

Valves

Series II Valve

Models A14 and H14

Patent# US D521.598 S

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Features

- ▶ Original Shear-Seal® technology
- ▶ Integrated actuator
- ▶ 2- and 3-position
- ▶ Superior shifting performance
- ▶ High velocity flow
- ▶ Compact design
- ▶ Corrosion resistant materials

Applications

- ▶ Land-based & offshore oil drilling controls
BOP control units
- ▶ Steel mills
- ▶ Shipboard hydraulic control systems
- ▶ Industrial hydraulic power units
- ▶ Refineries and chemical processing plants

General Specifications*

- Main Valve

Working Pressure:	Hydraulic up to 3,000 or 6,000 psi (206 bar or 413 bar) Air up to 4,000 psi (276 bar)
Flow Capacity, Cv:	See table
Back Pressure:	Must not exceed 250 psi (17.2 bar) at return port for satisfactory operation
Proof Pressure:	1-1/2 times working pressure except at return port
Burst Pressure:	2-1/2 times working pressure except at return port (3,000 psi [206 bar])
Pressure Drop (all Valves):	20 ft/s – 14 psi; 6.1 m/s – 1 bar 40 ft/s – 58 psi; 12.2 m/s – 4.0 bar 60 ft/s – 130 psi; 18.3 m/s – 9.0 bar
Media Temperature Range:	-40° to +250°F (-40° to +121°C)
Wetted Materials:	400 Series Stainless Steel
Standard O-Rings:	Buna N
Back-up Rings:	Teflon®
Handle Detent:	All valves have 3-position detents for manual shift to Center position
Panel Mounting:	Standard for 1/4"- 1/2" valves Consult Factory for 3/4" & 1" valves

* See product configurator for additional options.

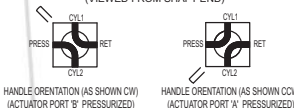
	Main Valve Port Size NPT	Flow Capacity (Approx.)			Min. Flow Passage Dia.	Cv Factor	Approx. Shipping Weight
		Service: Oil and Lubricated Water					
		20 ft/sec gpm (l/min)	40 ft/sec gpm (l/min)	60 ft/sec gpm (l/min)			
14, 92 Series Valves	1/4"	3 (11)	6 (23)	9 (34)	1/4"	0.95	30
	3/8" & 1/2"	9 (34)	19 (72)	28 (106)	7/16"	3.20	35
	3/4" & 1"	25 (95)	50 (189)	75 (284)	23/32"	9.20	50
20, 562 Series Valves	1/4"	3 (11)	6 (23)	9 (34)	1/4"	0.95	30
	1/2"	5 (19)	10 (38)	15 (57)	5/16"	1.60	35
	1"	9 (34)	19 (72)	28 (106)	7/16"	3.20	50



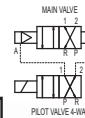
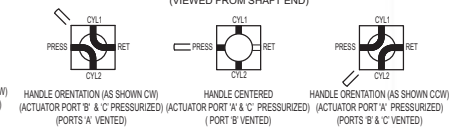
- Pilot Actuator

Working Pressure:	
Air:	80 psi (5.2 bar) minimum 250 psi (17.2 bar) maximum
Hydraulic (2-position only):	500 psi (34 bar) minimum 1,500 psi (103 bar) maximum
Porting:	1/4" NPT
Media Temperature Range:	-40° to +250°F (-40° to +121°C)
Speed of Operation:	Shift time for 90° must be 1/2 second minimum to avoid damage
Body, Housing, End Plate:	Al-Ni Bronze
Cylinder:	Amalga tubing (air) Stainless steel (hydraulic)
Shaft:	Stainless steel
Hardware:	Stainless steel
Handle:	Zinc plated alloy steel
Rotor, Seals:	400 series stainless steel

2-POSITION FLOW PATTERN SELECTOR (VIEWED FROM SHAFT END)



3-POSITION FLOW PATTERN SELECTOR (VIEWED FROM SHAFT END)



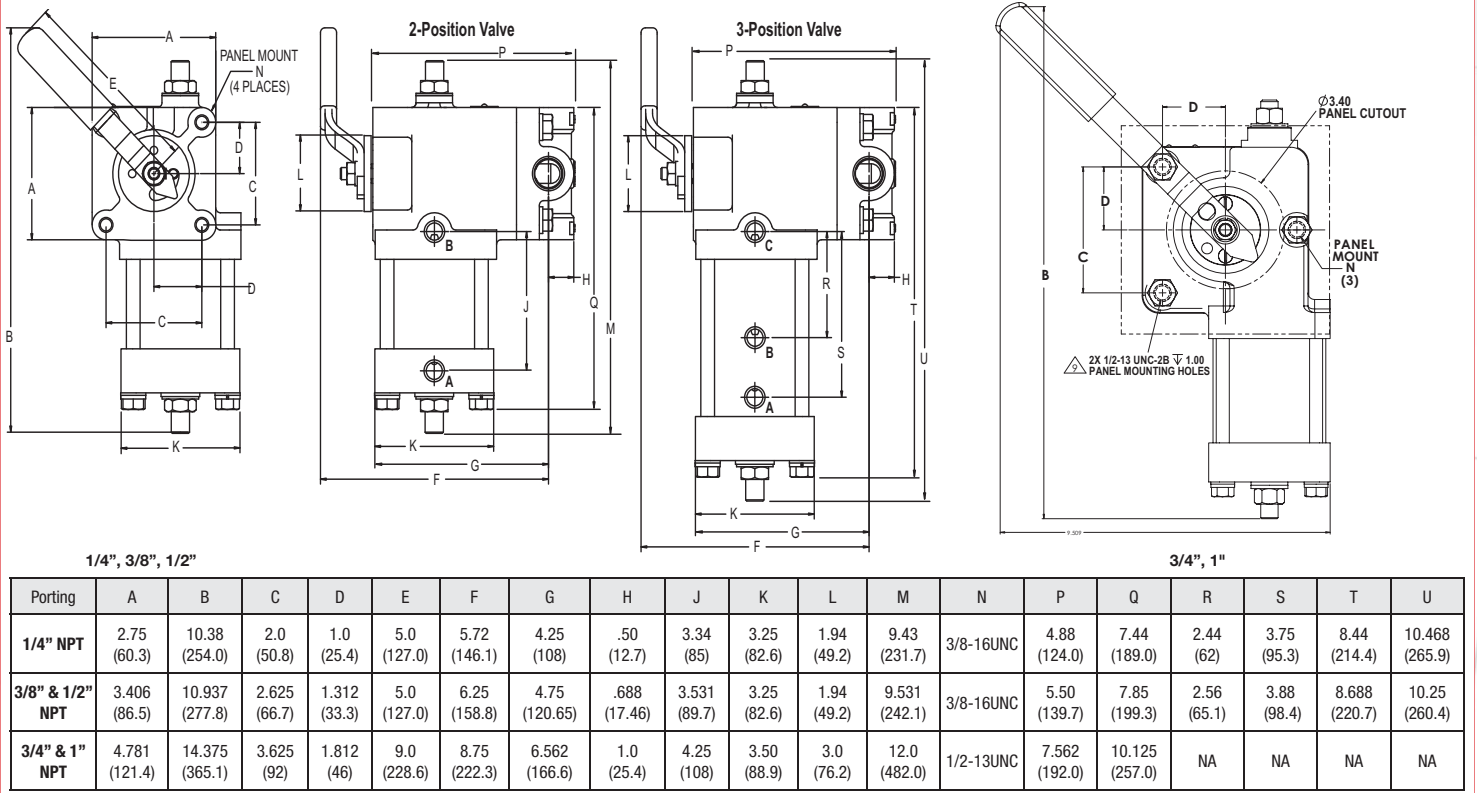
CLOSED CENTER MANIPULATOR FLOW PATTERN (VIEWED FROM SHAFT END)



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Technical Drawings



Product Configurator

Example: **A 20 3 R 6 W C 3**

Actuator Media

A	Air cylinder
H	Hydraulic cylinder

Optional O-ring Material
-Zxx See supplemental guide

Series

14	3,000 psi (206 bar), 4-way selector or diverter
20	6,000 psi (412 bar), 4-way selector or diverter
92	3,000 psi (206 bar), 4-way closed center manipulator
562	6,000 psi (412 bar), 4-way closed center manipulator
376	3,000 psi (206 bar), 4-way sub-plate mount

Pressure Range

3	3,000 psi lubricated water or hydraulic oil, 2,000 psi air (14, 92 & 376 Series)
6	6,000 psi lubricated water or hydraulic oil, 4,000 psi air (20 & 562 series)

Options

-B	Position Indicator
-C	3 x 2 converter Allows 3-position valve to be actuated with 2 inlets
-H	4,500 psi working pressure
-M	5,000 psi working pressure
-D	Diverter flow pattern
-MS	SAE Porting
-Zxx	Optional O-ring material ¹

Port Size

1	1/4" NPT
2	3/8" NPT (14 and 92 series only)
3	1/2" NPT
4	3/4" NPT (14 and 92 series only)
5	1" NPT

Working Media

W	Lubricated water or hydraulic oil
A	Air or other gasses

Flow Pattern

C	Closed center
O	Open center (tandem center)
Q	Closed center manipulator Standard on 92 and 562 series Optional on 376 Series in closed center only Not available on 14 and 20 Series

Position

2	2-position actuator, 90° rotation
3	3-position actuator

Port Location

R	Regular side porting
M	Manifold porting (376 series only)

¹ See Supplemental Guide for the appropriate "Z number"