

HP500 SERIES

150 to 450 PSIG

HIGH PRESSURE RELIEF VALVES

Fred C. Gilbert Co.
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Features

- **Very Accurate Cracking Pressure**
- **Zero Leakage to 95-98% of Cracking Pressure**
- **Tamper Proof Adjustment**
- **Long, Maintenance Free Service**

Technical Data

Materials of Construction

Body	– Brass
O-Rings	– Buna N, Ethylene Propylene, Neoprene, Silicone or Viton®
Spring	– 17-7 PH Stainless Steel
Spring Seat	– Brass
Poppet	– 303 Stainless Steel
Shroud	– Brass

Pressure Ratings

Operating Pressure – 0 to 600 PSIG (41 BAR)

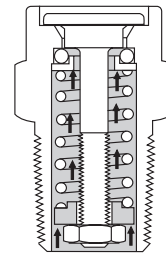
Temperature Range

-65°F to +350°F; -54°C to +177°C
Based On O-Ring Material, See Page 2

Valve Sizes & Connections

1/4" to 1/2" Male & Female Pipe
Popoff & Inline are available

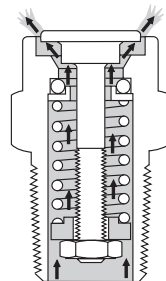
How It Works



CLOSED

The specially designed poppet seals on the elastomeric O-ring. The increasing pressure within the valve seals more tightly against the poppet and prevents leakage nearly to the cracking pressure. The metal-to-metal seal, on the

low pressure side, supports the spring load and prevents seal deformation.



OPEN

The excess pressure is vented instantly when the system pressure overcomes the spring force and opens the poppet. The ample flow passages, both internally and at the poppet opening, assure minimum pressure rise.

RESEALING

Repeated, positive resealing occurs at better than 90% of the cracking pressure when the spring action retracts the poppet, re-establishing the seal between the elastomeric O-ring and the poppet shoulder.



A division of CIRCOR International, Inc.

Certified to ISO 9001

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How To Order

HP5 59 B - 2 M - 150

BASIC MODEL NUMBER

HP500 Series

O-RING MATERIAL & TEMPERATURE

- 59 - Buna N -20°F to 250°F
- 62 - Ethylene Propylene -20°F to 250°F
- 33 - Neoprene -20°F to 240°F
- 24 - Silicone -65°F to 150°F
- 32 - Viton® -20°F to 350°F

BODY MATERIAL

B - Brass

CRACKING PRESSURE

Specify cracking pressure setting in PSIG.

150 - 150 PSIG

CONNECTIONS - Inlet/Outlet

- M - Male Pipe
- P - Female Pipe

VALVE SIZE

Pipe Sizes in 1/8" Increments
2 - 1/4"

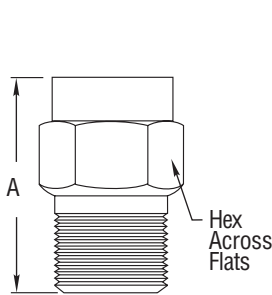
Notes:

The operating tolerance for cracking pressure is 5%. The initial crack may be slightly higher than the cracking pressure tolerance. The cracking pressure is defined as 5 cc/min. with gas.

Viton® is a registered trademark of DuPont Dow Elastomers.

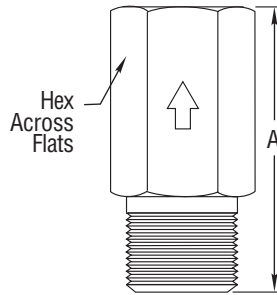
Please consult your Circle Seal Controls Distributor or our factory for information on special connections, materials, sizes, O-rings, operating pressures and temperature ranges.

Dimensions, Replacement Springs & Typical Flow Curves



VENT TO ATMOSPHERE,

Dash No.	Size	A	Hex
2M	1/4"	1.17"	5/8"
4M	1/2"	1.91"	1"



INLINE, MALE/FEMALE

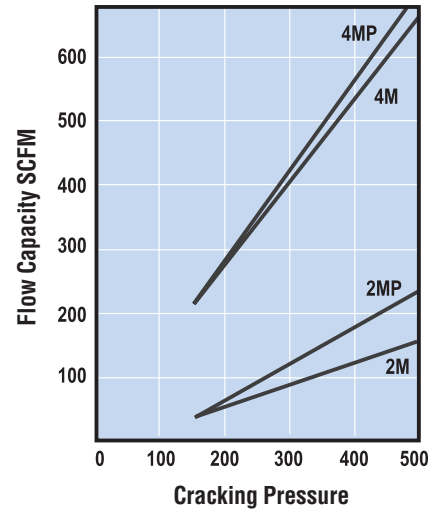
Dash No.	Size	A	Hex
2MP	1/4"	1.92"	3/4"
4MP	1/2"	2.63"	1-1/8"

REPLACEMENT SPRINGS

Range	2M/2MP	Range	4M/4MP
150-175	10262-40PH	150-250	10462-200PH
176-275	10262-100PH	251-350	10462-300PH
276-374	10262-120PH	351-450	10462-400PH
375-450	10262-175PH		

Springs for each valve size are interchangeable. The cracking pressure range can be changed by replacing the spring with one covering the desired range.

AIR @ 10% OVERPRESSURE



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