

100 Series

0 to 25 psig Check Valves



Features & Benefits

Low pressure

- Lightweight check valve for pressures to 25 psig.

Ultra-sensitive

- Unique design allows flow with minimum pressure differential. Cracking pressure is 4" H₂O maximum.

Positive sealing

- Unique knife-edge on the poppet positions snugly to provide zero sealing even with extremely low pressure.

Zero leakage

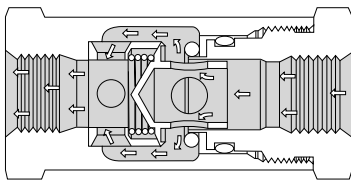
- Compact, easy installation. Efficient, inline design reduces size and weight. The valve can be mounted in any position.

Technical Data

Body Construction Materials	Aluminum, brass, steel, 303 or 316 stainless steel
O-ring Materials	Buna N or Viton®
Operating Pressure	25 psig (1.7 bar)
Cracking Pressure	4" H ₂ O maximum
Temperature Range	-40° F to +400° F (-40° C to +204° C) <i>Based on o-ring & body material, see "How to Order"</i>
Connection Sizes	1/8" to 3/4"

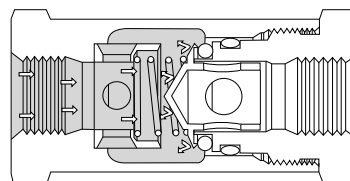
Note: Proper filtration is recommended to prevent damage to sealing surfaces.

How it Works



Open

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



Closed

As the inlet supply pressure decreases, a light spring closes the poppet, positioning the knife-edge automatically in line of contact sealing against the o-ring. The impression of the knife edge is limited by a metal-to-metal seat, which carries the reverse pressure load and serves to prevent sticking of the o-ring.

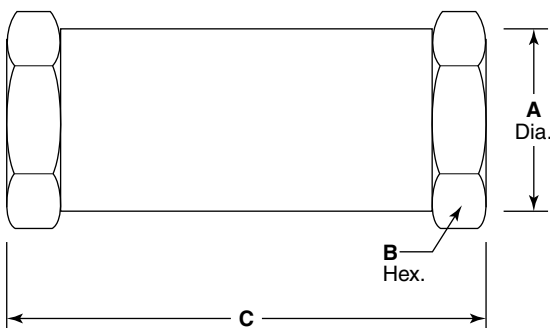
check valves

Circle Seal Controls

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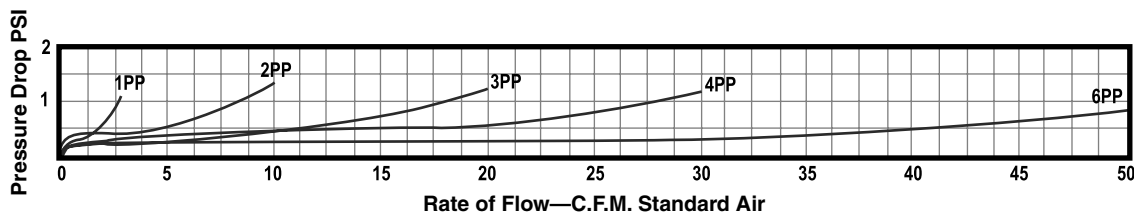
100 Series

Dimensions



Pipe, Female	Size	A Dia.	B Hex.	C
-1PP	1/8"	0.81	0.81	1.70
-2PP	1/4"	1.00	1.00	2.25
-3PP	3/8"	1.12	1.12	2.43
-4PP	1/2"	1.50	1.50	2.93
-6PP	3/4"	1.75	1.75	3.37

Flow Curve



How to Order

1 19 B - 2 PP

O-RING MATERIAL & TEMPERATURE RANGE

19 Buna N, -40° F to +250° F

32 Viton®, -20° F to +400° F

MATERIAL

A Aluminum

B Brass

T 303 stainless steel†

T1 316 stainless steel

CONNECTIONS—INLET/OUTLET

P Female pipe, NPT

VALVE SIZE

1 1/8"

2 1/4"

3 3/8"

4 1/2"

6 3/4"

† Not available for PED applications.

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

Repair Kits

In normal service, the only part(s) which may require replacement is(are) the seal(s). A repair kit may be ordered by placing a 'K/' in front of the complete part number (i.e. K/119B-2PP).

Although we offer separate kits where o-ring replacement is considered necessary, factory repair is recommended. Because of the ultra-sensitive characteristics of this valve, extreme care is necessary to insure that the o-ring is properly fitted into the groove without being twisted or distorted.

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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