

# 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 - (138 bar) For HXF
- MAWP 1000 psig - (69 bar) 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

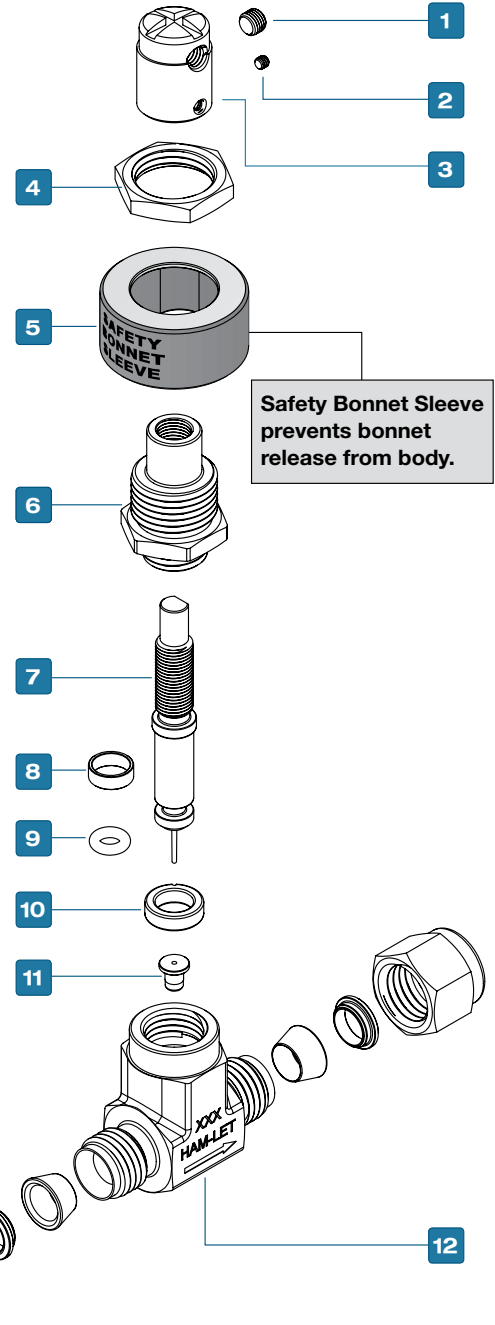
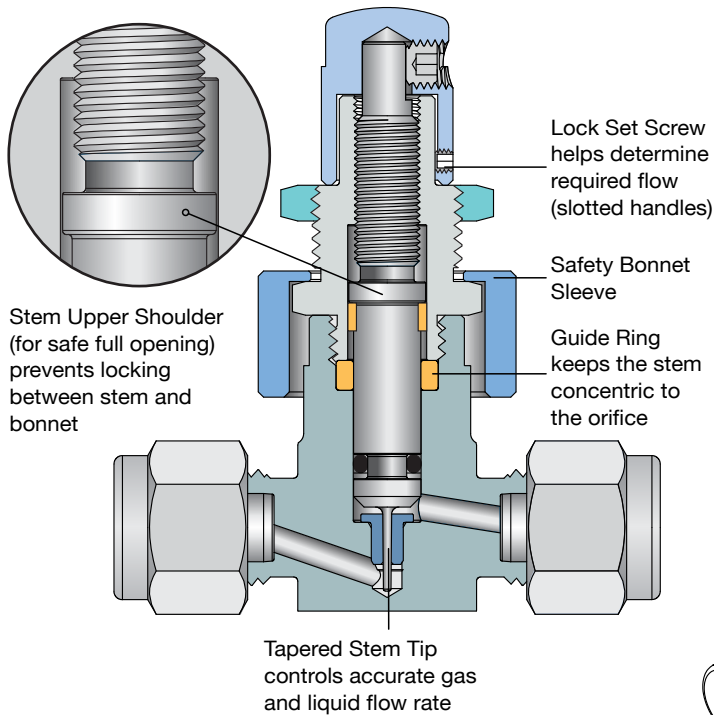
The H-1300 Series is a moderate-pressure instrumentation flow-regulating needle valve. It is generally used for instrumentation panels, sampling systems and accurate applications.

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	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	Viton® (fluorocarbon)	
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

### HXF SERIES STRAIGHT VALVE

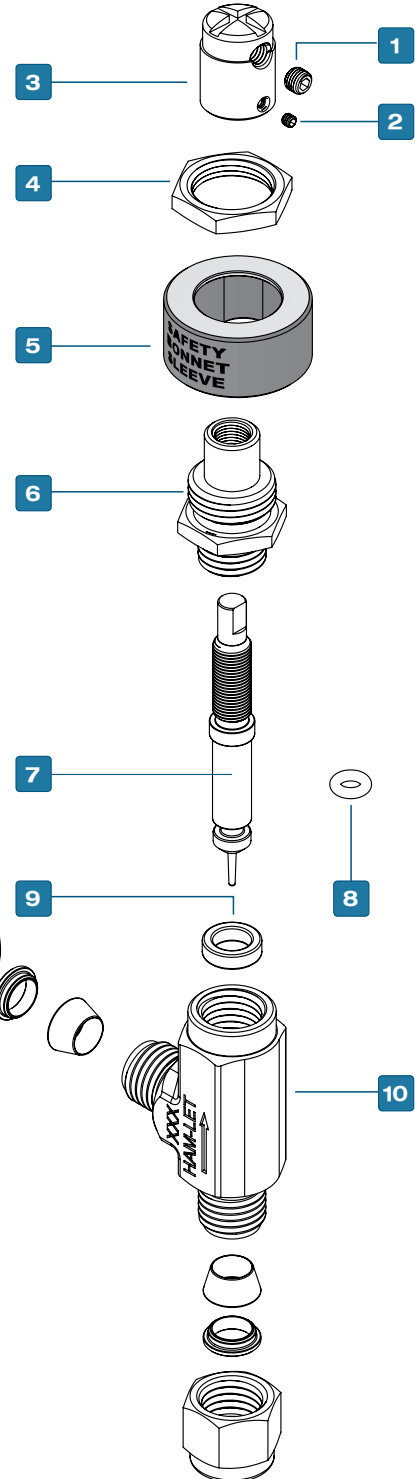


## CLEANING & PACKAGING

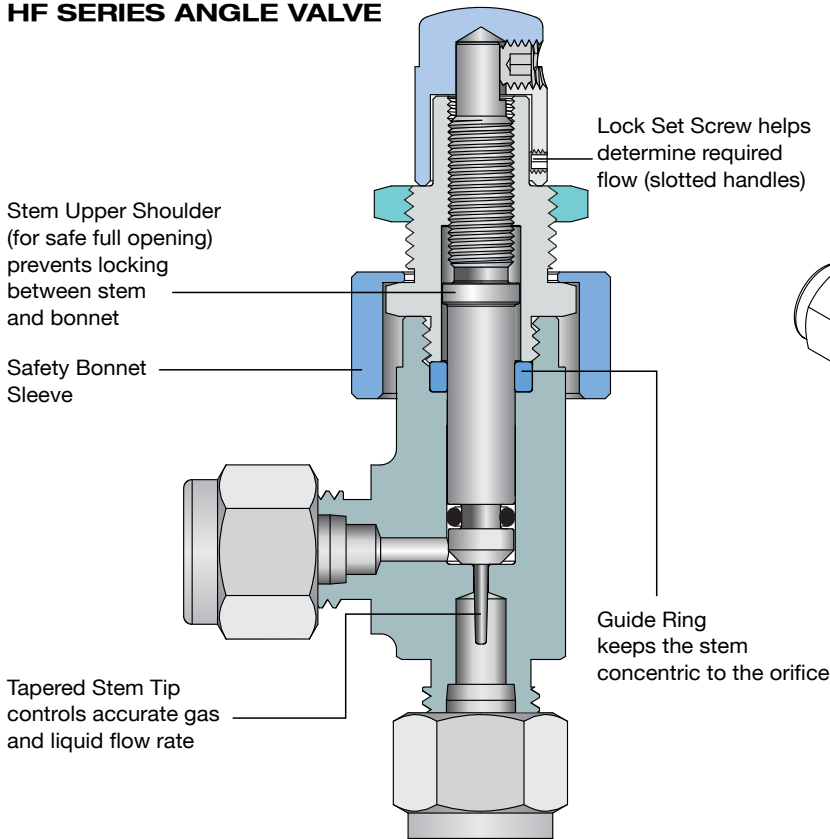
HAM-LET H-1300 Metering Valve is treated with HAM-LET Passivation Cleaning and Packaging (Procedure 8075).  
HAM-LET H-1300 Ball valves with face-seal end connections are treated with Oxygen Cleaning and Packaging (Procedure 8075).

### H&HF-1300 MATERIALS OF CONSTRUCTION

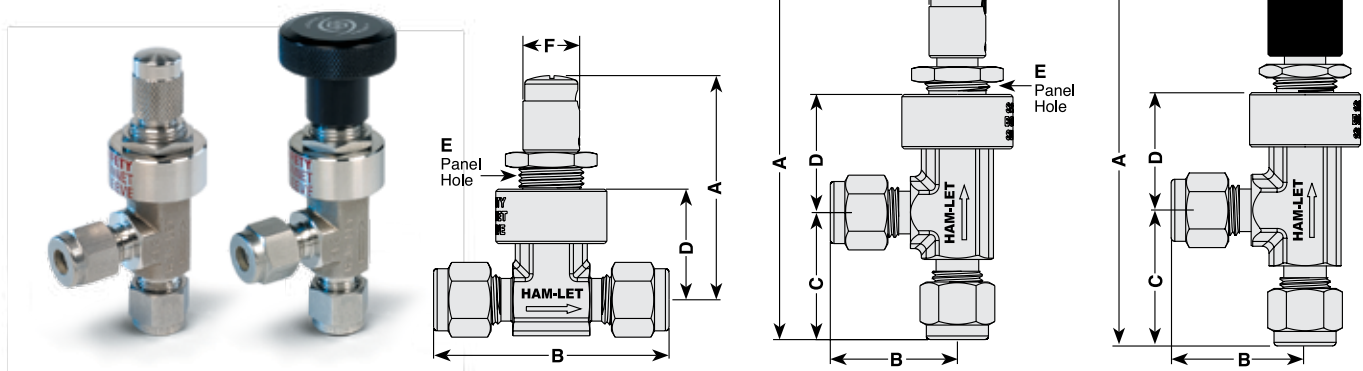
Item No.	Components	Qty	Valve Body Material	
			316 St.St.	Brass
1	Handle Set Screw	1	St.St. ASTM A-276	Brass ASTM B-16
2	Flow Fixing Screw	1	18-8 Stainless Steel	
3	Handle	1	St.St. ASTM A-276	
4	Panel Nut	1	St.St. ASTM A-276	Brass ASTM B-16
5	Safety Bonnet Sleeve	1	St.St. ASTM A-276	Brass ASTM B-16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



## HF SERIES ANGLE VALVE



# METERING VALVES H-1300 SERIES



## 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	50	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	29 mm 1.14"			
				1/4" LET-LOK®	1/4" LET-LOK®	71.5	2.81	29.5	2.34	-	-	32.0	1.26	14.8	0.58				
H-1300 Straight				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	29.5	2.34	-	-	32.0	1.26	14.8	0.58				
HF-1300 Angle	30	1.4 mm 0.055"	0.03 Max	1/4" Male NPT	1/4" Male NPT	71.5	2.81	50.8	2.00	-	-	32.0	1.26	14.8	0.58	12.5 mm 0.5"			
				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				
				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				
HF-1300 Straight				1/8" LET-LOK®	1/8" LET-LOK®	70.6	2.78	51.3	2.02	-	-	27.0	1.06	14.8	0.58	12.5 mm 0.5"			
				3MM LET-LOK®	3MM LET-LOK®	70.6	2.78	51.3	2.02	-	-	27.0	1.06	14.8	0.58				
				6MM LET-LOK®	6MM 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				
HXF-1300 Angle	10	0.8 mm 0.03"	0.004 Max	1/8" LET-LOK®	1/8" LET-LOK®	84.0	3.31	24.8	0.98	24.8	0.98	23.4	0.92	14.8	0.58	12.5 mm 0.5"			
				1/4" LET-LOK®	1/4" LET-LOK®	85.0	3.35	25.8	1.02	25.8	1.02	23.4	0.92	14.8	0.58				
				3MM LET-LOK®	3MM LET-LOK®	84.0	3.31	24.8	0.98	25.0	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				
HXF-1300 Straight							1/4" Male NPT	1/4" LET-LOK®	82	3.22	27.3	1.07	29.3	1.15	23.4	0.92	14.8	0.58	12.5 mm 0.5"
							1/8" LET-LOK®	1/8" LET-LOK®	59.6	2.34	48.0	1.89	-	-	24.4	0.96	14.8	0.58	
							1/4" LET-LOK®	1/4" LET-LOKv	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 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 for proper assembly, using leak detection.

## FLOW SETTING

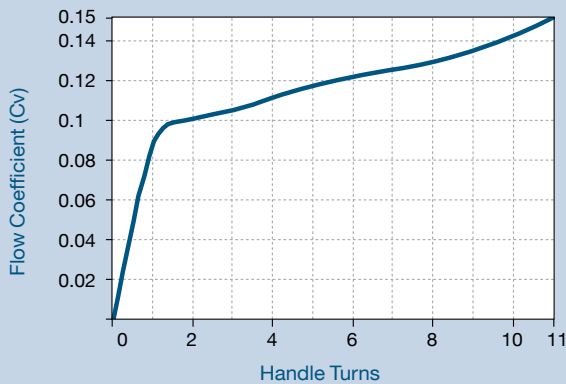
**H-1300** series metering valve is tested for bubble tight shutoff at 100 psig (6.8 bar) differential pressure.

**HF-1300** series metering valve handle dead stop is set at 4 to 10 std cm<sup>3</sup>/min with 5 psig (0.34 bar) inlet pressure.

**HXF-1300** series metering valve handle dead stop is set at 4 to 10 std cm<sup>3</sup>/min with 15 psig (1.0 bar) inlet pressure.

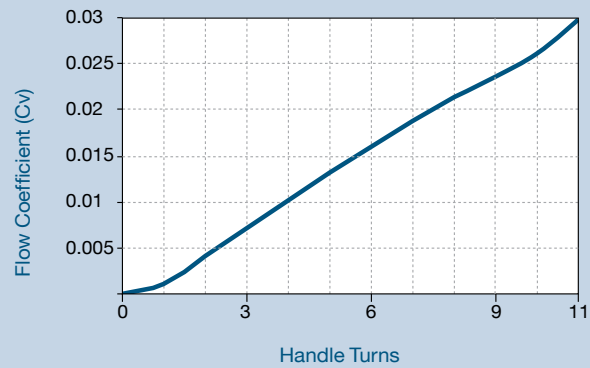
## FLOW DATA AT 70°F (20°C)

### H-1300 METERING VALVE 5° STEM



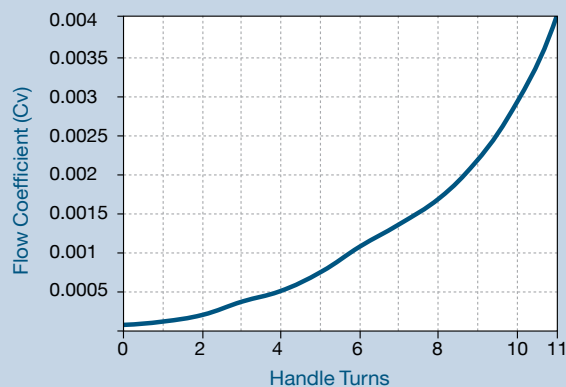
	Pressure Drop to Atmosphere psi (bar)	Water Flow U.S gal/min (L/min)	Air flow stb ft <sup>3</sup> / min (stb L / min)
Maximum Flow Coefficient (Cv) 0.15	10 (0.68)	0.47 (1.7)	1.6 (45.3)
	50 (3.4)	1.0 (3.7)	4.5 (127)
	100 (6.8)	1.5 (5.6)	7.9 (223)

### HF-1300 METERING VALVE 3° STEM

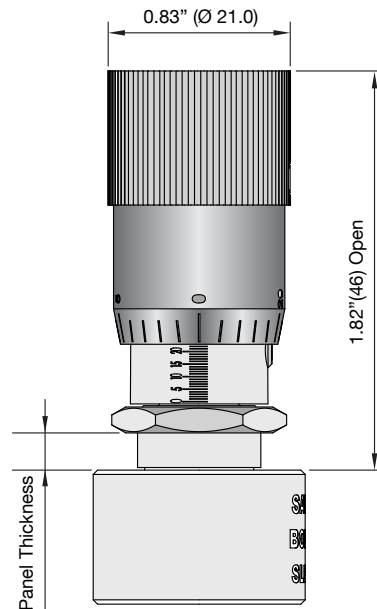


	Pressure Drop to Atmosphere psi (bar)	Water Flow U.S gal/min (L/min)	Air flow stb ft <sup>3</sup> / min (stb L / min)
Maximum Flow Coefficient (Cv) 0.03	10 (0.68)	0.09 (0.34)	0.33 (9.3)
	50 (3.4)	0.21 (0.79)	0.9 (25.4)
	100 (6.8)	0.3 (1.1)	1.5 (42.4)

### HXF-1300 METERING VALVE 1° STEM



	Pressure Drop to Atmosphere psi (bar)	Water Flow U.S gal/min (L/min)	Air flow stb ft <sup>3</sup> / min (stb L / min)
Maximum Flow Coefficient (Cv) 0.004	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°
HXF	Viton® (Fluorocarbon)	-15 to 400 (-26 to 204)	1000 (68.9)	0.055	1.4	No	3°
	Perfluor	-0 to 300 (-18 to 149)	2000 (138)	0.03	0.8	No	1°
	Neoprene	-10 to 250 (-23 to 121)	2000 (138)	0.03	0.8	No	1°

Viton® (Fluorocarbon) is a standard O-ring for H, HF, HXF-1300

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

# HANDLE OPTIONS

## Round Aluminum Handle\*

### Vernier Handle



Optional for H,  
HF & HXF



Standard for H

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

### Metal Slotted Handle



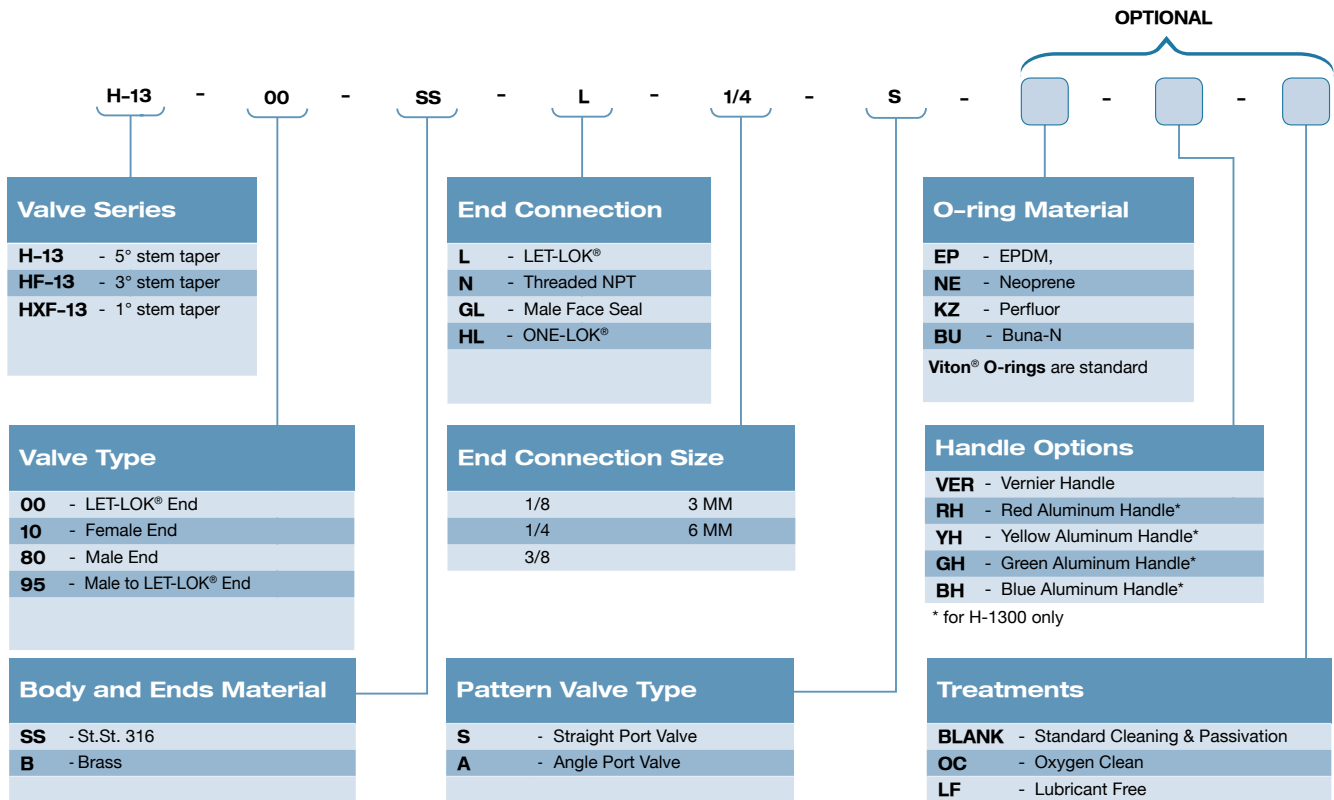
Standard  
for HF

### Metal Slotted Handle



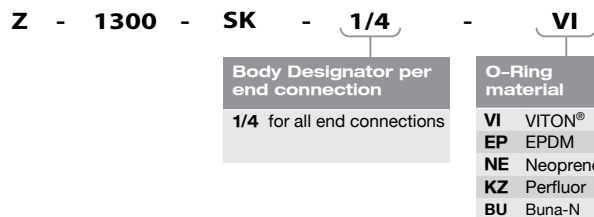
Standard  
for HXF

## H-1300 ORDERING INFORMATION



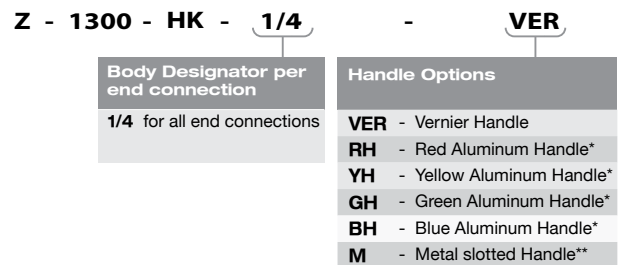
### SEAL KIT

Seal Kit contains O-ring



### HANDLE KIT

Handle Kit contains handle + set screw.



**Warning** Select the right component for safety's sake: The total design of the system must be taken into consideration when selecting components in order to ensure that your HAM-LET products provide safe, trouble-free operation. It is the responsibility of the system designer and the user to consider the compatibility of the materials, of the components and system, the function of the component, appropriate ratings and to ensure proper installation, operation and maintenance. Improper selection or use of products can cause property damage or personal injury, in respect of which the system designer and/or the user shall be solely liable and responsible.

