

# Relief Valves

HSR Series, 20,000 psig (1379 bar)

HMR Series, 60,000 psig (4137 bar)

HAR Series, 20,000 psig (1379 bar)



Medium & High Pressure  
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## HSR Series

20,000 psig (1379 bar) C-70

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## HMR Series

60,000 psig (4137 bar) C-73

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## HAR Series

20,000 psig (1379 bar) C-76

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## Ordering Number Description

C-79

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# HSR Series

## 20,000 psig (1379 bar)

### Features

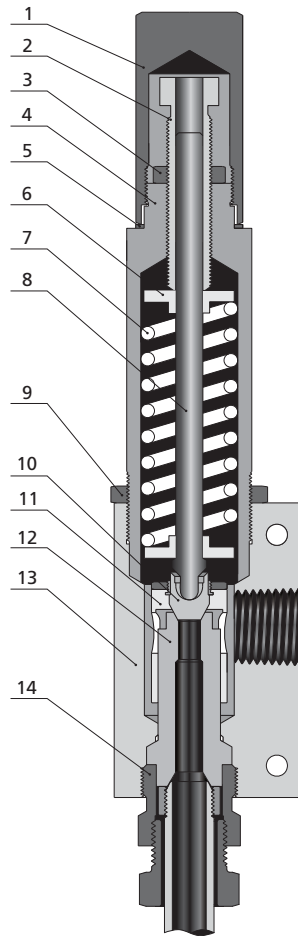
- ⦿ Set pressure: 1,500 to 20,000 psig (103 to 1379 bar)
- ⦿ Working temperature range: 32°F to 400°F (0°C to 204°C)
- ⦿ Liquid or gas service
- ⦿ Soft seat design to provide bubble tight shut-off of gas
- ⦿ Factory-set, test, locked, and tagged with the set pressure
- ⦿ Lock wire the cap and body together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

## Standard Materials of Construction

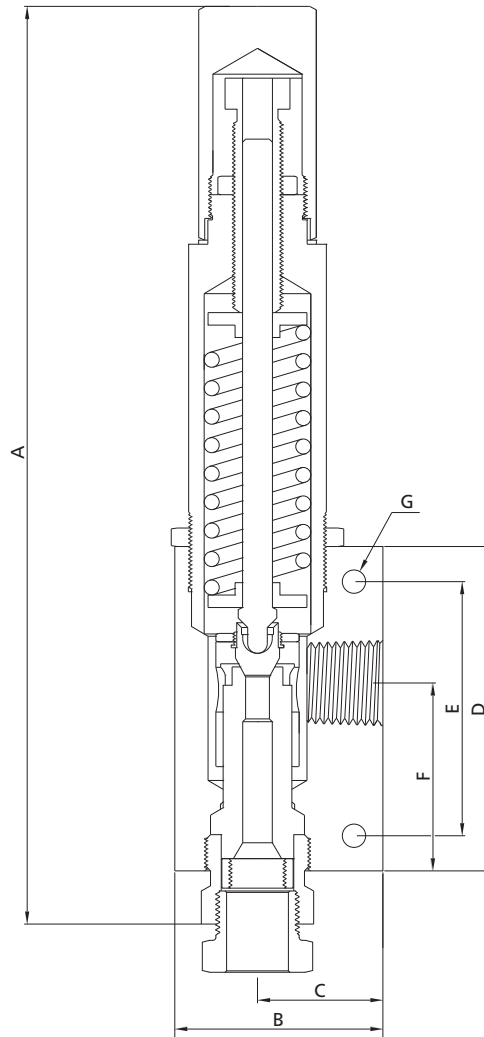


Item	Component	Material Grade/ASTM Specification
1	Cap	316 SS/A479
2	Adjusting Bolt	316 SS/A479
3	Lock Nut	316 SS/A479
4	Spring Cylinder	316 SS/A479
5	Gasket	316L SS/A479
6	Spring Washer	316 SS/A479
7	Spring	17-7PH/AMS5678
8	Spindle	316 SS/A479
9	Lock Nut	316 SS/A479
10	Plug	PEEK
11	Plug Guide	316 SS/A479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

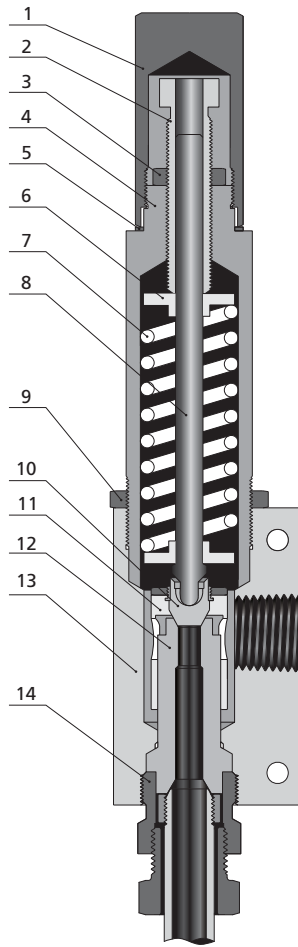
- ⦿ Set pressure: 3,000 to 60,000 psig (207 to 4137 bar)
- ⦿ Working temperature range: -110°F to 400°F (-79°C to 204°C)
- ⦿ Liquid or gas service
- ⦿ Metal-to-metal seating to provide shut-off of liquids and gases under pressure to commercial tightness standards
- ⦿ Factory-set, test, locked, and tagged with the set pressure
- ⦿ Lock wire the cap and body together to maintain relief setting
- ⦿ 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>	<i>316 SS/A479</i>
2	<i>Adjusting Bolt</i>	<i>316 SS/A479</i>
3	<i>Lock Nut</i>	<i>316 SS/A479</i>
4	<i>Spring Cylinder</i>	<i>316 SS/A479</i>
5	<i>Gasket</i>	<i>316L SS/A479</i>
6	<i>Spring Washer</i>	<i>316 SS/A479</i>
7	<i>Spring</i>	<i>17-7PH/AMS5678</i>
8	<i>Spindle</i>	<i>316 SS/A479</i>
9	<i>Lock Nut</i>	<i>316 SS/A479</i>
10	<i>Plug</i>	<i>S17400/A564</i>
11	<i>Plug Guide</i>	<i>316 SS/A479</i>
12	<i>Seat</i>	<i>17-4PH/A564</i>
13	<i>Valve Body</i>	<i>316 SS/A479</i>
14	<i>Seat Gland</i>	<i>316 SS/A479</i>
	Lubricant	Molybdenum Disulfide/Fluorinated-based

*Wetted components listed in italics.*

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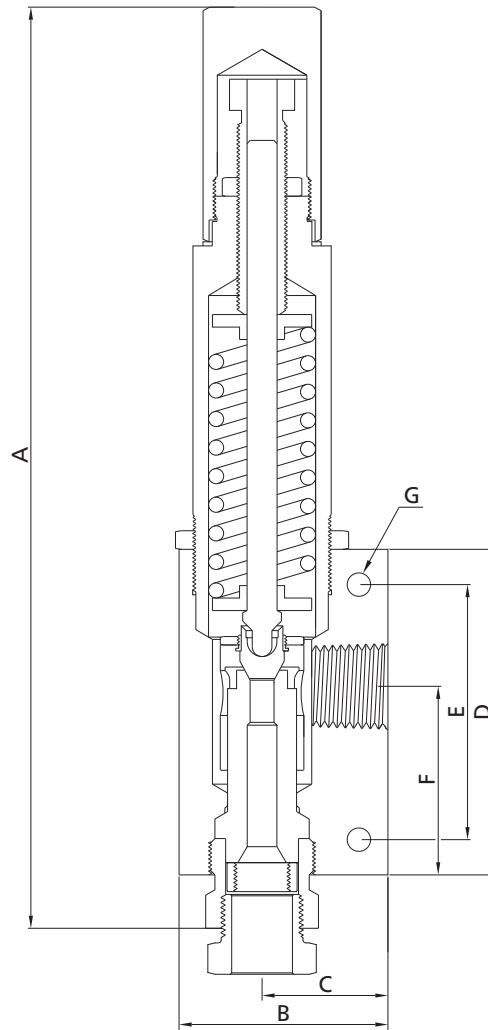
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## Dimensions



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.

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# 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

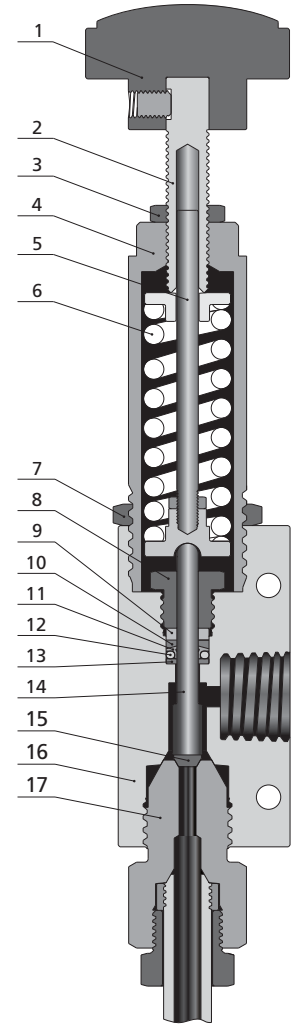
Ordering Number	Inlet		Outlet Connection	Orifice Size in. (mm)	Cv	Minimum Set Pressure psig (bar)	Maximum Set Pressure psig (bar)	Maximum Back Pressure psig (bar)
	Tube O.D. in.	Connection						
HARSS-2FH9-FNS12-1	9/16	2FH9	FNS12	0.197 (5.0)	0.5	3,000 (207)	10,000 (690)	500 (34.5)
HARSS-2FH9-FNS12-2	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.

## 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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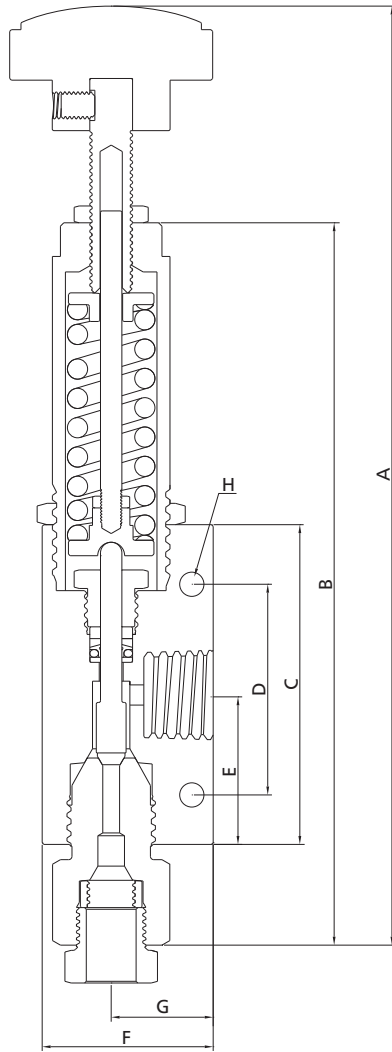
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## Dimensions



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.

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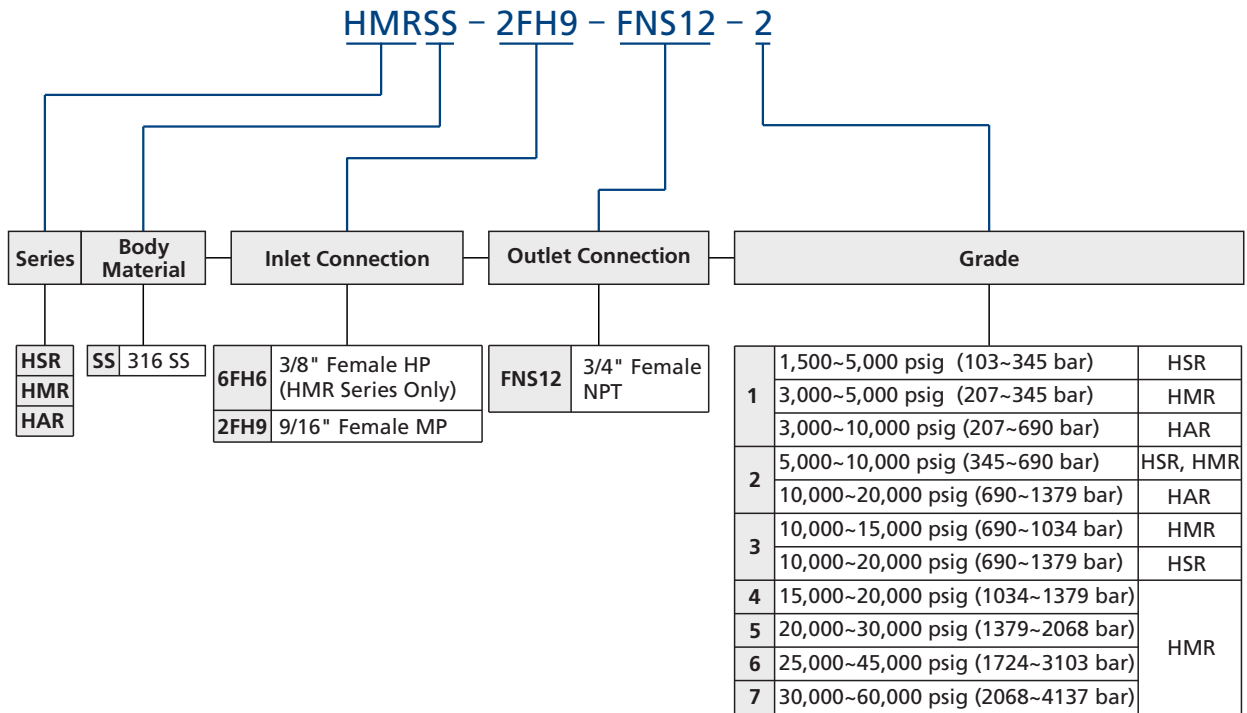
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## Ordering Number Description



- 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.

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