

Relief Valves

HSR Series: 20,000 psig (1379 bar)

HMR Series: 60,000 psig (4137 bar)

HAR Series: 20,000 psig (1379 bar)



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| Line Filters |
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| Part Number Crossover Charts |

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HSR Series: 20,000 psig (1379 bar)

Features

- ⦿ Set pressure: 1,500 to 20,000 psig (103 to 1379 bar)
- ⦿ Working temperature range: 32°F to 400°F (0°C to 204°C)
- ⦿ Liquid or gas service
- ⦿ Soft seat design to provide bubble tight shut-off of gas
- ⦿ Factory-set, test, locked, and tagged with the set pressure
- ⦿ Lock wire the cap and body together to maintain relief setting
- ⦿ Mountable in any direction

Ordering Information and Technical Data

| Ordering Number | Inlet | | Outlet Connection | Orifice in. (mm) | Cv | Minimum Set Pressure psig (bar) | Maximum Set Pressure psig (bar) | Maximum Back Pressure psig (bar) |
|-------------------|---------------|------------|-------------------|------------------|-----|---------------------------------|---------------------------------|----------------------------------|
| | Tube O.D. in. | Connection | | | | | | |
| HSRSS-MF9-FNS12-1 | 9/16 | MF9 | FNS12 | 0.312 (7.92) | 1.2 | 1,500 (103) | 5,000 (345) | 500 (34.5) |
| HSRSS-MF9-FNS12-2 | 9/16 | MF9 | FNS12 | 0.25 (6.35) | 0.8 | 5,000 (345) | 10,000 (690) | 500 (34.5) |
| HSRSS-MF9-FNS12-3 | 9/16 | MF9 | FNS12 | 0.156 (3.96) | 0.3 | 10,000 (690) | 20,000 (1379) | 500 (34.5) |

- NOTES: 1. Please specify the required set pressure when ordering.
 2. Maximum system operating pressure should not exceed 90% of the set pressure.

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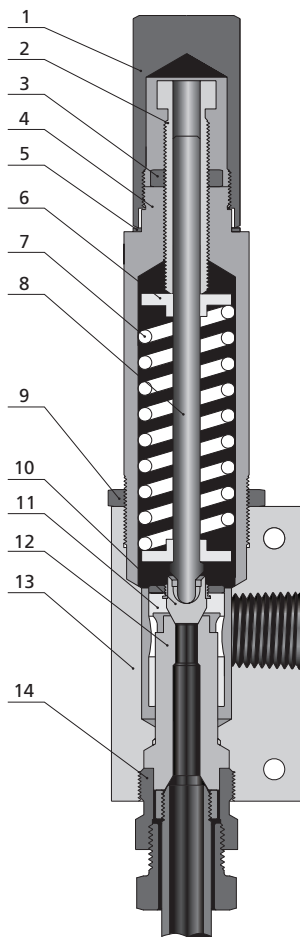
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Standard Materials of Construction

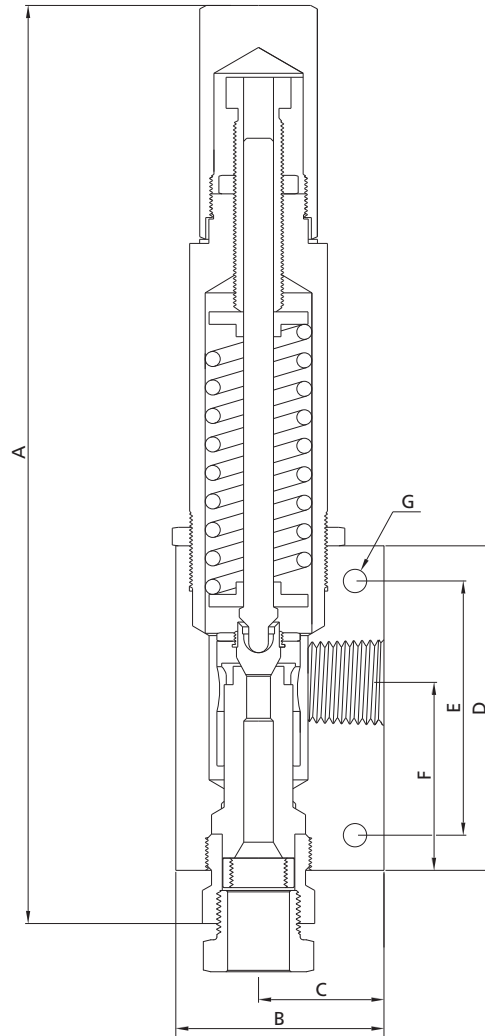
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| Item | Component | Material Grade |
|------|------------------------|--|
| 1 | <i>Cap</i> | 316 SS |
| 2 | <i>Adjusting Bolt</i> | 316 SS |
| 3 | <i>Lock Nut</i> | 316 SS |
| 4 | <i>Spring Cylinder</i> | 316 SS |
| 5 | <i>Gasket</i> | 316L SS |
| 6 | <i>Spring Washer</i> | 316 SS |
| 7 | <i>Spring</i> | S17700 |
| 8 | <i>Spindle</i> | 316 SS |
| 9 | Lock Nut | 316 SS |
| 10 | Plug | PEEK |
| 11 | Plug Guide | 316 SS |
| 12 | Seat | 316 SS |
| 13 | Valve Body | 316 SS |
| 14 | Seat Gland | 316 SS |
| | Lubricant | Molybdenum Disulfide/Fluorinated-based |

Wetted components listed in italics.

Dimensions



| Dimensions, in.(mm) | | | | | | |
|---------------------|----------------|----------------|----------------|----------------|----------------|---------------|
| A | B | C | D | E | F | G |
| 9.46 (240.4) | 2.00 (50.8) | 1.19 (30.2) | 3.25 (82.6) | 2.25 (57.1) | 1.94 (49.3) | 0.28 (7.1) |

NOTES: 1. G is the dimension of mounting holes.
 2. All dimensions are for reference only and are subject to change. For dimensions not shown above, please contact FITOK Group or our authorized distributors.

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HMR Series: 60,000 psig (4137 bar)

Features

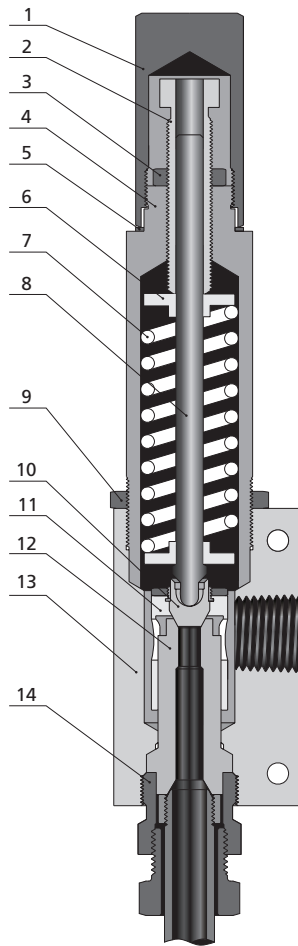
- ⦿ Set pressure: 3,000 to 60,000 psig (207 to 4137 bar)
- ⦿ Working temperature range: -110°F to 400°F (-79°C to 204°C)
- ⦿ Liquid or gas service
- ⦿ Metal-to-metal seating to provide shut-off of liquids and gases under pressure to commercial tightness standards
- ⦿ Factory-set, test, locked, and tagged with the set pressure
- ⦿ Lock wire the cap and body together to maintain relief setting
- ⦿ Mountable in any direction

Ordering Information and Technical Data

| Ordering Number | Inlet | | Outlet Connection | Orifice Size in. (mm) | Cv | Minimum Set Pressure psig (bar) | Maximum Set Pressure psig (bar) | Maximum Back Pressure psig (bar) |
|-------------------|---------------|------------|-------------------|-----------------------|------|---------------------------------|---------------------------------|----------------------------------|
| | Tube O.D. in. | Connection | | | | | | |
| HMRSS-MF9-FNS12-1 | 9/16 | MF9 | FNS12 | 0.312 (7.92) | 1.2 | 3,000 (207) | 5,000 (345) | 500 (34.5) |
| HMRSS-MF9-FNS12-2 | 9/16 | MF9 | FNS12 | 0.250 (6.35) | 0.8 | 5,000 (345) | 10,000 (690) | 500 (34.5) |
| HMRSS-MF9-FNS12-3 | 9/16 | MF9 | FNS12 | 0.188 (4.78) | 0.45 | 10,000 (690) | 15,000 (1034) | 500 (34.5) |
| HMRSS-MF9-FNS12-4 | 9/16 | MF9 | FNS12 | 0.156 (3.96) | 0.3 | 15,000 (1034) | 20,000 (1379) | 500 (34.5) |
| HMRSS-HF6-FNS12-5 | 3/8 | HF6 | FNS12 | 0.125 (3.18) | 0.2 | 20,000 (1379) | 30,000 (2068) | 500 (34.5) |
| HMRSS-HF6-FNS12-6 | 3/8 | HF6 | FNS12 | 0.093 (2.36) | 0.1 | 25,000 (1724) | 45,000 (3103) | 500 (34.5) |
| HMRSS-HF6-FNS12-7 | 3/8 | HF6 | FNS12 | 0.078 (1.98) | 0.07 | 30,000 (2068) | 60,000 (4137) | 500 (34.5) |

- NOTES: 1. Please specify the required set pressure when ordering.
2. Maximum system operating pressure should not exceed 90% of the relief valve set pressure.

Standard Materials of Construction



| Item | Component | Material Grade |
|------|------------------------|--|
| 1 | <i>Cap</i> | 316 SS |
| 2 | <i>Adjusting Bolt</i> | 316 SS |
| 3 | <i>Lock Nut</i> | 316 SS |
| 4 | <i>Spring Cylinder</i> | 316 SS |
| 5 | <i>Gasket</i> | 316L SS |
| 6 | <i>Spring Washer</i> | 316 SS |
| 7 | <i>Spring</i> | S17700 |
| 8 | <i>Spindle</i> | 316 SS |
| 9 | Lock Nut | 316 SS |
| 10 | <i>Plug</i> | S17400 |
| 11 | <i>Plug Guide</i> | 316 SS |
| 12 | Seat | S17400 |
| 13 | <i>Valve Body</i> | 316 SS |
| 14 | Seat Gland | 316 SS |
| | Lubricant | Molybdenum Disulfide/Fluorinated-based |

Wetted components listed in italics.

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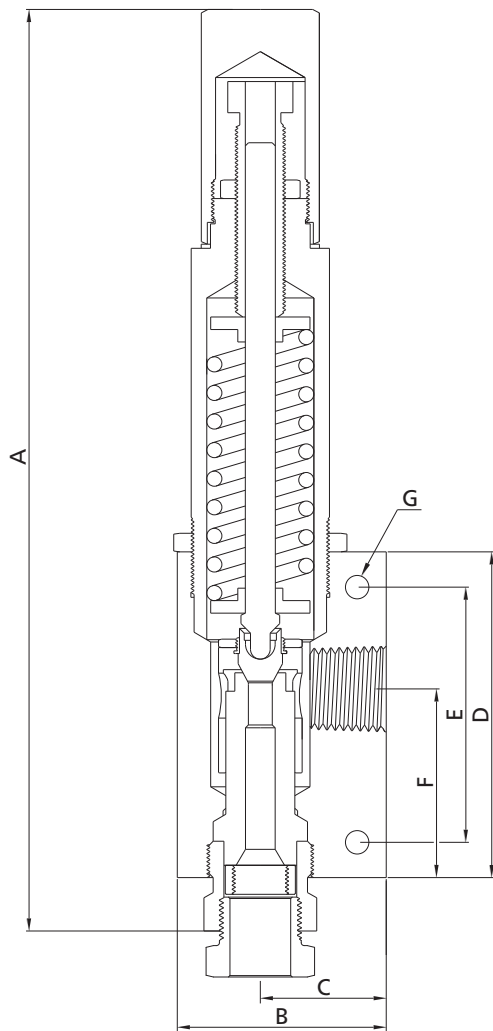
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Dimensions



| Dimensions, in.(mm) | | | | | | |
|---------------------|----------------|----------------|----------------|----------------|----------------|---------------|
| A | B | C | D | E | F | G |
| 9.46 (240.4) | 2.00 (50.8) | 1.19 (30.2) | 3.25 (82.6) | 2.25 (57.1) | 1.94 (49.3) | 0.28 (7.1) |

NOTES: 1. G is the dimension of mounting holes.

2. All dimensions are for reference only and are subject to change. For dimensions not shown above, please contact FITOK Group or our authorized distributors.

HAR Series: 20,000 psig (1379 bar)

Features

- ⦿ Set pressure: 3,000 to 20,000 psig (207 to 1379 bar)
- ⦿ Working temperature range: 32°F to 400°F (0°C to 204°C)
- ⦿ Field adjustable
- ⦿ Liquid or gas service
- ⦿ Soft seat design to provide bubble tight shut-off of gas
- ⦿ Easily replaceable seat
- ⦿ Mountable in any direction

Ordering Information and Technical Data

| Ordering Number | Inlet | | Outlet Connection | Orifice Size in. (mm) | Cv | Minimum Set Pressure psig (bar) | Maximum Set Pressure psig (bar) | Maximum Back Pressure psig (bar) |
|-------------------|---------------|------------|-------------------|-----------------------|-----|---------------------------------|---------------------------------|----------------------------------|
| | Tube O.D. in. | Connection | | | | | | |
| HARSS-MF9-FNS12-1 | 9/16 | MF9 | FNS12 | 0.197 (5.0) | 0.5 | 3,000 (207) | 10,000 (690) | 500 (34.5) |
| HARSS-MF9-FNS12-2 | 9/16 | MF9 | FNS12 | 0.093 (2.36) | 0.1 | 10,000 (690) | 20,000 (1379) | 500 (34.5) |

NOTE: Maximum system operating pressure should not exceed 90% of the relief valve set pressure.

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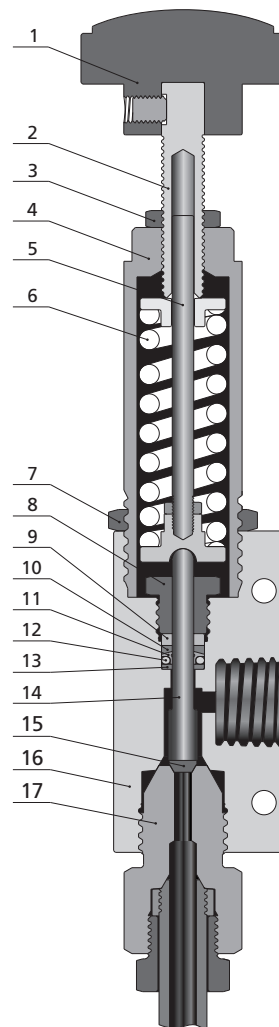
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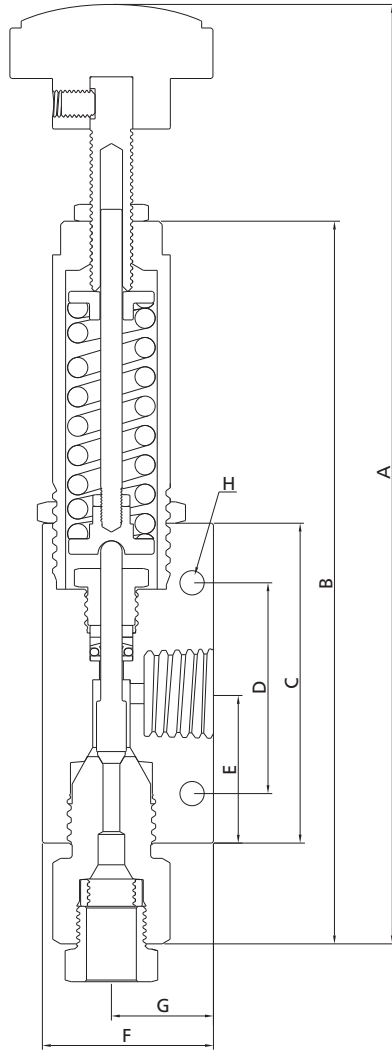
Standard Materials of Construction

| Item | Component | Material Grade |
|------|---------------------|--|
| 1 | Handle | Aluminum Alloy |
| 2 | Set Screw | 316 SS |
| 3 | Lock Nut | 316 SS |
| 4 | Bonnet | 316 SS |
| 5 | Upper Stem | 316 SS |
| 6 | Spring | S17700 |
| 7 | Lock Nut | 316 SS |
| 8 | Packing Gland | C63000 |
| 9 | Washer | C63000 |
| 10 | <i>Backing Ring</i> | <i>PEEK</i> |
| 11 | <i>Backing Ring</i> | <i>PTFE</i> |
| 12 | <i>O-ring</i> | <i>Fluorocarbon FKM</i> |
| 13 | <i>Ring</i> | <i>PEEK</i> |
| 14 | <i>Lower Stem</i> | <i>316 SS</i> |
| 15 | <i>Plug</i> | <i>PEEK</i> |
| 16 | <i>Body</i> | <i>316 SS</i> |
| 17 | <i>Seat</i> | <i>316 SS</i> |
| | Lubricant | Molybdenum Disulfide/Fluorinated-based |

Wetted components listed in italics.



Dimensions

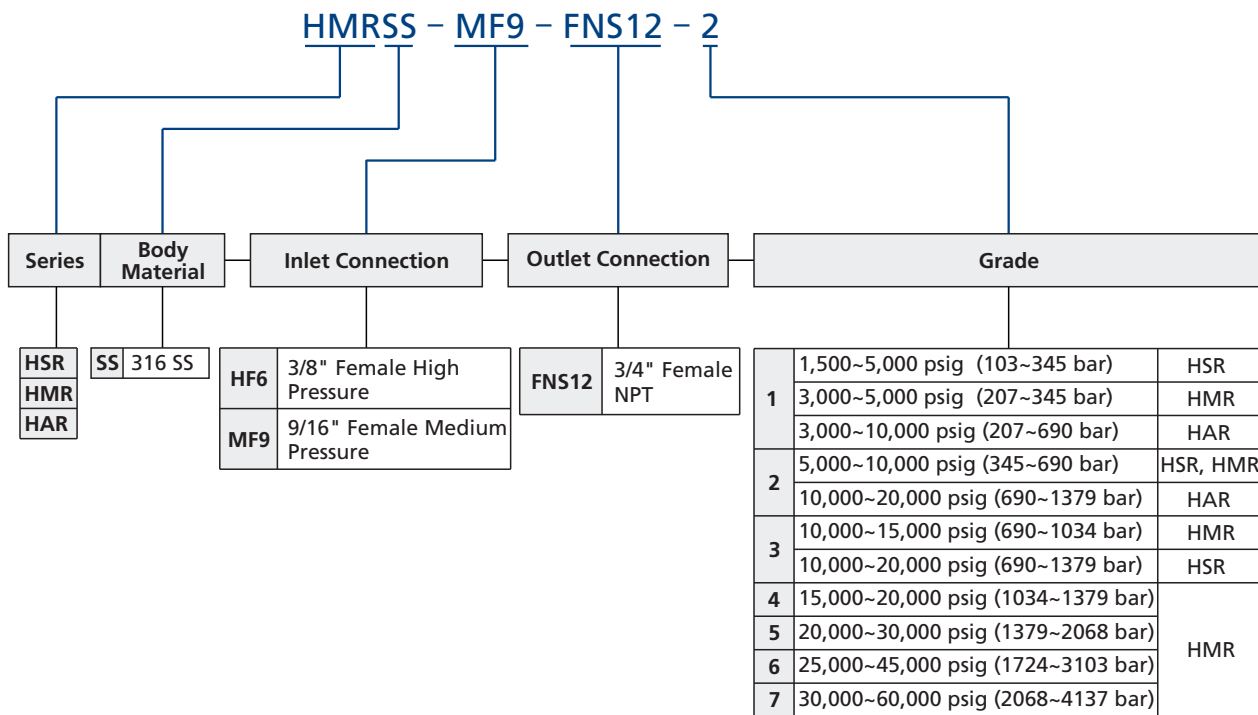


| Dimensions, in.(mm) | | | | | | | |
|---------------------|-----------------|----------------|----------------|----------------|----------------|----------------|---------------|
| A | B | C | D | E | F | G | H |
| 10.98 (278.8) | 8.45 (214.6) | 3.74 (95.0) | 2.46 (62.6) | 1.75 (44.4) | 2.00 (50.8) | 1.19 (30.3) | 0.28 (7.1) |

- NOTES: 1. H is the dimension of mounting holes.
 2. All dimensions are reference only and are subject to change. For dimensions not shown above, please contact the FITOK Group or our authorized distributors.

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Ordering Number Description



- NOTES: 1. For more details regarding Medium/High Pressure connections, please see **Connection Information** on I-02.
 2. Valves are factory-set, test, locked, and tagged with the set pressure. Please specify the required set pressure when ordering.
 3. "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number.
 Not all combinations are available.