

Data dictionary for QIF Library Features.xsd (normative)

schema location: ..attributeFormDefault: unqualified
elementFormDefault: qualified
targetNamespace: http://qifstandards.org/xsd/qif2

Complex types

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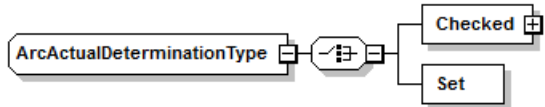
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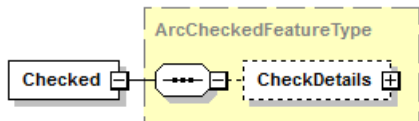
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complexType **ArcActualDeterminationType**

diagram	
children	Checked Set
used by	element ArcFeatureItemType/DeterminationMode
annotation	documentation The ArcActualDeterminationType defines how the arc actual is determined, either by being set or by being checked (measured or constructed).

element **ArcActualDeterminationType/Checked**

diagram	
type	ArcCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	documentation The Checked element signifies that the arc is checked from actual data, either measured or constructed.

element **ArcActualDeterminationType/Set**

diagram	
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type	SetFeatureType
properties	content complex
annotation	documentation The Set element signifies that the arc actual is set to its nominal value.

complexType **ArcBestFitType**

diagram	<p>The diagram shows the ArcBestFitType structure. It is an extension of ConstructionMethodBaseType. The ArcBestFitType element is connected to two child elements: NominalsCalculated (indicated by a dashed box) and BaseFeature (indicated by a plus sign). The BaseFeature element has a cardinality of 3..∞.</p>
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element ArcConstructionMethodType/BestFit
annotation	documentation The ArcBestFitType defines the information for a best-fit arc which includes a list of point-reducible base features; the points to which those features reduce are used in the best-fit construction of the arc.

element **ArcBestFitType/BaseFeature**

diagram	<p>The diagram shows the BaseFeature structure. It is a SequencedBaseFeatureType. The BaseFeature element is connected to three child elements: ReferencedComponent, FeatureItemId (indicated by a plus sign), and SequenceNumber. The BaseFeature element has a cardinality of 3..∞.</p>
type	SequencedBaseFeatureType
properties	minOcc 3 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	documentation Each BaseFeature element identifies a base feature to be used for the construction of an arc. The number of base features must be 3 or greater.

complexType **ArcCastType**

diagram	<p>The diagram shows the ArcCastType structure. It is an extension of ConstructionMethodBaseType. The ArcCastType element is connected to two child elements: NominalsCalculated (indicated by a dashed box) and BaseFeature (indicated by a plus sign). The BaseFeature element has a cardinality of 3..∞.</p>
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type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element ArcConstructionMethodType/Cast
annotation	documentation The ArcCastType defines an arc construction by the casting of another feature type to an arc. The location, vector and size are copied from the base feature. Any information not available on the base feature will remain at nominal. For example, a cast sphere will create an arc with center and diameter taken from the sphere but it will retain its nominal normal vector and start and end angles.

element **ArcCastType/BaseFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseFeature element identifies the feature to be cast to an arc.

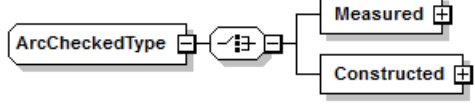
complexType **ArcCheckedFeatureType**

diagram	
children	CheckDetails
used by	element ArcActualDeterminationType/Checked
annotation	documentation The ArcCheckedFeatureType defines that an arc feature is checked.

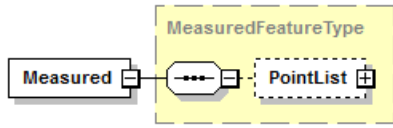
element **ArcCheckedFeatureType/CheckDetails**

diagram	
type	ArcCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the arc check (measurement or construction).

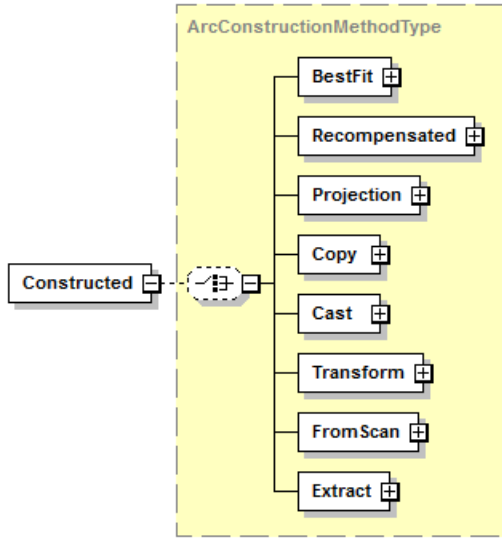
complexType **ArcCheckedType**

diagram	
children	Measured Constructed
used by	element ArcCheckedFeatureType/CheckDetails
annotation	documentation The ArcCheckedType defines how the arc actual is checked, either by measurement or by construction.

element **ArcCheckedType/Measured**

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the arc is measured.

element **ArcCheckedType/Constructed**

diagram	
type	ArcConstructionMethodType
properties	content complex
children	BestFit Recompensated Projection Copy Cast Transform FromScan Extract
annotation	documentation The Constructed element signifies that the arc is constructed.

complexType **ArcConstructionMethodType**

diagram	
children	BestFit Recompensated Projection Copy Cast Transform FromScan Extract
used by	element ArcCheckedType/Constructed
annotation	documentation The ArcConstructionMethodType defines the method for constructing a unique nominal or actual arc feature.

element **ArcConstructionMethodType/BestFit**

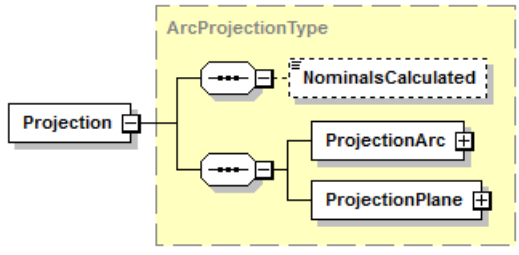
diagram	
type	ArcBestFitType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The BestFit element describes the best-fit construction of an arc from 3 or more point-reducible base features. This element is in an optional choice.

element **ArcConstructionMethodType/Recompensated**

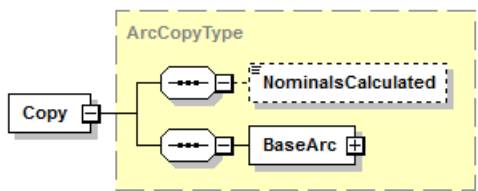
diagram	
type	ArcRecompType
properties	content complex

children	NominalsCalculated BaseFeaturePointList
annotation	documentation The Re-compensated element describes the re-compensated-for- probe-size best-fit construction of an arc from 3 or more base feature points. This element is in an optional choice.

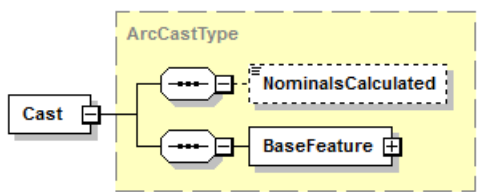
element **ArcConstructionMethodType/Projection**

diagram	 <p>The diagram shows a 'Projection' element connected to a dashed box labeled 'ArcProjectionType'. Inside this box, there are two parallel paths. The top path consists of a 'NominalsCalculated' element (dashed box) and a 'ProjectionArc' element (solid box). The bottom path consists of a 'ProjectionPlane' element (solid box). Both paths are connected to the 'Projection' element via a central connector.</p>
type	ArcProjectionType
properties	content complex
children	NominalsCalculated ProjectionArc ProjectionPlane
annotation	documentation The Projection element describes the construction of an arc by the projection of a base arc onto a plane. This element is in an optional choice.

element **ArcConstructionMethodType/Copy**

diagram	 <p>The diagram shows a 'Copy' element connected to a dashed box labeled 'ArcCopyType'. Inside this box, there are two parallel paths. The top path consists of a 'NominalsCalculated' element (dashed box). The bottom path consists of a 'BaseArc' element (solid box). Both paths are connected to the 'Copy' element via a central connector.</p>
type	ArcCopyType
properties	content complex
children	NominalsCalculated BaseArc
annotation	documentation The Copy element describes the construction of an arc by the copying of a base arc. This element is in an optional choice.

element **ArcConstructionMethodType/Cast**

diagram	 <p>The diagram shows a 'Cast' element connected to a dashed box labeled 'ArcCastType'. Inside this box, there are two parallel paths. The top path consists of a 'NominalsCalculated' element (dashed box). The bottom path consists of a 'BaseFeature' element (solid box). Both paths are connected to the 'Cast' element via a central connector.</p>
type	ArcCastType
properties	content complex
children	NominalsCalculated BaseFeature

annotation	documentation The Cast element describes the construction of an arc by the casting of a base feature. This element is in an optional choice.
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element **ArcConstructionMethodType/Transform**

diagram	<pre> graph LR Transform[Transform] --- ArcTransformType subgraph ArcTransformType [ArcTransformType] direction TB NominalsCalculated[NominalsCalculated] BaseArc[BaseArc] Transformation[Transformation] end </pre>
type	ArcTransformType
properties	content complex
children	NominalsCalculated BaseArc Transformation
annotation	documentation The Transform element describes the construction of an arc by the transformation of a base arc. This element is in an optional choice.

element **ArcConstructionMethodType/FromScan**

diagram	<pre> graph LR FromScan[FromScan] --- ArcFromScanType subgraph ArcFromScanType [ArcFromScanType] direction TB NominalsCalculated[NominalsCalculated] SurfaceFeature[SurfaceFeature] SearchRadius[SearchRadius] Depth[Depth] end </pre>
type	ArcFromScanType
properties	content complex
children	NominalsCalculated SurfaceFeature SearchRadius Depth
annotation	documentation The FromScan element describes the construction of an arc from scan data. This element is in an optional choice.

element **ArcConstructionMethodType/Extract**

diagram	<pre> graph LR Extract[Extract] --- ArcExtractType subgraph ArcExtractType [ArcExtractType] direction TB NominalsCalculated[NominalsCalculated] CurveFeature[CurveFeature] end </pre>
type	ArcExtractType
properties	content complex

children	NominalsCalculated CurveFeature
annotation	documentation The Extract element describes the extraction of an arc from a curve. This element is in an optional choice.

complexType **ArcCopyType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseArc
used by	element ArcConstructionMethodType/Copy
annotation	documentation The ArcCopyType defines a copied arc construction.

element **ArcCopyType/BaseArc**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseArc element identifies the arc to be copied.

complexType **ArcExtractType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated CurveFeature
used by	element ArcConstructionMethodType/Extract
annotation	documentation

The ArcExtractType defines an arc construction by the extraction of an arc from a curve feature.

element **ArcExtractType/CurveFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemid
annotation	documentation The CurveFeature element identifies the curve from which the arc is extracted.

complexType **ArcFeatureActualType**

diagram	
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type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Location Normal Radius RadiusMin RadiusMax Sweep Form					
used by	element ArcFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ArcFeatureActualType defines actual information for an individual arc feature.					

element **ArcFeatureActualType/Location**

diagram						
type	ActualPointType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional Location element is the actual center point of the arc.

element **ArcFeatureActualType/Normal**

diagram						
type	ActualUnitVectorType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional Normal element is the actual normal vector of the plane of the arc.

element **ArcFeatureActualType/Radius**

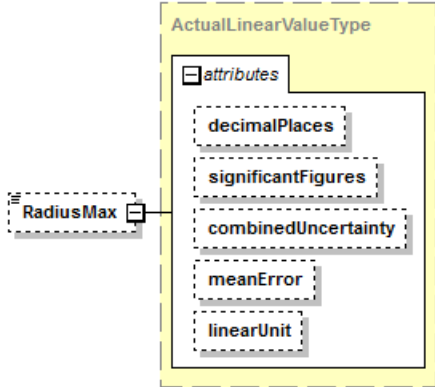
diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is

	linearUnit	xs:token	a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Radius element is the actual radius of the arc based on substitute feature data fitting algorithm setting.		

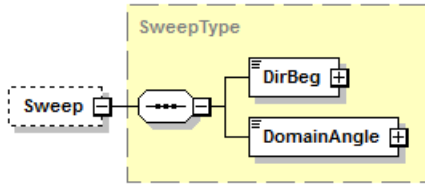
element **ArcFeatureActualType/RadiusMin**

diagram						
type	ActualLinearValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional RadiusMin element is the minimum radius of the arc from a report or an analysis.					

element **ArcFeatureActualType/RadiusMax**

diagram						
type	ActualLinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional RadiusMax element is the maximum radius of the arc from a report or an analysis.					

element **ArcFeatureActualType/Sweep**

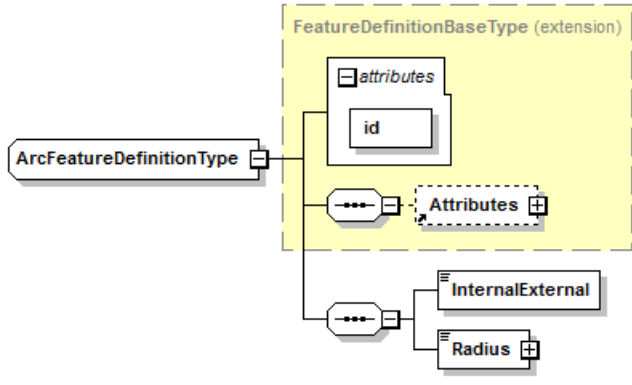
diagram						
type	SweepType					

properties	minOcc 0 maxOcc 1 content complex
children	DirBeg DomainAngle
annotation	documentation The optional Sweep element gives the actual start direction and the swept angle of the arc. The StartVector of the Sweep must lie in the plane of the arc.

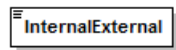
element **ArcFeatureActualType/Form**

diagram						
type	ActualLinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Form element is the form error (roundness) of the arc from a report or an analysis.					

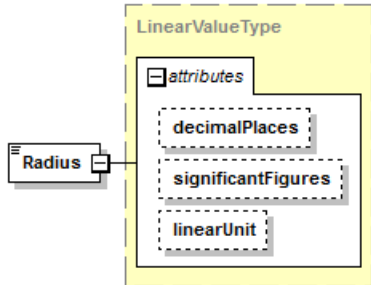
complexType **ArcFeatureDefinitionType**

diagram						
type	extension of FeatureDefinitionBaseType					
properties	base <code>FeatureDefinitionBaseType</code>					
children	Attributes InternalExternal Radius					
used by	element ArcFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ArcFeatureDefinitionType defines the arc feature nominal information that can be common to one or more arc features.					

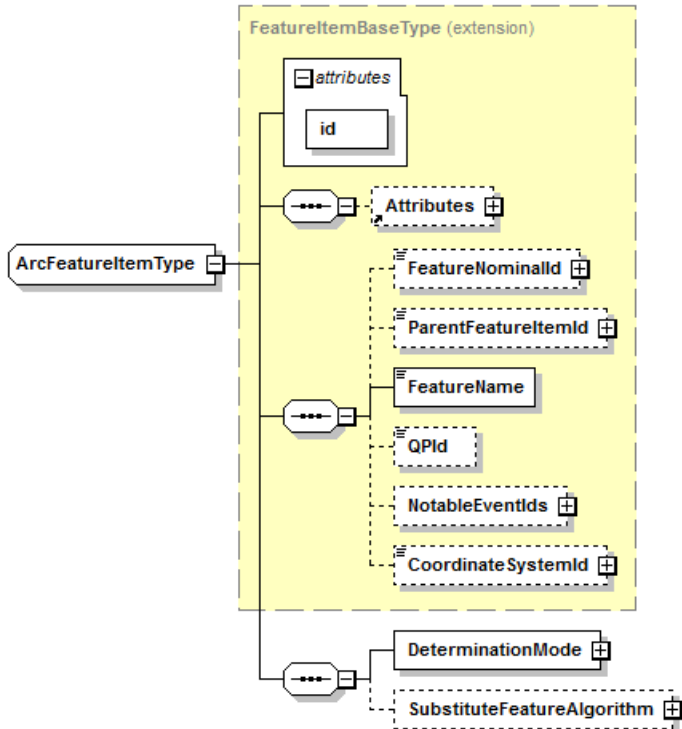
element **ArcFeatureDefinitionType/InternalExternal**

diagram			
type	InternalExternalEnumType		
properties	content simple		
facets	Kind enumeration enumeration enumeration	Value INTERNAL EXTERNAL NOT_APPLICABLE	Annotation
annotation	documentation The InternalExternal element indicates whether the feature is internal or external.		

element **ArcFeatureDefinitionType/Radius**

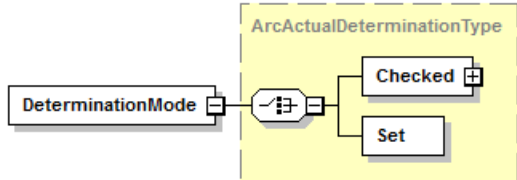
diagram						
type	LinearValueType					
properties	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The Radius element is the nominal radius of the arc feature.					

complexType **ArcFeatureItemType**

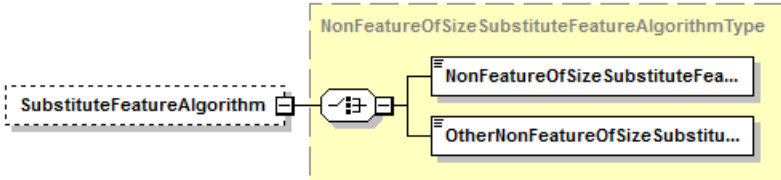
diagram						
type	extension of FeatureItemBaseType					

properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element ArcFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ArcFeatureItemType defines an individual arc feature. An arc feature is a two dimensional circular segment.					

element **ArcFeatureItem/DeterminationMode**

diagram						
type	ArcActualDeterminationType					
properties	content complex					
children	Checked Set					
annotation	documentation The DeterminationMode element is the means by which the arc feature actual is determined.					

element **ArcFeatureItem/SubstituteFeatureAlgorithm**

diagram	
type	NonFeatureOfSizeSubstituteFeatureAlgorithmType
properties	<div>minOcc0</div> <div>maxOcc1</div> <div>contentcomplex</div>
children	NonFeatureOfSizeSubstituteFeatureAlgorithmEnum OtherNonFeatureOfSizeSubstituteFeatureAlgorithm
annotation	<div>documentation</div> <div>The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the arc feature.</div>

complexType **ArcFeatureNominalType**

diagram						
type	extension of FeatureNominalBaseType					
properties	base FeatureNominalBaseType					
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Location Sweep Normal					
used by	element ArcFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ArcFeatureNominalType defines feature nominal information for an individual arc feature.					

element **ArcFeatureNominalType/Location**

diagram						
type	PointType					
properties	content complex					
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation The Location element is the nominal center point of the arc.					

element **ArcFeatureNominalType/Sweep**

diagram	
type	SweepType
properties	content complex
children	DirBeg DomainAngle
annotation	<p>documentation</p> <p>The Sweep element gives the nominal start direction and the swept angle for the arc. The StartVector of the Sweep must lie in the plane of the arc.</p>

element **ArcFeatureNominalType/Normal**

diagram	<pre>graph LR Normal[Normal] --- UnitVectorType[UnitVectorType] subgraph UnitVectorType direction TB attributes[attributes] linearUnit[linearUnit] decimalPlaces[decimalPlaces] significantFigures[significantFigures] validity[validity] xDecimalPlaces[xDecimalPlaces] xSignificantFigures[xSignificantFigures] xValidity[xValidity] yDecimalPlaces[yDecimalPlaces] ySignificantFigures[ySignificantFigures] yValidity[yValidity] zDecimalPlaces[zDecimalPlaces] zSignificantFigures[zSignificantFigures] zValidity[zValidity] end</pre>																								
type	UnitVectorType																								
properties	content complex																								
facets	<table><tr><td>Kind</td><td>Value</td><td>Annotation</td></tr><tr><td>length</td><td>3</td><td></td></tr></table>	Kind	Value	Annotation	length	3																			
Kind	Value	Annotation																							
length	3																								
attributes	<table><tr><td>Name</td><td>Type</td><td>Use</td><td>Default</td><td>Fixed</td><td>Annotation</td></tr><tr><td>linearUnit</td><td>xs:token</td><td></td><td></td><td></td><td></td></tr><tr><td>decimalPlaces</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td></td></tr><tr><td>significantFigures</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td></td></tr></table>	Name	Type	Use	Default	Fixed	Annotation	linearUnit	xs:token					decimalPlaces	xs:nonNegativeInteger					significantFigures	xs:nonNegativeInteger				
Name	Type	Use	Default	Fixed	Annotation																				
linearUnit	xs:token																								
decimalPlaces	xs:nonNegativeInteger																								
significantFigures	xs:nonNegativeInteger																								

	validity ValidityEnumType xDecimalPlaces xs:nonNegativeInteger xSignificantFigures xs:nonNegativeInteger xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType
annotation	documentation The Normal element is the nominal unit normal vector of the plane of the arc.

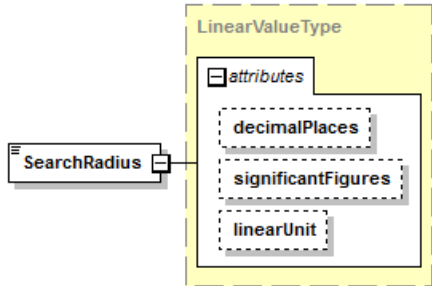
complexType **ArcFromScanType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated SurfaceFeature SearchRadius Depth
used by	element ArcConstructionMethodType/FromScan
annotation	documentation The ArcFromScanType defines an arc construction by the retrieval of an arc from a scanned surface feature (point cloud).

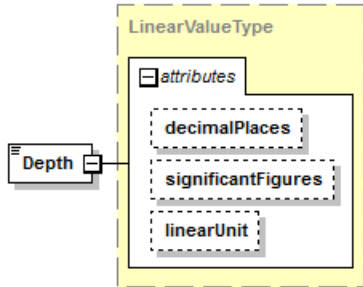
element **ArcFromScanType/SurfaceFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The SurfaceFeature element identifies the scanned surface feature from which the arc is retrieved.

element **ArcFromScanType/SearchRadius**

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The SearchRadius element is the radius around the nominal feature, wherein the actual feature can be expected. The SearchRadius is the radius added to and subtracted from the nominal feature radius to define a cylindrical shell. All scanned points within this cylindrical shell are used for the retrieval of the feature. The cylindrical shell's axis is defined by the feature's direction and the cylindrical shell's axis passes through the feature's center point.					

element **ArcFromScanType/Depth**

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.

annotation	documentation The Depth element is the measuring depth down the arc nominal axis vector at which the arc is to be retrieved.
------------	---

complexType **ArcProjectionType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated ProjectionArc ProjectionPlane
used by	element ArcConstructionMethodType/Projection
annotation	documentation The ArcProjectionType defines a projected arc construction with the arc to be projected and the projection plane.

element **ArcProjectionType/ProjectionArc**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The ProjectionArc element identifies the arc to be projected.

element **ArcProjectionType/ProjectionPlane**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The ProjectionPlane element identifies the plane onto which the arc is to be projected.

complexType **ArcRecompType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeaturePointList
used by	element ArcConstructionMethodType/Recompensated
annotation	<p>documentation</p> <p>The ArcRecompType defines a list of base feature points for the construction of a re-compensated-for-probe-size best-fit arc through the measurement points of base features.</p>

element **ArcRecompType/BaseFeaturePointList**

diagram	
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	<p>documentation</p> <p>The BaseFeaturePointList element is a list of points for the construction of a re-compensated-for-probe-size best-fit arc. The total number of points in the BaseFeaturePointSets in the list must be 3 or greater.</p>

complexType **ArcTransformType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseArc Transformation
used by	element ArcConstructionMethodType/Transform
annotation	<p>documentation</p> <p>The ArcTransformType defines an arc construction by the transformation of an arc through the specified nominal or actual coordinate system.</p>

element **ArcTransformType/BaseArc**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseArc element identifies the arc to be transformed.

element **ArcTransformType/Transformation**

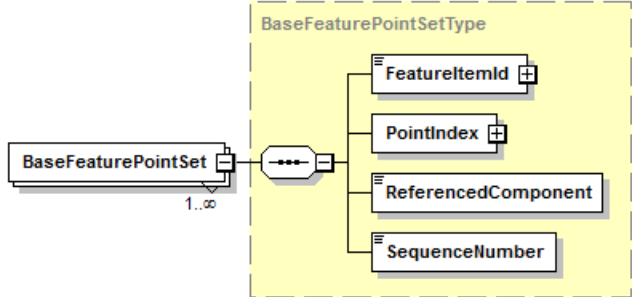
diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	documentation The Transformation element identifies the coordinate system to be used to transform the base arc.

complexType **BaseFeaturePointListType**

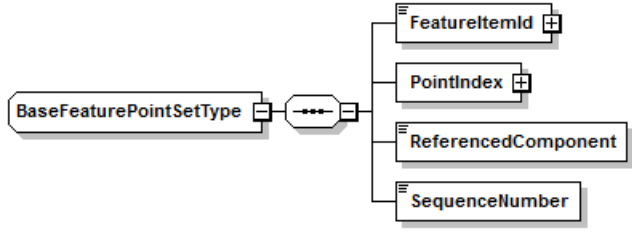
diagram	
children	BaseFeaturePointSet
used by	elements ArcRecompType/BaseFeaturePointList CircleRecompType/BaseFeaturePointList ConeRecompType/BaseFeaturePointList ConicalSegmentRecompType/BaseFeaturePointList CuboidRecompType/BaseFeaturePointList CylinderRecompType/BaseFeaturePointList CylindricalSegmentRecompType/BaseFeaturePointList EllipseRecompType/BaseFeaturePointList ElongatedCylinderRecompType/BaseFeaturePointList ExtrudedCrossSectionRecompType/BaseFeaturePointList LineRecompType/BaseFeaturePointList OppositeLinesRecompType/BaseFeaturePointList OppositePlanesRecompType/BaseFeaturePointList PlaneRecompType/BaseFeaturePointList PointDefinedCurveRecompType/BaseFeaturePointList PointDefinedSurfaceRecompType/BaseFeaturePointList SphereRecompType/BaseFeaturePointList SphericalSegmentRecompType/BaseFeaturePointList SurfaceOfRevolutionRecompType/BaseFeaturePointList ThreadedFeatureRecompType/BaseFeaturePointList ToroidalSegmentRecompType/BaseFeaturePointList TorusRecompType/BaseFeaturePointList
annotation	documentation

	The BaseFeaturePointListType defines a list of base feature points to be used in the construction of a re-compensated-for-probe-size best-fit feature. Each feature recompensation type will have a minimum number of points this list must contain.
--	--

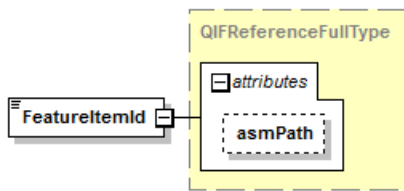
element **BaseFeaturePointListType/BaseFeaturePointSet**

diagram	 <p>The diagram shows a BaseFeaturePointSet element connected to a dashed box labeled BaseFeaturePointSetType. Inside this box, there are four sub-elements: FeatureItemId, PointIndex, ReferencedComponent, and SequenceNumber. The BaseFeaturePointSet element has a multiplicity of 1..∞.</p>
type	BaseFeaturePointSetType
properties	minOcc 1 maxOcc unbounded content complex
children	FeatureItemId PointIndex ReferencedComponent SequenceNumber
annotation	documentation Each BaseFeaturePointSet element is an individual point or set of points for a best-fit construction.

complexType **BaseFeaturePointSetType**

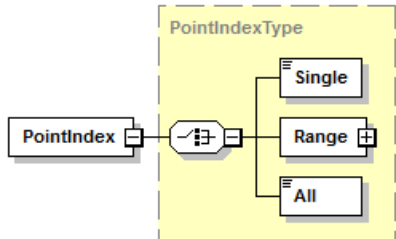
diagram	 <p>The diagram shows a BaseFeaturePointSetType element connected to a dashed box. Inside this box, there are four sub-elements: FeatureItemId, PointIndex, ReferencedComponent, and SequenceNumber.</p>
children	FeatureItemId PointIndex ReferencedComponent SequenceNumber
used by	element BaseFeaturePointListType/BaseFeaturePointSet
annotation	documentation The BaseFeaturePointSetType defines a measurement point or points from a feature to be used in a re-compensated-for-probe-size best-fit.

element **BaseFeaturePointSetType/FeatureItemId**


diagram	 <p>The diagram shows a FeatureItemId element connected to a dashed box labeled QIFReferenceFullType. Inside this box, there are two sub-elements: attributes and asmPath.</p>
type	QIFReferenceFullType
properties	content complex

attributes	Name asmPath	Type QIFIdType	Use	Default	Fixed	Annotation documentation The optional asmPath attribute is an id which must be used for locating of the assembly path within the AsmPaths. The assembly path (instantiation chain) unambiguously identifies a model entity within an assembly.
annotation	documentation The FeatureItemId element is the QIF id of the feature item.					

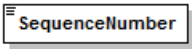
element **BaseFeaturePointSetType/PointIndex**

diagram						
type	PointIndexType					
properties	content complex					
children	Single Range All					
annotation	documentation The PointIndex element is a reference to a measurement point by a single index, or to several measurement points by a range, or by specifying all measurement points.					

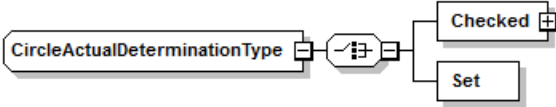
element **BaseFeaturePointSetType/ReferencedComponent**

diagram										
type	ReferencedComponentEnumType									
properties	content simple									
facets	<table><tr><td>Kind</td><td>Value</td><td>Annotation</td></tr><tr><td>enumeration</td><td>NOMINAL</td><td></td></tr><tr><td>enumeration</td><td>ACTUAL</td><td></td></tr></table>	Kind	Value	Annotation	enumeration	NOMINAL		enumeration	ACTUAL	
Kind	Value	Annotation								
enumeration	NOMINAL									
enumeration	ACTUAL									
annotation	<p>documentation</p> <p>The ReferencedComponent element identifies whether the actual or nominal component of a measurement point or points on this feature is used in the construction.</p>									

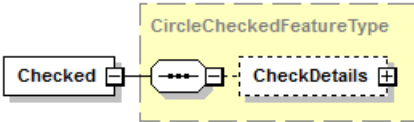
element **BaseFeaturePointSetType/SequenceNumber**

diagram	
type	xs:positiveInteger
properties	content simple
annotation	documentation The SequenceNumber element is an ordinal number defining the order of the base feature in the construction.


complexType **CircleActualDeterminationType**

diagram	
children	Checked Set
used by	element CircleFeatureItem/DeterminationMode
annotation	documentation The CircleActualDeterminationType defines how the circle actual is determined, either by being set or by being checked (measured or constructed).

element **CircleActualDeterminationType/Checked**

diagram	
type	CircleCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	documentation The Checked element signifies that the circle is checked from actual data, either measured or constructed.

element **CircleActualDeterminationType/Set**

diagram	
type	SetFeatureType
properties	content complex
annotation	documentation The Set element signifies that the circle actual is set to its nominal value.

complexType **CircleBestFitType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element CircleConstructionMethodType/BestFit
annotation	<p>documentation</p> <p>The CircleBestFitType defines the information for a best-fit circle which includes a list of point-reducible base features; the points to which those features reduce are used in the best-fit construction of the circle.</p>

element **CircleBestFitType/BaseFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 3 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	<p>documentation</p> <p>Each BaseFeature element identifies a base feature to be used for the construction of a circle. The number of base features must be 3 or greater.</p>

complexType **CircleCastType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element CircleConstructionMethodType/Cast
annotation	<p>documentation</p> <p>The CircleCastType defines a circle construction by the casting of another feature type to a circle. The location, vector</p>

	and size are copied from the base feature. Any information not available on the base feature will remain at nominal. For example, a cast sphere will create a circle with center and diameter taken from the sphere but it will retain its nominal normal vector.
--	---

element **CircleCastType/BaseFeature**

diagram	<pre> graph LR BaseFeature[BaseFeature] --> BaseFeatureType subgraph BaseFeatureType ReferencedComponent[ReferencedComponent] FeatureItemId[FeatureItemId] end </pre>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseFeature element identifies the feature to be cast to a circle.

complexType **CircleCheckedFeatureType**

diagram	<pre> graph LR CircleCheckedFeatureType[CircleCheckedFeatureType] --> CheckDetails subgraph CheckDetailsBox [CheckDetails] CheckDetails[CheckDetails] end </pre>
children	CheckDetails
used by	element CircleActualDeterminationType/Checked
annotation	documentation The CircleCheckedFeatureType defines that a circle feature is checked.

element **CircleCheckedFeatureType/CheckDetails**

diagram	<pre> graph LR CheckDetails[CheckDetails] --> CircleCheckedType subgraph CircleCheckedType Measured[Measured] Constructed[Constructed] end </pre>
type	CircleCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the circle check (measurement or construction).

complexType **CircleCheckedType**

diagram	<pre> graph LR CircleCheckedType[CircleCheckedType] --> CircleCheckedTypeBox subgraph CircleCheckedTypeBox Measured[Measured] Constructed[Constructed] end </pre>
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children	Measured Constructed
used by	element CircleCheckedFeatureType/CheckDetails
annotation	documentation The CircleCheckedType defines how the circle actual is checked, either by measurement or by construction.

element [CircleCheckedType/Measured](#)

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the circle is measured.

element [CircleCheckedType/Constructed](#)

diagram	
type	CircleConstructionMethodType
properties	content complex
children	BestFit Recompensated Intersection Projection Copy Cast Tangent TangentThrough Transform FromCone FromScan
annotation	documentation The Constructed element signifies that the circle is constructed.

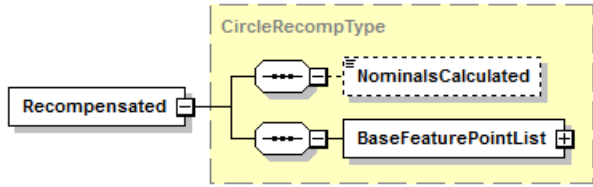
complexType **CircleConstructionMethodType**

diagram	
children	BestFit Recompensated Intersection Projection Copy Cast Tangent TangentThrough Transform FromCone FromScan
used by	element CircleCheckedType/Constructed
annotation	documentation The CircleConstructionMethodType defines the method for constructing a unique nominal or actual circle feature.

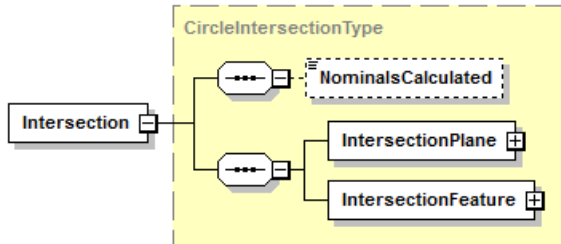
element **CircleConstructionMethodType/BestFit**

diagram	
type	CircleBestFitType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The BestFit element describes the best-fit construction of a circle from 3 or more point-reducible base features. This element is in an optional choice.

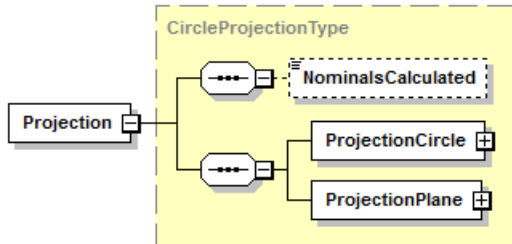
element **CircleConstructionMethodType/Recompensated**

diagram	
type	CircleRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	<p>documentation</p> <p>The Recompensated element describes the re-compensated-for- probe-size best-fit construction of a circle from 3 or more base feature points. This element is in an optional choice.</p>

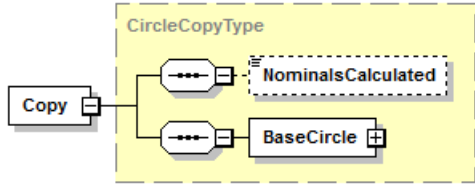
element **CircleConstructionMethodType/Intersection**

diagram	
type	CircleIntersectionType
properties	content complex
children	NominalsCalculated IntersectionPlane IntersectionFeature
annotation	<p>documentation</p> <p>The Intersection element describes the construction of a circle by the intersection of a plane and a feature which has a circular cross section. This element is in an optional choice.</p>

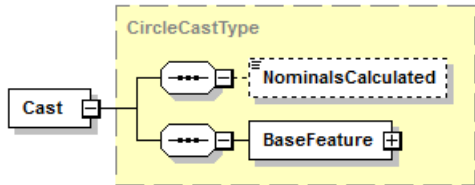
element **CircleConstructionMethodType/Projection**

diagram	
type	CircleProjectionType
properties	content complex
children	NominalsCalculated ProjectionCircle ProjectionPlane
annotation	<p>documentation</p> <p>The Projection element describes the construction of a circle by the projection of a base circle onto a plane. This element is in an optional choice.</p>

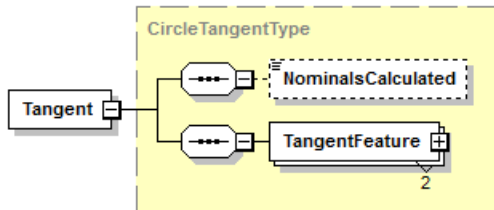
element **CircleConstructionMethodType/Copy**

diagram	 <p>The diagram shows a dashed box labeled 'CircleCopyType'. Inside, a 'Copy' element is connected to two other elements: 'NominalsCalculated' (in a dashed box) and 'BaseCircle' (in a solid box). Both connections are made via a small box with three dots and a plus sign.</p>
type	CircleCopyType
properties	content complex
children	NominalsCalculated BaseCircle
annotation	documentation The Copy element describes the construction of a circle by the copying of a base circle. This element is in an optional choice.

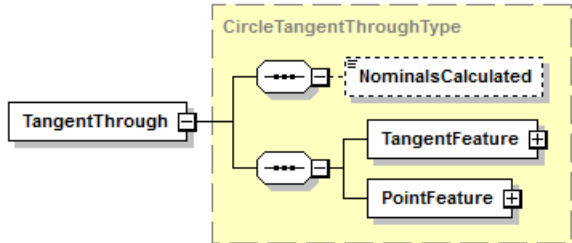
element **CircleConstructionMethodType/Cast**

diagram	 <p>The diagram shows a dashed box labeled 'CircleCastType'. Inside, a 'Cast' element is connected to two other elements: 'NominalsCalculated' (in a dashed box) and 'BaseFeature' (in a solid box). Both connections are made via a small box with three dots and a plus sign.</p>
type	CircleCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The Cast element describes the construction of a circle by the casting of a base feature. This element is in an optional choice.

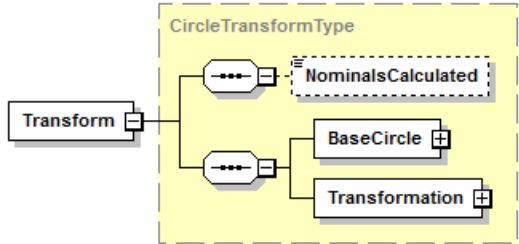
element **CircleConstructionMethodType/Tangent**

diagram	 <p>The diagram shows a dashed box labeled 'CircleTangentType'. Inside, a 'Tangent' element is connected to two other elements: 'NominalsCalculated' (in a dashed box) and 'TangentFeature' (in a solid box). Both connections are made via a small box with three dots and a plus sign. A '2' is written below the 'TangentFeature' box, indicating a multiplicity of 2.</p>
type	CircleTangentType
properties	content complex
children	NominalsCalculated TangentFeature
annotation	documentation The Tangent element describes the construction of a circle that is tangent to two base features. This element is in an optional choice.

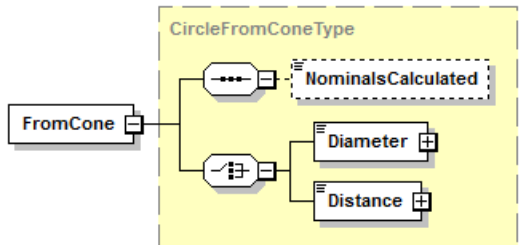
element **CircleConstructionMethodType/TangentThrough**

diagram	 <p>The diagram shows a 'TangentThrough' element connected to a dashed box labeled 'CircleTangentThroughType'. Inside this box, 'TangentThrough' branches into two paths. The top path leads to a 'NominalsCalculated' element (dashed box). The bottom path leads to a choice between 'TangentFeature' and 'PointFeature'.</p>
type	CircleTangentThroughType
properties	content complex
children	NominalsCalculated TangentFeature PointFeature
annotation	<p>documentation</p> <p>The TangentThrough element describes the construction of a circle tangent to a feature and passing through a point. This element is in an optional choice.</p>

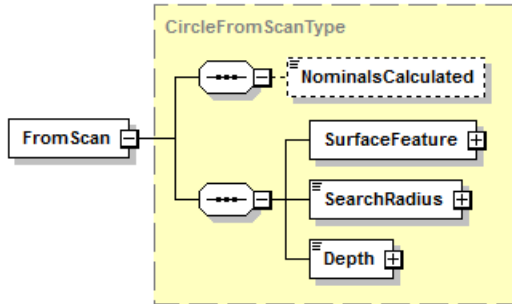
element **CircleConstructionMethodType/Transform**

diagram	 <p>The diagram shows a 'Transform' element connected to a dashed box labeled 'CircleTransformType'. Inside this box, 'Transform' branches into two paths. The top path leads to a 'NominalsCalculated' element (dashed box). The bottom path leads to a choice between 'BaseCircle' and 'Transformation'.</p>
type	CircleTransformType
properties	content complex
children	NominalsCalculated BaseCircle Transformation
annotation	<p>documentation</p> <p>The Transform element describes the construction of a circle by the transformation of a base circle. This element is in an optional choice.</p>

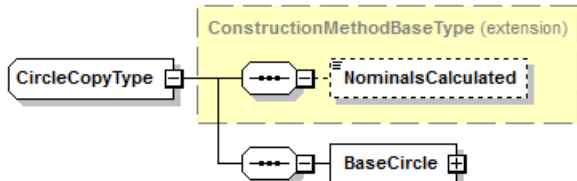
element **CircleConstructionMethodType/FromCone**

diagram	 <p>The diagram shows a 'FromCone' element connected to a dashed box labeled 'CircleFromConeType'. Inside this box, 'FromCone' branches into two paths. The top path leads to a 'NominalsCalculated' element (dashed box). The bottom path leads to a choice between 'Diameter' and 'Distance'.</p>
type	CircleFromConeType
properties	content complex
children	NominalsCalculated Diameter Distance
annotation	<p>documentation</p> <p>The FromCone element describes the construction of a circle from a cone at a specified cone diameter or at a specified distance from the cone vertex. This element is in an optional choice.</p>

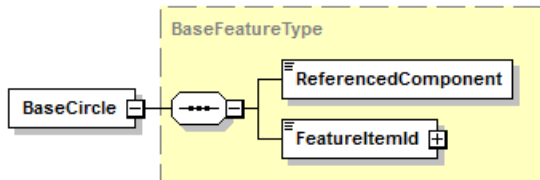
element **CircleConstructionMethodType/FromScan**

diagram	 <p>The diagram shows a 'FromScan' element connected to a dashed box labeled 'CircleFromScanType'. Inside this box, 'FromScan' is connected to a choice element (rectangle with three dots). This choice element has two branches: one leading to a dashed box labeled 'NominalsCalculated' and another leading to a choice element (rectangle with three dots). This second choice element has three branches: one leading to 'SurfaceFeature', one leading to 'SearchRadius', and one leading to 'Depth'.</p>
type	CircleFromScanType
properties	content complex
children	NominalsCalculated SurfaceFeature SearchRadius Depth
annotation	documentation The FromScan element describes the construction of a circle from scan data. This element is in an optional choice.

complexType **CircleCopyType**

diagram	 <p>The diagram shows a 'CircleCopyType' element connected to a dashed box labeled 'ConstructionMethodBaseType (extension)'. Inside this box, 'CircleCopyType' is connected to a choice element (rectangle with three dots). This choice element has two branches: one leading to a dashed box labeled 'NominalsCalculated' and another leading to a choice element (rectangle with three dots). This second choice element has one branch leading to 'BaseCircle'.</p>
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseCircle
used by	element CircleConstructionMethodType/Copy
annotation	documentation The CircleCopyType defines a copied circle construction.

element **CircleCopyType/BaseCircle**

diagram	 <p>The diagram shows a 'BaseCircle' element connected to a dashed box labeled 'BaseFeatureType'. Inside this box, 'BaseCircle' is connected to a choice element (rectangle with three dots). This choice element has two branches: one leading to 'ReferencedComponent' and another leading to 'FeatureItemId'.</p>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseCircle element identifies the circle to be copied.

complexType **CircleFeatureActualType**

diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Location Normal Diameter DiameterMin DiameterMax Form					
used by	element CircleFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CircleFeatureActualType defines actual information for an individual circle feature.					

element **CircleFeatureActualType/Location**

diagram						
type	ActualPointType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional Location element is the actual center point of the circle.

element **CircleFeatureActualType/Normal**

diagram						
type	ActualUnitVectorType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional Normal element is the actual normal vector of the plane of the circle.

element **CircleFeatureActualType/Diameter**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is

	linearUnit xs:token	a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Diameter element is the actual diameter of the circle based on the substitute feature data fitting algorithm setting.	

element **CircleFeatureActualType/DiameterMin**

diagram						
type	ActualLinearValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional DiameterMin element is the minimum actual diameter of the circle from a report or an analysis.					

element **CircleFeatureActualType/DiameterMax**

diagram						
type	ActualLinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional DiameterMax element is the maximum actual diameter of the circle from a report or an analysis.					

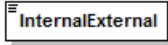
element **CircleFeatureActualType/Form**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Form element is the form error (roundness) of the circle from a report or an analysis.					

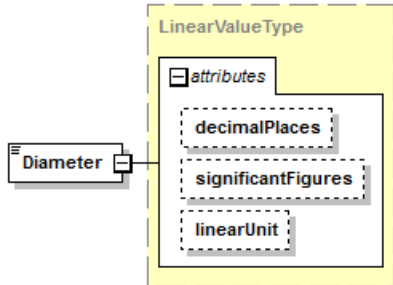
complexType **CircleFeatureDefinitionType**

diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes InternalExternal Diameter					
used by	element CircleFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CircleFeatureDefinitionType defines circle feature nominal information that can be common to one or more circle features.					

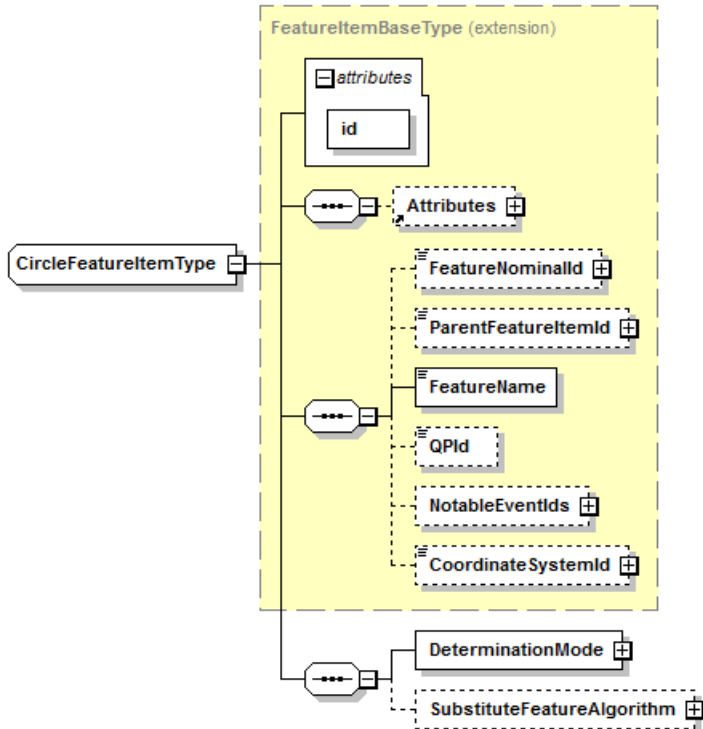
element **CircleFeatureDefinitionType/InternalExternal**

diagram			
type	InternalExternalEnumType		
properties	content simple		
facets	Kind enumeration enumeration enumeration	Value INTERNAL EXTERNAL NOT_APPLICABLE	Annotation
annotation	documentation The InternalExternal element indicates whether the feature is internal or external.		

element **CircleFeatureDefinitionType/Diameter**

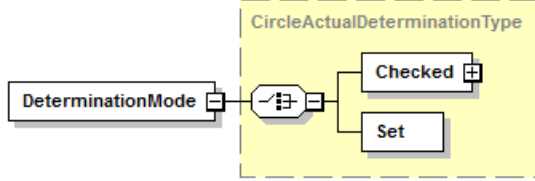
diagram						
type	LinearValueType					
properties	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The Diameter element is the nominal diameter of the circle feature.					

complexType **CircleFeatureItemType**

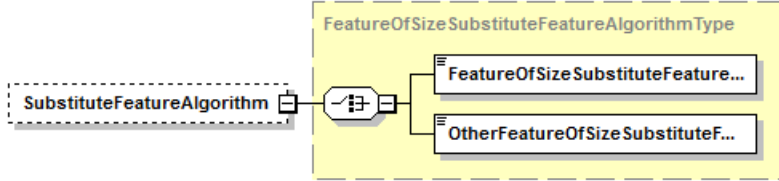
diagram						
type	extension of FeatureItemBaseType					

properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element CircleFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CircleFeatureItemType defines an individual circle feature.					

element **CircleFeatureItemType/DeterminationMode**

diagram						
type	CircleActualDeterminationType					
properties	content complex					
children	Checked Set					
annotation	documentation The DeterminationMode element is the means by which the circle feature actual is determined.					

element **CircleFeatureItemType/SubstituteFeatureAlgorithm**

diagram						
type	FeatureOfSizeSubstituteFeatureAlgorithmType					
properties	minOcc	0	maxOcc	1	content	complex
children	FeatureOfSizeSubstituteFeatureAlgorithmEnum OtherFeatureOfSizeSubstituteFeatureAlgorithm					
annotation	documentation The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the circle feature.					

complexType **CircleFeatureNominalType**

diagram	<p>The diagram illustrates the structure of the CircleFeatureNominalType complex type. It is an extension of the FeatureNominalBaseType. The extension includes an id attribute and a collection of Attributes. The Attributes collection contains the following elements: Name, PointList, FeatureDefinitionId, EntityInternalIds, and EntityExternalIds. Additionally, there is a collection of Location and Normal attributes.</p>					
type	extension of FeatureNominalBaseType					
properties	base FeatureNominalBaseType					
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Location Normal					
used by	element CircleFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CircleFeatureNominalType defines nominal information for an individual circle feature.					

element **CircleFeatureNominalType/Location**

diagram						
type	PointType					
properties	content	complex				
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation	The Location element is the nominal center point of the circle.				

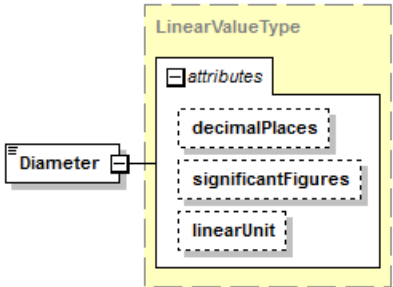
element **CircleFeatureNominalType/Normal**

diagram						
type	UnitVectorType					
properties	content	complex				
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation	The Normal element is the nominal unit normal vector of the plane of the circle.				

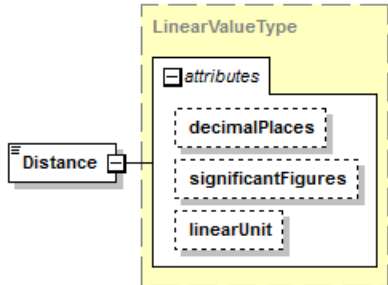
complexType **CircleFromConeType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated Diameter Distance
used by	element CircleConstructionMethodType/FromCone
annotation	<p>documentation</p> <p>The CircleFromConeType defines the construction of a circle from a cone. The circle will be located either at a specified diameter on the cone or at a specified distance from the vertex of the cone.</p>

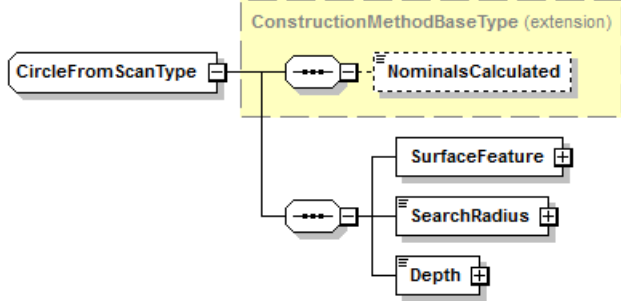
element **CircleFromConeType/Diameter**

diagram																									
type	LinearValueType																								
properties	content complex																								
attributes	<table><thead><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr></thead><tbody><tr><td>decimalPlaces</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr><tr><td>significantFigures</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr><tr><td>linearUnit</td><td>xs:token</td><td></td><td></td><td></td><td>documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.</td></tr></tbody></table>	Name	Type	Use	Default	Fixed	Annotation	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
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significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.																				
linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.																				
annotation	<p>documentation</p> <p>The Diameter element is the cone diameter at which the circle will be constructed.</p>																								

element **CircleFromConeType/Distance**

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The Distance element is the distance from the cone vertex at which the circle will be constructed.					

complexType **CircleFromScanType**

diagram						
type	extension of ConstructionMethodBaseType					
properties	base ConstructionMethodBaseType					
children	NominalsCalculated SurfaceFeature SearchRadius Depth					
used by	element CircleConstructionMethodType/FromScan					
annotation	documentation The CircleFromScanType defines a circle construction by the retrieval of a circle from a scanned surface feature (point cloud).					

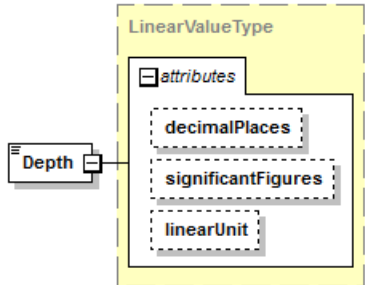
element **CircleFromScanType/SurfaceFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The SurfaceFeature element identifies the scanned surface feature from which the circle is retrieved.

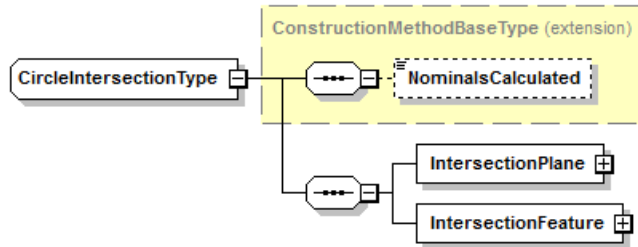
element **CircleFromScanType/SearchRadius**

diagram	<p>The diagram illustrates the relationship between the SearchRadius element and the LinearValueType container. The SearchRadius element is shown as a box with a small square icon, connected by a line to the LinearValueType container. The LinearValueType container is a larger box with a dashed border, containing an attributes section with three elements: decimalPlaces, significantFigures, and linearUnit, each represented by a dashed box.</p>																								
type	LinearValueType																								
properties	content complex																								
attributes	<table><thead><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr></thead><tbody><tr><td>decimalPlaces</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr><tr><td>significantFigures</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr><tr><td>linearUnit</td><td>xs:token</td><td></td><td></td><td></td><td>documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.</td></tr></tbody></table>	Name	Type	Use	Default	Fixed	Annotation	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
Name	Type	Use	Default	Fixed	Annotation																				
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significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.																				
linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.																				
annotation	<p>documentation</p> <p>The SearchRadius element is the radius around the nominal feature, wherein the actual feature can be expected. The SearchRadius is the radius added to and subtracted from the nominal feature radius to define a cylindrical shell. All scanned points within this cylindrical shell are used for the retrieval of the feature. The cylindrical shell's axis is defined by the feature's direction and the cylindrical shell's axis passes through the feature's center point.</p>																								

element **CircleFromScanType/Depth**

diagram						
type	LinearValueType					
properties	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The Depth element is the measuring depth down the circle nominal axis vector at which the circle is to be retrieved.					

complexType **CircleIntersectionType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated IntersectionPlane IntersectionFeature
used by	element CircleConstructionMethodType/Intersection
annotation	documentation The CircleIntersectionType defines the construction of a circle by the intersection of a plane with a feature with a circular cross section.

element **CircleIntersectionType/IntersectionPlane**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The IntersectionPlane element identifies the intersecting plane.

element **CircleIntersectionType/IntersectionFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The IntersectionFeature element identifies a cylinder, cone, sphere, surface of revolution or other feature with a circular cross section.

complexType **CircleProjectionType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated ProjectionCircle ProjectionPlane
used by	element CircleConstructionMethodType/Projection
annotation	documentation The CircleProjectionType defines a projected circle construction with the circle to be projected and the projection plane.

element **CircleProjectionType/ProjectionCircle**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The ProjectionCircle element identifies the circle to be projected.

element **CircleProjectionType/ProjectionPlane**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The ProjectionPlane element identifies the plane onto which the base circle is to be projected.

complexType **CircleRecompType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeaturePointList
used by	element CircleConstructionMethodType/Recompensated
annotation	documentation The CircleRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit circle through the measurement points of base features.

element **CircleRecompType/BaseFeaturePointList**

diagram	
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	<p>documentation</p> <p>The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit circle. The total number of points in the BaseFeaturePointSets in the list must be 3 or greater.</p>

complexType **CircleTangentThroughType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated TangentFeature PointFeature
used by	element CircleConstructionMethodType/TangentThrough
annotation	<p>documentation</p> <p>The CircleTangentThroughType defines the construction of a circle with a nominal diameter through a point and tangent to a base feature. The point and base feature are both coplanar with the circle.</p>

element **CircleTangentThroughType/TangentFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The TangentFeature element identifies the base feature to which the constructed circle is tangent.</p>

element **CircleTangentThroughType/PointFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The PointFeature element identifies the point feature through which the constructed circle passes.

complexType **CircleTangentType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated TangentFeature
used by	element CircleConstructionMethodType/Tangent
annotation	documentation The CircleTangentType defines the construction of a circle with a nominal diameter tangent to two base features coplanar with the circle.

element **CircleTangentType/TangentFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 2 maxOcc 2 content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	documentation Each TangentFeature element identifies a base feature for the tangent circle construction.

complexType **CircleTransformType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseCircle Transformation
used by	element CircleConstructionMethodType/Transform
annotation	documentation The CircleTransformType defines a circle construction by the transformation of a circle through the specified nominal or actual coordinate system.

element **CircleTransformType/BaseCircle**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseCircle element identifies the circle to be transformed.

element **CircleTransformType/Transformation**

diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	documentation The Transformation element identifies the coordinate system to be used to transform the base circle.

complexType **CompositeFeatureActualBaseType**

diagram	<pre>graph LR subgraph FeatureActualBaseType_extension [FeatureActualBaseType (extension)] direction TB subgraph attributes id[id] end Attributes[Attributes] PointList[PointList] FeatureItemId[FeatureItemId] ActualComponentId[ActualComponentId] ManufacturingProcessId[ManufacturingProcessId] MeasurementDeviceIds[MeasurementDeviceIds] NotedEventIds[NotedEventIds] end CompositeFeatureActualBaseTy...[CompositeFeatureActualBaseTy...] CompositeFeatureActualBaseTy... --- Attributes CompositeFeatureActualBaseTy... --- PointList CompositeFeatureActualBaseTy... --- FeatureItemId CompositeFeatureActualBaseTy... --- ActualComponentId CompositeFeatureActualBaseTy... --- ManufacturingProcessId CompositeFeatureActualBaseTy... --- MeasurementDeviceIds CompositeFeatureActualBaseTy... --- NotedEventIds</pre>						
type	extension of FeatureActualBaseType						
properties	base	FeatureActualBaseType					
	abstract	true					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds						
used by	complexTypes	CompoundFeatureActualType PatternFeatureActualType ProfileGroupFeatureActualType RunoutGroupFeatureActualType					
attributes	Name	Type	Use	Default	Fixed	Annotation	
	id	QIFIdType	required			documentation The id attribute is the QIF id of the feature, used for referencing.	
annotation	documentation The CompositeFeatureActualBaseType is the abstract base type that defines the composite feature actual information for an individual composite feature.						

complexType **CompositeFeatureDefinitionBaseType**

diagram	<p>The diagram illustrates the relationship between CompositeFeatureDefinitionBaseType and FeatureDefinitionBaseType. FeatureDefinitionBaseType is shown as an extension, containing an attributes container with an id attribute. CompositeFeatureDefinitionBaseType is connected to a dashed box containing Attributes, which is also connected to the attributes container of FeatureDefinitionBaseType.</p>				
type	extension of FeatureDefinitionBaseType				
properties	<table><tr><td>base</td><td>FeatureDefinitionBaseType</td></tr><tr><td>abstract</td><td>true</td></tr></table>	base	FeatureDefinitionBaseType	abstract	true
base	FeatureDefinitionBaseType				
abstract	true				
children	Attributes				

used by	complexTypes CompoundFeatureDefinitionType PatternFeatureDefinitionType ProfileGroupFeatureDefinitionType RunoutGroupFeatureDefinitionType					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CompositeFeatureDefinitionBaseType is the abstract base type that defines the composite feature nominal information that can be common to one or more composite features.					

complexType **CompositeFeatureItemBaseType**

diagram							
type	extension of FeatureItemBaseType						
properties	base abstract	FeatureItemBaseType true					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPIId NotableEventIds CoordinateSystemId						
used by	complexTypes	CompoundFeatureItemBaseType PatternFeatureItemBaseType ProfileGroupFeatureItemBaseType RunoutGroupFeatureItemBaseType					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.	
annotation	documentation The CompositeFeatureItemBaseType is the abstract base type that defines an individual composite feature. A composite feature is a complex feature defined by a set of simple features to which a characteristic tolerance like composite profile can be applied.						

complexType **CompositeFeatureNominalBaseType**

diagram	<pre>classDiagram class FeatureNominalBaseType { Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds } class CompositeFeatureNominalBaseType { id FeatureNominalIds } FeatureNominalBaseType < -- CompositeFeatureNominalBaseType</pre>					
type	extension of FeatureNominalBaseType					
properties	base	FeatureNominalBaseType				
	abstract	true				
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds FeatureNominalIds					
used by	complexTypes	CompoundFeatureNominalType PatternFeatureNominalType ProfileGroupFeatureNominalType RunoutGroupFeatureNominalType				
attributes	Name	Type	Use	Default	Fixed	Annotation
	id	QIFIdType	required			documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CompositeFeatureNominalBaseType is the abstract base type that defines the composite feature nominal information for an individual composite feature.					

element **CompositeFeatureNominalBaseType/FeatureNominalIds**

diagram	<p>The diagram illustrates a UML class extension. A class named FeatureNominalIds is shown on the left, connected by a solid line to a dashed box representing the ArrayReferenceFullType. Inside this dashed box, there is a compartment labeled attributes containing the letter N. Below the attributes compartment, there is a compartment labeled Id with a multiplicity of 1..∞. The Id compartment is connected to a small box containing three dots, which is in turn connected to the FeatureNominalIds class.</p>
type	ArrayReferenceFullType
properties	content complex
children	Id

attributes	Name N	Type NaturalType	Use required	Default	Fixed	Annotation documentation The required N attribute shows how many Id elements are present in this array.
annotation	documentation The FeatureNominalIds element is a list of QIF ids of the set of feature items comprising the CompositeFeature. Having a single QIF id in the list is OK because it is allowable to reference another CompositeFeature.					

complexType **CompoundFeatureActualType**

diagram						
type	extension of CompositeFeatureActualBaseType					
properties	base CompositeFeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Location Direction					
used by	element CompoundFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CompoundFeatureActualType defines the compound feature actual information for an individual compound feature.					

element **CompoundFeatureActualType/Location**

diagram						
type	ActualPointType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

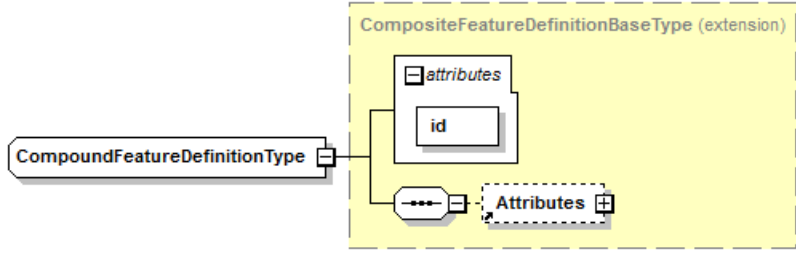
	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional Location element is the actual location of the compound feature. This is a point in the plane of a co-planar compound feature, on the axis of a co-axial compound feature, or at the center of a co-centered compound feature.

element **CompoundFeatureActualType/Direction**

diagram						
type	ActualUnitVectorType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional Direction element is the actual unit normal vector or unit axis vector of the compound feature.

complexType **CompoundFeatureDefinitionType**

diagram						
type	extension of CompositeFeatureDefinitionBaseType					
properties	base CompositeFeatureDefinitionBaseType					
children	Attributes					
used by	element CompoundFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CompoundFeatureDefinitionType defines the compound feature nominal information that can be common to one or more compound features.					

complexType **CompoundFeatureItem**

diagram						
type	extension of CompositeFeatureItemBaseType					
properties	base CompositeFeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId SubstituteFeatureAlgorithm					
used by	element CompoundFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CompoundFeatureItem type defines an individual compound feature. A compound feature is a complex feature defined by a set of simple features that are geometrically coincident (e.g., co-planar, co-axial) which can be used to establish a single compound datum.					

element **CompoundFeatureItem**/SubstituteFeatureAlgorithm

diagram						
type	FeatureOfSizeSubstituteFeatureAlgorithmType					
properties	minOcc	0	maxOcc	1	content	complex

children	FeatureOfSizeSubstituteFeatureAlgorithmEnum OtherFeatureOfSizeSubstituteFeatureAlgorithm
annotation	documentation The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the compound feature. If the compound feature is not a feature of size (i.e., planar) then neither the MINCIRCUMSCRIBED algorithm nor the MAXINSCRIBED algorithm should be used.

complexType **CompoundFeatureNominalType**

diagram	<pre> classDiagram class CompositeFeatureNominalBaseType { id Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds FeatureNominalIds } class CompoundFeatureNominalType { Location Direction CompoundFeatureForm } CompositeFeatureNominalBaseType < -- CompoundFeatureNominalType </pre>					
type	extension of CompositeFeatureNominalBaseType					
properties	base CompositeFeatureNominalBaseType					
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds FeatureNominalIds Location Direction CompoundFeatureForm					
used by	element CompoundFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CompoundFeatureNominalType defines the compound feature nominal information for an individual compound feature.					


element **CompoundFeatureNominalType/Location**

diagram						
type	PointType					
properties	content complex					
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation The Location element is the nominal location of the compound feature. This is a point in the plane of a co-planar compound feature, on the axis of a co-axial compound feature, or at the center of a co-centered compound feature.					

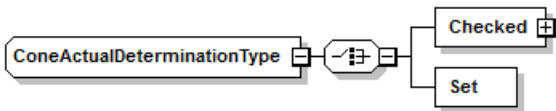
element **CompoundFeatureNominalType/Direction**

diagram						
type	UnitVectorType					
properties	content complex					
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation The Direction element is the nominal unit normal vector or the axis vector of the compound feature.					

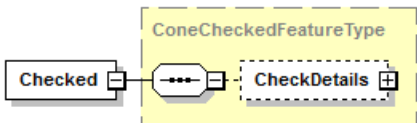
element **CompoundFeatureNominalType/CompoundFeatureForm**

diagram			
type	CompoundFeatureGeometryEnumType		
properties	content	simple	
facets	Kind	Value	Annotation
	enumeration	COAXIAL	
	enumeration	COPLANAR	
	enumeration	COCENTERED	
annotation	documentation The CompoundFeatureForm element is the type of the compound feature: COPLANAR, COAXIAL or COCENTERED.		


complexType **ConeActualDeterminationType**

diagram	
children	Checked Set
used by	element ConeFeatureItemType/DeterminationMode
annotation	documentation The ConeActualDeterminationType defines how the cone actual is determined, either by being set or by being checked (measured or constructed).

element **ConeActualDeterminationType/Checked**

diagram	
type	ConeCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	documentation The Checked element signifies that the cone is checked from actual data, either measured or constructed.

element **ConeActualDeterminationType/Set**

diagram	
type	SetFeatureType
properties	content complex
annotation	<div>documentation</div> <div>The Set element signifies that the cone actual is set to its nominal value.</div>

complexType **ConeBestFitType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element ConeConstructionMethodType/BestFit
annotation	<p>documentation</p> <p>The ConeBestFitType defines the information for a best-fit cone which includes a list of point-reducible base features; the points to which those features reduce are used in the best-fit construction of the cone.</p>

element **ConeBestFitType/BaseFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 6 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	<p>documentation</p> <p>Each BaseFeature element identifies a base feature to be used for the construction of a cone. The number of base features must be 6 or greater.</p>

complexType **ConeCastType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element ConeConstructionMethodType/Cast
annotation	<p>documentation</p> <p>The ConeCastType defines the cast of feature type to a cone. The location, vector and angle are copied from the base</p>

	feature. Any information not available on the base feature will remain at nominal.
--	--

element **ConeCastType/BaseFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseFeature element identifies the base feature to be cast to a cone.

complexType **ConeCheckedFeatureType**

diagram	
children	CheckDetails
used by	element ConeActualDeterminationType/Checked
annotation	documentation The ConeCheckedFeatureType defines that a cone feature is checked.

element **ConeCheckedFeatureType/CheckDetails**

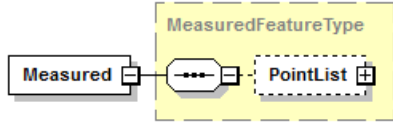
diagram	
type	ConeCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the cone check (measurement or construction).

complexType **ConeCheckedType**

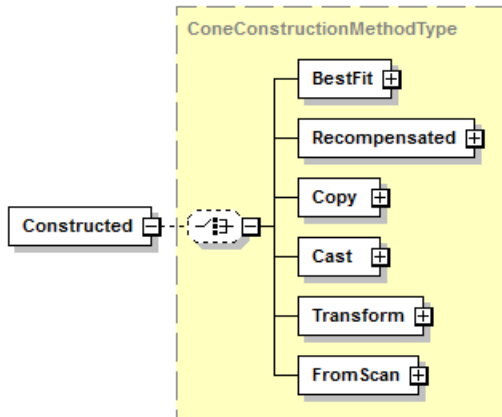
diagram	
children	Measured Constructed

used by	element ConeCheckedFeatureType/CheckDetails
annotation	documentation The ConeCheckedType defines how the cone actual is checked, either by measurement or by construction.

element **ConeCheckedType/Measured**

diagram	 <p>The diagram shows a yellow dashed box labeled 'MeasuredFeatureType'. Inside, a 'Measured' element (a rectangle with a small square on its right side) is connected by a solid line to a 'PointList' element (a rectangle with a small square on its left side). The 'PointList' element is enclosed in a dashed-line rectangle.</p>
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the cone is measured.

element **ConeCheckedType/Constructed**

diagram	 <p>The diagram shows a yellow dashed box labeled 'ConeConstructionMethodType'. Inside, a 'Constructed' element (a rectangle with a small square on its right side) is connected by a solid line to a dashed-line rectangle. This dashed rectangle is connected to a vertical list of six elements: 'BestFit', 'Recompensated', 'Copy', 'Cast', 'Transform', and 'FromScan'. Each of these elements is a rectangle with a small square on its right side.</p>
type	ConeConstructionMethodType
properties	content complex
children	BestFit Recompensated Copy Cast Transform FromScan
annotation	documentation The Constructed element signifies that the cone is constructed.

complexType **ConeConstructionMethodType**

diagram	
children	BestFit Recompensated Copy Cast Transform FromScan
used by	element ConeCheckedType/Constructed
annotation	documentation The ConeConstructionMethodType defines the method for constructing a unique nominal or actual cone feature.

element **ConeConstructionMethodType/BestFit**

diagram	
type	ConeBestFitType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The BestFit element describes the best-fit construction of a cone from 6 or more point-reducible base features. This element is in an optional choice.

element **ConeConstructionMethodType/Recompensated**

diagram	
type	ConeRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	documentation The Recompensated element describes the re-compensated-for- probe-size best-fit construction of a cone from 6 or more base feature points. This element is in an optional choice.

element **ConeConstructionMethodType/Copy**

diagram	
type	ConeCopyType
properties	content complex
children	NominalsCalculated BaseCone
annotation	documentation The Copy element describes the construction of a cone by the copying of a base cone. This element is in an optional choice.

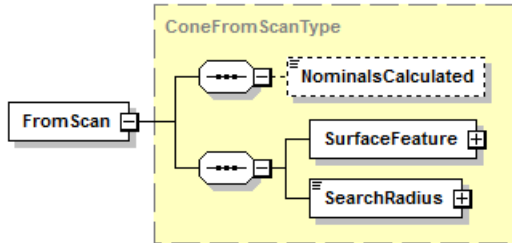
element **ConeConstructionMethodType/Cast**

diagram	
type	ConeCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The Cast element describes the construction of a cone by the casting of a base feature. This element is in an optional choice.

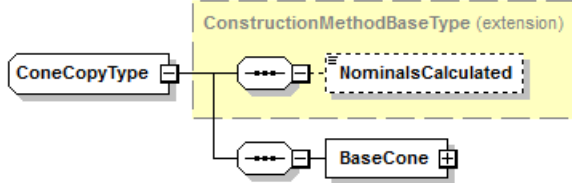
element **ConeConstructionMethodType/Transform**

diagram	
type	ConeTransformType
properties	content complex
children	NominalsCalculated BaseCone Transformation
annotation	documentation The Transform element describes the construction of a cone by the transformation of a base cone. This element is in an optional choice.

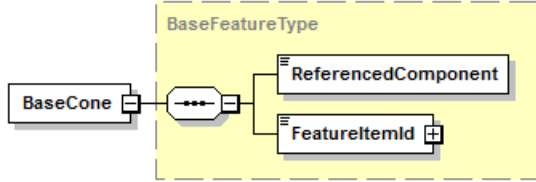
element **ConeConstructionMethodType/FromScan**

diagram	 <p>The diagram shows a 'FromScan' element connected to a dashed box labeled 'ConeFromScanType'. Inside this box, 'FromScan' is connected to two parallel paths. The top path leads to a 'NominalsCalculated' element. The bottom path leads to a 'SurfaceFeature' element, which is then connected to a 'SearchRadius' element.</p>
type	ConeFromScanType
properties	content complex
children	NominalsCalculated SurfaceFeature SearchRadius
annotation	documentation The FromScan element describes the construction of a cone from scan data. This element is in an optional choice.

complexType **ConeCopyType**

diagram	 <p>The diagram shows a 'ConeCopyType' element connected to a dashed box labeled 'ConstructionMethodBaseType (extension)'. Inside this box, 'ConeCopyType' is connected to two parallel paths. The top path leads to a 'NominalsCalculated' element. The bottom path leads to a 'BaseCone' element.</p>
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseCone
used by	element ConeConstructionMethodType/Copy
annotation	documentation The ConeCopyType defines a copied cone construction.

element **ConeCopyType/BaseCone**

diagram	 <p>The diagram shows a 'BaseCone' element connected to a dashed box labeled 'BaseFeatureType'. Inside this box, 'BaseCone' is connected to a 'ReferencedComponent' element, which is then connected to a 'FeatureItemId' element.</p>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseCone element identifies the cone to be copied.

complexType **ConeFeatureActualType**

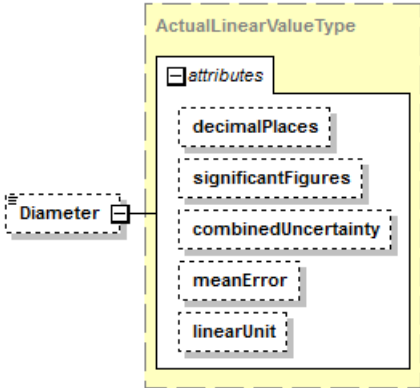
diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Axis Diameter DiameterMin DiameterMax HalfAngle FullAngle SmallEndDistance LargeEndDistance Sweep Form					
used by	element ConeFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.

annotation	documentation The ConeFeatureActualType defines the cone feature actual information for an individual cone feature.
------------	--

element ConeFeatureActualType/Axis

diagram	
type	ActualAxisType
properties	minOcc 0 maxOcc 1 content complex
children	AxisPoint Direction
annotation	documentation The optional Axis element is the actual XYZ locating point and unit axis vector of the cone which points from the locating point into the expanding end of the cone.

element ConeFeatureActualType/Diameter

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is

	linearUnit xs:token	a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Diameter element is the actual diameter of the the cone at the locating point. If the actual locating point is at the vertex this value will be zero.	

element **ConeFeatureActualType/DiameterMin**

diagram						
type	ActualLinearValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional DiameterMin element is the actual minimum diameter at the locating point of the cone from a report or an analysis.					

element **ConeFeatureActualType/DiameterMax**

diagram						
type	ActualLinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name decimalPlaces significantFigures combinedUncertainty meanError linearUnit	Type xs:nonNegativeInteger xs:nonNegativeInteger NonNegativeDecimalType NonNegativeDecimalType xs:token	Use	Default	Fixed	Annotation documentation See documentation of SpecifiedDecimalType. documentation See documentation of SpecifiedDecimalType. documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType. documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional DiameterMax element is the actual maximum diameter at the locating point of the cone from a report or an analysis.					

element **ConeFeatureActualType/HalfAngle**

diagram						
type	ActualAngularValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	angularUnit	xs:token				documentation The optional angularUnit attribute defines the unit used by ActualAngularValueType.
annotation	documentation The HalfAngle element is the actual angle between the side of the cone and its axis (this is half of the included angle of the cone). This angle will be greater than or equal to zero and less than or equal to 90 degrees.					

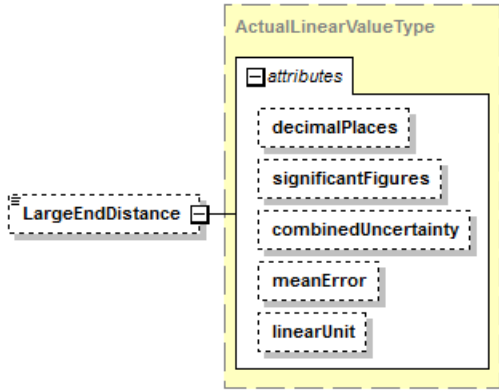
element **ConeFeatureActualType/FullAngle**

diagram	<pre>graph LR FullAngle[FullAngle] --- ActualAngularValueType[ActualAngularValueType] subgraph Attributes [attributes] decimalPlaces[decimalPlaces] significantFigures[significantFigures] combinedUncertainty[combinedUncertainty] meanError[meanError] angularUnit[angularUnit] end ActualAngularValueType --- Attributes</pre>					
type	ActualAngularValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	angularUnit	xs:token				documentation The optional angularUnit attribute defines the unit used by ActualAngularValueType.
annotation	documentation The FullAngle element is the actual angle between the sides of the cone in a plane including the cone's axis (this is the included angle of the cone). This angle will be greater than or equal to zero and less than or equal to 180 degrees.					

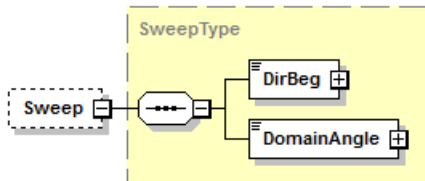
element **ConeFeatureActualType/SmallEndDistance**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional SmallEndDistance element is the actual distance from the locating point to the small end of a truncated cone along the axis vector.If the cone has a pointed end then this element must be omitted.					

element **ConeFeatureActualType/LargeEndDistance**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional LargeEndDistance element is the actual distance from the locating point to the large end of a truncated cone along the axis vector.					

element **ConeFeatureActualType/Sweep**

diagram						
type	SweepType					

properties	minOcc 0 maxOcc 1 content complex
children	DirBeg DomainAngle
annotation	documentation The optional Sweep element gives the actual start direction and the swept angle for a partial cone feature. The StartVector of the Sweep must lie in a plane normal to the axis of the cone.

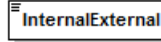
element **ConeFeatureActualType/Form**

diagram						
type	ActualLinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Form element is the form error (conicity) of the cone from a report or an analysis.					

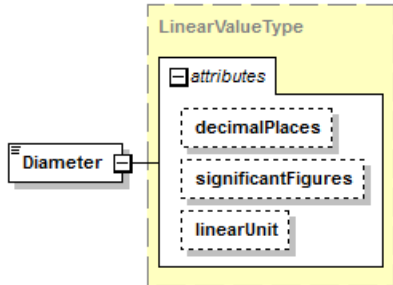
complexType **ConeFeatureDefinitionType**

diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes InternalExternal Diameter HalfAngle FullAngle LargeEndDistance SmallEndDistance					
used by	element ConeFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ConeFeatureDefinitionType defines the cone feature nominal information that can be common to one or more cone features.					

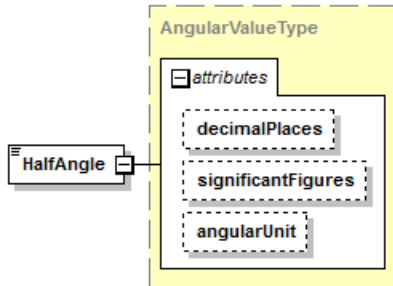
element **ConeFeatureDefinitionType/InternalExternal**

diagram			
type	InternalExternalEnumType		
properties	content simple		
facets	Kind enumeration enumeration enumeration	Value INTERNAL EXTERNAL NOT_APPLICABLE	Annotation
annotation	documentation The InternalExternal element indicates whether the feature is internal or external.		

element **ConeFeatureDefinitionType/Diameter**

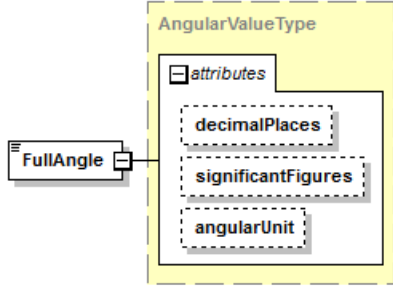
diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The Diameter element is the nominal diameter of the cone at the locating point. If the locating point is defined at the cone vertex then this value will be zero.					

element **ConeFeatureDefinitionType/Half Angle**

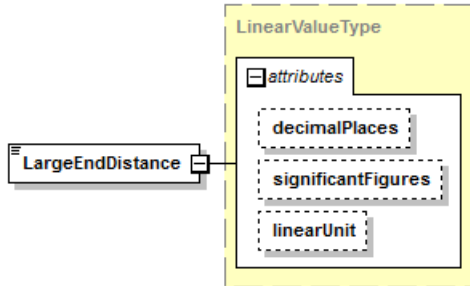
diagram						
type	AngularValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	angularUnit	xs:token				documentation The optional angularUnit attribute defines the UnitName for the AngularValueType.

annotation	documentation The HalfAngle element the nominal angle between the side of the cone and its axis (this is half of the included angle of the cone). This angle will be greater than zero and less than 90 degrees.
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element ConeFeatureDefinitionType/FullAngle

diagram						
type	AngularValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	angularUnit	xs:token				documentation The optional angularUnit attribute defines the UnitName for the AngularValueType.
annotation	documentation The FullAngle element is the nominal angle between the sides of the cone in a plane including the cone's axis (this is the included angle of the cone). This angle will be greater than zero and less than 180 degrees.					

element ConeFeatureDefinitionType/LargeEndDistance

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.

	linearUnit xs:token	documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The LargeEndDistance element is the nominal distance from the locating point to the large end of a truncated cone along the axis vector.	

element **ConeFeatureDefinitionType/SmallEndDistance**

diagram						
type	LinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The optional SmallEndDistance element is the nominal distance from the locating point to the small end of a truncated cone along the axis vector. If this element is missing, the cone has a pointed end.					

complexType **ConeFeatureItem**

diagram						
type	extension of FeatureItemBaseType					
properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element ConeFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ConeFeatureItem type defines an individual cone feature.					

element **ConeFeatureItem/DeterminationMode**

diagram						
type	ConeActualDeterminationType					
properties	content complex					
children	Checked Set					

annotation	documentation The DeterminationMode element is the means by which the cone feature actual is determined.
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element **ConeFeatureItem/Type/SubstituteFeatureAlgorithm**

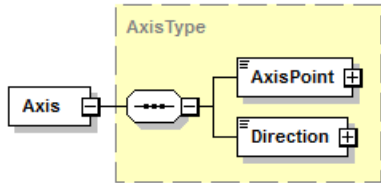
diagram	
type	FeatureOfSizeSubstituteFeatureAlgorithmType
properties	minOcc 0 maxOcc 1 content complex
children	FeatureOfSizeSubstituteFeatureAlgorithmEnum OtherFeatureOfSizeSubstituteFeatureAlgorithm
annotation	documentation The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the cone feature.

complexType **ConeFeatureNominalType**

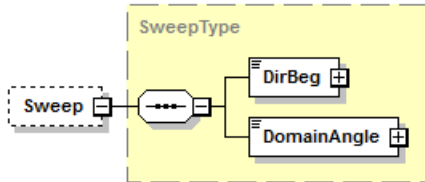
diagram	<p>The diagram illustrates the extension of the FeatureNominalBaseType by ConeFeatureNominalType. The extension is shown within a yellow dashed box. The attributes container is extended with the id attribute. The Attributes container is extended with Name, PointList, FeatureDefinitionId, EntityInternalIds, and EntityExternalIds. The Axis container is extended with Sweep.</p>												
type	extension of FeatureNominalBaseType												
properties	base FeatureNominalBaseType												
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Axis Sweep												
used by	element ConeFeatureNominal												
attributes	<table><thead><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr></thead><tbody><tr><td>id</td><td>QIFIdType</td><td>required</td><td></td><td></td><td>documentation The id attribute is the QIF id of the</td></tr></tbody></table>	Name	Type	Use	Default	Fixed	Annotation	id	QIFIdType	required			documentation The id attribute is the QIF id of the
Name	Type	Use	Default	Fixed	Annotation								
id	QIFIdType	required			documentation The id attribute is the QIF id of the								

		feature, used for referencing.
annotation	documentation The ConeFeatureNominalType defines the cone feature nominal information for an individual cone feature.	

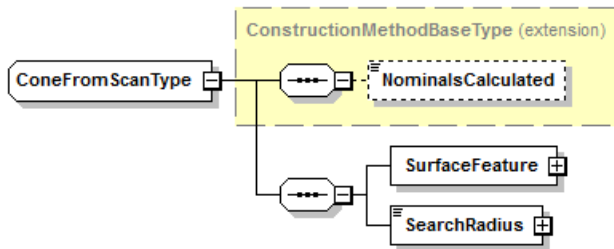
element ConeFeatureNominalType/Axis

diagram		
type	AxisType	
properties	content	complex
children	AxisPoint Direction	
annotation	documentation The Axis element is the nominal locating point and nominal unit axis vector of the cone which points from the locating point into the expanding end of the cone.	

element ConeFeatureNominalType/Sweep

diagram		
type	SweepType	
properties	minOcc 0 maxOcc 1 content	complex
children	DirBeg DomainAngle	
annotation	documentation The optional Sweep element is the swept angle for a partial cone. The swept angle is typically greater than 180 degrees for a feature of size. If the sweep is not specified then the feature subtends a full 360 degrees. The StartVector of the Sweep must lie in a plane normal to the axis of the cone.	

complexType ConeFromScanType

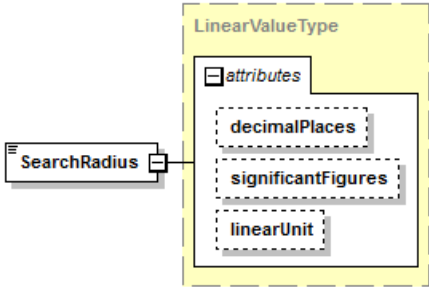
diagram		
type	extension of ConstructionMethodBaseType	
properties	base	ConstructionMethodBaseType

children	NominalsCalculated SurfaceFeature SearchRadius
used by	element ConeConstructionMethodType/FromScan
annotation	documentation The ConeFromScanType defines a cone construction by the retrieval of a cone from a scanned surface feature (point cloud).

element **ConeFromScanType/SurfaceFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The SurfaceFeature element identifies the scanned surface feature from which the cone is retrieved.

element **ConeFromScanType/SearchRadius**

diagram																									
type	LinearValueType																								
properties	content complex																								
attributes	<table><thead><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr></thead><tbody><tr><td>decimalPlaces</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr><tr><td>significantFigures</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr><tr><td>linearUnit</td><td>xs:token</td><td></td><td></td><td></td><td>documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.</td></tr></tbody></table>	Name	Type	Use	Default	Fixed	Annotation	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
Name	Type	Use	Default	Fixed	Annotation																				
decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.																				
significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.																				
linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.																				
annotation	<p>documentation</p> <p>The SearchRadius element is the radius around the nominal feature, wherein the actual feature can be expected. The SearchRadius is the radius added to and subtracted from the nominal feature radius (normal to the cone surface) to define a conical shell. All scanned points within this conical shell are used for the retrieval of the feature. The conical shell's axis is defined by the feature's direction and the conical shell's axis passes through the feature's center point. The conical acceptance shell is evenly disposed about the nominal cone.</p>																								

complexType **ConeRecompType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeaturePointList
used by	element ConeConstructionMethodType/Recompensated
annotation	<p>documentation</p> <p>The ConeRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit cone through the measurement points of base features.</p>

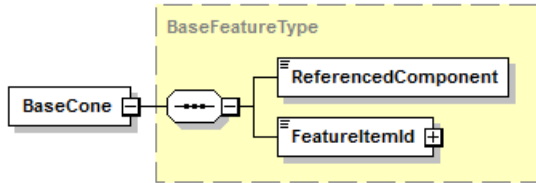
element **ConeRecompType/BaseFeaturePointList**

diagram	
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	<p>documentation</p> <p>The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit cone. The total number of points in the BaseFeaturePointSets in the list must be 6 or greater.</p>

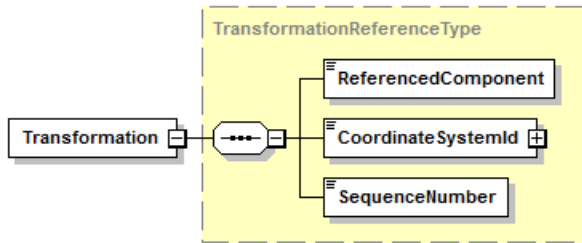
complexType **ConeTransformType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseCone Transformation
used by	element ConeConstructionMethodType/Transform
annotation	<p>documentation</p> <p>The ConeTransformType defines a cone construction by the transformation of a base cone through the specified nominal or actual coordinate system.</p>

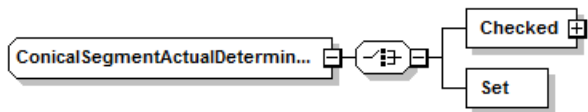
element **ConeTransformType/BaseCone**

diagram	 <p>The diagram shows a BaseCone element connected to a dashed box labeled BaseFeatureType. Inside this box, the BaseCone is linked to a container that holds ReferencedComponent and FeatureItemId.</p>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseCone element identifies the cone to be transformed.

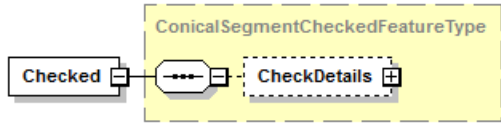
element **ConeTransformType/Transformation**

diagram	 <p>The diagram shows a Transformation element connected to a dashed box labeled TransformationReferenceType. Inside this box, the Transformation is linked to a container that holds ReferencedComponent, CoordinateSystemId, and SequenceNumber.</p>
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	documentation The Transformation element identifies the coordinate system to be used to transform the cone.


complexType **ConicalSegmentActualDeterminationType**

diagram	 <p>The diagram shows a ConicalSegmentActualDetermin... element connected to a container that holds Checked and Set elements.</p>
children	Checked Set
used by	element ConicalSegmentFeatureItem/DeterminationMode
annotation	documentation The ConicalSegmentActualDeterminationType defines how the conical segment feature actual is determined, either by being set or by being checked (measured or constructed).

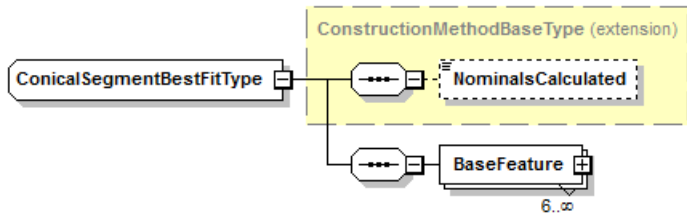
element **ConicalSegmentActualDeterminationType/Checked**

diagram	 The diagram shows a box labeled 'Checked' connected to a dashed box labeled 'ConicalSegmentCheckedFeatureType'. Inside this dashed box, there is a box labeled 'CheckDetails' with a plus sign in its corner.
type	ConicalSegmentCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	documentation The Checked element signifies that the conical segment feature is checked from actual data, either measured or constructed.

element **ConicalSegmentActualDeterminationType/Set**

diagram	 The diagram shows a simple box labeled 'Set'.
type	SetFeatureType
properties	content complex
annotation	documentation The Set element signifies that the conical segment feature actual is set to its nominal value.

complexType **ConicalSegmentBestFitType**

diagram	 The diagram shows a box labeled 'ConicalSegmentBestFitType' connected to a dashed box labeled 'ConstructionMethodBaseType (extension)'. Inside this dashed box, there is a box labeled 'NominalsCalculated' with a plus sign in its corner. Below the dashed box, there is a box labeled 'BaseFeature' with a plus sign in its corner and a multiplicity of '6..∞'.
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element ConicalSegmentConstructionMethodType/BestFit
annotation	documentation The ConicalSegmentBestFitType defines the information for a best-fit conical segment which includes a list of point-reducible base features; the points to which those features reduce are used in the best-fit construction of the conical segment.

element **ConicalSegmentBestFitType/BaseFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 6 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	documentation Each BaseFeature element identifies a base feature to be used for the construction of a conical segment. The number of base features must be 6 or greater.


complexType **ConicalSegmentCastType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element ConicalSegmentConstructionMethodType/Cast
annotation	documentation The ConicalSegmentCastType defines a conical segment construction by the casting of another feature type to a conical segment. The location, vector and size are copied from the base feature. Any information not available on the base feature will remain at nominal.

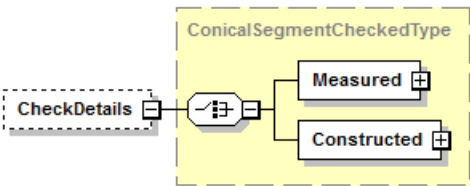
element **ConicalSegmentCastType/BaseFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseFeature element identifies the base feature to be cast to a conical segment.

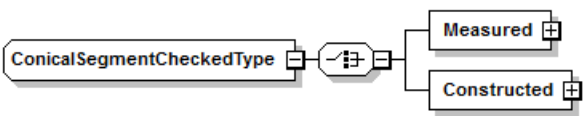
complexType ConicalSegmentCheckedFeatureType

diagram	
children	CheckDetails
used by	element ConicalSegmentActualDeterminationType/Checked
annotation	documentation The ConicalSegmentCheckedFeatureType defines that a conical segment feature is checked.

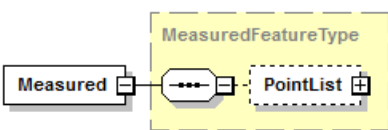
element ConicalSegmentCheckedFeatureType/CheckDetails

diagram	
type	ConicalSegmentCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the conical segment feature check (measurement or construction).

complexType ConicalSegmentCheckedType

diagram	
children	Measured Constructed
used by	element ConicalSegmentCheckedFeatureType/CheckDetails
annotation	documentation The ConicalSegmentCheckedType defines how the conical segment feature actual is checked, either by measurement or by construction.

element ConicalSegmentCheckedType/Measured

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the conical segment feature is measured.

element **ConicalSegmentCheckedType/Constructed**

diagram	
type	ConicalSegmentConstructionMethodType
properties	content complex
children	BestFit Recompensated Copy Cast Transform
annotation	documentation The Constructed element signifies that the conical segment feature is constructed.

complexType **ConicalSegmentConstructionMethodType**

diagram	
children	BestFit Recompensated Copy Cast Transform
used by	element ConicalSegmentCheckedType/Constructed
annotation	documentation The ConicalSegmentConstructionMethodType defines the method for constructing a unique nominal or actual conical segment feature.

element **ConicalSegmentConstructionMethodType/BestFit**

diagram	
type	ConicalSegmentBestFitType
properties	content complex

children	NominalsCalculated BaseFeature
annotation	documentation The BestFit element describes the best-fit construction of a conical segment from 6 or more point-reducible base features. This element is in an optional choice.

element **ConicalSegmentConstructionMethodType/Recompensated**

diagram	<pre> graph LR R[Recompensated] --- C[ConicalSegmentRecompType] subgraph C [ConicalSegmentRecompType] direction TB N[NominalsCalculated] B[BaseFeaturePointList] end </pre>
type	ConicalSegmentRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	documentation The Recompensated element describes the re-compensated-for- probe-size best-fit construction of a conical segment from 6 or more base feature points. This element is in an optional choice.

element **ConicalSegmentConstructionMethodType/Copy**

diagram	<pre> graph LR C[Copy] --- CC[ConicalSegmentCopyType] subgraph CC [ConicalSegmentCopyType] direction TB N[NominalsCalculated] B[BaseConicalSegment] end </pre>
type	ConicalSegmentCopyType
properties	content complex
children	NominalsCalculated BaseConicalSegment
annotation	documentation The Copy element describes the construction of a conical segment by the copying of a base conical segment. This element is in an optional choice.

element **ConicalSegmentConstructionMethodType/Cast**

diagram	<pre> graph LR Cast[Cast] --- CCT[ConicalSegmentCastType] subgraph CCT [ConicalSegmentCastType] direction TB N[NominalsCalculated] B[BaseFeature] end </pre>
type	ConicalSegmentCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The Cast element describes the construction of a conical segment by the casting of a base feature. This element is in an

	optional choice.
--	------------------

element **ConicalSegmentConstructionMethodType/Transform**

diagram	<pre> graph LR Transform[Transform] --- Box subgraph ConicalSegmentTransformType direction TB NominalsCalculated[NominalsCalculated] BaseConicalSegment[BaseConicalSegment] Transformation[Transformation] end Box --- NominalsCalculated Box --- BaseConicalSegment Box --- Transformation </pre>
type	ConicalSegmentTransformType
properties	content complex
children	NominalsCalculated BaseConicalSegment Transformation
annotation	<p>documentation</p> <p>The Transform element describes the construction of a conical segment by the transformation of a base conical segment. This element is in an optional choice.</p>

complexType **ConicalSegmentCopyType**

diagram	<pre> graph LR ConicalSegmentCopyType[ConicalSegmentCopyType] --- Box subgraph ConstructionMethodBaseType_extension direction TB NominalsCalculated[NominalsCalculated] BaseConicalSegment[BaseConicalSegment] end Box --- NominalsCalculated Box --- BaseConicalSegment </pre>
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseConicalSegment
used by	element ConicalSegmentConstructionMethodType/Copy
annotation	<p>documentation</p> <p>The ConicalSegmentCopyType defines a copied conical segment construction.</p>

element **ConicalSegmentCopyType/BaseConicalSegment**

diagram	<pre> graph LR BaseConicalSegment[BaseConicalSegment] --- Box subgraph BaseFeatureType direction TB ReferencedComponent[ReferencedComponent] FeatureItemId[FeatureItemId] end Box --- ReferencedComponent Box --- FeatureItemId </pre>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The BaseConicalSegment element identifies the conical segment to be copied.</p>

complexType **ConicalSegmentFeatureActualType**

diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Axis Diameter DiameterMin DiameterMax HalfAngle FullAngle SmallEndDistance LargeEndDistance Sweep Form					
used by	element ConicalSegmentFeatureActual					
attributes	Name	Type	Use	Default	Fixed	Annotation
	id	QIFIdType	required			documentation The id attribute is the QIF id of the feature, used

	for referencing.
annotation	documentation The ConicalSegmentFeatureActualType defines the conical segment feature actual information for an individual conical segment feature.

element ConicalSegmentFeatureActualType/Axis

diagram	
type	ActualAxisType
properties	minOcc 0 maxOcc 1 content complex
children	AxisPoint Direction
annotation	documentation The optional Axis element is the actual XYZ locating point and unit axis vector of the conical segment which points from the locating point into the expanding end of the conical segment.

element ConicalSegmentFeatureActualType/Diameter

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.

	<p>meanError NonNegativeDecimalType</p> <p>linearUnit xs:token</p>	<p>documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.</p> <p>documentation The optional linearUnit attribute defines the unit used by LinearValueType.</p>
annotation	<p>documentation The optional Diameter element is the actual diameter of the the conical segment at the locating point. If the actual locating point is at the vertex this value will be zero.</p>	

element **ConicalSegmentFeatureActualType/DiameterMin**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.

annotation	<p>documentation</p> <p>The optional DiameterMin element is the actual minimum diameter at the locating point of the conical segment from a report or an analysis.</p>
------------	--

element **ConicalSegmentFeatureActualType/DiameterMax**

diagram						
type	ActualLinearValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				<p>documentation</p> <p>See documentation of SpecifiedDecimalType.</p>
	significantFigures	xs:nonNegativeInteger				<p>documentation</p> <p>See documentation of SpecifiedDecimalType.</p>
	combinedUncertainty	NonNegativeDecimalType				<p>documentation</p> <p>The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.</p>
	meanError	NonNegativeDecimalType				<p>documentation</p> <p>The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.</p>
	linearUnit	xs:token				<p>documentation</p> <p>The optional linearUnit attribute defines the unit used by LinearValueType.</p>
annotation	<p>documentation</p> <p>The optional DiameterMax element is the actual maximum diameter at the locating point of the conical segment from a report or an analysis.</p>					

element **ConicalSegmentFeatureActualType/HalfAngle**

diagram						
type	ActualAngularValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	angularUnit	xs:token				documentation The optional angularUnit attribute defines the unit used by ActualAngularValueType.
annotation	documentation The HalfAngle element is the actual angle between the side of the conical segment and its axis (this is half of the included angle of the conical segment). This angle will be greater than or equal to zero and less than or equal to 90 degrees.					

element **ConicalSegmentFeatureActualType/FullAngle**

diagram						
type	ActualAngularValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	angularUnit	xs:token				documentation The optional angularUnit attribute defines the unit used by ActualAngularValueType.
annotation	documentation The FullAngle element is the actual angle between the sides of the conical segment in a plane including the conical segment's axis (this is the included angle of the conical segment). This angle will be greater than or equal to zero and less than or equal to 180 degrees.					

element **ConicalSegmentFeatureActualType/SmallEndDistance**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional SmallEndDistance element is the actual distance from the locating point to the small end of the conical segment along the axis vector.If the cone has a pointed end then this element must be omitted.					

element **ConicalSegmentFeatureActualType/LargeEndDistance**

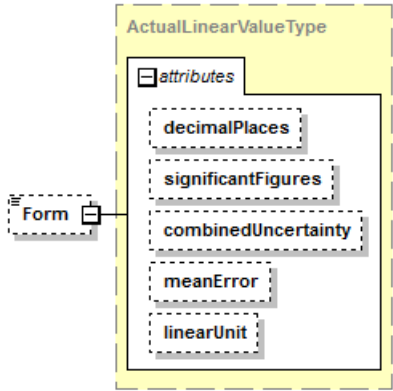
diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional LargeEndDistance element is the actual distance from the locating point to the large end of the conical segment along the axis vector.					

element **ConicalSegmentFeatureActualType/Sweep**

diagram						
type	SweepType					

properties	minOcc 0 maxOcc 1 content complex
children	DirBeg DomainAngle
annotation	documentation The optional Sweep element gives the actual start direction and the swept angle for a conical segment feature. The StartVector of the Sweep must lie in a plane normal to the axis of the cone.

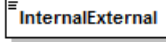
element **ConicalSegmentFeatureActualType/Form**

diagram						
type	ActualLinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Form element is the form error (conicity) of the conical segment from a report or an analysis.					

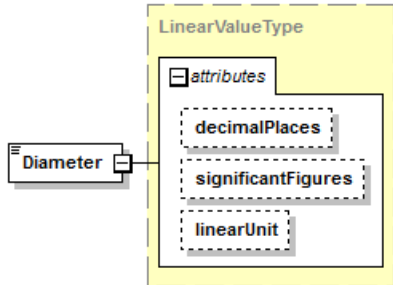
complexType **ConicalSegmentFeatureDefinitionType**

diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes InternalExternal Diameter HalfAngle FullAngle LargeEndDistance SmallEndDistance					
used by	element ConicalSegmentFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ConicalSegmentFeatureDefinitionType defines the conical segment feature nominal information that can be common to one or more conical segment features.					

element **ConicalSegmentFeatureDefinitionType/InternalExternal**

diagram			
type	InternalExternalEnumType		
properties	content simple		
facets	Kind enumeration enumeration enumeration	Value INTERNAL EXTERNAL NOT_APPLICABLE	Annotation
annotation	documentation The InternalExternal element indicates whether the feature is internal or external.		

element **ConicalSegmentFeatureDefinitionType/Diameter**

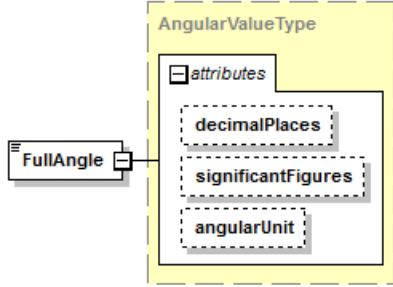
diagram						
type	LinearValueType					
properties	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The Diameter element is the nominal diameter of the conical segment at the locating point. If the locating point is defined at the conical segment's vertex then this value will be zero.					

element **ConicalSegmentFeatureDefinitionType/Half Angle**

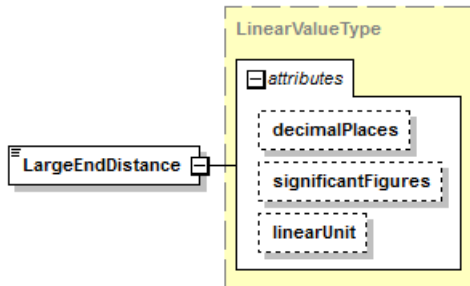
diagram						
type	AngularValueType					
properties	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	angularUnit	xs:token				documentation The optional angularUnit attribute defines the UnitName for the AngularValueType.

annotation	<p>documentation</p> <p>The HalfAngle element is the nominal angle between the side of the conical segment and its axis (this is half of the included angle of the conical segment). This angle will be greater than zero and less than 90 degrees.</p>
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element **ConicalSegmentFeatureDefinitionType/FullAngle**

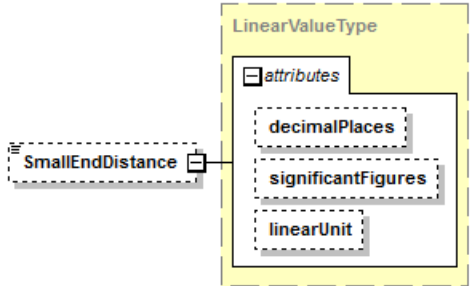
diagram						
type	AngularValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	angularUnit	xs:token				documentation The optional angularUnit attribute defines the UnitName for the AngularValueType.
annotation	<p>documentation</p> <p>The FullAngle element is the nominal angle between the sides of the conical segment in a plane including the conical segment's axis (this is the included angle of the conical segment). This angle will be greater than zero and less than 180 degrees.</p>					

element **ConicalSegmentFeatureDefinitionType/LargeEndDistance**

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of

	linearUnit xs:token	SpecifiedDecimalType. documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The LargeEndDistance element is the nominal distance from the locating point to the large end of the conical segment along the axis vector.	

element **ConicalSegmentFeatureDefinitionType/SmallEndDistance**

diagram						
type	LinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation	The optional SmallEndDistance element is the nominal distance from the locating point to the small end of the conical segment along the axis vector. If this element is missing, the conical segment has a pointed end.				

complexType **ConicalSegmentFeatureItemType**

diagram						
type	extension of FeatureItemBaseType					
properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPId NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element ConicalSegmentFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ConicalSegmentFeatureItemType defines an individual conical segment feature. A conical segment feature is a portion of a cone, for example, the surface of a rounded corner of a pocket with draft.					

element **ConicalSegmentFeatureItemType/DeterminationMode**

diagram						
type	ConicalSegmentActualDeterminationType					
properties	content complex					

children	Checked Set
annotation	documentation The DeterminationMode element is the means by which the conical segment feature actual is determined.

element **ConicalSegmentFeatureItemType/SubstituteFeatureAlgorithm**

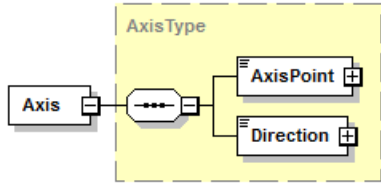
diagram	
type	NonFeatureOfSizeSubstituteFeatureAlgorithmType
properties	minOcc 0 maxOcc 1 content complex
children	NonFeatureOfSizeSubstituteFeatureAlgorithmEnum OtherNonFeatureOfSizeSubstituteFeatureAlgorithm
annotation	documentation The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the conical segment feature.

complexType **ConicalSegmentFeatureNominalType**

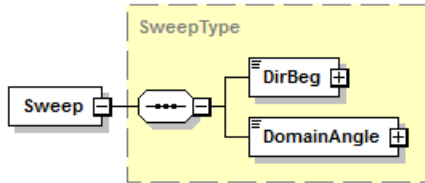
diagram													
type	extension of FeatureNominalBaseType												
properties	base FeatureNominalBaseType												
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Axis Sweep												
used by	element ConicalSegmentFeatureNominal												
attributes	<table><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr><tr><td>id</td><td>QIFIdType</td><td>required</td><td></td><td></td><td>documentation</td></tr></table>	Name	Type	Use	Default	Fixed	Annotation	id	QIFIdType	required			documentation
Name	Type	Use	Default	Fixed	Annotation								
id	QIFIdType	required			documentation								

		The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ConicalSegmentFeatureNominalType defines the conical segment feature nominal information for an individual conical segment feature.	

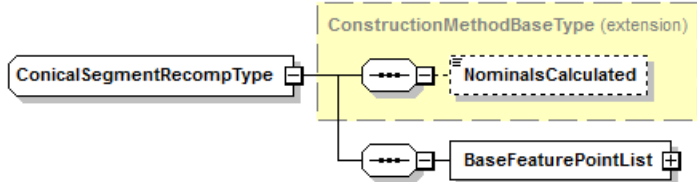
element **ConicalSegmentFeatureNominalType/Axis**

diagram		
type	AxisType	
properties	content complex	
children	AxisPoint Direction	
annotation	documentation The Axis element is the nominal locating point and nominal unit axis vector of the conical segment which points from the locating point into the expanding end of the conical segment.	

element **ConicalSegmentFeatureNominalType/Sweep**

diagram		
type	SweepType	
properties	content complex	
children	DirBeg DomainAngle	
annotation	documentation The Sweep element gives the start direction and the swept angle for a conical segment feature. The StartVector of the Sweep must lie in a plane normal to the axis of the cone.	

complexType **ConicalSegmentRecompType**

diagram		
type	extension of ConstructionMethodBaseType	
properties	base ConstructionMethodBaseType	

children	NominalsCalculated BaseFeaturePointList
used by	element ConicalSegmentConstructionMethodType/Recompensated
annotation	documentation The ConicalSegmentRecompType defines a list of base feature points for the construction of a re-compensated-for-probe-size best-fit conical segment through the measurement points of base features.

element **ConicalSegmentRecompType/BaseFeaturePointList**

diagram	
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	documentation The BaseFeaturePointList element gives a list of sets of points for the construction of a re-compensated-for-probe-size best-fit conical segment. The total number of points in the BaseFeaturePointSets in the list must be 6 or greater.

complexType **ConicalSegmentTransformType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseConicalSegment Transformation
used by	element ConicalSegmentConstructionMethodType/Transform
annotation	documentation The ConicalSegmentTransformType defines a conical segment construction by the transformation of a conical segment through the specified nominal or actual coordinate system.

element **ConicalSegmentTransformType/BaseConicalSegment**

diagram	
type	BaseFeatureType
properties	content complex

children	ReferencedComponent FeatureItemId
annotation	documentation The BaseConicalSegment element identifies the conical segment to be transformed.

element **ConicalSegmentTransformType/Transformation**

diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	documentation The Transformation element identifies the coordinate system to be used to transform the base conical segment.

complexType **ConstructionMethodBaseType**

diagram	
properties	abstract true
children	NominalsCalculated
used by	<p>complexTypes</p> <p> ArcBestFitType ArcCastType ArcCopyType ArcExtractType ArcFromScanType ArcProjectionType ArcRecompType ArcTransformType CircleBestFitType CircleCastType CircleCopyType CircleFromConeType CircleFromScanType CircleIntersectionType CircleProjectionType CircleRecompType CircleTangentThroughType CircleTangentType CircleTransformType ConeBestFitType ConeCastType ConeCopyType ConeFromScanType ConeRecompType ConeTransformType ConicalSegmentBestFitType ConicalSegmentCastType ConicalSegmentCopyType ConicalSegmentRecompType ConicalSegmentTransformType CuboidBestFitType CuboidCastType CuboidCopyType CuboidRecompType CuboidTransformType CylinderBestFitType CylinderCastType CylinderCopyType CylinderFromScanType CylinderRecompType CylinderTransformType CylindricalSegmentBestFitType CylindricalSegmentCastType CylindricalSegmentCopyType CylindricalSegmentRecompType CylindricalSegmentTransformType EdgePointCastType EdgePointCopyType EdgePointFromScanType EdgePointTransformType EllipseBestFitType EllipseCastType EllipseCopyType EllipseFromScanType EllipseIntersectionType EllipseProjectionType EllipseRecompType EllipseTransformType ElongatedCylinderBestFitType ElongatedCylinderCastType ElongatedCylinderCopyType ElongatedCylinderRecompType ElongatedCylinderTransformType ExtrudedCrossSectionBestFitType ExtrudedCrossSectionCastType ExtrudedCrossSectionCopyType ExtrudedCrossSectionRecompType ExtrudedCrossSectionTransformType LineBestFitType LineCastType LineCopyType LineExtractType LineFromScanType LineIntersectionType LineMidlineType LineParallelType LinePerpendicularType LineProjectionType LineRecompType LineTangentThroughType LineTransformType OppositeLinesBestFitType OppositeLinesCastType OppositeLinesCopyType OppositeLinesFromScanType OppositeLinesProjectionType OppositeLinesRecompType OppositeLinesTransformType OppositePlanesBestFitType OppositePlanesCastType OppositePlanesCopyType OppositePlanesFromScanType OppositePlanesRecompType OppositePlanesTransformType PlaneBestFitType PlaneCastType PlaneCopyType PlaneExtractType PlaneMidplaneType PlaneOffsetType PlaneParallelType PlanePerpendicularType PlaneRecompType PlaneTangentThroughType PlaneTransformType PointDefinedCurveBestFitType PointDefinedCurveCopyType PointDefinedCurveExtractType PointDefinedCurveFromScanType PointDefinedCurveRecompType PointDefinedCurveTransformType </p>

	PointDefinedSurfaceBestFitType PointDefinedSurfaceCopyType PointDefinedSurfaceExtractType PointDefinedSurfaceRecompType PointDefinedSurfaceTransformType PointFeatureCastType PointFeatureCenterOfGravityType PointFeatureCopyType PointFeatureExtremeType PointFeatureFromConeType PointFeatureFromScanType PointFeatureIntersectionType PointFeatureMidPointType PointFeatureMovePointAxisType PointFeatureMovePointType PointFeatureMovePointVectorType PointFeaturePierceType PointFeatureProjectionType PointFeatureTransformType SphereBestFitType SphereCastType SphereCopyType SphereFromScanType SphereRecompType SphereTransformType SphericalSegmentBestFitType SphericalSegmentCastType SphericalSegmentCopyType SphericalSegmentRecompType SphericalSegmentTransformType SurfaceOfRevolutionBestFitType SurfaceOfRevolutionCastType SurfaceOfRevolutionCopyType SurfaceOfRevolutionRecompType SurfaceOfRevolutionTransformType ThreadedFeatureBestFitType ThreadedFeatureCastType ThreadedFeatureCopyType ThreadedFeatureFromCylinderType ThreadedFeatureRecompType ThreadedFeatureTransformType ToroidalSegmentBestFitType ToroidalSegmentCastType ToroidalSegmentCopyType ToroidalSegmentRecompType ToroidalSegmentTransformType TorusBestFitType TorusCastType TorusCopyType TorusFromScanType TorusRecompType TorusTransformType
annotation	<p>documentation</p> <p>The ConstructionMethodBaseType is the abstract base type that defines a construction method. A construction method defines the data for constructing a feature and describes how to use that data in the construction of a feature. In any case where more than one feature can be constructed with the same input, the result closest to the feature's nominal definition will be chosen.</p>

element **ConstructionMethodBaseType/NominalsCalculated**

diagram	
type	xs:boolean
properties	minOcc 0 maxOcc 1 content simple
annotation	<p>documentation</p> <p>The optional NominalsCalculated element identifies whether nominals are calculated rather than supplied for the constructed feature: "true" for calculated, "false" or not present for supplied.</p>

complexType **CuboidActualDeterminationType**


diagram	
children	Checked Set
used by	element CuboidFeatureItem/DeterminationMode
annotation	<p>documentation</p> <p>The CuboidActualDeterminationType defines how the cuboid actual is determined, either by being set or by being checked (measured or constructed).</p>

element **CuboidActualDeterminationType/Checked**

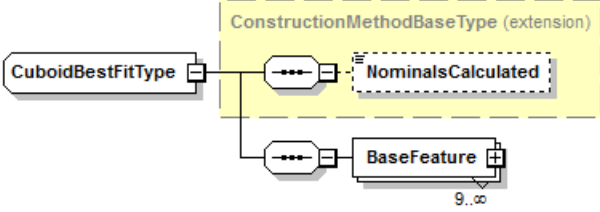
diagram	
type	CuboidCheckedFeatureType

properties	content complex
children	CheckDetails
annotation	documentation The Checked element signifies that the cuboid is checked from actual data, either measured or constructed.

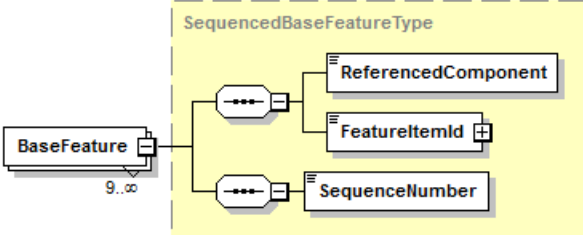
element **CuboidActualDeterminationType/Set**

diagram	
type	SetFeatureType
properties	content complex
annotation	documentation The Set element signifies that the cuboid actual is set to its nominal value.

complexType **CuboidBestFitType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element CuboidConstructionMethodType/BestFit
annotation	documentation The CuboidBestFitType defines the information for a best-fit cuboid which includes a list of point-reducible base features; the points to which those features reduce are used in the best-fit construction of the cuboid.

element **CuboidBestFitType/BaseFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 9 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	documentation Each BaseFeature element identifies a base feature to be used for the construction of a cuboid. The number of base features must be 9 or greater.

complexType **CuboidCastType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element CuboidConstructionMethodType/Cast
annotation	<p>documentation</p> <p>The CuboidCastType defines a cuboid construction by the casting of another feature type to a cuboid. The location, vectors and sizes are copied from the base feature. Any information not available on the base feature will remain at nominal.</p>

element **CuboidCastType/BaseFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The BaseFeature element identifies the base feature to be cast to a cuboid.</p>

complexType **CuboidCheckedFeatureType**

diagram	
children	CheckDetails
used by	element CuboidActualDeterminationType/Checked
annotation	<p>documentation</p> <p>The CuboidCheckedFeatureType defines that a cuboid feature is checked.</p>

element **CuboidCheckedFeatureType/CheckDetails**

diagram	
type	CuboidCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the cuboid check (measurement or construction).

complexType **CuboidCheckedType**

diagram	
children	Measured Constructed
used by	element CuboidCheckedFeatureType/CheckDetails
annotation	documentation The CuboidCheckedType defines how the cuboid actual is checked, either by measurement or by construction.

element **CuboidCheckedType/Measured**

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the cuboid is measured.

element **CuboidCheckedType/Constructed**

diagram	
type	CuboidConstructionMethodType
properties	content complex
children	BestFit Recompensated Copy Cast Transform
annotation	documentation The Constructed element signifies that the cuboid is constructed.

complexType **CuboidConstructionMethodType**

diagram	
children	BestFit Recompensated Copy Cast Transform
used by	element CuboidCheckedType/Constructed
annotation	documentation The CuboidConstructionMethodType defines the method for constructing a unique nominal or actual cuboid feature.

element **CuboidConstructionMethodType/BestFit**

diagram	
type	CuboidBestFitType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The BestFit element describes the best-fit construction of a cuboid from 9 or more point-reducible base features. This

	element is in an optional choice.
--	-----------------------------------

element CuboidConstructionMethodType/Recompensated

diagram	<p>The diagram shows a 'Recompensated' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'CuboidRecompType'. Inside this box, there are two elements: 'NominalsCalculated' (a dashed rectangle) and 'BaseFeaturePointList' (a rectangle with a small square on its right side). Both are connected to the main line from 'Recompensated'.</p>
type	CuboidRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	<p>documentation</p> <p>The Recompensated element describes the re-compensated-for- probe-size best-fit construction of a cuboid from 9 or more base feature points. This element is in an optional choice.</p>

element CuboidConstructionMethodType/Copy

diagram	<p>The diagram shows a 'Copy' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'CuboidCopyType'. Inside this box, there are two elements: 'NominalsCalculated' (a dashed rectangle) and 'BaseCuboid' (a rectangle with a small square on its right side). Both are connected to the main line from 'Copy'.</p>
type	CuboidCopyType
properties	content complex
children	NominalsCalculated BaseCuboid
annotation	<p>documentation</p> <p>The Copy element describes the construction of a cuboid by the copying of a base cuboid. This element is in an optional choice.</p>

element CuboidConstructionMethodType/Cast

diagram	<p>The diagram shows a 'Cast' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'CuboidCastType'. Inside this box, there are two elements: 'NominalsCalculated' (a dashed rectangle) and 'BaseFeature' (a rectangle with a small square on its right side). Both are connected to the main line from 'Cast'.</p>
type	CuboidCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	<p>documentation</p> <p>The Cast element describes the construction of a cuboid by the casting of a base feature. This element is in an optional choice.</p>

element **CuboidConstructionMethodType/Transform**

diagram	<p>The diagram shows a 'Transform' element connected to a dashed box labeled 'CuboidTransformType'. Inside this box, there are three elements: 'NominalsCalculated' (dashed), 'BaseCuboid' (solid), and 'Transformation' (solid). The 'Transform' element is connected to the 'NominalsCalculated' element, which is then connected to the 'BaseCuboid' and 'Transformation' elements.</p>
type	CuboidTransformType
properties	content complex
children	NominalsCalculated BaseCuboid Transformation
annotation	<p>documentation</p> <p>The Transform element describes the construction of a cuboid by the transformation of a base cuboid. This element is in an optional choice.</p>

complexType **CuboidCopyType**

diagram	<p>The diagram shows a 'CuboidCopyType' element connected to a dashed box labeled 'ConstructionMethodBaseType (extension)'. Inside this box, there are two elements: 'NominalsCalculated' (dashed) and 'BaseCuboid' (solid). The 'CuboidCopyType' element is connected to the 'NominalsCalculated' element, which is then connected to the 'BaseCuboid' element.</p>
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseCuboid
used by	element CuboidConstructionMethodType/Copy
annotation	<p>documentation</p> <p>The CuboidCopyType defines a copied cuboid construction.</p>

element **CuboidCopyType/BaseCuboid**

diagram	<p>The diagram shows a 'BaseCuboid' element connected to a dashed box labeled 'BaseFeatureType'. Inside this box, there are two elements: 'ReferencedComponent' (solid) and 'FeatureItemId' (solid). The 'BaseCuboid' element is connected to the 'ReferencedComponent' element, which is then connected to the 'FeatureItemId' element.</p>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The BaseCuboid element identifies the cuboid to be copied.</p>

complexType **CuboidFeatureActualType**

diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Location Length LengthMax LengthMin LengthVector Width WidthMax WidthMin Height HeightMax HeightMin HeightVector Form					
used by	element CuboidFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the

		QIF id of the feature, used for referencing.
annotation	documentation The CuboidFeatureActualType defines the cuboid feature actual information for an individual cuboid feature.	

element **CuboidFeatureActualType/Location**

diagram		
type	ActualPointType	
properties	minOcc	0
	maxOcc	1
	content	complex
facets	Kind	Value Annotation
	length	3

attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
	combinedUncertainty	xs:decimal				
	meanError	xs:decimal				
	xCombinedUncertainty	xs:decimal				
	xMeanError	xs:decimal				
	yCombinedUncertainty	xs:decimal				
	yMeanError	xs:decimal				
	zCombinedUncertainty	xs:decimal				
	zMeanError	xs:decimal				
annotation	documentation The optional Location element is the actual center of the cuboid.					

element **CuboidFeatureActualType/Length**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation

	<p>meanError NonNegativeDecimalType</p> <p>linearUnit xs:token</p>	<p>The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType. documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.</p>
annotation	documentation The optional Length element is the actual length of the cuboid.	

element **CuboidFeatureActualType/LengthMax**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.

	linearUnit xs:token	documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional LengthMax element is the maximum length of the cuboid from a report or an analysis.	

element **CuboidFeatureActualType/LengthMin**

diagram						
type	ActualLinearValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional LengthMin element is the minimum length of the cuboid from a report or an analysis.					

element **CuboidFeatureActualType/LengthVector**

diagram						
type	ActualUnitVectorType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional LengthVector element is the actual unit vector length direction of the cuboid.

element **CuboidFeatureActualType/Width**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is

	<p>linearUnit xs:token</p>	<p>a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.</p>
annotation	<p>documentation The optional Width element is the actual width of the cuboid.</p>	

element **CuboidFeatureActualType/WidthMax**

diagram						
type	ActualLinearValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	<p>documentation The optional WidthMax element is the maximum width of the cuboid from a report or an analysis.</p>					

element **CuboidFeatureActualType/WidthMin**

diagram						
type	ActualLinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional WidthMin element is the minimum width of the cuboid from a report or an analysis.					

element **CuboidFeatureActualType/Height**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Height element is the actual height of the cuboid.					

element **CuboidFeatureActualType/HeightMax**

diagram						
type	ActualLinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name decimalPlaces significantFigures combinedUncertainty meanError linearUnit	Type xs:nonNegativeInteger xs:nonNegativeInteger NonNegativeDecimalType NonNegativeDecimalType xs:token	Use	Default	Fixed	Annotation documentation See documentation of SpecifiedDecimalType. documentation See documentation of SpecifiedDecimalType. documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType. documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional HeightMax element is the maximum height of the cuboid from a report or an analysis.					

element **CuboidFeatureActualType/HeightMin**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional HeightMin element is the minimum height of the cuboid from a report or an analysis.					

element **CuboidFeatureActualType/HeightVector**

diagram						
type	ActualUnitVectorType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional HeightVector element is the actual unit vector height direction of the cuboid.

element **CuboidFeatureActualType/Form**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is

	linearUnit	xs:token	a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Form element is the form error of the cuboid from a report or an analysis.		

complexType CuboidFeatureDefinitionType

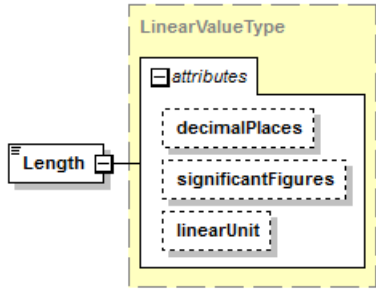
diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes InternalExternal Length Width Height					
used by	element CuboidFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CuboidFeatureDefinitionType defines the cuboid feature nominal information that can be common to one or more cuboid features.					

element CuboidFeatureDefinitionType/InternalExternal

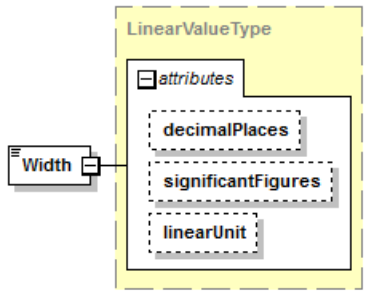
diagram						
type	InternalExternalEnumType					
properties	content simple					
facets	Kind enumeration	Value INTERNAL	Annotation			

	enumeration EXTERNAL enumeration NOT_APPLICABLE
annotation	documentation The InternalExternal element indicates whether the feature is internal or external.

element **CuboidFeatureDefinitionType/Length**

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The Length element is the size of the cuboid in the length direction.					

element **CuboidFeatureDefinitionType/Width**

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.

	linearUnit xs:token	documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The Width element is the size of the cuboid in the width direction. The width direction is given by the cross product of the height direction and the length direction.	

element **CuboidFeatureDefinitionType/Height**

diagram						
type	LinearValueType					
properties	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The Height element is the size of the cuboid in the height direction.					

complexType **CuboidFeatureItemType**

diagram						
type	extension of FeatureItemBaseType					
properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPId NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element CuboidFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CuboidFeatureItemType defines an individual cuboid feature. A cuboid feature is a solid prism with three pairs of parallel faces that are rectangles. Cuboid is a synonym for rectangular parallelepiped.					

element **CuboidFeatureItemType/DeterminationMode**

diagram						
type	CuboidActualDeterminationType					
properties	content complex					

children	Checked Set
annotation	documentation The DeterminationMode element is the means by which the cuboid feature actual is determined.

element **CuboidFeatureItemType/SubstituteFeatureAlgorithm**

diagram	
type	FeatureOfSizeSubstituteFeatureAlgorithmType
properties	minOcc 0 maxOcc 1 content complex
children	FeatureOfSizeSubstituteFeatureAlgorithmEnum OtherFeatureOfSizeSubstituteFeatureAlgorithm
annotation	documentation The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the cuboid feature.

complexType **CuboidFeatureNominalType**

diagram	
type	extension of FeatureNominalBaseType
properties	base FeatureNominalBaseType
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Location LengthVector HeightVector
used by	element CuboidFeatureNominal

attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CuboidFeatureNominalType defines the cuboid feature nominal information for an individual cuboid feature.					

element **CuboidFeatureNominalType/Location**

diagram						
type	PointType					
properties	content complex					
facets	Kind length	Value 3	Annotation			
attributes	Name linearUnit decimalPlaces significantFigures validity xDecimalPlaces xSignificantFigures xValidity yDecimalPlaces ySignificantFigures yValidity zDecimalPlaces zSignificantFigures zValidity	Type xs:token xs:nonNegativeInteger xs:nonNegativeInteger ValidityEnumType xs:nonNegativeInteger xs:nonNegativeInteger ValidityEnumType xs:nonNegativeInteger xs:nonNegativeInteger ValidityEnumType xs:nonNegativeInteger xs:nonNegativeInteger ValidityEnumType xs:nonNegativeInteger	Use	Default	Fixed	Annotation

	yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType
annotation	documentation The Location element is the nominal center of the cuboid midway between each pair of opposite faces.

element **CuboidFeatureNominalType/LengthVector**

diagram						
type	UnitVectorType					
properties	content	complex				
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				

	zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType
annotation	documentation The LengthVector element is the nominal unit vector of the length of the cuboid.

element **CuboidFeatureNominalType/HeightVector**

diagram						
type	UnitVectorType					
properties	content	complex				
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				

	zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType
annotation	documentation The HeightVector element is the nominal unit vector of the height of the cuboid.

complexType CuboidRecompType

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeaturePointList
used by	element CuboidConstructionMethodType/Recompensated
annotation	documentation The CuboidRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit cuboid through the measurement points of base features.

element CuboidRecompType/BaseFeaturePointList

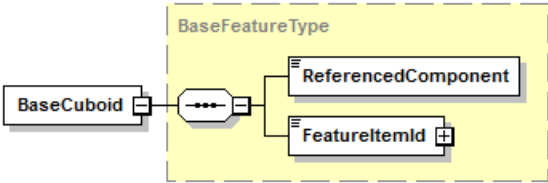
diagram	
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	documentation The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit cuboid. The total number of points in the BaseFeaturePointSets in the list must be 9 or greater.

complexType CuboidTransformType

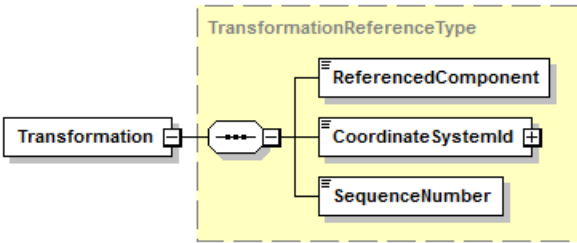
diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType

children	NominalsCalculated BaseCuboid Transformation
used by	element CuboidConstructionMethodType/Transform
annotation	documentation The CuboidTransformType defines a cuboid construction by the transformation of a cuboid through the specified nominal or actual coordinate system.

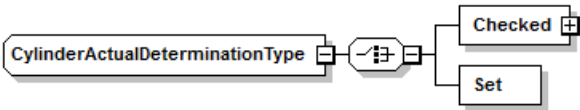
element **CuboidTransformType/BaseCuboid**

diagram	 <p>The diagram shows a BaseCuboid element connected to a dashed box labeled BaseFeatureType. Inside this box, there are two sub-elements: ReferencedComponent and FeatureItemId.</p>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseCuboid element identifies the cuboid to be transformed.

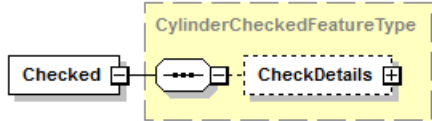
element **CuboidTransformType/Transformation**

diagram	 <p>The diagram shows a Transformation element connected to a dashed box labeled TransformationReferenceType. Inside this box, there are three sub-elements: ReferencedComponent, CoordinateSystemId, and SequenceNumber.</p>
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	documentation The Transformation element identifies the coordinate system to be used to transform the base cuboid.


complexType **CylinderActualDeterminationType**

diagram	 <p>The diagram shows a CylinderActualDeterminationType element connected to a dashed box. Inside this box, there are two sub-elements: Checked and Set.</p>
children	Checked Set
used by	element CylinderFeatureItem/DeterminationMode
annotation	documentation The CylinderActualDeterminationType defines how the cylinder actual is determined, either by being set or by being checked (measured or constructed).

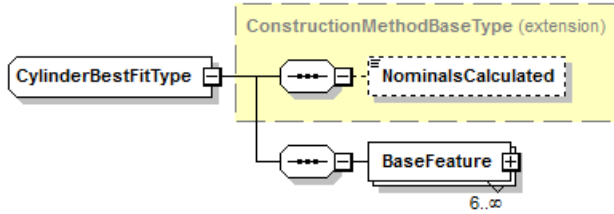
element **CylinderActualDeterminationType/Checked**

diagram	
type	CylinderCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	documentation The Checked element signifies that the cylinder is checked from actual data, either measured or constructed.

element **CylinderActualDeterminationType/Set**

diagram	
type	SetFeatureType
properties	content complex
annotation	documentation The Set element signifies that the cylinder actual is set to its nominal value.

complexType **CylinderBestFitType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element CylinderConstructionMethodType/BestFit
annotation	documentation The CylinderBestFitType defines the information for a best-fit cylinder which includes a list of point-reducible base features; the points to which those features reduce are used in the best-fit construction of the cylinder.

element **CylinderBestFitType/BaseFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 6 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	documentation Each BaseFeature element identifies a base feature to be used for the construction of a cylinder. The number of base features must be 6 or greater.


complexType **CylinderCastType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element CylinderConstructionMethodType/Cast
annotation	documentation The CylinderCastType defines a cylinder construction by the casting of another feature type to a cylinder. The location, vector and size are copied from the base feature. Any information not available on the base feature will remain at nominal.

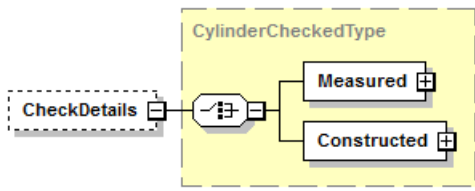
element **CylinderCastType/BaseFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseFeature element identifies the base feature to be cast to a cylinder.

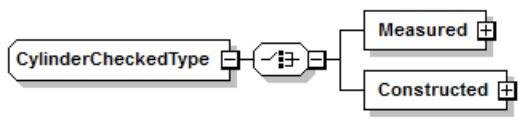
complexType CylinderCheckedFeatureType

diagram	
children	CheckDetails
used by	element CylinderActualDeterminationType/Checked
annotation	documentation The CylinderCheckedFeatureType defines that a cylinder feature is checked.

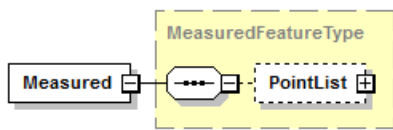
element CylinderCheckedFeatureType/CheckDetails

diagram	
type	CylinderCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the cylinder check (measurement or construction).

complexType CylinderCheckedType

diagram	
children	Measured Constructed
used by	element CylinderCheckedFeatureType/CheckDetails
annotation	documentation The CylinderCheckedType defines how the cylinder actual is checked, either by measurement or by construction.

element CylinderCheckedType/Measured

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the cylinder is measured.

element **CylinderCheckedType/Constructed**

diagram	
type	CylinderConstructionMethodType
properties	content complex
children	BestFit Recompensated Copy Cast Transform FromScan
annotation	documentation The Constructed element signifies that the cylinder is constructed.

complexType **CylinderConstructionMethodType**

diagram	
children	BestFit Recompensated Copy Cast Transform FromScan
used by	element CylinderCheckedType/Constructed
annotation	documentation The CylinderConstructionMethodType defines the method for constructing a unique nominal or actual cylinder feature.

element **CylinderConstructionMethodType/BestFit**

diagram	
---------	--

type	CylinderBestFitType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The BestFit element describes the best-fit construction of a cylinder from 6 or more point-reducible base features. This element is in an optional choice.

element **CylinderConstructionMethodType/Recompensated**

diagram	<p>The diagram shows a box labeled 'Recompensated' connected to a dashed box labeled 'CylinderRecompType'. Inside the dashed box, there are two sub-elements: 'NominalsCalculated' (in a dashed box) and 'BaseFeaturePointList' (in a solid box).</p>
type	CylinderRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	documentation The Recompensated element describes the re-compensated-for- probe-size best-fit construction of a cylinder from 6 or more base feature points. This element is in an optional choice.

element **CylinderConstructionMethodType/Copy**

diagram	<p>The diagram shows a box labeled 'Copy' connected to a dashed box labeled 'CylinderCopyType'. Inside the dashed box, there are two sub-elements: 'NominalsCalculated' (in a dashed box) and 'BaseCylinder' (in a solid box).</p>
type	CylinderCopyType
properties	content complex
children	NominalsCalculated BaseCylinder
annotation	documentation The Copy element describes the construction of a cylinder by the copying of a base cylinder. This element is in an optional choice.

element **CylinderConstructionMethodType/Cast**

diagram	<p>The diagram shows a box labeled 'Cast' connected to a dashed box labeled 'CylinderCastType'. Inside the dashed box, there are two sub-elements: 'NominalsCalculated' (in a dashed box) and 'BaseFeature' (in a solid box).</p>
type	CylinderCastType
properties	content complex

children	NominalsCalculated BaseFeature
annotation	documentation The Cast element describes the construction of a cylinder by the casting of a base feature. This element is in an optional choice.

element **CylinderConstructionMethodType/Transform**

diagram	<p>The diagram shows a 'Transform' element connected to a dashed box labeled 'CylinderTransformType'. Inside this box, there are three elements: 'NominalsCalculated' (dashed), 'BaseCylinder' (solid), and 'Transformation' (solid). The 'Transform' element is connected to the 'NominalsCalculated' element, which is then connected to the 'BaseCylinder' and 'Transformation' elements.</p>
type	CylinderTransformType
properties	content complex
children	NominalsCalculated BaseCylinder Transformation
annotation	documentation The Transform element describes the construction of a cylinder by the transformation of a base cylinder. This element is in an optional choice.

element **CylinderConstructionMethodType/FromScan**

diagram	<p>The diagram shows a 'FromScan' element connected to a dashed box labeled 'CylinderFromScanType'. Inside this box, there are three elements: 'NominalsCalculated' (dashed), 'SurfaceFeature' (solid), and 'SearchRadius' (solid). The 'FromScan' element is connected to the 'NominalsCalculated' element, which is then connected to the 'SurfaceFeature' and 'SearchRadius' elements.</p>
type	CylinderFromScanType
properties	content complex
children	NominalsCalculated SurfaceFeature SearchRadius
annotation	documentation The FromScan element describes the construction of a cylinder from scan data. This element is in an optional choice.

complexType **CylinderCopyType**

diagram	<p>The diagram shows a 'CylinderCopyType' element connected to a dashed box labeled 'ConstructionMethodBaseType (extension)'. Inside this box, there are two elements: 'NominalsCalculated' (dashed) and 'BaseCylinder' (solid). The 'CylinderCopyType' element is connected to the 'NominalsCalculated' element, which is then connected to the 'BaseCylinder' element.</p>
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType

children	NominalsCalculated BaseCylinder
used by	element CylinderConstructionMethodType/Copy
annotation	documentation The CylinderCopyType defines a copied cylinder construction.

element **CylinderCopyType/BaseCylinder**

diagram	<pre> classDiagram class BaseCylinder class BaseFeatureType class ReferencedComponent class FeatureItemId BaseFeatureType "1" -- "3" BaseCylinder BaseFeatureType "1" -- "1" ReferencedComponent BaseFeatureType "1" -- "1" FeatureItemId </pre>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseCylinder element identifies the cylinder to be copied.

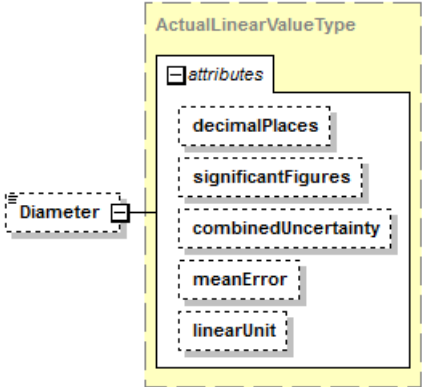
complexType **CylinderFeatureActualType**

diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Axis Diameter Length DiameterMin DiameterMax Sweep Form					
used by	element CylinderFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CylinderFeatureActualType defines the cylinder feature actual information for an individual cylinder feature.					

element **CylinderFeatureActualType/Axis**

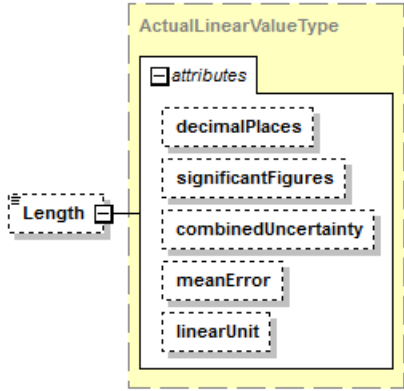
diagram	
type	ActualAxisType
properties	minOcc 0 maxOcc 1 content complex
children	AxisPoint Direction
annotation	documentation The optional Axis element gives the actual location of the start point and the actual unit vector of the cylinder axis. The direction of the axis vector points into the cylinder. The cylinder does not extend from the start point in the direction opposite the axis vector.

element **CylinderFeatureActualType/Diameter**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.

	linearUnit xs:token	documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Diameter element is the actual diameter of the cylinder based on the substitute feature data fitting algorithm setting.	

element **CylinderFeatureActualType/Length**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Length element is the actual length of the cylinder from the start point in the direction of the cylinder axis.					

element **CylinderFeatureActualType/DiameterMin**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional DiameterMin element is the minimum diameter of the cylinder from a report or an analysis.					

element **CylinderFeatureActualType/DiameterMax**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional DiameterMax element is the maximum diameter of the cylinder from a report or an analysis.					

element **CylinderFeatureActualType/Sweep**

diagram						
type	SweepType					
properties	minOcc	0				
	maxOcc	1				

	content complex
children	DirBeg DomainAngle
annotation	documentation The optional Sweep element gives the start direction and the swept angle for a partial cylinder. The StartVector of the Sweep must lie in a plane normal to the axis of the cylinder.

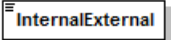
element **CylinderFeatureActualType/Form**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation	The optional Form element is the form error (cylindricity) of the cylinder from a report or an analysis.				

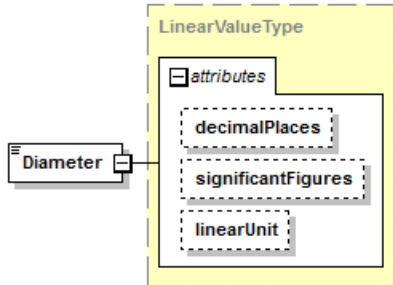
complexType **CylinderFeatureDefinitionType**

diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes InternalExternal Diameter Length Bottom					
used by	element CylinderFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CylinderFeatureDefinitionType defines the cylinder feature nominal information that can be common to one or more cylinder features.					

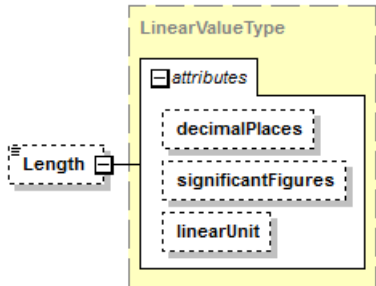
element **CylinderFeatureDefinitionType/InternalExternal**

diagram			
type	InternalExternalEnumType		
properties	content simple		
facets	Kind enumeration enumeration enumeration	Value INTERNAL EXTERNAL NOT_APPLICABLE	Annotation
annotation	documentation The InternalExternal element indicates whether the feature is internal or external.		

element **CylinderFeatureDefinitionType/Diameter**

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The Diameter element is the nominal diameter of the cylinder.					

element **CylinderFeatureDefinitionType/Length**

diagram						
type	LinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The optional Length element is the nominal length of the cylinder from the start point in the direction of the cylinder axis.					

element **CylinderFeatureDefinitionType/Bottom**

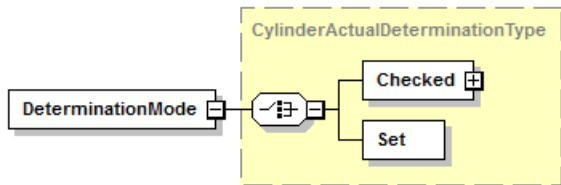
diagram	
type	BottomType
properties	minOcc 0 maxOcc 1 content complex
children	BottomEnum OtherBottom
annotation	documentation The optional Bottom element describes the bottom type of the cylinder.

complexType **CylinderFeatureItem**

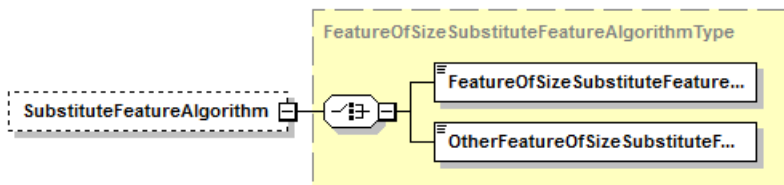
diagram													
type	extension of FeatureItemBaseType												
properties	base FeatureItemBaseType												
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPId NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm												
used by	element CylinderFeatureItem												
attributes	<table><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr><tr><td>id</td><td>QIFIdType</td><td>required</td><td></td><td></td><td>documentation The id attribute is the</td></tr></table>	Name	Type	Use	Default	Fixed	Annotation	id	QIFIdType	required			documentation The id attribute is the
Name	Type	Use	Default	Fixed	Annotation								
id	QIFIdType	required			documentation The id attribute is the								

		QIF id of the feature, used for referencing.
annotation	documentation The CylinderFeatureItemType defines an individual cylinder feature.	

element **CylinderFeatureItemType/DeterminationMode**

diagram	 <p>The diagram shows a box labeled 'DeterminationMode' connected to a choice symbol (a circle with a vertical line and two horizontal lines). This choice symbol is connected to two boxes: 'Checked' and 'Set'. The entire structure is enclosed in a dashed yellow box labeled 'CylinderActualDeterminationType'.</p>	
type	CylinderActualDeterminationType	
properties	content	complex
children	Checked Set	
annotation	documentation The DeterminationMode element is the means by which the cylinder feature actual is determined.	

element **CylinderFeatureItemType/SubstituteFeatureAlgorithm**

diagram	 <p>The diagram shows a dashed box labeled 'SubstituteFeatureAlgorithm' connected to a choice symbol (a circle with a vertical line and two horizontal lines). This choice symbol is connected to two boxes: 'FeatureOfSizeSubstituteFeature...' and 'OtherFeatureOfSizeSubstituteF...'. The entire structure is enclosed in a dashed yellow box labeled 'FeatureOfSizeSubstituteFeatureAlgorithmType'.</p>	
type	FeatureOfSizeSubstituteFeatureAlgorithmType	
properties	minOcc 0 maxOcc 1 content	complex
children	FeatureOfSizeSubstituteFeatureAlgorithmEnum OtherFeatureOfSizeSubstituteFeatureAlgorithm	
annotation	documentation The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the cylinder feature.	

complexType **CylinderFeatureNominalType**

diagram	<p>The diagram illustrates the structure of CylinderFeatureNominalType as an extension of FeatureNominalBaseType. The base type is shown in a yellow dashed box. It contains an attributes container with an id attribute. The CylinderFeatureNominalType extension is shown as a separate box connected to the base type. It contains a choice of the following elements: Attributes, Name, PointList, FeatureDefinitionId, EntityInternalIds, EntityExternalIds, Axis, and Sweep.</p>					
type	extension of FeatureNominalBaseType					
properties	base FeatureNominalBaseType					
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Axis Sweep					
used by	element CylinderFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CylinderFeatureNominalType defines the cylinder feature nominal information for an individual cylinder feature.					

element **CylinderFeatureNominalType/Axis**

diagram	<p>The diagram illustrates the structure of AxisType as a complex type. It is shown in a yellow dashed box. The Axis element is connected to a choice of AxisPoint and Direction.</p>					
type	AxisType					
properties	content complex					
children	AxisPoint Direction					
annotation	documentation The Axis element gives the nominal location of the start point and the nominal unit cylinder axis vector. The direction of the axis vector points into the cylinder. The cylinder does not extend from the start point in the direction opposite the axis					

	vector.
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element CylinderFeatureNominalType/Sweep

diagram	
type	SweepType
properties	minOcc 0 maxOcc 1 content complex
children	DirBeg DomainAngle
annotation	documentation The optional Sweep element gives the start direction and the swept angle for a partial cylinder. The swept angle is typically greater than 180 degrees for a feature of size. If the sweep is not specified the feature subtends a full 360 degrees. The StartVector of the Sweep must lie in a plane normal to the axis of the cylinder.

complexType CylinderFromScanType

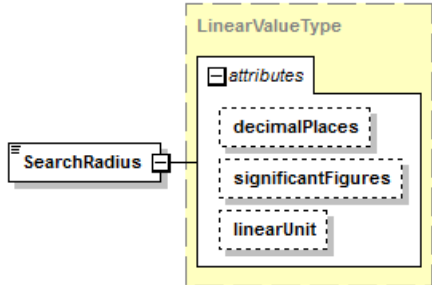
diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated SurfaceFeature SearchRadius
used by	element CylinderConstructionMethodType/FromScan
annotation	documentation The CylinderFromScanType defines a cylinder construction by the retrieval of a cylinder from a scanned surface feature (point cloud).

element CylinderFromScanType/SurfaceFeature

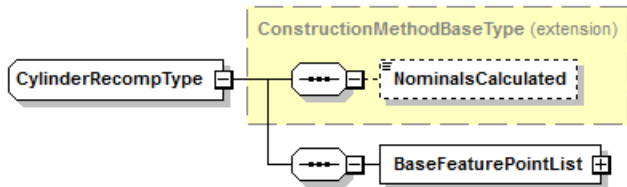
diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId

annotation	documentation The SurfaceFeature element identifies the scanned surface feature from which the cylinder is retrieved.
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element **CylinderFromScanType/SearchRadius**

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The SearchRadius element is the radius around the nominal feature, wherein the actual feature can be expected. The SearchRadius is the radius added to and subtracted from the nominal feature radius defining a cylindrical shell. All scanned points within this cylindrical shell are used for the retrieval of the feature. The cylindrical shell's axis is defined by the feature's direction and the cylindrical shell's axis passes through the feature's center point.					

complexType **CylinderRecompType**

diagram						
type	extension of ConstructionMethodBaseType					
properties	base ConstructionMethodBaseType					
children	NominalsCalculated BaseFeaturePointList					
used by	element CylinderConstructionMethodType/Recompensated					
annotation	documentation The CylinderRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit cylinder through the measurement points of base features.					

element **CylinderRecompType/BaseFeaturePointList**

diagram	
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	<p>documentation</p> <p>The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit cylinder. The total number of points in the BaseFeaturePointSets in the list must be 6 or greater.</p>

complexType **CylinderTransformType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseCylinder Transformation
used by	element CylinderConstructionMethodType/Transform
annotation	<p>documentation</p> <p>The CylinderTransformType defines a cylinder construction by the transformation of a base cylinder through the specified nominal or actual coordinate system.</p>

element **CylinderTransformType/BaseCylinder**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The BaseCylinder element identifies the cylinder to be transformed.</p>

element **CylinderTransformType/Transformation**

diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	documentation The Transformation element identifies the coordinate system to be used to transform the base cylinder.

complexType **CylindricalSegmentActualDeterminationType**

diagram	
children	Checked Set
used by	element CylindricalSegmentFeatureItem/DeterminationMode
annotation	documentation The CylindricalSegmentActualDeterminationType defines how the cylindrical segment feature actual is determined, either by being set or by being checked (measured or constructed).

element **CylindricalSegmentActualDeterminationType/Checked**

diagram	
type	CylindricalSegmentCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	documentation The Checked element signifies that the cylindrical segment feature is checked from actual data, either measured or constructed.

element **CylindricalSegmentActualDeterminationType/Set**

diagram	
type	SetFeatureType
properties	content complex
annotation	documentation The Set element signifies that the cylindrical segment feature actual is set to its nominal value.

complexType **CylindricalSegmentBestFitType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element CylindricalSegmentConstructionMethodType/BestFit
annotation	<p>documentation</p> <p>The CylindricalSegmentBestFitType defines the information for a best-fit cylindrical segment which includes a list of point-reducible base features; the points to which those features reduce are used in the best-fit construction of the cylindrical segment.</p>

element **CylindricalSegmentBestFitType/BaseFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 6 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	<p>documentation</p> <p>Each BaseFeature element identifies a base feature to be used for the construction of a cylindrical segment. The number of base features must be 6 or greater.</p>

complexType **CylindricalSegmentCastType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature

used by	element CylindricalSegmentConstructionMethodType/Cast
annotation	documentation The CylindricalSegmentCastType defines a cylindrical segment construction by the casting of another feature type to a cylindrical segment. The location, vector and size are copied from the base feature. Any information not available on the base feature will remain at nominal.

element **CylindricalSegmentCastType/BaseFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseFeature element identifies the base feature to be cast to a cylindrical segment.

complexType **CylindricalSegmentCheckedFeatureType**

diagram	
children	CheckDetails
used by	element CylindricalSegmentActualDeterminationType/Checked
annotation	documentation The CylindricalSegmentCheckedFeatureType defines that a cylindrical segment feature is checked.

element **CylindricalSegmentCheckedFeatureType/CheckDetails**

diagram	
type	CylindricalSegmentCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the cylindrical segment feature check (measurement or construction).

complexType **CylindricalSegmentCheckedType**

diagram	
children	Measured Constructed
used by	element CylindricalSegmentCheckedFeatureType/CheckDetails
annotation	documentation The CylindricalSegmentCheckedType defines how the cylindrical segment feature actual is checked, either by measurement or by construction.

element **CylindricalSegmentCheckedType/Measured**

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the cylindrical segment feature is measured.

element **CylindricalSegmentCheckedType/Constructed**

diagram	
type	CylindricalSegmentConstructionMethodType
properties	content complex
children	BestFit Recompensated Copy Cast Transform
annotation	documentation The Constructed element signifies that the cylindrical segment feature is constructed.

complexType **CylindricalSegmentConstructionMethodType**

diagram	
children	BestFit Recompensated Copy Cast Transform
used by	element CylindricalSegmentCheckedType/Constructed
annotation	documentation The CylindricalSegmentConstructionMethodType defines the method for constructing a unique nominal or actual cylindrical segment feature.

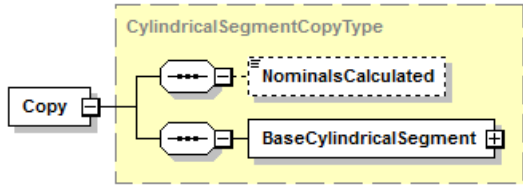
element **CylindricalSegmentConstructionMethodType/BestFit**

diagram	
type	CylindricalSegmentBestFitType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The BestFit element describes the best-fit construction of a cylindrical segment from 6 or more point-reducible base features. This element is in an optional choice.

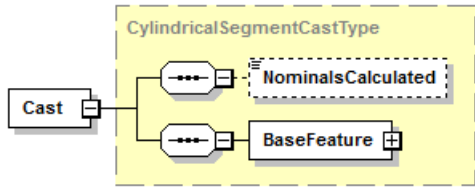
element **CylindricalSegmentConstructionMethodType/Recompensated**

diagram	
type	CylindricalSegmentRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	documentation The Recompensated element describes the re-compensated-for- probe-size best-fit construction of a cylindrical segment from 6 or more base feature points. This element is in an optional choice.

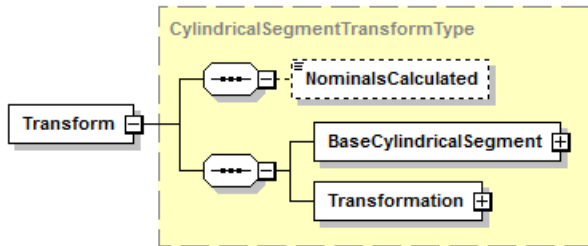
element **CylindricalSegmentConstructionMethodType/Copy**

diagram	 <p>The diagram shows a 'Copy' element on the left, connected by a line to a dashed yellow box labeled 'CylindricalSegmentCopyType'. Inside this box, there are two sub-elements: 'NominalsCalculated' (in a dashed box) and 'BaseCylindricalSegment' (in a solid box). Both sub-elements are connected to the 'Copy' element via lines with small square connectors.</p>
type	CylindricalSegmentCopyType
properties	content complex
children	NominalsCalculated BaseCylindricalSegment
annotation	<p>documentation</p> <p>The Copy element describes the construction of a cylindrical segment by the copying of a base cylindrical segment. This element is in an optional choice.</p>

element **CylindricalSegmentConstructionMethodType/Cast**

diagram	 <p>The diagram shows a 'Cast' element on the left, connected by a line to a dashed yellow box labeled 'CylindricalSegmentCastType'. Inside this box, there are two sub-elements: 'NominalsCalculated' (in a dashed box) and 'BaseFeature' (in a solid box). Both sub-elements are connected to the 'Cast' element via lines with small square connectors.</p>
type	CylindricalSegmentCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	<p>documentation</p> <p>The Cast element describes the construction of a cylindrical segment by the casting of a base feature. This element is in an optional choice. This element is in an optional choice.</p>

element **CylindricalSegmentConstructionMethodType/Transform**

diagram	 <p>The diagram shows a 'Transform' element on the left, connected by a line to a dashed yellow box labeled 'CylindricalSegmentTransformType'. Inside this box, there are three sub-elements: 'NominalsCalculated' (in a dashed box), 'BaseCylindricalSegment' (in a solid box), and 'Transformation' (in a solid box). All three sub-elements are connected to the 'Transform' element via lines with small square connectors.</p>
type	CylindricalSegmentTransformType
properties	content complex
children	NominalsCalculated BaseCylindricalSegment Transformation
annotation	<p>documentation</p> <p>The Transform element describes the construction of a cylindrical segment by the transformation of a base cylindrical segment. This element is in an optional choice.</p>

complexType **CylindricalSegmentCopyType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseCylindricalSegment
used by	element CylindricalSegmentConstructionMethodType/Copy
annotation	documentation The CylindricalSegmentCopyType defines a copied cylindrical segment construction.

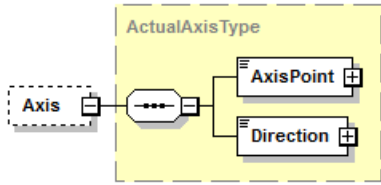
element **CylindricalSegmentCopyType/BaseCylindricalSegment**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseCylindricalSegment element identifies the cylindrical segment to be copied.

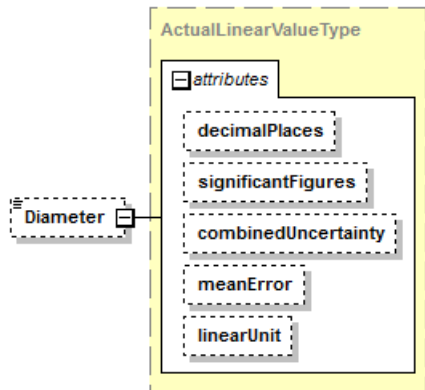
complexType **CylindricalSegmentFeatureActualType**

diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Axis Diameter Length DiameterMin DiameterMax Sweep Form					
used by	element CylindricalSegmentFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CylindricalSegmentFeatureActualType defines the cylindrical segment feature actual information for an individual cylindrical segment feature.					

element **CylindricalSegmentFeatureActualType/Axis**

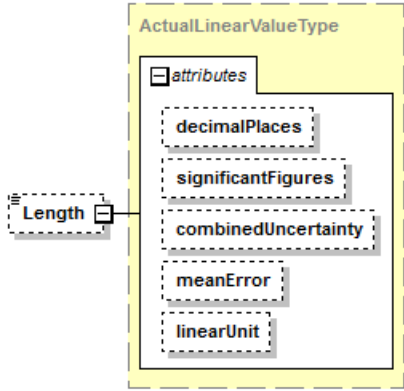
diagram	 <p>The diagram shows an ActualAxisType container (yellow dashed box) containing an Axis element (dashed box) and two child elements: AxisPoint and Direction (both solid boxes with plus signs).</p>
type	ActualAxisType
properties	minOcc 0 maxOcc 1 content complex
children	AxisPoint Direction
annotation	documentation The optional Axis element gives the actual location of the start point and the nominal unit vector of the cylindrical segment axis.

element **CylindricalSegmentFeatureActualType/Diameter**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.

	linearUnit xs:token	documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Diameter element is the actual diameter of the cylindrical segment based on the substitute feature data fitting algorithm setting.	

element **CylindricalSegmentFeatureActualType/Length**

diagram						
type	ActualLinearValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Length element is the actual length of the cylindrical segment from the start point in the direction of the cylindrical segment axis.					

element **CylindricalSegmentFeatureActualType/DiameterMin**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional DiameterMin element is the minimum diameter of the cylindrical segment from a report or an analysis.					

element **CylindricalSegmentFeatureActualType/DiameterMax**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional DiameterMax element is the maximum diameter of the cylindrical segment from a report or an analysis.					

element **CylindricalSegmentFeatureActualType/Sweep**

diagram						
type	SweepType					
properties	minOcc	0				
	maxOcc	1				

	content complex
children	DirBeg DomainAngle
annotation	documentation The optional Sweep element gives the start direction and the swept angle for a partial cylindrical segment. The StartVector of the Sweep must lie in a plane normal to the axis of the cylinder.

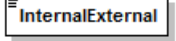
element **CylindricalSegmentFeatureActualType/Form**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation	The optional Form element is the form error (cylindricity) of the cylindrical segment from a report or an analysis.				

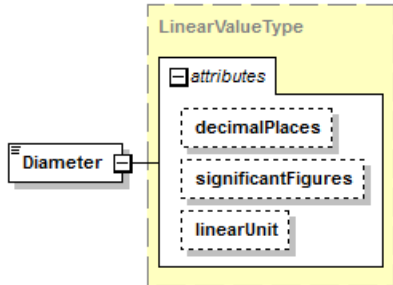
complexType **CylindricalSegmentFeatureDefinitionType**

diagram						
type	extension of FeatureDefinitionBaseType					
properties	base <code>FeatureDefinitionBaseType</code>					
children	Attributes InternalExternal Diameter Length Bottom					
used by	element CylindricalSegmentFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CylindricalSegmentFeatureDefinitionType defines the cylindrical segment feature nominal information that can be common to one or more cylindrical segment features.					

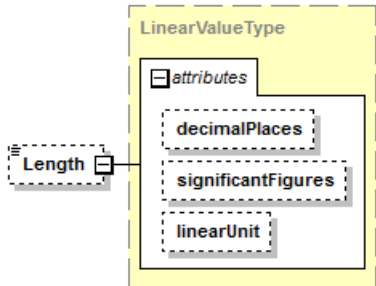
element **CylindricalSegmentFeatureDefinitionType/InternalExternal**

diagram			
type	InternalExternalEnumType		
properties	content simple		
facets	Kind enumeration	Value INTERNAL	Annotation
	enumeration	EXTERNAL	
	enumeration	NOT_APPLICABLE	
annotation	documentation The InternalExternal element indicates whether the feature is internal or external.		

element **CylindricalSegmentFeatureDefinitionType/Diameter**

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The Diameter element is the nominal diameter of the cylindrical segment.					

element **CylindricalSegmentFeatureDefinitionType/Length**

diagram						
type	LinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The optional Length element is the nominal length of the cylindrical segment from the start point in the direction of the					

	cylindrical segment axis.
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element **CylindricalSegmentFeatureDefinitionType/Bottom**

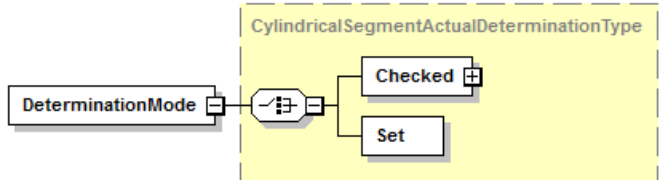
diagram	<p>The diagram shows a dashed box labeled 'Bottom' connected to a choice box (rectangle with a vertical line and a small square) which branches into two boxes: 'BottomEnum' and 'OtherBottom'. This entire structure is enclosed in a larger dashed box labeled 'BottomType'.</p>
type	BottomType
properties	minOcc 0 maxOcc 1 content complex
children	BottomEnum OtherBottom
annotation	documentation The optional Bottom element is the bottom type of the cylindrical segment.

complexType **CylindricalSegmentFeatureItem**

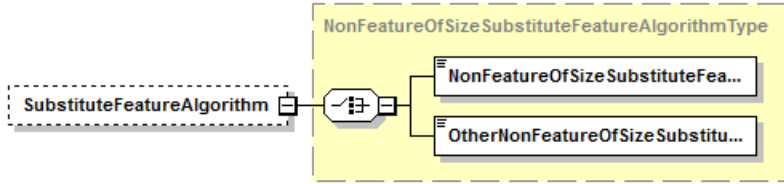
diagram	<p>The diagram illustrates the relationship between CylindricalSegmentFeatureItem and FeatureItemBaseType. FeatureItemBaseType (extension) is shown as a dashed box containing several attributes: attributes (which includes id), Attributes, FeatureNominalId, ParentFeatureItemId, FeatureName, QPid, NotableEventIds, and CoordinateSystemId. CylindricalSegmentFeatureItem is shown as a separate box with its own attributes: DeterminationMode and SubstituteFeatureAlgorithm. The diagram uses standard UML notation for extensions, including dashed lines and specific connector symbols.</p>												
type	extension of FeatureItemBaseType												
properties	base FeatureItemBaseType												
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm												
used by	element CylindricalSegmentFeatureItem												
attributes	<table><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr><tr><td>id</td><td>QIFIdType</td><td>required</td><td></td><td></td><td>documentation The id</td></tr></table>	Name	Type	Use	Default	Fixed	Annotation	id	QIFIdType	required			documentation The id
Name	Type	Use	Default	Fixed	Annotation								
id	QIFIdType	required			documentation The id								

		attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CylindricalSegmentFeatureItemType defines an individual cylindrical segment feature. A cylindrical segment feature is a partial cylinder like the surface in the corner of a rounded pocket.	

element **CylindricalSegmentFeatureItemType/DeterminationMode**

diagram	 <p>The diagram shows a box labeled 'DeterminationMode' connected to a choice box (a circle with a vertical line and a horizontal line). This choice box is connected to two boxes: 'Checked' and 'Set'. The entire structure is enclosed in a dashed yellow box labeled 'CylindricalSegmentActualDeterminationType'.</p>	
type	CylindricalSegmentActualDeterminationType	
properties	content	complex
children	Checked Set	
annotation	documentation	The DeterminationMode element is the means by which the cylindrical segment feature actual is determined.

element **CylindricalSegmentFeatureItemType/SubstituteFeatureAlgorithm**

diagram	 <p>The diagram shows a dashed box labeled 'SubstituteFeatureAlgorithm' connected to a choice box (a circle with a vertical line and a horizontal line). This choice box is connected to two boxes: 'NonFeatureOfSizeSubstituteFea...' and 'OtherNonFeatureOfSizeSubstitu...'. The entire structure is enclosed in a dashed yellow box labeled 'NonFeatureOfSizeSubstituteFeatureAlgorithmType'.</p>	
type	NonFeatureOfSizeSubstituteFeatureAlgorithmType	
properties	minOcc	0
	maxOcc	1
	content	complex
children	NonFeatureOfSizeSubstituteFeatureAlgorithmEnum OtherNonFeatureOfSizeSubstituteFeatureAlgorithm	
annotation	documentation	The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the cylindrical segment feature.

complexType **CylindricalSegmentFeatureNominalType**

diagram						
type	extension of FeatureNominalBaseType					
properties	base FeatureNominalBaseType					
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Axis Sweep					
used by	element CylindricalSegmentFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The CylindricalSegmentFeatureNominalType defines the cylindrical segment feature nominal information for an individual cylindrical segment feature.					

element **CylindricalSegmentFeatureNominalType/Axis**

diagram						
type	AxisType					
properties	content complex					
children	AxisPoint Direction					
annotation	documentation The Axis element gives the nominal location of the start point and the nominal unit cylindrical segment axis vector. The					

	direction of the axis vector points into the cylindrical segment.
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element **CylindricalSegmentFeatureNominalType/Sweep**

diagram	
type	SweepType
properties	content complex
children	DirBeg DomainAngle
annotation	<p>documentation</p> <p>The Sweep element gives the start direction and swept angle for a cylindrical segment. The StartVector of the Sweep must lie in a plane normal to the axis of the cylinder.</p>

complexType **CylindricalSegmentRecompType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeaturePointList
used by	element CylindricalSegmentConstructionMethodType/Recompensated
annotation	<p>documentation</p> <p>The CylindricalSegmentRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit cylindrical segment through the measurement points of base features.</p>

element **CylindricalSegmentRecompType/BaseFeaturePointList**

diagram	
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	<p>documentation</p> <p>The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit cylindrical segment. The total number of points in the BaseFeaturePointSets in the list must be 6 or greater.</p>

complexType **CylindricalSegmentTransformType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseCylindricalSegment Transformation
used by	element CylindricalSegmentConstructionMethodType/Transform
annotation	<p>documentation</p> <p>The CylindricalSegmentTransformType defines a cylindrical segment construction by the transformation of a base cylindrical segment through the specified nominal or actual coordinate system.</p>


element **CylindricalSegmentTransformType/BaseCylindricalSegment**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The BaseCylindricalSegment element identifies the cylindrical segment to be transformed.</p>

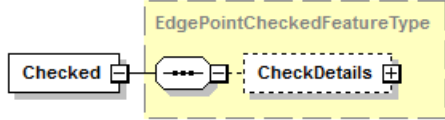
element **CylindricalSegmentTransformType/Transformation**

diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	<p>documentation</p> <p>The Transformation element identifies the coordinate system to be used to transform the base cylindrical segment.</p>


complexType **EdgePointActualDeterminationType**

diagram	
children	Checked Set
used by	element EdgePointFeatureItemType/DeterminationMode
annotation	documentation The EdgePointActualDeterminationType defines how the edge-point actual is determined, either by being set or by being checked (measured or constructed).

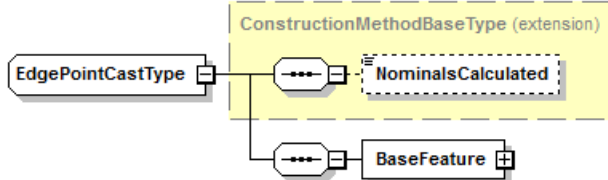
element **EdgePointActualDeterminationType/Checked**

diagram	
type	EdgePointCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	documentation The Checked element signifies that the edge-point is checked from actual data, either measured or constructed.

element **EdgePointActualDeterminationType/Set**

diagram	
type	SetFeatureType
properties	content complex
annotation	documentation The Set element signifies that the edge-point actual is set to its nominal value.

complexType **EdgePointCastType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element EdgePointConstructionMethodType/Cast
annotation	documentation The EdgePointCastType defines an edge-point construction by the casting of another feature type to an edge-point. The location is copied from the base feature.

element **EdgePointCastType/BaseFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseFeature element identifies the base feature to be cast to an edge-point.

complexType **EdgePointCheckedFeatureType**

diagram	
children	CheckDetails
used by	element EdgePointActualDeterminationType/Checked
annotation	documentation The EdgePointCheckedFeatureType defines that an edge-point feature is checked.

element **EdgePointCheckedFeatureType/CheckDetails**

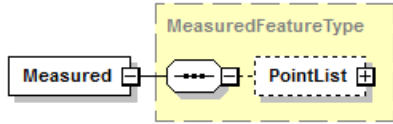
diagram	
type	EdgePointCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the edge-point check (measurement or construction).

complexType **EdgePointCheckedType**

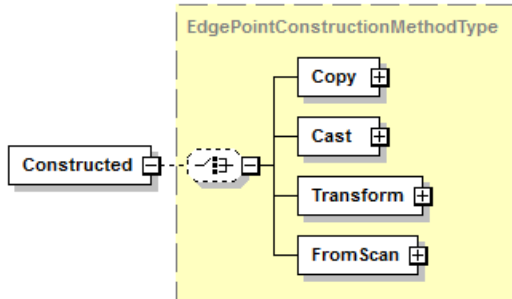
diagram	
children	Measured Constructed
used by	element EdgePointCheckedFeatureType/CheckDetails

annotation	documentation The EdgePointCheckedType defines how the edge-point actual is checked, either by measurement or by construction.
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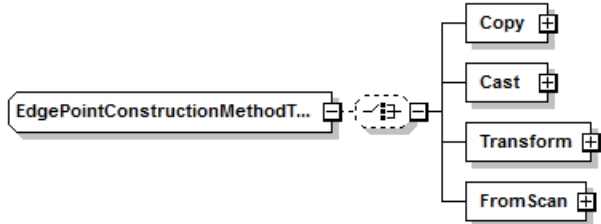
element **EdgePointCheckedType/Measured**

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the edge-point is measured.

element **EdgePointCheckedType/Constructed**

diagram	
type	EdgePointConstructionMethodType
properties	content complex
children	Copy Cast Transform FromScan
annotation	documentation The Constructed element signifies that the edge-point is constructed.

complexType **EdgePointConstructionMethodType**

diagram	
children	Copy Cast Transform FromScan
used by	element EdgePointCheckedType/Constructed
annotation	documentation The EdgePointConstructionMethodType defines the method for constructing a unique nominal or actual edge-point feature.

element **EdgePointConstructionMethodType/Copy**

diagram	<p>The diagram shows a 'Copy' element on the left, connected by a line to a dashed yellow box labeled 'EdgePointCopyType'. Inside this box, there are two parallel paths. The top path consists of a small box with three dots, followed by a dashed box labeled 'NominalsCalculated'. The bottom path consists of a small box with three dots, followed by a box labeled 'BaseEdgePoint'.</p>
type	EdgePointCopyType
properties	content complex
children	NominalsCalculated BaseEdgePoint
annotation	<p>documentation</p> <p>The Copy element describes the construction of an edge-point by the copying of a base edge-point. This element is in an optional choice.</p>

element **EdgePointConstructionMethodType/Cast**

diagram	<p>The diagram shows a 'Cast' element on the left, connected by a line to a dashed yellow box labeled 'EdgePointCastType'. Inside this box, there are two parallel paths. The top path consists of a small box with three dots, followed by a dashed box labeled 'NominalsCalculated'. The bottom path consists of a small box with three dots, followed by a box labeled 'BaseFeature'.</p>
type	EdgePointCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	<p>documentation</p> <p>The Cast element describes the construction of an edge-point by the casting of a base feature. This element is in an optional choice.</p>

element **EdgePointConstructionMethodType/Transform**

diagram	<p>The diagram shows a 'Transform' element on the left, connected by a line to a dashed yellow box labeled 'EdgePointTransformType'. Inside this box, there are two parallel paths. The top path consists of a small box with three dots, followed by a dashed box labeled 'NominalsCalculated'. The bottom path consists of a small box with three dots, followed by a box labeled 'BaseEdgePoint' and then a box labeled 'Transformation'.</p>
type	EdgePointTransformType
properties	content complex
children	NominalsCalculated BaseEdgePoint Transformation
annotation	<p>documentation</p> <p>The Transform element describes the construction of an edge-point by the transformation of a base edge-point. This element is in an optional choice.</p>

element **EdgePointConstructionMethodType/FromScan**

diagram	
type	EdgePointFromScanType
properties	content complex
children	NominalsCalculated SurfaceFeature SearchRadius PatchRadius Distance Depth RetrievalMethod
annotation	documentation The FromScan element describes the construction of an edge-point from scan data. This element is in an optional choice.

complexType **EdgePointCopyType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseEdgePoint
used by	element EdgePointConstructionMethodType/Copy
annotation	documentation The EdgePointCopyType defines a copied edge-point construction.

element **EdgePointCopyType/BaseEdgePoint**

diagram	
type	BaseFeatureType
properties	content complex

children	ReferencedComponent FeatureItemId
annotation	documentation The BaseEdgePoint element identifies the edge-point to be copied.

complexType **EdgePointFeatureActualType**

diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Location Normal AdjacentNormal					
used by	element EdgePointFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The EdgePointFeatureActualType defines the edge-point feature actual information for an individual edge-point feature.					

element **EdgePointFeatureActualType/Location**

diagram						
type	ActualPointType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional Location element is the actual location of a point on the edge between two surfaces.

element **EdgePointFeatureActualType/Normal**

diagram						
type	ActualUnitVectorType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional Normal element is the actual unit normal vector of the edge surface.

element **EdgePointFeatureActualType/AdjacentNormal**

diagram						
type	ActualUnitVectorType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional AdjacentNormal element is the actual unit normal vector of the surface adjacent to the edge surface.

complexType **EdgePointFeatureDefinitionType**

diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes InternalExternal					
used by	element EdgePointFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The EdgePointFeatureDefinitionType defines the edge-point feature nominal information that can be common to one or more edge point features.					

element **EdgePointFeatureDefinitionType/InternalExternal**

diagram	
---------	--

type	InternalExternalEnumType		
properties	content	simple	
facets	Kind	Value	Annotation
	enumeration	INTERNAL	
	enumeration	EXTERNAL	
	enumeration	NOT_APPLICABLE	
annotation	documentation The InternalExternal element indicates whether the feature is internal or external. For example, an edge point on the edge of a desk would be external, and an edge point where a floor meets a wall would be internal.		

complexType **EdgePointFeatureItem**

diagram													
type	extension of FeatureItemBaseType												
properties	base FeatureItemBaseType												
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPId NotableEventIds CoordinateSystemId DeterminationMode												
used by	element EdgePointFeatureItem												
attributes	<table><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr><tr><td>id</td><td>QIFIdType</td><td>required</td><td></td><td></td><td>documentation The id attribute is the QIF id of the feature, used for referencing.</td></tr></table>	Name	Type	Use	Default	Fixed	Annotation	id	QIFIdType	required			documentation The id attribute is the QIF id of the feature, used for referencing.
Name	Type	Use	Default	Fixed	Annotation								
id	QIFIdType	required			documentation The id attribute is the QIF id of the feature, used for referencing.								
annotation	<p>documentation</p> <p>The EdgePointFeatureItemType defines an individual edge-point feature. An edge-point feature is a point on the intersection curve of two faces.</p>												

element **EdgePointFeatureItem/DeterminationMode**

diagram	<p>The diagram shows a box labeled 'DeterminationMode' connected to a choice box (a circle with a vertical line and a plus sign). This choice box is connected to two boxes: 'Checked' and 'Set'. The entire structure is enclosed in a dashed yellow box labeled 'EdgePointActualDeterminationType'.</p>
type	EdgePointActualDeterminationType
properties	content complex
children	Checked Set
annotation	documentation The DeterminationMode element is the means by which the edge-point feature actual is determined.

complexType **EdgePointFeatureNominalType**

diagram						
type	extension of FeatureNominalBaseType					
properties	base FeatureNominalBaseType					
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Location Normal AdjacentNormal					
used by	element EdgePointFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.

annotation	documentation The EdgePointFeatureNominalType defines the edge-point feature nominal information for an individual edge-point feature.
------------	---

element **EdgePointFeatureNominalType/Location**

diagram						
type	PointType					
properties	content complex					
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				

annotation	documentation The Location element is the nominal location of a point on the edge between two surfaces.
------------	--

element **EdgePointFeatureNominalType/Normal**

diagram						
type	UnitVectorType					
properties	content	complex				
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation	The Normal element is the nominal unit normal vector of the edge surface.				

element **EdgePointFeatureNominalType/AdjacentNormal**

diagram																																																																																					
type	UnitVectorType																																																																																				
properties	minOcc 0 maxOcc 1 content complex																																																																																				
facets	Kind Value Annotation length 3																																																																																				
attributes	<table><thead><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr></thead><tbody><tr><td>linearUnit</td><td>xs:token</td><td></td><td></td><td></td><td></td></tr><tr><td>decimalPlaces</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td></td></tr><tr><td>significantFigures</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td></td></tr><tr><td>validity</td><td>ValidityEnumType</td><td></td><td></td><td></td><td></td></tr><tr><td>xDecimalPlaces</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td></td></tr><tr><td>xSignificantFigures</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td></td></tr><tr><td>xValidity</td><td>ValidityEnumType</td><td></td><td></td><td></td><td></td></tr><tr><td>yDecimalPlaces</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td></td></tr><tr><td>ySignificantFigures</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td></td></tr><tr><td>yValidity</td><td>ValidityEnumType</td><td></td><td></td><td></td><td></td></tr><tr><td>zDecimalPlaces</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td></td></tr><tr><td>zSignificantFigures</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td></td></tr><tr><td>zValidity</td><td>ValidityEnumType</td><td></td><td></td><td></td><td></td></tr></tbody></table>	Name	Type	Use	Default	Fixed	Annotation	linearUnit	xs:token					decimalPlaces	xs:nonNegativeInteger					significantFigures	xs:nonNegativeInteger					validity	ValidityEnumType					xDecimalPlaces	xs:nonNegativeInteger					xSignificantFigures	xs:nonNegativeInteger					xValidity	ValidityEnumType					yDecimalPlaces	xs:nonNegativeInteger					ySignificantFigures	xs:nonNegativeInteger					yValidity	ValidityEnumType					zDecimalPlaces	xs:nonNegativeInteger					zSignificantFigures	xs:nonNegativeInteger					zValidity	ValidityEnumType				
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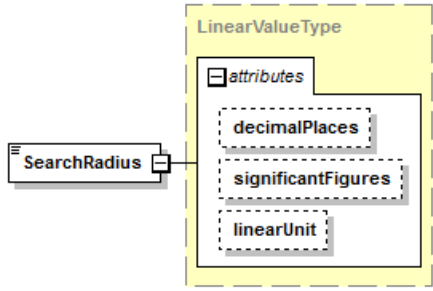
complexType **EdgePointFromScanType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated SurfaceFeature SearchRadius PatchRadius Distance Depth RetrievalMethod
used by	element EdgePointConstructionMethodType/FromScan
annotation	documentation The EdgePointFromScanType defines an edge-point construction by the retrieval of an edge-point from a scanned surface feature (point cloud).

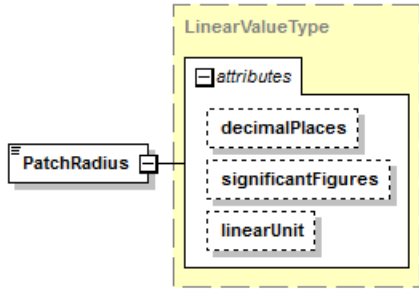
element **EdgePointFromScanType/SurfaceFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The SurfaceFeature element identifies the scanned surface feature from which the edge-point is retrieved.

element **EdgePointFromScanType/SearchRadius**

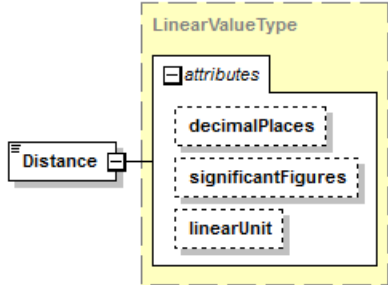
diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The SearchRadius element is the radius around the nominal feature (adjusted for depth), wherein the actual feature can be expected. The SearchRadius is the radius of a cylinder. All scanned points within this cylinder are examined for the retrieval of the feature. The cylinder's axis is defined by the feature's normal and the cylinder's axis passes through the feature's location point adjusted by the Depth element.					

element **EdgePointFromScanType/PatchRadius**

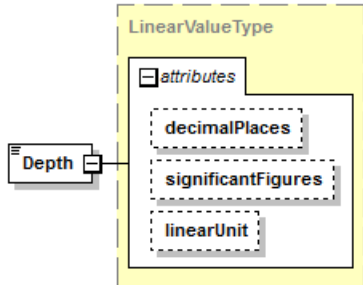
diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.

annotation	documentation The PatchRadius element is the radius around the edge-point reference used to adjust location and orientation.
------------	---

element **EdgePointFromScanType/Distance**

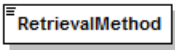
diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The Distance element is the distance from the surface's edge where measurements to adjust orientation and location are taken.					

element **EdgePointFromScanType/Depth**

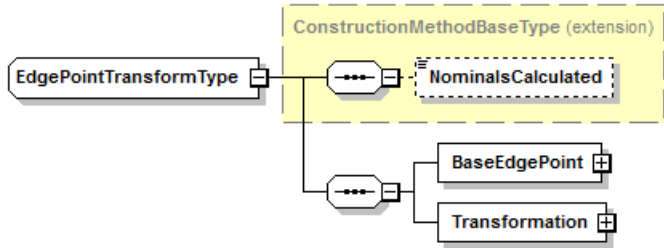
diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit

		attribute defines the UnitName for the LinearValueType.
annotation	documentation The Depth element is the measuring depth at which the edge point is to be retrieved.	

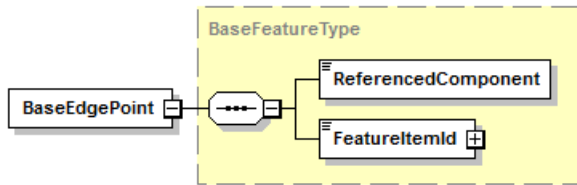
element **EdgePointFromScanType/RetrievalMethod**

diagram		
type	RetrievalMethodEnumType	
properties	content	simple
facets	Kind	Value
	enumeration	AVERAGE
	enumeration	MAXEXTREME
	enumeration	MINEXTREME
	enumeration	CLOSEST1D
	enumeration	CLOSEST2D
	enumeration	CLOSEST3D
annotation	documentation The RetrievalMethod element is the method used for retrieving the edge point from the acceptance cylinder.	

complexType **EdgePointTransformType**

diagram		
type	extension of ConstructionMethodBaseType	
properties	base	ConstructionMethodBaseType
children	NominalsCalculated BaseEdgePoint Transformation	
used by	element	EdgePointConstructionMethodType/Transform
annotation	documentation The EdgePointTransformType defines an edge-point construction by the transformation of an edge-point through the specified nominal or actual coordinate system.	

element **EdgePointTransformType/BaseEdgePoint**

diagram		
type	BaseFeatureType	

properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseEdgePoint element identifies the edge-point to be transformed.

element **EdgePointTransformType/Transformation**

diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	documentation The Transformation element identifies the coordinate system to be used to transform the base edge-point.


complexType **EllipseActualDeterminationType**

diagram	
children	Checked Set
used by	element EllipseFeatureItemType/DeterminationMode
annotation	documentation The EllipseActualDeterminationType defines how the ellipse actual is determined, either by being set or by being checked (measured or constructed).

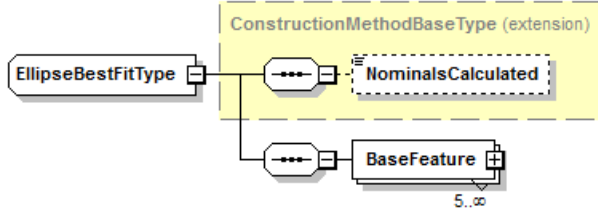
element **EllipseActualDeterminationType/Checked**

diagram	
type	EllipseCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	documentation The Checked element signifies that the ellipse is checked from actual data, either measured or constructed.

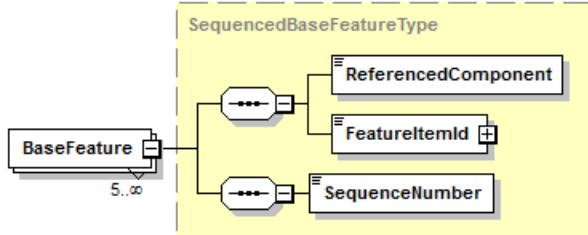
element **EllipseActualDeterminationType/Set**

diagram	
type	SetFeatureType
properties	content complex
annotation	documentation The Set element signifies that the ellipse actual is set to its nominal value.

complexType **EllipseBestFitType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element EllipseConstructionMethodType/BestFit
annotation	documentation The EllipseBestFitType defines the information for a best-fit ellipse which includes a list of point-reducible base features; the points to which those features reduce are used in the best-fit construction of the ellipse.

element **EllipseBestFitType/BaseFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 5 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	documentation Each BaseFeature element identifies a base feature to be used for the construction of an ellipse. The number of base features must be 5 or greater.

complexType EllipseCastType

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element EllipseConstructionMethodType/Cast
annotation	<p>documentation</p> <p>The EllipseCastType defines an ellipse construction by the casting of another feature type to an ellipse. The location, vectors and sizes are copied from the base feature. Any information not available on the base feature will remain at nominal.</p>

element EllipseCastType/BaseFeature

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The BaseFeature element identifies the base feature to be cast to an ellipse.</p>

complexType EllipseCheckedFeatureType

diagram	
children	CheckDetails
used by	element EllipseActualDeterminationType/Checked
annotation	<p>documentation</p> <p>The EllipseCheckedFeatureType defines that an ellipse feature is checked.</p>

element EllipseCheckedFeatureType/CheckDetails

diagram	
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type	EllipseCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the ellipse check (measurement or construction).

complexType [EllipseCheckedType](#)

diagram	
children	Measured Constructed
used by	element EllipseCheckedFeatureType/CheckDetails
annotation	documentation The EllipseCheckedType defines how the ellipse actual is checked, either by measurement or by construction.

element [EllipseCheckedType/Measured](#)

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the ellipse is measured.

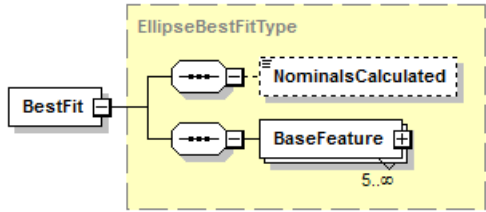
element **EllipseCheckedType/Constructed**

diagram	
type	EllipseConstructionMethodType
properties	content complex
children	BestFit Recompensated Intersection Projection Copy Cast Transform FromScan
annotation	documentation The Constructed element signifies that the ellipse is constructed.

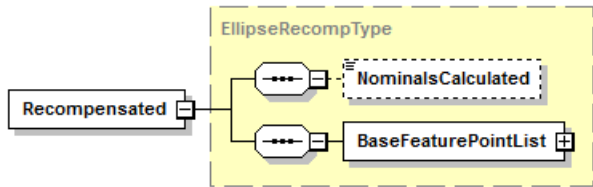
complexType **EllipseConstructionMethodType**

diagram	
children	BestFit Recompensated Intersection Projection Copy Cast Transform FromScan
used by	element EllipseCheckedType/Constructed
annotation	documentation The EllipseConstructionMethodType defines the method for constructing a unique nominal or actual ellipse feature.

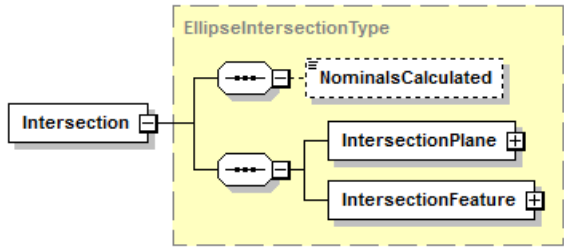
element **EllipseConstructionMethodType/BestFit**

diagram	 <p>The diagram shows a yellow dashed box labeled 'EllipseBestFitType'. Inside, a 'BestFit' box is connected to two other boxes: 'NominalsCalculated' (dashed) and 'BaseFeature' (solid). The 'BaseFeature' box has a multiplicity of '5..∞'.</p>
type	EllipseBestFitType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	<p>documentation</p> <p>The BestFit element describes the best-fit construction of an ellipse from 5 or more point-reducible base features. This element is in an optional choice.</p>

element **EllipseConstructionMethodType/Recompensated**

diagram	 <p>The diagram shows a yellow dashed box labeled 'EllipseRecompType'. Inside, a 'Recompensated' box is connected to two other boxes: 'NominalsCalculated' (dashed) and 'BaseFeaturePointList' (solid).</p>
type	EllipseRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	<p>documentation</p> <p>The Recompensated element describes the re-compensated-for- probe-size best-fit construction of an ellipse from 5 or more base feature points. This element is in an optional choice.</p>

element **EllipseConstructionMethodType/Intersection**

diagram	 <p>The diagram shows a yellow dashed box labeled 'EllipseIntersectionType'. Inside, an 'Intersection' box is connected to three other boxes: 'NominalsCalculated' (dashed), 'IntersectionPlane' (solid), and 'IntersectionFeature' (solid).</p>
type	EllipseIntersectionType
properties	content complex
children	NominalsCalculated IntersectionPlane IntersectionFeature
annotation	<p>documentation</p> <p>The Intersection element describes the construction of an ellipse by the intersection of a plane with a cylinder, cone, or other feature which has an elliptical cross section. This element is in an optional choice.</p>

element **EllipseConstructionMethodType/Projection**

diagram	<pre> graph LR subgraph EllipseProjectionType Projection[Projection] --- OC1[...] OC1 --- NominalsCalculated[NominalsCalculated] OC1 --- OC2[...] OC2 --- ProjectionFeature[ProjectionFeature] OC2 --- ProjectionPlane[ProjectionPlane] end </pre>
type	EllipseProjectionType
properties	content complex
children	NominalsCalculated ProjectionFeature ProjectionPlane
annotation	<p>documentation</p> <p>The Projection element describes the construction of an ellipse by the projection of a base ellipse onto a plane. This element is in an optional choice.</p>

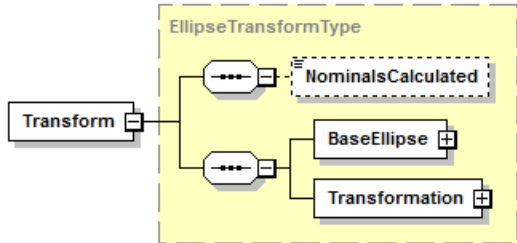
element **EllipseConstructionMethodType/Copy**

diagram	<pre> graph LR subgraph EllipseCopyType Copy[Copy] --- OC1[...] OC1 --- NominalsCalculated[NominalsCalculated] OC1 --- OC2[...] OC2 --- BaseEllipse[BaseEllipse] end </pre>
type	EllipseCopyType
properties	content complex
children	NominalsCalculated BaseEllipse
annotation	<p>documentation</p> <p>The Copy element describes the construction of an ellipse by the copying of a base ellipse. This element is in an optional choice.</p>

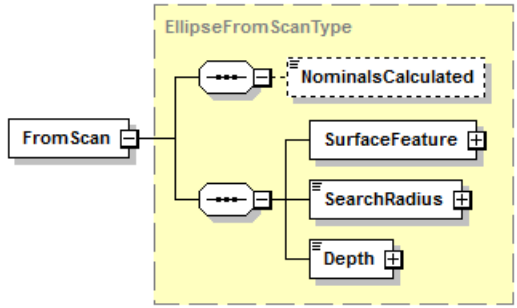
element **EllipseConstructionMethodType/Cast**

diagram	<pre> graph LR subgraph EllipseCastType Cast[Cast] --- OC1[...] OC1 --- NominalsCalculated[NominalsCalculated] OC1 --- OC2[...] OC2 --- BaseFeature[BaseFeature] end </pre>
type	EllipseCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	<p>documentation</p> <p>The Cast element describes the construction of an ellipse by the casting of a base feature. This element is in an optional choice.</p>

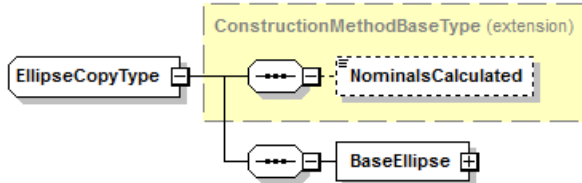
element **EllipseConstructionMethodType/Transform**

diagram	 <p>The diagram shows a 'Transform' element connected to a dashed box labeled 'EllipseTransformType'. Inside this box, there are three elements: 'NominalsCalculated' (dashed), 'BaseEllipse', and 'Transformation'.</p>
type	EllipseTransformType
properties	content complex
children	NominalsCalculated BaseEllipse Transformation
annotation	<p>documentation</p> <p>The Transform element describes the construction of an ellipse by the transformation of a base ellipse. This element is in an optional choice.</p>

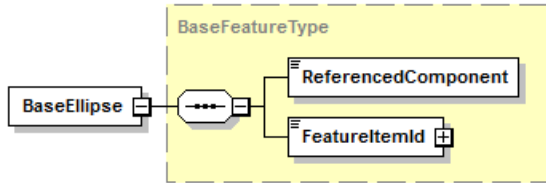
element **EllipseConstructionMethodType/FromScan**

diagram	 <p>The diagram shows a 'FromScan' element connected to a dashed box labeled 'EllipseFromScanType'. Inside this box, there are four elements: 'NominalsCalculated' (dashed), 'SurfaceFeature', 'SearchRadius', and 'Depth'.</p>
type	EllipseFromScanType
properties	content complex
children	NominalsCalculated SurfaceFeature SearchRadius Depth
annotation	<p>documentation</p> <p>The FromScan element describes the construction of an ellipse from scan data. This element is in an optional choice.</p>

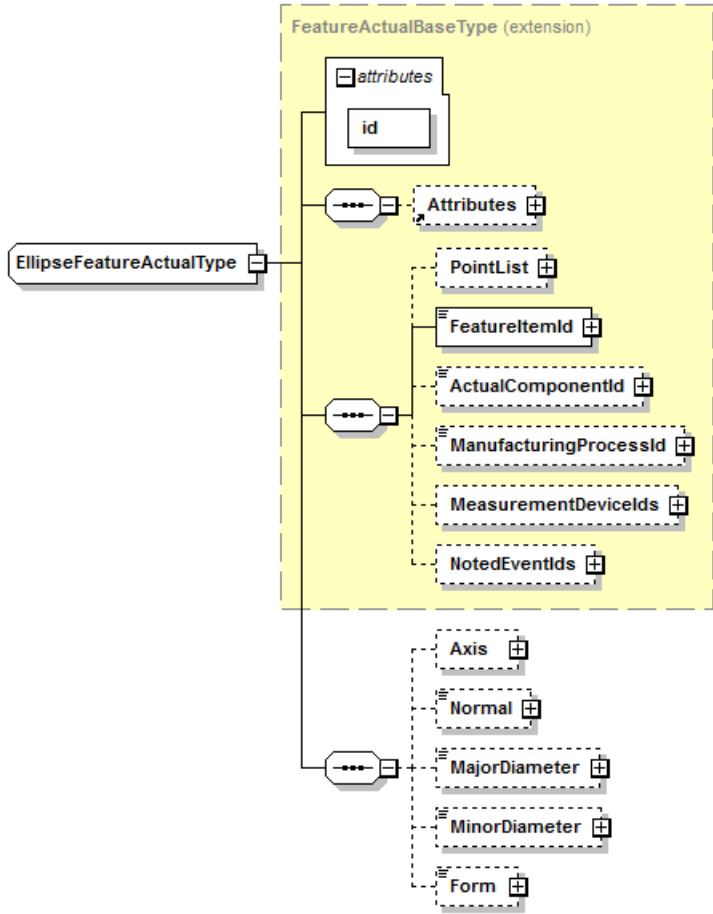
complexType **EllipseCopyType**

diagram	 <p>The diagram shows an 'EllipseCopyType' element connected to a dashed box labeled 'ConstructionMethodBaseType (extension)'. Inside this box, there are two elements: 'NominalsCalculated' (dashed) and 'BaseEllipse'.</p>
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseEllipse
used by	element EllipseConstructionMethodType/Copy
annotation	<p>documentation</p> <p>The EllipseCopyType defines a copied ellipse construction.</p>

element **EllipseCopyType/BaseEllipse**

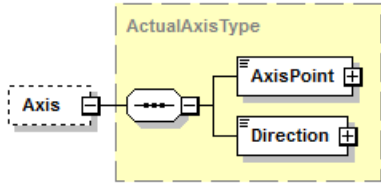
diagram	 <p>The diagram shows a box labeled 'BaseEllipse' connected to a dashed box labeled 'BaseFeatureType'. Inside 'BaseFeatureType', there is a container with two elements: 'ReferencedComponent' and 'FeatureItemId'.</p>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseEllipse element identifies the ellipse to be copied.

complexType **EllipseFeatureActualType**

diagram	 <p>The diagram shows a box labeled 'EllipseFeatureActualType' connected to a dashed box labeled 'FeatureActualBaseType (extension)'. Inside 'FeatureActualBaseType', there is an 'attributes' container with an 'id' attribute. Below this, there are two main branches. The first branch contains a container with 'Attributes', 'PointList', 'FeatureItemId', 'ActualComponentId', 'ManufacturingProcessId', 'MeasurementDeviceIds', and 'NotedEventIds'. The second branch contains a container with 'Axis', 'Normal', 'MajorDiameter', 'MinorDiameter', and 'Form'.</p>
type	extension of FeatureActualBaseType
properties	base FeatureActualBaseType
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Axis Normal MajorDiameter MinorDiameter Form

used by	element EllipseFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The EllipseFeatureActualType defines the ellipse feature actual information for an individual ellipse feature.					

element **EllipseFeatureActualType/Axis**

diagram						
type	ActualAxisType					
properties	minOcc	0	maxOcc	1	content	complex
children	AxisPoint Direction					
annotation	documentation The optional Axis element is the actual center point and actual axis vector along the long axis of the ellipse.					

element **EllipseFeatureActualType/Normal**

diagram						
type	ActualUnitVectorType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional Normal element is the actual unit normal vector of the plane of the ellipse.

element **EllipseFeatureActualType/MajorDiameter**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is

	linearUnit	xs:token	a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional MajorDiameter element is the actual major diameter of the ellipse.		

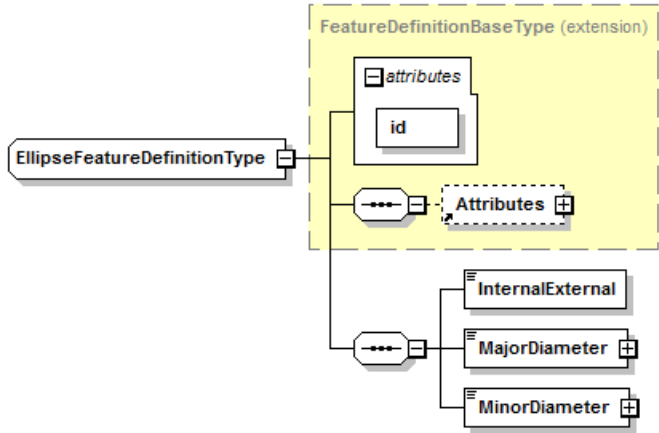
element **EllipseFeatureActualType/MinorDiameter**

diagram						
type	ActualLinearValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional MinorDiameter element is the actual minor diameter of the ellipse.					

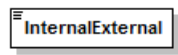
element **EllipseFeatureActualType/Form**

diagram						
type	ActualLinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Form element is the form error (ellipticity) of the ellipse from a report or an analysis.					

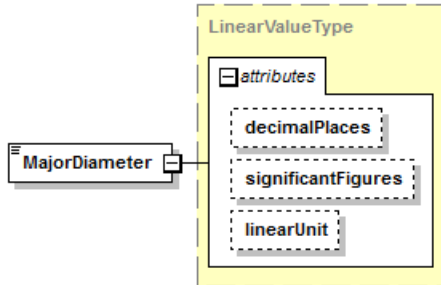
complexType **EllipseFeatureDefinitionType**

diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes InternalExternal MajorDiameter MinorDiameter					
used by	element EllipseFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The EllipseFeatureDefinitionType defines the ellipse feature nominal information that can be common to one or more ellipse features.					

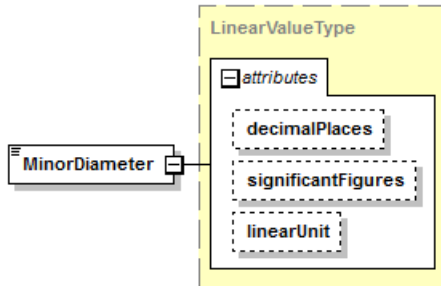
element **EllipseFeatureDefinitionType/InternalExternal**

diagram			
type	InternalExternalEnumType		
properties	content simple		
facets	Kind enumeration	Value INTERNAL	Annotation
	enumeration	EXTERNAL	
	enumeration	NOT_APPLICABLE	
annotation	documentation The InternalExternal element indicates whether the feature is internal or external.		

element **EllipseFeatureDefinitionType/MajorDiameter**

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The MajorDiameter element is the nominal major diameter of the ellipse.					

element **EllipseFeatureDefinitionType/MinorDiameter**

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The MinorDiameter element is the nominal minor diameter of the ellipse.					

complexType **EllipseFeatureItemType**

diagram						
type	extension of FeatureItemBaseType					
properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element EllipseFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The EllipseFeatureItemType defines an individual ellipse feature.					

element **EllipseFeatureItemType/DeterminationMode**

diagram						
type	EllipseActualDeterminationType					

properties	content complex
children	Checked Set
annotation	documentation The DeterminationMode element is the means by which the ellipse feature actual is determined.

element **EllipseFeatureItemType/SubstituteFeatureAlgorithm**

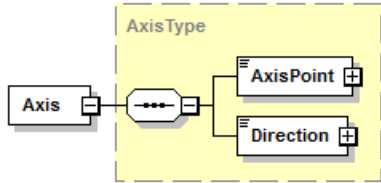
diagram	
type	FeatureOfSizeSubstituteFeatureAlgorithmType
properties	minOcc 0 maxOcc 1 content complex
children	FeatureOfSizeSubstituteFeatureAlgorithmEnum OtherFeatureOfSizeSubstituteFeatureAlgorithm
annotation	documentation The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the ellipse feature.

complexType **EllipseFeatureNominalType**

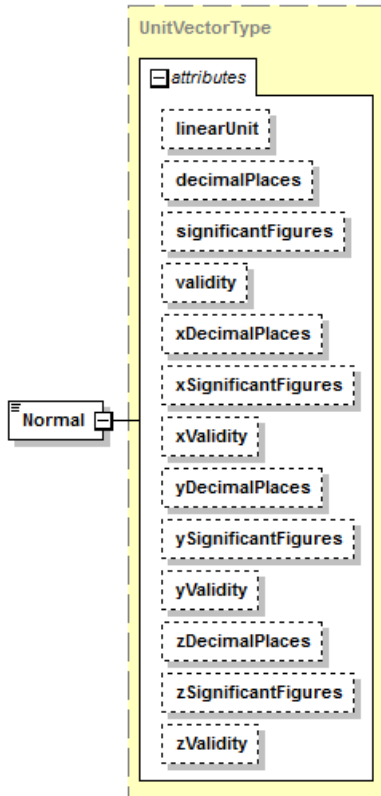
diagram	<p>The diagram illustrates the structure of the EllipseFeatureNominalType complex type. It is an extension of the FeatureNominalBaseType. The structure is as follows:</p> <ul style="list-style-type: none">FeatureNominalBaseType (extension) (dashed box):<ul style="list-style-type: none">attributes (block):<ul style="list-style-type: none">id (attribute)Attributes (block):<ul style="list-style-type: none">Name (attribute)PointList (block)FeatureDefinitionId (block)EntityInternalIds (block)EntityExternalIds (block)Axis (block)Normal (block)												
type	extension of FeatureNominalBaseType												
properties	base FeatureNominalBaseType												
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Axis Normal												
used by	element EllipseFeatureNominal												
attributes	<table><thead><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr></thead><tbody><tr><td>id</td><td>string</td><td>required</td><td></td><td></td><td></td></tr></tbody></table>	Name	Type	Use	Default	Fixed	Annotation	id	string	required			
Name	Type	Use	Default	Fixed	Annotation								
id	string	required											

	id QIFIdType required	documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The EllipseFeatureNominalType defines the ellipse feature nominal information for an individual ellipse feature.	

element **EllipseFeatureNominalType/Axis**

diagram		
type	AxisType	
properties	content complex	
children	AxisPoint Direction	
annotation	documentation The Axis element is the nominal center point and nominal axis vector along the long axis of the ellipse.	

element **EllipseFeatureNominalType/Normal**

diagram		
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type	UnitVectorType					
properties	content	complex				
facets	Kind length	Value 3	Annotation			
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation The Normal element is the nominal unit normal vector of the plane of the ellipse.					

complexType **EllipseFromScanType**

diagram	<pre>classDiagram class EllipseFromScanType class ConstructionMethodBaseType class NominalsCalculated class SurfaceFeature class SearchRadius class Depth EllipseFromScanType -- > ConstructionMethodBaseType EllipseFromScanType "1" -- "*" Container Container "1" -- "*" NominalsCalculated Container "1" -- "*" SurfaceFeature Container "1" -- "*" SearchRadius Container "1" -- "*" Depth</pre>
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated SurfaceFeature SearchRadius Depth
used by	element EllipseConstructionMethodType/FromScan
annotation	documentation The EllipseFromScanType defines an ellipse construction by the retrieval of an ellipse from a scanned surface feature (point cloud).

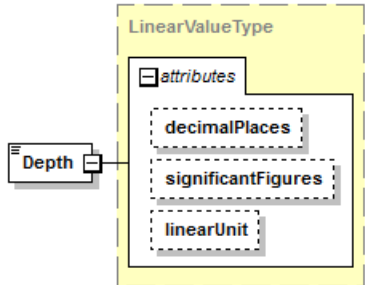
element **EllipseFromScanType/SurfaceFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The SurfaceFeature element identifies the scanned surface feature from which the ellipse is retrieved.

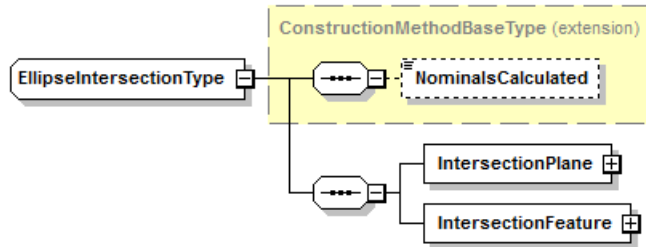
element **EllipseFromScanType/SearchRadius**

diagram	<pre>graph LR SearchRadius[SearchRadius] --- LinearValueType[LinearValueType] subgraph LinearValueType decimalPlaces[decimalPlaces] significantFigures[significantFigures] linearUnit[linearUnit] end</pre>					
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The SearchRadius element is the radius around the nominal feature, wherein the actual feature can be expected. The SearchRadius is the radius added to and subtracted from the nominal feature size defining an elliptical cylindrical shell. All scanned points within this elliptical cylindrical shell are used for the retrieval of the feature. The elliptical cylindrical shell's extrusion axis is defined by the feature's normal direction and the elliptical cylindrical shell's axis passes through the feature's center point. The elliptical cylindrical shell is evenly disposed about the nominal ellipse.					

element **EllipseFromScanType/Depth**

diagram						
type	LinearValueType					
properties	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The Depth element is the measuring depth at which the ellipse is to be retrieved.					

complexType **EllipseIntersectionType**

diagram	 <p>The diagram illustrates the structure of the <code>EllipseIntersectionType</code>. It is an extension of <code>ConstructionMethodBaseType</code>. The <code>EllipseIntersectionType</code> is represented by a rounded rectangle. It is connected to a dashed box labeled <code>ConstructionMethodBaseType (extension)</code>. Inside this dashed box, there is a dashed box labeled <code>NominalsCalculated</code>. Below the <code>NominalsCalculated</code> box, there are two boxes: <code>IntersectionPlane</code> and <code>IntersectionFeature</code>, both with a plus sign in a box next to them.</p>
type	extension of ConstructionMethodBaseType
properties	base <code>ConstructionMethodBaseType</code>
children	NominalsCalculated IntersectionPlane IntersectionFeature
used by	element EllipseConstructionMethodType/Intersection
annotation	<p>documentation</p> <p>The <code>EllipseIntersectionType</code> defines the construction of an ellipse by the intersection of a plane with a base feature that may be a cylinder, cone, or other feature with an elliptical cross section.</p>

element **EllipseIntersectionType/IntersectionPlane**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The IntersectionPlane element identifies the intersecting plane.

element **EllipseIntersectionType/IntersectionFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The IntersectionFeature element identifies a cylinder, cone, or other feature with an elliptical cross section.

complexType **EllipseProjectionType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated ProjectionFeature ProjectionPlane
used by	element EllipseConstructionMethodType/Projection
annotation	documentation The EllipseProjectionType defines a projected ellipse construction with the ellipse to be projected and the projection plane.

element **EllipseProjectionType/ProjectionFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The ProjectionFeature element identifies the ellipse, circle or arc to be projected.

element **EllipseProjectionType/ProjectionPlane**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The ProjectionPlane element identifies the plane onto which the base ellipse, circle or arc is to be projected.

complexType **EllipseRecompType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeaturePointList
used by	element EllipseConstructionMethodType/Recompensated
annotation	documentation The EllipseRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit ellipse through the measurement points of base features.

element **EllipseRecompType/BaseFeaturePointList**

diagram	
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	<p>documentation</p> <p>The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit ellipse. The total number of points in the BaseFeaturePointSets in the list must be 5 or greater.</p>

complexType **EllipseTransformType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseEllipse Transformation
used by	element EllipseConstructionMethodType/Transform
annotation	<p>documentation</p> <p>The EllipseTransformType defines an ellipse construction by the transformation of an ellipse through the specified nominal or actual coordinate system.</p>

element **EllipseTransformType/BaseEllipse**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The BaseEllipse element identifies the ellipse to be transformed.</p>

element **EllipseTransformType/Transformation**

diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	<p>documentation</p> <p>The Transformation element identifies the coordinate system to be used to transform the ellipse.</p>

complexType **ElongatedCylinderActualDeterminationType**

diagram	
children	Checked Set
used by	element ElongatedCylinderFeatureItem/DeterminationMode
annotation	<p>documentation</p> <p>The ElongatedCylinderActualDeterminationType defines how the elongated cylinder actual is determined, either by being set or by being checked (measured or constructed).</p>

element **ElongatedCylinderActualDeterminationType/Checked**

diagram	
type	ElongatedCylinderCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	<p>documentation</p> <p>The Checked element signifies that the elongated cylinder is checked from actual data, either measured or constructed.</p>

element **ElongatedCylinderActualDeterminationType/Set**

diagram	
type	SetFeatureType
properties	content complex
annotation	<p>documentation</p> <p>The Set element signifies that the elongated cylinder actual is set to its nominal value.</p>

complexType **ElongatedCylinderBestFitType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element ElongatedCylinderConstructionMethodType/BestFit
annotation	<p>documentation</p> <p>The ElongatedCylinderBestFitType defines the information for a best-fit elongated cylinder which includes a list of point-reducible base features; the points to which those features reduce are used in the best-fit construction of the elongated cylinder.</p>

element **ElongatedCylinderBestFitType/BaseFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 9 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	<p>documentation</p> <p>Each BaseFeature element identifies a base feature to be used for the construction of an elongated cylinder. The number of base features must be 9 or greater.</p>

complexType **ElongatedCylinderCastType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature

used by	element ElongatedCylinderConstructionMethodType/Cast
annotation	documentation The ElongatedCylinderCastType defines an elongated cylinder construction by the casting of another feature type to an elongated cylinder. The location, vectors and size are copied from the base feature. Any information not available on the base feature will remain at nominal.

element **ElongatedCylinderCastType/BaseFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseFeature element identifies the base feature to be cast to an elongated cylinder.

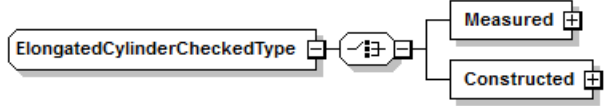
complexType **ElongatedCylinderCheckedFeatureType**

diagram	
children	CheckDetails
used by	element ElongatedCylinderActualDeterminationType/Checked
annotation	documentation The ElongatedCylinderCheckedFeatureType defines that an elongated cylinder feature is checked.

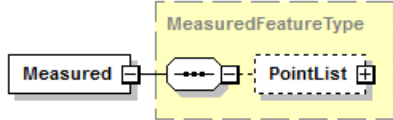
element **ElongatedCylinderCheckedFeatureType/CheckDetails**

diagram	
type	ElongatedCylinderCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the elongated cylinder check (measurement or construction).

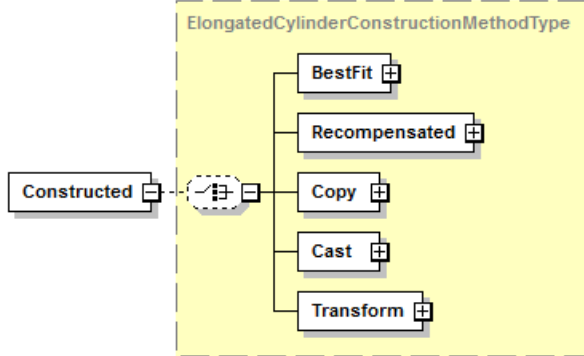
complexType **ElongatedCylinderCheckedType**

diagram	
children	Measured Constructed
used by	element ElongatedCylinderCheckedFeatureType/CheckDetails
annotation	documentation The ElongatedCylinderCheckedType defines how the elongated cylinder actual is checked, either by measurement or by construction.

element **ElongatedCylinderCheckedType/Measured**

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the elongated cylinder is measured.

element **ElongatedCylinderCheckedType/Constructed**

diagram	
type	ElongatedCylinderConstructionMethodType
properties	content complex
children	BestFit Recompensated Copy Cast Transform
annotation	documentation The Constructed element signifies that the elongated cylinder is constructed.

complexType **ElongatedCylinderConstructionMethodType**

diagram	
children	BestFit Recompensated Copy Cast Transform
used by	element ElongatedCylinderCheckedType/Constructed
annotation	documentation The ElongatedCylinderConstructionMethodType defines the method for constructing a unique nominal or actual elongated cylinder.

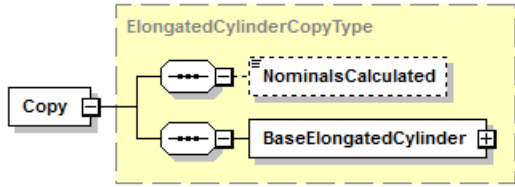
element **ElongatedCylinderConstructionMethodType/BestFit**

diagram	
type	ElongatedCylinderBestFitType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The BestFit element describes the best-fit construction of an elongated cylinder from 9 or more point-reducible base features. This element is in an optional choice.

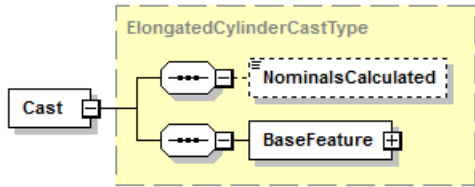
element **ElongatedCylinderConstructionMethodType/Recompensated**

diagram	
type	ElongatedCylinderRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	documentation The Recompensated element describes the re-compensated-for- probe-size best-fit construction of an elongated cylinder from 9 or more base feature points. This element is in an optional choice.

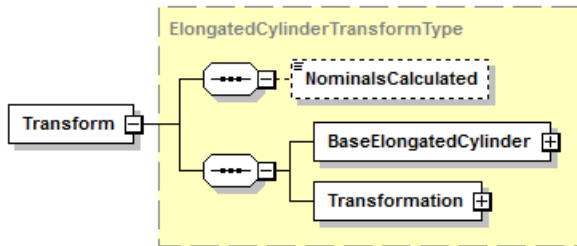
element **ElongatedCylinderConstructionMethodType/Copy**

diagram	 <p>The diagram shows a 'Copy' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'ElongatedCylinderCopyType'. Inside this box, there are two parallel paths. The top path consists of a cylinder icon with a dashed line through its center, followed by a dashed box labeled 'NominalsCalculated'. The bottom path consists of a cylinder icon with a dashed line through its center, followed by a rectangle labeled 'BaseElongatedCylinder' with a small square on its right side.</p>
type	ElongatedCylinderCopyType
properties	content complex
children	NominalsCalculated BaseElongatedCylinder
annotation	<p>documentation</p> <p>The Copy element describes the construction of an elongated cylinder by the copying of a base elongated cylinder. This element is in an optional choice.</p>

element **ElongatedCylinderConstructionMethodType/Cast**

diagram	 <p>The diagram shows a 'Cast' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'ElongatedCylinderCastType'. Inside this box, there are two parallel paths. The top path consists of a cylinder icon with a dashed line through its center, followed by a dashed box labeled 'NominalsCalculated'. The bottom path consists of a cylinder icon with a dashed line through its center, followed by a rectangle labeled 'BaseFeature' with a small square on its right side.</p>
type	ElongatedCylinderCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	<p>documentation</p> <p>The Cast element describes the construction of an elongated cylinder by the casting of a base feature. This element is in an optional choice.</p>

element **ElongatedCylinderConstructionMethodType/Transform**

diagram	 <p>The diagram shows a 'Transform' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'ElongatedCylinderTransformType'. Inside this box, there are two parallel paths. The top path consists of a cylinder icon with a dashed line through its center, followed by a dashed box labeled 'NominalsCalculated'. The bottom path consists of a cylinder icon with a dashed line through its center, followed by two rectangles: 'BaseElongatedCylinder' and 'Transformation', both with small squares on their right sides.</p>
type	ElongatedCylinderTransformType
properties	content complex
children	NominalsCalculated BaseElongatedCylinder Transformation
annotation	<p>documentation</p> <p>The Transform element describes the construction of an elongated cylinder by the transformation of a base elongated cylinder. This element is in an optional choice.</p>

complexType **ElongatedCylinderCopyType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseElongatedCylinder
used by	element ElongatedCylinderConstructionMethodType/Copy
annotation	documentation The ElongatedCylinderCopyType defines a copied elongated cylinder construction.

element **ElongatedCylinderCopyType/BaseElongatedCylinder**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseElongatedCylinder element identifies the elongated cylinder to be copied.

complexType **ElongatedCylinderFeatureActualType**

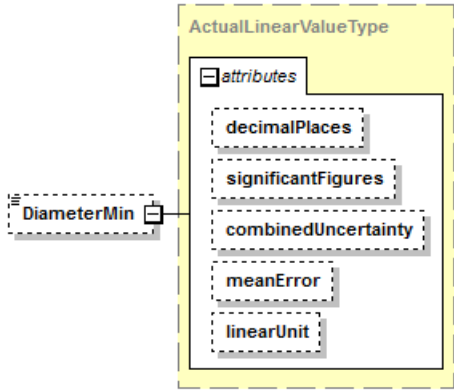
diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Diameter DiameterMin DiameterMax CenterPlane Length LengthMax LengthMin Width WidthMax WidthMin Depth DepthMax DepthMin DepthVector Form					
used by	element ElongatedCylinderFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the

		QIF id of the feature, used for referencing.
annotation	documentation The ElongatedCylinderFeatureActualType defines the elongated cylinder feature actual information for an individual elongated cylinder feature.	

element **ElongatedCylinderFeatureActualType/Diameter**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation	The optional Diameter element is the actual diameter of the elongated cylinder based on the substitute feature data fitting algorithm setting.				

element **ElongatedCylinderFeatureActualType/DiameterMin**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional DiameterMin element is the minimum actual diameter of the elongated cylinder from a report or an analysis.					

element **ElongatedCylinderFeatureActualType/DiameterMax**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional DiameterMax element is the maximum actual diameter of the elongated cylinder from a report or an analysis.					

element **ElongatedCylinderFeatureActualType/CenterPlane**

diagram						
type	ActualPlaneType					

properties	minOcc 0 maxOcc 1 content complex
children	Point Normal
annotation	documentation The optional CenterPlane element gives the actual location point and unit vector normal of the center plane of the actual elongated cylinder feature. The location point of the center plane is also the actual location point of the actual elongated cylinder feature and lies midway between the cylindrical ends.

element ElongatedCylinderFeatureActualType/Length

diagram						
type	ActualLinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Length element is the actual length (i.e., size) of the elongated cylinder.					

element **ElongatedCylinderFeatureActualType/LengthMax**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional LengthMax element is the maximum length of the elongated cylinder from a report or an analysis.					

element **ElongatedCylinderFeatureActualType/LengthMin**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional LengthMin element is the minimum length of the elongated cylinder from a report or an analysis.					

element **ElongatedCylinderFeatureActualType/Width**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Width element is the actual width of the elongated cylinder.					

element **ElongatedCylinderFeatureActualType/WidthMax**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional WidthMax element is the maximum width of the elongated cylinder from a report or an analysis.					

element **ElongatedCylinderFeatureActualType/WidthMin**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional WidthMin element is the minimum width of the elongated cylinder from a report or an analysis.					

element **ElongatedCylinderFeatureActualType/Depth**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Depth element is the actual depth of the elongated cylinder.					

element **ElongatedCylinderFeatureActualType/DepthMax**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional DepthMax element is the maximum depth of the elongated cylinder from a report or an analysis.					

element **ElongatedCylinderFeatureActualType/DepthMin**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional DepthMin element is the minimum depth of the elongated cylinder from a report or an analysis.					

element **ElongatedCylinderFeatureActualType/DepthVector**

diagram						
type	ActualUnitVectorType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional DepthVector element is the actual unit vector direction of the depth of the actual elongated cylinder. The depth vector is parallel to the axis vector of each cylindrical end and points into the elongated cylinder. The elongated cylinder does not extend from the location point in the direction opposite the depth vector.

element **ElongatedCylinderFeatureActualType/Form**

diagram						
type	ActualLinearValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation

	linearUnit xs:token	The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Form element is the form error (cylindricity) of the elongated cylinder from a report or an analysis.	

complexType **ElongatedCylinderFeatureDefinitionType**

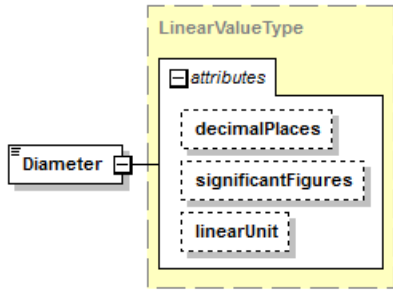
diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes InternalExternal Diameter Length Width Depth					
used by	element ElongatedCylinderFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ElongatedCylinderFeatureDefinitionType defines the elongated cylinder feature nominal information that can be common to one or more elongated cylinder features.					

element **ElongatedCylinderFeatureDefinitionType/InternalExternal**

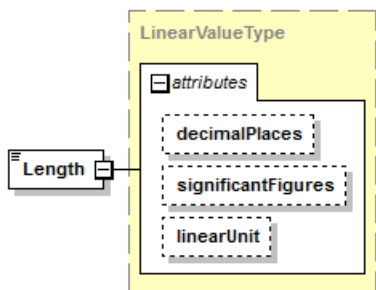
diagram	
type	InternalExternalEnumType

properties	content simple		
facets	Kind	Value	Annotation
	enumeration	INTERNAL	
	enumeration	EXTERNAL	
	enumeration	NOT_APPLICABLE	
annotation	documentation The InternalExternal element indicates whether the feature is internal or external.		

element **ElongatedCylinderFeatureDefinitionType/Diameter**

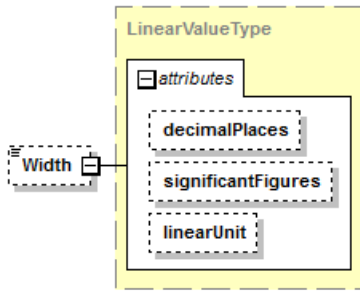
diagram						
type	LinearValueType					
properties	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation	The Diameter element is the nominal diameter of the elongated cylinder.				

element **ElongatedCylinderFeatureDefinitionType/Length**

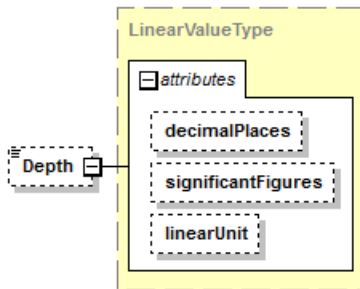
diagram						
type	LinearValueType					
properties	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation

	<p>significantFigures xs:nonNegativeInteger</p> <p>linearUnit xs:token</p>	<p>See documentation of SpecifiedDecimalType. documentation</p> <p>See documentation of SpecifiedDecimalType. documentation</p> <p>The optional linearUnit attribute defines the UnitName for the LinearValueType.</p>
annotation	<p>documentation</p> <p>The Length element is the length (i.e., size) of the elongated cylinder from cylindrical end to cylindrical end.</p>	

element **ElongatedCylinderFeatureDefinitionType/Width**

diagram						
type	LinearValueType					
properties	<p>minOcc 0</p> <p>maxOcc 1</p> <p>content complex</p>					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType. documentation
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType. documentation
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	<p>documentation</p> <p>The optional Width element is the width of the elongated cylinder with cylindrical ends. The width is no greater than the diameter of each cylindrical end.</p>					

element **ElongatedCylinderFeatureDefinitionType/Depth**

diagram						
type	LinearValueType					

properties	minOcc 0 maxOcc 1 content complex					
attributes	<div> <div>Name</div> <div>decimalPlaces</div> <div>Type</div> <div>xs:nonNegativeInteger</div> <div>Use</div> <div></div> <div>Default</div> <div></div> <div>Fixed</div> <div></div> <div>Annotation</div> <div>documentation See documentation of SpecifiedDecimalType. documentation See documentation of SpecifiedDecimalType. documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.</div> </div> <div> <div>significantFigures</div> <div>xs:nonNegativeInteger</div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div> <div> <div>linearUnit</div> <div>xs:token</div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div>					
annotation	documentation The optional Depth element is the depth of the elongated cylinder.					

complexType **ElongatedCylinderFeatureItem**Type

diagram						
type	extension of FeatureItemBaseType					
properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element ElongatedCylinderFeatureItem					
attributes	<div> <div>Name</div> <div>id</div> <div>Type</div> <div>QIFIdType</div> <div>Use</div> <div>required</div> <div>Default</div> <div></div> <div>Fixed</div> <div></div> <div>Annotation</div> <div>documentation The id attribute is the QIF id of the feature, used for referencing.</div> </div>					

annotation	<p>documentation</p> <p>The ElongatedCylinderFeatureItemType defines an individual feature-of-size elongated cylinder feature, located by its center plane. An elongated cylinder feature can represent the ends of a round-ended slot in the case where the slot has independent tolerance requirements for its sides and ends.</p>
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element **ElongatedCylinderFeatureItemType/DeterminationMode**

diagram	
type	ElongatedCylinderActualDeterminationType
properties	content complex
children	Checked Set
annotation	<p>documentation</p> <p>The DeterminationMode element is the means by which the elongated cylinder feature actual is determined.</p>

element **ElongatedCylinderFeatureItemType/SubstituteFeatureAlgorithm**

diagram	
type	FeatureOfSizeSubstituteFeatureAlgorithmType
properties	minOcc 0 maxOcc 1 content complex
children	FeatureOfSizeSubstituteFeatureAlgorithmEnum OtherFeatureOfSizeSubstituteFeatureAlgorithm
annotation	<p>documentation</p> <p>The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the elongated cylinder feature.</p>

complexType **ElongatedCylinderFeatureNominalType**

diagram						
type	extension of FeatureNominalBaseType					
properties	base FeatureNominalBaseType					
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds CenterPlane DepthVector					
used by	element ElongatedCylinderFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ElongatedCylinderFeatureNominalType defines the elongated cylinder feature nominal information for an individual elongated cylinder feature.					

element **ElongatedCylinderFeatureNominalType/CenterPlane**

diagram						
type	PlaneType					
properties	content complex					
children	Point Normal					
annotation	documentation The CenterPlane element gives the nominal location point and unit vector normal of the center plane of the elongated					

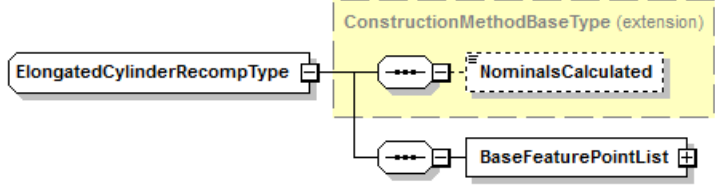
cylinder feature. The location point of the center plane is also the nominal location point of the elongated cylinder feature and lies midway between the cylindrical ends.

element **ElongatedCylinderFeatureNominalType/DepthVector**

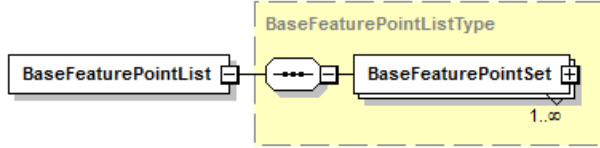
diagram						
type	UnitVectorType					
properties	content complex					
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation The DepthVector element is the nominal unit vector direction of the depth of the elongated cylinder. The depth vector is					

	parallel to the axis vector of each cylindrical end and points into the elongated cylinder. The elongated cylinder does not extend from the location point in the direction opposite the depth vector.
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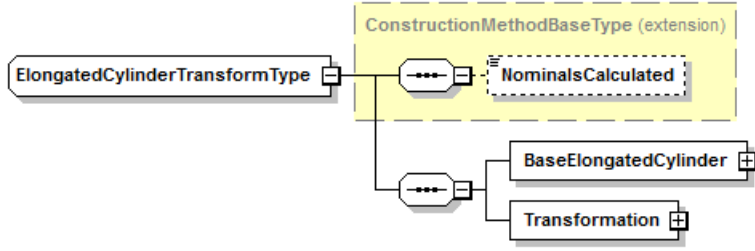
complexType **ElongatedCylinderRecompType**

diagram	 The diagram shows a box labeled 'ElongatedCylinderRecompType' connected to a dashed yellow box labeled 'ConstructionMethodBaseType (extension)'. Inside this extension box, there are two elements: 'NominalsCalculated' (dashed box) and 'BaseFeaturePointList' (solid box). Both are connected to the main box via lines with three dots, indicating a list or array of elements.
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeaturePointList
used by	element ElongatedCylinderConstructionMethodType/Recompensated
annotation	documentation The ElongatedCylinderRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit elongated cylinder through the measurement points of base features.

element **ElongatedCylinderRecompType/BaseFeaturePointList**

diagram	 The diagram shows a box labeled 'BaseFeaturePointList' connected to a dashed yellow box labeled 'BaseFeaturePointListType'. Inside this extension box, there is one element: 'BaseFeaturePointSet' (solid box). The connection is via a line with three dots, and the 'BaseFeaturePointSet' box has a '1..∞' cardinality indicator.
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	documentation The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit elongated cylinder. The total number of points in the BaseFeaturePointSets in the list must be 9 or greater.

complexType **ElongatedCylinderTransformType**

diagram	 The diagram shows a box labeled 'ElongatedCylinderTransformType' connected to a dashed yellow box labeled 'ConstructionMethodBaseType (extension)'. Inside this extension box, there are three elements: 'NominalsCalculated' (dashed box), 'BaseElongatedCylinder' (solid box), and 'Transformation' (solid box). All three are connected to the main box via lines with three dots, indicating a list or array of elements.
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseElongatedCylinder Transformation
used by	element ElongatedCylinderConstructionMethodType/Transform

annotation	documentation The ElongatedCylinderTransformType defines an elongated cylinder construction by the transformation of an elongated cylinder through the specified nominal or actual coordinate system.
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element ElongatedCylinderTransformType/BaseElongatedCylinder

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseElongatedCylinder element identifies the elongated cylinder to be transformed.

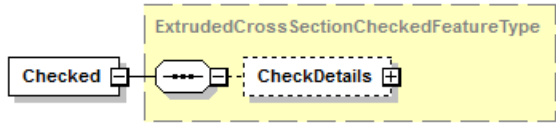
element ElongatedCylinderTransformType/Transformation

diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	documentation The Transformation element identifies the coordinate system to be used to transform the elongated cylinder.


complexType ExtrudedCrossSectionActualDeterminationType

diagram	
children	Checked Set
used by	element ExtrudedCrossSectionFeatureItemType/DeterminationMode
annotation	documentation The ElongatedCylinderActualDeterminationType defines how the extruded cross-section actual is determined, either by being set or by being checked (measured or constructed).

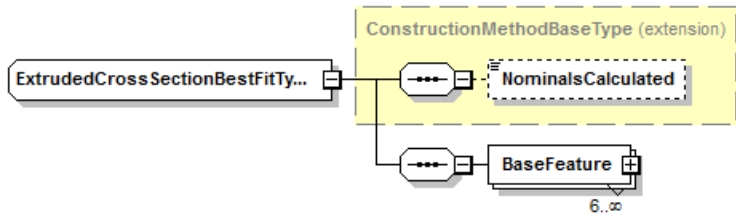
element **ExtrudedCrossSectionActualDeterminationType/Checked**

diagram	 <p>The diagram shows a box labeled 'Checked' connected to a dashed box labeled 'ExtrudedCrossSectionCheckedFeatureType'. Inside this dashed box is a 'CheckDetails' box with a plus sign in its corner.</p>
type	ExtrudedCrossSectionCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	<p>documentation</p> <p>The Checked element signifies that the extruded cross-section is checked from actual data, either measured or constructed.</p>

element **ExtrudedCrossSectionActualDeterminationType/Set**

diagram	 <p>The diagram shows a box labeled 'Set'.</p>
type	SetFeatureType
properties	content complex
annotation	<p>documentation</p> <p>The Set element signifies that the extruded cross-section actual is set to its nominal value.</p>

complexType **ExtrudedCrossSectionBestFitType**

diagram	 <p>The diagram shows a box labeled 'ExtrudedCrossSectionBestFitTy...' connected to a dashed box labeled 'ConstructionMethodBaseType (extension)'. Inside this dashed box is a 'NominalsCalculated' box. Below the dashed box is a 'BaseFeature' box with a plus sign in its corner. A line connects the 'ExtrudedCrossSectionBestFitTy...' box to the 'BaseFeature' box, with the text '6..∞' below the line.</p>
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element ExtrudedCrossSectionConstructionMethodType/BestFit
annotation	<p>documentation</p> <p>The ExtrudedCrossSectionBestFitType defines the information for a best-fit extruded cross section which includes a list of point-reducible base features; the points to which those features reduce are used in the best-fit construction of the extruded cross section.</p>

element **ExtrudedCrossSectionBestFitType/BaseFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 6 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	documentation Each BaseFeature element identifies a base feature to be used for the construction of an extruded cross section. The number of base features must be 6 or greater.


complexType **ExtrudedCrossSectionCastType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element ExtrudedCrossSectionConstructionMethodType/Cast
annotation	documentation The ExtrudedCrossSectionCastType defines the cast of another feature type to an extruded cross section. The location, axis and size are copied from the base feature.

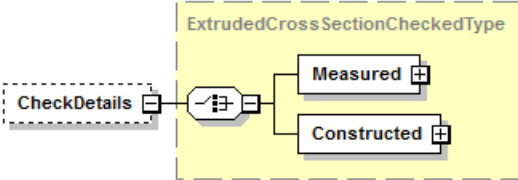
element **ExtrudedCrossSectionCastType/BaseFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseFeature element identifies the base feature to be cast to an extruded cross section.

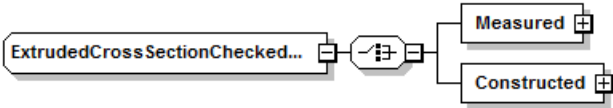
complexType ExtrudedCrossSectionCheckedFeatureType

diagram	
children	CheckDetails
used by	element ExtrudedCrossSectionActualDeterminationType/Checked
annotation	documentation The ExtrudedCrossSectionCheckedFeatureType defines that an extruded cross-section feature is checked.

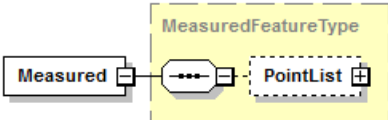
element ExtrudedCrossSectionCheckedFeatureType/CheckDetails

diagram	
type	ExtrudedCrossSectionCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the extruded cross-section check (measurement or construction).

complexType ExtrudedCrossSectionCheckedType

diagram	
children	Measured Constructed
used by	element ExtrudedCrossSectionCheckedFeatureType/CheckDetails
annotation	documentation The ExtrudedCrossSectionCheckedType defines how the extruded cross section actual is checked, either by measurement or by construction.

element ExtrudedCrossSectionCheckedType/Measured

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the extruded cross-section is measured.

element **ExtrudedCrossSectionCheckedType/Constructed**

diagram	
type	ExtrudedCrossSectionConstructionMethodType
properties	content complex
children	BestFit Recompensated Copy Cast Transform
annotation	<p>documentation</p> <p>The Constructed element signifies that the extruded cross-section is constructed.</p>

complexType **ExtrudedCrossSectionConstructionMethodType**

diagram	
children	BestFit Recompensated Copy Cast Transform
used by	element ExtrudedCrossSectionCheckedType/Constructed
annotation	<p>documentation</p> <p>The ExtrudedCrossSectionConstructionMethodType defines the method for constructing a unique nominal or actual extruded cross section feature.</p>

element **ExtrudedCrossSectionConstructionMethodType/BestFit**

diagram	
type	ExtrudedCrossSectionBestFitType
properties	content complex

children	NominalsCalculated BaseFeature
annotation	documentation The BestFit element describes the best-fit construction of an extruded cross section from 6 or more point-reducible base features. This element is in an optional choice.

element **ExtrudedCrossSectionConstructionMethodType/Recompensated**

diagram	<p>The diagram shows a box labeled 'Recompensated' connected by a line to a dashed box labeled 'ExtrudedCrossSectionRecompType'. Inside this dashed box, there are two sub-elements: 'NominalsCalculated' (in a dashed box) and 'BaseFeaturePointList' (in a solid box).</p>
type	ExtrudedCrossSectionRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	documentation The Recompensated element describes the re-compensated-for-probe-size best-fit construction of an extruded cross section from 6 or more base feature points. This element is in an optional choice.

element **ExtrudedCrossSectionConstructionMethodType/Copy**

diagram	<p>The diagram shows a box labeled 'Copy' connected by a line to a dashed box labeled 'ExtrudedCrossSectionCopyType'. Inside this dashed box, there are two sub-elements: 'NominalsCalculated' (in a dashed box) and 'BaseExtrudedCrossSection' (in a solid box).</p>
type	ExtrudedCrossSectionCopyType
properties	content complex
children	NominalsCalculated BaseExtrudedCrossSection
annotation	documentation The Copy element describes the construction of an extruded cross section by the copying of a base extruded cross section. This element is in an optional choice.

element **ExtrudedCrossSectionConstructionMethodType/Cast**

diagram	<p>The diagram shows a box labeled 'Cast' connected by a line to a dashed box labeled 'ExtrudedCrossSectionCastType'. Inside this dashed box, there are two sub-elements: 'NominalsCalculated' (in a dashed box) and 'BaseFeature' (in a solid box).</p>
type	ExtrudedCrossSectionCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The Cast element describes the construction of an extruded cross section by the casting of a base feature. This element

	is in an optional choice.
--	---------------------------

element ExtrudedCrossSectionConstructionMethodType/Transform

diagram	
type	ExtrudedCrossSectionTransformType
properties	content complex
children	NominalsCalculated BaseExtrudedCrossSection Transformation
annotation	documentation The Transform element describes the construction of an extruded cross section by the transformation of a base extruded cross section. This element is in an optional choice.

complexType ExtrudedCrossSectionCopyType

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseExtrudedCrossSection
used by	element ExtrudedCrossSectionConstructionMethodType/Copy
annotation	documentation The ExtrudedCrossSectionCopyType defines a copied extruded cross section construction.

element ExtrudedCrossSectionCopyType/BaseExtrudedCrossSection

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseExtrudedCrossSection element identifies the extruded cross section to be copied.

complexType **ExtrudedCrossSectionFeatureActualType**

diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Direction Length Form					
used by	element ExtrudedCrossSectionFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ExtrudedCrossSectionFeatureActualType defines the extruded cross-section feature actual information for an individual extruded cross-section feature.					

element **ExtrudedCrossSectionFeatureActualType/Direction**

diagram						
type	ActualUnitVectorType					
properties	minOcc	0	maxOcc	1	content	complex
facets	Kind	Value	Annotation	length	3	
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional Direction element is the vector representing the direction along which the cross-section is extruded.

element **ExtrudedCrossSectionFeatureActualType/Length**

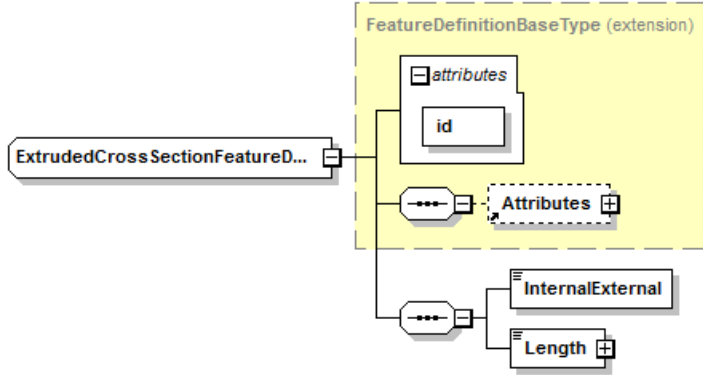
diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is

	linearUnit xs:token	a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Length element is the length over which the extruded cross-section is extruded.	

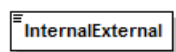
element **ExtrudedCrossSectionFeatureActualType/Form**

diagram						
type	ActualLinearValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Form element is the form error (straightness) of the extruded cross-section from a report or an analysis.					

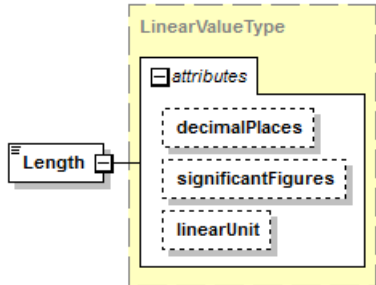
complexType **ExtrudedCrossSectionFeatureDefinitionType**

diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes InternalExternal Length					
used by	element ExtrudedCrossSectionFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ExtrudedCrossSectionFeatureDefinitionType defines the extruded cross-section feature nominal information that can be common to one or more extruded cross-section features.					

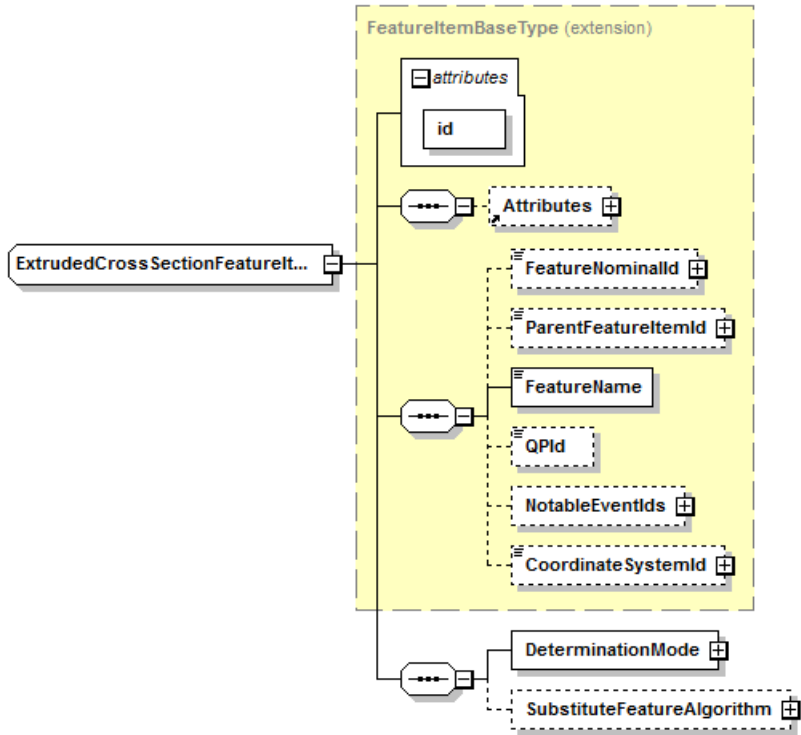
element **ExtrudedCrossSectionFeatureDefinitionType/InternalExternal**

diagram					
type	InternalExternalEnumType				
properties	content simple				
facets	Kind enumeration	Value INTERNAL	Annotation		
	enumeration	EXTERNAL			
	enumeration	NOT_APPLICABLE			
annotation	documentation The InternalExternal element indicates whether the feature is internal or external.				

element **ExtrudedCrossSectionFeatureDefinitionType/Length**

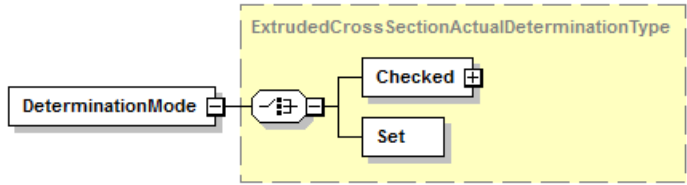
diagram						
type	LinearValueType					
properties	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The Length element is the nominal length of the feature in the direction of extrusion.					

complexType **ExtrudedCrossSectionFeatureItem**

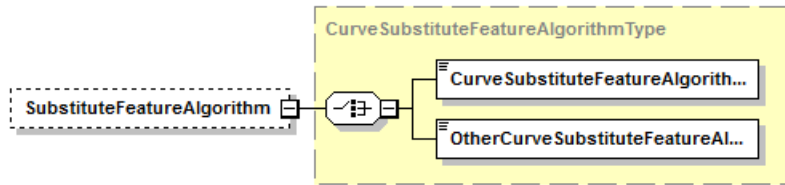
diagram						
type	extension of FeatureItemBaseType					

properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element ExtrudedCrossSectionFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ExtrudedCrossSectionFeatureItemType defines an individual extruded cross-section feature. An extruded cross-section feature is formed by extruding a planar curve a distance along a vector normal to the plane of the curve.					

element **ExtrudedCrossSectionFeatureItemType/DeterminationMode**

diagram						
type	ExtrudedCrossSectionActualDeterminationType					
properties	content complex					
children	Checked Set					
annotation	documentation The DeterminationMode element is the means by which the extruded cross-section feature actual is determined.					

element **ExtrudedCrossSectionFeatureItemType/SubstituteFeatureAlgorithm**

diagram	
type	CurveSubstituteFeatureAlgorithmType
properties	<div>minOcc0</div> <div>maxOcc1</div> <div>contentcomplex</div>
children	CurveSubstituteFeatureAlgorithmEnum OtherCurveSubstituteFeatureAlgorithm
annotation	<div>documentation</div> <div>The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the extruded cross-section feature.</div>

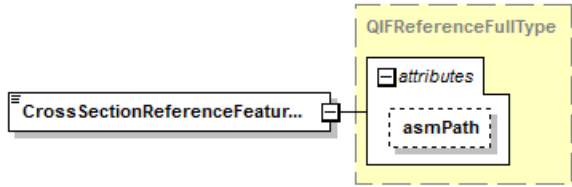
complexType **ExtrudedCrossSectionFeatureNominalType**

diagram						
type	extension of FeatureNominalBaseType					
properties	base FeatureNominalBaseType					
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Direction CrossSectionReferenceFeatureId					
used by	element ExtrudedCrossSectionFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ExtrudedCrossSectionFeatureNominalType defines the extruded cross-section feature nominal information for an individual extruded cross-section feature.					

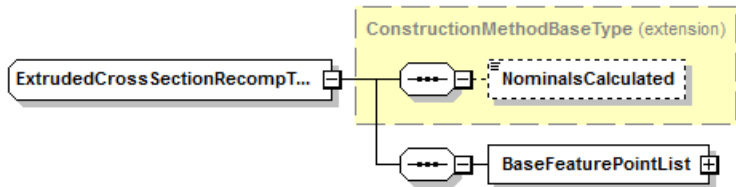
element **ExtrudedCrossSectionFeatureNominalType/Direction**

diagram						
type	UnitVectorType					
properties	content	complex				
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation	The Direction element is the unit vector representing the extrusion direction.				

element **ExtrudedCrossSectionFeatureNominalType/CrossSectionReferenceFeatureId**

diagram						
type	QIFReferenceFullType					
properties	content complex					
attributes	Name asmPath	Type QIFIdType	Use	Default	Fixed	Annotation documentation The optional asmPath attribute is an id which must be used for locating of the assembly path within the AsmPaths. The assembly path (instantiation chain) unambiguously identifies a model entity within an assembly.
annotation	documentation The CrossSectionReferenceFeatureId element is the QIF id of the nominal feature defining the base cross section. This feature is extruded by Length from the location of the base cross-section in the extrusion direction. The value of the element must be the QIF id of a nominal feature.					

complexType **ExtrudedCrossSectionRecompType**

diagram						
type	extension of ConstructionMethodBaseType					
properties	base ConstructionMethodBaseType					
children	NominalsCalculated BaseFeaturePointList					
used by	element ExtrudedCrossSectionConstructionMethodType/Recompensated					
annotation	documentation The ExtrudedCrossSectionRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit extruded cross section through the measurement points of base features.					

element **ExtrudedCrossSectionRecompType/BaseFeaturePointList**

diagram	<pre> graph LR BFL[BaseFeaturePointList] --- BFPSet[BaseFeaturePointSet] BFPSet --- M1[1..∞] subgraph BaseFeaturePointListType BFL BFPSet end </pre>
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	<p>documentation</p> <p>The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit extruded cross section. The total number of points in the BaseFeaturePointSets in the list must be 6 or greater.</p>

complexType **ExtrudedCrossSectionTransformType**

diagram	<pre> graph LR ECST[ExtrudedCrossSectionTransformType] --- CM[ConstructionMethodBaseType (extension)] CM --- NC[NominalsCalculated] CM --- EC[BaseExtrudedCrossSection] CM --- T[Transformation] </pre>
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseExtrudedCrossSection Transformation
used by	element ExtrudedCrossSectionConstructionMethodType/Transform
annotation	<p>documentation</p> <p>The ExtrudedCrossSectionTransformType defines an extruded cross section construction by the transformation of an extruded cross section through the specified nominal or actual coordinate system.</p>

element **ExtrudedCrossSectionTransformType/BaseExtrudedCrossSection**

diagram	<pre> graph LR BECS[BaseExtrudedCrossSection] --- BF[BaseFeatureType] BF --- RC[ReferencedComponent] BF --- FI[FeatureItemId] </pre>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The BaseExtrudedCrossSection element identifies the extruded cross section to be transformed.</p>

element **ExtrudedCrossSectionTransformType/Transformation**

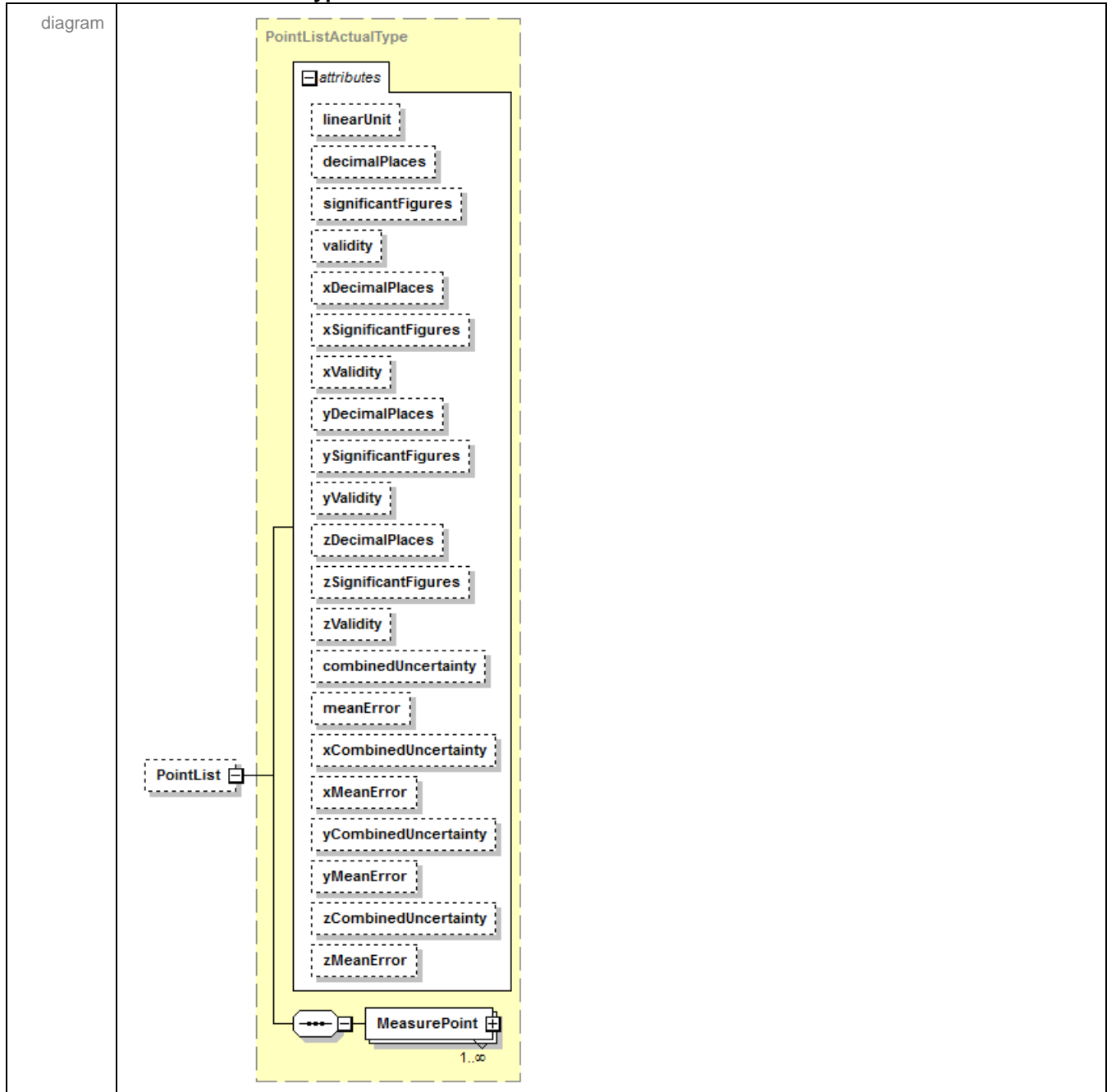
diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	<p>documentation</p> <p>The Transformation element identifies the coordinate system to be used to transform the extruded cross section.</p>

complexType **FeatureActualBaseType**

diagram													
type	extension of FeatureBaseType												
properties	<div><div>base</div><div>FeatureBaseType</div><div>abstract</div><div>true</div></div>												
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds												
used by	<div><div>element</div><div>FeatureActual</div><div>complexType</div><div>ArcFeatureActualType CircleFeatureActualType CompositeFeatureActualBaseType ConeFeatureActualType ConicalSegmentFeatureActualType CuboidFeatureActualType CylinderFeatureActualType CylindricalSegmentFeatureActualType EdgePointFeatureActualType EllipseFeatureActualType ElongatedCylinderFeatureActualType ExtrudedCrossSectionFeatureActualType GenericFeatureActualType LineFeatureActualType OppositeLinesFeatureActualType OppositePlanesFeatureActualType PlaneFeatureActualType PointDefinedCurveFeatureActualType PointDefinedSurfaceFeatureActualType PointFeatureActualType SphereFeatureActualType SphericalSegmentFeatureActualType SurfaceOfRevolutionFeatureActualType ThreadedFeatureActualType ToroidalSegmentFeatureActualType TorusFeatureActualType</div></div>												
attributes	<table><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	Name	Type	Use	Default	Fixed	Annotation						
Name	Type	Use	Default	Fixed	Annotation								

	id	QIFIdType	required	documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation	The FeatureActualBaseType is the abstract base type for feature actuals. A feature actual holds all information for a measured or constructed feature, e.g. feature size and feature location.		

element **FeatureActualBaseType/PointList**



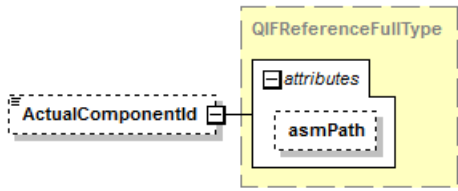
type	PointListActualType					
properties	minOcc	0	maxOcc	1	content	complex
children	MeasurePoint					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
	combinedUncertainty	xs:decimal				
	meanError	xs:decimal				
	xCombinedUncertainty	xs:decimal				
	xMeanError	xs:decimal				
	yCombinedUncertainty	xs:decimal				
	yMeanError	xs:decimal				
	zCombinedUncertainty	xs:decimal				
	zMeanError	xs:decimal				
annotation	documentation The optional PointList element is a list of actual measurement points for the feature.					

element **FeatureActualBaseType/FeatureItemId**

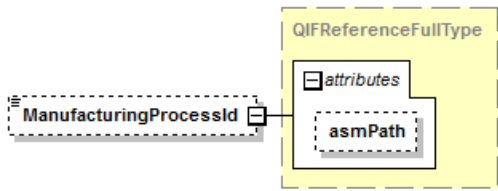
diagram	<pre> classDiagram class QIFReferenceFullType { +attributes +asmPath } class FeatureItemId { +asmPath } QIFReferenceFullType -- FeatureItemId </pre>					
type	QIFReferenceFullType					
properties	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	asmPath	QIFIdType				documentation The optional asmPath attribute is an id which must be used for locating of the assembly path within the AsmPaths.

		The assembly path (instantiation chain) unambiguously identifies a model entity within an assembly.
annotation	documentation The FeatureItemId element is the QIF id of the associated feature item which may or may not reference feature nominal information.	

element **FeatureActualBaseType/ActualComponentId**

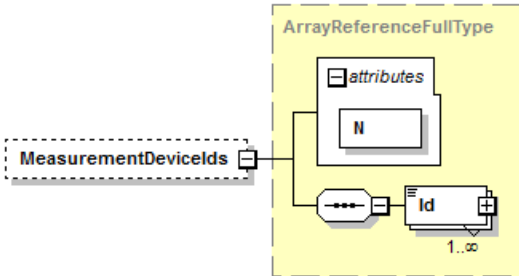
diagram						
type	QIFReferenceFullType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name asmPath	Type QIFIdType	Use	Default	Fixed	Annotation documentation The optional asmPath attribute is an id which must be used for locating of the assembly path within the AsmPaths. The assembly path (instantiation chain) unambiguously identifies a model entity within an assembly.
annotation	documentation The optional ActualComponentId element is the QIF id of the actual component to which this feature actual belongs.					

element **FeatureActualBaseType/ManufacturingProcessId**

diagram						
type	QIFReferenceFullType					

properties	minOcc 0 maxOcc 1 content complex					
attributes	Name asmPath	Type QIFIdType	Use	Default	Fixed	Annotation documentation The optional asmPath attribute is an id which must be used for locating of the assembly path within the AsmPaths. The assembly path (instantiation chain) unambiguously identifies a model entity within an assembly.
annotation	documentation The optional ManufacturingProcessId element is a reference to the traceability information for the process used to manufacture this feature.					

element **FeatureActualBaseType/MeasurementDevicelds**

diagram						
type	ArrayReferenceFullType					
properties	minOcc 0 maxOcc 1 content complex					
children	Id					
attributes	Name N	Type NaturalType	Use required	Default	Fixed	Annotation documentation The required N attribute shows how many Id elements are present in this array.
annotation	documentation The optional MeasurementDevicelds element is a list of references to the measurement devices used in the inspection of the feature.					

element **FeatureActualBaseType/NotedEventIds**

diagram						
type	ArrayReferenceFullType					
properties	minOcc	0	maxOcc	1	content	complex
children	Id					
attributes	Name N	Type NaturalType	Use required	Default	Fixed	Annotation documentation The required N attribute shows how many Id elements are present in this array.
annotation	documentation The optional NotedEventIds element is a list of QIF ids of noted events that happened during the measurement of this feature.					

complexType **FeatureActualsType**

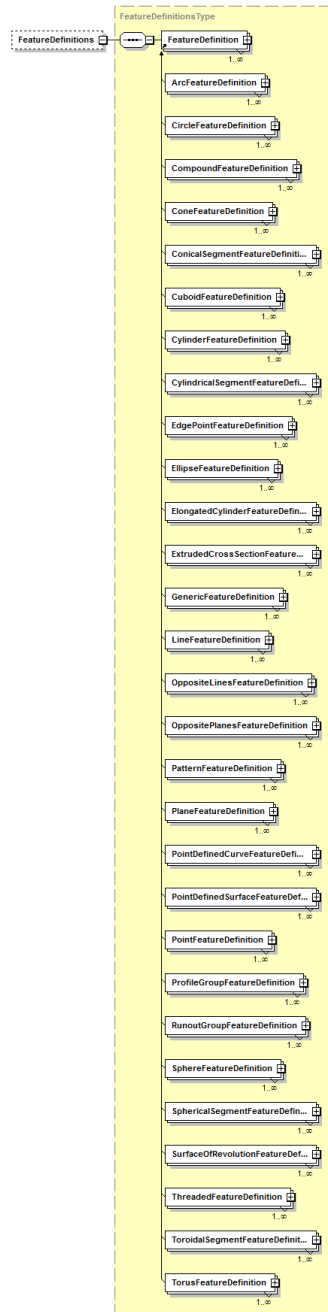
diagram	<pre> classDiagram class FeatureActualsType class FeatureActual class ArcFeatureActual class CircleFeatureActual class CompoundFeatureActual class ConeFeatureActual class ConicalSegmentFeatureActual class CuboidFeatureActual class CylinderFeatureActual class CylindricalSegmentFeatureActual class EdgePointFeatureActual class EllipseFeatureActual class ElongatedCylinderFeatureActual class ExtrudedCrossSectionFeatureActual class GenericFeatureActual class LineFeatureActual class OppositeLinesFeatureActual class OppositePlanesFeatureActual class PatternFeatureActual class PlaneFeatureActual class PointDefinedCurveFeatureActual class PointDefinedSurfaceFeatureActual class PointFeatureActual class ProfileGroupFeatureActual class RunoutGroupFeatureActual class SphereFeatureActual class SphericalSegmentFeatureActual class SurfaceOfRevolutionFeatureActual class ThreadedFeatureActual class ToroidalSegmentFeatureActual class TorusFeatureActual FeatureActualsType -- "1..∞" FeatureActual FeatureActual -- "1..∞" ArcFeatureActual FeatureActual -- "1..∞" CircleFeatureActual FeatureActual -- "1..∞" CompoundFeatureActual FeatureActual -- "1..∞" ConeFeatureActual FeatureActual -- "1..∞" ConicalSegmentFeatureActual FeatureActual -- "1..∞" CuboidFeatureActual FeatureActual -- "1..∞" CylinderFeatureActual FeatureActual -- "1..∞" CylindricalSegmentFeatureActual FeatureActual -- "1..∞" EdgePointFeatureActual FeatureActual -- "1..∞" EllipseFeatureActual FeatureActual -- "1..∞" ElongatedCylinderFeatureActual FeatureActual -- "1..∞" ExtrudedCrossSectionFeatureActual FeatureActual -- "1..∞" GenericFeatureActual FeatureActual -- "1..∞" LineFeatureActual FeatureActual -- "1..∞" OppositeLinesFeatureActual FeatureActual -- "1..∞" OppositePlanesFeatureActual FeatureActual -- "1..∞" PatternFeatureActual FeatureActual -- "1..∞" PlaneFeatureActual FeatureActual -- "1..∞" PointDefinedCurveFeatureActual FeatureActual -- "1..∞" PointDefinedSurfaceFeatureActual FeatureActual -- "1..∞" PointFeatureActual FeatureActual -- "1..∞" ProfileGroupFeatureActual FeatureActual -- "1..∞" RunoutGroupFeatureActual FeatureActual -- "1..∞" SphereFeatureActual FeatureActual -- "1..∞" SphericalSegmentFeatureActual FeatureActual -- "1..∞" SurfaceOfRevolutionFeatureActual FeatureActual -- "1..∞" ThreadedFeatureActual FeatureActual -- "1..∞" ToroidalSegmentFeatureActual FeatureActual -- "1..∞" TorusFeatureActual </pre>
children	FeatureActual
used by	element MeasuredFeaturesType/FeatureActuals
annotation	documentation The FeatureActualsType defines a list of feature actuals.

complexType **FeatureAspectsListsType**

diagram	
children	FeatureDefinitions FeatureNominals FeatureItems
used by	element Features
annotation	documentation The FeaturesAspectsListsType defines lists of the four aspects of a set of inspection features.

element **FeatureAspectsListsType/FeatureDefinitions**

diagram



type

[FeatureDefinitionsType](#)

properties

minOcc 0
 maxOcc 1
 content complex

children

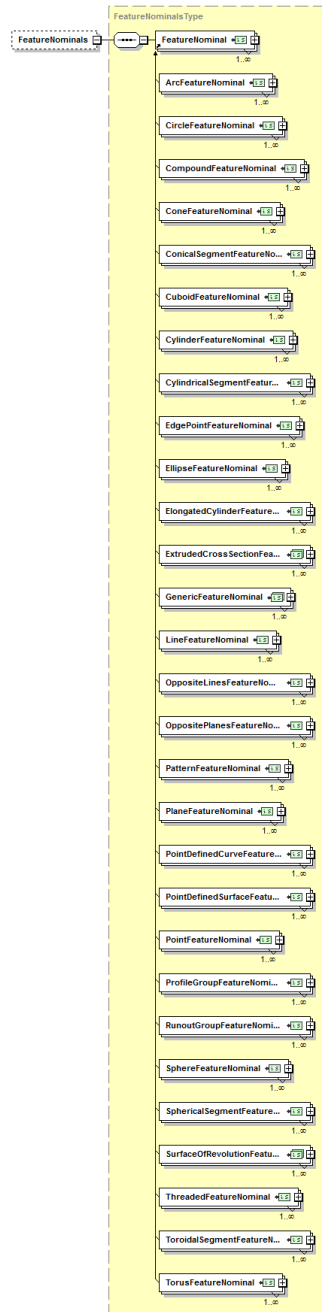
FeatureDefinition

annotation

documentation
 The optional FeatureDefinitions element is a list of definitions of the inspection features.

element **FeatureAspectsListsType/FeatureNominals**

diagram



type

[FeatureNominalsType](#)

properties

minOcc 0
 maxOcc 1
 content complex

children

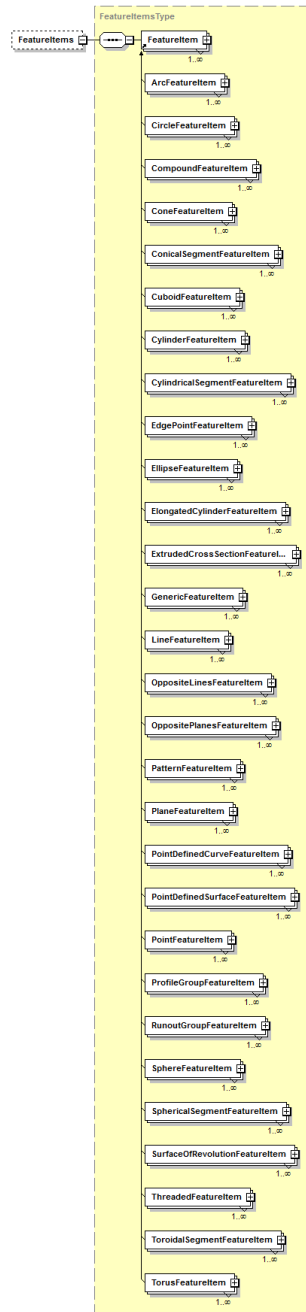
FeatureNominal

annotation

documentation
 The optional FeatureNominals element is a list of Nominal inspection features.

element **FeatureAspectsListsType/FeatureItems**

diagram

type [FeatureItemsType](#)

properties

minOcc 0

maxOcc 1

content complex

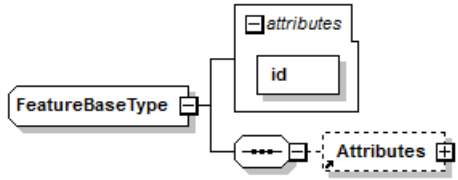
children **FeatureItem**

annotation

documentation

The optional FeatureItems element is a list of instances of inspection features.

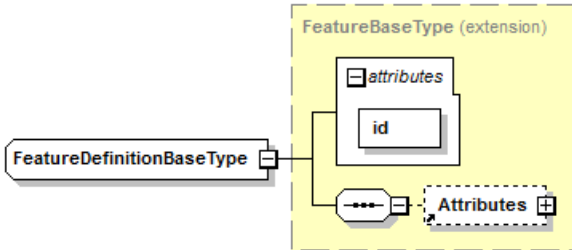
complexType **FeatureBaseType**

diagram						
properties	abstract true					
children	Attributes					
used by	complexTypes	FeatureActualBaseType FeatureDefinitionBaseType FeatureItemBaseType FeatureNominalBaseType				
attributes	Name	Type	Use	Default	Fixed	Annotation
	id	QIFIdType	required			documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The FeatureBaseType is the abstract base type for feature definitions, feature nominals, feature items, and feature actuals. It describes a subset of information common to all features.					

attribute **FeatureBaseType/@id**

type	QIFIdType
properties	use required
annotation	documentation The id attribute is the QIF id of the feature, used for referencing.

complexType **FeatureDefinitionBaseType**

diagram			
type	extension of FeatureBaseType		
properties	base	FeatureBaseType	
	abstract	true	
children	Attributes		
used by	element complexTypes	FeatureDefinition ArcFeatureDefinitionType CircleFeatureDefinitionType CompositeFeatureDefinitionBaseType ConeFeatureDefinitionType ConicalSegmentFeatureDefinitionType CuboidFeatureDefinitionType CylinderFeatureDefinitionType CylindricalSegmentFeatureDefinitionType EdgePointFeatureDefinitionType EllipseFeatureDefinitionType ElongatedCylinderFeatureDefinitionType ExtrudedCrossSectionFeatureDefinitionType GenericFeatureDefinitionType LineFeatureDefinitionType OppositeLinesFeatureDefinitionType OppositePlanesFeatureDefinitionType PlaneFeatureDefinitionType PointDefinedCurveFeatureDefinitionType PointDefinedSurfaceFeatureDefinitionType PointFeatureDefinitionType SphereFeatureDefinitionType SphericalSegmentFeatureDefinitionType SurfaceOfRevolutionFeatureDefinitionType	

	ThreadedFeatureDefinitionType ToroidalSegmentFeatureDefinitionType TorusFeatureDefinitionType					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The FeatureDefinitionBaseType is the abstract base type for feature definitions. A feature definition holds that portion of feature nominal information which can be shared among several features, e.g. feature size.					

complexType **FeatureDefinitionsType**

diagram	
children	FeatureDefinition
used by	element FeatureAspectsListsType/FeatureDefinitions
annotation	documentation The FeatureDefinitionsType defines a list of definitions of inspection features.

complexType **FeatureItemBaseType**

diagram	<pre>classDiagram class FeatureBaseType { +attributes +id } class FeatureItemBaseType { +FeatureNominalId +ParentFeatureItemId +FeatureName +QPid +NotableEventIds +CoordinateSystemId } FeatureBaseType < -- FeatureItemBaseType FeatureItemBaseType ..> FeatureBaseType : Attributes</pre>						
type	extension of FeatureBaseType						
properties	base	FeatureBaseType					
	abstract	true					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId						
used by	element complexTypes	FeatureItem ArcFeatureItem CircleFeatureItem CompositeFeatureItemBaseType ConeFeatureItem ConicalSegmentFeatureItem CuboidFeatureItem CylinderFeatureItem CylindricalSegmentFeatureItem EdgePointFeatureItem EllipseFeatureItem ElongatedCylinderFeatureItem ExtrudedCrossSectionFeatureItem GenericFeatureItem LineFeatureItem OppositeLinesFeatureItem OppositePlanesFeatureItem PlaneFeatureItem PointDefinedCurveFeatureItem PointDefinedSurfaceFeatureItem PointFeatureItem SphereFeatureItem SphericalSegmentFeatureItem SurfaceOfRevolutionFeatureItem ThreadedFeatureItem ToroidalSegmentFeatureItem TorusFeatureItem					
attributes	Name	Type	Use	Default	Fixed	Annotation	
	id	QIFIdType	required			documentation The id attribute is the QIF id of the feature, used for referencing.	
annotation	documentation The FeatureItemBaseType is the abstract base type for feature items. A feature item represents a single feature with optional nominal data.						

element **FeatureItemBaseType/FeatureNominalId**

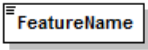
diagram	
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type	QIFReferenceFullType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name asmPath	Type QIFIdType	Use	Default	Fixed	Annotation documentation The optional asmPath attribute is an id which must be used for locating of the assembly path within the AsmPaths. The assembly path (instantiation chain) unambiguously identifies a model entity within an assembly.
annotation	documentation The optional FeatureNominalId element is the QIF id of the feature nominal.					


element **FeatureItemBaseType/ParentFeatureItemId**

diagram						
type	QIFReferenceFullType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name asmPath	Type QIFIdType	Use	Default	Fixed	Annotation documentation The optional asmPath attribute is an id which must be used for locating of the assembly path within the AsmPaths. The assembly path (instantiation chain) unambiguously identifies a model entity within an assembly.
annotation	documentation The optional ParentFeatureItemId element is the QIF id of the parent feature item when this feature item is derived from another feature item.					

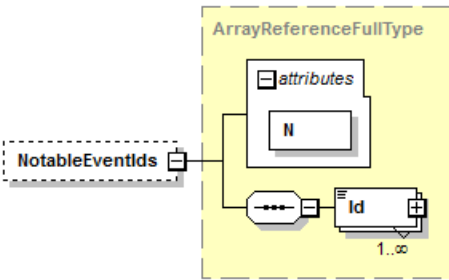
element **FeatureItemBaseType/FeatureName**

diagram	
type	xs:token
properties	content simple
annotation	documentation The FeatureName element is the name of the feature, e.g. CIRC1, PLANE_3.

element **FeatureItemBaseType/QPid**

diagram	
type	QPIdType
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The optional QPid element is a persistent identifier for the feature item. If used, it should be generated using a widely accepted UUID generator.

element **FeatureItemBaseType/NotableEventIds**

diagram						
type	ArrayReferenceFullType					
properties	minOcc 0 maxOcc 1 content complex					
children	Id					
attributes	Name N	Type NaturalType	Use required	Default	Fixed	Annotation documentation The required N attribute shows how many Id elements are present in this array.
annotation	documentation The optional NotableEventIds element is a list of the QIF ids of notable events associated with the measurement of this feature.					

element **FeatureItemBaseType/CoordinateSystemId**

diagram						
type	QIFReferenceFullType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	asmPath	QIFIdType				documentation The optional asmPath attribute is an id which must be used for locating of the assembly path within the AsmPaths. The assembly path (instantiation chain) unambiguously identifies a model entity within an assembly.
annotation	documentation The optional CoordinateSystemId element is the QIF id of the coordinate system in which the feature is checked or set.					


complexType **FeatureItemsType**

diagram	
children	FeatureItem
used by	element FeatureAspectsListsType/FeatureItems
annotation	<p>documentation</p> <p>The FeatureItemsType defines a list of feature items.</p>

complexType **FeatureNominalBaseType**

diagram	<pre>classDiagram class FeatureBaseType { +attributes +id } class FeatureNominalBaseType { +Name +PointList +FeatureDefinitionId +EntityInternalIds +EntityExternalIds } FeatureBaseType < -- FeatureNominalBaseType FeatureBaseType --> FeatureNominalBaseType : extension</pre>					
type	extension of FeatureBaseType					
properties	base	FeatureBaseType				
	abstract	true				
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds					
used by	element	FeatureNominal				
	complexTypes	ArcFeatureNominalType CircleFeatureNominalType CompositeFeatureNominalBaseType ConeFeatureNominalType ConicalSegmentFeatureNominalType CuboidFeatureNominalType CylinderFeatureNominalType CylindricalSegmentFeatureNominalType EdgePointFeatureNominalType EllipseFeatureNominalType ElongatedCylinderFeatureNominalType ExtrudedCrossSectionFeatureNominalType GenericFeatureNominalType LineFeatureNominalType OppositeLinesFeatureNominalType OppositePlanesFeatureNominalType PlaneFeatureNominalType PointDefinedCurveFeatureNominalType PointDefinedSurfaceFeatureNominalType PointFeatureNominalType SphereFeatureNominalType SphericalSegmentFeatureNominalType SurfaceOfRevolutionFeatureNominalType ThreadedFeatureNominalType ToroidalSegmentFeatureNominalType TorusFeatureNominalType				
attributes	Name	Type	Use	Default	Fixed	Annotation
	id	QIFIdType	required			documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The FeatureNominalBaseType is the abstract base type for feature nominals. A feature nominal holds that portion of feature nominal information which cannot be shared among several features, e.g. feature location.					


element **FeatureNominalBaseType/Name**

diagram	
type	xs:token
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The optional Name element is the name of the feature nominal.

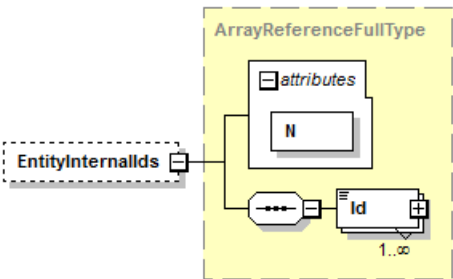
element **FeatureNominalBaseType/PointList**

diagram						
type	PointListNominalType					
properties	minOcc 0 maxOcc 1 content complex					
children	MeasurePoint					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation The optional PointList element is a list of target measurement points for the feature.					

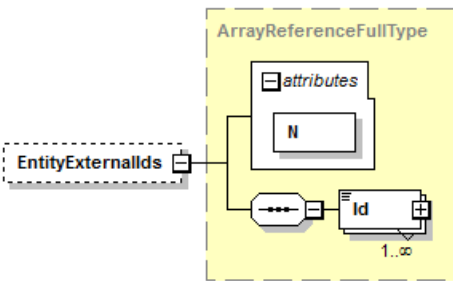
element **FeatureNominalBaseType/FeatureDefinitionId**

diagram	
type	QIFReferenceType
properties	content complex
annotation	documentation The FeatureDefinitionId element is the QIF id of the associated feature definition.

element **FeatureNominalBaseType/EntityInternalIds**

diagram						
type	ArrayReferenceFullType					
properties	minOcc	0	maxOcc	1	content	complex
children	Id					
attributes	Name N	Type NaturalType	Use required	Default	Fixed	Annotation documentation The required N attribute shows how many Id elements are present in this array.
annotation	documentation The EntityInternalIds element is a list of the QIF ids of internally-defined CAD entities associated with this feature nominal.					

element **FeatureNominalBaseType/EntityExternalIds**

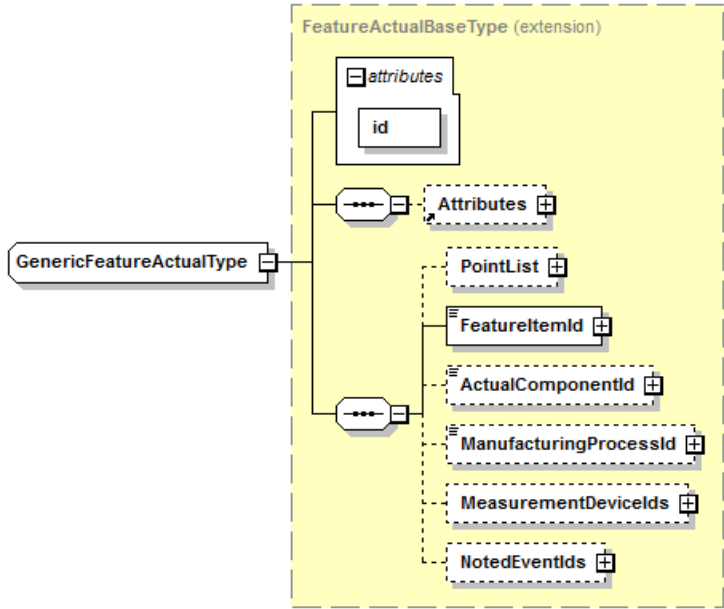
diagram						
type	ArrayReferenceFullType					
properties	minOcc	0	maxOcc	1		

	content	complex				
children	Id					
attributes	Name N	Type NaturalType	Use required	Default	Fixed	Annotation documentation The required N attribute shows how many Id elements are present in this array.
annotation	documentation The EntityExternalIds element is a list of the QIF ids of instances of EntityExternalType associated with this feature nominal.					

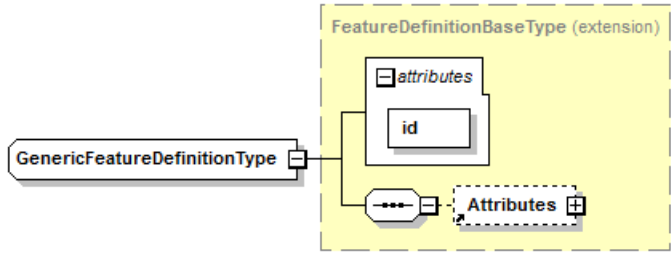
complexType **FeatureNominalsType**

diagram	
children	FeatureNominal
used by	element FeatureAspectsListsType/FeatureNominals
annotation	<p>documentation</p> <p>The FeatureNominalsType defines a list of nominal definitions of inspection features.</p>

complexType **GenericFeatureActualType**

diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds					
used by	element GenericFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The GenericFeatureActualType defines the actual values of a generic feature.					

complexType **GenericFeatureDefinitionType**

diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes					
used by	element GenericFeatureDefinition					

attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The GenericFeatureDefinitionType defines a generic feature definition.					

complexType **GenericFeatureItem**Type

diagram						
type	extension of FeatureItemBaseType					
properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPId NotableEventIds CoordinateSystemId					
used by	element GenericFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The GenericFeatureItem defines a generic feature item, usually associated with a non-dimensional characteristic.					

complexType **GenericFeatureNominalType**

diagram						
type	extension of FeatureNominalBaseType					
properties	base FeatureNominalBaseType					
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Location ReferenceFeatureNominalId					
used by	element GenericFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The GenericFeatureNominalType defines the nominal values of a generic feature.					

element **GenericFeatureNominalType/Location**

diagram						
type	PointType					
properties	minOcc	0	maxOcc	1	content	complex
facets	Kind	Value	Annotation	length	3	
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation The optional Location element is the location of the generic feature. It is intended for use with characteristics (such as color or hardness), that have a value at a particular location on a product.					

element **GenericFeatureNominalType/ReferenceFeatureNominalId**

diagram						
type	QIFReferenceFullType					
properties	minOcc	0	maxOcc	unbounded	content	complex
attributes	Name asmPath	Type QIFIdType	Use	Default	Fixed	Annotation documentation The optional asmPath attribute is an id which must be used for locating of the assembly path within the AsmPaths. The assembly path (instantiation chain) unambiguously identifies a model entity within an assembly.
annotation	documentation Each optional ReferenceFeatureNominalId element is the QIF id of an associated nominal feature.					

complexType **LineActualDeterminationType**


diagram						
children	Checked Set					
used by	element	LineFeatureItem/DeterminationMode				
annotation	documentation	The LineActualDeterminationType defines how the line actual is determined, either by being set or by being checked (measured or constructed).				

element **LineActualDeterminationType/Checked**

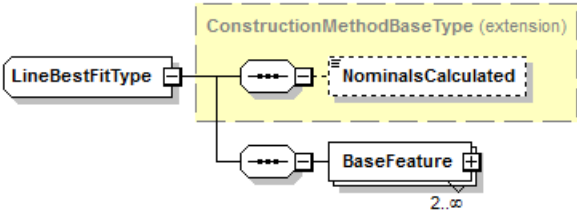
diagram						
type	LineCheckedFeatureType					
properties	content	complex				

children	CheckDetails
annotation	documentation The Checked element signifies that the line is checked from actual data, either measured or constructed.

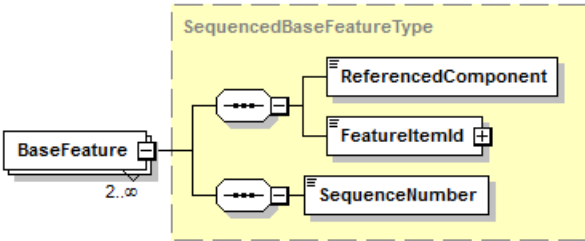
element **LineActualDeterminationType/Set**

diagram	
type	SetFeatureType
properties	content complex
annotation	documentation The Set element signifies that the line actual is set to its nominal value.

complexType **LineBestFitType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element LineConstructionMethodType/BestFit
annotation	documentation The LineBestFitType defines the information for a best-fit line which includes a list of point-reducible base features; the points to which those features reduce are used in the best-fit construction of the line.

element **LineBestFitType/BaseFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 2 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	documentation Each BaseFeature element identifies a base feature to be used for the construction of a line. The number of base features must be 2 or greater.

complexType **LineCastType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element LineConstructionMethodType/Cast
annotation	documentation The LineCastType defines the cast of another feature type to a line. The location and vector are copied from the base feature.

element **LineCastType/BaseFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseFeature element identifies the base feature to be cast to a line.

complexType **LineCheckedFeatureType**

diagram	
children	CheckDetails
used by	element LineActualDeterminationType/Checked
annotation	documentation The LineCheckedFeatureType defines that a line feature is checked.

element **LineCheckedFeatureType/CheckDetails**

diagram	
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type	LineCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the line check (measurement or construction).

complexType [LineCheckedType](#)

diagram	
children	Measured Constructed
used by	element LineCheckedFeatureType/CheckDetails
annotation	documentation The LineCheckedType defines how the line actual is checked, either by measurement or by construction.

element [LineCheckedType/Measured](#)

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the line is measured.

element **LineCheckedType/Constructed**

diagram	<p>The diagram illustrates the structure of the Constructed element. It consists of a Constructed box connected to a dashed box labeled LineConstructionMethodType. Inside this dashed box is a vertical list of construction methods, each in its own box: BestFit, Recompensated, Midline, Intersection, Projection, Perpendicular, Parallel, Copy, Cast, TangentThrough, Transform, Extract, and FromScan. Each box has a small icon in the top right corner.</p>
type	LineConstructionMethodType
properties	content complex
children	BestFit Recompensated Midline Intersection Projection Perpendicular Parallel Copy Cast TangentThrough Transform Extract FromScan
annotation	documentation The Constructed element signifies that the line is constructed.

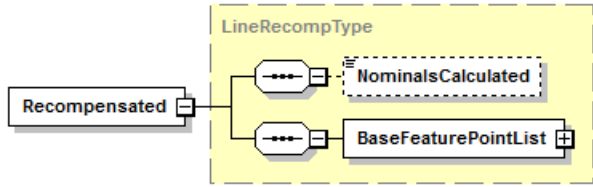
complexType **LineConstructionMethodType**

diagram	
children	BestFit Recompensated Midline Intersection Projection Perpendicular Parallel Copy Cast TangentThrough Transform Extract FromScan
used by	element LineCheckedType/Constructed
annotation	documentation The LineConstructionMethodType defines the method for constructing a unique nominal or actual line feature.

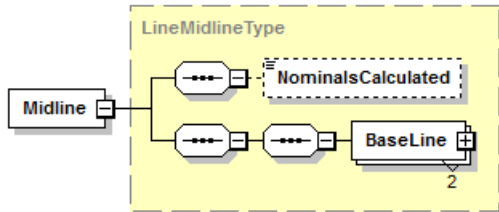
element **LineConstructionMethodType/BestFit**

diagram	
type	LineBestFitType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The BestFit element describes the best-fit construction of a line from 2 or more point-reducible base features. This element is in an optional choice.

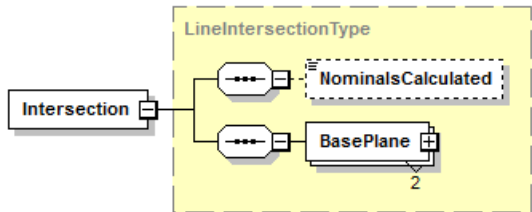
element **LineConstructionMethodType/Recompensated**

diagram	
type	LineRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	<p>documentation</p> <p>The Recompensated element describes the re-compensated-for- probe-size best-fit construction of a line from 2 or more base feature points. This element is in an optional choice.</p>

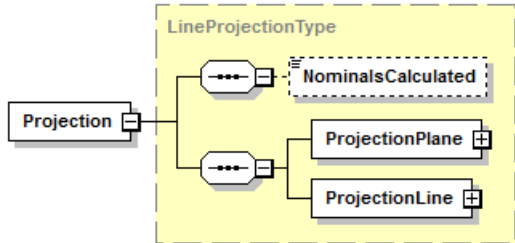
element **LineConstructionMethodType/Midline**

diagram	
type	LineMidlineType
properties	content complex
children	NominalsCalculated BaseLine
annotation	<p>documentation</p> <p>The Midline element describes the construction of a line that is everywhere at equal distance from each of a pair of base lines. This element is in an optional choice.</p>

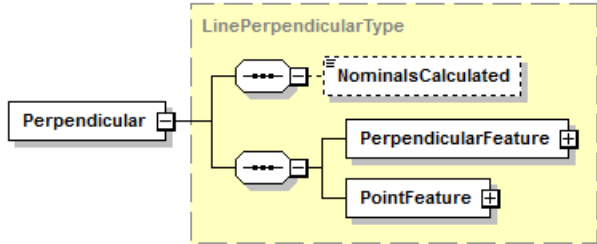
element **LineConstructionMethodType/Intersection**

diagram	
type	LineIntersectionType
properties	content complex
children	NominalsCalculated BasePlane
annotation	<p>documentation</p> <p>The Intersection element describes the construction of a line by the intersection of two planes. This element is in an optional choice.</p>

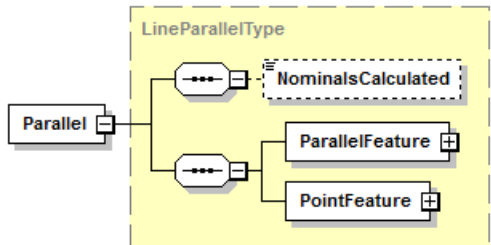
element **LineConstructionMethodType/Projection**

diagram	 <p>The diagram shows a 'Projection' element connected to a dashed box labeled 'LineProjectionType'. Inside this box, the 'Projection' element branches into two paths. The top path leads to a 'NominalsCalculated' element (dashed box). The bottom path leads to a 'ProjectionPlane' element, which is then connected to a 'ProjectionLine' element. All elements within the dashed box have a small square icon with a plus sign in the top right corner.</p>
type	LineProjectionType
properties	content complex
children	NominalsCalculated ProjectionPlane ProjectionLine
annotation	<p>documentation</p> <p>The Projection element describes the construction of a line by the projection of a base line onto a plane. This element is in an optional choice.</p>

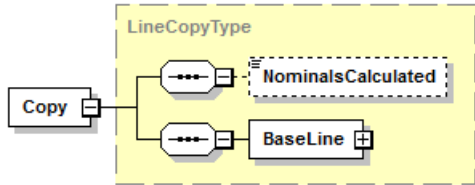
element **LineConstructionMethodType/Perpendicular**

diagram	 <p>The diagram shows a 'Perpendicular' element connected to a dashed box labeled 'LinePerpendicularType'. Inside this box, the 'Perpendicular' element branches into two paths. The top path leads to a 'NominalsCalculated' element (dashed box). The bottom path leads to a 'PerpendicularFeature' element, which is then connected to a 'PointFeature' element. All elements within the dashed box have a small square icon with a plus sign in the top right corner.</p>
type	LinePerpendicularType
properties	content complex
children	NominalsCalculated PerpendicularFeature PointFeature
annotation	<p>documentation</p> <p>The Perpendicular element describes the construction of a line perpendicular to one base feature and passing through a point feature. This element is in an optional choice.</p>

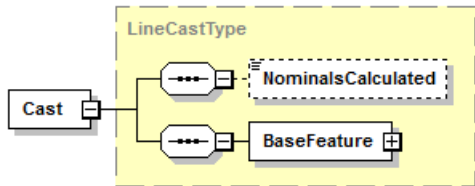
element **LineConstructionMethodType/Parallel**

diagram	 <p>The diagram shows a 'Parallel' element connected to a dashed box labeled 'LineParallelType'. Inside this box, the 'Parallel' element branches into two paths. The top path leads to a 'NominalsCalculated' element (dashed box). The bottom path leads to a 'ParallelFeature' element, which is then connected to a 'PointFeature' element. All elements within the dashed box have a small square icon with a plus sign in the top right corner.</p>
type	LineParallelType
properties	content complex
children	NominalsCalculated ParallelFeature PointFeature
annotation	<p>documentation</p> <p>The Parallel element describes the construction of a line parallel to a base feature and passing through a point feature. This element is in an optional choice.</p>

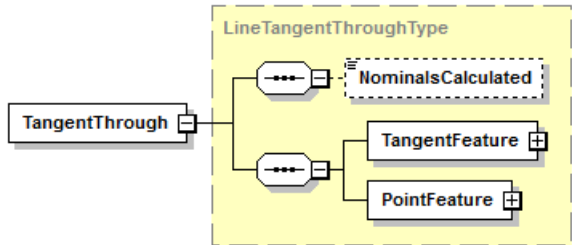
element **LineConstructionMethodType/Copy**

diagram	 <p>The diagram shows a 'Copy' element connected to a dashed box labeled 'LineCopyType'. Inside this box, the 'Copy' element branches into two paths: one leading to a 'NominalsCalculated' element (indicated by a dashed border) and another leading to a 'BaseLine' element.</p>
type	LineCopyType
properties	content complex
children	NominalsCalculated BaseLine
annotation	documentation The Copy element describes the construction of a line by the copying of a base line. This element is in an optional choice.

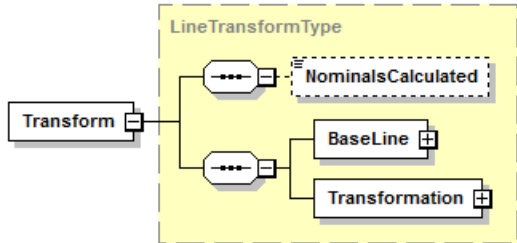
element **LineConstructionMethodType/Cast**

diagram	 <p>The diagram shows a 'Cast' element connected to a dashed box labeled 'LineCastType'. Inside this box, the 'Cast' element branches into two paths: one leading to a 'NominalsCalculated' element (indicated by a dashed border) and another leading to a 'BaseFeature' element.</p>
type	LineCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The Cast element describes the construction of a line by the casting of a base feature. This element is in an optional choice.

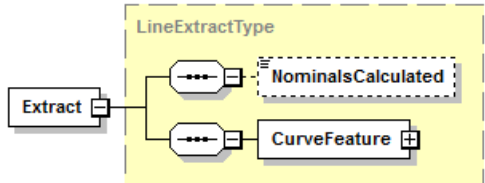
element **LineConstructionMethodType/TangentThrough**

diagram	 <p>The diagram shows a 'TangentThrough' element connected to a dashed box labeled 'LineTangentThroughType'. Inside this box, the 'TangentThrough' element branches into two paths: one leading to a 'NominalsCalculated' element (indicated by a dashed border) and another leading to a group of two elements, 'TangentFeature' and 'PointFeature', which are connected to a common junction point.</p>
type	LineTangentThroughType
properties	content complex
children	NominalsCalculated TangentFeature PointFeature
annotation	documentation The TangentThrough element describes the construction of a line tangent to a base feature and passing through a point feature. This element is in an optional choice.

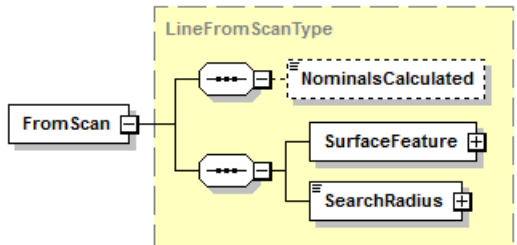
element **LineConstructionMethodType/Transform**

diagram	 <p>The diagram shows a 'Transform' element connected to a dashed box labeled 'LineTransformType'. Inside this box, the 'Transform' element branches into two optional choices (indicated by dashed lines and small squares). The first choice is 'NominalsCalculated'. The second choice is a group containing 'BaseLine' and 'Transformation'.</p>
type	LineTransformType
properties	content complex
children	NominalsCalculated BaseLine Transformation
annotation	<p>documentation</p> <p>The Transform element describes the construction of a line by the transformation of a base line. This element is in an optional choice.</p>

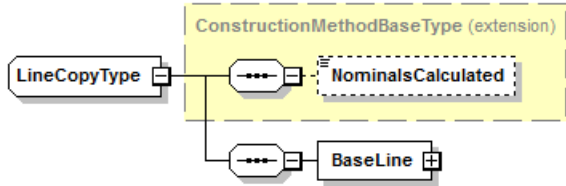
element **LineConstructionMethodType/Extract**

diagram	 <p>The diagram shows an 'Extract' element connected to a dashed box labeled 'LineExtractType'. Inside this box, the 'Extract' element branches into two optional choices (indicated by dashed lines and small squares). The first choice is 'NominalsCalculated'. The second choice is 'CurveFeature'.</p>
type	LineExtractType
properties	content complex
children	NominalsCalculated CurveFeature
annotation	<p>documentation</p> <p>The Extract element describes the extraction of a line from a curve. This element is in an optional choice.</p>

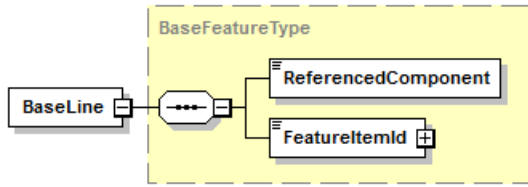
element **LineConstructionMethodType/FromScan**

diagram	 <p>The diagram shows a 'FromScan' element connected to a dashed box labeled 'LineFromScanType'. Inside this box, the 'FromScan' element branches into two optional choices (indicated by dashed lines and small squares). The first choice is 'NominalsCalculated'. The second choice is a group containing 'SurfaceFeature' and 'SearchRadius'.</p>
type	LineFromScanType
properties	content complex
children	NominalsCalculated SurfaceFeature SearchRadius
annotation	<p>documentation</p> <p>The FromScan element describes the construction of a line from scan data. This element is in an optional choice.</p>

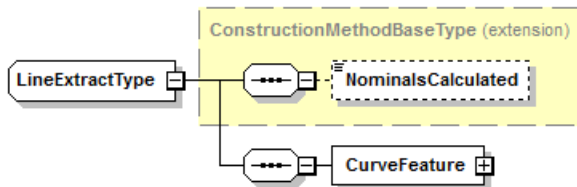
complexType **LineCopyType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseLine
used by	element LineConstructionMethodType/Copy
annotation	documentation The LineCopyType defines a copied line construction.

element **LineCopyType/BaseLine**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseLine element identifies the line to be copied.

complexType **LineExtractType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated CurveFeature
used by	element LineConstructionMethodType/Extract
annotation	documentation The LineExtractType defines a line construction by the extraction of a line from a curve feature.

element **LineExtractType/CurveFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The CurveFeature element identifies the curve from which the line is extracted.

complexType **LineFeatureActualType**

diagram	
type	extension of FeatureActualBaseType
properties	base FeatureActualBaseType
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Location Direction Length Normal Form
used by	element LineFeatureActual

attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The LineFeatureActualType defines the line feature actual information for an individual line feature.					

element **LineFeatureActualType/Location**

diagram						
type	ActualPointType					
properties	minOcc	0	maxOcc	1		

	content complex					
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
	combinedUncertainty	xs:decimal				
	meanError	xs:decimal				
	xCombinedUncertainty	xs:decimal				
	xMeanError	xs:decimal				
	yCombinedUncertainty	xs:decimal				
	yMeanError	xs:decimal				
	zCombinedUncertainty	xs:decimal				
	zMeanError	xs:decimal				
annotation	documentation					
	The optional Location element is the actual location of the start point of the line.					

element **LineFeatureActualType/Direction**

diagram						
type	ActualUnitVectorType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional Direction element is the actual unit vector representing the direction of the line.

element **LineFeatureActualType/Length**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is

	linearUnit	xs:token	a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation	The optional Length element is the actual length of the line from the starting point in the line direction.	

element **LineFeatureActualType/Normal**

diagram	<p>The diagram shows a container element named ActualUnitVectorType (highlighted in yellow). Inside this container is a dashed box labeled attributes. Within the attributes box, the following elements are listed: linearUnit, decimalPlaces, significantFigures, validity, xDecimalPlaces, xSignificantFigures, xValidity, yDecimalPlaces, ySignificantFigures, yValidity, zDecimalPlaces, zSignificantFigures, zValidity, combinedUncertainty, meanError, xCombinedUncertainty, xMeanError, yCombinedUncertainty, yMeanError, zCombinedUncertainty, and zMeanError. To the left of the attributes box, outside the ActualUnitVectorType container, is a dashed box labeled Normal. A line connects the Normal box to the attributes box, indicating that the Normal element is associated with the attributes listed within the ActualUnitVectorType container.</p>		
type	ActualUnitVectorType		

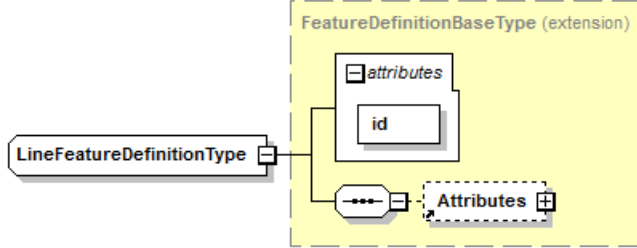
properties	minOcc0 maxOcc1 contentcomplex					
facets	Kind length3	Value	Annotation			
attributes	Name linearUnit	Type xs:token	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
	combinedUncertainty	xs:decimal				
	meanError	xs:decimal				
	xCombinedUncertainty	xs:decimal				
	xMeanError	xs:decimal				
	yCombinedUncertainty	xs:decimal				
	yMeanError	xs:decimal				
	zCombinedUncertainty	xs:decimal				
zMeanError	xs:decimal					
annotation	documentation The optional Normal element is the actual unit normal of the surface in which the line lies.					

element **LineFeatureActualType/Form**

diagram						
type	ActualLinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name decimalPlaces	Type xs:nonNegativeInteger	Use	Default	Fixed	Annotation documentation

	<p>significantFigures xs:nonNegativeInteger</p> <p>combinedUncertainty NonNegativeDecimalType</p> <p>meanError NonNegativeDecimalType</p> <p>linearUnit xs:token</p>	<p>See documentation of SpecifiedDecimalType. documentation</p> <p>See documentation of SpecifiedDecimalType. documentation</p> <p>The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType. documentation</p> <p>The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType. documentation</p> <p>The optional linearUnit attribute defines the unit used by LinearValueType.</p>
annotation	<p>documentation</p> <p>The optional Form element is the form error (straightness) of the line from a report or an analysis.</p>	

complexType LineFeatureDefinitionType

diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes					
used by	element LineFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	<p>documentation</p> <p>The LineFeatureDefinitionType defines the line feature nominal information that can be common to one or more line features.</p>					

complexType **LineFeatureItem**

diagram						
type	extension of FeatureItemBaseType					
properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element LineFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The LineFeatureItem defines an individual line feature.					

element **LineFeatureItem/DeterminationMode**

diagram						
type	LineActualDeterminationType					
properties	content complex					
children	Checked Set					

annotation	documentation The DeterminationMode element is the means by which the line feature actual is determined.
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element **LineFeatureItem**Type/SubstituteFeatureAlgorithm

diagram	
type	NonFeatureOfSizeSubstituteFeatureAlgorithmType
properties	minOcc 0 maxOcc 1 content complex
children	NonFeatureOfSizeSubstituteFeatureAlgorithmEnum OtherNonFeatureOfSizeSubstituteFeatureAlgorithm
annotation	documentation The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the line feature.

complexType **LineFeatureNominal**Type

diagram	
type	extension of FeatureNominalBaseType
properties	base FeatureNominalBaseType
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Location Direction Length Normal
used by	element LineFeatureNominal

attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The LineFeatureNominalType defines the line feature nominal information for an individual line feature.					

element **LineFeatureNominalType/Location**

diagram						
type	PointType					
properties	content complex					
facets	Kind length	Value 3	Annotation			
attributes	Name linearUnit decimalPlaces significantFigures validity xDecimalPlaces xSignificantFigures xValidity yDecimalPlaces ySignificantFigures yValidity zDecimalPlaces zSignificantFigures zValidity	Type xs:token xs:nonNegativeInteger xs:nonNegativeInteger ValidityEnumType xs:nonNegativeInteger xs:nonNegativeInteger ValidityEnumType xs:nonNegativeInteger xs:nonNegativeInteger ValidityEnumType xs:nonNegativeInteger xs:nonNegativeInteger ValidityEnumType xs:nonNegativeInteger	Use	Default	Fixed	Annotation

	yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType
annotation	documentation The Location element is the nominal location of the start point of the line.

element **LineFeatureNominalType/Direction**

diagram						
type	UnitVectorType					
properties	content	complex				
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces					
	zSignificantFigures					
	zValidity					

	zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType
annotation	documentation The Direction element is the nominal unit vector representing the direction of the line.

element **LineFeatureNominalType/Length**

diagram						
type	LinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation	The optional Length element is the nominal length of the line from the starting point in the line direction.				

element **LineFeatureNominalType/Normal**

diagram						
type	UnitVectorType					
properties	minOcc	0	maxOcc	1	content	complex
facets	Kind	Value	Annotation	length	3	
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation	The optional Normal element is the nominal unit normal of the surface in which the line lies.				

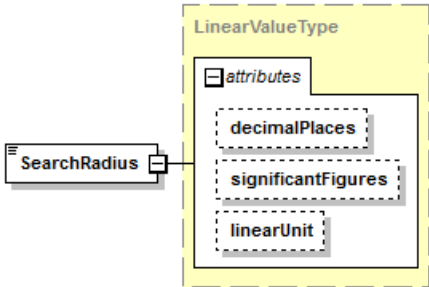
complexType **LineFromScanType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated SurfaceFeature SearchRadius
used by	element LineConstructionMethodType/FromScan
annotation	documentation The LineFromScanType defines a line construction by the retrieval of a line from a scanned surface feature (point cloud).

element **LineFromScanType/SurfaceFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The SurfaceFeature element identifies the scanned surface feature from which the line is retrieved.

element **LineFromScanType/SearchRadius**

diagram													
type	LinearValueType												
properties	content complex												
attributes	<table><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr><tr><td>decimalPlaces</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr></table>	Name	Type	Use	Default	Fixed	Annotation	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
Name	Type	Use	Default	Fixed	Annotation								
decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.								

	<p>significantFigures xs:nonNegativeInteger</p> <p>linearUnit xs:token</p>	<p>documentation See documentation of SpecifiedDecimalType. documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.</p>
annotation	<p>documentation The SearchRadius element is the radius around the nominal feature, wherein the actual feature can be expected. The SearchRadius is the radius of a cylinder. All scanned points within this cylinder are used for the retrieval of the feature. The cylinder's axis is defined by the feature's direction and the cylinder's axis passes through the feature's locating point.</p>	

complexType LineIntersectionType

diagram		
type	extension of ConstructionMethodBaseType	
properties	base	ConstructionMethodBaseType
children	NominalsCalculated BasePlane	
used by	element	LineConstructionMethodType/Intersection
annotation	<p>documentation The LineIntersectionType defines the construction of a line that is constructed by the intersection of two planes.</p>	

element LineIntersectionType/BasePlane

diagram		
type	SequencedBaseFeatureType	
properties	minOcc	2
	maxOcc	2
	content	complex
children	ReferencedComponent FeatureItemId SequenceNumber	
annotation	<p>documentation Each BasePlane element identifies a plane to be used to construct the line of intersection.</p>	

complexType **LineMidlineType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseLine
used by	element LineConstructionMethodType/Midline
annotation	documentation The LineMidlineType defines the construction of a line that is the midline of two base lines.

element **LineMidlineType/BaseLine**

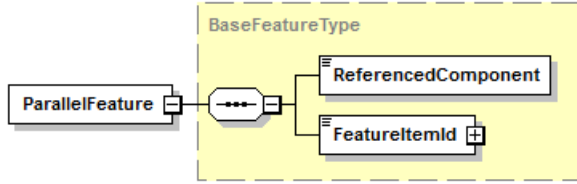
diagram	
type	SequencedBaseFeatureType
properties	minOcc 2 maxOcc 2 content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	documentation Each BaseLine element identifies one of a pair of base lines used to construct a midline.

complexType **LineParallelType**

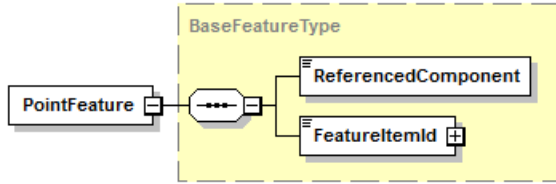
diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated ParallelFeature PointFeature
used by	element LineConstructionMethodType/Parallel
annotation	documentation

	The LineParallelType defines the construction of a line that is parallel to a feature and passing through a point.
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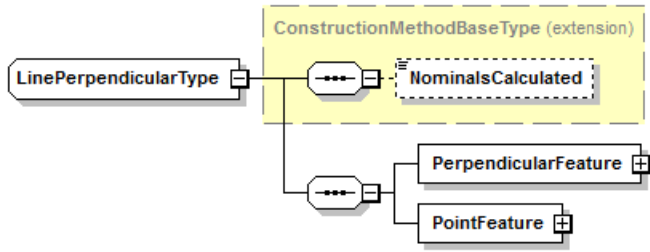
element LineParallelType/ParallelFeature

diagram	 <p>The diagram shows the structure of the ParallelFeature element. It is a rectangular box labeled 'ParallelFeature' connected to a dashed yellow box labeled 'BaseFeatureType'. Inside 'BaseFeatureType', there is a connector box (a circle with three dots) that branches into two rectangular boxes: 'ReferencedComponent' and 'FeatureItemId'.</p>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The ParallelFeature element identifies the feature to which the constructed line must be parallel.

element LineParallelType/PointFeature

diagram	 <p>The diagram shows the structure of the PointFeature element. It is a rectangular box labeled 'PointFeature' connected to a dashed yellow box labeled 'BaseFeatureType'. Inside 'BaseFeatureType', there is a connector box (a circle with three dots) that branches into two rectangular boxes: 'ReferencedComponent' and 'FeatureItemId'.</p>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The PointFeature element identifies the point through which the constructed line must pass.

complexType LinePerpendicularType

diagram	 <p>The diagram shows the structure of the LinePerpendicularType element. It is a rectangular box labeled 'LinePerpendicularType' connected to a dashed yellow box labeled 'ConstructionMethodBaseType (extension)'. Inside this box, there is a connector box (a circle with three dots) that branches into a dashed box labeled 'NominalsCalculated'. Below the dashed box, there is another connector box (a circle with three dots) that branches into two rectangular boxes: 'PerpendicularFeature' and 'PointFeature'.</p>
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated PerpendicularFeature PointFeature
used by	element LineConstructionMethodType/Perpendicular
annotation	documentation The LinePerpendicularType defines the construction of a line that is perpendicular to a feature and passing through a point.

element **LinePerpendicularType/PerpendicularFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The PerpendicularFeature element identifies the feature to which the constructed line must be perpendicular.

element **LinePerpendicularType/PointFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The PointFeature element identifies the point through which the constructed line must pass.

complexType **LineProjectionType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated ProjectionPlane ProjectionLine
used by	element LineConstructionMethodType/Projection
annotation	documentation The LineProjectionType defines a projected line construction with the line to be projected and the projection plane.

element **LineProjectionType/ProjectionPlane**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The ProjectionPlane element identifies the plane onto which the line is to be projected.

element **LineProjectionType/ProjectionLine**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The ProjectionLine element identifies the line to be projected.

complexType **LineRecompType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeaturePointList
used by	element LineConstructionMethodType/Recompensated
annotation	documentation The LineRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit line through the measurement points of base features.

element **LineRecompType/BaseFeaturePointList**

diagram	
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	<p>documentation</p> <p>The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit line. The total number of points in the BaseFeaturePointSets in the list must be 2 or greater.</p>

complexType **LineTangentThroughType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated TangentFeature PointFeature
used by	element LineConstructionMethodType/TangentThrough
annotation	<p>documentation</p> <p>The LineTangentThroughType defines the construction of a line through a point and tangent to a base feature.</p>

element **LineTangentThroughType/TangentFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The TangentFeature element identifies the base feature to which the line is tangent.</p>

element **LineTangentThroughType/PointFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The PointFeature element identifies the point through which the line must pass.

complexType **LineTransformType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseLine Transformation
used by	element LineConstructionMethodType/Transform
annotation	documentation The LineTransformType defines a line construction by the transformation of a line through the specified nominal or actual coordinate system.

element **LineTransformType/BaseLine**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseLine element identifies the line feature to be transformed.

element **LineTransformType/Transformation**

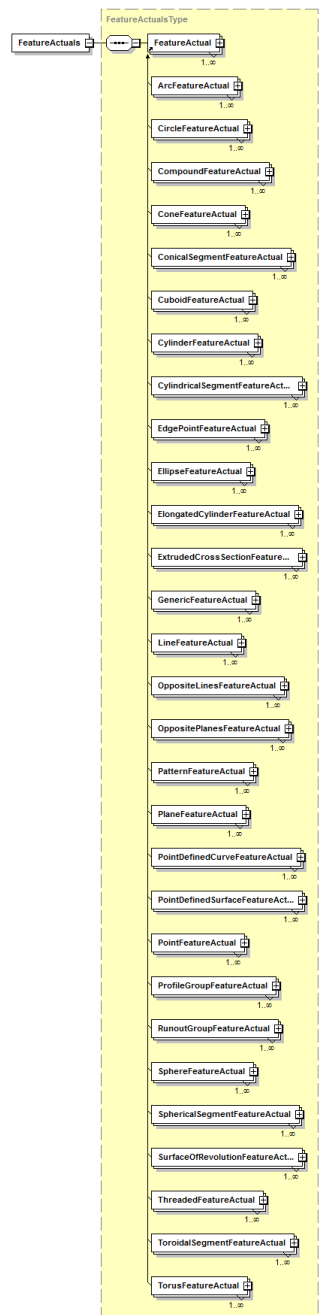
diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	documentation The Transformation element identifies the coordinate system to be used to transform the line.

complexType **MeasuredFeaturesType**

diagram	
children	FeatureActuals
used by	element MeasuredFeatures

element **MeasuredFeaturesType/FeatureActuals**

diagram

type [FeatureActualsType](#)

properties content complex

children **FeatureActual**annotation documentation
The FeatureActuals element is a list of actual inspection features.

complexType **MeasuredFeatureType**

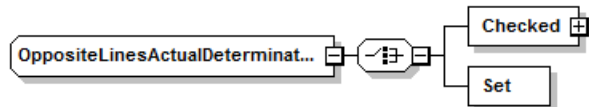
diagram	
children	PointList
used by	elements ArcCheckedType/Measured CircleCheckedType/Measured ConeCheckedType/Measured ConicalSegmentCheckedType/Measured CuboidCheckedType/Measured CylinderCheckedType/Measured CylindricalSegmentCheckedType/Measured EdgePointCheckedType/Measured EllipseCheckedType/Measured ElongatedCylinderCheckedType/Measured ExtrudedCrossSectionCheckedType/Measured LineCheckedType/Measured OppositeLinesCheckedType/Measured OppositePlanesCheckedType/Measured PlaneCheckedType/Measured PointDefinedCurveCheckedType/Measured PointDefinedSurfaceCheckedType/Measured PointCheckedType/Measured SphereCheckedType/Measured SphericalSegmentCheckedType/Measured SurfaceOfRevolutionCheckedType/Measured ThreadedFeatureCheckedType/Measured ToroidalSegmentCheckedType/Measured TorusCheckedType/Measured
annotation	documentation The MeasuredFeatureType defines that a feature is measured.

element **MeasuredFeatureType/PointList**

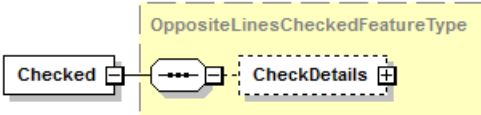
diagram	
type	PointListNominalType
properties	minOcc 0 maxOcc 1 content complex
children	MeasurePoint

attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation The optional PointList element is a list of target measurement points for the feature.					


complexType **OppositeLinesActualDeterminationType**

diagram	
children	Checked Set
used by	element OppositeLinesFeatureItem/DeterminationMode
annotation	documentation The OppositeLinesActualDeterminationType defines how the opposite lines feature actual is determined, either by being set or by being checked (measured or constructed).

element **OppositeLinesActualDeterminationType/Checked**

diagram	
type	OppositeLinesCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	<p>documentation</p> <p>The Checked element signifies that the opposite lines feature is checked from actual data, either measured or constructed.</p>

element **OppositeLinesActualDeterminationType/Set**

diagram						
type	SetFeatureType					
properties	content	complex				

annotation	documentation The Set element signifies that the opposite lines feature actual is set to its nominal value.
------------	--

complexType **OppositeLinesBestFitType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element OppositeLinesConstructionMethodType/BestFit
annotation	documentation The OppositeLinesBestFitType defines the information for a best-fit opposite lines feature which includes a list of point-reducible base features; the points to which those features reduce are used in the best-fit construction of the opposite lines feature.

element **OppositeLinesBestFitType/BaseFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 3 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	documentation Each BaseFeature element identifies a base feature to be used for the construction of an opposite lines feature. The number of base features must be 3 or greater.

complexType **OppositeLinesCastType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType

children	NominalsCalculated BaseFeature
used by	element OppositeLinesConstructionMethodType/Cast
annotation	documentation The OppositeLinesCastType defines the cast of another feature type to an opposite lines feature. The location, vector and size are copied from the base feature. Any information not available on the base feature will remain at nominal.

element **OppositeLinesCastType/BaseFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseFeature element identifies the base feature to be cast to an opposite line feature.

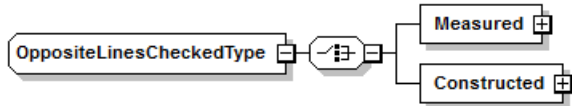
complexType **OppositeLinesCheckedFeatureType**

diagram	
children	CheckDetails
used by	element OppositeLinesActualDeterminationType/Checked
annotation	documentation The OppositeLinesCheckedFeatureType defines that an opposite lines feature is checked.

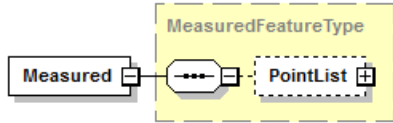
element **OppositeLinesCheckedFeatureType/CheckDetails**

diagram	
type	OppositeLinesCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the opposite lines feature check (measurement or construction).

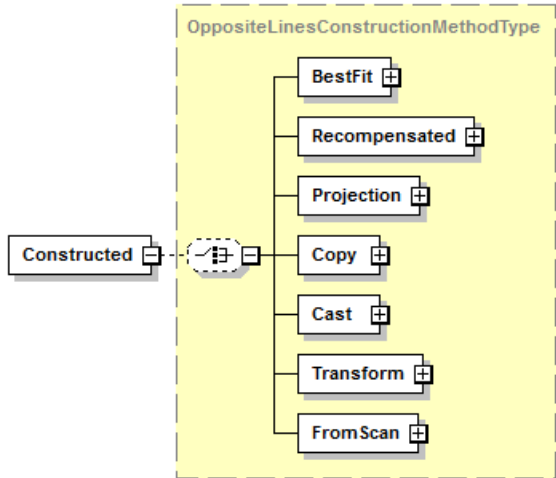
complexType **OppositeLinesCheckedType**

diagram	
children	Measured Constructed
used by	element OppositeLinesCheckedFeatureType/CheckDetails
annotation	documentation The OppositeLinesCheckedType defines how the opposite lines feature actual is checked, either by measurement or by construction.

element **OppositeLinesCheckedType/Measured**

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the opposite lines feature is measured.

element **OppositeLinesCheckedType/Constructed**

diagram	
type	OppositeLinesConstructionMethodType
properties	content complex
children	BestFit Recompensated Projection Copy Cast Transform FromScan
annotation	documentation The Constructed element signifies that the opposite lines feature is constructed.

complexType **OppositeLinesConstructionMethodType**

diagram	
children	BestFit Recompensated Projection Copy Cast Transform FromScan
used by	element OppositeLinesCheckedType/Constructed
annotation	documentation The OppositeLinesConstructionMethodType defines the method for constructing a unique nominal or actual opposite lines feature.

element **OppositeLinesConstructionMethodType/BestFit**

diagram	
type	OppositeLinesBestFitType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The BestFit element describes the best-fit construction of an opposite lines feature from 3 or more point-reducible base features. This element is in an optional choice.

element **OppositeLinesConstructionMethodType/Recompensated**

diagram	
type	OppositeLinesRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	documentation The Recompensated element describes the re-compensated-for- probe-size best-fit construction of an opposite lines

	feature from 3 or more base feature points. This element is in an optional choice.
--	--

element OppositeLinesConstructionMethodType/Projection

diagram	<pre> graph LR Projection[Projection] --- Node1(()) Node1 --- Node2(()) Node2 --- NominalsCalculated[NominalsCalculated] Node2 --- ProjectionPlane[ProjectionPlane] Node2 --- ProjectionOppositeLines[ProjectionOppositeLines] subgraph OppositeLinesProjectionType NominalsCalculated ProjectionPlane ProjectionOppositeLines end </pre>
type	OppositeLinesProjectionType
properties	content complex
children	NominalsCalculated ProjectionPlane ProjectionOppositeLines
annotation	<p>documentation</p> <p>The Projection element describes the construction of an opposite lines feature by the projection of a base opposite lines feature onto a plane. This element is in an optional choice.</p>

element OppositeLinesConstructionMethodType/Copy

diagram	<pre> graph LR Copy[Copy] --- Node1(()) Node1 --- Node2(()) Node2 --- NominalsCalculated[NominalsCalculated] Node2 --- BaseOppositeLines[BaseOppositeLines] subgraph OppositeLinesCopyType NominalsCalculated BaseOppositeLines end </pre>
type	OppositeLinesCopyType
properties	content complex
children	NominalsCalculated BaseOppositeLines
annotation	<p>documentation</p> <p>The Copy element describes the construction of an opposite lines feature by the copying of a base opposite lines feature. This element is in an optional choice.</p>

element OppositeLinesConstructionMethodType/Cast

diagram	<pre> graph LR Cast[Cast] --- Node1(()) Node1 --- Node2(()) Node2 --- NominalsCalculated[NominalsCalculated] Node2 --- BaseFeature[BaseFeature] subgraph OppositeLinesCastType NominalsCalculated BaseFeature end </pre>
type	OppositeLinesCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	<p>documentation</p> <p>The Cast element describes the construction of an opposite lines feature by the casting of a base feature. This element is in an optional choice.</p>

element **OppositeLinesConstructionMethodType/Transform**

diagram	<p>The diagram shows a 'Transform' element connected to a dashed box labeled 'OppositeLinesTransformType'. Inside this box, there are three elements: 'NominalsCalculated' (dashed box), 'BaseOppositeLines' (solid box), and 'Transformation' (solid box). The 'Transform' element is connected to the 'NominalsCalculated' element, which is then connected to the 'BaseOppositeLines' and 'Transformation' elements.</p>
type	OppositeLinesTransformType
properties	content complex
children	NominalsCalculated BaseOppositeLines Transformation
annotation	<p>documentation</p> <p>The Transform element describes the construction of an opposite lines feature by the transformation of a base opposite lines feature. This element is in an optional choice.</p>

element **OppositeLinesConstructionMethodType/FromScan**

diagram	<p>The diagram shows a 'FromScan' element connected to a dashed box labeled 'OppositeLinesFromScanType'. Inside this box, there are four elements: 'NominalsCalculated' (dashed box), 'SurfaceFeature' (solid box), 'SearchRadius' (solid box), and 'Depth' (solid box). The 'FromScan' element is connected to the 'NominalsCalculated' element, which is then connected to the 'SurfaceFeature', 'SearchRadius', and 'Depth' elements.</p>
type	OppositeLinesFromScanType
properties	content complex
children	NominalsCalculated SurfaceFeature SearchRadius Depth
annotation	<p>documentation</p> <p>The FromScan element describes the construction of an opposite lines feature from scan data. This element is in an optional choice.</p>

complexType **OppositeLinesCopyType**

diagram	<p>The diagram shows an 'OppositeLinesCopyType' element connected to a dashed box labeled 'ConstructionMethodBaseType (extension)'. Inside this box, there are two elements: 'NominalsCalculated' (dashed box) and 'BaseOppositeLines' (solid box). The 'OppositeLinesCopyType' element is connected to the 'NominalsCalculated' element, which is then connected to the 'BaseOppositeLines' element.</p>
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseOppositeLines

used by	element OppositeLinesConstructionMethodType/Copy
annotation	documentation The OppositeLinesCopyType defines a copied opposite lines feature construction.

element **OppositeLinesCopyType/BaseOppositeLines**

diagram	<pre> classDiagram class BaseOppositeLines class ReferencedComponent class FeatureItemId class BaseFeatureType { +BaseOppositeLines } BaseOppositeLines "1" -- "*" ReferencedComponent BaseOppositeLines "1" -- "*" FeatureItemId </pre> <p>The diagram illustrates the structure of the BaseOppositeLines element. It is a composition of two elements: ReferencedComponent and FeatureItemId. The composition is shown within a dashed box labeled BaseFeatureType. The BaseOppositeLines element is represented by a rectangle with a small square on its right side, indicating a composition. The ReferencedComponent and FeatureItemId elements are represented by rectangles with a small square on their left side, indicating they are components of the BaseOppositeLines element. The FeatureItemId element also has a small plus sign on its right side, indicating it is a multiplicity of one.</p>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseOppositeLines element identifies the opposite lines feature to be copied.

complexType **OppositeLinesFeatureActualType**

diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds CenterLine Normal Width WidthMin WidthMax Length LengthMin LengthMax TaperAngle EndRadius1 EndRadius2 Form					
used by	element OppositeLinesFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the

		QIF id of the feature, used for referencing.
annotation	documentation The OppositeLinesFeatureActualType defines the opposite parallel lines feature actual information for an individual opposite lines feature.	

element **OppositeLinesFeatureActualType/CenterLine**

diagram		
type	ActualPointAndVectorType	
properties	minOcc 0 maxOcc 1 content complex	
children	StartPoint Vector	
annotation	documentation The optional CenterLine element is the actual location point and a unit vector direction of the centerline of the opposite lines feature.	

element **OppositeLinesFeatureActualType/Normal**

diagram						
type	ActualUnitVectorType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional Normal element is the actual unit normal vector of the plane of the opposite lines feature.

element **OppositeLinesFeatureActualType/Width**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is

	<p>linearUnit xs:token</p>	<p>a value expressing the mean error assigned to the SpecifiedDecimalType. documentation</p> <p>The optional linearUnit attribute defines the unit used by LinearValueType.</p>
annotation	<p>documentation</p> <p>The optional Width element is the actual width between the opposite lines of the feature per the substitute feature data fitting algorithm setting. If the opposite lines are tapered then the width applies at the locating point.</p>	

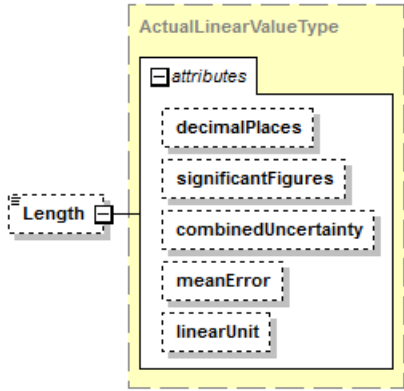
element **OppositeLinesFeatureActualType/WidthMin**

diagram						
type	ActualLinearValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	<p>documentation</p> <p>The optional WidthMin element is the minimum width of the opposite lines feature from a report or an analysis.</p>					

element **OppositeLinesFeatureActualType/WidthMax**

diagram						
type	ActualLinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional WidthMax element is the maximum width of the opposite lines feature from a report or an analysis.					

element **OppositeLinesFeatureActualType/Length**

diagram						
type	ActualLinearValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Length element is the actual length of the centerline of the opposite lines feature based on the substitute feature data fitting algorithm setting.					

element **OppositeLinesFeatureActualType/LengthMin**

diagram						
type	ActualLinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name decimalPlaces significantFigures combinedUncertainty meanError linearUnit	Type xs:nonNegativeInteger xs:nonNegativeInteger NonNegativeDecimalType NonNegativeDecimalType xs:token	Use	Default	Fixed	Annotation documentation See documentation of SpecifiedDecimalType. documentation See documentation of SpecifiedDecimalType. documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType. documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional LengthMin element is the minimum length of the opposite lines feature from a report or an analysis.					

element **OppositeLinesFeatureActualType/LengthMax**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional LengthMax element is the maximum length of the opposite lines feature from a report or an analysis.					

element **OppositeLinesFeatureActualType/TaperAngle**

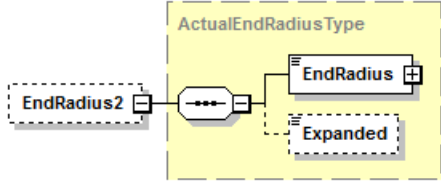
diagram						
type	ActualAngularValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	angularUnit	xs:token				documentation The optional angularUnit attribute defines the unit used by ActualAngularValueType.
annotation	documentation The optional TaperAngle element is the actual taper angle of the tapered opposite lines feature.					

element **OppositeLinesFeatureActualType/EndRadius1**

diagram						
type	ActualEndRadiusType					
properties	minOcc	0	maxOcc	1	content	complex

children	EndRadius Expanded
annotation	documentation The optional EndRadius1 element is the actual radius of the rounded end in the direction opposite the centerline vector.

element **OppositeLinesFeatureActualType/EndRadius2**

diagram						
type	ActualEndRadiusType					
properties	minOcc	0	maxOcc	1	content	complex
children	EndRadius Expanded					
annotation	documentation	The optional EndRadius2 element is the actual radius of the rounded end in the direction of the centerline vector.				

element **OppositeLinesFeatureActualType/Form**

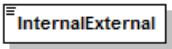
diagram						
type	ActualLinearValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional

	linearUnit xs:token	meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Form element is the form error of the opposite lines feature from a report or an analysis.	

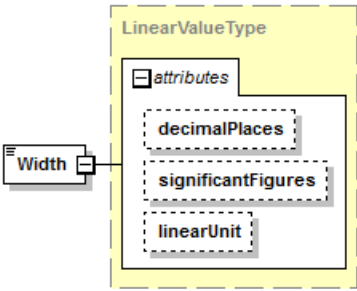
complexType OppositeLinesFeatureDefinitionType

diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes InternalExternal Width Length EndType TaperAngle SingleOpenEnd EndRadius1 EndRadius2					
used by	element OppositeLinesFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The OppositeLinesFeatureDefinitionType defines the nominal information that can be common to one or more opposite line features.					

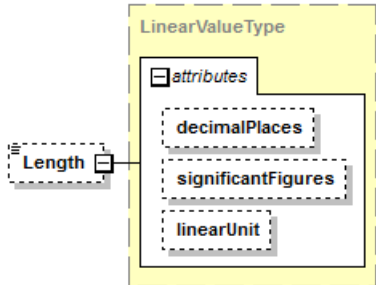
element **OppositeLinesFeatureDefinitionType/InternalExternal**

diagram			
type	InternalExternalEnumType		
properties	content	simple	
facets	Kind	Value	Annotation
	enumeration	INTERNAL	
	enumeration	EXTERNAL	
	enumeration	NOT_APPLICABLE	
annotation	documentation	The InternalExternal element indicates whether the feature is internal (slot, groove) or external (rib, web, block).	

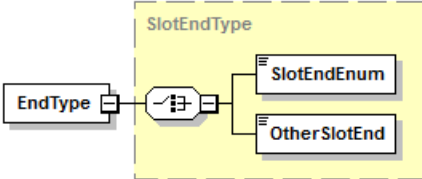
element **OppositeLinesFeatureDefinitionType/Width**

diagram						
type	LinearValueType					
properties	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation	The Width element is the nominal width of this feature of size. When the feature is tapered the width applies at the locating point.				

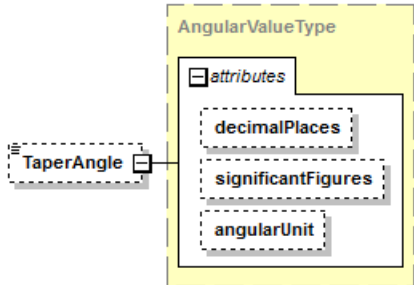
element **OppositeLinesFeatureDefinitionType/Length**

diagram						
type	LinearValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The optional Length element is the nominal length of the feature from end to end along the centerline.					

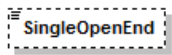
element **OppositeLinesFeatureDefinitionType/EndType**

diagram	
type	SlotEndType
properties	content complex
children	SlotEndEnum OtherSlotEnd
annotation	<div>documentation</div> <div>The EndType element is the type of the opposite lines feature's ends: round, flat, expanded, or open.</div>

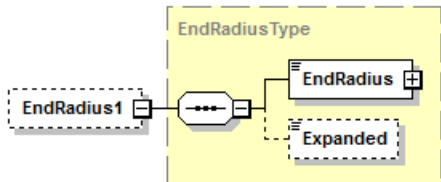
element **OppositeLinesFeatureDefinitionType/TaperAngle**

diagram						
type	AngularValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	angularUnit	xs:token				documentation The optional angularUnit attribute defines the UnitName for the AngularValueType.
annotation	documentation The optional TaperAngle element is the nominal taper angle of the feature. If positive, the opposite lines of the feature open in the direction of the centerline vector, and if negative, the opposite lines close in the direction of the centerline vector.					

element **OppositeLinesFeatureDefinitionType/SingleOpenEnd**

diagram						
type	xs:boolean					
properties	minOcc	0	maxOcc	1	content	simple
annotation	documentation The optional SingleOpenEnd element is a designator that this feature has one open end. It has meaning only with FLAT, ROUND or EXPANDED end types. If this element exists and is set to "true" then the end in the direction of the centerline vector is open and the other end is closed.					

element **OppositeLinesFeatureDefinitionType/EndRadius1**

diagram						
type	EndRadiusType					

properties	minOcc 0 maxOcc 1 content complex
children	EndRadius Expanded
annotation	documentation The optional EndRadius1 element is the radius of a complex end in the direction opposite the centerline vector. If the end type is flat, then the opposite lines feature has a filleted flat end, and the value must be small enough that a portion of the end is flat. If the end type is round, this value must be such that the end is an outward circular arc. If the end radius is greater than that of a tangent round end then whether the end expands in size like a dumbbell or not is defined by the Expanded element.

element **OppositeLinesFeatureDefinitionType/EndRadius2**

diagram	
type	EndRadiusType
properties	minOcc 0 maxOcc 1 content complex
children	EndRadius Expanded
annotation	documentation The optional EndRadius2 element is the radius of the complex end in the direction of the centerline vector. If the end type is flat, then the opposite lines feature has a filleted flat end, and the value must be small enough that a portion of the end is flat. If the end type is round, this value must be such that the end is an outward circular arc. If the end radius is greater than that of a tangent round end then whether the end expands in size like a dumbbell or not is defined by the Expanded element.

complexType **OppositeLinesFeatureItem**

diagram						
type	extension of FeatureItemBaseType					
properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element OppositeLinesFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The OppositeLinesFeatureItem defines an individual feature-of-size opposite lines feature, either parallel or tapered, located by its centerline. This feature can be used to describe a slot or groove (internal feature) or a rib, web, or block (external feature).					

element **OppositeLinesFeatureItem/DeterminationMode**

diagram						
type	OppositeLinesActualDeterminationType					
properties	content complex					

children	Checked Set
annotation	documentation The DeterminationMode element is the means by which the opposite lines feature actual is determined.

element **OppositeLinesFeatureItemType/SubstituteFeatureAlgorithm**

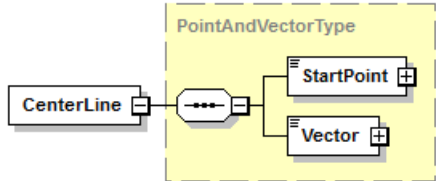
diagram	
type	FeatureOfSizeSubstituteFeatureAlgorithmType
properties	minOcc 0 maxOcc 1 content complex
children	FeatureOfSizeSubstituteFeatureAlgorithmEnum OtherFeatureOfSizeSubstituteFeatureAlgorithm
annotation	documentation The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the opposite lines feature.

complexType **OppositeLinesFeatureNominalType**

diagram	<p>The diagram illustrates the structure of the OppositeLinesFeatureNominalType as an extension of FeatureNominalBaseType. The base type is enclosed in a dashed yellow box and includes an attributes block with an id attribute. The extension adds three optional components, each represented by a dashed box with a circle and a plus sign: Attributes (containing Name, PointList, FeatureDefinitionId, EntityInternalIds, and EntityExternalIds), CenterLine, and Normal.</p>												
type	extension of FeatureNominalBaseType												
properties	base FeatureNominalBaseType												
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds CenterLine Normal												
used by	element OppositeLinesFeatureNominal												
attributes	<table><thead><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr></thead><tbody><tr><td>id</td><td>QIFIdType</td><td>required</td><td></td><td></td><td>documentation</td></tr></tbody></table>	Name	Type	Use	Default	Fixed	Annotation	id	QIFIdType	required			documentation
Name	Type	Use	Default	Fixed	Annotation								
id	QIFIdType	required			documentation								

		The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The OppositeLinesFeatureNominalType defines the opposite lines feature nominal information for an individual opposite lines feature.	

element **OppositeLinesFeatureNominalType/CenterLine**

diagram		
type	PointAndVectorType	
properties	content	complex
children	StartPoint Vector	
annotation	documentation	The CenterLine element is the nominal location point and a unit vector direction of the centerline of the opposite lines feature. The location point is both midway between the sides and between the ends (real or virtual). Or in other words, the sides are located half the width away from the location point in directions perpendicular to both the centerline vector and the normal vector. The ends are located half the length away from the location point in directions along and against the centerline vector.

element **OppositeLinesFeatureNominalType/Normal**

diagram						
type	UnitVectorType					
properties	content	complex				
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation	The Normal element is the nominal unit normal vector of the plane in which the opposite lines feature lies.				

complexType **OppositeLinesFromScanType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated SurfaceFeature SearchRadius Depth
used by	element OppositeLinesConstructionMethodType/FromScan
annotation	documentation The OppositeLinesFromScanType defines an opposite lines feature construction by the retrieval of an opposite lines feature from a scanned surface feature (point cloud).

element **OppositeLinesFromScanType/SurfaceFeature**

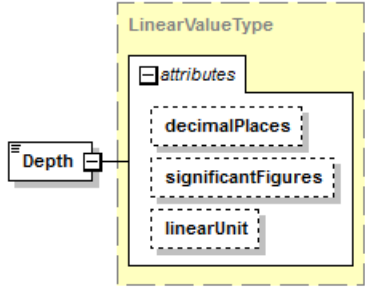
diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The SurfaceFeature element identifies the scanned surface feature from which the opposite lines feature is retrieved.

element **OppositeLinesFromScanType/SearchRadius**

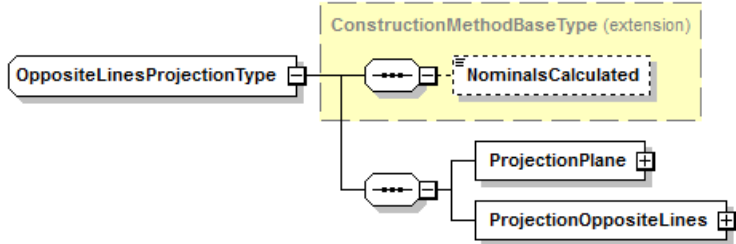
diagram	<pre>classDiagram class SearchRadius class LinearValueType { attributes { decimalPlaces significantFigures linearUnit } } SearchRadius --> LinearValueType</pre>												
type	LinearValueType												
properties	content complex												
attributes	<table><thead><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr></thead><tbody><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table>	Name	Type	Use	Default	Fixed	Annotation						
Name	Type	Use	Default	Fixed	Annotation								

	<p>decimalPlaces xs:nonNegativeInteger</p> <p>significantFigures xs:nonNegativeInteger</p> <p>linearUnit xs:token</p>	<p>documentation See documentation of SpecifiedDecimalType. documentation See documentation of SpecifiedDecimalType. documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.</p>
annotation	<p>documentation The SearchRadius element is the radius around the nominal feature, wherein the actual feature can be expected. The SearchRadius is the radius added to and subtracted from the size of the nominal feature defining an extruded shell. All scanned points within this extruded shell are used for the retrieval of the feature. The extruded shell's axis is defined by the feature's normal and the extruded shell's axis passes through the feature's center point. The extruded shell is evenly disposed about the nominal opposite lines feature.</p>	

element **OppositeLinesFromScanType/Depth**

diagram						
type	LinearValueType					
properties	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType. documentation See documentation of SpecifiedDecimalType. documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
	significantFigures	xs:nonNegativeInteger				
	linearUnit	xs:token				
annotation	<p>documentation The Depth element is the measuring depth at which the opposite lines feature is to be retrieved.</p>					

complexType **OppositeLinesProjectionType**

diagram						
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type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated ProjectionPlane ProjectionOppositeLines
used by	element OppositeLinesConstructionMethodType/Projection
annotation	documentation The OppositeLinesProjectionType defines a projected opposite lines feature construction with the opposite lines feature to be projected and the projection plane.

element **OppositeLinesProjectionType/ProjectionPlane**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The ProjectionPlane element identifies the plane onto which the opposite lines feature is to be projected.

element **OppositeLinesProjectionType/ProjectionOppositeLines**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The ProjectionOppositeLines element identifies the opposite lines feature to be projected.

complexType **OppositeLinesRecompType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType

children	NominalsCalculated BaseFeaturePointList
used by	element OppositeLinesConstructionMethodType/Recompensated
annotation	documentation The OppositeLinesRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit opposite lines feature through the measurement points of base features.

element **OppositeLinesRecompType/BaseFeaturePointList**

diagram	
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	documentation The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit opposite lines feature. The total number of points in the BaseFeaturePointSets in the list must be 3 or greater for an opposite lines feature with open ends and 5 or greater for an opposite lines feature with closed ends.

complexType **OppositeLinesTransformType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseOppositeLines Transformation
used by	element OppositeLinesConstructionMethodType/Transform
annotation	documentation The OppositeLinesTransformType defines an opposite lines feature construction by the transformation of an opposite lines feature through the specified nominal or actual coordinate system.

element **OppositeLinesTransformType/BaseOppositeLines**

diagram	
type	BaseFeatureType

properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseOppositeLines element identifies the opposite lines feature to be transformed.

element **OppositeLinesTransformType/Transformation**

diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	documentation The Transformation element identifies the coordinate system to be used to transform the opposite lines feature.


complexType **OppositePlanesActualDeterminationType**

diagram	
children	Checked Set
used by	element OppositePlanesFeatureItem/DeterminationMode
annotation	documentation The OppositePlanesActualDeterminationType defines how the opposite planes feature actual is determined, either by being set or by being checked (measured or constructed).

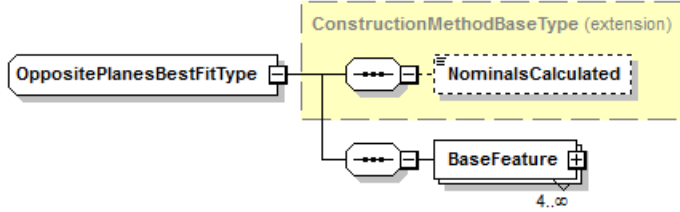
element **OppositePlanesActualDeterminationType/Checked**

diagram	
type	OppositePlanesCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	documentation The Checked element signifies that the opposite planes feature is checked from actual data, either measured or constructed.

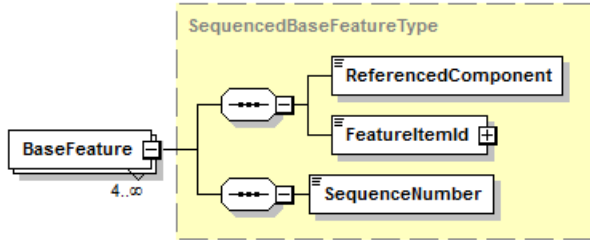
element **OppositePlanesActualDeterminationType/Set**

diagram	
type	SetFeatureType
properties	content complex
annotation	documentation The Set element signifies that the opposite planes feature actual is set to its nominal value.

complexType **OppositePlanesBestFitType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element OppositePlanesConstructionMethodType/BestFit
annotation	documentation The OppositePlanesBestFitType defines the information for a best-fit opposite planes feature which includes a list of point-reducible base features; the points to which those features reduce are used in the best-fit construction of the opposite planes feature.

element **OppositePlanesBestFitType/BaseFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 4 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	documentation Each BaseFeature element identifies a base feature to be used for the construction of an opposite planes feature. The number of base features must be 4 or greater.

complexType **OppositePlanesCastType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element OppositePlanesConstructionMethodType/Cast
annotation	documentation The OppositePlanesCastType defines the cast of another feature type to an opposite planes feature. The location and size are copied from the base feature.

element **OppositePlanesCastType/BaseFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseFeature element identifies the base feature to be cast to an opposite planes feature.

complexType **OppositePlanesCheckedFeatureType**

diagram	
children	CheckDetails
used by	element OppositePlanesActualDeterminationType/Checked
annotation	documentation The OppositePlanesCheckedFeatureType defines that an opposite planes feature is checked.

element **OppositePlanesCheckedFeatureType/CheckDetails**

diagram	
type	OppositePlanesCheckedType

properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the opposite planes feature check (measurement or construction).

complexType **OppositePlanesCheckedType**

diagram	
children	Measured Constructed
used by	element OppositePlanesCheckedFeatureType/CheckDetails
annotation	documentation The OppositePlanesCheckedType defines how the opposite planes feature actual is checked, either by measurement or by construction.

element **OppositePlanesCheckedType/Measured**

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the opposite planes feature is measured.

element **OppositePlanesCheckedType/Constructed**

diagram	
type	OppositePlanesConstructionMethodType
properties	content complex

children	BestFit Recompensated Copy Cast Transform FromScan
annotation	documentation The Constructed element signifies that the opposite planes feature is constructed.

complexType **OppositePlanesConstructionMethodType**

diagram	
children	BestFit Recompensated Copy Cast Transform FromScan
used by	element OppositePlanesCheckedType/Constructed
annotation	documentation The OppositePlanesConstructionMethodType defines the method for constructing a unique nominal or actual opposite planes feature.

element **OppositePlanesConstructionMethodType/BestFit**

diagram	
type	OppositePlanesBestFitType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The BestFit element describes the best-fit construction of an opposite planes feature from 4 or more point-reducible base features. This element is in an optional choice.

element **OppositePlanesConstructionMethodType/Recompensated**

diagram	
type	OppositePlanesRecompType
properties	content complex

children	NominalsCalculated BaseFeaturePointList
annotation	documentation The Re-compensated element describes the re-compensated-for- probe-size best-fit construction of an opposite planes feature from 4 or more base feature points. This element is in an optional choice.

element [OppositePlanesConstructionMethodType/Copy](#)

diagram	<p>The diagram shows a 'Copy' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'OppositePlanesCopyType'. Inside this box, there are two elements: 'NominalsCalculated' (a dashed rectangle) and 'BaseOppositePlanes' (a rectangle with a small square on its right side). Both are connected to the 'Copy' element via lines that pass through small circles with three dots.</p>
type	OppositePlanesCopyType
properties	content complex
children	NominalsCalculated BaseOppositePlanes
annotation	documentation The Copy element describes the construction of an opposite planes feature by the copying of a base opposite planes feature. This element is in an optional choice.

element [OppositePlanesConstructionMethodType/Cast](#)

diagram	<p>The diagram shows a 'Cast' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'OppositePlanesCastType'. Inside this box, there are two elements: 'NominalsCalculated' (a dashed rectangle) and 'BaseFeature' (a rectangle with a small square on its right side). Both are connected to the 'Cast' element via lines that pass through small circles with three dots.</p>
type	OppositePlanesCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The Cast element describes the construction of an opposite planes feature by the casting of a base feature. This element is in an optional choice.

element [OppositePlanesConstructionMethodType/Transform](#)

diagram	<p>The diagram shows a 'Transform' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'OppositePlanesTransformType'. Inside this box, there are three elements: 'NominalsCalculated' (a dashed rectangle), 'BaseOppositePlanes' (a rectangle with a small square on its right side), and 'Transformation' (a rectangle with a small square on its right side). All three are connected to the 'Transform' element via lines that pass through small circles with three dots.</p>
type	OppositePlanesTransformType
properties	content complex
children	NominalsCalculated BaseOppositePlanes Transformation

annotation	documentation The Transform element describes the construction of an opposite planes feature by the transformation of a base opposite planes feature. This element is in an optional choice.
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element **OppositePlanesConstructionMethodType/FromScan**

diagram	
type	OppositePlanesFromScanType
properties	content complex
children	NominalsCalculated SurfaceFeature SearchRadius
annotation	documentation The FromScan element describes the construction of an opposite planes feature from scan data. This element is in an optional choice.

complexType **OppositePlanesCopyType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseOppositePlanes
used by	element OppositePlanesConstructionMethodType/Copy
annotation	documentation The OppositePlanesCopyType defines a copied opposite planes feature construction.

element **OppositePlanesCopyType/BaseOppositePlanes**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId

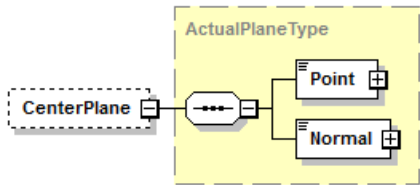
annotation	documentation The BaseOppositePlanes element identifies the opposite planes to be copied.
------------	--

complexType **OppositePlanesFeatureActualType**

diagram	
type	extension of FeatureActualBaseType
properties	base FeatureActualBaseType
children	Attributes PointList FeatureItemid ActualComponentid ManufacturingProcessid MeasurementDeviceids NotedEventids CenterPlane LengthVector DepthVector Width WidthMin WidthMax Length LengthMin LengthMax Depth TaperAngle DraftAngle EndRadius1 EndRadius2 Form

used by	element OppositePlanesFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The OppositePlanesFeatureActualType defines the opposite planes feature actual information for an individual opposite planes feature.					

element **OppositePlanesFeatureActualType/CenterPlane**

diagram						
type	ActualPlaneType					
properties	minOcc	0	maxOcc	1	content	complex
children	Point Normal					
annotation	documentation The optional CenterPlane element is the actual location point and a unit vector normal of the center plane of the opposite planes feature.					

element **OppositePlanesFeatureActualType/LengthVector**

diagram						
type	ActualUnitVectorType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional LengthVector element is the actual unit vector of the long axis of the feature.

element **OppositePlanesFeatureActualType/DepthVector**

diagram						
type	ActualUnitVectorType					
properties	minOcc	0	maxOcc	1	content	complex
facets	Kind	Value	Annotation	length	3	
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional DepthVector element is the actual unit vector of the depth axis of the feature.

element **OppositePlanesFeatureActualType/Width**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is

	<p>linearUnit xs:token</p>	<p>a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.</p>
annotation	<p>documentation The optional Width element is the actual width between the opposite planes per the substitute feature data fitting algorithm setting. If the feature is tapered or has draft the width applies at the locating point.</p>	

element **OppositePlanesFeatureActualType/WidthMin**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	<p>documentation The optional WidthMin element is the minimum width of the opposite planes feature from a report or an analysis.</p>					

element **OppositePlanesFeatureActualType/WidthMax**

diagram						
type	ActualLinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional WidthMax element is the maximum width of the opposite planes feature from a report or an analysis.					

element **OppositePlanesFeatureActualType/Length**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Length element is the actual length of the opposite planes feature based on the substitute feature data fitting algorithm setting.					

element **OppositePlanesFeatureActualType/LengthMin**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional LengthMin element is the minimum length of the opposite planes feature from a report or an analysis.					

element **OppositePlanesFeatureActualType/LengthMax**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional LengthMax element is the maximum length of the opposite planes feature from a report or an analysis.					

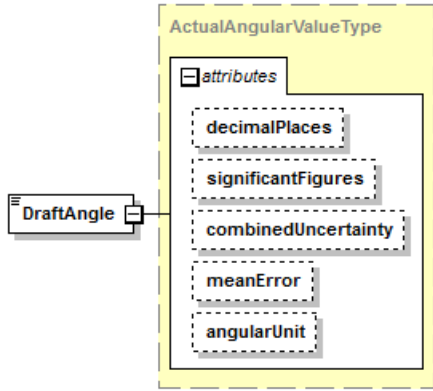
element **OppositePlanesFeatureActualType/Depth**

diagram						
type	ActualLinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name decimalPlaces significantFigures combinedUncertainty meanError linearUnit	Type xs:nonNegativeInteger xs:nonNegativeInteger NonNegativeDecimalType NonNegativeDecimalType xs:token	Use	Default	Fixed	Annotation documentation See documentation of SpecifiedDecimalType. documentation See documentation of SpecifiedDecimalType. documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType. documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Depth element is the actual depth of opposite planes feature in the direction of the depth vector.					

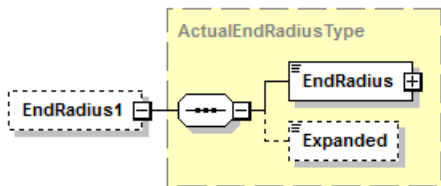
element **OppositePlanesFeatureActualType/TaperAngle**

diagram						
type	ActualAngularValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	angularUnit	xs:token				documentation The optional angularUnit attribute defines the unit used by ActualAngularValueType.
annotation	documentation The optional TaperAngle element is the actual taper angle of the feature. This element is in an optional choice.					

element **OppositePlanesFeatureActualType/DraftAngle**

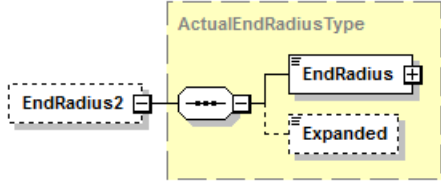
diagram	 <p>The diagram shows a yellow box labeled 'ActualAngularValueType'. Inside it is a dashed box labeled 'attributes'. Within 'attributes' are five dashed boxes: 'decimalPlaces', 'significantFigures', 'combinedUncertainty', 'meanError', and 'angularUnit'. To the left of the 'attributes' box is a box labeled 'DraftAngle' with a small square icon next to it, connected to the 'attributes' box by a line.</p>					
type	ActualAngularValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	angularUnit	xs:token				documentation The optional angularUnit attribute defines the unit used by ActualAngularValueType.
annotation	documentation The optional DraftAngle element is the actual draft angle of the feature. This element is in an optional choice.					

element **OppositePlanesFeatureActualType/EndRadius1**

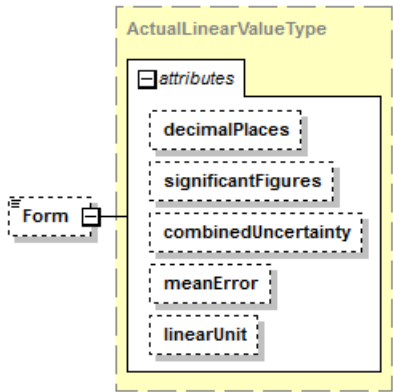
diagram	 <p>The diagram shows a yellow box labeled 'ActualEndRadiusType'. Inside it is a dashed box labeled 'Expanded'. Within 'Expanded' are two dashed boxes: 'EndRadius1' and 'EndRadius'. To the left of the 'Expanded' box is a box labeled 'EndRadius1' with a small square icon next to it, connected to the 'Expanded' box by a line.</p>					
type	ActualEndRadiusType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				

children	EndRadius Expanded
annotation	documentation The optional EndRadius1 element is the actual radius of the rounded end in the direction opposite the length vector.

element **OppositePlanesFeatureActualType/EndRadius2**

diagram						
type	ActualEndRadiusType					
properties	minOcc	0	maxOcc	1	content	complex
children	EndRadius Expanded					
annotation	documentation The optional EndRadius2 element is the actual radius of the rounded end in the direction of the length vector.					

element **OppositePlanesFeatureActualType/Form**

diagram						
type	ActualLinearValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional

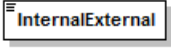
	linearUnit xs:token	meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Form element is the form error of the opposite planes feature from a report or an analysis.	

complexType OppositePlanesFeatureDefinitionType

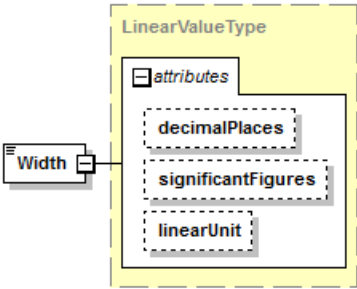
diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes InternalExternal Width Length EndType Depth Bottom SingleOpenEnd EndRadius1 EndRadius2 TaperAngle DraftAngle					
used by	element OppositePlanesFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for

	referencing.
annotation	documentation The OppositePlanesFeatureDefinitionType defines the nominal information that can be common to one or more opposite planes features.

element **OppositePlanesFeatureDefinitionType/InternalExternal**

diagram			
type	InternalExternalEnumType		
properties	content	simple	
facets	Kind	Value	Annotation
	enumeration	INTERNAL	
	enumeration	EXTERNAL	
	enumeration	NOT_APPLICABLE	
annotation	documentation The InternalExternal element indicates whether the feature is internal (slot, groove) or external (rib, web, block).		

element **OppositePlanesFeatureDefinitionType/Width**

diagram						
type	LinearValueType					
properties	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The Width element is the nominal width of this feature of size. If the opposite planes of the feature are tapered or have a draft angle then the width applies at the locating point.					

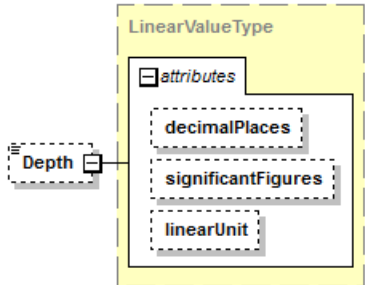
element **OppositePlanesFeatureDefinitionType/Length**

diagram						
type	LinearValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The optional Length element is the nominal length of the feature parallel to the length vector in the center-plane. If the opposite planes feature has a draft angle then the length applies at the depth of the locating point.					

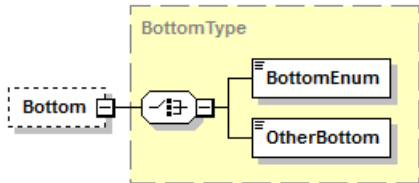
element **OppositePlanesFeatureDefinitionType/EndType**

diagram	<pre>graph LR; EndType[EndType] --- SlotEndType[SlotEndType]; subgraph SlotEndType; SlotEndEnum[SlotEndEnum]; OtherSlotEnd[OtherSlotEnd]; end</pre>
type	SlotEndType
properties	content complex
children	SlotEndEnum OtherSlotEnd
annotation	documentation The EndType element is the type of the opposite planes feature's ends: round, flat, expanded, or open. A flat end is formed by a plane perpendicular to the LengthVector passing through the location point of the center plane.

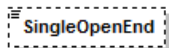
element **OppositePlanesFeatureDefinitionType/Depth**

diagram						
type	LinearValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The optional Depth element is the depth of the opposite planes feature.					

element **OppositePlanesFeatureDefinitionType/Bottom**

diagram						
type	BottomType					
properties	minOcc	0	maxOcc	1	content	complex
children	BottomEnum OtherBottom					
annotation	documentation The optional Bottom element is the type of bottom of the slot. If present, it must be BLIND or THROUGH. The bottom type affects the region available for probing. If the InternalExternal given in the opposite planes feature item is INTERNAL, the opposite planes feature fits the intuitive description of a slot, and in that case BLIND means that the slot has material at the bottom, while THROUGH means that the slot goes all the way through the product. If the InternalExternal is EXTERNAL, the slot is actually a boss with parallel planes for sides, and in that case BLIND means that there is material outside the boss at the base of the boss, while THROUGH means that there is no material there.					

element **OppositePlanesFeatureDefinitionType/SingleOpenEnd**

diagram						
---------	---	--	--	--	--	--

type	xs:boolean
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The optional SingleOpenEnd element signifies that this feature has one open end. It has meaning only with FLAT, ROUND or EXPANDED end types. If this element exists and is set to "true" then the end in the direction of the length vector is open.

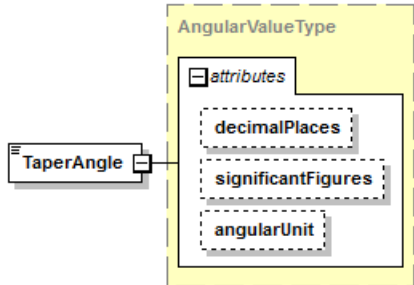
element OppositePlanesFeatureDefinitionType/EndRadius1

diagram	
type	EndRadiusType
properties	minOcc 0 maxOcc 1 content complex
children	EndRadius Expanded
annotation	documentation The optional EndRadius1 element is the radius of a complex end in the direction opposite the centerline vector. The radius is measured in a plane passing through the location point and containing the LengthVector and the normal to the center plane. If the end type is flat, then the opposite planes feature has a filleted flat end, and the value must be small enough that a portion of the end is flat. If the end type is round, this value must be such that the end is an outward cylindrical segment (or a conical segment if there is a taper). If the end radius is greater than that of a tangent round end then whether the end expands in size like a dumbbell or not is defined by the Expanded element.

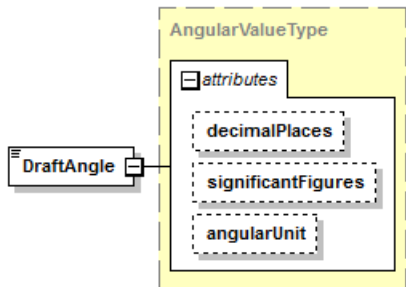
element OppositePlanesFeatureDefinitionType/EndRadius2

diagram	
type	EndRadiusType
properties	minOcc 0 maxOcc 1 content complex
children	EndRadius Expanded
annotation	documentation The optional EndRadius2 element is the radius of the complex end in the direction of the centerline vector. The radius is measured in a plane passing through the location point and containing the LengthVector and the normal to the center plane. If the end type is flat, then the opposite planes feature has a filleted flat end, and the value must be small enough that a portion of the end is flat. If the end type is round, this value must be such that the end is an outward cylindrical segment (or a conical segment if there is a taper). If the end radius is greater than that of a tangent round end then whether the end expands in size like a dumbbell or not is defined by the Expanded element.

element **OppositePlanesFeatureDefinitionType/TaperAngle**

diagram						
type	AngularValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	angularUnit	xs:token				documentation The optional angularUnit attribute defines the UnitName for the AngularValueType.
annotation	documentation The TaperAngle element is the nominal angle between each side of the feature and the center plane (i.e. half of the angle between the two sides). If positive, the opposite planes of the feature open in the direction of the length vector, and if negative, the opposite planes close in the direction of the length vector. For a taper angle, the normal vector of each side is parallel to a plane containing the normal to the center plane and the length vector. This element is in an optional choice.					

element **OppositePlanesFeatureDefinitionType/DraftAngle**

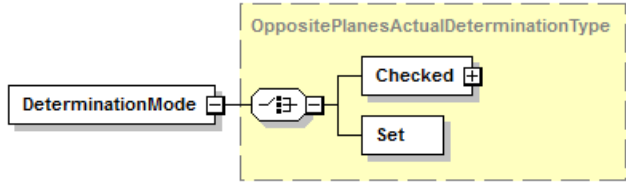
diagram						
type	AngularValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	angularUnit	xs:token				documentation The optional angularUnit attribute

		defines the UnitName for the AngularValueType.
annotation	documentation The DraftAngle element is the nominal angle between the center plane of the feature and each side of the feature (i.e. half of the angle between the two sides). If positive, the opposite planes of the feature open in the direction of the depth vector, and if negative, the opposite planes close in the direction of the depth vector. The ends of the feature, if there are any, will be similarly drafted. This element is in an optional choice.	

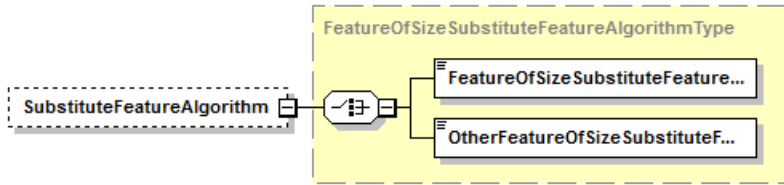
complexType **OppositePlanesFeatureItem**

diagram						
type	extension of FeatureItemBaseType					
properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element OppositePlanesFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The OppositePlanesFeatureItem defines an individual, three dimensional feature-of-size opposite planes feature, located by its center plane. This feature can be used to describe a slot or groove (internal feature) or a rib, web, or block (external feature).					

element **OppositePlanesFeatureItemType/DeterminationMode**

diagram	 <p>The diagram shows a box labeled 'DeterminationMode' connected to a choice box (a circle with a vertical line and a plus sign). This choice box is connected to two boxes: 'Checked' and 'Set'. The entire structure is enclosed in a dashed yellow box labeled 'OppositePlanesActualDeterminationType'.</p>
type	OppositePlanesActualDeterminationType
properties	content complex
children	Checked Set
annotation	<p>documentation</p> <p>The DeterminationMode element is the means by which the opposite planes feature actual is determined.</p>

element **OppositePlanesFeatureItemType/SubstituteFeatureAlgorithm**

diagram	 <p>The diagram shows a dashed box labeled 'SubstituteFeatureAlgorithm' connected to a choice box (a circle with a vertical line and a plus sign). This choice box is connected to two boxes: 'FeatureOfSizeSubstituteFeature...' and 'OtherFeatureOfSizeSubstituteF...'. The entire structure is enclosed in a dashed yellow box labeled 'FeatureOfSizeSubstituteFeatureAlgorithmType'.</p>
type	FeatureOfSizeSubstituteFeatureAlgorithmType
properties	minOcc 0 maxOcc 1 content complex
children	FeatureOfSizeSubstituteFeatureAlgorithmEnum OtherFeatureOfSizeSubstituteFeatureAlgorithm
annotation	<p>documentation</p> <p>The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the opposite planes feature.</p>

complexType **OppositePlanesFeatureNominalType**

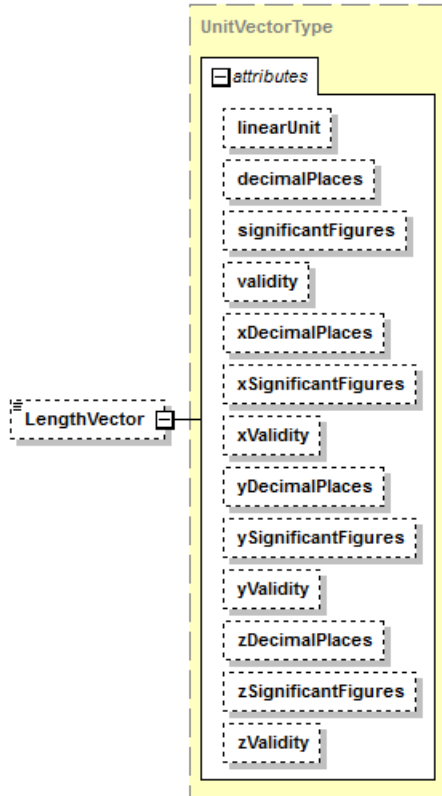
diagram						
type	extension of FeatureNominalBaseType					
properties	base FeatureNominalBaseType					
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds CenterPlane LengthVector DepthVector DraftVector					
used by	element OppositePlanesFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The OppositePlanesFeatureNominalType defines the opposite planes feature nominal information for an individual opposite planes feature.					

element **OppositePlanesFeatureNominalType/CenterPlane**

diagram						
type	PlaneType					

properties	content complex
children	Point Normal
annotation	<p>documentation</p> <p>The CenterPlane element is the nominal location point and a unit vector normal of the center plane of the opposite planes feature. The location point is both midway between the sides and between the ends (real or virtual). Or in other words, the sides are located half the width away from the location point in directions along and against the center plane normal. The ends are located half the length away from the location point in directions along and against the length vector.</p>

element **OppositePlanesFeatureNominalType/LengthVector**

diagram							
type	UnitVectorType						
properties	minOcc	0	maxOcc	1	content	complex	
facets	Kind	Value	Annotation				
	length	3					
attributes	Name	Type	Use	Default	Fixed	Annotation	
	linearUnit	xs:token					
	decimalPlaces	xs:nonNegativeInteger					
	significantFigures	xs:nonNegativeInteger					
	validity	ValidityEnumType					
	xDecimalPlaces	xs:nonNegativeInteger					
	xSignificantFigures	xs:nonNegativeInteger					
	xValidity	ValidityEnumType					
	yDecimalPlaces	xs:nonNegativeInteger					
	ySignificantFigures	xs:nonNegativeInteger					

	yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType
annotation	documentation The optional LengthVector element is the nominal unit vector of the long axis of the feature.

element **OppositePlanesFeatureNominalType/DepthVector**

diagram						
type	UnitVectorType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				

	yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType
annotation	documentation The optional DepthVector element is the nominal unit vector pointing out of the feature (away from the bottom if there is one) and is perpendicular to both the LengthVector and the normal to the center plane.

element **OppositePlanesFeatureNominalType/DraftVector**

diagram						
type	UnitVectorType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				

	yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType
annotation	documentation The optional DraftVector element is the nominal unit vector defining the direction in which the draft angle is applied when it is different than the depth vector and like the depth vector generally points out of the feature. It is not necessarily perpendicular to either the LengthVector or the normal to the center plane.

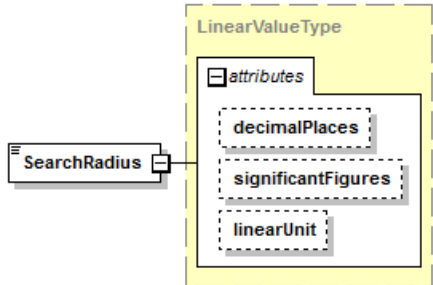
complexType **OppositePlanesFromScanType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated SurfaceFeature SearchRadius
used by	element OppositePlanesConstructionMethodType/FromScan
annotation	documentation The OppositePlanesFromScanType defines an opposite planes feature construction by the retrieval of an opposite planes feature from a scanned surface feature (point cloud).

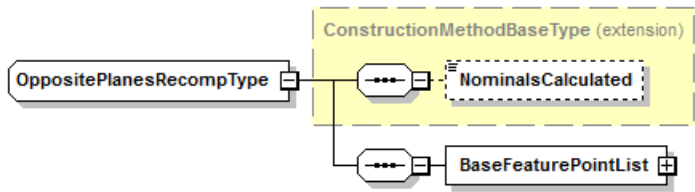
element **OppositePlanesFromScanType/SurfaceFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The SurfaceFeature element identifies the scanned surface feature from which the opposite planes feature is retrieved.

element **OppositePlanesFromScanType/SearchRadius**

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The SearchRadius element is the radius around the nominal feature, wherein the actual feature can be expected. The SearchRadius is the radius added to and subtracted from the nominal feature size defining a shell. All scanned points within this shell are used for the retrieval of the feature. The shell's axis is defined by the DepthVector direction and the shell's axis passes through the feature's center point. The shell is even disposed about the nominal opposite planes feature.					

complexType **OppositePlanesRecompType**

diagram						
type	extension of ConstructionMethodBaseType					
properties	base ConstructionMethodBaseType					
children	NominalsCalculated BaseFeaturePointList					
used by	element OppositePlanesConstructionMethodType/Recompensated					
annotation	documentation The OppositePlanesRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit opposite planes through the measurement points of base features.					

element **OppositePlanesRecompType/BaseFeaturePointList**

diagram	
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	<p>documentation</p> <p>The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit opposite planes. The total number of points in the BaseFeaturePointSets in the list must be 4 or greater.</p>

complexType **OppositePlanesTransformType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseOppositePlanes Transformation
used by	element OppositePlanesConstructionMethodType/Transform
annotation	<p>documentation</p> <p>The OppositePlanesTransformType defines an opposite planes feature construction by the transformation of an opposite planes feature through the specified nominal or actual coordinate system.</p>

element **OppositePlanesTransformType/BaseOppositePlanes**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The BaseOppositePlanes element identifies the opposite planes feature to be transformed.</p>

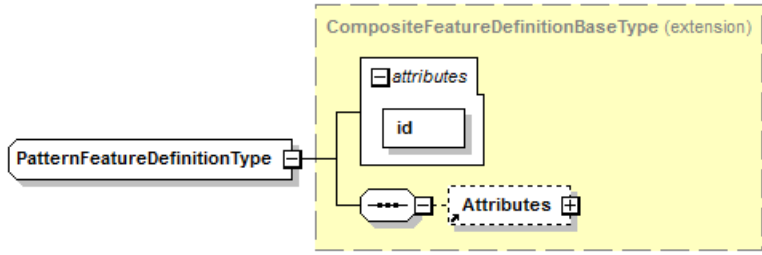
element **OppositePlanesTransformType/Transformation**

diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	documentation The Transformation element identifies the coordinate system to be used to transform the opposite planes.

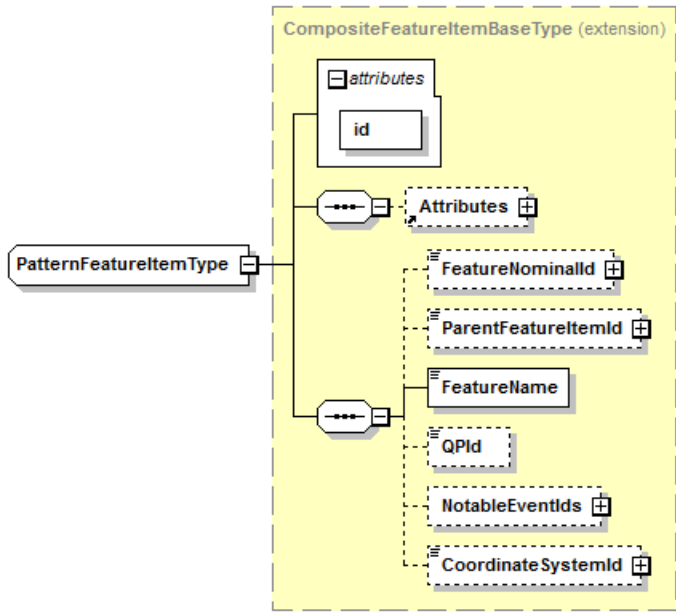
complexType **PatternFeatureActualType**

diagram													
type	extension of CompositeFeatureActualBaseType												
properties	base CompositeFeatureActualBaseType												
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds												
used by	element PatternFeatureActual												
attributes	<table><thead><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr></thead><tbody><tr><td>id</td><td>QIFIdType</td><td>required</td><td></td><td></td><td>documentation The id attribute is the QIF id of the feature, used for referencing.</td></tr></tbody></table>	Name	Type	Use	Default	Fixed	Annotation	id	QIFIdType	required			documentation The id attribute is the QIF id of the feature, used for referencing.
Name	Type	Use	Default	Fixed	Annotation								
id	QIFIdType	required			documentation The id attribute is the QIF id of the feature, used for referencing.								
annotation	documentation The PatternFeatureActualType defines the pattern feature actual information for an individual pattern feature.												

complexType **PatternFeatureDefinitionType**

diagram						
type	extension of CompositeFeatureDefinitionBaseType					
properties	base CompositeFeatureDefinitionBaseType					
children	Attributes					
used by	element PatternFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The PatternFeatureDefinitionType defines the pattern feature nominal information that can be common to one or more pattern features.					

complexType **PatternFeatureItemType**

diagram						
type	extension of CompositeFeatureItemTypeBaseType					
properties	base CompositeFeatureItemTypeBaseType					

children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPId NotableEventIds CoordinateSystemId					
used by	element PatternFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The PatternFeatureItem type defines an individual pattern feature. A pattern feature is a complex feature defined by a set of similar feature of size features (e.g., holes, bosses, slots, tabs) in a pattern (e.g., bolt hole circle) and to which a composite pattern tolerance may be applied.					

complexType **PatternFeatureNominalType**

diagram	<pre> classDiagram class CompositeFeatureNominalBaseType { +id } class PatternFeatureNominalType { +Name +PointList +FeatureDefinitionId +EntityInternalIds +EntityExternalIds +FeatureNominalIds } CompositeFeatureNominalBaseType < -- PatternFeatureNominalType </pre>					
type	extension of CompositeFeatureNominalBaseType					
properties	base CompositeFeatureNominalBaseType					
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds FeatureNominalIds					
used by	element PatternFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The PatternFeatureNominalType defines the pattern feature nominal information for an individual pattern feature.					

complexType **PlaneActualDeterminationType**

diagram	
children	Checked Set
used by	element PlaneFeatureItemType/DeterminationMode
annotation	documentation The PlaneActualDeterminationType defines how the plane actual is determined, either by being set or by being checked (measured or constructed).

element **PlaneActualDeterminationType/Checked**

diagram	
type	PlaneCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	documentation The Checked element signifies that the plane is checked from actual data, either measured or constructed.

element **PlaneActualDeterminationType/Set**

diagram	
type	SetFeatureType
properties	content complex
annotation	documentation The Set element signifies that the plane actual is set to its nominal value.

complexType **PlaneBestFitType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element PlaneConstructionMethodType/BestFit
annotation	documentation The PlaneBestFitType defines the information for a best-fit plane which includes a list of point-reducible base features;

	the points to which those features reduce are used in the best-fit construction of the plane.
--	---

element PlaneBestFitType/BaseFeature

diagram	
type	SequencedBaseFeatureType
properties	minOcc 3 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	documentation Each BaseFeature element identifies a base feature to be used for the construction of a plane. The number of base features must be 3 or greater.

complexType PlaneCastType


diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element PlaneConstructionMethodType/Cast
annotation	documentation The PlaneCastType defines the cast of another feature type to a plane. The location and vector are copied from the base feature.

element PlaneCastType/BaseFeature

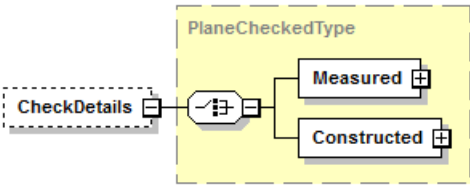
diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId

annotation	documentation The BaseFeature element identifies the base feature to be cast to a plane.
------------	---

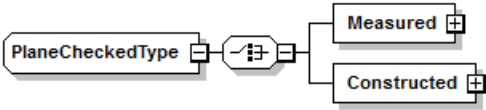
complexType **PlaneCheckedFeatureType**

diagram	
children	CheckDetails
used by	element PlaneActualDeterminationType/Checked
annotation	documentation The PlaneCheckedFeatureType defines that a plane feature is checked.

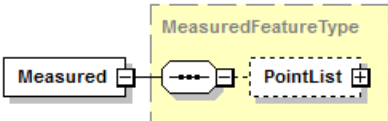
element **PlaneCheckedFeatureType/CheckDetails**

diagram	
type	PlaneCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the plane check (measurement or construction).

complexType **PlaneCheckedType**

diagram	
children	Measured Constructed
used by	element PlaneCheckedFeatureType/CheckDetails
annotation	documentation The PlaneCheckedType defines how the plane actual is checked, either by measurement or by construction.

element **PlaneCheckedType/Measured**

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList

annotation	documentation The Measured element signifies that the plane is measured.
------------	---

element **PlaneCheckedType/Constructed**

diagram	<p>The diagram illustrates the structure of the PlaneCheckedType/Constructed element. It features a central box labeled Constructed with a small square icon. To its right is a dashed yellow box labeled PlaneConstructionMethodType. Inside this dashed box is a vertical list of eleven plane construction methods, each in a box with a small square icon: BestFit, Recompensated, Midplane, Offset, Perpendicular, Parallel, Copy, Cast, TangentThrough, Transform, and Extract. A dashed line connects the Constructed box to the Parallel box within the dashed yellow box.</p>
type	PlaneConstructionMethodType
properties	content complex
children	BestFit Recompensated Midplane Offset Perpendicular Parallel Copy Cast TangentThrough Transform Extract
annotation	documentation The Constructed element signifies that the plane is constructed.

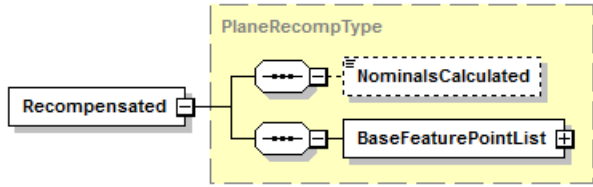
complexType **PlaneConstructionMethodType**

diagram	
children	BestFit Recompensated Midplane Offset Perpendicular Parallel Copy Cast TangentThrough Transform Extract
used by	element PlaneCheckedType/Constructed
annotation	documentation The PlaneConstructionMethodType defines the method for constructing a unique nominal or actual plane feature.

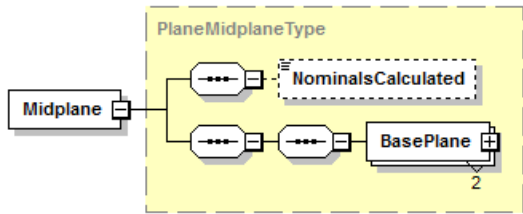
element **PlaneConstructionMethodType/BestFit**

diagram	
type	PlaneBestFitType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The BestFit element describes the best-fit construction of a plane from 3 or more point-reducible base features. This element is in an optional choice.

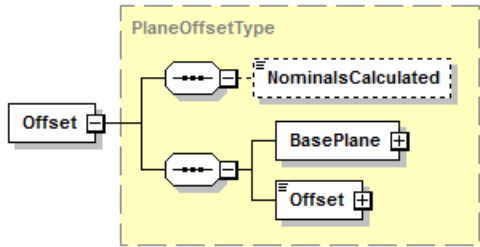
element **PlaneConstructionMethodType/Recompensated**

diagram	 <p>The diagram shows a 'Recompensated' element connected to two sub-elements: 'NominalsCalculated' and 'BaseFeaturePointList'. These sub-elements are enclosed in a dashed box labeled 'PlaneRecompType'.</p>
type	PlaneRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	<p>documentation</p> <p>The Recompensated element describes the re-compensated-for- probe-size best-fit construction of a plane from 3 or more base feature points. This element is in an optional choice.</p>

element **PlaneConstructionMethodType/Midplane**

diagram	 <p>The diagram shows a 'Midplane' element connected to two sub-elements: 'NominalsCalculated' and 'BasePlane'. These sub-elements are enclosed in a dashed box labeled 'PlaneMidplaneType'. The 'BasePlane' element has a '2' next to it, indicating a multiplicity of 2.</p>
type	PlaneMidplaneType
properties	content complex
children	NominalsCalculated BasePlane
annotation	<p>documentation</p> <p>The Midplane element describes the construction of a plane that is everywhere equidistant from each of two base planes. This element is in an optional choice.</p>

element **PlaneConstructionMethodType/Offset**

diagram	 <p>The diagram shows an 'Offset' element connected to two sub-elements: 'NominalsCalculated' and 'BasePlane'. These sub-elements are enclosed in a dashed box labeled 'PlaneOffsetType'. The 'BasePlane' element is connected to an 'Offset' element, which is also enclosed in the dashed box.</p>
type	PlaneOffsetType
properties	content complex
children	NominalsCalculated BasePlane Offset
annotation	<p>documentation</p> <p>The Offset element describes the construction of a plane that is offset from a base plane by a specified offset distance along the normal vector of the base plane. This element is in an optional choice.</p>

element **PlaneConstructionMethodType/Perpendicular**

diagram	<p>The diagram shows a 'Perpendicular' element box connected to a dashed yellow box labeled 'PlanePerpendicularType'. Inside this box, there are three sub-elements: 'NominalsCalculated' (in a dashed box), 'PerpendicularFeature', and 'PointFeature'. The 'Perpendicular' element is connected to the 'NominalsCalculated' element, which is then connected to the 'PerpendicularFeature' and 'PointFeature' elements.</p>
type	PlanePerpendicularType
properties	content complex
children	NominalsCalculated PerpendicularFeature PointFeature
annotation	<p>documentation</p> <p>The Perpendicular element describes the construction of a plane perpendicular to a line-reducible base feature and passing through a point feature. This element is in an optional choice.</p>

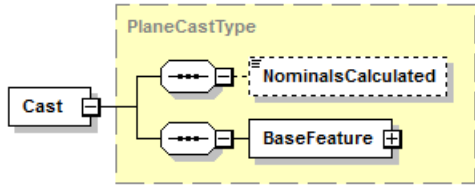
element **PlaneConstructionMethodType/Parallel**

diagram	<p>The diagram shows a 'Parallel' element box connected to a dashed yellow box labeled 'PlaneParallelType'. Inside this box, there are three sub-elements: 'NominalsCalculated' (in a dashed box), 'ParallelFeature', and 'PointFeature'. The 'Parallel' element is connected to the 'NominalsCalculated' element, which is then connected to the 'ParallelFeature' and 'PointFeature' elements.</p>
type	PlaneParallelType
properties	content complex
children	NominalsCalculated ParallelFeature PointFeature
annotation	<p>documentation</p> <p>The Parallel element describes the construction of a plane parallel to a base feature and passing through a point feature. This element is in an optional choice.</p>

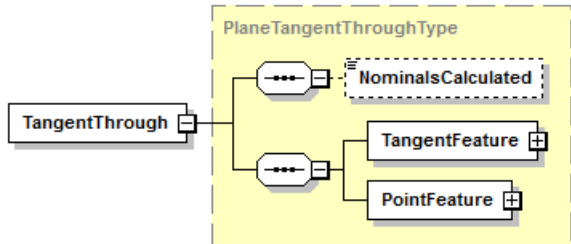
element **PlaneConstructionMethodType/Copy**

diagram	<p>The diagram shows a 'Copy' element box connected to a dashed yellow box labeled 'PlaneCopyType'. Inside this box, there are two sub-elements: 'NominalsCalculated' (in a dashed box) and 'BasePlane'. The 'Copy' element is connected to the 'NominalsCalculated' element, which is then connected to the 'BasePlane' element.</p>
type	PlaneCopyType
properties	content complex
children	NominalsCalculated BasePlane
annotation	<p>documentation</p> <p>The Copy element describes the construction of a plane by the copying of a base plane. This element is in an optional choice.</p>

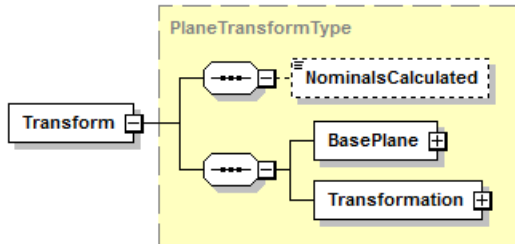
element **PlaneConstructionMethodType/Cast**

diagram	 <p>The diagram shows a 'Cast' element connected to a dashed box labeled 'PlaneCastType'. Inside this box, there are two parallel paths. The top path consists of a connector box followed by a dashed box labeled 'NominalsCalculated'. The bottom path consists of a connector box followed by a box labeled 'BaseFeature'.</p>
type	PlaneCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	<p>documentation</p> <p>The Cast element describes the construction of a plane by the casting of a base feature. This element is in an optional choice.</p>

element **PlaneConstructionMethodType/TangentThrough**

diagram	 <p>The diagram shows a 'TangentThrough' element connected to a dashed box labeled 'PlaneTangentThroughType'. Inside this box, there are two parallel paths. The top path consists of a connector box followed by a dashed box labeled 'NominalsCalculated'. The bottom path consists of a connector box followed by two boxes: 'TangentFeature' and 'PointFeature'.</p>
type	PlaneTangentThroughType
properties	content complex
children	NominalsCalculated TangentFeature PointFeature
annotation	<p>documentation</p> <p>The TangentThrough element describes the construction of a plane tangent to a base feature and passing through a point feature. This element is in an optional choice.</p>

element **PlaneConstructionMethodType/Transform**

diagram	 <p>The diagram shows a 'Transform' element connected to a dashed box labeled 'PlaneTransformType'. Inside this box, there are two parallel paths. The top path consists of a connector box followed by a dashed box labeled 'NominalsCalculated'. The bottom path consists of a connector box followed by two boxes: 'BasePlane' and 'Transformation'.</p>
type	PlaneTransformType
properties	content complex
children	NominalsCalculated BasePlane Transformation
annotation	<p>documentation</p> <p>The Transform element describes the construction of a plane by the transformation of a base plane. This element is in an optional choice.</p>

element **PlaneConstructionMethodType/Extract**

diagram	<p>The diagram shows an 'Extract' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'PlaneExtractType'. Inside this box, there are two elements: 'NominalsCalculated' (a dashed rectangle) and 'SurfaceFeature' (a rectangle with a small square on its right side). Both are connected to the 'Extract' element via lines that pass through small circles with three dots.</p>
type	PlaneExtractType
properties	content complex
children	NominalsCalculated SurfaceFeature
annotation	documentation The Extract element describes the extraction of a plane from a surface. This element is in an optional choice.

complexType **PlaneCopyType**

diagram	<p>The diagram shows a 'PlaneCopyType' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'ConstructionMethodBaseType (extension)'. Inside this box, there are two elements: 'NominalsCalculated' (a dashed rectangle) and 'BasePlane' (a rectangle with a small square on its right side). Both are connected to the 'PlaneCopyType' element via lines that pass through small circles with three dots.</p>
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BasePlane
used by	element PlaneConstructionMethodType/Copy
annotation	documentation The PlaneCopyType defines a copied plane construction.

element **PlaneCopyType/BasePlane**

diagram	<p>The diagram shows a 'BasePlane' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'BaseFeatureType'. Inside this box, there are two elements: 'ReferencedComponent' (a rectangle with a small square on its right side) and 'FeatureItemId' (a rectangle with a small square on its right side). Both are connected to the 'BasePlane' element via lines that pass through small circles with three dots.</p>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BasePlane element identifies the plane to be copied.

complexType **PlaneExtractType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated SurfaceFeature
used by	element PlaneConstructionMethodType/Extract
annotation	documentation The PlaneExtractType defines a plane construction by the extraction of a plane from a surface feature.

element **PlaneExtractType/SurfaceFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The SurfaceFeature element identifies the surface from which the plane is extracted.

complexType **PlaneFeatureActualType**

diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Location Normal PolyLine Form					
used by	element PlaneFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The PlaneFeatureActualType defines the plane feature actual information for an individual plane feature.					

element **PlaneFeatureActualType/Location**

diagram						
type	ActualPointType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional Location element is the actual XYZ location of a point on the plane.

element **PlaneFeatureActualType/Normal**

diagram						
type	ActualUnitVectorType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional Normal element is the actual unit normal vector of the plane.

element **PlaneFeatureActualType/PolyLine**

diagram	
type	PolyLineType
properties	minOcc 0 maxOcc 1

	content	complex				
attributes	<div> <div>Name</div> <div>N</div> </div> <div> <div>Type</div> <div>xs:positiveInteger</div> </div> <div> <div>Use</div> <div>required</div> </div> <div> <div>Default</div> <div></div> </div> <div> <div>Fixed</div> <div></div> </div> <div> <div>Annotation</div> <div>documentation The required N attribute gives the number of points represented by the array. The number of entries in the array must be 3N.</div> </div>					
	<div> <div>linearUnit</div> <div>xs:token</div> </div> <div> <div>decimalPlaces</div> <div>xs:nonNegativeInteger</div> </div> <div> <div>significantFigures</div> <div>xs:nonNegativeInteger</div> </div> <div> <div>validity</div> <div>ValidityEnumType</div> </div> <div> <div>xDecimalPlaces</div> <div>xs:nonNegativeInteger</div> </div> <div> <div>xSignificantFigures</div> <div>xs:nonNegativeInteger</div> </div> <div> <div>xValidity</div> <div>ValidityEnumType</div> </div> <div> <div>yDecimalPlaces</div> <div>xs:nonNegativeInteger</div> </div> <div> <div>ySignificantFigures</div> <div>xs:nonNegativeInteger</div> </div> <div> <div>yValidity</div> <div>ValidityEnumType</div> </div> <div> <div>zDecimalPlaces</div> <div>xs:nonNegativeInteger</div> </div> <div> <div>zSignificantFigures</div> <div>xs:nonNegativeInteger</div> </div> <div> <div>zValidity</div> <div>ValidityEnumType</div> </div>					
annotation	<div>documentation</div> <div>The optional PolyLine element gives a polyline representing the extent and boundary of the plane.</div>					

element **PlaneFeatureActualType/Form**

diagram						
type	ActualLinearValueType					
properties	<div>minOcc</div> <div>0</div>	<div>maxOcc</div> <div>1</div>	<div>content</div> <div>complex</div>			
attributes	<div> <div>Name</div> <div>decimalPlaces</div> </div> <div> <div>Type</div> <div>xs:nonNegativeInteger</div> </div> <div> <div>Use</div> <div></div> </div> <div> <div>Default</div> <div></div> </div> <div> <div>Fixed</div> <div></div> </div> <div> <div>Annotation</div> <div>documentation See documentation of SpecifiedDecimalType.</div> </div>	<div> <div>Name</div> <div>significantFigures</div> </div> <div> <div>Type</div> <div>xs:nonNegativeInteger</div> </div> <div> <div>Use</div> <div></div> </div> <div> <div>Default</div> <div></div> </div> <div> <div>Fixed</div> <div></div> </div> <div> <div>Annotation</div> <div>documentation See documentation of SpecifiedDecimalType.</div> </div>				

	combinedUncertainty NonNegativeDecimalType meanError NonNegativeDecimalType linearUnit xs:token	documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType. documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Form element is the form error (flatness) of the plane from a report or an analysis.	

complexType **PlaneFeatureDefinitionType**

diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes					
used by	element PlaneFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The PlaneFeatureDefinitionType defines the plane feature nominal information that can be common to one or more plane features.					

complexType **PlaneFeatureItem**Type

diagram						
type	extension of FeatureItemBaseType					
properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPId NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element PlaneFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The PlaneFeatureItem type defines an individual plane feature.					

element **PlaneFeatureItem**Type/**DeterminationMode**

diagram						
type	PlaneActualDeterminationType					
properties	content complex					
children	Checked Set					

annotation	documentation The DeterminationMode element is the means by which the plane feature actual is determined.
------------	--

element **PlaneFeatureItem/SubstituteFeatureAlgorithm**

diagram	
type	NonFeatureOfSizeSubstituteFeatureAlgorithmType
properties	minOcc 0 maxOcc 1 content complex
children	NonFeatureOfSizeSubstituteFeatureAlgorithmEnum OtherNonFeatureOfSizeSubstituteFeatureAlgorithm
annotation	documentation The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the plane feature.

complexType **PlaneFeatureNominalType**

diagram													
type	extension of FeatureNominalBaseType												
properties	base FeatureNominalBaseType												
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Location Normal PolyLine												
used by	element PlaneFeatureNominal												
attributes	<table><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr><tr><td>id</td><td>QIFIdType</td><td>required</td><td></td><td></td><td>documentation The id</td></tr></table>	Name	Type	Use	Default	Fixed	Annotation	id	QIFIdType	required			documentation The id
Name	Type	Use	Default	Fixed	Annotation								
id	QIFIdType	required			documentation The id								

		attribute is the QIF id of the feature, used for referencing.
annotation	documentation The PlaneFeatureNominalType defines the plane feature nominal information for an individual plane feature.	

element **PlaneFeatureNominalType/Location**

diagram						
type	PointType					
properties	content complex					
facets	Kind length	Value 3	Annotation			
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				

	zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType
annotation	documentation The Location element is the nominal location of a point on the plane.

element **PlaneFeatureNominalType/Normal**

diagram						
type	UnitVectorType					
properties	content complex					
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				

	zValidity ValidityEnumType
annotation	documentation The Normal element is the nominal unit normal vector of the plane.

element **PlaneFeatureNominalType/PolyLine**

diagram						
type	PolyLineType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	N	xs:positiveInteger	required			documentation The required N attribute gives the number of points represented by the array. The number of entries in the array must be 3N.
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				

	xSignificantFigures xs:nonNegativeInteger xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType
annotation	documentation The optional PolyLine element gives a polyline representing the extent and boundary of the plane.

complexType **PlaneMidplaneType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BasePlane
used by	element PlaneConstructionMethodType/Midplane
annotation	documentation The PlaneMidplaneType defines the construction of a plane that is everywhere equidistant from two base planes.

element **PlaneMidplaneType/BasePlane**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 2 maxOcc 2 content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	documentation Each BasePlane element identifies a base plane for construction of a mid-plane.

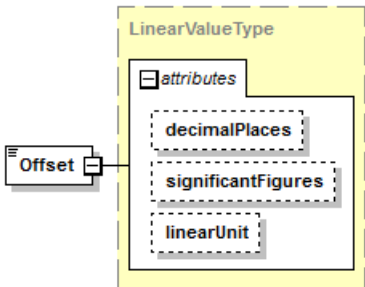
complexType **PlaneOffsetType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BasePlane Offset
used by	element PlaneConstructionMethodType/Offset
annotation	<p>documentation</p> <p>The PlaneOffsetType defines the construction of a plane created by translating a base plane by a specified offset distance along its normal vector. If the Offset is negative, the offset is in a direction opposite that of the plane vector.</p>

element **PlaneOffsetType/BasePlane**

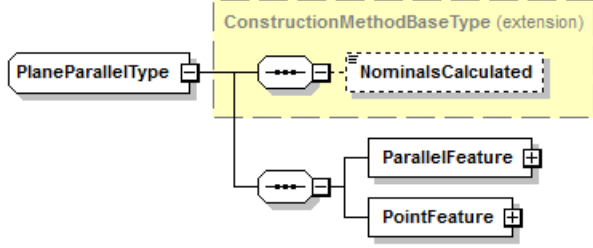
diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The BasePlane element identifies the plane whose normal vector determines the translation direction.</p>

element **PlaneOffsetType/Offset**

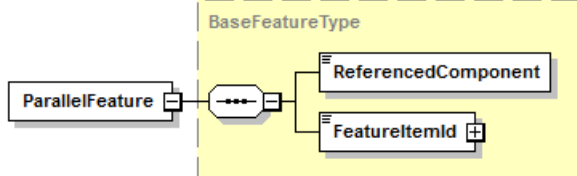
diagram													
type	LinearValueType												
properties	content complex												
attributes	<table><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr><tr><td>decimalPlaces</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr></table>	Name	Type	Use	Default	Fixed	Annotation	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
Name	Type	Use	Default	Fixed	Annotation								
decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.								

	significantFigures xs:nonNegativeInteger linearUnit xs:token	documentation See documentation of SpecifiedDecimalType. documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The Offset element is the distance by which the base plane is translated.	

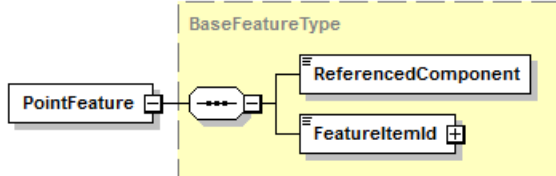
complexType **PlaneParallelType**

diagram		
type	extension of ConstructionMethodBaseType	
properties	base ConstructionMethodBaseType	
children	NominalsCalculated ParallelFeature PointFeature	
used by	element PlaneConstructionMethodType/Parallel	
annotation	documentation The PlaneParallelType defines the construction of a plane parallel to a base feature, through a point feature.	

element **PlaneParallelType/ParallelFeature**

diagram		
type	BaseFeatureType	
properties	content complex	
children	ReferencedComponent FeatureItemId	
annotation	documentation The ParallelFeature element identifies the base feature to which the constructed plane must be parallel.	

element **PlaneParallelType/PointFeature**

diagram		
---------	---	--

type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The PointFeature element identifies the point through which the constructed plane must pass.

complexType PlanePerpendicularType

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated PerpendicularFeature PointFeature
used by	element PlaneConstructionMethodType/Perpendicular
annotation	documentation The PlanePerpendicularType defines the construction of a plane perpendicular to a line-reducible base feature, through a point feature.

element PlanePerpendicularType/PerpendicularFeature

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The PerpendicularFeature element identifies the line-reducible feature to which the constructed plane must be perpendicular.

element PlanePerpendicularType/PointFeature

diagram	
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type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The PointFeature element identifies the point through which the constructed plane must pass.

complexType PlaneRecompType

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeaturePointList
used by	element PlaneConstructionMethodType/Recompensated
annotation	documentation The PlaneRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit plane through the measurement points of base features.

element PlaneRecompType/BaseFeaturePointList

diagram	
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	documentation The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit plane. The total number of points in the BaseFeaturePointSets in the list must be 3 or greater.

complexType PlaneTangentThroughType

diagram	
type	extension of ConstructionMethodBaseType

properties	base ConstructionMethodBaseType
children	NominalsCalculated TangentFeature PointFeature
used by	element PlaneConstructionMethodType/TangentThrough
annotation	documentation The PlaneTangentThroughType defines the construction of a plane through a point and tangent to a base feature.

element [PlaneTangentThroughType/TangentFeature](#)

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The TangentFeature element identifies the base feature to which the point is tangent.

element [PlaneTangentThroughType/PointFeature](#)

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The PointFeature element identifies the point through which the plane must pass.

complexType [PlaneTransformType](#)

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType

children	NominalsCalculated BasePlane Transformation
used by	element PlaneConstructionMethodType/Transform
annotation	documentation The PlaneTransformType defines a plane construction by the transformation of a plane through the specified nominal or actual coordinate system.

element **PlaneTransformType/BasePlane**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BasePlane element identifies the plane to be transformed.

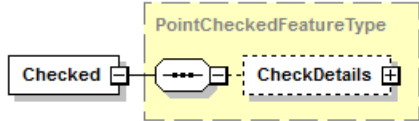
element **PlaneTransformType/Transformation**

diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	documentation The Transformation element identifies the coordinate system to be used to transform the plane.


complexType **PointActualDeterminationType**

diagram	
children	Checked Set
used by	element PointFeatureItemType/DeterminationMode
annotation	documentation The PointActualDeterminationType defines how the point actual is determined, either by being set or by being checked (measured or constructed).

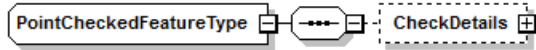
element **PointActualDeterminationType/Checked**

diagram	
type	PointCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	documentation The Checked element signifies that the point is checked from actual data, either measured or constructed.

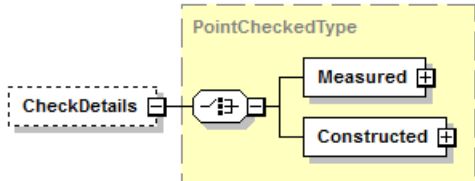
element **PointActualDeterminationType/Set**

diagram	
type	SetFeatureType
properties	content complex
annotation	documentation The Set element signifies that the point actual is set to its nominal value.

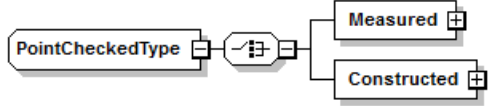
complexType **PointCheckedFeatureType**

diagram	
children	CheckDetails
used by	element PointActualDeterminationType/Checked
annotation	documentation The PointCheckedFeatureType defines that a point feature is checked.

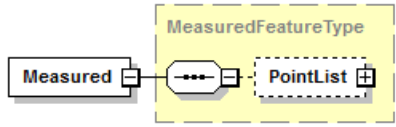
element **PointCheckedFeatureType/CheckDetails**

diagram	
type	PointCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the point check (measurement or construction).

complexType **PointCheckedType**

diagram	
children	Measured Constructed
used by	element PointCheckedFeatureType/CheckDetails
annotation	documentation The PointCheckedType defines how the point actual is checked, either by measurement or by construction.

element **PointCheckedType/Measured**

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the point is measured.

element **PointCheckedType/Constructed**

diagram	
type	PointConstructionMethodType
properties	content complex
children	Intersection Projection Copy Cast Transform FromCone FromScan CenterOfGravity Pierce MidPoint MovePoint MovePointVector MovePointAxis Extreme
annotation	documentation The Constructed element signifies that the point is constructed.

complexType **PointConstructionMethodType**

diagram	
children	Intersection Projection Copy Cast Transform FromCone FromScan CenterOfGravity Pierce MidPoint MovePoint MovePointVector MovePointAxis Extreme
used by	element PointCheckedType/Constructed
annotation	documentation The PointConstructionMethodType defines the method for constructing a unique nominal or actual point feature.

element **PointConstructionMethodType/Intersection**

diagram	
type	PointFeatureIntersectionType
properties	content complex
children	NominalsCalculated IntersectionFeature
annotation	documentation The Intersection element describes the construction of a point feature by the intersection of two base features. This element is in an optional choice.

element **PointConstructionMethodType/Projection**

diagram	<p>The diagram shows a yellow box labeled 'PointFeatureProjectionType'. Inside, a 'Projection' element (a rectangle with a small square on its right side) is connected by lines to three other elements: 'NominalsCalculated' (a dashed rectangle), 'ProjectionPlane' (a rectangle with a small square on its right side), and 'ProjectionFeature' (a rectangle with a small square on its right side). The 'NominalsCalculated' element is at the top, 'ProjectionPlane' is in the middle, and 'ProjectionFeature' is at the bottom.</p>
type	PointFeatureProjectionType
properties	content complex
children	NominalsCalculated ProjectionPlane ProjectionFeature
annotation	<p>documentation</p> <p>The Projection element describes the construction of a point feature by the projection of a base point feature onto a plane. This element is in an optional choice.</p>

element **PointConstructionMethodType/Copy**

diagram	<p>The diagram shows a yellow box labeled 'PointFeatureCopyType'. Inside, a 'Copy' element (a rectangle with a small square on its right side) is connected by lines to two other elements: 'NominalsCalculated' (a dashed rectangle) and 'BasePointFeature' (a rectangle with a small square on its right side). 'NominalsCalculated' is at the top, and 'BasePointFeature' is at the bottom.</p>
type	PointFeatureCopyType
properties	content complex
children	NominalsCalculated BasePointFeature
annotation	<p>documentation</p> <p>The Copy element describes the construction of a point feature by the copying of a base point feature. This element is in an optional choice.</p>

element **PointConstructionMethodType/Cast**

diagram	<p>The diagram shows a yellow box labeled 'PointFeatureCastType'. Inside, a 'Cast' element (a rectangle with a small square on its right side) is connected by lines to two other elements: 'NominalsCalculated' (a dashed rectangle) and 'BaseFeature' (a rectangle with a small square on its right side). 'NominalsCalculated' is at the top, and 'BaseFeature' is at the bottom.</p>
type	PointFeatureCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	<p>documentation</p> <p>The Cast element describes the construction of a point feature by the casting of a base feature. This element is in an optional choice.</p>

element **PointConstructionMethodType/Transform**

diagram	<p>The diagram shows a 'Transform' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'PointFeatureTransformType'. Inside this box, there are three elements: 'NominalsCalculated' (a dashed rectangle), 'BasePointFeature' (a rectangle with a small square on its right side), and 'Transformation' (a rectangle with a small square on its right side). The 'Transform' element is connected to a small circle with three dots, which is then connected to the 'NominalsCalculated' element. Another small circle with three dots is connected to the 'BasePointFeature' and 'Transformation' elements.</p>
type	PointFeatureTransformType
properties	content complex
children	NominalsCalculated BasePointFeature Transformation
annotation	<p>documentation</p> <p>The Transform element describes the construction of a point feature by the transformation of a base point feature. This element is in an optional choice.</p>

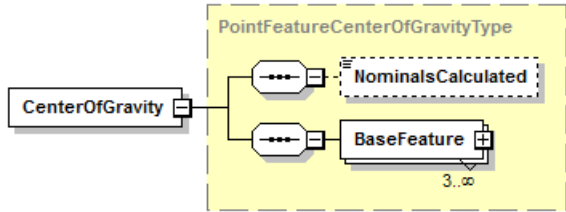
element **PointConstructionMethodType/FromCone**

diagram	<p>The diagram shows a 'FromCone' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'PointFeatureFromConeType'. Inside this box, there are two elements: 'NominalsCalculated' (a dashed rectangle) and 'BaseCone' (a rectangle with a small square on its right side). The 'FromCone' element is connected to a small circle with three dots, which is then connected to the 'NominalsCalculated' element. Another small circle with three dots is connected to the 'BaseCone' element.</p>
type	PointFeatureFromConeType
properties	content complex
children	NominalsCalculated BaseCone
annotation	<p>documentation</p> <p>The FromCone element describes the construction of a point feature at the vertex point of a base cone. This element is in an optional choice.</p>

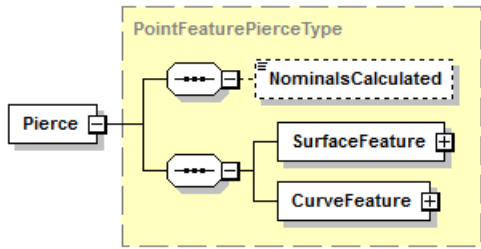
element **PointConstructionMethodType/FromScan**

diagram	<p>The diagram shows a 'FromScan' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'PointFeatureFromScanType'. Inside this box, there are four elements: 'NominalsCalculated' (a dashed rectangle), 'SurfaceFeature' (a rectangle with a small square on its right side), 'SearchRadius' (a rectangle with a small square on its right side), and 'RetrievalMethod' (a rectangle with a small square on its right side). The 'FromScan' element is connected to a small circle with three dots, which is then connected to the 'NominalsCalculated' element. Another small circle with three dots is connected to the 'SurfaceFeature', 'SearchRadius', and 'RetrievalMethod' elements.</p>
type	PointFeatureFromScanType
properties	content complex
children	NominalsCalculated SurfaceFeature SearchRadius RetrievalMethod
annotation	<p>documentation</p> <p>The FromScan element describes the construction of a point feature from scan data. This element is in an optional choice.</p>

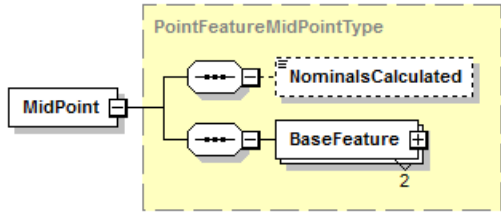
element **PointConstructionMethodType/CenterOfGravity**

diagram	
type	PointFeatureCenterOfGravityType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	<p>documentation</p> <p>The CenterOfGravity element describes the construction of a point feature at the center of gravity of the locations of a set of 3 or more base features. This element is in an optional choice.</p>

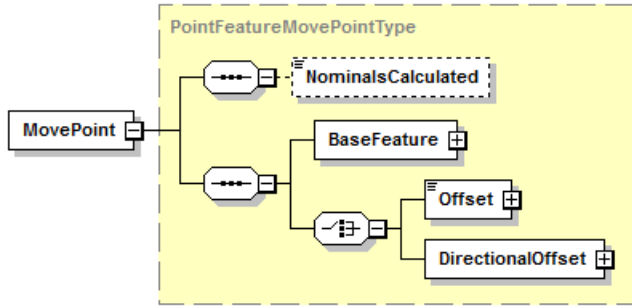
element **PointConstructionMethodType/Pierce**

diagram	
type	PointFeaturePierceType
properties	content complex
children	NominalsCalculated SurfaceFeature CurveFeature
annotation	<p>documentation</p> <p>The Pierce element describes the construction of a point feature at the location where a curve pierces a surface. This element is in an optional choice.</p>

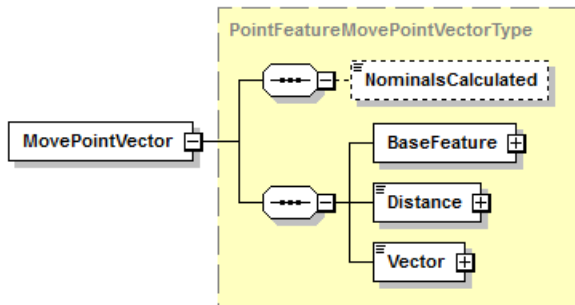
element **PointConstructionMethodType/MidPoint**

diagram	
type	PointFeatureMidPointType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	<p>documentation</p> <p>The MidPoint element describes the construction of a point feature at the midpoint of the locations of 2 base features. This element is in an optional choice.</p>

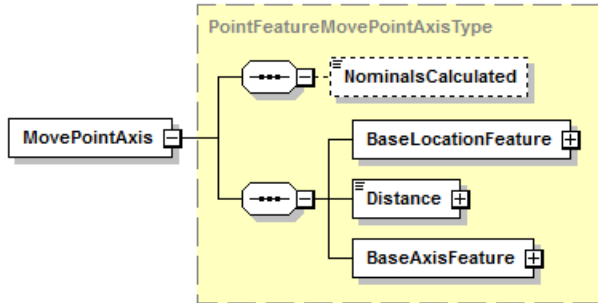
element **PointConstructionMethodType/MovePoint**

diagram	 <p>The diagram shows the structure of the PointFeatureMovePointType. A central MovePoint element is connected to two optional choice elements (represented by dashed boxes with a small square in the top-left corner). The first optional choice contains the NominalsCalculated element. The second optional choice contains the BaseFeature element, which is further connected to another optional choice element. This second optional choice contains the Offset and DirectionalOffset elements.</p>
type	PointFeatureMovePointType
properties	content complex
children	NominalsCalculated BaseFeature Offset DirectionalOffset
annotation	<p>documentation</p> <p>The MovePoint element describes the construction of a point feature by translating the location of a base feature by a specified 3D offset. This element is in an optional choice.</p>

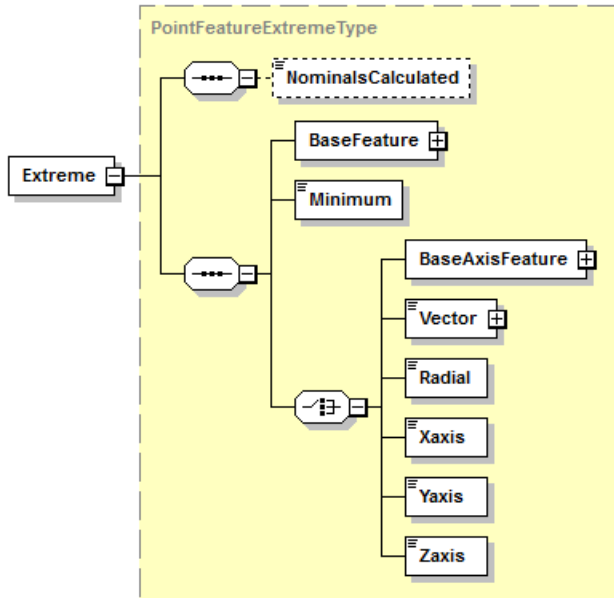
element **PointConstructionMethodType/MovePointVector**

diagram	 <p>The diagram shows the structure of the PointFeatureMovePointVectorType. A central MovePointVector element is connected to two optional choice elements (represented by dashed boxes with a small square in the top-left corner). The first optional choice contains the NominalsCalculated element. The second optional choice contains the BaseFeature element, which is further connected to another optional choice element. This second optional choice contains the Distance and Vector elements.</p>
type	PointFeatureMovePointVectorType
properties	content complex
children	NominalsCalculated BaseFeature Distance Vector
annotation	<p>documentation</p> <p>The MovePointVector element describes the construction of a point feature by translating the location of a base feature by a specified distance in the direction of a specified unit vector. This element is in an optional choice.</p>

element **PointConstructionMethodType/MovePointAxis**

diagram	 <p>The diagram shows the structure of the PointFeatureMovePointAxisType. It is a dashed yellow box containing a tree of elements. The root element is MovePointAxis, which has two children: NominalsCalculated (indicated by a dashed box) and BaseLocationFeature. The BaseLocationFeature element has two children: Distance and BaseAxisFeature.</p>
type	PointFeatureMovePointAxisType
properties	content complex
children	NominalsCalculated BaseLocationFeature Distance BaseAxisFeature
annotation	<p>documentation</p> <p>The MovePointAxis element describes the construction of a point feature by translating the location of a base feature a specified distance in a direction specified by a base axis feature. This element is in an optional choice.</p>

element **PointConstructionMethodType/Extreme**

diagram	 <p>The diagram shows the structure of the PointFeatureExtremeType. It is a dashed yellow box containing a tree of elements. The root element is Extreme, which has two children: NominalsCalculated (indicated by a dashed box) and BaseFeature. The BaseFeature element has two children: Minimum and BaseAxisFeature. The BaseAxisFeature element has four children: Vector, Radial, Xaxis, and Yaxis. The Xaxis and Yaxis elements have a child Zaxis.</p>
type	PointFeatureExtremeType
properties	content complex
children	NominalsCalculated BaseFeature Minimum BaseAxisFeature Vector Radial Xaxis Yaxis Zaxis
annotation	<p>documentation</p> <p>The Extreme element describes the construction of a point feature at an extreme location of a base feature along a specified direction. This element is in an optional choice.</p>

complexType **PointDefinedCurveActualDeterminationType**

diagram	
children	Checked Set
used by	element PointDefinedCurveFeatureItem/DeterminationMode
annotation	documentation The PointDefinedCurveActualDeterminationType defines how the point-defined curve actual is determined, either by being set or by being checked (measured or constructed).

element **PointDefinedCurveActualDeterminationType/Checked**

diagram	
type	PointDefinedCurveCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	documentation The Checked element signifies that the point-defined curve is checked from actual data, either measured or constructed.

element **PointDefinedCurveActualDeterminationType/Set**

diagram	
type	SetFeatureType
properties	content complex
annotation	documentation The Set element signifies that the point-defined curve actual is set to its nominal value.

complexType **PointDefinedCurveBestFitType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element PointDefinedCurveConstructionMethodType/BestFit
annotation	documentation The PointDefinedCurveBestFitType defines the information for a best-fit point-defined curve which includes a list of point-

	reducible base features; the points to which those features reduce are used in the best-fit construction of the point-defined curve.
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element **PointDefinedCurveBestFitType/BaseFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 3 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	documentation Each BaseFeature element identifies a base feature to be used for the construction of a point-defined curve. The number of base features must be 3 or greater.

complexType **PointDefinedCurveCheckedFeatureType**

diagram	
children	CheckDetails
used by	element PointDefinedCurveActualDeterminationType/Checked
annotation	documentation The PointDefinedCurveCheckedFeatureType defines that a point-defined curve feature is checked.

element **PointDefinedCurveCheckedFeatureType/CheckDetails**

diagram	
type	PointDefinedCurveCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the point-defined curve check (measurement or construction).

complexType **PointDefinedCurveCheckedType**

diagram	
children	Measured Constructed
used by	element PointDefinedCurveCheckedFeatureType/CheckDetails
annotation	documentation The PointDefinedCurveCheckedType defines how the point-defined curve actual is checked, either by measurement or by construction.

element **PointDefinedCurveCheckedType/Measured**

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the point-defined curve is measured.

element **PointDefinedCurveCheckedType/Constructed**

diagram	
type	PointDefinedCurveConstructionMethodType
properties	content complex
children	BestFit Recompensated Copy Transform FromScan Extract
annotation	documentation The Constructed element signifies that the point-defined curve is constructed.

complexType **PointDefinedCurveConstructionMethodType**

diagram	
children	BestFit Recompensated Copy Transform FromScan Extract
used by	element PointDefinedCurveCheckedType/Constructed
annotation	<p>documentation</p> <p>The PointDefinedCurveConstructionMethodType defines the method for constructing a unique nominal or actual point-defined curve feature.</p>

element **PointDefinedCurveConstructionMethodType/BestFit**

diagram	
type	PointDefinedCurveBestFitType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	<p>documentation</p> <p>The BestFit element describes the best-fit construction of a point-defined curve from 3 or more point-reducible base features. This element is in an optional choice.</p>

element **PointDefinedCurveConstructionMethodType/Recompensated**

diagram	
type	PointDefinedCurveRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	<p>documentation</p> <p>The Recompensated element describes the re-compensated-for- probe-size best-fit construction of a point-defined curve from 3 or more base feature points. This element is in an optional choice.</p>

element **PointDefinedCurveConstructionMethodType/Copy**

diagram	<pre> graph LR Copy[Copy] --> NC[NominalsCalculated] Copy --> BPCD[BasePointDefinedCurve] subgraph PointDefinedCurveCopyType NC BPCD end </pre>
type	PointDefinedCurveCopyType
properties	content complex
children	NominalsCalculated BasePointDefinedCurve
annotation	<p>documentation</p> <p>The Copy element describes the construction of a point-defined curve by the copying of a base point-defined curve. This element is in an optional choice.</p>

element **PointDefinedCurveConstructionMethodType/Transform**

diagram	<pre> graph LR Transform[Transform] --> NC[NominalsCalculated] Transform --> BPCD[BasePointDefinedCurve] Transform --> Trans[Transformation] subgraph PointDefinedCurveTransformType NC BPCD Trans end </pre>
type	PointDefinedCurveTransformType
properties	content complex
children	NominalsCalculated BasePointDefinedCurve Transformation
annotation	<p>documentation</p> <p>The Transform element describes the construction of a point-defined curve by the transformation of a base point-defined curve. This element is in an optional choice.</p>

element **PointDefinedCurveConstructionMethodType/FromScan**

diagram	<pre> graph LR FromScan[FromScan] --> NC[NominalsCalculated] FromScan --> SF[SurfaceFeature] FromScan --> SR[SearchRadius] subgraph PointDefinedCurveFromScanType NC SF SR end </pre>
type	PointDefinedCurveFromScanType
properties	content complex
children	NominalsCalculated SurfaceFeature SearchRadius
annotation	<p>documentation</p> <p>The FromScan element describes the construction of a point-defined curve from scan data. This element is in an optional choice.</p>

element **PointDefinedCurveConstructionMethodType/Extract**

diagram	<p>The diagram shows an 'Extract' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'PointDefinedCurveExtractType'. Inside this box, there are two elements: 'NominalsCalculated' (a dashed rectangle) and 'CurveFeature' (a rectangle with a small square on its right side). Both are connected to the 'Extract' element via lines that pass through small circles with three dots.</p>
type	PointDefinedCurveExtractType
properties	content complex
children	NominalsCalculated CurveFeature
annotation	documentation The Extract element describes the extraction of a point-defined curve from a curve. This element is in an optional choice.

complexType **PointDefinedCurveCopyType**

diagram	<p>The diagram shows a 'PointDefinedCurveCopyType' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'ConstructionMethodBaseType (extension)'. Inside this box, there are two elements: 'NominalsCalculated' (a dashed rectangle) and 'BasePointDefinedCurve' (a rectangle with a small square on its right side). Both are connected to the 'PointDefinedCurveCopyType' element via lines that pass through small circles with three dots.</p>
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BasePointDefinedCurve
used by	element PointDefinedCurveConstructionMethodType/Copy
annotation	documentation The PointDefinedCurveCopyType defines a copied point-defined curve construction.

element **PointDefinedCurveCopyType/BasePointDefinedCurve**

diagram	<p>The diagram shows a 'BasePointDefinedCurve' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'BaseFeatureType'. Inside this box, there are two elements: 'ReferencedComponent' (a rectangle with a small square on its right side) and 'FeatureItemId' (a rectangle with a small square on its right side). Both are connected to the 'BasePointDefinedCurve' element via lines that pass through small circles with three dots.</p>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BasePointDefinedCurve element identifies the point-defined curve to be copied.

complexType **PointDefinedCurveExtractType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated CurveFeature
used by	element PointDefinedCurveConstructionMethodType/Extract
annotation	documentation The PointDefinedCurveExtractType defines a point-defined curve construction by the extraction of a point-defined curve from a curve feature.

element **PointDefinedCurveExtractType/CurveFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The CurveFeature element identifies the curve or surface from which the point-defined curve is extracted.

complexType **PointDefinedCurveFeatureActualType**

diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds DefiningPoints Plane Form					
used by	element PointDefinedCurveFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The PointDefinedCurveFeatureActualType defines the point-defined curve feature actual information for an individual point-defined curve feature.					

element **PointDefinedCurveFeatureActualType/DefiningPoints**

diagram						
type	TargetPointsActualType					
properties	minOcc	0	maxOcc	1	content	complex
children	TargetPoint					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				

	xDecimalPlaces xs:nonNegativeInteger xSignificantFigures xs:nonNegativeInteger xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional DefiningPoints element gives a list of points which defines the actual point-defined curve. The actual point-defined curve passes through these points.

element **PointDefinedCurveFeatureActualType/Plane**

diagram	
type	ActualPlaneType
properties	minOcc 0 maxOcc 1 content complex
children	Point Normal
annotation	documentation The optional Plane element is the actual plane in which the actual point-defined curve feature lies.

element **PointDefinedCurveFeatureActualType/Form**

diagram						
type	ActualLinearValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Form element is the form error of the point-defined curve feature from a report or an analysis.					

complexType **PointDefinedCurveFeatureDefinitionType**

diagram						
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type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes					
used by	element PointDefinedCurveFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The PointDefinedCurveFeatureDefinitionType defines the point-defined curve feature nominal information that can be common to one or more point-defined curve features.					

complexType **PointDefinedCurveFeatureItem**Type

diagram						
type	extension of FeatureItemBaseType					
properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element PointDefinedCurveFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for

	referencing.
annotation	<p>documentation</p> <p>The PointDefinedCurveFeatureItemType defines an individual point-defined curve feature. A point-defined curve feature is defined by a set of points and may be a planar curve or a free-form curve not in a plane.</p>

element **PointDefinedCurveFeatureItemType/DeterminationMode**

diagram	<p>The diagram shows a box labeled 'DeterminationMode' connected to a choice box (a circle with a vertical line and a horizontal line). This choice box is connected to two boxes: 'Checked' and 'Set'. The entire structure is enclosed in a dashed yellow box labeled 'PointDefinedCurveActualDeterminationType'.</p>
type	PointDefinedCurveActualDeterminationType
properties	content complex
children	Checked Set
annotation	<p>documentation</p> <p>The DeterminationMode element is the means by which the point-defined curve feature actual is determined.</p>

element **PointDefinedCurveFeatureItemType/SubstituteFeatureAlgorithm**

diagram	<p>The diagram shows a dashed box labeled 'SubstituteFeatureAlgorithm' connected to a choice box (a circle with a vertical line and a horizontal line). This choice box is connected to two boxes: 'CurveSubstituteFeatureAlgorithm...' and 'OtherCurveSubstituteFeatureAI...'. The entire structure is enclosed in a dashed yellow box labeled 'CurveSubstituteFeatureAlgorithmType'.</p>
type	CurveSubstituteFeatureAlgorithmType
properties	minOcc 0 maxOcc 1 content complex
children	CurveSubstituteFeatureAlgorithmEnum OtherCurveSubstituteFeatureAlgorithm
annotation	<p>documentation</p> <p>The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the point curve feature.</p>

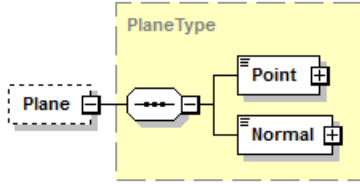
complexType **PointDefinedCurveFeatureNominalType**

diagram						
type	extension of FeatureNominalBaseType					
properties	base FeatureNominalBaseType					
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds DefiningPoints Plane					
used by	element PointDefinedCurveFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The PointDefinedCurveFeatureNominalType defines the point-defined curve feature nominal information for an individual point-defined curve feature.					

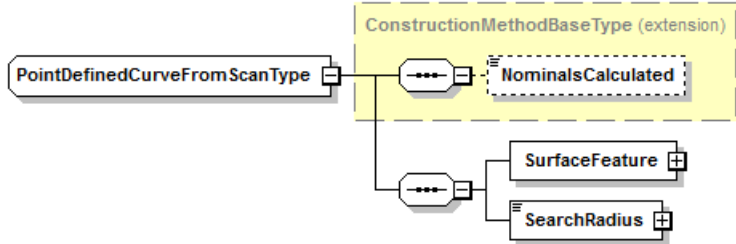
element **PointDefinedCurveFeatureNominalType/DefiningPoints**

diagram						
type	TargetPointsNominalType					
properties	content complex					
children	TargetPoint					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation The DefiningPoints element gives a list of points which defines the nominal point-defined curve. The nominal point-defined curve passes through these points.					

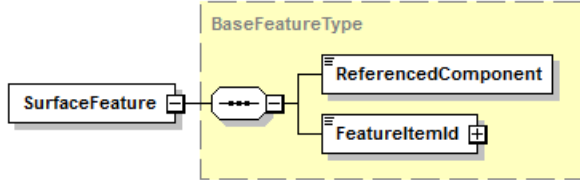
element **PointDefinedCurveFeatureNominalType/Plane**

diagram	 <p>The diagram shows a dashed box labeled 'PlaneType' containing a 'Plane' element (dashed box) connected to a central node, which then branches to 'Point' and 'Normal' elements.</p>
type	PlaneType
properties	minOcc 0 maxOcc 1 content complex
children	Point Normal
annotation	documentation The optional Plane element is the plane in which the point-defined curve feature lies.

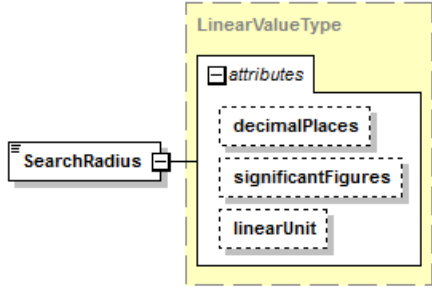
complexType **PointDefinedCurveFromScanType**

diagram	 <p>The diagram shows 'PointDefinedCurveFromScanType' connected to a central node, which branches to 'NominalsCalculated' (dashed box) and another node. This second node branches to 'SurfaceFeature' and 'SearchRadius'.</p>
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated SurfaceFeature SearchRadius
used by	element PointDefinedCurveConstructionMethodType/FromScan
annotation	documentation The PointDefinedCurveFromScanType defines a point-defined curve construction by the retrieval of a point-defined curve from a scanned surface feature (point cloud).

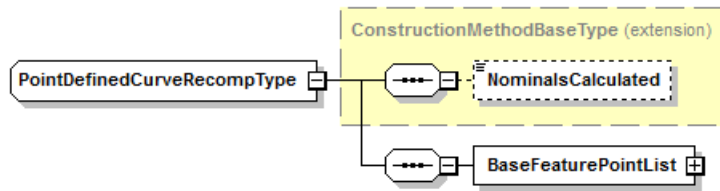
element **PointDefinedCurveFromScanType/SurfaceFeature**

diagram	 <p>The diagram shows 'SurfaceFeature' connected to a central node, which branches to 'ReferencedComponent' and 'FeatureItemId'.</p>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The SurfaceFeature element identifies the scanned surface feature from which the point-defined curve is retrieved.

element **PointDefinedCurveFromScanType/SearchRadius**

diagram	 <p>The diagram shows a yellow box labeled 'LinearValueType'. Inside it is a dashed box labeled 'attributes'. Within 'attributes' are three dashed boxes: 'decimalPlaces', 'significantFigures', and 'linearUnit'. To the left of the 'LinearValueType' box is a box labeled 'SearchRadius' with a small square icon next to it, connected to the 'attributes' box.</p>					
type	LinearValueType					
properties	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	<p>documentation</p> <p>The SearchRadius element is the radius around the nominal feature, wherein the actual feature can be expected. The SearchRadius is the radius of a tube following the curve. All scanned points within this tube are used for the retrieval of the feature. The tube is evenly disposed about the nominal point defined curve.</p>					

complexType **PointDefinedCurveRecompType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeaturePointList
used by	element PointDefinedCurveConstructionMethodType/Recompensated
annotation	documentation The PointDefinedCurveRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit point-defined curve through the measurement points of base features.

element **PointDefinedCurveRecompType/BaseFeaturePointList**

diagram	
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	<p>documentation</p> <p>The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit point-defined curve. The total number of points in the BaseFeaturePointSets in the list must be 3 or greater.</p>

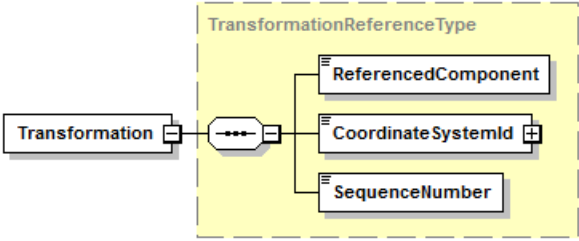
complexType **PointDefinedCurveTransformType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BasePointDefinedCurve Transformation
used by	element PointDefinedCurveConstructionMethodType/Transform
annotation	<p>documentation</p> <p>The PointDefinedCurveTransformType defines a point-defined curve construction by the transformation of a point-defined curve through the specified nominal or actual coordinate system.</p>

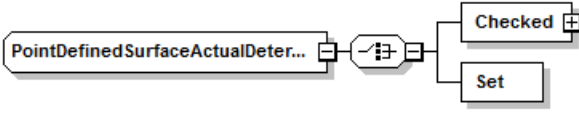
element **PointDefinedCurveTransformType/BasePointDefinedCurve**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The BasePointDefinedCurve element identifies the point-defined curve to be transformed.</p>

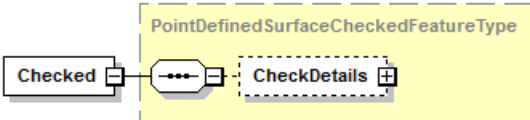
element **PointDefinedCurveTransformType/Transformation**

diagram	 <p>The diagram shows a 'Transformation' box connected to a dashed box labeled 'TransformationReferenceType'. Inside this dashed box, there are three stacked boxes: 'ReferencedComponent', 'CoordinateSystemId', and 'SequenceNumber'.</p>
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	<p>documentation</p> <p>The Transformation element identifies the coordinate system to be used to transform the point-defined curve.</p>


complexType **PointDefinedSurfaceActualDeterminationType**

diagram	 <p>The diagram shows a box labeled 'PointDefinedSurfaceActualDeter...' connected to a dashed box containing two stacked boxes: 'Checked' and 'Set'.</p>
children	Checked Set
used by	element PointDefinedSurfaceFeatureItem/DeterminationMode
annotation	<p>documentation</p> <p>The PointDefinedSurfaceActualDeterminationType defines how the point-defined surface actual is determined, either by being set or by being checked (measured or constructed).</p>

element **PointDefinedSurfaceActualDeterminationType/Checked**

diagram	 <p>The diagram shows a 'Checked' box connected to a dashed box labeled 'PointDefinedSurfaceCheckedFeatureType'. Inside this dashed box, there is a box labeled 'CheckDetails'.</p>
type	PointDefinedSurfaceCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	<p>documentation</p> <p>The Checked element signifies that the point-defined surface is checked from actual data, either measured or constructed.</p>

element **PointDefinedSurfaceActualDeterminationType/Set**

diagram	 <p>The diagram shows a single box labeled 'Set'.</p>
type	SetFeatureType
properties	content complex
annotation	<p>documentation</p> <p>The Set element signifies that the point-defined surface actual is set to its nominal value.</p>

complexType **PointDefinedSurfaceBestFitType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element PointDefinedSurfaceConstructionMethodType/BestFit
annotation	<p>documentation</p> <p>The PointDefinedSurfaceBestFitType defines the information for a best-fit point-defined surface which includes a list of point-reducible base features; the points to which those features reduce are used in the best-fit construction of the point-defined surface.</p>

element **PointDefinedSurfaceBestFitType/BaseFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 3 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	<p>documentation</p> <p>Each BaseFeature element identifies a base feature to be used for the construction of a point-defined surface. The number of base features must be 3 or greater.</p>

complexType **PointDefinedSurfaceCheckedFeatureType**

diagram	
children	CheckDetails
used by	element PointDefinedSurfaceActualDeterminationType/Checked
annotation	<p>documentation</p> <p>The PointDefinedSurfaceCheckedFeatureType defines that a point-defined surface feature is checked.</p>

element **PointDefinedSurfaceCheckedFeatureType/CheckDetails**

diagram	
type	PointDefinedSurfaceCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the point-defined surface check (measurement or construction).

complexType **PointDefinedSurfaceCheckedType**

diagram	
children	Measured Constructed
used by	element PointDefinedSurfaceCheckedFeatureType/CheckDetails
annotation	documentation The PointDefinedSurfaceCheckedType defines how the point-defined surface actual is checked, either by measurement or by construction.

element **PointDefinedSurfaceCheckedType/Measured**

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the point-defined surface is measured.

element **PointDefinedSurfaceCheckedType/Constructed**

diagram	
type	PointDefinedSurfaceConstructionMethodType
properties	content complex
children	BestFit Recompensated Copy Transform Extract
annotation	documentation The Constructed element signifies that the point-defined surface is constructed.

complexType **PointDefinedSurfaceConstructionMethodType**

diagram	
children	BestFit Recompensated Copy Transform Extract
used by	element PointDefinedSurfaceCheckedType/Constructed
annotation	documentation The PointDefinedSurfaceConstructionMethodType defines the method for constructing a unique nominal or actual point-defined surface feature.

element **PointDefinedSurfaceConstructionMethodType/BestFit**

diagram	
type	PointDefinedSurfaceBestFitType
properties	content complex
children	NominalsCalculated BaseFeature

annotation	documentation The BestFit element describes the best-fit construction of a point-defined surface from 3 or more point-reducible base features. This element is in an optional choice.
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element **PointDefinedSurfaceConstructionMethodType/Recompensated**

diagram	<pre> graph LR R[Recompensated] --- Box subgraph PointDefinedSurfaceRecompType direction TB NC[NominalsCalculated] BFL[BaseFeaturePointList] end Box --- NC Box --- BFL </pre>
type	PointDefinedSurfaceRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	documentation The Recompensated element describes the re-compensated-for- probe-size best-fit construction of a point-defined surface from 3 or more base feature points. This element is in an optional choice.

element **PointDefinedSurfaceConstructionMethodType/Copy**

diagram	<pre> graph LR C[Copy] --- Box subgraph PointDefinedSurfaceCopyType direction TB NC[NominalsCalculated] BPS[BasePointDefinedSurface] end Box --- NC Box --- BPS </pre>
type	PointDefinedSurfaceCopyType
properties	content complex
children	NominalsCalculated BasePointDefinedSurface
annotation	documentation The Copy element describes the construction of a point-defined surface by the copying of a base point-defined surface. This element is in an optional choice.

element **PointDefinedSurfaceConstructionMethodType/Transform**

diagram	<pre> graph LR T[Transform] --- Box subgraph PointDefinedSurfaceTransformType direction TB NC[NominalsCalculated] BPS[BasePointDefinedSurface] TR[Transformation] end Box --- NC Box --- BPS Box --- TR </pre>
type	PointDefinedSurfaceTransformType
properties	content complex
children	NominalsCalculated BasePointDefinedSurface Transformation
annotation	documentation The Transform element describes the construction of a point-defined surface by the transformation of a base point-

	defined surface. This element is in an optional choice.
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element PointDefinedSurfaceConstructionMethodType/Extract

diagram	
type	PointDefinedSurfaceExtractType
properties	content complex
children	NominalsCalculated SurfaceFeature
annotation	<p>documentation</p> <p>The Extract element describes the extraction of a point-defined surface from a surface. This element is in an optional choice.</p>

complexType PointDefinedSurfaceCopyType

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BasePointDefinedSurface
used by	element PointDefinedSurfaceConstructionMethodType/Copy
annotation	<p>documentation</p> <p>The PointDefinedSurfaceCopyType defines a copied point-defined surface construction.</p>

element PointDefinedSurfaceCopyType/BasePointDefinedSurface

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The BasePointDefinedSurface element identifies the point-defined surface to be copied.</p>

complexType **PointDefinedSurfaceExtractType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated SurfaceFeature
used by	element PointDefinedSurfaceConstructionMethodType/Extract
annotation	documentation The PointDefinedSurfaceExtractType defines a point-defined surface construction by the extraction of a point-defined surface from a surface.

element **PointDefinedSurfaceExtractType/SurfaceFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The SurfaceFeature element identifies the surface from which the point-defined surface is extracted.

complexType **PointDefinedSurfaceFeatureActualType**

diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds DefiningPoints Form					
used by	element PointDefinedSurfaceFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The PointDefinedSurfaceFeatureActualType defines the point-defined surface feature actual information for an individual point-defined surface feature.					

element **PointDefinedSurfaceFeatureActualType/DefiningPoints**

diagram						
type	TargetPointsActualType					
properties	minOcc	0	maxOcc	1	content	complex
children	TargetPoint					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				

	xDecimalPlaces xs:nonNegativeInteger xSignificantFigures xs:nonNegativeInteger xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional DefiningPoints element gives a list of actual points defining the actual point-surface. The actual point-defined surface passes through these points.

element **PointDefinedSurfaceFeatureActualType/Form**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the

	<p>meanError NonNegativeDecimalType</p> <p>linearUnit xs:token</p>	<p>SpecifiedDecimalType. documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.</p>
annotation	<p>documentation The optional Form element is the form error of the point-defined surface feature from a report or an analysis.</p>	

complexType **PointDefinedSurfaceFeatureDefinitionType**

diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes					
used by	element PointDefinedSurfaceFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	<p>documentation The PointDefinedSurfaceDefinitionType defines the point-defined surface feature nominal information that can be common to one or more point-defined surface features.</p>					

complexType **PointDefinedSurfaceFeatureItem**Type

diagram						
type	extension of FeatureItemBaseType					
properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element PointDefinedSurfaceFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The PointDefinedSurfaceFeatureItem type defines an individual point-defined surface feature. A point-defined surface feature is defined by a set of points on a surface.					

element **PointDefinedSurfaceFeatureItem**Type/**DeterminationMode**

diagram						
type	PointDefinedSurfaceActualDeterminationType					
properties	content complex					

children	Checked Set
annotation	documentation The DeterminationMode element is the means by which the point-defined surface feature actual is determined.

element **PointDefinedSurfaceFeatureItemType/SubstituteFeatureAlgorithm**

diagram	
type	SurfaceSubstituteFeatureAlgorithmType
properties	minOcc 0 maxOcc 1 content complex
children	SurfaceSubstituteFeatureAlgorithmEnum OtherSurfaceSubstituteFeatureAlgorithm
annotation	documentation The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the point-defined surface feature.

complexType **PointDefinedSurfaceFeatureNominalType**

diagram													
type	extension of FeatureNominalBaseType												
properties	base FeatureNominalBaseType												
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds DefiningPoints												
used by	element PointDefinedSurfaceFeatureNominal												
attributes	<table><thead><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr></thead><tbody><tr><td>id</td><td>QIFIdType</td><td>required</td><td></td><td></td><td>documentation The id attribute is the QIF id of the</td></tr></tbody></table>	Name	Type	Use	Default	Fixed	Annotation	id	QIFIdType	required			documentation The id attribute is the QIF id of the
Name	Type	Use	Default	Fixed	Annotation								
id	QIFIdType	required			documentation The id attribute is the QIF id of the								

		feature, used for referencing.
annotation	documentation The PointDefinedSurfaceFeatureNominalType defines the point-defined surface feature nominal information for an individual point-defined surface feature.	

element **PointDefinedSurfaceFeatureNominalType/DefiningPoints**

diagram						
type	TargetPointsNominalType					
properties	content complex					
children	TargetPoint					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				

	zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType
annotation	documentation The DefiningPoints element is a list of nominal points defining the nominal point-defined surface. The nominal point-defined surface passes through these points.

complexType PointDefinedSurfaceRecompType

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeaturePointList
used by	element PointDefinedSurfaceConstructionMethodType/Recompensated
annotation	documentation The PointDefinedSurfaceRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit point-defined surface through the measurement points of base features.

element PointDefinedSurfaceRecompType/BaseFeaturePointList

diagram	
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	documentation The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit point-defined surface. The total number of points in the BaseFeaturePointSets in the list must be 3 or greater.

complexType PointDefinedSurfaceTransformType

diagram	
type	extension of ConstructionMethodBaseType

properties	base ConstructionMethodBaseType
children	NominalsCalculated BasePointDefinedSurface Transformation
used by	element PointDefinedSurfaceConstructionMethodType/Transform
annotation	documentation The PointDefinedSurfaceTransformType defines a point-defined surface construction by the transformation of a point-defined surface through the specified nominal or actual coordinate system.

element **PointDefinedSurfaceTransformType/BasePointDefinedSurface**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BasePointDefinedSurface element identifies the point-defined surface to be transformed.

element **PointDefinedSurfaceTransformType/Transformation**

diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	documentation The Transformation element identifies the coordinate system to be used to transform the point-defined surface.

complexType **PointFeatureActualType**

diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Location Normal					
used by	element PointFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The PointFeatureActualType defines the point feature actual information for an individual point feature.					

element **PointFeatureActualType/Location**

diagram						
type	ActualPointType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional Location element is the actual location of the point.

element **PointFeatureActualType/Normal**

diagram						
type	ActualUnitVectorType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional Normal element is the actual unit normal vector of the point.

complexType **PointFeatureCastType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element PointConstructionMethodType/Cast
annotation	documentation The PointFeatureCastType defines the cast of another feature type to a point feature. The location is copied from the base feature.

element **PointFeatureCastType/BaseFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseFeature element identifies the base feature to be cast to a point feature.

complexType **PointFeatureCenterOfGravityType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element PointConstructionMethodType/CenterOfGravity
annotation	documentation The PointFeatureCenterOfGravityType defines the construction of a point which is the center of gravity of the base feature locations.

element **PointFeatureCenterOfGravityType/BaseFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 3 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	documentation Each BaseFeature element identifies a base feature whose location is taken as one of the set for computation of the center of gravity.

complexType **PointFeatureCopyType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BasePointFeature

used by	element PointConstructionMethodType/Copy
annotation	documentation The PointFeatureCopyType defines a copied point feature construction.

element **PointFeatureCopyType/BasePointFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BasePointFeature element identifies the point to be copied.

complexType **PointFeatureDefinitionType**

diagram	<pre>classDiagram class FeatureDefinitionBaseType { +attributes +id } class PointFeatureDefinitionType { } FeatureDefinitionBaseType .. > PointFeatureDefinitionType class Attributes { } class id { } class attributes { } class id_attr { } class Attributes_attr { } id_attr --> attributes Attributes_attr --> Attributes</pre>												
type	extension of FeatureDefinitionBaseType												
properties	base <code>FeatureDefinitionBaseType</code>												
children	Attributes												
used by	element PointFeatureDefinition												
attributes	<table><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr><tr><td>id</td><td>QIFIdType</td><td>required</td><td></td><td></td><td>documentation The id attribute is the QIF id of the feature, used for referencing.</td></tr></table>	Name	Type	Use	Default	Fixed	Annotation	id	QIFIdType	required			documentation The id attribute is the QIF id of the feature, used for referencing.
Name	Type	Use	Default	Fixed	Annotation								
id	QIFIdType	required			documentation The id attribute is the QIF id of the feature, used for referencing.								
annotation	documentation The <code>PointFeatureDefinitionType</code> defines the point feature nominal information that can be common to one or more point features.												

complexType **PointFeatureExtremeType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature Minimum BaseAxisFeature Vector Radial Xaxis Yaxis Zaxis
used by	element PointConstructionMethodType/Extreme
annotation	<p>documentation</p> <p>The PointFeatureExtremeType defines the construction of the extreme point on a feature in the specified direction. Except in the case of Radial, the point is the point at which a plane approaching the feature from the given direction first touches the feature.</p>

element **PointFeatureExtremeType/BaseFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The BaseFeature element identifies the feature whose extreme location is to be used in a construction.</p>

element **PointFeatureExtremeType/Minimum**

diagram	
type	xs:boolean

properties	content simple default false
annotation	documentation The Minimum element specifies whether the minimum or the maximum extreme of the base feature is to be used. It is set to "false" for the maximum extreme point in the specified direction, or set to "true" for the minimum.

element **PointFeatureExtremeType/BaseAxisFeature**


diagram	<pre> graph LR BaseAxisFeature[BaseAxisFeature] --- Connector(()) subgraph BaseFeatureType [BaseFeatureType] ReferencedComponent[ReferencedComponent] FeatureItemId[FeatureItemId] end Connector --- ReferencedComponent Connector --- FeatureItemId </pre>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseAxisFeature element identifies a feature whose axis defines the direction along which the extreme point is to be located.

element **PointFeatureExtremeType/Vector**


diagram	<pre> graph LR Vector[Vector] --- Connector(()) subgraph UnitVectorType [UnitVectorType] direction TB attributes[attributes] linearUnit[linearUnit] decimalPlaces[decimalPlaces] significantFigures[significantFigures] validity[validity] xDecimalPlaces[xDecimalPlaces] xSignificantFigures[xSignificantFigures] xValidity[xValidity] yDecimalPlaces[yDecimalPlaces] ySignificantFigures[ySignificantFigures] yValidity[yValidity] zDecimalPlaces[zDecimalPlaces] zSignificantFigures[zSignificantFigures] zValidity[zValidity] end Connector --- attributes </pre>
type	UnitVectorType
properties	content complex

facets	Kind length	Value 3	Annotation			
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation The Vector element is a unit vector which defines the direction along which the extreme point is to be located.					


element **PointFeatureExtremeType/Radial**

diagram	
type	xs:token
properties	content simple fixed Radial
annotation	documentation The Radial element specifies that the extreme point is the point at which a large cylinder coaxial with the feature and containing the feature first touches the feature as its radius shrinks. The Radial element applies only if the base feature is axially symmetric.


element **PointFeatureExtremeType/Xaxis**

diagram	
type	xs:token
properties	content simple fixed Xaxis
annotation	documentation The Xaxis element specifies that the extreme point is to be taken along the X axis of the current coordinate system.

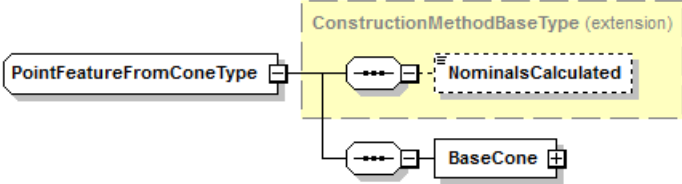
element **PointFeatureExtremeType/Yaxis**

diagram	
type	xs:token
properties	content simple fixed Yaxis
annotation	documentation The Yaxis element specifies that the extreme point is to be taken along the Y axis of the current coordinate system.

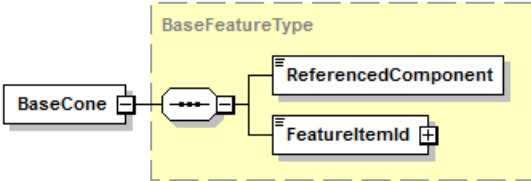
element **PointFeatureExtremeType/Zaxis**

diagram	
type	xs:token
properties	content simple fixed Zaxis
annotation	documentation The Zaxis element specifies that the extreme point is to be taken along the Z axis of the current coordinate system.

complexType **PointFeatureFromConeType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseCone
used by	element PointConstructionMethodType/FromCone
annotation	documentation The PointFeatureFromConeType defines the construction of a point which is the vertex of a cone.

element **PointFeatureFromConeType/BaseCone**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseCone element identifies a cone from which the vertex point will be extracted.

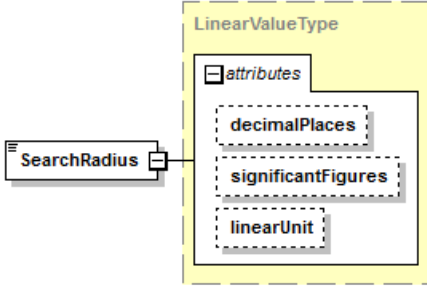
complexType **PointFeatureFromScanType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated SurfaceFeature SearchRadius RetrievalMethod
used by	element PointConstructionMethodType/FromScan
annotation	documentation The PointFeatureFromScanType defines a point feature construction by the retrieval of a point feature from a scanned surface feature (point cloud).

element **PointFeatureFromScanType/SurfaceFeature**


diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The SurfaceFeature element identifies the scanned surface feature from which the point feature is retrieved.

element **PointFeatureFromScanType/SearchRadius**

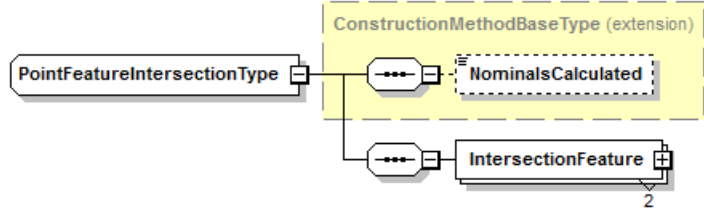
diagram																									
type	LinearValueType																								
properties	content complex																								
attributes	<table><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr><tr><td>decimalPlaces</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>significantFigures</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>linearUnit</td><td></td><td></td><td></td><td></td><td></td></tr></table>	Name	Type	Use	Default	Fixed	Annotation	decimalPlaces						significantFigures						linearUnit					
Name	Type	Use	Default	Fixed	Annotation																				
decimalPlaces																									
significantFigures																									
linearUnit																									

	<p>decimalPlaces xs:nonNegativeInteger</p> <p>significantFigures xs:nonNegativeInteger</p> <p>linearUnit xs:token</p>	<p>documentation See documentation of SpecifiedDecimalType. documentation See documentation of SpecifiedDecimalType. documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.</p>
annotation	<p>documentation The SearchRadius element is the radius around the nominal feature, wherein the actual feature can be expected. The SearchRadius is the radius of a cylinder. All scanned points within this cylinder are examined for the retrieval of the feature. The cylinder's axis is defined by the feature's normal direction and the cylinder's axis passes through the feature's location point.</p>	

element **PointFeatureFromScanType/RetrievalMethod**

diagram			
type	RetrievalMethodEnumType		
properties	content	simple	
facets	Kind	Value	Annotation
	enumeration	AVERAGE	
	enumeration	MAXEXTREME	
	enumeration	MINEXTREME	
	enumeration	CLOSEST1D	
	enumeration	CLOSEST2D	
	enumeration	CLOSEST3D	
annotation	<p>documentation The RetrievalMethod element defines the method for extracting the point feature from the points within the acceptance cylinder.</p>		

complexType **PointFeatureIntersectionType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated IntersectionFeature
used by	element PointConstructionMethodType/Intersection
annotation	documentation The PointFeatureIntersectionType defines a point that is the intersection of two features.

element **PointFeatureIntersectionType/IntersectionFeature**

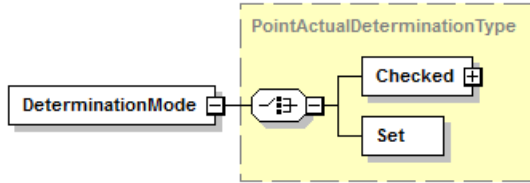
diagram	
type	SequencedBaseFeatureType
properties	minOcc 2 maxOcc 2 content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	documentation Each IntersectionFeature element identifies a feature that intersects the other feature at a point.

complexType **PointFeatureItemType**

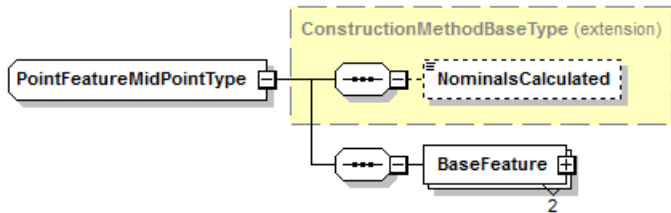
diagram													
type	extension of FeatureItemBaseType												
properties	base FeatureItemBaseType												
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPId NotableEventIds CoordinateSystemId DeterminationMode												
used by	element PointFeatureItem												
attributes	<table><thead><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr></thead><tbody><tr><td>id</td><td>QIFIdType</td><td>required</td><td></td><td></td><td>documentation The id attribute is the QIF id of the feature, used for</td></tr></tbody></table>	Name	Type	Use	Default	Fixed	Annotation	id	QIFIdType	required			documentation The id attribute is the QIF id of the feature, used for
Name	Type	Use	Default	Fixed	Annotation								
id	QIFIdType	required			documentation The id attribute is the QIF id of the feature, used for								

		referencing.
annotation	documentation The PointFeatureItem type defines an individual point feature.	

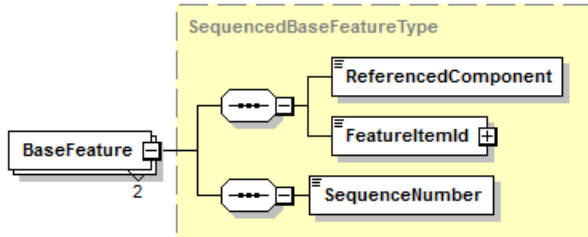
element PointFeatureItem/DeterminationMode

diagram		
type	PointActualDeterminationType	
properties	content	complex
children	Checked Set	
annotation	documentation The DeterminationMode element is the means by which the point feature actual is determined.	

complexType PointFeatureMidPointType

diagram		
type	extension of ConstructionMethodBaseType	
properties	base	ConstructionMethodBaseType
children	NominalsCalculated BaseFeature	
used by	element	PointConstructionMethodType/MidPoint
annotation	documentation The PointFeatureMidPointType defines the construction of a point which is the midpoint of two base feature locations.	

element PointFeatureMidPointType/BaseFeature

diagram		
type	SequencedBaseFeatureType	
properties	minOcc maxOcc content	2 2 complex
children	ReferencedComponent FeatureItemId SequenceNumber	

annotation	documentation Each BaseFeature element identifies a base feature whose location will be used to compute a midpoint.
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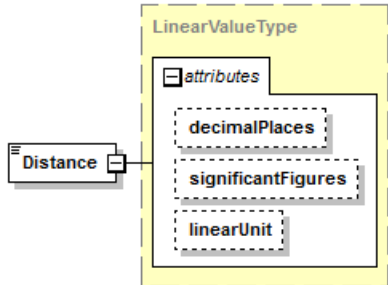
complexType **PointFeatureMovePointAxisType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseLocationFeature Distance BaseAxisFeature
used by	element PointConstructionMethodType/MovePointAxis
annotation	documentation The PointFeatureMovePointAxisType defines the construction of a point by translating a point by a specified distance along a feature axis from another feature location. If the Distance is negative, the point moves in the opposite direction to the feature axis.

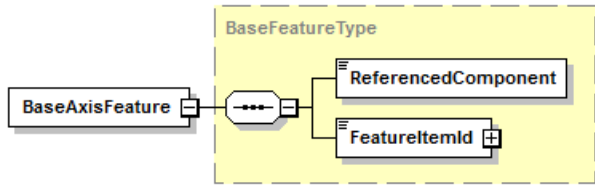
element **PointFeatureMovePointAxisType/BaseLocationFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseLocationFeature element identifies the feature whose location point is to be translated.

element **PointFeatureMovePointAxisType/Distance**

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The Distance element is the distance by which the base location is to be translated.					

element **PointFeatureMovePointAxisType/BaseAxisFeature**

diagram						
type	BaseFeatureType					
properties	content complex					
children	ReferencedComponent FeatureItemId					
annotation	documentation The BaseAxisFeature element identifies the feature whose axis defines the translation direction.					

complexType **PointFeatureMovePointType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature Offset DirectionalOffset
used by	element PointConstructionMethodType/MovePoint
annotation	documentation The PointFeatureMovePointType defines the construction of a point by translating a base point by a specified offset.

element **PointFeatureMovePointType/BaseFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseFeature element identifies the feature that defines the base point that is to be translated.

element **PointFeatureMovePointType/Offset**

diagram						
type	VectorType					
properties	content	complex				
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation	The Offset element specifies the XYZ amount by which the base point is to be translated in the current coordinate system.				

element **PointFeatureMovePointType/DirectionalOffset**

diagram	
type	DirectionalOffsetType
properties	content complex
children	Offset NominalDirection FeatureDirection
annotation	<p>documentation</p> <p>The DirectionalOffset element specifies the offset distance and direction by which the base point is to be translated in the current coordinate system.</p>

complexType **PointFeatureMovePointVectorType**

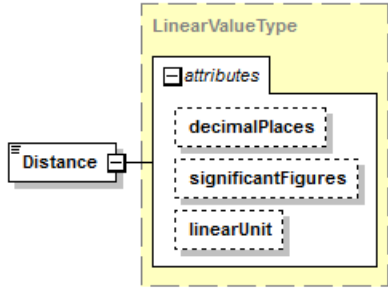
diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature Distance Vector
used by	element PointConstructionMethodType/MovePointVector
annotation	<p>documentation</p> <p>The PointFeatureMovePointVectorType defines the construction of a point by translating a base point a specified distance in a specified direction. If the Distance is negative, the point moves in the opposite direction to the vector.</p>

element **PointFeatureMovePointVectorType/BaseFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation

	The BaseFeature element identifies the point to be translated.
--	--

element **PointFeatureMovePointVectorType/Distance**

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The Distance element is the distance by which the base point is to be translated.					

element **PointFeatureMovePointVectorType/Vector**

diagram						
type	UnitVectorType					
properties	content complex					
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation The Vector element is the unit vector specifying the translation direction.					

complexType **PointFeatureNominalType**

diagram						
type	extension of FeatureNominalBaseType					
properties	base FeatureNominalBaseType					
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Location Normal					
used by	element PointFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The PointFeatureNominalType defines the point feature nominal information for an individual point feature.					

element **PointFeatureNominalType/Location**

diagram						
type	PointType					
properties	content	complex				
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation	The Location element is the nominal location of the point.				

element **PointFeatureNominalType/Normal**

diagram						
type	UnitVectorType					
properties	minOcc	0	maxOcc	1	content	complex
facets	Kind	Value	Annotation	length	3	
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation The optional Normal element is the nominal unit normal vector at the point of a surface on which the point lies.					

complexType **PointFeaturePierceType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated SurfaceFeature CurveFeature
used by	element PointConstructionMethodType/Pierce
annotation	documentation The PointFeaturePierceType defines the construction of a point created by the intersection of a surface with a line or curve.

element **PointFeaturePierceType/SurfaceFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The SurfaceFeature element identifies a feature representing a surface such as a plane, cylinder, point-defined surface, etc.

element **PointFeaturePierceType/CurveFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The CurveFeature element identifies a feature representing a curve such as a line, cylinder axis, point-defined curve, etc.

complexType **PointFeatureProjectionType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated ProjectionPlane ProjectionFeature
used by	element PointConstructionMethodType/Projection
annotation	documentation The PointFeatureProjectionType defines a projected point construction with the point to be projected and the projection plane.

element **PointFeatureProjectionType/ProjectionPlane**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The ProjectionPlane element identifies the plane onto which the point is to be projected.

element **PointFeatureProjectionType/ProjectionFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The ProjectionFeature element identifies the point-reducible feature to be projected.

complexType **PointFeatureTransformType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BasePointFeature Transformation
used by	element PointConstructionMethodType/Transform
annotation	<p>documentation</p> <p>The PointFeatureTransformType defines a point feature construction by the transformation of a point feature through the specified nominal or actual coordinate system.</p>

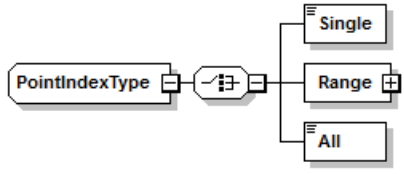
element **PointFeatureTransformType/BasePointFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The BasePointFeature element identifies the point feature to be transformed.</p>


element **PointFeatureTransformType/Transformation**

diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	<p>documentation</p> <p>The Transformation element identifies the coordinate system to be used to transform the point feature.</p>

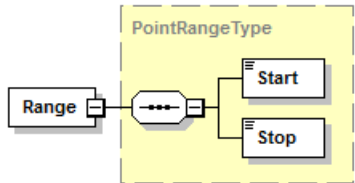
complexType **PointIndexType**

diagram	
children	Single Range All
used by	element BaseFeaturePointSetType/PointIndex
annotation	documentation The PointIndexType defines a point, a range of points, or all points.


element **PointIndexType/Single**

diagram	
type	xs:positiveInteger
properties	content simple
annotation	documentation The Single element is the index number of a single point. Index numbers start at 1 for the first point on a feature.

element **PointIndexType/Range**

diagram	
type	PointRangeType
properties	content complex
children	Start Stop
annotation	documentation The Range element is the range of point locations.

element **PointIndexType/All**

diagram	
type	xs:token
properties	content simple fixed All
annotation	documentation The All element indicates all points are to be used.

complexType **PointListActualType**

diagram						
children	MeasurePoint					
used by	element FeatureActualBaseType/PointList					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The PointListActualType defines a list of ordered actual measurement points for a feature.

element **PointListActualType/MeasurePoint**

diagram						
type	MeasurePointActualType					
properties	minOcc	1	maxOcc	unbounded	content	complex
children	Point Normal Compensated ProbeRadius MeasurementDeviceId SensorId MeasurePointNominalId					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the point, used for referencing.

annotation	documentation Each MeasurePoint element is an individual actual measurement point for a feature.
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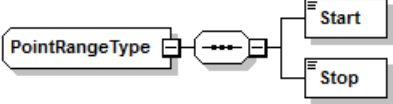
complexType PointListNominalType

diagram						
children	MeasurePoint					
used by	elements	FeatureNominalBaseType/PointList MeasuredFeatureType/PointList				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation	The PointListNominalType defines a list of ordered nominal measurement points for a feature.				


element **PointListNominalType/MeasurePoint**

diagram						
type	MeasurePointNominalType					
properties	minOcc	1	maxOcc	unbounded	content	complex
children	Point Normal MeasurementDeviceId SensorId					
attributes	Name	Type	Use	Default	Fixed	Annotation
	id	QIFIdType	required			documentation The id attribute is the QIF id of the point, used for referencing.
annotation	documentation Each MeasurePoint element is an individual nominal measurement point for a feature.					

complexType **PointRangeType**


diagram	
children	Start Stop
used by	element PointIndexType/Range
annotation	<p>documentation</p> <p>The PointRangeType defines a range of point index numbers. The points at the start and stop indexes are included. Index numbers start at 1 for the first point on a feature.</p>

element **PointRangeType/Start**

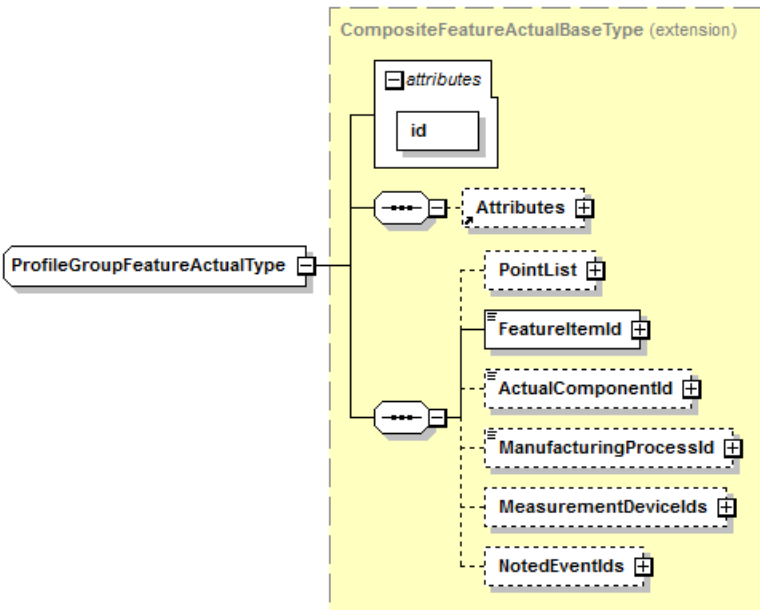
diagram	
type	xs:positiveInteger
properties	content simple
annotation	<p>documentation</p> <p>The Start element is the index number of the starting point in the range. The value of the Start element must be 1 or</p>

	greater and smaller than the value of the Stop element.
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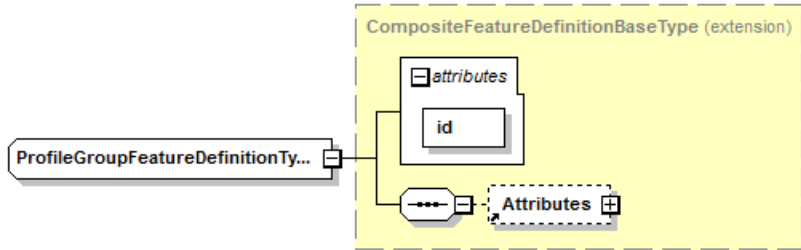
element **PointRangeType/Stop**

diagram	
type	xs:positiveInteger
properties	content simple
annotation	documentation The Stop element is the index number of the stopping point in the range. The value of the Stop element must be greater than the value of the Start element and less than or equal to the number of points in the feature measurement point list.

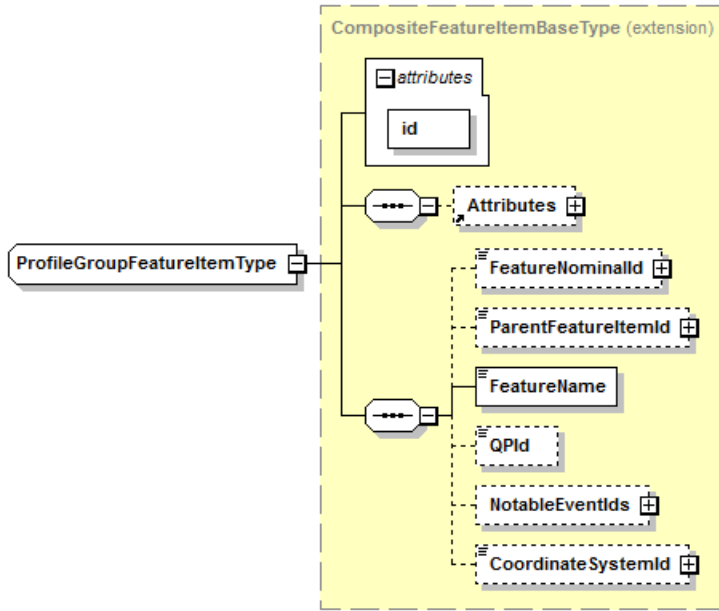
complexType **ProfileGroupFeatureActualType**

diagram						
type	extension of CompositeFeatureActualBaseType					
properties	base CompositeFeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds					
used by	element ProfileGroupFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ProfileGroupFeatureActualType defines the profile group feature actual information for an individual profile group feature.					

complexType **ProfileGroupFeatureDefinitionType**

diagram						
type	extension of CompositeFeatureDefinitionBaseType					
properties	base CompositeFeatureDefinitionBaseType					
children	Attributes					
used by	element ProfileGroupFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ProfileGroupFeatureDefinitionType defines the profile group feature nominal information that can be common to one or more profile group features.					

complexType **ProfileGroupFeatureItemType**

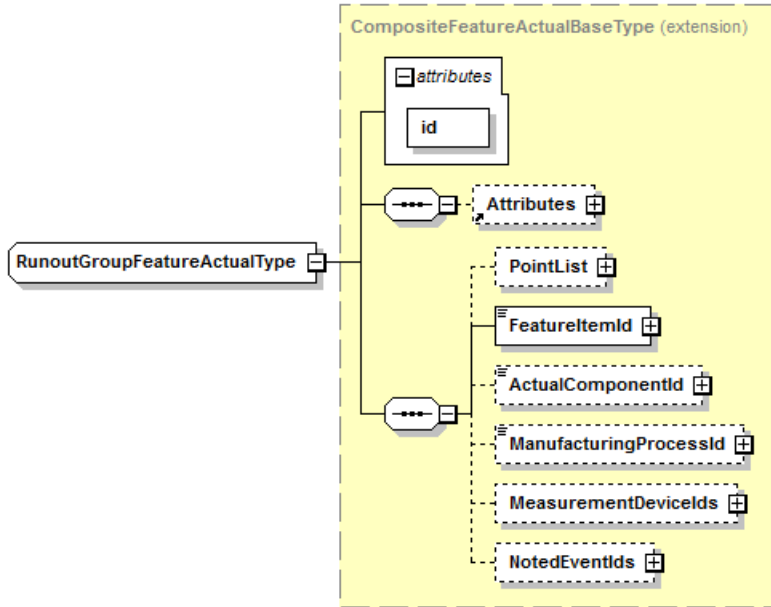
diagram						
type	extension of CompositeFeatureItemBaseType					
properties	base CompositeFeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPId NotableEventIds CoordinateSystemId					
used by	element ProfileGroupFeatureItem					

attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ProfileGroupFeatureItem type defines an individual profile group feature. A profile group feature is a complex feature defined by a set of simple features grouped together (e.g., all sides of an inner pocket), to which a common profile tolerance may be applied.					

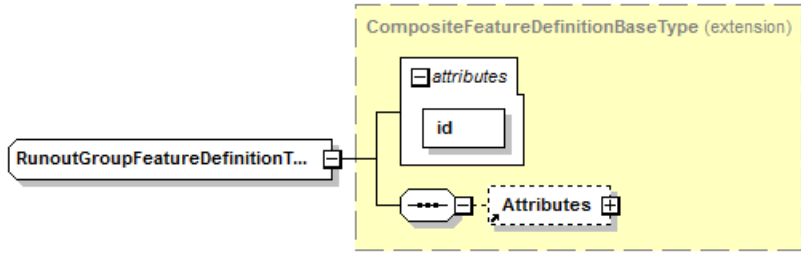
complexType ProfileGroupFeatureNominalType

diagram						
type	extension of CompositeFeatureNominalBaseType					
properties	base CompositeFeatureNominalBaseType					
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds FeatureNominalIds					
used by	element ProfileGroupFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ProfileGroupFeatureNominalType defines the profile group feature nominal information for an individual profile group feature.					

complexType **RunoutGroupFeatureActualType**

diagram						
type	extension of CompositeFeatureActualBaseType					
properties	base CompositeFeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds					
used by	element RunoutGroupFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The RunoutGroupFeatureActualType defines the runout group feature actual information for an individual runout group feature.					

complexType **RunoutGroupFeatureDefinitionType**

diagram						
type	extension of CompositeFeatureDefinitionBaseType					
properties	base CompositeFeatureDefinitionBaseType					
children	Attributes					
used by	element RunoutGroupFeatureDefinition					

attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The RunoutGroupFeatureDefinitionType defines the runout group feature nominal information that can be common to one or more runout group features.					

complexType RunoutGroupFeatureItem

diagram						
type	extension of CompositeFeatureItemBaseType					
properties	base CompositeFeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId					
used by	element RunoutGroupFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The RunoutGroupFeatureItem defines an individual runout group feature. A runout group feature is a complex feature defined by a set of simple features grouped together (e.g., all entities that rotate about or at right angle to a single axis) to which a common runout tolerance may be applied.					

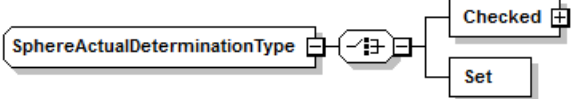
complexType **RunoutGroupFeatureNominalType**

diagram						
type	extension of CompositeFeatureNominalBaseType					
properties	base CompositeFeatureNominalBaseType					
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds FeatureNominalIds					
used by	element RunoutGroupFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The RunoutGroupFeatureNominalType defines the runout group feature nominal information for an individual runout group feature.					

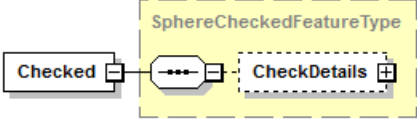
complexType **SetFeatureType**

diagram						
used by	elements ArcActualDeterminationType/Set CircleActualDeterminationType/Set ConeActualDeterminationType/Set ConicalSegmentActualDeterminationType/Set CuboidActualDeterminationType/Set CylinderActualDeterminationType/Set CylindricalSegmentActualDeterminationType/Set EdgePointActualDeterminationType/Set EllipseActualDeterminationType/Set ElongatedCylinderActualDeterminationType/Set ExtrudedCrossSectionActualDeterminationType/Set LineActualDeterminationType/Set OppositeLinesActualDeterminationType/Set OppositePlanesActualDeterminationType/Set PlaneActualDeterminationType/Set PointDefinedCurveActualDeterminationType/Set PointDefinedSurfaceActualDeterminationType/Set PointActualDeterminationType/Set SphereActualDeterminationType/Set SphericalSegmentActualDeterminationType/Set SurfaceOfRevolutionActualDeterminationType/Set ThreadedFeatureActualDeterminationType/Set ToroidalSegmentActualDeterminationType/Set TorusActualDeterminationType/Set					
annotation	documentation The SetFeatureType defines that a feature has a set value rather than a checked (measured or constructed) value. The set feature type is used in cases where a non-measurable basic value needs to be tracked by virtue of appearing on a product print. For example, a circle representing the area in which weld splatter is not allowed.					


complexType SphereActualDeterminationType

diagram	
children	Checked Set
used by	element SphereFeatureItemType/DeterminationMode
annotation	documentation The SphereActualDeterminationType defines how the sphere actual is determined, either by being set or by being checked (measured or constructed).

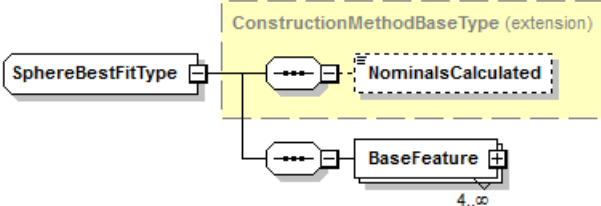
element SphereActualDeterminationType/Checked

diagram	
type	SphereCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	documentation The Checked element signifies that the sphere is checked from actual data, either measured or constructed.

element SphereActualDeterminationType/Set

diagram	
type	SetFeatureType
properties	content complex
annotation	documentation The Set element signifies that the sphere actual is set to its nominal value.

complexType SphereBestFitType

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature

used by	element SphereConstructionMethodType/BestFit
annotation	documentation The SphereBestFitType defines the information for a best-fit sphere which includes a list of point-reducible base features; the points to which those features reduce are used in the best-fit construction of the sphere.

element **SphereBestFitType/BaseFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 4 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	documentation Each BaseFeature element identifies a base feature to be used for the construction of a sphere. The number of base features must be 4 or greater.

complexType **SphereCastType**


diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element SphereConstructionMethodType/Cast
annotation	documentation The SphereCastType defines the cast of another feature type to a sphere. The location and size are copied from the base feature.

element **SphereCastType/BaseFeature**

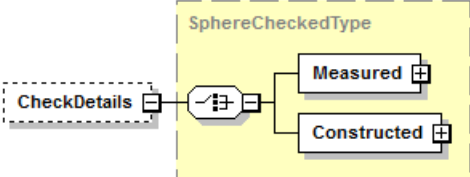
diagram	
type	BaseFeatureType

properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseFeature element identifies the base feature to be cast to a sphere.

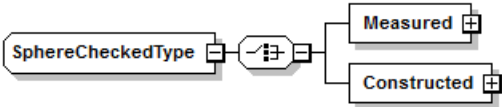
complexType SphereCheckedFeatureType

diagram	
children	CheckDetails
used by	element SphereActualDeterminationType/Checked
annotation	documentation The SphereCheckedFeatureType defines that a sphere feature is checked.

element SphereCheckedFeatureType/CheckDetails

diagram	
type	SphereCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the sphere check method (measurement or construction).

complexType SphereCheckedType

diagram	
children	Measured Constructed
used by	element SphereCheckedFeatureType/CheckDetails
annotation	documentation The SphereCheckedType defines how the sphere actual is checked, either by measurement or by construction.

element SphereCheckedType/Measured

diagram	
type	MeasuredFeatureType

properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the sphere is measured.

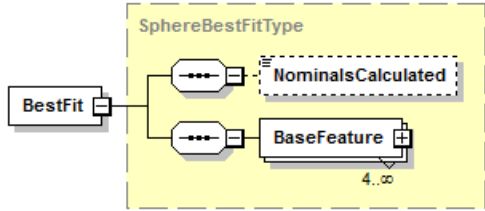
element **SphereCheckedType/Constructed**

diagram	
type	SphereConstructionMethodType
properties	content complex
children	BestFit Recompensated Copy Cast Transform FromScan
annotation	documentation The Constructed element signifies that the sphere is constructed.

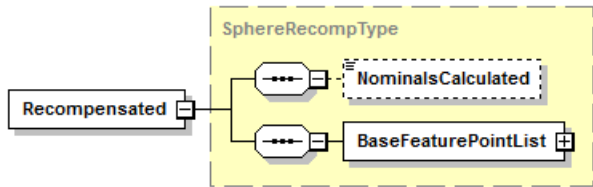
complexType **SphereConstructionMethodType**

diagram	
children	BestFit Recompensated Copy Cast Transform FromScan
used by	element SphereCheckedType/Constructed
annotation	documentation The SphereConstructionMethodType defines the method for constructing a unique nominal or actual sphere feature.

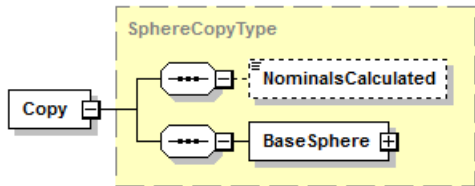
element **SphereConstructionMethodType/BestFit**

diagram	 <p>The diagram shows a 'BestFit' element connected to a dashed box labeled 'SphereBestFitType'. Inside this box, 'BestFit' branches into two paths: one leading to 'NominalsCalculated' and another leading to 'BaseFeature'. The 'BaseFeature' element has a '4..∞' cardinality constraint.</p>
type	SphereBestFitType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	<p>documentation</p> <p>The BestFit element describes the best-fit construction of a sphere from 4 or more point-reducible base features. This element is in an optional choice.</p>

element **SphereConstructionMethodType/Recompensated**

diagram	 <p>The diagram shows a 'Recompensated' element connected to a dashed box labeled 'SphereRecompType'. Inside this box, 'Recompensated' branches into two paths: one leading to 'NominalsCalculated' and another leading to 'BaseFeaturePointList'.</p>
type	SphereRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	<p>documentation</p> <p>The Recompensated element describes the re-compensated-for- probe-size best-fit construction of a sphere from 4 or more base feature points. This element is in an optional choice.</p>

element **SphereConstructionMethodType/Copy**

diagram	 <p>The diagram shows a 'Copy' element connected to a dashed box labeled 'SphereCopyType'. Inside this box, 'Copy' branches into two paths: one leading to 'NominalsCalculated' and another leading to 'Base Sphere'.</p>
type	SphereCopyType
properties	content complex
children	NominalsCalculated BaseSphere
annotation	<p>documentation</p> <p>The Copy element describes the construction of a sphere by the copying of a base sphere. This element is in an optional choice.</p>

element **SphereConstructionMethodType/Cast**

diagram	<p>The diagram shows a 'Cast' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'SphereCastType'. Inside this box, the line splits to connect to two elements: 'NominalsCalculated' (a dashed rectangle) and 'BaseFeature' (a rectangle with a small square on its right side).</p>
type	SphereCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	<p>documentation</p> <p>The Cast element describes the construction of a sphere by the casting of a base feature. This element is in an optional choice.</p>

element **SphereConstructionMethodType/Transform**

diagram	<p>The diagram shows a 'Transform' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'SphereTransformType'. Inside this box, the line splits to connect to three elements: 'NominalsCalculated' (a dashed rectangle), 'BaseSphere' (a rectangle with a small square on its right side), and 'Transformation' (a rectangle with a small square on its right side).</p>
type	SphereTransformType
properties	content complex
children	NominalsCalculated BaseSphere Transformation
annotation	<p>documentation</p> <p>The Transform element describes the construction of a sphere by the transformation of a base sphere. This element is in an optional choice.</p>

element **SphereConstructionMethodType/FromScan**

diagram	<p>The diagram shows a 'FromScan' element (a rectangle with a small square on its right side) connected by a line to a dashed yellow box labeled 'SphereFromScanType'. Inside this box, the line splits to connect to four elements: 'NominalsCalculated' (a dashed rectangle), 'SurfaceFeature' (a rectangle with a small square on its right side), 'SearchRadius' (a rectangle with a small square on its right side), and 'Vector' (a rectangle with a small square on its right side).</p>
type	SphereFromScanType
properties	content complex
children	NominalsCalculated SurfaceFeature SearchRadius Vector
annotation	<p>documentation</p> <p>The FromScan element describes the construction of a sphere from scan data. This element is in an optional choice.</p>

complexType **SphereCopyType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseSphere
used by	element SphereConstructionMethodType/Copy
annotation	documentation The SphereCopyType defines a copied sphere construction.

element **SphereCopyType/BaseSphere**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseSphere element identifies the sphere to be copied.

complexType **SphereFeatureActualType**

diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Location Diameter DiameterMin DiameterMax LatitudeLongitudeSweep Form					
used by	element SphereFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The SphereFeatureActualType defines the sphere feature actual information for an individual sphere feature.					

element **SphereFeatureActualType/Location**

diagram						
type	ActualPointType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional Location element is the actual center of the sphere.

element **SphereFeatureActualType/Diameter**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is

	<p>linearUnit xs:token</p>	<p>a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.</p>
annotation	<p>documentation The optional Diameter element is the actual diameter of the sphere based on the substitute feature data fitting algorithm setting.</p>	

element **SphereFeatureActualType/DiameterMin**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	<p>documentation The optional DiameterMin element is the minimum diameter of the sphere from a report or an analysis.</p>					

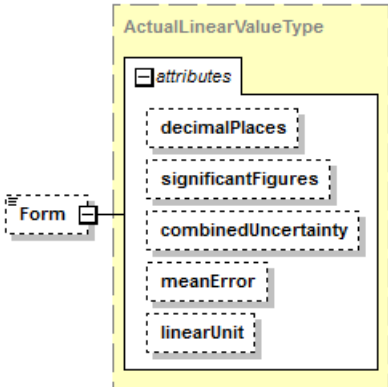
element **SphereFeatureActualType/DiameterMax**

diagram						
type	ActualLinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional DiameterMax element is the maximum diameter of the sphere from a report or an analysis.					

element **SphereFeatureActualType/LatitudeLongitudeSweep**

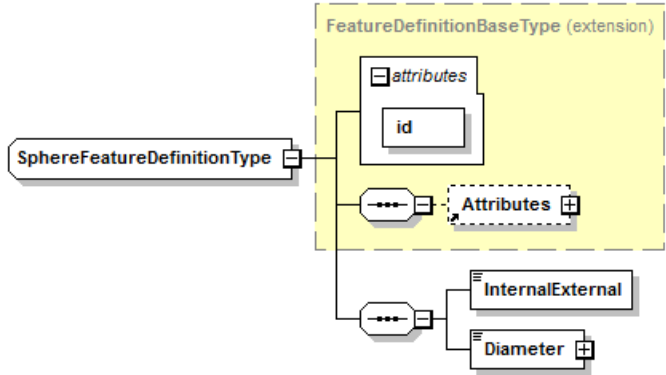
diagram	
type	OrientedLatitudeLongitudeSweepType
properties	minOcc 0 maxOcc 1 content complex
children	DirMeridianPrime DomainLatitude DomainLongitude DirNorthPole
annotation	documentation The optional LatitudeLongitudeSweep element gives the extent of an actual partial sphere with angular sweep in two directions analogous to terrestrial latitude and longitude.

element **SphereFeatureActualType/Form**

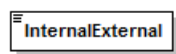
diagram						
type	ActualLinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is

	linearUnit	xs:token	a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Form element is the form error (sphericity) of the sphere from a report or an analysis.		

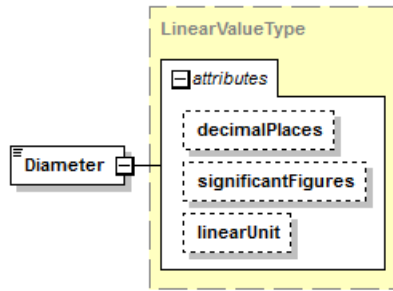
complexType **SphereFeatureDefinitionType**

diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes InternalExternal Diameter					
used by	element SphereFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The SphereFeatureDefinitionType defines the sphere feature nominal information that can be common to one or more sphere features.					

element **SphereFeatureDefinitionType/InternalExternal**

diagram			
type	InternalExternalEnumType		
properties	content simple		
facets	Kind enumeration enumeration enumeration	Value INTERNAL EXTERNAL NOT_APPLICABLE	Annotation
annotation	documentation The InternalExternal element indicates whether the feature is internal or external.		

element **SphereFeatureDefinitionType/Diameter**

diagram																														
type	LinearValueType																													
properties	content complex																													
attributes	<table><thead><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr></thead><tbody><tr><td>decimalPlaces</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr><tr><td>significantFigures</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr><tr><td>linearUnit</td><td>xs:token</td><td></td><td></td><td></td><td>documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.</td></tr></tbody></table>	Name	Type	Use	Default	Fixed	Annotation	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.					
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linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.																									
annotation	documentation The Diameter element is the nominal diameter of the sphere.																													

complexType **SphereFeatureItemType**

diagram						
type	extension of FeatureItemBaseType					
properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element SphereFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The SphereFeatureItemType defines an individual sphere feature.					

element **SphereFeatureItemType/DeterminationMode**

diagram						
type	SphereActualDeterminationType					
properties	content complex					
children	Checked Set					

annotation	documentation The DeterminationMode element is the means by which the sphere feature actual is determined.
------------	---

element **SphereFeatureItem/SubstituteFeatureAlgorithm**

diagram	
type	FeatureOfSizeSubstituteFeatureAlgorithmType
properties	minOcc 0 maxOcc 1 content complex
children	FeatureOfSizeSubstituteFeatureAlgorithmEnum OtherFeatureOfSizeSubstituteFeatureAlgorithm
annotation	documentation The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the sphere feature.

complexType **SphereFeatureNominalType**

diagram	<p>The diagram illustrates the structure of the SphereFeatureNominalType complex type. It is an extension of the FeatureNominalBaseType (extension). The base type contains an attributes block with an id attribute. The extension adds several optional elements: Attributes, Name, PointList, FeatureDefinitionId, EntityInternalIds, EntityExternalIds, Location, and LatitudeLongitudeSweep.</p>					
type	extension of FeatureNominalBaseType					
properties	base FeatureNominalBaseType					
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Location LatitudeLongitudeSweep					
used by	element SphereFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the

		feature, used for referencing.
annotation	documentation The SphereFeatureNominalType defines the sphere feature nominal information for an individual sphere feature.	

element **SphereFeatureNominalType/Location**

diagram						
type	PointType					
properties	content complex					
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				

	zValidity ValidityEnumType
annotation	documentation The Location element is the nominal center of the sphere.

element **SphereFeatureNominalType/LatitudeLongitudeSweep**

diagram	
type	OrientedLatitudeLongitudeSweepType
properties	minOcc 0 maxOcc 1 content complex
children	DirMeridianPrime DomainLatitude DomainLongitude DirNorthPole
annotation	documentation The optional LatitudeLongitude Sweep element gives the partial sphere with angular sweep in two directions analogous to terrestrial latitude and longitude.

complexType **SphereFromScanType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated SurfaceFeature SearchRadius Vector
used by	element SphereConstructionMethodType/FromScan
annotation	documentation The SphereFromScanType defines a sphere construction by the retrieval of a sphere from a scanned surface feature (point cloud).

element **SphereFromScanType/SurfaceFeature**

diagram	<p>The diagram shows a SurfaceFeature element connected to a BaseFeatureType container. Inside the container, there are two elements: ReferencedComponent and FeatureItemId.</p>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The SurfaceFeature element identifies the scanned surface feature from which the sphere is retrieved.</p>

element **SphereFromScanType/SearchRadius**

diagram	<p>The diagram illustrates the structure of the SearchRadius element. It is connected to a LinearValueType container. Inside this container, there is an attributes group containing three attributes: decimalPlaces, significantFigures, and linearUnit.</p>																								
type	LinearValueType																								
properties	content complex																								
attributes	<table><thead><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr></thead><tbody><tr><td>decimalPlaces</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr><tr><td>significantFigures</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr><tr><td>linearUnit</td><td>xs:token</td><td></td><td></td><td></td><td>documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.</td></tr></tbody></table>	Name	Type	Use	Default	Fixed	Annotation	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
Name	Type	Use	Default	Fixed	Annotation																				
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linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.																				
annotation	<p>documentation</p> <p>The SearchRadius element is the radius around the nominal feature, wherein the actual feature can be expected. The SearchRadius is the radius added to and subtracted from the nominal feature radius defining a spherical shell. All scanned points within this spherical shell are used for the retrieval of the feature. The spherical shell's center coincides with the sphere feature's nominal center point.</p>																								

element **SphereFromScanType/Vector**

diagram						
type	UnitVectorType					
properties	minOcc	0	maxOcc	1	content	complex
facets	Kind	Value	Annotation	length	3	
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation	The optional Vector element is the axis of the search radius cylinder when it cannot be determined by the sphere nominal information.				

complexType **SphereRecompType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeaturePointList
used by	element SphereConstructionMethodType/Recompensated
annotation	<p>documentation</p> <p>The SphereRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit sphere through the measurement points of base features.</p>

element **SphereRecompType/BaseFeaturePointList**

diagram	
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	<p>documentation</p> <p>The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit sphere. The total number of points in the BaseFeaturePointSets in the list must be 4 or greater.</p>

complexType **SphereTransformType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseSphere Transformation
used by	element SphereConstructionMethodType/Transform
annotation	<p>documentation</p> <p>The SphereTransformType defines a sphere construction by the transformation of a sphere through the specified nominal or actual coordinate system.</p>

element **SphereTransformType/BaseSphere**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseSphere element identifies the sphere to be transformed.

element **SphereTransformType/Transformation**

diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	documentation The Transformation element identifies the coordinate system to be used to transform the sphere.

complexType **SphericalSegmentActualDeterminationType**


diagram	
children	Checked Set
used by	element SphericalSegmentFeatureItem/DeterminationMode
annotation	documentation The SphericalSegmentActualDeterminationType defines how the spherical segment actual is determined, either by being set or by being checked (measured or constructed).

element **SphericalSegmentActualDeterminationType/Checked**

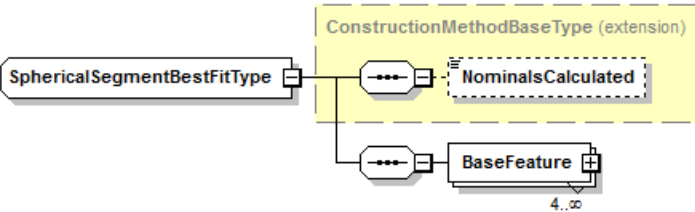
diagram	
---------	--

type	SphericalSegmentCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	documentation The Checked element signifies that the spherical segment is checked from actual data, either measured or constructed.

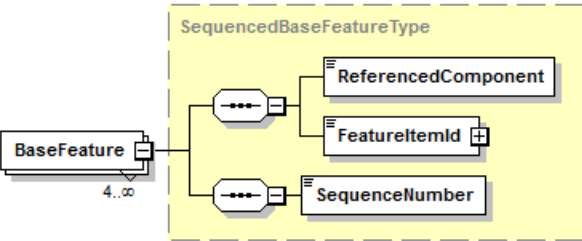
element **SphericalSegmentActualDeterminationType/Set**

diagram	
type	SetFeatureType
properties	content complex
annotation	documentation The Set element signifies that the spherical segment actual is set to its nominal value.

complexType **SphericalSegmentBestFitType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element SphericalSegmentConstructionMethodType/BestFit
annotation	documentation The SphericalSegmentBestFitType defines the information for a best-fit spherical segment which includes a list of point-reducible base features; the points to which those features reduce are used in the best-fit construction of the spherical segment.

element **SphericalSegmentBestFitType/BaseFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 4 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber

annotation	documentation Each BaseFeature element identifies a base feature to be used for the construction of a spherical segment. The number of base features must be 4 or greater.
------------	---

complexType **SphericalSegmentCastType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element SphericalSegmentConstructionMethodType/Cast
annotation	documentation The SphericalSegmentCastType defines the cast of another feature type to a spherical segment. The location, axis and size are copied from the base feature.

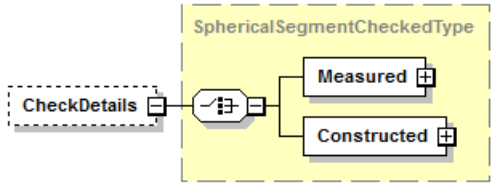
element **SphericalSegmentCastType/BaseFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseFeature element identifies the base feature to be cast to a spherical segment.

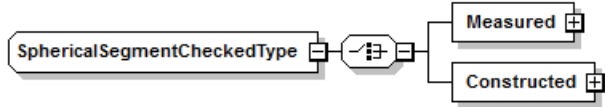
complexType **SphericalSegmentCheckedFeatureType**

diagram	
children	CheckDetails
used by	element SphericalSegmentActualDeterminationType/Checked
annotation	documentation The SphericalSegmentCheckedFeatureType defines that a spherical segment feature is checked.

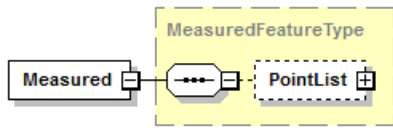
element **SphericalSegmentCheckedFeatureType/CheckDetails**

diagram	
type	SphericalSegmentCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the spherical segment check method (measurement or construction).

complexType **SphericalSegmentCheckedType**

diagram	
children	Measured Constructed
used by	element SphericalSegmentCheckedFeatureType/CheckDetails
annotation	documentation The SphericalSegmentCheckedType defines how the spherical segment actual is checked, either by measurement or by construction.

element **SphericalSegmentCheckedType/Measured**

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the spherical segment is measured.

element **SphericalSegmentCheckedType/Constructed**

diagram	
type	SphericalSegmentConstructionMethodType
properties	content complex
children	BestFit Recompensated Copy Cast Transform
annotation	documentation The Constructed element signifies that the spherical segment is constructed.

complexType **SphericalSegmentConstructionMethodType**

diagram	
children	BestFit Recompensated Copy Cast Transform
used by	element SphericalSegmentCheckedType/Constructed
annotation	documentation The SphericalSegmentConstructionMethodType defines the method for constructing a unique nominal or actual spherical segment feature.

element **SphericalSegmentConstructionMethodType/BestFit**

diagram	
type	SphericalSegmentBestFitType
properties	content complex
children	NominalsCalculated BaseFeature

annotation	documentation The BestFit element describes the best-fit construction of a spherical segment from 4 or more point-reducible base features. This element is in an optional choice.
------------	--

element SphericalSegmentConstructionMethodType/Recompensated

diagram	<p>The diagram shows a rectangular box labeled 'Recompensated' on the left. A line connects its right side to a dashed rectangular box on the right. Inside the dashed box, at the top, is the text 'SphericalSegmentRecompType'. Below this text are two elements: 'NominalsCalculated' (in a dashed box) and 'BaseFeaturePointList' (in a solid box). Both elements have a small square icon with three dots on their left side, and a small square icon with a plus sign on their right side.</p>
type	SphericalSegmentRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	documentation The Recompensated element describes the re-compensated-for- probe-size best-fit construction of a spherical segment from 4 or more base feature points. This element is in an optional choice.

element SphericalSegmentConstructionMethodType/Copy

diagram	<p>The diagram shows a rectangular box labeled 'Copy' on the left. A line connects its right side to a dashed rectangular box on the right. Inside the dashed box, at the top, is the text 'SphericalSegmentCopyType'. Below this text are two elements: 'NominalsCalculated' (in a dashed box) and 'BaseSphericalSegment' (in a solid box). Both elements have a small square icon with three dots on their left side, and a small square icon with a plus sign on their right side.</p>
type	SphericalSegmentCopyType
properties	content complex
children	NominalsCalculated BaseSphericalSegment
annotation	documentation The Copy element describes the construction of a spherical segment by the copying of a base spherical segment. This element is in an optional choice.

element SphericalSegmentConstructionMethodType/Cast

diagram	<p>The diagram shows a rectangular box labeled 'Cast' on the left. A line connects its right side to a dashed rectangular box on the right. Inside the dashed box, at the top, is the text 'SphericalSegmentCastType'. Below this text are two elements: 'NominalsCalculated' (in a dashed box) and 'BaseFeature' (in a solid box). Both elements have a small square icon with three dots on their left side, and a small square icon with a plus sign on their right side.</p>
type	SphericalSegmentCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The Cast element describes the construction of a spherical segment by the casting of a base feature. This element is in an optional choice.

element **SphericalSegmentConstructionMethodType/Transform**

diagram	<p>The diagram shows a 'Transform' element connected to a dashed box labeled 'SphericalSegmentTransformType'. Inside this box, there are three elements: 'NominalsCalculated' (dashed), 'Base SphericalSegment', and 'Transformation'.</p>
type	SphericalSegmentTransformType
properties	content complex
children	NominalsCalculated BaseSphericalSegment Transformation
annotation	<p>documentation</p> <p>The Transform element describes the construction of a spherical segment by the transformation of a base spherical segment. This element is in an optional choice.</p>

complexType **SphericalSegmentCopyType**

diagram	<p>The diagram shows a 'SphericalSegmentCopyType' element connected to a dashed box labeled 'ConstructionMethodBaseType (extension)'. Inside this box, there are two elements: 'NominalsCalculated' (dashed) and 'Base SphericalSegment'.</p>
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseSphericalSegment
used by	element SphericalSegmentConstructionMethodType/Copy
annotation	<p>documentation</p> <p>The SphericalSegmentCopyType defines a copied spherical segment construction.</p>

element **SphericalSegmentCopyType/BaseSphericalSegment**

diagram	<p>The diagram shows a 'Base SphericalSegment' element connected to a dashed box labeled 'BaseFeatureType'. Inside this box, there are two elements: 'ReferencedComponent' and 'FeatureItemId'.</p>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The BaseSphericalSegment element identifies the spherical segment to be copied.</p>

complexType **SphericalSegmentFeatureActualType**

diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Location Diameter DiameterMin DiameterMax LatitudeLongitudeSweep Form					
used by	element SphericalSegmentFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The SphericalSegmentFeatureActualType defines the spherical segment feature actual information for an individual spherical segment feature.					

element **SphericalSegmentFeatureActualType/Location**

diagram						
type	ActualPointType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional Location element is the actual center of the spherical segment.

element **SphericalSegmentFeatureActualType/Diameter**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is

	linearUnit xs:token	a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Diameter element is the actual diameter of the spherical segment based on the substitute feature data fitting algorithm setting.	

element **SphericalSegmentFeatureActualType/DiameterMin**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional DiameterMin element is the minimum diameter of the spherical segment from a report or an analysis.					

element **SphericalSegmentFeatureActualType/DiameterMax**

diagram						
type	ActualLinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional DiameterMax element is the maximum diameter of the spherical segment from a report or an analysis.					

element **SphericalSegmentFeatureActualType/LatitudeLongitudeSweep**

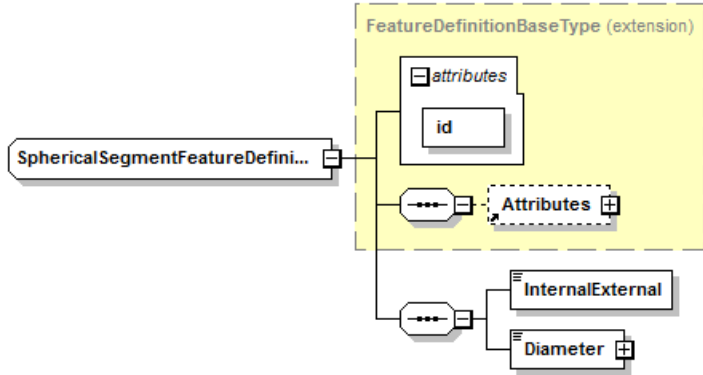
diagram	
type	OrientedLatitudeLongitudeSweepType
properties	minOcc 0 maxOcc 1 content complex
children	DirMeridianPrime DomainLatitude DomainLongitude DirNorthPole
annotation	documentation The optional LatitudeLongitudeSweep element gives the extent of an actual spherical segment with angular sweep in two directions analogous to terrestrial latitude and longitude.

element **SphericalSegmentFeatureActualType/Form**

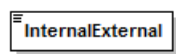
diagram																															
type	ActualLinearValueType																														
properties	<div><div>minOcc</div><div>0</div></div> <div><div>maxOcc</div><div>1</div></div> <div><div>content</div><div>complex</div></div>																														
attributes	<table><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr><tr><td>decimalPlaces</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr><tr><td>significantFigures</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr><tr><td>combinedUncertainty</td><td>NonNegativeDecimalType</td><td></td><td></td><td></td><td>documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.</td></tr><tr><td>meanError</td><td>NonNegativeDecimalType</td><td></td><td></td><td></td><td>documentation The optional meanError attribute is</td></tr></table>	Name	Type	Use	Default	Fixed	Annotation	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is
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combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.																										
meanError	NonNegativeDecimalType				documentation The optional meanError attribute is																										

	linearUnit xs:token	a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Form element is the form error (sphericity) of the spherical segment from a report or an analysis.	

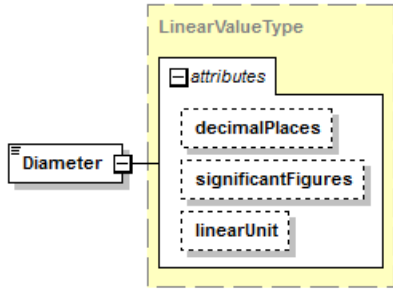
complexType **SphericalSegmentFeatureDefinitionType**

diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes InternalExternal Diameter					
used by	element SphericalSegmentFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The SphericalSegmentFeatureDefinitionType defines the spherical segment feature nominal information that can be common to one or more spherical segment features.					

element **SphericalSegmentFeatureDefinitionType/InternalExternal**

diagram			
type	InternalExternalEnumType		
properties	content simple		
facets	Kind enumeration enumeration enumeration	Value INTERNAL EXTERNAL NOT_APPLICABLE	Annotation
annotation	documentation The InternalExternal element indicates whether the feature is internal or external.		

element **SphericalSegmentFeatureDefinitionType/Diameter**

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The Diameter element is the nominal diameter of the spherical segment.					

complexType **SphericalSegmentFeatureItemType**

diagram						
type	extension of FeatureItemBaseType					
properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element SphericalSegmentFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The SphericalSegmentFeatureItemType defines an individual spherical segment feature. A spherical segment is a portion of a sphere like the surface in the corner intersection of three filleted planes.					

element **SphericalSegmentFeatureItemType/DeterminationMode**

diagram						
type	SphericalSegmentActualDeterminationType					
properties	content	complex				

children	Checked Set
annotation	documentation The DeterminationMode element is the means by which the spherical segment feature actual is determined.

element **SphericalSegmentFeatureItemType/SubstituteFeatureAlgorithm**

diagram	
type	NonFeatureOfSizeSubstituteFeatureAlgorithmType
properties	minOcc 0 maxOcc 1 content complex
children	NonFeatureOfSizeSubstituteFeatureAlgorithmEnum OtherNonFeatureOfSizeSubstituteFeatureAlgorithm
annotation	documentation The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the spherical segment feature.

complexType **SphericalSegmentFeatureNominalType**

diagram	<pre>classDiagram class SphericalSegmentFeatureNominalType { id Attributes Location LatitudeLongitudeSweep } class FeatureNominalBaseType { <<abstract>> } SphericalSegmentFeatureNominalType -- > FeatureNominalBaseType class Attributes { Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds }</pre>												
type	extension of FeatureNominalBaseType												
properties	base FeatureNominalBaseType												
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Location LatitudeLongitudeSweep												
used by	element SphericalSegmentFeatureNominal												
attributes	<table><thead><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr></thead><tbody><tr><td>id</td><td>QIFIdType</td><td>required</td><td></td><td></td><td>documentation</td></tr></tbody></table>	Name	Type	Use	Default	Fixed	Annotation	id	QIFIdType	required			documentation
Name	Type	Use	Default	Fixed	Annotation								
id	QIFIdType	required			documentation								

		The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The SphericalSegmentFeatureNominalType defines the spherical segment feature nominal information for an individual spherical segment feature.	

element **SphericalSegmentFeatureNominalType/Location**

diagram						
type	PointType					
properties	content complex					
facets	Kind length	Value 3	Annotation			
attributes	Name linearUnit decimalPlaces significantFigures validity xDecimalPlaces xSignificantFigures xValidity yDecimalPlaces ySignificantFigures	Type xs:token xs:nonNegativeInteger xs:nonNegativeInteger ValidityEnumType xs:nonNegativeInteger xs:nonNegativeInteger ValidityEnumType xs:nonNegativeInteger xs:nonNegativeInteger	Use	Default	Fixed	Annotation

	yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType
annotation	documentation The Location element is the nominal center of the spherical segment.

element SphericalSegmentFeatureNominalType/LatitudeLongitudeSweep

diagram	
type	OrientedLatitudeLongitudeSweepType
properties	content complex
children	DirMeridianPrime DomainLatitude DomainLongitude DirNorthPole
annotation	documentation The LatitudeLongitudeSweep element gives the extent of a spherical segment with angular sweep in two directions analogous to terrestrial latitude and longitude.

complexType SphericalSegmentRecompType

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeaturePointList
used by	element SphericalSegmentConstructionMethodType/Recompensated
annotation	documentation The SphericalSegmentRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit spherical segment through the measurement points of base features.

element SphericalSegmentRecompType/BaseFeaturePointList

diagram	
---------	--

type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	documentation The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit spherical segment. The total number of points in the BaseFeaturePointSets in the list must be 4 or greater.

complexType **SphericalSegmentTransformType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseSphericalSegment Transformation
used by	element SphericalSegmentConstructionMethodType/Transform
annotation	documentation The SphericalSegmentTransformType defines a spherical segment construction by the transformation of a spherical segment through the specified nominal or actual coordinate system.

element **SphericalSegmentTransformType/BaseSphericalSegment**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseSphericalSegment element identifies the spherical segment feature to be transformed.

element **SphericalSegmentTransformType/Transformation**

diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	<p>documentation</p> <p>The Transformation element identifies the coordinate system to be used to transform the spherical segment.</p>

complexType **SurfaceOfRevolutionActualDeterminationType**

diagram	
children	Checked Set
used by	element SurfaceOfRevolutionFeatureItemType/DeterminationMode
annotation	<p>documentation</p> <p>The PointDefinedSurfaceActualDeterminationType defines how the surface of revolution actual is determined, either by being set or by being checked (measured or constructed).</p>

element **SurfaceOfRevolutionActualDeterminationType/Checked**

diagram	
type	SurfaceOfRevolutionCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	<p>documentation</p> <p>The Checked element signifies that the surface of revolution is checked from actual data, either measured or constructed.</p>

element **SurfaceOfRevolutionActualDeterminationType/Set**

diagram	
type	SetFeatureType
properties	content complex
annotation	<p>documentation</p> <p>The Set element signifies that the surface of revolution actual is set to its nominal value.</p>

complexType **SurfaceOfRevolutionBestFitType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element SurfaceOfRevolutionConstructionMethodType/BestFit
annotation	<p>documentation</p> <p>The SurfaceOfRevolutionBestFitType defines the information for a best-fit surface of revolution which includes a list of point-reducible base features; the points to which those features reduce are used in the best-fit construction of the surface of revolution.</p>

element **SurfaceOfRevolutionBestFitType/BaseFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 6 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	<p>documentation</p> <p>Each BaseFeature element identifies a base feature to be used for the construction of a surface of revolution. The number of base features must be 6 or greater.</p>

complexType **SurfaceOfRevolutionCastType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature

used by	element SurfaceOfRevolutionConstructionMethodType/Cast
annotation	documentation The SurfaceOfRevolutionCastType defines the cast of another feature type to a surface of revolution. The location, axis and size are copied from the base feature.

element **SurfaceOfRevolutionCastType/BaseFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseFeature element identifies the base feature to be cast to a surface of revolution.

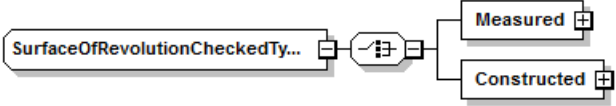
complexType **SurfaceOfRevolutionCheckedFeatureType**

diagram	
children	CheckDetails
used by	element SurfaceOfRevolutionActualDeterminationType/Checked
annotation	documentation The SurfaceOfRevolutionCheckedFeatureType defines that a surface of revolution feature is checked.

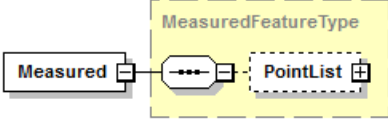
element **SurfaceOfRevolutionCheckedFeatureType/CheckDetails**

diagram	
type	SurfaceOfRevolutionCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the surface of revolution check (measurement or construction).

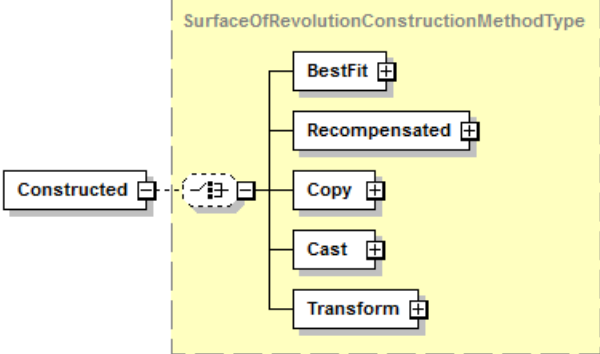
complexType **SurfaceOfRevolutionCheckedType**

diagram	
children	Measured Constructed
used by	element SurfaceOfRevolutionCheckedFeatureType/CheckDetails
annotation	documentation The SurfaceOfRevolutionCheckedType defines how the surface of revolution actual is checked, either by measurement or by construction.

element **SurfaceOfRevolutionCheckedType/Measured**

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the surface of revolution is measured.

element **SurfaceOfRevolutionCheckedType/Constructed**

diagram	
type	SurfaceOfRevolutionConstructionMethodType
properties	content complex
children	BestFit Recompensated Copy Cast Transform
annotation	documentation The Constructed element signifies that the surface of revolution is constructed.

complexType **SurfaceOfRevolutionConstructionMethodType**

diagram	
children	BestFit Recompensated Copy Cast Transform
used by	element SurfaceOfRevolutionCheckedType/Constructed
annotation	documentation The SurfaceOfRevolutionConstructionMethodType defines the method for constructing a unique nominal or actual surface of revolution feature.

element **SurfaceOfRevolutionConstructionMethodType/BestFit**

diagram	
type	SurfaceOfRevolutionBestFitType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The BestFit element describes the best-fit construction of a surface of revolution from 6 or more point-reducible base features. This element is in an optional choice.

element **SurfaceOfRevolutionConstructionMethodType/Recompensated**

diagram	
type	SurfaceOfRevolutionRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	documentation The Recompensated element describes the re-compensated-for- probe-size best-fit construction of a surface of revolution from 6 or more base feature points. This element is in an optional choice.

element **SurfaceOfRevolutionConstructionMethodType/Copy**

diagram	
type	SurfaceOfRevolutionCopyType
properties	content complex
children	NominalsCalculated BaseSurfaceOfRevolution
annotation	<p>documentation</p> <p>The Copy element describes the construction of a surface of revolution by the copying of a base surface of revolution. This element is in an optional choice.</p>

element **SurfaceOfRevolutionConstructionMethodType/Cast**

diagram	
type	SurfaceOfRevolutionCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	<p>documentation</p> <p>The Cast element describes the construction of a surface of revolution by the casting of a base feature. This element is in an optional choice.</p>

element **SurfaceOfRevolutionConstructionMethodType/Transform**

diagram	
type	SurfaceOfRevolutionTransformType
properties	content complex
children	NominalsCalculated BaseSurfaceOfRevolution Transformation
annotation	<p>documentation</p> <p>The Transform element describes the construction of a surface of revolution by the transformation of a base surface of revolution. This element is in an optional choice.</p>

complexType **SurfaceOfRevolutionCopyType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseSurfaceOfRevolution
used by	element SurfaceOfRevolutionConstructionMethodType/Copy
annotation	documentation The SurfaceOfRevolutionCopyType defines a copied surface of revolution construction.

element **SurfaceOfRevolutionCopyType/BaseSurfaceOfRevolution**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseSurfaceOfRevolution element identifies the surface of revolution to be copied.

complexType **SurfaceOfRevolutionFeatureActualType**

diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Axis Sweep Length Form					
used by	element SurfaceOfRevolutionFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The SurfaceOfRevolutionFeatureActualType defines the surface of revolution feature actual information for an individual surface of revolution feature.					

element **SurfaceOfRevolutionFeatureActualType/Axis**

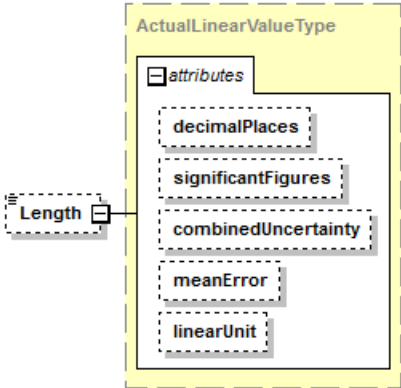
diagram						
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type	ActualAxisType
properties	minOcc 0 maxOcc 1 content complex
children	AxisPoint Direction
annotation	documentation The optional Axis element gives the actual location of the start point and the actual unit axis vector of the surface of revolution.

element **SurfaceOfRevolutionFeatureActualType/Sweep**

diagram	
type	SweepType
properties	minOcc 0 maxOcc 1 content complex
children	DirBeg DomainAngle
annotation	documentation The optional Sweep element gives the actual start direction and actual swept angle for a partial surface of revolution.

element **SurfaceOfRevolutionFeatureActualType/Length**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value

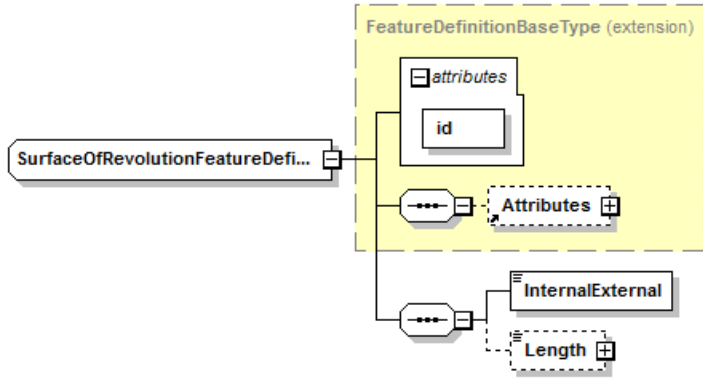
	<p>meanError NonNegativeDecimalType</p> <p>linearUnit xs:token</p>	<p>expressing the combined uncertainty assigned to the SpecifiedDecimalType. documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.</p>
annotation	documentation The optional Length element gives the actual length of the surface of revolution from the actual start point in the direction of the axis of the surface of revolution.	

element **SurfaceOfRevolutionFeatureActualType/Form**

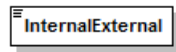
diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit

		attribute defines the unit used by LinearValueType.
annotation	documentation The optional Form element is the form error (roundness) of the surface of revolution from a report or an analysis.	

complexType **SurfaceOfRevolutionFeatureDefinitionType**

diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes InternalExternal Length					
used by	element SurfaceOfRevolutionFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The SurfaceOfRevolutionFeatureDefinitionType defines the surface of revolution feature nominal information that can be common to one or more surface of revolution features.					

element **SurfaceOfRevolutionFeatureDefinitionType/InternalExternal**

diagram					
type	InternalExternalEnumType				
properties	content simple				
facets	Kind enumeration	Value INTERNAL	Annotation		
	enumeration	EXTERNAL			
	enumeration	NOT_APPLICABLE			
annotation	documentation The InternalExternal element indicates whether the feature is internal or external.				

element **SurfaceOfRevolutionFeatureDefinitionType/Length**

diagram						
type	LinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The optional Length element is the nominal length of the surface of revolution from the starting point in the direction of the axis of the surface of revolution.					

complexType **SurfaceOfRevolutionFeatureItemType**

diagram						
type	extension of FeatureItemBaseType					
properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element SurfaceOfRevolutionFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	<p>documentation</p> <p>The SurfaceOfRevolutionFeatureItemType defines an individual surface of revolution feature. A surface of revolution feature is defined by sweeping a planar curve through an angle about an axis. The angle may be a full circle. The axis has a start point. The surface has a length that is measured along the axis. The curve being swept must lie in a plane that contains the axis of the surface of revolution. The line which is perpendicular to the axis at the start point of the axis and lies in the plane of the curve must intersect or be tangent to the curve. The surface that is formed consists of those points that lie on the surface formed by sweeping the curve and also lie between (1) the plane perpendicular to the axis at the start point and (2) the plane perpendicular to the axis a distance length from the start point in the direction of the axis.</p>					

element **SurfaceOfRevolutionFeatureItemType/DeterminationMode**

diagram	
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type	SurfaceOfRevolutionActualDeterminationType
properties	content complex
children	Checked Set
annotation	documentation The DeterminationMode element is the means by which the surface of revolution feature actual is determined.

element **SurfaceOfRevolutionFeatureItemType/SubstituteFeatureAlgorithm**

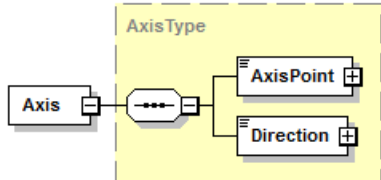
diagram	<p>The diagram shows a dashed box labeled 'SubstituteFeatureAlgorithm' connected to a solid box labeled 'CurveSubstituteFeatureAlgorithmType'. Inside the solid box, there are two sub-elements: 'CurveSubstituteFeatureAlgorith...' and 'OtherCurveSubstituteFeatureAI...'.</p>
type	CurveSubstituteFeatureAlgorithmType
properties	minOcc 0 maxOcc 1 content complex
children	CurveSubstituteFeatureAlgorithmEnum OtherCurveSubstituteFeatureAlgorithm
annotation	documentation The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the surface of revolution feature.

complexType **SurfaceOfRevolutionFeatureNominalType**

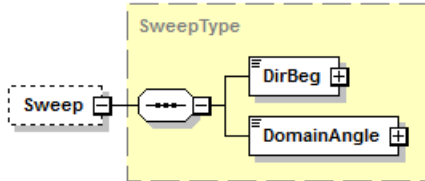
diagram	<p>The diagram shows a dashed box labeled 'SurfaceOfRevolutionFeatureNo...' connected to a solid box labeled 'FeatureNominalBaseType (extension)'. Inside the solid box, there are several sub-elements: 'attributes' (containing 'id'), 'Attributes', 'Name', 'PointList', 'FeatureDefinitionId', 'EntityInternalIds', 'EntityExternalIds', 'Axis', 'Sweep', and 'ReferenceFeatureNominalId'.</p>
type	extension of FeatureNominalBaseType
properties	base FeatureNominalBaseType

children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Axis Sweep ReferenceFeatureNominalId					
used by	element SurfaceOfRevolutionFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The SurfaceOfRevolutionFeatureNominalType defines the nominal information for an individual surface of revolution feature.					

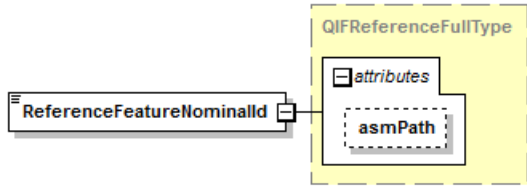
element **SurfaceOfRevolutionFeatureNominalType/Axis**

diagram						
type	AxisType					
properties	content complex					
children	AxisPoint Direction					
annotation	documentation The Axis element gives the nominal location of the start point and the nominal unit axis vector of the surface of revolution.					

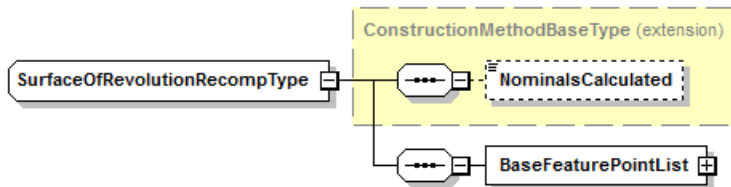
element **SurfaceOfRevolutionFeatureNominalType/Sweep**

diagram						
type	SweepType					
properties	minOcc 0 maxOcc 1 content complex					
children	DirBeg DomainAngle					
annotation	documentation The optional Sweep element gives the nominal start direction and the swept angle for a partial surface of revolution. The swept angle is typically greater than 180 degrees for a feature of size. If the sweep is not specified, the feature subtends a full 360 degrees. The StartVector of the Sweep must lie in a plane normal to the axis of the surface of revolution.					

element **SurfaceOfRevolutionFeatureNominalType/ReferenceFeatureNominalId**

diagram						
type	QIFReferenceFullType					
properties	content complex					
attributes	Name asmPath	Type QIFIdType	Use	Default	Fixed	Annotation documentation The optional asmPath attribute is an id which must be used for locating of the assembly path within the AsmPaths. The assembly path (instantiation chain) unambiguously identifies a model entity within an assembly.
annotation	documentation The ReferenceFeatureNominalId element is the QIF id of the nominal feature that is the curve being swept. The value of the element must be the QIF id of a nominal feature.					

complexType **SurfaceOfRevolutionRecompType**

diagram						
type	extension of ConstructionMethodBaseType					
properties	base ConstructionMethodBaseType					
children	NominalsCalculated BaseFeaturePointList					
used by	element SurfaceOfRevolutionConstructionMethodType/Recompensated					
annotation	documentation The SurfaceOfRevolutionRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit surface of revolution through the measurement points of base features.					

element **SurfaceOfRevolutionRecompType/BaseFeaturePointList**

diagram	
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	<p>documentation</p> <p>The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit surface of revolution. The total number of points in the BaseFeaturePointSets in the list must be 6 or greater.</p>

complexType **SurfaceOfRevolutionTransformType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseSurfaceOfRevolution Transformation
used by	element SurfaceOfRevolutionConstructionMethodType/Transform
annotation	<p>documentation</p> <p>The SurfaceOfRevolutionTransformType defines a surface of revolution construction by the transformation of a surface of revolution through the specified nominal or actual coordinate system.</p>

element **SurfaceOfRevolutionTransformType/BaseSurfaceOfRevolution**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The BaseSurfaceOfRevolution element identifies the surface of revolution to be transformed.</p>

element **SurfaceOfRevolutionTransformType/Transformation**

diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	documentation The Transformation element identifies the coordinate system to be used to transform the surface of revolution.

complexType **TargetPointsActualType**

diagram						
children	TargetPoint					
used by	elements	PointDefinedCurveFeatureActualType/DefiningPoints PointDefinedSurfaceFeatureActualType/DefiningPoints				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				

	xSignificantFigures xs:nonNegativeInteger xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The TargetPointsActualType defines a list of ordered actual target points.

element TargetPointsActualType/TargetPoint

diagram						
type	TargetPointActualType					
properties	minOcc	1	maxOcc	unbounded	content	complex
children	Point Normal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the point, used for referencing.
annotation	documentation Each TargetPoint element is a point on an actual point-defined curve or an actual point-defined surface.					

complexType **TargetPointsNominalType**

diagram						
children	TargetPoint					
used by	elements	PointDefinedCurveFeatureNominalType/DefiningPoints PointDefinedSurfaceFeatureNominalType/DefiningPoints				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation The TargetPointsNominalType defines an ordered list of nominal target points.					

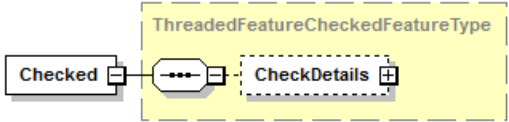
element **TargetPointsNominalType/TargetPoint**

diagram						
type	TargetPointNominalType					
properties	minOcc	1	maxOcc	unbounded	content	complex
children	Point Normal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the point, used for referencing.
annotation	documentation Each TargetPoint element is a nominal point on a nominal point-defined curve or a nominal point-defined surface.					


complexType **ThreadedFeatureActualDeterminationType**

diagram	<pre>graph LR; A[ThreadedFeatureActualDeterminationType] --> B[]; B --> C[Checked]; B --> D[Set];</pre>
children	Checked Set
used by	element ThreadedFeatureItem/Type/DeterminationMode
annotation	documentation The ThreadedFeatureActualDeterminationType defines how the threaded feature actual is determined, either by being set or by being checked (measured or constructed).

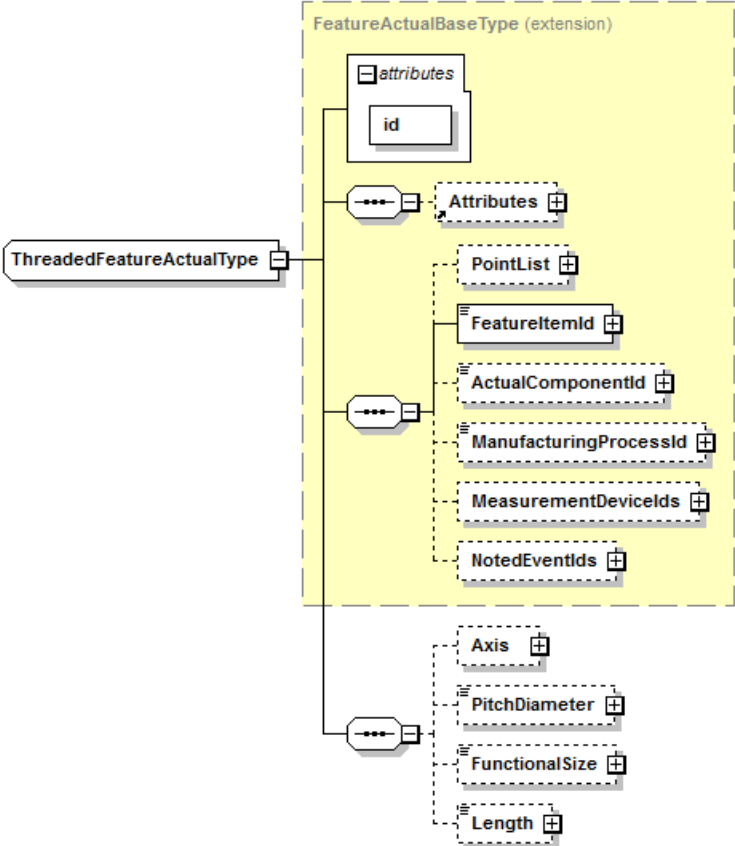
element **ThreadedFeatureActualDeterminationType/Checked**

diagram	
type	ThreadedFeatureCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	documentation The Checked element signifies that the threaded feature is checked from actual data, either measured or constructed.

element **ThreadedFeatureActualDeterminationType/Set**

diagram	
type	SetFeatureType
properties	content complex
annotation	documentation The Set element signifies that the threaded feature actual is set to its nominal value.

complexType **ThreadedFeatureActualType**

diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Axis PitchDiameter FunctionalSize Length					
used by	element ThreadedFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ThreadedFeatureActualType defines the threaded feature actual information for an individual threaded feature.					

element **ThreadedFeatureActualType/Axis**

diagram	
type	ActualAxisType
properties	minOcc 0 maxOcc 1 content complex
children	AxisPoint Direction
annotation	documentation The optional Axis element gives the actual location of the start point and the actual unit vector of the threaded feature axis.

element **ThreadedFeatureActualType/PitchDiameter**

diagram	<pre>graph LR PitchDiameter[PitchDiameter] --- ActualLinearValueType[ActualLinearValueType] subgraph ActualLinearValueType direction TB attributes[attributes] decimalPlaces[decimalPlaces] significantFigures[significantFigures] combinedUncertainty[combinedUncertainty] meanError[meanError] linearUnit[linearUnit] end</pre>																														
type	ActualLinearValueType																														
properties	<div>minOcc0</div> <div>maxOcc1</div> <div>contentcomplex</div>																														
attributes	<table><thead><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr></thead><tbody><tr><td>decimalPlaces</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr><tr><td>significantFigures</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr><tr><td>combinedUncertainty</td><td>NonNegativeDecimalType</td><td></td><td></td><td></td><td>documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.</td></tr><tr><td>meanError</td><td>NonNegativeDecimalType</td><td></td><td></td><td></td><td>documentation The optional meanError attribute is a value expressing the mean error assigned</td></tr></tbody></table>	Name	Type	Use	Default	Fixed	Annotation	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned
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meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned																										

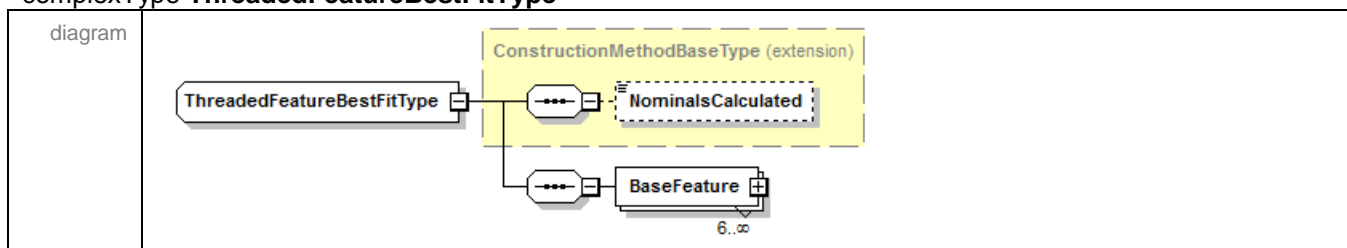
	linearUnit xs:token	to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional PitchDiameter element is the actual pitch diameter of the threaded feature based on the substitute feature data fitting algorithm setting.	

element **ThreadedFeatureActualType/FunctionalSize**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional FunctionalSize element is the actual functional size of the threaded feature based on the substitute feature data fitting algorithm setting.					

element **ThreadedFeatureActualType/Length**

diagram						
type	ActualLinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Length element is the actual length of the threaded feature from the starting point in the direction of the threaded feature axis.					

complexType **ThreadedFeatureBestFitType**

type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element ThreadedFeatureConstructionMethodType/BestFit
annotation	documentation The ThreadedFeatureBestFitType defines the information for a best-fit threaded feature which includes a list of point-reducible base features; the points to which those features reduce are used in the best-fit construction of the threaded feature.

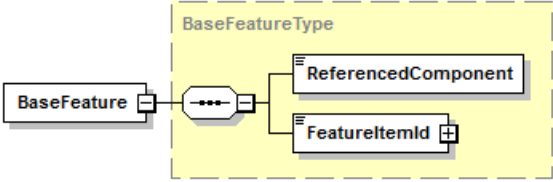
element ThreadedFeatureBestFitType/BaseFeature

diagram	
type	SequencedBaseFeatureType
properties	minOcc 6 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	documentation Each BaseFeature element identifies a base feature to be used for the construction of a threaded feature. The number of base features must be 6 or greater.


complexType ThreadedFeatureCastType

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element ThreadedFeatureConstructionMethodType/Cast
annotation	documentation The ThreadedFeatureCastType defines the cast of another feature type to a threaded feature. The location, axis and size are copied from the base feature.

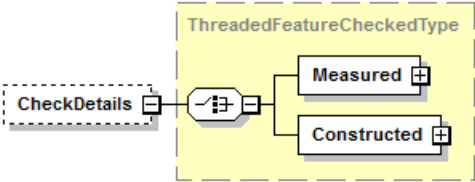
element **ThreadedFeatureCastType/BaseFeature**

diagram	 <p>The diagram shows a box labeled 'BaseFeature' connected to a dashed box labeled 'BaseFeatureType'. Inside 'BaseFeatureType', there is a connector box with three dots, which is connected to two stacked boxes: 'ReferencedComponent' and 'FeatureItemId'.</p>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseFeature element identifies the base feature to be cast to a threaded feature.

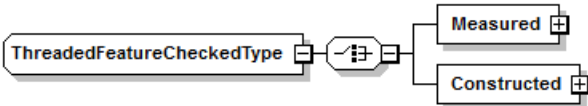
complexType **ThreadedFeatureCheckedFeatureType**

diagram	 <p>The diagram shows a box labeled 'ThreadedFeatureCheckedFeatu...' connected to a dashed box labeled 'CheckDetails'.</p>
children	CheckDetails
used by	element ThreadedFeatureActualDeterminationType/Checked
annotation	documentation The ThreadedFeatureCheckedFeatureType defines that a threaded feature is checked.

element **ThreadedFeatureCheckedFeatureType/CheckDetails**

diagram	 <p>The diagram shows a dashed box labeled 'CheckDetails' connected to a connector box with a checkmark and three dots. This connector is inside a dashed box labeled 'ThreadedFeatureCheckedType', which is also connected to two stacked boxes: 'Measured' and 'Constructed'.</p>
type	ThreadedFeatureCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the threaded feature check (measurement or construction).

complexType **ThreadedFeatureCheckedType**

diagram	 <p>The diagram shows a box labeled 'ThreadedFeatureCheckedType' connected to a connector box with a checkmark and three dots. This connector is connected to two stacked boxes: 'Measured' and 'Constructed'.</p>
children	Measured Constructed
used by	element ThreadedFeatureCheckedFeatureType/CheckDetails
annotation	documentation The ThreadedFeatureCheckedType defines how the threaded feature actual is checked, either by measurement or by construction.

element **ThreadedFeatureCheckedType/Measured**

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the threaded feature is measured directly.

element **ThreadedFeatureCheckedType/Constructed**

diagram	
type	ThreadedFeatureConstructionMethodType
properties	content complex
children	BestFit Recompensated Copy Cast Transform FromCylinder
annotation	documentation The Constructed element signifies that the threaded feature is constructed.

complexType **ThreadedFeatureConstructionMethodType**

diagram	
children	BestFit Recompensated Copy Cast Transform FromCylinder

used by	element ThreadedFeatureCheckedType/Constructed
annotation	documentation The ThreadedFeatureConstructionMethodType defines the method for constructing a unique nominal or actual threaded feature.

element ThreadedFeatureConstructionMethodType/BestFit

diagram	
type	ThreadedFeatureBestFitType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The BestFit element describes the best-fit construction of a threaded feature from 9 or more point-reducible base features. This element is in an optional choice.

element ThreadedFeatureConstructionMethodType/Recompensated

diagram	
type	ThreadedFeatureRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	documentation The Recompensated element describes the re-compensated-for- probe-size best-fit construction of a threaded feature from 9 or more base feature points. This element is in an optional choice.

element ThreadedFeatureConstructionMethodType/Copy

diagram	
type	ThreadedFeatureCopyType
properties	content complex
children	NominalsCalculated BaseThreadedFeature
annotation	documentation

	The Copy element describes the construction of a threaded feature by the copying of a base threaded feature. This element is in an optional choice.
--	---

element ThreadedFeatureConstructionMethodType/Cast

diagram	<p>The diagram shows a yellow dashed box labeled 'ThreadedFeatureCastType'. Inside, a 'Cast' element is connected to two sub-elements: 'NominalsCalculated' (in a dashed box) and 'BaseFeature' (in a solid box).</p>
type	ThreadedFeatureCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The Cast element describes the construction of a threaded feature by the casting of a base feature. This element is in an optional choice.

element ThreadedFeatureConstructionMethodType/Transform

diagram	<p>The diagram shows a yellow dashed box labeled 'ThreadedFeatureTransformType'. Inside, a 'Transform' element is connected to three sub-elements: 'NominalsCalculated' (in a dashed box), 'BaseThreadedFeature' (in a solid box), and 'Transformation' (in a solid box).</p>
type	ThreadedFeatureTransformType
properties	content complex
children	NominalsCalculated BaseThreadedFeature Transformation
annotation	documentation The Transform element describes the construction of a threaded feature by the transformation of a base threaded feature. This element is in an optional choice.

element ThreadedFeatureConstructionMethodType/FromCylinder

diagram	<p>The diagram shows a yellow dashed box labeled 'ThreadedFeatureFromCylinderType'. Inside, a 'FromCylinder' element is connected to three sub-elements: 'NominalsCalculated' (in a dashed box), 'BaseCylinder' (in a solid box), and 'Offset' (in a dashed box).</p>
type	ThreadedFeatureFromCylinderType
properties	content complex
children	NominalsCalculated BaseCylinder Offset

annotation	documentation The FromCylinder element describes the construction of a threaded feature from a base cylinder. This element is in an optional choice.
------------	---

complexType ThreadedFeatureCopyType

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseThreadedFeature
used by	element ThreadedFeatureConstructionMethodType/Copy
annotation	documentation The ThreadedFeatureCopyType defines a copied threaded feature construction.

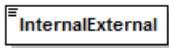
element ThreadedFeatureCopyType/BaseThreadedFeature

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseThreadedFeature element identifies the threaded feature to be copied.

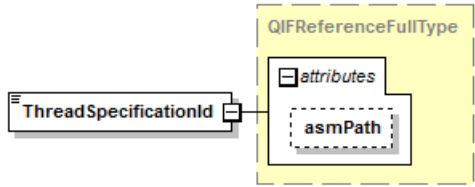
complexType **ThreadedFeatureDefinitionType**

diagram						
type	extension of FeatureDefinitionBaseType					
properties	base <code>FeatureDefinitionBaseType</code>					
children	Attributes InternalExternal ThreadSpecificationId Length Bottom					
used by	element ThreadedFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ThreadedFeatureDefinitionType defines the threaded feature nominal information that can be common to one or more threaded features.					

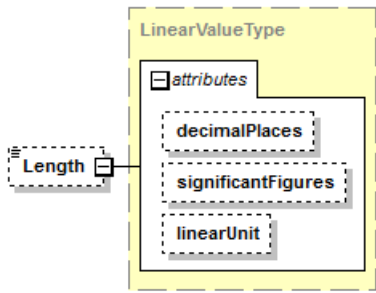
element **ThreadedFeatureDefinitionType/InternalExternal**

diagram			
type	InternalExternalEnumType		
properties	content simple		
facets	Kind enumeration enumeration enumeration	Value INTERNAL EXTERNAL NOT_APPLICABLE	Annotation
annotation	documentation The InternalExternal element indicates whether the feature is internal or external.		

element **ThreadedFeatureDefinitionType/ThreadSpecificationId**

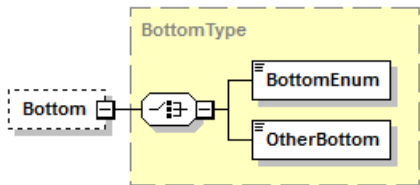
diagram						
type	QIFReferenceFullType					
properties	content complex					
attributes	Name asmPath	Type QIFIdType	Use	Default	Fixed	Annotation documentation The optional asmPath attribute is an id which must be used for locating of the assembly path within the AsmPaths. The assembly path (instantiation chain) unambiguously identifies a model entity within an assembly.
annotation	documentation The ThreadSpecificationId element is the QIF id of the thread specification for the thread characteristic. This must be the QIF id of a thread specification.					

element **ThreadedFeatureDefinitionType/Length**

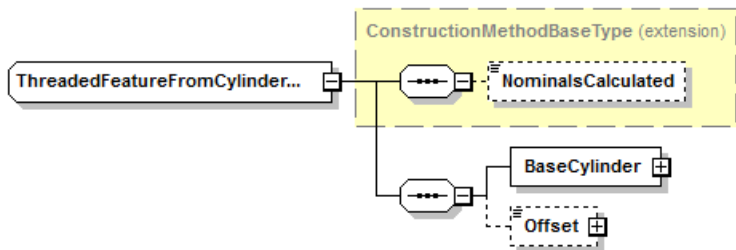
diagram						
type	LinearValueType					
properties	minOcc 0 maxOcc 1 content complex					
attributes	Name decimalPlaces	Type xs:nonNegativeInteger	Use	Default	Fixed	Annotation documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit

		attribute defines the UnitName for the LinearValueType.
annotation	documentation The optional Length element is the nominal length of the threaded feature from the starting point in the direction of the threaded feature axis.	

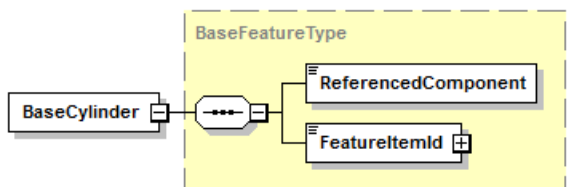
element ThreadedFeatureDefinitionType/Bottom

diagram		
type	BottomType	
properties	minOcc 0 maxOcc 1 content complex	
children	BottomEnum OtherBottom	
annotation	documentation The optional Bottom element describes the bottom type of the threaded feature.	

complexType ThreadedFeatureFromCylinderType

diagram		
type	extension of ConstructionMethodBaseType	
properties	base ConstructionMethodBaseType	
children	NominalsCalculated BaseCylinder Offset	
used by	element	ThreadedFeatureConstructionMethodType/FromCylinder
annotation	documentation The ThreadedFeatureFromCylinderType defines the construction of a threaded feature from a cylinder. This construction is used to associate the location and axis of a measured joe plug with a threaded feature.	

element ThreadedFeatureFromCylinderType/BaseCylinder

diagram		
type	BaseFeatureType	

properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseCylinder element identifies the cylinder from which the threaded feature is constructed.

element ThreadedFeatureFromCylinderType/Offset

diagram						
type	LinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The optional Offset element is the distance from the cylinder locating point along the cylinder axis to the thread feature locating point.					

complexType ThreadedFeatureItemType

diagram						
type	extension of FeatureItemBaseType					
properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element ThreadedFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ThreadedFeatureItemType defines an individual threaded feature.					

element ThreadedFeatureItemType/DeterminationMode

diagram						
type	ThreadedFeatureActualDeterminationType					
properties	content complex					
children	Checked Set					

annotation	documentation The DeterminationMode element is the means by which the threaded feature actual is determined.
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element **ThreadedFeatureItemType/SubstituteFeatureAlgorithm**

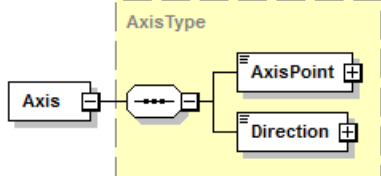
diagram	
type	FeatureOfSizeSubstituteFeatureAlgorithmType
properties	minOcc 0 maxOcc 1 content complex
children	FeatureOfSizeSubstituteFeatureAlgorithmEnum OtherFeatureOfSizeSubstituteFeatureAlgorithm
annotation	documentation The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the threaded feature.

complexType **ThreadedFeatureNominalType**

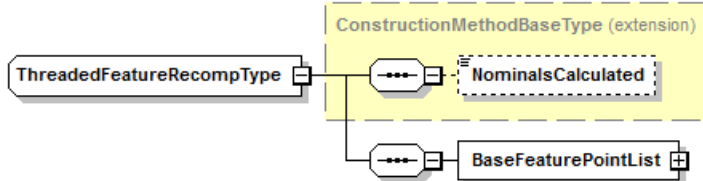
diagram						
type	extension of FeatureNominalBaseType					
properties	base FeatureNominalBaseType					
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Axis					
used by	element ThreadedFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.

annotation	documentation The ThreadedFeatureNominalType defines the threaded feature nominal information for an individual threaded feature.
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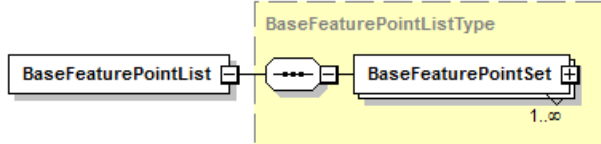
element ThreadedFeatureNominalType/Axis

diagram	 The diagram shows a box labeled 'Axis' connected to a dashed box labeled 'AxisType'. Inside 'AxisType', there is a connector box (a circle with three dots) that branches into two boxes: 'AxisPoint' and 'Direction'.
type	AxisType
properties	content complex
children	AxisPoint Direction
annotation	documentation The Axis element gives the nominal location of the start point and the nominal unit threaded feature axis vector. The direction of the axis vector points into the threaded feature.

complexType ThreadedFeatureRecompType

diagram	 The diagram shows a box labeled 'ThreadedFeatureRecompType' connected to a dashed box labeled 'ConstructionMethodBaseType (extension)'. Inside this dashed box, there is a connector box (a circle with three dots) that branches into two boxes: 'NominalsCalculated' (which is itself in a dashed box) and 'BaseFeaturePointList'.
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeaturePointList
used by	element ThreadedFeatureConstructionMethodType/Recompensated
annotation	documentation The ThreadedFeatureRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit threaded feature through the measurement points of base features.

element ThreadedFeatureRecompType/BaseFeaturePointList

diagram	 The diagram shows a box labeled 'BaseFeaturePointList' connected to a dashed box labeled 'BaseFeaturePointListType'. Inside this dashed box, there is a connector box (a circle with three dots) that connects to a box labeled 'BaseFeaturePointSet'. A '1..∞' cardinality constraint is shown near the 'BaseFeaturePointSet' box.
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	documentation The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit threaded feature. The total number of points in the BaseFeaturePointSets in the list must be 6 or greater.

complexType ThreadedFeatureTransformType

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseThreadedFeature Transformation
used by	element ThreadedFeatureConstructionMethodType/Transform
annotation	<p>documentation</p> <p>The ThreadedFeatureTransformType defines a threaded feature construction by the transformation of a threaded feature through the specified nominal or actual coordinate system.</p>

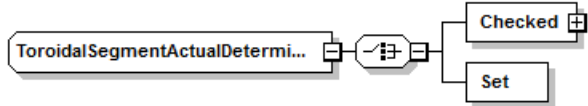
element ThreadedFeatureTransformType/BaseThreadedFeature

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The BaseThreadedFeature element identifies the threaded feature to be transformed.</p>

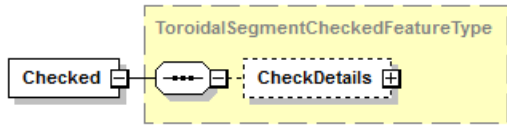
element ThreadedFeatureTransformType/Transformation

diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	<p>documentation</p> <p>The Transformation element identifies the coordinate system to be used to transform the threaded feature.</p>


complexType **ToroidalSegmentActualDeterminationType**

diagram	
children	Checked Set
used by	element ToroidalSegmentFeatureItem/DeterminationMode
annotation	documentation The ToroidalSegmentActualDeterminationType defines how the toroidal segment actual is determined, either by being set or by being checked (measured or constructed).

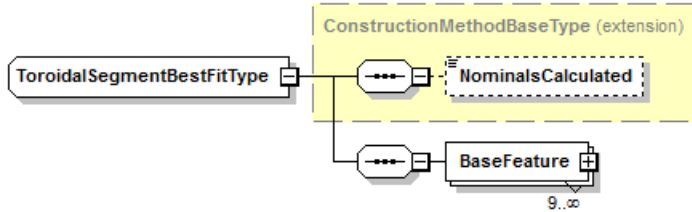
element **ToroidalSegmentActualDeterminationType/Checked**

diagram	
type	ToroidalSegmentCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	documentation The Checked element signifies that the toroidal segment is checked from actual data, either measured or constructed.

element **ToroidalSegmentActualDeterminationType/Set**

diagram	
type	SetFeatureType
properties	content complex
annotation	documentation The Set element signifies that the toroidal segment actual is set to its nominal value.

complexType **ToroidalSegmentBestFitType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element ToroidalSegmentConstructionMethodType/BestFit

annotation	<p>documentation</p> <p>The ToroidalSegmentBestFitType defines the information for a best-fit toroidal segment which includes a list of point-reducible base features; the points to which those features reduce are used in the best-fit construction of the toroidal segment.</p>
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element **ToroidalSegmentBestFitType/BaseFeature**

diagram	
type	SequencedBaseFeatureType
properties	minOcc 9 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	<p>documentation</p> <p>Each BaseFeature element identifies a base feature to be used for the construction of a toroidal segment. The number of base features must be 9 or greater.</p>

complexType **ToroidalSegmentCastType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element ToroidalSegmentConstructionMethodType/Cast
annotation	<p>documentation</p> <p>The ToroidalSegmentCastType defines the cast of another feature type to a toroidal segment. The location, axis and sizes are copied from the base feature.</p>

element **ToroidalSegmentCastType/BaseFeature**

diagram	
type	BaseFeatureType
properties	content complex

children	ReferencedComponent FeatureItemId
annotation	documentation The BaseFeature element identifies the base feature to be cast to a toroidal segment.

complexType **ToroidalSegmentCheckedFeatureType**

diagram	
children	CheckDetails
used by	element ToroidalSegmentActualDeterminationType/Checked
annotation	documentation The ToroidalSegmentCheckedFeatureType defines that a toroidal segment feature is checked.

element **ToroidalSegmentCheckedFeatureType/CheckDetails**

diagram	
type	ToroidalSegmentCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the toroidal segment check (measurement or construction).

complexType **ToroidalSegmentCheckedType**

diagram	
children	Measured Constructed
used by	element ToroidalSegmentCheckedFeatureType/CheckDetails
annotation	documentation The ToroidalSegmentCheckedType defines how the toroidal segment actual is checked, either by measurement or by construction.

element **ToroidalSegmentCheckedType/Measured**

diagram	
type	MeasuredFeatureType

properties	content complex
children	PointList
annotation	documentation The Measured element signifies that the toroidal segment is measured.

element **ToroidalSegmentCheckedType/Constructed**

diagram	
type	ToroidalSegmentConstructionMethodType
properties	content complex
children	BestFit Recompensated Copy Cast Transform
annotation	documentation The Constructed element signifies that the toroidal segment is constructed.

complexType **ToroidalSegmentConstructionMethodType**

diagram	
children	BestFit Recompensated Copy Cast Transform
used by	element ToroidalSegmentCheckedType/Constructed
annotation	documentation The ToroidalSegmentConstructionMethodType defines the method for constructing a unique nominal or actual toroidal segment feature.

element **ToroidalSegmentConstructionMethodType/BestFit**

diagram	<p>The diagram shows a 'BestFit' element connected to a dashed box labeled 'ToroidalSegmentBestFitType'. Inside the box, there are two sub-elements: 'NominalsCalculated' and 'BaseFeature'. The 'BaseFeature' element has a range indicator '9..∞' next to it.</p>
type	ToroidalSegmentBestFitType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	<p>documentation</p> <p>The BestFit element describes the best-fit construction of a toroidal segment from 9 or more point-reducible base features. This element is in an optional choice.</p>

element **ToroidalSegmentConstructionMethodType/Recompensated**

diagram	<p>The diagram shows a 'Recompensated' element connected to a dashed box labeled 'ToroidalSegmentRecompType'. Inside the box, there are two sub-elements: 'NominalsCalculated' and 'BaseFeaturePointList'.</p>
type	ToroidalSegmentRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	<p>documentation</p> <p>The Recompensated element describes the re-compensated-for- probe-size best-fit construction of a toroidal segment from 9 or more base feature points. This element is in an optional choice.</p>

element **ToroidalSegmentConstructionMethodType/Copy**

diagram	<p>The diagram shows a 'Copy' element connected to a dashed box labeled 'ToroidalSegmentCopyType'. Inside the box, there are two sub-elements: 'NominalsCalculated' and 'BaseToroidalSegment'.</p>
type	ToroidalSegmentCopyType
properties	content complex
children	NominalsCalculated BaseToroidalSegment
annotation	<p>documentation</p> <p>The Copy element describes the construction of a toroidal segment by the copying of a base toroidal segment. This element is in an optional choice. This element is in an optional choice.</p>

element **ToroidalSegmentConstructionMethodType/Cast**

diagram	<p>The diagram shows a 'Cast' element connected to a dashed box labeled 'ToroidalSegmentCastType'. Inside this box, there are two sub-elements: 'NominalsCalculated' (indicated as optional with a dashed border) and 'BaseFeature' (indicated as mandatory with a solid border and a plus sign).</p>
type	ToroidalSegmentCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	<p>documentation</p> <p>The Cast element describes the construction of a toroidal segment by the casting of a base feature. This element is in an optional choice.</p>

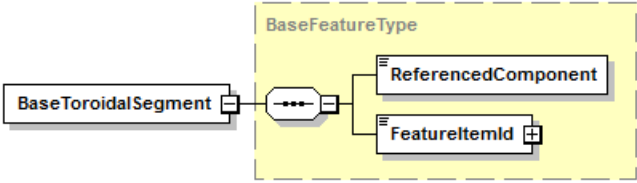
element **ToroidalSegmentConstructionMethodType/Transform**

diagram	<p>The diagram shows a 'Transform' element connected to a dashed box labeled 'ToroidalSegmentTransformType'. Inside this box, there are three sub-elements: 'NominalsCalculated' (optional, dashed border), 'BaseToroidalSegment' (mandatory, solid border with plus sign), and 'Transformation' (mandatory, solid border with plus sign).</p>
type	ToroidalSegmentTransformType
properties	content complex
children	NominalsCalculated BaseToroidalSegment Transformation
annotation	<p>documentation</p> <p>The Transform element describes the construction of a toroidal segment by the transformation of a base toroidal segment. This element is in an optional choice.</p>

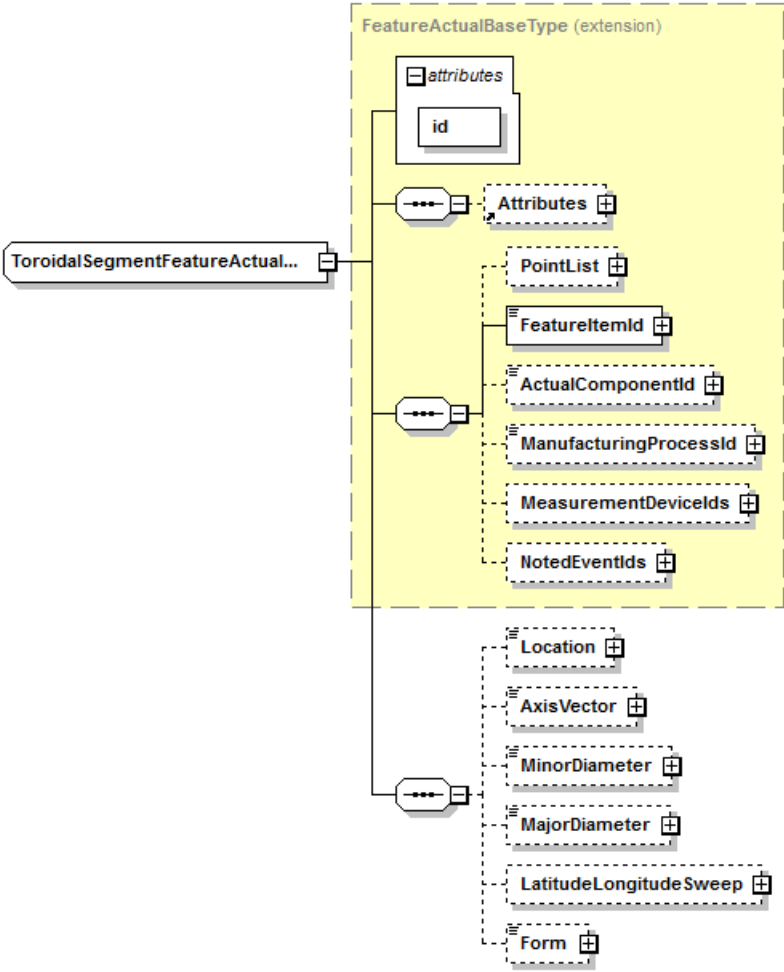
complexType **ToroidalSegmentCopyType**

diagram	<p>The diagram shows 'ToroidalSegmentCopyType' as an extension of 'ConstructionMethodBaseType (extension)'. The base type contains two sub-elements: 'NominalsCalculated' (optional, dashed border) and 'BaseToroidalSegment' (mandatory, solid border with plus sign).</p>
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseToroidalSegment
used by	element ToroidalSegmentConstructionMethodType/Copy
annotation	<p>documentation</p> <p>The ToroidalSegmentCopyType defines a copied toroidal segment construction.</p>

element **ToroidalSegmentCopyType/BaseToroidalSegment**

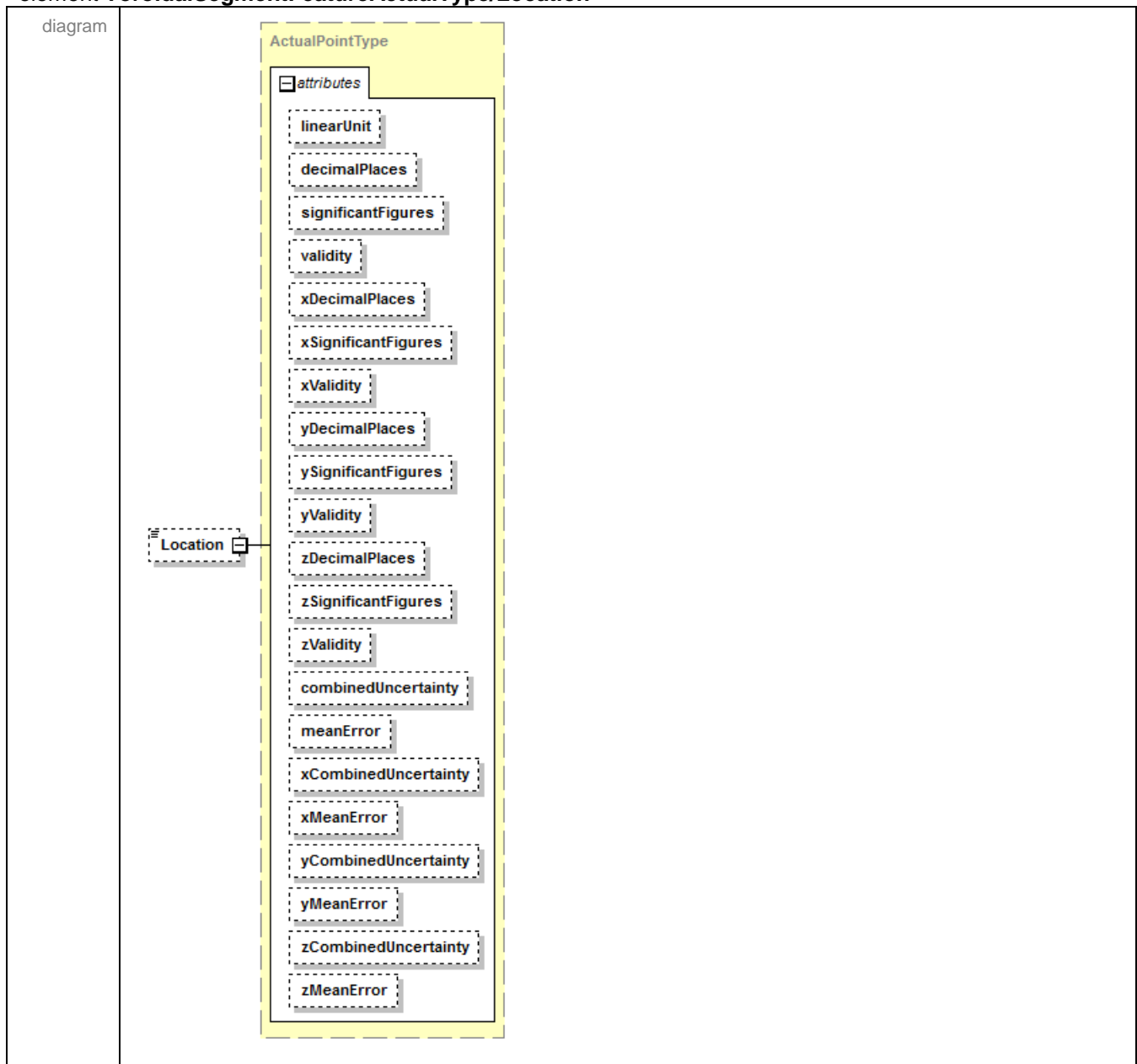
diagram	 <p>The diagram shows a box labeled 'BaseToroidalSegment' connected to a dashed box labeled 'BaseFeatureType'. Inside 'BaseFeatureType', there are two sub-elements: 'ReferencedComponent' and 'FeatureItemId'.</p>
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseToroidalSegment element identifies the toroidal segment to be copied.

complexType **ToroidalSegmentFeatureActualType**

diagram	 <p>The diagram shows a box labeled 'ToroidalSegmentFeatureActual...' connected to a dashed box labeled 'FeatureActualBaseType (extension)'. Inside this box, there is an 'attributes' group containing an 'id' element. Below this, there are two main branches. The first branch contains a dashed box with 'Attributes', 'PointList', 'FeatureItemId', 'ActualComponentId', 'ManufacturingProcessId', 'MeasurementDeviceIds', and 'NotedEventIds'. The second branch contains a dashed box with 'Location', 'AxisVector', 'MinorDiameter', 'MajorDiameter', 'LatitudeLongitudeSweep', and 'Form'.</p>
type	extension of FeatureActualBaseType
properties	base FeatureActualBaseType
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Location AxisVector MinorDiameter MajorDiameter LatitudeLongitudeSweep Form

used by	element ToroidalSegmentFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ToroidalSegmentFeatureActualType defines the toroidal segment feature actual information for an individual toroidal segment feature.					

element **ToroidalSegmentFeatureActualType/Location**



type	ActualPointType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
	combinedUncertainty	xs:decimal				
	meanError	xs:decimal				
	xCombinedUncertainty	xs:decimal				
	xMeanError	xs:decimal				
	yCombinedUncertainty	xs:decimal				
	yMeanError	xs:decimal				
zCombinedUncertainty	xs:decimal					
zMeanError	xs:decimal					
annotation	documentation The optional Location element is the actual center of the toroidal segment.					

element **ToroidalSegmentFeatureActualType/AxisVector**

diagram						
type	ActualUnitVectorType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional AxisVector element is the actual unit axis vector of the toroidal segment.

element **ToroidalSegmentFeatureActualType/MinorDiameter**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is

	<p>linearUnit xs:token</p>	<p>a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.</p>
annotation	<p>documentation The optional MinorDiameter element is the actual minor diameter of the toroidal segment based on the substitute feature data fitting algorithm setting.</p>	

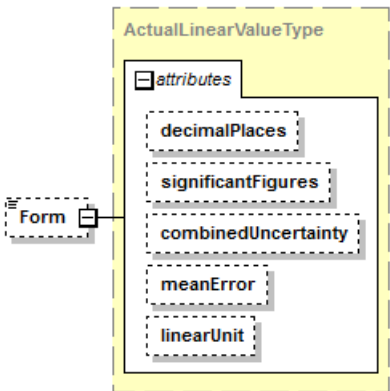
element **ToroidalSegmentFeatureActualType/MajorDiameter**

diagram						
type	ActualLinearValueType					
properties	minOcc	0	maxOcc	1	content	complex
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	<p>documentation The optional MajorDiameter element is the actual major diameter of the toroidal segment based on the substitute feature data fitting algorithm setting.</p>					

element **ToroidalSegmentFeatureActualType/LatitudeLongitudeSweep**

diagram	
type	LatitudeLongitudeSweepType
properties	minOcc 0 maxOcc 1 content complex
children	DirMeridianPrime DomainLatitude DomainLongitude
annotation	documentation The optional LatitudeLongitudeSweep element gives the extent of an actual toroidal segment feature with angular sweep in two directions analogous to terrestrial latitude and longitude.

element **ToroidalSegmentFeatureActualType/Form**

diagram																															
type	ActualLinearValueType																														
properties	<div>minOcc0</div> <div>maxOcc1</div> <div>contentcomplex</div>																														
attributes	<table><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr><tr><td>decimalPlaces</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr><tr><td>significantFigures</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr><tr><td>combinedUncertainty</td><td>NonNegativeDecimalType</td><td></td><td></td><td></td><td>documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.</td></tr><tr><td>meanError</td><td>NonNegativeDecimalType</td><td></td><td></td><td></td><td>documentation The optional</td></tr></table>	Name	Type	Use	Default	Fixed	Annotation	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.	meanError	NonNegativeDecimalType				documentation The optional
Name	Type	Use	Default	Fixed	Annotation																										
decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.																										
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combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.																										
meanError	NonNegativeDecimalType				documentation The optional																										

	linearUnit xs:token	meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Form element is the form error (toroidicity) of the toroidal segment from a report or an analysis.	

complexType ToroidalSegmentFeatureDefinitionType

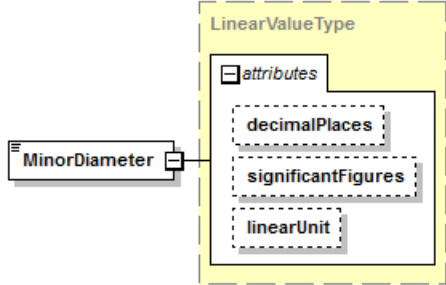
diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes InternalExternal MinorDiameter MajorDiameter					
used by	element ToroidalSegmentFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ToroidalSegmentFeatureDefinitionType defines the toroidal segment feature nominal information that can be common to one or more toroidal segment features.					

element ToroidalSegmentFeatureDefinitionType/InternalExternal

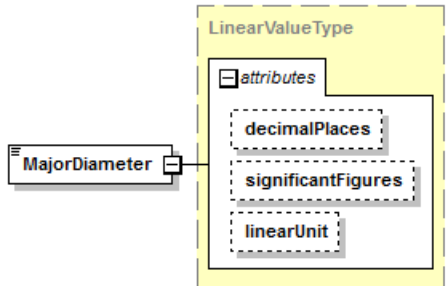
diagram					
type	InternalExternalEnumType				
properties	content simple				
facets	Kind enumeration	Value INTERNAL EXTERNAL	Annotation		

	enumeration NOT_APPLICABLE
annotation	documentation The InternalExternal element indicates whether the feature is internal or external.

element ToroidalSegmentFeatureDefinitionType/MinorDiameter

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The MinorDiameter element is the nominal minor diameter of the toroidal segment.					

element ToroidalSegmentFeatureDefinitionType/MajorDiameter

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation

		The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The MajorDiameter element is the nominal major diameter of the toroidal segment.	

complexType ToroidalSegmentFeatureItem

diagram						
type	extension of FeatureItemBaseType					
properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element ToroidalSegmentFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ToroidalSegmentFeatureItem defines an individual toroidal segment feature. A toroidal segment feature is a partial torus such as the fillet surface between a cylinder and a plane.					

element **ToroidalSegmentFeatureItemType/DeterminationMode**

diagram	
type	ToroidalSegmentActualDeterminationType
properties	content complex
children	Checked Set
annotation	documentation The DeterminationMode element is the means by which the toroidal segment feature actual is determined.

element **ToroidalSegmentFeatureItemType/SubstituteFeatureAlgorithm**

diagram	
type	NonFeatureOfSizeSubstituteFeatureAlgorithmType
properties	minOcc 0 maxOcc 1 content complex
children	NonFeatureOfSizeSubstituteFeatureAlgorithmEnum OtherNonFeatureOfSizeSubstituteFeatureAlgorithm
annotation	documentation The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the toroidal segment feature.

complexType **ToroidalSegmentFeatureNominalType**

diagram						
type	extension of FeatureNominalBaseType					
properties	base FeatureNominalBaseType					
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Location AxisVector LatitudeLongitudeSweep					
used by	element ToroidalSegmentFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The ToroidalSegmentFeatureNominalType defines the toroidal segment feature nominal information for an individual toroidal segment feature.					

element **ToroidalSegmentFeatureNominalType/Location**

diagram						
type	PointType					
properties	content	complex				
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation	The Location element is the nominal center of the toroidal segment.				

element **ToroidalSegmentFeatureNominalType/AxisVector**

diagram						
type	UnitVectorType					
properties	content	complex				
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation	The AxisVector element is the nominal unit axis vector of the toroidal segment.				

element **ToroidalSegmentFeatureNominalType/LatitudeLongitudeSweep**

diagram	
type	LatitudeLongitudeSweepType
properties	content complex
children	DirMeridianPrime DomainLatitude DomainLongitude
annotation	<p>documentation</p> <p>The LatitudeLongitudeSweep element is the extent of the toroidal segment feature with angular sweep in two directions analogous to terrestrial latitude and longitude.</p>

complexType **ToroidalSegmentRecompType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeaturePointList
used by	element ToroidalSegmentConstructionMethodType/Recompensated
annotation	<p>documentation</p> <p>The ToroidalSegmentRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit toroidal segment through the measurement points of base features.</p>

element **ToroidalSegmentRecompType/BaseFeaturePointList**

diagram	
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	<p>documentation</p> <p>The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit toroidal segment. The total number of points in the BaseFeaturePointSets in the list must be 9 or greater.</p>

complexType **ToroidalSegmentTransformType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseToroidalSegment Transformation
used by	element ToroidalSegmentConstructionMethodType/Transform
annotation	documentation The ToroidalSegmentTransformType defines a toroidal segment construction by the transformation of a toroidal segment through the specified nominal or actual coordinate system.

element **ToroidalSegmentTransformType/BaseToroidalSegment**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseToroidalSegment element identifies the toroidal segment to be transformed.

element **ToroidalSegmentTransformType/Transformation**

diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	documentation The Transformation element identifies the coordinate system to be used to transform the toroidal segment.

complexType **TorusActualDeterminationType**

diagram	
children	Checked Set
used by	element TorusFeatureItem/DeterminationMode
annotation	documentation The TorusActualDeterminationType defines how the torus actual is determined, either by being set or by being checked (measured or constructed).

element **TorusActualDeterminationType/Checked**

diagram	
type	TorusCheckedFeatureType
properties	content complex
children	CheckDetails
annotation	documentation The Checked element signifies that the torus is checked from actual data, either measured or constructed.

element **TorusActualDeterminationType/Set**

diagram	
type	SetFeatureType
properties	content complex
annotation	documentation The Set element signifies that the torus actual is set to its nominal value.

complexType **TorusBestFitType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element TorusConstructionMethodType/BestFit
annotation	documentation The TorusBestFitType defines the information for a best-fit torus which includes a list of point-reducible base features; the

	points to which those features reduce are used in the best-fit construction of the torus.
--	---

element TorusBestFitType/BaseFeature

diagram	
type	SequencedBaseFeatureType
properties	minOcc 9 maxOcc unbounded content complex
children	ReferencedComponent FeatureItemId SequenceNumber
annotation	documentation Each BaseFeature element identifies a base feature to be used for the construction of a torus. The number of base features must be 9 or greater.

complexType TorusCastType

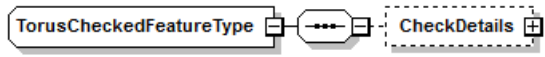
diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseFeature
used by	element TorusConstructionMethodType/Cast
annotation	documentation The TorusCastType defines the cast of another feature type to a torus. The location and size are copied from the base feature.

element TorusCastType/BaseFeature

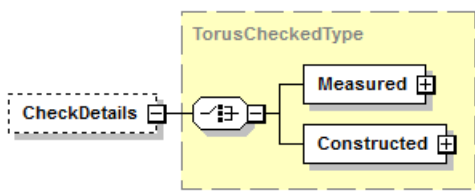
diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId

annotation	documentation The BaseFeature element identifies the base feature to be cast to a torus.
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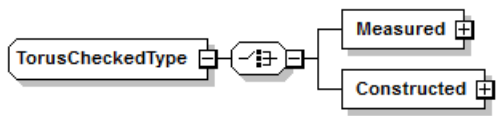
complexType TorusCheckedFeatureType

diagram	
children	CheckDetails
used by	element TorusActualDeterminationType/Checked
annotation	documentation The TorusCheckedFeatureType defines that a torus feature is checked.

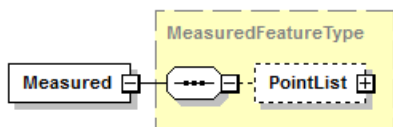
element TorusCheckedFeatureType/CheckDetails

diagram	
type	TorusCheckedType
properties	minOcc 0 maxOcc 1 content complex
children	Measured Constructed
annotation	documentation The optional CheckDetails element gives details about the torus check (measurement or construction).

complexType TorusCheckedType

diagram	
children	Measured Constructed
used by	element TorusCheckedFeatureType/CheckDetails
annotation	documentation The TorusCheckedType defines how the torus actual is checked, either by measurement or by construction.

element TorusCheckedType/Measured

diagram	
type	MeasuredFeatureType
properties	content complex
children	PointList

annotation	documentation The Measured element signifies that the torus is measured.
------------	---

element **TorusCheckedType/Constructed**

diagram	
type	TorusConstructionMethodType
properties	content complex
children	BestFit Recompensated Copy Cast Transform FromScan
annotation	documentation The Constructed element signifies that the torus is constructed.

complexType **TorusConstructionMethodType**

diagram	
children	BestFit Recompensated Copy Cast Transform FromScan
used by	element TorusCheckedType/Constructed
annotation	documentation The TorusConstructionMethodType defines the method for constructing a unique nominal or actual torus feature.

element **TorusConstructionMethodType/BestFit**

diagram	<p>The diagram shows a 'BestFit' element connected to a dashed box labeled 'TorusBestFitType'. Inside this box, there are two sub-elements: 'NominalsCalculated' (indicated by a dashed border) and 'BaseFeature'. Both are connected to the 'BestFit' element via lines with arrowheads. A value '9..∞' is shown near the 'BaseFeature' element.</p>
type	TorusBestFitType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	<p>documentation</p> <p>The BestFit element describes the best-fit construction of a torus from 3 or more point-reducible base features. This element is in an optional choice.</p>

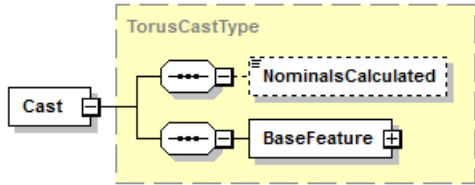
element **TorusConstructionMethodType/Recompensated**

diagram	<p>The diagram shows a 'Recompensated' element connected to a dashed box labeled 'TorusRecompType'. Inside this box, there are two sub-elements: 'NominalsCalculated' (indicated by a dashed border) and 'BaseFeaturePointList'. Both are connected to the 'Recompensated' element via lines with arrowheads.</p>
type	TorusRecompType
properties	content complex
children	NominalsCalculated BaseFeaturePointList
annotation	<p>documentation</p> <p>The Recompensated element describes the re-compensated-for- probe-size best-fit construction of a torus from 9 or more base feature points. This element is in an optional choice.</p>

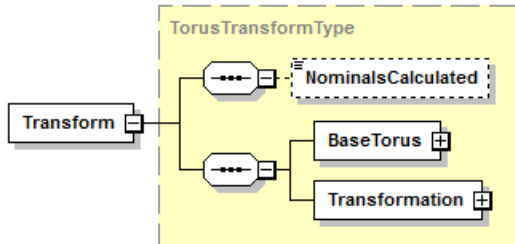
element **TorusConstructionMethodType/Copy**

diagram	<p>The diagram shows a 'Copy' element connected to a dashed box labeled 'TorusCopyType'. Inside this box, there are two sub-elements: 'NominalsCalculated' (indicated by a dashed border) and 'BaseTorus'. Both are connected to the 'Copy' element via lines with arrowheads.</p>
type	TorusCopyType
properties	content complex
children	NominalsCalculated BaseTorus
annotation	<p>documentation</p> <p>The Copy element describes the construction of a torus by the copying of a base torus. This element is in an optional choice.</p>

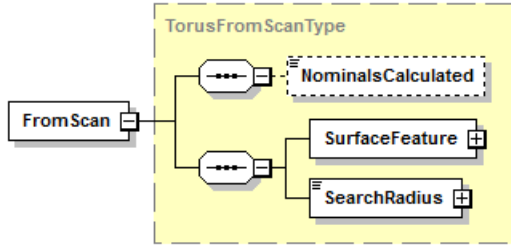
element **TorusConstructionMethodType/Cast**

diagram	 <p>The diagram shows a 'Cast' element on the left, connected by a line to a dashed yellow box labeled 'TorusCastType'. Inside this box, the line splits into two paths. The top path goes through an optional choice connector (a circle with three dots) to a 'NominalsCalculated' element. The bottom path goes through another optional choice connector to a 'BaseFeature' element.</p>
type	TorusCastType
properties	content complex
children	NominalsCalculated BaseFeature
annotation	documentation The Cast element describes the construction of a torus by the casting of a base feature. This element is in an optional choice.

element **TorusConstructionMethodType/Transform**

diagram	 <p>The diagram shows a 'Transform' element on the left, connected by a line to a dashed yellow box labeled 'TorusTransformType'. Inside this box, the line goes through an optional choice connector to a dashed box containing 'NominalsCalculated'. Below this, the line goes through another optional choice connector to a group containing 'BaseTorus' and 'Transformation'.</p>
type	TorusTransformType
properties	content complex
children	NominalsCalculated BaseTorus Transformation
annotation	documentation The Transform element describes the construction of a torus by the transformation of a base torus. This element is in an optional choice.

element **TorusConstructionMethodType/FromScan**

diagram	 <p>The diagram shows a 'FromScan' element on the left, connected by a line to a dashed yellow box labeled 'TorusFromScanType'. Inside this box, the line goes through an optional choice connector to a dashed box containing 'NominalsCalculated'. Below this, the line goes through another optional choice connector to a group containing 'SurfaceFeature' and 'SearchRadius'.</p>
type	TorusFromScanType
properties	content complex
children	NominalsCalculated SurfaceFeature SearchRadius
annotation	documentation The FromScan element describes the construction of a torus from scan data. This element is in an optional choice.

complexType **TorusCopyType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseTorus
used by	element TorusConstructionMethodType/Copy
annotation	documentation The TorusCopyType defines a copied torus construction.

element **TorusCopyType/BaseTorus**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The BaseTorus element identifies the torus to be copied.

complexType **TorusFeatureActualType**

diagram						
type	extension of FeatureActualBaseType					
properties	base FeatureActualBaseType					
children	Attributes PointList FeatureItemId ActualComponentId ManufacturingProcessId MeasurementDeviceIds NotedEventIds Location AxisVector MinorDiameter MajorDiameter LatitudeLongitudeSweep Form					
used by	element TorusFeatureActual					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The TorusFeatureActualType defines the torus feature actual information for an individual torus feature.					

element **TorusFeatureActualType/Location**

diagram						
type	ActualPointType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity	ValidityEnumType
	yDecimalPlaces	xs:nonNegativeInteger
	ySignificantFigures	xs:nonNegativeInteger
	yValidity	ValidityEnumType
	zDecimalPlaces	xs:nonNegativeInteger
	zSignificantFigures	xs:nonNegativeInteger
	zValidity	ValidityEnumType
	combinedUncertainty	xs:decimal
	meanError	xs:decimal
	xCombinedUncertainty	xs:decimal
	xMeanError	xs:decimal
	yCombinedUncertainty	xs:decimal
	yMeanError	xs:decimal
	zCombinedUncertainty	xs:decimal
	zMeanError	xs:decimal
annotation	documentation The optional Location element is the actual center of the torus.	

element **TorusFeatureActualType/AxisVector**

diagram						
type	ActualUnitVectorType					
properties	minOcc 0 maxOcc 1 content complex					
facets	Kind Value Annotation length 3					
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				

	xValidity ValidityEnumType yDecimalPlaces xs:nonNegativeInteger ySignificantFigures xs:nonNegativeInteger yValidity ValidityEnumType zDecimalPlaces xs:nonNegativeInteger zSignificantFigures xs:nonNegativeInteger zValidity ValidityEnumType combinedUncertainty xs:decimal meanError xs:decimal xCombinedUncertainty xs:decimal xMeanError xs:decimal yCombinedUncertainty xs:decimal yMeanError xs:decimal zCombinedUncertainty xs:decimal zMeanError xs:decimal
annotation	documentation The optional AxisVector element is the actual unit axis vector of the torus.

element **TorusFeatureActualType/MinorDiameter**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is

	<p>linearUnit xs:token</p>	<p>a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.</p>
annotation	<p>documentation The optional MinorDiameter element is the actual minor diameter of the torus based on the substitute feature data fitting algorithm setting.</p>	

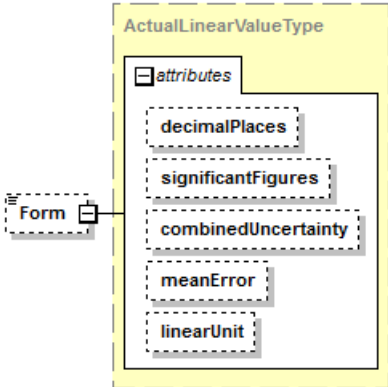
element **TorusFeatureActualType/MinorDiameter**

diagram						
type	ActualLinearValueType					
properties	minOcc	0				
	maxOcc	1				
	content	complex				
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.
	meanError	NonNegativeDecimalType				documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	<p>documentation The optional MajorDiameter element is the actual major diameter of the torus based on the substitute feature data fitting algorithm setting.</p>					

element **TorusFeatureActualType/LatitudeLongitudeSweep**

diagram	
type	LatitudeLongitudeSweepType
properties	minOcc 0 maxOcc 1 content complex
children	DirMeridianPrime DomainLatitude DomainLongitude
annotation	documentation The optional LatitudeLongitudeSweep element gives the extent of an actual partial torus with angular sweep in two directions analogous to terrestrial latitude and longitude.

element **TorusFeatureActualType/Form**

diagram																															
type	ActualLinearValueType																														
properties	<div>minOcc0</div> <div>maxOcc1</div> <div>contentcomplex</div>																														
attributes	<table><tr><th>Name</th><th>Type</th><th>Use</th><th>Default</th><th>Fixed</th><th>Annotation</th></tr><tr><td>decimalPlaces</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr><tr><td>significantFigures</td><td>xs:nonNegativeInteger</td><td></td><td></td><td></td><td>documentation See documentation of SpecifiedDecimalType.</td></tr><tr><td>combinedUncertainty</td><td>NonNegativeDecimalType</td><td></td><td></td><td></td><td>documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.</td></tr><tr><td>meanError</td><td>NonNegativeDecimalType</td><td></td><td></td><td></td><td>documentation The optional</td></tr></table>	Name	Type	Use	Default	Fixed	Annotation	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.	combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.	meanError	NonNegativeDecimalType				documentation The optional
Name	Type	Use	Default	Fixed	Annotation																										
decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.																										
significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.																										
combinedUncertainty	NonNegativeDecimalType				documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.																										
meanError	NonNegativeDecimalType				documentation The optional																										

	linearUnit xs:token	meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType. documentation The optional linearUnit attribute defines the unit used by LinearValueType.
annotation	documentation The optional Form element is the form error (toroidicity) of the torus from a report or an analysis.	

complexType TorusFeatureDefinitionType

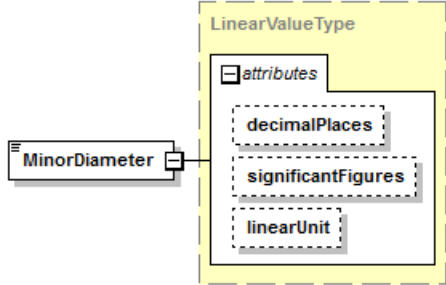
diagram						
type	extension of FeatureDefinitionBaseType					
properties	base FeatureDefinitionBaseType					
children	Attributes InternalExternal MinorDiameter MajorDiameter					
used by	element TorusFeatureDefinition					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The TorusFeatureDefinitionType defines the torus feature nominal information that can be common to one or more torus features.					

element TorusFeatureDefinitionType/InternalExternal

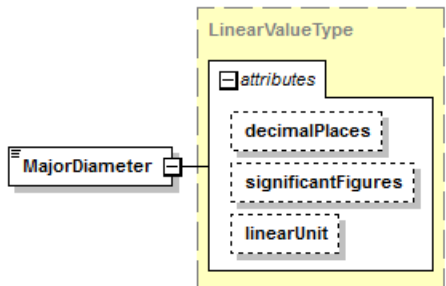
diagram					
type	InternalExternalEnumType				
properties	content simple				
facets	Kind enumeration	Value INTERNAL enumeration EXTERNAL	Annotation		

	enumeration NOT_APPLICABLE
annotation	documentation The InternalExternal element indicates whether the feature is internal or external.

element TorusFeatureDefinitionType/MinorDiameter

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The MinorDiameter element is the nominal minor diameter of the torus.					

element TorusFeatureDefinitionType/MajorDiameter

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation

		The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The MajorDiameter element is the nominal major diameter of the torus.	

complexType TorusFeatureItem

diagram						
type	extension of FeatureItemBaseType					
properties	base FeatureItemBaseType					
children	Attributes FeatureNominalId ParentFeatureItemId FeatureName QPid NotableEventIds CoordinateSystemId DeterminationMode SubstituteFeatureAlgorithm					
used by	element TorusFeatureItem					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The TorusFeatureItem defines an individual torus feature.					

element **TorusFeatureItemType/DeterminationMode**

diagram	
type	TorusActualDeterminationType
properties	content complex
children	Checked Set
annotation	documentation The DeterminationMode element is the means by which the torus feature actual is determined.

element **TorusFeatureItemType/SubstituteFeatureAlgorithm**

diagram	
type	FeatureOfSizeSubstituteFeatureAlgorithmType
properties	minOcc 0 maxOcc 1 content complex
children	FeatureOfSizeSubstituteFeatureAlgorithmEnum OtherFeatureOfSizeSubstituteFeatureAlgorithm
annotation	documentation The optional SubstituteFeatureAlgorithm element is the substitute feature data fitting algorithm for the torus feature.

complexType **TorusFeatureNominalType**

diagram						
type	extension of FeatureNominalBaseType					
properties	base FeatureNominalBaseType					
children	Attributes Name PointList FeatureDefinitionId EntityInternalIds EntityExternalIds Location AxisVector LatitudeLongitudeSweep					
used by	element TorusFeatureNominal					
attributes	Name id	Type QIFIdType	Use required	Default	Fixed	Annotation documentation The id attribute is the QIF id of the feature, used for referencing.
annotation	documentation The TorusFeatureNominalType defines the torus feature nominal information for an individual torus feature.					

element **TorusFeatureNominalType/Location**

diagram						
type	PointType					
properties	content complex					
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation The Location element is the nominal center of the torus.					

element **TorusFeatureNominalType/AxisVector**

diagram						
type	UnitVectorType					
properties	content	complex				
facets	Kind	Value	Annotation			
	length	3				
attributes	Name	Type	Use	Default	Fixed	Annotation
	linearUnit	xs:token				
	decimalPlaces	xs:nonNegativeInteger				
	significantFigures	xs:nonNegativeInteger				
	validity	ValidityEnumType				
	xDecimalPlaces	xs:nonNegativeInteger				
	xSignificantFigures	xs:nonNegativeInteger				
	xValidity	ValidityEnumType				
	yDecimalPlaces	xs:nonNegativeInteger				
	ySignificantFigures	xs:nonNegativeInteger				
	yValidity	ValidityEnumType				
	zDecimalPlaces	xs:nonNegativeInteger				
	zSignificantFigures	xs:nonNegativeInteger				
	zValidity	ValidityEnumType				
annotation	documentation	The AxisVector element is the nominal unit axis vector of the torus.				

element **TorusFeatureNominalType/LatitudeLongitudeSweep**

diagram	
type	LatitudeLongitudeSweepType
properties	minOcc 0 maxOcc 1 content complex
children	DirMeridianPrime DomainLatitude DomainLongitude
annotation	documentation The optional LatitudeLongitudeSweep element gives extent of a partial torus with angular sweep in two directions analogous to terrestrial latitude and longitude.

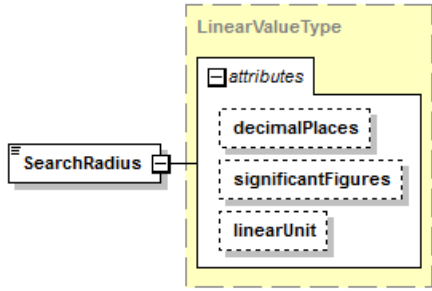
complexType **TorusFromScanType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated SurfaceFeature SearchRadius
used by	element TorusConstructionMethodType/FromScan
annotation	documentation The TorusFromScanType defines a torus feature construction by the retrieval of a torus feature from a scanned surface feature (point cloud).

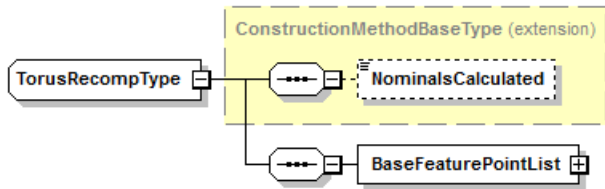
element **TorusFromScanType/SurfaceFeature**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	documentation The SurfaceFeature element identifies the scanned surface feature from which the torus is retrieved.

element **TorusFromScanType/SearchRadius**

diagram						
type	LinearValueType					
properties	content complex					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	linearUnit	xs:token				documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.
annotation	documentation The SearchRadius element is the radius around the nominal feature, wherein the actual feature can be expected. The SearchRadius is the radius added to and subtracted from the nominal torus minor radius defining a toroidal shell. All scanned points within this toroidal shell are used for the retrieval of the feature. The toroidal shell's axis is defined by the torus feature's direction, the toroidal shell's axis passes through the torus feature's center point. The toroidal shell is evenly disposed about the nominal torus.					

complexType **TorusRecompType**

diagram						
type	extension of ConstructionMethodBaseType					
properties	base ConstructionMethodBaseType					
children	NominalsCalculated BaseFeaturePointList					
used by	element TorusConstructionMethodType/Recompensated					
annotation	documentation The TorusRecompType defines a list of base feature points for construction of a re-compensated-for-probe-size best-fit torus through the measurement points of base features.					

element **TorusRecompType/BaseFeaturePointList**

diagram	
type	BaseFeaturePointListType
properties	content complex
children	BaseFeaturePointSet
annotation	<p>documentation</p> <p>The BaseFeaturePointList element gives a list of sets of points for construction of a re-compensated-for-probe-size best-fit torus. The total number of points in the BaseFeaturePointSets in the list must be 9 or greater.</p>

complexType **TorusTransformType**

diagram	
type	extension of ConstructionMethodBaseType
properties	base ConstructionMethodBaseType
children	NominalsCalculated BaseTorus Transformation
used by	element TorusConstructionMethodType/Transform
annotation	<p>documentation</p> <p>The TorusTransformType defines a torus construction by the transformation of a torus through the specified nominal or actual coordinate system.</p>

element **TorusTransformType/BaseTorus**

diagram	
type	BaseFeatureType
properties	content complex
children	ReferencedComponent FeatureItemId
annotation	<p>documentation</p> <p>The BaseTorus element identifies the torus to be transformed.</p>

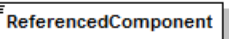
element **TorusTransformType/Transformation**

diagram	
type	TransformationReferenceType
properties	content complex
children	ReferencedComponent CoordinateSystemId SequenceNumber
annotation	<p>documentation</p> <p>The Transformation element identifies the coordinate system to be used to transform the torus.</p>

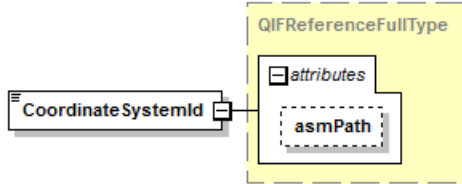
complexType **TransformationReferenceType**

diagram	
children	ReferencedComponent CoordinateSystemId SequenceNumber
used by	<p>elements</p> <p>ArcTransformType/Transformation CircleTransformType/Transformation ConeTransformType/Transformation ConicalSegmentTransformType/Transformation CuboidTransformType/Transformation CylinderTransformType/Transformation CylindricalSegmentTransformType/Transformation EdgePointTransformType/Transformation EllipseTransformType/Transformation ElongatedCylinderTransformType/Transformation ExtrudedCrossSectionTransformType/Transformation LineTransformType/Transformation OppositeLinesTransformType/Transformation OppositePlanesTransformType/Transformation PlaneTransformType/Transformation PointDefinedCurveTransformType/Transformation PointDefinedSurfaceTransformType/Transformation PointFeatureTransformType/Transformation SphereTransformType/Transformation SphericalSegmentTransformType/Transformation SurfaceOfRevolutionTransformType/Transformation ThreadedFeatureTransformType/Transformation ToroidalSegmentTransformType/Transformation TorusTransformType/Transformation</p>
annotation	<p>documentation</p> <p>The TransformationReferenceType defines a component of a coordinate system to be used in a transform-by construction.</p>

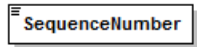
element **TransformationReferenceType/ReferencedComponent**

diagram										
type	ReferencedComponentEnumType									
properties	content simple									
facets	<table><tr><td>Kind</td><td>Value</td><td>Annotation</td></tr><tr><td>enumeration</td><td>NOMINAL</td><td></td></tr><tr><td>enumeration</td><td>ACTUAL</td><td></td></tr></table>	Kind	Value	Annotation	enumeration	NOMINAL		enumeration	ACTUAL	
Kind	Value	Annotation								
enumeration	NOMINAL									
enumeration	ACTUAL									
annotation	<p>documentation</p> <p>The ReferencedComponent element indicates whether the actual or nominal component of this coordinate system is referenced.</p>									

element **TransformationReferenceType/CoordinateSystemId**

diagram						
type	QIFReferenceFullType					
properties	content complex					
attributes	Name asmPath	Type QIFIdType	Use	Default	Fixed	Annotation documentation The optional asmPath attribute is an id which must be used for locating of the assembly path within the AsmPaths. The assembly path (instantiation chain) unambiguously identifies a model entity within an assembly.
annotation	documentation The CoordinateSystemId element is the QIF id of the coordinate system used in a feature transform construction.					

element **TransformationReferenceType/SequenceNumber**

diagram						
type	xs:positiveInteger					
properties	content simple					
annotation	documentation The SequenceNumber element is an ordinal number defining the order of the base feature in the construction.					