

Adding a Wing Nut

Intelligent Fastener Extension



Goal of this tutorial

- This tutorial will show you the steps to add a wing nut to your Intelligent fastener library
- You will learn to add it as a legacy part or you can add it as a new type
- You will learn how to determine the placement reference from your fastener and create a new fastener data file
- Adding you fastener to a catalog will be the final step in this tutorial



Steps to add a Wing Nut

Fastener Data File

- Specify the Fastener Type
- Specify the placement references - For a wing nut an orientation is recommended
- You need the information about the sizes of your wing nut

Icon

- For the wing nut IFX does not have a default icon
- You need a new icon to show in the IFX dialog

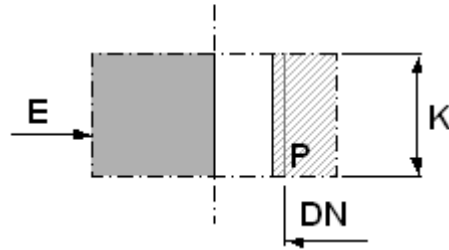
Catalog

- For which catalogs do you want to add your nut
- Only one or different catalogs

Fastener Data File – Fastener Type

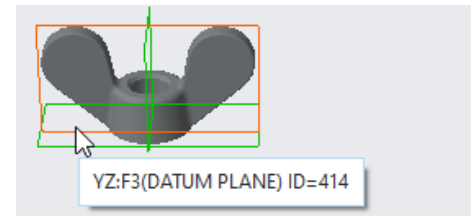
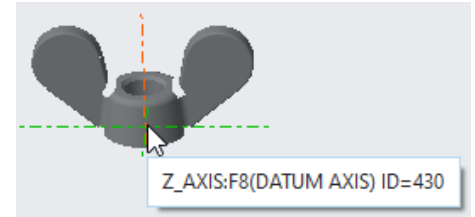
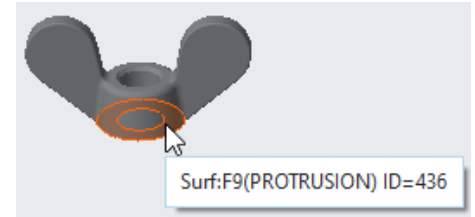
- As the Wing Nut is not available in IFX you have to use the NUTTYPE 99
- For the 2D preview only the dimensions E, K and DN/P are required

NUTTYPE 99



Fastener Data File - References

- In the fastener data file we use the placement references SURFACE, AXIS and ORIENT.
- Set the creo option `show_selected_item_id` to `yes`
- Use Surf:F9 as SURFACE 436
- Use Z_AXIS as AXIS 430
- Use YZ Plane as ORIENT 414



Fastener Data File - Size

- If you only want to assemble the given model, you only have to add DN, E and K value to your *.dat File

SYMBOL	DN	E	K
INSTANCE	DN	E	K
wingnut_single_m8	8	38	19

- If you want to use the given model as template to create more fastener sizes, you have to add a column for each dimension/parameter from you model, which you want to control

SYMBOL	DN	E	K	TBM_HEAD_DIAMETER	TBM_HEAD_HIGHT	TBM_WING_WIDTH	TBM_WING_HIGHT	TBM_WING_THICKNESS	TBM_NOMINAL_DIAMETER	EXTENDED_DESCRIPTION
INSTANCE	DN	E	K	TBM_HEAD_DIAMETER	TBM_HEAD_HIGHT	TBM_WING_WIDTH	TBM_WING_HIGHT	TBM_WING_THICKNESS	TBM_NOMINAL_DIAMETER	EXTENDED_DESCRIPTION
wingnut_m8	8	38	19	15	8.25	38	19	4	8	DIN 315 M8 GTW 480H
wingnut_m10	10	51	25	20	12	51	25	6	10	DIN 315 M10 GTW 480H

Fastener Data File - Result

```
!-----  
! ->Wing.nut.--only.one.leagcy.part  
!-----  
NUTTYPE>99  
UNIT ->MM  
SURFACE.436  
AXIS ->430  
ORIENT ->414  
INFO ->Wing.Nut.Single
```

```
!.No.need.to.add.P->.the.default.6.8.from.ifx_screw_data.cfg.is.taken  
SYMBOL. .->DN ->E ->K  
INSTANCE ->DN ->E ->K  
wingnut_single_m8 ->8 ->38 ->19
```

```
!-----  
! ->Wing.nut.--using.a.template  
!-----  
NUTTYPE>99  
UNIT ->MM  
SURFACE.436  
AXIS ->430  
ORIENT ->414  
INFO ->Wing.Nut.Template
```

```
!.If.P.is.not.specified,.the.default.from.ifx_screw_data.cfg.is.taken  
!.E.and.K.are.required.for.the.2D.preview!  
SYMBOL. .->DN ->E ->K ->TBM_HEAD_DIAMETER ->TBM_HEAD_HIGHT ->TBM_WING_WIDTH ->TBM_WING_HIGHT ->TBM_WING_THICKNESS ->TBM_NOMINAL_DIAMETER ->EXTENDED_DESCRIPTION  
INSTANCE ->DN ->E ->K ->TBM_HEAD_DIAMETER ->TBM_HEAD_HIGHT ->TBM_WING_WIDTH ->TBM_WING_HIGHT ->TBM_WING_THICKNESS ->TBM_NOMINAL_DIAMETER ->EXTENDED_DESCRIPTION  
wingnut_m8 ->8 ->38 ->19 ->15 ->8.25 ->38 ->19 ->4 ->8 ->DIN.315.M8.GTW.480H  
wingnut_m10 ->10 ->51 ->25 ->208 ->12 ->51 ->25 ->6 ->10 ->DIN.315.M10.GTW.480H
```

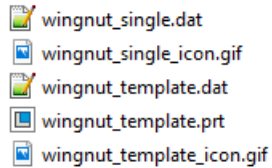
- The legacy modle ,wingnut_single_m8' must be accessible by IFX. Store in in PDM Link, or in a search_path location
- You need a template with the same name as your *.dat file. Example:
 - wingnut.dat
 - wingnut.prt

Icon for your wing nut

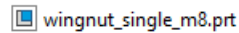
- If you have a special fastener, you may want to use your own icon. Simply store a PNG, BMP or GIF in your ifx_fastener_data folder with the name of your *.dat file and a suffix _icon
- Example for ,wingnut.dat' -> wingnut_icon.png
- [OLH - Fastener Icons](#)

File Locations

- You have to store the files like shown below in your IFX library
- Location of PATH_ABS_LIBRARY
 - Folder ifx_fastener_data



- Folder ifx_fastener_archive



Adding your wing nut to a catalog

- The last step is now to add your wing nuts to a catalog file.
- You can add the fastener to more than one file. Simply open the catalog where you want to add it and add the name of the *.dat file to the catalog.
- The catalogs are located in <PATH_ABS_LIBRARY>\ifx_catalogs
- Open the mm.txt catalog and add the following to the nut sector:

```
#nuts Wingnuts  
wingnut_template  
wingnut_single
```

Assemble your Wing Nut

- The wing nuts are now available in your Nut menu.
- Available for M8 and M10
- While assemble you have to select the orientation for the wing nut

→ Select surface on the lower part (Thread/Nut).

