

User Manual HyDraw[®] Library Manager 2013



HyDraw[®] Library Manager 2013



 VEST, Inc.
 3250 W, Big Beaver Road, Suite 440, Troy, MI 48084 USA

 Tel: +1 248 649 9550
 Email: sales@VESTusa.com
 Visit: www.VESTusa.com

VEST, Inc.

HyDraw[®] Library Manager 2013 Software Product License Agreement

Notice: Read this before installing the software.

Carefully read the terms and conditions of this agreement before opening the product package. Opening the package indicates your acceptance of these terms and conditions. If you do not agree with the terms and conditions of this Agreement, promptly return the package unopened to the place where you obtained it.

Definitions

The Software Product is licensed (not sold) to you. The Software product includes all copies of the Software Product and its related supporting materials.

License

VEST, Inc. (we, our, us) grants you a personal, nontransferable, and non-exclusive license to use the Software Product in the specified quantity only.

You may not:

- 1. distribute, sublicense or copy any portion of the Licensed Software product:
- 2. modify or prepare derivative works from the Licensed Software Product:
- 3. transmit the Licensed Software product electronically by any means: or
- Use the Licensed Software product in multiple computer for multiple user arrangements unless that use is covered by individual license for each computer or user.

You agree that the Licensed Software product belongs to us and you agree to keep confidential and use your best efforts to prevent and protect the contents of the Licensed Software Product from unauthorized disclosure.

Limited

 For 90 days from the date of shipment, we warrant that the media (for example, CD) on which the Licensed Software Product is contained will be free from defects in materials and workmanship. The warranty does not cover damage caused by viruses, improper use or neglect.

We do not warrant the contents of the Licensed Software Product (it is furnished "AS IS" and without warranty as to the performance or results you may obtain by using the Licensed Software Product) or that it will be error free.

You assume the entire risk as to the results and performance of the Licensed Software Product.

To get media warranty service during the 90-day warranty period, you may return the Product (postage paid) with a description of the problem to the place where you obtained it. The defective media on which the Licensed Software Product is contained will be replaced at no additional charge to you.

 If you do not receive media that is free from defects in materials and workmanship during the 90-day warranty period, you will receive a refund or credit to your account for the amount you paid for the Licensed Software Product returned.

Disclaimer of Warranty

YOU UNDERSTAND AND AGREE AS FOLLOWS:

- Warranties in this agreement replace all other warranties, express or implied, including any warranties of merchantability or fitness for a particular purpose. We disclaim and exclude all other warranties.
- We will not be liable for any loss or damage caused by delay in furnishing a Licensed Software Product or any other performance under this Agreement.
- 3. Our entire liability and your exclusive remedies for our liability of any kind (including liability for negligence except liability for personal injury caused solely by our negligence) for the Licensed Software Product covered by the Agreement and all other performance or non-performance by us under or related to this Agreement are limited to the remedies specified by this Agreement.
- In no event will our liability of any kind include any special incidental or consequential damages, even if we have knowledge of the potential loss or damage.
- Special notice to consumers: some states do not allow the exclusion of implied warranties so the above exclusion may not apply to you. The warranty gives you special legal rights, and you may also have other rights, which vary from state to state.

Termination

This Agreement is effective until terminated. You may terminate it any time by destroying the Licensed Software Product. It will also terminate if you do not comply with any term or condition of this Agreement. You agree upon termination to destroy the Licensed Software Product.

General

You are responsible for installation, management and operation of the Licensed Software Product.

Contents

1.	Introduction1
2.	Installation2
3.	HyDraw Library Manager Menu bar
4.	Update Symbol Library4
5.	Options6
Com	ponents 11
6.	Components - Symbol View12
7.	Components - Model Data View
8.	Documents
9.	CAD Files
10.	Components - Model Properties
11.	Components - Design Properties45
12.	Components - Display Formats
13.	Components - Component Types
14.	Manage List 58
Acce	essories
15.	Accessories
16.	Documents
17.	CAD Files

18.

19. 20.

Exte	ernal Ports	.72
21.	External Ports	. 73
22.	External Ports - Model Properties	. 76
23.	External Ports - Design Properties	. 78
24.	External Ports - Display Formats	. 80
Con	nections	82
25.	Connections	. 83
26.	Connections - Model Properties	. 86
27.	Connections - Design Properties	. 88
28.	Connections - Display Formats	. 90
29.	Connections - Connection Types	. 93
Sub-	-systems	96
30.	Sub-systems	. 97

- 31. Sub-Systems Properties 101

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.

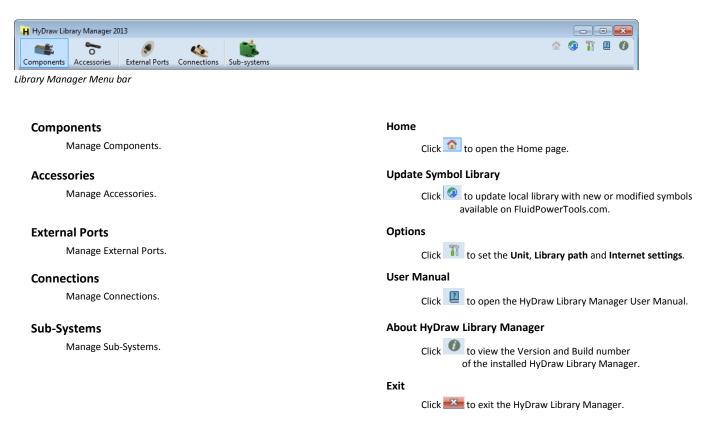
2. View Read Me from the Setup, if required.

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

iield(R) Wizard will allow you to remo	
iger 2013. To continue, click Next.	we HyDraw
*	

Installation Wizard

3. HyDraw Library Manager Menu bar



4. Update Symbol Library

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

 Click Olice 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:



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

H HyDraw Update Symbol Libran O Visio Dwg Available Symbols Select All Add Selected Symbols Compare. Available Updates Library Hydraulic Symbols for CAD600 Library My Last Update: 11/11/2013 Check for Updates New Symbols Modified Symbols Generational Control Valve 🗄 🛅 Stackable Symbol - Flipped E C Stackable Symbol in Con-Stackable Symbol Manually Operated Mechanically Operated Solenoid Operated 🖮 🧰 D03 ,D05 / ISO 4401 - 03,05 Size Double Solenoid 🚞 Sorina C C No Spring C Single Solenoid Poppet Valve Solenoid Controlled Pilot Operated Hydraulic Pilot Operated Add All Symbols

HyDraw Update Symbol Library – New Symbols

•

٠

٠

.

4. Click Check for Updates.

V500 Library

V415 Library

V415.1 Library

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.

- 2. 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

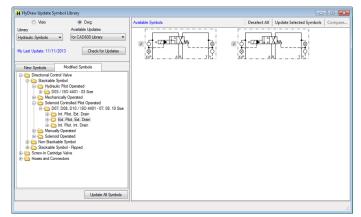
Modified Symbols Update

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.

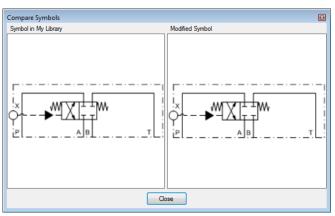
1. Click the **Add All Symbols** button to download all the new symbols from the FluidPowerTool.com website and update the local library.

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

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



HyDraw Update Symbol Library – Modified Symbols



Compare Symbols

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.

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.

Options			x
Units Library Path Interne	t Settings		
Current units Caution:			
Imperial Data already entered in the library will not be automatical			ly
Metric	converted on changing the units.		
Advanced units			
Unit category	*	Units	<u> </u>
Acceleration		in/sec/sec	
Angle		٥	
Area		in^2	E
Current		amp	
Density		lb/in^3	
Energy		BTU	
Flow		gpm	
Force N			
Frequency Hz			
Length		in	
Mass & Weight		lb	
Dawar		шо	-
		Edit Units	
		OK Cancel	

HyDraw Library Manager Options

Units

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

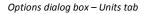
If you change the unit system in the library, the data, which is already available in the drawing and library will not be converted automatically.

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 💽			
Units Library Path Interr	net Settings		
Current units Caution: (a) Imperial Data already entered in the library will not be automatically converted on changing the units.			
Advanced units		Units	*
Acceleration		in/sec/sec	1
Angle		•	
Area		in^2	=
Current		amp	
Density		lb/in^3	
Energy		BTU	
Flow		gpm	
Force		N	
Frequency		Hz	
Length		in	
Mass & Weight		lb	
Dowor		UD	*
		Edit Units	
)K Cancel	



Unit category Acceleration	Category name	
Angle Angle Area Current Density Energy	Acceleration Imperial unit in/sec/sec	Metric unit mm/sec/sec -
Flow	Unit Name	Precision
Frequency	cm/sec/sec	4
Length Mass & Weight Power Pressure	ft/sec/sec	4
	m/sec/sec	4
Speed	mm/sec/sec	4
Temperature Time	in/sec/sec	4
Torque Viscosity Volume Volumetric Displacement	Save OK Cancel	As New Save

Define Units dialog box

Library Path

- 1. Click the Library Path tab.
- 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.

×
Browse
Browse
Browse

Set Library Path

Internet Settings

To access FluidPowerTool.com from HyDraw Library Manager, the Internet settings of the HyDraw Library Manger 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**.

Options			
Units Library Path Internet Settings			
Configuration			
Automatically detect settings			
Use proxy server			
Address	Port		
Enable authentication			
User name	Password		

Internet Settings – Automatically detect settings

VEST, Inc.

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.

Options		x
Units Library Path Internet Settings		
Configuration		
Automatically detect settings		
Use proxy server		
Address	Port	
192.168.4.1	80	
Enable authentication		
User name	Password	
VESTAdmin		
		_

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.

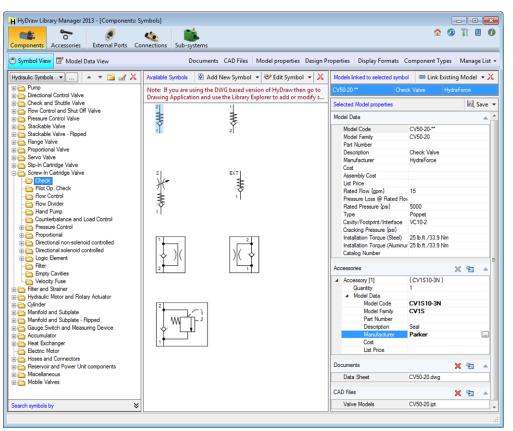
6	Symbol View
7	Model Data View
8	Documents
9	CAD Files
10	Model Properties
11	Design Properties
12	Display Formats
13	Component Types
14	Manage Lists

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.

Hydraulic Symbols 🔻 🔺 🔻 🕍 🏑 🔪	٢ (
⊞. 🛅 Pump	
🗄 🫅 Directional Control Valve	
🚊 🛅 Stackable Symbol	
🛓 🛅 Solenoid Operated	
🖨 🛅 D03 / ISO 4401 - 03 Size	
🖨 🗁 Single Solenoid	
- 📇 End To End	
End To Center	
🛅 Shift To Center	
🛅 End To End - LH	
🛅 End To Center - LH	
Shift To Center - LH	_
⊕ 🛅 Double Solenoid	Н
Solenoid Controlled Pilot Operated	
🕀 🫅 Hydraulic Pilot Operated	
🗈 🧰 Manually Operated	
Comparison Mechanically Operated	
🗈 🧰 Air Pilot Operated	
Stackable Symbol - Flipped	
Non-Stackable Symbol	
Check and Shuttle Valve	
Flow Control and Shut Off Valve	
⊕	
E Calchable Valve - Flipped	
Groportional Valve	
Servo Valve	
Gille Slip-In Cartridge Valve	
Grew-In Cartridge Valve	
Hydraulic Motor and Rotary Actuator	Ŧ
Library tree view	

Add New Folder

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

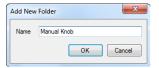
Click 📕 button on the caption bar.

The Add New Folder dialog box displays.

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

The new folder is created.

	Add New Symbol
	Build New Symbol
	Configure & Add DC Valve Symbol
	Edit Symbol
	Edit Component Type
	Add Visio Symbol
	Delete Symbol
Lib	rary context menu



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.

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			
Libraries	Library name		
Hydraulic Symbols Pneumatic Symbols	My Symbol Library		
Electrical Symbols	Parent library		
	None		
	Rename Add New		
Delete	Close		

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.

The Manage Symbol Library dialog box displays.

- 2. Enter Library name.
- 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	X
Libraries	Library name
Hydraulic Symbols	My Hydraulic Library
Pneumatic Symbols Electrical Symbols	Parent library
My Symbol Library	Hydraulic Symbols 🔹
	Rename Add New
Delete	Close

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

- 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.

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

The Import Symbol from Parent Library dialog box displays.

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

The available symbols are listed in the middle pane.

4. Click Select All to select all the symbols.

Or

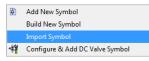
Click the **symbol** to select or press **Ctrl + symbol** to select more symbols.

5. Click the Add button.

The selected symbols are listed in the right pane.

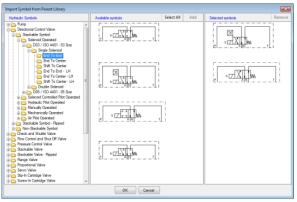
- Review and remove the symbols that are not required by clicking the **Remove** button.
- 7. Click OK to import the symbols.

Add Ne	v Folder 🛛 🐱
Name	Direction Contro Valvel
	OK Cancel



Add New Folder dialog box



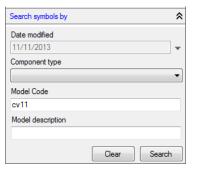


Import Symbols from Parent Library



Search symbols by

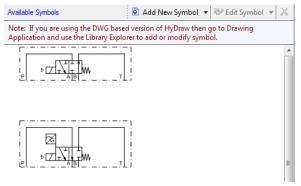
Search symbols by enables you to search symbols, per parameters Date modified, Component type, Model code and Model description.



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

- 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		8
Symbol properties		
Application		
Hydraulic		-
Component type		
Accumulator		-
Is stackable symbol		
Select		
Symbol		
	OK Cancel	

Add New Symbol dialog box

DC Valve Symbol Configurator

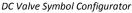
Configure DC Valve from DC Valve Configurator and Add to the Library. (Functionality available only in the Visio based version of HyDraw)

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.
- Click Add to Library to add the DC valve from the preview pane to the library.

	E
22	
Symbol preview	
	Show Preview



Edit Symbol

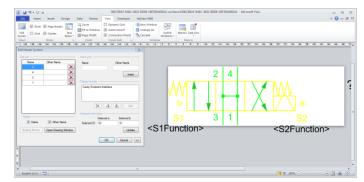
1. Select the symbol in the Drawing section to edit it.

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	×
Application	
Hydraulic	-
Component type	
Direction Control Valve - Sol. Operated - Surface mounted	-
☑ Is stackable symbol	
OK Cancel	

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

:V5	50-20-** Cheo	ck Valve 🛛 H	lydra F	orce	
Sel	ected Model properties				Save
Mo	del Data			4	
	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 Flo	v.			
	Rated Pressure {psi}	5000			
	Туре	Poppet			
	Cavity/Footprint/Interface	VC10-2			
	Cracking Pressure {psi}				
	Installation Torque (Steel)	25 lb.ft./33.9 Nr	n		
	Installation Torque (Aluminu	r 25 lb.ft./33.9 Nr	n		
	Catalog Number				
Ace	cessories		×	-	
۵	Accessory [1]	{CV1S10-3N }			
	Quantity	1			
	Model Data				
	Model Code	CV1S10-3N			
	Model Family	CV1S			
	Part Number				
	Description	Seal			
	Manufacturer	Parker			
	Cost				
	List Price				
)0	cuments		×	1	
	Data Sheet	CV50-20.dwg			
:A	D Files		×	1	
-	Valve Models	CV50-20.ipt	_		_

Model Properties Section

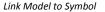
Link Models to Symbol

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			×
Search by				
Manufacturer	All Manufacturers -	Model Code		
Available mod	els			
Model Code	Model Family	Description	Manufacturer	
CV1-10-*-P-**	CV1-10	Check Valve	Eaton	
Select models	and click OK to link to the selected	symbol.	Add Nev	
	ок	Cancel		



Туре		\sim
Application	Hydraulic	
Component Type	Check Valve - Screw-in Cartridge	
Model Data		~
Model Code	CV1-10-*-P-**	
Model Family	CV1-10	
Part Number		
Description	Check Valve	
Manufacturer	Eaton	
Cost		
Assembly Cost		
List Price		
Rated Flow {gpm}	12	
Pressure Loss @ Rated Flow {psi}		
Rated Pressure (psi)	3000	
Туре	Poppet	
Cavity/Footprint/Interface	C-10-2	
Cracking Pressure (psi)		
Installation Torque (Steel)	50-55 lb.ft./68-70 Nm	
Installation Torque (Aluminum)	35-40 lb.ft./47-54 Nm	
Catalog Number	V-VLOV-MC001-D-4 E4	
Accessories	X 🕤	~
Accessory [1]	{CV1S10-3N }	
Documents	× 🕤	×
CAD Files	× 9	×
Enter data & click OK to create and sav	re a new model.	

Add New Model dialog box

Accessories

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

Link Accessory

Component type		Manufactu		del Code
All Component Typ	es	▼ All Manufa	acturers 🔻	
Available accessorie	BS			
Model Code		odel Family	Description	Manufacturer
789	CA		1/2" Solenoid Tubes	BSF
853496-012	85	34	DS Coil , 1/2", 5/8", 1" I	Parker
CAS010A	CA		5/8" Solenoid Tubes	Parker
S10LCD048	S1	0	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	SK	:10	Seal Kit	Parker
SK10-4V	SK	:10	Seal Kit	Parker
Select model and cl	ick OK to lin	k to the selected o	component.	Add New

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.

Add New Accessory		×
Туре		
Application Component Type	Hydraulic	
Model Data		
Documents	×	E 🔺
CAD Files	×	2 ▲
Enter data & click OK to create and save a new model.		
OK 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.

Select Component Type	X
Available Component Types	
Accumulator Bladder Kit Accumulator Charging Kit Amplifier Card and Holder Bot Kit Buib Well Coil & Electronics Connector Filter Element New Component Type 10 Seal Kit Tie Rod and Nut Kit	
	Add New
OK Cancel	

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				E
General properties				
Name				
Component Group				_
Accumulator Bladder Kit				•
Model Properties	•	~ ^	Х	
Model Family Description Manufacturer Model Code				
		_		
ОК	Cancel			

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	<u> </u>
Available properties	
Area Ratio	Differential Percent
Assembly Cost	Displacement
Beta Ratio	Displacement, Cover End
Bolt Shoulder Height	Displacement, Middle Section
Bore	Displacement, Shaft End
Bypass Pressure	Feet
Catalog Number	Filter Mesh Size
Cavity/Footprint/Interface	Flow Direction
Closing Pressure	Flow Ratio
Compensator Setting	Flow Setting
Compensator Setting #1	Flow, Cover End
Compensator Setting #2	Flow, Middle Section
Compensator Setting #3	Flow, Shaft End
Compensator Spring Pressure	Frame Size
Cost	Frequency
Cracking Pressure	Frequency Response
Current Max	Function
Cushions	Height
Cut-in Pressure	Hub Bore Size
Cut-out Pressure	Hub Keyway Size
Cut-out Temperature	Hub1 Bore Size
Cylinder Mount	Hub1 Keyway Size
Decompression Ratio	Hub2 Bore Size
<	4
	Add New
ОК	Cancel

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						×
Search by Document category			File Name			
All Categories		-				
Available Documents						
File Name	Category	Root	t Folder		Subfolder	
4WE6.PDF	Data Sheet	C:\U	sers\LK\Desktop\TEST_SAMPLES	5 i	amb4001	
Select document and click OK	to link to the se	ected	component			
Select document and Click UK	to link to the se	sected	component.		Add Nev	N
		ОК	Cancel			

Link Documents

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

Document on LAN		Document on web	
		Ŭ	
Root Folder			
E:\VEST			Browse
Select Folder		Select documents	
Files			
⊛ 🚞 HyDraw Library 2012			
		List files in subfolders	Select All
		Document category	
			▼
	OK	Cancel	

Add New Document

CAD Files

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

Link CAD File				
Search by				
CAD file category			File Name	
All Categories		-		
Available CAD file:	5			Selected CAD file preview
File Name	Category	Root Folder	Subfolder	
CV50-20.ipt	Valve Models	E:\VEST	Files	
Select file and clic	k OK to link to the select	ed component.	Add New	
			OK Cancel	

Link CAD File

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

CAD file on LAN	CAD file on web	
Root Folder		
E:\VEST	Browse	
Select Folder	Select files	
È Res α È HyΩraw Lbray 2012		
	List files in subfolders Select CAD file category	_
۱ ۲	OK Cancel	

Add New CAD File – From LAN

Add New CAD File		—
CAD file on LAN	 CAD file on web 	
Address		
CAD file category	•	Add CAD File
	OK Cancel	

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.

reate New Model			×
••			
Application	Hydraulic		
Component Type	Check Valv	e - Scre	
Model Data			
Model Code			1
Model Family			
Part Number			
Description			
Manufacturer			
Cost			
Assembly Cost			
List Price			
Rated Flow {gpm}			
Pressure Loss @ Rated Flow {psi}			E
Rated Pressure {psi}			11
Туре			
Cavity/Footprint/Interface			
Cracking Pressure {psi}			
Installation Torque (Steel)			
Installation Torque (Aluminum)			
Catalog Number			
Accessories	× 19		
Documents	XE		
CAD Files	× 9	1 4	-
inter 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

🔊 Symbol View 📝 Model 🛛	Data Viev	/	Doc	uments CAD Files	Model properties Design Properties	Display Formats Comp	oonent Types Manage L
Search by		Available Models			Import 🗋 New 👗	Selected Model properties	🔣 Sav
Application		Model Code 🔺	Model Family	Description	Manufacturer	Application	Hydraulic
Hydraulic	•	*-SPZB030E06M	SPZ	Check Valve	Parker	Component Type	Check Valve - Screw-in Car
		-SPZB030E10M	SPZ	Check Valve	Parker	Model Data	4
Component type		04.31.20.00.56-*	04.31.20	Check Valve	Bosch Rexroth	Model Code	*-SPZB030E06M
All Component Types	•	04.31.23.00.85-*	04.31.23	Check Valve	Bosch Rexroth	Model Family	SPZ
Manufacturer		CV08-20-**	CV08-20	Check Valve	HvdraForce	Part Number	
All Manufacturers		CV08-NP-**	CV08-NP	Check Valve	Sauer-Danfoss	Description Manufacturer	Check Valve Parker
Air Maharactarere		CV10-20-**	CV10-20	Check Valve	HydraForce	Cost	- dittor
Model Code		CV11-10-*-P-**	CV10 20	Check Valve	Eaton	Assembly Cost	
		CV12-20-**	CV11-10 CV12-20	Check Valve	HvdraForce	List Price Rated Row (gpm)	8.8
		CV50-20-**	CV12-20 CV50-20	Check Valve	HydraForce	Pressure Loss @ Rated	
		CV50-20-	CV50-20	Check valve	nydrarorce	Rated Pressure (psi)	5075
						Type Cavity/Footprint/Interfac	
						Cracking Pressure (psi)	
						Installation Torque (Stee	
						Installation Torque (Alum Catalog Number	
						Catalog Number	HY11-3500/UK
						Symbols linked to selected m	nodel 💠 📫 📾
							i
							2 - MV\$
							₹ T
							1

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.

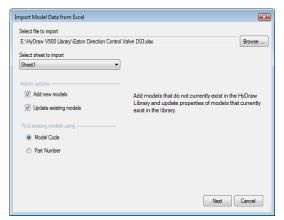
7. Select the **My data has headers** option, if there are headers for columns in the Excel sheet.

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

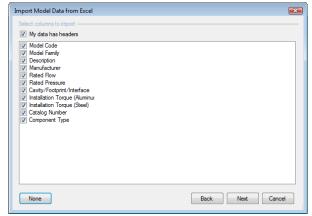
8. Click Next to continue.

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.

My data contains component types Column name Component Type	If you don't have component type data in the select Excel file then go to the next page to specify the component type for the models.	ted
Column Name	Equivalent HyDraw Property	Ŀ
Model Code	Model Code	
Model Family	Model Family	
Description	Description	
Manufacturer	Manufacturer	
Rated Flow	Rated Row	
Rated Pressure	Rated Pressure	
Cavity/Footprint/Interface	Cavity/Footprint/Interface	
Installation Torque (Aluminum)	Installation Torque (Aluminum)	
Installation Torque (Steel)	Installation Torque (Steel)	
	Map Proper	

Import Model Data from Excel - Map Properties

Select Equivalent Property	×
R	
Rated Pressure Rated Pressure Rated Pressure Cover End Rated Pressure Middle Section Rated Pressure Shaft End Rated Pressure Tube Rated Speed Reset Pressure Rod Diameter Rod Diameter #2 Rod End Rod End Rod End #2	*
Rotation Seal Type Shaft Dameter Shaft Ingth Shaft Type Special Feature Special Max Spine Pitch	4 III
OK Cancel	

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.

Click Assign Component Type. 2.

The Select Component Type dialog box displays.

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

Importing Model Data

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

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.

vailable	model data				
Status	Component Type	Model Code	Model Family	Description	Manufactur
		DG3V-3-0-7-*-600	DG3V-3	Direction Control	Eaton
		DG3V-3-0-7-*-601	DG3V-3	Direction Control	Eaton
		DG3V-3-0-7-*-602	DG3V-3	Direction Control	Eaton
		DG3V-3-0-7-*-603	DG3V-3	Direction Control	Eaton
			•		
			-		
	III		·	Assign Compc	

Import Model Data from Excel – Available Model Data

			del bata nom Excel				
elect Component Type	×	Available	model data				
		Status	Component Type	Model Code	Model Family	Description	Manufactu
Virection Control Valve - Sol. Operated - Screw-in Cartridge			Direction Control Valve - Sol	DG3V-3-0-7-*-600	DG3V-3	Direction Control	Eaton
Direction Control Valve - Air Pilot Operated - Screw-in Cartridge Direction Control Valve - Air Pilot Operated - Surface mounted	*		Direction Control Valve - Sol	DG3V-3-0-7-*-601	DG3V-3	Direction Control	Eaton
irection Control Valve - Hyd. Pilot Operated - Line Mounted irection Control Valve - Hyd. Pilot Operated - Screw-in Cartridge							
rection Control Valve - Hyd. Plot Operated - Surface mounted rection Control Valve - Manually Operated - Line Mounted							
Vection Control Valve - Manually Operated - Screw-in Catridge Vection Control Valve - Manually Operated - Surface mounted Vection Control Valve - Mechanically Operated - Surface mounted Vection Control Valve - Mechanically Operated - Surface mounted Vection Control Valve - Mechanically Operated - Surface mounted Vection Control Valve - Proportional - Line Mounted Vection Control Valve - Proportional - Surface mounted Vection Control Valve - Sol Operated Flor Operated - Surface Vection Control Valve - Sol Operated - Line Mounted Vection Control Valve - Sol Operated - Line Mounted Vection Control Valve - Sol Operated - Surface mou	-	<	III		iew Log Bac	Assign Comp ck Import	onent Type Cancel

Import Model Data from Excel



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.

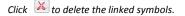
Link Symbol

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

The Linked Symbol dialog box displays.

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

to traverse through the linked Click symbols.



Selected Model pro	operties	😹 Save 🔻					
Туре							
	Hydraulic Check Valve - Scree	w-in Cartrid <u>c</u>					
Model Data Model Code Model Family	*-SPZB030E06M SPZ						
Part Number Description Manufacturer	Check Valve		3				
Cost Assembly Cost List Price							
Rated Flow {g Pressure Loss			Linked Symbol Selected Library Hydraulic Symbols	Available Symbols	Add	Selected symbols	Rem
Rated Pressum Type Cavity/Footprir			Screw-In Catridge Valve		2 H WO	a WV	
Cracking Press Installation Tor		-		EXT ≱	1		
Symbols linked to s	elected mode 🛛 🖛		_				
	2 WW						
				ок	Cancel		

Selected Model propertiesSection Linked Symbol dialog box

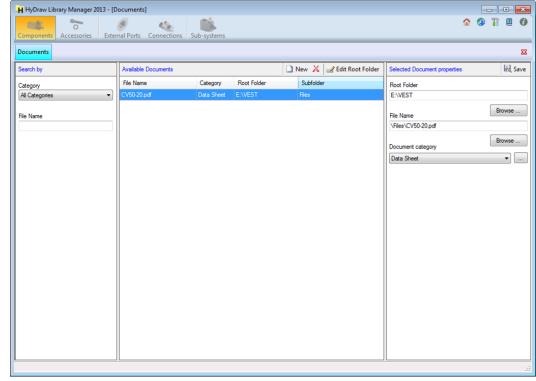
8. Documents

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 🔻	1
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.

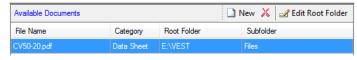
Selected Document Properties Section

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	🔣 Save
Root Folder	
E:\VEST	
File Name	Browse
\Files\CV50-20.pdf	
Document category	Browse
Data Sheet	▼

Selected Document properties Section



Available Documents Section

9. CAD Files

Manipulate CAD files in the library.

Components \rightarrow CAD Files

CAD Files window has three sections (column wise):

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

Components Accessories Exte	mal Ports Connections S	ub-systems			â 3 îi 🛛
CAD Files					
Search by	Available CAD files			New 👗 📝 Edit Root Fo	older Selected CAD file properties 🔣 Sa
Category	File Name	Category	Root Folder	Subfolder	Root Folder
All Categories 🔹	4WE6.ipt	Valve Models	E:\k\MDTools Demo	Inventor	E:Vk\MDTools Demo Part Lib
	Solenoid Coil.0004.ipt	Valve Models	E:\k\MDTools Demo	OldVersions	Browse
File Name	SAE6.0009.ipt	Valve Models	E:\k\MDTools Demo	OldVersions	File Name
	SAE2.0017.ipt	Valve Models	E:\k\MDTools Demo	OldVersions	\OldVersions\CV1-10.ipt
	RAH101.0004.ipt	Valve Models	E:\k\MDTools Demo	OldVersions	Browse
	RAH101.0003.ipt	Valve Models	E:\k\MDTools Demo	OldVersions	CAD file category
	LockNut.0004.ipt	Valve Models	E:\k\MDTools Demo	OldVersions	Valve Models
	Expander Plug.0002.ipt	Valve Models	E:\k\MDTools Demo	OldVersions	
	DSH104 Base.0004.ipt	Valve Models	E:\k\MDTools Demo	OldVersions	
	DSH101 Base.0004.ipt	Valve Models	E:\k\MDTools Demo	OldVersions	
	D1VW-C-AC-P.0006.ipt	Valve Models	E:\k\MDTools Demo	OldVersions	
	CV50-10.ipt	Valve Models	E:\k\MDTools Demo	OldVersions	
	CV1-10.ipt	Valve Models	E:\k\MDTools Demo	OldVersions	
	CV1-10 - Copy.ipt	Valve Models	E:\k\MDTools Demo	OldVersions	
	CV1-10 - Copy - Copy - Cop	Valve Models	E:\k\MDTools Demo	OldVersions	
	CBB LHN.0003.ipt	Valve Models	E:\k\MDTools Demo	OldVersions	Preview
	BD15.0001.ipt	Valve Models	E:\k\MDTools Demo	OldVersions	
	6 ORB Plug.0005.ipt		E:\k\MDTools Demo		
	1.ipt	Valve Models	E:\k\MDTools Demo	OldVersions	

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 \bowtie delete a CAD file by selecting the icons on the caption bar.

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

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.

Available CAD files		🗋 New 👗 🎿	PEdit Root Folder
File Name	Category	Root Folder	Subfolder
4WE6.ipt	Valve Models	E:\lk\MDTools Demo	Inventor
Solenoid Coil.0004.ipt	Valve Models	E:\lk\MDTools Demo	OldVersions
SAE6.0009.ipt	Valve Models	E:\k\MDTools Demo	OldVersions
SAE2.0017.ipt	Valve Models	E:\lk\MDTools Demo	OldVersions
RAH101.0004.ipt	Valve Models	E:\k\MDTools Demo	OldVersions
RAH101.0003.ipt	Valve Models	E:\k\MDTools Demo	OldVersions
LockNut.0004.ipt	Valve Models	E:\k\MDTools Demo	OldVersions

Available CAD files Section

Selected CAD file properties	🔣 Save
Root Folder	
E:Nk\MDTools Demo Part Lib	
File Name	Browse
\Inventor\4WE6.ipt	
CAD file category	Browse
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

Components Accessories External Po	orts Connections	Sub-systems				<u>^</u> 🧿 🏋 🗉 (
Model properties						٤
Model properties					🗋 New 👗	Selected property definition
Name	Data type	Unit category	Unit	Display in drawing	<u>^</u>	Name
Area Ratio	Text					Cavity/Footprint/Interface
Assembly Cost	Currency				E	Data type
Beta Ratio	Text					Text •
Bolt Shoulder Height	Number	Length	in			Unit category
Bore	Number	Length	in			· · · · · · · · · · · · · · · · · · ·
Bypass Pressure	Number	Pressure	psi			Unit
Catalog Number	Text					
Cavity/Footprint/Interface	Text			V		Display in drawing
Closing Pressure	Number	Pressure	psi			Assign to Component Type
Compensator Setting	Number	Pressure	psi			Assign to component Type
Compensator Setting #1	Number	Pressure	psi	V		
Compensator Setting #2	Number	Pressure	psi			
Compensator Setting #3	Number	Pressure	psi			
Compensator Spring Pressure	Number	Pressure	psi			
Cost	Currency					
Cracking Pressure	Number	Pressure	psi	V		
Current Max	Number	Current	amp			
Cushions	Text					
Cut-in Pressure	Number	Pressure	psi			
Cut-out Pressure	Number	Pressure	psi			
Cut-out Temperature	Text					
Cylinder Mount	Text					
Decompression Ratio	Text					
Description	Text					

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

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.
- 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	🔣 Save
Name	
Closing Pressure	
Data type	
Number	•
Unit category	
Pressure	•
Unit	
psi	
Display in drawing	
Assian to Compon	ent 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.

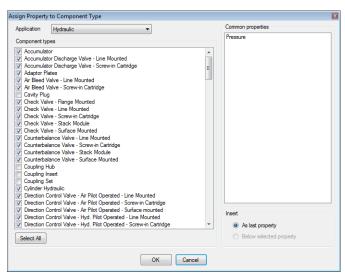
- 2. Select Application.
- 3. Select the available Component types to include the property.

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

Components Accessories	External I	Ports Connect	ions Sub-s	stems					û 🔮 🏋 🛛
Design Properties									
Design Properties							🗋 New 👗	Selected property definition	N
Name	Data type	Unit category	Unit	Display in drawing	Linked model property	Search operator	Search Tolerance (%)	Name	Displacement, Middle Section
Cleanliness Rating	Text				ISO Cleaniness Rating			Data type	Number
Displacement	Number	Volumetric Di	Cu. in/Rev		Displacement	>=	25		
Displacement, Cover End	Number	Volumetric Di	Cu. in/Rev		Displacement, Cover End	>=	25	Unit category	Volumetric Displacement 💌
								Unit	Cu. in/Rev
Displacement, Shaft End	Number	Volumetric Di	Cu. in/Rev		Displacement, Shaft End	>=	25	Linked model property	Displacement, Middle Section
Row	Number	Row	gpm		Rated Row	>=	25	Search operator)
Row, Cover End	Number	Row	gpm		Flow, Cover End	>=	25		
Row, Middle Section	Number	Row	gpm		Flow, Middle Section	>=	25	Search tolerance +/-	25 %
Row, Shaft End	Number	Row	gpm		Flow, Shaft End	>=	25		Display in drawing
Power	Number	Power	HP	E	Power Rating	>=	25		Assign to Component Type
Pressure, Middle Section	Number	Pressure	psi		Rated Pressure Middle Sect	>=	25		
Pressure	Number	Pressure	psi		Rated Pressure	>=	25		
Pressure, Cover End	Number	Pressure	psi		Rated Pressure Cover End	>=	25		
Pressure, Shaft End	Number	Pressure	psi		Rated Pressure Shaft End	>=	25		
Torque	Number	Torque	Lb/-ft		Torque	>=	25		
Volume	Number	Volume	Gallon		Volume	>=	25		
4									

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 bar.

Name	Data type	Unit category	Unit	Display in drawing	Linked model property	Search operator	Search Tolerance (%
Cleanliness Rating	Text				ISO Cleanliness Rating		
Displacement	Number	Volumetric Di	Cu. in/Rev		Displacement	>=	25
Displacement, Cover End	Number	Volumetric DI	Cu. in/Rev		Displacement, Cover End	>-	25
Displacement, Middle Section	Number	Volumetric Di	Cu.in/Rev		Displacement, Middle Section	>=	25
Displacement, Shaft End	Number	Volumetric Di	Cu. in/Rev		Displacement, Shaft End	>=	25
Flow	Number	Row	gpm		Rated Row	>=	25
Flow, Cover End	Number	Row	gpm		Row, Cover End	>=	25
Flow, Middle Section	Number	Row	gpm		Row, Middle Section	>=	25
Flow, Shaft End	Number	Row	gpm	1	Row, Shaft End	>=	25
Power	Number	Power	HP		Power Rating	>=	25
Pressure, Middle Section	Number	Pressure	psi		Rated Pressure Middle Sect	>=	25
Pressure	Number	Pressure	psi		Rated Pressure	>=	25
Pressure, Cover End	Number	Pressure	psi		Rated Pressure Cover End	>=	25
Pressure, Shaft End	Number	Pressure	psi		Rated Pressure Shaft End	>=	25
Torque	Number	Torque	Lbf-ft		Torque	>=	25
Volume	Number	Volume	Gallon	m	Volume	>-	25

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.
- 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 is 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.

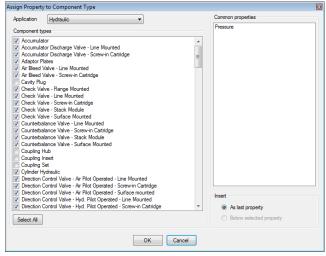
Or

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	🔣 Save
Name	Displacement, Middle Section
Data type	Number
Unit category	Volumetric Displacement 💌
Unit	Cu. in/Rev
Linked model property	Displacement, Middle Section 🔹
Search operator	>=
Search tolerance +/-	25 %
	Display in drawing
	Assign to Component Type

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

Components Ac	cessorie	s External Ports	Connection	ns Sub	-systems					☆ ③ 🏋 🛛
Display Formats										
Available Display Fo	mats						🗋 New 👗	Selected Display Fom	nat	🔣 Sa
Name	Prefix	Linked property 1	Display unit	Suffix	Prefix	Linked property 2	Display unit	Name		
Beta Ratio		Beta Ratio						Compensator Setting	; #1	
Cavity/Footprint/I		Cavity/Footprint/I						Linked property 1		
Compensator Set		Compensator Set	\checkmark				=	Compensator Setting	#1	
Compensator Set		Compensator Set						Prefix	Suffix	
Compensator Set		Compensator Set	V							Display unit
Compensator Set		Compensator Set	V					Linked property 2		
Cracking Pressure		Cracking Pressure	\checkmark							
Cylinder Size	Ø	Bore			x	Rod Diameter				
Displacement		Displacement	\checkmark					Prefix	Suffix	Display unit
Displacement, Co		Displacement, Co	V							Display unit
Displacement, Mi		Displacement, Mi	V					Linked property 3		
Displacement, Sh		Displacement, Sh	V							
Flow Setting		Flow Setting	V					Prefix	Suffix	
Micron Rating		Micron Rating								Display unit
Nominal Size		Nominal Size								
Pilot Ratio		Pilot Ratio							6	Assign to Component Typ
Port Size		Port Size								
Port Size Ext		Port Size Ext					-			

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.

Available Display Fo	mats						🗋 New	X
Name	Prefix	Linked property 1	Display unit	Suffix	Prefix	Linked property 2	Display unit	
Beta Ratio		Beta Ratio						
Cavity/Footprint/I		Cavity/Footprint/I						
Compensator Set		Compensator Set	V					
Compensator Set		Compensator Set						
Compensator Set		Compensator Set	V					
Compensator Set		Compensator Set	V					
Cracking Pressure		Cracking Pressure	V					
Cylinder Size	Ø	Bore			x	Rod Diameter		
Displacement		Displacement	V					
Displacement, Co		Displacement, Co	V					
Displacement, Mi		Displacement, Mi	\checkmark					
Displacement, Sh		Displacement, Sh	V					
Flow Setting		Flow Setting	V					
Micron Rating		Micron Rating						
Nominal Size		Nominal Size						
Pilot Ratio		Pilot Ratio						
Port Size		Port Size						1
Port Size Ext		Port Size Ext						1

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 Fo	mat	8	Save
Name			
Compensator Settin	ng #1		
Linked property 1			
Compensator Settin	ng #1		
Prefix	Suffix	🔽 Display unit	
Linked property 2			
Prefix	Suffix	Display unit	
Linked property 3			
Prefix	Suffix	Display unit	
		Assign to Component	Туре

Selected Display format Section

Select Property	x
Model property Design property	
Available properties	
Beta Ratio Bore	_
Cavity/Footprint/Interface	
Compensator Setting Compensator Setting #1	
Compensator Setting #2 Compensator Setting #3	E
Cracking Pressure	
Displacement Displacement, Cover End	
Displacement, Middle Section Displacement, Shaft End	
Flow Setting	
Micron Rating Nominal Size	
Pilot Ratio Port Size	
Port Size Ext	
Port Size Ret Port Size, Aux. Remote Control	
Port Size, Drain Port Size, Gauge	-
OK Cancel	

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	
Application	Hydraulic 🔹	
Component ty	pes	
Accumula Accumula Accumula Adaptor P Air Bleed Cavity Plu Check Va Check Va Check Va Check Va Check Va Check Va Check Va Counteba Counteba	tor tor Discharge Valve - Line Mounted tor Discharge Valve - Screw-in Cartridge lates Valve - Line Mounted Valve - Screw-in Cartridge g live - Flange Mounted live - Line Mounted Ve - Screw-in Cartridge live - Stack Module alance Valve - Line Mounted alance Valve - Screw-in Cartridge slance Valve - Screw-in Cartridge slance Valve - Screw-in Cartridge slance Valve - Surack Module alance Valve - Surack Module	
Coupling I	Set	-
Select All		
	OK Cancel	

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

Components Accessorie	es External Ports Connections Sub-systems			
Component Types				
Search by	Available Component Types	🗋 New 👗	Selected Component Type properties	K Save
Application	Accumulator Accumulator Discharge Valve - Line Mounted		General properties	
Hydraulic	Accumulator Discharge Valve - Screw-in Cartridge Adaptor Plates		Name	
	Air Bleed Valve - Line Mounted		Accumulator	
Name	Air Bleed Valve - Screw-in Cartridge	=	Component Group	
	Check Valve - Flange Mounted		Accumulator	
	Check Valve - Line Mounted Check Valve - Screw-in Cartridge Check Valve - Stack Module		Design Properties 🗸 🗸	~ X 🗅
	Check Valve - Surface Mounted Counterbalance Valve - Line Mounted Counterbalance Valve - Screw in Catridge Counterbalance Valve - Stack Module Counterbalance Valve - Surface Mounted		Pressure Volume	
	Coupling Hub Coupling Insert Coupling Insert		Model Properties	~ X D
	Cylinder Hydraulic Direction Control Valve - Air Pilot Operated - Line Mounted Direction Control Valve - Air Pilot Operated - Screw-in Catridge Direction Control Valve - Hydr. Pilot Operated - Surface mounted Direction Control Valve - Hydr. Pilot Operated - Surface mounted Direction Control Valve - Hydr. Pilot Operated - Surface mounted Direction Control Valve - Hydr. Pilot Operated - Surface mounted Direction Control Valve - Manually Operated - Line Mounted Direction Control Valve - Manually Operated - Line Mounted Direction Control Valve - Manually Operated - Surface mounted Direction Control Valve - Manually Operated - Surface mounted Direction Control Valve - Mechanically Operated - Surface mounted		Model Code Model Family Part Number Description Manufacturer Cost Assembly Cost List Price Volume Rated Pressure Cavity/Footprint/Interface	
	Direction Control Valve - Recharing Voterated - Surface mounted Direction Control Valve - Proportional - Line Mounted Direction Control Valve - Proportional - Screw-in Catridge Direction Control Valve - Sol. Controlled Pliot Operated - Surface mou Direction Control Valve - Sol. Operated - Line Mounted Direction Control Valve - Sol. Operated - Screw in Catridge	nted	Display Formats Cavity/Footprint/Interface Nominal Size Precharge Pressure Volume	XD

HyDraw Library Manager – (Components - Component Types)

Search by

bar.

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

The Available Component Types section displays all

component type by selecting the icons on the caption

Create a **New** component type or 🔀 delete a

Available Component Types

available component types.

Application	
Hydraulic	-

Search by Section

🗋 New 👗 Available Component Types Accumulator Discharge Valve - Line Mounted Accumulator Discharge Valve - Screw-in Cartridge Adaptor Plates Air Bleed Valve - Line Mounted Air Bleed Valve - Screw-in Cartridge Cavity Plug Check Valve - Flange Mounted Check Valve - Line Mounted Check Valve - Screw-in Cartridge Check Valve - Stack Module Check Valve - Surface Mounted Counterbalance Valve - Line Mounted Counterbalance Valve - Screw-in Cartridge Counterbalance Valve - Stack Module Counterbalance Valve - Surface Mounted Coupling Hub Coupling Insert Coupling Set Cylinder Hydraulic Direction Control Valve - Air Pilot Operated - Line Mounted Direction Control Valve - Air Pilot Operated - Screw-in Cartridge Direction Control Valve - Air Pilot Operated - Surface mounted Direction Control Valve - Hyd. Pilot Operated - Line Mounted Direction Control Valve - Hyd. Pilot Operated - Screw-in Cartridge Direction Control Valve - Hvd. Pilot Operated - Surface mounted Direction Control Valve - Manually Operated - Line Mounted Direction Control Valve - Manually Operated - Screw-in Cartridge Direction Control Valve - Manually Operated - Surface mounted Direction Control Valve - Mechanically Operated - Line Mounted Direction Control Valve - Mechanically Operated - Screw-in Cartridge Direction Control Valve - Mechanically Operated - Surface mounted Direction Control Valve - Proportional - Line Mounted Direction Control Valve - Proportional - Screw-in Cartridge Direction Control Valve - Proportional - Surface mounted Direction Control Valve - Sol, Controlled Pilot Operated - Surface mounted Direction Control Valve - Sol. Operated - Line Mounted Direction Control Valve - Sol. Operated - Screw-in Cartridge

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.

General properties				
Name				
Accumulator				
Component Group				
Accumulator				•
Design Properties	~	^	Х	
Pressure Volume				
Model Properties	~	^	Х	
Model Code Model Family Part Number Description Manufacturer Cost Ust Price Volume Rated Pressure Cavity/Footprint/Interface				
Display Formats			\times	
Cavity/Footprint/Interface Nominal Size Precharge Pressure				

.....

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.

- Click On the Design properties caption bar to display the Select Design Property dialog box.
- 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
Available properties
Cleanliness Rating
Design Property 12
Displacement
Displacement, Cover End
Displacement, Middle Section
Displacement, Shaft End
Flow. Cover End
Flow, Middle Section
Flow, Shaft End
Power
Pressure
Pressure, Cover End
Pressure, Middle Section
Pressure, Shaft End
Torque
Volume
Add New
OK Cancel

Select Design Property dialog box

- 4. Click New to add new property.
- 5. Select **Display in drawing** to display the property in the drawing.
- 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						- ×
Model properties				🗋 New 👗	Selected property definition	🔣 Save
Name	Data type	Unit category	Unit	Display in drawi	Name	
Pump Mount	Text				Rated Pressure	
Rated Row	Number	Flow	LPM		Data type	
Rated Pressure	Number	Pressure			Number	-
Rated Pressure Cover End	Number	Pressure	bar		Unit category	
Rated Pressure Middle Section	Number	Pressure	bar		Pressure	•
Rated Pressure Shaft End	Number	Pressure	bar		Unit	
Rated Pressure Shell	Number	Pressure	bar		bar	
Rated Pressure Tube	Number	Pressure	bar		Display in drawing	
Rated Speed	Text					
Reset Pressure	Number	Pressure	bar			
Rod Diameter	Number	Length	mm			
Rod Diameter #2	Number	Length	mm			
Rod End	Text					
Rod End #2	Text					
Rotation	Text					
Seal Type	Text					
Shaft Diameter	Number	Length	mm			
Shaft Length	Number	Length	mm	=		
Shaft Type	Text					
Special Feature	Text					
Speed Max	Text					
Spline Pitch	Number	Unitless				
< [- F	1	

Define Component Properties

Jnit category	Category name	
Acceleration Angle	Pressure	
Area Current	Imperial unit	Metric unit
Density Energy	psi 👻	bar •
Flow Force	Unit Name	Precision *
Frequency	atm	4
Length Mass & Weight	bar	1
Power Pressure	psi	2 8
Speed	lbf/ft^2	4
Temperature Time	ра	4
Torque Viscostv	kpa	4
Volume Volumetric Displacement	Мра	4
volumetric Displacement	kg/m^2	4
	kg/cm^2	4 -
Delete	Save A	s New Save

Define Units

Model Properties

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

- 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.
- Click Add New to display the Define Component Properties dialog box.
- 4. Click New to add new property.
- Click in the selected property definition section to display the Define Units dialog box.
- Select the Display in drawing checkbox to display the model property in the drawing.
- 7. Click **Save t**o save the new property or update the existing property.

Select Model Properties	×
Available properties	
Area Ratio Area Ratio Area Ratio Area Ratio Bot Shoulder Height Bor Boyass Pressure Catalog Number Catalog Number Casing Pressure Compensator Setting #1 Compensator Setting #2 Compensa	Differential Percent Displacement Displacement, Over End Displacement, Middle Section Displacement, Middle Section Field Filter Mesh Size Row Natio Row Ratio Row Ratio Row Setting Row, Over End Row, Shaft End Frame Size Frequency Frequency Frequency Frequency Frequency Frequency Frequency Hub Bore Size Hub Bore Size Hub Row Size Hub Row Size
	•
	Add New
ОК	Cancel

Define Component Properties						
Model Properties				🗋 New 👗	Selected property definition	🔣 Savı
Name	Data type	Unit category	Unit	Display in drawle *	Name	
Port Size, Outlet	Text				Pressure Max	
Port Size, Outlet, Cover End	Text			V	Data type	
Port Size, Outlet, Middle Section	Text				Number	-
Port Size, Outlet, Shaft End	Text			1	Unit category	
Port Size, Pilot	Text				Pressure	•
Port Size, Pressure	Text			1	Unt	
Port Size, Primary	Text				psi	
Port Size, Remote Control	Text				Daplay in drawing	
Port Size, Secondary	Text					
Port Size, Tank	Text			V		
Power Rating	Number	Power	HP			
Precharge Pressure	Number	Pressure	psi	v		
Pressure Differential	Number	Pressure	psi			
Pressure Loss @ Rated Row	Number	Pressure	psi			
Pressure Max #1	Number	Pressure	psi			
Pressure Max #2	Number	Pressure	psi	1		
Presoure Max #3	Number	Pressure	psi	1		
Pressure Min	Number	Pressure	psi			
Pressure Min #1	Number	Pressure	psi			
Pressure Min #2	Number	Pressure	psi			
Pressure Min #3	Number	Pressure	psi			
٠				•		

Define Component Properties

Select Model Properties dialog box

Note

- You cannot delete essential model properties; hence Kerna 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.

efine Units			2
Unit category	Category name		
Acceleration	Pressure		
Angle Area			
Current	Imperial unit	Metric unit	
Density	psi 💌	bar	•
Energy	psi +	Udi	
Flow	Unit Name	Precision	
Frequency	atm	4	
Length			
Mass & Weight	bar	1	
Power Pressure	psi	2	Ε
Speed	lbf/ft^2	4	
Temperature Time	ра	4	
Forque /iscosity	kpa	4	1
/olume	Мра	4	
/olumetric Displacement	kg/m^2	4	
	kg/cm^2	4	-
Delete	Sav	re As New Save	
ſ	OK Cancel		

Define Units dialog box

XD

Display Formats

Port Size, Pilot

Cavity/Footprint/Interface

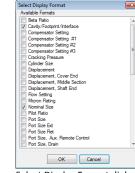
Display Formats Section

Display Formats

This section displays the available display formats.

- 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.

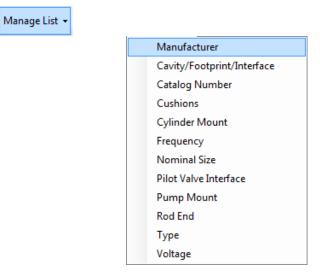
You can also click 🐱 delete an existing display format.



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.



Manufacturer

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

Components \rightarrow Manage List \rightarrow Manufacturer Manufacturer has two sections:

- Available Manufacturer
- Selected manufacturer Property

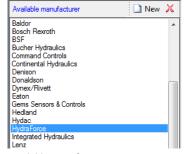
omponents Accessories External Ports Co	nnections Sub-systems	<u>☆</u> ③ 🏋 🗉
lanufacturer		
vailable manufacturer 🛛 🗋 New 👗	Selected manufacturer Property 🔣 Save	
aldor soch Rezordh SP	Name HydraForce	

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 *k* 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.

🔣 Save

Selected manufacturer property

Cavity/Footprint/Interface

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

Components \rightarrow Manage List

→ Cavity/Footprint/Interface

Cavity/Footprint/Interface has three sections:

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

Components Accessories Extern	al Ports Connections Sub-systems		☆ ③ 第 图 0
Cavity/Footprint/Interface			
Search by	Available Cavities/Footprints	🗋 New 👗	Selected Cavity/Footprint properties
Category	Cavity/Footprint	Category	Cavity/Footprint Name
All Categories -	#10 SAE	SAE O-ring	#4 SAE
Cavity/Footprint Name	#12 SAE	SAE O-ring	Colorest
Cavity/Footprint Name	#14 SAE	SAE O-ring	Category SAE O-ring
	#16 SAE	SAE O-ring	one only
	#2 SAE	SAE O-ring	
	#20 SAE	SAE O-ring	
	#24 SAE	SAE O-ring	
	#3 SAE	SAE O-ring	
	#32 SAE	SAE O-ring	
	#4 SAE	SAE O-ring	
	#5 SAE	SAE O-ring	
	#6 SAE	SAE O-ring	
	#8 SAE	SAE O-ring	
	003	Bosch Rexroth	
	004	Bosch Rexroth	
	019-E	Bosch Rexroth	
	03030	Hydac	
	03230	Hydac	
	04220	Hydac	
	05030	Hydac	
	05220	Hydac	
	05330	Hydac	
	05420	Hydac	
	05520	Hydac	

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 *k* delete a cavity/footprint by clicking the icons on the caption bar.

Available Cavities/Footprints	🗋 New	Х
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	🔣 Save 👻
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

			Documents CAD File	Model Properties Component Types	Manage L	
Search by Available Models			Import 🗋 New 🄀	Selected Model properties		
Application	Model Code A Model Family	Description	Manufacturer	Туре		
Hydraulic	▼ SK-10 SK	Seal	Parker	Application Hydraulic Component Typ Seal Kit		
Component type All Component Types	•			Model Data		
Manufacturer All Manufacturers Model Code				Model Code SK-10 Model Family SK Part Number Description Seal Manufacturer Parker Cost List Price		
				Documents	× 🖻	
				CAD Files	× 1	

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.

Search by
Application
Hydraulic 🔹
Component type All Component Types
Manufacturer
All Manufacturers 🔹
Model Code
earch 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 toimport accessory data from Microsoft Excel.

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

Available Models		Import 🗋 New 🔀	
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 🔻			
Туре				-
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		×	5	
CAD Files		×	5	

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.

Components Accessories External	Ports Connections	Sub-systems				۵ (ه	11 🛛 🛈
Model Properties							X
Model Properties					🗋 New 👗	Selected property definition	🔣 Save
Name	Data type	Unit category	Unit	Display in drawing	*	Name	
Pressure Setting #2	Number	Pressure	psi			Seal Type	
Pressure Setting #3	Number	Pressure	psi			Data type	
Pressure Setting Port A	Number	Pressure	psi			Text	•
Pressure Setting Port B	Number	Pressure	psi			Unit category	
Pump Mount	Text						▼
Rated Flow	Number	Flow	gpm			Unit	
Rated Pressure	Number	Pressure	psi				
Rated Pressure Cover End	Number	Pressure	psi			Display in drawing	
Rated Pressure Middle Section	Number	Pressure	psi			Assign to Compon	ent Type
Rated Pressure Shaft End	Number	Pressure	psi			Asaginto compon	онк туро
Rated Pressure Shell	Number	Pressure	psi				
Rated Pressure Tube	Number	Pressure	psi				
Rated Speed	Text						
Reset Pressure	Number	Pressure	psi				
Rod Diameter	Number	Length	in				
Rod Diameter #2	Number	Length	in				
Rod End	Text						
Rod End #2	Text						
Rotation	Text				=		
Seal Type	Text						
Shaft Diameter	Number	Length	in				
Shaft Length	Number	Length	in				
Shaft Type	Text						
Special Feature	Text						

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 2013 -	[Component Types]	
Component Types	n an an an that is a start of the start of t	×
Search by	Available Component Types	Selected Component Type properties 🛛 🔣 Save 👻
Application Hydraulic	Accumulator Bladder Kt Accumulator Charging Kt Amplifer Card and Holder	General properties
Name	Bot Me Bub Well Cold & Bectronics Connector Filter Bement Seal Kt The Rod and Nut Kt	Bolt Kit Component Group Bolt Kit Model Properties Model Prope
		4

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.

Application	
Hydraulic	

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 \bowtie 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	I

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 prope	erties		l	Sav	e '
General properties					
Name					
Bolt Kit					
Component Group					
Bolt Kit					•
Model Properties	~	^	Х		
Model Code Model Family					
Part Number					
Description Manufacturer					
Cost Assembly Cost					
List Price					
Nominal Size Length					
No. of Bolts					
Installation Torque (Aluminum)					

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

Components Accessories	Externa	I Ports Conn	ections Sub	-systems	_	_		Mod	lel Properties Design Prop	oerties Dis	play Forma
Search by		Available Ports					🗋 New	×	Selected Port properties		🔣 Save
Port Type		Port Type 🔺	Port Size	Description	Mounting	Nominal ID (in)	Cavity	^	Port Type E	SP	
All Port Types	-	BSP	G 1-11	1 BSP	Threaded	0.957	G 1-11	-		6 1 1/4 -11	
		BSP	G 1/8-28	1/8 BSP	Threaded	0.215	G 1/8-28			-1/4 BSP Threaded	
Port Size		BSP	G 3/4-14	3/4 BSP	Threaded	0.742	G 3/4-14		Nominal ID {in} 1	.278	
		BSP	G 2-11	2 BSP	Threaded	2.323	G 2-11		Cavity C Rated Pressure (psi) 6	6 1 1/4 -11	
		BSP	G 1 1/2 -11	1-1/2 BSP	Threaded	1.5	G 1 1/2 -11		Pressure Line Max Fi 2		
		BSP	G 3/8-19	3/8 BSP	Threaded	0.546	G 3/8-19	Ξ	Return Line Max Flov 1		
		Metric	ISO 6149-1	M22 X 1.5	Threaded	0.551	ISO 6149-1-M22		With O-ring N With Through Bolt Hc N	No No	
		Metric	ISO 6149-1	M42 X 2	Threaded	1.181	ISO 6149-1-M42		With Hildogin box Hk H		
		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				
		Metric	ISO 6149-1	M48 X 2	Threaded	1.417	ISO 6149-1-M48				
		Metric	ISO 6149-1	M18 X 1.5	Threaded	0.433	ISO 6149-1-M18	-			
		Metric	ISO 6149-1	M8 X 1	Threaded	0.118	ISO 6149-1-M8				
		Metric	ISO 6149-1	M16 X 1.5	Threaded	0.354	ISO 6149-1-M16	-			
		Metric	ISO 6149-1	M14 X 1.5	Threaded	0.295	ISO 6149-1-M14				
		Metric	ISO 6149-1	M27 X 2	Threaded	0.709	ISO 6149-1-M27				
		Metric	ISO 6149-1	M12 X 1.5	Threaded	0.236	ISO 6149-1-M12				
		Metric	ISO 6149-1	M10 X 1	Threaded	0.177	ISO 6149-1-M10				
		NPT	3/8 NPT	3/8 NPT	Threaded	0.546	NPT 3/8				
		NPT	2 NPT	2 NPT	Threaded	2.323	NPT 2				
		NPT	1-1/2 NPT	1-1/2 NPT	Threaded	1.5	NPT 1-1/2				
		NPT	1-1/4 NPT	1-1/4 NPT	Threaded	1.278	NPT 1-1/4				
		NPT	1/2 NPT	1/2 NPT	Threaded	0.555	NPT 1/2				

HyDraw Library Manager – (External Ports)

Search by

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

Search by	
Port Type	
All Port Types	•
Port Size	

Search by Section

Available Ports

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

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

Port Type 🔺	Port Size	Description	Mounting	Nominal ID (in)	Cavity	1
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.

Selected Port properties	🔣 Save 🔻
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 Flo	28
Return Line Max Flov	14
With O-ring	No
With Through Bolt Ho	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

H HyDraw Library Manager 2013 - [Model Properties]						×
Components Accessories External Ports Connections Sub-systems					<u>↑</u> ③ ¶ 🛛	0
Model Properties						Σ
Model Properties				New 📈 🔺 👻	Selected property definition	Save
Name	Data type	Unit category	Unit	Display in drawing	Name	
Port Type	Text				Port Size	
Description	Text				Data type	
Port Size	Text				Text 👻	
Cavity Name	Text				Unit category	
Rated Pressure	Number	Pressure	psi		▼	
Pressure Line Max Row	Number	Flow	gpm		Unit	
Return Line Max Row	Number	Flow	gpm			
Mounting	Text				Display in drawing	
Nominal ID	Number	Length	in		 Display in Grawing 	
With O-ring	Yes/No					
With Through Bolt Holes	Yes/No					

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 \Join delete by selecting the icons on the caption bar.

Model Properties		New 📈 🔺 👻		
Name	Data type	Unit category	Unit	Display in drawing
Port Type	Text			
Description	Text			
Port Size	Text			
Cavity Name	Text			
Rated Pressure	Number	Pressure	psi	
Pressure Line Max Flow	Number	Flow	gpm	
Return Line Max Flow	Number	Flow	gpm	
Mounting	Text			
Nominal ID	Number	Length	in	
With O-ring	Yes/No			
With Through Bolt Holes	Yes/No			

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	📉 Save
Name	
Port Size	
Data type	
Text	T
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

Components Accessions Design Properties Design Properties Design Properties Row Name Data type Data type Data type Data type	H HyDraw Library Manager 2013 - [Design Properties]			
Design Properties Selected property definition Ref Name Data type Interview Name Pressure Number Pressure Data type Row Number Row gpm Data type Unit actegory Unit actegory Unit actegory Unit actegory Value Row Number Row gpm Data type Unit actegory Pressure Unit actegory Pressure Unit actegory Value Image: Pressure				<u>^</u> () 🏋 🛛 ()
Name Data type Unit category Unit Display in drawing Pressure Number Pressure pater Row Number Pow gpm Data type Unit category Interaction Unit category Interaction Watcom Number Pow gpm Data type Unit category Interaction Unit category Interaction Unit Interaction Unit Interaction Unit Interaction Interaction Unit Interaction Interaction Interaction Interaction Interaction	Design Properties			X
Pressure pd Pressure pd Pressure Data type Row Number Row gom Data type Number Utit category Virta resure Virta resure Virta resure Virta Display in drawing Virta Virta Virta Virta Virta Virta Virta <	Design Properties		🗋 New 📈 🔺 👻	Selected property definition 🛛 🔣 Save
Row Number Row gpm Data type Number Uit category Presure Uit category Presure Image: Category Presure Image: Category Data type Image: Category Presure Image: Category Presure Image: Category Image: Category Image: Category Presure Image: Category Image: Category Image: Category Presure Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category Image: Category	Name	Data type Unit category	Unit Display in drawing	Name
Image: Second				
Unit category Pressure Unit ps Deplay in drawing	Row	Number Flow	gpm 📃	
Presure				
Unit periodic de la construcción				
Deplay in drawing				
				psi
				Display in drawing

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			🗋	New 📈 🔺 👻
Name	Data type	Unit category	Unit	Display in drawing
Pressure	Number	Pressure		
Row	Number	Flow	gpm	

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

Selected property definition	😹 Save
Name	
Pressure	
Data type	
Number	-
Unit category	
Pressure	⊸
Unit	
psi	
Display in drawing	

Selected property definition Section

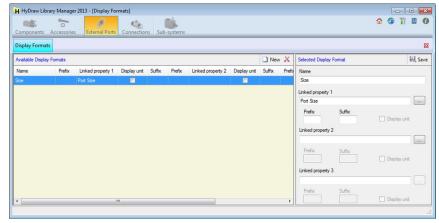
24. External Ports - Display Formats

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:

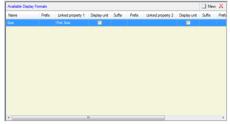
- Available Display Formats
- Selected Display Format



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 Displa	y Format	😹 Save
Name		
Size		
Linked property	1	
Port Size		
Prefix	Suffix	Display unit
Linked property	2	
Prefix	Suffix	Display unit
Linked property	3	
Prefix	Suffix	Display unit

Selected Display Format Section

Select Property		×
Model property	Design property	
Available properties		
Port Size		
ОК	Cancel	

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

Components Accessories Exter	al Ports Connections Sub	-systems						☆ ④ 🏋 🛛	
					Model Proper	ties Desigr	Properties Display Fo	rmats Connection Ty	
Search by	Available Pipes					New 👗	Selected Pipe properties	🔣 Save	
Туре	Material A	Nominal Size	Inner	Outer	Wall Thickness (in)	Press ^	Material	Seemless Steel Schedu	
Pipe 👻	Seemless Steel Schedule 160	1/2 Threaded	0.466	0.84	0.187	3334	Nominal Size Outer Diameter (in)	2 1/2 Welded 2.875	
Material	Seemless Steel Schedule 160	6 Threaded	5.187	6.625	0.719	2456	Wall Thickness (in)	0.375	
All Materials	Seemless Steel Schedule 160	1 Welded	0.815	1.315	0.25	5127 E	Pressure (psi)	3517	
Ail Materials	Seemless Steel Schedule 160	1/2 Welded	0.466	0.84	0.187	5129			
	Seemless Steel Schedule 160	6 Welded	5.187	6.625	0.719	2977			
	Seemless Steel Schedule 160	5 Threaded	4.313	5.563	0.625	2453			
	Seemless Steel Schedule 160	5 Welded	4.313	5.563	0.625	3074			
	Seemless Steel Schedule 160	4 Welded	3.438	4.5	0.531	3219			
	Seemless Steel Schedule 160	1 1/4 Threaded	1.16	1.66	0.25	2490			
	Seemless Steel Schedule 160	2 1/2 Welded	2.125	2.875	0.375	3517			
	Seemless Steel Schedule 160	4 Threaded	3.438	4.5	0.531	2447			
	Seemless Steel Schedule 160	3 Welded	2.624	3.5	0.438	3395			
	Seemless Steel Schedule 160	3 Threaded	2.624	3.5	0.438	2401			
	Seemless Steel Schedule 160	2 1/2 Threaded	2.125	2.875	0.375	2305			
	Seemless Steel Schedule 160	1/2 Welded	1.338	1.9	0.281	3941			
	Seemless Steel Schedule 160	2 Welded	1.687	2.375	0.344	3921			
	Seemless Steel Schedule 160	1 Threaded	0.815	1.315	0.25	3187			
	Seemless Steel Schedule 160	2 Threaded	1.687	2.375	0.344	2875			
	Seemless Steel Schedule 160	1 1/4 Welded	1.16	1.66	0.25	3972			
	Seemless Steel Schedule 160	1/2 Threaded	1.338	1.9	0.281	2642			
	Seemless Steel Schedule 160	3/4 Welded	0.614	1.05	0.218	5544			
	Seemless Steel Schedule 160	3/4 Threaded	0.614	1.05	0.218	3528			
	Seemless Steel Schedule 40	6 Welded	6.065	6.625	0.28	1047			
	Seemless Steel Schedule 40	1/8 Threaded	0.269	0.405	0.068	726			
	Seemless Steel Schedule 40	1/4 Threaded	0.364	0.54	0.088	711 -			

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	
Туре	
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	X
Material 💌	Nominal Size	Inner Diameter {in}	Outer Diameter {in}	Wall Thickness {in}	Pressure {psi}	•
Seemless Steel Schedule XXS	1/2 Welded	0.336	0.84	0.252	8473	
Seemless Steel Schedule XXS	1 Threaded	0.599	1.315	0.358	5103	
Seemless Steel Schedule XXS	2 1/2 Threaded	1.771	2.875	0.552	4191	
Seemless 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 t**o create a new pipe/tube data.

Material Seemless Steel Sched Nominal Size 4 Welded Outer Diameter {in} 4.5 Wall Thickness {in} 0.531	Selected Pipe properties	🔣 Save 🔻
Outer Diameter (in) 4.5	Material	Seemless Steel Schedule
	Nominal Size	4 Welded
Wall Thickness (in) 0.531	Outer Diameter {in}	4.5
	Wall Thickness {in}	0.531
Pressure {psi} 3219	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

Name Data type Unit category Unit Display in drawing Connection Type Text Image: Size Row to Actuator Number Row gpm Row to Tank Number Row gpm Inner Dameter Number Length in Type Text Image: Size Type Text Image: Size Nominal Size Text Image: Size Outer Diameter Number Length in	Components Accessories External Ports Connections Sub-systems Model Properties			_				
Connection Type Text Image: Connection Type Row to Actuator Number Row gm Row to Tank Number Row gm Inner Diameter Number Rog Image: Connection Type Stee Text Image: Connection Type Image: Connection Type Material Text Image: Connection Type Image: Connection Type Nominal Size Text Image: Connection Type Image: Connection Type Outer Diameter Number Length Image: Connection Type	Model Properties				🗋 New 🐰	Selected prope	erty definition	🔣 S
Row to Actuator Number Row gpm Image: Constraint of the constraint of	Name	Data type	Unit category	Unit	Display in drawing	Name		
Row to Tank Number Row gpm Image Inner Diameter Number Length in Image Size Text Image Image Image Material Text Image Image Image Nominal Size Text Image Image Image Outer Diameter Number Length in Image	Connection Type	Text				Size		
Iner Diameter Number Length in Ind Unit category Sze Test Int Ind Int Type Test Int Ind Int Material Test Int Int Nominal Size Test Int Int Outer Diameter Number Length in Int	Flow to Actuator	Number	Flow	gpm		Data type		
Size Test Image: Comparison of the test of the test of test	Flow to Tank	Number	Flow	gpm		Text		Ŧ
Type Text I I/I Material Text I/I I/I Nominal Size Text I/I I/I Outer Diameter Number Length in I/I	Inner Diameter	Number	Length	in		Unit category		
Material Text I I Nominal Size Text I I Outer Diameter Number Length in I	Size	Text						· · · ·
Nominal Size Text Image: Constraint of the size of the si	Туре	Text				Unit		
Outer Diameter Number Length in V								
	Nominal Size						Display in	drawing
Descent and Descent an				in				
	Pressure		Pressure	psi				
Wall Thickness Number Length in V	Wall Thickness	Number	Length	in				

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 kellete one, by selecting the icons on the caption bar.

Model Properties				🗋 New 🐰
Name	Data type	Unit category	Unit	Display in drawing
Connection Type	Text			
Flow to Actuator	Number	Flow	gpm	
Flow to Tank	Number	Flow	gpm	
Inner Diameter	Number	Length	in	
	Text			
Туре	Text			
Material	Text			
Nominal Size	Text			
Outer Diameter	Number	Length	in	V
Pressure	Number	Pressure	psi	
Wall Thickness	Number	Length	in	V

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 key remains inactive on selection of such essential properties.
- Image: main matching in the matching of the match

Selected property definition	🔣 Save
Name	
Size	
Data type	
Text	-
Unit category	
	•
Unit	
📝 Display in draw	ing

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 2013 - [Design Properties]			
Components Accessories External Ports Connections Sub-systems			<u>^</u> 3 1 🛛 0
Design Properties			×
Design Properties		🗋 New 📈	Selected property definition 🔣 Save
Name	Data type Unit category	Unit Display in drawing	Name
Row	Number Flow	gpm 📃	Flow
Pressure	Number Pressure	psi 📃	Data type
			Number 👻
			Unit category
			Flow
			Unit
			gpm
			Display in drawing

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 \bigotimes delete by selecting the icons on the caption bar.

Design Properties									
Design Properties				🗋 New 📈					
Name	Data type	Unit category	Unit	Display in drawing					
Row	Number	Flow	gpm						
Pressure	Number	Pressure	psi						

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.
- less remains inactive, if Text, Currency, or Yes/No is selected in the Unit category box.

Selected prop	erty definition	🔣 Save
Name		
Flow		
Data type		
Number		-
Unit category		
Flow		▼
Unit		
gpm		
	🔽 Display in d	drawing

Selected property definition Section

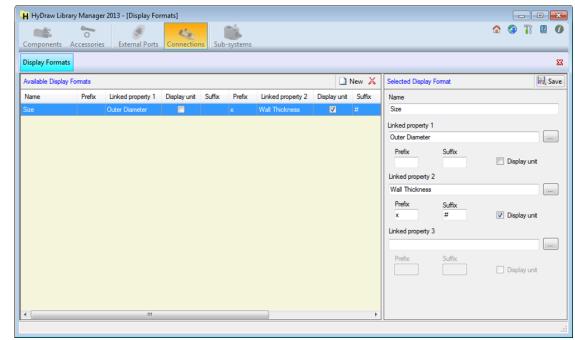
28.Connections - Display Formats

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.

								New 🎽
Name	Prefix	Linked property 1	Display unit	Suffix	Prefix	Linked property 2	Display unit	Suffix
Size		Outer Diameter				Wall Thickness	V	#

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 Fo	mat		📉 Save
Name			
Size			
Linked property 1			
Outer Diameter			
Prefix	Suffix	Display unit	
Linked property 2			
Wall Thickness			
Prefix x	Suffix #	Display unit	
Linked property 3			
Prefix	Suffix	Display unit	

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
Model property
Available properties
Inner Diameter Outer Dameter Size Type Wall Thickness
OK Cancel

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

	nal Ports Connections Sub-systems	
Connection Types	late la	
Available Connections	Selected Connection properties K Save	
ank	General properties	
lilot Irain	Name Pressure	
uction ine1	Type Color Weight (in)	
ine2 ine3	Line Continuous	
ine4 ine5	Application Hydraulic	
ileo	Design Properties V A 🔏 🗋 🔺	
	Pressure	
	Row	
	Model Properties 🗸 🔉 🔺	
	Connection Type	
	i ressure	
	Display Formats 🔀 🗋 🔺	
	Size	

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.

Pressure		
Tank		
Pilot		
Drain		
Suction		
Line1		
Line2		
Line3		
Line4		
Line5		

Selected Connection properties

The Selected Connections properties section displays:

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

General Properties

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

Click Save to save the changes.

Selected Conr	nection properties					🔣 s	ave
General proper	ties						
Name	Pressure						
	Туре		С	olor		Weight	t (in)
Line	Continuous	•				0.008	
Application	Hydraulic	•					
Design Propert	ies		~	^	X		
Pressure Flow							
Model Propertie	38		~	^	×		
Connection Ty Pressure	ype						*
Display Format	5				Х		
Size							

Selected Connection properties Section

Design Properties

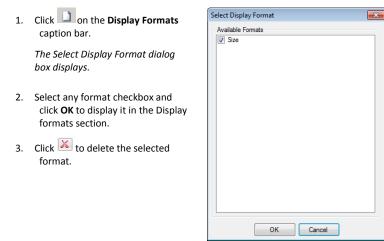
The Design Properties section displays the available design properties. You can also add new design properties, similar to components.

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.



Select Display Format

Sub-systems

Manage sub-systems available in the library.

30 Sub-systems

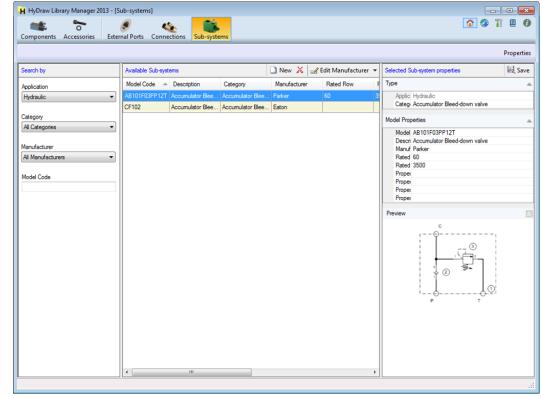
31 Properties

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 subsystem by selecting the icons on the caption bar.

Edit Manufacturer List:

4. 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.
- 6. Click **Save** after editing the name of the new or existing manufacturer.
- 7. Select a manufacturer and click **Delete** to remove a manufacturer from the list.

Available Sub-systems 🗋 New 👗 🌌 Edit Manufacturer 🤜					
Model Code 🛛 🔺	Description	Category	Manufacturer	Rated Flow	F
AB101F03PP12T	Accumulator Blee	Accumulator Blee	Parker	60	3!
CF102	Accumulator Blee	Accumulator Blee	Eaton		

Available Sub-sytems Section

Туре	
Application	Hydraulic
Category	
Model Properties	
Model Code	
Description	
Manufacturer	
Rated Flow (gpm)	
Rated Pressure (psi)	
Property1	
Property2	
Property3	
Property4	
	sub-system entities
	OK Cancel



Edit Manufacturer List



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 subsystem.

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.

Type Applic Hydraulic	
Applic Hydraulic	
Categi Accumulator Bleed-down valve	
Model Properties	
Model AB101F03PP12T	
Descri Accumulator Bleed-down valve	
Manuf Parker	
Rated 60	
Rated 3500	
Proper	
Proper	
Proper	
Порег	
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.

Components A	Accessories	External Port	s Co	- Connections	Sub-systems		û 🕘 🏋 🗵 🕯
Properties							
Model Properties							Selected property definition 🔣 Sa
Name	Data type	Unit category	Unit	Hydraulic	Pneumatic	Electrical	Name
Model Code	Text			1	V	1	Property1
Description	Text			v	V	V	Data type
Manufacturer	Text			1	V	1	Text 💌
Rated Flow	Number	Flow	LPM	v	V		Unit category
Rated Pressure	Number	Pressure	bar	V	V	V	▼ [
Property1	Text				V		Unit
Property2	Text			v	V	V	
Property3	Text			v			
Property4	Text			V	V	V	Used with
Property5	Text				V		V Hydraulic sub-systems
							Pneumatic sub-systems
							Electrical sub-systems

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.
- 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.
- 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	×
Data library	
C:\VEST\HyDraw Library 2012\Data	Browse
Symbol library	
C:\VEST\HyDraw Library 2012\Symbol Library	Browse
Sub-systems	
C:\VEST\HyDraw Library 2012\SubSystems	Browse
OK Cancel	

Set library path



Migrate Data Library – Success Message

H Migrate Data Library	X
The data library you are using was created in a previous version of HyDraw. The data be migrated to the new format.	library must
Choose whether to create a backup	
If you want a copy of your data library in the current format, it must be backed up.	
☑ Create a backup before migrating	
Location for backup	
C:\VEST\HyDraw Library 2012\Data\Backup	Browse
Next	Cancel
IVEX	Cancel

Migrate Data Library

Α

About HyDraw Library Manager, 9 Accessories, 24, 63 Accessories Library, 64 Add new accessory to the library, 25 Add Visio Symbol, 21 Assigning Component Type, 36 Available Cavities/Footprints, 62 Available Component Design Properties, 45 Available Component Model Properties, 43 Available Component Types, 52, 69 Available Connection Model Properties, 87 Available Connections, 94 Available Display Formats, 48, 80, 91 Available Document section, 39 Available External Port Design Properties, 79 Available External Port Model Properties, 77 Available Manufacturer, 60 Available Models, 65 Available Models section, 31 Available Pipes & Tubes, 84 Available Ports, 74 Available Sub system, 98

В

Build New Symbol and Add to the Library, 19

С

CAD Files, 28, 40 CAD Files Properties, 41 CAD Files Search section, 41 CAD Files section. 41 Cavity/Footprint Interface, 61 Cavity/Footprint Properties, 62 Cavity/Footprint search section, 62 Compare Symbols, 5 Component - Display Formats, 47 **Component Design Properties**, 45 **Component Library Management**, 12 **Component Model Properties**, 42 Component Model Property Edit section, 43 Component Type Properties, 53 Connection - Design Properties, 89, 101 Connection - Design Property defunation, 89. 101 **Connection Design Properties**, 88 **Connection Model Properties**, 86 **Connection Properties**, 94 Connections – Display Formats, 90 Create New Model & Link. 29

D

DC Valve Symbol Configurator, 20 Delete Symbol, 21 Design Properties, 95 Design Properties section, 54 Display Formats, 57 Document Search section, 39 Documents, 27 Drawing section, 18

Ε

Edit Component type, 21 Edit Symbol, 20 External Port - Design Properties, 78 External Port - Model Properties, 76 External Port Design Property Edit, 79 External Port Model Property Edit, 77 External Ports, 73 External Ports – Display Formats, 80

G

General Properties, 54, 94

н

HyDraw Library Manager - Introduction, 1

I

Import, 32 Importing Model Data, 36 Installation, 2 Internet Settings, 8

L

Library Manager Menu bar, 3 Library section, 13 Link Models to Symbols, 23

Μ

Managing Component Types, 51 Managing Documents, 38 Manufacturer, 59 Map Properties, 34 Migrating Library, 102 Model Data, 30 Model Properties, 56, 95 Model Properties section, 37 Model Properties section, 22 Model Search section, 31 Modified Symbols Update, 5

Ν

New Symbols Update, 4

0

Options, 6, 12

Ρ

Proxy Connection, 9

S

Search by, 65, 74, 84 Search Component Type, 52, 69 Search Sub-system, 98 Search symbols by, 18 Selected Component Type -properties, 70 Selected Display Format, 49, 81 Selected Display Formats, 91 Selected Document Properties section, 39 Selected Manufacturer Property, 60 Selected Model properties, 66 Selected Pipe/Tube Properties, 85 Selected Port Properties, 75 Selected property definition, 87 Selected property definition, 46 Selected Sub-system properties, 100 Sub-system Library, 97 System Requirements, 2

U

Update Symbol Library, 4





VEST, Inc. 3250 W. Big Beaver Rd., #440 Troy, MI 48084 USA Call: +1 (248) 649-9550 Email: sales@VESTusa.com Visit: VESTusa.com © 2014, VEST, Inc. All rights reserved.