



The HFN Series Valve is a severe service integral-bonnet needle valve that features a one-piece forged body and grafoil packing, all designed to handle the extreme conditions of high pressure and high temperature services such as those in super-heated steam power plant services.

With a multitude of configurations available, you will find a model to meet your varying needs. The HFN Series is produced in 6mm and 10mm orifice sizes (standard), and can be provided with various end connections. To withstand the extreme temperatures this valve is designed for, the HFN Series can be specified in 316H, 316, 316L, F91 or F92 materials.



Features and Benefits

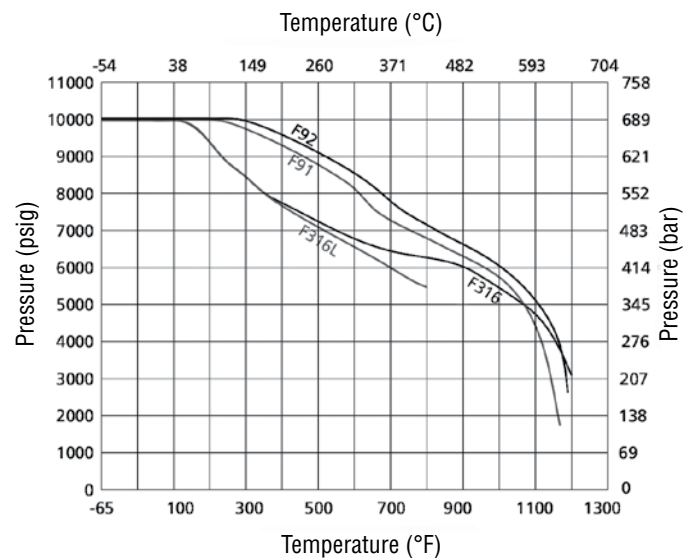
- **Construction:** One-piece forged body design. The integral bonnet eliminates a potential leak path with a clean design. Packing able to be adjusted in the open position.
- **Packing Materials:** Grafoil packing standard to handle temperatures up to 1200°F (648,9°C).
- **Ratings:**
10,000 psig @ 100°F (689,5 bar @ 37,8°C)
- **Backseated Bonnets with Packing Below the Stem Threads:** To eliminate potential media contamination by the thread lubricant, the packing is located below the stem threads. Backseating minimizes potential leaking through the packing with a metal-to-metal backseat that also prevents stem blow-out during operation.
- **Panel Mount Optional**
- **Two Stem Design:** Non-Rotating Tip Stem provides for repeatable, leak-tight shutoff. Because the tip stops rotating when it contacts the seat, further torque turns the stem, but not the tip, protecting the stem tip from damage.

Repeated closures improve the mating between the seat and the stem tip, unlike wear that will occur over time with a rotating tip.
- **Leak-Tight Performance Testing** for every valve with nitrogen at the maximum working pressure, but not higher than 6000 psig.

Flow Schematic

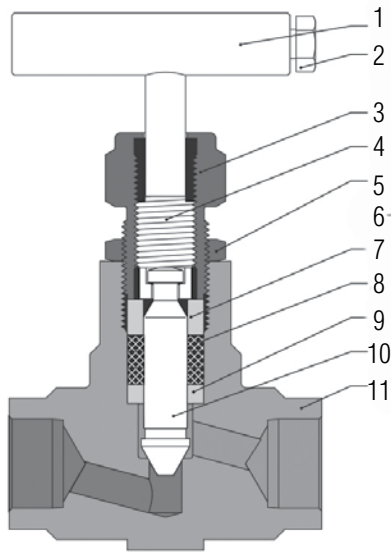


Pressure vs. Temperature

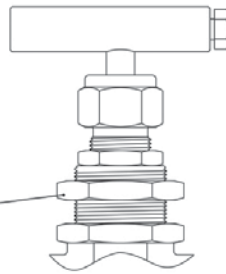




Standard Parts



Panel Mounting



Part Descriptions

Part Number	Part Description
1	Handle
2	Set Screw
3	Packing Bolt
4	Upper Stem
5	Lock Nut
6	Panel Nut
7	Gland
8	Packing
9	Packing Washer
10	Lower Stem
11	Body
	Seat



How to Order

Model	Orifice	Body Material	Inlet Size	Inlet Type	Outlet	Outlet Type	Stem Material	Seat Material	Packing	Option
HFN	T	U	H	E	H	W	4	1	3	

	Model Number
HFN	Forged Needle Valve

T	Orifice
1	6mm Hard Seat
T	10mm Hard Seat

U	Body Material
U	Stainless Steel (SA-479; 316)
8	316H SS
F	F91
	Other Material Available Upon Request

H	Inlet Size
E	10mm
F	12mm
G	14mm
H	16mm
I	18mm
M	20mm
J	22mm
K	25mm
L	28mm
1	M20 x 1.5
2	M22 x 1.5
4	14 x 2 (BW only)
6	16 x 3 (BW only)
8	18 x 4 (BW only)
5	25 x 7 (BW only)
	Other Size Available Upon Request

E	Inlet Type
3	FNPT
E	TSW Tube Socket Weld
A	BW Butt Weld
	Other Type Available Upon Request

H	Outlet Size
E	10mm
F	12mm
G	14mm
H	16mm
I	18mm
M	20mm
J	22mm
K	25mm
L	28mm
1	M20 x 1.5
2	M22 x 1.5
4	14 x 2 (BW only)
6	16 x 3 (BW only)
8	18 x 4 (BW only)
5	25 x 7 (BW only)
	Other Size Available Upon Request

E	Outlet Type
3	FNPT
E	TSW Tube Socket Weld
A	BW Butt Weld
	Other Type Available Upon Request

4	Stem Material
4	316 SS / NRT
5	316SS / Stellite

1	Seat Material
1	Integral (hard)
3	Stellite Insert

3	Packing
3	Graphite / Grafoil / Graphite

	Option
P	Panel Mount