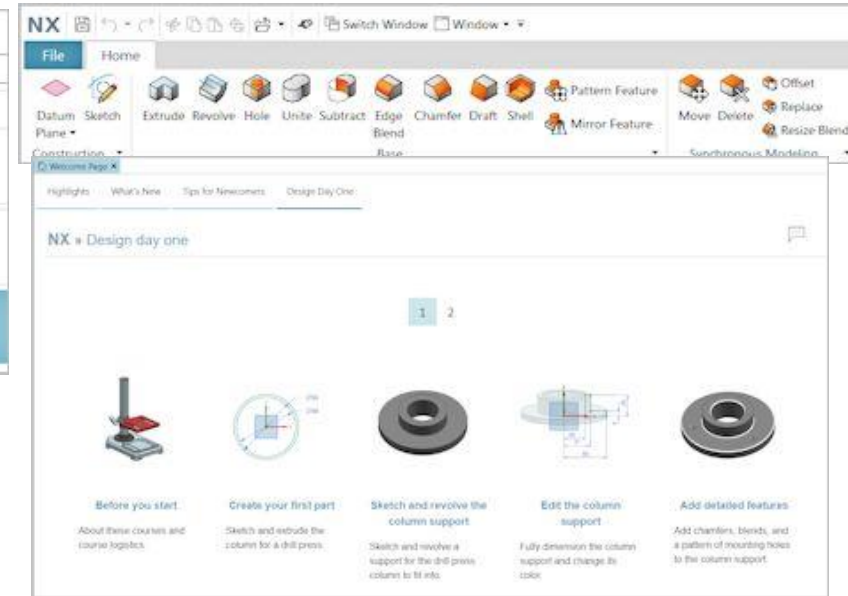
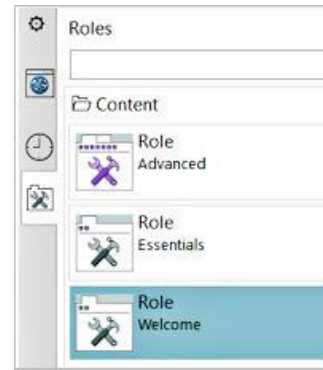

What's new in NX1899 CAD

March 15, 2020

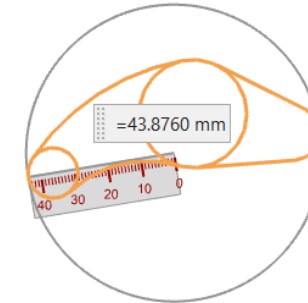
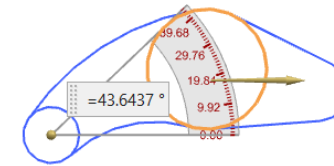
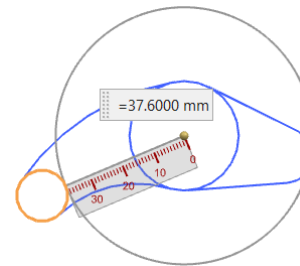
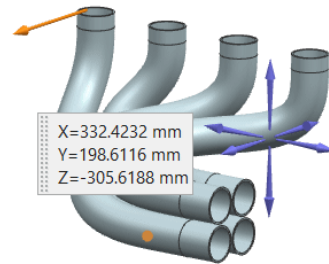
Paiboon Songnapawuthikul
Senior Technical Services

Fundamentals

- New user experience (UX Interface)
- Ribbon bar organization
- Day One training
- Tips for Newcomers
- *Measure enhancements*
- Extreme Point
- 2D Polar Radius
- 2D Polar Area
- New line styles
- QuickPick selection enhancements



- Long Dashed Dotted
- Long Dashed Double Dotted
- Long Dashed Triplicate Dotted
- Long Dashed Double Short Dashed

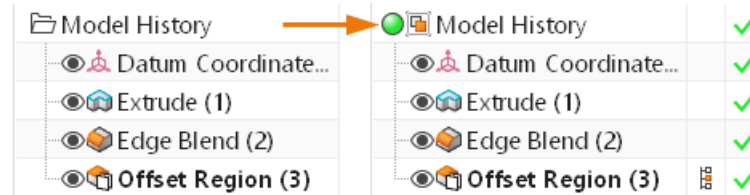


Modeling(New command)

- *Design groups* 😊

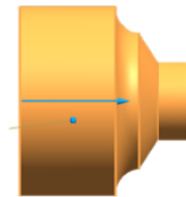
For example, you can organize your features into logical groups, such as:

- Reference geometry
- Target body
- Tool bodies
- Booleans
- Features that modify the target body

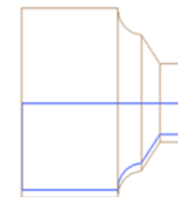


- *Radiate Face* 😊

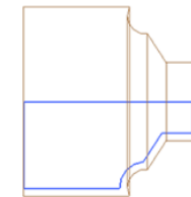
- Offset coaxial faces normal to their axis.
- Radiate a set of coaxial faces or a whole body at once.
- Automatically regenerate blends adjacent to an axial face when you radiate the face.



Coaxial faces and their axis are selected



Radiate Face



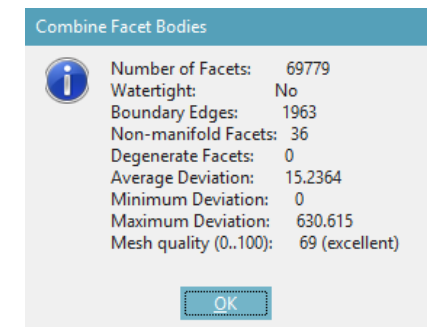
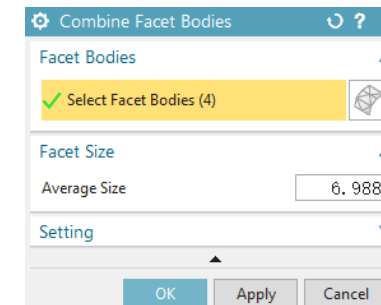
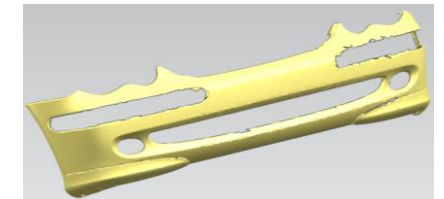
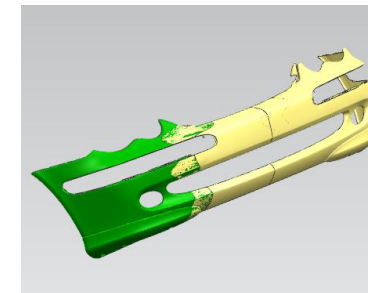
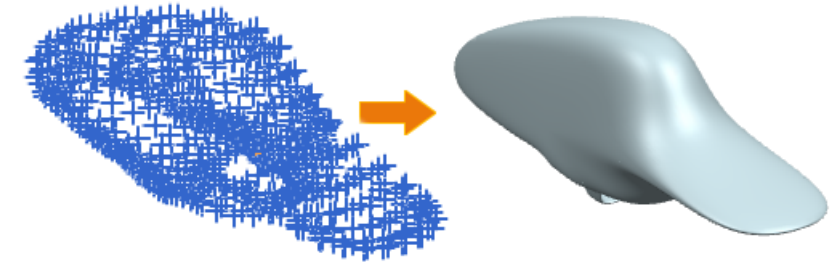
Offset Region

Modeling(New command)

- *Mesh from Cloud*
 - You can select a mesh mode to specify whether the convergent body has:
 - Nearly the same facet size throughout.
 - Larger facets in low-curvature areas and smaller facets in high-curvature areas.
 - A mesh vertex for each input point.
- *Combine Facet Bodies* 😊

You can:

 - *Specify the average facet size to control the output facet size and determine whether close facet bodies are considered overlapping.*
 - *Analyze the mesh quality of the resulting convergent body.*



Modeling(Enhancement Command)

- *Chamfer* 😊

The Chamfer command is enhanced as follows:

- The Offset Faces and Trim offset method in the Settings group is renamed as **Offset Face**.
- The new **Apex** option in the Settings group replaces the Offset Edges along Faces from previous releases.
- You can specify a **Length Limit** that allows a chamfer to span less than the entire length of an edge.

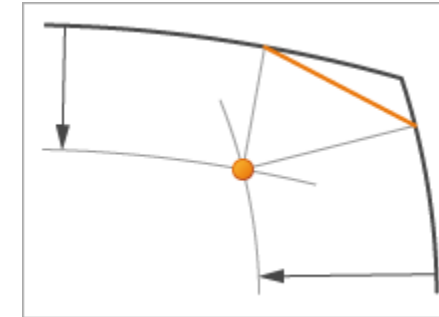
- *Hole enhancements*

You can:

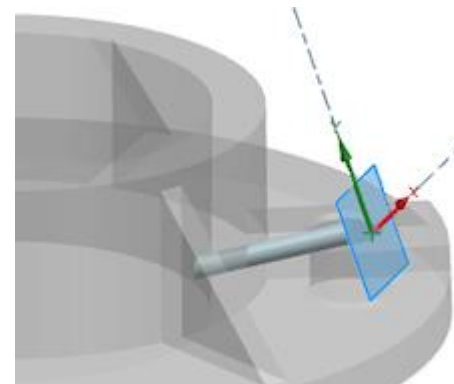
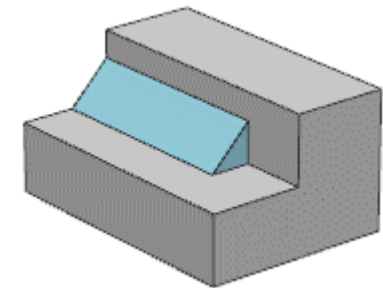
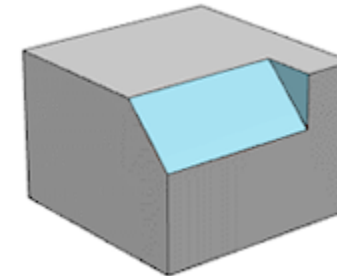
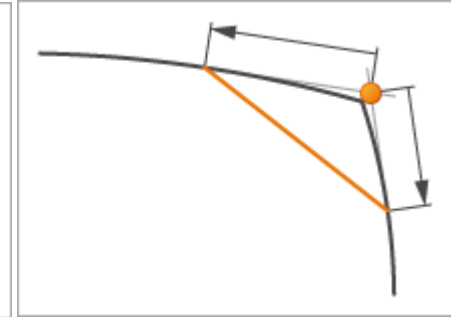
- Holes normal to the sketch plane
- Hole depth and diameter enhancements
- Checking the hole size

 M 24 X 3 Threaded Hole

Offset



Apex



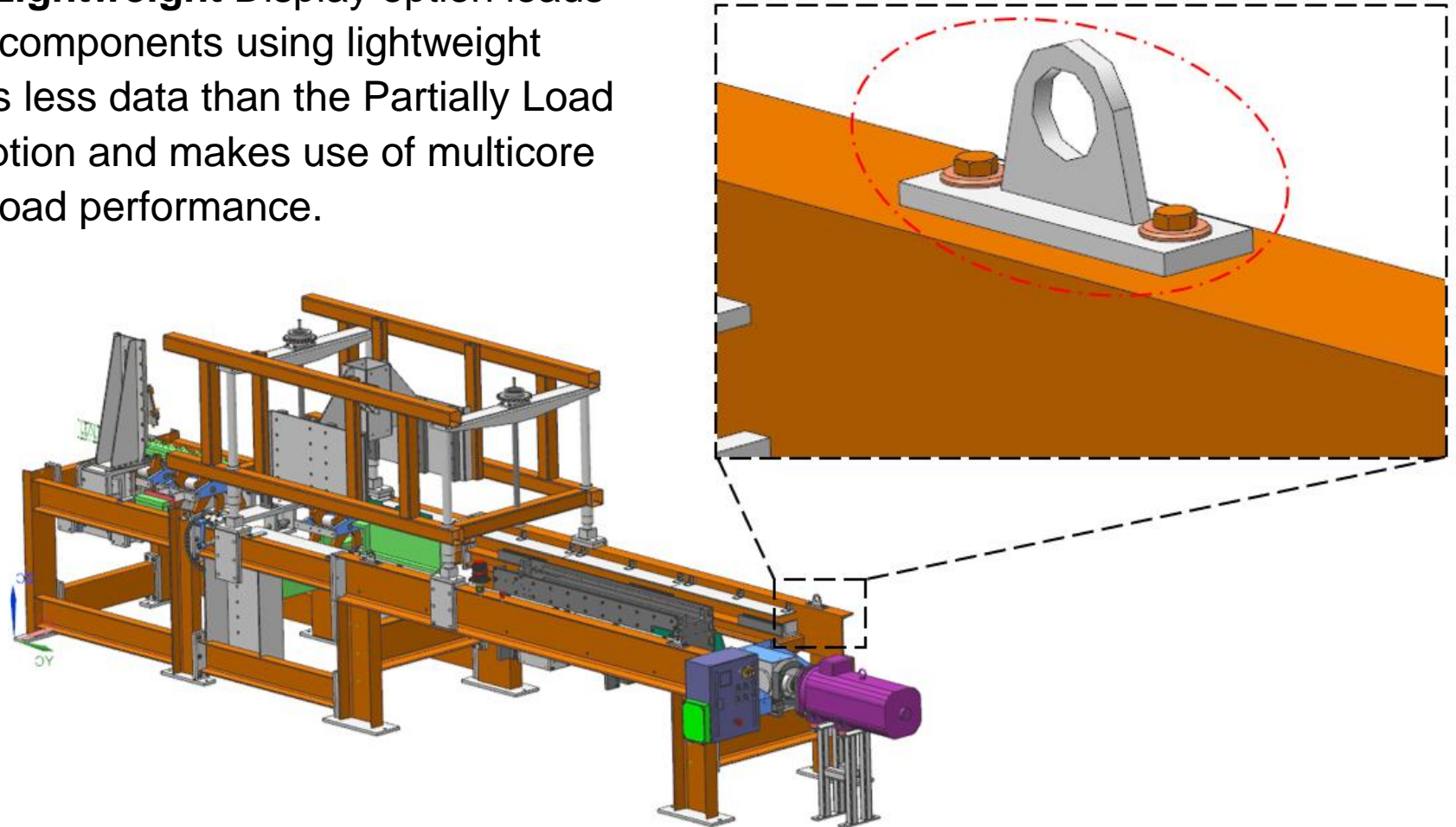
Modeling(Enhancement Command)

- *Pattern enhancements* 😊
 - **Pattern Feature**
You can apply Symbolic Threads to one or more features at once.
 - **Pattern Face**
Pattern Face now has the Copy Threads option, similar to Pattern Geometry
- *Sketch in Task Environment enhancements*
 - The **Direct Sketch** commands are consolidated and replaced with the **Sketch** commands previously available with **Sketch in Task Environment**.
 - When you **Finish** a sketch, it remains selected and ready to be inferred as input by the next command you use. If you use a command that does not accept sketch objects as input, the selected sketch is simply ignored.



Assembly

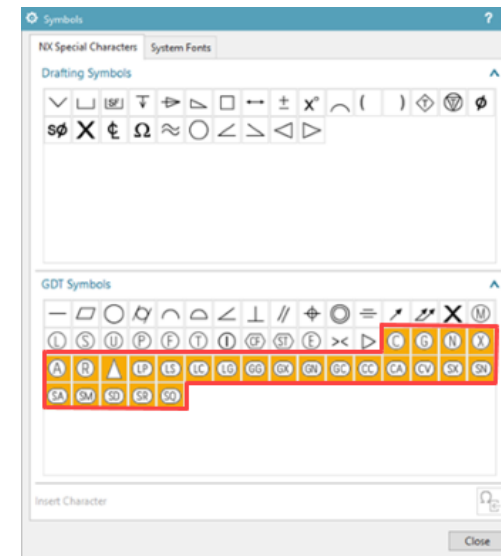
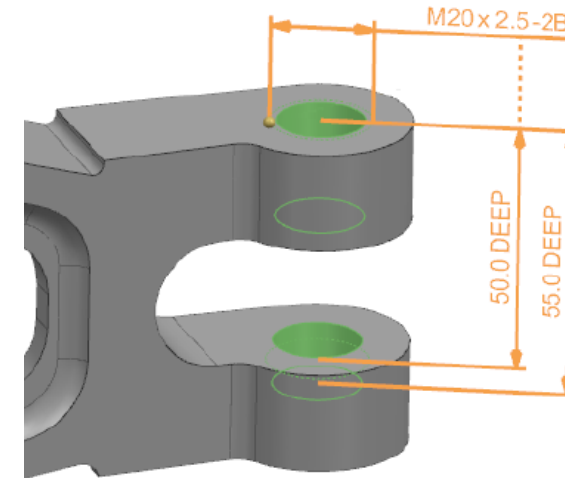
- *New default assembly load option* 😊
 - The **Minimally Load - Lightweight** Display option loads and displays assembly components using lightweight representations. It loads less data than the Partially Load - Lightweight Display option and makes use of multicore processors to improve load performance.



Drafting

- *Hole Callout enhancement* 😊
 - The linear hole callout dimension has the following enhancements.
 - You can now create a depth callout for the thread of a threaded or symbolic hole that is created through multiple faces.
 - When a hole is through multiple faces and the thread is on a single face, the depth callout of the thread is now consistently displayed.
- *New GD&T symbols*

You can now place several new **Geometric Dimensioning and Tolerance (GD&T)** symbols in a note or dimension text. You can use these symbols in any annotation you can enter using the **Text Editor**.



Drafting

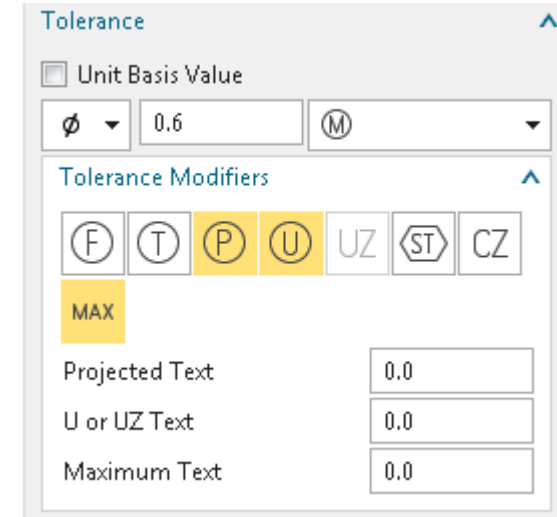
- *Feature Control Frame enhancements*

The Feature Control Frame dialog box is enhanced so the following options now appear as buttons that you can turn on and off instead of check boxes

Tolerance modifier options

- *New line styles and definition file requirements*

You can now use four new line styles to control the appearance of edges, lines, curves, and annotation objects, such as arrowhead and arrow lines.



Long Dashed Dotted



Long Dashed Double Dotted



Long Dashed Triplicate Dotted



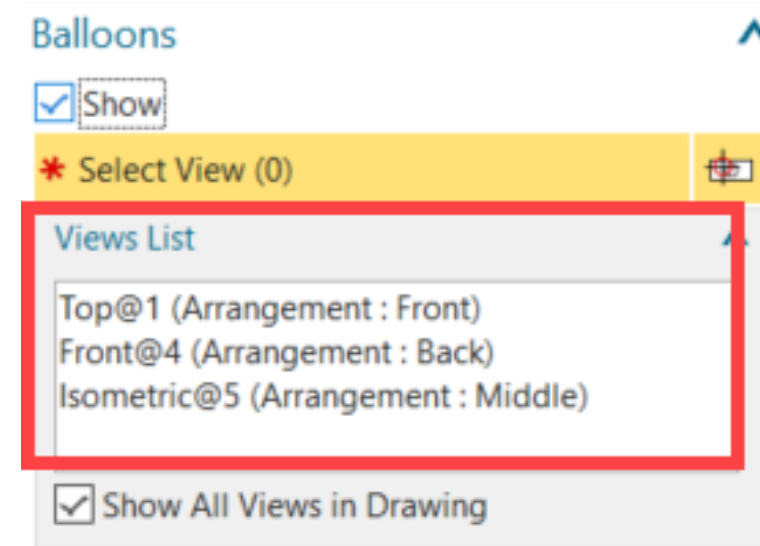
Long Dashed Double Short Dashed



Drafting

- *Parts List support for arrangements*
 - Specifying assembly arrangement to use for parts list
 - You can use the new Arrangement to Use option to specify which arrangement to use when you create or edit a parts list of an assembly with more than one assembly arrangement.
 - Viewing arrangement names when selecting views for balloons
 - Arrangement names are now displayed with drafting view names in the Views List to help you select the appropriate view in which to create the balloons.
- *New line styles and definition file requirements*

You can now use four new line styles to control the appearance of edges, lines, curves, and annotation objects, such as arrowhead and arrow lines.



PMI

- Technical data package enhancements*
 - Displaying attributes by selecting Attribute in a column list, and then specifying the attribute name
 - Adding, removing, or reordering columns
 - Displaying the PMI Value in your PMI table
 - Move, align, and snap existing TDP objects in the template by selecting and then dragging them or moving them with your keyboard, without having to use a dialog box

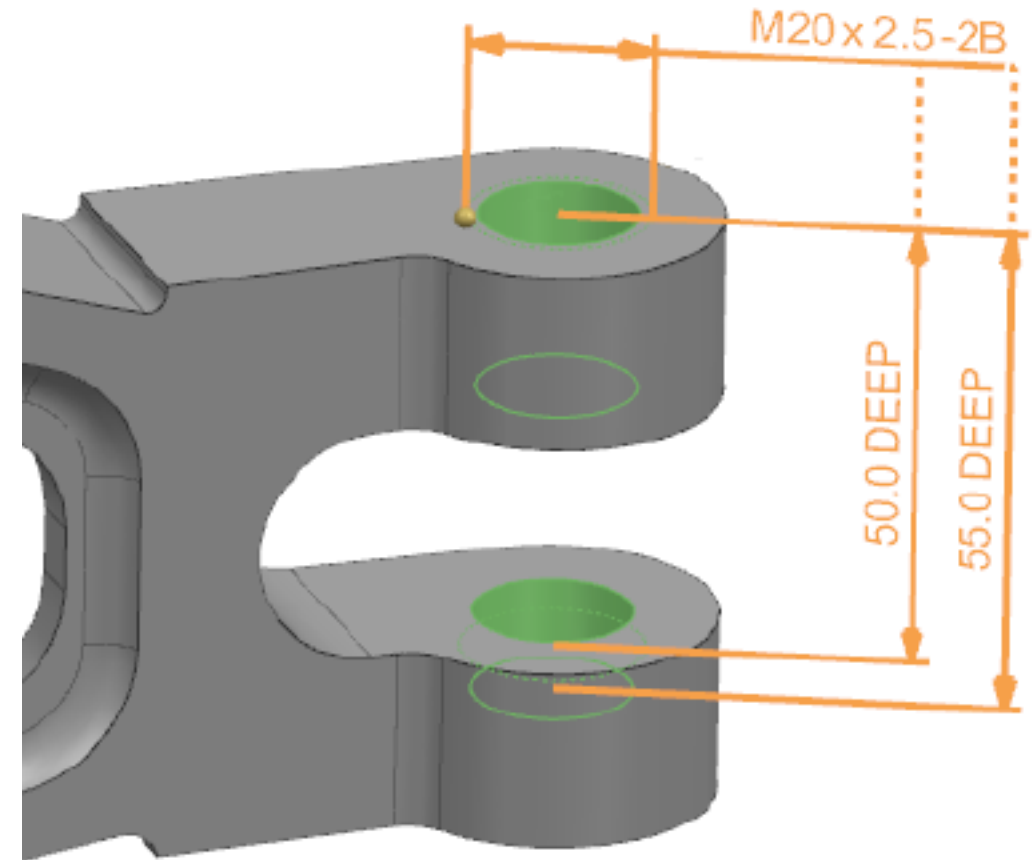
	Column	Header	Attribute
1	Index	Index	
2	Part Name	Part Name	
3	Quantity	Quantity	
4	Attribute	Attribute	MASS

PMI

- *Hole Callout enhancement*

The linear hole callout dimension has the following enhancements.

- You can now create a depth callout for the thread of a threaded or symbolic hole that is created through multiple faces.
- When a hole is through multiple faces and the thread is on a single face, the depth callout of the thread is now consistently displayed.

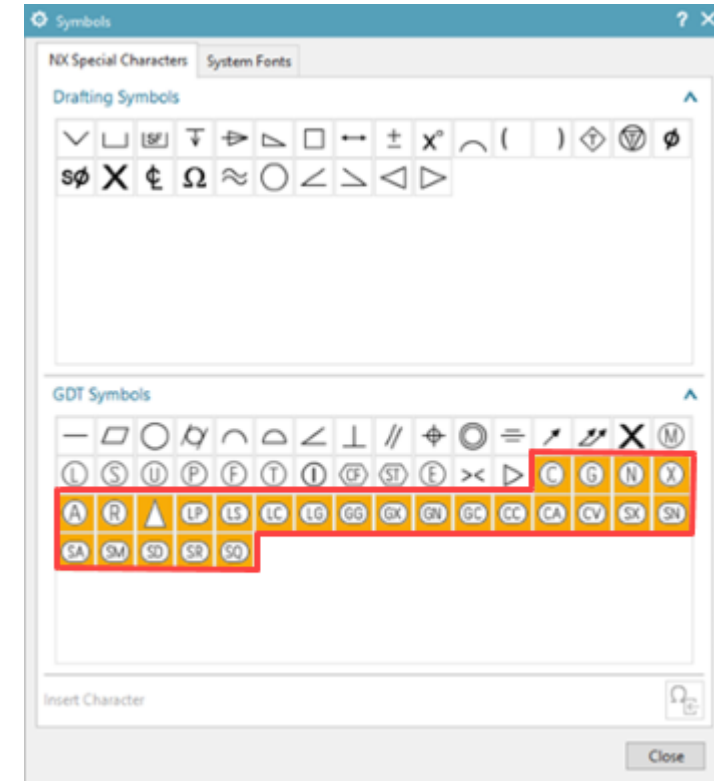


PMI

- *New GD&T symbols*

You can now place several new Geometric Dimensioning and Tolerance (GD&T) symbols in a note or dimension text. You can use these symbols in any annotation you can enter using the Text Editor. To use these new symbols, you must set the following preferences

- Text Parameters = any standard font file, such as Arial
- Symbol Font File = NX ISO Symbols or NX ANSI Symbols



PMI

- *Feature Control Frame enhancements*

The **Feature Control Frame** dialog box is enhanced so the following options now appear as buttons that you can turn on and off instead of check boxes:

- Tolerance modifier options:
- The **Free State** and **Projected** options for setting the primary, secondary, tertiary, and compound datum references:

Tolerance

Unit Basis Value

∅ 0.6 (M)

Tolerance Modifiers

(F) (T) (P) (U) UZ (ST) CZ

MAX

Projected Text 0.0

U or UZ Text 0.0

Maximum Text 0.0

HITACHI
Inspire the Next