

Data dictionary for QIF Library Units.xsd (normative)

schema location: **..\QIFLibrary\Units.xsd**
attributeFormDefault: **unqualified**
elementFormDefault: **qualified**
targetNamespace: **http://qifstandards.org/xsd/qif2**

Complex types

[ActualAngularValueType](#)
[ActualAreaValueType](#)
[ActualDecimalType](#)
[ActualForceValueType](#)
[ActualLinearValueType](#)
[ActualMassValueType](#)
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[AngularUnitType](#)
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[ForceUnitType](#)
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[UnitConversionType](#)
[UserDefinedUnitsType](#)
[UserDefinedUnitType](#)
[UserDefinedUnitValueType](#)

Simple types

[NonNegativeDecimalType](#)
[PositiveDecimalType](#)

complexType **ActualAngularValueType**

diagram						
type	extension of ActualDecimalType					
properties	base ActualDecimalType					
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 ActualAngularValueType is an ActualDecimalType with an optional angularUnit attribute that identifies the unit being used by its UnitName. If no value for the attribute is given in an instance file when an angle value is given, the unit type is the AngularUnit specified in the PrimaryUnits element of a FileUnits element, if that specification exists, and radians if not.					

attribute **ActualAngularValueType/@angularUnit**

type	xs:token
annotation	documentation The optional angularUnit attribute defines the unit used by ActualAngularValueType.

complexType **ActualAreaValueType**

diagram	<pre> classDiagram class ActualAreaValueType { areaUnit } class ActualDecimalType { decimalPlaces significantFigures combinedUncertainty meanError } ActualAreaValueType -- > ActualDecimalType </pre>					
type	extension of ActualDecimalType					
properties	base ActualDecimalType					
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.
	areaUnit	xs:token				documentation The optional areaUnit attribute defines the unit used by ActualAreaValueType.
annotation	documentation The ActualAreaValueType is an ActualDecimalType with an optional areaUnit attribute that identifies the unit being used by its UnitName. If no value for the attribute is given in an instance file when an area value is given, the unit type is the AreaUnit specified in the PrimaryUnits element of a FileUnits element, if that specification exists, and square meters if not.					

attribute **ActualAreaValueType/@areaUnit**

type	xs:token
annotation	documentation The optional areaUnit attribute defines the unit used by ActualAreaValueType.

complexType **ActualDecimalType**

diagram						
type	extension of SpecifiedDecimalType					
properties	base SpecifiedDecimalType					
used by	complexTypes	ActualAngularValueType ActualAreaValueType ActualForceValueType ActualLinearValueType ActualMassValueType ActualPressureValueType ActualSpeedValueType ActualTemperatureValueType ActualTimeValueType ActualUserDefinedUnitValueType				
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.
annotation	documentation An ActualDecimalType defines a SpecifiedDecimalType with two additional optional attributes: meanError and combinedUncertainty. These attributes should either both be used or both be omitted.					

attribute **ActualDecimalType/@combinedUncertainty**

type	NonNegativeDecimalType		
facets	Kind	Value	Annotation
	minInclusive	0	
annotation	documentation The optional combinedUncertainty attribute is a value expressing the combined uncertainty assigned to the SpecifiedDecimalType.		

attribute **ActualDecimalType/@meanError**

type	NonNegativeDecimalType		
facets	Kind	Value	Annotation
	minInclusive	0	

annotation	documentation The optional meanError attribute is a value expressing the mean error assigned to the SpecifiedDecimalType.
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complexType **ActualForceValueType**

diagram						
type	extension of ActualDecimalType					
properties	base ActualDecimalType					
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.
	forceUnit	xs:token				documentation The optional forceUnit attribute defines the unit used by ActualForceValueType.
annotation	documentation The ActualForceValueType is an ActualDecimalType with an optional forceUnit attribute that identifies the unit being used by its UnitName. If no value for the attribute is given in an instance file when a force value is given, the unit type is the ForceUnit specified in the PrimaryUnits element of a FileUnits element, if that specification exists, and newtons if not.					

attribute **ActualForceValueType/@forceUnit**

type	xs:token
annotation	documentation The optional forceUnit attribute defines the unit used by ActualForceValueType.

complexType **ActualLinearValueType**

diagram	<pre> classDiagram class ActualLinearValueType { linearUnit xs:token } class ActualDecimalType { decimalPlaces xs:nonNegativeInteger significantFigures xs:nonNegativeInteger combinedUncertainty NonNegativeDecimalType meanError NonNegativeDecimalType } ActualLinearValueType -- > ActualDecimalType </pre>					
type	extension of ActualDecimalType					
properties	base ActualDecimalType					
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 ActualLinearValueType is an ActualDecimalType with an optional linearUnit attribute that identifies the unit being used by its UnitName. If no value for the attribute is given in an instance file when a length value is given, the unit type is the LinearUnit specified in the PrimaryUnits element of a FileUnits element, if that specification exists, and meters if not.					

attribute **ActualLinearValueType/@linearUnit**

type	xs:token
annotation	documentation The optional linearUnit attribute defines the unit used by LinearValueType.

complexType **ActualMassValueType**

diagram	<pre> classDiagram class ActualMassValueType class ActualDecimalType { decimalPlaces significantFigures combinedUncertainty meanError } ActualMassValueType -- > ActualDecimalType ActualMassValueType --> massUnit </pre>					
type	extension of ActualDecimalType					
properties	base ActualDecimalType					
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.
	massUnit	xs:token				documentation The optional massUnit attribute defines the unit used by ActualMassValueType.
annotation	documentation The ActualMassValueType is an ActualDecimalType with an optional massUnit attribute that identifies the unit being used by its UnitName. If no value for the attribute is given in an instance file when a mass value is given, the unit type is the MassUnit specified in the PrimaryUnits element of a FileUnits element, if that specification exists, and kilograms if not.					

attribute **ActualMassValueType/@massUnit**

type	xs:token
annotation	documentation The optional massUnit attribute defines the unit used by ActualMassValueType.

complexType **ActualPressureValueType**

diagram	<p>The diagram illustrates the relationship between ActualPressureValueType and ActualDecimalType. ActualPressureValueType is shown as a complex type that extends ActualDecimalType. ActualDecimalType (extension) is highlighted in a yellow box and contains four attributes: decimalPlaces, significantFigures, combinedUncertainty, and meanError. ActualPressureValueType has an additional attribute, pressureUnit.</p>					
type	extension of ActualDecimalType					
properties	base ActualDecimalType					
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 .
	pressureUnit	xs:token				documentation The optional pressureUnit attribute defines the UnitName for the ActualPressureValueType .
annotation	documentation The ActualPressureValueType is an ActualDecimalType with an optional pressureUnit attribute that identifies the unit being used by its UnitName. If no value for the attribute is given in an instance file when a pressure value is given, the unit type is the PressureUnit specified in the PrimaryUnits element of a FileUnits element, if that specification exists, and pascals if not.					

attribute **ActualPressureValueType/@pressureUnit**

type	xs:token
annotation	documentation The optional pressureUnit attribute defines the UnitName for the ActualPressureValueType .

complexType **ActualSpeedValueType**

diagram	<pre>classDiagram class ActualSpeedValueType { speedUnit } class ActualDecimalType { decimalPlaces significantFigures combinedUncertainty meanError } ActualSpeedValueType -- > ActualDecimalType</pre>																																									
type	extension of ActualDecimalType																																									
properties	base ActualDecimalType																																									
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 to the SpecifiedDecimalType.</td></tr><tr><td>speedUnit</td><td>xs:token</td><td></td><td></td><td></td><td>documentation The optional speedUnit attribute defines the UnitName for the ActualSpeedValueType.</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 to the SpecifiedDecimalType.	speedUnit	xs:token				documentation The optional speedUnit attribute defines the UnitName for the ActualSpeedValueType.					
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speedUnit	xs:token				documentation The optional speedUnit attribute defines the UnitName for the ActualSpeedValueType.																																					
annotation	<p>documentation</p> <p>The ActualSpeedValueType is an ActualDecimalType with an optional speedUnit attribute that identifies the unit being used by its UnitName. If no value for the attribute is given in an instance file when a speed value is given, the unit type is the SpeedUnit specified in the PrimaryUnits element of a FileUnits element, if that specification exists, and meters per second if not.</p>																																									

attribute **ActualSpeedValueType/@speedUnit**

type	xs:token
annotation	documentation The optional speedUnit attribute defines the UnitName for the ActualSpeedValueType.

complexType **ActualTemperatureValueType**

diagram	<pre>classDiagram class ActualDecimalType { decimalPlaces significantFigures combinedUncertainty meanError } class ActualTemperatureValueType { temperatureUnit } ActualTemperatureValueType -- > ActualDecimalType</pre>																																				
type	extension of ActualDecimalType																																				
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temperatureUnit	xs:token				documentation The optional temperatureUnit attribute defines the UnitName for the TemperatureValueType.																																
annotation	<p>documentation</p> <p>The ActualTemperatureValueType is an ActualDecimalType with an optional temperatureUnit attribute that identifies the unit being used by its UnitName. If no value for the attribute is given in an instance file when a temperature value is given, the unit type is the TemperatureUnit specified in the PrimaryUnits element of a FileUnits element, if that specification exists, and kelvin if not.</p>																																				

attribute **ActualTemperatureValueType/@temperatureUnit**

type	xs:token
annotation	documentation The optional temperatureUnit attribute defines the UnitName for the TemperatureValueType.

complexType **ActualTimeValueType**

diagram	<pre>classDiagram class ActualTimeValueType { timeUnit } class ActualDecimalType { decimalPlaces significantFigures combinedUncertainty meanError } ActualTimeValueType -- > ActualDecimalType</pre>																																									
type	extension of ActualDecimalType																																									
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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 a value expressing the mean error assigned to the SpecifiedDecimalType.																																					
timeUnit	xs:token				documentation The optional timeUnit attribute defines the UnitName for the TimeValueType.																																					
annotation	<div>documentation</div> <div>The ActualTimeValueType is an ActualDecimalType with an optional timeUnit attribute that identifies the unit being used by its UnitName. If no value for the attribute is given in an instance file when a time value is given, the unit type is the TimeUnit specified in the PrimaryUnits element of a FileUnits element, if that specification exists, and seconds if not.</div>																																									

attribute **ActualTimeValueType/@timeUnit**

type	xs:token
annotation	documentation The optional timeUnit attribute defines the UnitName for the TimeValueType.

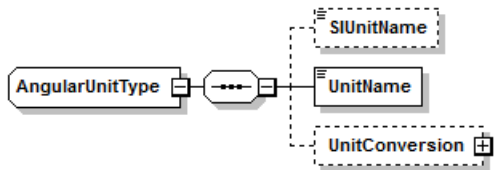
complexType **ActualUserDefinedUnitValueType**

diagram						
type	extension of ActualDecimalType					
properties	base ActualDecimalType					
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.
	unitName	xs:token	required			documentation The (required) UnitName attribute is the unit name for the UserDefinedUnitValueType.
annotation	documentation The ActualUserDefinedUnitValueType defines an ActualDecimalType with a required unitName attribute that identifies the unit being used by its UnitName. The units used in an ActualUserDefinedUnitValueType must be UserDefinedUnits.					

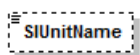
attribute **ActualUserDefinedUnitValueType/@unitName**

type	xs:token
properties	use required
annotation	documentation The (required) UnitName attribute is the unit name for the UserDefinedUnitValueType.


complexType **AngularUnitType**

diagram	
children	SIUnitName UnitName UnitConversion
used by	elements PrimaryUnitsType/AngularUnit OtherUnitsType/AngularUnit
annotation	documentation The AngularUnitType defines the units to be used in the expression of angular values.

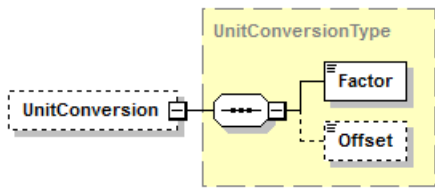
element **AngularUnitType/SIUnitName**

diagram	
type	xs:token
properties	minOcc 0 maxOcc 1 content simple fixed radian
annotation	documentation The optional SIUnitName element is the name of the SI unit of angle. If the element is used, its value must be radian.

element **AngularUnitType/UnitName**

diagram	
type	xs:token
properties	content simple
annotation	documentation The UnitName element is the name for the AngularUnitType.

element **AngularUnitType/UnitConversion**

diagram	
type	UnitConversionType
properties	minOcc 0 maxOcc 1 content complex
children	Factor Offset
annotation	documentation The optional UnitConversion element specifies how an angle value in the named angle unit may be converted to a value in radians.

complexType **AngularValueType**

diagram						
type	extension of SpecifiedDecimalType					
properties	base SpecifiedDecimalType					
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 AngularValueType is a SpecifiedDecimalType with an optional angularUnit attribute that identifies the unit being used by its UnitName. If no value for the attribute is given in an instance file when an angle value is given, the unit type is the AngularUnit specified in the PrimaryUnits element of a FileUnits element, if that specification exists, and radians if not.					

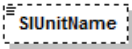
attribute **AngularValueType/@angularUnit**

type	xs:token
annotation	documentation The optional angularUnit attribute defines the UnitName for the AngularValueType.


complexType **AreaUnitType**

diagram						
children	SIUnitName UnitName UnitConversion					
used by	elements PrimaryUnitsType/AreaUnit OtherUnitsType/AreaUnit					
annotation	documentation The AreaUnitType defines the units to be used in the expression of area values.					

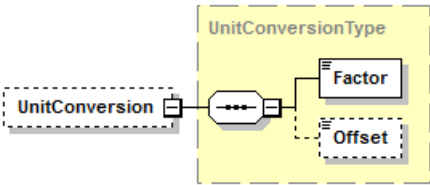
element **AreaUnitType/SIUnitName**

diagram	
type	xs:token
properties	minOcc 0 maxOcc 1 content simple fixed square meter
annotation	documentation The optional SIUnitName element is the name of the SI unit of area. If the element is used, its value must be square meter.

element **AreaUnitType/UnitName**

diagram	
type	xs:token
properties	content simple
annotation	documentation The UnitName element is the name for AreaUnitType.

element **AreaUnitType/UnitConversion**

diagram	
type	<u>UnitConversionType</u>
properties	minOcc 0 maxOcc 1 content complex
children	<u>Factor</u> <u>Offset</u>
annotation	documentation The optional UnitConversion element specifies how an area value in the named area unit may be converted to a value in square meters.

complexType **AreaValueType**

diagram						
type	extension of SpecifiedDecimalType					
properties	base SpecifiedDecimalType					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	areaUnit	xs:token				documentation The optional areaUnit attribute defines the UnitName for the AreaValueType.
annotation	documentation The AreaValueType is a SpecifiedDecimalType with an optional areaUnit attribute that identifies the unit being used by its UnitName. If no value for the attribute is given in an instance file when an area value is given, the unit type is the AreaUnit specified in the PrimaryUnits element of a FileUnits element, if that specification exists, and square meters if not.					

attribute **AreaValueType/@areaUnit**

type	xs:token
annotation	documentation The optional areaUnit attribute defines the UnitName for the AreaValueType.

complexType **FileUnitsType**

diagram						
children	PrimaryUnits OtherUnits UserDefinedUnits					
used by	element FileUnits					
annotation	documentation The FileUnitsType defines the units for quantities found in an instance file. If an instance file includes a FileUnits element, and any quantity of a given unit type appears in the instance file, the corresponding data type must appear in the PrimaryUnits, OtherUnits or UserDefinedUnits of the FileUnitsType. Common XML file checkers will signal an error if this rule is violated.					

element **FileUnitsType/PrimaryUnits**

diagram	<pre> classDiagram class PrimaryUnits class PrimaryUnitsType { AreaUnit AngularUnit ForceUnit LinearUnit MassUnit PressureUnit SpeedUnit TemperatureUnit TimeUnit } PrimaryUnits -- PrimaryUnitsType </pre>
type	PrimaryUnitsType
properties	content complex
children	AreaUnit AngularUnit ForceUnit LinearUnit MassUnit PressureUnit SpeedUnit TemperatureUnit TimeUnit
annotation	documentation The PrimaryUnits element describes the primary set of units.

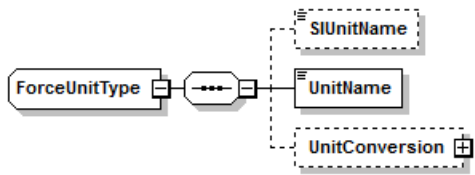
element **FileUnitsType/OtherUnits**

diagram	
type	OtherUnitsType
properties	minOcc 0 maxOcc 1 content complex
children	AreaUnit AngularUnit ForceUnit LinearUnit MassUnit PressureUnit SpeedUnit TemperatureUnit TimeUnit
annotation	documentation The optional OtherUnits element describes a set of other units predefined by QIF types.

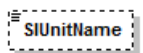
element **FileUnitsType/UserDefinedUnits**

diagram	
type	UserDefinedUnitsType
properties	minOcc 0 maxOcc 1 content complex
children	UserDefinedUnit
annotation	documentation The optional UserDefinedUnits element describes a set of user-defined units.


complexType ForceUnitType

diagram	
children	SIUnitName UnitName UnitConversion
used by	elements PrimaryUnitsType/ForceUnit OtherUnitsType/ForceUnit
annotation	documentation The ForceUnitType defines the units to be used in the expression of force values.

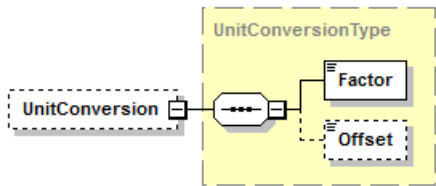
element ForceUnitType/SIUnitName

diagram	
type	xs:token
properties	minOcc 0 maxOcc 1 content simple fixed newton
annotation	documentation The optional SIUnitName element is the name of the SI unit of force. If the element is used, its value must be newton.

element ForceUnitType/UnitName

diagram	
type	xs:token
properties	content simple
annotation	documentation The UnitName element is the name for ForceUnitType.

element ForceUnitType/UnitConversion

diagram	
type	UnitConversionType
properties	minOcc 0 maxOcc 1 content complex
children	Factor Offset
annotation	documentation The optional UnitConversion element specifies how a force value in the named force unit may be converted to a value in newtons.

complexType **ForceValueType**

diagram						
type	extension of SpecifiedDecimalType					
properties	base SpecifiedDecimalType					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	forceUnit	xs:token				documentation The optional forceUnit attribute defines the UnitName for the ForceValueType.
annotation	documentation The ForceValueType is a SpecifiedDecimalType with an optional forceUnit attribute that identifies the unit being used by its UnitName. If no value for the attribute is given in an instance file when a force value is given, the unit type is the ForceUnit specified in the PrimaryUnits element of a FileUnits element, if that specification exists, and newtons if not.					

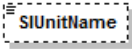
attribute **ForceValueType/@forceUnit**

type	xs:token
annotation	documentation The optional forceUnit attribute defines the UnitName for the ForceValueType.


complexType **LinearUnitType**

diagram						
children	SIUnitName UnitName UnitConversion					
used by	elements PrimaryUnitsType/LinearUnit OtherUnitsType/LinearUnit					
annotation	documentation The LinearUnitType defines the units to be used in the expression of length values.					

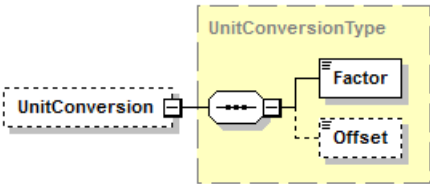
element **LinearUnitType/SIUnitName**

diagram	
type	xs:token
properties	minOcc 0 maxOcc 1 content simple fixed meter
annotation	documentation The optional SIUnitName element is the name of the SI unit of length. If the element is used, its value must be meter.

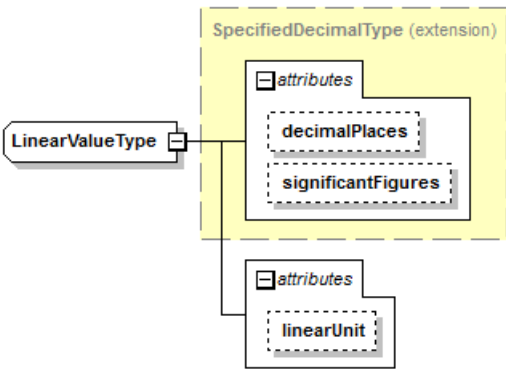
element **LinearUnitType/UnitName**

diagram	
type	xs:token
properties	content simple
annotation	documentation The UnitName element is the name for LinearUnitType.

element **LinearUnitType/UnitConversion**

diagram	
type	UnitConversionType
properties	minOcc 0 maxOcc 1 content complex
children	Factor Offset
annotation	documentation The optional UnitConversion element specifies how a length value in the named length unit may be converted to a value in meters.

complexType **LinearValueType**

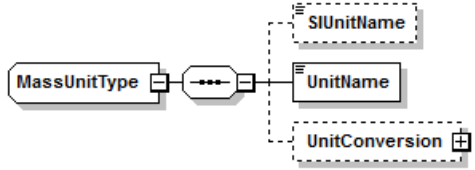
diagram	
---------	---

type	extension of SpecifiedDecimalType					
properties	base SpecifiedDecimalType					
attributes	Name decimalPlaces	Type xs:nonNegativeInteger	Use	Default	Fixed	Annotation 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	documentation The LinearValueType is a SpecifiedDecimalType with an optional linearUnit attribute that identifies the unit being used by its UnitName. If no value for the attribute is given in an instance file when a length value is given, the unit type is the LinearUnit specified in the PrimaryUnits element of a FileUnits element, if that specification exists, and meters if not.					

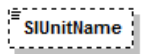
attribute **LinearValueType/@linearUnit**

type	xs:token
annotation	documentation The optional linearUnit attribute defines the UnitName for the LinearValueType.

complexType **MassUnitType**

diagram	
children	SIUnitName UnitName UnitConversion
used by	elements PrimaryUnitsType/MassUnit OtherUnitsType/MassUnit
annotation	documentation The MassUnitType defines the units to be used in the expression of mass values.

element **MassUnitType/SIUnitName**

diagram	
type	xs:token
properties	minOcc 0 maxOcc 1 content simple fixed kilogram
annotation	documentation The optional SIUnitName element is the name of the SI unit of mass. If the element is used, its value must be kilogram.

element **MassUnitType/UnitName**

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

type	xs:token
properties	content simple
annotation	documentation The UnitName element is the name for MassUnitType.

element **MassUnitType/UnitConversion**

diagram	
type	UnitConversionType
properties	minOcc 0 maxOcc 1 content complex
children	Factor Offset
annotation	documentation The optional UnitConversion element specifies how a mass value in the named mass unit may be converted to a value in kilograms.

complexType **MassValueType**

diagram																									
type	extension of SpecifiedDecimalType																								
properties	base SpecifiedDecimalType																								
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>massUnit</td><td>xs:token</td><td></td><td></td><td></td><td>documentation The optional massUnit attribute defines the UnitName for the MassValueType.</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.	massUnit	xs:token				documentation The optional massUnit attribute defines the UnitName for the MassValueType.
Name	Type	Use	Default	Fixed	Annotation																				
decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.																				
significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.																				
massUnit	xs:token				documentation The optional massUnit attribute defines the UnitName for the MassValueType.																				
annotation	<p>documentation</p> <p>The MassValueType is a SpecifiedDecimalType with an optional massUnit attribute that identifies the unit being used by its UnitName. If no value for the attribute is given in an instance file when a mass value is given, the unit type is the MassUnit specified in the PrimaryUnits element of a FileUnits element, if that specification exists, and kilograms if not.</p>																								

attribute **MassValueType/@massUnit**

type	xs:token
annotation	documentation The optional massUnit attribute defines the UnitName for the MassValueType.

complexType **OtherUnitsType**

diagram	
children	AreaUnit AngularUnit ForceUnit LinearUnit MassUnit PressureUnit SpeedUnit TemperatureUnit TimeUnit
used by	element FileUnitsType/OtherUnits
annotation	documentation The OtherUnitsType defines alternative units for various quantities. All unit types are optional and may occur multiple times so that many units of the same type (meters, inches, and millimeters, for example) may co-exist in an instance file.

element **OtherUnitsType/AreaUnit**

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

type	AreaUnitType
properties	minOcc 0 maxOcc unbounded content complex
children	SIUnitName UnitName UnitConversion
annotation	documentation Each optional AreaUnit element defines alternative units for area values.

element OtherUnitsType/AngularUnit

diagram	
type	AngularUnitType
properties	minOcc 0 maxOcc unbounded content complex
children	SIUnitName UnitName UnitConversion
annotation	documentation Each optional AngularUnit element defines alternative units for angle values.

element OtherUnitsType/ForceUnit

diagram	
type	ForceUnitType
properties	minOcc 0 maxOcc unbounded content complex
children	SIUnitName UnitName UnitConversion
annotation	documentation Each optional ForceUnit element defines alternative units for force values.

element **OtherUnitsType/LinearUnit**

diagram	<p>The diagram shows a dashed box labeled 'LinearUnit' with a multiplicity of '0..∞'. This box is connected to a larger dashed box labeled 'LinearUnitType'. Inside 'LinearUnitType' are three elements: 'SIUnitName' (dashed box), 'UnitName' (solid box), and 'UnitConversion' (dashed box with a plus icon).</p>
type	LinearUnitType
properties	minOcc 0 maxOcc unbounded content complex
children	SIUnitName UnitName UnitConversion
annotation	documentation Each optional LinearUnit element defines alternative units for length values.

element **OtherUnitsType/MassUnit**

diagram	<p>The diagram shows a dashed box labeled 'MassUnit' with a multiplicity of '0..∞'. This box is connected to a larger dashed box labeled 'MassUnitType'. Inside 'MassUnitType' are three elements: 'SIUnitName' (dashed box), 'UnitName' (solid box), and 'UnitConversion' (dashed box with a plus icon).</p>
type	MassUnitType
properties	minOcc 0 maxOcc unbounded content complex
children	SIUnitName UnitName UnitConversion
annotation	documentation Each optional MassUnit element defines alternative units for mass values.

element **OtherUnitsType/PressureUnit**

diagram	<p>The diagram shows a dashed box labeled 'PressureUnit' with a multiplicity of '0..∞'. This box is connected to a larger dashed box labeled 'PressureUnitType'. Inside 'PressureUnitType' are three elements: 'SIUnitName' (dashed box), 'UnitName' (solid box), and 'UnitConversion' (dashed box with a plus icon).</p>
type	PressureUnitType
properties	minOcc 0 maxOcc unbounded content complex
children	SIUnitName UnitName UnitConversion
annotation	documentation Each optional PressureUnit element defines alternative units for pressure values.

element **OtherUnitsType/SpeedUnit**

diagram	
type	SpeedUnitType
properties	minOcc 0 maxOcc unbounded content complex
children	SIUnitName UnitName UnitConversion
annotation	documentation Each optional SpeedUnit element defines alternative units for speed values.

element **OtherUnitsType/TemperatureUnit**

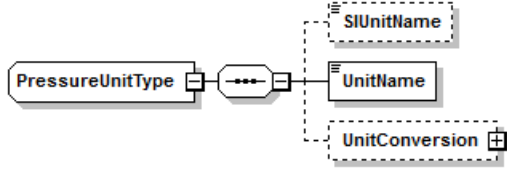
diagram	
type	TemperatureUnitType
properties	minOcc 0 maxOcc unbounded content complex
children	SIUnitName UnitName UnitConversion
annotation	documentation Each optional TemperatureUnit element defines alternative units for temperature values.

element **OtherUnitsType/TimeUnit**

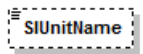
diagram	
type	TimeUnitType
properties	minOcc 0 maxOcc unbounded content complex

children	SIUnitName UnitName UnitConversion
annotation	documentation Each optional TimeUnit element defines alternative units for time values.


complexType **PressureUnitType**

diagram	
children	SIUnitName UnitName UnitConversion
used by	elements PrimaryUnitsType/PressureUnit OtherUnitsType/PressureUnit
annotation	documentation The PressureUnitType defines the units to be used in the expression of pressure values.

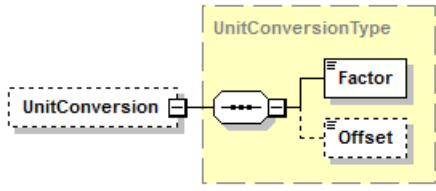
element **PressureUnitType/SIUnitName**

diagram	
type	xs:token
properties	minOcc 0 maxOcc 1 content simple fixed pascal
annotation	documentation The optional SIUnitName element is the name of the SI unit of pressure. If the element is used, its value must be pascal.

element **PressureUnitType/UnitName**

diagram	
type	xs:token
properties	content simple
annotation	documentation The UnitName element is the name for PressureUnitType.

element **PressureUnitType/UnitConversion**

diagram	
type	UnitConversionType
properties	minOcc 0 maxOcc 1 content complex

children	Factor Offset
annotation	documentation The optional UnitConversion element specifies how a pressure value in the named pressure unit may be converted to a value in pascals.

complexType **PressureValueType**

diagram						
type	extension of SpecifiedDecimalType					
properties	base SpecifiedDecimalType					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	pressureUnit	xs:token				documentation The optional pressureUnit attribute defines the UnitName for the PressureValueType.
annotation	documentation The PressureValueType is a SpecifiedDecimalType with an optional pressureUnit attribute that identifies the unit being used by its UnitName. If no value for the attribute is given in an instance file when a pressure value is given, the unit type is the PressureUnit specified in the PrimaryUnits element of a FileUnits element, if that specification exists, and pascals if not.					

attribute **PressureValueType/@pressureUnit**

type	xs:token
annotation	documentation The optional pressureUnit attribute defines the UnitName for the PressureValueType.

complexType **PrimaryUnitsType**

diagram	
children	AreaUnit AngularUnit ForceUnit LinearUnit MassUnit PressureUnit SpeedUnit TemperatureUnit TimeUnit
used by	element FileUnitsType/PrimaryUnits
annotation	documentation The PrimaryUnitsType defines the primary units for various quantities. All unit types are optional.

element **PrimaryUnitsType/AreaUnit**

diagram	
type	AreaUnitType
properties	minOcc 0 maxOcc 1 content complex
children	SIUnitName UnitName UnitConversion
annotation	documentation The optional AreaUnit element is the primary units for area values.

element **PrimaryUnitsType/AngularUnit**

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

type	AngularUnitType
properties	minOcc 0 maxOcc 1 content complex
children	SIUnitName UnitName UnitConversion
annotation	documentation The optional AngularUnit element is the primary units for angle values.

element **PrimaryUnitsType/ForceUnit**

diagram	
type	ForceUnitType
properties	minOcc 0 maxOcc 1 content complex
children	SIUnitName UnitName UnitConversion
annotation	documentation The optional ForceUnit element is the primary units for force values.

element **PrimaryUnitsType/LinearUnit**

diagram	
type	LinearUnitType
properties	minOcc 0 maxOcc 1 content complex
children	SIUnitName UnitName UnitConversion
annotation	documentation The optional LinearUnit element is the primary units for length values.

element **PrimaryUnitsType/MassUnit**

diagram	
type	MassUnitType
properties	minOcc 0 maxOcc 1 content complex
children	SIUnitName UnitName UnitConversion
annotation	documentation The optional MassUnit element is the primary units for mass values.

element **PrimaryUnitsType/PressureUnit**

diagram	
type	PressureUnitType
properties	minOcc 0 maxOcc 1 content complex
children	SIUnitName UnitName UnitConversion
annotation	documentation The optional PressureUnit element is the primary units for pressure values.

element **PrimaryUnitsType/SpeedUnit**

diagram	
type	SpeedUnitType
properties	minOcc 0 maxOcc 1 content complex
children	SIUnitName UnitName UnitConversion
annotation	documentation The optional SpeedUnit element is the primary units for speed values.

element **PrimaryUnitsType/TemperatureUnit**

diagram	
type	TemperatureUnitType
properties	minOcc 0 maxOcc 1 content complex
children	SIUnitName UnitName UnitConversion
annotation	documentation The optional TemperatureUnit element is the primary units for temperature values.

element **PrimaryUnitsType/TimeUnit**

diagram	
type	TimeUnitType
properties	minOcc 0 maxOcc 1 content complex
children	SIUnitName UnitName UnitConversion
annotation	documentation The optional TimeUnit element is the primary units for time values.

complexType **SpecifiedDecimalType**

diagram	<pre>classDiagram class SpecifiedDecimalType class Attributes { decimalPlaces significantFigures } SpecifiedDecimalType --> Attributes</pre>												
type	extension of xs:decimal												
properties	base xs:decimal												
used by	complexTypes ActualDecimalType AngularValueType AreaValueType ForceValueType LinearValueType MassValueType PressureValueType SpeedValueType TemperatureValueType TimeValueType UserDefinedUnitValueType												
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</td></tr></tbody></table>	Name	Type	Use	Default	Fixed	Annotation	decimalPlaces	xs:nonNegativeInteger				documentation
Name	Type	Use	Default	Fixed	Annotation								
decimalPlaces	xs:nonNegativeInteger				documentation								

	significantFigures xs:nonNegativeInteger	See documentation of SpecifiedDecimalType. documentation See documentation of SpecifiedDecimalType.
annotation	documentation A SpecifiedDecimalType defines an xs:decimal type with two optional attributes: significantFigures and decimalPlaces. The optional decimalPlaces attribute represents the number of places to the right of the decimal point to which the xs:decimal is specified. The actual number of decimal places used may be greater or less than the decimalPlaces attribute. If the value has more decimal places, the extra ones are meaningless. If the value has fewer decimal places, the missing decimal places are implicitly zero. A value of xs:decimal type stored in an XML instance file might not have the same number of decimal places as the original input number. The number of decimal place may be truncated because of trailing zeros. For example a number like 10.000 from a part print might appear in an instance file as {Value}10{/Value} -- using '{' and '}' here instead of chevrons as would be used in an instance file. The xs:decimal representation of a value may have many extra decimal places because of intrinsic computer limitations in representing floating point numbers. For example a number like 3.15 might appear in an instance file as 3.149999999999998. In both cases the original format of the value can be communicated using the optional decimalPlaces attribute: {Value decimalPlaces="3"}10{/Value} means 10.000 {Value decimalPlaces="2"}3.149999999999998{/Value} means 3.15. The value is to be rounded to the number of decimal places indicated with the decimalPlaces attribute. The optional significantFigures attribute represents the number of significant figures with which the xs:decimal is specified. The actual number of digits may be greater or less than the significantFigures attribute. Unlike decimalPlaces, the significantFigures value does not affect the format of a value, but rather its meaning. A value becomes uncertain when the number of significant figures is exceeded. A value of 2.3456789 with 4 significant figures indicates that the real value is uncertain and lies anywhere in the range 2.345000... to 2.345999...	

attribute SpecifiedDecimalType/@decimalPlaces

type	xs:nonNegativeInteger
annotation	documentation See documentation of SpecifiedDecimalType.

attribute SpecifiedDecimalType/@significantFigures

type	xs:nonNegativeInteger
annotation	documentation See documentation of SpecifiedDecimalType.

complexType SpeedUnitType


diagram		
children	SIUnitName UnitName UnitConversion	
used by	elements PrimaryUnitsType/SpeedUnit OtherUnitsType/SpeedUnit	
annotation	documentation The SpeedUnitType defines the units to be used in the expression of speed values.	

element SpeedUnitType/SIUnitName

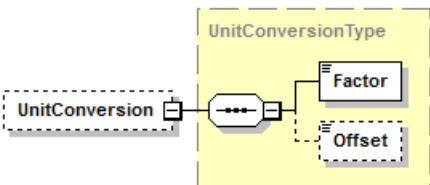
diagram		
type	xs:token	
properties	minOcc 0	

	maxOcc 1 content simple fixed meter per second
annotation	documentation The optional SIUnitName element is the name of the SI unit of speed. If the element is used, its value must be meter per second.

element SpeedUnitType/UnitName

diagram	
type	xs:token
properties	content simple
annotation	documentation The UnitName element is the name for SpeedUnitType.

element SpeedUnitType/UnitConversion

diagram	
type	UnitConversionType
properties	minOcc 0 maxOcc 1 content complex
children	Factor Offset
annotation	documentation The optional UnitConversion element specifies how a speed value in the named speed unit may be converted to a value in meters per second.

complexType SpeedValueType

diagram																			
type	extension of SpecifiedDecimalType																		
properties	base SpecifiedDecimalType																		
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</td></tr><tr><td>speedUnit</td><td></td><td></td><td></td><td></td><td></td></tr></table>	Name	Type	Use	Default	Fixed	Annotation	decimalPlaces	xs:nonNegativeInteger				documentation	speedUnit					
Name	Type	Use	Default	Fixed	Annotation														
decimalPlaces	xs:nonNegativeInteger				documentation														
speedUnit																			

	<p>significantFigures xs:nonNegativeInteger</p> <p>speedUnit xs:token</p>	<p>See documentation of SpecifiedDecimalType. documentation</p> <p>See documentation of SpecifiedDecimalType. documentation</p> <p>The optional speedUnit attribute defines the UnitName for the SpeedValueType.</p>
annotation	<p>documentation</p> <p>The SpeedValueType is a SpecifiedDecimalType with an optional speedUnit attribute that identifies the unit being used by its UnitName. If no value for the attribute is given in an instance file when a speed value is given, the unit type is the SpeedUnit specified in the PrimaryUnits element of a FileUnits element, if that specification exists, and meters per second if not.</p>	

attribute **SpeedValueType/@speedUnit**

type	xs:token
annotation	<p>documentation</p> <p>The optional speedUnit attribute defines the UnitName for the SpeedValueType.</p>

complexType **TemperatureUnitType**

diagram		
children	SIUnitName UnitName UnitConversion	
used by	elements	PrimaryUnitsType/TemperatureUnit OtherUnitsType/TemperatureUnit
annotation	<p>documentation</p> <p>The TemperatureUnitType defines the units to be used in the expression of temperature values.</p>	

element **TemperatureUnitType/SIUnitName**

diagram		
type	xs:token	
properties	minOcc 0 maxOcc 1 content simple fixed kelvin	
annotation	<p>documentation</p> <p>The optional SIUnitName element is the name of the SI unit of temperature. If the element is used, its value must be kelvin.</p>	

element **TemperatureUnitType/UnitName**

diagram		
type	xs:token	

properties	content simple
annotation	documentation The UnitName element is the name for TemperatureUnitType.

element TemperatureUnitType/UnitConversion

diagram	
type	UnitConversionType
properties	minOcc 0 maxOcc 1 content complex
children	Factor Offset
annotation	documentation The optional UnitConversion element specifies how a temperature value in the named temperature unit may be converted to a value in kelvin.

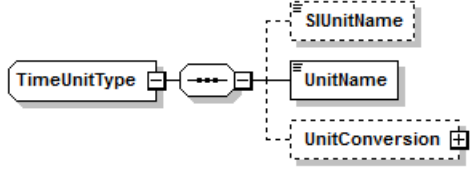
complexType TemperatureValueType

diagram	<pre>classDiagram class TemperatureValueType class SpecifiedDecimalType TemperatureValueType -- > SpecifiedDecimalType TemperatureValueType --> decimalPlaces TemperatureValueType --> significantFigures TemperatureValueType --> temperatureUnit</pre>																								
type	extension of SpecifiedDecimalType																								
properties	base SpecifiedDecimalType																								
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>temperatureUnit</td><td>xs:token</td><td></td><td></td><td></td><td>documentation The optional temperatureUnit attribute defines the UnitName for the TemperatureValueType.</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.	temperatureUnit	xs:token				documentation The optional temperatureUnit attribute defines the UnitName for the TemperatureValueType.
Name	Type	Use	Default	Fixed	Annotation																				
decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.																				
significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.																				
temperatureUnit	xs:token				documentation The optional temperatureUnit attribute defines the UnitName for the TemperatureValueType.																				
annotation	<p>documentation</p> <p>The TemperatureValueType is a SpecifiedDecimalType with an optional temperatureUnit attribute that identifies the unit being used by its UnitName. If no value for the attribute is given in an instance file when a temperature value is given, the unit type is the TemperatureUnit specified in the PrimaryUnits element of a FileUnits element, if that specification exists, and kelvin if not.</p>																								

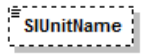
attribute **TemperatureValueType/@temperatureUnit**

type	xs:token
annotation	documentation The optional temperatureUnit attribute defines the UnitName for the TemperatureValueType.


complexType **TimeUnitType**

diagram	
children	SIUnitName UnitName UnitConversion
used by	elements PrimaryUnitsType/TimeUnit OtherUnitsType/TimeUnit
annotation	documentation The TimeUnitType defines the units to be used in the expression of time values.

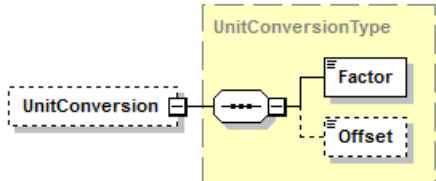
element **TimeUnitType/SIUnitName**

diagram	
type	xs:token
properties	minOcc 0 maxOcc 1 content simple fixed second
annotation	documentation The optional SIUnitName element is the name of the SI unit of time. If the element is used, its value must be second.

element **TimeUnitType/UnitName**

diagram	
type	xs:token
properties	content simple
annotation	documentation The UnitName element is the name for TimeUnitType.

element **TimeUnitType/UnitConversion**

diagram	
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type	UnitConversionType
properties	minOcc 0 maxOcc 1 content complex
children	Factor Offset
annotation	documentation The optional UnitConversion element specifies how a time value in the named time unit may be converted to a value in seconds.

complexType TimeValueType

diagram						
type	extension of SpecifiedDecimalType					
properties	base SpecifiedDecimalType					
attributes	Name	Type	Use	Default	Fixed	Annotation
	decimalPlaces	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	significantFigures	xs:nonNegativeInteger				documentation See documentation of SpecifiedDecimalType.
	timeUnit	xs:token				documentation The optional timeUnit attribute defines the UnitName for the TimeValueType.
annotation	documentation The TimeValueType is a SpecifiedDecimalType with an optional timeUnit attribute that identifies the unit being used by its UnitName. If no value for the attribute is given in an instance file when a time value is given, the unit type is the TimeUnit specified in the PrimaryUnits element of a FileUnits element, if that specification exists, and seconds if not.					

attribute TimeValueType/@timeUnit


type	xs:token
annotation	documentation The optional timeUnit attribute defines the UnitName for the TimeValueType.

complexType UnitConversionType


diagram	
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children	Factor Offset
used by	elements AngularUnitType/UnitConversion AreaUnitType/UnitConversion ForceUnitType/UnitConversion LinearUnitType/UnitConversion MassUnitType/UnitConversion PressureUnitType/UnitConversion SpeedUnitType/UnitConversion TemperatureUnitType/UnitConversion TimeUnitType/UnitConversion
annotation	<p>documentation</p> <p>The UnitConversionType defines the parameters for a conversion from non-SI units to SI units. To convert a non-SI unit value X to an SI unit S, use the equation: $S = ((X \text{ plus Offset}) \text{ times Factor})$.</p> <p>documentation</p> <p>Angle conversion to radians</p> <p>degree Factor=0.017453293 Offset=0</p> <p>Area conversion to square meters</p> <p>square inch Factor=0.00064516 Offset=0</p> <p>square foot Factor=0.09290304 Offset=0</p> <p>square millimeter Factor=0.000001 Offset=0</p> <p>Force conversion to newtons</p> <p>kilogram Factor=9.80665 Offset=0</p> <p>ounce Factor=0.2780139 Offset=0</p> <p>pound Factor=4.448222 Offset=0</p> <p>Length conversion to meters</p> <p>foot Factor=0.3048 Offset=0</p> <p>inch Factor=0.0254 Offset=0</p> <p>millimeter Factor=0.001 Offset=0</p> <p>Mass conversion to kilograms</p> <p>gram Factor=0.001 Offset=0</p> <p>ounce Factor=0.02834952 Offset=0</p> <p>pound Factor=0.4535924 Offset=0</p> <p>Pressure conversion to pascals</p> <p>kilopascal Factor=1000.0 Offset=0</p> <p>psi Factor=6894.757 Offset=0</p> <p>Speed conversion to meters per second</p> <p>feetPerSecond Factor=0.3048 Offset=0</p> <p>inchesPerSecond Factor=0.0254 Offset=0</p> <p>mmPerSecond Factor=0.001 Offset=0</p> <p>Temperature Conversion to kelvin</p> <p>Fahrenheit Factor=0.555555556 Offset=459.67</p> <p>Celsius Factor=1.0 Offset=273.15</p> <p>Rankine Factor=0.555555556 Offset=0</p> <p>Time conversion to seconds</p> <p>hour Factor=3600.0 Offset=0</p> <p>minute Factor= 60.0 Offset=0</p>

element **UnitConversionType/Factor**

diagram							
type	PositiveDecimalType						
properties	content simple						
facets	<table><tr><td>Kind</td><td>Value</td><td>Annotation</td></tr><tr><td>minExclusive</td><td>0</td><td></td></tr></table>	Kind	Value	Annotation	minExclusive	0	
Kind	Value	Annotation					
minExclusive	0						
annotation	<p>documentation</p> <p>The Factor element is the multiplicative factor for a conversion from non-SI to SI units.</p>						

element **UnitConversionType/Offset**

diagram	
type	xs:decimal

properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation The optional Offset element is the offset value for a conversion from non-SI to SI units.

complexType UserDefinedUnitsType

diagram	
children	UserDefinedUnit
used by	element FileUnitsType/UserDefinedUnits
annotation	documentation The UserDefinedUnitsType defines a set of user-defined units.

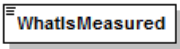
element UserDefinedUnitsType/UserDefinedUnit

diagram	
type	UserDefinedUnitType
properties	minOcc 1 maxOcc unbounded content complex
children	WhatIsMeasured UnitName StandardName
annotation	documentation Each UserDefinedUnit element describes a single user-defined unit.


complexType UserDefinedUnitType

diagram	
children	WhatIsMeasured UnitName StandardName
used by	element UserDefinedUnitsType/UserDefinedUnit
annotation	documentation The UserDefinedUnitType defines the units for user-defined quantities that are not of any of the defined unit types.


element **UserDefinedUnitType/WhatIsMeasured**

diagram	
type	xs:string
properties	content simple
annotation	documentation The WhatIsMeasured element describes the sort of quantity that can be measured using this unit. For example 'electric current', 'angular velocity', 'density of scratches', or 'number of widgets'.

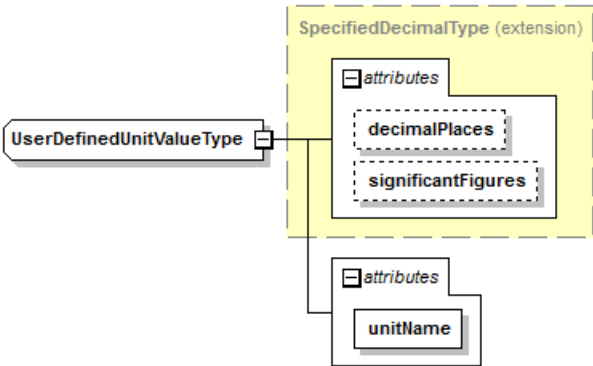
element **UserDefinedUnitType/UnitName**

diagram	
type	xs:token
properties	content simple
annotation	documentation The UnitName element is the name for the UserDefinedUnitType. For example 'amperes', 'radians per second', 'scratches per door panel', or 'widgets'.

element **UserDefinedUnitType/StandardName**

diagram	
type	xs:string
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The optional StandardName element provides the name of a standard or document containing a more complete description of the named unit. For SI units, it is suggested that the value be "SI".

complexType **UserDefinedUnitValueType**

diagram						
type	extension of SpecifiedDecimalType					
properties	base SpecifiedDecimalType					
attributes	Name decimalPlaces	Type xs:nonNegativeInteger	Use	Default	Fixed	Annotation documentation See documentation of

	significantFigures xs:nonNegativeInteger unitName xs:token required	SpecifiedDecimalType. documentation See documentation of SpecifiedDecimalType. documentation The (required) UnitName attribute is the unit name for the UserDefinedUnitValueType.
annotation	documentation The UserDefinedUnitValueType defines a SpecifiedDecimalType with a required unitName attribute that identifies the unit being used by its UnitName. The units used in a UserDefinedUnitValueType must be UserDefinedUnits.	

attribute **UserDefinedUnitValueType/@unitName**

type	xs:token
properties	use required
annotation	documentation The (required) UnitName attribute is the unit name for the UserDefinedUnitValueType.

simpleType **NonNegativeDecimalType**

type	restriction of xs:decimal
properties	base xs:decimal
used by	attributes ActualDecimalType/@combinedUncertainty ActualDecimalType/@meanError
facets	Kind Value Annotation minInclusive 0
annotation	documentation The NonNegativeDecimalType is an xs:decimal that is not negative.

simpleType **PositiveDecimalType**

type	restriction of xs:decimal
properties	base xs:decimal
used by	element UnitConversionType/Factor
facets	Kind Value Annotation minExclusive 0
annotation	documentation The PositiveDecimalType is an xs:decimal that is positive.