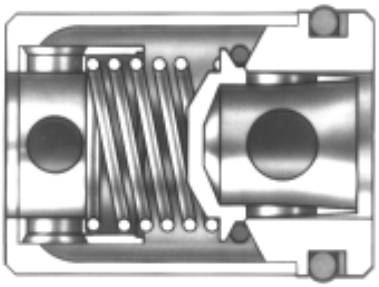


CIRCLE SEAL CONTROLS, INC.
A division of CIRCOR International, Inc.

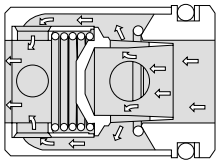
C200 SERIES
CARTRIDGE CHECK VALVES
0 to 5,000 PSIG

Features	Benefits
• Large Flow Capacity	• Maintenance Free Flow
• Compact Design	• Easy Installation
• Floating O-ring	• Zero Leak
	• Quiet Closing
	• Automatic Compensation for Wear

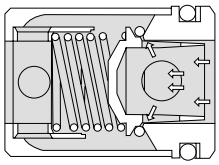
Technical Data

Body Construction Materials:	• Aluminum, 303 or 316 Stainless Steel, Steel
Finish Materials:	• Aluminum-Anodized, Steel-Black Oxide
O-ring Materials:	• Buna N, Teflon® and Viton®
Spring Material:	• 302 Stainless Steel
Operating Pressure:	• 0 to 5,000 PSIG (345 BAR)
Proof Pressure:	• 0 to 7,500 PSIG (517 BAR)
Rated Burst Pressure:	• Over 15,000 PSIG (1,034 BAR)
Temperature Range:	• -100° F to +400° F (-73° C to +204° C) Based on o-ring material, see “How to Order”

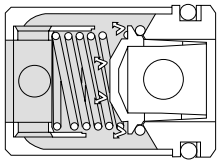
How It Works



OPEN
Full flow passages offer minimum restriction to flow. Spring is completely removed from flow path.



CLOSING
Floating o-ring automatically establishes line contact with conical metal surfaces of poppet and seat to cushion closing and insure perfect sealing.



CLOSED
O-ring only seals. Full pressure load is carried by metal-to-metal seat. Increasing pressure increases sealing efficiency – metal seat prevents any possibility of deformation or extrusion of o-ring.

C200 SERIES

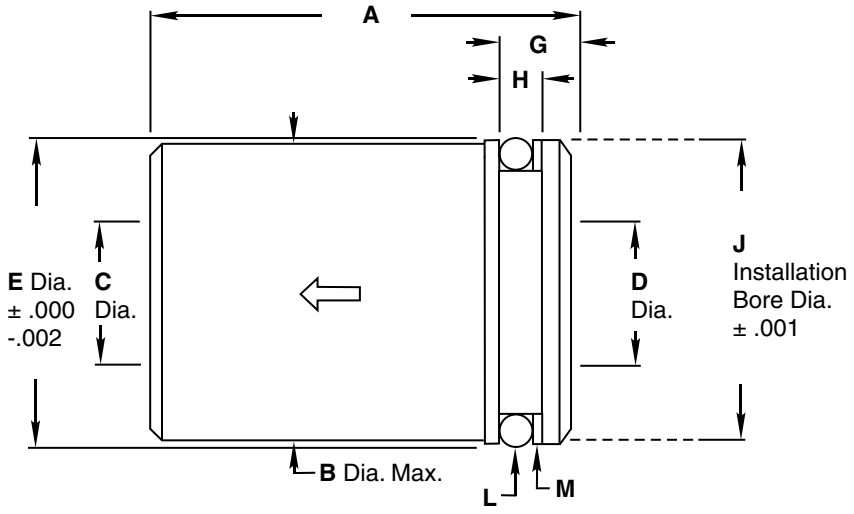
0 to 5,000 PSIG

Specifications, Dimensions, Weights & Typical Flow Rates

Specifications, Dimensions (inches), Weights & Cv Curves

Model Number	A	B	C	D	E	G	H	J	*L(O-Ring) AS 568	*M (Backup Ring) MS 28774	Weight in Lbs.	
											Alum.	Stl.
1Q	1.13	.746	.34	.34	.748	.245	.170	.750	-113	-113	.05	.14
2Q	1.38	.996	.43	.45	.998	.298	.208	1.000	-210	-210	.09	.26
4Q	1.90	1.432	.72	.73	1.435	.306	.208	1.437	-217	-217	.24	.69
6Q	2.16	1.621	.92	.91	1.623	.380	.208	1.625	-220	-220	.37	1.06

* Valves are furnished complete with o-ring and backup ring.



Flow Rates**				
Valve Size	1Q	2Q	4Q	6Q
C_V (nominal)	1.6	2.7	6.6	10.3

** For typical flow rates see the 200/H200 Series catalog sheet.
(1Q=1PP, 2Q=2PP, 4Q=4PP, 6Q=6PP)

C200 SERIES
0 to 5,000 PSIG

How to Order

C2 20 S – 1Q - 5

BASIC MODEL NUMBER
C200 Series

O-RING MATERIAL, TEMPERATURE & CRACKING PRESSURE RANGES *
- **49 -** Buna N -65° F to 250° F 2.0 - 4.0 PSI
- **59 -** Buna N -65° F to 275° F 0.5 - 1.0 PSI
- **20 -** Teflon® -100° F to 400° F 8 PSI Max
- **32 -** Viton® -20° F to 400° F 0.5 - 1.0 PSI

Notes
Vacuum service may require special lubricants. Teflon® and Viton® are registered trademarks of Dupont.

Please consult Circle Seal Controls or your local distributor for information on operating pressures and temperature ranges.

CRACKING PRESSURE
Call out dash number if not standard.
- **5 -** 5 PSIG

CONNECTION SIZE
- **1Q**
- **2Q**
- **4Q**
- **6Q**

BODY MATERIAL
- **A -** 2024-T4/T351 Aluminum
- **A1 -** 6061-T6/T651 Aluminum
- **S -** Steel
- **T -** 303 Stainless Steel
- **T1 -** 316 Stainless Steel

For Your Safety
It is the sole responsibility of the system designer and user to select products suitable for their specific application requirements and to ensure proper installation, operation and maintenance of these products. Material compatibility product ratings and application details should be considered in the selection. Improper selection or use of products described herein can cause personal injury or property damage.

CRACKING PRESSURE
MINIMUM CRACKING PRESSURE AVAILABLE - 0.1 PSI
MAXIMUM CRACKING PRESSURE AVAILABLE - 25 PSI
NOTE: Cracking pressure is defined as pressure at which flow is 5cc/min. except for C220 Series for which flow is approximately .02 cfm. When ordering a cracking pressure within the standard range or below the standard range of cracking pressure, the dash number is a “maximum.” Example: C259S-1Q-.3 (C.P. tolerance will be +0%, -50%). When ordering a cracking pressure equal to or greater than the upper limit of the standard C.P. shown above, C.P. tolerance will be ±10%. Example: C259S-1Q-5. Cracking pressures over 8 psi should not be specified without consulting the factory. Where C200 Series valves are supplied with higher cracking pressures, a shroud ring may be used to confine the o-ring.

LEAKAGE

External	Zero	
Internal		
Elastomeric Seals	Zero	
Teflon® Seals	0-50 psi	5cc/min max
	50+ psi.	5cc/min max

For cracking pressures less than standard, consult factory for leakage rates.