

DENISON HYDRAULICS

Direct Operated Check Valves

In-Line SAE 61 & 62 Flanges
Series C5V – Design B



Publ. 6-EN 4660-C, replaces 6-EN 4660-B & 6-EN 465-B

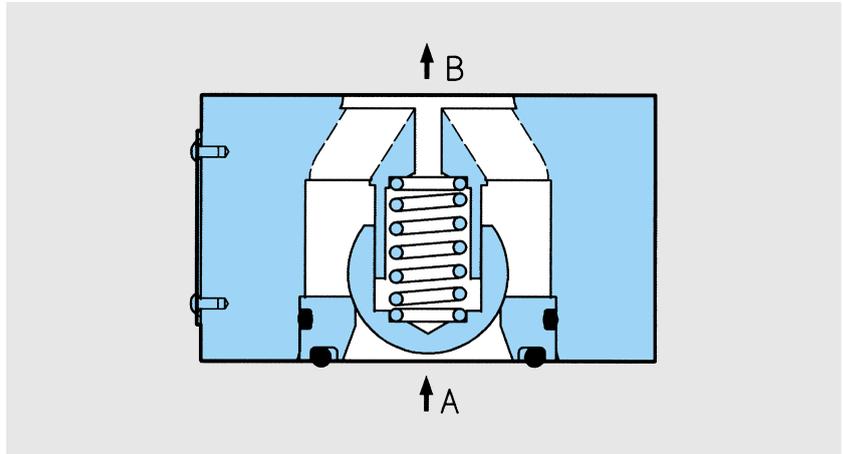
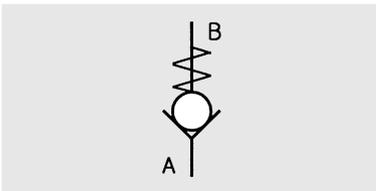
DENISON Hydraulics

FEATURES, SYMBOL, OPERATION

FEATURES

- Flange mounted check valves series C5V-B according to SAE 61 and 62 can be bolt directly on pumps and motors for hydraulic systems up to 420 bar operating pressure.
- Flange mounted valves eliminate costly piping.
- Up to three different springs are available to create a range of different cracking pressures.
- Due to the capsulated spring chamber the ball gets a mechanical stop and the spring can not be driven "on block".
In case of a broken spring, parts can not enter into the operating system.
- The 2 Port In-Line flange check valves illustrated in this bulletin increase the range of all the other DENISON flange mounted valves.

SYMBOL



OPERATION

Free flow: At zero pressure conditions the ball is held on its seat by a spring. By flow the valve is opening from port A. The necessary cracking pressure A-B is selectable with three variants for each valve size.

Blocked flow: This function is given by the spring when the operating pressure in port B is equal to the pressure in port A. The passage B-A consequently is closed absolutely leak-free.

TECHNICAL DATA

GENERAL

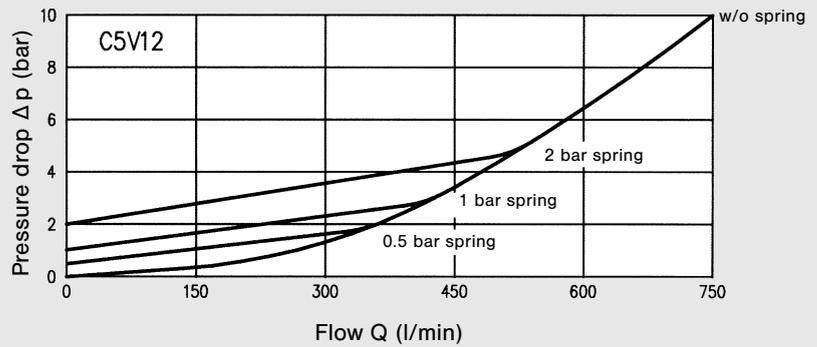
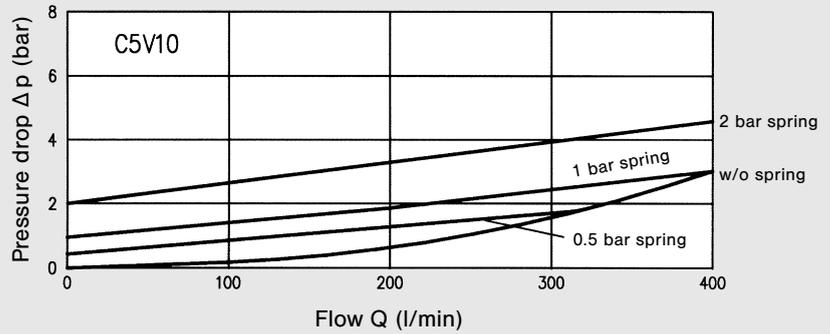
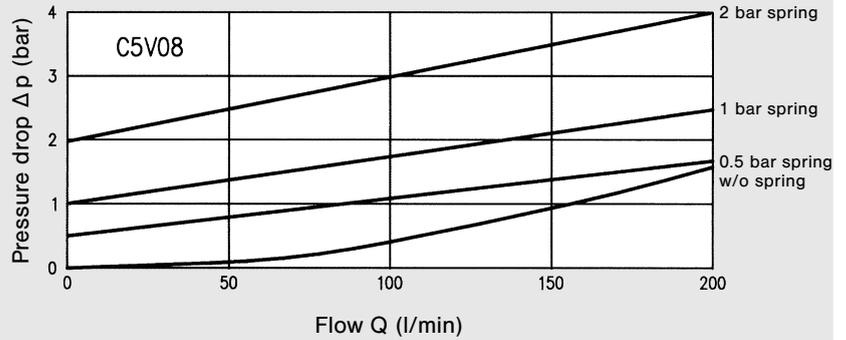
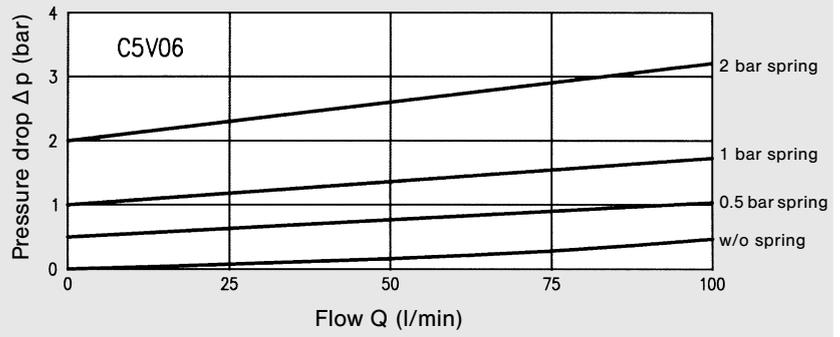
• Type of unit	Direct Operated Check Valves
• Design	Ball-type
• Type of mounting	2 Port In-Line Flange (SAE 61 and 62)
• Port sizes	C5V06 C5V08 C5V10 C5V12
	³ / ₄ " 1" 1 ¹ / ₄ " 1 ¹ / ₂ "
	16 mm 25 mm 32 mm 38 mm
• Mounting position	Optional
• Direction of flow	A→B
• Ambient temperature range	−20 °C ... +60 °C
• Suitability for special working conditions	Consult DENISON

HYDRAULIC CHARACTERISTICS

• Operating pressure range	– min	0.5 bar
	– max	SAE 61 350 bar – Sizes 06 & 08 280 bar – Size 10 210 bar – Size 12 SAE 62 420 bar (all sizes)
• Max. flow recommended	C5V06 C5V08 C5V10 C5V12	
	100 l/min 200 l/min 400 l/min 750 l/min	
• Fluid	Mineral oil according to DIN 51524/25 (other fluids on request)	
• Contamination level	Max. permissible contamination level according to NAS 1638 Class 8 (Class 9 for 15 Micron and smaller) or ISO 17/14	
• Fluid temperature range	−18 °C ... +80 °C	
• Viscosity range	10 ... 650 cSt; optimal 30 cSt	

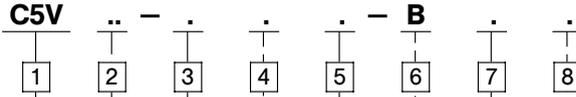
CURVES

Δ p-Q-CHARACTERISTICS



ORDERING CODE

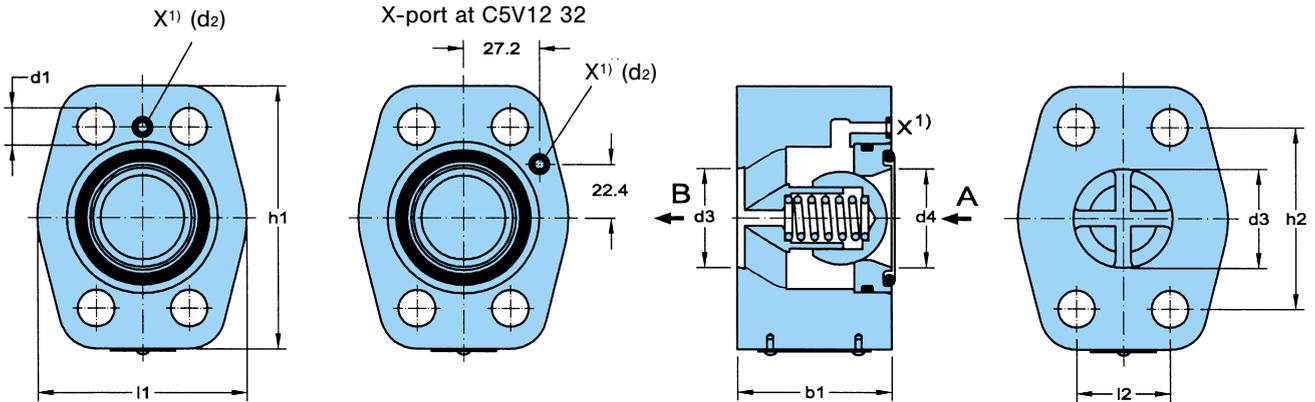
Model Number:



- 1 **Series** _____
- 2 **Size** _____
 06 = 3/4"
 08 = 1"
 10 = 1 1/4"
 12 = 1 1/2"
- 3 **Flange Version** _____
 3 = SAE 61 } max. pressure see technical data
 6 = SAE 62 }
- 4 **Body Sealing** _____
 1 = sealing for port A
 2 = sealing for ports A & X (for SAE 61 only)
 3 = without sealing
- 5 **Cracking Pressure** _____
 0 = 0.5 bar
 1 = 1 bar (Standard)
 2 = 2 bar
- 6 **Design Letter** _____
- 7 **Seal Class** _____
 1 = NBR (Buna N) Standard
 4 = EPDM
 5 = VITON®
- 8 **Modification** _____
 019 = C5V10 for M14 mounting screws (for SAE 62 only)

DIMENSIONS, MOUNTING INSTRUCTIONS

DIMENSIONS



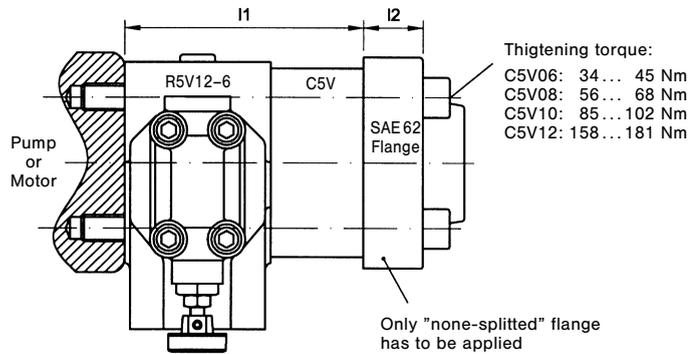
¹⁾ at SAE 61 only (for use with Unloading Valve R5U)

Series	Nominal Size		l1	l2	h1	h2	b1	d1	d2	d3 + 0.8	d4	Weight
C5V06	3/4"	SAE 61	48	22.2	64	47.6	45	10.5	∅ 3	19	19	0.6 kg
		SAE 62	48	23.8	64	50.8	45	10.5	-	19	19	0.6 kg
C5V08	1"	SAE 61	60	26.2	74	52.4	45	10.5	∅ 3	25	25	0.9 kg
		SAE 62	60	27.8	74	57.2	45	12.5	-	25	25	0.9 kg
C5V10	1 1/4"	SAE 61	68	30.2	85	58.7	50	12.5	∅ 3	32	32	1.3 kg
		SAE 62	68	31.8	85	66.7	50	13.5 ²⁾	-	32	32	1.3 kg
C5V12	1 1/2"	SAE 61	80	35.7	104	69.8	50	13.5	∅ 3	42	38	1.8 kg
		SAE 62	80	36.5	104	79.4	50	17	-	42	38	1.8 kg

²⁾ 15 at modification 019

MOUNTING INSTRUCTIONS

(for SAE 62 Valves)

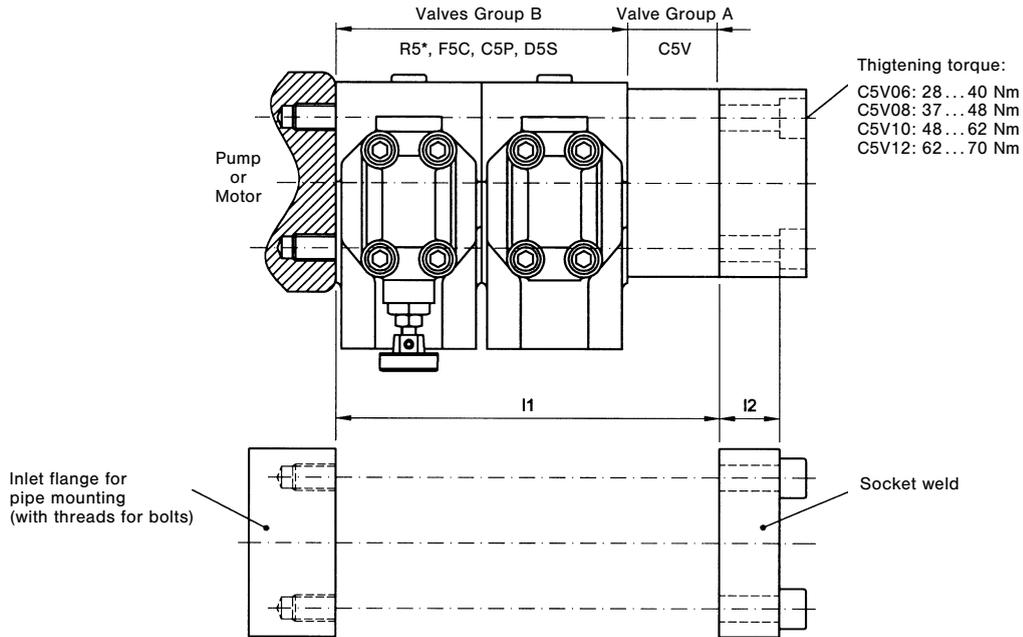


Series	Nominal Size	l1	l2	UNC-Screws		Metric Screws	
				Dimension	Order No.	Dimension	Order No.
C5V06	3/4"	45	21	3/8"-16 x 3 1/4"	358-16330-0	M10 x 80 10.9	700-70412-8
C5V08	1"	45	25	7/16"-14 x 3 1/2"	358-18340-0	M12 x 90 10.9	361-12343-8
C5V10	1 1/4"	50	27	1/2"-13 x 3 3/4"	358-20350-0	M12 x 95 10.9	361-12353-8
						M14 x 95 ¹⁾ 10.9	361-13353-8
C5V12	1 1/2"	50	30	5/8"-11 x 4"	358-24360-0	M16 x 110 12.9	361-14364-8
R5V12-6	1 1/2"	80	30	5/8"-11 x 5 1/4"	358-24410-0	M16 x 135 12.9	361-14694-8
R5V12-6 + C5V12	1 1/2"	130	30	5/8"-11 x 7"	358-24480-0	M16 x 180 12.9	361-14463-8

¹⁾ for modification 019

MOUNTING INSTRUCTIONS FOR SAE 61-VALVES

Example



	Qty. of valves and group for each stack	I1	I2	UNC-Screws		Metric Screws	
				Dimension	Order No.	Dimension	Order No.
3/4" SAE 61	1 x A	45	16...22	3/8"-16 x 3 1/4"	358-16330-0	M10 x 80 10.9	700-70412-8
	1 x B	60		3/8"-16 x 3 3/4"	358-16350-0	M10 x 95 10.9	361-11354-8
	(1 x A) + (1 x B)	105		3/8"-16 x 5 1/2"	358-16420-0	M10 x 140 10.9	361-11423-8
	2 x B	120		3/8"-16 x 6"	358-16440-0	M10 x 150 10.9	361-11434-8
	(1 x A) + (2 x B)	165		3/8"-16 x 8"	358-16520-0	M10 x 200 10.9	700-70821-8
	3 x B	180		3/8"-16 x 8 1/2"	358-16540-0	M10 x 220 10.9	361-11494-8
1" SAE 61	1 x A	45	18...24	3/8"-16 x 3 1/4"	358-16330-0	M10 x 85 10.9	361-11333-8
	1 x B	60		3/8"-16 x 3 3/4"	358-16350-0	M10 x 95 10.9	361-11354-8
	(1 x A) + (1 x B)	105		3/8"-16 x 5 3/4"	358-16430-0	M10 x 145 10.9	361-11643-8
	2 x B	120		3/8"-16 x 6 1/4"	358-16450-0	M10 x 160 10.9	700-70836-8
	(1 x A) + (2 x B)	165		3/8"-16 x 8 1/4"	358-16530-0	M10 x 200 10.9	700-70821-8
	3 x B	180		3/8"-16 x 8 1/2"	358-16540-0	M10 x 220 10.9	361-11494-8
1 1/4" SAE 61	1 x A	50	21...25	7/16"-14 x 3 1/2"	358-18340-0	M12 x 90 10.9	361-12343-8
	1 x B	75		7/16"-14 x 4 1/2"	358-18380-0	M12 x 115 10.9	361-12394-8
	(1 x A) + (1 x B)	125		7/16"-14 x 6 1/2"	358-18460-0	M12 x 170 10.9	361-12453-8
	2 x B	150		7/16"-14 x 7 1/2"	358-18500-0	M12 x 190 10.9	361-12474-8
	(1 x A) + (2 x B)	200		7/16"-14 x 9 1/2"	358-18580-0	M12 x 240 10.9	361-12504-8
	3 x B	225		7/16"-14 x 10 1/2"	358-18590-0	M12 x 270 10.9	361-12664-8
1 1/2" SAE 61	1 x A	50	25...27	1/2"-13 x 3 3/4"	358-20350-0	M12 x 90 10.9	361-12343-8
	1 x B	80		1/2"-13 x 5"	358-20400-0	M12 x 130 10.9	361-12414-8
	(1 x A) + (1 x B)	130		1/2"-13 x 6 3/4"	358-20470-0	M12 x 170 10.9	361-12453-8
	2 x B	160		1/2"-13 x 8"	358-20520-0	M12 x 200 10.9	361-12484-8
	(1 x A) + (2 x B)	210		1/2"-13 x 10"	358-20600-0	M12 x 250 10.9	361-12674-8
	3 x B	240		1/2"-13 x 11 1/4"	358-20650-0	M12 x 290 10.9	361-12684-8

The product described is subject to continual development and the manufacturer reserves the right to change the specifications without notice.