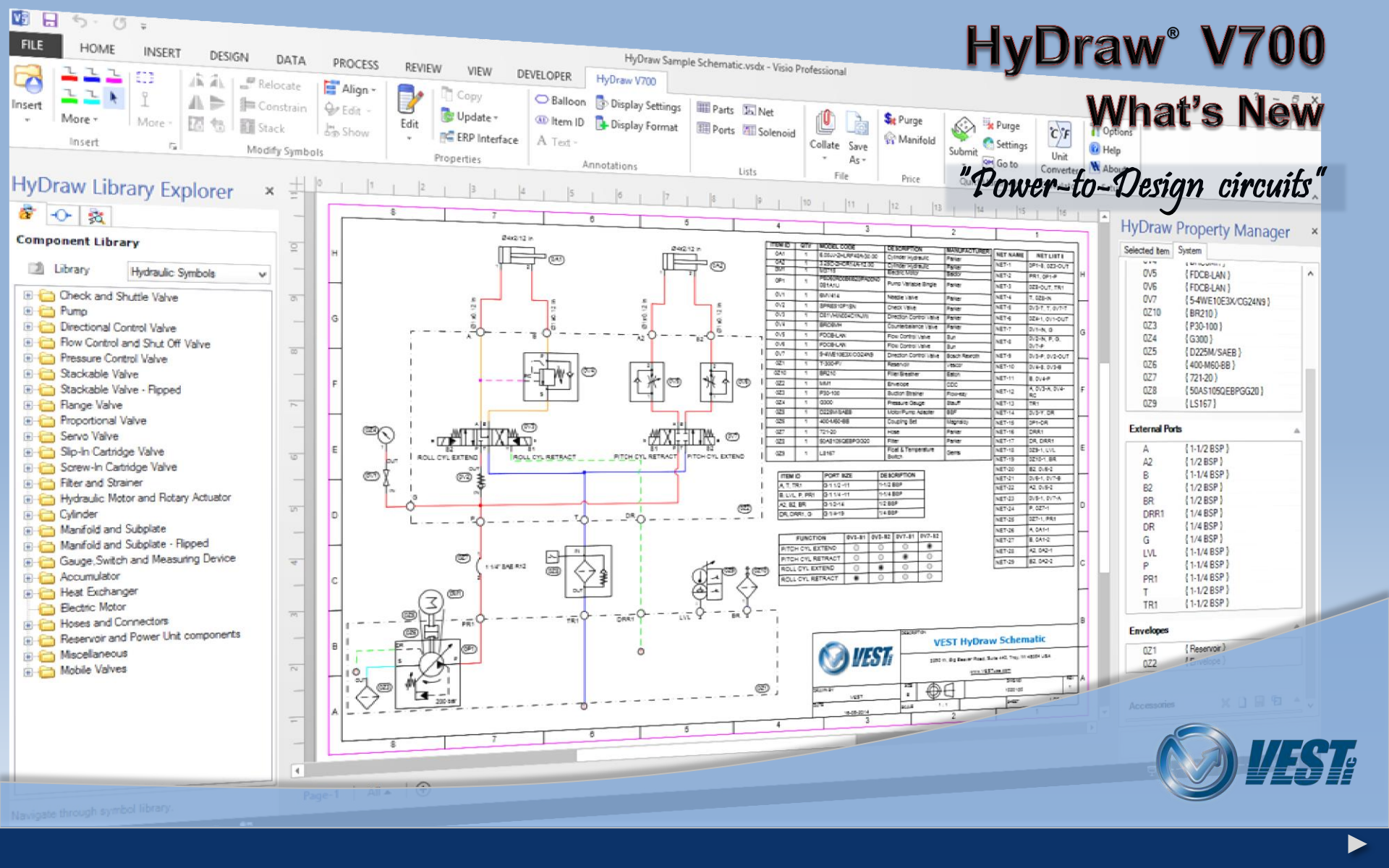


HyDraw® V700

What's New

"Power-to-Design circuits"



FILE

HOME

INSERT

DESIGN

DATA

PROCESS

REVIEW

VIEW

DEVELOPER

HyDraw Sample Schematic.vsdw - Visio Professional

HyDraw V700

HyDraw Library Explorer

Component Library

- Library: Hydraulic Symbols
- Check and Shuttle Valve
- Pump
- Directional Control Valve
- Flow Control and Shut Off Valve
- Pressure Control Valve
- Stackable Valve
- Stackable Valve - Flipped
- Range Valve
- Proportional Valve
- Servo Valve
- Slip-In Cartridge Valve
- Screw-In Cartridge Valve
- Filter and Strainer
- Hydraulic Motor and Rotary Actuator
- Cylinder
- Manifold and Subplate
- Manifold and Subplate - Flipped
- Gauge, Switch and Measuring Device
- Accumulator
- Heat Exchanger
- Electric Motor
- Hoses and Connectors
- Reservoir and Power Unit components
- Miscellaneous
- Mobile Valves

HyDraw Property Manager

- Selected Item System
- 0V5 {FCBC-LAN}
 - 0V6 {FCBC-LAN}
 - 0V7 {5-4WE10E3X/G24N9}
 - 0Z10 {BR210}
 - 0Z3 {P30-100}
 - 0Z4 {G300}
 - 0Z5 {D22SM/SAEB}
 - 0Z6 {40S-M50-BB}
 - 0Z7 {721-20}
 - 0Z8 {50AS105GEBPG20}
 - 0Z9 {LS167}
- External Ports
- A {1-1/2 BSP}
 - A2 {1/2 BSP}
 - B {1-1/4 BSP}
 - B2 {1/2 BSP}
 - BR {1/2 BSP}
 - DRR1 {1/4 BSP}
 - DR {1/4 BSP}
 - GR {1/4 BSP}
 - LVL {1-1/4 BSP}
 - P {1-1/4 BSP}
 - PR1 {1-1/4 BSP}
 - T {1-1/2 BSP}
 - TR1 {1-1/2 BSP}

ITEM ID	QTY	MODEL CODE	DESCRIPTION	MANUFACTURER	NET NAME	NET LIST
0A1	1	630A-2H-RF4A-30-30	Cylinder hydraulic	Festo	NET-1	0P1-1, 0Z2-OUT
0A2	1	720C-2H-RF4A-30-30	Cylinder hydraulic	Festo	NET-2	PR1, 0P1-P
0B1	1	220C-2H-RF4A-30-30	Cylinder hydraulic	Festo	NET-3	0Z2-OUT, TR1
0P1	1	HEP0000000000000000	Pump Variable Single	Grundfos	NET-4	0Z2-OUT, TR1
0V1	1	0V1414	Nature Valve	Festo	NET-5	0Z2-OUT, TR1
0V2	1	SPB03-0P1N	Check Valve	Festo	NET-6	0Z17-T, 0Z17-2
0V3	1	0Z1VAND02CNUS	Director Control Valve	Festo	NET-4	0Z1-1, 0Z1-OUT
0V4	1	0Z06AN	Counterbalance Valve	Festo	NET-7	0V1-A, D
0V5	1	FOCBLAN	Flow Control Valve	Bur	NET-8	0V2-N, P, 0Z1-P
0V6	1	FOCBLAN	Flow Control Valve	Bur	NET-9	0V3-P, 0V3-OUT
0V7	1	0V4E10E3X/G24N9	Director Control Valve	Boach Rexroth	NET-10	0V4-E, 0V3-E
0Z1	1	130007	Relay	Rockwell	NET-11	0V4-P
0Z10	1	BR210	Filter Breather	Elcom	NET-12	A, 0V3K, 0V4-K
0Z2	1	LM1	Envelope	CCC	NET-13	TR1
0Z3	1	P30-100	Bucket Strainer	Flowtec	NET-14	0V3-P, 0V4-K
0Z4	1	G300	Pressure Gauge	Staubli	NET-15	TR1
0Z5	1	D22SM/SAEB	Motor/Pump Asstbr	BSP	NET-16	0V3-P, DR
0Z6	1	40S-M50-BB	Coil/ing Set	Magnum	NET-16	0P1-GK
0Z7	1	721-20	Hose	Festo	NET-16	DRK1
0Z8	1	50AS105GEBPG20	Filter	Festo	NET-17	DR, DRR1
0Z9	1	LS167	Flow & Temperature Switch	Demu	NET-18	0Z1-L, LVL
					NET-19	0Z15T, BR
					NET-20	B2, 0Z2-E
					NET-21	0Z1-E, 0Z1-B
					NET-22	A2, 0Z2-E
					NET-23	0V3-P, 0V3-A
					NET-24	P, 0Z1-P
					NET-25	0Z1-L, PR1
					NET-26	A, 0A1-1
					NET-27	B, 0A1-2
					NET-28	A2, 0A2-1
					NET-29	B2, 0A2-2

ITEM ID	PORT SIZE	DESCRIPTION
A, T, TR1	0 1 1/2 - 11	1-1/2 BSP
B, LVL, P, PR1	0 1 1/4 - 11	1-1/4 BSP
AZ, B2, BR	0 1/2 - 14	1/2 BSP
DR, DRR1, DZ	0 1/4 - 18	1/4 BSP

FUNCTION	0V1-B1	0V1-B2	0V1-B1	0V1-B2
PITCH CYL EXTEND	●	●	●	●
PITCH CYL RETRACT	●	●	●	●
ROLL CYL EXTEND	●	●	●	●
ROLL CYL RETRACT	●	●	●	●

VEST
 VEST HyDraw Schematic
 1000 N. Big Beaver Road, Suite 400, Troy, MI 48068 USA
 www.VEST-usa.com



Navigate through symbol library.

HyDraw® *"Power-to-Design" circuits*

Dual Library

Link Documents and CAD Files to Component Data

Numbering Scheme – ISO 1219-2:2012

Rotate External Port Name

Rotate Connection Display Properties

Advanced Options – Primary Units

ERP Interface

Display Properties in Dual Units

Add New Display Format

Accessories - Define Search Criteria

List Component as First Sub-item

Unit Converter

HyDraw® Library Manager 2013

Enhanced Graphics User Interface

Italian Interface

Localized Library Data

Link Symbols to Model Code

Dual Library



Define dual library path and toggle between your **Local Library** and **Corporate Library**

HyDraw Options

Application	Units	Balloon	Connection	External Port	Parts List	Ports List
Library Path	Misc.	Internet Settings	QuickManifolds	ERP Settings		

Local Library

Enable modification

Data
D:\VEST\HyDraw Library 2013\Data Browse...

Symbols
D:\VEST\HyDraw Library 2013\Symbol Library Browse...

Sub-systems
D:\VEST\HyDraw Library 2013\SubSystems Browse...

Corporate Library

Enable modification

Data
\\VEST\HyDraw Library 2013\Data Browse...

Symbols
\\VEST\HyDraw Library 2013\Symbol Library Browse...

Sub-systems
\\VEST\HyDraw Library 2013\SubSystems Browse...

OK Cancel

Link Documents and CAD Files to Component Data

NEW

Select Documents from library

Search By

Document Category

File Name

All Categories

Available Documents

File Name	Category	Root Folder	Subfolder
4WE6.PDF	Data Sheet	C:\Users\LK\Desktop\TEST_SAMPLES	amb4001

Fetch documents and CAD files from library

Documents

Data Sheet

4WE6.PDF

CAD Files

Valve Models

4WE6.ipt

Select CAD Files from library

Search By

CAD File Category

File Name

All Categories

Available CAD Files

File Name	Category	Root Folder	Subfolder
4WE6.ipt	Valve Models	E:\k\MDTools De...	Inventor

Selected CAD file preview

Link these to the component data in the drawing

Numbering Scheme - ISO 1219-2:2012



Name the components, per ISO 1219-2:2012, numbering scheme.

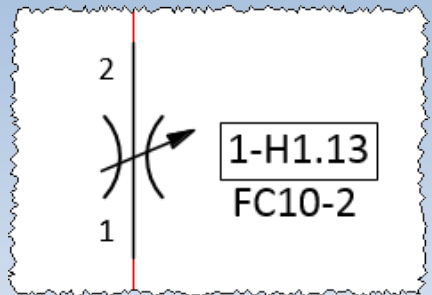
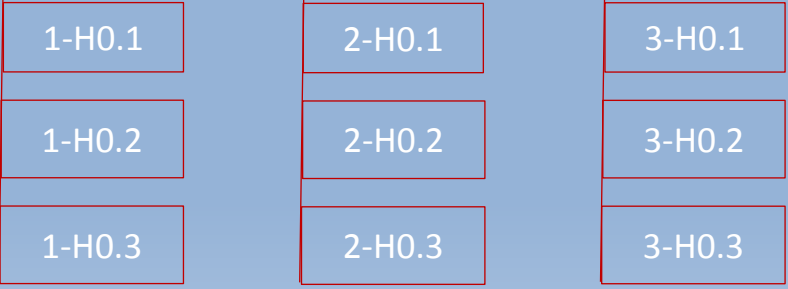
Installation



Circuit



Component



Reassign Item ID

Selection: Select symbols

Balloon: None

Use current balloon type

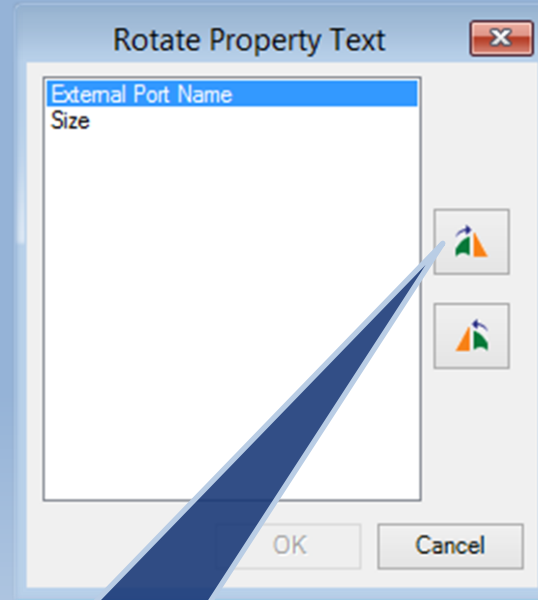
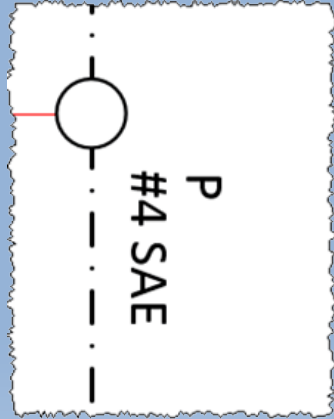
Item ID options

Installation code: Circuit ID:

Medium code:

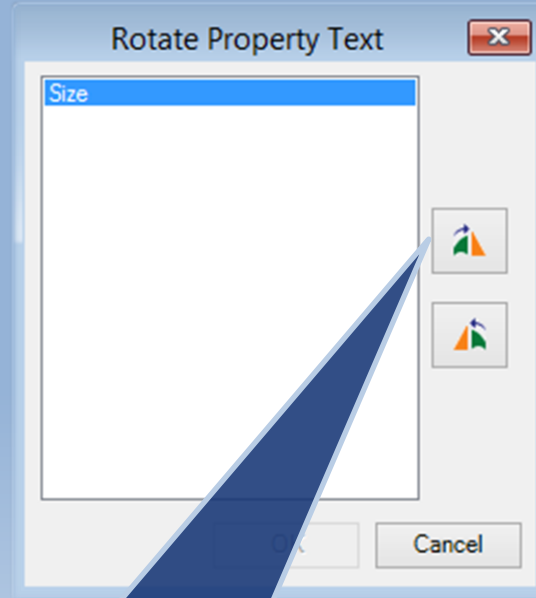
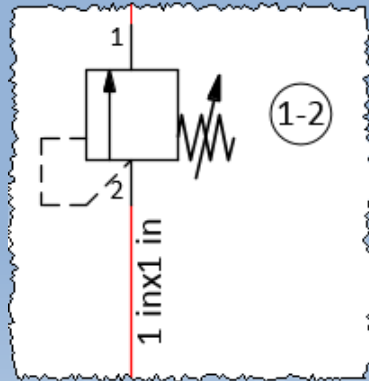
- H - Hydraulics
- H - Hydraulics
- P - Pneumatics
- C - Cooling
- K - Cooling Lubricant
- L - Lubricant
- G - Gas Engineering

Items included: Components Component accessories System accessories



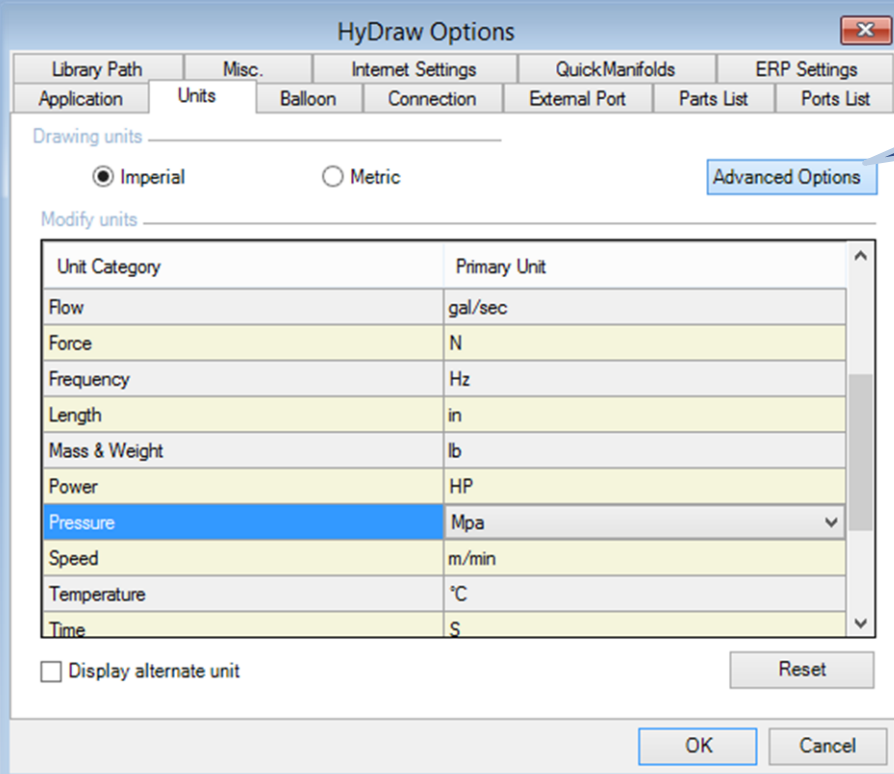
**Rotate external port name
in steps of 90 degree**

Rotate Connection Display Properties



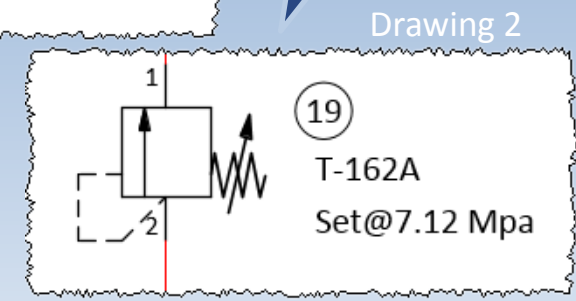
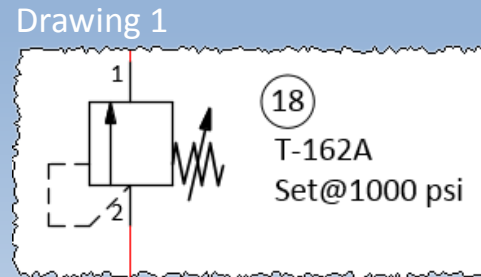
Rotate connection line display properties
in steps of 90 degree

Advanced Options – Primary Units



Advanced Options enable you to use different units for different drawings

Create different drawings with different units e.g. pressure in **psi/Mpa**





ERP Settings
Set your ERP data path in HyDraw Options

Application | Units | Balloon | Connection | External Port | Parts List | Ports List
Library Path | Misc. | Internet Settings | QuickManifolds | **ERP Settings**

My local ERP data
Excel file path: D:\Documents\ERP\Sample ERP Database.xls [Browse...]

Online ERP data
Service URL: _____

Search using: _____
 Model Code Part Number

ERP column name: ModelCode

Fetch Data From ERP

Model Code	Part Number	Manufacturer	Price	Assembly Cost	Stock
M3715	9000000001	Baldor	29	5	50
DYN-CF1P350ASAE	Select				
M/P Adapter	Select				
721-20	9000000004	Parker	32	6	56
PE060R00B6B20PA00N00S1A1U	9000000005	Parker	34	4	88
P30-100	9000000006	Flow-ezy	32	6	45

[Update] [Update All] [Cancel]

Fetch ERP data stored in the Excel format, locally on a network or on a hosting space

Price and other related properties are updated in the Model data

Model data

Model Code	M3715
Model Family	
Part Number	9000000001
Description	Relief Valve - Screw-in
Manufacturer	Baldor
Cost	
Assembly Cost	5
List Price	29
Rated Flow {gal/sec}	

Display Properties in Dual Units



HyDraw Options

Library Path Misc. Internet Settings QuickManifolds ERP Settings

Application Units Balloon Connection External Port Parts List Ports List

Drawing units

Imperial Metric [Advanced Options](#)

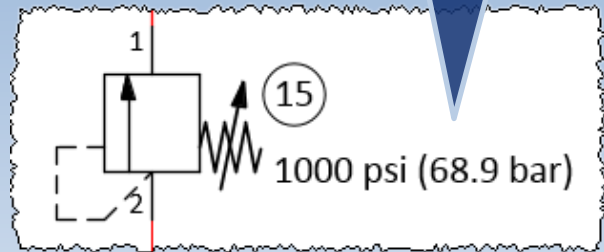
Modify units

Unit Category	Primary Unit	Alternate Unit
Frequency	Hz	RPM
Length	in	mm
Mass & Weight	lb	g
Power	HP	KW
Pressure	psi	bar
Speed	m/min	ft/min
Temperature	°C	°F
Time	S	min
Torque	Lbf-ft	cm*gf
Viscosity	cSt	St

Display alternate unit [Reset](#)

[OK](#) [Cancel](#)

Display property values in dual units: primary and alternate



Add New Display Format



Add New Display Format [Close]

Name
Model Series

Property1
Model Family [Browse] ...

Prefix Suffix Display unit

Property2
[Text] [Browse] ...

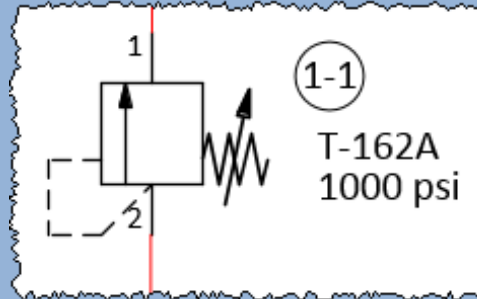
Prefix Suffix Display unit

Property3
[Text] [Browse] ...

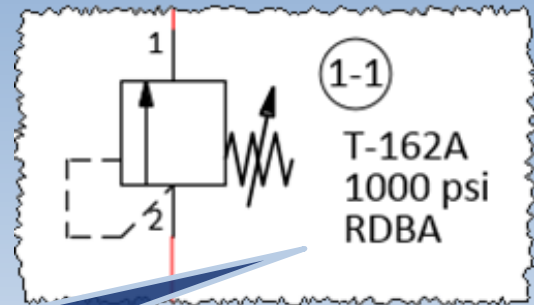
Prefix Suffix Display unit

[Add] [Cancel]

Default Display Format



New Display Format



Add the New Display format to the component

Accessories – Define Search Criteria



Accessories	
4	{ 697647 }
Item ID	4
Model data	
Model Code	697647
Model Family	697
Part Number	
Description	Seal Kit - D1VW
Manufacturer	Parker
Cost	10
List Price	

Select Accessories from Library

Model code: 697 Manufacturer: Parker

Component type: Seal Kit

Define more criteria

Cost: ... <= 10

None

None

Search

Available accessories

Model Code	Manufacturer	Description
697647	Parker	Seal Kit - D1VW

Add

Selected accessories

Model Code	Manufacturer	Description	Quantity
------------	--------------	-------------	----------

Remove

OK Cancel

Search the accessories from Library by **defining more criteria**

List Component as First Sub-item



HyDraw Options

Library Path	Misc.	Internet Settings	QuickManifolds	ERP Settings		
Application	Units	Balloon	Connection	External Port	Parts List	Ports List

Numbering scheme _____ Type _____

1, 2, 3, 4... 1A, 1B, 2A, 2B... 1.1, 1.2, 2.1, 2.2... 1-1, 1-2, 2-1, 2-2... ISO 1219

None

No balloons on external ports

Accessory Item ID _____

Display in drawing
 As sub item of component

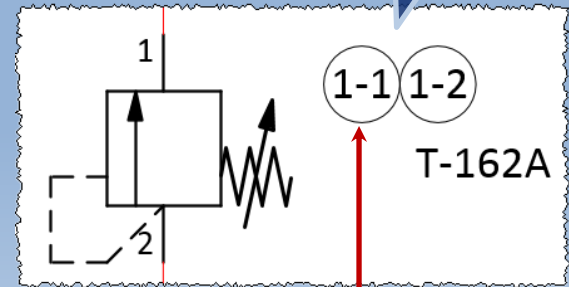
Numeric ID Alphabetic ID

Item ID Separator Dash (-)

List component as first sub-item

OK Cancel

List components as first sub-item



Unit Converter



Converts the value of one selected unit to another selected unit

Unit Converter

Unit Category

- Acceleration
- Angle
- Area
- Current
- Density
- Dynamic Viscosity
- Energy
- Flow
- Force
- Frequency
- Kinematic Viscosity
- Length
- Mass & Weight
- Power
- Pressure**
- Speed
- Temperature
- Time
- Torque
- Volume
- Volumetric Displacement

Convert Pressure

From _____ To _____

Value: 5000 Value: 344.7379

Units

- kilograms/square centimeter [kgs/cm²]
- kilograms/square meter [kgs/m²]
- kilograms/square millimeter [kgs/mm²]
- kilopascal [kpa]
- megapascal [Mpa]
- microbar [μ bar]
- millibar [mbar]
- millimeters of mercury (0°C)
- pascal [pa]
- pounds/square feet [lb/ft²]
- pounds/Square inch [psi]**
- tons/square inch [ton/in²]
- tors [Torr]

- atmospheres [atm]
- bars**
- centimeters of mercury (0°C)
- dynes/square centimeter [dyn/cm²]
- feet of water (4°C)
- feet of water (60°F)
- inch of mercury (32°F)
- inch of mercury (60°F)
- inch of water (60°F)
- inches of water (4°C)
- kilograms/square centimeter [kgs/cm²]
- kilograms/square meter [kgs/m²]
- kilograms/square millimeter [kgs/mm²]
- kilopascal [kpa]

Close

Library Manager 2013

Enhanced Graphics User Interface



GUI Restructured for easy access and better management

HyDraw Library Manager 2013 - [Components: Symbols]

Components Accessories External Ports Connections Sub-systems

Symbol View Model Data View Documents CAD Files Model properties Design Properties Display Formats Component Types Manage List

Hydraulic Symbols Available Symbols Add New Symbol Edit Symbol Models linked to selected symbol Link Existing Model

Note: If you are using the DWG based version of HyDraw then go to Drawing Application and use the Library Explorer to add or modify symbol.

Selected Model properties	
Model Code	4WE6J6X/EW230N9K4
Model Family	4WE6
Part Number	678924
Description	Direction Control Valve
Manufacturer	Bosch Rexroth
Cost	27
Assembly Cost	2
List Price	236
Rated Flow (LPM)	79.5
Pressure Loss @ Rated Fl	10
Rated Pressure (bar)	345
Cavity/Footprint/Interface	D03
Malfunction Flow (LPM)	79.5
Voltage	230
Frequency	50
Bolt Shoulder Height (mm)	35.6
Installation Torque (Steel)	5.9 lb.ft./8 Nm
Installation Torque (Alumin)	5.9 lb.ft./8 Nm
Catalog Number	RE 23178/08.08





Italian Interface

H Gestore Libreria HyDraw 2013 - [Componenti: Dati di Componenti]

Componenti Accessori Porte Esterne Connessioni Sotto-sistemi

Simbolo Vista **Modello di Vista** Documenti File CAD Proprietà dei modelli Proprietà di progetto Formati di visualizzazione Tipi di componenti Gestisci Elenco

Cerca per

Applicazione: Hydraulic

Tipo di componente: Tutti i tipi di componente

Produttore: Tutti i produttori

Codice Modello

Codice Modello	Famiglia	Descrizione	Produttore
04.04.02-40-85-20	04.04.02	Valvola di Control...	Bosch Rexroth
04.05.04.00.85-02	04.05.04	Valvola Divisore/...	Bosch Rexroth
04.11.48-03-56-10	04.11.48	Valvola Limitatric...	Bosch Rexroth
0T.U5.01.00-02-00	0T.U5.01.00	Valvola di Non Ri...	Bosch Rexroth
2FRM6K2-1X/0....	2FRM*K	Valvola Controllo ...	Bosch Rexroth
332.54	332.54	Manometro	WIKA
342.11	312.2	Manometro	WIKA
4DP01-3E43F10-...	4DP01	Valvola di Control...	Parker
4DP03-3EB2F20-...	4DP03	Valvola di Control...	Parker
4DPE01-3E02Q1-...	4DPE	Valvola di Control...	Parker
4WE10C3X/CG2...	WE10	Valvola Controllo ...	Bosch Rexroth
4WE6E16X/EG2...	WE6	Valvola Controllo ...	Bosch Rexroth
4WE6E6X/EG24...	WE6	Valvola Controllo ...	Bosch Rexroth
4WE6G6X/EG24...	WE6	Valvola Controllo ...	Bosch Rexroth
4WE6H6X/EG24...	WE6	Valvola Controllo ...	Bosch Rexroth
4WE6J6X/EG24...	WE6	Valvola Controllo ...	Bosch Rexroth
4WE6RA6X/EG...	WE6	Valvola Controllo ...	Bosch Rexroth
4WRAB6E12-1X-...	4WRAB	Valvola di Control...	Bosch Rexroth
4WRTE10V25L-...	4WRTE	Valvola di Control...	Bosch Rexroth
4WRTE25V25L-...	4WRTE	Valvola di Control...	Bosch Rexroth
4WRZ10W6-50-...	4WRZ	Valvola di Control...	Bosch Rexroth
4WRZE25E-100-...	4WRZE	Valvola di Control...	Bosch Rexroth
5-4WE10C3X/O...	5-WE10	Valvola Controllo ...	Bosch Rexroth
5-4WE10HA3X/...	5-WE10	Valvola Controllo ...	Bosch Rexroth

Proprietà di modello selezionate

Tipo

Applicazione: Hydraulic

Tipo di componente: Valvola Controllo Flusso - Car

Dati modello

Codice Modello: 04.04.02-40-85-20

Famiglia: 04.04.02

Numero Parte

Descrizione: Valvola di Controllo Flusso Pr

Produttore: Bosch Rexroth

Costo

Costo Assemblaggio

Prezzo Listino

Portata Nominale (gpm): 8

Perdite Carico @ Portata

Pressione Nominale (psi): 5000

Tipo: Otturatore

Cavità/Maschera/Interf: CA-10A-3N

Taratura Portata (gpm)

Pressione Molla Comper

Costo di Installazione (/ 20 25 30 / 41 47 M...

Simboli collegati al modello selezionato



English

Model properties	
Name	Data type
Area Ratio	Text
Assembly Cost	Currency
Beta Ratio	Text
Bolt Shoulder Height	Number
Bore	Number

Design Properties			
Name	Data type	Unit category	Unit
Cleanliness Rating	Text		
Displacement	Number	Volumetric Di...	Cu. in/Rev
Displacement, Cover End	Number	Volumetric Di...	Cu. in/Rev
Displacement, Middle Section	Number	Volumetric Di...	Cu. in/Rev

Component Types	
Search by	Available Component Types
Application Hydraulic	Accumulator 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
Name	

Italian

Model properties	
Name	Data type
Altezza	Number
Altezza Spalla Bullone	Number
Altezza Stack	Number
Caratteristica Speciale	Text
Categoria Micron	Text

Design Properties			
Name	Data type	Unit category	Unit
Classe Filtrazione	Text		
Cilindrata	Number	Cilindrata	CC/Rev
Cilindrata, Estremità Coperc...	Number	Cilindrata	CC/Rev
Cilindrata, Sezione Intermedia	Number	Cilindrata	CC/Rev

Component Types	
Search by	Available Component Types
Application Hydraulic	Accumulatore Adattatore Motore/Pompa Blocco/Manifold e Sottobase Cilindro Idraulico Compensatore di Pressione - Flangiabile Divisore/Riunificatore di Flusso - Cartuccia Divisore/Riunificatore di Flusso - In Linea Elemento Logico - In Linea Elemento Logico - Assieme Valvola Elemento Logico - Cartuccia
Name	

Localized Properties

Link Symbols to Model Code



HyDraw Library Manager 2013 - [Components: Model Data]

Model Data View

Search by	Available Models
Application	Model Code Model Family Description Manufacturer
Hydraulic	4WE6J6X/EW23... 4WE6 Direction Control... Bosch Rexroth
Component type	A04B2PZ-N A04B2 Direct Acting Pre... Parker
Manufacturer	
Model Code	

Selected Model properties

Application: Hydraulic
Component Type: Direction Control Valve - Sol.

Model Data

- Model Code: 4WE6J6X/EW230N9K4
- Model Family: 4WE6
- Part Number: 678924
- Description: Direction Control Valve
- Manufacturer: Bosch Rexroth
- Cost: 27
- Assembly Cost: 2
- List Price: 236
- Rated Flow (LPM): 79.5
- Pressure Loss @ Rated: 10
- Rated Pressure (bar): 345
- Cavity/Footprint/Interfac: D03
- Malfunction Flow (LPM): 79.5
- Voltage: 230
- Frequency: 50
- Bolt Shoulder Height (mm): 35.6
- Installation Torque (Stee 5.9 lb.ft. / 8 Nm)

Symbols linked to selected model

Linked Symbol

Selected Library: Hydraulic Symbols

- Directional Control Valve
 - Stackable Symbol - Flipped
 - Non-Stackable Symbol
 - Solenoid Operated
 - D03, D05 / ISO 4401 - 03,05 Size
 - Single Solenoid
 - Double Solenoid
 - No Spring
 - No Spring, Detented
 - Spring Centered
 - Poppet Valve
 - Solenoid Controlled Pilot Operated
 - Hydraulic Pilot Operated

Available Symbols

In the Model Data view, the Model Code can be linked to one or more symbols

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