

HyDraw[®] CAD 2019

What's New

Power-to-Design Circuits



HyDraw® CAD 2019 What's New!

Parts List Auto-Updated

Properties Equally Spaced in Drawing

Inserted Symbol Auto Numbered based on Item ID Scheme

Component without Model Code Auto-Grouped

Copied Symbol Auto Numbered based on Item ID Scheme

Edit and Update Blank Fields in Parts List

Group Item ID by Component Code

Update Hose ID Text Height

Title Block Attributes Updated using Text File

Change and Update Hose Balloon Type

Network License option available within HyDraw CAD Client

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Vertical Stacking option for Item ID and Balloons

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ISO 1219-2 Item ID Auto Numbering Scheme

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Line Type Preview available for HyDraw Connection Lines

HyDraw Ribbon Created using Cuix file

HyDraw Library Manager

Define Component Code for a Component Type



Parts List Auto-Updated

Change in a component's property value reflects in the Parts List:

- Flag
- Text color changes to red

Automatically update the Parts List using the UPDATEPARTLIST command.

- Right click on the Parts List or
- Use the command line.

ITEM ID	QTY	MODEL CODE	DESCRIPTION	MANUFACTURER
1	1		MANIFOLD	
3	3	DYN-CF1P300A SAE	PRESSURE GAGE, 0-5000 PSI	DYNAMIC
4	1	KP2000	PUMP MOTOR ASSEMBLY	CUSTOM
6	1	P30-100	ELECTION STRAINER	EATON
7	1	A04B2PZ-N1	DIRECT ACTING PRESSURE RELIEF VALVE	PARKER
8	1	CXDAXAN	CHECK VALVE	EATON
9	1	4WERJRK6 W20NKR	DIRECTION CONTROL VALVE	HYDAC
10	1	A04B2PZ-N1	DIRECT ACTING PRESSURE RELIEF VALVE	YUKEN-INDIA
11	1	S0AS 050E BPG020	FILTER	EATON
12	1	3010 1HC7M	NEEDLE VALVE	HYDAC
13	1	LS16	LOAD & TEMPERATURE SWITCH	YUKEN-INDIA
14	1	BR21	FILLER HEATER	YUKEN-INDIA
15	1	KR10002	BLACK MATING CONNECTOR	BOSCH Rexroth

NET NAME	NET LIST	NET PRESSURE (PSI)
NET-1	MC, B-2, C	3000
NET-2	F-T, T, SA-2	2500
NET-3	F-P, P2, P1, M-P, SA-1	2500
NET-4	NR, B-2, R, SB-1	2000
NET-6	P-1, P-B	2500
NET-7	S-1, SB-2, F-A	4000

FUNCTION	%SV1	%SV2	%HOSE
CYLINDER EXT.	<input type="radio"/>	<input type="radio"/>	3
CYLINDER RET.	<input type="radio"/>	<input type="radio"/>	

HYDRAW PROPERTY MANAGER

Selected Item System

Design requirements

Flow {gpm}

Pressure {psi}

Model data

Model Code **A04B2PZ-N121**

Model Family A04B2

Part Number A10-FR01H-12

Description Direct Acting Pressure F

Manufacturer Yuken-India

Cost

Assembly Cost 4

List Price

Rated Flow {gpm} 26

Pressure Loss @ Ra

Rated Pressure {psi} 6000

Pressure Setting {psi} 2500

Cavity/Footprint/Inter C10-2

Pressure Min {psi}

Pressure Max {psi}

Type Poppet

Installation Torque (4) 37 lb.ft./50 Nm

Installation Torque (S) 37 lb.ft./50 Nm

Catalog Number HY 15-3501/US

Set Model Family of the selected item

UPDATEPARTLIST

UPDATEPARTLIST

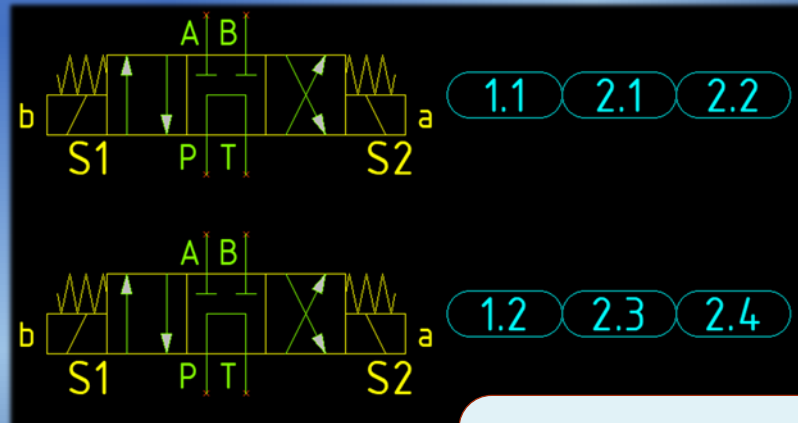
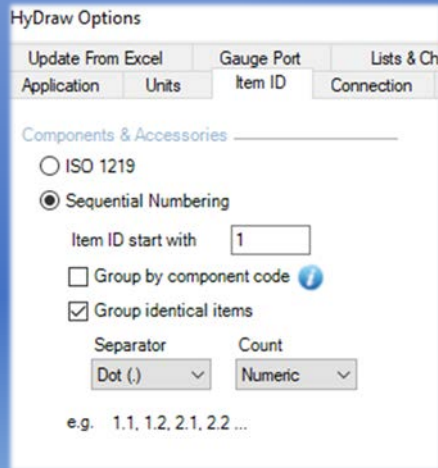
Note:

1. Mismatch in component data value with respect to the schematic reflects in the change in text color in the Parts List to red and appearance of a flag at the start of the row.
2. Update Parts List by right-clicking the Parts List table and selecting 'Update Parts List'.





Inserted Symbols Auto Numbered based on Item ID Scheme

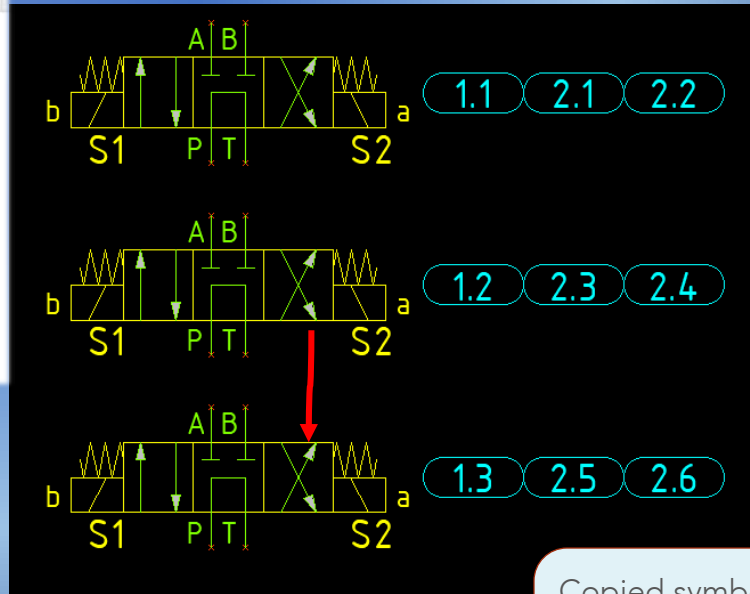
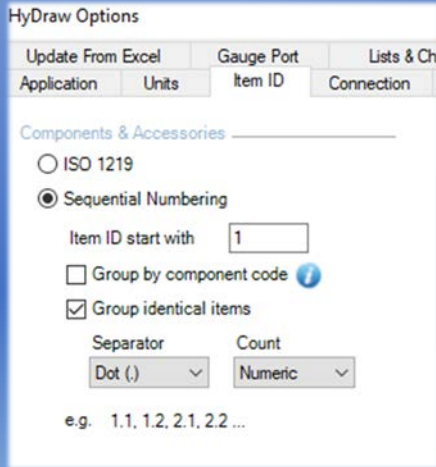


Inserted Symbol is automatically numbered based on the Components & Accessories numbering scheme selected in HyDraw Options, Item ID tab





Copied Symbols Auto Numbered based on Item ID Scheme



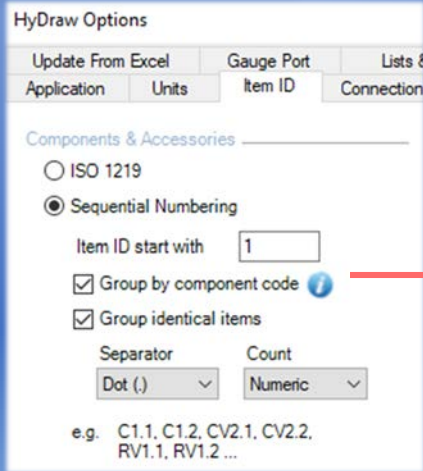
Copied symbol is automatically numbered based on the Components & Accessories numbering scheme selected in HyDraw Options, Item ID tab

Note: HyDraw checks the Item ID number of the selected numbering scheme and then assigns the next copied symbol with the number increment by one.

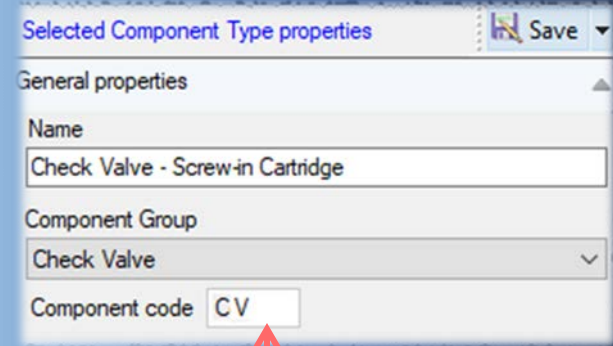




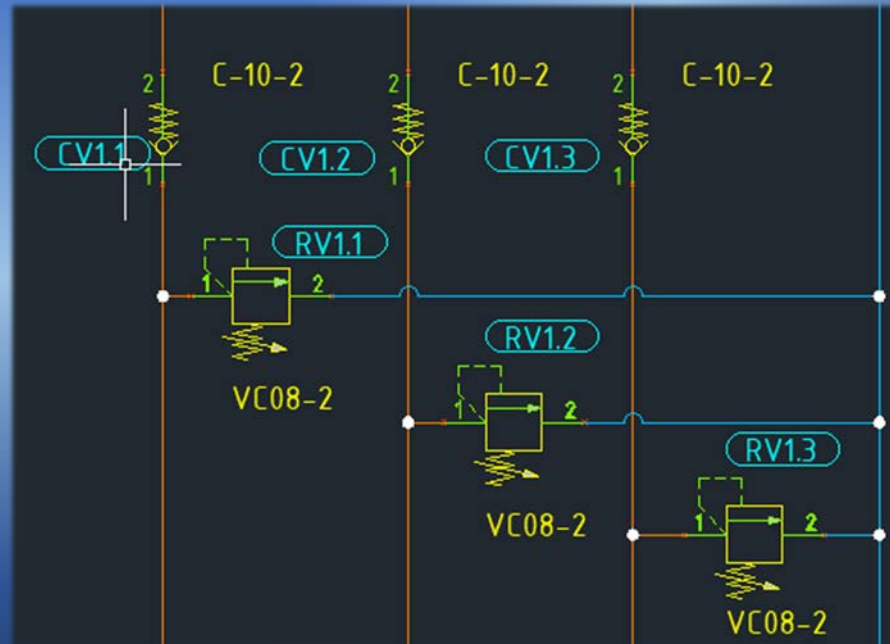
Group Item ID by Component Code



Item ID grouped based on the Component code assigned to Component types



Component Code assigned for the Component Type in HyDraw Library using HyDraw Library Manager 2019 [more...](#)





Title Block Attributes Updated using Text File

HyDrawTitleBlockAttributes.txt - Notepad

BLOCKNAME	REV	SCALE	FINISH	MATERIAL	TITLE	COMPANY	SHEETSIZE	SHEET	DRAWNAME	DRAWDATE	CHECKEDNAME	CHECKEDDATE	APPROVEDNAME	APPROVEDDATE	DWGNO
HyDraw Title Block	0	1:1	Clear	Aluminum	Saving Lock System	Oiley Hydraulics	B	1	Janis Joplin	04/05/2018	Eric Clapton	04/05/2018	Jimi Hendrix	04/06/2018	M0001

Text File with Title Block Attributes

Edit Title Block

Available properties

Property Name	Value
Revision Number	
Drawing Scale	
Finish Type	
Material Type	
Title	
Company Name	
Sheet Size	A
Sheet Number	
Drawn By	
Drawn Date	
Checked By	
Checked Date	
Approved By	
Approved Date	
Drawing Number	

Import Export OK Cancel

Import Title Block Attributes from external text file

Edit Title Block

Available properties

Property Name	Value
Revision Number	0
Drawing Scale	1:1
Finish Type	Clear
Material Type	Aluminum
Title	Saving Lock System
Company Name	Oiley Hydraulics
Sheet Size	B
Sheet Number	1
Drawn By	Janis Joplin
Drawn Date	04/05/2018
Checked By	Eric Clapton
Checked Date	04/05/2018
Approved By	Jimi Hendrix
Approved Date	04/06/2018
Drawing Number	M0001

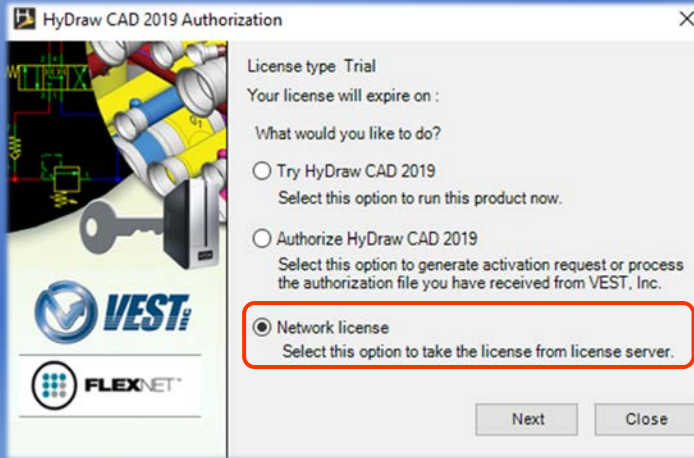
Import Export OK Cancel

Export Title Block Attributes to external text file

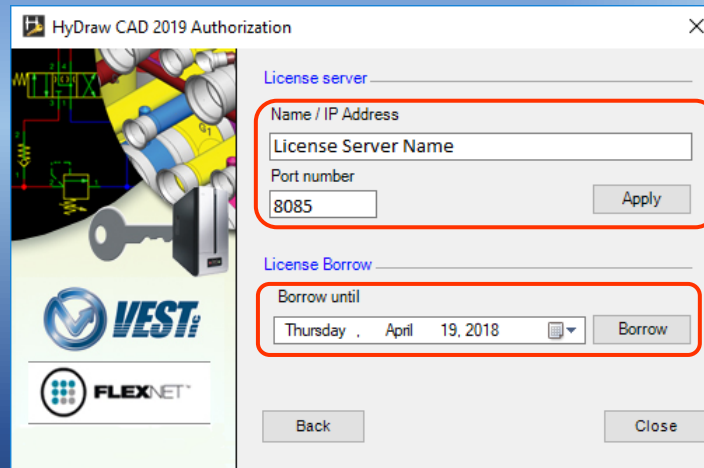




Network License option available within HyDraw CAD Client



Network License Option is now available within HyDraw CAD Client



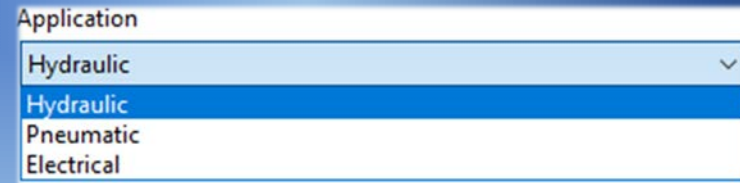
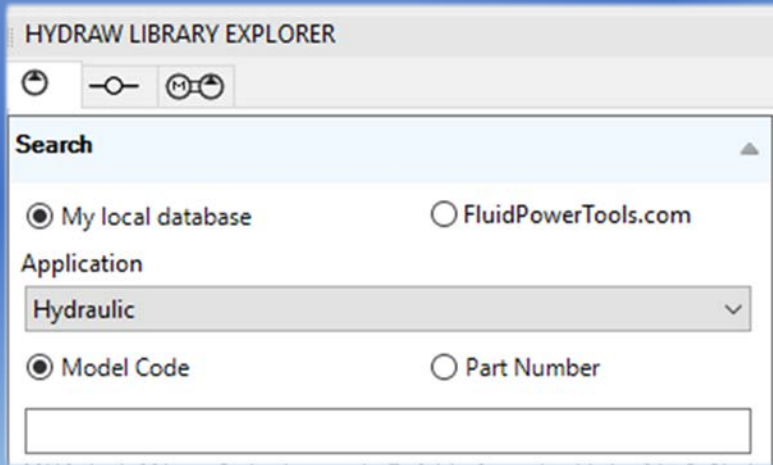
Check License directly from the client by entering server details

Borrow License from HyDraw CAD Client





Search Components by Application Type



Option to search by Application type:
Hydraulic, Pneumatic or Electrical is now
available in HyDraw Library Explorer

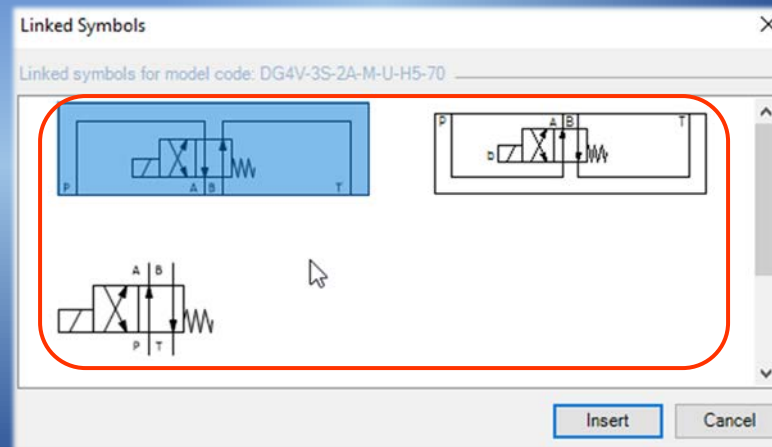


Select Symbol to Insert from Parts List

Model Code in Parts List has multiple symbols linked to it in the HyDraw Library

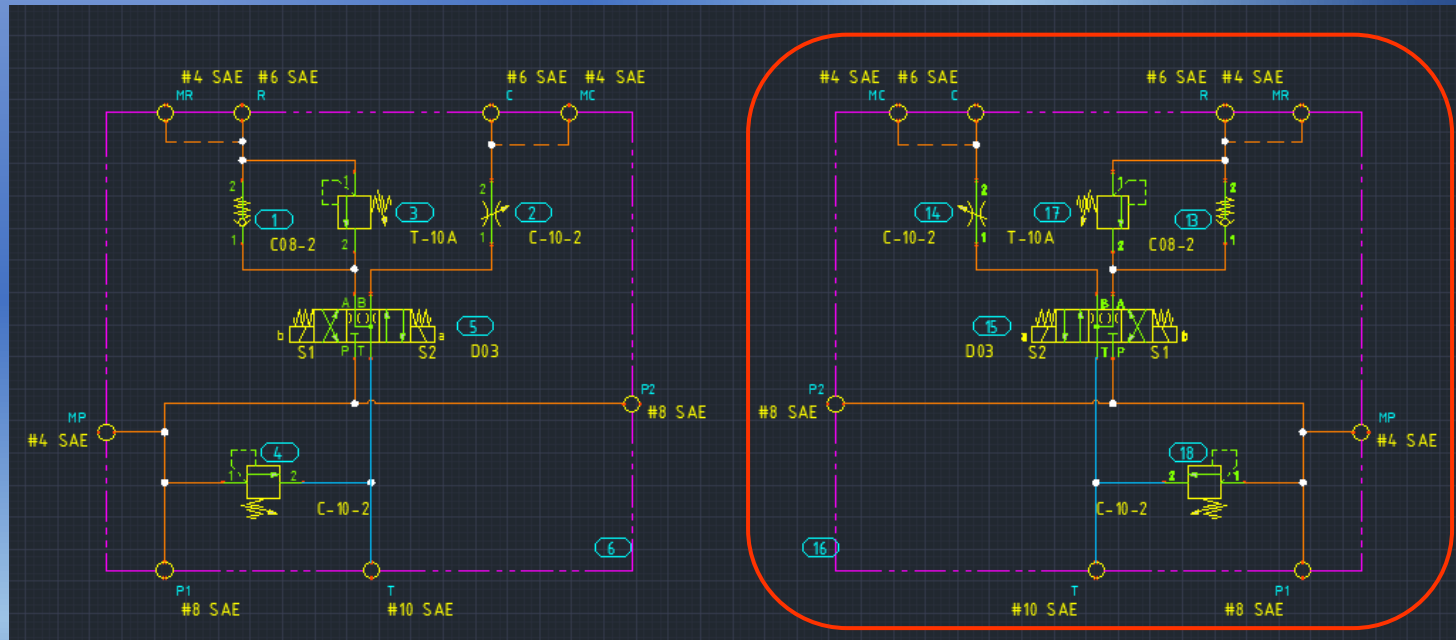
	A	B	C
1	MODEL CODE	DESCRIPTION	MANUFACTURER
2	DG4V-3S-2A-M-U-H5-70	DIRECTION CONTROL VALVE - SOL OPERATED - SURFACE MOUNTED	EATON
3	4WE6E6X/EG24N9K4/A12	DIRECTION CONTROL VALVE	BOSCH REXROTH

Select an appropriate symbol to insert from the Parts List into the drawing





Mirror HyDraw Schematic



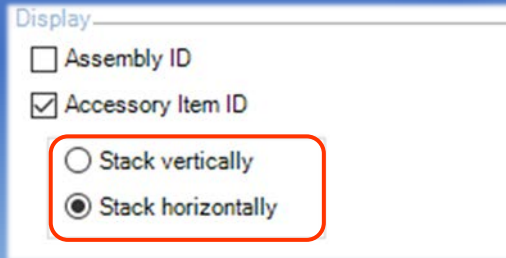
Mirror HyDraw Schematic automatically corrects the orientation and position of the texts of Item ID, Properties and Balloons

Note: This is an enhancement to the AutoCAD 'MIRROR' command.

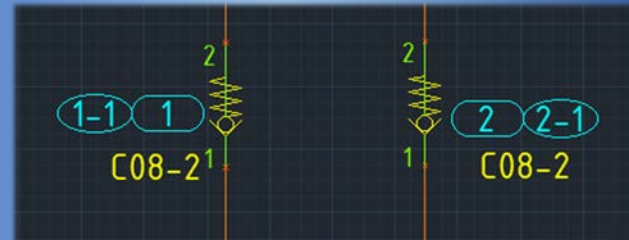




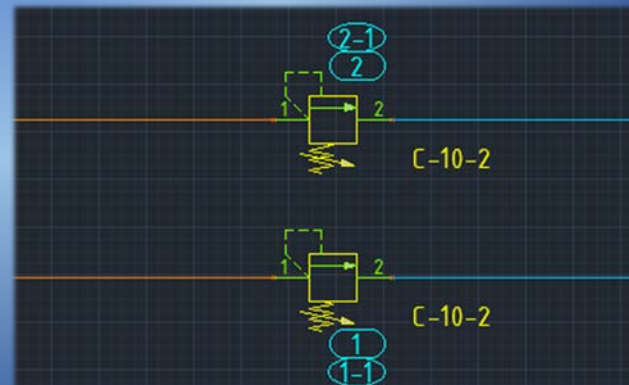
Vertical Stacking option for Item ID and Balloons



Accessory Item ID Stacking options in HyDraw Options > Item ID



Horizontal Stacking of Accessory IDs



Vertical Stacking of Accessory IDs

Note: Option to 'Stack Vertically' is now added



ISO 1219-2 Item ID Auto Numbering Scheme

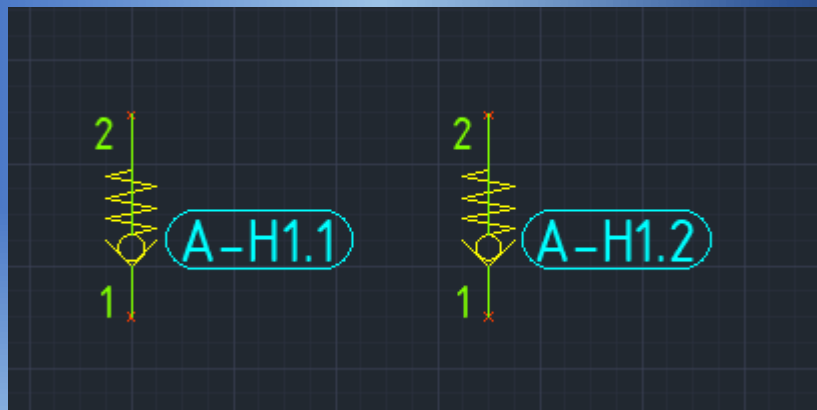
Item ID options

Installation Code
A

Circuit Number
1

Medium Code
H - Hydraulics

Define ISO1219-2
Numbering Scheme
for the first symbol



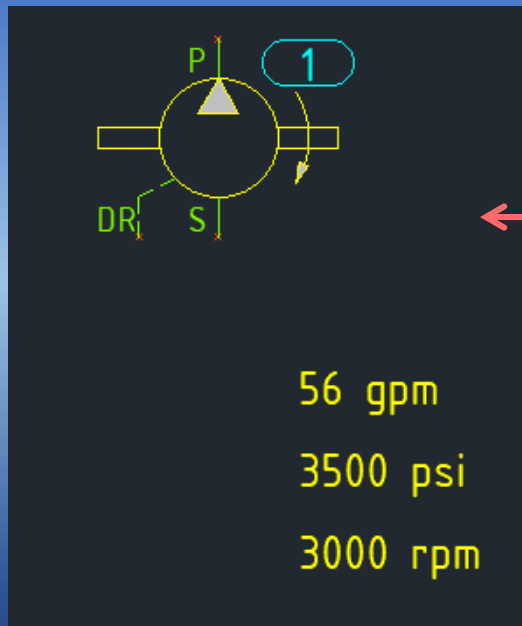
HyDraw stores the prefix and continuously
increments the index along with the prefix



Properties Equally Spaced in Drawing

Selected Item	
System	
Symbol <input type="checkbox"/> Exclude from Parts List	
Item ID	1
Assembly ID	
Balloon Style	Rounded Rectangle
▼ Display Setting	
Displacement	Hide
Port Size, Inlet	Hide
Port Size, Outlet	Hide
Rated Flow	Show
Rated Pressure	Show
RPM	Show
Accessory ID	Hide

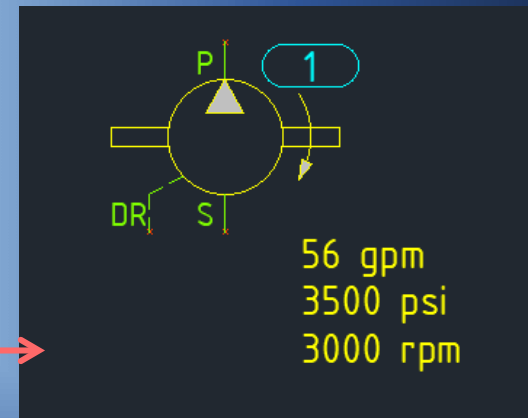
HyDraw CAD 2018



Empty space appears for hidden displayable properties

The spacing between the displayable properties is automatically controlled

HyDraw CAD 2019





Components without Model Code Auto-Grouped

Create Parts List

ITEM ID	QTY	DESCRIPTION	MANUFACTURER
1	1	MANIFOLD	
2	2	PILOT OPERATED P...	SUN HYDRAULICS
3	1	CHECK VALVE	PARKER
4	1	DIRECTION CONTR...	PARKER
5	1	NEEDLE VALVE	EATON

** Double click the blank cell to edit.

Back Export Update Insert Cancel

For components without model code, all identical components are grouped on the basis of properties listed in the Parts List





Edit and Update Blank Fields in Parts List

Create Parts List

ITEM ID	QTY	DESCRIPTION	MANUFACTURER
1	1	MANIFOLD	
2	2	PILOT OPERATED P...	SUN HYDRAULICS
3	1	CHECK VALVE	PARKER
4	1	DIRECTION CONTR...	PARKER
5	1	NEEDLE VALVE	EATON

** Double click the blank cell to edit

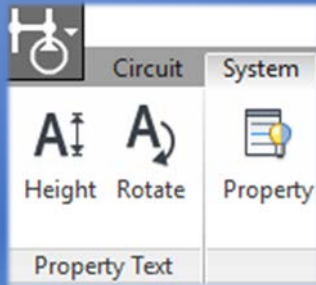
Back Export Update Insert Cancel

Double Click and enter required properties in the blank cells and Update the Parts List

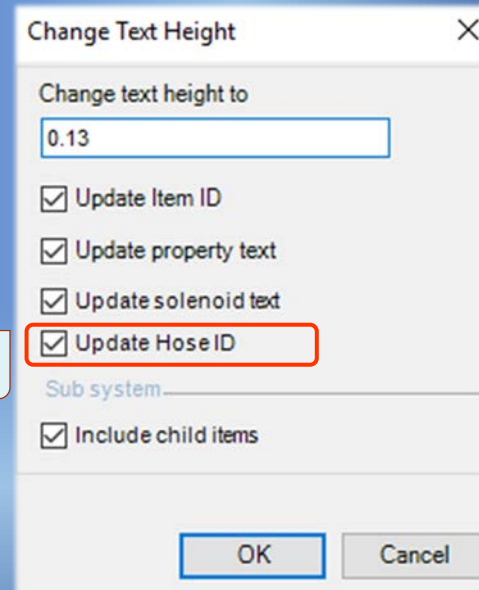
Note: The Model Data linked to the symbol in the drawing will also get updated if the Parts List is updated.



Update Hose ID Text Height

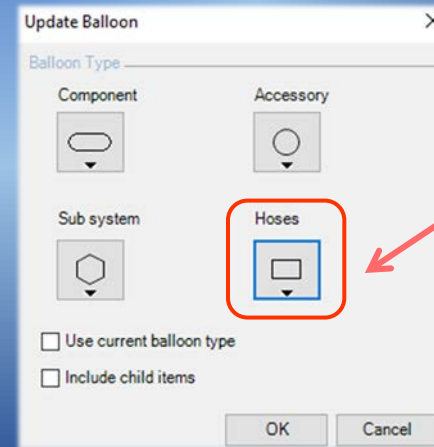
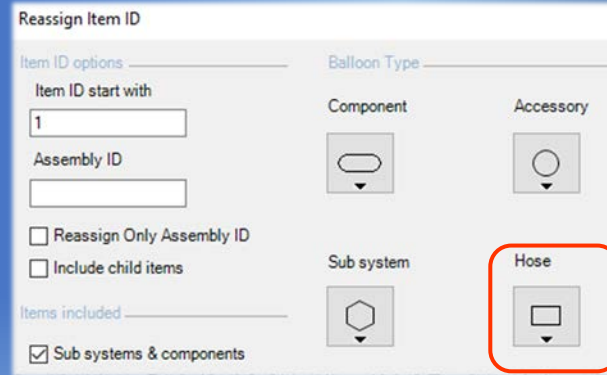
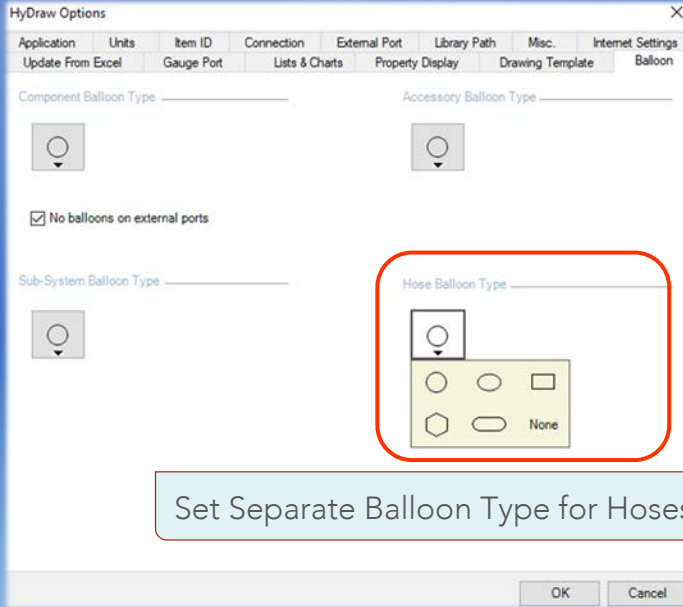


Update Hose ID Text Height



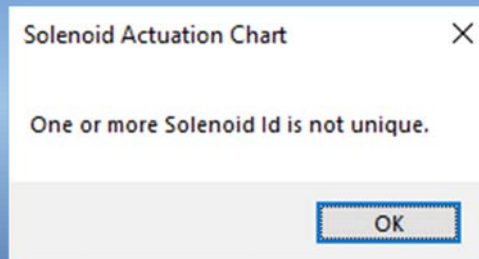


Change and Update Hose Balloon Type





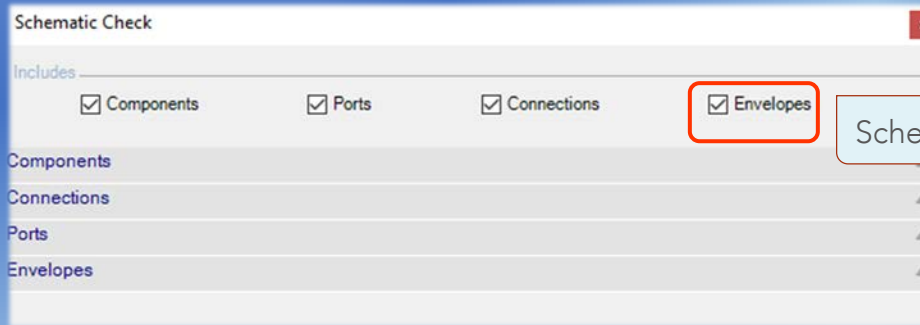
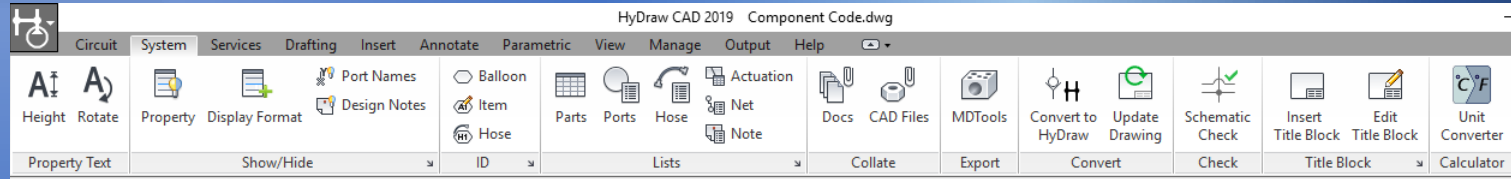
Warning for Non-Unique Solenoid ID



Warning message is displayed to indicate duplicate Solenoid IDs, when chart is created without Item ID as an option



Enhanced Schematic Check



Schematic check for Envelopes added

Items	Error Type
P1	2 is not connected
T	2 is not connected
P2	2 is not connected

Unconnected ends of External Ports listed

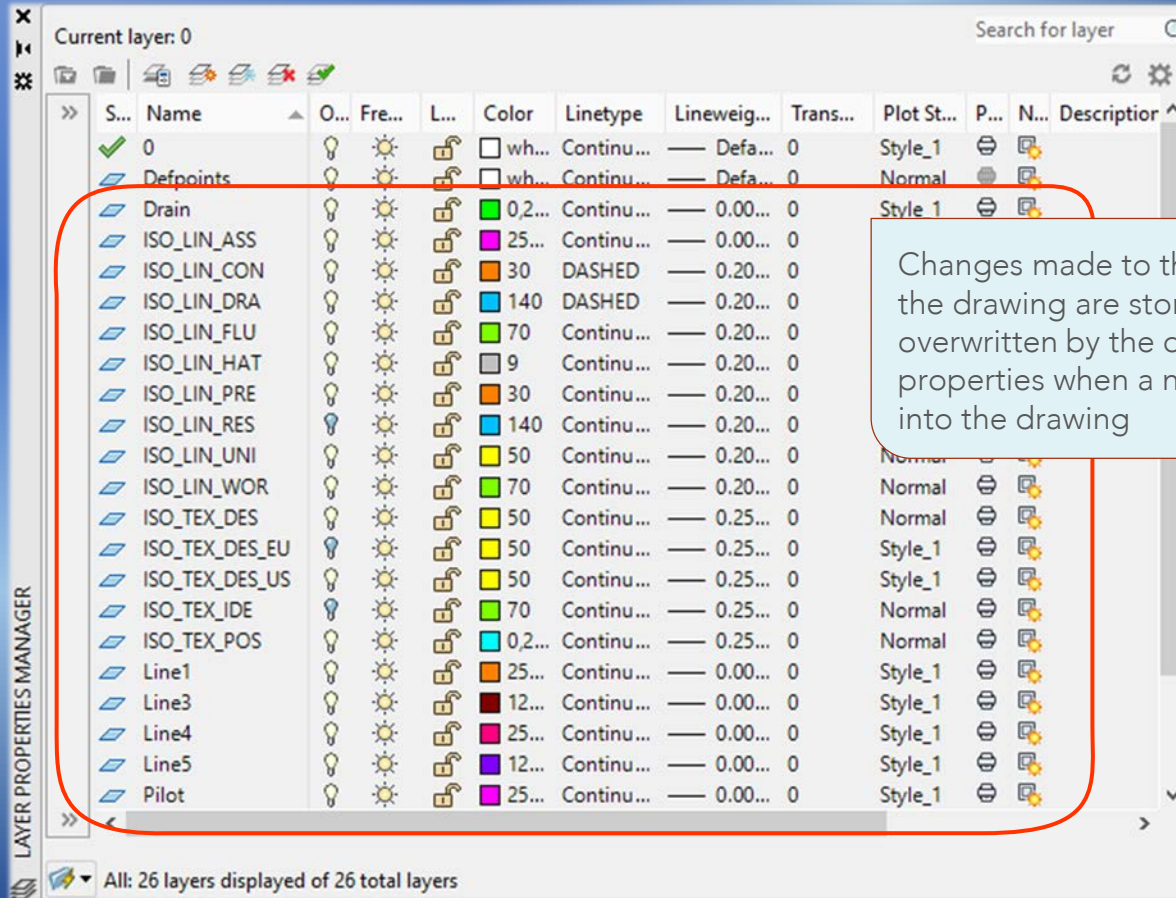
Items	Error Type
Connection 1	Reservoir and Pressure is connected.

Validation of Connection Error



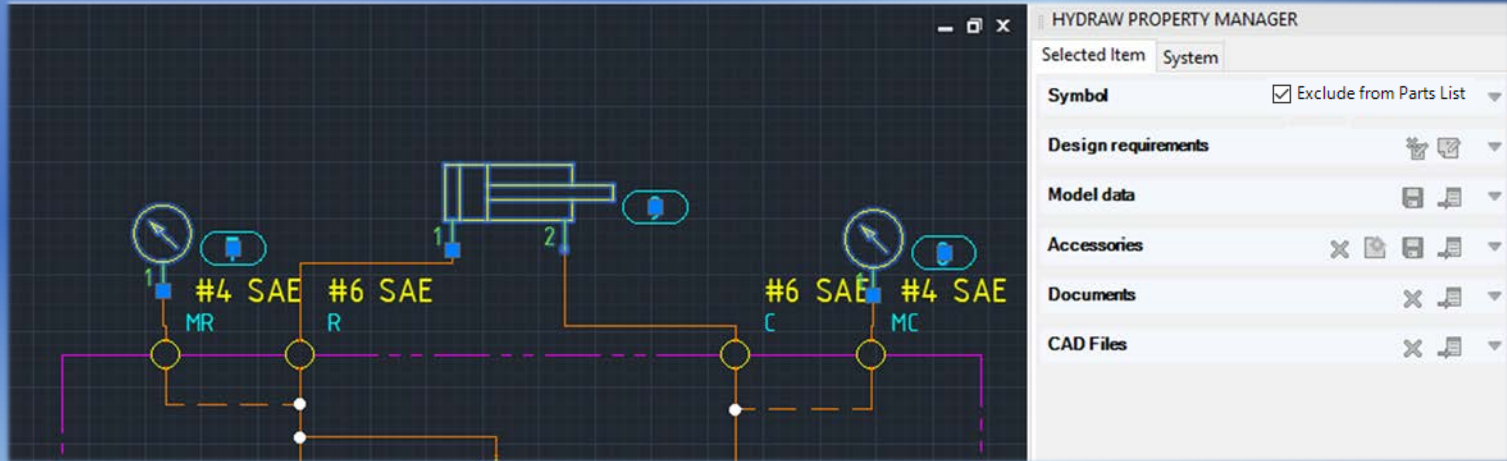


Customized HyDraw Layer Properties Stored in the Drawing





Exclude Multiple Items from Parts List

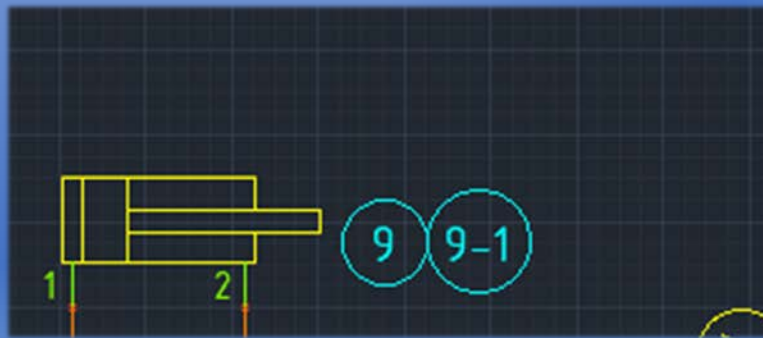


Multiple Component selection in the drawing can be excluded from the Parts List







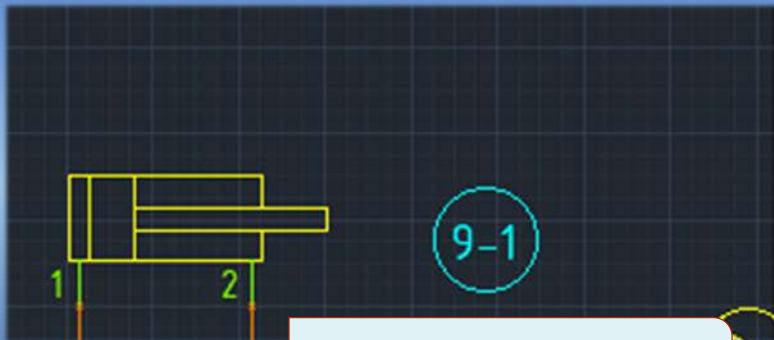
Display Accessories of Components Excluded from Parts List





Symbol	
<input type="checkbox"/> Exclude from Parts List	
Item ID	9
Assembly ID	
Balloon Style	
> Display Setting	

Design requirements  

Component included in Parts List



Symbol	
<input checked="" type="checkbox"/> Exclude from Parts List	
Item ID	
Assembly ID	
Balloon Style	
> Display Setting	

Design requirements  

Component not included in Parts List

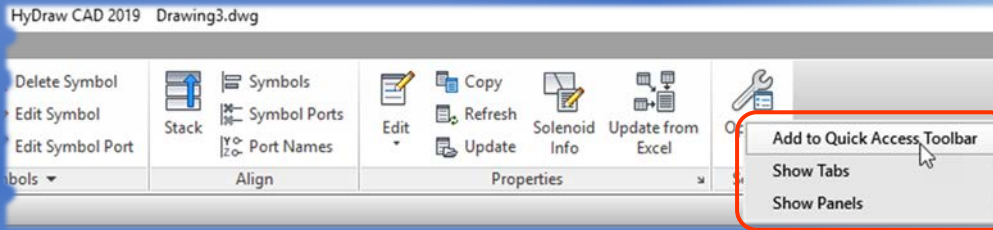
Accessory is still displayed in the drawing

Note: You can now exclude a component from the Parts List and not exclude its linked accessories.





Add HyDraw CAD Commands to Quick Access Toolbar



Add to Quick Access Toolbar by right-clicking the HyDraw CAD command on the ribbon menu



Newly added HyDraw CAD command displays on the Quick Access Toolbar





Line Type Preview available for HyDraw Connection Lines

HyDraw Options

Update From Excel Gauge Port Lists & Charts Property Display Drawing Template Balloon

Application Units Item ID Connection External Port Library Path Misc. Internet Settings

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	Reservoir	BYLAYER	1	ISO_LIN_RES	BYLAYER	ByLayer	<input checked="" type="checkbox"/>
Control	Control	BYLAYER	2.5	ISO_LIN_CON	BYLAYER	ByLayer	<input checked="" type="checkbox"/>
Drain	Drain	BYLAYER	2.0	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	BYLAY...	255,127,0	
Line2	Reservoir	BYLAYER		Line2	BYLAYER	Silver	
Line3	Pressure	PHANTOM (.5X)		Line3	BYLAYER	255,255,12	
Line4	Pressure	HIDDEN		Line4	BYLAYER	255,0,127	
Line5	Pressure	DASH DOT		Line5	BYLAYER	159,255,12	

Line Type Preview dropdown menu:

- BYLAYER
- CONTINUOUS
- PHANTOM (.5X)
- HIDDEN
- DASH DOT
- DASHED
- PHANTOM
- CENTER
- CENTER (2X)
- DOT (.5X)
- Others..

Reset Connection Properties

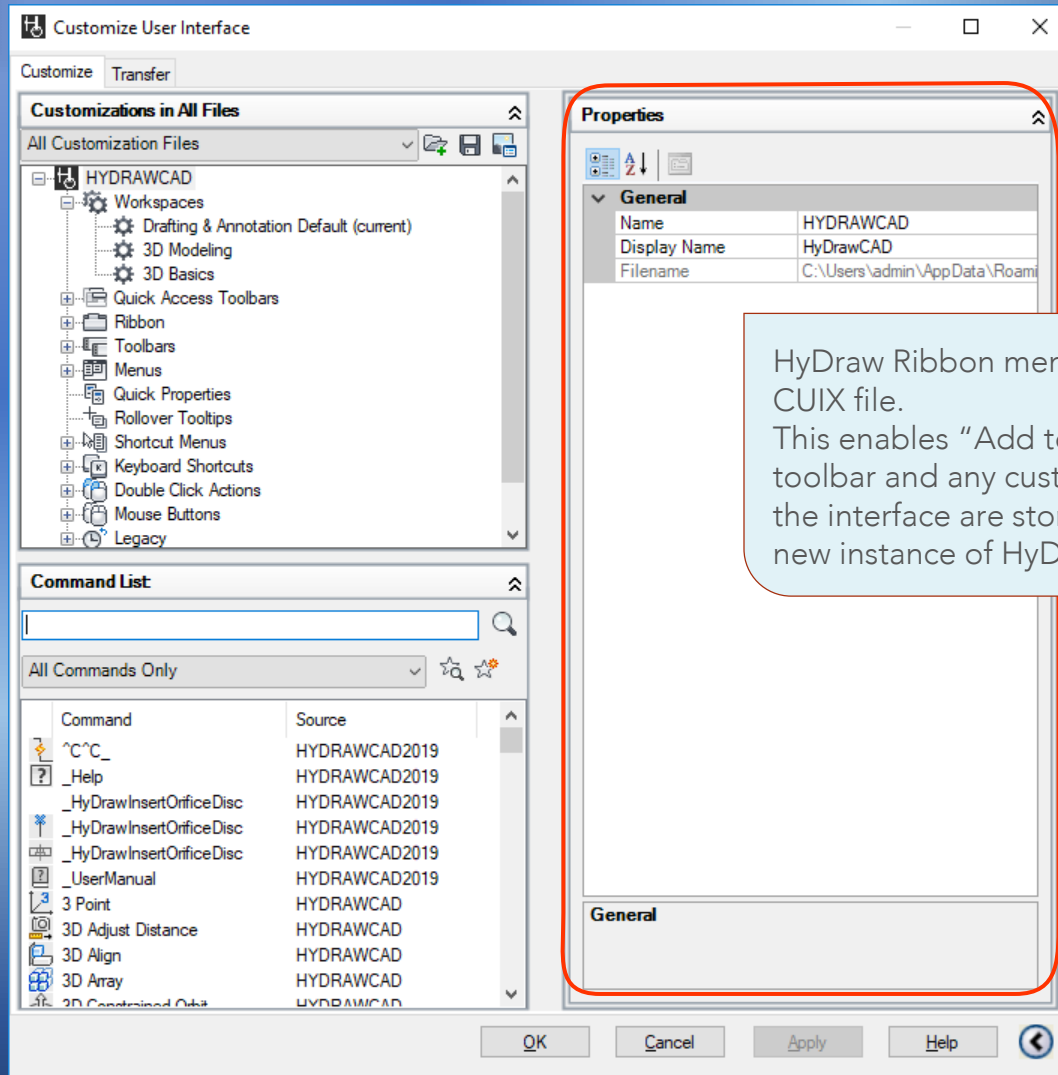
Recommended velocity

Line Type Preview now available for HyDraw CAD Connection Lines





HyDraw Ribbon Created using CUIX file



HyDraw Ribbon menu created using CUIX file.
This enables "Add to Quick Access" toolbar and any customizations made to the interface are stored and available in a new instance of HyDraw.



HyDraw Library Manager



Define Component Code for a Component Type

The screenshot shows the HyDraw Library Manager 2019 interface. The 'Component Types' tab is active, and the 'Check Valve - Screw-in Cartridge' component type is selected. The 'Component code' field in the 'Selected Component Type properties' panel is highlighted with a red box and contains the value 'CVI'. A callout box on the right contains the text 'Define Component code for a Component Type' and a link 'more...'. The interface also shows a list of available component types on the left and various property panels on the right.

Note: This is used for assigning Item IDs in the drawing.



Do more...

HyDraw® CAD 2019

circuit design app

HyDraw CAD 2019 Free Evaluation

For more information, [contact VEST](#)

Call +1 (248) 649-9550, or email sales@VESTusa.com

In Europe, Call +39 328 695 70 01 or email carlo.molon@fluidpower.it

