

## Colorflow® and Ball Valves

Industrial Flow Control, Check, Gauge Control

Catalog HY14-3300/US

aerospace  
climate control  
electromechanical  
filtration  
fluid & gas handling  
**hydraulics**  
pneumatics  
process control  
sealing & shielding



ENGINEERING YOUR SUCCESS.

Fully guided poppets are used on Colorflow valves rather than the less durable ball-check type construction. Poppets open and close more smoothly — last longer — and eliminate the distortion of seats and springs.

The exclusive “Colorflow” feature on metering, flow control, and needle valves gives highly visible check-points for setting valve openings. This feature also provides a reference point that allows the valve to be accurately and quickly reset to a previous setting.



Steel, brass or stainless steel bodies are available, all of which include stainless steel needles as standard.

Colorflow valves are available with a variety of porting options.

**WARNING: Colorflow valves are not repairable**

**⚠ WARNING – USER RESPONSIBILITY**

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

- This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.
- The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.
- To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

**OFFER OF SALE**

The items described in this document are hereby offered for sale by Parker-Hannifin Corporation, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated in the detailed “Offer of Sale” elsewhere in this document or available at [www.parker.com/hydraulicvalve](http://www.parker.com/hydraulicvalve).

**SAFETY GUIDE**

For safety information, see Safety Guide SG HY14-1000 at [www.parker.com/safety](http://www.parker.com/safety) or call 1-800-CParker.

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Cat HY14-3300-frtcvr.indd, dd



### General Description

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

### Operation

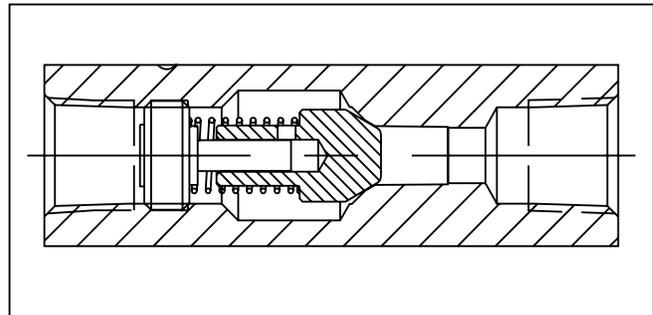
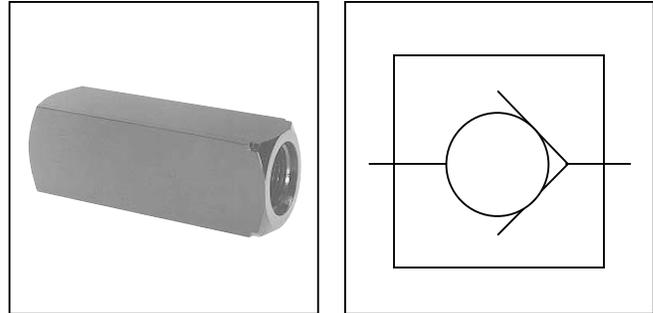
When pressure going through the valve is increased to the cracking level, the valve opens. When the pressure is reduced to below the cracking level, the valve closes.

### Features

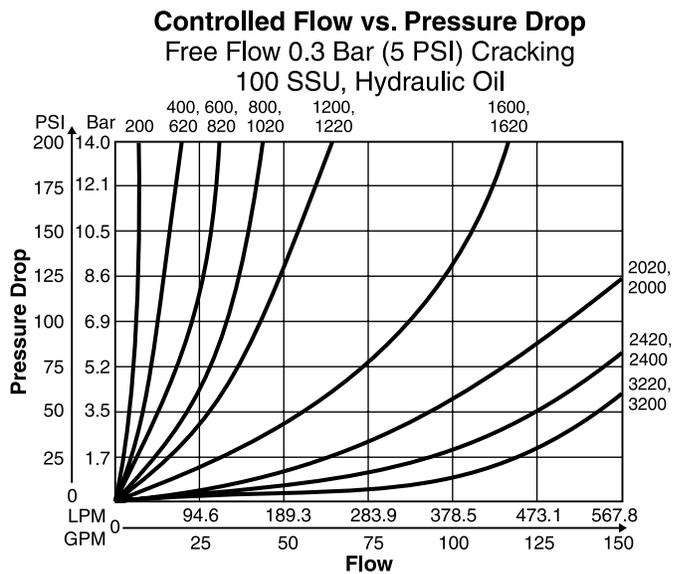
- Stainless steel poppets standard.
- Soft seal poppets are standard in some variations.
- Triangular retainers guide the poppets, and hold the spring firmly in place even under high velocity and shock.

### Specifications

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

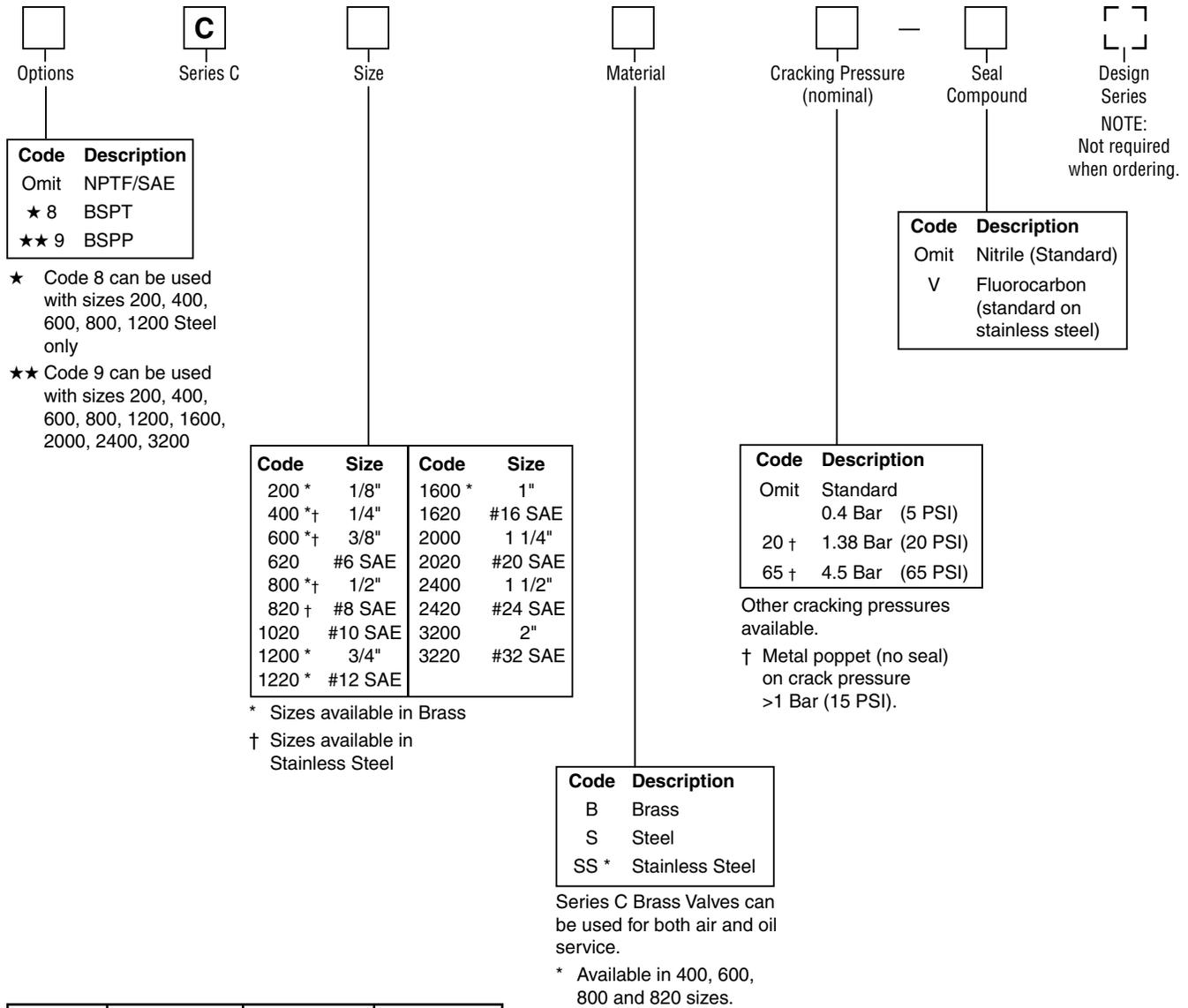


### Performance Curves



**Ordering Information**

**Series C**

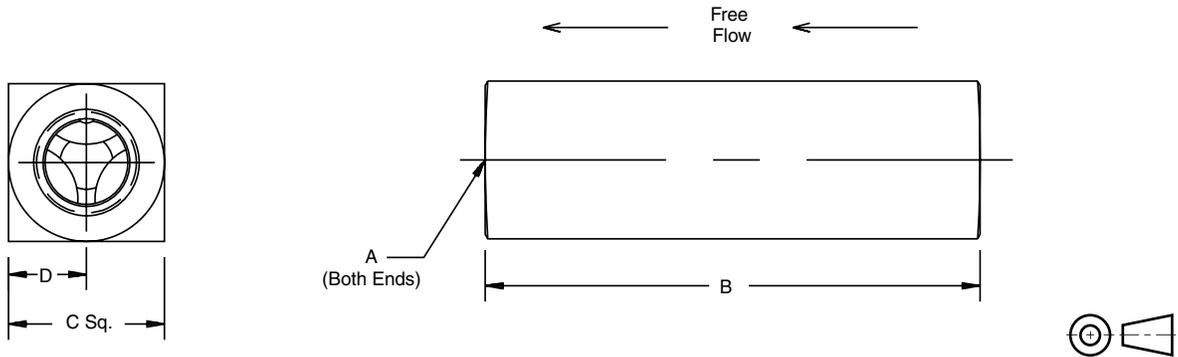


Model Number	Max Flow LPM (GPM)	Effective Orifice Area Control Flow in. <sup>2</sup>	Effective Control Flow C <sub>v</sub>
C200	11 (3)	0.023	0.53
C400	19 (5)	0.068	1.56
C620	19 (5)	0.068	1.56
C600	30 (8)	0.099	2.27
C820	30 (8)	0.099	2.27
C800	57 (15)	0.224	5.11
C1020	57 (15)	0.224	5.11
C1200	95 (25)	0.348	7.95
C1220	95 (25)	0.348	7.95
C1600	151 (40)	0.453	10.35
C1620	151 (40)	0.453	10.35
C2000	265 (70)	0.855	19.52
C2020	265 (70)	0.855	19.52
C2400	379 (100)	0.955	21.82
C2420	379 (100)	0.955	21.82
C3200	568 (150)	1.046	23.90
C3220	568 (150)	1.046	23.90

**Dimensions**

**Series C**

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



Model Number	Weight kg (lbs.)	A	B	C	D
C200	0.05 (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)
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)