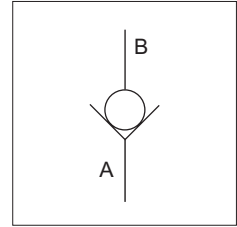


Veljan Direct operated Check Valve Series VC4V are poppet type and designed for a maximum pressure of 350 bar and a flow capacity ranging from 180 l/min for a 3/8" valve to 600 l/min for 1 1/2" valve. Mounting configuration of VC4V are in accordance with International standards such as CETOP, ISO, DIN 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

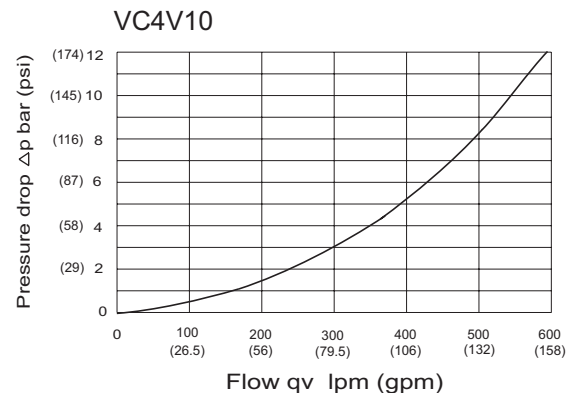
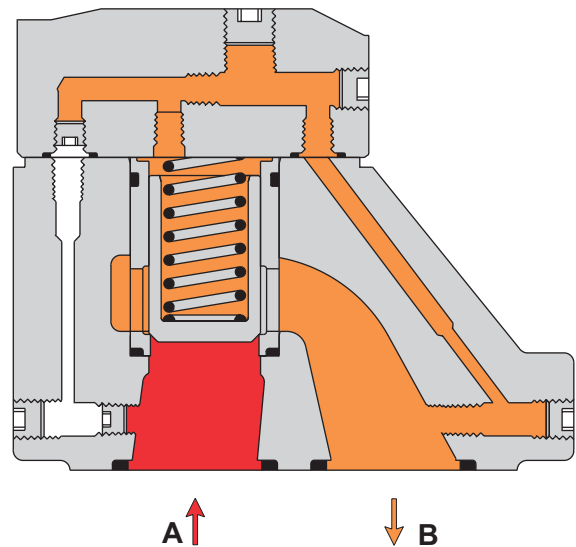
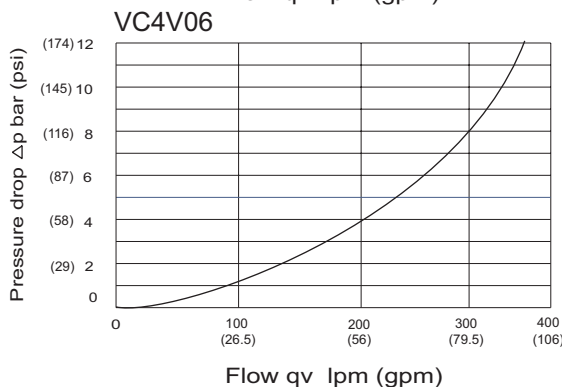
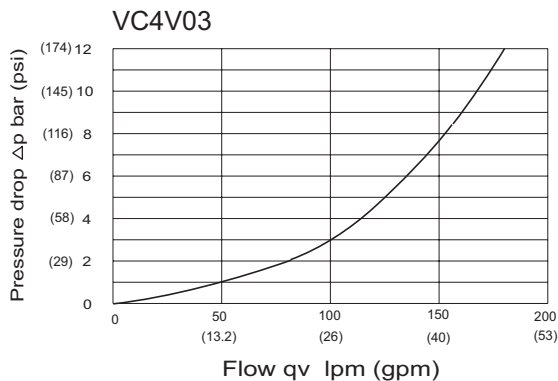
### General

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 <b>VELJAN</b>

### 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
  - 5 - for body valves only
- } 5000 psi  
(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	-

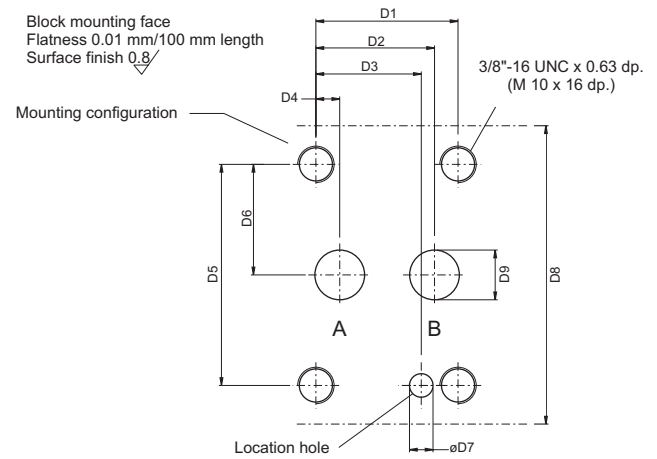
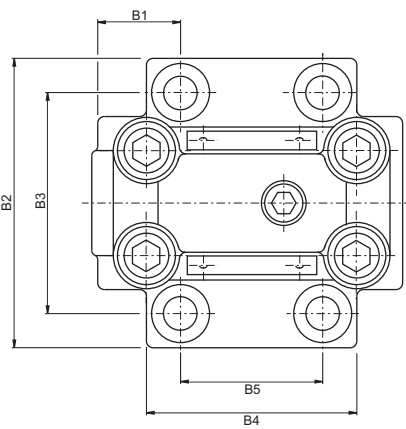
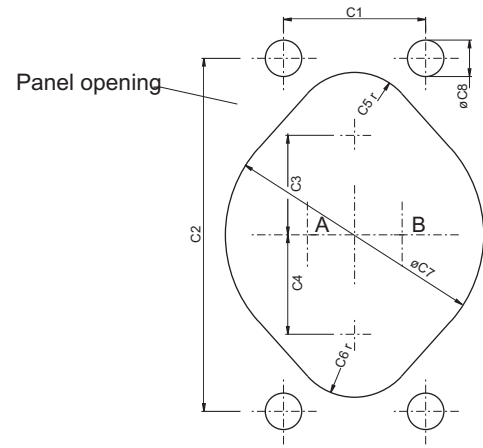
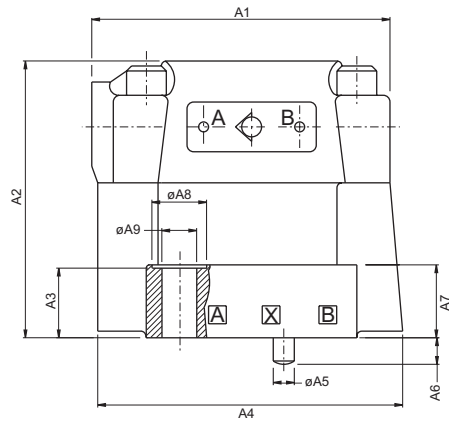
**Body Head**

0 - Cap



**VC4V03 (3/8") SUBPLATE MOUNTING ( #3 )**

Weight : 6.06 lbs (2.7 kg )



Dimensions	in		mm	
A1	3.54		90.0	
A2	3.29		83.5	
A3	0.827		21.0	
A4	3.622		92.0	
A5	ø0.25		ø6.35	
A6	0.315		8.0	
A7	0.866		22.0	
A8	ø0.65		ø16.5	
A9	ø0.41		ø10.5	

Dimensions	in		mm	
B1	0.984		25.0	
B2	3.437		87.3	
B3	2.626		66.7	
B4	2.5		63.5	
B5	1.69		42.9	

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		ø78.0	
C8	ø0.43		ø11.0	

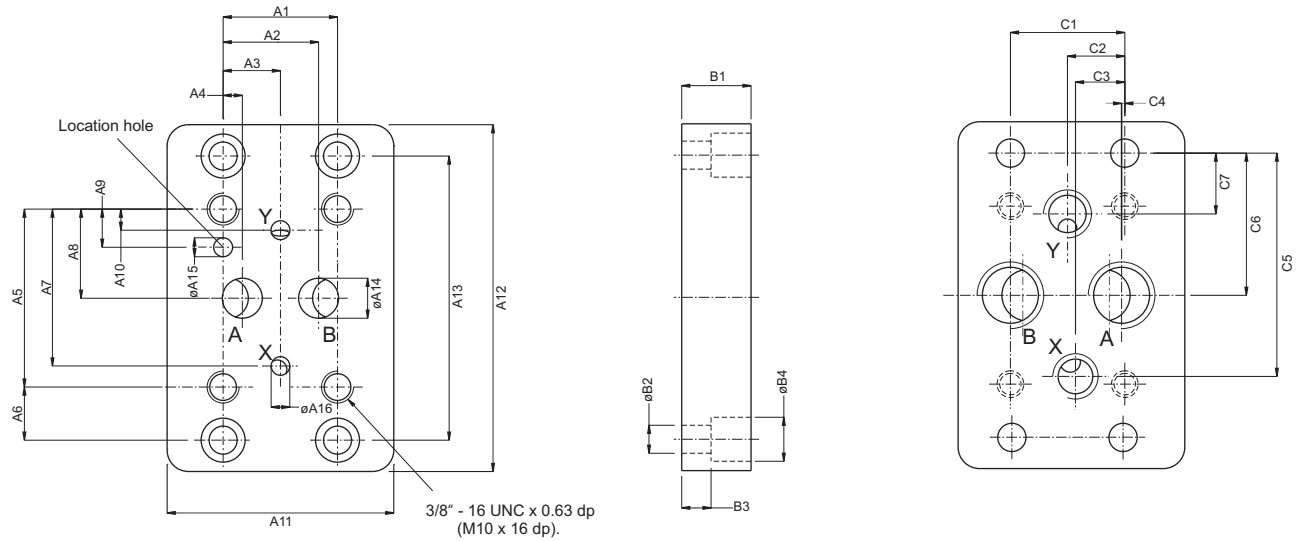
Dimensions	in		mm	
D1	1.69		42.9	
D2	1.41		35.8	
D3	1.253		31.8	
D4	0.283		7.2	
D5	2.626		66.7	
D6	1.315		33.4	
D7	ø0.28 x 0.433 dp.		ø7.1 x 11.0 dp.	
D8	3.543		90.0	
D9	ø0.59		ø15.0	

Ports	Function
A	Inlet
B	Outlet

Note : For details of Subplate & mtg. Screws please refer page 10

VC4V03 (3/8") SUBPLATE

Weight : 4.4 lbs (2.0 kg)



	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	ø0.59	ø15.0
A15	ø0.28 x 0.315 dp.	ø7.1 x 8.0 dp.
A16	ø0.275	ø7.0

	Dimensions	
	in	mm
B1	1.024	26.0
B2	ø0.41	ø10.5
B3	0.433	11.0
B4	ø0.65	ø16.5

	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

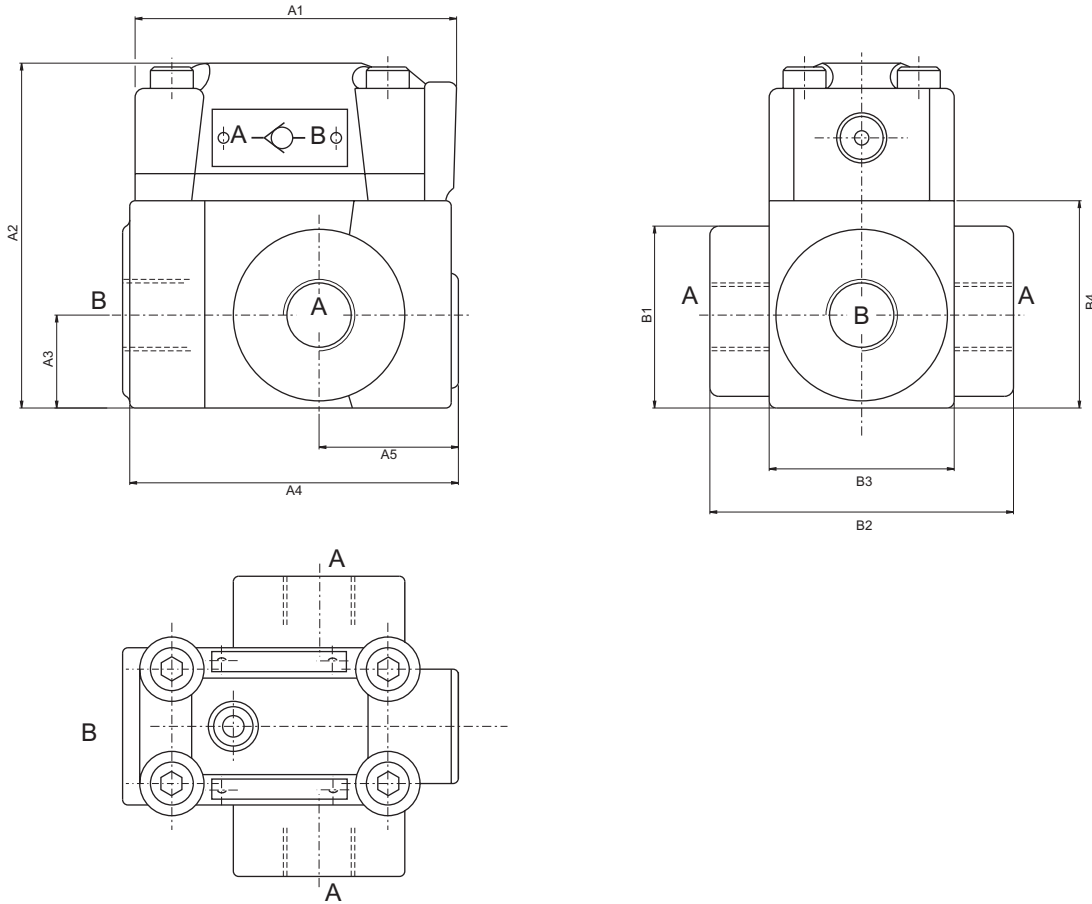
\*\*Note: Ports X and Y not required for direct operated check valve.

Order No.	Port sizes		4 Mounting screws*		
	A+B	X+Y**	Dimension	Order No.	min.tensile strength
VSS - P - 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)
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	at p>210 bar = 120 daN/mm <sup>2</sup> (Torque 82 Nm)

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

**VC4V03 (3/8") - THREADED BODY ( #1 & #6 )**

Weight : 6.3 lbs (2.8 kg)



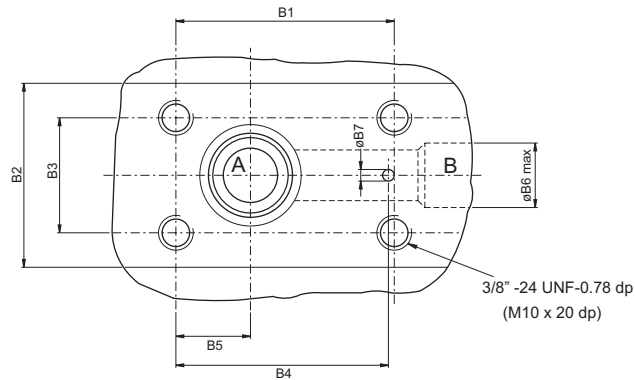
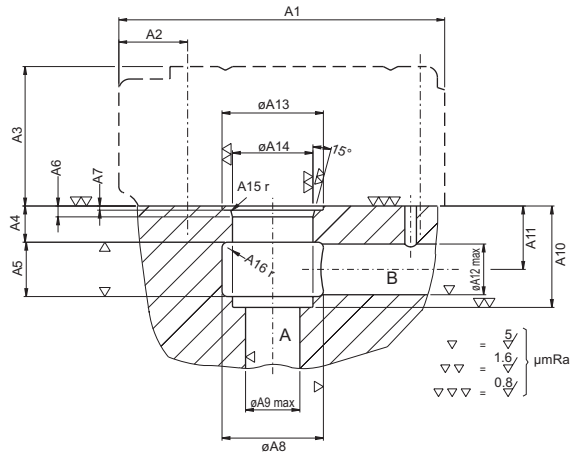
	Dimensions	
	in	mm
A1	3.544	90.0
A2	3.799	96.5
A3	1.024	26.0
A4	3.62	92.0
A5	1.535	39.0

	Dimensions	
	in	mm
B1	1.96	49.6
B2	3.35	85.0
B3	2.04	51.8
B4	2.28	58.0

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

CARTRIDGE WITH CAP VC4V03 (#0)

Weight : 2.24 lbs (1.0 kg)



	Dimensions	
	in	mm
A1	3.544	90.0
A2	0.75	19.0
A3	1.516	38.5
A4	0.4	10.0
A5	0.59	15.0
A6	0.12	3.0
A7	0.045 <sup>+0.008</sup>	1.15 <sup>+0.15</sup>
A8	ø1.1	ø28.0
A9	ø0.59	ø15.0
A10	1.1 <sup>+0.002</sup>	28.0 <sup>+0.05</sup>
A11	0.69	17.5
A12	ø0.55	ø14.0
A13	ø1.1 <sup>+0.004</sup>	ø28.0 <sup>+0.1</sup>
A14	ø0.875 <sup>+0.0008</sup>	ø22.225 <sup>+0.02</sup>
A15	0.016 r	0.4 r
A16	0.06 r	1.5 r

	Dimensions	
	in	mm
B1	2.374 <sup>+0.008</sup>	60.32 <sup>+0.2</sup>
B2	2.0	50.8
B3	1.25 <sup>+0.008</sup>	31.75 <sup>+0.2</sup>
B4	2.31	58.7
B5	0.81	20.6
B6	ø0.7	ø17.8
B7	ø0.126	ø3.2

Ports	Function
A	Inlet
B	Outlet

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