

Flexible Tube & Pipe - How to be a “Hoser”

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AUTODESK® EXPERT ELITE

Class summary

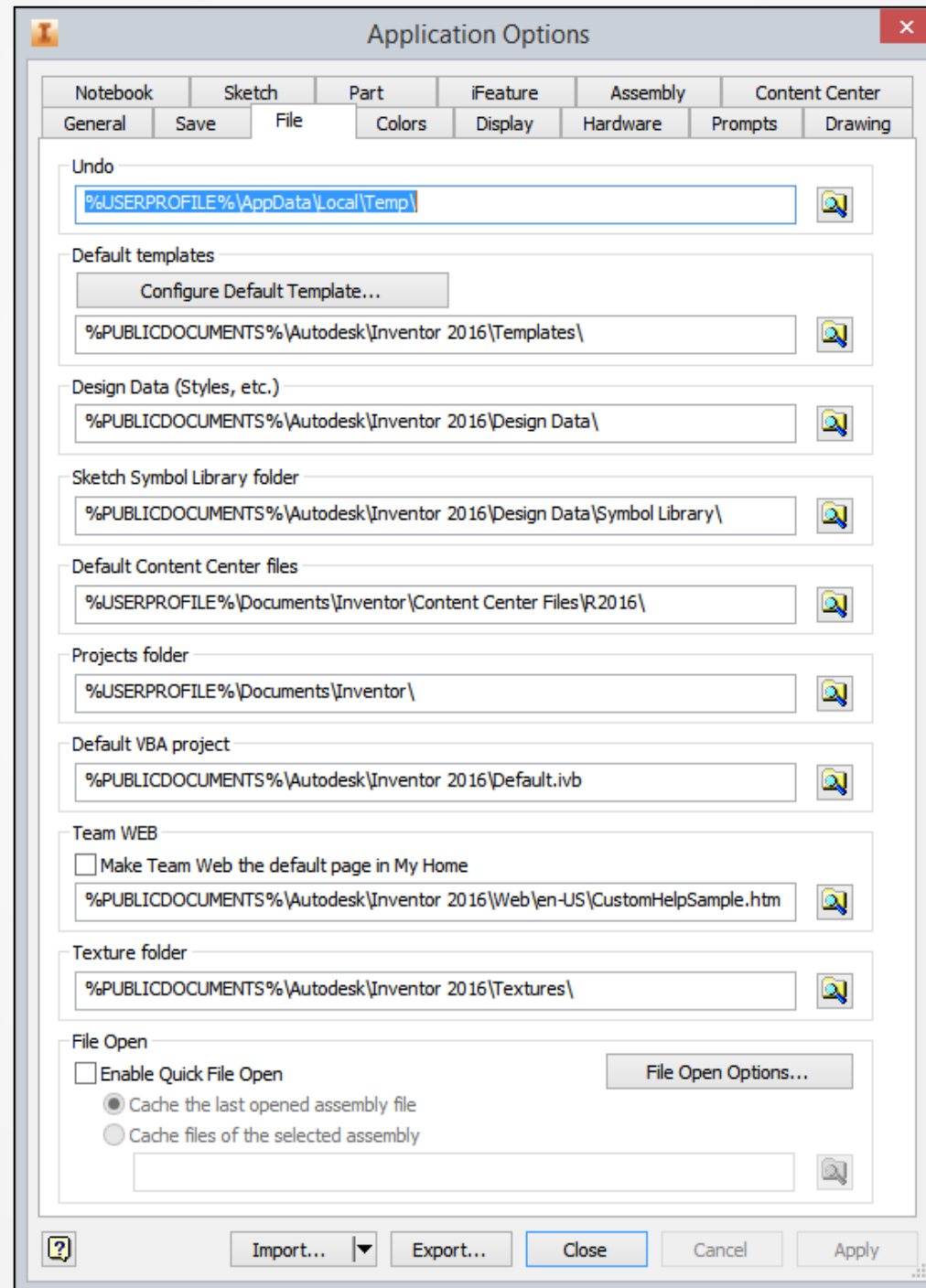
- 1.) Tube and Pipe Template Management
- 2.) System and BOM Settings Particular to T & P
- 3.) T & P Styles –Copy and Modify Existing
- 4.) Define and Refine T & P Runs
- 5.) Fitting Placement with Respects to BOM

Key learning objectives





At the end of this class, you will be able to:

- Understand Inventor Settings to Maximize Performance
- Add Copy/Edit Tube & Pipe Styles
- Create and Modify Tube & Pipe Runs
- Tube and Pipe Runs with Respect to BOM

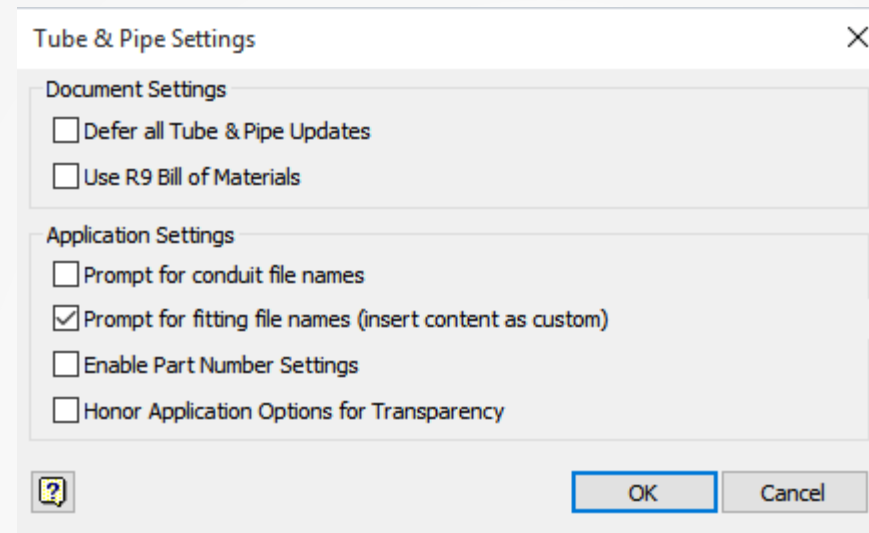
Tube & Pipe Styles Template



Tube & Pipe Template

 << Users > Public > Public Documents > Autodesk > Inventor 2016 > Design Data > Tube & Pipe > en-US				
Name	Date modified	Type	Size	
 OldVersions	10/06/2015 8:52 PM	File folder		
 piping runs.iam	20/04/2015 4:18 PM	Autodesk Inventor...	316 KB	
 piping runs2016.iam	03/03/2015 4:33 PM	Autodesk Inventor...	249 KB	

System Settings



Use R9 BOM

In the current BOM, the raw material description for conduit parts is stored in the new stock number property. All BOM items with the same part number are automatically merged in parts lists. If the part number is blank, parts do not merge

In the R9 BOM, the raw material description for conduit parts was stored in the part number property. You had control over the merging of rows in the parts list. If two pipes had the same part number, you could choose not to merge them

Application Settings

Prompt for conduit file names

Determines whether conduit part files prompt to rename in progress of populating routes, saving files, and reusing tube and pipe components.

Prompt for fitting file names (insert content as custom)

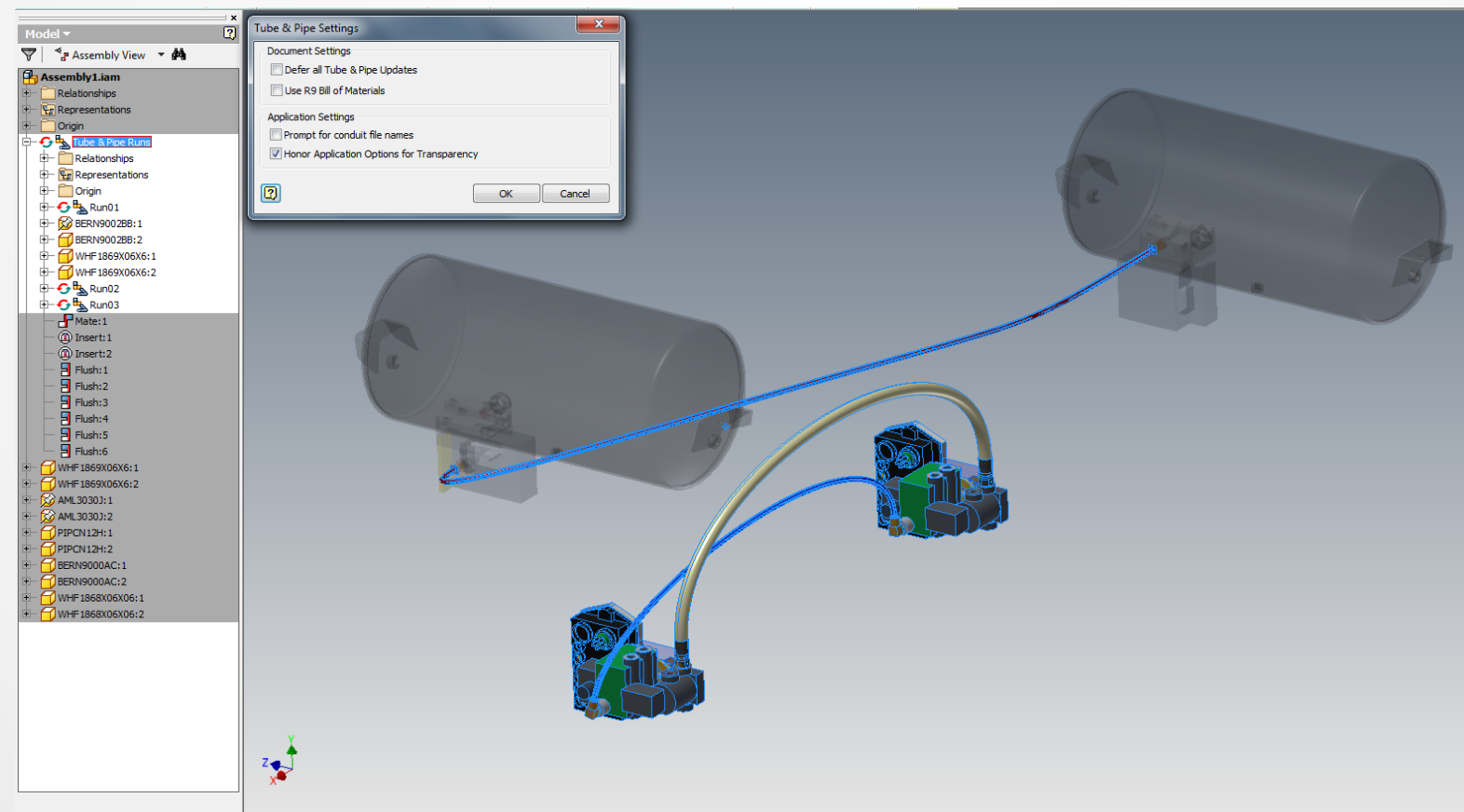
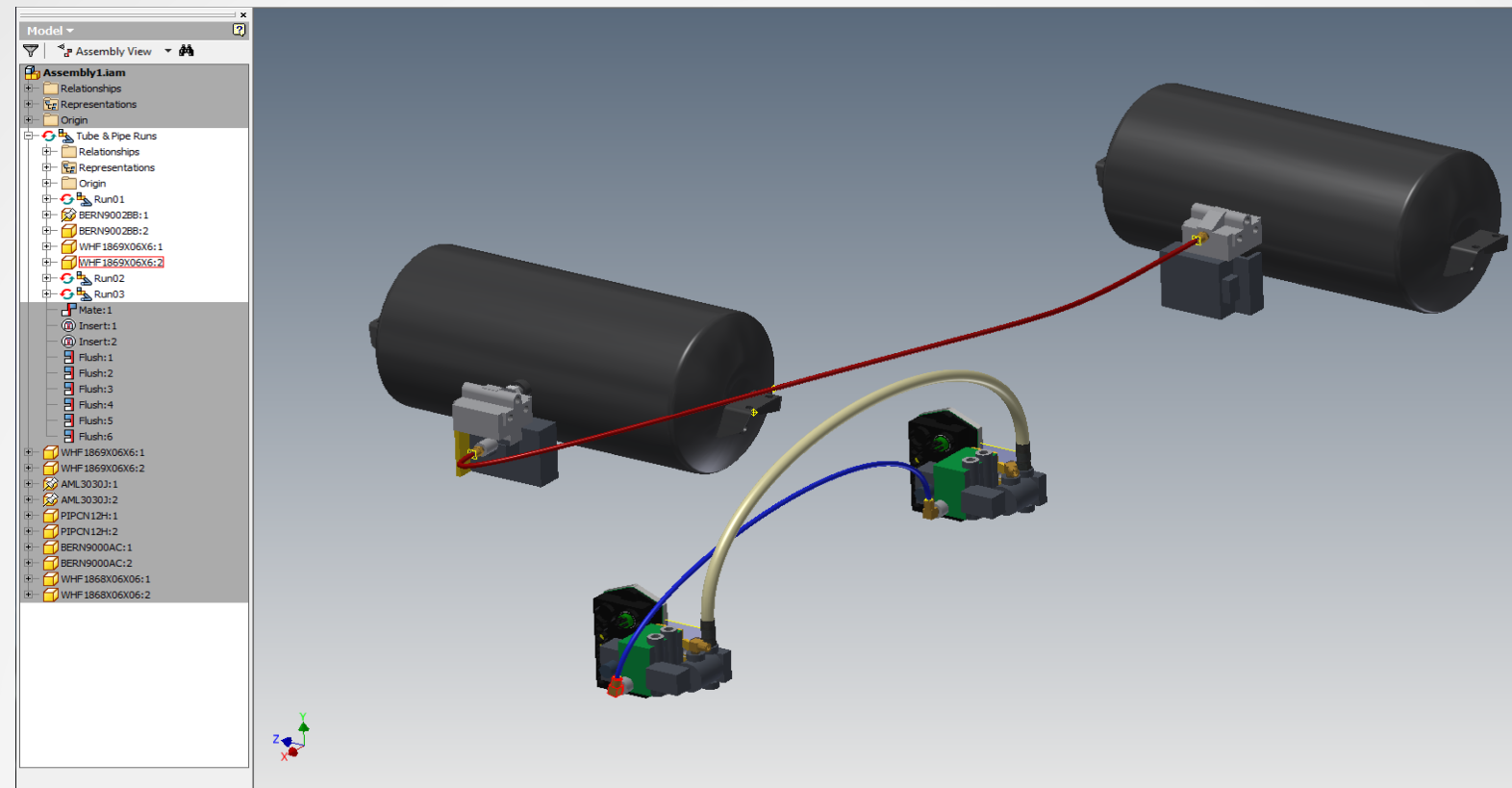
Prompts the option to customize the name of your fittings within the Conduit File Names dialog box.

Enable Part Number Settings

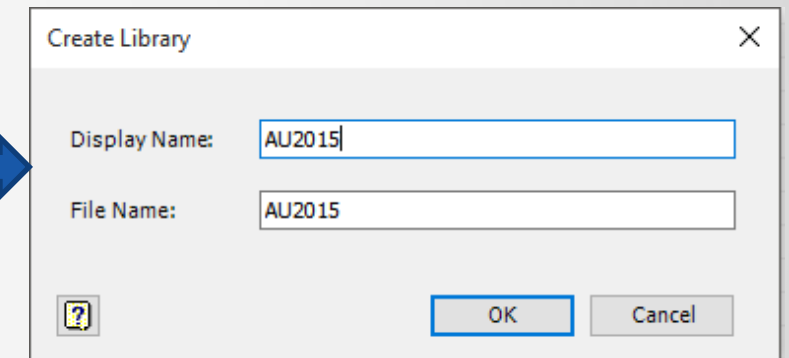
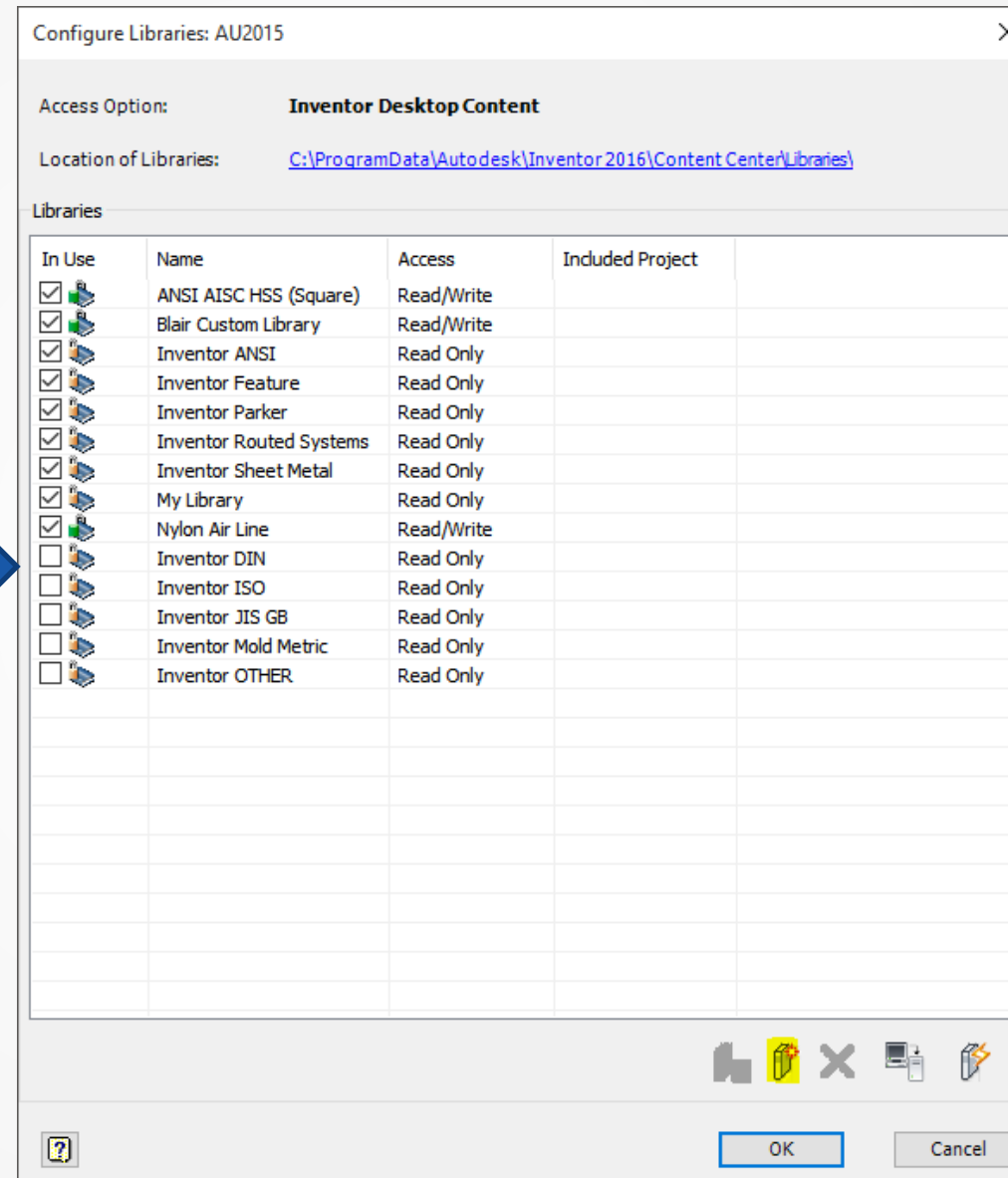
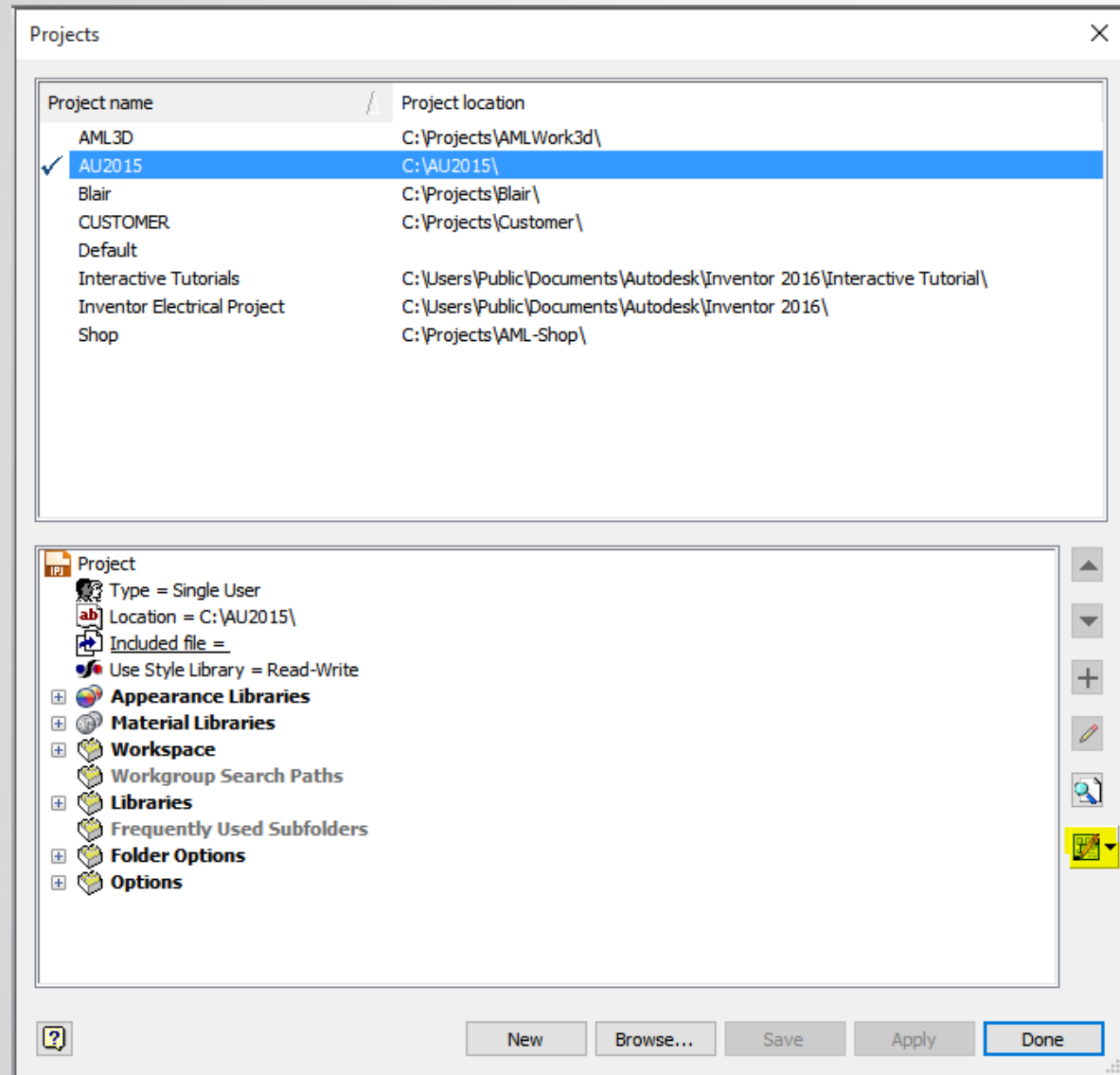
Allows you to populate a part number into the parts list within the drawing environment. The part number is updated within the part file and then populates to the parts list. This option also makes available the Part Number Settings options in the Conduit File Names dialog box. Upon accessing the Conduit File Names dialog box, you then have the option to inherit part numbers from Content Center, use a custom file name, or leave empty.

Honor Application Options for transparency

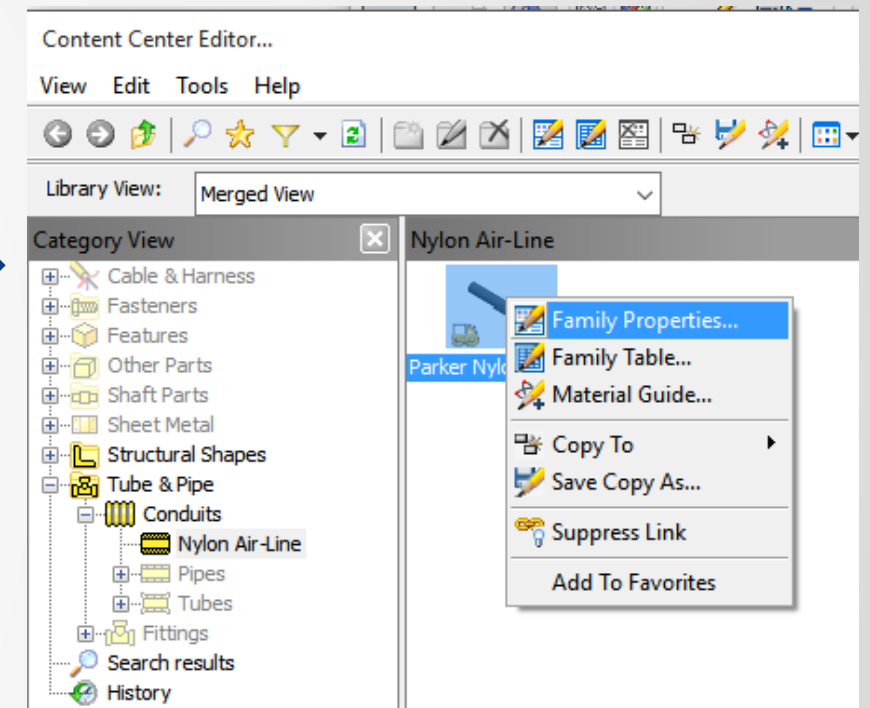
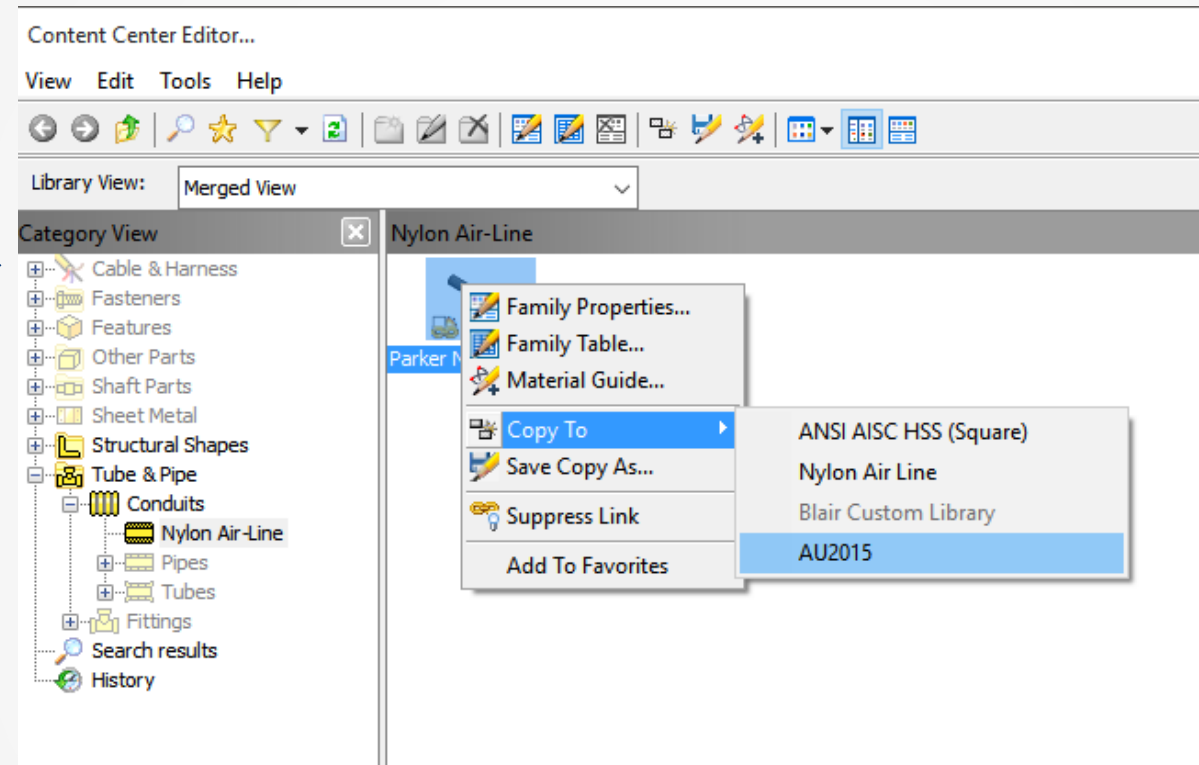
When selected, the option settings for transparency are honored as set in the Application Options dialog box. Turned off by default. When not selected, the entire assembly displays as opaque, and avoids the visual confusion that can occur when transparency is active.



Configure Library(s)

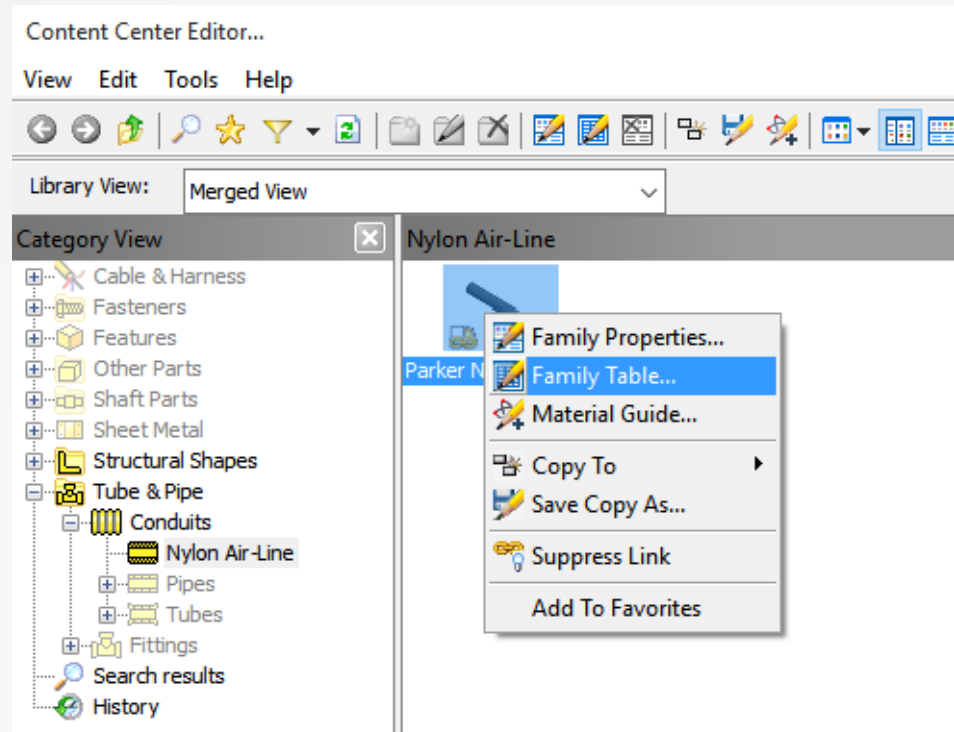


Content Center Editor



Select Library – RMB
Copy to Library
RMB – Family Properties

Let's Get Editing



Family Table: Parker Nylon Air-line

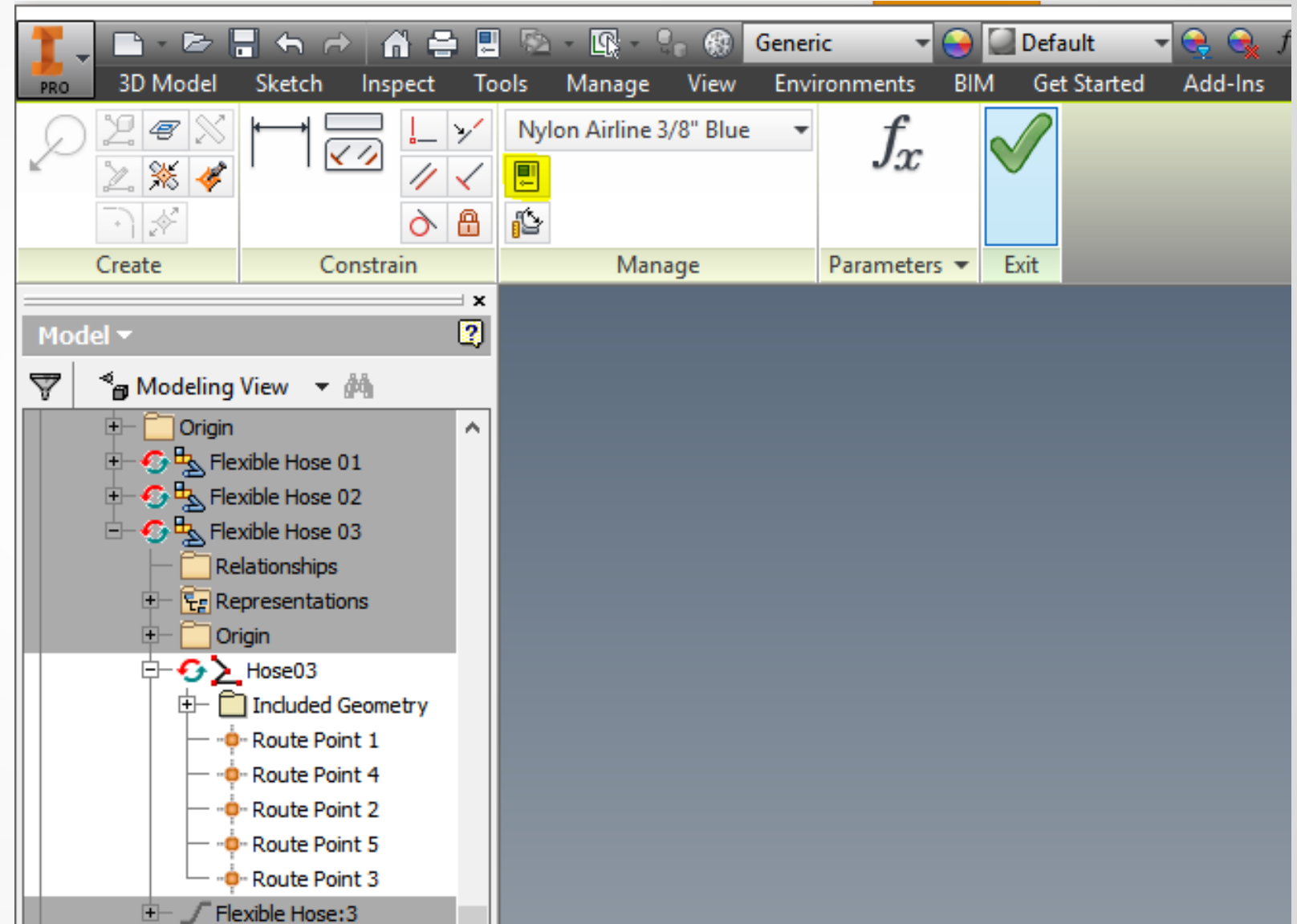
All Columns

RowStatus	ID [in]	OD [in]	L [in]	PL [in]	ND	Size Designation	SN	FILENAME	DESIGNATION	PARTNUMBER	STOCKNUMBER	MATERIAL	ITEM-CODE	ISOGEN Description
1	0.079	0.125	5	5	1/8	1/8	ID=0.125	Parker Hannifin J844 Nylon Air Brake - 1/8	1/8	WHFNT 100-02	WHFNT 100-02	Nylon 6/6		
2	0.118	.188	5	5	3/16	3/16	ID=0.1875	Parker Hannifin J844 Nylon Air Brake - 3/16	3/16 - 5	WHFNT 100-03	WHFNT 100-03	Nylon 6/6		
3	0.170	.25	5	5	1/4	1/4	ID=0.25	Parker Hannifin J844 Nylon Air Brake - 1/4	1/4 - 5	WHFNT 100-04	WHFNT 100-04	Nylon 6/6		
4	0.375	0.251	5	5	3/8	3/8	ID=0.375	Parker Hannifin J844 Nylon Air Brake - 3/8	3/8 - 5	WHFNT 100-06	WHFNT 100-06	Nylon 6/6		
5	0.376	0.50	5	5	1/2	1/2	ID=0.50	Parker Hannifin J844 Nylon Air Brake - 1/2	1/2 - 5	WHFNT 100-08	WHFNT 100-08	Nylon 6/6		
6	0.441	0.625	5	5	5/8	5/8	ID=0.625	Parker Hannifin J844 Nylon Air Brake - 5/8	5/8 - 5	WHFNT 100-10	WHFNT 100-10	Nylon 6/6		
7	0.566	0.75	5	5	3/4	3/4	ID=0.75	Parker Hannifin J844 Nylon Air Brake - 3/4	3/4 - 5	WHFNT 100-12	WHFNT 100-12	Nylon 6/6		
8	0.3125	.232	5	5	5/15	5/16	ID=0.3125	Parker Hannifin J844 Nylon Air Brake - 5/16	5/16 - 5	WHFNT 100-05	WHFNT 100-05	Nylon 6/6		
9	0.752	1.00	5	5	1	1	ID=1.000	Parker Hannifin J844 Nylon Air Brake - 1	1 - 5	WHTNT 100-16	WHFNT 100-10	Nylon 6/6		

OK Cancel Apply

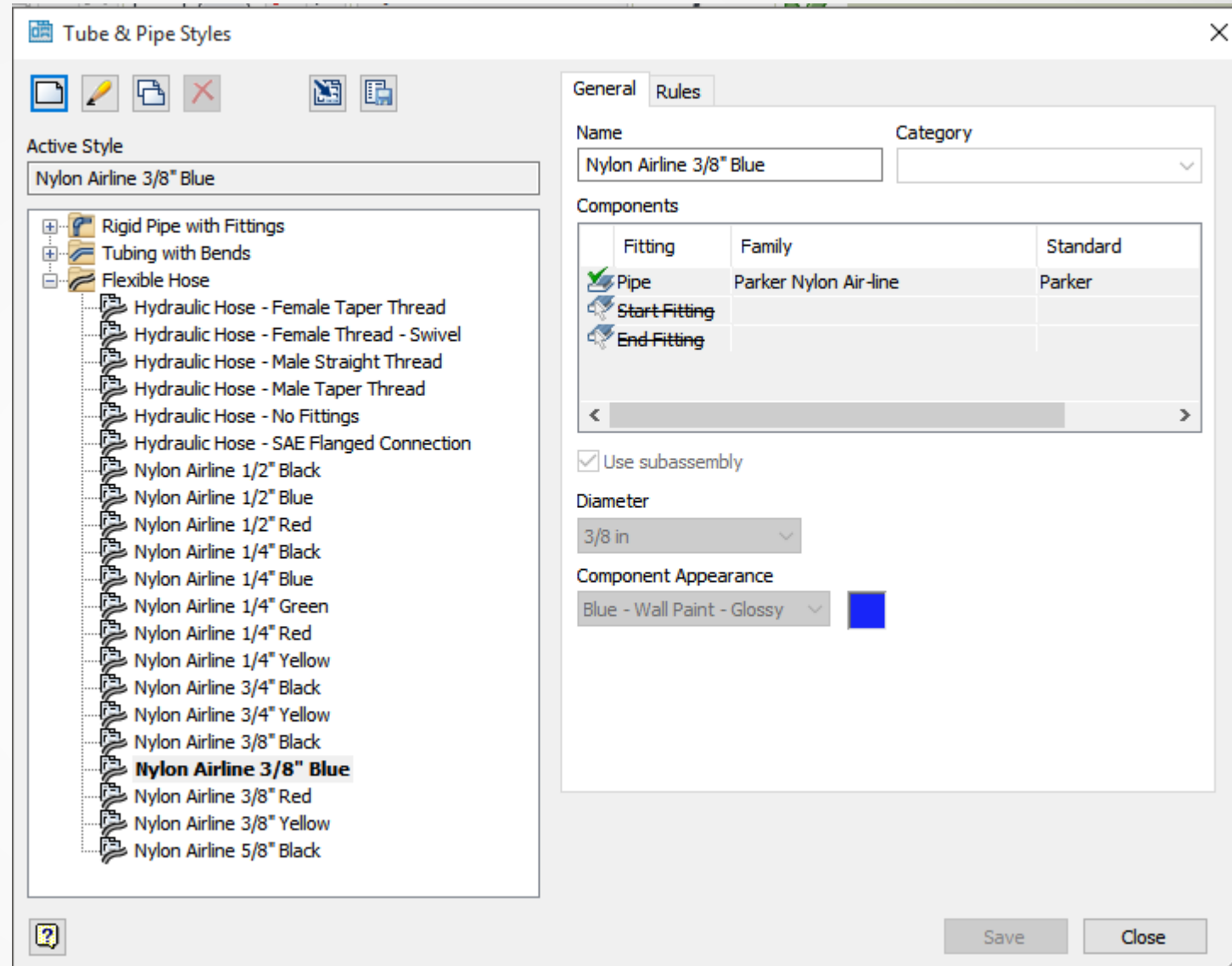
Styles

■ Open Tube & Pipe Run






Tube & Pipe Styles

- New
- Edit
- Copy
- Delete
- Import to XML
- Export to XML
- General
- Rules
- Diameter
- Component Appearance



Work Points/Nodes

- Include Geometry 
 - Edge, Vertex, Work Geometry, 2D Sketch Geometry, Planar Face
- Insert Node 
- Grounded Work Point 
 - Converts (adds) Existing Construction Point to Work Point/Node

Fitting Placement – BOM Concerns

- Fitting as Part of Hose Assembly
 - Place Fitting within T & P
 - Hydraulic Hose Assemblies with Pressed on End Fittings
- Fitting not Part of Hose Assembly
 - Place Fitting with IAM prior to entering T & P
 - Air Control with Push-to-Connect or reusable Hydraulic Fittings
- Promote & Demote Command to Relocate Fittings

BOM's

- Use “Parts Only” for Run Data

Autodesk Inventor Professional 2016 Assembly10

Run Content Component Position Relationships Manage Parameters iPart/iAssembly Exit

Model ▾ Assembly View ▾

Assembly10.iam

- Relationships
- Representations
- Origin
- Component Pattern 1:1
- Tube & Pipe Runs
 - Relationships
 - Representations
 - Origin
 - Run01
 - Run02
 - Run03
 - Run04
 - Run05
 - Run06
 - Run07
 - Relationships
 - Representations
 - Origin
 - Flexible Hose 03

Bill of Materials [Assembly10.Tube and Pipe Runs]

Model Data Structured Parts Only

Item	Part Number	BOM Structure	Unit QTY	QTY	Stock Number	Description	Material
2		Normal	21.376 in	21.376 in	Parker Hydraulic Hose - No Skive 5/8	Hose	Nylon 6/6
5	WHFNT 100-10 - 21.983	Normal	21.983 in	21.983 in	WHFNT 100-10	Nylon Air-Line	Nylon 6/6
6	WHFNT 100-10 - 29.793	Normal	29.793 in	29.793 in	WHFNT 100-10	Nylon Air-Line	Nylon 6/6
7	WHFNT 100-10 - 43.113	Normal	43.113 in	43.113 in	WHFNT 100-10	Nylon Air-Line	Nylon 6/6
8	Parker Female Taper Thread 1/2 x 1/2	Purchased	Each	2		Parker Fitting	Steel
9	WHFNT 100-06 - 24.503	Normal	24.503 in	24.503 in	WHFNT 100-06	Nylon Air-Line	Nylon 6/6

Import... Export... Done

More Questions? Visit the AU Answer Bar

- Seek answers to all of your technical product questions by visiting the **Answer Bar**.
- Open daily 8am-10am and Noon-6pm and located just outside of Hall C on Level 2.
- Staffed by Autodesk developers, QA, & support engineers ready to help you through your most challenging technical questions.



