

Item	Characteristics	Symbol of quantity	Symbol of SI unit	Technical Data		
<b>1.</b>	<b>General</b>					
1.1.	Type of unit	-	-	Pilot operated pressure relief valve Pilot operated proportional pressure relief valve See ordering code		
1.2.	Model number	-	-	See ordering code		
1.3.	Design	-	-	Poppet type		
1.4.	Type of mounting	-	-	Thread. body, subplate mount., cartridge		
1.5.	Type of port connection	-	-	Threads B.S.P.P.; N.P.T.F.		
1.6.	Port sizes	-	-	3/8", 3/4", 1 1/4" (Nominal)		
1.7.	Dimensions of unit	-	mm	See pages 6...13		
1.8.	Weight	-	kg	See pages 6...13		
1.9.	Mounting position	-	-	Optional		
1.10.	Direction of flow	-	-	A→B		
1.11.	Ambient temperature range	θ	°C	- 20 min + 60 max		
1.12.	Suitability for special working conditions	-	-	Consult Denison		
<b>2.</b>	<b>Hydraulic Characteristics</b>					
2.1.	Operating pressure range					
2.1.1.	Inlet (Port A)	min max	bar bar	0 350		
2.1.2.	Outlet (Port B)	min max	bar bar	0 30		
2.1.3.	Port X	p	bar	0-350		
2.1.4.	Port Y	p	bar	0-30		
2.3.	Pressure setting range	p <sub>s</sub> min p <sub>s</sub> max	bar bar	dependent on flow (see page 5) ...350		
2.4.	Fluid temperature range	θ θ	°C °C	- 18 min + 80 max		
2.5.	Viscosity range	ν min ν max	mm <sup>2</sup> /s mm <sup>2</sup> /s	10 (cSt) 650 (cSt)		
2.5.1.	Recommended operating viscosity	ν	mm <sup>2</sup> /s	30 (cSt)		
2.5.2.	Contamination level	-	-	Max. permissible contamination level according to NAS 1638 Class 8 (Class 9 for 15 Micron and smaller) or ISO 17/14		
				R4V03 (3/8")	R4V06 (3/4")	R4V10 (1 1/4")
2.6.	Nominal flow	q <sub>v</sub>	l/min	60	200	450
2.6.1.	Max. flow	q <sub>v</sub>	l/min	90	300	600
2.7.	Diagrams	-	-	See page 5		
<b>3.</b>	<b>Type of actuator (control adjustment)</b>					
3.1.	<b>Manual</b>	-	-	Handwheel		
3.1.3.	Rotation	-	rev.	3.75		
3.1.4.	Operation torque	M	Nm	0.72		
3.2.	<b>Electric (Vent valve VV01)</b>	-	-	By solenoid		
3.2.1.	Nominal voltage	U <sub>n</sub>	V	Refer to ordering code page 4		
3.2.2.	Permissible voltage difference	-	%	+ 5...- 10		
3.2.2.	Max. coil temperature (temperature class F)	θ	°C	+ 155		
3.2.3.	Type of current	-	-	Alternating current (AC) or direct current (DC)		
				Alternating current		Direct current
				115 V / 60 CY 115 V / 50 CY	230 V / 60 CY 230 V / 50 CY	12 V / 24 V / 48 V
3.2.4.	Input power	P <sub>20</sub>	W	31		30
3.2.5.	Holding		VA	78		
3.2.6.	Inrush		VA	264		
3.2.7.	Relative operating period	OP <sub>rel</sub>	%	100		
3.2.8.	Type of protection	-	-	IP 65		
3.3.	<b>Electric proportional (Pilot stage P1)</b>	-	mA	0...800 (refer to bulletin 3-EN 220)		
<p><b>If the performance characteristics outlined above do not meet your own particular requirements, please consult your local Denison Office.</b></p>						

## Ordering Code

omit  
for version  
without VV01  
& without P1

### Model Number

R4V

#### Series

R4V = Pressure Relief Valve  
R4V...P1 = Proportional Pressure Relief Valve

#### Size

03 = 3/8"  
06 = 3/4"  
10 = 1 1/4"

#### Max. pressure

0 = for cartridges only  
5 = for body valves only } 350 bar

#### Body mounting

G = Cartridge B.S.P.P.  
0 = Cartridge NPTF  
1 = Threaded body - R4V03 = 1/2" NPTF; R4V06 = 1" NPTF  
(2 A-Ports, 1 B-Port); X, Y1-Port = 1/4" NPTF  
3 = Subplate mounting - R4V03/06/10  
(1/4" NPTF - thread on pilot head, Y1-Port, with drain line code 2)  
6 = Threaded body - R4V03 = 1/2" B.S.P.P.; R4V06 = 1" B.S.P.P.  
(2 A-Ports, 1 B-Port); X, Y1-Port = 1/4" B.S.P.P.  
9 = Subplate mounting - R4V03/06/10  
(1/4" B.S.P.P. - thread on pilot head, Y1-Port, with drain line code 2)  
A = Threaded body - R4V06 = 3/4" NPTF; R4V10 = 1 1/4" NPTF  
(1 A-Port, 1 B-Port); X, Y1-Port = 1/4" NPTF  
D = Threaded body - R4V06 = 3/4" B.S.P.P.; R4V10 = 1 1/4" B.S.P.P.  
(1 A-Port, 1 B-Port); X, Y1-Port = 1/4" B.S.P.P.

#### Pressure setting range

1 = 7...105 bar  
3 = 7...210 bar  
5 = 7...350 bar

#### Type of control

1 = Hand knob 32 mm dia.  
2 = Hand knob 50 mm dia. (not for version with vent valve VV01 & P1)  
3 = Acorn nut with lead seal  
4 = Adjusting device with key lock, key order no. 700-70619

#### Drain line

0 = internal  
1 = external from the subplate (Y)  
2 = external from the pilot head (Y1)

#### 3-way vent valve VV01

09 = with manual override	} Solenoid de-energized: open to tank
10 = without manual override	
11 = with manual override	} Solenoid energized: vent line blocked
12 = without manual override	

#### Electric proportional pressure control (24 V DC only)

P1 = Solenoid de-energized: open to tank. Solenoid energized: valve in function

#### Solenoid voltage and current

W01 = 115 V / 60 CY	} AC	GOR = 12 V	} DC
W02 = 230 V / 60 CY		1) GOQ = 24 V	
W06 = 115 V / 50 CY		GOH = 48 V	
W07 = 230 V / 50 CY		1) R4V with P1 = P1-GOQ only	

#### Design letter

#### Seal class

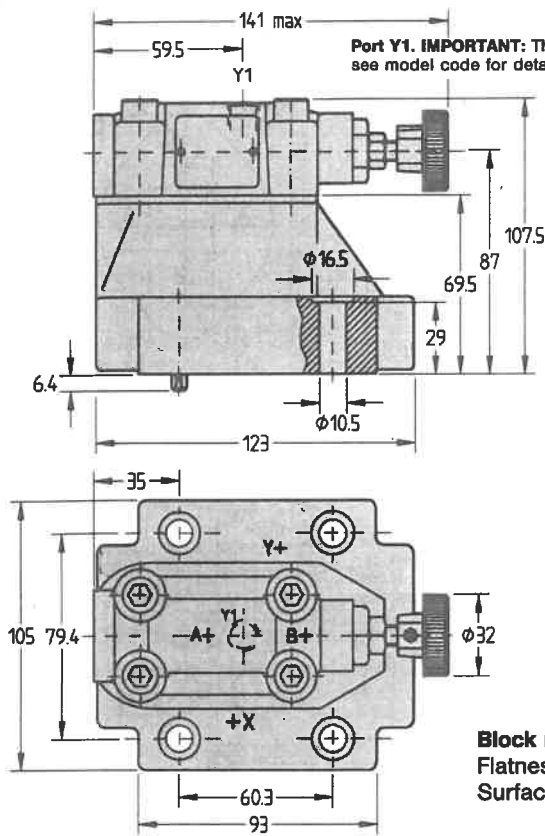
1 = Standard (for special fluids consult Denison)

#### Modifications

**Please Note:** R4V03 - Pilot heads are not interchangeable with R4V06 respectively R4V10 pilot heads.

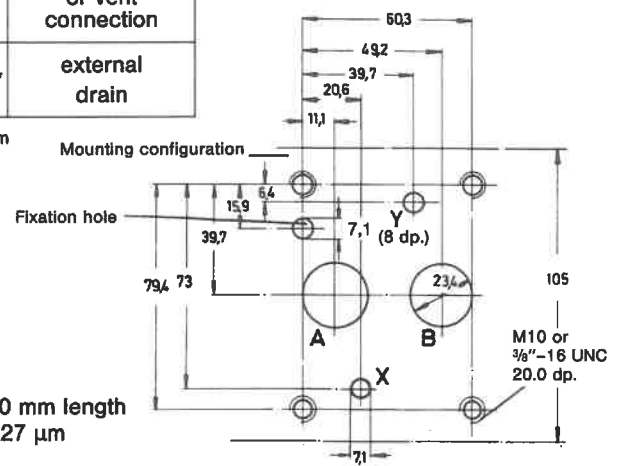
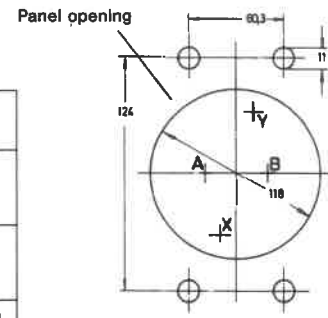
**R4V06 (3/4") Subplate Mounting, Configuration accord. to ISO**

Weight: 4.5 kg



Ports	Function
A	Pressure (Inlet)
B	Tank (Outlet)
X	Remote control or vent connection
Y, Y1*	external drain

\* optional from pilot head or subplate

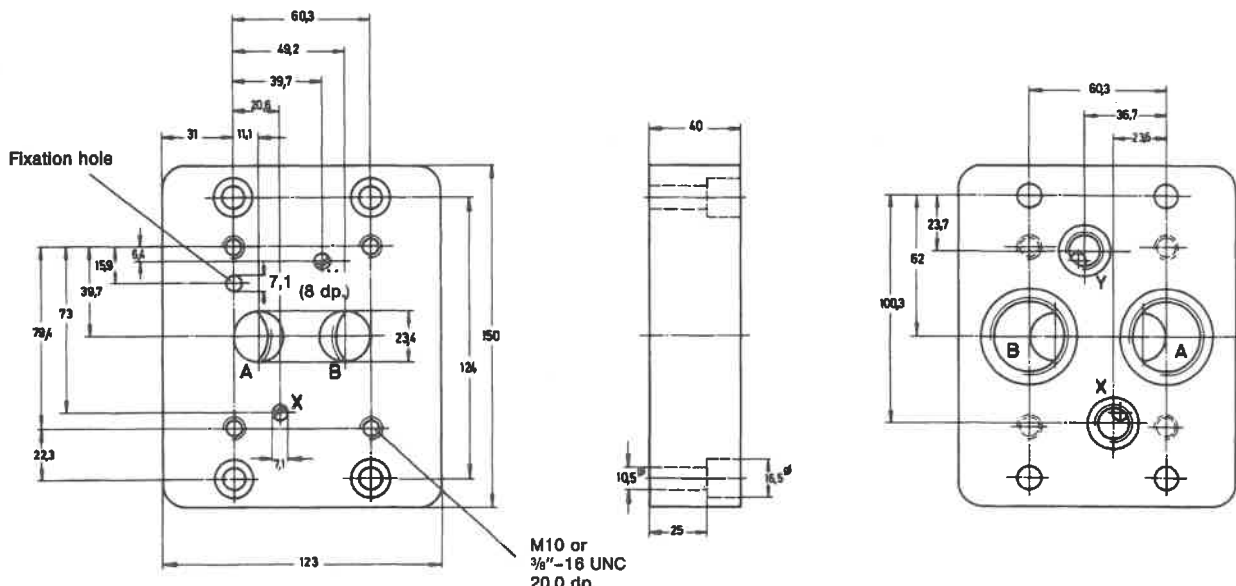


**Block mounting face**  
Flatness 0,01 mm/100 mm length  
Surface finish CLA 1.27 µm

3

**R4V06 - Subplates**

Weight: 4.8 kg



**Subplates**

Order-No.	Port sizes		4 Fixing screws *		
	A + B	X + Y	Dimension	Order-No.	min tensile strength
SS-P-16-G 114	1" NPTF	1/4" NPTF	3/8"-16 UNC 1 3/4" lg.	358-16220	at p ≤ 210 bar = 100 daN/mm <sup>2</sup>
SS-B-12-G 115	3/4" B.S.P.P.	1/4" B.S.P.P.	M10 x 45 DIN 912-12.9	700-71602	at p > 210 bar = 120 daN/mm <sup>2</sup>
SS-B-16-G 115	1" B.S.P.P.	1/4" B.S.P.P.			

\* Fixing screws are included in subplate order.  
For valves ordered without subplate, fixing screws must be ordered separately.