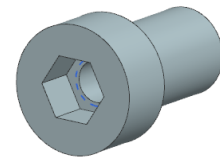


Advanced Mass Properties

(This documentation was created with NX1899)

As of NX1899, the functionality of the "Advanced Mass Properties" has changed. In this Smart Tip, I would like to briefly introduce the new procedure. What can this functionality be used for? One example that comes to mind is purchased parts that are modelled in NX using a supplier data sheet. The next step is to assign the weight noted in the data sheet to this NX component. This is where the "Advanced Mass Properties" comes into play, with which a defined weight can now be assigned, regardless of the density and material of the body. However, this requires the **NX Advanced Assembly licence**.

If no specific material and no specific density have been assigned to a solid in NX, NX calculates the weight with the density 0.000007831 kg/mm³ by default. In our example, a weight of 0.0425 kg is calculated for the total weight of the active part file.



Object information:

[Strg] + [I] + ... QuickPick and selection of the solid body.

Calculate mass:

Mass that is calculated in NX for the entire active part (possibly several solids):

File + Properties + Mass ...

Result in the information window:

Style	SOLID
Width	0.35 mm
Density	0.000007831 kg/mm ³
Face Attributes:	
Grid Count - U	0
Grid Count - V	0

Displayed Part Properties

Attributes | Displayed Part | Mass | Part File | Preview

Mass

Mass: 0.0425 kg

Update Mass Properties on Save

Update Mass Properties Now

OK Apply Cancel

Open mass properties window:

Menu + Analysis + Advanced Mass Properties + Show Mass Properties Panels...

Assembly Navigator

Descriptive Part Name	P..	Re...	R..	M	Info	Count	Reference Set	Out o...	Mass...
Session Component Groups						-			
Component Groups in Part						-			
Sections									
<input checked="" type="checkbox"/> ET_HUELSE									0.0425

Preview

Dependencies

Mass Properties

ET_HUELSE.prt : 1 Components

Configuration Context

Name	Value	Unit	Source	From Design	Asserted	User Defined 1
1 MassPropMass	0.0425	kg	From Design	0.0425	0.0700	
2 MassPropWeight	0.4172	N	From Design	0.4172	0.6865	
3 MassPropDensity	7.831e-06	kg/mm ³	From Design	7.831e-06		

Now change the attribute of the weight specification to Asserted.

Mass Properties
ET_HUELSE.prt : 1 Components

Configuration Context

	Name	Value	Unit	Source	From Design	Asserted
1	MassPropMass	0.0425	kg	From Design	0.0425	0.0700
2	MassPropWeight	0.4172	N	From Design	0.4172	0.6865
3	MassPropDensity	7.831e-06	kg/mm ³	User Defined 1	7.831e-06	
4	MassPropVolume	5432.7820	mm ³	User Defined 2	5432.7820	
5	MassPropArea	3062.2700	mm ²	User Defined 3	3062.2700	

Activate the input field in the "Asserted" column by double-clicking and enter the specified weight. This value is now immediately displayed in the Value column.

Mass Properties
ET_HUELSE.prt : 1 Components

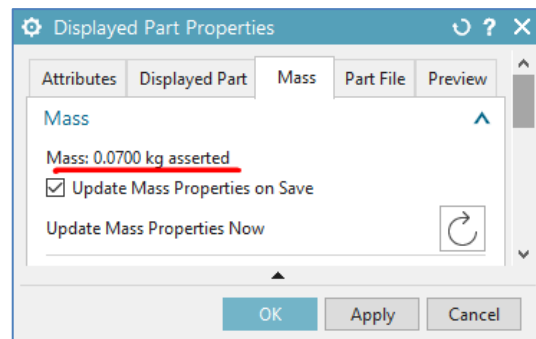
Configuration Context

	Name	Value	Unit	Source	From Design	Asserted
1	MassPropMass	0.0700	kg	Asserted	0.0425	0.0700
2	MassPropWeight	0.6865	N	Asserted	0.4172	0.6865
3	MassPropDensity	7.831e-06	kg/mm ³	From Design	7.831e-06	
4	MassPropVolume	8939.2438	mm ³	Derived	5432.7820	
5	MassPropArea	3062.2700	mm ²	From Design	3062.2700	

Check the mass of the active part:

File + Properties + Mass ...

The specified value is now displayed here. In the weight calculation of an assembly, this component would now be calculated with this weight.



The procedure described here is available in all current NX versions from NX1899.

I would be delighted if this NX Smart Tip was useful to you.

Do you still have questions? Just get in touch with me.



Your NX trainer, consultant and service provider

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