

DENISON HYDRAULICS

Direct Operated Check Valves

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



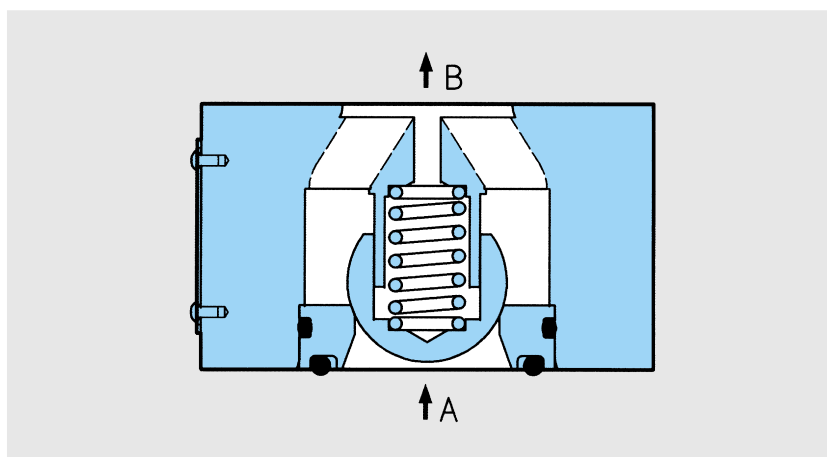
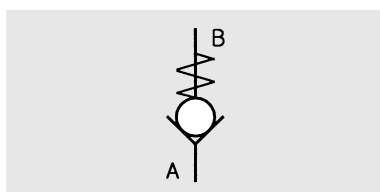
Publ. 6-EN 4660-D, replaces 6-EN 4660-C

DENISON | **Hydraulics**

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

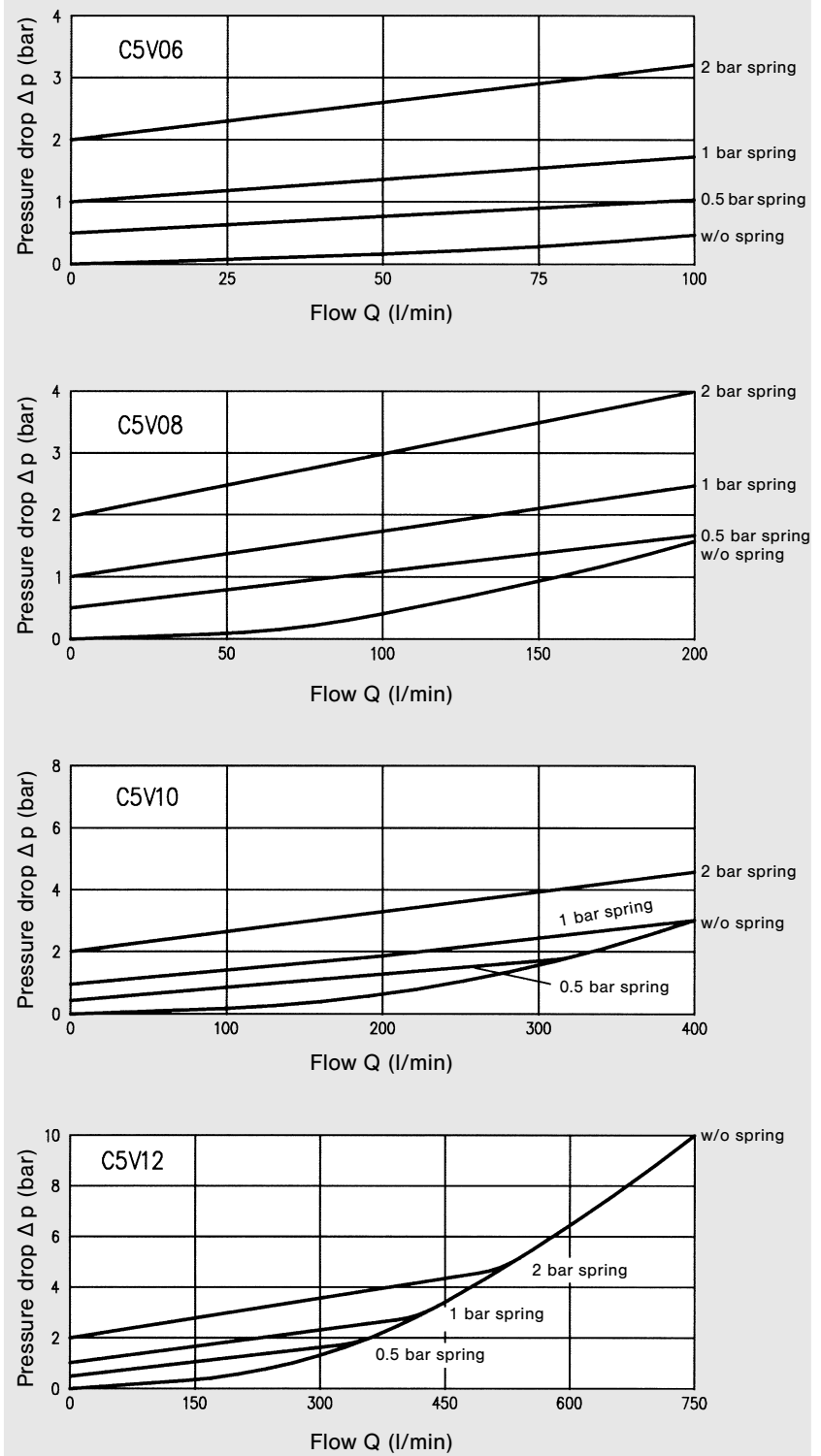
• Type of unit	Direct Operated Check Valves			
• Design	Ball-type			
• Type of mounting	2 Port In-Line Flange (SAE 61 and 62)			
• Port sizes	C5V06	C5V08	C5V10	C5V12
	3/4"	1"	1 1/4"	1 1/2"
	16 mm	25 mm	32 mm	38 mm
• Mounting position	Optional			
• Direction of flow	A→B			
• Ambient temperature range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

HYDRAULIC CHARACTERISTICS

• Operating pressure range	0.5 bar			
	— min			
— max	SAE 61	350 bar – Sizes 06 & 08		
		280 bar – Size 10		
	SAE 62	210 bar – Size 12		
		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

Δp -Q-CHARACTERISTICS



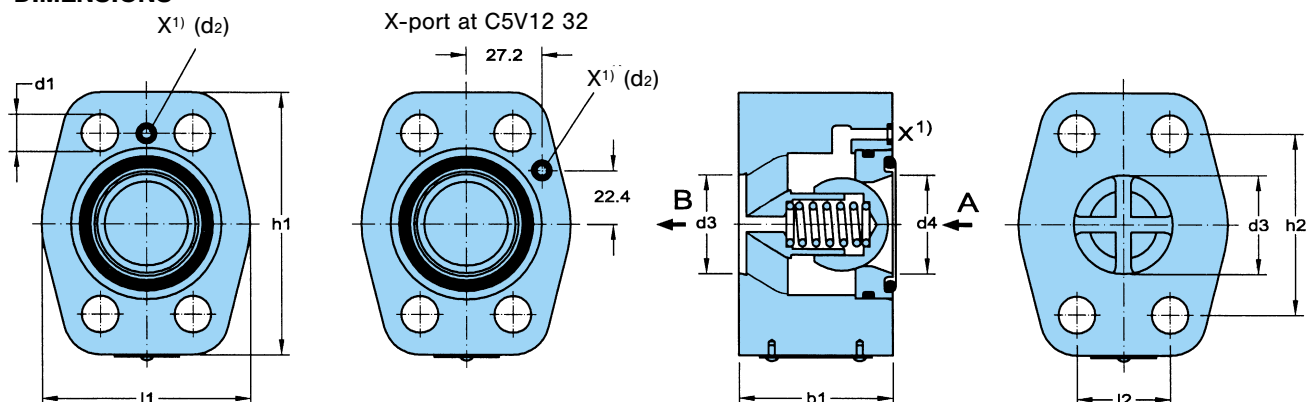
ORDERING CODE

Model Number:

	C5V	..	-	.	.	-	B	.	.
	1	2	3	4	5	6	7	8	
1 Series _____	1	2	3	4	5	6	7	8	
2 Size _____ 06 = 3/4" 08 = 1" 10 = 1 1/4" 12 = 1 1/2"		2	3	4	5	6	7	8	
3 Flange Version _____ 3 = SAE 61 } max. pressure see technical data 6 = SAE 62 }		2	3	4	5	6	7	8	
4 Body Sealing _____ 1 = sealing for port A 2 = sealing for ports A & X (for SAE 61 only) 3 = without sealing		2	3	4	5	6	7	8	
5 Cracking Pressure _____ 0 = 0.5 bar 1 = 1 bar (Standard) 2 = 2 bar		2	3	4	5	6	7	8	
6 Design Letter _____		2	3	4	5	6	7	8	
7 Seal Class _____ 1 = NBR (Buna N) Standard 4 = EPDM 5 = VITON®		2	3	4	5	6	7	8	
8 Modification _____ 019 = C5V10 for M14 mounting screws (for SAE 62 only)		2	3	4	5	6	7	8	

DIMENSIONS, MOUNTING INSTRUCTIONS

DIMENSIONS

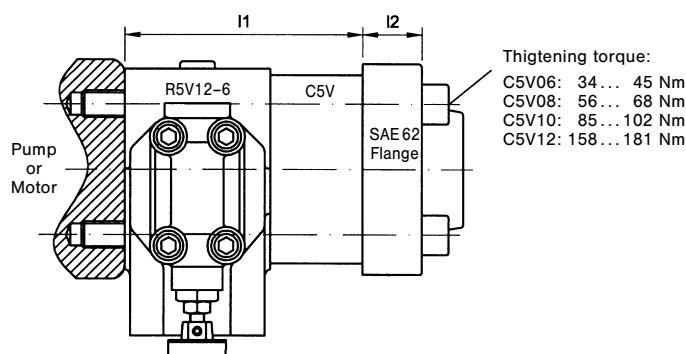


¹⁾ at SAE 61 only (for use with Unloading Valve R5U)

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

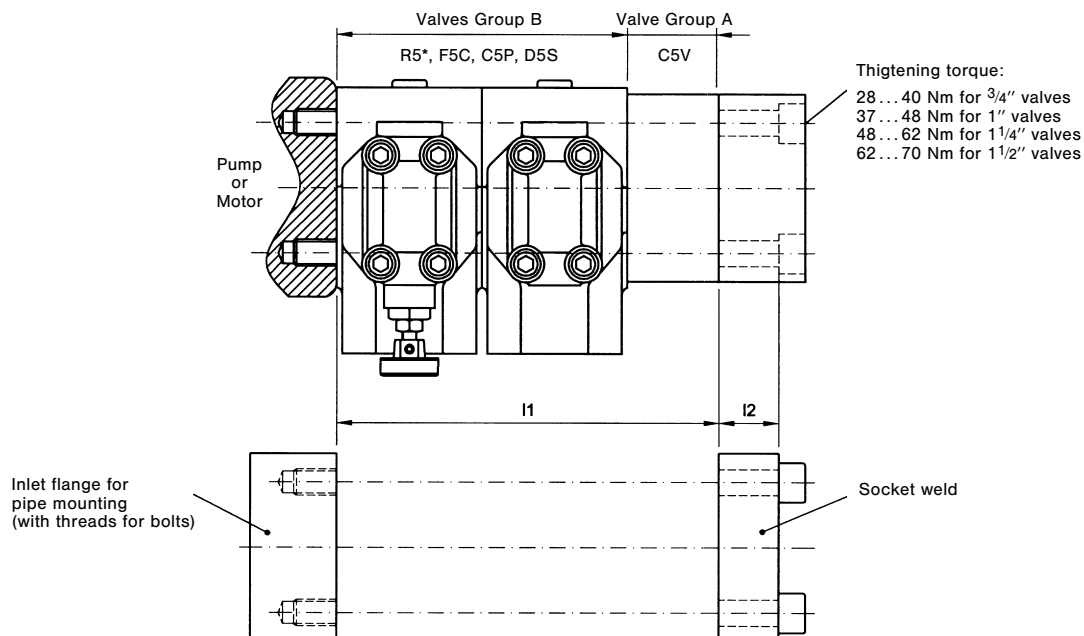


Series	Nominal Size	L1	L2	UNC-Screws (12.9)		Metric Screws (12.9)	
				Dimension	Order No.	Dimension	Order No.
C5V06	3/4"	45	21	3/8"-16 x 3 1/4"	358-16330-0	M10 x 80	361-11324-8
C5V08	1"	45	25	7/16"-14 x 3 1/2"	358-18340-0	M12 x 90	361-12344-8
C5V10	1 1/4"	50	27	1/2"-13 x 3 3/4"	358-20350-0	M12 x 100	361-12364-8
						M14 x 100 ¹⁾	361-13364-8
C5V12	1 1/2"	50	30	5/8"-11 x 4"	358-24360-0	M16 x 100	361-14364-8
R5V12-6	1 1/2"	80	30	5/8"-11 x 5 1/4"	358-24410-0	M16 x 130	361-14414-8
R5V12-6 + C5V12	1 1/2"	130	30	5/8"-11 x 7"	358-24480-0	M16 x 180	361-14464-8

¹⁾ for modification 019

MOUNTING INSTRUCTIONS FOR SAE 61-VALVES

Example



	Qty. of valves and group for each stack	I1	I2	UNC-Screws (12.9)		Metric Screws (12.9)	
				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	361-11324-8
	1 x B	60		3/8"-16 x 3 3/4"	358-16350-0	M10 x 95	361-11354-8
	(1 x A) + (1 x B)	105		3/8"-16 x 5 1/2"	358-16420-0	M10 x 140	361-11424-8
	2 x B	120		3/8"-16 x 6"	358-16440-0	M10 x 160	700-70836-8
	(1 x A) + (2 x B)	165		3/8"-16 x 8"	358-16520-0	M10 x 200	700-70821-8
	3 x B	180		3/8"-16 x 8 1/2"	358-16540-0	M10 x 220	361-11494-8
1" SAE 61	1 x A	45	18...24	3/8"-16 x 3 1/4"	358-16330-0	M10 x 80	361-11324-8
	1 x B	60		3/8"-16 x 3 3/4"	358-16350-0	M10 x 95	361-11354-8
	(1 x A) + (1 x B)	105		3/8"-16 x 5 3/4"	358-16430-0	M10 x 140	361-11424-8
	2 x B	120		3/8"-16 x 6 1/4"	358-16450-0	M10 x 160	700-70836-8
	(1 x A) + (2 x B)	165		3/8"-16 x 8"	358-16520-0	M10 x 200	700-70821-8
	3 x B	180		3/8"-16 x 8 1/2"	358-16540-0	M10 x 220	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	361-12344-8
	1 x B	75		7/16"-14 x 4 1/2"	358-18380-0	M12 x 120	361-12404-8
	(1 x A) + (1 x B)	125		7/16"-14 x 6 1/2"	358-18460-0	M12 x 170	361-12454-8
	2 x B	150		7/16"-14 x 7 1/2"	358-18500-0	M12 x 190	361-12474-8
	(1 x A) + (2 x B)	200		7/16"-14 x 9 1/2"	358-18580-0	M12 x 240	361-12504-8
	3 x B	225		7/16"-14 x 10 1/2"	358-18590-0	M12 x 270	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	361-12344-8
	1 x B	80		1/2"-13 x 5"	358-20400-0	M12 x 130	361-12414-8
	(1 x A) + (1 x B)	130		1/2"-13 x 6 3/4"	358-20470-0	M12 x 170	361-12454-8
	2 x B	160		1/2"-13 x 8"	358-20520-0	M12 x 200	361-12484-8
	(1 x A) + (2 x B)	210		1/2"-13 x 10"	358-20600-0	M12 x 250	361-12674-8
	3 x B	240		1/2"-13 x 11 1/4"	358-20650-0	M12 x 290	361-12684-8

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