



User Manual

HyDraw® Library Manager 2013



HyDraw® Library Manager 2013



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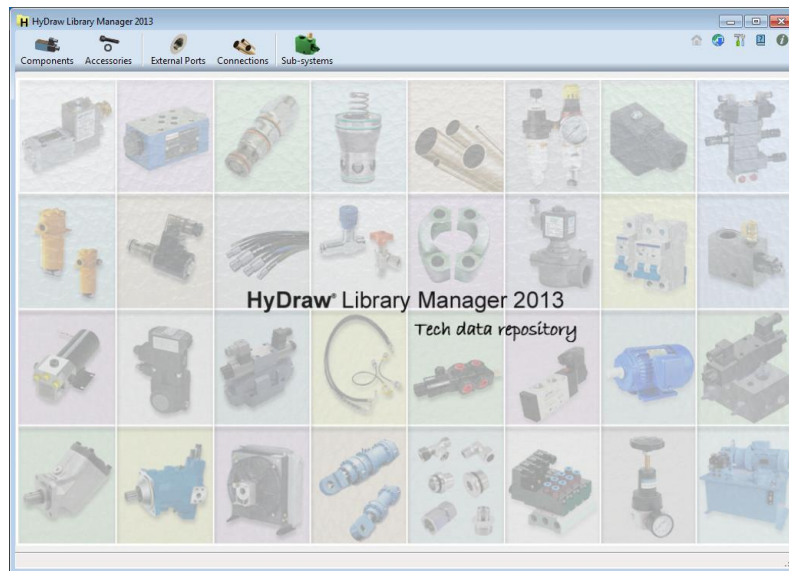
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1. Introduction

HyDraw® Library Manager 2013 makes symbol and component library management easy.

- ✓ Fast and easy component building and maintenance.
- ✓ Create new symbols and assign them with specific manufacturer properties.
- ✓ Dynamic Directional Control (DC) Valve design.
- ✓ Edit, delete symbols, or components to your specific need.
- ✓ Assign components with the related accessories, documents, and CAD files (2D/3D component image/video).
- ✓ Component design and model properties parameters are included to design customized component model and sub-system.
- ✓ Exhaustive list of external ports and cavity/footprint of different manufacturers included.
- ✓ Search command to find symbol or component with required properties.
- ✓ Both Imperial and Metric units and conversion from imperial to metric and vice-versa.
- ✓ GUI interface with helpful icons and tool tips.
- ✓ Context menu quick access to relevant commands.
- ✓ Protection against accidental deletion of essential components properties.
- ✓ Network enabled, enhances productivity of the design and engineering team.
- ✓ Multiple users within a local area network can share a common HyDraw library and database.
- ✓ Import Component Model Data and ERP data from Excel into HyDraw.



HyDraw Library Manager Home Page

2. Installation

The HyDraw® installation program installs the HyDraw Library Manager 2013 on your computer system.

System Requirements

- Windows 7/Windows 8/Windows 8.1.
- Microsoft .NET Framework version 3.5 or higher.
- Adobe Reader 6.0 or higher.
- HyDraw CAD⁷⁰⁰ / Microsoft Visio 2010 (32/64 Bit) with HyDraw V600.
- *Microsoft Excel 2007 or higher.

** Required only for importing Model data into HyDraw Library*

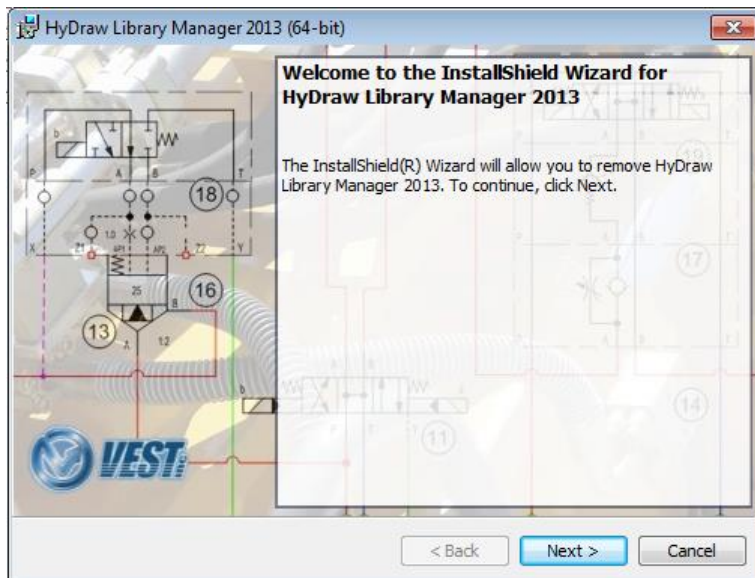
Installation

1. Run **Setup.exe** from the HyDraw Library Manager 2013 Installation folder.
(Downloaded installation or on the DVD).

The installation program starts and guides you through the installation process.

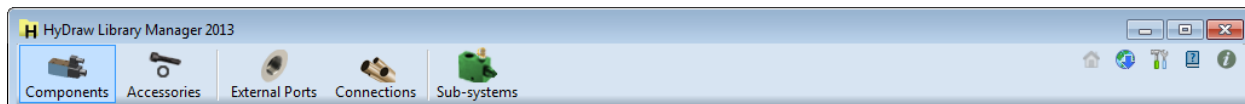
2. View **Read Me** from the Setup, if required.

HyDraw Library Manager 2013 is installed on the system and displayed in the Windows Start > Program menu.



Installation Wizard

3. HyDraw Library Manager Menu bar



Library Manager Menu bar

Components

Manage Components.

Accessories

Manage Accessories.

External Ports

Manage External Ports.


Connections

Manage Connections.


Sub-Systems

Manage Sub-Systems.

Home

Click  to open the Home page.


Update Symbol Library

Click  to update local library with new or modified symbols available on FluidPowerTools.com.


Options

Click  to set the **Unit**, **Library path** and **Internet settings**.


User Manual

Click  to open the HyDraw Library Manager User Manual.

About HyDraw Library Manager


Click  to view the Version and Build number of the installed HyDraw Library Manager.

Exit

Click  to exit the HyDraw Library Manager.

4. Update Symbol Library

Update your local library with new or modified symbols available on the FluidPowerTools.com website.

1. Click  the **Update Symbol Library** icon on menu bar to update the symbol library.

The HyDraw® Update Symbol Library dialog box displays.

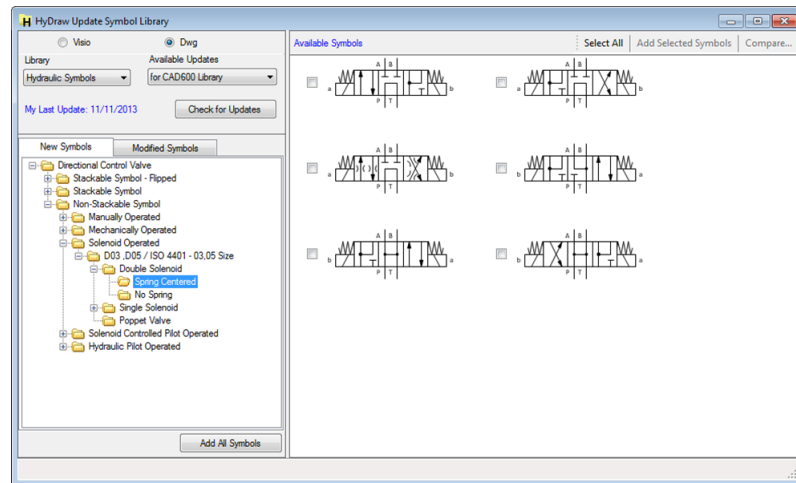
2. Select the **Visio** or **Dwg** option, per the current HyDraw version.
3. Select **Available Updates** from the following options:

Visio

- Since My Last Update
- V600 Library
- V500 Library
- V415.1 Library
- V415 Library

Dwg

- Since My Last Update
- CAD700 Library
- CAD600 Library
- CAD500 Library



HyDraw Update Symbol Library – New Symbols

4. Click **Check for Updates**.

The program downloads the list of new symbols and modified symbols.

New Symbols Update

The **New Symbols** tab displays the tree view of the symbol folders in the left pane. When a folder is selected, the **Available Symbols** are displayed in the right pane.

1. Click the **Add All Symbols** button to download all the new symbols from the FluidPowerTool.com website and update the local library.

In the right pane, the checkbox along each symbol enables selection of individual symbols.

- Click **Select All** to select all the symbols displayed in the right pane.
- Click **Add Selected Symbols** to update the currently selected symbols to the local library

Modified Symbols Update

The **Modified Symbols** tab shows the tree view of the symbol folders in the left pane. When a folder is selected, **Available Symbols** are displayed in the right pane.

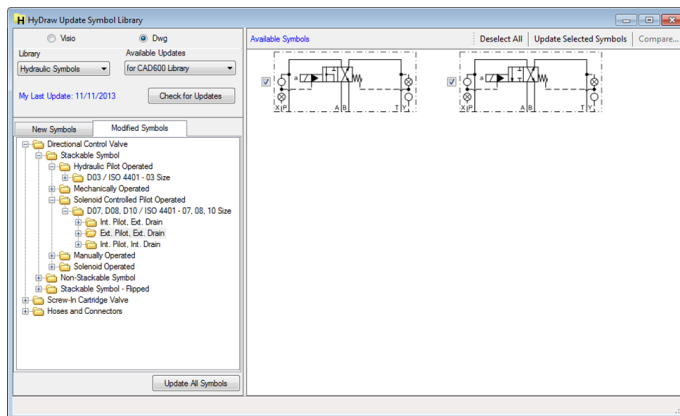
- Click the **Add All Symbols** button to download all the new symbols from the FluidPowerTool.com website and update the local library.

In the right pane, the checkbox along each symbol enables selection of individual symbols.

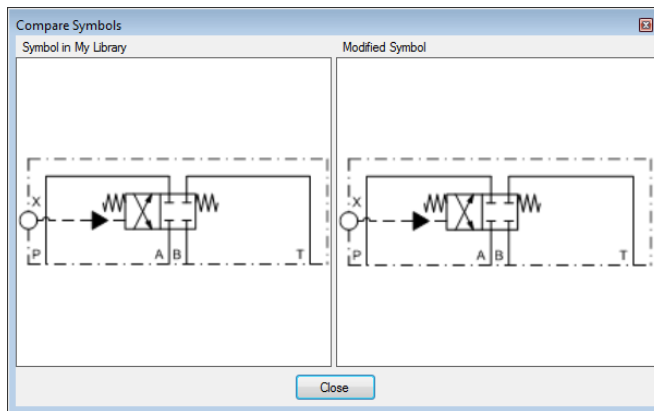
- Click **Select All** to select all the symbols displayed in the right pane.
- Click **Update Selected Symbols** to update the currently selected symbols to the local library.

Compare Symbols

*The **Compare Symbols** option enables to view and compare the symbol in **My local Library** and the modified symbol available in the **FluidPowerTools.com** website.*




HyDraw Update Symbol Library – Modified Symbols

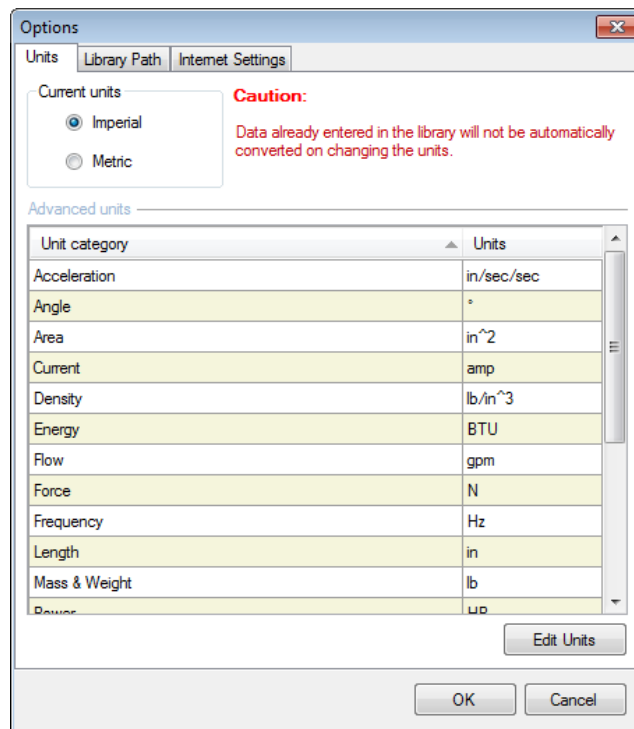


Compare Symbols

5. Options

Click  the **Options** icon on the menu bar to set **Units**, **Library Path** and **Internet Settings**.

The HyDraw Library Manager Options dialog box displays.



HyDraw Library Manager Options

Units

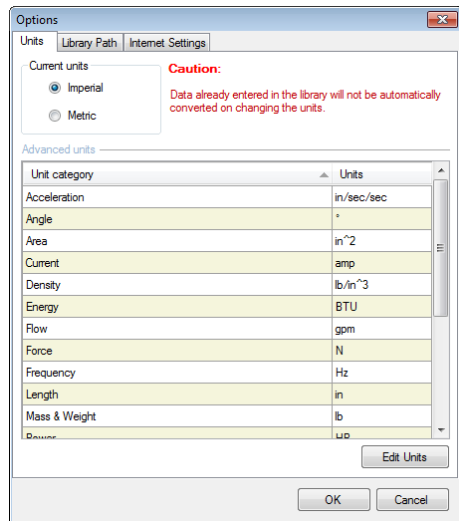
1. Click the **Units** tab.
2. Select the current units system you want to work with.

If you change the unit system in the library, the data, which is already available in the drawing and library will not be converted automatically.

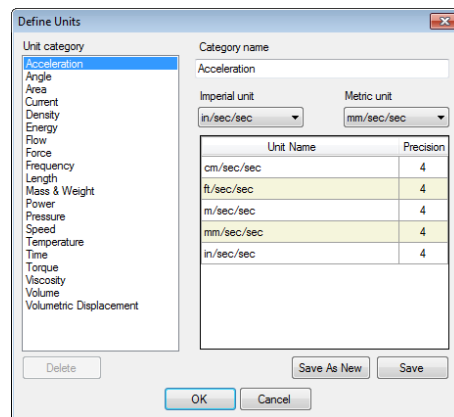
3. Click the **Edit Units** tab.

The Define Units dialog box displays.

4. Select the Unit category.
5. Set the Imperial Unit.
6. Set the Metric Unit.
7. Set the decimal precision.
8. Click **Save**.
9. If required, change the Category name and click **Save As New**, to add the new Unit category.



Options dialog box – Units tab



Define Units dialog box

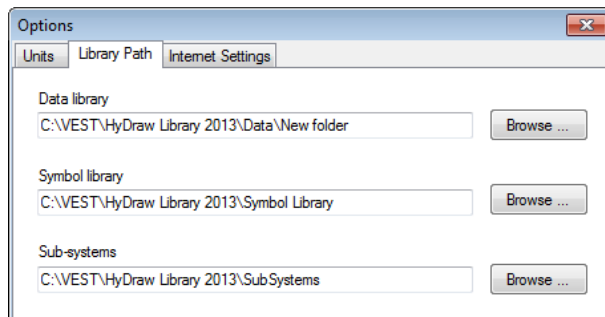
Library Path

1. Click the **Library Path** tab.
2. Click **Browse...** to navigate to the folder, where the HyDraw® Library data is installed.
3. Similarly browse for the Symbol library and Sub-systems.
4. Click **OK**.

All the HyDraw Library paths are configured.

Note

The Library path can be configured to the common network path.



Set Library Path

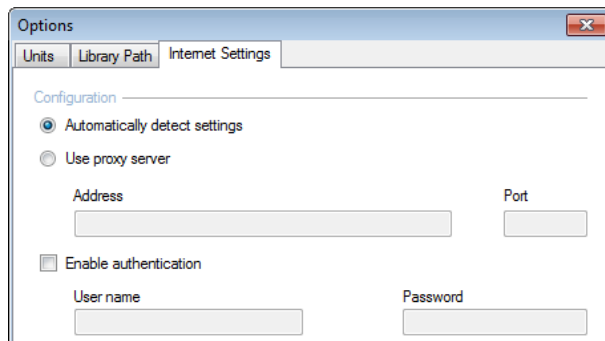
Internet Settings

To access FluidPowerTool.com from HyDraw Library Manager, the Internet settings of the HyDraw Library Manager requires configuration.

Click the **Internet Settings** tab to configure the internet settings.

Automatic Settings detection

If your computer is connected to the Internet through a direct LAN connection, then select the configuration, **Automatically detect settings**.



Internet Settings – Automatically detect settings

Proxy Connection

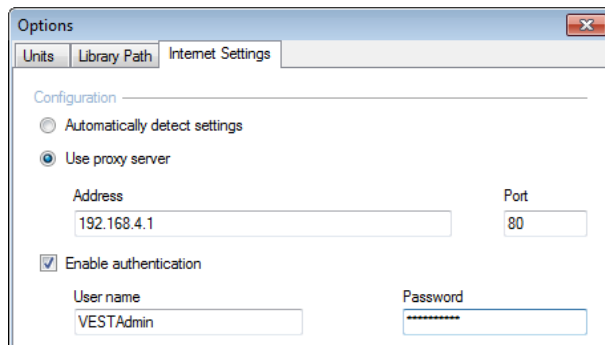
If your computer is connected to the Internet through a web proxy server, then select **Use proxy server**.

Configure the proxy settings.

1. Enter **Address**.
2. Enter the **Port** number.
3. Enter authentication details, if required.


You may refer to the settings that may be already defined in your web browser.

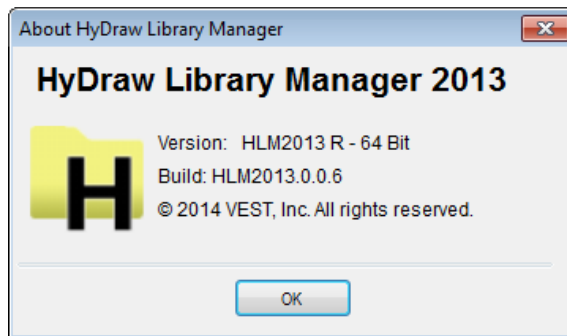
4. Click **OK** to save.



Internet Connection Settings – Use Proxy Server

About HyDraw Library Manager

Click  the **About Library Manager** icon on the menu bar displays the Version and Build number of the installed HyDraw Library Manager.



About HyDraw Library Manager

Components

Components allow you to manage Symbols, Model Data, Documents, CAD Files, Component models and their properties, linked accessories and lists.

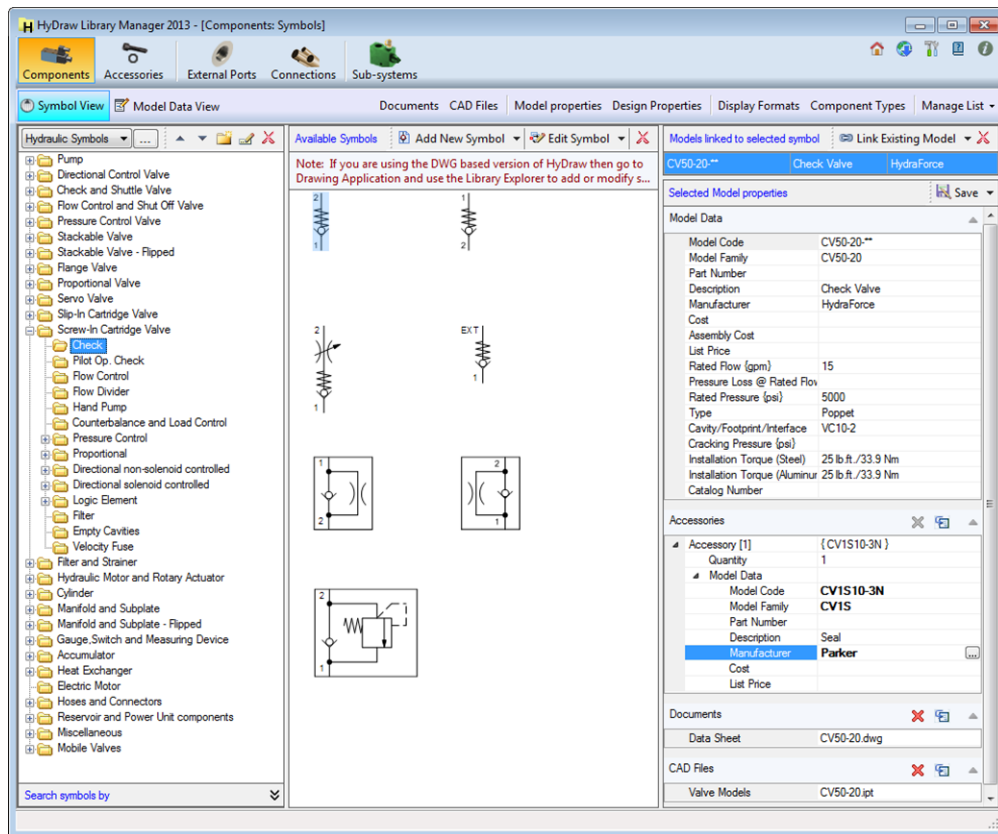
- | | |
|----|-------------------|
| 6 | Symbol View |
| 7 | Model Data View |
| 8 | Documents |
| 9 | CAD Files |
| 10 | Model Properties |
| 11 | Design Properties |
| 12 | Display Formats |
| 13 | Component Types |
| 14 | Manage Lists |

6. Components - Symbol View

Components → Symbol view

Components in **Symbol View** have three sections (column wise).

- Library
- Available Symbols (Drawing)
- Models linked to the selected symbol



HyDraw Library Manager (Component - Symbol View)

Library Section

The Library section displays a logically structured tree-view library.

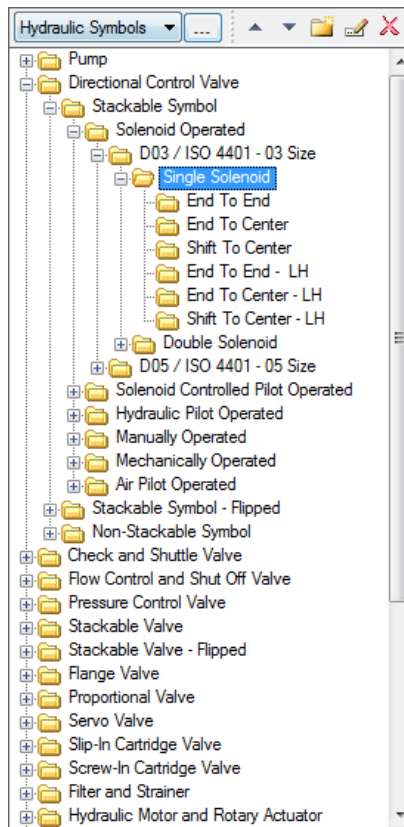
Click the required folder to display the symbols in the Drawing section.

You can:

- Create a new library
- Create a new folder
- Rename an existing folder
- Delete a folder
- Move a folder up or down to customize the tree view

When you delete a folder, it deletes all its sub folders along with the symbols.

The commands are displayed as icons on the caption bar and in the context menu.



Library tree view

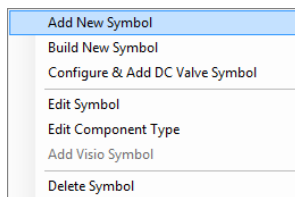
Add New Folder

1. Right click the required folder in the library folder section and select **Add New** from the context menu.

Or



Click button on the caption bar.

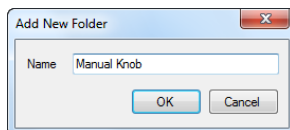


Library context menu

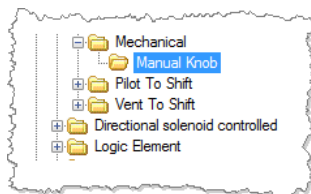
The Add New Folder dialog box displays.

2. Enter the name of the new folder and click **OK**.

The new folder is created.



Add New Folder dialog box



Desired folder created under selected category

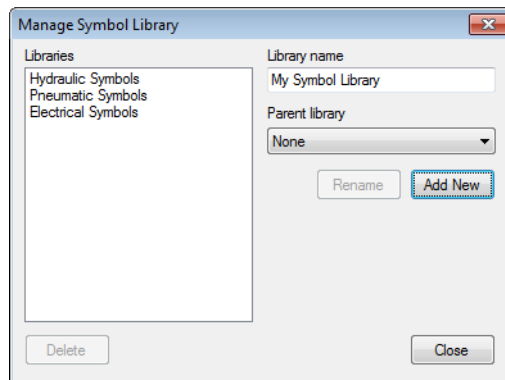
Create New Custom Symbol Library

You can create a new custom Symbol Library from scratch.

1. Click .

The Manage Symbol Library dialog box displays.

2. Enter Library name.
3. Select the None option from the Parent library drop down.
4. Click Add New.
5. Click Close to create the library.



Manage Symbol Library

Note

The user created libraries can be

- Renamed by clicking the Rename button.
- Deleted by clicking the Delete button.

Caution!

The deleted libraries cannot be recovered.

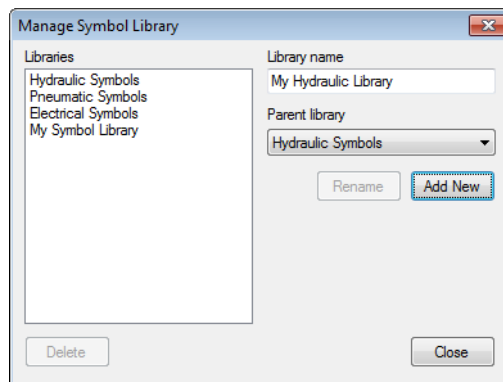
Create New Child Symbol Library

You can create a new child Symbol Library from any of the three parent libraries: Hydraulic Symbols, Pneumatic Symbols, and Electric Symbols.

1. Click .

The Manage Symbol Library dialog box displays.

2. Enter Library name.
3. Select the required option from the Parent library drop down:
Hydraulic Symbols/Pneumatic Symbols/Electric Symbols.
4. Click Add New.
5. Click Close to create the library.



Manage Symbol Library

Note

The user created libraries can be

- Renamed by clicking the Rename button.
- Deleted by clicking the Delete button.

Caution!


The deleted libraries cannot be recovered.

Add Symbols to Child Symbol Library from Parent Library

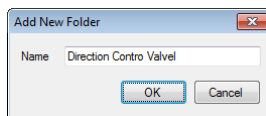
Add New Folder

1. Right click the required folder in the library folder section and select **Add New** from the context menu.

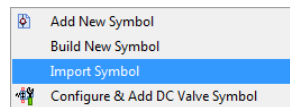
Or

Click  button on the caption bar.

The Add New Folder dialog box displays.



Add New Folder dialog box



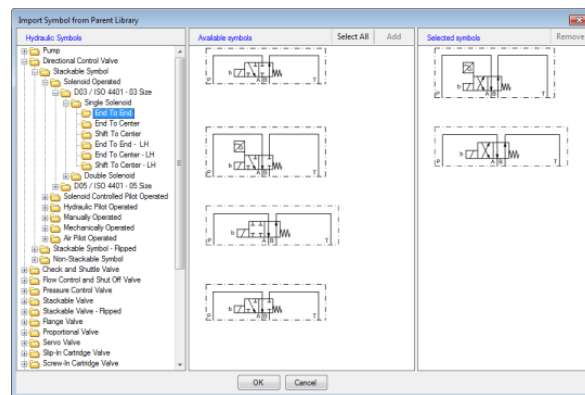
Symbols Menu

2. Select the **Import Symbol** option from the middle section caption bar drop down.

The Import Symbol from Parent Library dialog box displays.

3. Traverse through the library on the left pane and select the required folder.

The available symbols are listed in the middle pane.



Import Symbols from Parent Library

4. Click **Select All** to select all the symbols.

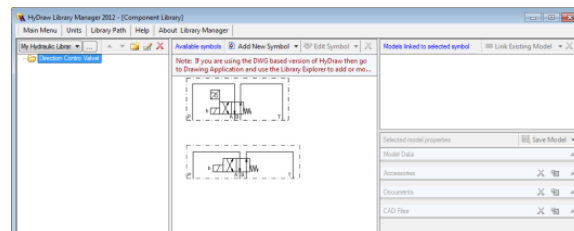
Or

Click the **symbol** to select or
press **Ctrl + symbol** to select more symbols.

5. Click the **Add** button.

The selected symbols are listed in the right pane.

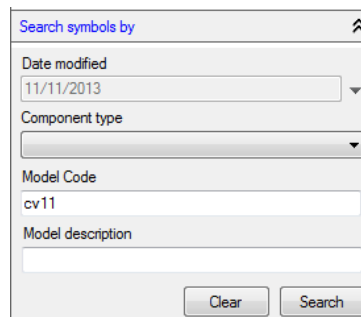
6. Review and remove the symbols that are not required by clicking the **Remove** button.
7. Click **OK** to import the symbols.



Component Library

Search symbols by

Search symbols by enables you to search symbols, per parameters Date modified, Component type, Model code and Model description.

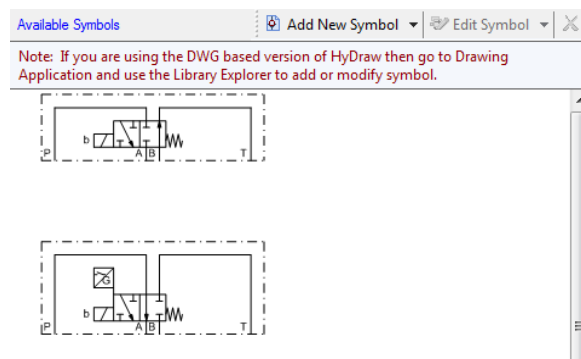


A dialog box titled "Search symbols by" with a close button (X) in the top right corner. It contains four search criteria: "Date modified" with a dropdown menu showing "11/11/2013"; "Component type" with a dropdown menu; "Model Code" with a text input field containing "cv11"; and "Model description" with an empty text input field. At the bottom are "Clear" and "Search" buttons.

Search symbols by

Available Symbols (Drawing Section)

All available symbols of the selected library folder are displayed in the Drawing section.



Available Symbols (Drawing) Section

Build New Symbol and Add to the Library

1. Click **Build New Symbol** on the caption bar of the Drawing section.

A Visio drawing page displays.

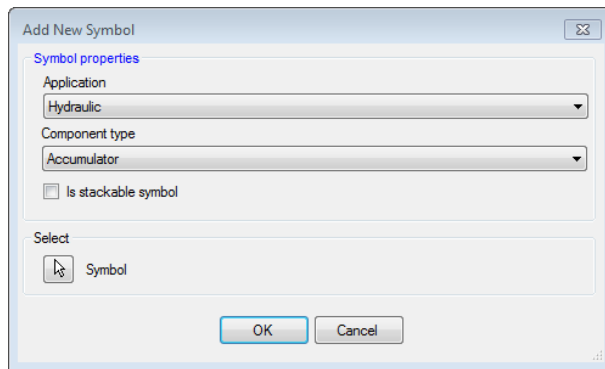
2. Build your symbol.
3. Click **Add New Symbol**, to add it to the required folder.

The Add New Symbol dialog box displays.

4. Select **Application**.
5. Select **Component type**.
6. Select '**Is stackable symbol**', if required.
7. Click the **Symbol** button.
8. Select the required symbol.
9. Click **OK** to add the symbol.

Note

If you use the **DWG** based version of HyDraw then go to the **HyDraw CAD** Drawing Application and use the Library Explorer to add or modify symbols.



Add New Symbol dialog box

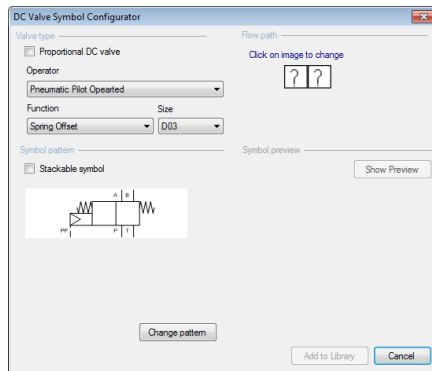
DC Valve Symbol Configurator

Configure DC Valve from DC Valve Configurator and Add to the Library. (Functionality available only in the Visio based version of HyDraw)

1. Click **Configure & DC Valve Symbol Valve** on the caption bar.

The DC Valve Symbol Configurator dialog box displays.

- a. Select **Valve type**.
 - b. Specify the **Operator** of the valve, **Function** and **Size**.
 - c. Verify with the preview pattern shown, click **Change pattern**, if required.
 - d. Select **Flow Path** of the functional units.
 - e. Configured DC valve symbol preview can be seen by a click on **Show Preview** in the symbol preview section.
2. Click **Add to Library** to add the DC valve from the preview pane to the library.



DC Valve Symbol Configurator

Edit Symbol

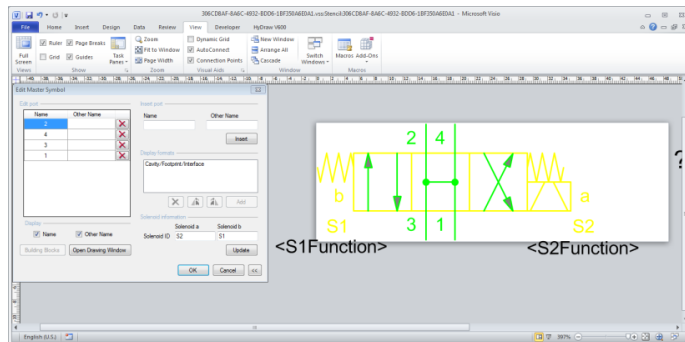
1. Select the symbol in the Drawing section to edit it.

A Visio drawing page displays and opens with Edit Master Symbol dialog box.

2. Edit the symbol as required including Port names, Display format and Solenoid information, then save it in the library.
3. Click **OK** to save all the changes made to Component.

Note:

HyDraw CAD users must use the Library Explorer in the Drawing application to add/modify symbol.



Edit Master Symbol – Port Names, Display Formats and Solenoid Information

Edit Component Type

1. Select the symbol in the Drawing to edit the component type.

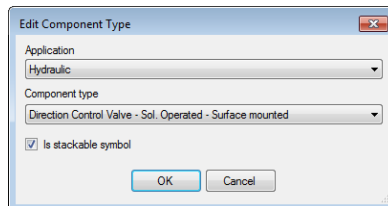
2. Click **Edit Component Type** on the caption bar.

The Edit Component Type dialog box displays.

3. Select the required application and the component type.

4. Click **OK**.

The specified component type is saved to the selected component.



Edit Component Type Dialog

Add Visio Symbol*

Create a new symbol in the Visio version of HyDraw.

Click **Add Visio symbol** to add the Visio symbol file.

Note:

* HyDraw CAD users must go to the Drawing Application and use the Library Explorer to add/modify symbol.

Delete symbol

Select the icon on the caption bar to delete the selected symbol.

The symbol is deleted from the library.

Models linked to selected symbol Section

The Models linked to selected symbol section displays models, accessories, documents, and CAD files linked to the selected symbol.

Three functionalities:

- Link Existing Model
- Create New Model and Link
- Import Model Data and Link

Models linked to selected symbol Link Existing Model X

CV50-20-** Check Valve HydraForce

Selected Model properties Save ▼

Model Data

Model Code	CV50-20-**
Model Family	CV50-20
Part Number	
Description	Check Valve
Manufacturer	HydraForce
Cost	
Assembly Cost	
List Price	
Rated Flow (gpm)	15
Pressure Loss @ Rated Flow	
Rated Pressure (psi)	5000
Type	Poppet
Cavity/Footprint/Interface	VC10-2
Cracking Pressure (psi)	
Installation Torque (Steel)	25 lb.ft./33.9 Nm
Installation Torque (Aluminum)	25 lb.ft./33.9 Nm
Catalog Number	

Accessories X + ▼

Accessory [1] { CV1S10-3N }

Quantity	1
Model Data	
Model Code	CV1S10-3N
Model Family	CV1S
Part Number	
Description	Seal
Manufacturer	Parker
Cost	
List Price	

Documents X + ▼

Data Sheet	CV50-20.dwg
------------	-------------

CAD Files X + ▼

Valve Models	CV50-20.ipt
--------------	-------------

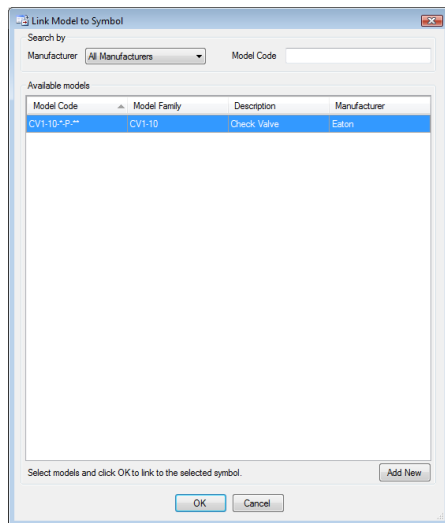
Model Properties Section

Link Models to Symbol

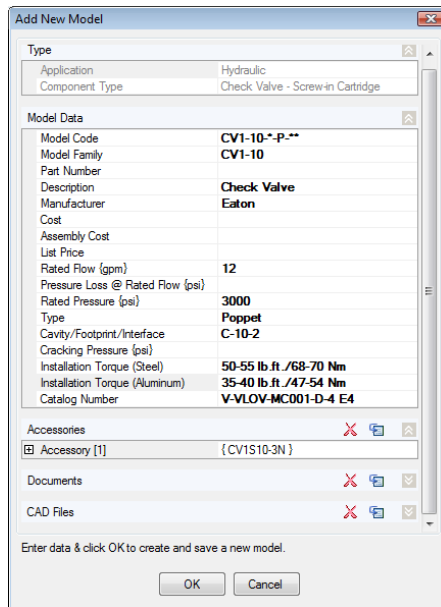
Link the selected symbol to the existing models available in the library.

1. Select models and click **OK** to link the selected symbol.
2. Click **Add New** to create new models and link it with the selected symbol, then save it in the library.

The Add New Model dialog displays.



Link Model to Symbol

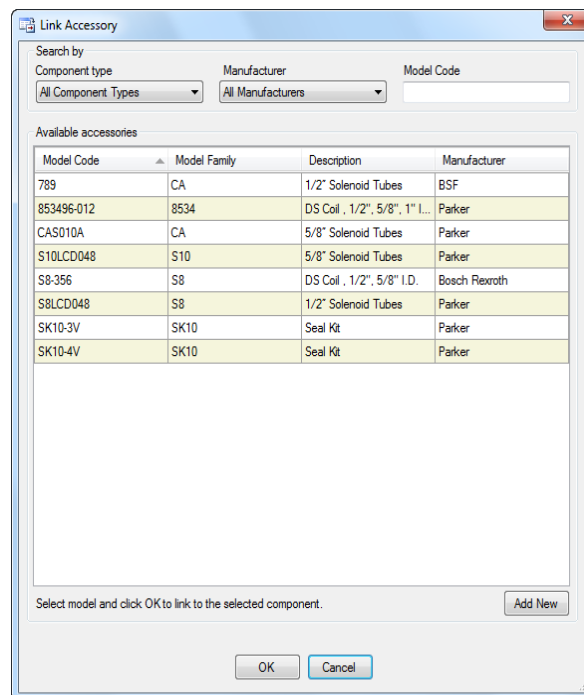


Add New Model dialog box

Accessories

Link selected model to the existing accessories available in the library.

Link Accessory



The 'Link Accessory' dialog box is used to link a selected model to existing accessories in the library. It features search filters for component type, manufacturer, and model code. A table of available accessories is displayed, with columns for Model Code, Model Family, Description, and Manufacturer. The table lists various solenoid tubes and seal kits from manufacturers like BSF, Parker, and Bosch Rexroth. At the bottom, there are 'OK', 'Cancel', and 'Add New' buttons, along with a note to select a model and click OK to link it.

Search by
Component type: All Component Types
Manufacturer: All Manufacturers
Model Code:

Available accessories

Model Code	Model Family	Description	Manufacturer
789	CA	1/2" Solenoid Tubes	BSF
853496-012	8534	DS Coil , 1/2", 5/8", 1" L...	Parker
CAS010A	CA	5/8" Solenoid Tubes	Parker
S10LCD048	S10	5/8" Solenoid Tubes	Parker
S8-356	S8	DS Coil , 1/2", 5/8" I.D.	Bosch Rexroth
S8LCD048	S8	1/2" Solenoid Tubes	Parker
SK10-3V	SK10	Seal Kit	Parker
SK10-4V	SK10	Seal Kit	Parker

Select model and click OK to link to the selected component.

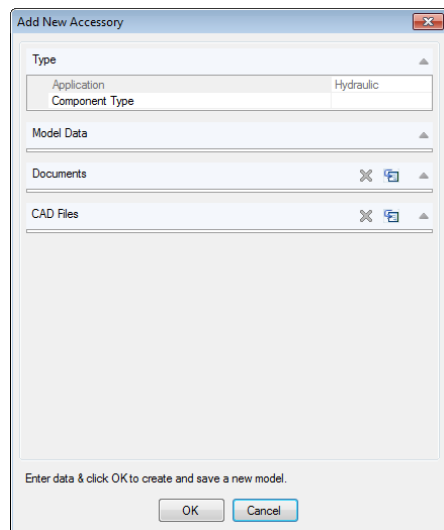
Add New

OK Cancel

Add new accessory to the library

1. Click **Add New** button to add a new accessory to the library.

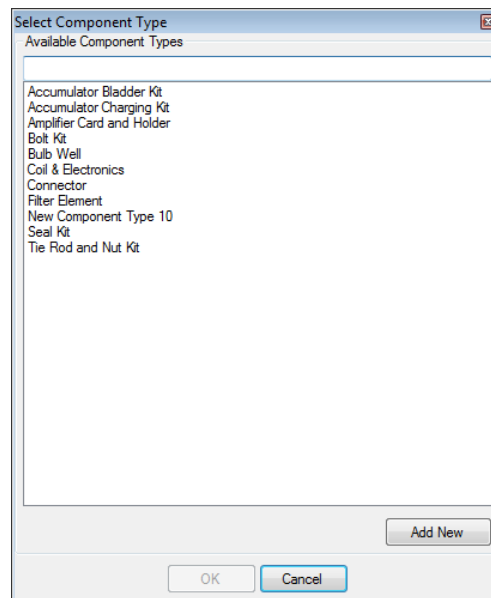
The Add New Accessory dialog box displays.

The dialog box is titled "Add New Accessory". It contains several sections: "Type" with a dropdown menu showing "Application" and "Component Type" (with "Hydraulic" selected); "Model Data" with a text input field; "Documents" with a text input field and icons for file operations; and "CAD Files" with a text input field and icons for file operations. At the bottom, there is a message "Enter data & click OK to create and save a new model." and two buttons: "OK" and "Cancel".

Add New Accessory dialog box

2. Select component type and click  the browse button on the caption.

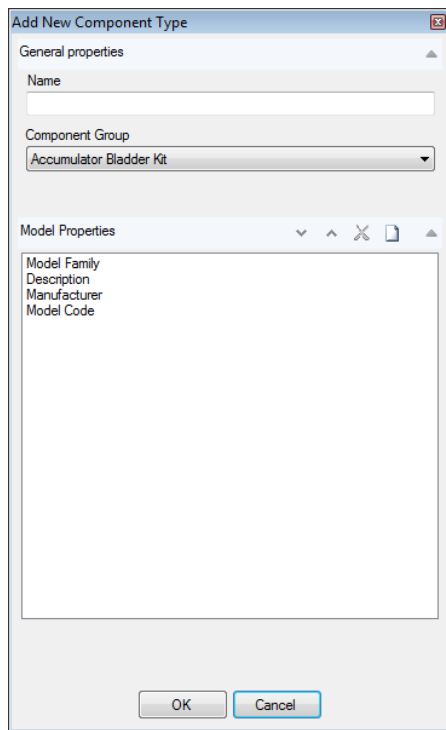
The Select Component Type dialog box displays.

The dialog box is titled "Select Component Type". It has a section "Available Component Types" with a list of items: Accumulator Bladder Kit, Accumulator Charging Kit, Amplifier Card and Holder, Bolt Kit, Bulb Well, Coil & Electronics, Connector, Filter Element, New Component Type 10, Seal Kit, and Tie Rod and Nut Kit. At the bottom right, there is an "Add New" button. At the bottom center, there are "OK" and "Cancel" buttons.

Select Component Type dialog box

3. Select a component type from **Available Component Types** and click **OK**.
4. To add new component type, click the **Add New** button.

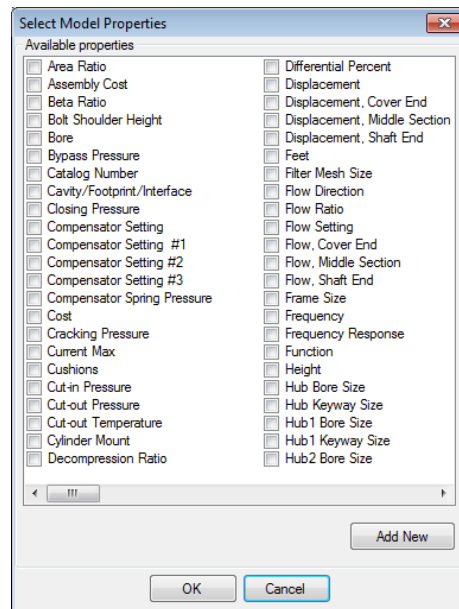
The Add New Component Type dialog box displays.



Add New Component Type

5. Enter the **Name** of the component type.
6. Select **Component Group**

The Select Model Properties dialog box displays.



Select Model Properties

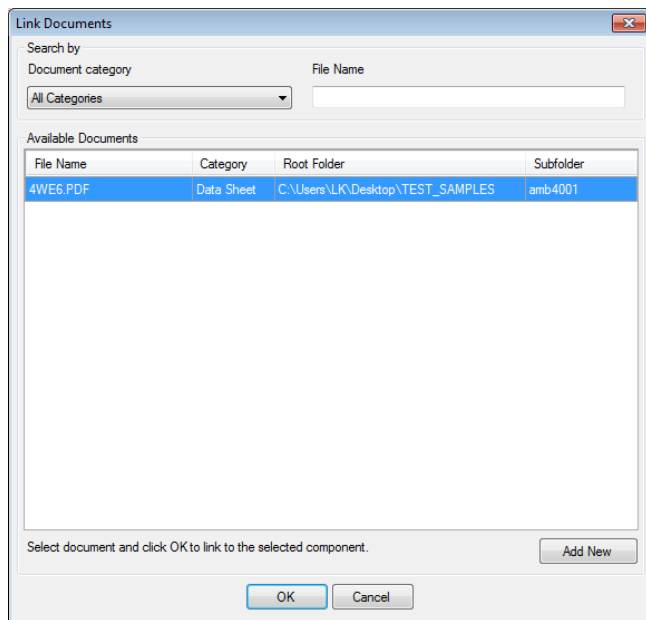
7. Click Add New Property.
8. Select the required model properties to add to your accessories.
9. Click **OK**.

Note:

Refer Chapter 10, Components – Model Properties for Add New

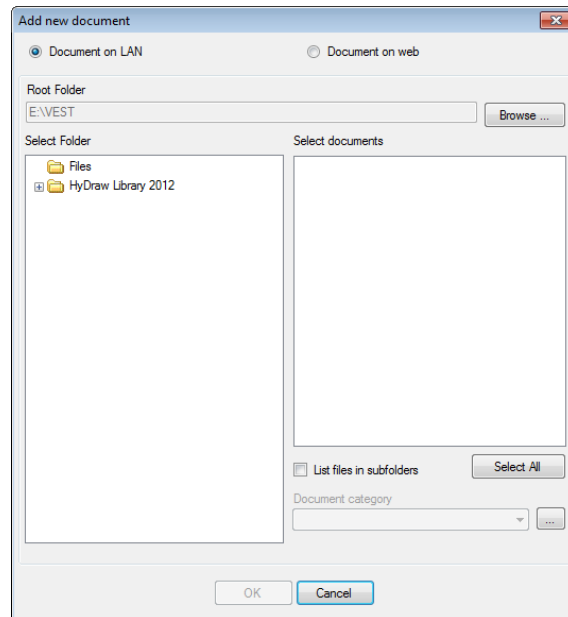
Documents

Link the selected model to the existing documents available in the local library.



Link Documents

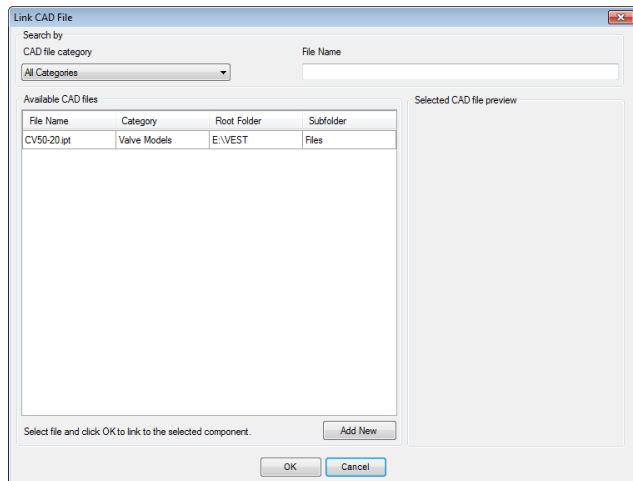
Add a new document and link it to the selected model.



Add New Document

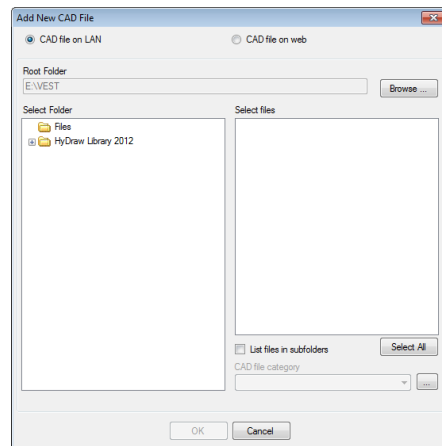
CAD Files

Link a selected model to the existing CAD files available in the library.

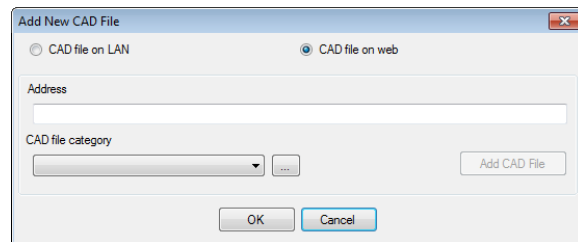


Link CAD File

Add a new CAD file and link it to the selected model.



Add New CAD File – From LAN



Add New CAD File - From Web

Create New Model & Link

1. Create a new model for the selected symbol and link.
2. Enter Model Data, link Accessories, Documents and CAD files.
3. Click OK to link the selected symbol.

Application: Hydraulic
Component Type: Check Valve - Screen

Model Data

Model Code	
Model Family	
Part Number	
Description	
Manufacturer	
Cost	
Assembly Cost	
List Price	
Rated Flow (gpm)	
Pressure Loss @ Rated Flow (psi)	
Rated Pressure (psi)	
Type	
Cavity/Footprint/Interface	
Cracking Pressure (psi)	
Installation Torque (Steel)	
Installation Torque (Aluminum)	
Catalog Number	

Accessories: [] X [] ▲

Documents: [] X [] ▲

CAD Files: [] X [] ▲

Enter data & click OK to create and save a new model.

OK Cancel

Create New Model

Import Model Data and link

The **Import** command imports model data in the Microsoft Excel Sheet into HyDraw Library and link it to the selected symbol. Refer Chapter 5, Components – Model Data view, Section Import, Page No. 29.

7. Components - Model Data View

View all the available components and their properties.

Components → **Model Data View**

Model Data Manager has three sections (column wise):

- Search by
- Available Models
- Selected Model Properties

The screenshot shows the HyDraw Library Manager 2013 interface. The title bar reads "HyDraw Library Manager 2013 - [Components: Model Data]". The main window is divided into three sections:

- Search by:** Contains dropdown menus for Application (Hydraulic), Component type (All Component Types), Manufacturer (All Manufacturers), and a text field for Model Code.
- Available Models:** A table listing available models with columns: Model Code, Model Family, Description, and Manufacturer.
- Selected Model properties:** A panel showing the properties of the selected model, including Model Code, Model Family, Part Number, Description, Manufacturer, Cost, Assembly Cost, List Price, Rated Flow (gpm), Pressure Loss @ Rated, Rated Pressure (psi), Type, Cavity/Footprint/Interface, Cracking Pressure (psi), Installation Torque (Stee), Installation Torque (Alur), and Catalog Number.

The table in the Available Models section contains the following data:

Model Code	Model Family	Description	Manufacturer
*SPZB030E06M	SPZ	Check Valve	Parker
*SPZB030E10M	SPZ	Check Valve	Parker
04.31.20.00.56**	04.31.20	Check Valve	Bosch Rexroth
04.31.23.00.85**	04.31.23	Check Valve	Bosch Rexroth
CV08-20**	CV08-20	Check Valve	HydraForce
CV08-NP**	CV08-NP	Check Valve	Sauer-Danfoss
CV10-20**	CV10-20	Check Valve	HydraForce
CV11-10**	CV11-10	Check Valve	Eaton
CV12-20**	CV12-20	Check Valve	HydraForce
CV50-20**	CV50-20	Check Valve	HydraForce

The Selected Model properties panel shows the following details for the selected model:

- Application: Hydraulic
- Component Type: Check Valve - Screw-in Cartri
- Model Code: *SPZB030E06M
- Model Family: SPZ
- Part Number:
- Description: Check Valve
- Manufacturer: Parker
- Cost:
- Assembly Cost:
- List Price:
- Rated Flow (gpm): 8.8
- Pressure Loss @ Rated:
- Rated Pressure (psi): 5075
- Type:
- Cavity/Footprint/Interface:
- Cracking Pressure (psi):
- Installation Torque (Stee):
- Installation Torque (Alur):
- Catalog Number: HY11-3500/UK

Below the properties panel, there is a section titled "Symbols linked to selected model" which displays a hydraulic symbol for a check valve.

HyDraw Library Manager – (Components - Model Data View)

1. Search by

The Search by section enables you to search for model or all models of a particular component type, manufacturer, or models of any component type of any manufacturer.

Search by

Application
Hydraulic

Component type
All Component Types

Manufacturer
All Manufacturers

Model Code

Search by Section

2. Available Models

The Available Models section displays four mandatory properties: Model Code, Model Family, Description and Manufacturer.

You can also **Import** model data from the Excel sheet, create a **New** model or **Delete** an existing model by selecting the icons on the caption bar.

Available Models				Import	New	
Model Code	Model Family	Description	Manufacturer			
*-SPZB030E06M	SPZ	Check Valve	Parker			
*-SPZB030E10M	SPZ	Check Valve	Parker			
04.31.20.00.56-*	04.31.20	Check Valve	Bosch Rexroth			
04.31.23.00.85-*	04.31.23	Check Valve	Bosch Rexroth			
CV08-20-**-	CV08-20	Check Valve	HydraForce			
CV08-NP-**-	CV08-NP	Check Valve	Sauer-Danfoss			
CV10-20-**-	CV10-20	Check Valve	HydraForce			
CV11-10-*P-**-	CV11-10	Check Valve	Eaton			
CV12-20-**-	CV12-20	Check Valve	HydraForce			
CV50-20-**-	CV50-20	Check Valve	HydraForce			

Available Models Section

Import

The **Import** command imports model data from the Microsoft Excel into the HyDraw library.

You can import data from your ERP system into the HyDraw library using this feature.

Update properties, such as list price, cost, and assembly cost of the models in the HyDraw library with the changes made in the ERP data.

Note

- Export model data from the ERP system into Microsoft Excel manually.
You should be able to export data into Microsoft Excel easily using the ERP software.
- Manually link models to the following items after importing the data into the library.
 - Symbol
 - CAD file
 - Documents
 - Accessories
- To add more data, in addition to the properties available in the ERP, add the data into the Microsoft Excel sheet before importing into the library.

1. Click **Import**.

The Import Model Data from Excel dialog box displays.

2. Click **Browse** ...

The Select Excel File dialog box displays.

3. Browse and select the Excel file with the model data.

The program populates the Select sheet to import the drop-down list with the sheet names.

4. Select the sheet you want to import.

5. Select the **Import** options.

Select the Add new models option or

Select the Update existing models option to update the properties in the HyDraw library.

6. Click **Next** to continue.

The Select columns to import page displays with a list of columns in the selected sheet.

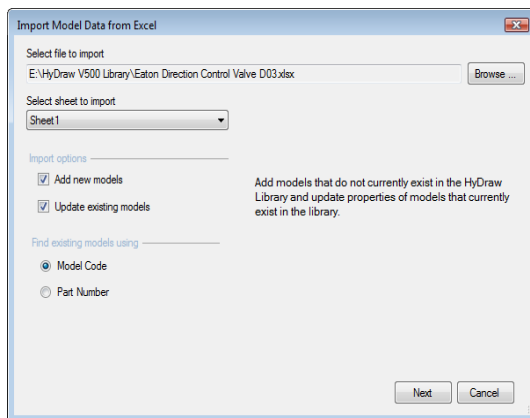
7. Select the **My data has headers** option,
if there are headers for columns in the Excel sheet.

The column names in the list changes to the column headers.

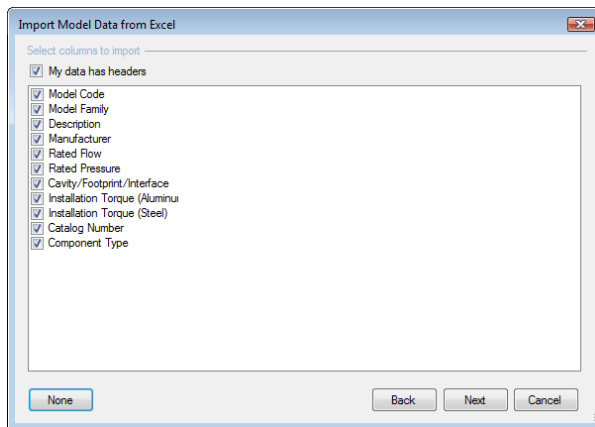
8. Click **Next** to continue.

Note

- Use the Select All option to select all the items in the list. This is a toggle button. When you click on the button, the text will toggle 'Select All/None'.
- The last used columns are selected by default, the next time you run the command.



Import Model Data from Excel




Import Model Data from Excel – Select Columns to import

The Map Properties page appears with the list of columns selected to import.

The Column name for HyDraw property mapping will be saved in the library and equivalent properties will be assigned automatically, the next time you run the command.

If the mapping information is not available in the library, then the program will automatically assign the equivalent property, if the column name is same as the property name.

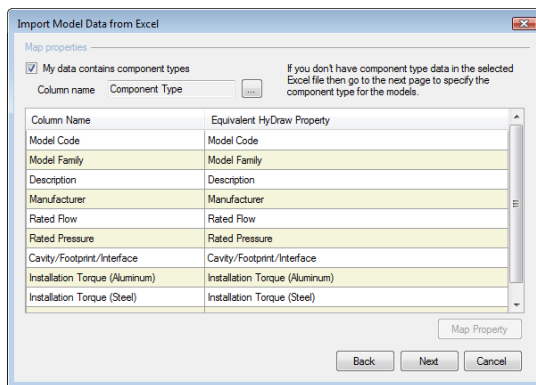
9. Select the **My data contains component types** option.
10. Click  to select the column containing the component types.

Use this option, if you have component types available in the Excel sheet for each model.

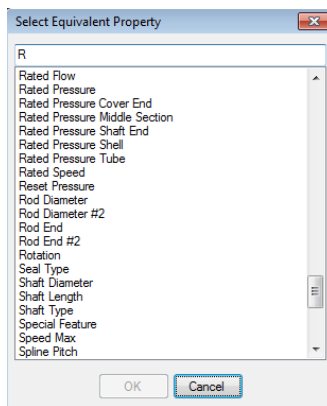
Map Property

1. Select the column name and click **Map Property**.
The Select Equivalent Property dialog box displays.
2. Select the property and click **OK**.
3. Repeat the above steps and assign equivalent property for all the columns.
4. Click **Next** to continue.

The **Available Model Data** page displays with all the models in the selected sheet.



Import Model Data from Excel – Map Properties



Select Equivalent Property

Note

- The data in Excel must have all mandatory properties, such as Model Code, Model Family, Manufacturer, and Description. You will not be able to continue, if any of these four items are missing.
- If Part Number is selected to find the existing model, then Part Number also becomes a mandatory field.
- If component types are not entered in the Excel sheet, then you can specify the component type from the last page of this wizard.

Assigning Component Type

1. Select the models.

You can select multiple models from the list.

2. Click **Assign Component Type**.



The Select Component Type dialog box displays.

3. Select the appropriate component type and click **OK**.

Importing Model Data

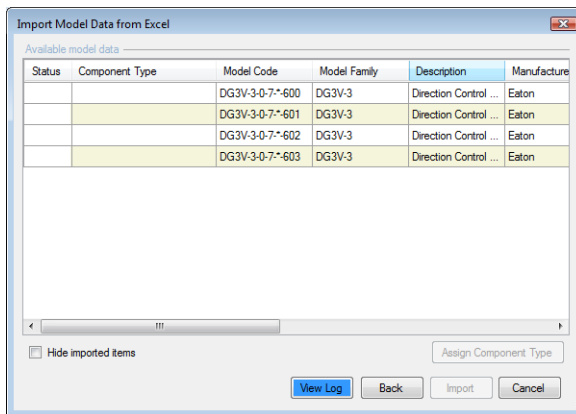
1. Select the models to import.
2. Click **Import** to import the selected models into the library.
3. Repeat the above steps to import all the models.

If the Hide imported items option is selected, then the program hides the successfully imported items from the list.

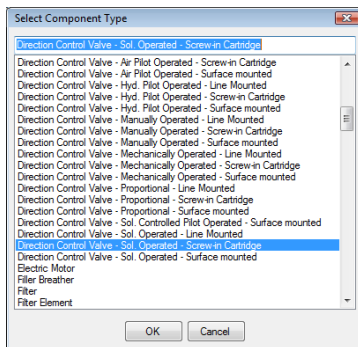
The successfully imported data is indicated by  and non-imported data is indicated by  in the Status column.

Note

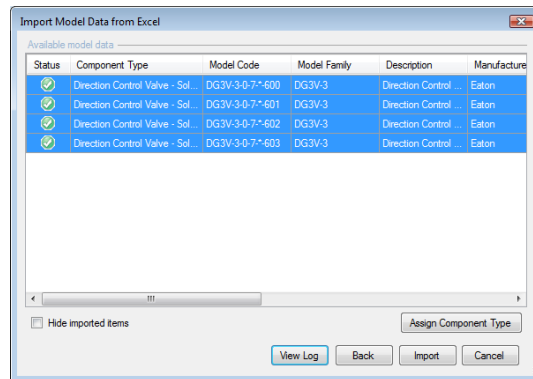
The Application option, such as Hydraulic, Pneumatic, and Electrical, selected in the Manage Model Data page will be assigned to all the models.



Import Model Data from Excel – Available Model Data



Select Component Type



Import Model Data from Excel :Imported Model Data

Selected Model properties


The Selected Model properties section displays the properties of the selected model.

Change the property of the model in the Model Data section.

1. Enter new properties and click **Save** to save the model properties.
2. Click **Save As** to save it as a new model.



You can also link accessories, documents, CAD files and symbols to the selected model.


Link Symbol

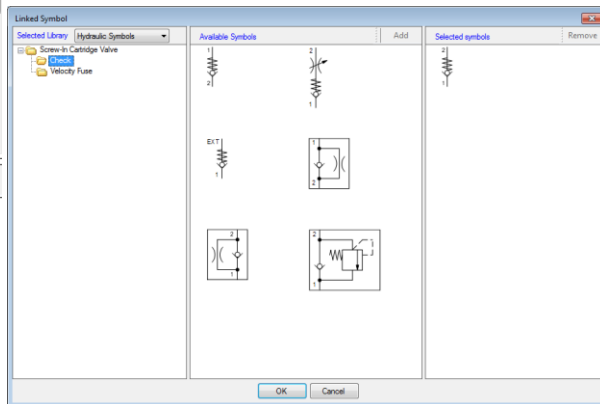
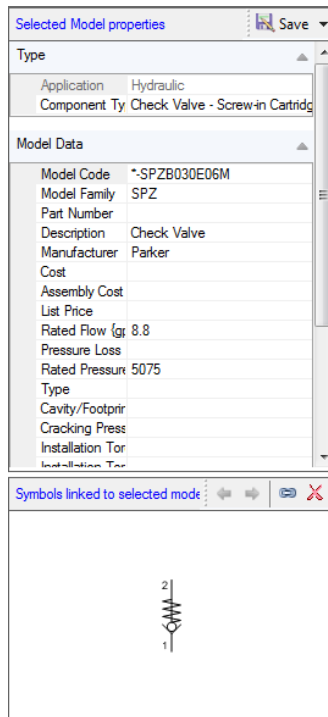
1. Click  in the **Symbols linked to selected mode** section.

The Linked Symbol dialog box displays.

2. Browse through the folders in the first pane.
3. View the **Available Symbols** in the selected folder.
4. Select the symbol to link and click **Add** in the **Selected symbols** pane.
5. Click **OK** to link the selected symbols.

Click   to traverse through the linked symbols.

Click  to delete the linked symbols.



Selected Model propertiesSection Linked Symbol dialog box

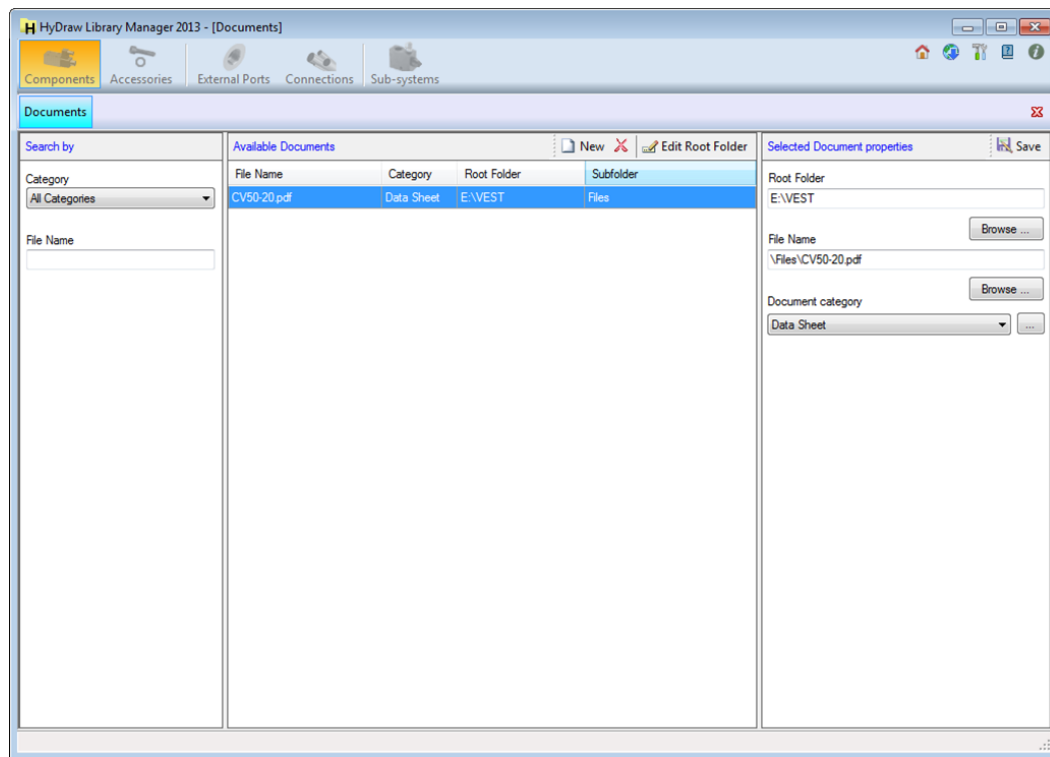
8. Documents

Manipulate documents in the library.

Components → **Documents**

Documents window has three sections(column wise):

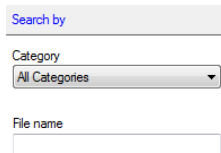
- Search by
- Available Documents
- Selected Document properties



HyDraw Library Manager – (Components - Documents)

Search by

The Search by section enables you to search for a particular document belonging to a category.



Search by

Category
All Categories

File name

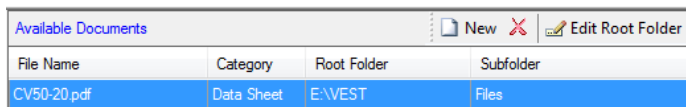
Search by Section

Available Documents Section

The Available Documents section displays all the available documents for a category or all categories.

You can create a new document or a delete a document by selecting the icons on the caption bar.

- Click **Edit Root Folder** to edit the path of the folder containing the document.



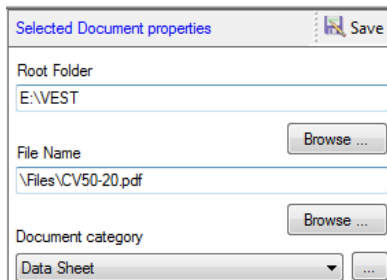
Available Documents			
File Name	Category	Root Folder	Subfolder
CV50-20.pdf	Data Sheet	E:\VEST	Files

Available Documents Section

Selected Document Properties Section

The Selected Documents properties section displays the category, path of the root folder, and the file of the selected document.

- Click **Browse** to change the root folder path and the file name.
- Click **Save** document to save the changes made to the document.



Selected Document properties

Root Folder
E:\VEST

File Name
\Files\CV50-20.pdf

Document category
Data Sheet

Selected Document properties Section

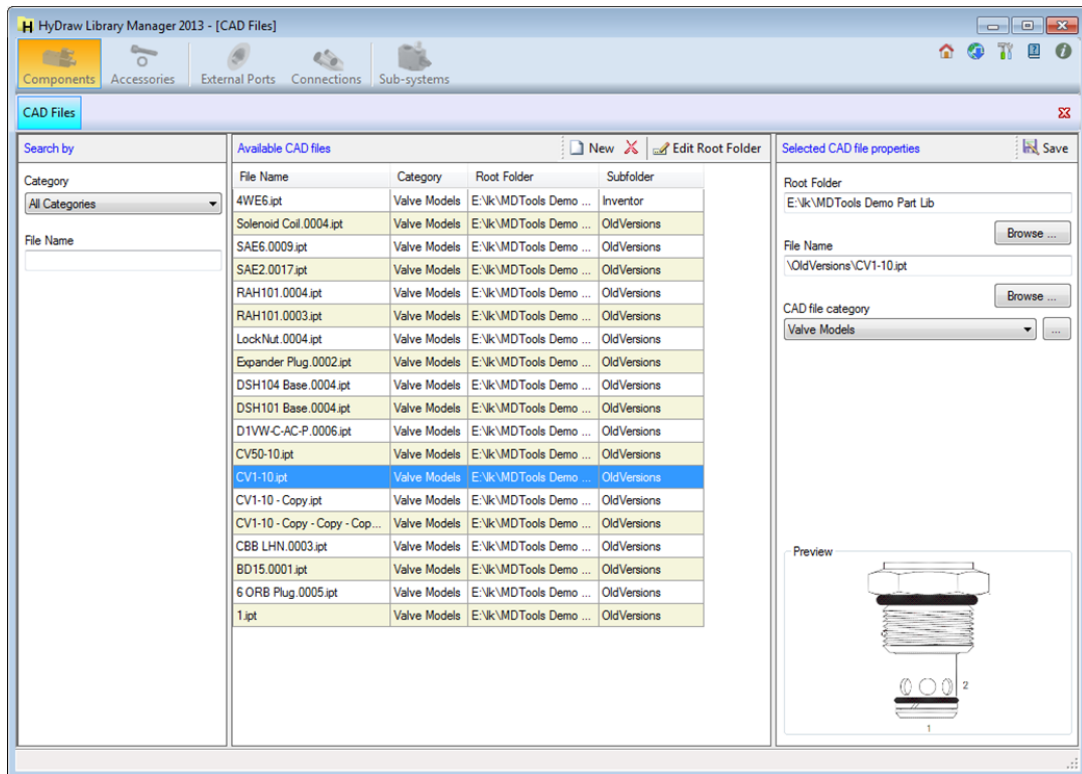
9. CAD Files

Manipulate CAD files in the library.

Components → CAD Files

CAD Files window has three sections (column wise):

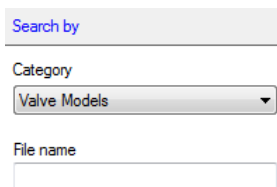
- Search by
- Available CAD files
- Selected CAD file properties



HyDraw Library Manager – (Components - CAD files)

Search by

The Search by section enables you to search for a particular CAD file belonging to a category.



Search by

Category


Valve Models

File name

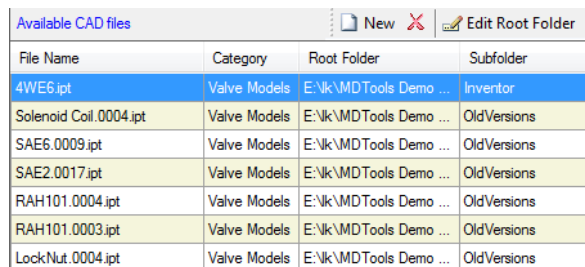
Search by Section

Available CAD files

The Available CAD files section displays the CAD file name, category, root folder, and sub folder.

You can create a **New** CAD file or  delete a CAD file by selecting the icons on the caption bar.

- Click **Edit Root Folder** to edit the path of the CAD file.



File Name	Category	Root Folder	Subfolder
4WE6.ipt	Valve Models	E:\Nk\MDTools Demo ...	Inventor
Solenoid Coil.0004.ipt	Valve Models	E:\Nk\MDTools Demo ...	OldVersions
SAE6.0009.ipt	Valve Models	E:\Nk\MDTools Demo ...	OldVersions
SAE2.0017.ipt	Valve Models	E:\Nk\MDTools Demo ...	OldVersions
RAH101.0004.ipt	Valve Models	E:\Nk\MDTools Demo ...	OldVersions
RAH101.0003.ipt	Valve Models	E:\Nk\MDTools Demo ...	OldVersions
LockNut.0004.ipt	Valve Models	E:\Nk\MDTools Demo ...	OldVersions

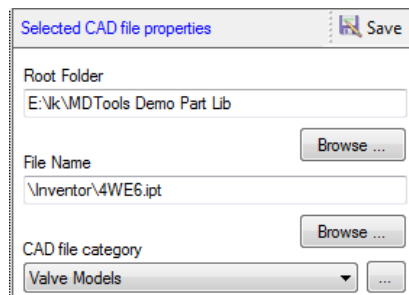
Available CAD files Section

Selected CAD file properties

The Selected CAD file properties section displays the selected CAD file name, category, and root folder.

It also displays the image of the selected CAD file in the Preview pane.

- Click **Browse** to change the root folder path and file name.
- Click **Save** to save the changes made to the CAD file.



Selected CAD file properties

Root Folder

E:\Nk\MDTools Demo Part Lib

File Name

\Inventor\4WE6.ipt

CAD file category

Valve Models

Selected CAD file properties Section

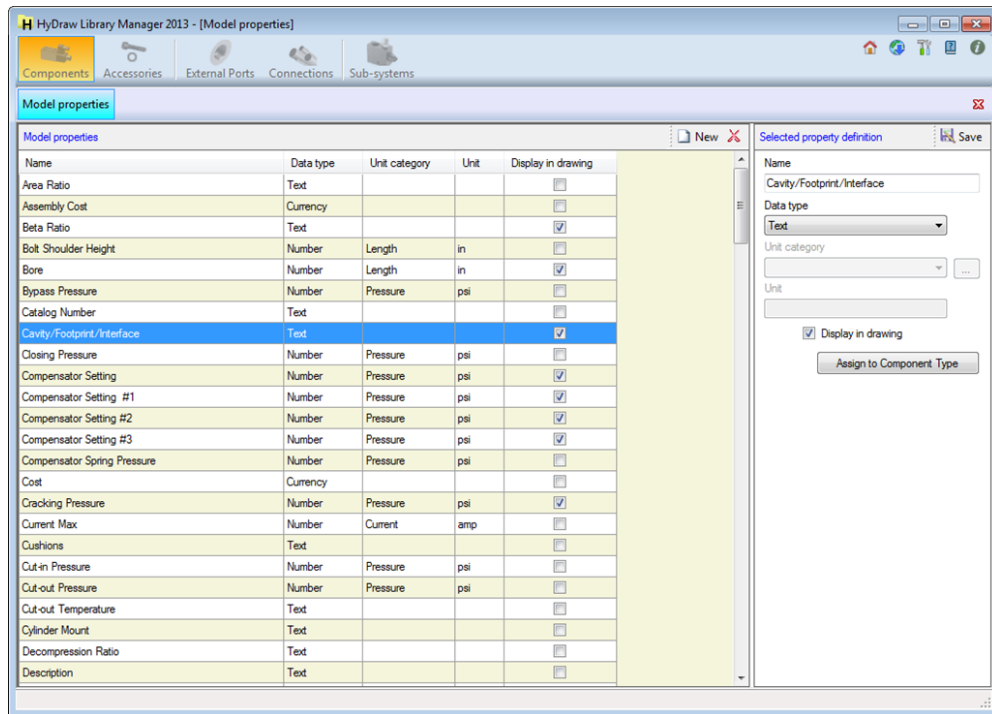
10.Components - Model Properties

Manage the properties of the component model.

Components → **Model Properties**

Component Model Properties window is broadly divided into two sections:

- Model Properties
- Selected property definition



HyDraw Library Manager – (Components - Model Properties)

Model properties

The Model properties section displays all model properties, their data type, and unit category.

You can also create a **New** model property or delete one by selecting the icons on the caption bar.

Model properties					New	
Name	Data type	Unit category	Unit	Display in drawing		
Area Ratio	Text			<input type="checkbox"/>		
Assembly Cost	Currency			<input type="checkbox"/>		
Beta Ratio	Text			<input checked="" type="checkbox"/>		
Bolt Shoulder Height	Number	Length	in	<input type="checkbox"/>		
Bore	Number	Length	in	<input checked="" type="checkbox"/>		
Bypass Pressure	Number	Pressure	psi	<input type="checkbox"/>		
Catalog Number	Text			<input type="checkbox"/>		
Cavity/Footprint/Interface	Text			<input checked="" type="checkbox"/>		
Closing Pressure	Number	Pressure	psi	<input type="checkbox"/>		
Compensator Setting	Number	Pressure	psi	<input checked="" type="checkbox"/>		
Compensator Setting #1	Number	Pressure	psi	<input checked="" type="checkbox"/>		
Compensator Setting #2	Number	Pressure	psi	<input checked="" type="checkbox"/>		
Compensator Setting #3	Number	Pressure	psi	<input checked="" type="checkbox"/>		
Compensator Spring Pressure	Number	Pressure	psi	<input type="checkbox"/>		
Cost	Currency			<input type="checkbox"/>		
Cracking Pressure	Number	Pressure	psi	<input checked="" type="checkbox"/>		
Current Max	Number	Current	amp	<input type="checkbox"/>		
Cushions	Text			<input type="checkbox"/>		
Cut-in Pressure	Number	Pressure	psi	<input type="checkbox"/>		
Cut-out Pressure	Number	Pressure	psi	<input type="checkbox"/>		
Cut-out Temperature	Text			<input type="checkbox"/>		
Cylinder Mount	Text			<input type="checkbox"/>		
Decompression Ratio	Text			<input type="checkbox"/>		
Description	Text			<input type="checkbox"/>		

Model properties section

Selected property definition

The Selected property definition section enables you to edit the name of the model property, data type, unit category, and unit.

1. Select **Display in drawing** to display the property in the drawing.
2. Click **Assign to Component Type** to assign the selected property to one or more component types.
3. Click **Save** to save the changes of the property.

Note



remains inactive for Data types Text, Currency, or Yes/No.

Selected property definition

Name

Closing Pressure

Data type

Number

Unit category

Pressure

Unit

psi

☐ Display in drawing

Assign to Component Type

Selected property definition Section

Assign Property to Component Type

1. Click Assign to Component Type

The Assign Property to Component Type dialog box displays.

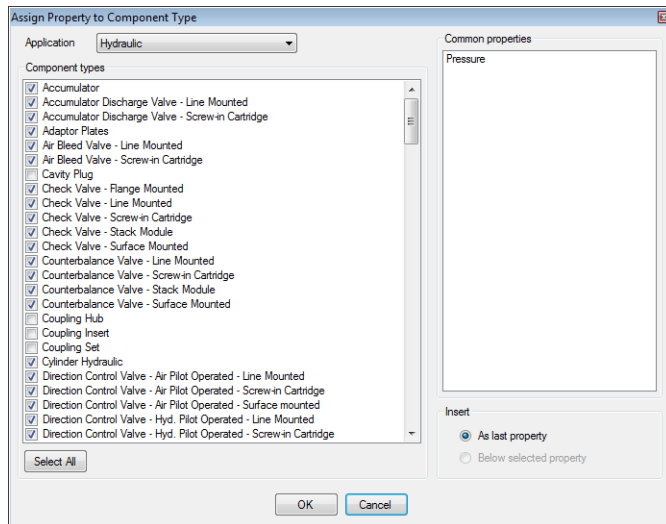
2. Select **Application**.
3. Select the available **Component types** to include the property.

Or

Click the **Select All** button to select all the component types.

*On the basis of the selected component properties the **Common properties** are displayed in the listing on the right.*

4. Select any of the Insert options, **As last property/Below selected property**.
5. Click **OK** to apply and exit.



Assign Property to Component Type

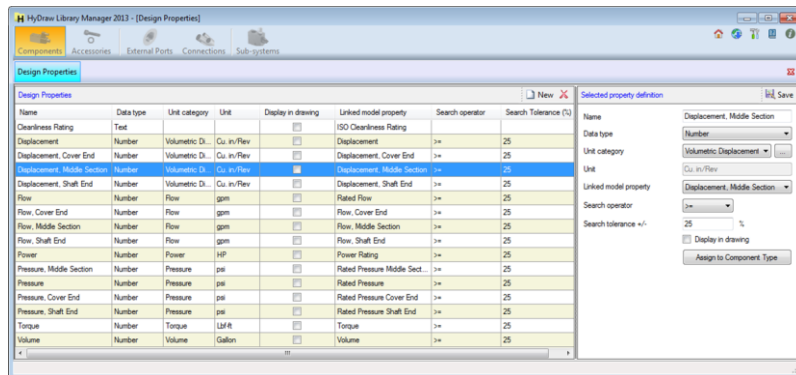
11.Components - Design Properties

Manage the design properties of the component model.

Components → Design Properties

Design Properties has two sections:


- Design Properties
- Selected property definition

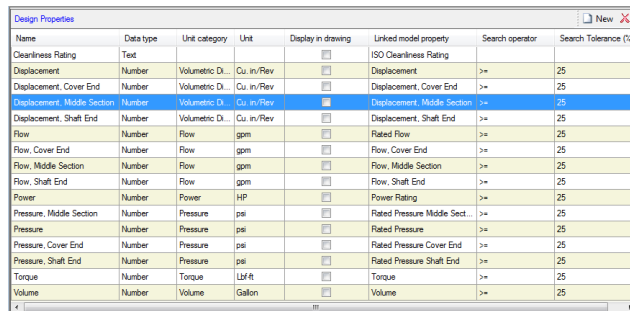


HyDraw Library Manager (Components - Design Properties)

Design Properties

The Design Properties section displays all design properties, their data type, category and unit.

You can also create a **New** design property or delete one by selecting the icons on the caption .





Design Properties section

Selected property definition

The Selected property definition section enables you to edit the name of the model property, data type, unit category and unit.

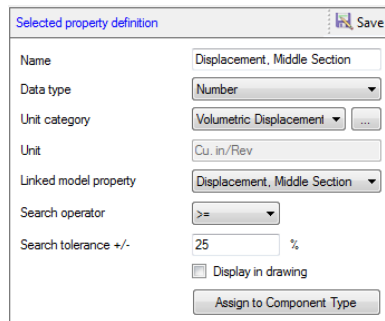
1. Select **Display in drawing** to display the property in the drawing.
2. Click **Assign to Component Type** to assign the selected property to one or more component types.
3. Click **Save** to save the changes to the property.

Note

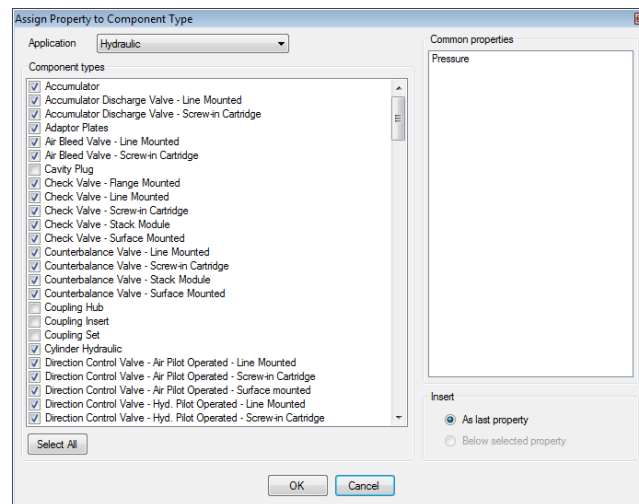
- You cannot delete essential design properties; hence  remains inactive on selection of such essential properties.
-  remains inactive for Data types Text, Currency, or Yes/No.

The Assign Property to Component Type dialog box displays.

- Select **Application**.
- Select the available **Component types** to include the property.
Or
Click the **Select All** button to select all the component types.
- On the basis of the selected component properties the **Common properties** are displayed in the listing on the right.
- Select Insert, **As last property/Below selected property**.
- Click **OK** to apply and exit.



Selected property definition Section



Assign Property to Component Type

12.Components - Display Formats

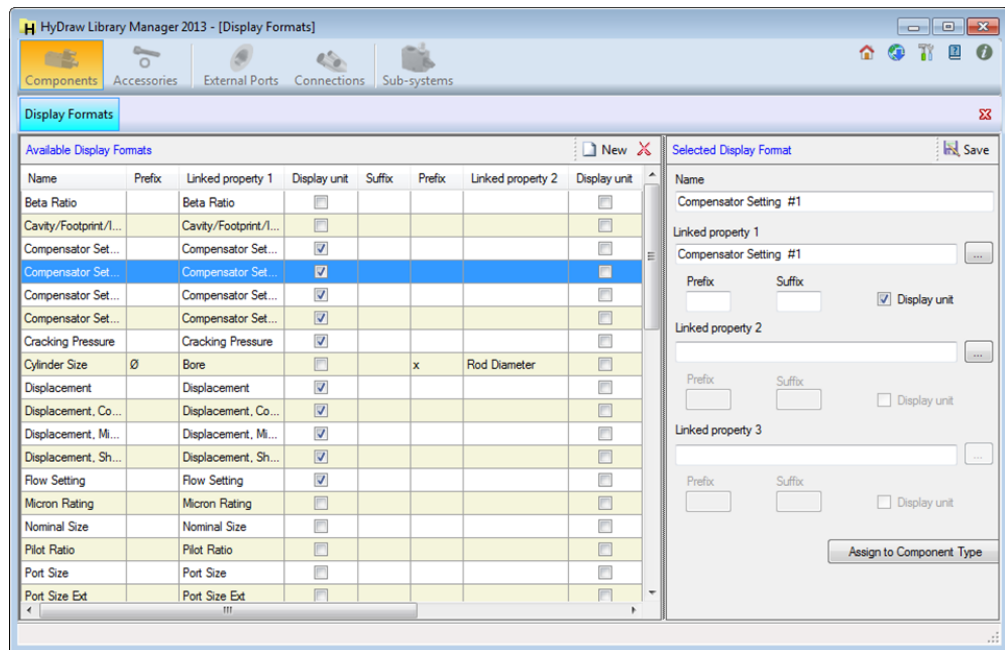
Define Display formats for components to display properties with prefix and/or suffix.

Display compound properties using the display format.

Components → Display Formats


Manage Display Formats window has two sections:



- Available Display Formats
- Selected Display Format



HyDraw Library Manager (Components - Display Formats)

Available Display Formats Section

- The Available Display Formats section displays all the formats and properties that are marked with the display in the drawing.
- Create **New** Display Format or  delete by selecting the icons on the caption bar.

Display Formats							
Available Display Formats  							
Name	Prefix	Linked property 1	Display unit	Suffix	Prefix	Linked property 2	Display unit
Beta Ratio		Beta Ratio	<input type="checkbox"/>				<input type="checkbox"/>
Cavity/Footprint/1...		Cavity/Footprint/1...	<input type="checkbox"/>				<input type="checkbox"/>
Compensator Set...		Compensator Set...	<input checked="" type="checkbox"/>				<input type="checkbox"/>
Compensator Set...		Compensator Set...	<input checked="" type="checkbox"/>				<input type="checkbox"/>
Compensator Set...		Compensator Set...	<input checked="" type="checkbox"/>				<input type="checkbox"/>
Cracking Pressure		Cracking Pressure	<input checked="" type="checkbox"/>				<input type="checkbox"/>
Cylinder Size	Ø	Bore	<input type="checkbox"/>		x	Rod Diameter	<input type="checkbox"/>
Displacement		Displacement	<input checked="" type="checkbox"/>				<input type="checkbox"/>
Displacement, Co...		Displacement, Co...	<input checked="" type="checkbox"/>				<input type="checkbox"/>
Displacement, Mi...		Displacement, Mi...	<input checked="" type="checkbox"/>				<input type="checkbox"/>
Displacement, Sh...		Displacement, Sh...	<input checked="" type="checkbox"/>				<input type="checkbox"/>
Flow Setting		Flow Setting	<input checked="" type="checkbox"/>				<input type="checkbox"/>
Micron Rating		Micron Rating	<input type="checkbox"/>				<input type="checkbox"/>
Nominal Size		Nominal Size	<input type="checkbox"/>				<input type="checkbox"/>
Pilot Ratio		Pilot Ratio	<input type="checkbox"/>				<input type="checkbox"/>
Port Size		Port Size	<input type="checkbox"/>				<input type="checkbox"/>
Port Size Ext		Port Size Ext	<input type="checkbox"/>				<input type="checkbox"/>

Available Display Formats Section

Selected Display Format

The selected Display Format section displays Name, Linked Property1, Linked Property 2 and Linked Property 3 and their Display Unit, **Prefix and Suffix**.

Define Display Property

1. Enter **Name** of the display format.

For the Linked Property 1

2. Click .

The Select Property dialog box displays.

3. Select **Model Property/Design Property**.

Note

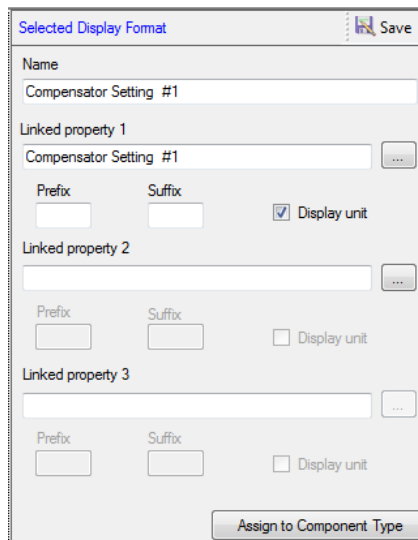
The properties that are marked, *Display in drawing*, are visible.

4. Select a property from the available properties.
5. Click **OK** to apply and exit.
6. Select **Display Unit**, if available.
7. Enter **Prefix**.
8. Enter **Suffix**.

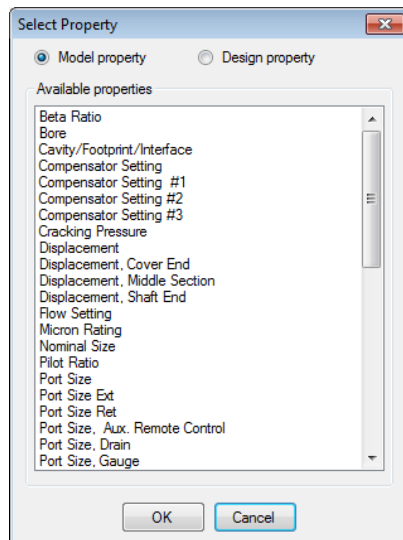
Repeat the same procedure for Linked Property 2 and Linked Property 3.

9. Click **Assign to Component Type**.

The Assign Display Format to Component Type dialog box displays.

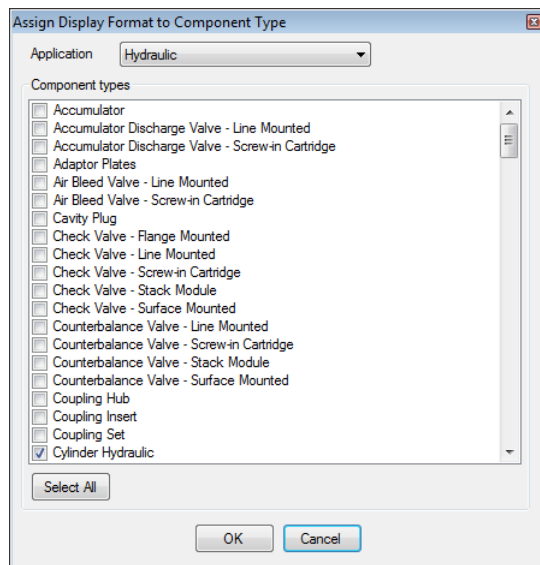


Selected Display format Section



Select Property

10. Select **Application**.
11. Select one or more listed component types
12. Click **Select All** to select all component types.
13. Click **OK** to apply and exit.
14. Click **Save**.



Assign Display Format to Component Type

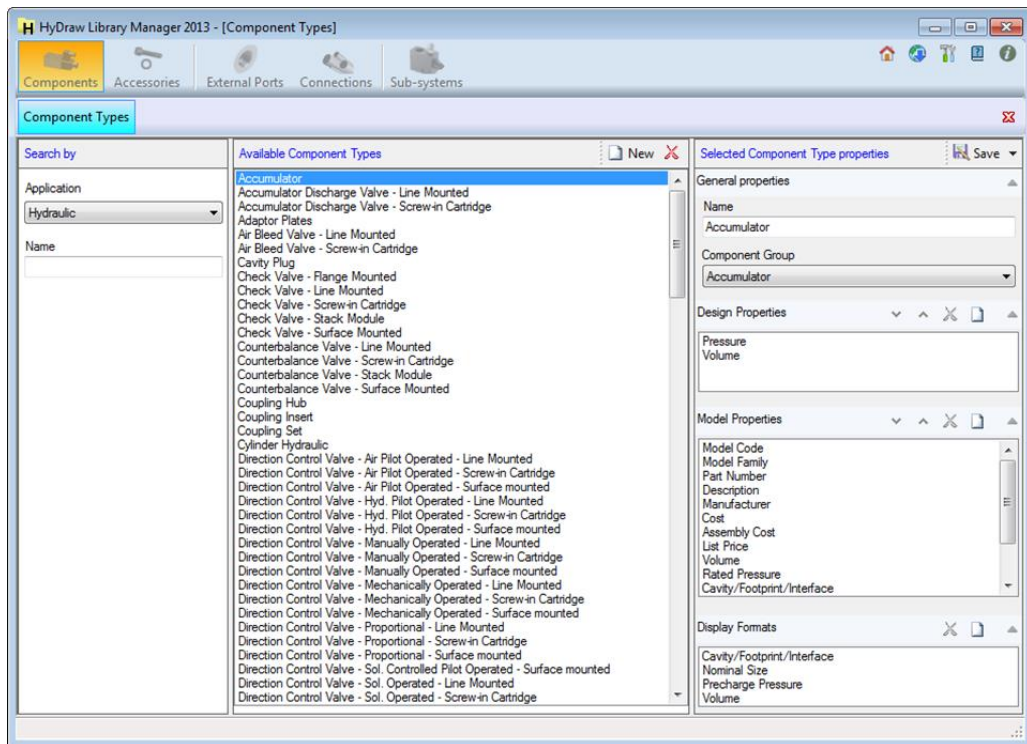
13. Components - Component Types

View all available component types and their properties.

Components → **Component Types**

Component Types window has three sections:

- Search by
- Available Component Types
- Selected Component Type properties



HyDraw Library Manager – (Components - Component Types)

Search by

The Search by section enables you to search for a particular application, component type or all component types.

Search by

Application


Hydraulic

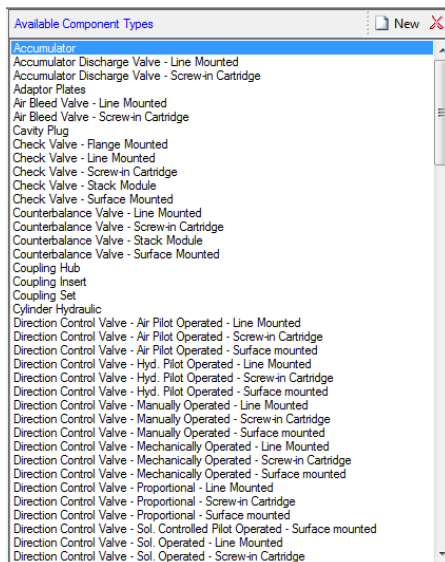
Name

Search by Section

Available Component Types

The Available Component Types section displays all available component types.

Create a **New** component type or  delete a component type by selecting the icons on the caption bar.



Available Component Types Section

Selected Component Type properties

The Selected Component Type properties section displays

- General Properties
- Design Properties
- Model Properties
- Display Formats

Save the properties of the component type after making changes.

Or

Save As a new component type.

Save commands are available on the caption bar.

Selected Component Type properties

General properties

Name
Accumulator

Component Group
Accumulator

Design Properties

Pressure
Volume

Model Properties

Model Code
Model Family
Part Number
Description
Manufacturer
Cost
Assembly Cost
List Price
Volume
Rated Pressure
Cavity/Footprint/Interface

Display Formats

Cavity/Footprint/Interface
Nominal Size
Precharge Pressure
Volume


Selected Component Type properties section

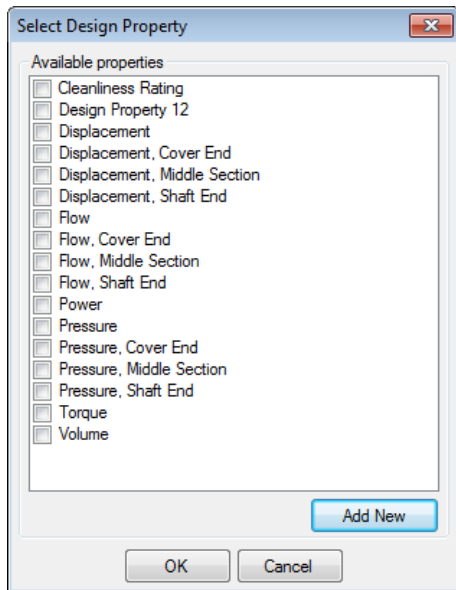
General Properties

This section displays the name of the Component Type and the Component Group.


Design Properties

This section displays the available design properties. You can also add new design properties.



1. Click  on the Design properties caption bar to display the Select Design Property dialog box.
2. Select any property checkbox to display them in the Design Property section.
3. Click **Add New** to display the Define Component Properties dialog box.

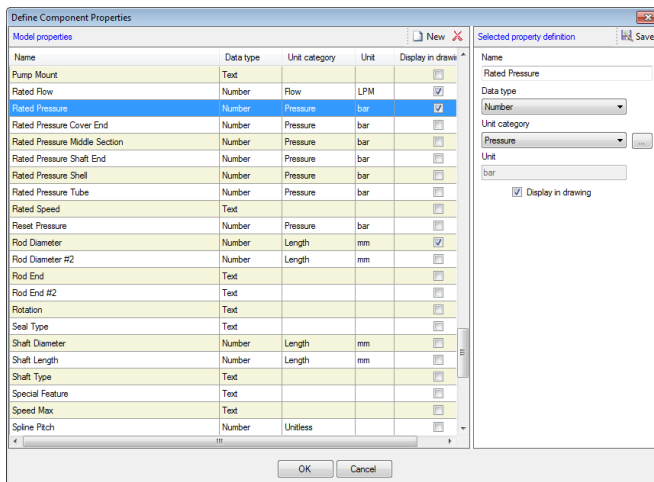


Select Design Property dialog box

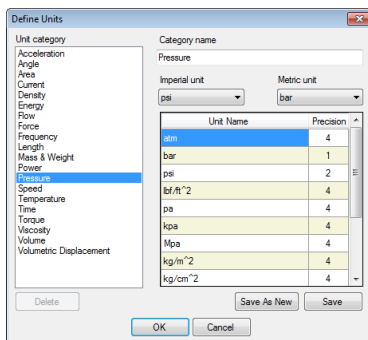
4. Click **New** to add new property.
5. Select **Display in drawing** to display the property in the drawing.
6. Click  in the selected property definition section to display the Define Units dialog box.
7. Click **Save** to save the new property and update the existing property.

Note

- You cannot delete essential model properties; hence  remains inactive on selection of essential model properties.
-  remains inactive if Text, Currency, or Yes/No is selected in the Data type box.





Define Component Properties

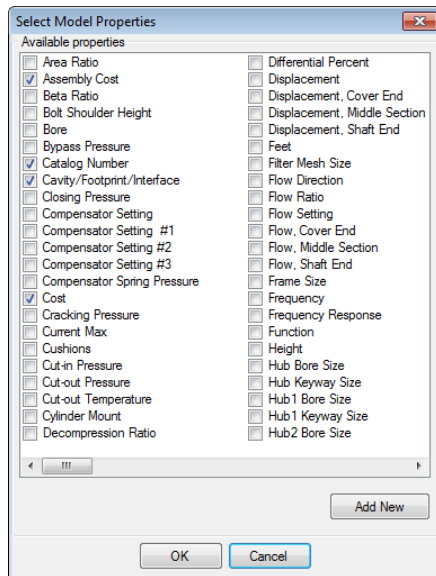


Define Units

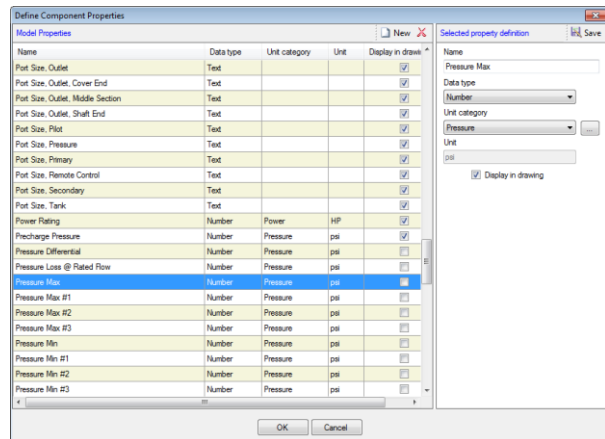
Model Properties

This section displays the available model properties. You can also add new model properties.

1. Click  on the Model properties caption bar to display the Select Model Properties dialog box.
2. Select any property checkbox to display it in the Model Property section.
3. Click **Add New** to display the Define Component Properties dialog box.
4. Click **New** to add new property.
5. Click  in the selected property definition section to display the Define Units dialog box.
6. Select the **Display in drawing** checkbox to display the model property in the drawing.
7. Click **Save** to save the new property or update the existing property.





Select Model Properties dialog box



Define Component Properties

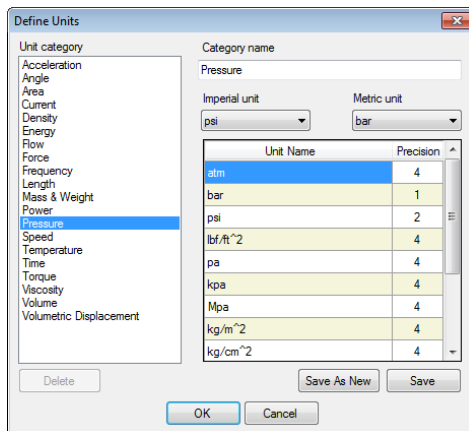
Note

- You cannot delete essential model properties; hence  remains inactive on selection of essential model properties.
-  This option remains inactive if Text, Currency or Yes/No is selected in the Data type box.

Define Units

The Define Units dialog box display details of the selected Unit category.


1. Select **Unit Category**.
2. Edit **Category name**, if required.
3. Select **Imperial unit**.
4. Select **Metric unit**.
5. Select **Unit Name**.
6. Enter the **precision** up to four decimal places.
7. Click **Save As New** to add a new category.
8. Click **Save** to update an existing category.




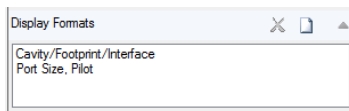
Define Units dialog box

Display Formats

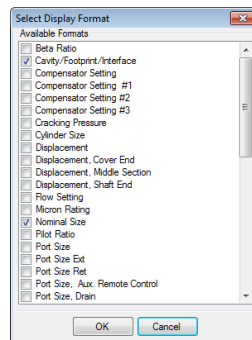
This section displays the available display formats.

1. Click  on the Display Formats caption bar to display the Select Display Formats dialog box.
2. Select any property checkbox to display it in the Display Formats section.
3. Click **OK**.

You can also click  delete an existing display format.



Display Formats Section



Select Display Format dialog box

14. Manage List

Manage Manufacturer, Cavity/Footprint/Interface, Catalog Number, Cushions, Cylinder Mount, Frequency, Nominal Size, Pilot Valve Interface, Pump Mount, Rod End, Type and Voltage.

Manage List ▼

Manufacturer
Cavity/Footprint/Interface
Catalog Number
Cushions
Cylinder Mount
Frequency
Nominal Size
Pilot Valve Interface
Pump Mount
Rod End
Type
Voltage

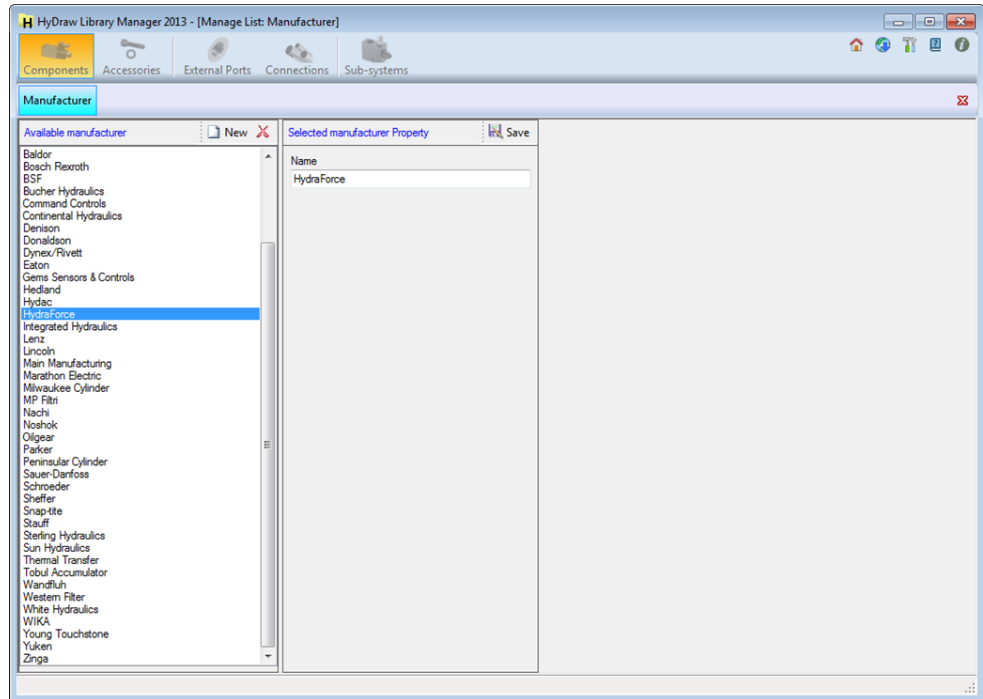
Manufacturer

View all available manufacturers. You can also create a new and delete manufacturer.

Components → Manage List → Manufacturer

Manufacturer has two sections:


- Available Manufacturer
- Selected manufacturer Property

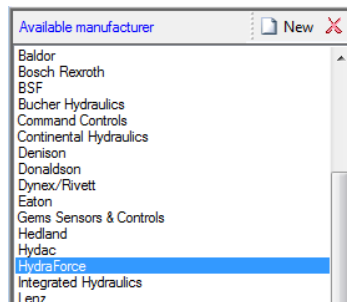


HyDraw Library Manager 2013 – [Manage List: Manufacturer]

Available manufacturer

The Available manufacturer section displays the list of all manufacturers available in the library.

You can create a **New** manufacturer and  delete any manufacturer by selecting the icons on the caption bar.



Available manufacturer Section

Selected manufacturer Property

Add New

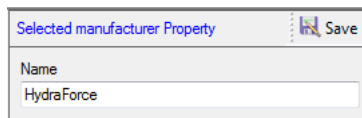
1. Click **New** to add a new manufacturer.
2. Click **Save**.

Edit

1. Select the existing manufacturer name.
2. Edit the manufacturer name.
3. Click **Save**.

Note

You can manage the Master Properties list of Cushions, Cylinder Mounts, Frequency, Nominal Size, Pilot Valve Interface, Pump Mount, Rod End Type, and Voltage; similarly as you manage the list of manufacturers.



Selected manufacturer property

Cavity/Footprint/Interface

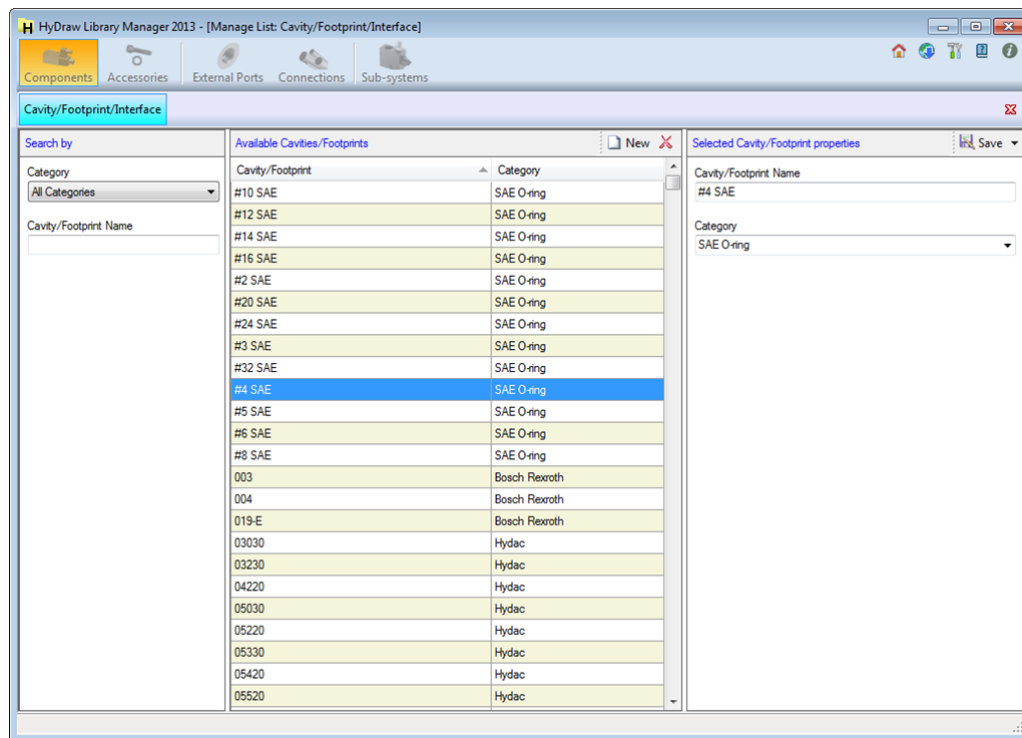
Search a specific cavity/footprint or cavities/footprints of all categories.

Components → Manage List

→ **Cavity/Footprint/Interface**

Cavity/Footprint/Interface has three sections:

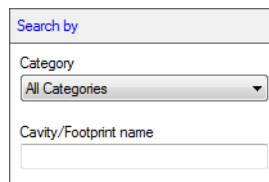
- Search by
- Available Cavities/Footprints
- Selected Cavity/Footprint properties



HyDraw Library Manager – (Components - Manage List - Cavity/Footprint/Interface)

Search by Section

The Search by section enables you to search for a cavity/footprint in a category or cavities/footprints in all categories.



Search by


Category
All Categories

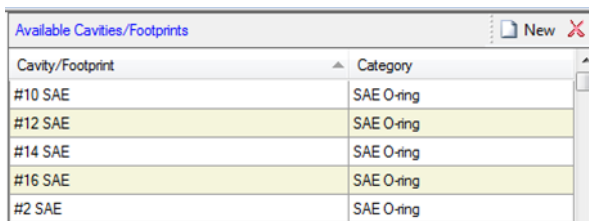
Cavity/Footprint name

Search by Section

Available Cavities/Footprints

The Available Cavities/Footprints section displays the cavities/footprints and the category to which it belongs.

You can also create a **New** or  delete a cavity/footprint by clicking the icons on the caption bar.



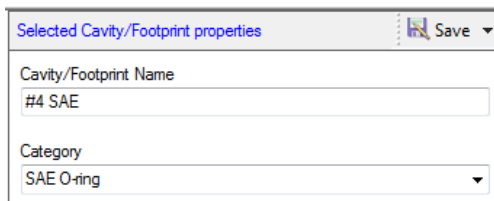
Cavity/Footprint	Category
#10 SAE	SAE O-ring
#12 SAE	SAE O-ring
#14 SAE	SAE O-ring
#16 SAE	SAE O-ring
#2 SAE	SAE O-ring

Available Cavities/Footprints Section

Selected Cavity/Footprint properties

The Selected Cavity/Footprint properties section displays the Cavity/Footprint name and category of the selected cavity.

1. Select the Cavity/Footprint name.
2. Edit the Cavity/Footprint name.
3. Enter a new category or select an existing category.
4. Click **Save** or **Save As**, as required.



Selected Cavity/Footprint properties

Cavity/Footprint Name
#4 SAE

Category
SAE O-ring

Selected Cavity/Footprint properties Section

Accessories

Manage Accessories, Documents, CAD File, Model properties, Component Types and Manage List.

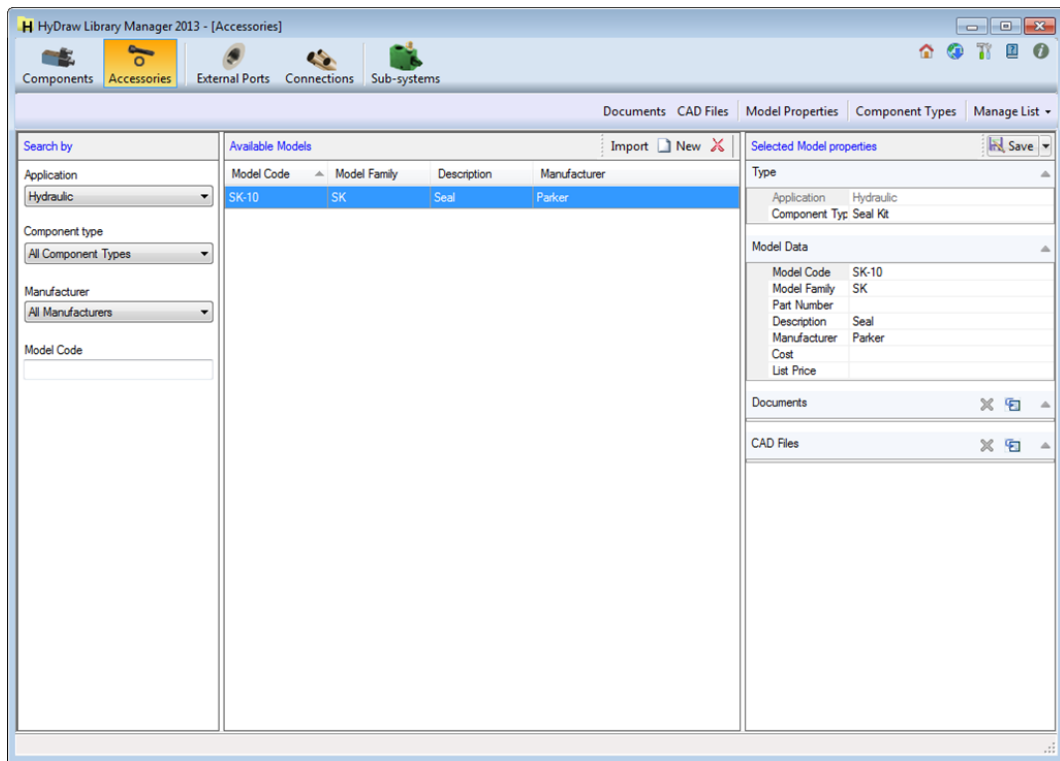
15	Accessories
16	Documents
17	CAD Files
18	Model Properties
19	Component Types
20	Manage List

15.Accessories

Manage Accessories, Documents, CAD File, Model properties, Component Types and List.

Accessories Library has three sections (column wise).

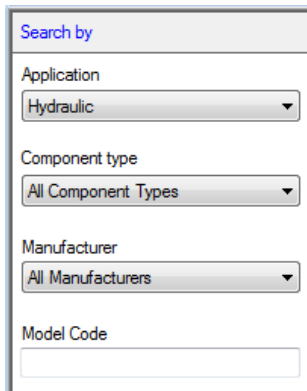
- Search by
- Available Models
- Selected Model properties



HyDraw Library Manager – (Accessories)

Search by

The Search by section enables you to search for a particular accessory by application, component type, manufacturer and model code of a particular component type.




The 'Search by' section is a vertical panel with a title bar. It contains four search criteria, each with a dropdown menu: 'Application' (set to 'Hydraulic'), 'Component type' (set to 'All Component Types'), 'Manufacturer' (set to 'All Manufacturers'), and 'Model Code' (an empty text input field).

Search by Section

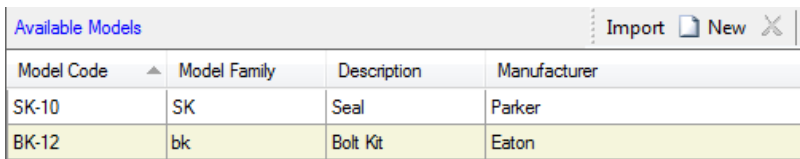
Available Models

The Available models section displays all the accessories for the selected component type of a manufacturer or all manufacturers.

Create a **New** model or  delete a model by selecting the icons on the caption bar.

The **Import** option enables you to import accessory data from Microsoft Excel.

Refer Chapter 5, Components – Model Data view, Section Import, Page No. 29.



The 'Available Models' section features a table with columns: Model Code, Model Family, Description, and Manufacturer. Above the table is a caption bar with 'Import', 'New' (with a plus icon), and a close icon (X). The table contains two rows of data.

Model Code	Model Family	Description	Manufacturer
SK-10	SK	Seal	Parker
BK-12	bk	Bolt Kit	Eaton


Available Models Section

Selected Model properties

The Selected Model properties section displays the model properties of the selected model accessory.

- Link Documents and CAD files to the selected model.
- Click **Save** or **Save As**, as required.

Selected Model properties



 Save

Type	
Application	Hydraulic
Component Type	Seal Kit



Model Data

Model Code	SK-10
Model Family	SK
Part Number	
Description	Seal
Manufacturer	Parker
Cost	
List Price	

Documents

CAD Files

Selected Model Properties section

16.Documents

Select and link documents from the Library / delete the linked documents.

Refer Chapter 7, Documents for detailed usage.

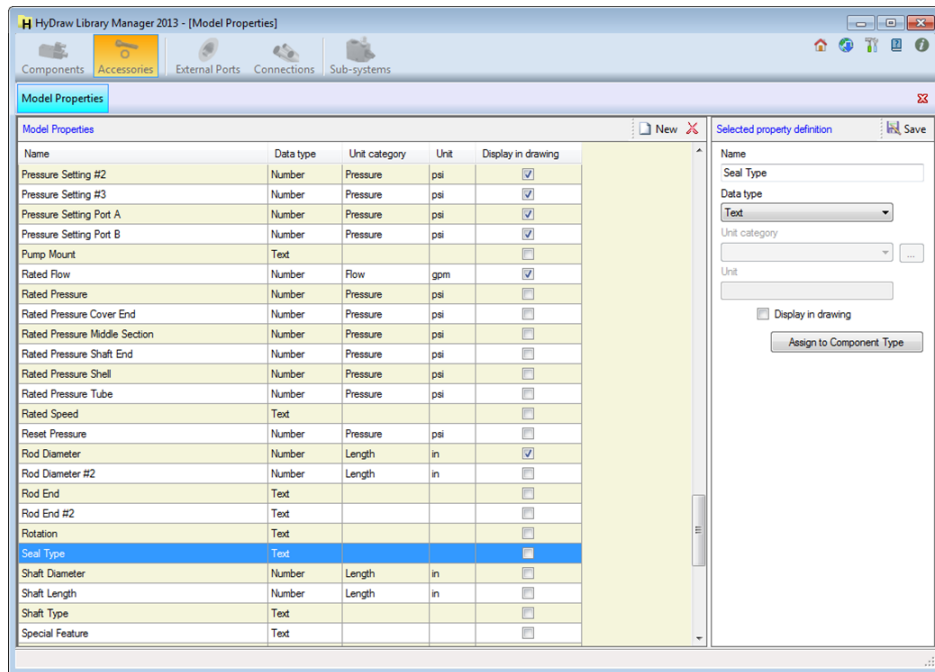
17.CAD Files

Select and link CAD Files from the Library / delete the linked CAD Files.

Refer Chapter 8, CAD Files for detailed usage.

18. Accessories - Model Properties

Manage the Model properties. These properties are common to components and accessories.



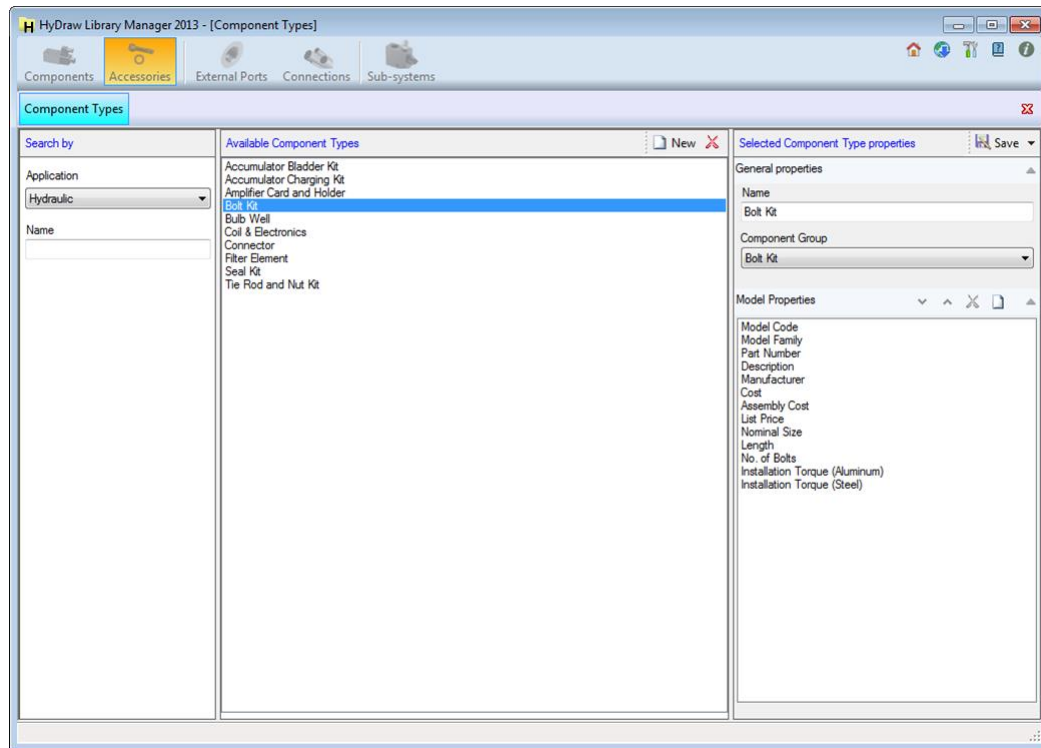
Note:

Refer Chapter 10, Components – Model Properties for detailed usage.

19. Accessories - Component Types

Component Types window has three sections (column wise):

- Search by
- Available Component Type
- Selected Component Type properties



HyDraw Library Manager – (Accessories - Component Types)

Search by

The Search by section enables you to search by Application and for a particular component or all component types of accessories.

Search by

Application


Hydraulic

Name

Search by section

Available Component Types

The Available component Types section displays all available component types.

You can also create a **New** component type or  delete a component type by selecting the icons on the caption bar.

Available Component Types

New

Accumulator Bladder Kit

Accumulator Charging Kit

Amplifier Card and Holder

Bolt Kit

Bulb Well

Coil & Electronics

Connector

Filter Element

Seal Kit

Tie Rod and Nut Kit

Available Component Types Section

Selected Component Type properties

The Selected Component Type properties section displays Component Type Name, Component Group and Model Properties.

- **Save** the properties of the component type after making changes.
- Or
- **Save As** a new component type.

The Save commands are available on the caption bar.

Refer Chapter 8, Components – Model Properties for detailed usage.

Selected Component Type properties section

20. Manage List

Refer Chapter 14, Manage List.

External Ports

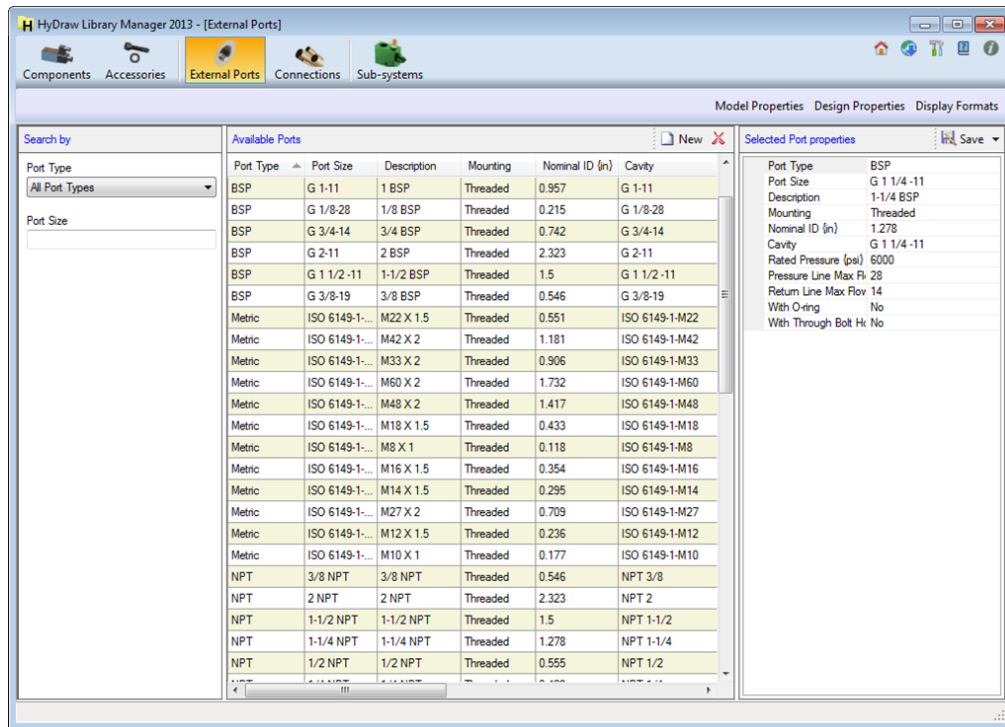
- | | |
|----|-------------------|
| 21 | External Ports |
| 22 | Model Properties |
| 23 | Design Properties |
| 24 | Display Formats |

21.External Ports

External Ports deals with the external ports available in the library, Model Properties, Design Properties and Display Formats.

External Ports window has three sections (column wise):

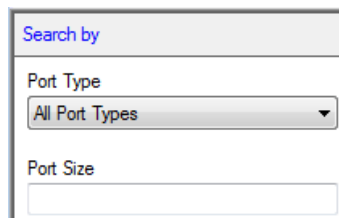
- Search by
- Available Ports
- Selected Port Properties



HyDraw Library Manager – (External Ports)

Search by

The Search by section enables search for a particular external port type and port size.




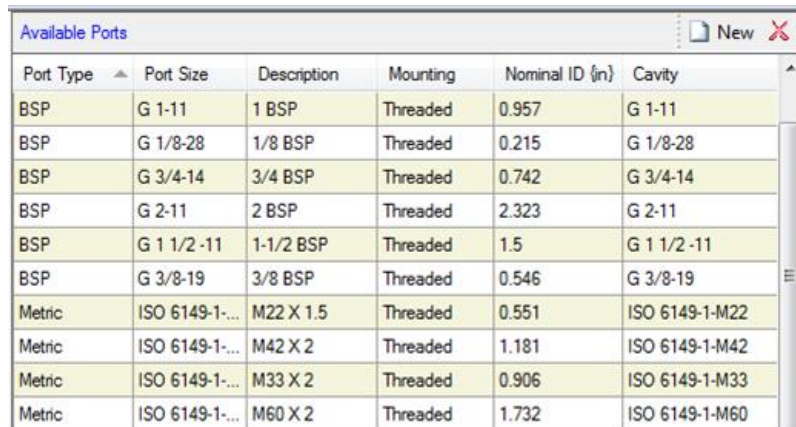
The 'Search by' section contains two input fields. The first is 'Port Type' with a dropdown menu currently showing 'All Port Types'. The second is 'Port Size' with an empty text input box.

Search by Section

Available Ports

The Available Ports section displays all the available ports based on the search criteria.

Create a **New** port or  delete a port by selecting the icons on the caption bar.



The 'Available Ports' section features a table with 6 columns: Port Type, Port Size, Description, Mounting, Nominal ID (in), and Cavity. The table lists 12 different port configurations. Above the table is a caption bar with a 'New' button (document icon) and a delete button (X icon).

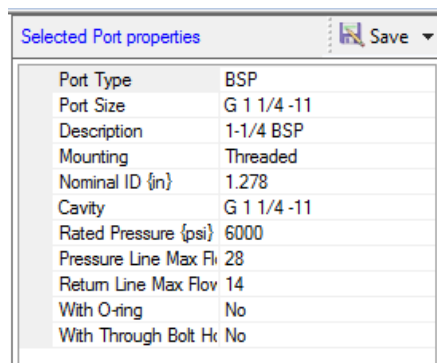
Port Type	Port Size	Description	Mounting	Nominal ID (in)	Cavity
BSP	G 1-11	1 BSP	Threaded	0.957	G 1-11
BSP	G 1/8-28	1/8 BSP	Threaded	0.215	G 1/8-28
BSP	G 3/4-14	3/4 BSP	Threaded	0.742	G 3/4-14
BSP	G 2-11	2 BSP	Threaded	2.323	G 2-11
BSP	G 1 1/2 -11	1-1/2 BSP	Threaded	1.5	G 1 1/2 -11
BSP	G 3/8-19	3/8 BSP	Threaded	0.546	G 3/8-19
Metric	ISO 6149-1-...	M22 X 1.5	Threaded	0.551	ISO 6149-1-M22
Metric	ISO 6149-1-...	M42 X 2	Threaded	1.181	ISO 6149-1-M42
Metric	ISO 6149-1-...	M33 X 2	Threaded	0.906	ISO 6149-1-M33
Metric	ISO 6149-1-...	M60 X 2	Threaded	1.732	ISO 6149-1-M60

Available Ports Section

Selected Port properties

The Selected Port properties section displays the properties of the selected port.

- Click **Save** on the caption bar to save port properties.
- Click **Save As** on the caption bar to save as a new port.



Port Type	BSP
Port Size	G 1 1/4 -11
Description	1-1/4 BSP
Mounting	Threaded
Nominal ID {in}	1.278
Cavity	G 1 1/4 -11
Rated Pressure {psi}	6000
Pressure Line Max Flow	28
Return Line Max Flow	14
With O-ring	No
With Through Bolt Hole	No

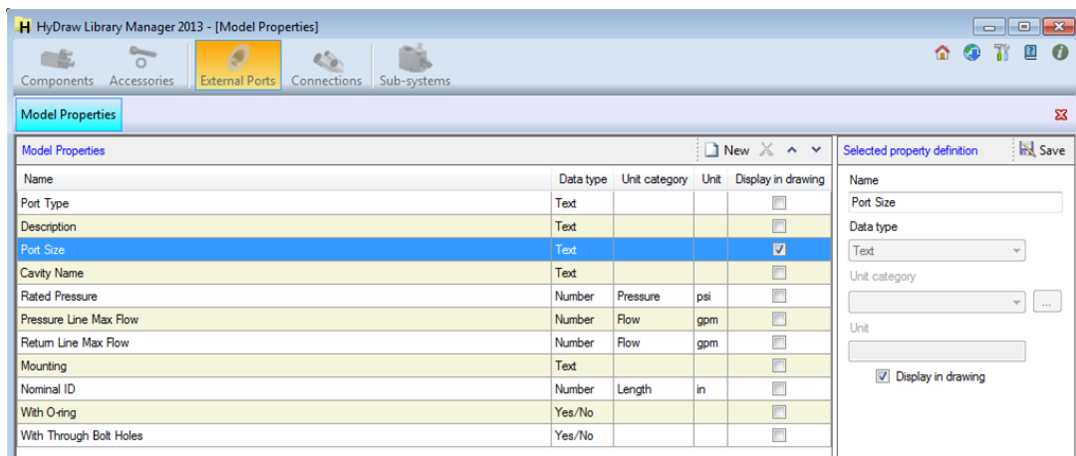
Selected Port properties

22.External Ports - Model Properties

Manage properties of the external port models.

External Port Model Properties window has two sections:


- Model Properties
- Selected property definition



HyDraw Library Manager (External Ports - Model Properties)

Model Properties

Display all available model properties, their data type, category, and unit.

Create a **New** model property or  delete by selecting the icons on the caption bar.

Model Properties					New	X	^	v
Name	Data type	Unit category	Unit	Display in drawing				
Port Type	Text			<input type="checkbox"/>				
Description	Text			<input type="checkbox"/>				
Port Size	Text			<input checked="" type="checkbox"/>				
Cavity Name	Text			<input type="checkbox"/>				
Rated Pressure	Number	Pressure	psi	<input type="checkbox"/>				
Pressure Line Max Flow	Number	Flow	gpm	<input type="checkbox"/>				
Return Line Max Flow	Number	Flow	gpm	<input type="checkbox"/>				
Mounting	Text			<input type="checkbox"/>				
Nominal ID	Number	Length	in	<input type="checkbox"/>				
With O-ring	Yes/No			<input type="checkbox"/>				
With Through Bolt Holes	Yes/No			<input type="checkbox"/>				

Model Properties Section

Selected property definition


Edit the name of the model property, data type, unit category, and unit.

1. Select **Display in drawing** to display the property in the drawing.
2. Click **Save** to save the changes to the property.

Note



remains inactive for Data types Text, Currency, or Yes/No.

Selected property definition 

Name

Port Size

Data type

Text

Unit category

Unit

☒ Display in drawing

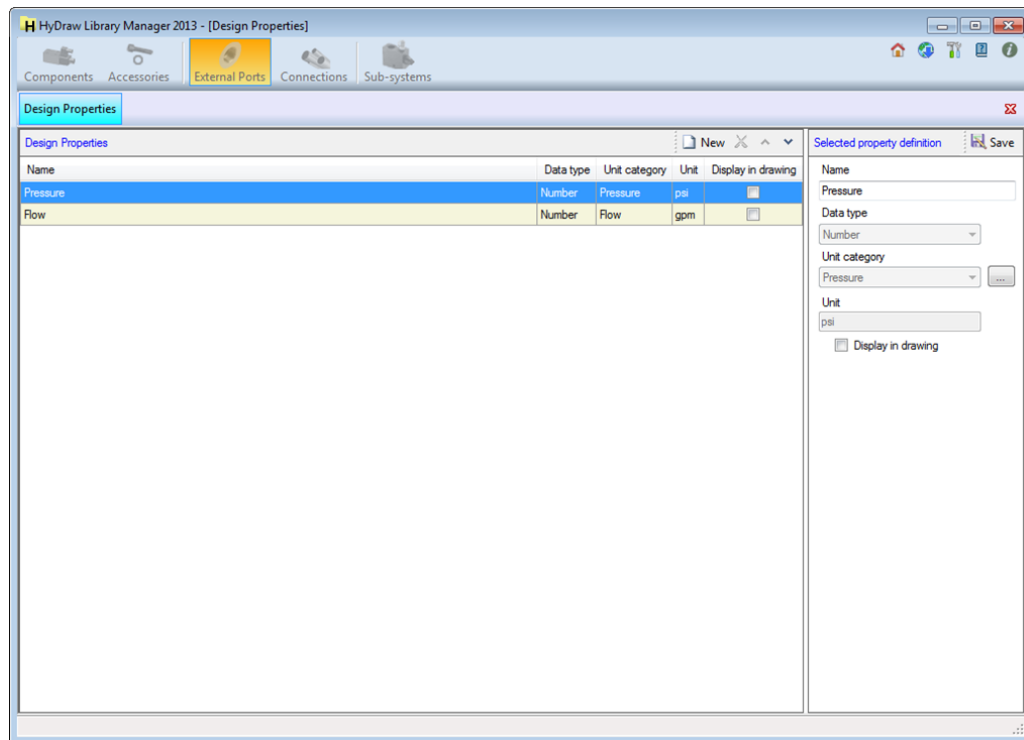
Selected property definition section

23.External Ports - Design Properties

Manage the design properties of the external port.

External Ports Design Properties window has two sections:

- Design Properties
- Selected property definition



HyDraw Library Manager (External Ports - Design Properties)

Design Properties

Display all design properties, their data type, category, and unit.

You can also create a new design property or delete one by selecting the icons on the caption bar.

Design Properties				
Design Properties				
Name	Data type	Unit category	Unit	Display in drawing
Pressure	Number	Pressure	psi	<input checked="" type="checkbox"/>
Flow	Number	Flow	gpm	<input type="checkbox"/>



Design Properties Section


Selected property definition

Edit the name of the model property, data type, unit category, and unit.

- Select **Display in drawing** to display the property in the drawing.
- Click **Save** to save the changes to the property.

Note

- You cannot delete essential design properties; hence  remains inactive on selection of such essential properties.
-  remains inactive for Data types Text, Currency, or Yes/No.

Selected property definition 

Name

Pressure

Data type

Number

Unit category

Pressure

...

Unit

psi

☐ Display in drawing

Selected property definition Section

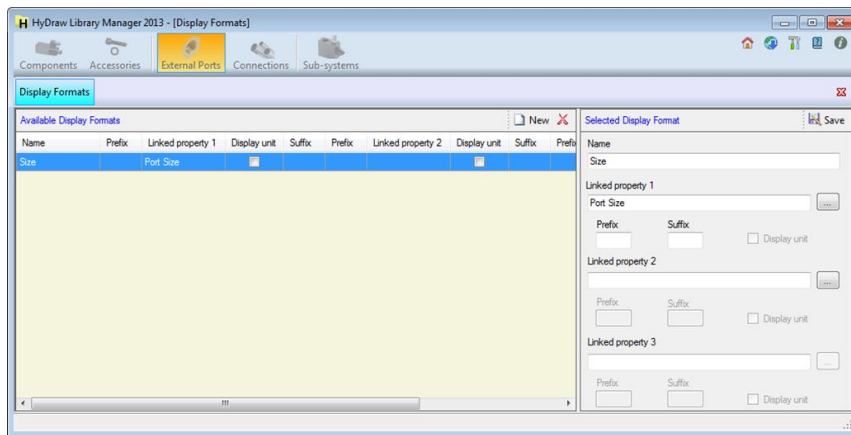
24.External Ports - Display Formats

Define Display formats to external ports and display properties with prefix and/or suffix.

Display compound properties using the display format.

Display Formats window has two sections:

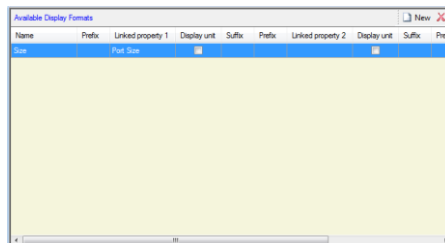
- Available Display Formats
- Selected Display Format



HyDraw Library Manager – (External Ports - Display Formats)

Available Display Formats

- The Available Display Formats section displays all formats and properties that are marked with the display in the drawing.
- You can also create a **New** Display format or delete by selecting the icons on the caption bar.



Available Display Formats Section

Selected Display Format

The selected Display Format section displays Name, Linked Property1, Linked Property 2 and Linked Property 3 and their Display Unit, Prefix and Suffix.

Define Display Property

1. Enter the name of the display format.

For the Linked Property 1

2. Click .

The Select Property dialog box displays.

3. Select **Model property** or **Design property**.

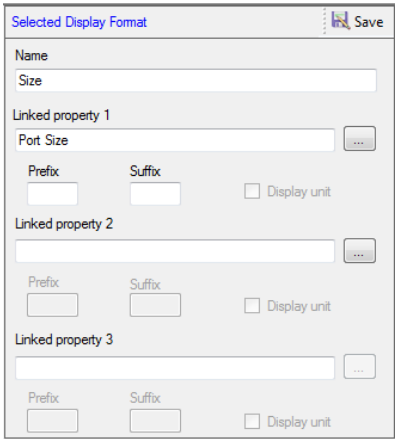
Note

The properties that are marked for *Display in drawing* are only visible.

4. Select a property from the available properties.
5. Click **OK** to apply and exit.
6. Select **Display Unit**, if available.
7. Enter **Prefix**.
8. Enter **Suffix**.

*Repeat the same procedure for
Linked property 2 and Linked property 3.*

9. Click **Save** to save the Display Format.



Selected Display Format Section



Select Property

Connections

View all the available Connections (Pipes & Tubes), Model Properties, Design Properties, Display Formats and Connection types.

25	Connections
26	Model Properties
27	Design Properties
28	Display Formats
29	Connection Types

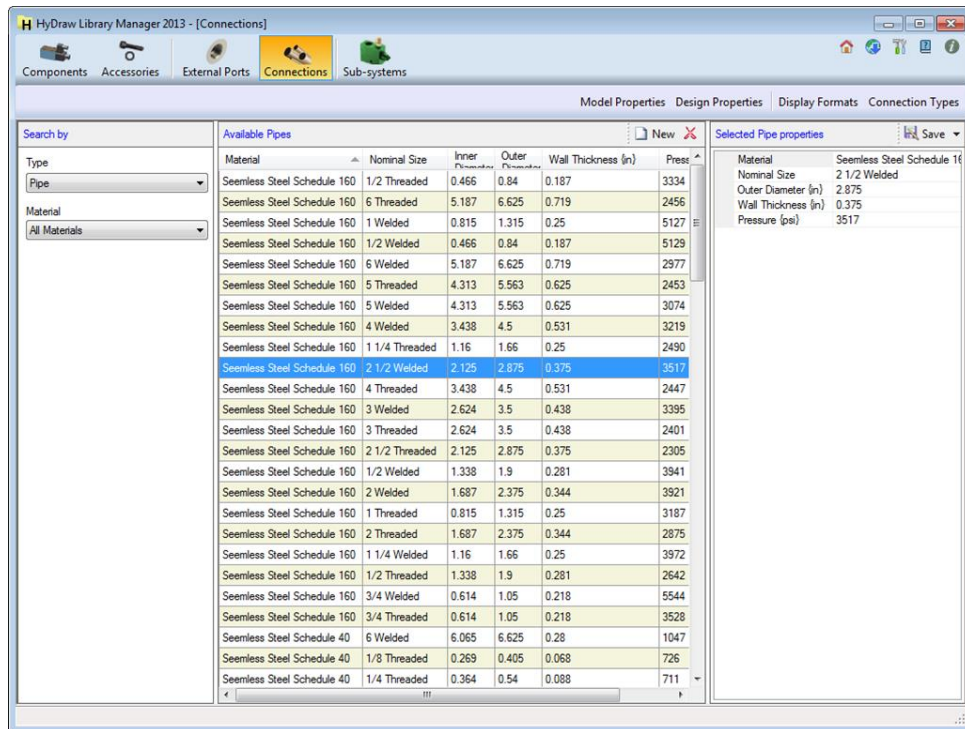
25.Connections

View all the available pipes and tubes and their properties.

You can delete and create new pipes and tubes, using the icons on the caption bar.

Connections window has three sections
(column wise):

- Search by
- Available Pipes/Tubes
- Selected Pipe/Tube properties



HyDraw Library Manager – (Connections)

Search by

The Search by section enables you to filter the selection on the Type i.e. Pipe/Tube and Material.

Search by

Type

Pipe

Material

All Materials

Search by Section

Available Pipes & Tube

The Available Pipes & Tubes section displays all the pipes and tubes available for the selected Type and Material.

- You can create a **New** pipe/tube.
- Delete an existing pipe/tube.

Available Pipes						New	
Material	Nominal Size	Inner Diameter (in)	Outer Diameter (in)	Wall Thickness (in)	Pressure (psi)		
Seamless Steel Schedule XXS	1/2 Welded	0.336	0.84	0.252	8473		
Seamless Steel Schedule XXS	1 Threaded	0.599	1.315	0.358	5103		
Seamless Steel Schedule XXS	2 1/2 Threaded	1.771	2.875	0.552	4191		
Seamless Steel Schedule XXS	4 Welded	3.152	4.5	0.674	4226		

Available Pipes Section

Available Tubes						New	
Material	Nominal Size	Inner Diameter (in)	Outer Diameter (in)	Wall Thickness (in)	Pressure (psi)		
304 SS	3/16	0.118	0.188	0.035	8200		
304 SS	1	0.704	1	0.148	6350		
304 SS	2	1.87	2	0.065	1250		
304 SS	2	1.834	2	0.083	1600		
304 SS	2	1.81	2	0.095	1850		

Available Tubes Section

Selected Pipe/Tube properties

The Selected Pipe/Tube properties section displays the properties of the selected pipe/tube.

- Click **Save** to update the existing pipe/tube data.
- Click **Save As** to create a new pipe/tube data.

Selected Pipe properties	
Material	Seamless Steel Schedule
Nominal Size	4 Welded
Outer Diameter {in}	4.5
Wall Thickness {in}	0.531
Pressure {psi}	3219

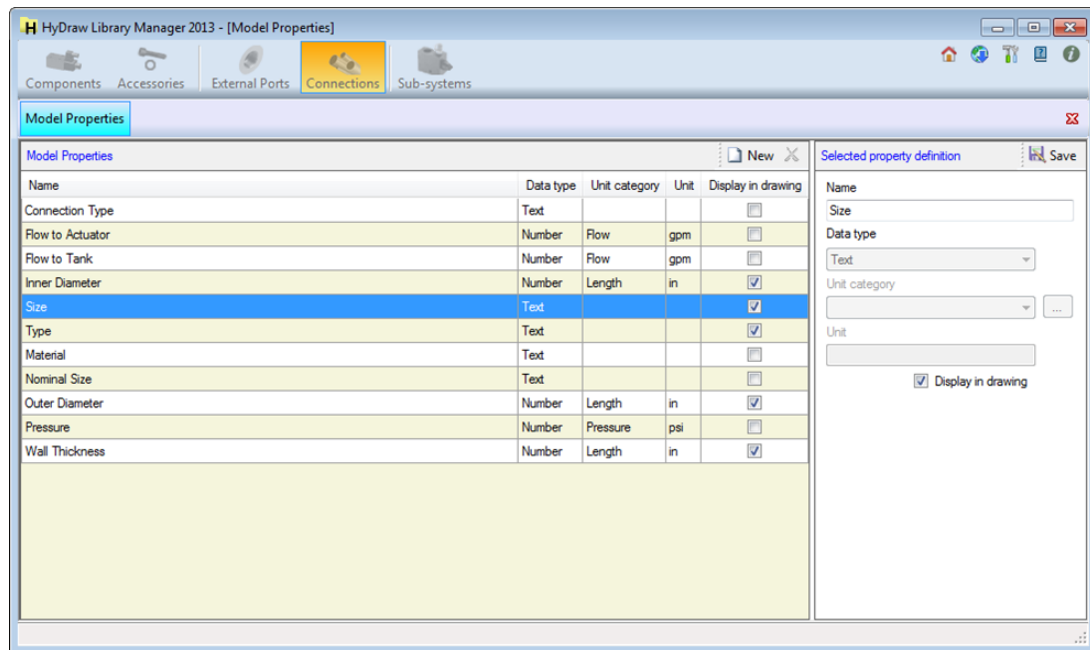
Selected Pipe properties Section

26.Connections - Model Properties

Manage the properties of the connections.

Connections Model Properties window has two sections:


- Model Properties
- Selected property



HyDraw Library Manager – (Connections - Model Properties)

Model Properties

The Model Properties section displays all available connection models properties, their data type, category, and unit.

Create a **New** model property or  delete one, by selecting the icons on the caption bar.

Model Properties				
Model Properties				
Name	Data type	Unit category	Unit	Display in drawing
Connection Type	Text			<input type="checkbox"/>
Flow to Actuator	Number	Flow	gpm	<input type="checkbox"/>
Flow to Tank	Number	Flow	gpm	<input type="checkbox"/>
Inner Diameter	Number	Length	in	<input checked="" type="checkbox"/>
Size	Text			<input checked="" type="checkbox"/>
Type	Text			<input checked="" type="checkbox"/>
Material	Text			<input type="checkbox"/>
Nominal Size	Text			<input type="checkbox"/>
Outer Diameter	Number	Length	in	<input checked="" type="checkbox"/>
Pressure	Number	Pressure	psi	<input type="checkbox"/>
Wall Thickness	Number	Length	in	<input checked="" type="checkbox"/>



Model Properties Section

Selected property definition

The Selected property definition section enables you to edit the name of the connection model property, data type, unit category, and unit.

- Select **Display in drawing** to display the property in the drawing.
- Click **Save Property**.

Note

- You cannot delete essential design properties; hence  remains inactive on selection of such essential properties.
-  remains inactive, if Text, Currency, or Yes/No is selected in the Unit category box.

Selected property definition

Save

Name

Size

Data type

Text

Unit category

...

Unit

☒ Display in drawing

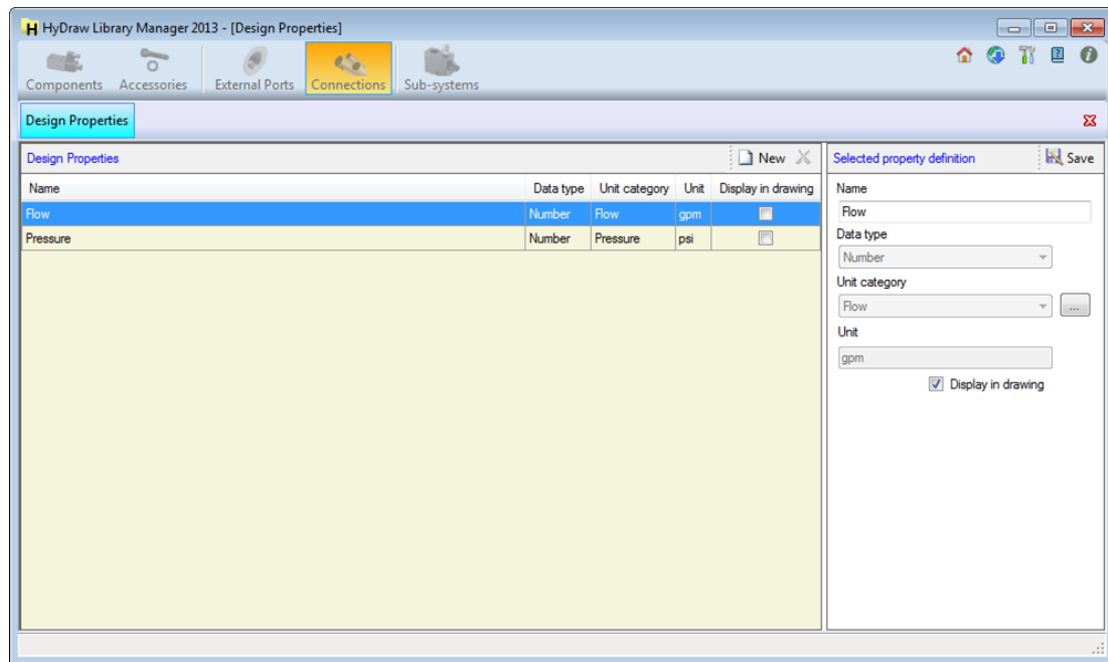
Selected property definition Section

27.Connections - Design Properties

Manage the design properties of the connections.

Connections Design Properties window has two sections:


- Design Properties
- Selected property

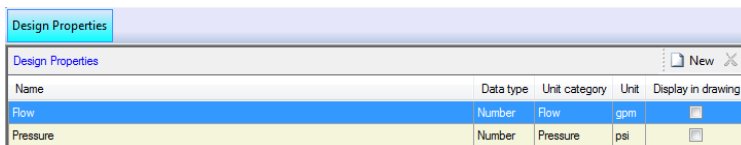


HyDraw Library Manager – (Connection - Design Properties)

Design Properties

The Design Properties section displays all design properties, their data type, category, and unit.

Create a **New** connection design property or  delete by selecting the icons on the caption bar.



The screenshot shows the 'Design Properties' window. It has a title bar 'Design Properties' with a 'New' button and a close icon. Below is a table with columns: Name, Data type, Unit category, Unit, and Display in drawing. The table contains two rows: 'Flow' (Number, Flow, gpm) and 'Pressure' (Number, Pressure, psi). The 'Flow' row is highlighted in blue.

Name	Data type	Unit category	Unit	Display in drawing
Flow	Number	Flow	gpm	<input checked="" type="checkbox"/>
Pressure	Number	Pressure	psi	<input type="checkbox"/>



Design Properties section

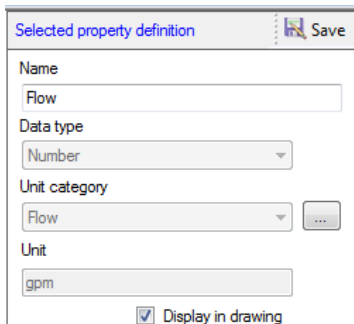
Selected property definition

The Selected property definition section enables you to edit the name of the design property, data type, unit category, and unit.

- Select **Display in drawing** to display the property in the drawing.
- Click **Save**.

Note

- You cannot delete essential design properties; hence  remains inactive on selection of such essential properties.
-  remains inactive, if Text, Currency, or Yes/No is selected in the Unit category box.



The screenshot shows the 'Selected property definition' dialog box. It has a title bar 'Selected property definition' with a 'Save' button. The fields are: Name (Flow), Data type (Number), Unit category (Flow), and Unit (gpm). There is a 'Display in drawing' checkbox which is checked. There is also an ellipsis button next to the Unit category field.

Name
Flow

Data type
Number

Unit category
Flow

Unit
gpm

☒ Display in drawing

Selected property definition Section

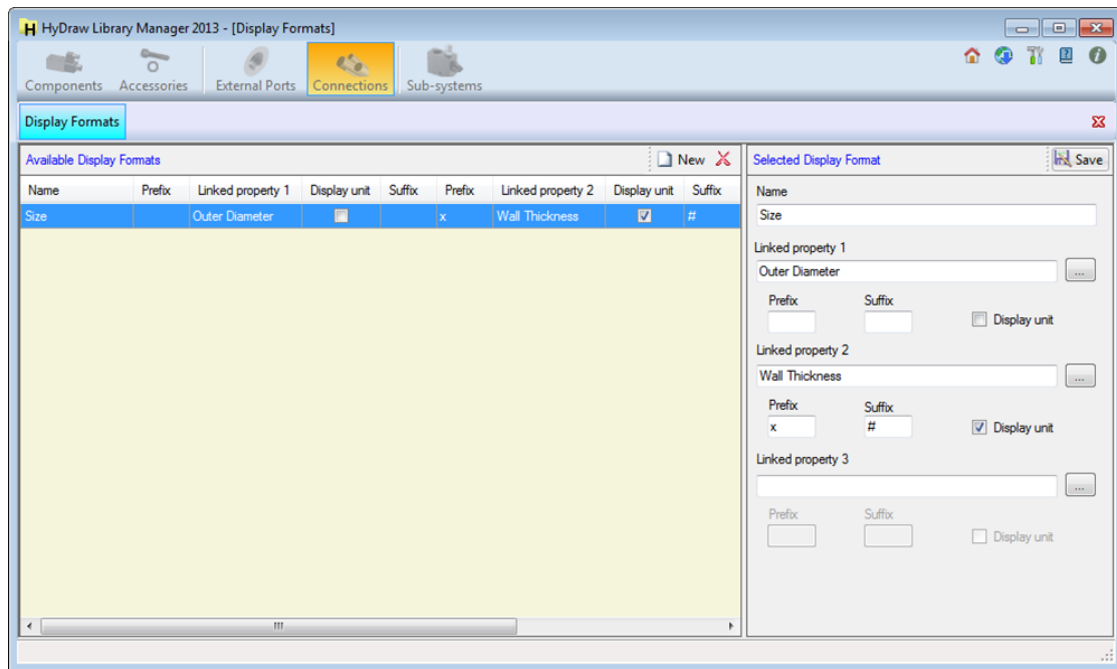
28.Connections - Display Formats

Define display formats to connection lines display properties with suffix and/or prefix.

Display compound properties using the display format.

Manage Display Formats has two sections:


- Display Formats
- Selected Display Format

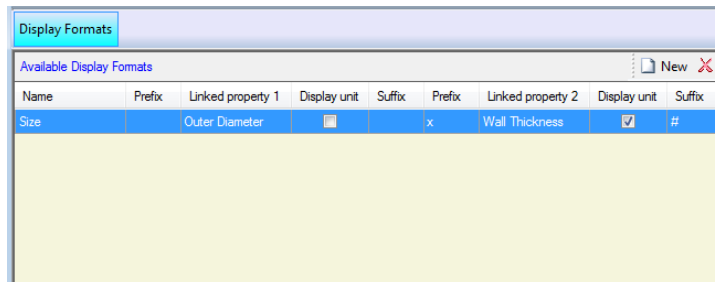


HyDraw Library Manager 2013 - (Connections - Display Formats)

Display Formats Section

The Display Formats section displays all formats and properties that are marked with the display in the drawing.

Create a **New** Display Format or  delete by selecting the icons on the caption bar.




Display Formats Section

Selected Display Format Section

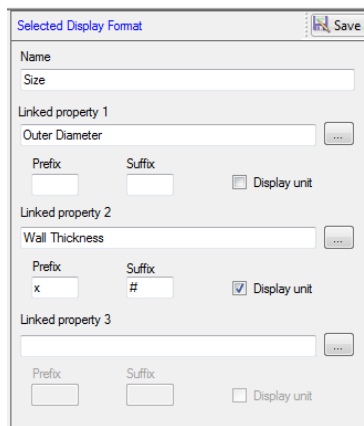
The Selected Display Formats section displays Name, Linked Property1, Linked Property 2, and Linked Property 3 and their Display Unit, Prefix and Suffix.

Define Display Property

1. Enter the name of the display format.
2. Click  browse for the linked property 1.

The Select Property dialog box displays.

3. Select **Model property/Design property**.



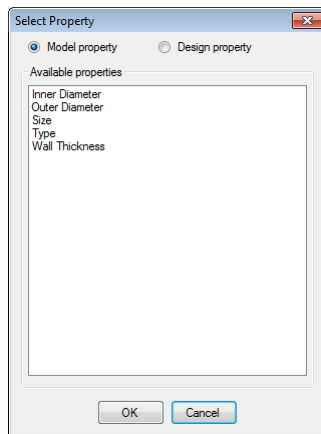
Selected Display Format Section

Note

Properties that are marked for *Display in drawing* are only visible.

The properties that are defined as Display in drawing do not appear automatically in Drawing; you need to add the Display Formats to the Connection Types.

- Select a property from the available properties.
 - Click **OK** to apply and exit.
 - Select **Display Unit**, if available.
 - Enter **Prefix**.
 - Enter **Suffix**.
4. Repeat the same procedure for Linked Property 2 and Linked Property 3.
5. Click **Save Display Format**.



Select Property

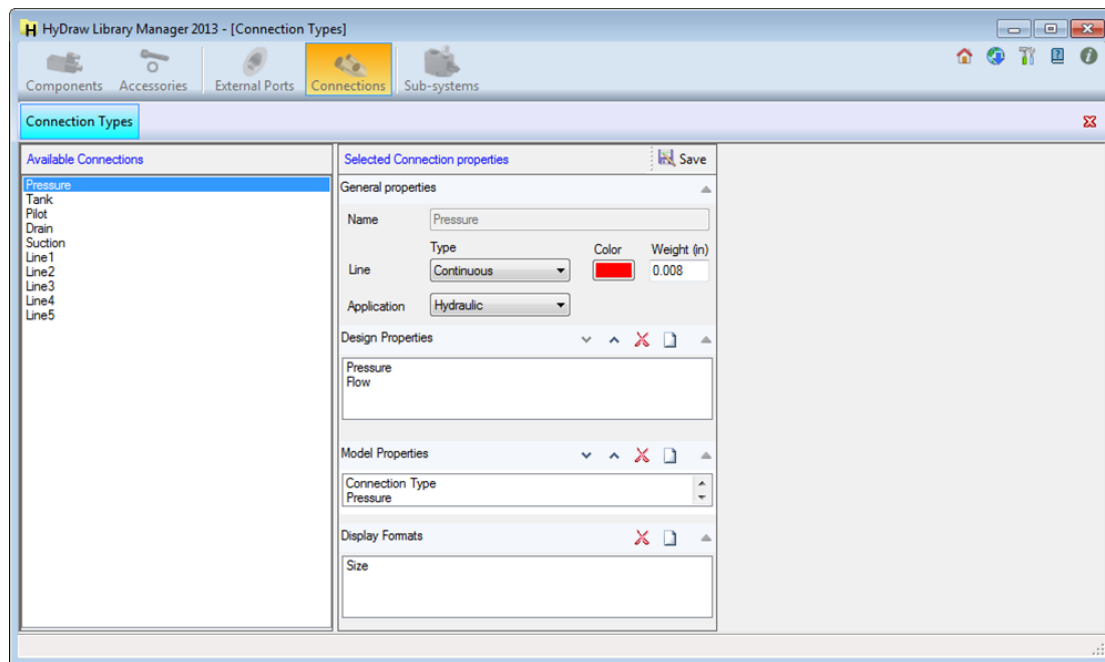
29.Connections - Connection Types

View available connections. Customize their color and line weight.

Delete and create new design properties, model properties and Display formats.

Connection Types window has two sections (column wise):

- Available Connections
- Selected Connection properties

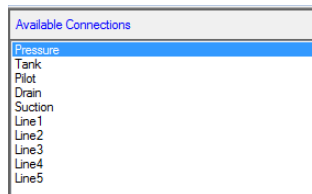


HyDraw Library Manager – (Connections - Connection Types)

Available Connections

The Available Connections section displays all available connections.

Select any connection to view its properties in the Connection properties section.

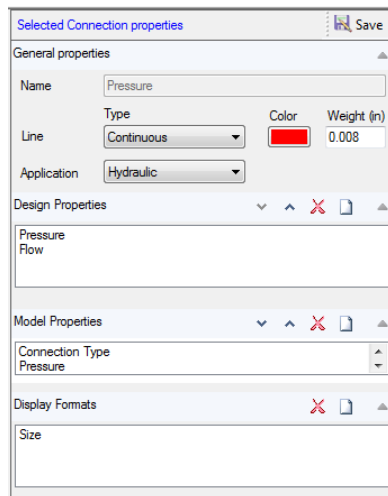


Available Connections Section

Selected Connection properties

The Selected Connections properties section displays:

1. General Properties
2. Design Properties
3. Model Properties
4. Display Formats



Selected Connection properties Section

General Properties

You can customize the application, type of line, its color, and its weight.

Click **Save** to save the changes.

Design Properties


The Design Properties section displays the available design properties. You can also add new design properties, similar to components.

Model Properties


The Model Properties section displays the available model properties. You can also add new model properties, similar to components.

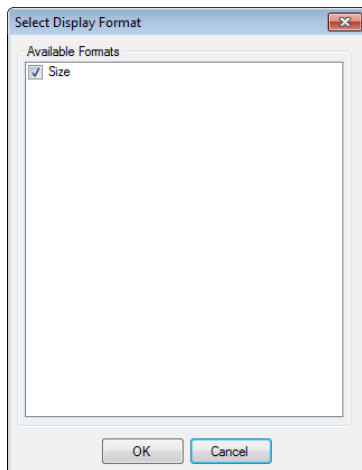
Display Formats

The Display Formats section displays the available Display formats.

1. Click  on the **Display Formats** caption bar.

The Select Display Format dialog box displays.

2. Select any format checkbox and click **OK** to display it in the Display formats section.
3. Click  to delete the selected format.



Select Display Format

Sub-systems

Manage sub-systems available in the library.

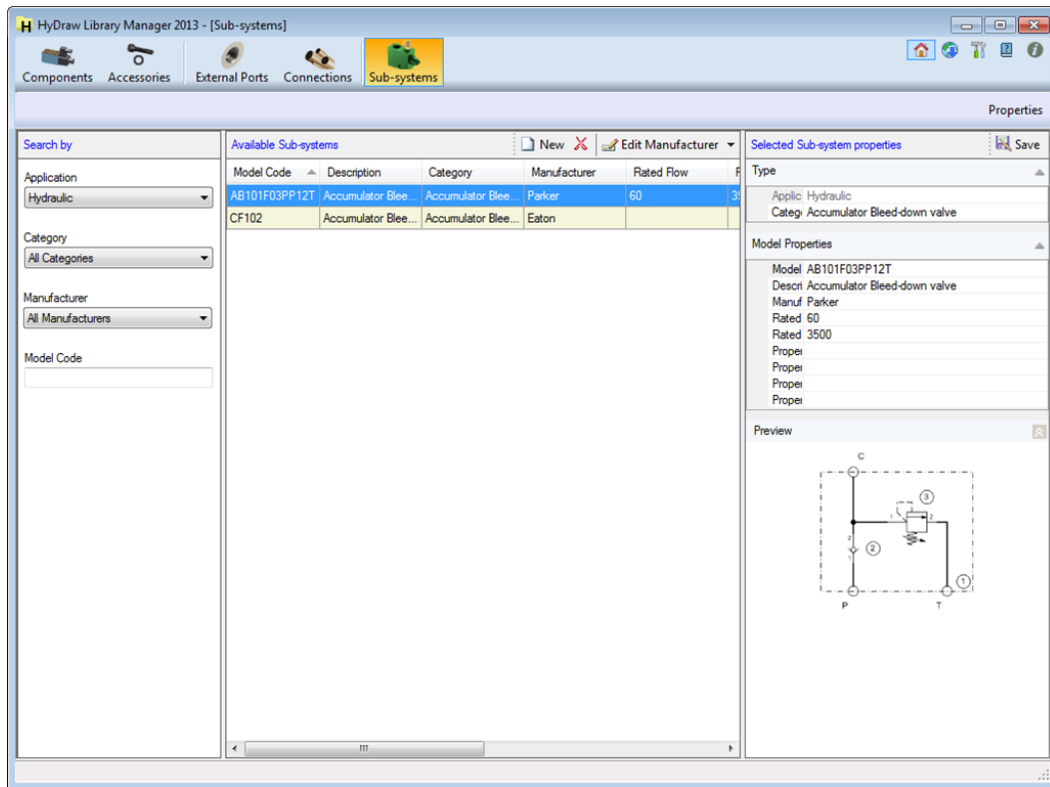
30	Sub-systems
31	Properties

30.Sub-systems

Manage the sub-systems and their properties available in the library.

Sub-systems window has three sections (column wise):

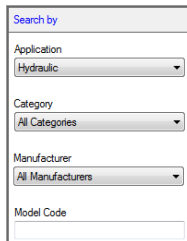
- Search by
- Available Sub-systems
- Selected Sub-system properties



HyDraw Library Manager – (Sub-system Library)

Search by

The Search by section enables you to search for a particular sub-system of a category for a manufacturer.



Search by

Application
Hydraulic

Category
All Categories


Manufacturer
All Manufacturers

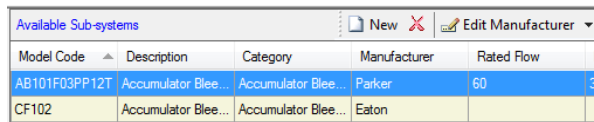
Model Code

Search by Section

Available Sub-systems

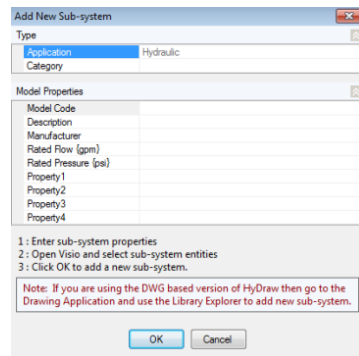
The Available Sub-systems section displays all the Sub-systems available for the selected category and manufacturer.

Create a **New** sub-system or  delete a sub-system by selecting the icons on the caption bar.



Model Code	Description	Category	Manufacturer	Rated Flow
AB101F03PP12T	Accumulator Blee...	Accumulator Blee...	Parker	60
CF102	Accumulator Blee...	Accumulator Blee...	Eaton	

Available Sub-systems Section



Add New Sub-system

Type
Application: Hydraulic
Category:

Model Properties

Model Code	
Description	
Manufacturer	
Rated Flow (gpm)	
Rated Pressure (psi)	
Property1	
Property2	
Property3	
Property4	

1: Enter sub-system properties
2: Open Visio and select sub-system entities
3: Click OK to add a new sub-system.

Note: If you are using the DWG based version of HyDraw then go to the Drawing Application and use the Library Explorer to add new sub-system.

OK Cancel

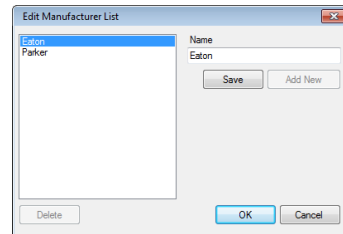
New Sub-systems

Edit Manufacturer List:

- Click **Edit Manufacturer** on the caption bar to edit the manufacturer list.

The Edit Manufacturer List dialog box displays.

- Enter the name of manufacturer and Click **Add New** to add a new manufacturer.
- Click **Save** after editing the name of the new or existing manufacturer.
- Select a manufacturer and click **Delete** to remove a manufacturer from the list.



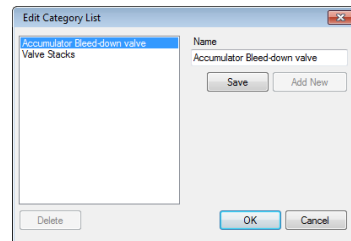
Edit Manufacturer List

Name
Eaton

Save Add New

Delete OK Cancel

Edit Manufacturer List



Edit Category List

Accumulator Bleed down valve
Valve Stacks

Name
Accumulator Bleed down valve

Save Add New

Delete OK Cancel

Edit Category List

Edit Category List:

1. Click **Edit Category** on the caption bar to edit the category list.

The Edit Category List dialog box displays.

2. Enter the category name and click **Add New** to add a new category
3. Click **Save** after editing the name of the new or existing Category.
4. Select a category and click **Delete** to remove a category from the list.

Note

HyDraw CAD users must go to Drawing application and use the Library Explorer to add new sub-system.

Selected Sub-system properties

Display the properties of the selected sub-system.

- Select a category.
- Edit Model Properties of the sub-system, as required.
- Click **Save** to save the sub-system data.

The image of the sub-system is displayed in the Preview pane.

Selected Sub-system properties

Save

Type

Applic

Hydraulic

Categ

Accumulator Bleed-down valve

Model Properties

Model

AB101F03PP12T

Descri

Accumulator Bleed-down valve

Manuf

Parker

Rated

60

Rated

3500

Proper

Proper

Proper

Proper

Preview

Selected Sub-system properties Section

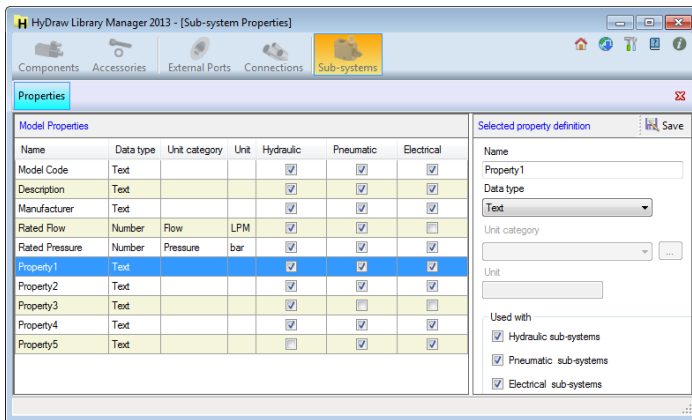
31. Sub-Systems – Properties

Properties

The Properties section displays all properties name, data type, unit category, Hydraulic, Pneumatic and Electrical.

The Sub-Systems has two sections (column wise):

- Model Properties
- Selected property definition.



Properties window

Selected property definition

The Selected property definition section enables you to edit the name of the design property, data type, unit category, and unit.

- Click **Save** to make the changes for the selected property.

Note

- You cannot change essential properties.

32. Migrating Library

Migrate your existing HyDraw Library to the new HyDraw Library format.

1. Run the HyDraw Library Manager 2013

Start

> All Programs

> VEST

> **HyDraw Library Manager 2013**

The Set library path displays.

2. Click the **Library Path** tab.
3. Click **Browse...** and select the previous version of the HyDraw Library Path for the Data, Symbol, and Sub-systems Library.

4. Click **OK**.

The Migrate Data Library dialog box displays.

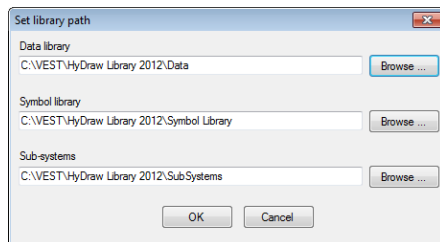
5. The **Create a backup before migrating** option is selected by default.

6. In the HyDraw Library backup path, click **Browse...** and select the alternate backup path, if required.

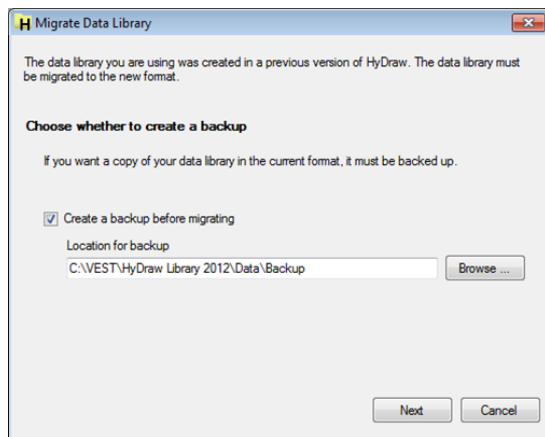
7. Click **Migrate** to migrate the library.

On successful migration, "Your data library migrated successfully" message box displays.

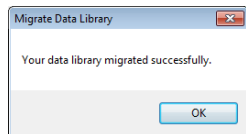
8. Click **OK** to exit.



Set library path



Migrate Data Library



Migrate Data Library – Success Message

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