

Relief Valves

HSR Series, 20,000 psig (1379 bar)

HMR Series, 60,000 psig (4137 bar)

HAR Series, 20,000 psig (1379 bar)



Contents

HSR Series

20,000 psig (1379 bar) C-70

HMR Series

60,000 psig (4137 bar) C-73

HAR Series

20,000 psig (1379 bar) C-76

Ordering Number Description

C-79

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| Medium & High Pressure Fittings and Tubing |
| Quick Couplings |
| Medium & High Pressure Valves |
| Line Filters |
| Sour Service Products |
| Subsea Valves |
| Tools and Installation Instructions |
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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
- ⦿ Free assembly positions

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-2FH9-FNS12-1 | 9/16 | 2FH9 | FNS12 | 0.312 (7.92) | 1.2 | 1,500 (103) | 5,000 (345) | 500 (34.5) |
| HSRSS-2FH9-FNS12-2 | 9/16 | 2FH9 | FNS12 | 0.25 (6.35) | 0.8 | 5,000 (345) | 10,000 (690) | 500 (34.5) |
| HSRSS-2FH9-FNS12-3 | 9/16 | 2FH9 | 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.

Medium & High Pressure Fittings and Tubing

Quick Couplings

Medium & High Pressure Valves

Line Filters

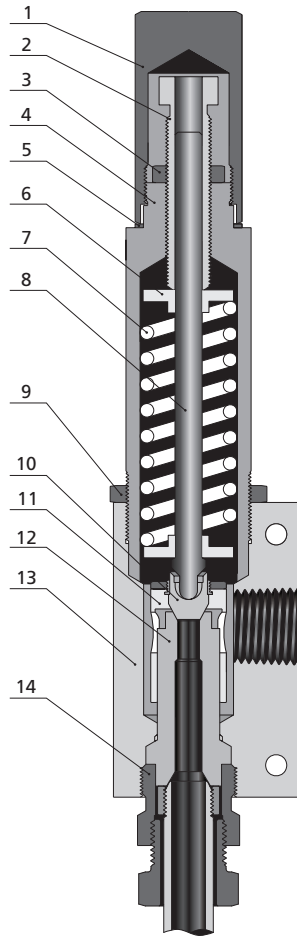
Sour Service Products

Subsea Valves

Tools and Installation Instructions

Technical Information

Standard Materials of Construction



| Item | Component | Material Grade/ASTM Specification |
|------|------------------------|--|
| 1 | <i>Cap</i> | 316 SS/A479 |
| 2 | <i>Adjusting Bolt</i> | 316 SS/A479 |
| 3 | <i>Lock Nut</i> | 316 SS/A479 |
| 4 | <i>Spring Cylinder</i> | 316 SS/A479 |
| 5 | <i>Gasket</i> | 316L SS/A479 |
| 6 | <i>Spring Washer</i> | 316 SS/A479 |
| 7 | <i>Spring</i> | 17-7PH/AMS5678 |
| 8 | <i>Spindle</i> | 316 SS/A479 |
| 9 | <i>Lock Nut</i> | 316 SS/A479 |
| 10 | <i>Plug</i> | PEEK |
| 11 | <i>Plug Guide</i> | 316 SS/A479 |
| 12 | <i>Seat</i> | 316 SS/A479 |
| 13 | <i>Valve Body</i> | 316 SS/A479 |
| 14 | <i>Seat Gland</i> | 316 SS/A479 |
| | Lubricant | Molybdenum Disulfide/Fluorinated-based |

Wetted components listed in italics.

Medium & High Pressure Fittings and Tubing

Quick Couplings

Medium & High Pressure Valves

Line Filters

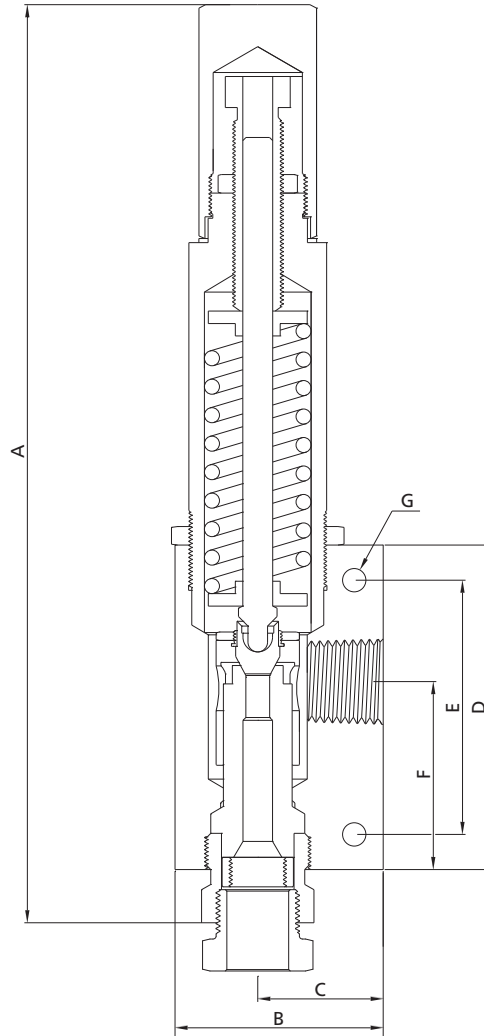
Sour Service Products

Subsea Valves

Tools and Installation Instructions

Technical Information

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.

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
- ⦿ Free assembly positions

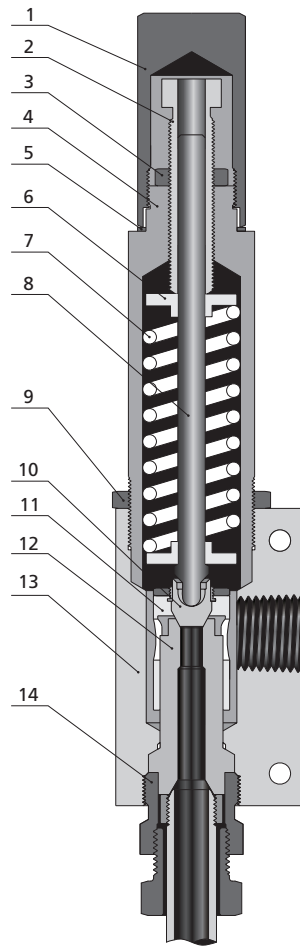
Ordering Information and Technical Data

| 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-2FH9-FNS12-1 | 9/16 | 2FH9 | FNS12 | 0.312 (7.92) | 1.2 | 3,000 (207) | 5,000 (345) | 500 (34.5) |
| HMRSS-2FH9-FNS12-2 | 9/16 | 2FH9 | FNS12 | 0.250 (6.35) | 0.8 | 5,000 (345) | 10,000 (690) | 500 (34.5) |
| HMRSS-2FH9-FNS12-3 | 9/16 | 2FH9 | FNS12 | 0.188 (4.78) | 0.45 | 10,000 (690) | 15,000 (1034) | 500 (34.5) |
| HMRSS-2FH9-FNS12-4 | 9/16 | 2FH9 | FNS12 | 0.156 (3.96) | 0.3 | 15,000 (1034) | 20,000 (1379) | 500 (34.5) |
| HMRSS-6FH6-FNS12-5 | 3/8 | 6FH6 | FNS12 | 0.125 (3.18) | 0.2 | 20,000 (1379) | 30,000 (2068) | 500 (34.5) |
| HMRSS-6FH6-FNS12-6 | 3/8 | 6FH6 | FNS12 | 0.093 (2.36) | 0.1 | 25,000 (1724) | 45,000 (3103) | 500 (34.5) |
| HMRSS-6FH6-FNS12-7 | 3/8 | 6FH6 | 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/ASTM Specification |
|------|------------------------|--|
| 1 | <i>Cap</i> | 316 SS/A479 |
| 2 | <i>Adjusting Bolt</i> | 316 SS/A479 |
| 3 | <i>Lock Nut</i> | 316 SS/A479 |
| 4 | <i>Spring Cylinder</i> | 316 SS/A479 |
| 5 | <i>Gasket</i> | 316L SS/A479 |
| 6 | <i>Spring Washer</i> | 316 SS/A479 |
| 7 | <i>Spring</i> | 17-7PH/AMS5678 |
| 8 | <i>Spindle</i> | 316 SS/A479 |
| 9 | Lock Nut | 316 SS/A479 |
| 10 | <i>Plug</i> | S17400/A564 |
| 11 | <i>Plug Guide</i> | 316 SS/A479 |
| 12 | <i>Seat</i> | 17-4PH/A564 |
| 13 | <i>Valve Body</i> | 316 SS/A479 |
| 14 | <i>Seat Gland</i> | 316 SS/A479 |
| | Lubricant | Molybdenum Disulfide/Fluorinated-based |

Wetted components listed in italics.

Medium & High Pressure
Fittings and Tubing

Quick Couplings

Medium & High Pressure
Valves

Line Filters

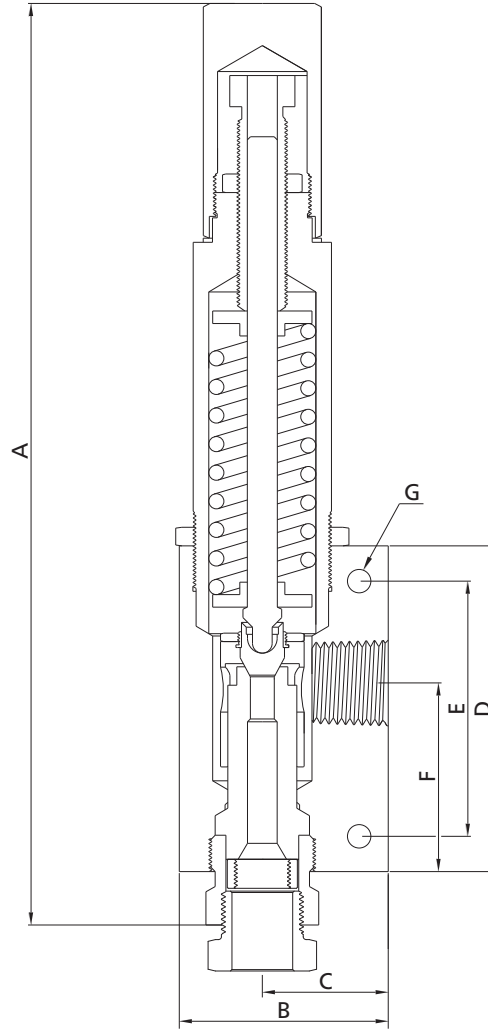
Sour Service Products

Subsea Valves

Tools and Installation
Instructions

Technical Information

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 exchangeable seat
- ⦿ Free assembly positions

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-2FH9-FNS12-1 | 9/16 | 2FH9 | FNS12 | 0.197 (5.0) | 0.5 | 3,000 (207) | 10,000 (690) | 500 (34.5) |
| HARSS-2FH9-FNS12-2 | 9/16 | 2FH9 | 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.

Medium & High Pressure Fittings and Tubing

Quick Couplings

Medium & High Pressure Valves

Line Filters

Sour Service Products

Subsea Valves

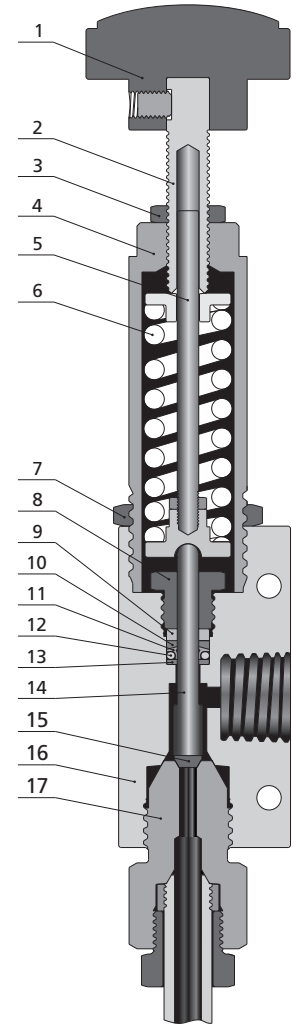
Tools and Installation Instructions

Technical Information

Standard Materials of Construction

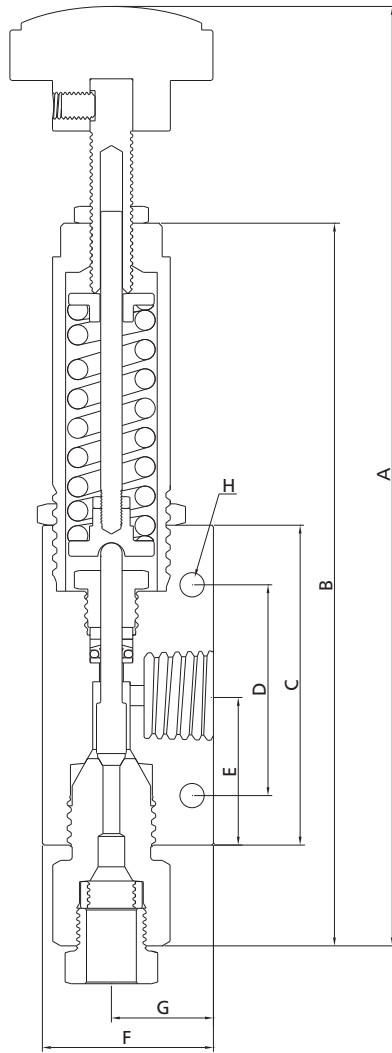
| Item | Component | Material Grade/ASTM Specification |
|------|---------------------|--|
| 1 | Handle | 6061/B211 |
| 2 | Set Screw | 316 SS/A479 |
| 3 | Lock Nut | 316 SS/A476 |
| 4 | Bonnet | 316 SS/A479 |
| 5 | Upper Stem | 316 SS/A479 |
| 6 | Spring | 17-7PH/AMS5678 |
| 7 | Lock Nut | 316 SS/A479 |
| 8 | Packing Gland | C63000/B150 |
| 9 | Washer | C63000/B150 |
| 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/A479</i> |
| 15 | <i>Plug</i> | <i>PEEK</i> |
| 16 | <i>Body</i> | <i>316 SS/A479</i> |
| 17 | <i>Seat</i> | <i>316 SS/A479</i> |
| | Lubricant | Molybdenum Disulfide/Fluorinated-based |

Wetted components listed in italics.



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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.

Medium & High Pressure Fittings and Tubing

Quick Couplings

Medium & High Pressure Valves

Line Filters

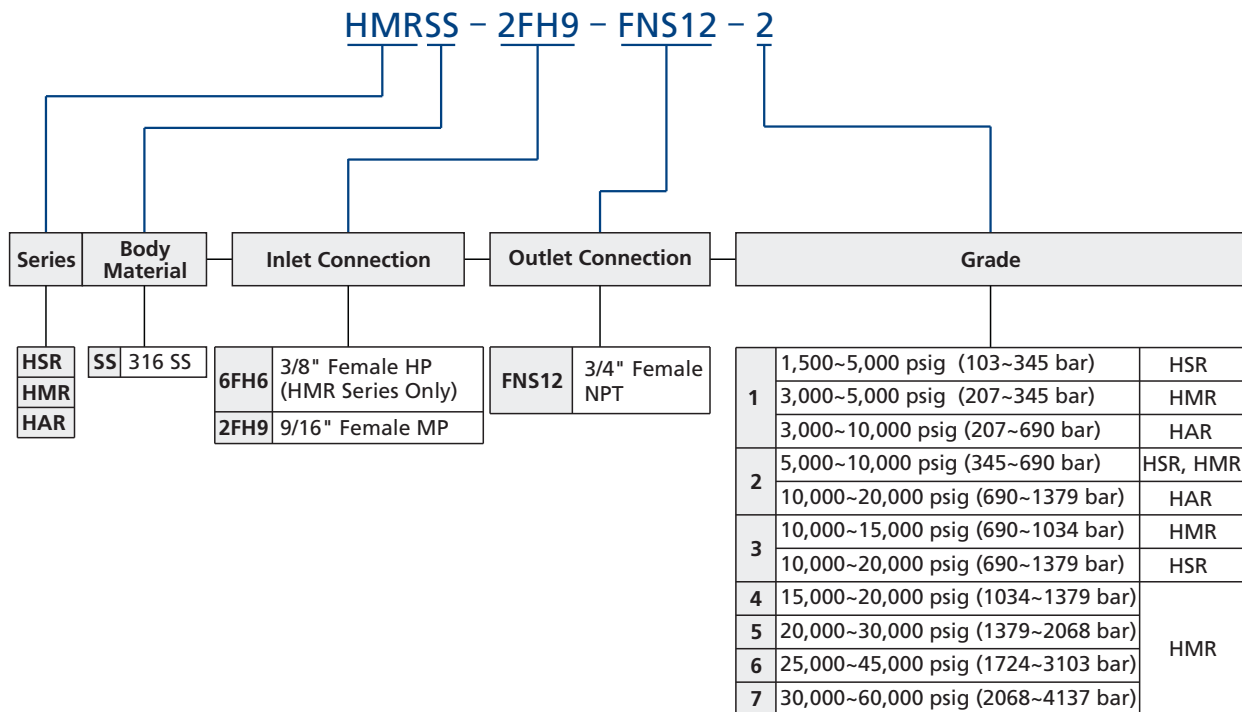
Sour Service Products

Subsea Valves

Tools and Installation Instructions

Technical Information

Ordering Number Description



- NOTES: 1. Valves are factory-set, test, locked, and tagged with the set pressure. Please specify the required set pressure when ordering.
2. "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.

FITOK Group

FITOK GmbH (Headquarter)

Sprendlinger Landstr. 115, 63069 Offenbach am Main, Germany
Tel.: +49 69 8900 4498 Fax: +49 69 8900 4495

FITOK, Inc.

13843 North Promenade Blvd., Suite 750, Stafford, Texas 77477, USA
Tel.: +1 281 888 0077 Fax: +1 281 582 4051

FITOK Incorporated

1-4F, Block C, Zone E, Yingtailong Industrial Park, Dalang Street,
Longhua District, Shenzhen, 518109, China
Tel.: +86 755 2803 2500 Fax: +86 755 2803 2619

FITOK Middle East Oil Equipment Trading LLC

208-209, Makateb Tower, Airport Road, P.O.Box 185412, Deira, Dubai, UAE
Tel.: +971 4 2959 853 Fax: +971 4 2959 854

info@fitokgroup.com
www.fitokgroup.com

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