

# 10. Proportional Valves

## Proportional Pressure Control Valve

Type	Series	Cetop	Max. Flow (GPM)	Ports Max. Pressure		Linearity	Hysteresis	Repeatability	Page
				P, A, B (PSI)	T (PSI)				
Pressure Control	4VP01 / VP01 <sup>1</sup>	03	1.3	5000	3000	≤ 2.8%	≤ 3.0%	-	10 - 2
Pressure Reducing	4RP01	03	3.4	1500	-	-	≤ 3.0%	≤ 1.0%	10 - 3
Pressure Relief	R1EP01	03	2.6	5000	Tank	≤ 1.5%	≤ 1.0%	≤ 0.5%	10 - 4
Pressure Relief	R4VP	05/08/10	24...160	5000	Tank	≤ 1.5%	≤ 1.0%	≤ 0.5%	10 - 5

## Proportional Directional Valve

Type	Series	Cetop	Max. Flow <sup>2</sup> (GPM)	Ports Maximum Pressure			Without Position Feedback		With Position Feedback		Page
				P A, B (PSI)	T Ext. drain Int. drain (PSI)	Drain Ext. drain Int. drain	Response <sup>3</sup> 0→100% 100%→0 (ms)	Hysteresis Repeatability	Response <sup>2</sup> 0→100% 100%→0 (ms)	Hysteresis Repeatability	
Direct	4DP01	03	7.9	5000	3000 / 2300	145 / 2300	40 / 25	≤5.0% / ≤3.0%	30 / 20	≤1.0% / ≤0.5%	10 - 6
Operated	4DP02 <sup>4</sup>	05	21.1	4600	3500 / 2300	145 / 2300	60 / 40	≤5.0% / ≤2.0%	50 / 35	≤1.0% / ≤0.5%	
Pilot	4DP03	07	53	5000	3500 / 3000	3000 / -	50 / 50	≤5.0% / ≤3.0%	50 / 25	≤1.0% / ≤0.5%	10-10
Operated	4DP06	08	106	5000	3500 / 3000	3000 / -	60 / 70	≤5.0% / ≤3.0%	50 / 50	≤1.0% / ≤0.5%	

## Proportional Flow Control Valve

Type	Series	Size	Max. Flow <sup>5</sup> (GPM)	Max. Pressure		Page
				A, B Ports (PSI)	Other ports (PSI)	
Throttle Valve	C1FP	16	53	5000	1500 (Y port)	10 - 14
		25	106			
		32	169			
		40	240			
Flange Mounted Flow Control	F5C	¾"	25	4000	500 (drain)	10 - 16
		1"	50			
		1 ¼"	100			

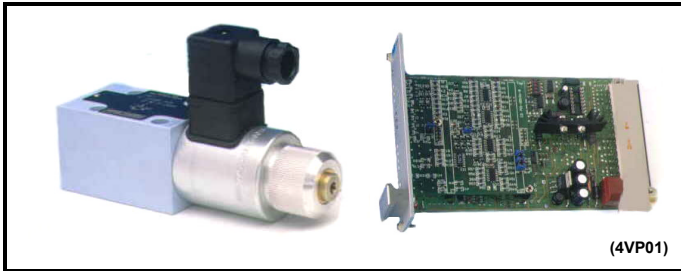
<sup>1</sup> See R4V/R4V...P2 and R5V/R5P...P2 : section 5.

<sup>2</sup> At 75 psi Δp per edge.

<sup>3</sup> With 12 VDC coils.

<sup>4</sup> Contact Denison Hydraulics for availability.

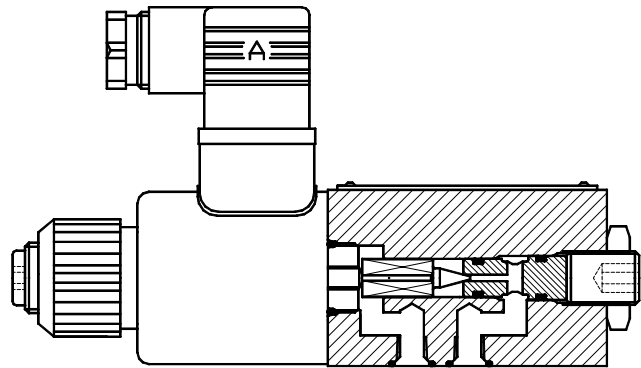
<sup>5</sup> At 150 psi Δp.



## Proportional Pressure Control Valves

**4VP01 Series  
VP01 Series**

**1.3 GPM - 5000 PSI**



**Key sheet** ..... Example : **4VP01-10-0R-B1-C1**

1. **4VP01-10-G12-B1-C1**..... Series

Subplate , CETOP 03	<b>4VP01</b>
P2 option (R4 & R5 pressure control valves) See table below for actual key sheet	<b>VP01</b>

2. **4VP01-10-0R-B1-C1** ..... Pressure range

PSI	750	1500	3000	5000
Code	1	2	3	5

3. **4VP01-10-0R-B1-C1** ..... Orifice in ports

	4VP01 (P port)					VP01 (Y&Z ports)	
in	None	0.02	0.03	0.04	0.05	0.05	0.04
						R4R, R5R	R4V, R5V, R5P
Code	0	1	2	3	4	1	4

4. **4VP01-10-0R-B1-C1** ..... Solenoid

12 VDC (recommended) <sup>1</sup>	<b>0R</b>
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5. **4VP01-10-0R-B1-C1** ..... Design

6. **4VP01-10-0R-B1-C1** ..... Seal Class

Buna N : Mineral oil	<b>1</b>
Viton : Mineral oil & Fire resistant fluids	<b>5</b>

7. **4VP01-10-0R-B1-C1** ..... Connectors Included

<sup>1</sup> 24 VDC available : consult Denison Hydraulics.

Proportional Amplifier & accessories			DIN Connectors		
Type	Model	Code	Type	Gray	Black
12 VDC	EC01 AO1	701-00600-8	Standard (<250 V)	167-01007-8	167-01008-8
115/230 VAC	Power supply	701-00023-8	Red LED (15-30 VDC)	167-01100-8	167-01101-8
Card Holder	-	701-00066-8			

	4VP01	VP01	VP01 Selection table
<b>A</b>	4.69	4.69	<b>R4V, R5V, R5P :</b> • 750 PSI .....S26-58347-G VP01-14-OR-B1 • 1500 PSI.....S26-58348-G VP01-24-OR-B1 • 3000 PSI.....S26-58349-G VP01-34-OR-B1 • 5000 PSI.....S26-58350-G VP01-54-OR-B1
<b>B</b>	6.46	6.89	
<b>C</b>	0.91	0.93	
<b>D</b>	3.70		
$\varnothing$ <b>E</b>	0.35		
<b>F</b>	0.87		
$\varnothing$ <b>G</b>	0.21	0.21	
<b>H</b>	1.77		
<b>J</b>	0.59	0.59	
<b>K</b>	1.28	1.85	
			<b>R4R, R5R :</b> • 750 PSI .....S26-58376-G VP01-11-OR-B1 • 1500 PSI.....S26-58377-G VP01-21-OR-B1 • 3000 PSI.....S26-58378-G VP01-31-OR-B1 • 5000 PSI.....S26-58379-G VP01-51-OR-B1