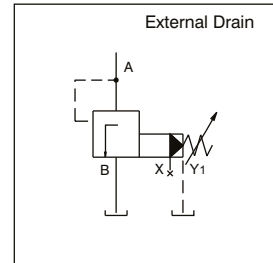
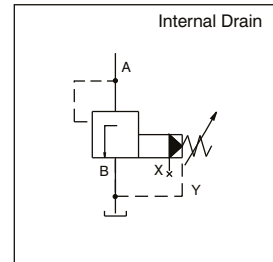


The Veljan Pressure Relief Valve series VR4V are pilot operated and work on the principle of hydraulic balancing. These valves are used to limit the system pressure in a hydraulic system and protect the system against pressure overload. Accurate pressure control even under wide flow variations are achieved by these valves. The valves may also be used to generate a pressure drop in a hydraulic circuit.

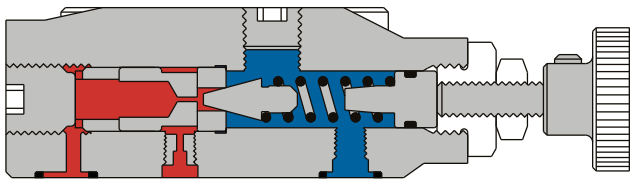
VR4V consist of a high flow poppet type seat valve section controlled by the low flow, adjustable pilot section mounted on top. Pressure setting is achieved by means of knurled knob. For tamper proof setting, an acorn nut with lead seal is available as option. Optional vent valve VVV01 sandwiched between pilot section and the main body can be used for venting the VR4V valves.

Exceptionally fast response is obtained due to the precise ratio between the main piston area and its mass. High pressure stability is an outstanding feature of VR4V valves.

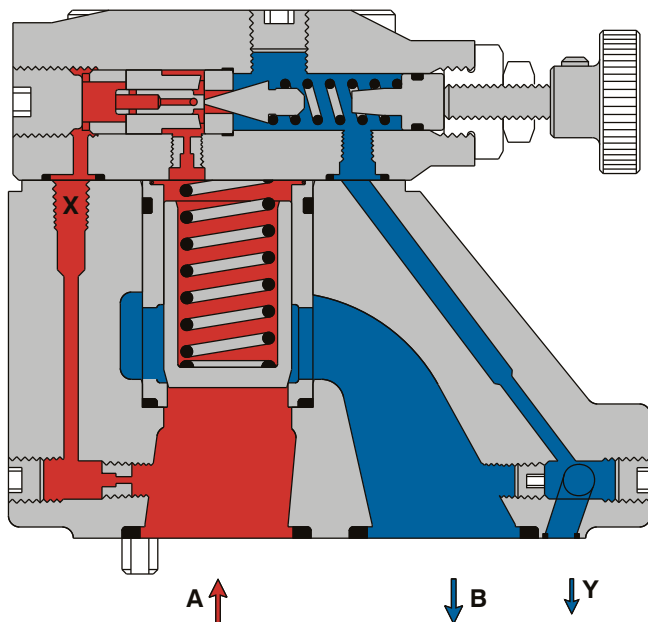


PC

VR4V03 pilot valve Y<sub>1</sub> (OPTIONAL)



VR4V06/10 pilot valve Y<sub>1</sub> (OPTIONAL)



Normally port A is connected to pump and port B to tank. At low pressure, flow entering port A is blocked by the main poppet. Pressure at port A passes to the pilot section as well as to the top of the main poppet through orifices. No flow takes place in this portion until the pressure overcomes the spring setting of the pilot cone. This pilot cone is lifted from its seat releasing a small pilot flow to tank and resulting in a pressure drop across the main poppet. The main poppet opens and allows only enough flow from port A to port B maintaining inlet pressure at the set value of the pilot spring. At drop of inlet pressure below the set value, the main poppet closes instantly.

Pilot drain is normally through port B for internal drain valves. External drain from port Y or Y<sub>1</sub> is optional. Port X may be used for venting or remote control of VR4V valves.

## SPECIFICATIONS

### General

Type	:	Pilot operated pressure relief
Design	:	Poppet type
Mounting	:	Threaded/Subplate/Cartridge/Flange
Mounting position	:	Optional
Port sizes (nominal)	:	3/8", 3/4", 1 1/4"
Direction of flow	:	A → B
Ambient temperature	:	-20° C... +60° C (-4° F... +140° F)
Special working conditions	:	Consult <b>VELJAN</b>

### Hydraulics

Pressure control range	:	100 - 5000 psi (7 - 350 bar)
Maximum operating pressure	:	
Port A (inlet)	:	5000 psi (350 bar)
Port B (outlet)	:	425 psi (30 bar)
Port X (pilot)	:	5000 psi (350 bar)
Port Y, Y <sub>1</sub> (Pilot drain )	:	425 psi (30 bar)
	:	VR4V 03 (3/8")      VR4V 06 (3/4")      VR4V 10 (1 1/4")
Nominal flow gpm (lpm)	:	16.0 (60)      53.0 (200)      119.0 (450)
Maximum flow gpm (lpm)	:	24.0 (90)      80.0 (300)      159.0 (600)
Fluid	:	Mineral oil as per DIN 51524/25 or other fluids on request
Fluid Temperature Range	:	-18° C... +80° C (0° F... +176° F)
Viscosity Range	:	10 to 650 cSt (60 to 3900 SSU)
Optimum operating viscosity	:	30 cSt (180 SSU)
Seal compatibility	:	Code 1 (Buna N) or Code 5 (Viton) (contact Veljan with specific oil details)
Cleanliness recommended	:	Better than NAS 1638 Class 8 or ISO 17/14

### Adjustment

Manual	:	Handwheel
Rotation	:	3.75 rev.
Operating torque	:	0.72 Nm
Electricals ( Vent Vavle VVV01)	:	Solenoid
Nominal voltage	:	Refer to Ordering Code
Permissible voltage fluctuation	:	+5%...-10%
Max. coil temperature	:	+155° C (311° F)
Type of current	:	Alternating Current (AC)/Direct Current (DC)
Input power	:	31 W
Holding	:	78 VA
Inrush	:	264 VA
Relative operating period	:	100%
Type of protection	:	I P 65

PC

ORDERING CODE

VR4V 06 - 5 6 5 - 1 0 - 09 - W07 - A 1 \*\*\*

Series

Size

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

Max. Pressure of Valve Body

- 0 - for cartridges only
- 5 - 5000psi (350 bar)

Body Mounting

Cartridge

- 0-Cartridge Y1 port = 1 1/4" NPTF
- E - Cartridge Y1 port = SAE - 4 (7/16" - 20 UNF)
- G-Cartridge Y1 port = G 1/4"

Threaded body

- 1 - Threaded body - VR4V03 = 1/2" NPTF ;  
VR4V06 = 1" NPTF  
(2 A - Ports, 1B - Port) } X, Y1 ports = 1/4" NPTF
- A - Threaded body VR4V06 = 3/4" NPTF ;  
VR4V10 = 1" NPTF  
(1 A - Port, 1B - Port) }
- 6 - Threaded body VR4V03 = 1/2" B.S.P.P ;  
VR4V06 = 1" B.S.P.P ;  
(2 A - Ports, 1B - Port) } X, Y1 ports = G1/4"
- D - Threaded body VR4V06 = 3/4" B.S.P.P ;  
VR4V10 = 1" B.S.P.P  
(1 A - Port, 1B - Port) }
- 4 - Threaded body VR4V03 - SAE - 8,  
VR4V06 - SAE - 16  
(2 A - Ports, 1B - Port) } X, Y1 ports = SAE-4 (7/16" - 20 UNF)
- B - Threaded body VR4V06 - SAE - 12,  
VR4V10 - SAE - 20  
(1 A - Port, 1B - Port) }

Subplate mounting

- 3 - Subplate mounting - VR4V03/06 /10 ISO  
(Y1 port - 1/4" NPTF ; with drain line code 2)
- 7 - Subplate mounting - VR4V03/06 /10 ISO  
(Y1 Port - SAE - 4 (7/16" - 20 UNF)
- 9 - Subplate mounting VR4V03/06 /10 ISO  
(Y1 Port - 1/4" B.S.P.P ; with drain line code 2)

Flange body

- 2 - Flange body ( X, Y1 port - 1/4" NPTF )  
(2 A - Ports, 1 B - Port)

Modification

Seal Class

- 1 - Buna N (Standard)
- 5 - Viton

Design Letter

Solenoid Voltage

- (Omit for non vent version)
- W01 - 115V/60 Hz AC GOR - 12V DC
- W02 - 230V/60 Hz AC GOQ - 24V DC
- W06 - 115V/50 Hz AC GOH - 48V DC
- W07 - 230V/50 Hz AC

Electrical Vent

- (3way VENT VALVE VVV01)
- Omit for non vent version
- 09 - With manual override (Solenoid de-energized : open to tank. Solenoid energized : vent line blocked)
- 10 - Without manual override (Solenoid de-energized : open to tank. Solenoid energized : vent line blocked)
- 11 - With manual override (Solenoid de-energized : vent line blocked Solenoid energized : open to tank)
- 12 - Without manual override (Solenoid de-energized : vent line blocked Solenoid energized : open to tank)

Drain line

- 0 - Internal
- 1 - External from subplate or manifold (Y)
- 2 - External from pilot head (Y1)

At subplate mounting only with body code 3,7,9

Type of Control

- 1 - Hand knob (32mm dia)
- 2 - Hand knob (50mm dia) (not for version with vent valve)
- 3 - Acorn nut with lead seal

Pressure setting range

- 1 - 100 - 1500 psi (7 - 105 bar)
- 3 - 100 - 3000 psi (7 - 210 bar)
- 5 - 100 - 5000 psi (7 - 350 bar)

PC

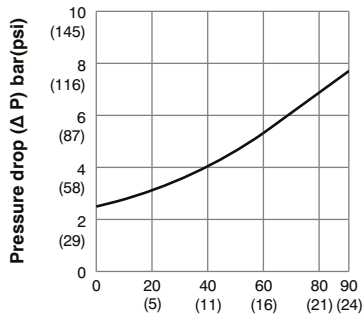
PERFORMANCE CURVES

**$\Delta p - q_v$  - Characteristics**

(Fluid 60 cSt at 40°C  
Test temp. 50°C  $\pm$  10%)

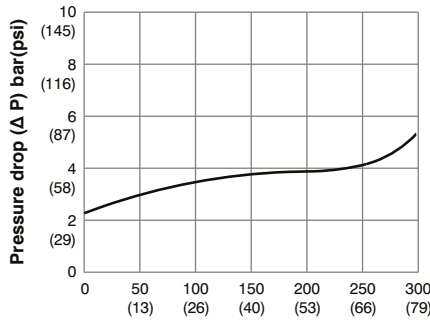
PC

VR4V03



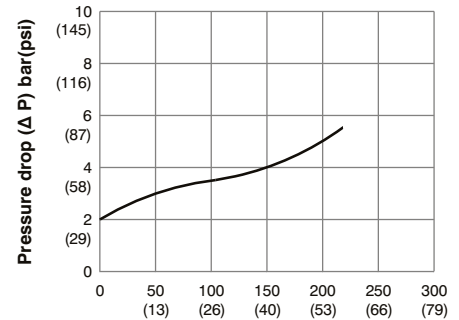
Flow  $q_v$  lpm(gpm)

VR4V06



Flow  $q_v$  lpm(gpm)

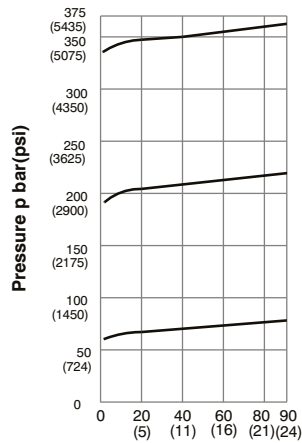
VR4V10



Flow  $q_v$  lpm(gpm)

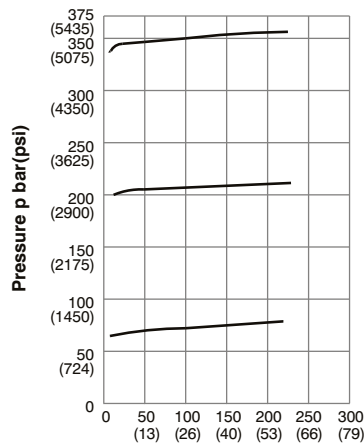
**P- $q_v$  - Characteristics**

VR4V03



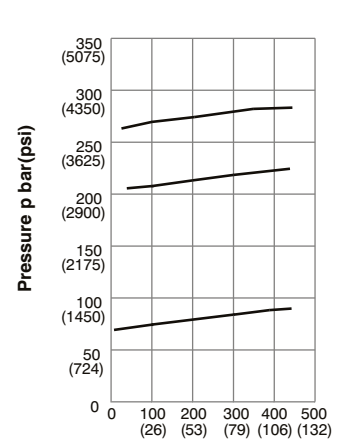
Flow  $q_v$  lpm(gpm)

VR4V06



Flow  $q_v$  lpm(gpm)

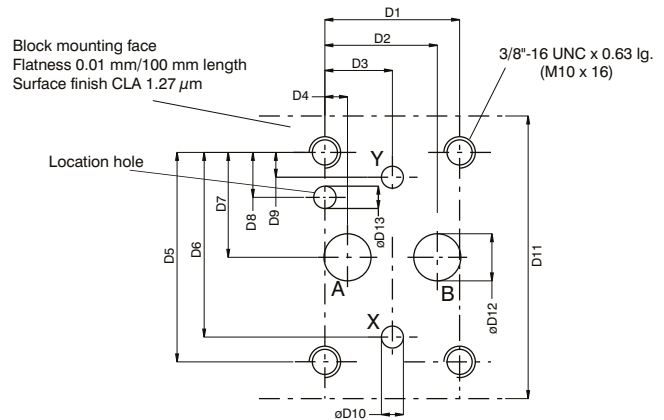
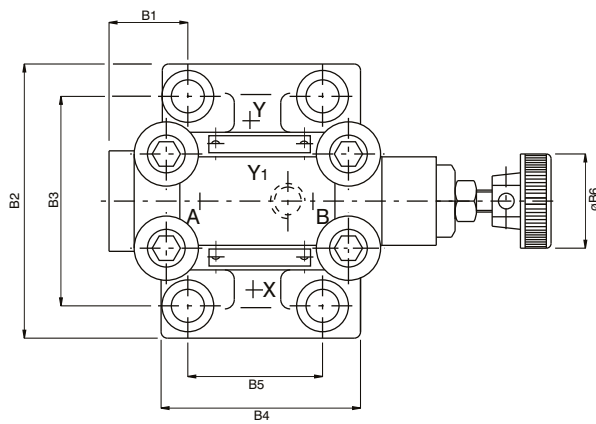
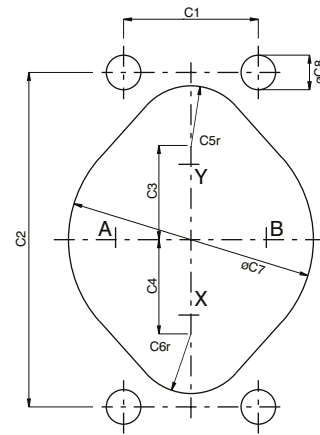
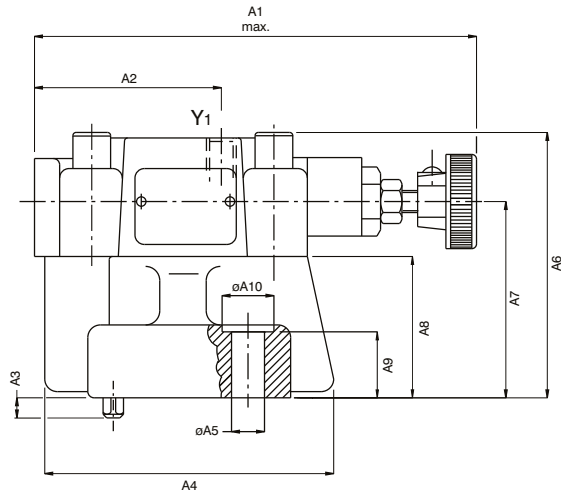
VR4V10



Flow  $q_v$  lpm(gpm)

VR4V03 (3/8") SUBPLATE MOUNTING BODY ( #3, #7 & #9 )

Weight : 5.93 lbs (2.7 kg)



Dimensions		
	in	mm
A1	5.55	141.0
A2	2.34	59.5
A3	0.25	6.4
A4	3.622	92.0
A5	ø 0.41	ø 10.5
A6	3.33	84.5
A7	2.46	62.5
A8	1.77	45.0
A9	0.83	21.0
A10	ø 0.65	ø 16.5

Dimensions		
	in	mm
B1	1.14	29.0
B2	3.437	87.3
B3	2.626	66.7
B4	2.5	63.5
B5	1.69	42.9
B6	ø 1.26	ø 32.0

Dimensions		
	in	mm
C1	1.69	42.9
C2	4.19	106.5
C3	1.18	30.0
C4	1.18	30.0
C5	0.75 r	19.0 r
C6	0.75 r	19.0 r
C7	ø3.07	ø 78.0
C8	ø0.43	ø 11.0

Dimensions		
	in	mm
D1	1.69	42.9
D2	1.41	35.8
D3	0.846	21.5
D4	0.283	7.2
D5	2.626	66.7
D6	2.315	58.8
D7	1.315	33.4
D8	0.563	14.3
D9	0.311	7.9
D10	ø 0.275	ø 7.0
D11	3.543	90.0
D12	ø 0.59	ø 15.0
D13	ø 0.28 x 0.315 dp.	ø 7.1 x 8.0 dp.

Ports	Function
A	Pressure (inlet)
B	Tank (outlet)
X	Remote control or vent connection
Y(Y <sub>1</sub> )	External drain <sup>1)</sup>

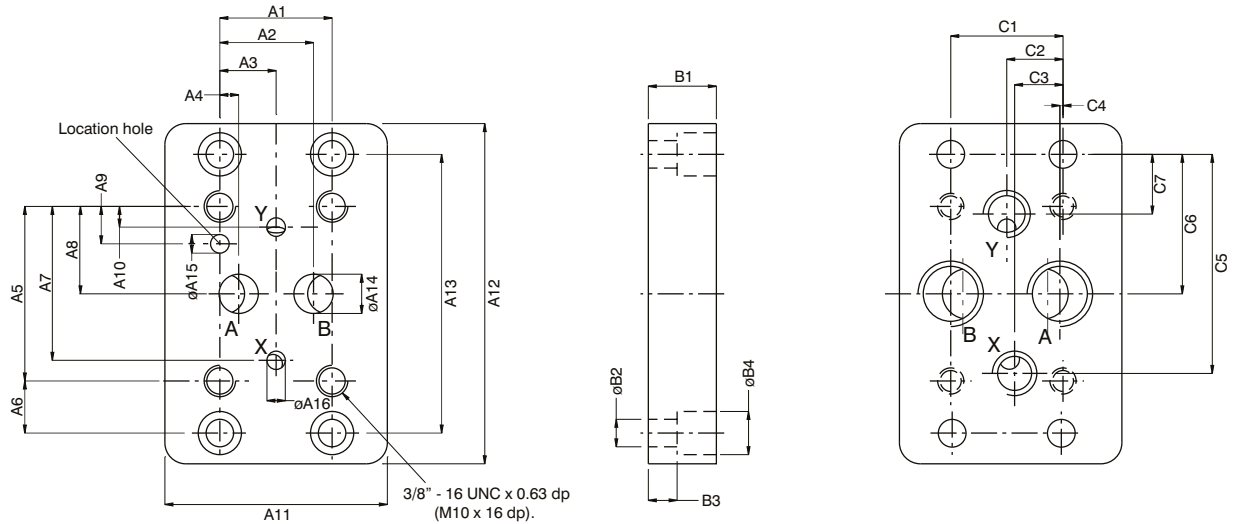
1) Optional from pilot head or subplate.  
Port Y<sub>1</sub> is only available at drain line (code 2) external from the pilot head.

Note : For details of Subplate & mtg. screws please refer page 12

VR4V03 (3/8") SUBPLATE

Weight : 4.4 lbs (2.0 kg)

PC



Dimensions	Dimensions	
	in	mm
A1	1.69	42.9
A2	1.41	35.8
A3	0.846	21.5
A4	0.283	7.2
A5	2.626	66.7
A6	0.783	19.9
A7	2.315	58.8
A8	1.315	33.4
A9	0.563	14.3
A10	0.311	7.9
A11	3.346	85.0
A12	5.12	130.0
A13	4.19	106.5
A14	ø 0.59	ø 15.0
A15	ø 0.28 x 0.315 dp.	ø 7.1 x 8.0 dp.
A16	ø 0.275	ø 7.0

Dimensions	Dimensions	
	in	mm
B1	1.024	26.0
B2	ø 0.41	ø 10.5
B3	0.433	11.0
B4	ø 0.65	ø 16.5

Dimensions	Dimensions	
	in	mm
C1	1.69	42.9
C2	0.846	21.5
C3	0.73	18.5
C4	0.047	1.2
C5	3.295	83.7
C6	2.1	53.3
C7	0.9	22.8

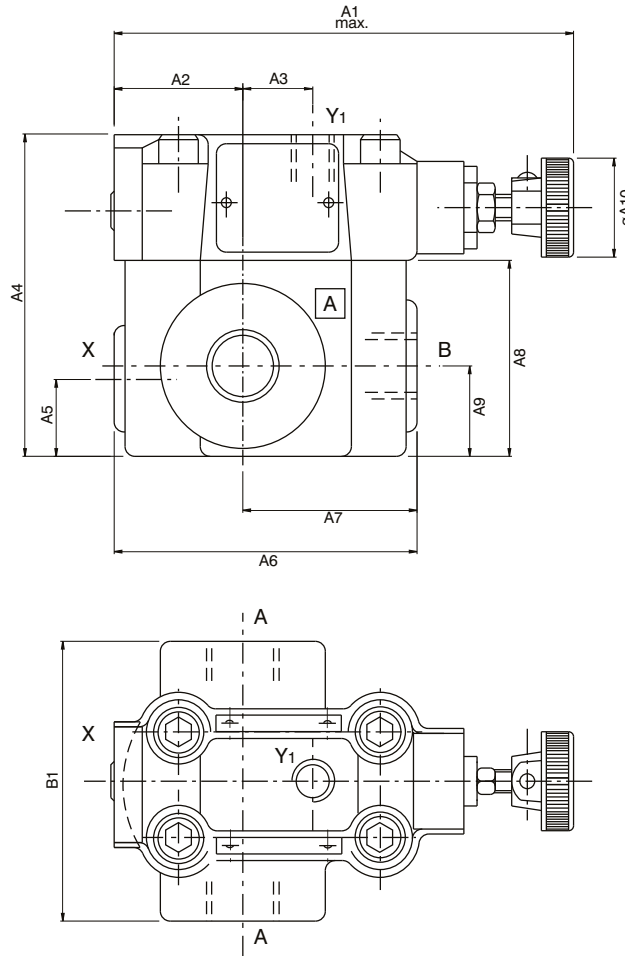
Order No.	Port sizes		4 Mounting screws*		
	A+B	X+Y	Dimensions	Order No.	min.tensile strength
VSS - P - 08 - G 112	1/2" NPTF	1/4" NPTF	3/8"- 16UNC 1 1/4" lg.	V358 - 16180	at p ≤ 210 bar = 100 daN/mm <sup>2</sup> (Torque 68 Nm) at p > 210 bar = 120 daN/mm <sup>2</sup> (Torque 82 Nm)
VSS - B - 08 - G 113	1/2" B.S.P.P	1/4" B.S.P.P.	M10 x 35mm DIN 912 - 12.9	V700 - 70039	

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

VR4V03 (3/8") - THREADED BODY ( #1, #4 & #6 )

Weight : 7.03 lbs (3.2 kg)

PC



	Dimensions	
	in	mm
A1	5.55	141.0
A2	1.535	39.0
A3	0.807	20.5
A4	3.84	97.5
A5	0.92	23.3
A6	3.62	91.9
A7	2.08	52.8
A8	2.34	59.4
A9	1.08	27.4
A10	ø 1.26	ø 32.0

	Dimensions	
	in	mm
B1	3.34	84.8

Ports	Function	Port Sizes
A (2)	Pressure (inlet)	1/2" NPTF or G 1/2" or SAE - 8 (3/4" - 16 UNF)
B	Tank (outlet)	1/2" NPTF or G 1/2" or SAE - 8 (3/4" - 16 UNF)
X <sup>1)</sup>	Ext.remote control or vent connection	1/4" NPTF or G 1/4" or SAE - 4 (7/16" - 20 UNF)
Y1 <sup>2)</sup>	External drain	1/4" NPTF or G 1/4" or SAE - 4 (7/16" - 20 UNF)

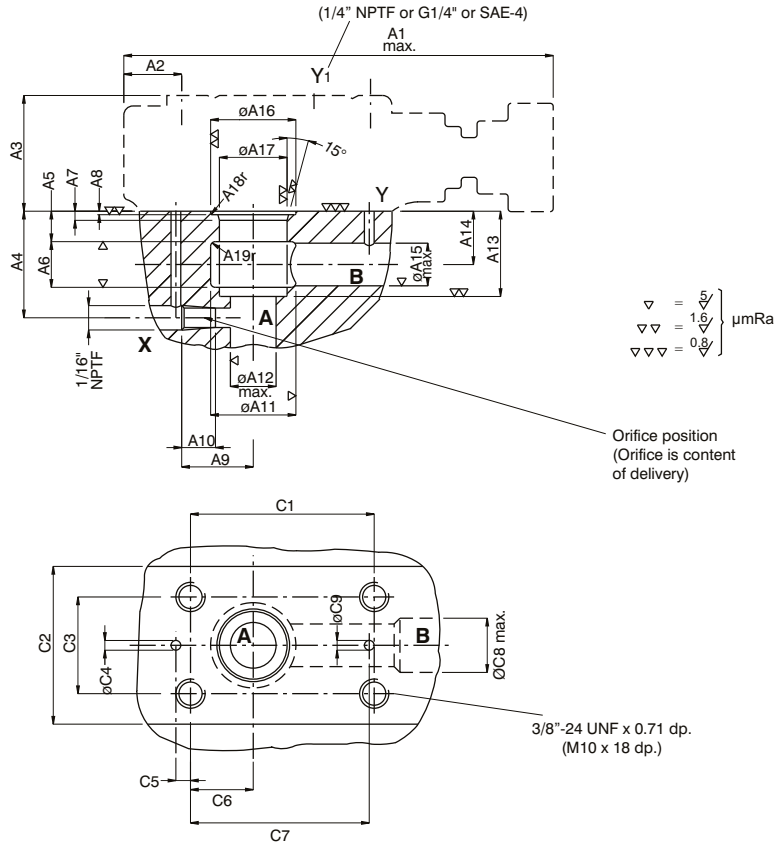
1) Closed when supplied

2) Port Y1 is only available at drain line (code 2) external from the pilot head

CARTRIDGE WITH PILOT VALVE VR4V03 ( #0, #E & #G )

Weight : 1.32 lbs (0.6 kg)

PC



Dimensions	in		mm	
A1	5.55		141.0	
A2	0.75		19.0	
A3	1.49		38.0	
A4	1.38		35.0	
A5	0.39		10.0	
A6	0.59		15.0	
A7	0.12		3.0	
A8	0.045 <sup>+0.006</sup>		1.15 <sup>+0.15</sup>	
A9	0.925		23.5	
A10	0.437		11.1	
A11	∅ 1.1		∅ 28.0	
A12	∅ 0.6		∅ 15.0	
A13	1.1		28.0	
A14	0.69		17.5	
A15	∅ 0.55		∅ 14.0	
A16	∅ 1.1 <sup>±0.004</sup>		∅ 28.0 <sup>+0.1</sup>	
A17	∅ 0.875 <sup>+0.0008</sup>		∅ 22.225 <sup>+0.02</sup>	
A18	0.016		0.4	
A19	0.6		15.0	

Dimensions	in		mm	
C1	2.375 <sup>+0.008</sup>		60.32 <sup>+0.2</sup>	
C2	2.04		51.8	
C3	1.25 <sup>+0.008</sup>		31.75 <sup>+0.2</sup>	
C4	∅ 0.126		∅ 3.2	
C5	0.19		4.8	
C6	0.81		20.6	
C7	2.31		58.7	
C8	∅ 0.7		∅ 17.8	
C9	∅ 0.126		∅ 3.2	

Ports	Function
A	Pressure (inlet)
B	Tank (outlet)
X	External control connection
Y, Y1 <sup>1)</sup>	Drain

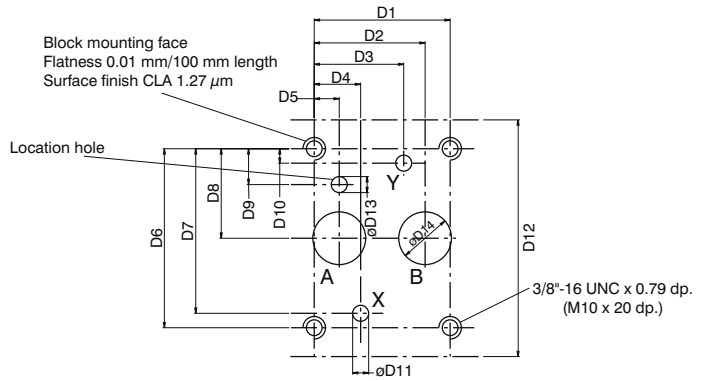
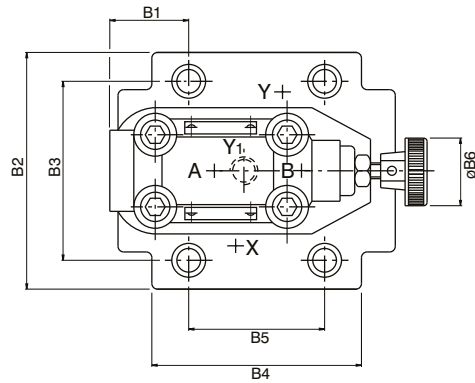
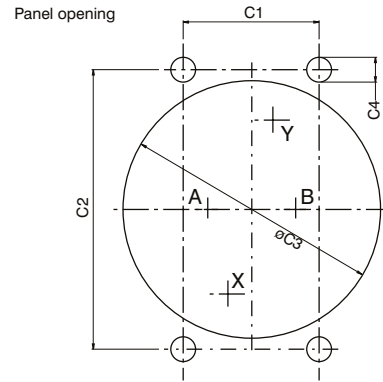
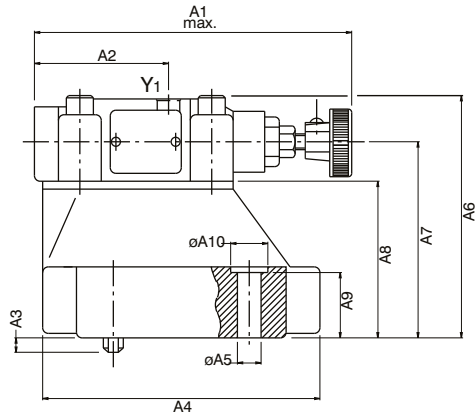
4 Mounting screws*	
Dimensions	Order No.
3/8" - 24 UNF x 1 1/4"lg. or M10 x 45mm, DIN 912 - 12.9	V359 - 15220 or V700 - 71602

1) Port Y1 is only available at drain line (code 2) external from the pilot head.

\* Mounting screws must be ordered separately

VR4V06 (3/4") SUBPLATE MOUNTING BODY ( #3, #7 & #9 )

Weight : 9.89 lbs (4.5 kg)



Dimensions		
	in	mm
A1	5.55	141.0
A2	2.34	59.5
A3	0.25	6.4
A4	4.842	123.0
A5	ø 0.41	ø 10.5
A6	4.232	107.5
A7	3.425	87.0
A8	2.736	69.5
A9	1.142	29.0
A10	ø 0.65	ø 16.5

Dimensions		
	in	mm
B1	1.38	35.0
B2	4.134	105.0
B3	3.126	79.4
B4	3.66	93.0
B5	2.374	60.3
B6	ø 1.26	ø 32.0

Dimensions		
	in	mm
C1	2.374	60.3
C2	4.88	124.0
C3	ø 4.645	ø 118.0
C4	ø 0.433	ø 11.0

Dimensions		
	in	mm
D1	2.374	60.3
D2	1.937	49.2
D3	1.563	39.7
D4	0.811	20.6
D5	0.437	11.1
D6	3.126	79.4
D7	2.874	73.0
D8	1.563	39.7
D9	0.626	15.9
D10	0.25	6.4
D11	ø 0.28	ø 7.1
D12	4.134	105.0
D13	ø 0.28 x 0.315 dp.	ø 7.1 x 8.0 dp.
D14	ø 0.92	ø 23.4

Ports	Function
A	Pressure (inlet)
B	Tank (outlet)
X	Remote control or vent connection
Y(Y <sub>1</sub> )	External drain <sup>1)</sup>

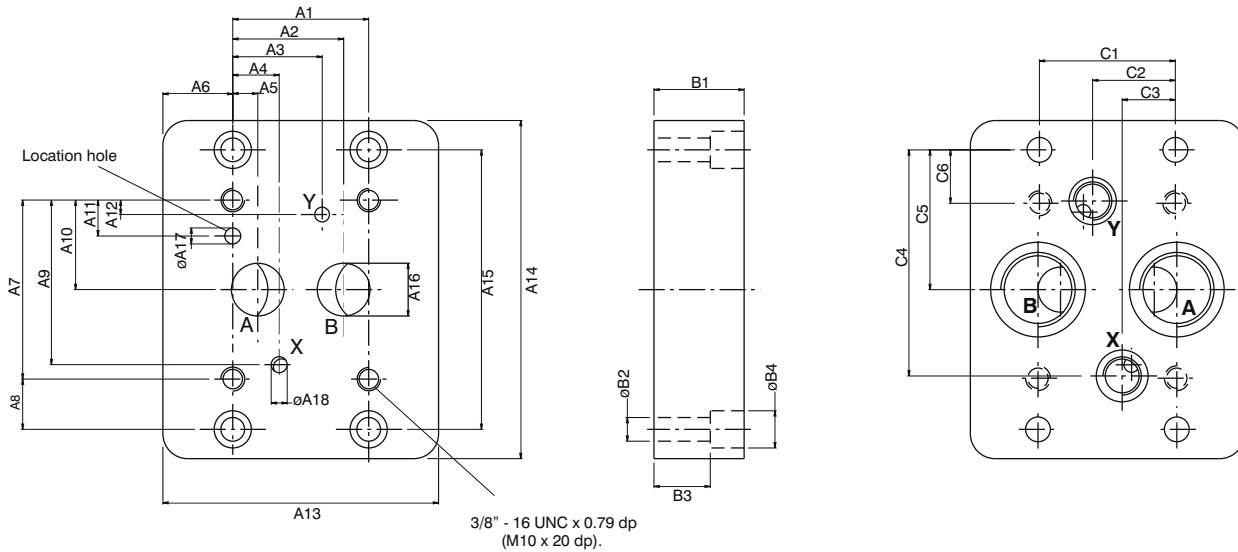
1) Optional from pilot head or subplate.  
Port Y<sub>1</sub> is only available at drain line (code 2) external from the pilot head.

Note : For details of Subplate & mtg. screws please refer page 16

SUBPLATE FOR VR4V06 (3/4")

Weight : 10.54 lbs (4.8 kg)

PC



	Dimensions	
	in	mm
A1	2.374	60.3
A2	1.937	49.2
A3	1.563	39.7
A4	0.811	20.6
A5	0.437	11.1
A6	1.22	31.0
A7	3.126	79.4
A8	0.88	22.3
A9	2.874	73.0
A10	1.563	39.7
A11	0.626	15.9
A12	0.25	6.4
A13	4.843	123
A14	5.905	150.0
A15	4.882	124.0
A16	0.92	23.4
A17	ø 0.28 x 0.315 dp.	ø 7.1 x 8.0 dp.
A18	ø 0.28	ø 7.1

	Dimensions	
	in	mm
B1	1.575	40.0
B2	ø 0.41	ø 10.5
B3	0.984	25.0
B4	ø 0.65	ø 16.5

	Dimensions	
	in	mm
C1	2.374	60.3
C2	1.445	36.7
C3	0.93	23.6
C4	3.949	100.3
C5	2.44	62.0
C6	0.933	23.7

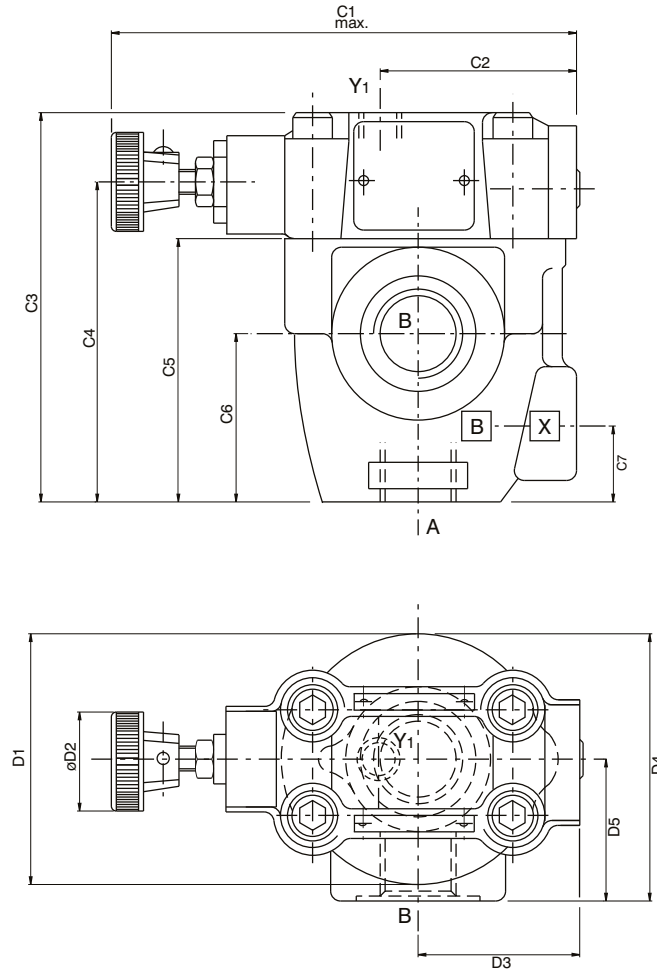
Order No.	Port sizes		4 Mounting screws*		
	A+B	X+Y	Dimension	Order No.	min.tensile strength
VSS - P -16 - G 114	1" NPTF	1/4" NPTF	3/8"-16UNC 1 3/4" lg	V359-16220	at p ≤ 210 bar = 100 daN/mm <sup>2</sup> (Torque 68 Nm) at p > 210 bar = 120 daN/mm <sup>2</sup> (Torque 82 Nm)
VSS - B -12 - G 115	3/4" B.S.P.P.	1/4" B.S.P.P.	M10 x 45mm DIN 912 - 12.9	V700 - 71602	
VSS - B -16 - G 115	1" B.S.P.P.				

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

VR4V06 (3/4") - THREADED BODY ( #A, #B & #D )

Weight : 7.25 lbs (3.3 kg)

PC



Dimensions		
	in	mm
C1	5.55	141.0
C2	2.34	59.5
C3	4.646	118.0
C4	3.82	97.0
C5	3.15	80.0
C6	2.01	51.0
C7	0.905	23.0

Dimensions		
	in	mm
D1	2.99	76.0
D2	ø 1.26	ø 32.0
D3	1.93	49.0
D4	3.19	81.0
D5	1.693	43.0

Ports	Function	Port Sizes
A	Pressure (inlet)	3/4" NPTF or G 3/4" or SAE - 12 (1 <sup>1</sup> / <sub>16</sub> " - 12 UNF)
B	Tank (outlet)	3/4" NPTF or G 3/4" or SAE - 12 (1 <sup>1</sup> / <sub>16</sub> " - 12 UNF)
X <sup>1)</sup>	Remote control or vent connection	1/4" NPTF or G 1/4" or SAE - 4 (7/16" - 20 UNF)
Y <sub>1</sub> <sup>1)</sup>	External drain	1/4" NPTF or G 1/4" or SAE - 4 (7/16" - 20 UNF)

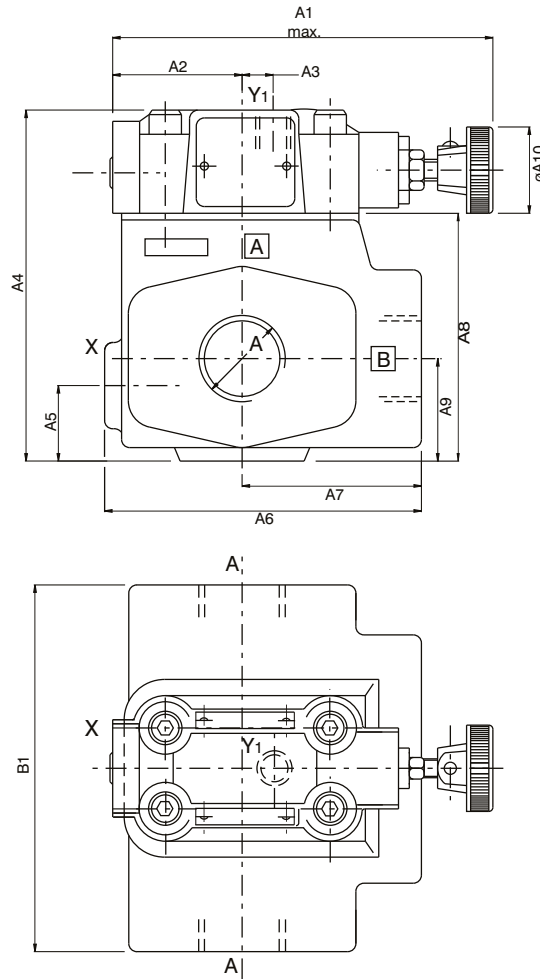
1) Closed when supplied

2) Port Y<sub>1</sub> is only available at drain line (code 2) external from the pilot head

VR4V06 (3/4") - THREADED BODY ( #1, #4 & #6 )

Weight : 14.5 lbs (6.6 kg)

PC



Dimensions		
	in	mm
A1	5.55	141.0
A2	1.89	48.0
A3	0.453	11.5
A4	5.12	130.0
A5	1.102	28.0
A6	4.626	117.5
A7	2.62	66.5
A8	3.622	92.0
A9	1.496	38.0
A10	$\phi$ 1.26	$\phi$ 32.0

Dimensions		
	in	mm
B1	5.35	136.0

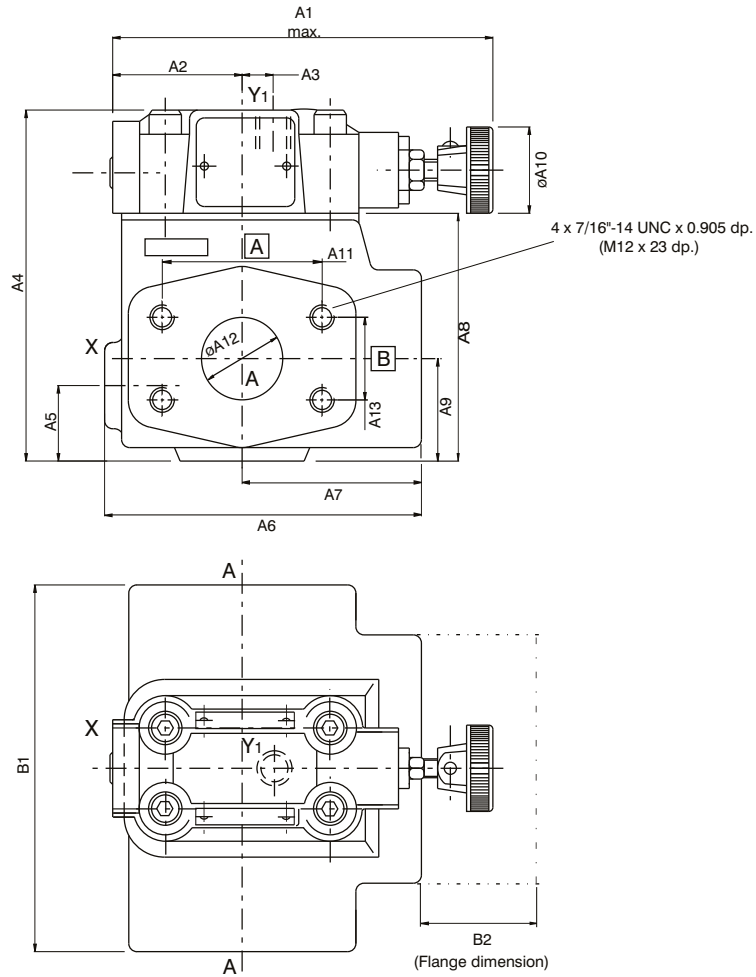
Ports	Function	Port Sizes
A(2)	Pressure (inlet)	1" NPTF or G 1" or SAE - 16 ( 1 5/16" - 12 UNF)
B	Tank (outlet)	1" NPTF or G 1" or SAE - 16 ( 1 5/16" - 12 UNF)
X <sup>1)</sup>	Remote control or vent connection	1/4" NPTF or G 1/4" or SAE - 4 ( 7/16" - 20 UNF)
Y <sub>1</sub> <sup>2)</sup>	External drain	1/4" NPTF or G 1/4" or SAE - 4 ( 7/16" - 20 UNF)

- 1) Closed when supplied
- 2) Port Y<sub>1</sub> is only available at drain line (code 2) external from the pilot head

VR4V06 (3/4") - FLANGE BODY ( #2 )

Weight : 14.5 lbs (6.6 kg)

PC



Dimensions		
	in	mm
A1	5.55	141.0
A2	1.89	48.0
A3	0.453	11.5
A4	5.12	130.0
A5	1.102	28.0
A6	4.626	114.3
A7	2.5	63.5
A8	3.622	92.0
A9	1.5	38.1
A10	ø 1.26	ø 32.0
A11	2.307	58.6
A12	ø 1.18	ø 30.0
A13	1.188	30.2

Dimensions		
	in	mm
B1	5.35	136.0
B2	1.56	39.8

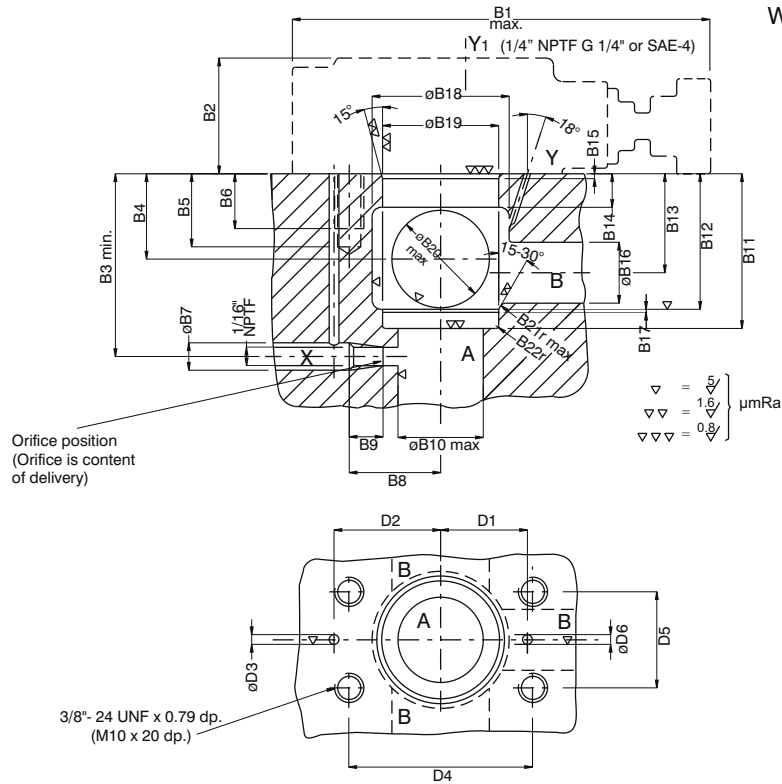
Ports	Function	Flange model no	Flange order no	Port Sizes
A(2x)	Pressure (inlet)	VFS4-B-20-26 or VFS4-P-20-26	VS14-66935 or VS14-66927	1/4" B.S.P.P or 1/4" NPTF
B	Tank (outlet)	-	-	1/4" B.S.P.P or 1/4" NPTF
X	Remote control or vent connection	-	-	1/4" B.S.P.P or 1/4" NPTF
Y <sub>1</sub>	External drain	-	-	1/4" B.S.P.P or 1/4" NPTF

Flanges must be ordered separately.  
Mounting screws are included in flange order.

CARTRIDGES WITH PILOT VALVES VR4V06/VR4V10 ( #0, #E & #G )

Weight : 2.63 lbs (1.2 kg)

PC



Dimensions	in		mm	
B1	5.55		141.0	
B2	1.49		38.0	
B3	2.362		60.0	
B4	1.102/1.083		28.0/27.5	
B5	0.945		24.0	
B6	0.71		18.0	
B7	ø 0.35		ø 9.0	
B8	1.18		30.0	
B9	0.437		11.1	
B10	ø 1.1		ø 28.0	
B11	2.000/1.997		50.80/50.73	
B12	1.75		44.5	
B13	1.28		32.5	
B14	0.433		11.0	
B15	0.06		1.6	
B16	ø 0.79		ø 20.0	
B17	0.04		1.0	
B18	ø 1.772/1.732		ø 45.0/44.0	
B19	ø 1.502/1.500		ø 38.139/38.100	
B20	ø 1.26		ø 32.0	
B21	0.08		2.0	
B22	0.0157		0.4	

Dimensions	in		mm	
D1	1.122		28.5	
D2	1.38		35.0	
D3	ø 0.126/0.236		ø 3.2/6.0	
D4	2.375/2.383		60.32/60.52	
D5	1.24/1.26		31.55/31.95	
D6	ø 0.126		ø 3.2	

Ports	Function
A	Pressure (inlet)
B	Tank (outlet)
X	External control connection
Y, Y <sup>1)</sup>	Drain

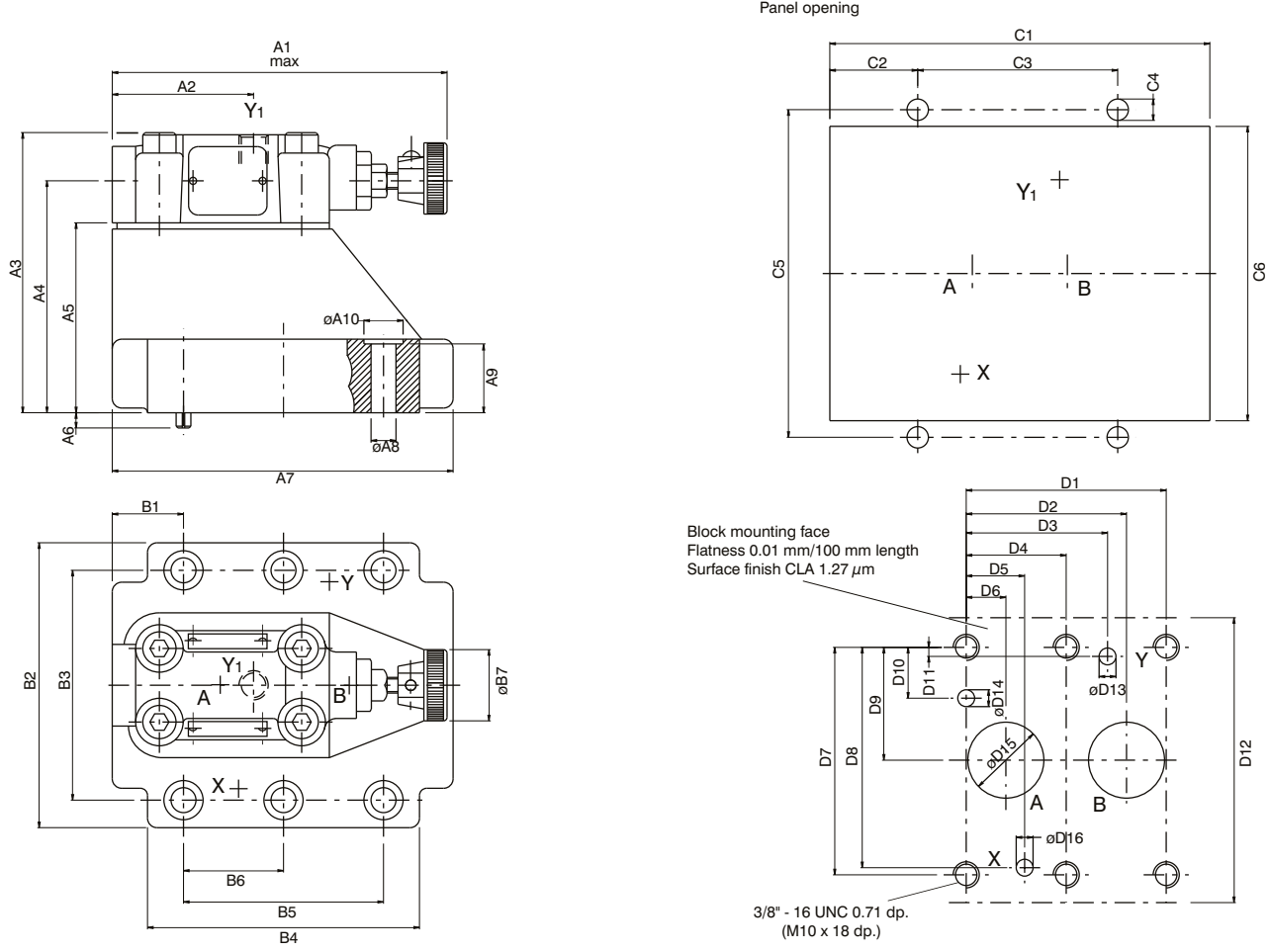
4 Mounting screws*	
Dimensions	Order No.
3/8" - 24 UNF x 1 3/4" lg. or M10 x 45mm, DIN 912 - 12.9	V359 - 15220 or V700 - 71602

1) Port Y<sup>1)</sup> is only available at drain line (code 2) external from the pilot head.

\* Mounting screws must be ordered separately

VR4V10 (1 1/4") SUBPLATE MOUNTING BODY ( #3, #7 & #9 )

Weight : 13.2 lbs (6.0 kg)



PC

Dimensions	in		mm	
A1	5.55	141.0		
A2	2.34	59.5		
A3	4.645	118.0		
A4	3.846	97.7		
A5	3.15	80.0		
A6	0.25	6.4		
A7	5.645	143.5		
A8	ø 0.41	ø 10.5		
A9	1.14	29.0		
A10	ø 0.65	ø 16.5		

Dimensions	in		mm	
B1	1.181	30.0		
B2	4.72	120.0		
B3	3.8	96.8		
B4	4.51	114.5		
B5	3.315	84.2		
B6	1.657	42.1		
B7	ø 1.26	ø 32.0		

Dimensions	in		mm	
C1	6.3	160.0		
C2	1.456	37.0		
C3	3.315	84.2		
C4	ø 0.35	ø 9.0		
C5	5.433	138.0		
C6	4.88	124.0		

Dimensions	in		mm	
D1	3.345	84.2		
D2	2.657	67.5		
D3	2.342	59.5		
D4	1.657	42.1		
D5	0.97	24.6		
D6	0.657	16.7		
D7	3.811	96.8		
D8	3.653	92.8		
D9	1.905	48.4		
D10	0.842	21.4		
D11	0.15	3.8		
D12	4.724	120.0		
D13	ø 0.28	ø 7.1		
D14	ø 0.28 x 0.4 dp.	ø 7.1 x 11.0 dp.		
D15	ø 1.26	ø 32.0		
D16	ø 0.28	ø 7.1		

Ports	Function
A	Pressure (inlet)
B	Tank (outlet)
X	Remote control or vent connection
Y(Y <sub>1</sub> )	External drain <sup>1)</sup>

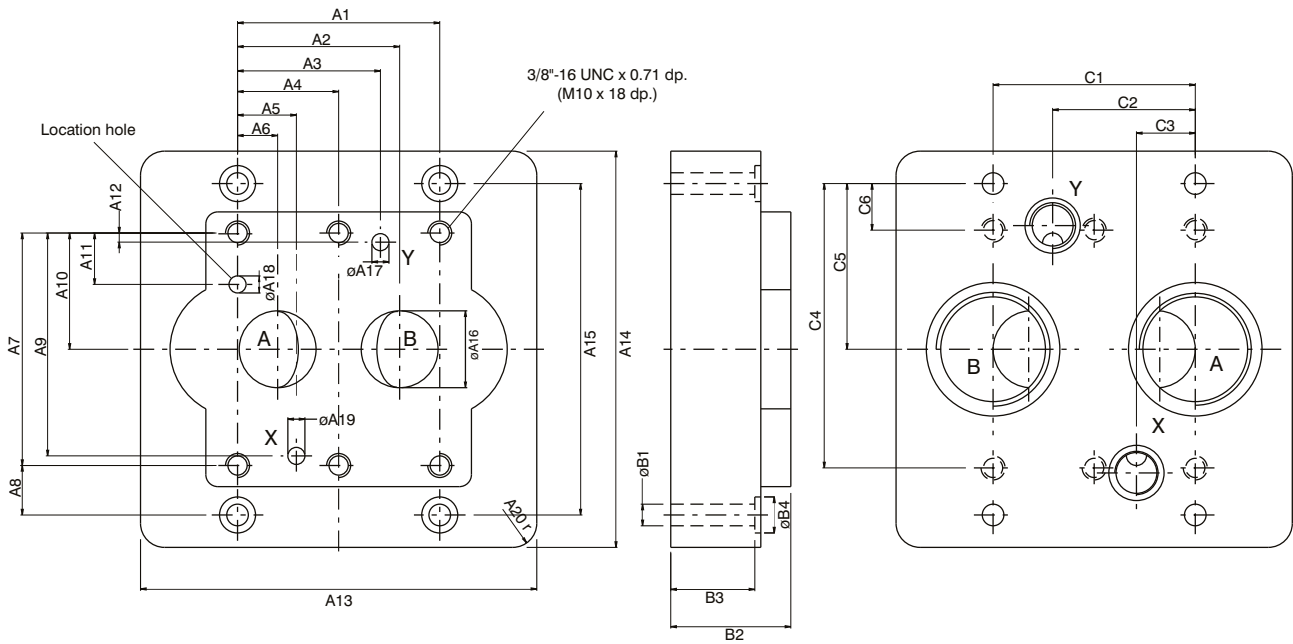
1) Optional from pilot head or subplate.  
Port Y<sub>1</sub> is only available at drain line (code 2) external from the pilot head.

Note : For details of Subplate & mtg. screws please refer page 22

Subplate for VR4V10

Weight : 18.68 lbs (8.5 kg)

PC



Dimensions	in		mm	
A1	3.315	84.2		
A2	2.657	67.5		
A3	2.342	59.5		
A4	1.657	42.1		
A5	0.965	24.5		
A6	0.657	16.7		
A7	3.811	96.8		
A8	0.811	20.6		
A9	3.653	92.8		
A10	1.905	48.4		
A11	0.842	21.4		
A12	0.15	3.8		
A13	6.535	166.0		
A14	6.5	165.0		
A15	5.43	138.0		
A16	ø 1.26	ø 32.0		
A17	ø 0.28	ø 7.1		
A18	ø 0.28 x 0.315 dp.	ø 7.1 x 8.0 dp.		
A19	ø 0.28	ø 7.1		
A20	0.4r	10.0 r		

Dimensions	in		mm	
B1	ø 0.351	ø 9.0		
B2	1.97	50.0		
B3	1.38	35.0		
B4	ø 0.59	ø 15.0		

Dimensions	in		mm	
C1	3.315	84.2		
C2	2.342	59.5		
C3	0.97	24.6		
C4	4.66	118.4		
C5	2.716	69.0		
C6	0.764	19.4		

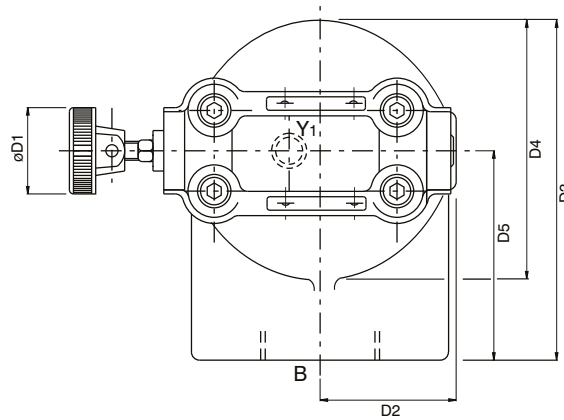
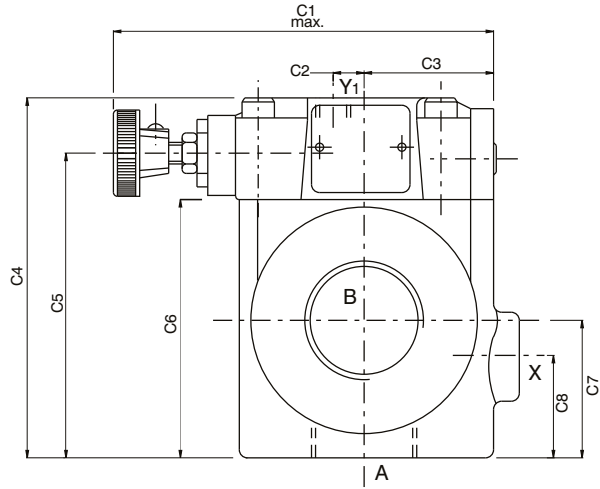
Order No.	Port sizes		6 Mounting screws*		
	A+B	X+Y	Dimension	Order no	min.tensile strength
VSS - P - 24 - G 116	1½" NPTF	1/4" NPTF	3/8" - 16UNC 1¾" lg.	V358 - 16220	at p ≤ 210 bar = 100 daN/mm² (Torque 68 Nm) at p > 210 bar = 120 daN/mm² (Torque 82 Nm)
VSS - B - 24 - G 117	1½" B.S.P.P	1/4" B.S.P.P.	M 10 x 45 DIN 912-12.9	V700 - 71602	

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

VR4V10 (1 1/4") - THREADED BODY ( #A, #B & #D )

Weight : 12.3 lbs (5.6 kg)

PC



Dimensions		
	in	mm
C1	5.55	141.0
C2	0.453	11.5
C3	1.89	48.0
C4	5.236	133.5
C5	4.45	113.0
C6	3.76	95.5
C7	2.01	51.0
C8	1.496	38.0

Dimensions		
	in	mm
D1	ø 1.26	ø 32.0
D2	2.01	51.0
D3	4.75	120.6
D4	3.374	85.7
D5	3.063	77.8

Ports	Function	Port Sizes
A	Pressure (inlet)	1 1/4" NPTF or G 1 1/4" or SAE - 20 (1 5/8" - 12 UNF)
B	Tank (outlet)	1 1/4" NPTF or G 1 1/4" or SAE - 20 (1 5/8" - 12 UNF)
X <sup>1)</sup>	Remote control or vent connection	1/4" NPTF or G 1/4" or SAE - 4 (7/16" - 20 UNF)
Y <sub>i</sub> <sup>2)</sup>	External drain	1/4" NPTF or G 1/4" or SAE - 4 (7/16" - 20 UNF)

1) Closed when supplied

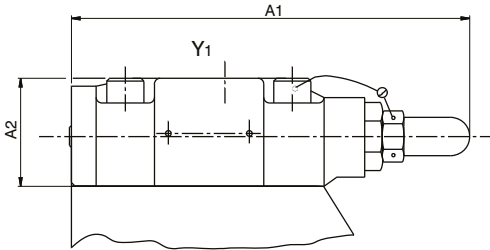
2) Port Y<sub>i</sub> is only available at drain line (code 2) external from the pilot head

OPTIONAL CONTROL

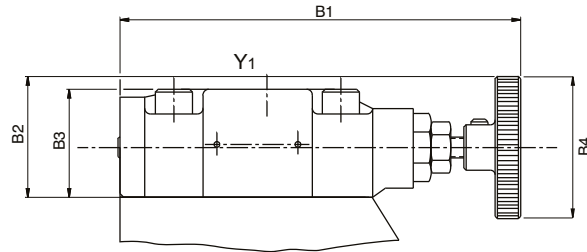
Type of control - Code 3  
Acron nut with lead seal

Type of control - Code 2  
Hand knob 50mm dia  
(not for version with vent valve VVV01)

PC



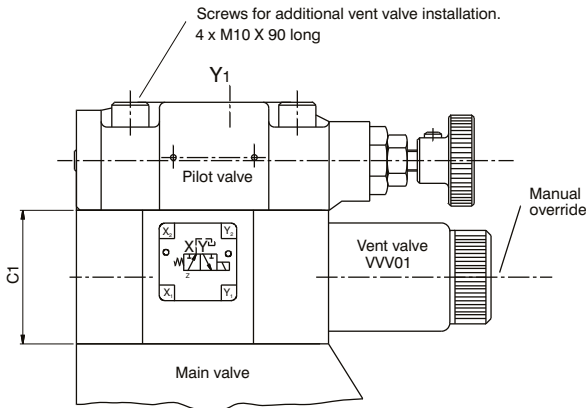
Dimensions		
	in	mm
A1	5.51	140.0
A2	1.49	38.0



Dimensions		
	in	mm
B1	5.55	141.0
B2	1.67	42.5
B3	1.49	38.0
B4	ø 1.96	ø 50.0

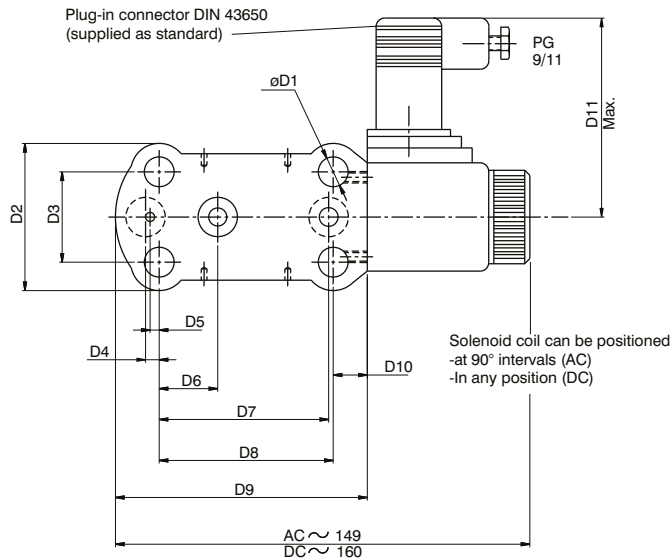
Version with Vent Valve VVV01

Weight (VVV01) : 3.73 lbs (1.7 kg)



Dimensions		
	in	mm
C1	1.85	47.0

Dimensions		
	in	mm
D1	ø 0.41	ø 10.5
D2	2.03	51.8
D3	1.25	31.8
D4	0.18	4.8
D5	0.12	3.2
D6	0.81	20.6
D7	2.31	58.7
D8	2.37	60.3
D9	3.49	88.7
D10	0.51	13.0
D11	2.75	70.0



Code	Internal Drain	External Drain
11 or 12		
09 or 10		