



HyDraw® CAD⁹⁰⁰ What's New



Power-to-Design Circuits

HyDraw® CAD⁹⁰⁰ What's New?

Aliases for HyDraw Commands

Replace Symbol

Convert Symbol or Connection to HyDraw Object

Insert Drawing Sheet Border & Title Block

Edit Title Block Properties

ISO Standard Connection Lines

HyDraw Property Manager Enhancements

Unlimited Custom Connection Lines

Merge Connection Lines

Assembly ID – Reassign, Display in Drawing & Parts List

Export to MDTools Enhancements

Display Properties Enhancements

Manage Drawing Templates

Flip/Rotate Symbols When Inserting into Drawing

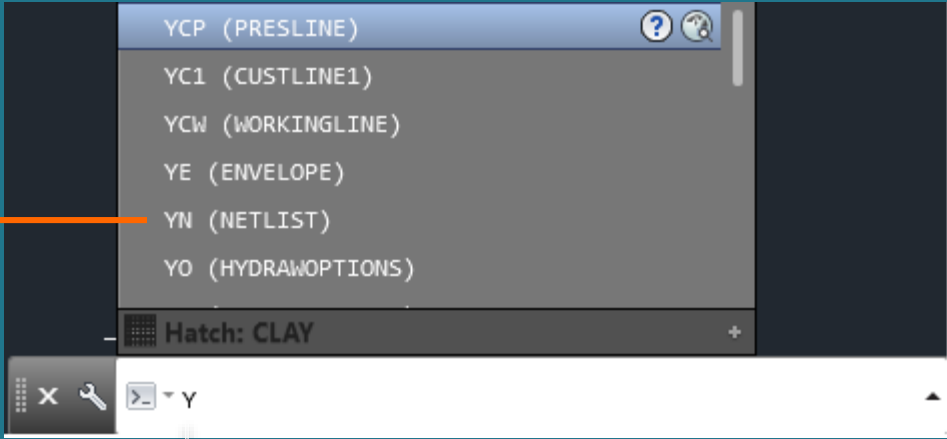
Use Autodesk Vault to manage HyDraw CAD

Drawing



Aliases for HyDraw Commands

- YCP (PRESLINE)
- YC1 (CUSTLINE1)
- YCW (WORKINGLINE)
- YE (ENVELOPE)
- YN (NETLIST)
- YO (HYDRAWOPTIONS)
- YB (UPDATEBALLOON)
- YC2 (CUSTLINE2)
- YC3 (CUSTLINE3)
- YC4 (CUSTLINE4)
- YC5 (CUSTLINE5)
- YCC (CONTRROLLINE)
- YCD (DRAINLINE)
- YCR (RESORVOIRLINE)
- YCS (SUCTIONLINE)
- YG (INSERTGAUGEPORT)
- YI (ASSIGNITEMID)
- YL (LIBRARYEXPLORER)
- YM (MATCHCONPROP)
- YP (PROPERTYMANAGER)
- YPA (PARTSLIST)
- YPO (PORTSLIST)
- YR (REFRESHPROPS)



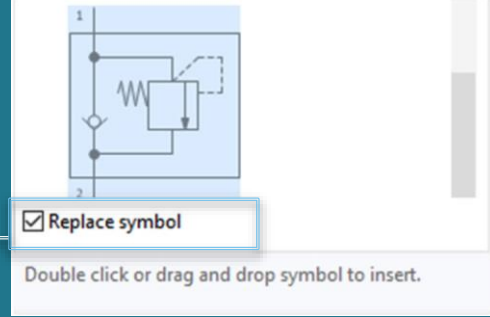
Key in the letter "Y" to bring up the list of aliases for HyDraw shortcut commands



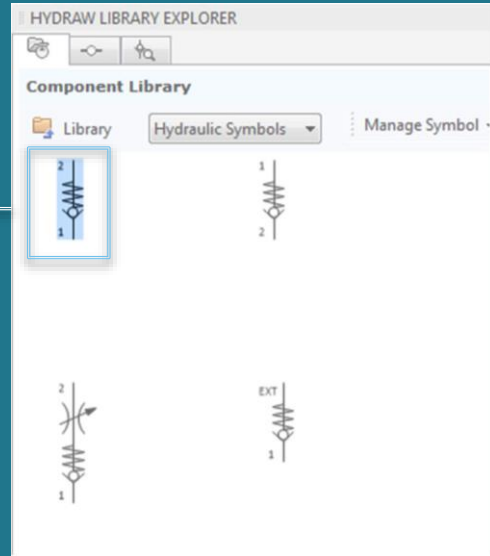


Replace Symbol

Option is enabled when the symbol to be replaced is selected in the drawing

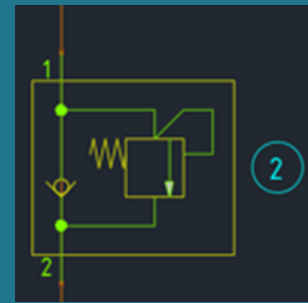


Drag and Drop the new symbol into the drawing to replace the selected symbol

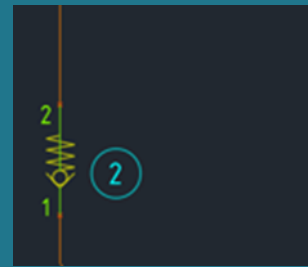


- Lines stay connected after symbol is replaced in the drawing
- Replace Symbol option is also available in HyDraw Library Explorer – Search from Library

Before

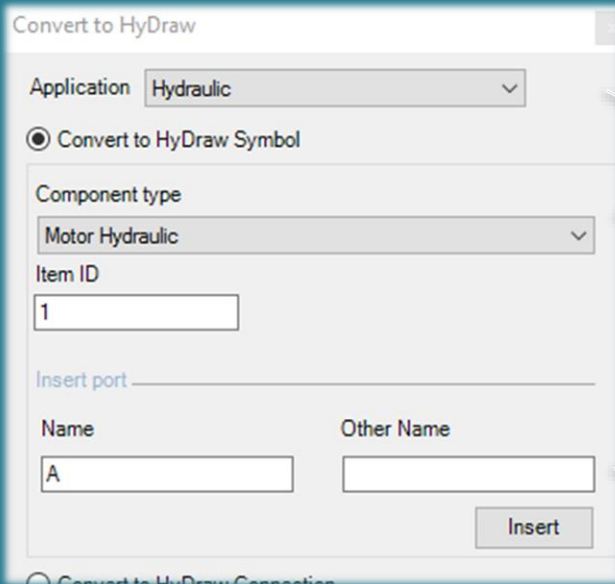
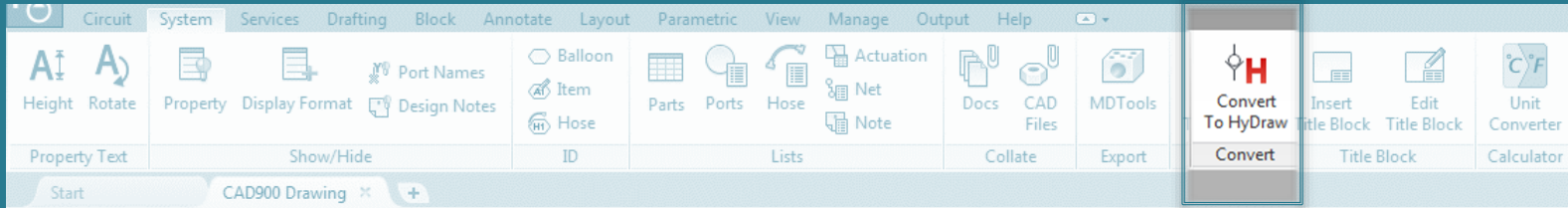


After



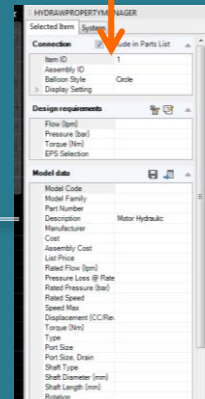
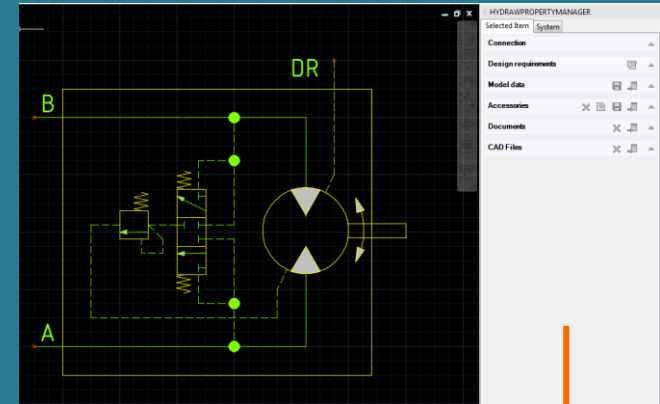


Convert Symbol to HyDraw Object



Specify Application and Component Type

Add Ports to the symbol to make connections

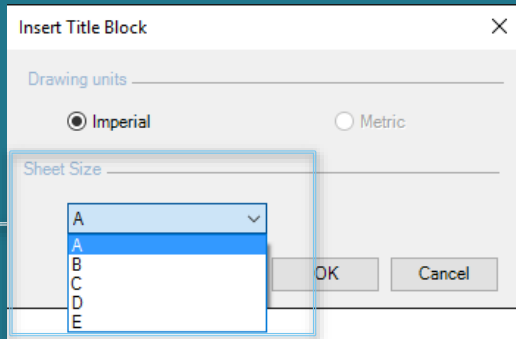
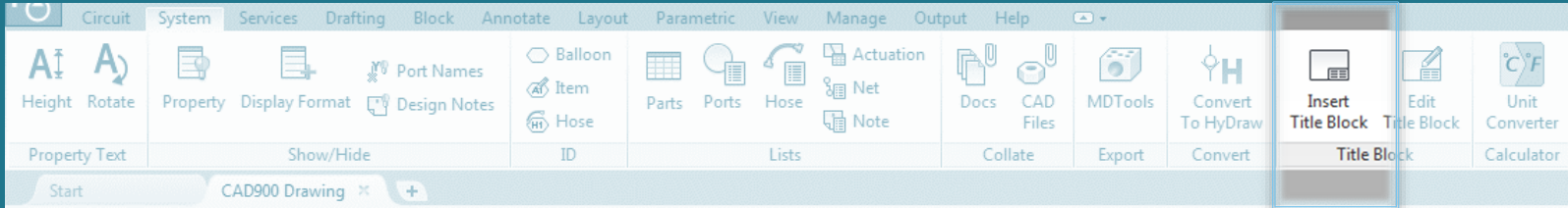


Symbol becomes HyDraw intelligent

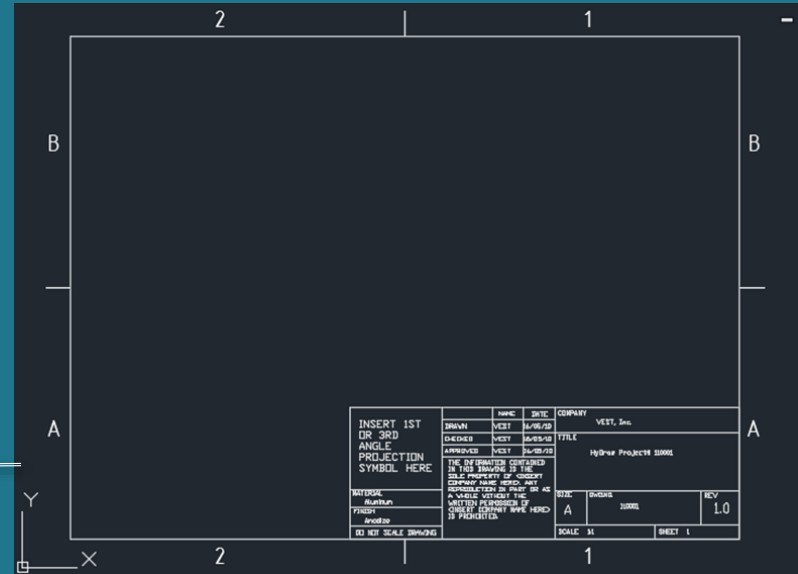




Insert Drawing Sheet Border & Title Block



Select Sheet Size

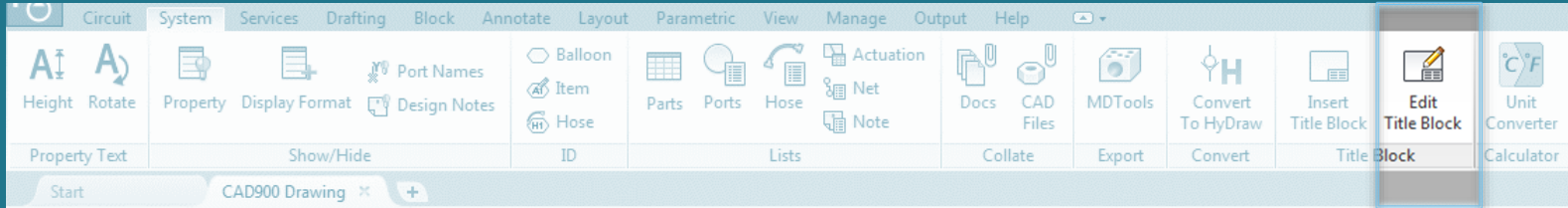


Drawing Sheet Border & Title Block





Edit Title Block Properties



Edit Title Block

Available properties

| Property Name | Value |
|-----------------|------------------------|
| Revision Number | 1.0 |
| Drawing Scale | 1:1 |
| Finish Type | Anodize |
| Material Type | Aluminum |
| Title | HyDraw Project# 110001 |
| Company Name | VEST, Inc. |
| Sheet Size | A |
| Sheet Number | 1 |
| Drawn Name | VEST |
| Drawn Date | 16/05/10 |
| Checked Name | VEST |
| Checked Date | 16/05/10 |
| Approved Name | VEST |
| Approved Date | 16/05/10 |
| Drawing Number | 110001 |

OK Cancel

Enter Title Block properties to be displayed in the drawing

| | | | | |
|--|-----------|--------------------|----------|------------------------|
| INSERT 1ST OR 3RD ANGLE PROJECTION SYMBOL HERE | | NAME | DATE | COMPANY |
| | DRAWN | VEST | 16/05/10 | VEST, Inc. |
| | CHECKED | VEST | 16/05/10 | TITLE |
| | APPROVED | VEST | 16/05/10 | HyDraw Project# 110001 |
| THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF <INSERT COMPANY NAME HERE>. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF <INSERT COMPANY NAME HERE> IS PROHIBITED. | | | | |
| MATERIAL Aluminum | SIZE A | DW.G.NO. 110001 | | REV 1.0 |
| FINISH Anodize | SCALE 1:1 | | SHEET 1 | |
| DO NOT SCALE DRAWING | | | | |





ISO Standard Connection Lines

HyDraw Options

Internet Settings ERP Settings Gauge port Lists & Charts Display Format Drawing Template

Application Units Item ID Connection External Port Library Path Misc.

Connection properties

| Name | Type | Line Type | Scale | Layer | Weight | Color | ISO |
|-----------|----------|------------|-------|-------------|------------|---------|-------------------------------------|
| Pressure | Pressure | BYLAYER | 1 | ISO_LIN_PRE | BYLAYER | ByLayer | <input checked="" type="checkbox"/> |
| Reservoir | Tank | BYLAYER | 1 | ISO_LIN_RES | BYLAYER | ByLayer | <input checked="" type="checkbox"/> |
| Control | Pilot | BYLAYER | 0.5 | ISO_LIN_CON | BYLAYER | ByLayer | <input checked="" type="checkbox"/> |
| Drain | Drain | BYLAYER | 0.5 | ISO_LIN_DRA | BYLAYER | ByLayer | <input checked="" type="checkbox"/> |
| Suction | Suction | BYLAYER | 1 | ISO_LIN_RES | BYLAYER | ByLayer | <input checked="" type="checkbox"/> |
| Working | Pressure | BYLAYER | 1 | ISO_LIN_WOR | BYLAYER | ByLayer | <input checked="" type="checkbox"/> |
| Line1 | Pressure | CONTINUOUS | 1 | Line1 | 0.008 inch | Red | |
| Line2 | Tank | CONTINUOUS | 1 | Line2 | 0.008 inch | Yellow | |
| Line3 | Pressure | CONTINUOUS | 1 | Line3 | 0.008 inch | Maroon | |
| Line4 | Pressure | CONTINUOUS | 1 | Line4 | 0.008 inch | Lime | |
| Line5 | Pressure | CONTINUOUS | 1 | Line5 | 0.008 inch | Aqua | |

Recommended velocity _____ Jumper _____ Dot (.) _____

Pressure line
15 ft/s

Return line
10 ft/s

Jumper size
0.03 inch

Dot size
0.03 inch

Reset Connection Properties

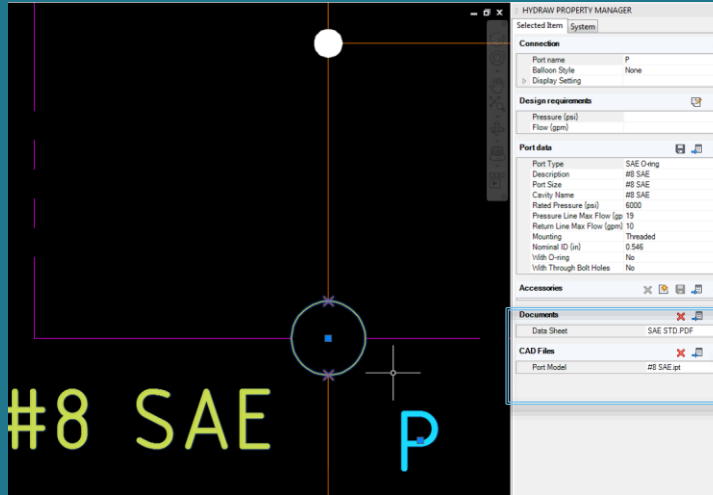
OK Cancel

Use ISO Standard Connection Line Types to standardize your HyDraw drawings

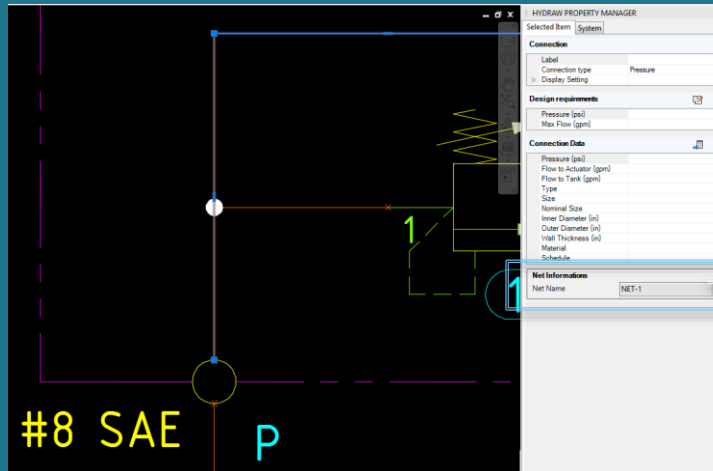




Enhanced HyDraw Property Manager



Link CAD Files & Documents to External Ports



Net information displayed for connection lines





Unlimited Custom Connection Lines

HyDraw Options

Internet Settings ERP Settings Gauge port Lists & Charts Display Format Drawing Template
Application Units Item ID Connection External Port Library Path Misc.

Connection properties

| Name | Type | Line Type | Scale | Layer | Weight | Color | ISO |
|---------|----------|------------|-------|-------------|---------|---------|-------------------------------------|
| Working | Pressure | BYLAYER | 1 | ISO_LIN_WOR | BYLAYER | ByLayer | <input checked="" type="checkbox"/> |
| Line1 | Pressure | CONTINUOUS | 1 | Line1 | BYLAYER | Red | |
| Line2 | Tank | CONTINUOUS | 1 | Line2 | BYLAYER | Yellow | |
| Line3 | Pressure | CONTINUOUS | 1 | Line3 | BYLAYER | Lime | |
| Line4 | Pressure | CONTINUOUS | 1 | Line4 | BYLAYER | Aqua | |
| Line5 | Pressure | CONTINUOUS | 1 | Line5 | BYLAYER | Blue | |
| Line6 | Pressure | CONTINUOUS | 1 | Line5 | BYLAYER | Fuchsia | |
| Line7 | Pressure | CONTINUOUS | 1 | ISO_LIN_PRE | BYLAYER | Maroon | |
| Line8 | Pressure | CONTINUOUS | 1 | ISO_LIN_PRE | BYLAYER | Navy | |
| Line9 | Pressure | CONTINUOUS | 1 | ISO_LIN_PRE | BYLAYER | Green | |
| Line10 | Pressure | CONTINUOUS | 1 | ISO_LIN_PRE | BYLAYER | Olive | |

Recommended velocity Jumper Dot (.)

Pressure line: 5 ft/s None Dot size: 0.03 inch

Return line: 3 ft/s Jumper size: 0.03 inch

Reset Connection Properties

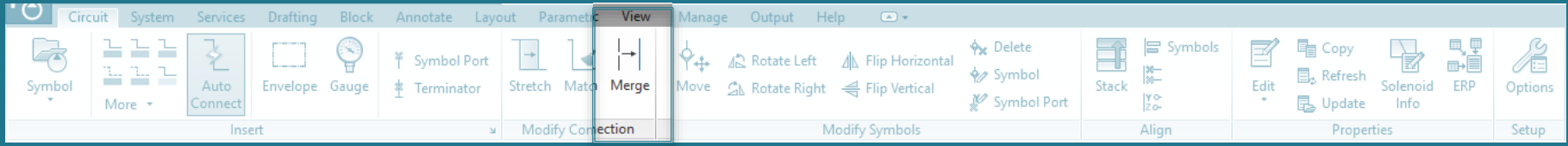
OK Cancel

Manage any number of custom connection lines

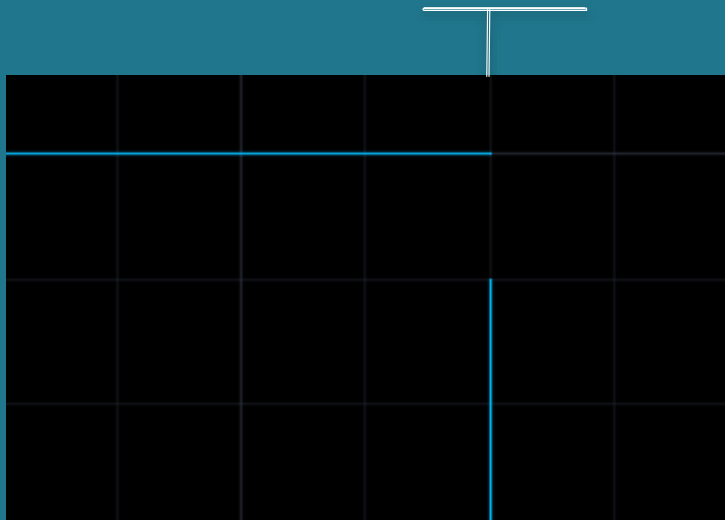




Merge Connection Lines



Before Merge

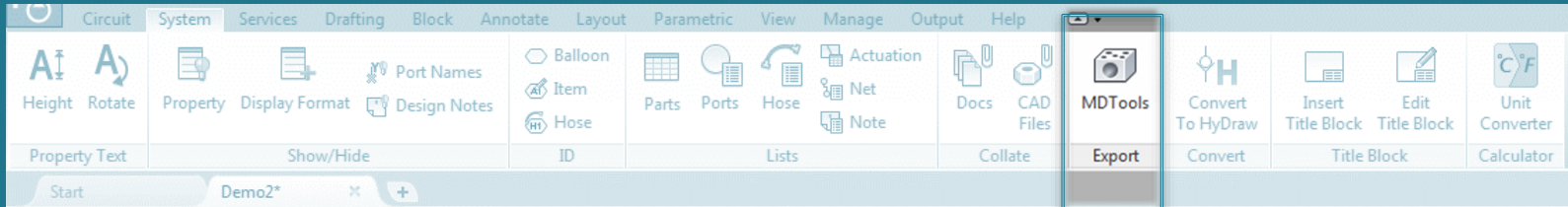


Lines of the same type merged together to become a single polyline

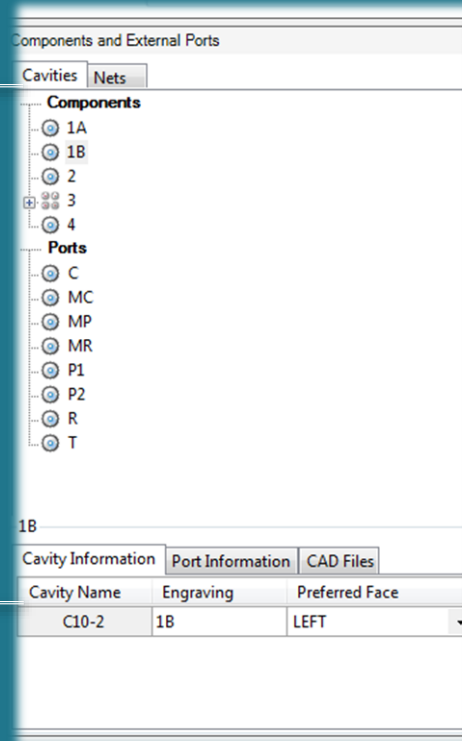




Export to MDTools Enhancements



View by Cavities or Nets

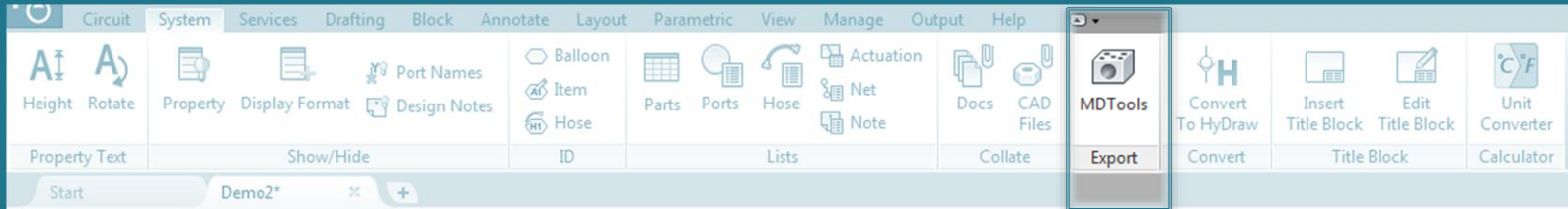


Specify Preferred Face, Engraving and view linked CAD Files





Export to MDTools Enhancements (contd.)



1B

Cavity Information Port Information CAD Files

| Cavity Name | Engraving | Preferred Face |
|-------------|-----------|----------------|
| C10-2 | 1B | LEFT |

Mounting Hole

None

Threaded Bolt Hole

Thru. Hole

Report Export

View or Save the
Export to MDTools
Report

Export to MDTools Report

Report

Components and Orifices

| Item ID | Cavity Name | PortName | Type | Net Name | Stamping Text | CAD Files | Face Preferan |
|---------|-------------|----------|----------|----------|---------------|-------------------|---------------|
| 1A | C10-2 | Port-1 | Pressure | NET-3 | 1A | A02A2P2ZV-1.SL... | LEFT |
| | | Port-2 | Tank | NET-2 | | | |
| 1B | | Port-1 | Pressure | NET-4 | 1B | | |
| | | Port-2 | Pressure | NET-7 | | | |
| 2 | T-5A | Port-1 | Pressure | NET-4 | 2 | CXFA-XAN.SLD... | BACK |
| | | Port-2 | Pressure | NET-4 | | | |
| 3 | D03 | B | Pressure | NET-6 | 3 | | TOP |
| | | P | Pressure | NET-3 | | | |
| | | T | Tank | NET-2 | | | |
| | | A | Pressure | NET-7 | | d1vw_ods_jw_... | |
| 4 | VC10-2 | Port-1 | Pressure | NET-6 | 4 | mv10-20a.SLDP... | RIGHT |
| | | Port-2 | Pressure | NET-1 | | | |

External Ports

| Port Name | Cavity Name | Type | Net Name | Stamping Text | CAD Files | Face Preferan... |
|-----------|-------------|----------|----------|---------------|-----------|------------------|
| C | #6 SAE | Pressure | NET-1 | C | | BACK |
| MC | #4 SAE | Pilot | NET-1 | MC | | BACK |
| MP | #4 SAE | Pressure | NET-3 | MP | | TOP |
| MR | #4 SAE | Pilot | NET-4 | MR | | TOP |
| P1 | #6 SAE | Pressure | NET-3 | P1 | | TOP |
| P2 | #6 SAE | Pressure | NET-3 | P2 | | TOP |
| R | #6 SAE | Pressure | NET-4 | R | | TOP |
| T | #8 SAE | Tank | NET-2 | T | | BACK |

NetList

| Net Name | Net List | Net Pressure |
|----------|-----------------------|--------------|
| NET-1 | MC, C, 4-2 | |
| NET-4 | MR, R, 1B-1, 2-2 | |
| NET-3 | MP, P2, P1, 1A-1, 3-P | |
| NET-2 | T, 1A-2, 3-T | |
| NET-6 | 4-1, 3-B | |
| NET-7 | 1B-2, 2-1, 3-A | |

Close





Assembly ID – Reassign, Display in Drawing & Parts List

Reassign Item ID

Item ID options

Item ID start with:

Assembly ID:

Reassign Only Assembly ID

Balloon

None

Use current balloon type

Items included

Components

Component accessories

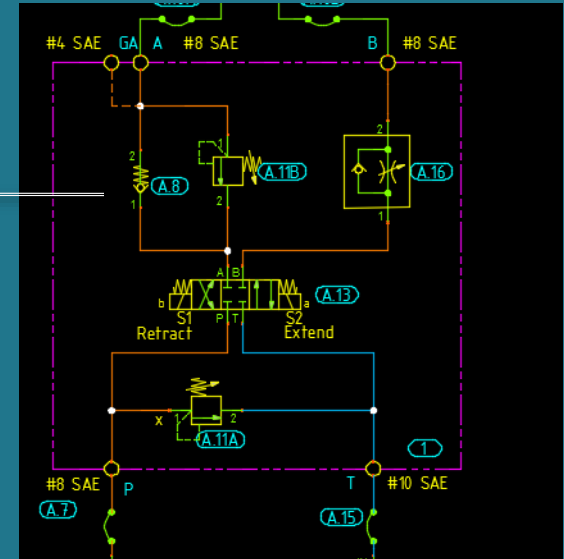
System accessories

Hoses

OK Cancel

Reassign Only Assembly ID

Display Assembly ID along with Item ID in drawing



Display Assembly ID in Parts List

| ITEM ID | QTY | MODEL CODE | DESCRIPTION | MANUFACTURER |
|---------|-----|--------------------------|----------------------------|--------------|
| A.1 | 1 | | MANIFOLD | |
| A.2 | 1 | T-30-F | RESERVOIR | VESCOR |
| A.3 | 1 | EM15/1800/254TC/TE FC | ELECTRIC MOTOR | BALDOR |
| A.4 | 1 | M182682B | MIP ADAPTER | MAGNALOY |
| A.5 | 1 | M300-254T-SAEB | COUPLING SET | MAGNALOY |
| A.6 | 1 | FVQ20-A2R-SE1S-21-C21-12 | PUMP, PRESSURE COMPENSATED | EATON |





Display Properties Enhancements

HyDraw Options

Application Units Item ID Connection External Port Library Path Misc.
Internet Settings ERP Settings Gauge port Lists & Charts Display Format Drawing Template

Components

| Property Name | Show |
|------------------------------|-------------------------------------|
| Beta Ratio | <input checked="" type="checkbox"/> |
| Cavity/Footprint/Interface | <input checked="" type="checkbox"/> |
| Compensator Setting | <input checked="" type="checkbox"/> |
| Compensator Setting #1 | <input checked="" type="checkbox"/> |
| Compensator Setting #2 | <input checked="" type="checkbox"/> |
| Compensator Setting #3 | <input checked="" type="checkbox"/> |
| Cracking Pressure | <input checked="" type="checkbox"/> |
| Cylinder Size | <input checked="" type="checkbox"/> |
| Displacement | <input checked="" type="checkbox"/> |
| Displacement, Cover End | <input checked="" type="checkbox"/> |
| Displacement, Middle Section | <input checked="" type="checkbox"/> |
| Displacement, Shaft End | <input checked="" type="checkbox"/> |
| Flow Setting | <input checked="" type="checkbox"/> |
| Micron Rating | <input checked="" type="checkbox"/> |
| Nominal Size | <input checked="" type="checkbox"/> |

None

External Ports

| Property Name | Show |
|---------------|-------------------------------------|
| Size | <input checked="" type="checkbox"/> |

Connections

| Property Name | Show |
|---------------|-------------------------------------|
| Size | <input checked="" type="checkbox"/> |

Reset

OK Cancel

Manage display of properties from within HyDraw





Manage Drawing Templates

HyDraw Options

| Application | Units | Item ID | Connection | External Port | Library Path | Misc. |
|-------------------|--------------|------------|----------------|----------------|------------------|-------|
| Internet Settings | ERP Settings | Gauge port | Lists & Charts | Display Format | Drawing Template | |

Name _____

Title Block:

Border:

Template Path & Size _____

Path:

| Size | File Name |
|------|----------------------------------|
| A | HyDraw Title Block A Size.dwt |
| B | HyDraw Title Block B Size.dwt |
| C | HyDraw Title Block C Size.dwt |
| D | HyDraw Title Block D Size.dwt |
| E | HyDraw Title Block E Size.dwt |
| | aoem -Named Plot Styles.dwt |
| | aoem -Named Plot Styles3D.dwt |
| | aoemISO -Named Plot Styles.dwt |
| | aoemISO -Named Plot Styles3D.dwt |
| | HyDraw Imperial.dwt |
| | HyDraw Metric.dwt |
| | HyDraw Title Block A Size.dwt |
| | HyDraw Title Block A0 Size.dwt |
| | HyDraw Title Block A1 Size.dwt |
| | HyDraw Title Block A2 Size.dwt |
| | HyDraw Title Block A3 Size.dwt |
| | HyDraw Title Block A4 Size.dwt |
| | HyDraw Title Block B Size.dwt |

Enter Title Block & Border Name

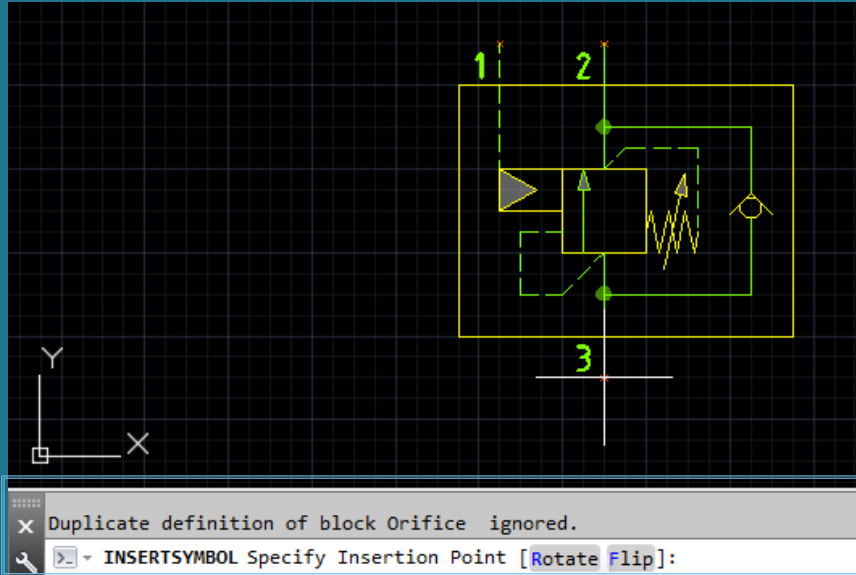
Set Drawing Template Path

Assign a template to each size



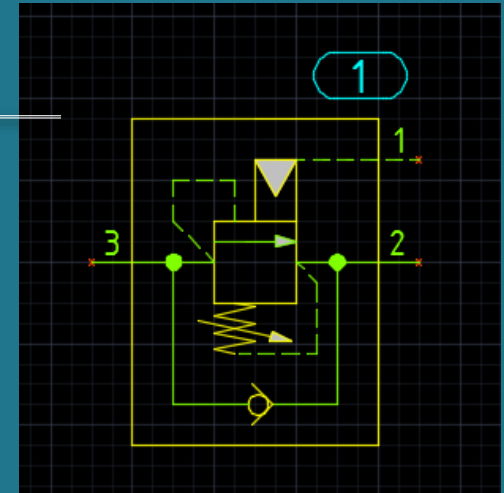


Flip or Rotate Symbols while Inserting into Drawing

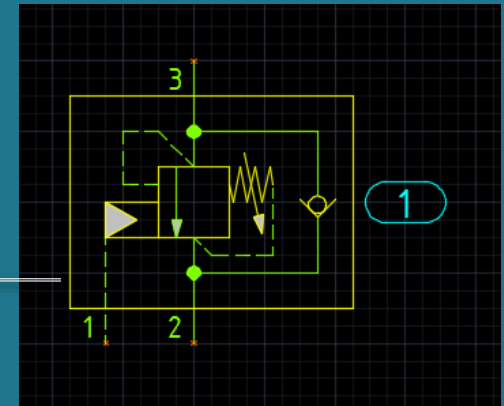


Rotate/Flip the symbol using the command line while inserting into drawing

Symbol Flipped Right



Symbol Flipped Vertically





Manage HyDraw Drawings through Autodesk Vault

The screenshot displays the Autodesk Vault Workgroup 2016 interface. The main window shows a file list for 'HyDraw CAD Schematics' with columns for Name, State, and Revision. Below this, a 'History' tab is active, showing a table of version and revision information.

| Thumbnail | File Name | Revision | State (Historical) | Created By | Checked In | Comment |
|-----------|---------------------------|----------|--------------------|---------------|-------------------|----------------------|
| | HyDraw_Project-S100010... | | | Administrator | 5/2/2016 12:07 PM | |
| | HyDraw_Project-S100010... | A | | Administrator | 5/2/2016 12:08 PM | BRAKE AND DRAIN A... |

Manage HyDraw CAD drawing revisions through Autodesk Vault



HyDraw® Library Manager 2016, What's New?

Delete Multiple Model Codes

Link CAD Files & Documents to Multiple Model Codes

Add/Delete Connection Line Types



Delete Multiple Model Codes

HyDraw Library Manager 2016 - [Components: Model Data]

Components Accessories External Ports Connections Sub-systems

Symbol View Model Data View Documents CAD Files Model Properties Design Properties Display Formats

Search by

Application: Hydraulic

Component type: All Component Types

Manufacturer: All Manufacturers

Model Code

| Model Code | Model Family | Description | Manufacturer |
|---------------------|--------------|-----------------------|---------------|
| 04.31.28.00.57* | 04.31.28 | Check Valve | Bosch Rexroth |
| 2 1/2..II-2HCT14... | 2H | CYLINDER | Parker |
| 451-1-1/4 | 451 | Hose | Parker |
| 4WE10C*X/C** | 4WE10 | Direction Control ... | Bosch Rexroth |
| 4WE10J*X/C** | 4WE10 | Direction Control ... | Bosch Rexroth |
| 4WE6E6X/EG24... | 4WE6 | DIRECTIONAL C... | Bosch Rexroth |
| 4WE6J6X/EG24... | 4WE6 | | Bosch Rexroth |
| 4WE6J6X/EW23... | 4WE6 | | Bosch Rexroth |
| 4WE6J73-6X/E*... | 4WE6J73 | | Bosch Rexroth |
| 4WE6M6X/EG2... | 4WE6 | | Bosch Rexroth |
| 4WEH16J*X** | 4WEH16 | | Bosch Rexroth |
| 50AS105QEBPG... | 50AS | FILTER | Parker |
| 721-12-36 | R12 | HOSE | Parker |

Context Menu:

- New Model
- Delete Model(s)
- Link Documents
- Link CAD Files

Select multiple model codes and right click to delete





Link CAD Files & Documents to multiple model codes

HyDraw Library Manager 2016 - [Components: Model Data]

Components Accessories External Ports Connections Sub-systems

Symbol View **Model Data View** Documents CAD Files Model Properties Design Properties Display Formats

Search by

Application: Hydraulic

Component type: All Component Types

Manufacturer: All Manufacturers

Model Code:

| Model Code | Model Family | Description | Manufacturer |
|--------------------|--------------|-----------------------|---------------|
| 04.31.28.00.57* | 04.31.28 | Check Valve | Bosch Rexroth |
| 2 1/2 JJ-2HCT14... | 2H | CYLINDER | Parker |
| 451-1-1/4 | 451 | Hose | Parker |
| 4WE10C*X/C** | 4WE10 | Direction Control ... | Bosch Rexroth |
| 4WE10J*X/C** | 4WE10 | Direction Control ... | Bosch Rexroth |
| 4WE6E6X/EG24... | 4WE6 | DIRECTIONAL C... | Bosch Rexroth |
| 4WE6J6X/EG24... | 4WE6 | Direction Control ... | Bosch Rexroth |
| 4WE6J6X/EW23... | 4WE6 | Direction Control ... | Bosch Rexroth |
| 4WE6J73-6X/E... | | Direction Control ... | Bosch Rexroth |
| 4WE6M6X/EG2... | | Direction Control ... | Bosch Rexroth |
| 4WEH16J*X** | | Direction Control ... | Bosch Rexroth |
| 50AS105QEBP... | | | Parker |

Import New X

Selected Model properties

- Type
- Model Data
- Accessories
- Documents
- CAD Files

Context menu for selected row:

- New Model
- Delete Model(s)
- Link Documents
- Link CAD Files

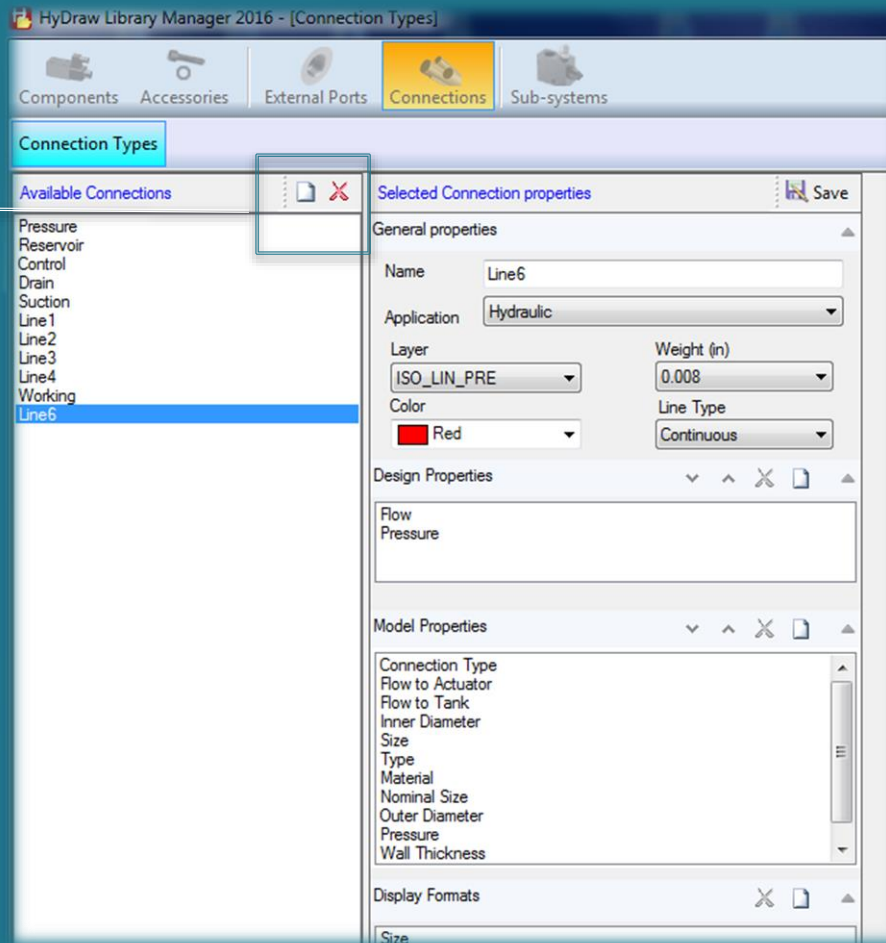
Link Documents and CAD Files to multiple model codes





Add or Delete Connection Line Types

Add or Delete
Connection Line
Types to use inside
HyDraw CAD



Do more...

HyDraw CAD⁹⁰⁰ schematic drawing software

 **FREE** HyDraw CAD⁹⁰⁰ Evaluation Software

For more information, please call +1 (248) 649-9550, or email sales@VESTusa.com
In **Europe**, please call +49 (0) 6083 95716-1, or email otto.friedrich@taunus-it.de
call +39 328 695 70 01 or email carlo.molon@fluidpower.it

