

# Circular Economy Ontology Network (CEON) - Quantity Module

## Metadata

**IRI**

<http://w3id.org/CEON/ontology/quantity/>

**Title**

Circular Economy Ontology Network (CEON) - Quantity Module

**Publisher**

Onto-DESIDE

**Creator**

Huanyu Li

**Contributor**

Eva Blomqvist

**Date Created**

2024-12-31

**Date Issued**

2025-06-30

**License**

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**Version Iri**

<http://w3id.org/CEON/ontology/quantity/0.2/>

**Version Info**

0.2

**Prior Version**

0.1

**Preferred Namespace Prefix**

ceon-quantity

**Preferred Namespace Uri**

<http://w3id.org/CEON/ontology/quantity/>

**Covers Requirements**

In addition to requirements covered by imported ODPs, covers the following requirements from Onto-DESIDE D3.2: C3-2, C13-1, C13-4, E3-1, E4-11, T6-1, T10-1.

## Classes

Quantity Interval <sup>c</sup>	
IRI	<a href="http://w3id.org/CEON/ontology/quantity/QuantityInterval">http://w3id.org/CEON/ontology/quantity/QuantityInterval</a>
In Domain Of	<a href="#">hasMaximalValueIncludedOfInterval<sup>op</sup></a> <a href="#">hasMaximalValueNotIncludedOfInterval<sup>op</sup></a> <a href="#">hasMinimalValueIncludedOfInterval<sup>op</sup></a> <a href="#">hasMinimalValueNotIncludedOfInterval<sup>op</sup></a>

## Object Properties

has dimension<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/quantity/hasDimension>

**Sub Property Of** [gudt:quantityValue](#)

**Super Property Of**

- [hasHeight<sup>op</sup>](#)
- [hasLength<sup>op</sup>](#)
- [hasThickness<sup>op</sup>](#)
- [hasWidth<sup>op</sup>](#)

has dismantling cost<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/quantity/hasDismantlingCost>

**Sub Property Of** [hasProcessCost<sup>op</sup>](#)

has height<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/quantity/hasHeight>

**Sub Property Of** [hasDimension<sup>op</sup>](#)

has length<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/quantity/hasLength>

**Sub Property Of** [hasDimension<sup>op</sup>](#)

has market value<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/quantity/hasMarketValue>

**Sub Property Of** [gudt:quantityValue](#)

has maximal value included of interval<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/quantity/hasMaximalValueIncludedOfInterval>

**Sub Property Of** [gudt:quantityValue](#)

**Domain** [QuantityInterval<sup>c</sup>](#)

**Range** [gudt:QuantityValue](#)

has maximal value not included of interval<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/quantity/hasMaximalValueNotIncludedOfInterval">http://w3id.org/CE0N/ontology/quantity/hasMaximalValueNotIncludedOfInterval</a>
<b>Sub Property Of</b>	<a href="#">gudt:quantityValue</a>
<b>Domain</b>	<a href="#">QuantityInterval</a> <sup>c</sup>
<b>Range</b>	<a href="#">gudt:QuantityValue</a>

has minimal value included of interval<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/quantity/hasMinimalValueIncludedOfInterval">http://w3id.org/CE0N/ontology/quantity/hasMinimalValueIncludedOfInterval</a>
<b>Sub Property Of</b>	<a href="#">gudt:quantityValue</a>
<b>Domain</b>	<a href="#">QuantityInterval</a> <sup>c</sup>
<b>Range</b>	<a href="#">gudt:QuantityValue</a>

has minimal value not included of interval<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/quantity/hasMinimalValueNotIncludedOfInterval">http://w3id.org/CE0N/ontology/quantity/hasMinimalValueNotIncludedOfInterval</a>
<b>Sub Property Of</b>	<a href="#">gudt:quantityValue</a>
<b>Domain</b>	<a href="#">QuantityInterval</a> <sup>c</sup>
<b>Range</b>	<a href="#">gudt:QuantityValue</a>

has price<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/quantity/hasPrice">http://w3id.org/CE0N/ontology/quantity/hasPrice</a>
<b>Sub Property Of</b>	<a href="#">gudt:quantityValue</a>

has process cost<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/quantity/hasProcessCost">http://w3id.org/CE0N/ontology/quantity/hasProcessCost</a>
<b>Sub Property Of</b>	<a href="#">gudt:quantityValue</a>
<b>Super Property Of</b>	<ul style="list-style-type: none"><li>• <a href="#">hasDismantlingCost</a><sup>op</sup></li><li>• <a href="#">hasRecyclingCost</a><sup>op</sup></li><li>• <a href="#">hasRefurbishmentCost</a><sup>op</sup></li><li>• <a href="#">hasTestingCost</a><sup>op</sup></li><li>• <a href="#">hasTransportCost</a><sup>op</sup></li></ul>

has recycling cost<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/quantity/hasRecyclingCost>

**Sub Property Of** [hasProcessCost<sup>op</sup>](#)

has refurbishment cost<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/quantity/hasRefurbishmentCost>

**Sub Property Of** [hasProcessCost<sup>op</sup>](#)

has testing cost<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/quantity/hasTestingCost>

**Sub Property Of** [hasProcessCost<sup>op</sup>](#)

has thickness<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/quantity/hasThickness>

**Sub Property Of** [hasDimension<sup>op</sup>](#)

has transport cost<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/quantity/hasTransportCost>

**Sub Property Of** [hasProcessCost<sup>op</sup>](#)

has volume<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/quantity/hasVolume>

**Sub Property Of** [qudt:quantityValue](#)

has weight<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/quantity/hasWeight>

**Sub Property Of** [qudt:quantityValue](#)

has width<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/quantity/hasWidth>

**Sub Property Of** [hasDimension<sup>op</sup>](#)

object value<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/quantity/objectValue>

**Sub Property Of** [qudt:hasQuantityKind](#)

## Datatype Properties

numerical max value<sup>dp</sup>

**IRI** <http://w3id.org/CE0N/ontology/quantity/numericalMaxValue>

**Range** [xsd:double](#)

numerical min value<sup>dp</sup>

**IRI** <http://w3id.org/CE0N/ontology/quantity/numericalMinValue>

**Sub Property Of** [topDataProperty](#)<sup>dp</sup>

**Range** [xsd:double](#)

## Annotation Properties

contributor<sup>ap</sup>

**IRI** <http://purl.org/dc/terms/contributor>

created<sup>ap</sup>

**IRI** <http://purl.org/dc/terms/created>

issued<sup>ap</sup>

**IRI** <http://purl.org/dc/terms/issued>

publisher<sup>ap</sup>

**IRI** <http://purl.org/dc/terms/publisher>

covers requirements<sup>ap</sup>

**IRI** [http://www.ontologydesignpatterns.org/schemas/cpannotation  
schema.owl#coversRequirements](http://www.ontologydesignpatterns.org/schemas/cpannotation/schema.owl#coversRequirements)

## Namespaces

:

<http://w3id.org/CEON/ontology/quantity/>

**dcterms**

<http://purl.org/dc/terms/>

**owl**

<http://www.w3.org/2002/07/owl#>

**prov**

<http://www.w3.org/ns/prov#>

**qudt**

<http://qudt.org/schema/qudt/>

**qudt-unit**

<http://qudt.org/vocab/unit/>

**rdf**

<http://www.w3.org/1999/02/22-rdf-syntax-ns#>

**rdfs**

<http://www.w3.org/2000/01/rdf-schema#>

**vann**

<http://purl.org/vocab/vann/>

**xsd**

<http://www.w3.org/2001/XMLSchema#>

## Legend

c	Classes
op	Object Properties
dp	Datatype Properties
ap	Annotation Properties