

METERING VALVES

H-1300 SERIES



H, HF & HXF-1300 SERIES FEATURES

- Forged-body 316 St.St.or Brass Construction
- Straight and Angle Patterns and Panel Mounting
- MAWP 2000 psig - (137 Barg) For HXF
- MAWP 1000 psig - (68 Barg) For H, HF
- MAWT 400°F (204°C)
- Flow coefficients (Cv) from 0.004 to 0.15
- Round & Slotted Handles with Screwdriver Slots
- HAM-LET LET-LOK® Ends, Male & Female NPT, HTC® Face Seal Bead End Connections
- 1°, 3° and 5° Stem Taper for required flow control
- Stem with Stopper Shoulder for maximum life

GENERAL

The H-1300 Series is a moderate-pressure instrumentation flow-regulating needle valve. It is generally used for instrumentation panels, sampling systems and others. The valves are compact in size and structure and offer reliable low and moderate flow regulation with long service life.

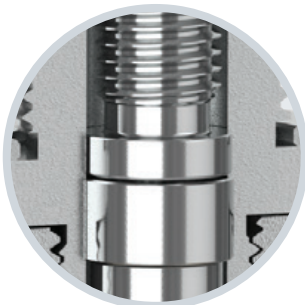
HXF-1300 MATERIALS OF CONSTRUCTION

Item No.	Components	Qty	Valve Body Material	
			316 St.St.	Brass
1	Handle Set Screw ⁽¹⁾	1	18-8 Stainless Steel	
2	Flow Fixing Screw	1	18-8 Stainless Steel	
3	Handle	1	St.St. ASTM A-276	Brass ASTM B-16
4	Panel Nut	1	St.St. ASTM A-276	Brass ASTM B-16
5	Safety Bonnet Sleeve	1	St.St. ASTM A-276	Brass ASTM B-16
6	Bonnet	1	St.St. ASTM A-276	Brass ASTM B-16
7	*Stem	1	St.St. 174PH/A564	
8	Stem Ring	1	Glass-filled TFE	
9	*O-ring	1	Fluorocarbon FKM	
10	Guide Ring	1	Glass-filled TFE	
11	*Orifice	1	St.St. ASTM A-276	Brass ASTM B-16
12	*Body	1	St.St. ASTM A-182	Brass ASTM B-283
	Lubricants		Silicone based	

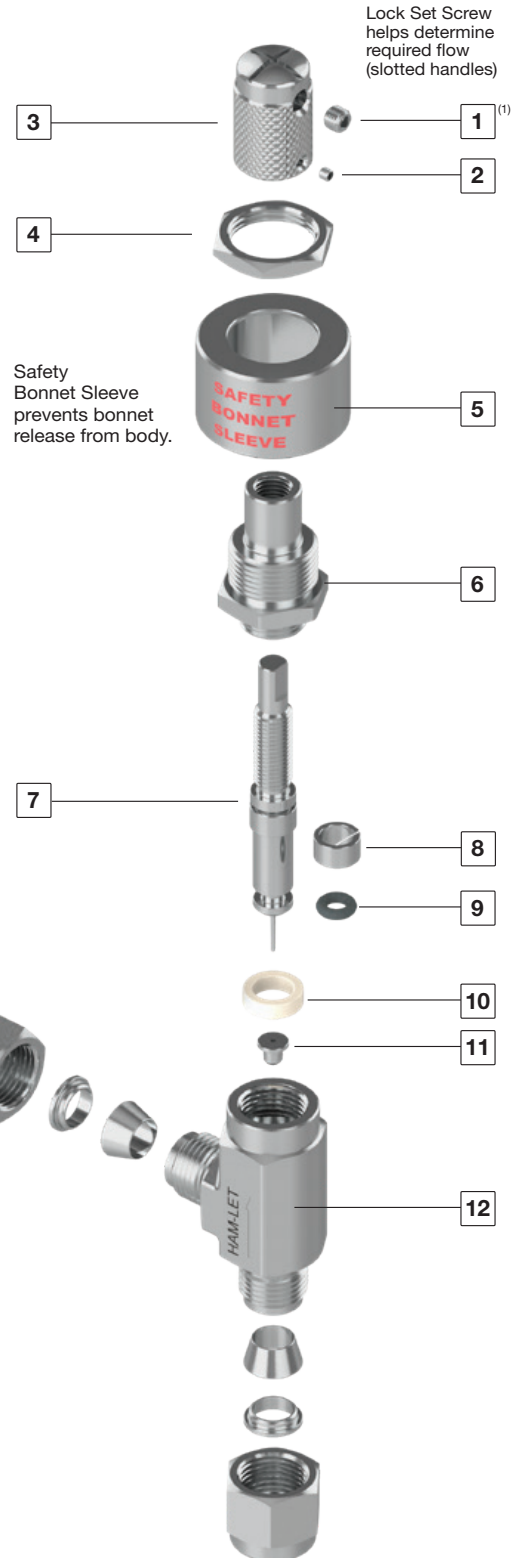
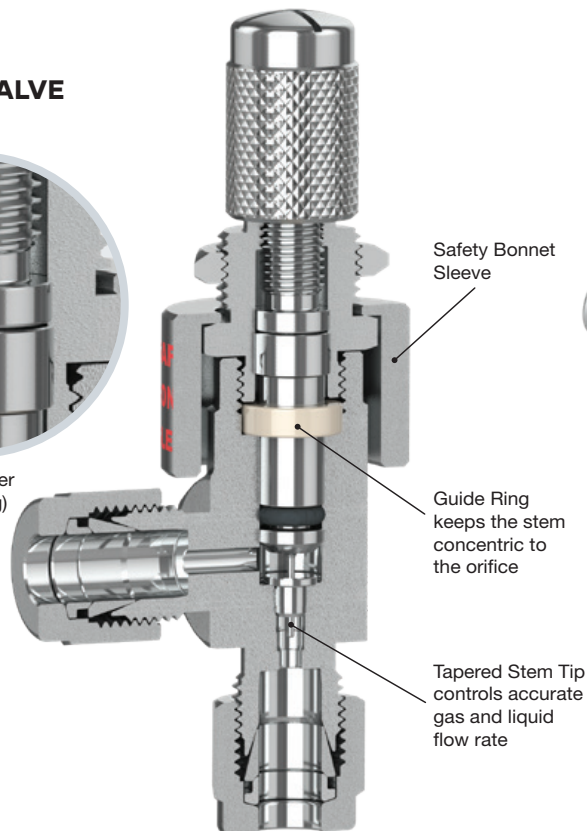
* Wetted parts

⁽¹⁾Warning: Handle Set Screw is factory calibrated and should not be adjusted in order to defend the HF and HXF stem from being harmed

HXF SERIES STRAIGHT VALVE



Stem Upper Shoulder (for safe full opening) prevents locking between stem and bonnet



CLEANING & PACKAGING

Every H-1300 series needle valve is cleaned in accordance with Standard Cleaning and Packaging (procedure 8184). Oxygen Clean & Lubricant-Free Cleaning and packaging, in accordance with Special Cleaning and Packaging (procedure 8185), is available as an option. Lubricant-Free cleaned valves have significantly higher actuation torque and MAWP* 1000 psi.

* Maximum Allowed Working Pressure.

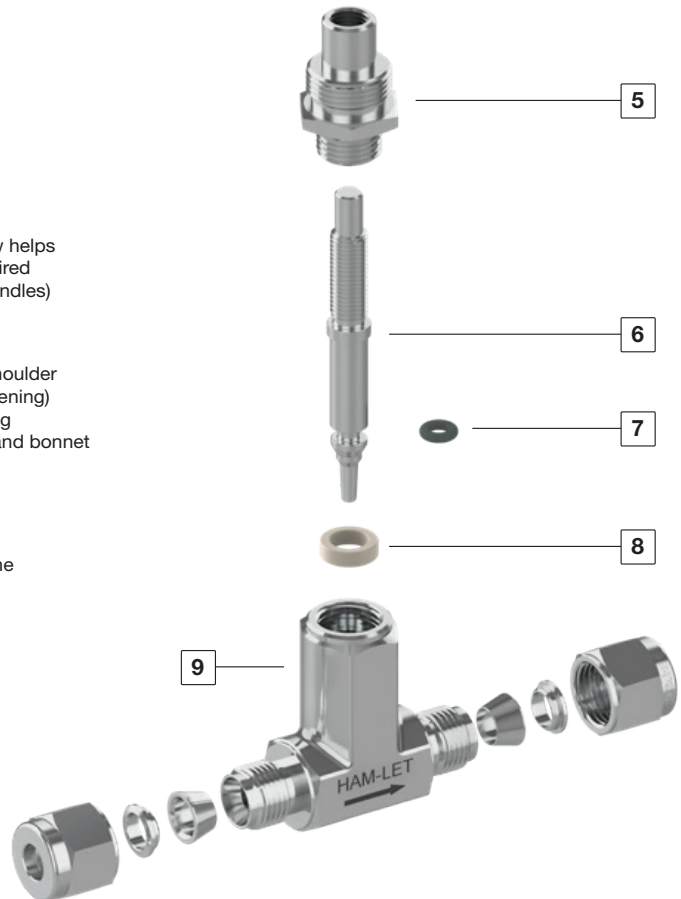
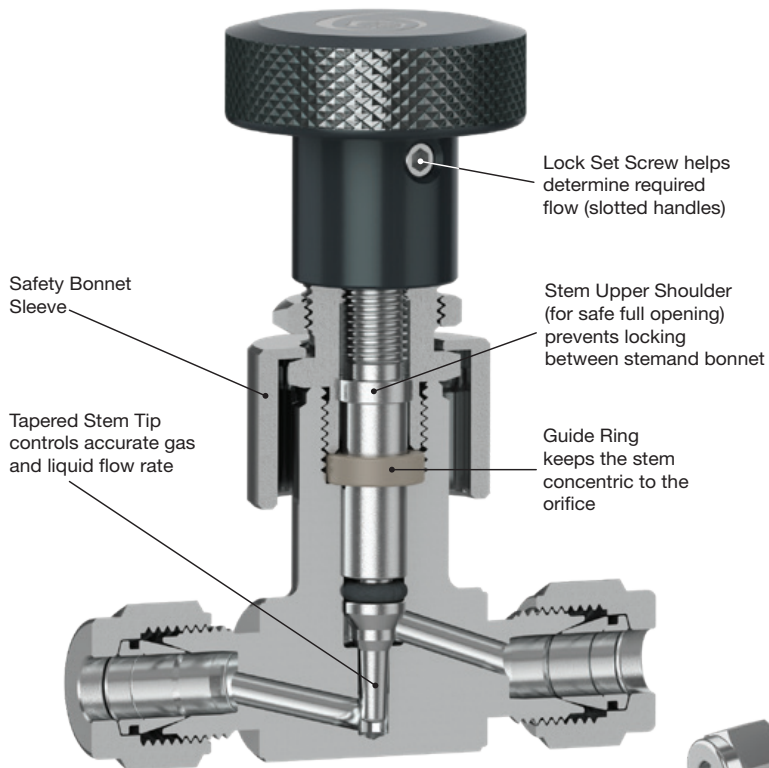
H&HF-1300 MATERIALS OF CONSTRUCTION

Item No.	Components	Qty	Valve Body Material	
			316 St.St.	Brass
1	Handle	1	St.St. ASTM A-276	
2	Handle Set Screw ⁽¹⁾	1	St.St. ASTM A-276	Brass ASTM B-16
3	Panel Nut	1	St.St. ASTM A-276	Brass ASTM B-16
4	Safety Bonnet Sleeve	1	St.St. ASTM A-276	Brass ASTM B-16
5	Bonnet	1	St.St. ASTM A-276	Brass ASTM B-16
6	*Stem	1	St.St. 174PH/A564	
7	*O-ring	1	Fluorocarbon FKM	
8	Guide Ring	1	Glass-filled TFE	
9	*Body	1	St.St. ASTM A-182	Brass ASTM B-283
	Lubricants		Silicone based	

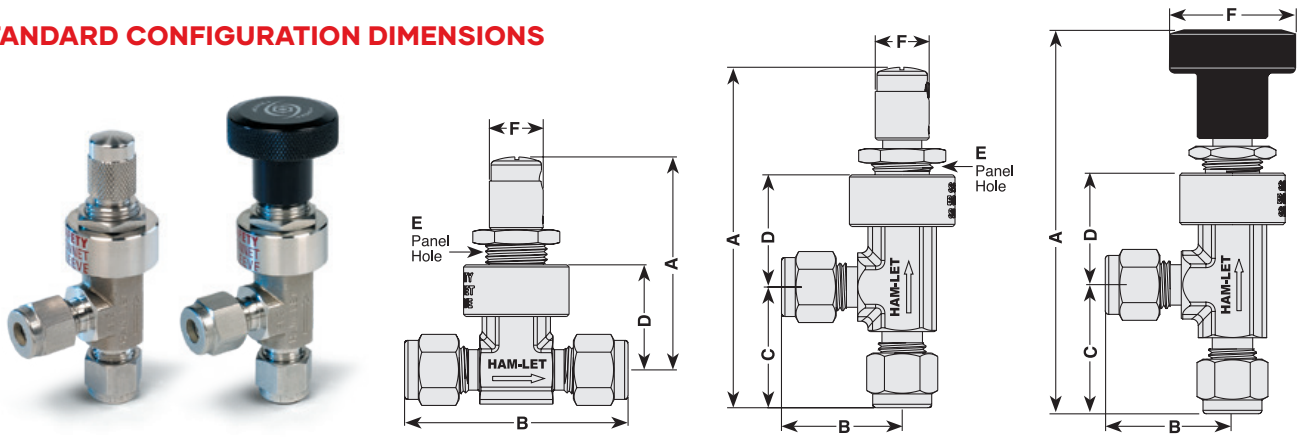
* Wetted parts

Warning: Handle Set Screw is factory calibrated and should not be adjusted in order to defend the HF and HXF stem from being harmed

HF SERIES ANGLE VALVE



STANDARD CONFIGURATION DIMENSIONS



Basic Ordering Number	Stem Taper Angle	Orifice mm/in	Cv	Inlet	Outlet	A-Open		B		C		D		E		F	
						mm	in	mm	in	mm	in	mm	in	mm	in		
H-1300 Angle	5°	3.3mm 0.13"	0.13 Max	1/4" LET-LOK®	1/4" LET-LOK®	95.7	3.77	29.6	1.17	30.0	1.18	26.0	1.02	14.8	0.58	29 mm 1.14"	
				6MM LET-LOK®	6MM LET-LOK®	95.7	3.77	29.6	1.17	30.0	1.18	26.0	1.02	14.8	0.58		
H-1300 Straight	5°	3.3mm 0.13"	0.13 Max	1/4" LET-LOK®	1/4" LET-LOK®	71.5	2.81	59.5	2.34	-	-	32.0	1.26	14.8	0.58		
				3/8" LET-LOK®	3/8" LET-LOK®	71.5	2.81	62.4	2.46	-	-	32.0	1.26	14.8	0.58		
				6MM LET-LOK®	6MM LET-LOK®	71.5	2.81	59.5	2.34	-	-	32.0	1.26	14.8	0.58		
				1/4" Male NPT	1/4" Male NPT	71.5	2.81	50.8	2.00	-	-	32.0	1.26	14.8	0.58		
HF-1300 Angle	3°	1.4mm 0.055"	0.03 Max	1/8" LET-LOK®	1/8" LET-LOK®	83.5	3.29	25.8	1.02	25.8	1.02	27.0	1.06	14.8	0.58		12.5 mm 0.5"
				1/4" LET-LOK®	1/4" LET-LOK®	85.0	3.35	28.0	1.10	28.0	1.10	27.0	1.06	14.8	0.58		
				3MM LET-LOK®	3MM LET-LOK®	83.5	3.29	25.8	1.02	25.8	1.02	27.0	1.06	14.8	0.58		
				6MM LET-LOK®	6MM LET-LOK®	85.0	3.35	28.0	1.10	28.0	1.10	27.0	1.06	14.8	0.58		
				1/8" Male NPT	1/8" Male NPT	77.0	3.03	19.0	0.75	19.0	0.75	27.0	1.06	14.8	0.58		
				1/4" Male NPT	1/4" Male NPT	83.0	3.27	25.0	0.98	26.0	1.02	27.0	1.06	14.8	0.58		
				1/8" Male NPT	1/8" LET-LOK®	77.0	3.03	25.8	1.02	19.0	0.75	27.0	1.06	14.8	0.58		
				1/4" Male NPT	1/4" LET-LOK®	81.5	3.2	28.3	1.11	23.5	0.92	27.0	1.06	14.8	0.58		
				1/8" Female NPT	1/8" Female NPT	82.5	3.25	24.9	0.98	24.9	0.98	27.0	1.06	14.8	0.58		
				1/8" LET-LOK®	1/8" LET-LOK®	70.6	2.78	51.3	2.02	-	-	27.0	1.06	14.8	0.58		
HF-1300 Straight	3°	1.4mm 0.055"	0.03 Max	3MM LET-LOK®	3MM LET-LOK®	70.6	2.78	51.3	2.02	-	-	27.0	1.06	14.8	0.58	12.5 mm 0.5"	
				6MM LET-LOK®	6MM LET-LOK®	70.6	2.78	55.9	2.20	-	-	27.0	1.06	14.8	0.58		
				1/4" LET-LOK®	1/4" LET-LOK®	70.6	2.78	55.9	2.20	-	-	27.0	1.06	14.8	0.58		
				1/8" Male NPT	1/8" Male NPT	70.6	2.78	38.1	1.50	-	-	27.0	1.06	14.8	0.58		
				1/4" Male NPT	1/4" Male NPT	70.6	2.78	49.8	1.96	-	-	27.0	1.06	14.8	0.58		
				1/8" Female NPT	1/8" Female NPT	70.6	2.78	49.3	1.94	-	-	27.0	1.06	14.8	0.58		
				1/4" Male Face Seal	1/4" Male Face Seal	70.6	2.78	52.3	2.06	-	-	27.0	1.06	14.8	0.58		
				1/8" LET-LOK®	1/8" LET-LOK®	84.4	3.23	24.8	0.98	24.8	0.98	23.4	0.92	14.8	0.58		
HXF-1300 Angle	1°	0.8 mm 0.03"	0.004 Max	1/4" LET-LOK®	1/4" LET-LOK®	85.0	3.35	26.0	1.02	26.0	1.02	23.4	0.92	14.8	0.58	12.5 mm 0.5"	
				3MM LET-LOK®	3MM LET-LOK®	84.4	3.32	24.8	0.98	24.8	0.98	23.4	0.92	14.8	0.58		
				1/8" Male NPT	1/8" LET-LOK®	77.5	3.05	24.8	0.98	24.8	0.98	23.4	0.92	14.8	0.58		
				1/4" Male NPT	1/4" LET-LOK®	82	3.22	27.3	1.07	24.8	0.98	23.4	0.92	14.8	0.58		
				1/8" Male NPT	1/8" Male NPT	84.4	3.32	24.9	0.98	24.9	0.98	23.4	0.92	14.8	0.58		
				1/4" Male NPT	1/4" Male NPT	84.4	3.32	24.9	0.98	24.9	0.98	23.4	0.92	14.8	0.58		
HXF-1300 Straight	1°	0.8 mm 0.03"	0.004 Max	1/8" LET-LOK®	1/8" LET-LOK®	59.6	2.34	48.0	1.89	-	-	24.4	0.96	14.8	0.58	12.5 mm 0.5"	
				1/4" LET-LOK®	1/4" LET-LOK®	59.6	2.34	51.9	2.04	-	-	24.4	0.96	14.8	0.58		
				3MM LET-LOK®	3MM LET-LOK®	59.6	2.34	48.0	1.89	-	-	24.4	0.96	14.8	0.58		
				6MM LET-LOK®	6MM LET-LOK®	59.6	2.34	51.9	2.04	-	-	24.4	0.96	14.8	0.58		
				1/4" Male NPT	1/4" Male NPT	59.6	2.34	48.0	1.89	-	-	24.4	0.96	14.8	0.58		
				1/4" Male Face Seal	1/4" Male Face Seal	59.6	2.34	52.0	2.05	-	-	24.4	0.96	14.8	0.58		

Dimensions are for reference only and are subject to change.

MAX PANEL THICKNESS

"HXF" Series - 4.3 mm (0.17")

"H" and "HF" - 3.3 mm (0.13")

TESTING

The H, HF and HXF Series metering valve designs have been tested for proof and burst.

Every H, HF & HXF-1300 metering valve is factory tested with Nitrogen at 1000 psig (69 bar) for leakage through the seat.

No detectable leakage is allowed during shell test.

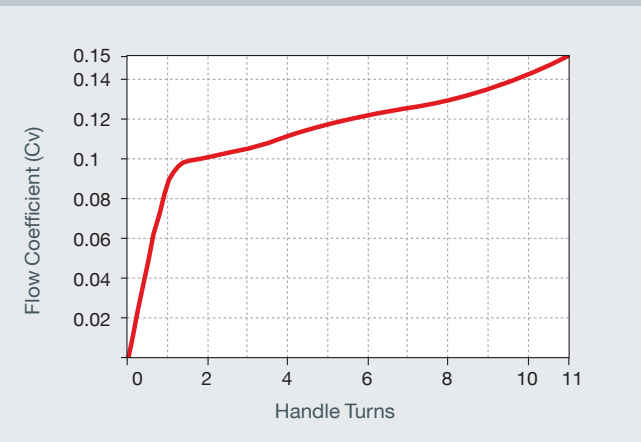
FLOW SETTING

H-1300 series metering valve is tested for bubble tight shut-off at **HF-1300** series metering valve handle dead stop is set at 4 to 10 std cm³/min with 5 psig (0.34 bar) inlet pressure.

HXF-1300 series metering valve handle dead stop is set at 4 to 10 std cm³/min with 15 psig (1.0 bar) inlet pressure.

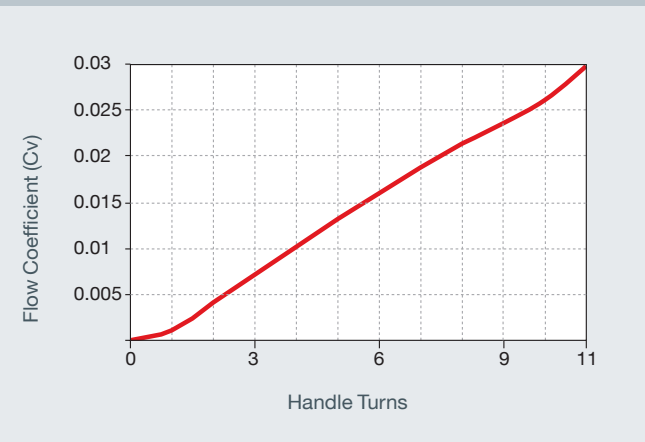
FLOW DATA AT 70°F (20°C)

H-1300 METERING VALVE 5° STEM



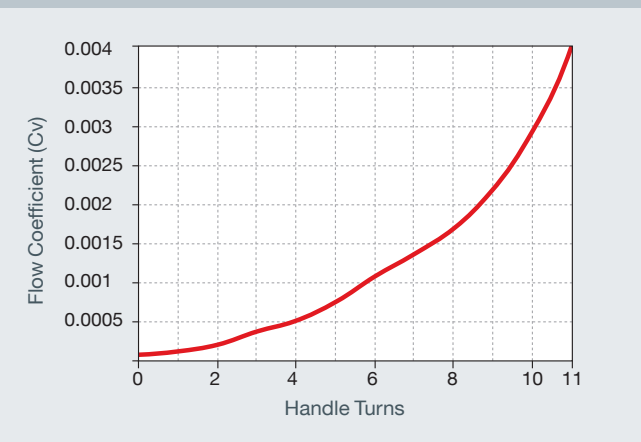
	Pressure Drop to Atmosphere psi (bar)	Water Flow U.S gal/min (L/min)	Air Flow std ft ³ / min (std L / min)
Maximum Flow Coefficient (Cv) 0.15	10 (0.68)	0.47 (1.7)	1.6 (45.3)
	50 (3.4)	1.0 (3.7)	4.5 (127)
	100 (6.8)	1.5 (5.6)	7.9 (223)

HF-1300 METERING VALVE 3° STEM

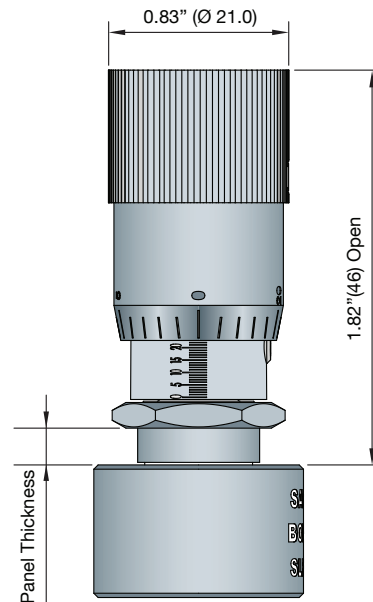


	Pressure Drop to Atmosphere psi (bar)	Water Flow U.S gal/min (L/min)	Air Flow std ft ³ / min (std L / min)
Maximum Flow Coefficient (Cv) 0.03	10 (0.68)	0.09 (0.34)	0.33 (9.3)
	50 (3.4)	0.21 (0.79)	0.9 (25.4)
	100 (6.8)	0.3 (1.1)	1.5 (42.4)

HXF-1300 METERING VALVE 1° STEM



	Pressure Drop to Atmosphere psi (bar)	Water Flow U.S gal/min (L/min)	Air Flow std ft ³ / min (std L / min)
Maximum Flow Coefficient (Cv) 0.15	10 (0.68)	0.01 (0.03)	0.04 (1.1)
	50 (3.4)	0.02 (0.07)	0.1 (2.8)
	100 (6.8)	0.04 (0.15)	0.2 (5.5)



TECHNICAL DATA

Series	Pressure - Temperature Ratings			Orifice		Shutoff Service	Angle
	O-ring Material	Temperature Rating °F (°C)	Pressure psig (bar)	inch	mm		
H	Buna N	-10 to 300 (-23 to 149)	1000 (68.9)	0.13	3.3	*Yes	5°
HF	Ethylene Propylene	-10 to 300 (-23 to 149)	1000 (68.9)	0.055	1.4	No	3°
	Fluorocarbon FKM	-15 to 400 (-26 to 204)					
HXF	Perfluor	-0 to 300 (-18 to 149)	2000 (138)	0.03	0.8	No	1°
		Polychloroprene (CR)					

Fluorocarbon FKM is a standard O-ring for H, HF, HXF-1300

*Shut-off Service: In Stainless Steel constructions only.
H-1300 Series valves are not recommended for shut-off in vacuum or gas service or for repetitive shut-off in liquid service.

HANDLE OPTIONS

Vernier Handle



Optional for H, HF & HXF

Round Aluminum Handle*



Standard for H

* Black is Standard.
Colored Handles are available upon request, see "Ordering Information"

Metal Slotted Handle



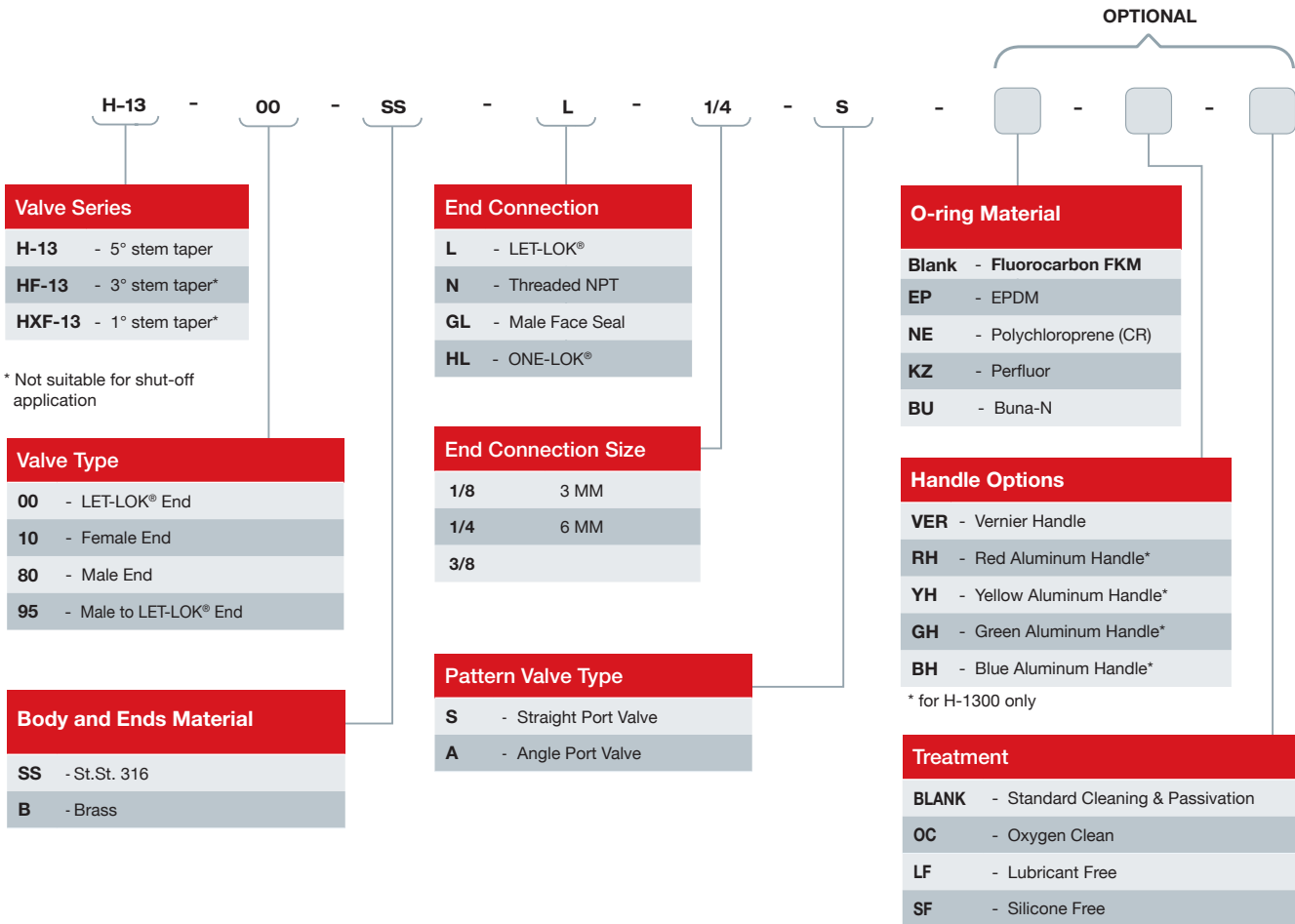
Standard for HF. Optimal for H.

Metal Slotted Handle



Standard for HXF.

H-1300 ORDERING INFORMATION



SEAL KIT

Seal Kit contains O-ring

Z - 1300 - SK - 1/4 - VI

Body Designator per end connection	O-Ring material
1/4 for all end connections	VI Fluorocarbon FKM
	EP EPDM
	NE Polychloroprene (CR)
	KZ Perfluor
	BU Buna-N

Warning!

The system designer and user have the sole responsibility for selecting products suitable for their special application requirements, ensuring their safe and trouble-free installation, operation, and maintenance. Application details, material compatibility and product ratings should all be considered for each selected product. Improper selection, installation or use of products can cause property damage or personal injury.

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HANDLE KIT

Handle Kit contains handle + set screw.

Z - 1300 - HK - 1/4 - VER

Handle Options	Handle Options
1/4 For all end connections	VER - Vernier Handle
	RH - Red Aluminum Handle*
	YH - Yellow Aluminum Handle*
	GH - Green Aluminum Handle*
	BH - Blue Aluminum Handle*
	MF - Metal slotted Handle**
	MXF - Metal slotted Handle***

* For H-1300 only

**For HF-1300 only

***For HXF-1300 only

