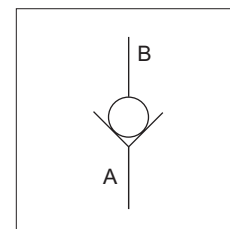


Veljan Direct operated Check Valve Series VC4V are poppet type and designed for a maximum pressure of 350 bar and a flow capacity ranging from 180 l/min for a 3/8" valve to 600 l/min for 1 1/2" valve. Mounting configuration of VC4V are in accordance with International standards such as CETOP, ISO, DIN or NFPA. Subplate mounting, L - body and T - body are standard. VC4V valves can be used as body type units or cartridges for manifold applications.



A zero-leak condition can be achieved for flow from port B to port A and free flow in the opposite direction. Due to a precise ratio between the main piston area and its mass, an exceptional fast response can be obtained. Only a small opening stroke of the poppet causes free flow from port A to port B.

SPECIFICATIONS

General

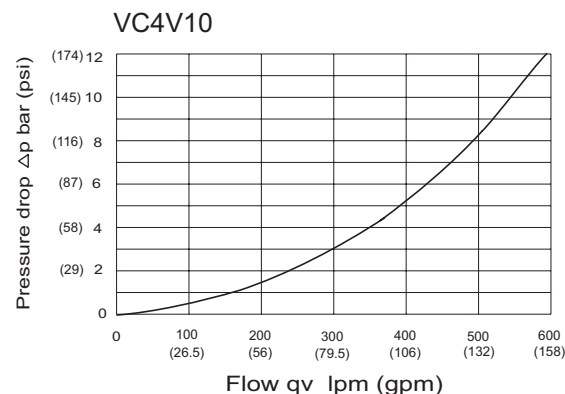
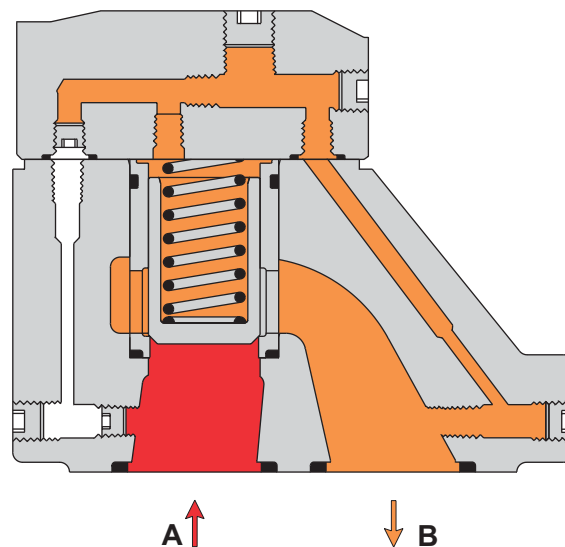
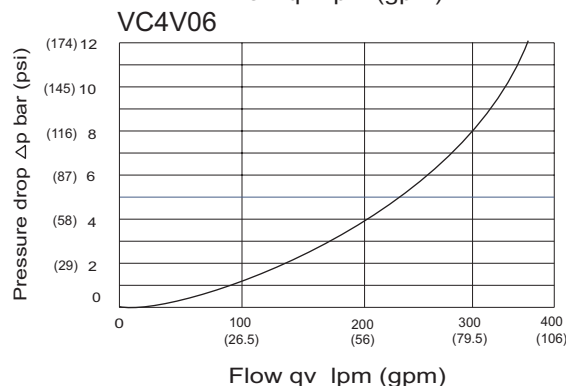
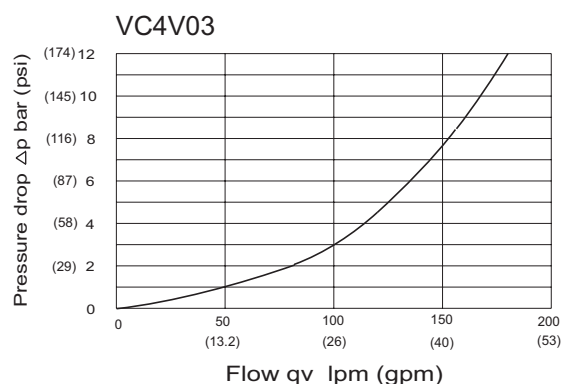
Type	: Direct operated check valve
Design	: Poppet type
Mounting	: VC4V03 : Threaded body/ Subplate mounting/Cartridge
	: VC4V06 : Threaded body/ Subplate mounting/Cartridge
	: VC4V10 : Threaded body/ Subplate mounting
Mounting position	: Optional
Port sizes (nominal)	: 3/8", 3/4", 1 1/2"
Type of port	: Threads
Direction of flow	: A → B
Ambient temperature	: -20°C...+60°C (-4°F...+140°F)
Special working conditions	: Consult VELJAN

Hydraulics

Operating Pressure range	: 0 - 5000 psi (0 - 350bar)
Cracking pressure	: See model code
Flow gpm (lpm)	: Maximum Nominal
VC4V 03 (3/8")	48 (180) 40 (150)
VC4V 06 (3/4")	95 (360) 72 (270)
VC4V10 (1 1/2")	59 (600) 120 (450)
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 recommended	: 30 cSt (180 SSU)



PERFORMANCE CURVES



ORDERING CODE

VC4V 10 - 5 3 0 - 4 B 1 - ***

Series _____
 VC4V - Check valve (direct operated)

Size _____
 03 - 3/8"
 06 - 3/4"
 10 - 1 1/2"

Max Pressure _____
 0 - for cartridges only } 5000 psi
 5 - for body valves only } (350 bar)

Body Mounting _____
 Cartridge
 0 - Cartridge (VC4V03/VC4V06)
 Threaded body
 1 - Threaded body - VC4V03 = 1/2" NPTF ;
 VC4V06 = 1" NPTF
 (2 A - Ports, 1 B - Port)
 A - Threaded body - VC4V06 = 3/4" NPTF ;
 VC4V10 = 1 1/4" NPTF
 (1 A - Port, 1 B - Port)
 6 - Threaded body - VC4V03 = 1/2" B.S.P.P. ;
 VC4V06 = 1" B.S.P.P.
 (2 A - Ports, 1 B - Port)
 D - Threaded body - VC4V06 = 3/4" B.S.P.P. ;
 VC4V10 = 1 1/4" B.S.P.P.
 (1 A - Port, 1 B - Port)
 Subplate mounting
 3 - Subplate mounting VC4V03/06/10
 Flange body
 2 - Flange body - VC4V06
 (2 A - Ports, 1 B - Port)

Modification

Seal Class

1 - Buna N (Standard)
 5 - Viton

Design letter

Cracking pressure (Approximate)

	VC4V03	VC4V06/10
	bar	bar
1 =	2.8	3.5
2 =	0.5	0.5
3 =	0.3	0.3
4 =	2.2	2.2
5 =	-	9.0
6 =	1.2	1.2
7 =	3.0	-

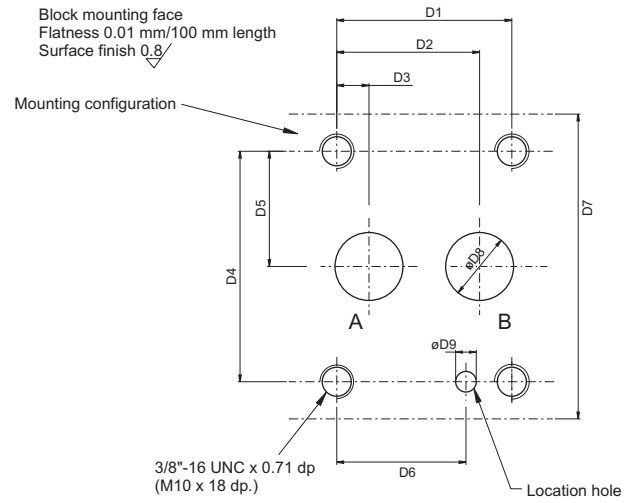
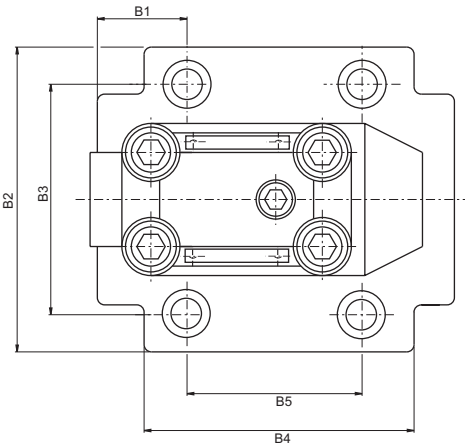
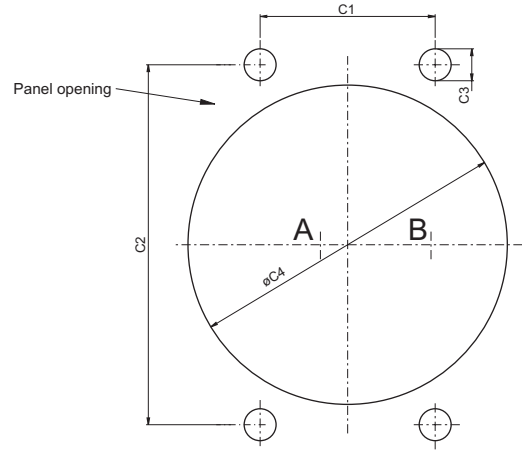
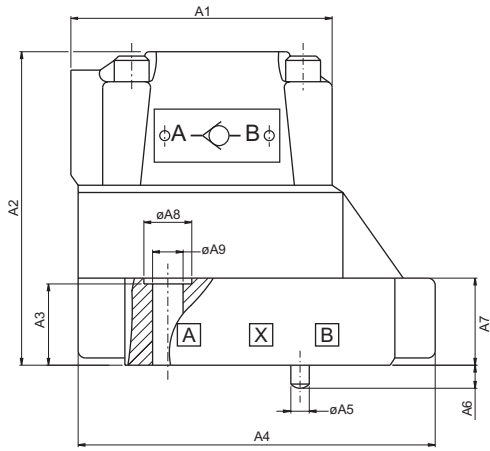
Body Head

0 - Cap



VC4V06 (3/4") SUBPLATE MOUNTING (#3)

Weight : 10.11 lbs (4.5 kg)



	Dimensions	
	in	mm
A1	3.544	90.0
A2	4.252	108.0
A3	1.14	29.0
A4	4.843	123.0
A5	ø0.25	ø6.35
A6	0.315	8.0
A7	1.18	30.0
A8	ø0.65	ø1.65
A9	ø0.41	ø10.5

	Dimensions	
	in	mm
B1	1.22	30.9
B2	4.134	105.0
B3	3.126	79.4
B4	3.66	93.0
B5	2.374	60.3

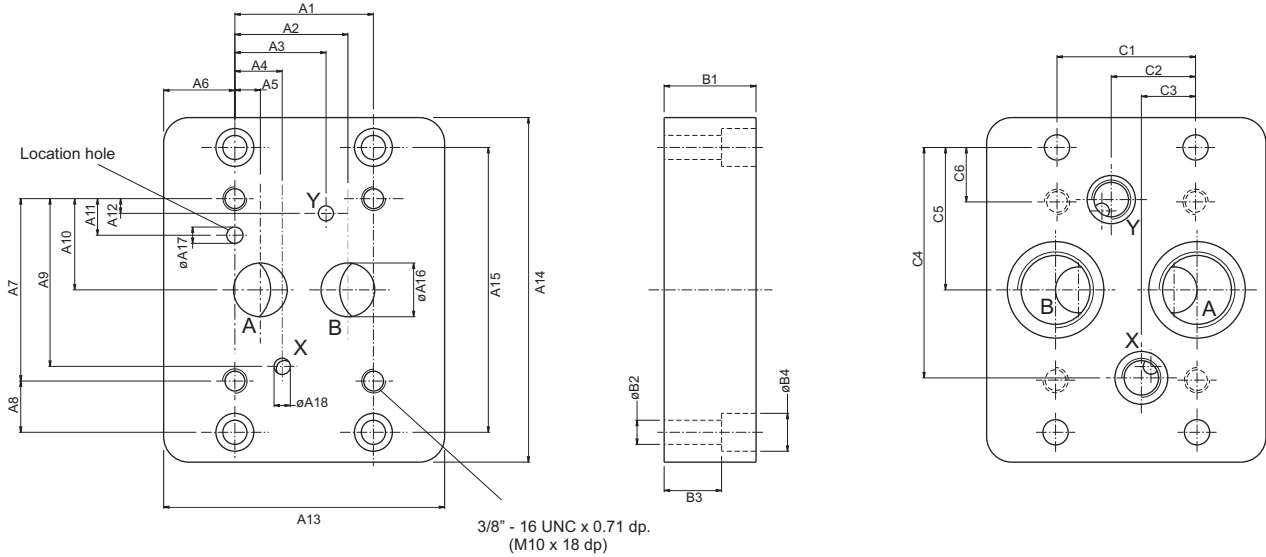
	Dimensions	
	in	mm
C1	2.374	60.3
C2	4.88	124.0
C3	ø0.433	ø11.0
C4	ø4.64	ø118.0

	Dimensions	
	in	mm
D1	2.374	60.3
D2	1.937	49.2
D3	0.437	11.1
D4	3.126	79.4
D5	1.563	39.7
D6	ø1.75	ø44.5
D7	ø4.134	ø105.0
D8	ø0.92	ø23.4
D9	ø0.28 x 0.433 dp.	ø7.1 x 11.0 dp.

Ports	Function
A	Inlet
B	Outlet

SUBPLATE FOR VC4V06 (3/4")

Weight : 10.79 lbs (4.8 kg)



3/8" - 16 UNC x 0.71 dp.
(M10 x 18 dp)

	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	ø0.92	ø23.4
A17	ø0.28 x 0.315 dp.	ø7.1 x 8.0 dp.
A18	ø0.28	ø7.1

	Dimensions	
	in	mm
B1	1.575	40.0
B2	ø0.41	ø10.5
B3	0.984	25.0
B4	ø0.65	ø16.5

	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

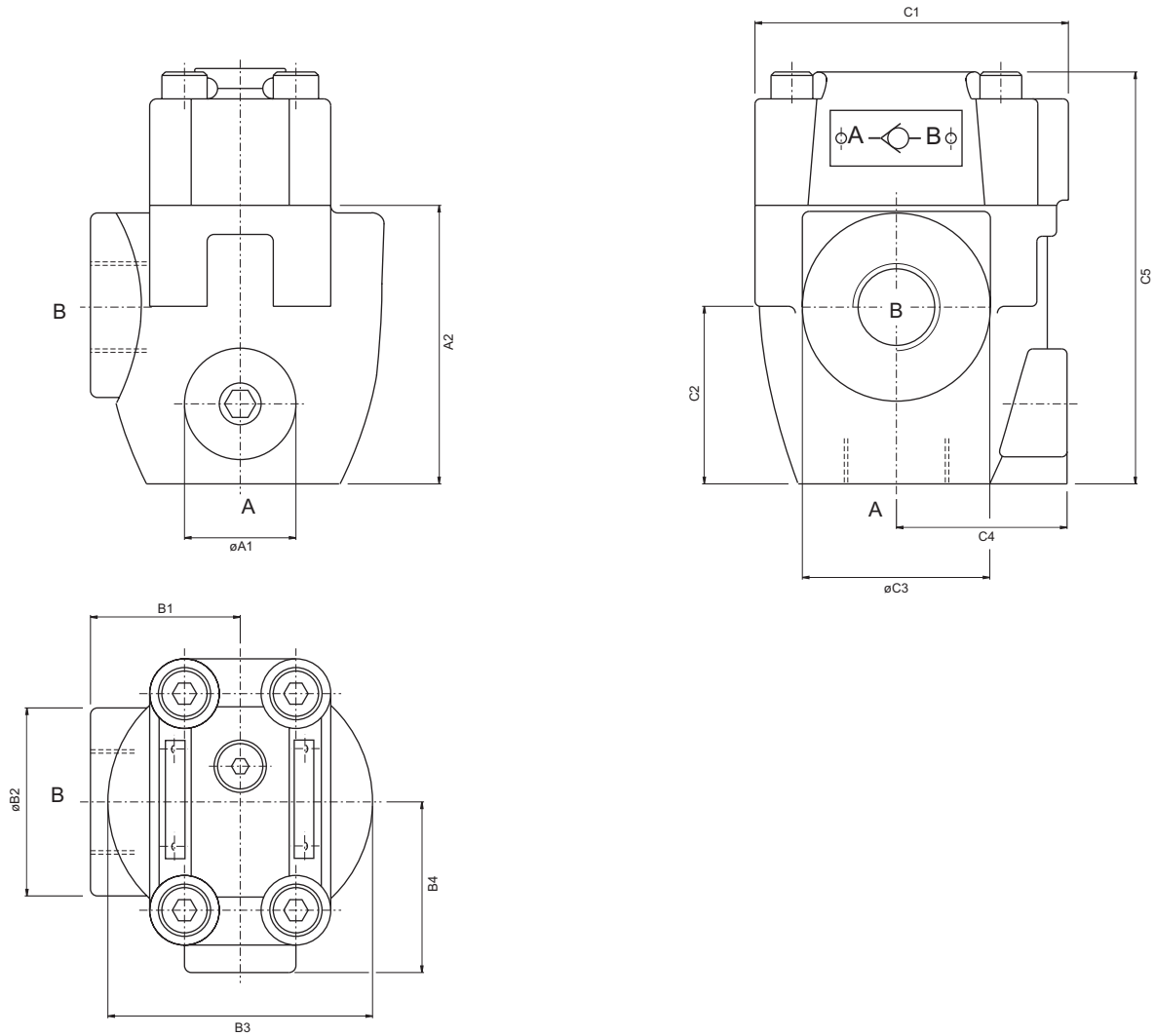
**Note: Ports X and Y not required for direct operated check valve.

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 3/4lg	V359 - 16220	at p≤ 210 bar = 100 daN/mm ² (Torque 68 Nm) at p>210 bar = 120 daN/mm ² (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.

VC4V06 (3/4") - THREADED BODY (#A & #D)

Weight : 7.41 lbs (3.3 kg)



Dimensions		
	in	mm
A1	ø1.26	ø32.0
A2	3.15	80.0

Dimensions		
	in	mm
B1	1.693	43.0
B2	ø2.126	ø54.0
B3	2.99	76.0
B4	1.93	49.0

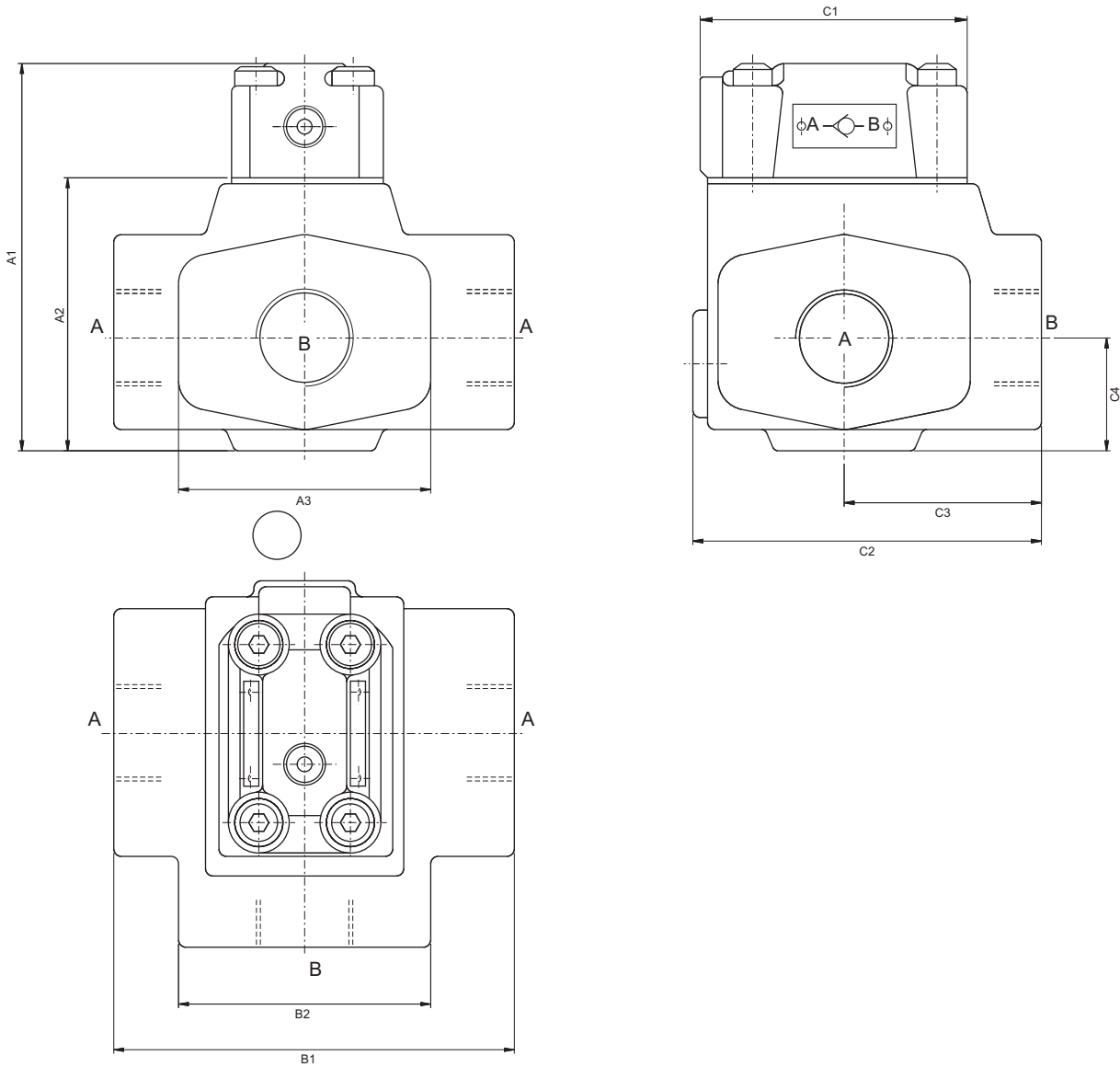
Dimensions		
	in	mm
C1	3.543	90.0
C2	2.008	51.0
C3	ø2.126	ø54.0
C4	1.93	49.0
C5	4.66	118.5

Ports	Function	Port Sizes
A	Inlet	3/4" B.S.P.P
B	Outlet	3/4" NPTF

VC4V06 (3/4") - THREADED BODY (#1 & #6)

Weight : 14.5 lbs (6.6 kg)

CV



Dimensions		
	in	mm
A1	5.138	130.5
A2	3.622	92.0
A3	3.35	85.0

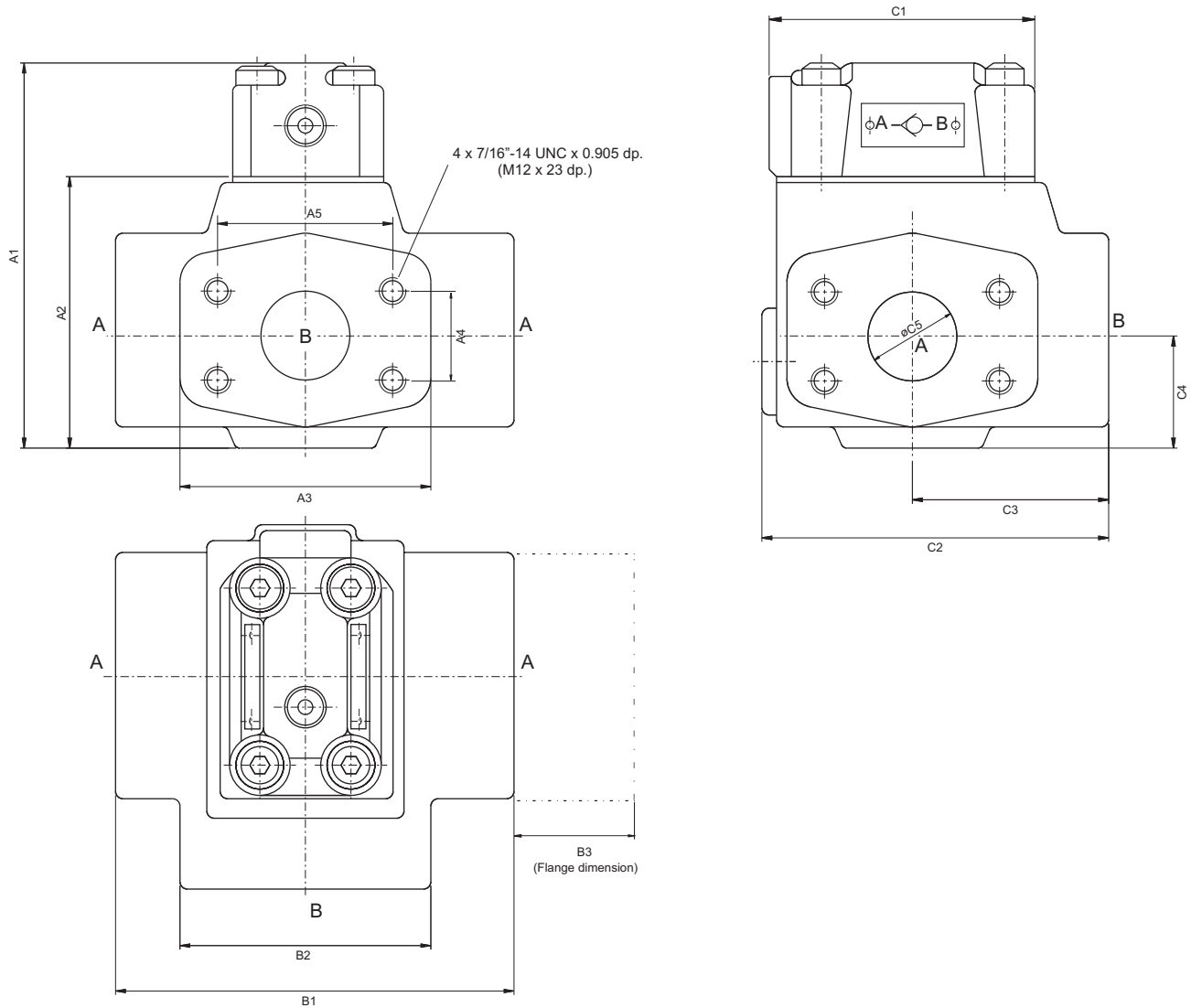
Dimensions		
	in	mm
B1	5.315	135.0
B2	3.35	85.0

Dimensions		
	in	mm
C1	3.543	90.0
C2	4.626	117.5
C3	2.618	66.5
C4	1.496	38.0

Ports	Function	Port Sizes
A (2x)	Inlet	1" B.S.P.P
B	Outlet	1" NPTF

VC4V06 (3/4") - FLANGE BODY (#2)

Weight : 14.5 lbs (6.6 kg)



Dimensions		
	in	mm
A1	5.138	130.5
A2	3.622	92.0
A3	3.35	85.0
A4	1.189	30.2
A5	2.31	58.7

Dimensions		
	in	mm
B1	5.35	136.0
B2	3.35	85.0
B3	1.57	40.0

Dimensions		
	in	mm
C1	3.543	90.0
C2	4.51	114.5
C3	2.5	63.5
C4	1.496	38.0
C5	ø1.18	ø30.0

Ports	Function	Flange model no	Flange order no *	Port Sizes
A (2x)	Inlet	VFS4 - B - 20 - 26 or VFS4 - P - 20 - 26	VS14 - 66935 or VS14 - 66927	1 1/4" B.S.P.P or 1 1/4" NPTF
B	Outlet			

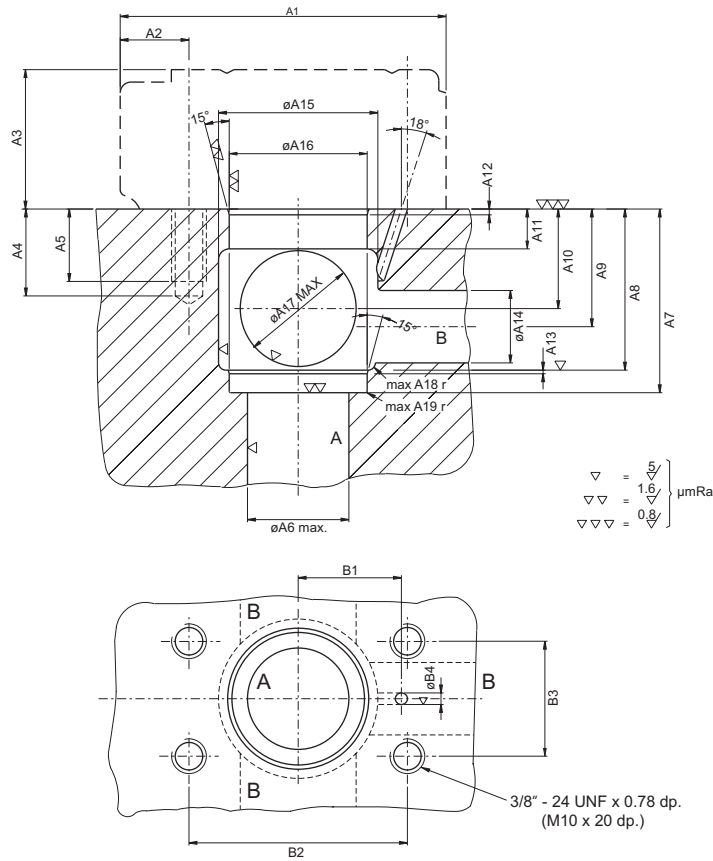
* Flanges must be ordered separately.
mounting screws are included in flange order.



CARTRIDGE WITH CAP VC4V06 (#0)

Weight : 2.47 lbs (1.1 kg)

CV



Dimensions		
	in	mm
A1	3.544	90.0
A2	0.75	19.0
A3	1.52	38.5
A4	0.95	24.0
A5	0.787	20.0
A6	ø1.1	ø28.0
A7	1.997 ^{+0.0027}	50.7 ^{+0.07}
A8	1.75	44.5
A9	1.28	32.5
A10	1.083 ^{+0.02}	27.5 ^{+0.5}
A11	0.433	11.0
A12	0.063	1.6
A13	0.04	1.0
A14	ø0.787	ø20.0
A15	ø1.733 ^{+0.04}	ø44.0 ^{*1}
A16	ø1.5 ^{HB}	ø38.1 ^{HB}
A17	ø1.26	ø32.0
A18	0.08 r	2.0 r
A19	0.016 r	0.4 r

Dimensions		
	in	mm
B1	1.12	28.5
B2	2.375 ^{+0.008}	60.32 ^{+0.2}
B3	1.25	31.75
B4	ø0.126 ^{+0.008}	ø3.2 ^{+0.2}

Ports	Function
A	Inlet
B*	Oulet

*arrangement optional

4 Mounting screws	
Dimensions	Order No.
3/8" - 24UNF x 1 ³ / ₄ " lg.	V359 - 15220
M10 x 45mm, DIN 912 - 10.9	V700 - 71602

(Mounting screws must be ordered separately)

Torque 68 Nm