

High Pressure Relief Valves

HSR Series, 20,000 psi (1379 bar)

HMR Series, 60,000 psi (4137 bar)

HAR Series, 20,000 psi (1379 bar)



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Contents

HSR Series

20,000 psig (1379 bar) 01

HMR Series

60,000 psig (4137 bar) 04

HAR Series

20,000 psig (1379 bar) 07

Part Number Description

10

HSR Series

20,000 psig (1379 bar)

Features

- ⦿ Soft seat relief valves.
- ⦿ Set pressure: 1500 to 20,000 psig (103 to 1379 bar).
- ⦿ Working temperature: 32°F to 400°F (0°C to 204°C).
- ⦿ Liquid or gas service. Provide bubble tight shut-off of gas.
- ⦿ Pressure settings are made at the factory and valves are tagged accordingly.
State the required set pressure with the order please.
- ⦿ Lock wired secure cap to maintain set pressure.
- ⦿ Easily exchangeable seat.
- ⦿ Free assembly positions.

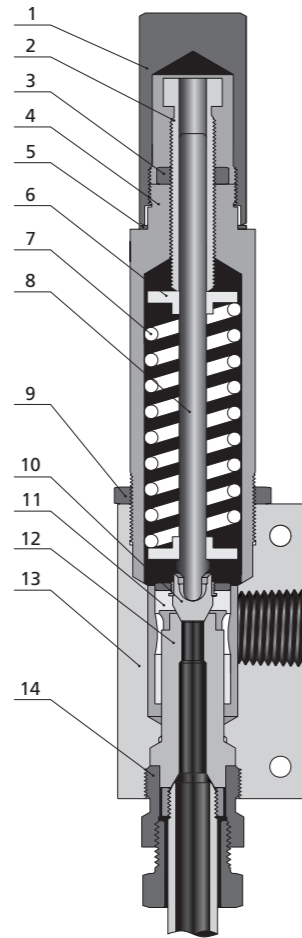
Technical Data

Ordering Number	Inlet		Outlet Connection Type	Orifice Size in. (mm)	Cv	Pressure Rating psig (bar)@100°F (38°C)		
	Tube OD in.	Connection Type				Minimum Set Pressure	Maximum Set Pressure	Maximum Back Pressure
HSRSS-2FH9-FNS12-1	9/16	2FH9	FNS12	0.312 (7.92)	1.2	1500 (103)	5000 (345)	500 (34.5)
HSRSS-2FH9-FNS12-2	9/16	2FH9	FNS12	0.25 (6.35)	0.8	5000 (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)

NOTE:

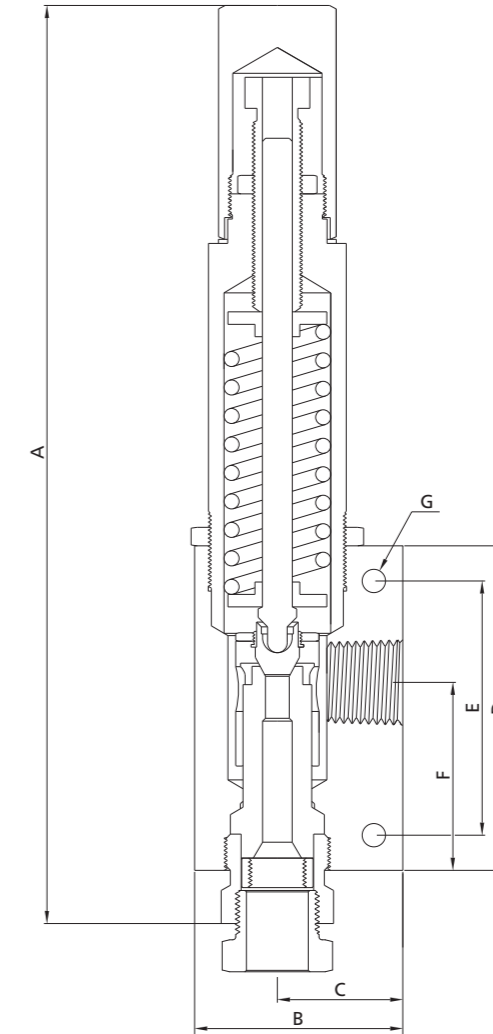
Maximum system operating pressure should not exceed 90% of relief valve set pressure.

Standard Materials of Construction



Item	Component	Valve Material
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/A276
6	Spring Washer	316 SS/A479
7	Spring	17-7PH/AMS5678
8	Spindle	316 SS/A479
9	Lock Nut	316 SS/A276
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

Dimensions



Relief Valves Dimensions						
A	B	C	D	E	F	G
in. (mm)						
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)

NOTE:

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 the authorized representative or FITOK Group.

HMR Series

60,000 psig (4137 bar)

Features

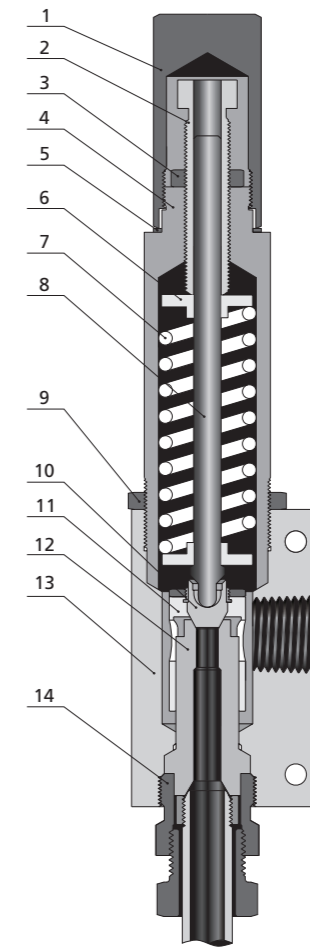
- ⦿ Metal seat relief valves.
- ⦿ Set pressure: 3000 to 60,000 psig (207 to 4137 bar).
- ⦿ Working temperature: -110°F to 500°F (-79°C to 260°C).
- ⦿ Liquid or gas service. Provide shut-off of liquids and gases under pressure to commercial tightness standards.
- ⦿ Pressure settings are made at the factory and valves are tagged accordingly. State the required set pressure with the order please.
- ⦿ Lock wired secure cap to maintain set pressure.
- ⦿ Easily exchangeable seat.
- ⦿ Free assembly positions.

Technical Data

Ordering Number	Inlet		Outlet Connection Type	Orifice Size in. (mm)	Cv	Pressure Rating psig (bar) @100°F (38°C)		
	Tube OD in.	Connection Type				Minimum Set Pressure	Maximum Set Pressure	Maximum Back Pressure
HMRSS-2FH9-FNS12-1	9/16	2FH9	FNS12	0.312 (7.92)	1.2	3000 (207)	5000 (345)	500 (34.5)
HMRSS-2FH9-FNS12-2	9/16	2FH9	FNS12	0.250 (6.35)	0.8	5000 (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)

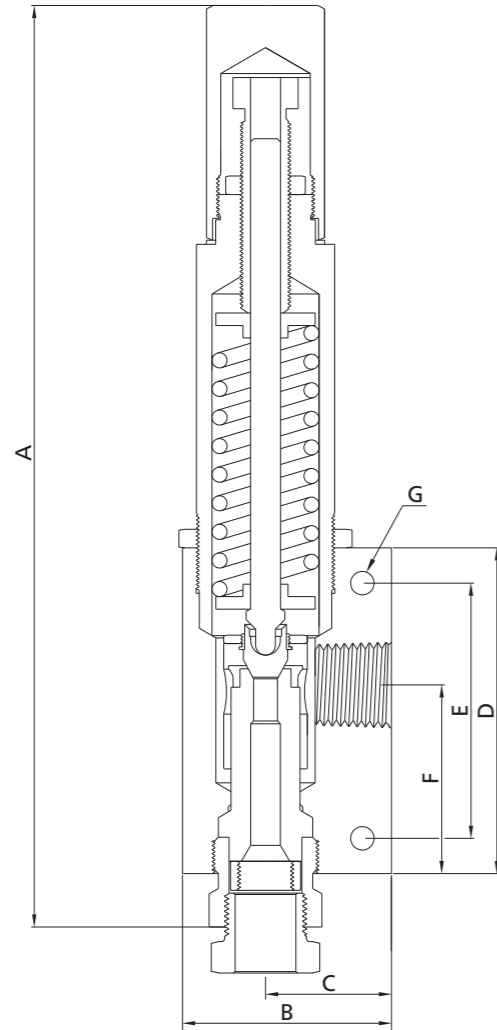
NOTE:
Maximum system operating pressure should not exceed 90% of relief valve set pressure.

Standard Materials of Construction



Item	Component	Valve Material
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/A276
6	Spring Washer	316 SS/A479
7	Spring	17-7PH/AMS5678
8	Spindle	316 SS/A479
9	Lock Nut	316 SS/A276
10	Plug	S17400/A564
11	Plug Guide	316 SS/A479
12	Seat	17-4PH/A564
13	Valve Body	316 SS/A479
14	Seat Gland	316 SS/A479
	Lubricant	Molybdenum Disulfide

Dimensions



Relief Valves Dimensions						
A	B	C	D	E	F	G
in. (mm)						
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)

NOTE:

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 the authorized representative or FITOK Group.

HAR Series

20,000 psig (1379 bar)

Features

- Field adjustable and soft seat relief valves.
- Set pressure: 3000 to 20,000 psig (207 to 1379 bar).
- Working temperature: 32°F to 400°F (0°C to 204°C).
- Liquid or gas service. Provide bubble tight shut-off of gas.
- Easily exchangeable seat.
- Free assembly positions.

Technical Data

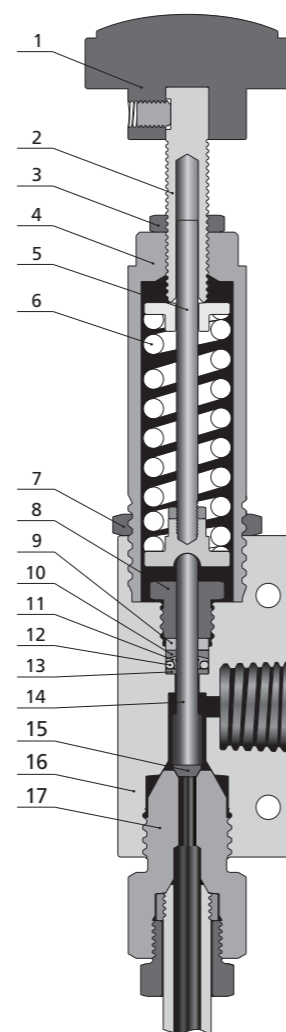
Ordering Number	Inlet		Outlet Connection Type	Orifice Size in. (mm)	Cv	Pressure Rating psig (bar) @100°F (38°C)		
	Tube OD in.	Connection Type				Minimum Set Pressure	Maximum Set Pressure	Maximum Back Pressure
HARSS-2FH9-FNS12-1	9/16	2FH9	FNS12	0.197 (5.0)	0.5	3000 (207)	10,000 (690)	500 (34.5)
HARSS-2FH9-FNS12-2	9/16	2FH9	FNS12	0.093 (2.36)	0.1	10,000 (690)	20,000 (1379)	500 (34.5)

NOTE:

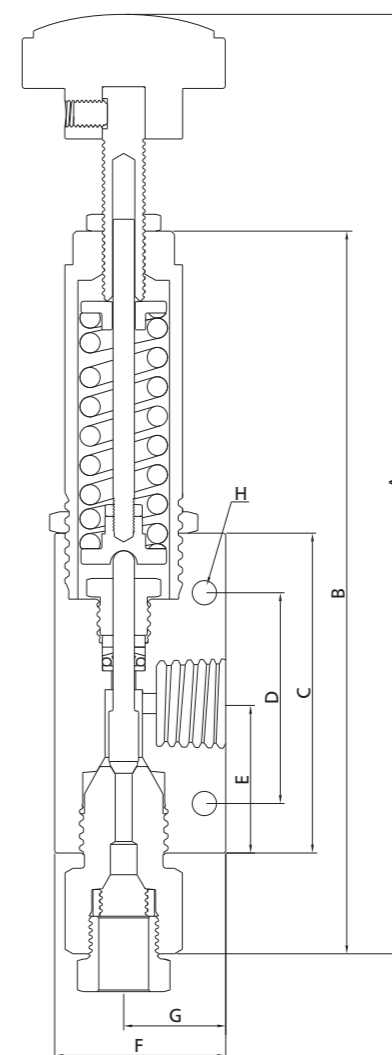
Maximum system operating pressure should not exceed 90% of relief valve set pressure.

Standard Materials of Construction

Item	Component	Valve Material
1	Handle	6061/B211
2	Set Screw	316SS/A479
3	Lock Nut	316SS/A276
4	Bonnet	316SS/A479
5	Upper Stem	316SS/A479
6	Spring	17-7PH/AMS5678
7	Lock Nut	316SS/A276
8	Packing Gland	C63000/B150
9	Washer	C63000/B150
10	Backing Ring	PEEK
11	Backing Ring	PTFE
12	O-ring	Fluorocarbon FKM
13	Ring	PEEK
14	Lower Stem	316SS/A479
15	Plug	PEEK
16	Body	316SS/A479
17	Seat	316SS/A479
	Lubricant	Molybdenum Disulfide



Dimensions

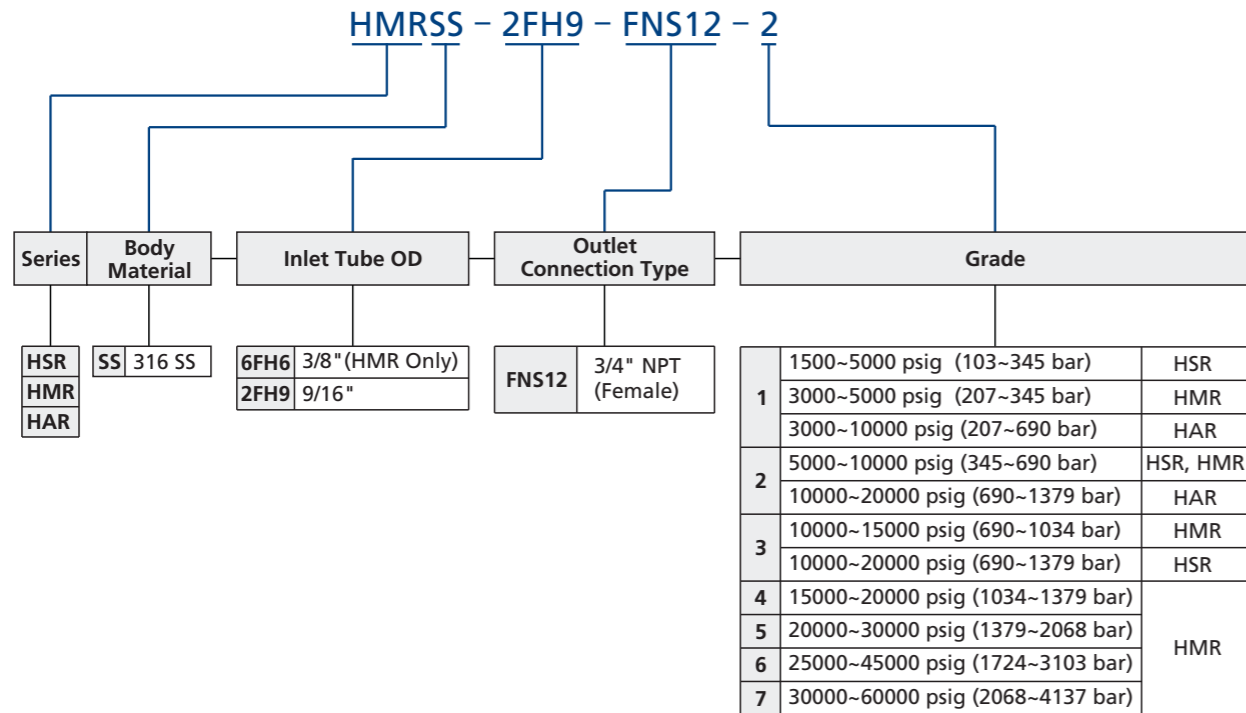


Ordering Number	A	B	C	D	E	F	G	H
in. (mm)								
HARSS-FH9-FNS12-1	10.98 (278.8)	8.45 (214.6)	3.74 (95.0)	2.46 (62.6)	1.75 (44.4)	2.00 (50.8)	1.19 (30.3)	0.28 (7.1)
HARSS-FH9-FNS12-2	10.98 (278.8)	8.45 (214.6)	3.74 (95.0)	2.46 (62.6)	1.75 (44.4)	2.00 (50.8)	1.19 (30.3)	0.28 (7.1)

NOTE:

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 authorized representative or FITOK Group.

Part Number Description



- Note: 1. Pressure settings are made at the factory and valves are tagged accordingly. State the required set pressure with the order please.
2. "Part Number Description" is used for composition rules of FITOK product model, not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK group or authorized agent.