General Description

Series C check valves permit free flow in one direction, and dependable shut-off in the reverse direction.

Operation

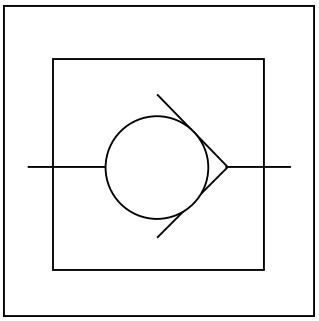
When pressure going through the valve is increased to the cracking level, the valve opens. When the pressure is reduced to below the cracking level, the valve closes.

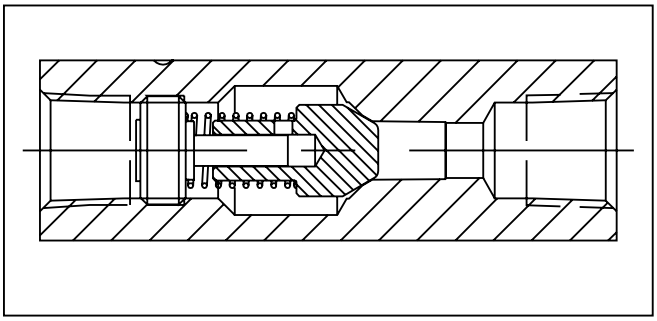
Features

- Stainless steel poppets standard.
- Soft seal poppets are available.
- Triangular retainers guide the poppets, and hold the spring firmly in place even under high velocity and shock.

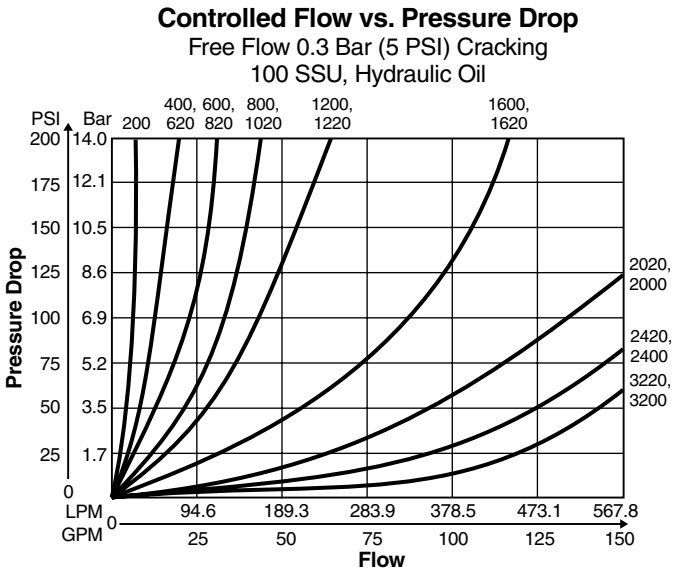
Specifications

Maximum Operating Pressure	Brass:	140 Bar (2000 PSI); except for C1600 brass which is 35 Bar (500 PSI)
	Steel & Stainless Steel:	345 Bar (5000 PSI) for 200 thru 1220; 207 Bar (3000 PSI) for all other sizes and styles
Material	Body	see ordering code
	Spring	316 Stainless Steel
	Poppet	416 Stainless Steel
	Retainer	416 Stainless Steel
	Stainless Steel Bodies	303 Stainless Steel
Poppets	Soft seal poppet is standard for 200 through 800/1020 size. For cracking pressures > 15 PSI, solid metal poppets are standard	
Nominal Cracking Pressure	0.4 Bar (5 PSI) standard 0.07 Bar (1 PSI), 1.38 Bar (20 PSI), 4.48 Bar (65 PSI) optional	
Operating Temperature	-40°C to +121°C (-40°F to +250°F) Nitrile (standard) -26°C to +205°C (-15°F to +400°F) Fluorocarbon	





Performance Curves



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Options	Series C	Size	Material	Cracking Pressure (nominal)	—	Seal Compound	Design Series
	C						

NOTE: Not required when ordering.

Code	Description
Omit	NPTF/SAE
★ 8	BSPT
★★ 9	BSPP

★ Code 8 can be used with sizes 200, 400, 600, 800, 1200 Steel only

★★ Code 9 can be used with sizes 200, 400, 600, 800, 1200, 1600, 2000, 2400, 3200

Code	Size	Code	Size
200 *	1/8"	1600 *	1"
400 *†	1/4"	1620	#16 SAE
600 *†	3/8"	2000	1 1/4"
620	#6 SAE	2020	#20 SAE
800 *†	1/2"	2400	1 1/2"
820	#8 SAE	2420	#24 SAE
1020	#10 SAE	3200	2"
1200 *	3/4"	3220	#32 SAE
1220 *	#12 SAE		

* Sizes available in Brass

† Sizes available in Stainless Steel

Code	Description
B	Brass
S	Steel
SS *	Stainless Steel

Series C Brass Valves can be used for both air and oil service.

* Available in 400, 600 and 800 sizes.

Code	Description
Omit	Standard 0.4 Bar (5 PSI)
1	0.07 Bar (1 PSI)
20	1.38 Bar (20 PSI)
65	4.5 Bar (65 PSI)

Other cracking pressures available.

Code	Description
Omit	Nitrile (Standard)
V	Fluorocarbon

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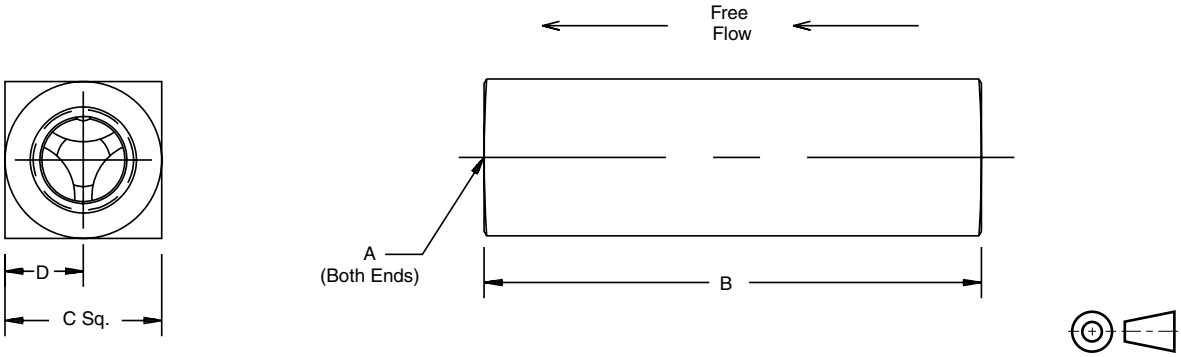
Model Number	Max Flow LPM (GPM)	Effective Orifice Area Control Flow in.²	Effective Control Flow C_v
C200	15 (3)	0.023	0.53
C400	23 (5)	0.068	1.56
C620	23 (5)	0.068	1.56
C600	30 (8)	0.099	2.27
C820	30 (8)	0.099	2.27
C800	45 (15)	0.224	5.11
C1020	45 (15)	0.224	5.11
C1200	100 (25)	0.348	7.95
C1220	100 (25)	0.348	7.95
C1600	150 (40)	0.453	10.35
C1620	150 (40)	0.453	10.35
C2000	284 (70)	0.855	19.52
C2020	284 (70)	0.855	19.52
C2400	378 (100)	0.955	21.82
C2420	378 (100)	0.955	21.82
C3200	605 (150)	1.046	23.90
C3220	605 (150)	1.046	23.90

Inch equivalents for millimeter dimensions are shown in (**)



Model Number	Weight kg (lbs.)	A	B	C	D
C200	0.0 (0.1)	1/8–27 NPTF	50.8 (2.00)	16.0 (0.63)	7.9. (0.31)
C400	0.2 (0.4)	1/4–18 NPTF	66.8 (2.63)	20.6 (0.81)	10.4 (0.41)
C420	0.0 (0.1)	7/16–20 UNF #4 SAE	68.3 (2.69)	20.6 (0.81)	10.4 (0.41)
C600	0.2 (0.5)	3/8–18 NPTF	69.9 (2.75)	25.4 (1.00)	12.7 (0.50)
C620	0.2 (0.5)	9/16–18 UNF #6 SAE	79.2 (3.12)	25.4 (1.00)	12.7 (0.50)
C800	0.6 (1.3)	1/2–14 NPTF	87.4 (3.44)	31.8 (1.25)	16.0 (0.63)
C820	0.3 (0.7)	3/4–16 UNF #8 SAE	88.9 (3.50)	28.4 (1.12)	14.2 (0.56)
C1020	0.6 (1.3)	7/8–14 UNF #10 SAE	101.6 (4.00)	31.8 (1.25)	15.7 (0.62)
C1200	0.9 (2.0)	3/4–14 NPTF	98.6 (3.88)	38.1 (1.50)	19.1 (0.75)
C1220	0.9 (2.0)	1 1/6–12 UN #12 SAE	117.3 (4.62)	38.1 (1.50)	19.1 (0.75)
C1600	1.5 (3.3)	1–11 1/2 NPTF	127.0 (5.00)	44.5 (1.75)	22.4 (0.88)
C1620	1.5 (3.3)	1 5/16–12 UN #16 SAE	142.7 (5.62)	57.2 (2.25)	28.4 (1.12)
C2000	2.8 (6.2)	1 1/4–11 1/2 NPTF	143.0 (5.63)	57.2 (2.25)	28.7 (1.13)
C2020	2.8 (6.2)	1 5/8–12 UN #20 SAE	165.1 (6.50)	69.9 (2.75)	35.1 (1.38)
C2400	3.8 (8.4)	1 1/2–11 1/2 NPTF	143.0 (5.63)	69.9 (2.75)	35.1 (1.38)
C2420	3.8 (8.4)	1 7/8–12 UN #24 SAE	184.2 (7.25)	76.2 (3.00)	38.1 (1.50)
C3200	7.0 (15.4)	2–11 1/2 NPTF	165.1 (6.50)	88.9 (3.50)	44.5 (1.75)
C3220	7.0 (15.4)	2 1/2–12 UN #32 SAE	228.6 (9.00)	101.6 (4.00)	50.8 (2.00)