PTC® Live Global

CUST 241 - IFX Libraries In an Enterprise

David Lewis, Jim Barret-Smith
Zebra Technologies, PTC

June 9, 2015

IFX Libraries In an Enterprise

What is IFX

- **Fasteners**
- **IFX Lite vs Full *(Free v Licensed)***

Quick Demo

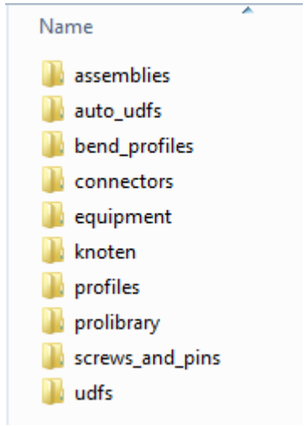
IFX Libraries In an Enterprise

Contents

- Workings of IFX
- Setup Considerations
- Where to Edit
- Where to Store
- Resources
- OOTB Library

Default Configuration

- **Parts located in Creo Install point**
  - **Common Files\afx\parts**



- **Configuration files**
  - **User Interface**
    - ***.mnu***
  - **Part Configuration Files**
    - ***.dat***
  - **CAD Data**
    - ***Seed Part***

IFX Libraries In an Enterprise

Determine Implementation Method

- Add / Remove parts to ‘Out of the Box’ library
  - Create parts based on copies of OOTB files
  - Modify OOTB items to include your Parameters
  - Add in-house Company parts to the UI
  - Remove OOTB choices from the menu
- Start fresh with Legacy in-house Company Parts
  - Naming for files
  - Create required datums & features
  - Designate datums and dimensions to the .dat file

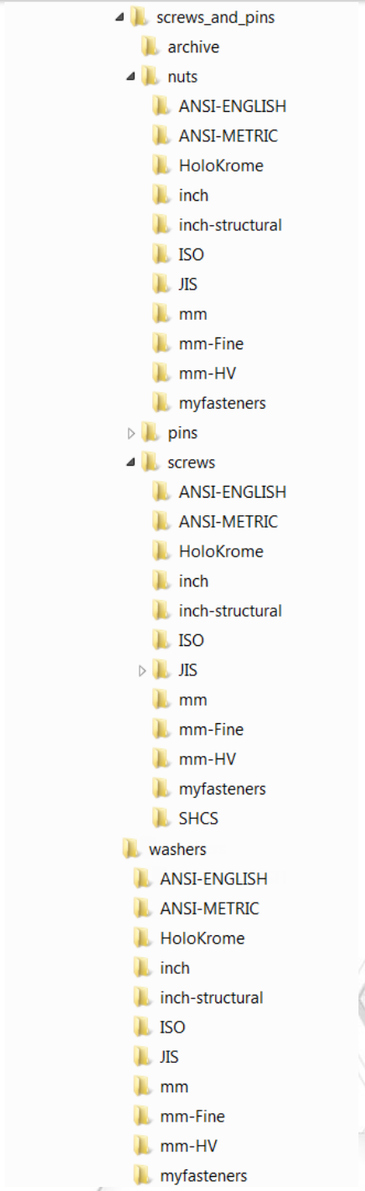
Edit / Create CAD Files

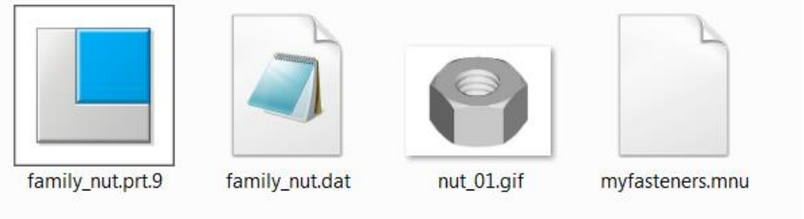
- **File Naming**
  - *Key connection between UI and Data store*
  - *MNU file points to DAT file*
    - *but must be referenced as a PRT*

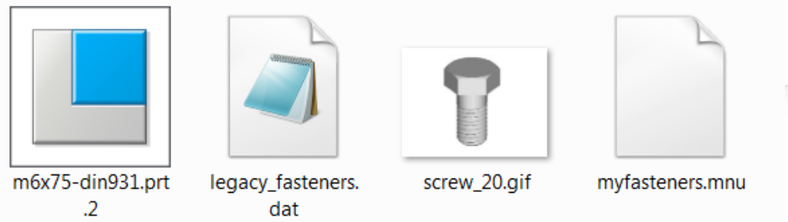
myfasteners.mnu *

```
My Legacy Fasteners
#
#
legacy_fasteners.prt
Converted Legacy Fasteners
Konvertiert ältere Befestigungen
```

  - **The *.mnu file name must be the same as the name of containing folder.**
  - **The Screw, Nut, & Washer must be in commonly named folders**







Creation Method of CAD Files for Library

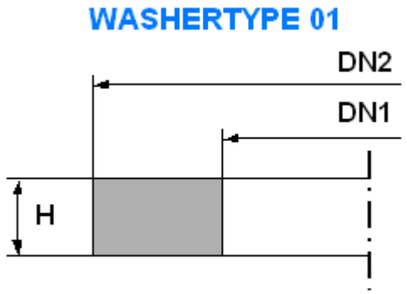
- ***On-The-Fly***
  - *As defined in OOTB*

- ***Individual part files***
  - Pro
    - Revision of one part easier
    - Required when family parts are not allowed
  - Con
    - Revision of many parts difficult
    - Many more Parts in Windchill

- ***Family Table***
  - Pro
    - Revision of many parts easy
    - Fewer files in Windchill
    - Easier creation of new variants
  - Con
    - More complicated to first create

- **TIP**

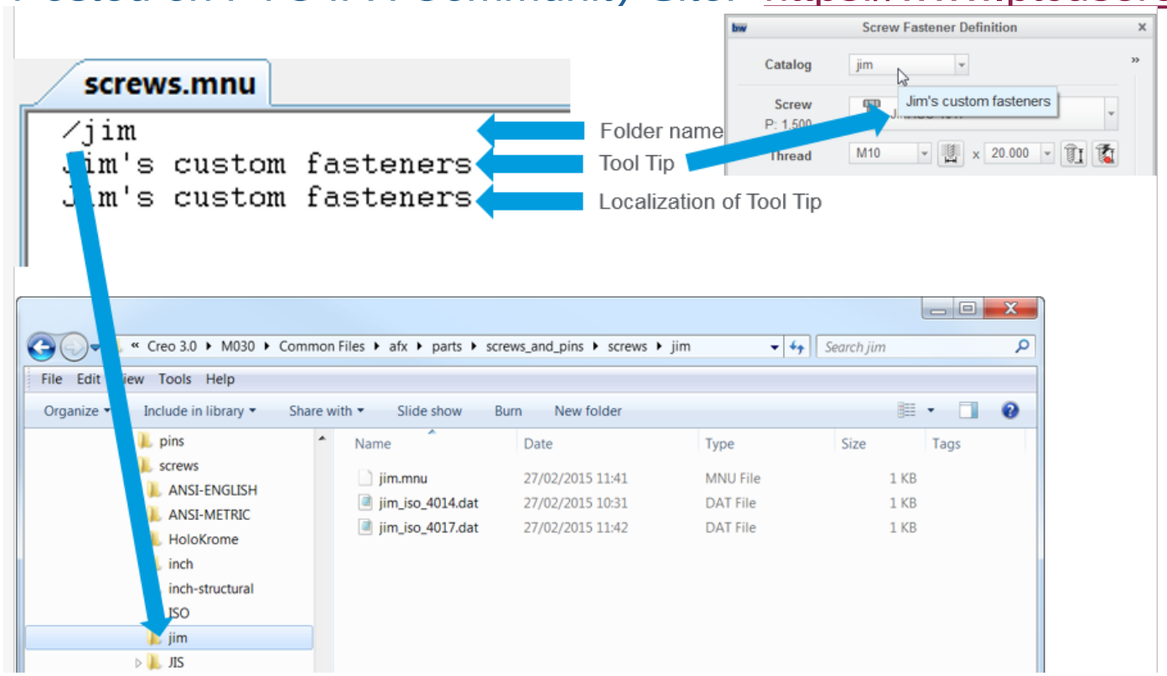
  Use special DAT Syntax

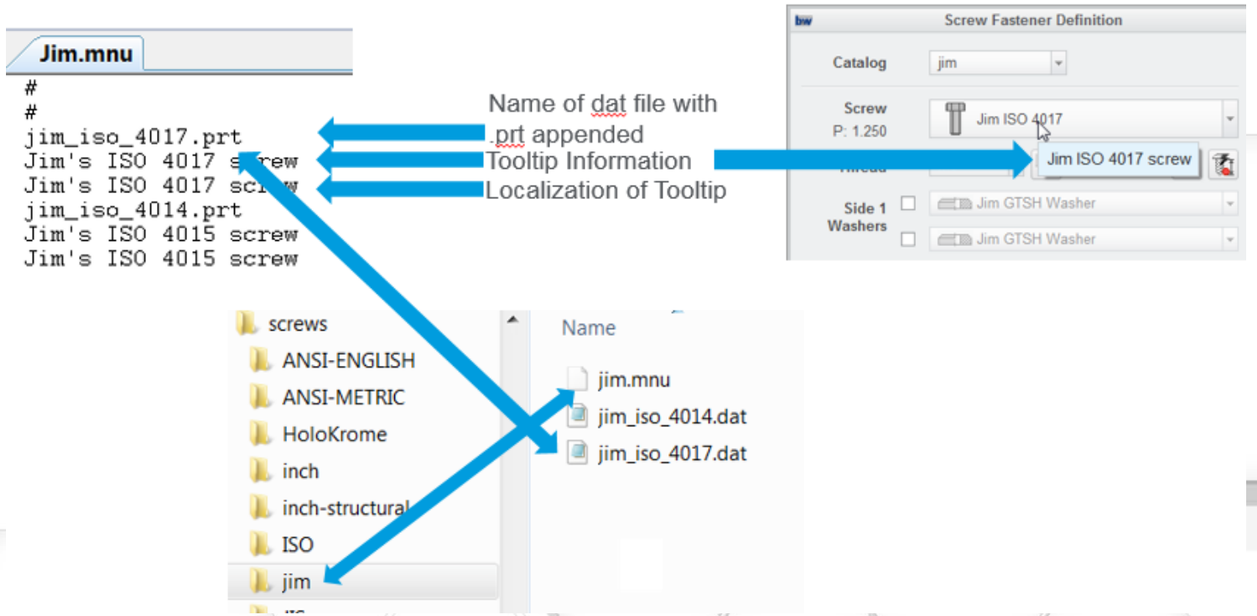



```
!-------------------------------------------------------
!       Scheibe ohne Fase
!       Plain washer (without chamfer)
!-------------------------------------------------------

WASHERTYPE      1
UNIT    MM
SURFACE 57
AXIS    80
CBSCR   DIN974-1 R5
CBNUT   DIN974-2 R1
INFO    my washer

FAMPRT  washer

SYMBOL          STRING  DN      H       DN1     DN2
INSTANCE        STRING  DN      H       DN1     DN2
#FAMTAB         M<DN>   d1      d3      d1      d2
```

Edit UI

- IFX Migration Slide Deck
  Posted on PTC IFX Community Site: https://www.ptcusercommunity.com/docs/DOC-7126



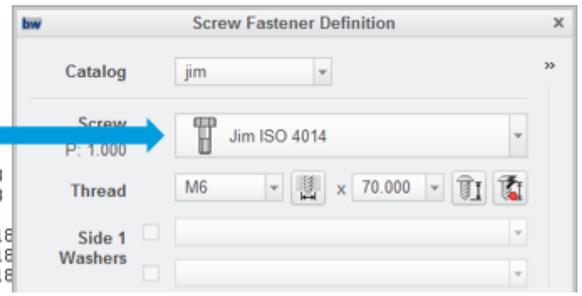


Edit Part DAT Files

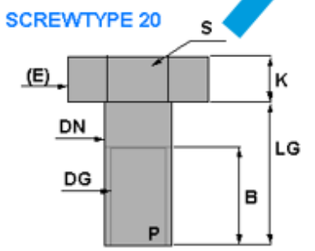
- IFX Migration Slide Deck
  Posted on PTC IFX Community Site: https://www.ptcusercommunity.com/docs/DOC-7126

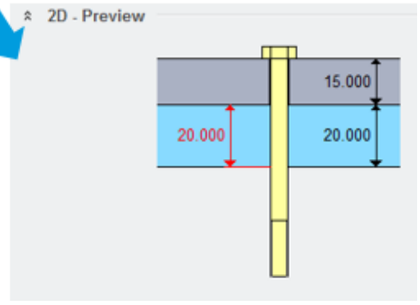
jim_iso_4014.dat *

```
!-------------------------------------------------------------------------
!       ISO 4014 - 8.8
!
!       Hexagon head screw with shank, product grades A and B
!       Sechskantschraube mit Schaft, Produktklassen A und B
!-------------------------------------------------------------------------

SCREWTYPE       20
UNIT    MM

SURFACE 495
AXIS    1440
CBSCR   DIN974-2 R1
INFO    Jim ISO 4014

SYMBOL          STRING  DN      LG      B       BUW_TYPE        BUW_SIZE
INSTANCE        STRING  DN      LG      B       type            size

m6x70-din931    M6      6       70      18      ISO 4014        M6 x 70 - 8.8
m6x75-din931    M6      6       75      18      ISO 4014        M6 x 75 - 8.8
m6x80-din931    M6      6       80      18      ISO 4014        M6 x 80 - 8.8
```

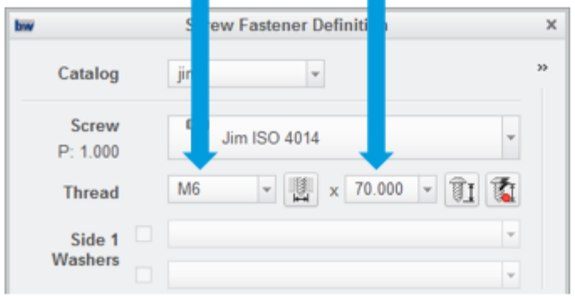



```
        DIN974-2 R1
        Jim ISO 4014

        STRING  DN      LG      B       S       K       DG      P       BUW_I
E       STRING  DN      LG      B       S       K       DG      P       name

in931   M6      6       70      18      10      4       5       1       hexh
in931   M6      6       75      18      10      4       5       1       hexh
in931   M6      6       80      18      10      4       5       1       hexh
```






```
SYMBOL          STRING  DN      LG      B       S       K       DG      P       BUW_NAM
INSTANCE        STRING  DN      LG      B       S       K       DG      P       name

m6x70-din931    M6      6       70      18      10      4       5       1       hexhead
m6x75-din931    M6      6       75      18      10      4       5       1       hexhead
m6x80-din931    M6      6       80      18      10      4       5       1       hexhead
```



Used for matching the nut The pitch of the nut must match the pitch of the fastener

Putting DAT Files in Windchill

- **Store files in Installation point**
  - *Current Method*
  - *Use Current Structure*
  - *Installation point must be updated when Windchill library is updated*

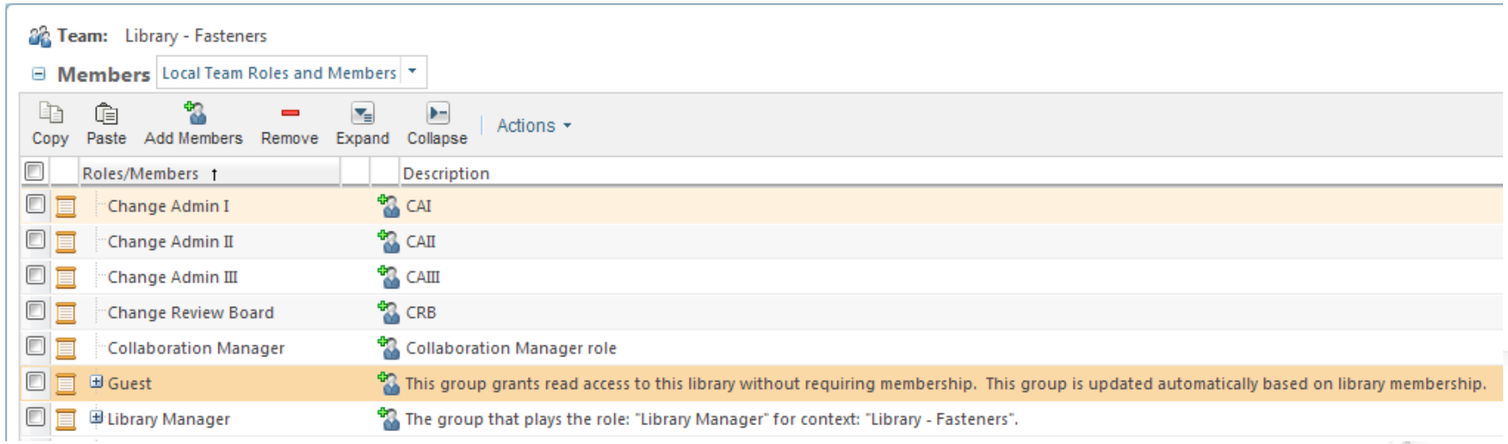
- **Store in PTC Windchill**
  - *Planned Method - Direct integration to Windchill*
  - *Use Structure Preferred by Org.*
  - *Installation point will not need to change when content changes*

ETA Creo 3 Build M??? (Winter 2015)

Will be as Piping is currently implemented

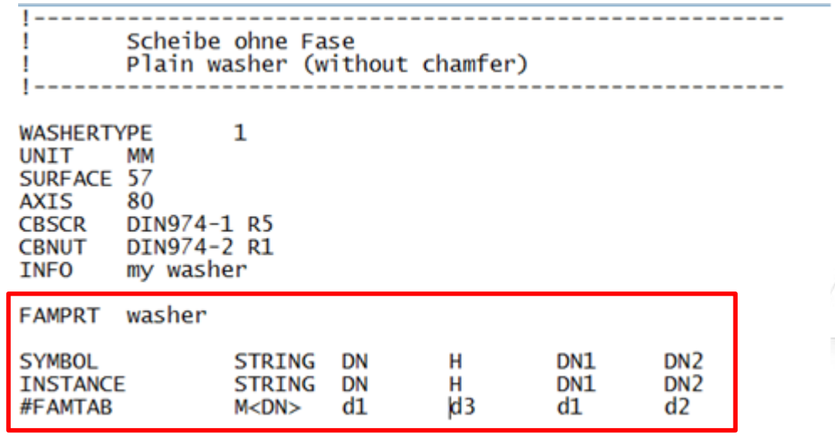
Putting Files in Windchill

- **CAD Files**
  - Can be stored in PTC Windchill Today
    - Dat and MNU files need to stay in the Installation
  - Location
    - Upload to PTC Windchill in your preferred folder organization.
    - Needs to be accessible for all Users as Read Only



Putting Files in PTC Windchill

- **CAD Files**
  - **Import Parts**
    - **Individual Parts** *(OOTB Method)*
      - **IFX Instance Creator**
      - **See Video on PTC IFX Community**
    - **Family Table**
      - **Edit Dimension Names**
      - **Create Family Table**
      - **Use DAT file information**
      - **Draft document available for email.**
        Final will be published to M060 Help Center



```
!-------------------------------------------------------
!       Scheibe ohne Fase
!       Plain washer (without chamfer)
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AXIS    80
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CBNUT   DIN974-2 R1
INFO    my washer

FAMPRT  washer

SYMBOL          STRING  DN      H       DN1     DN2
INSTANCE        STRING  DN      H       DN1     DN2
#FAMTAB         M<DN>   d1      d3      d1      d2
```

TEST!

IFX Libraries In an Enterprise

Where to find Detailed Information

- Learning Exchange
  - http://learningexchange.ptc.com/tutorials/search?product_id=1&search=fastener
- Help Center
  - http://help.ptc.com/creo_hc/creo30_pma_hc/usascii/index.html#page/pma/assembly/About_Working_with_Intelligent_Fastener.html
- Tutorial
  - Introduction to IFX
    - http://help.ptc.com/creo_hc/creo30_pma_hc/usascii/index.html#page/pma/tutorials_pma/ifx_tutorials_overview.html
  - Customization
    - Coming Summer 2015 -- M050
- Community
  - https://www.ptcusercommunity.com/groups/intelligent-fastener-extension-ifx-by-bw-software

Questions

Please use PTC Community to post questions

We will be monitoring the group and replying

https://www.ptcusercommunity.com/groups/intelligent-fastener-extension-ifx-by-bw-software

- Your feedback is valuable
- Don’t miss out on the chance to provide your feedback
- Gain a chance to win an instant prize!
- Complete your session evaluation now

Reference Materials

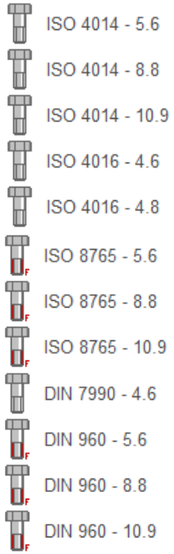
Out of the Box Library Contents

Library *(OOTB)*

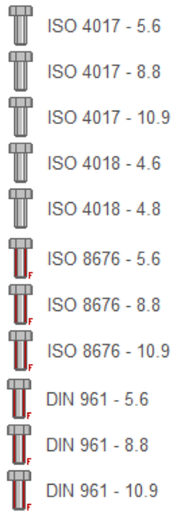
PTC® Live Global

MM

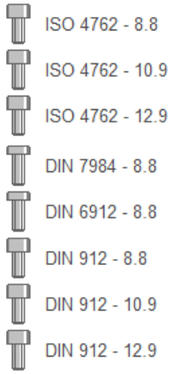
HEX Head With Shank



HEX Head Full Thread

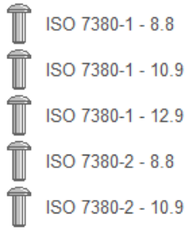


HEX Socket Head Cap

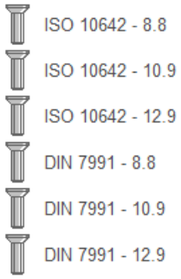


Hexalobular Socket Head

HEX Socket Button Head

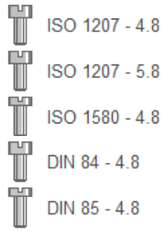


HEX Socket Countersunk

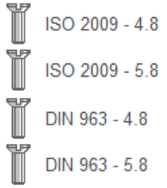


Hexalobular Countersunk

Slotted Cheese Head

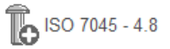


Slotted Flat Countersunk



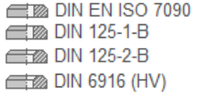
Slotted Pan Head

Pan Head with Cross Recess

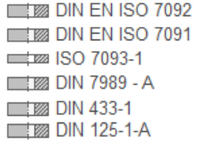


Lifting Eye

Chamfered

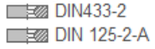


Plain



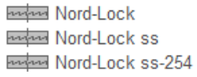
Square Taper

Specific Bolt Type



Spring Lock

Nord Lock



Plain

Prevailing

With Flare

Dome

Library *(OOTB)*

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MM-HV

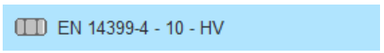
Hex

Chamfered

Plain

Square Taper

Plain



Library *(OOTB)*

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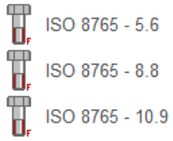
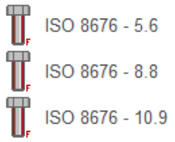
MM Fine

HEX Head With Shank



ISO 8765 - 5.6
ISO 8765 - 8.8
ISO 8765 - 10.9

HEX Head Full Thread



ISO 8676 - 5.6
ISO 8676 - 8.8
ISO 8676 - 10.9

Chamfered

DIN EN ISO 7090
DIN 125-1-B
DIN 125-2-B

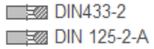
Plain

DIN EN ISO 7092
DIN EN ISO 7091
ISO 7093-1
DIN 433-1
DIN 125-1-A

Square Taper

DIN 434 U
DIN 435 I

Specific Bolt Type

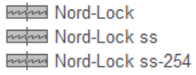


DIN433-2
DIN 125-2-A

Spring Lock

DIN 7980
DIN 127-A
DIN 127-B
DIN 128-A

Nord Lock



Nord-Lock
Nord-Lock ss
Nord-Lock ss-254

Plain

ISO 8673 - 6
ISO 8673 - 8
ISO 8673 - 10
ISO 8674 - 8
ISO 8674 - 10
ISO 8674 - 12
ISO 8675 - 04
ISO 8675 - 05

Prevailing

ISO 10512 - 6
ISO 10512 - 8
ISO 10512 - 10

Dome

DIN 1587 x? - 6

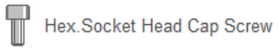
Library *(OOTB)*

PTC® Live Global

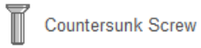
Inch

HEX Head With Shank

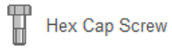
HEX Socket Head Cap



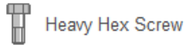
Countersunk



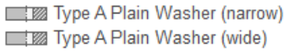
HEX Cap



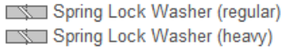
Heavy Hex



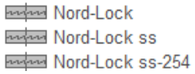
Plain



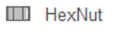
Spring Lock



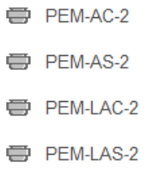
Nord Lock



Plain



Non Locking



Library *(OOTB)*

PTC® Live Global

Inch Structural

Heavy Hex

Heavy Hex Structural Bolt - A490, Type 1

Heavy Hex Structural Bolt - A325, Type 1

Plain

Hardened Steel Circular Washer - F436

Square Taper

Square Beveled Washer - F436

Plain

Heavy Hex Nut - A563, Grade DH

Heavy Hex Nut - A563, Grade C

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