

C200 Series

0 to 5000 psig Cartridge Check Valve



Features

- Large flow capacity
- Compact design
- Floating o-ring

Benefits

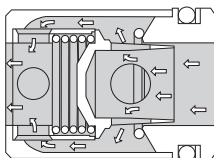
- Maintenance free flow
- Easy installation
- Zero leak
- Quiet closing
- Automatic compensation for wear

Technical Data

Body Construction Materials	Aluminum, 303 or 316 stainless steel, steel
Finish Materials	Aluminum-anodized, steel black oxide
O-ring Materials	Buna N, PTFE and Viton®
Spring Material	302 stainless steel
Operating Pressure	0 to 5000 psig (345 bar)
Proof Pressure	0 to 7500 psig (517 bar)
Rated Burst Pressure	Over 15000 psig (1,034 bar)
Temperature Range	-100° F to +400° F (-73° C to +204° C) <i>Based on o-ring & body material, see "How to Order"</i>

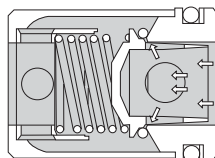
Note: Proper filtration is recommended to prevent damage to sealing surfaces.

How it Works



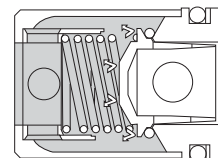
Open

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.

check valves

Circle Seal Controls

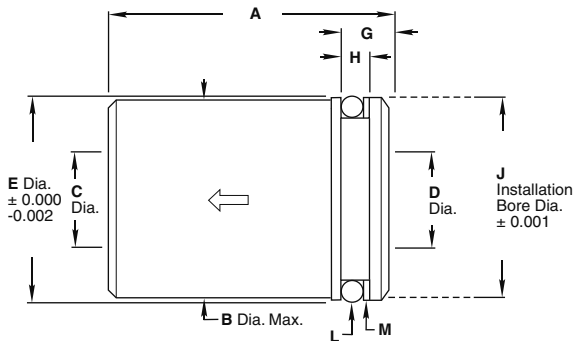
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C200 Series

Specifications, Dimensions, Weights & Typical Flow Rates

Model Number	A	B	C	D	E	G	H	J	L* (O-ring) AS568	M* (Backup ring) MS28774	Weight (lbs)	
											Aluminum	St. Steel
-1Q	1.13	0.746	0.34	0.34	0.748	0.245	0.170	0.750	-113	-113	0.05	0.14
-2Q	1.38	0.996	0.43	0.45	0.998	0.298	0.208	1.000	-210	-210	0.09	0.26
-4Q	1.90	1.432	0.72	0.73	1.435	0.306	0.208	1.437	-217	-217	0.24	0.69
-6Q	2.16	1.621	0.92	0.91	1.623	0.380	0.208	1.625	-220	-220	0.37	1.06

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



Flow Rates**

Valve size	-1Q	-2Q	-4Q	-6Q
Cv (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)

How to Order

C2 20 S - 1Q - 5

O-RING MATERIAL, TEMPERATURE & CRACKING PRESSURE RANGES

- 49** Buna N, -65° F to +250° F, 2.0-4.0 psig
- 59** Buna N, -65° F to +275° F, 0.5-1.0 psig
- 20** PTFE, -100° F to +400° F, 8 psig maximum
- 32** Viton®, -20° F to +400° F, 0.5-1.0 psig

BODY MATERIAL

- A** 2024-T4/T351 aluminum^{††}
- A1** 6061-T6/T651 aluminum^{††}
- S** Steel[†]
- T** 303 stainless steel
- T1** 316 stainless steel

CRACKING PRESSURE

Call out dash number if not standard
5 5 psig

CONNECTION SIZE

- 1Q**
- 2Q**
- 4Q**
- 6Q**

† Not available for PED applications

†† For PED applications, aluminum bodies are limited to a maximum temperature of +200° F (+93° C)

Note: Vacuum service may require special lubricants.

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

Leakage

External: Zero

Internal:

Elastomeric seals: Zero

PTFE seals: 0-50 psig = 5cc/min max.
50+ psig = 0.5cc/min max.

Cracking Pressure

Minimum cracking pressure available: 0.1 psig

Maximum cracking pressure available: 25 psig

Note: Cracking pressure is defined as pressure at which flow is 5cc/min, except for C220 Series, for which flow is approximately 0.02 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: C259-1Q-.3 (cracking pressure tolerance will be +0%, -50%). When ordering a cracking pressure equal to or greater than the upper limit of the standard cracking pressure shown above, cracking pressure tolerance will be ±10%. Example: C259S-1Q-5. Cracking pressure over 8 psig 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.

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

For Your Safety

It is solely the 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.

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