



HAM-LET HIGH PRESSURE

UP TO 60,000 PSI



- ✓ High pressure fittings, valves and tubing up to 60,000 psig (4134 bar)
- ✓ 316 stainless steel construction
- ✓ Cone and thread (C&T) connection provides dependable high-pressure performance



HAM-LET HIGH PRESSURE LINE

UCT has years of expertise in manufacturing top-quality fittings, valves, and instrumentation solutions.

Our company's commitment to research and development, combined with our exceptional team of engineers, has positioned us as leaders in technological innovation. We have developed the UCT High Pressure line in order to fulfill the rapidly increasing demand for high pressure valves, fittings, tubes and accessories.

The HHP products support the industry standard elevated pressure gas and liquid systems with working pressures up to 60,000 psi, in various industries like oil & gas, chemical and petrochemical, laboratories and research, water-jet cleaning and water-jet cutting.

The HHP line is backed by UCT's commitment to the highest quality-control standards and skilled craftsmanship.

HHP offers a complete range of high quality high-pressure components:

- High Pressure Fittings and Tubes
- High Pressure Needle Valves
- High Pressure Check Valves
- High Pressure Filters
- High Pressure Repture Disc
- Tooling and Accessories for high pressure gas and fluid

System Assembling

Our HHP products are based on ASME B31.1 and B31.3 formal design.

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HIGH PRESSURE FITTINGS AND TUBES UP TO 60,000 PSI

Fitting and tubing with cone-and-thread connection up to 60,000 psi

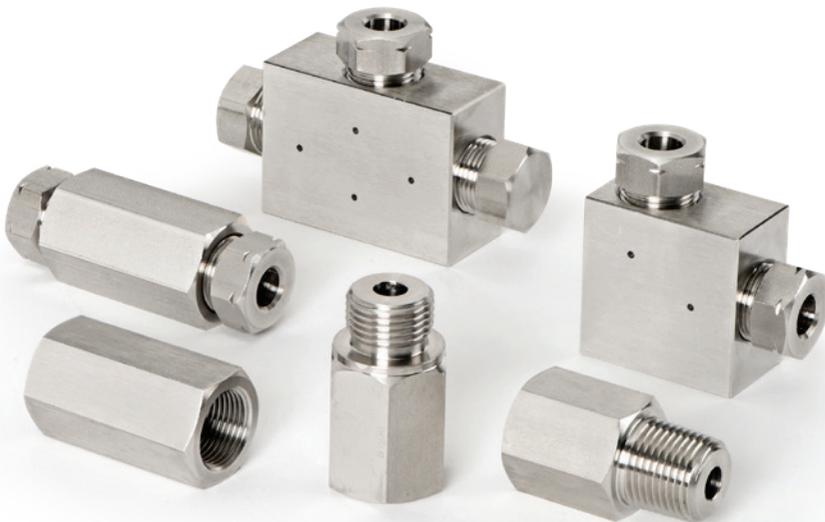
- High Pressure (HHP) line offers a wide range of fittings, including couplings.
- Elbow, tee, and cross configurations with cone-and-thread connections, rated for extreme pressure.
- Pressure rating up to 60,000 PSI, available in 1/4", 3/8", and 9/16" O.D. sizes.
- Bodies are made from high-tensile 316 stainless steel for maximum strength and durability.
- Supplied complete with glands and sleeves for easy installation.

UCT Fluid Solutions provides a full range of high-pressure fittings and adapters engineered to complement the performance of our valves and tubing.

These components are designed for fluid and gas systems operating under extreme pressures and temperatures, and can be supplied in virtually any configuration to meet your system requirements.

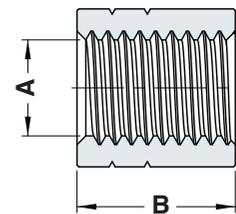
All fittings and adapters are clearly marked with the UCT logo, ordering code, material specification, pressure rating, and material batch number (linked to the DIN 3.1.B material certificate). On request, most fittings and adapters can also be supplied in compliance with NACE MR0175 / ISO 15156 standards for sour-gas service.

Our High-Pressure (HHP) fittings provide reliable, elastic metal-to-metal sealing for demanding applications. Each assembly includes a high-pressure tube with a 58° cone point, collar, gland, and female component (fitting, valve, or adapter). The 58° cone of the tube seats precisely in the 60° cone of the mating part to ensure a tight, leak-resistant seal. The gland and collar match standard 58°/60° designs, and a bleed hole is included for enhanced safety.



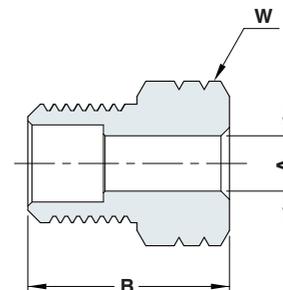
HIGH PRESSURE FITTINGS AND COMPONENTS

COLLAR



Ordering Information	A TUBE O.D.		B	
	inch	mm	inch	mm
60,000 psi (4,200 bar)				
HHPFS60-S-HF4	1/4	6.35	0.35	9.00
HHPFS60-S-HF6	3/8	9.53	0.49	12.50
HHPFS60-S-HF9	9/16	14.29	0.87	22.00

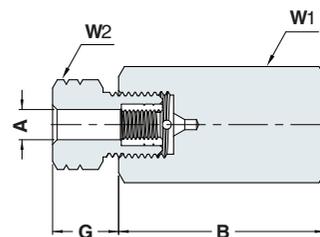
GLAND



Ordering Information	A TUBE O.D.		B		W Hex Flat
	inch	mm	inch	mm	inch
60,000 psi (4,200 bar)					
HHPFS60-G-HM4	1/4	6.35	0.94	24.00	11/16
HHPFS60-G-HM6	3/8	9.53	1.06	27.00	7/8
HHPFS60-G-HM9	9/16	14.29	1.26	32.00	1-5/16

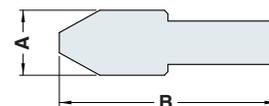
HIGH PRESSURE FITTINGS AND COMPONENTS

CAP



Ordering Information	A TUBE O.D.		B		G		W1 Hex Flat	W2 Hex Flat
	inch	mm	inch	mm	inch	mm	inch	inch
60,000 psi (4,200 bar)								
HHPFS60-C-HF4	1/4	6.35	1.77	45.00	0.59	15.09	7/8	11/16
HHPFS60-C-HF6	3/8	9.53	1.97	50.00	0.64	16.21	1-1/16	7/8
HHPFS60-C-HF9	9/16	14.29	2.20	56.00	0.82	20.92	1-1/2	1-5/16

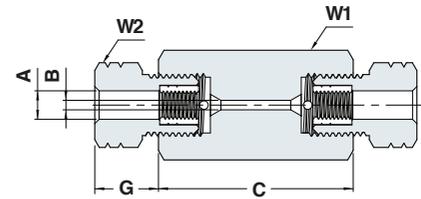
PLUG



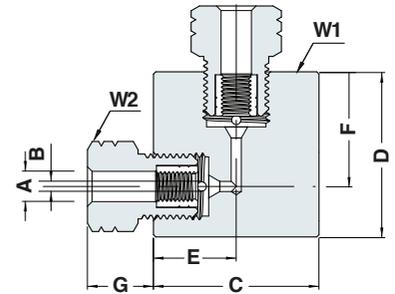
Ordering Information	A TUBE O.D.		B	
	inch	mm	inch	mm
100,000 psi (6,800 bar)				
HHPFS60-P-HM4	1/4	6.35	1.18	30.00
HHPFS60-P-HM6	3/8	9.53	1.42	36.00
HHPFS60-P-HM9	9/16	14.29	1.61	41.00

HIGH PRESSURE FITTINGS AND COMPONENTS

STRAIGHT COUPLING



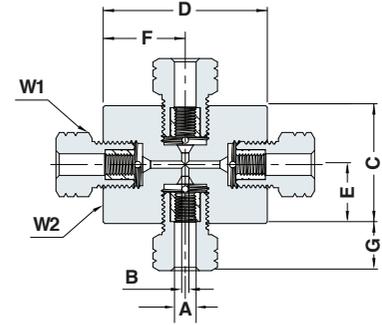
Ordering Information	A TUBE O.D.		B		C		G		W1 Hex Flat	W2 Hex Flat
	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
30,000 psi (2,100 bar)										
HHPFS30-A-HF6	3/8	9.53	0.20	5.00	1.97	50.00	0.64	16.21	1-1/16	15/16
HHPFS30-A-HF9	9/16	14.29	0.31	8.00	2.20	56.00	0.82	20.90	1-1/2	1-5/16
60,000 psi (4,200 bar)										
HHPFS60-A-HF4	1/4	6.35	0.09	2.20	1.77	45.00	0.59	15.09	7/8	11/16
HHPFS60-A-HF6	3/8	9.53	0.14	3.50	1.97	50.00	0.64	16.21	1-1/16	7/8
HHPFS60-A-HF9	9/16	14.29	0.20	5.00	2.20	56.00	0.82	20.92	1-1/2	1-5/16



ELBOW

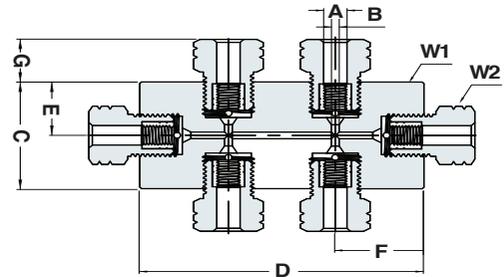
Ordering Information	A TUBE O.D.		B		C		D		E		F		G		W1 Hex Flat	W2 Hex Flat
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
30,000 psi (2,100 bar)																
HHPFS30-L-HF6	3/8	9.53	0.20	5.00	1.73	44.00	1.73	44.00	0.87	22.00	1.18	30.00	0.64	16.21	1-1/16	7/8
HHPFS30-L-HF9	9/16	14.29	0.31	8.00	2.52	64.00	2.28	58.00	1.26	32.00	1.50	38.00	0.82	20.90	1-1/2	1-5/16
60,000 psi (4,200 bar)																
HHPFS60-L-HF4	1/4	6.35	0.09	2.20	1.42	36.00	1.42	36.00	0.71	18.00	0.98	25.00	0.59	15.09	7/8	11/16
HHPFS60-L-HF6	3/8	9.53	0.14	3.50	1.73	44.00	1.73	44.00	0.87	22.00	1.18	30.00	0.64	16.21	1-1/16	7/8
HHPFS60-L-HF9	9/16	14.29	0.20	5.00	2.52	64.00	2.28	58.00	1.26	32.00	1.50	38.00	0.82	20.92	1-1/2	1-5/16

HIGH PRESSURE FITTINGS AND COMPONENTS



CROSS

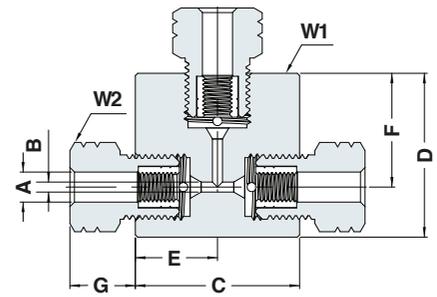
Ordering Information	A TUBE O.D.		B		C		D		E		F		G		W1 Hex Flat	W2 Hex Flat
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
30,000 psi (2,100 bar)																
HHPFS30-X-HF6	3/8	9.53	0.20	5.00	1.73	44.00	2.76	70.00	0.87	22.00	1.18	30.00	0.64	16.21	1-1/16	7/8
HHPFS30-X-HF9	9/16	14.29	0.31	8.00	2.52	64.00	2.99	76.00	1.26	32.00	1.50	38.00	0.82	20.90	1-1/2	1-5/16
60,000 psi (4,200 bar)																
HHPFS60-X-HF4	1/4	6.35	0.09	2.20	1.42	36.00	1.97	50.00	0.71	18.00	0.98	25.00	0.59	15.09	7/8	11/16
HHPFS60-X-HF6	3/8	9.53	0.14	3.50	1.73	44.00	2.76	70.00	0.87	22.00	1.18	30.00	0.64	16.21	1-1/16	7/8
HHPFS60-X-HF9	9/16	14.29	0.20	5.00	2.52	64.00	2.99	76.00	1.26	32.00	1.50	38.00	0.82	20.92	1-1/2	1-5/16



DOUBLE CROSS

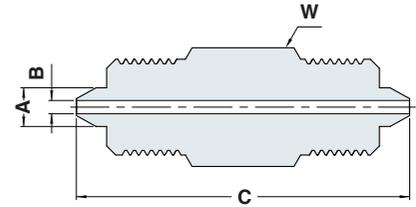
Ordering Information	A TUBE O.D.		B		C		D		E		F		G		W1 Hex Flat	W2 Hex Flat
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
60,000 psi (4,200 bar)																
HHPFS60-DX-HF4	1/4	6.35	0.09	2.20	1.42	36.00	3.15	80.00	0.71	18.00	0.98	25.00	0.59	15.09	7/8	11/16

HIGH PRESSURE FITTINGS AND COMPONENTS



TEE

Ordering Information	A TUBE O.D.		B		C		D		E		F		G		W1 Hex Flat	W2 Hex Flat
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
30,000 psi (2,100 bar)																
HHPFS30-T-HF6	3/8	9.53	0.20	5.00	1.73	44.00	1.73	44.00	0.87	22.00	1.18	30.00	0.64	16.21	1-1/16	7/8
HHPFS30-T-HF9	9/16	14.29	0.31	8.00	2.52	64.00	2.28	58.00	1.26	32.00	1.50	38.00	0.82	20.90	1-1/2	1-5/16
60,000 psi (4,200 bar)																
HHPFS60-T-HF4	1/4	6.35	0.09	2.20	1.42	36.00	1.42	36.00	0.71	18.00	0.98	25.00	0.59	15.09	7/8	11/16
HHPFS60-T-HF6	3/8	9.53	0.14	3.50	1.73	44.00	1.73	44.00	0.87	22.00	1.18	30.00	0.64	16.21	1-1/16	7/8
HHPFS60-T-HF9	9/16	14.29	0.20	5.00	2.52	64.00	2.28	58.00	1.26	32.00	1.50	38.00	0.82	20.92	1-1/2	1-5/16

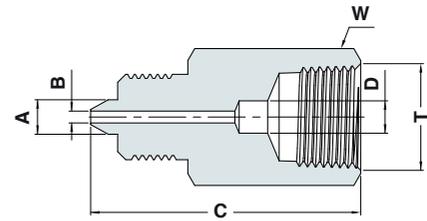


UNION MALE

Ordering Information	A TUBE O.D.		B		C		W Hex Flat
	inch	mm	inch	mm	inch	mm	inch
30,000 psi (2,100 bar)							
HHPFS30-A-HM6	3/8	9.53	0.20	5.00	2.24	57.00	1-1/16
HHPFS30-A-HM9	9/16	14.29	0.31	8.00	2.80	71.00	1-5/16
60,000 psi (4,200 bar)							
HHPFS60-A-HM4	1/4	6.35	0.09	2.20	2.17	55.00	11/16
HHPFS60-A-HM6	3/8	9.53	0.14	3.50	2.32	59.00	1-1/16
HHPFS60-A-HM9	9/16	14.29	0.20	5.00	2.99	76.00	1-5/16

ADAPTERS AND COUPLINGS

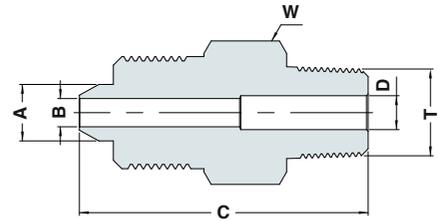
MALE HP - FEMALE NPT



Ordering Information	A TUBE O.D.		T NPT	B		C		D		W Hex Flat
	inch	mm		inch	mm	inch	mm	inch	mm	
10,000 psi (689.5 bar)										
HHPFS10-A-HM4NF8	1/4	6.35	1/2	0.09	2.20	2.17	55.00	0.31	8.00	1-1/16
HHPFS10-A-HM6NF8	3/8	9.53	1/2	0.20	5.00	2.20	56.00	0.31	8.00	1-1/16
HHPFS10-A-HM9NF8	9/16	14.29	1/2	0.31	8.00	2.50	63.50	0.31	8.00	1-5/16
15,000 psi (1,034 bar)										
HHPFS15-A-HM4NF6	1/4	6.35	3/8	0.09	2.20	1.97	50.00	0.24	6.00	7/8
HHPFS15-A-HM6NF6	3/8	9.53	3/8	0.20	5.00	2.01	51.00	0.24	6.00	7/8
HHPFS15-A-HM9NF6	9/16	14.29	3/8	0.31	8.00	2.50	63.50	0.24	6.00	1-5/16
23,000 psi (1,585 bar)										
HHPFS23-A-HM4NF4	1/4	6.35	1/4	0.09	2.20	1.97	50.00	0.09	2.20	7/8
HHPFS23-A-HM6NF4	3/8	9.53	1/4	0.20	5.00	2.01	51.00	0.20	5.00	7/8
HHPFS23-A-HM9NF4	9/16	14.29	1/4	0.31	8.00	2.50	63.50	0.31	8.00	1-5/16

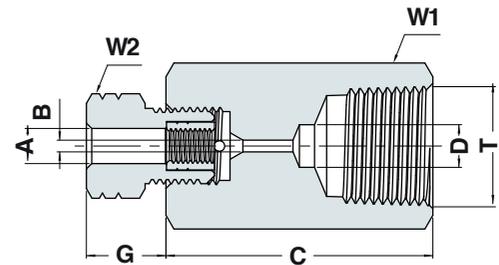
ADAPTERS AND COUPLINGS

MALE HP - MALE NPT



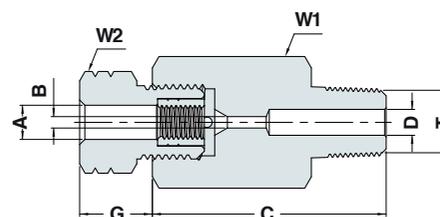
Ordering Information	A TUBE O.D.		T NPT	B		C		D		W Hex Flat
	inch	mm		inch	mm	inch	mm	inch	mm	
10,000 psi (689.5 bar)										
HHPFS10-A-HM4NM8	1/4	6.35	1/2	0.09	2.20	2.17	55.00	0.31	8.00	1-1/16
HHPFS10-A-HM6NM8	3/8	9.53	1/2	0.20	5.00	2.20	56.00	0.31	8.00	1-1/16
HHPFS10-A-HM9NM8	9/16	14.29	1/2	0.31	8.00	2.50	63.50	0.31	8.00	1-5/16
15,000 psi (1,034 bar)										
HHPFS15-A-HM4NM6	1/4	6.35	3/8	0.09	2.20	1.97	50.00	0.24	6.00	7/8
HHPFS15-A-HM6NM6	3/8	9.53	3/8	0.20	5.00	2.01	51.00	0.24	6.00	7/8
HHPFS15-A-HM9NM6	9/16	14.29	3/8	0.31	8.00	2.50	63.50	0.24	6.00	1-5/16
23,000 psi (1,585 bar)										
HHPFS23-A-HM4NM4	1/4	6.35	1/4	0.09	2.20	1.97	50.00	0.20	5.00	11/16
HHPFS23-A-HM6NM4	3/8	9.53	1/4	0.20	5.00	2.01	51.00	0.20	5.00	7/8
HHPFS23-A-HM9NM4	9/16	14.29	1/4	0.31	8.00	2.50	63.50	0.20	5.00	1-5/16

FEMALE HP - FEMALE NPT



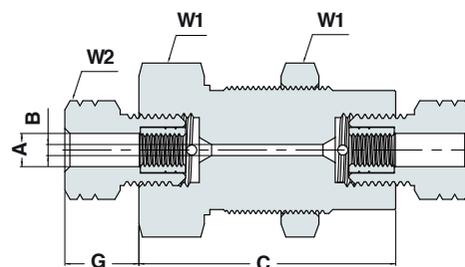
Ordering Information	A TUBE O.D.		T NPT	B		C		D		G		W1 Hex Flat	W2 Hex Flat
	inch	mm		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
10,000 psi (689.5 bar)													
HHPFS10-A-HF4NF8	1/4	6.35	1/2	0.09	2.20	1.97	50.00	0.31	8.00	0.59	15.09	1-1/16	11/16
HHPFS10-A-HF6NF8	3/8	9.53	1/2	0.20	5.00	1.97	50.00	0.31	8.00	0.64	16.21	1-1/16	7/8
HHPFS10-A-HF9NF8	9/16	14.29	1/2	0.31	8.00	2.20	56.00	0.31	8.00	0.82	20.90	1-1/2	1-5/16
15,000 psi (1,034 bar)													
HHPFS15-A-HF4NF6	1/4	6.35	3/8	0.09	2.20	1.77	45.00	0.24	6.00	0.59	15.09	7/8	11/16
HHPFS15-A-HF6NF6	3/8	9.53	3/8	0.20	5.00	1.97	50.00	0.24	6.00	0.64	16.21	1-1/16	7/8
HHPFS15-A-HF9NF6	9/16	14.29	3/8	0.31	8.00	2.20	56.00	0.24	6.00	0.82	20.90	1-1/2	1-5/16
23,000 psi (1,585 bar)													
HHPFS23-A-HF4NF4	1/4	6.35	1/4	0.09	2.20	1.77	45.00	0.09	2.20	0.59	15.09	7/8	11/16
HHPFS23-A-HF6NF4	3/8	9.53	1/4	0.20	5.00	1.97	50.00	0.20	5.00	0.64	16.21	1-1/16	7/8
HHPFS23-A-HF9NF4	9/16	14.29	1/4	0.31	8.00	2.20	56.00	0.20	5.00	0.82	20.90	1-1/2	1-5/16

ADAPTERS AND COUPLINGS



FEMALE HP - MALE NPT

Ordering Information	A TUBE O.D.		T NPT	B		C		D		G		W1 Hex Flat	W2 Hex Flat
	inch	mm		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
10,000 psi (689.5 bar)													
HHPFS10-A-HF4NM8	1/4	6.35	1/2	0.09	2.20	1.97	50.00	0.31	8.00	0.59	15.09	1-1/16	11/16
HHPFS10-A-HF6NM8	3/8	9.53	1/2	0.20	5.00	1.97	50.00	0.31	8.00	0.64	16.21	1-1/16	7/8
HHPFS10-A-HF9NM8	9/16	14.29	1/2	0.31	8.00	2.20	56.00	0.31	8.00	0.82	20.90	1-1/2	1-5/16
15,000 psi (1,034 bar)													
HHPFS15-A-HF4NM6	1/4	6.35	3/8	0.09	2.20	1.77	45.00	0.24	6.00	0.59	15.09	7/8	11/16
HHPFS15-A-HF6NM6	3/8	9.53	3/8	0.20	5.00	1.97	50.00	0.24	6.00	0.64	16.21	1-1/16	7/8
HHPFS15-A-HF9NM6	9/16	14.29	3/8	0.31	8.00	2.20	56.00	0.24	6.00	0.82	20.90	1-1/2	1-5/16
23,000 psi (1,585 bar)													
HHPFS23-A-HF4NM4	1/4	6.35	1/4	0.09	2.20	1.77	45.00	0.20	5.00	0.59	15.09	7/8	11/16
HHPFS23-A-HF6NM4	3/8	9.53	1/4	0.20	5.00	1.97	50.00	0.20	5.00	0.64	16.21	1-1/16	7/8
HHPFS23-A-HF9NM4	9/16	14.29	1/4	0.31	8.00	2.20	56.00	0.20	5.00	0.82	20.90	1-1/2	1-5/16

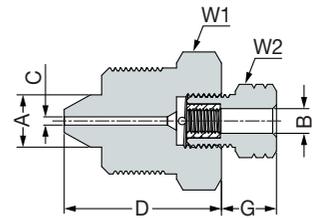


BULKHEAD COUPLING

Ordering Information	A TUBE O.D.		B		C		G		W1	W2	Panel Hole Size	Max. Panel Thickness
	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch
30,000 psi (2,100 bar)												
HHPFS30-AB-HF6	3/8	9.53	0.20	5.00	2.36	60.00	0.65	16.40	1-5/8	7/8	1-21/64	0.75
HHPFS30-AB-HF9	9/16	14.29	0.31	8.00	2.72	69.00	0.84	21.27	1-7/8	1-5/16	1-41/64	0.75
60,000 psi (4,200 bar)												
HHPFS60-AB-HF4	1/4	6.35	0.09	2.20	2.01	51.00	0.60	15.27	1-3/16	11/16	1-1/64	0.66
HHPFS60-AB-HF6	3/8	9.53	0.14	3.50	2.36	60.00	0.67	17.10	1-5/8	7/8	1-21/64	0.75
HHPFS60-AB-HF9	9/16	14.29	0.20	5.00	2.72	69.00	0.81	20.67	1-7/8	1-5/16	1-41/64	0.75

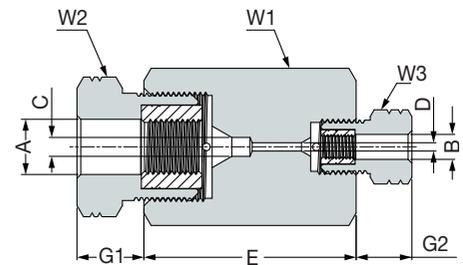
ADAPTERS AND COUPLINGS

MALE HP - FEMALE HP (REDUCER GLAND)



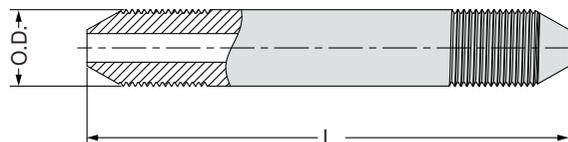
Ordering Information	A Tube O.D		B Tube O.D		C		D		G		W1	W2
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
30,000 psi (2,100 bar)												
HHPFS30-A-HM9HF6	9/16"	14.29	3/8"	9.53	0.20	5.00	1.56	39.50	0.65	16.40	1-5/16"	7/8"
60,000 psi (4,200 bar)												
HHPFS60-A-HM6HF4	3/8"	9.53	1/4"	6.35	0.09	2.20	1.46	37.00	0.60	15.27	7/8"	11/16"
HHPFS60-A-HM9HF4	9/16"	14.29	1/4"	6.35	0.09	2.20	1.65	42.00	0.60	15.27	1-5/16"	11/16"
HHPFS60-A-HM9HF6	9/16"	14.29	3/8"	9.53	0.14	3.50	1.65	42.00	0.67	17.10	1-5/16"	7/8"

FEMALE HP - FEMALE HP (REDUCER BUSHING)



Ordering Information	A Tube O.D		B Tube O.D		C		D		E		G1		G2		W1	W2	W3
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch
30,000 psi (2,100 bar)																	
HHPFS30-A-HF9HF6	9/16"	14.29	3/8"	9.53	0.31	8.00	0.20	5.00	2.20	56.00	0.84	21.27	0.65	16.40	1-1/2"	1-5/16"	7/8"
60,000 psi (4,200 bar)																	
HHPFS60-A-HF6HF4	3/8"	9.53	1/4"	6.35	0.14	3.50	0.09	2.20	1.97	50.00	0.67	17.10	0.60	15.27	1-1/16"	7/8"	11/16"
HHPFS60-A-HF9HF4	9/16"	14.29	1/4"	6.35	0.20	5.00	0.09	2.20	2.20	56.00	0.81	20.67	0.60	15.27	1-1/2"	1-5/16"	11/16"
HHPFS60-A-HF9HF6	9/16"	14.29	3/8"	9.53	0.20	5.00	0.14	3.50	2.20	56.00	0.81	20.67	0.67	17.10	1-1/2"	1-5/16"	7/8"

CONED AND THREADED NIPPLES



Ordering Information	O.D. Tube Diameter		L Tube Length	
	inch	mm	inch	mm
60,000 psi (4,200 bar)				
HHPFS60-NE-HM4-2.75	1/4"	6.35	2.75	69.85
HHPFS60-NE-HM4-6	1/4"	6.35	6	152.4
HHPFS60-NE-HM4-8	1/4"	6.35	8	203.2
HHPFS60-NE-HM4-10	1/4"	6.35	10	254
HHPFS60-NE-HM4-12	1/4"	6.35	12	304.8
HHPFS60-NE-HM6-3	3/8"	9.53	3	76.2
HHPFS60-NE-HM6-6	3/8"	9.53	6	152.4
HHPFS60-NE-HM6-8	3/8"	9.53	8	203.2
HHPFS60-NE-HM6-10	3/8"	9.53	10	254
HHPFS60-NE-HM6-12	3/8"	9.53	12	304.8
HHPFS60-NE-HM9-4	9/16"	14.29	4	101.6
HHPFS60-NE-HM9-6	9/16"	14.29	6	152.4
HHPFS60-NE-HM9-8	9/16"	14.29	8	203.2
HHPFS60-NE-HM9-10	9/16"	14.29	10	254
HHPFS60-NE-HM9-12	9/16"	14.29	12	304.8

* Raw tubes are available by request, please contact your sales representative for additional information

HIGH PRESSURE FITTINGS AND COMPONENTS ORDERING INFORMATION



HIGH PRESSURE NEEDLE VALVES UP TO 60,000 PSIG

Connections and Stem Design

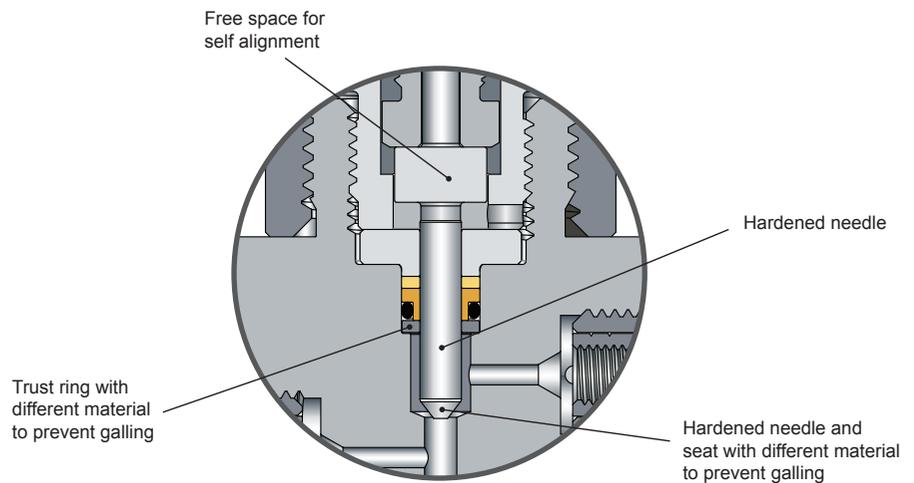
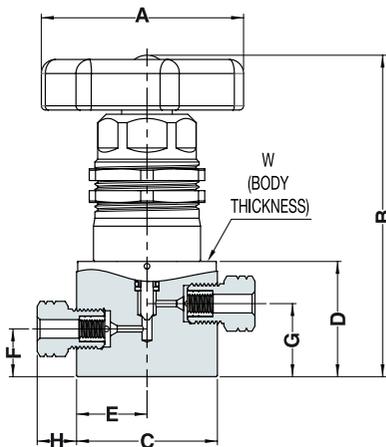
The high-pressure needle valve series features cone-and-thread connections in 1/4", 3/8", and 9/16" sizes, rated for pressures up to 60,000 psi. Each needle valve is equipped with a non-rotating "V" Tip stem, preventing material loss in the sealing area and eliminating galling for long, reliable service.

Safety and Construction

A standard panel-mount safety cover shields the operator from internal blowout, while an internal stem-lifting stop provides additional protection. The valve body is manufactured from 316L stainless steel with high mechanical strength. PTFE packing is supplied as standard, suitable for working temperatures from -10 °C to 60 °C. The self-adjusting packing requires minimal preloading, delivers low frictional resistance, and provides excellent chemical resistance.

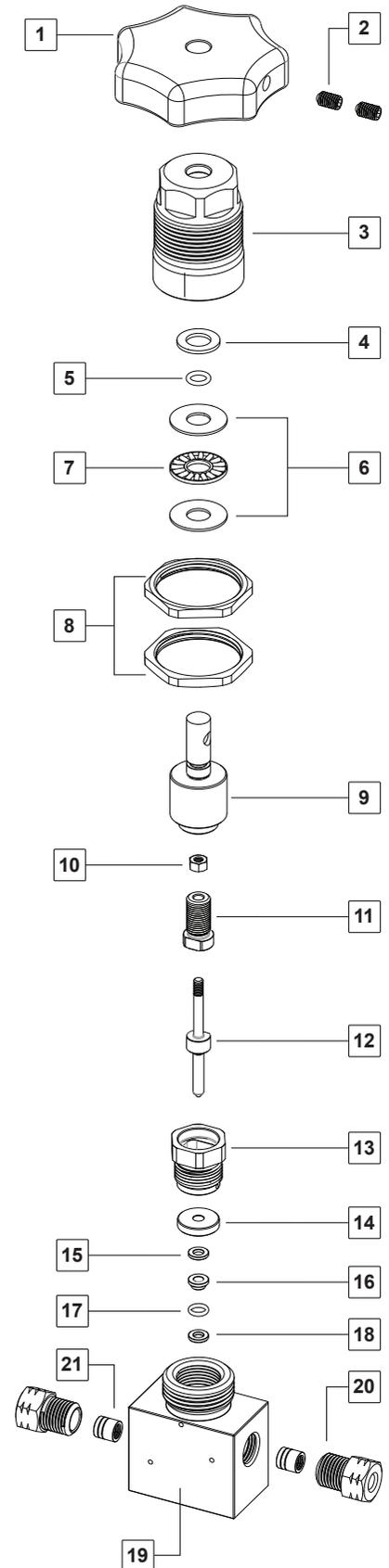
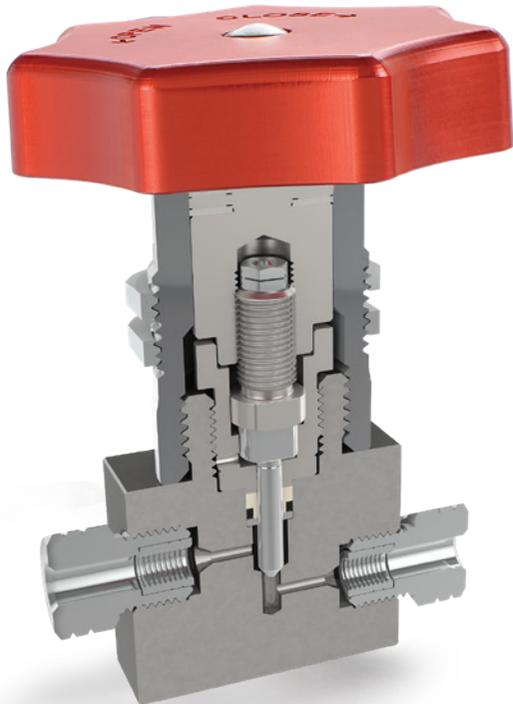
Operation and Options

For smooth operation and durability, each needle valve includes an ergonomically designed handwheel, a needle thrust bearing, and wide internal orifices for outstanding flow capacity. Pneumatic actuators are available for all valve types to meet diverse application requirements.



HHP NEEDLE VALVES MATERIALS OF CONSTRUCTION

Item No.	Component	Qty.	Material
			Pressure rating up to 60,000 psi (4,137 bar)
1	Hand wheel	1	Aluminum 51 SS
2	Set screw	2	SS A4
3	Protection cap	1	SS 316
4	Washer protection cap	1	Nylon-6
5	O-ring	1	NBR
6	Thin plate washer	2	Chrome Steel
7	Bearing	1	Chrome Steel/Sheet steel
8	Panel mounting nut plated	2	Brass nickel
9	Actuator	1	SS 431
10	Snep hex nut	1	SS A2
11	Needle base	1	CuSN8P R620
12	Needle	1	SS 440B
13	Seal gland hand	1	SS 430F
14	Seal thrust ring	1	Ampco M4
15	Back-up ring	1	PETP
16	Seal	1	PTFE
17	O-ring	1	NBR
18	Thrust ring	1	CuSN8
19	Valve body	1	SS 316L
20	Gland	2	SS 303
21	Collar	2	SS 1.4122

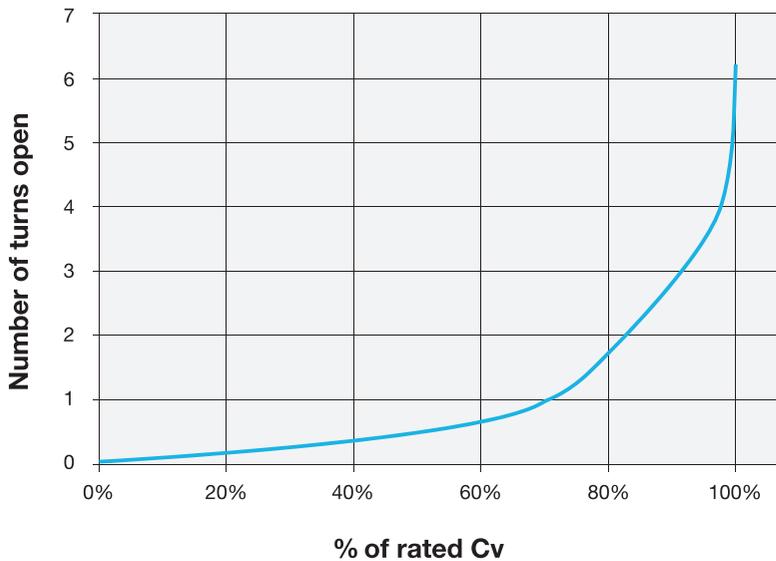


TECHNICAL DATE

UCT DESCRIPTION	Configuration	END			Orifice		MAWP		Rated Cv ¹
		Connection	Size		inch	mm	bar	psi	
			inch	mm					
10,000 psi (689.5 bar)									
HHPVS10-NV2S-NF8	Straight	Female NPT	1/2	-	0.30	7.50	700	10000	0.60
HHPVS10-NV2E-NF8	Angle								0.68
30,000 psi (2,100 bar)									
HHPVS30-NV2S-HF6	Straight	High pressure C&T	3/8	9.53	0.20	5.00	2100	30000	0.57
HHPVS30-NV2E-HF6	Angle								0.77
HHPVS30-NV3B-HF6	3 way - 2 on pressure								-
HHPVS30-NV2S-HF9	Straight	High pressure C&T	9/16	14.29	0.30	7.50	2100	30000	0.60
HHPVS30-NV2E-HF9	Angle								0.68
HHPVS30-NV3B-HF9	3 way - 2 on pressure								-
60,000 psi (4,200 bar)									
HHPVS60-NV2S-HF4	Straight	High pressure C&T	1/4	6.35	0.10	3.50	4200	60000	0.08
HHPVS60-NV2E-HF4	Angle								0.08
HHPVS60-NV3B-HF4	3 way - 2 on pressure								-
HHPVS60-NV2S-HF6	Straight	High pressure C&T	3/8	9.53	0.14	3.50	4200	60000	0.26
HHPVS60-NV2E-HF6	Angle								0.38
HHPVS60-NV3B-HF6	3 way - 2 on pressure								-
HHPVS60-NV2S-HF9	Straight	High pressure C&T	9/16	14.29	0.20	5.00	4200	60000	0.48
HHPVS60-NV2E-HF9	Angle								0.57
HHPVS60-NV3B-HF9	3 way - 2 on pressure								-

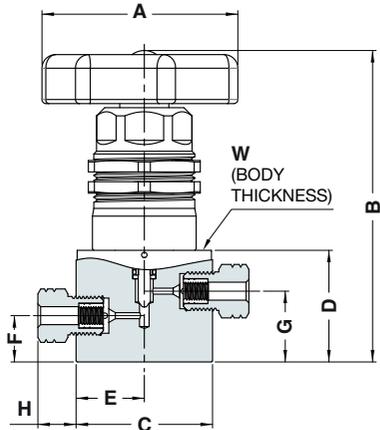
¹The Cv values are only valid for fluid with a viscosity of 1.0 mPa*s (water)¹

Generalized Flow Coefficient curves (Cv)

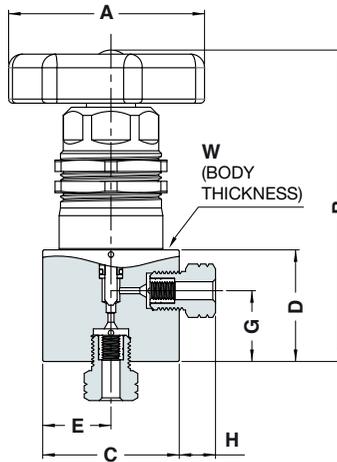


NEEDLE VALVE OPERATED DIMENSIONS

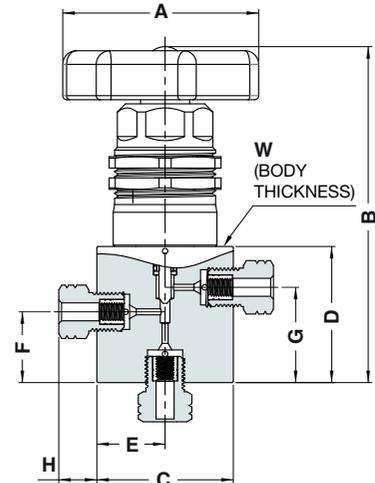
2 WAY STRAIGHT



2 WAY ANGLE

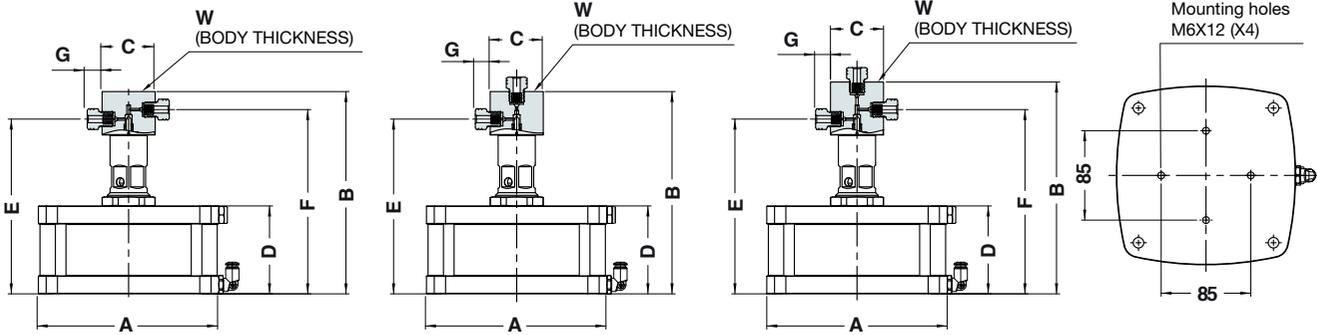


3 WAY - 2 ON PRESSURE



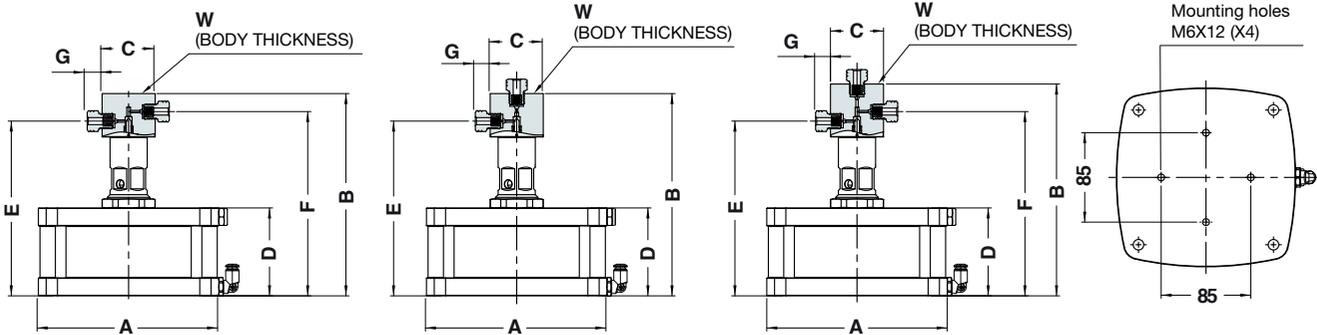
DESCRIPTION	Configuration	END		Orifice		A		B		C		D		E		F		G		H		W	
		Connection	Size		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	
			inch	mm																			
10,000 psi (689.5 bar)																							
HHPVS10-NV2S-NF8	Straight	Female NPT	1/2	-	0.30	7.5	2.95	75.0	5.08	129	2.52	64.0	2.13	54.0	1.26	32.00	1.10	28.0	1.10	28.0	-	-	36.0
HHPVS10-NV2E-NF8	Angle		5.28	134	2.32	59.0	-	-	1.57	40.0													
30,000 psi (2,100 bar)																							
HHPVS30-NV2S-HF6	Straight	High pressure C&T	3/8	9.53	0.20	5.0	2.95	75.0	4.53	115	1.97	50.0	1.61	41.0	0.98	25.0	0.67	17.0	1.02	26.00	0.64	16.21	31.0
HHPVS30-NV2E-HF6	Angle								4.53	115			1.61	41.0			-	-	1.02	26.0			
HHPVS30-NV3B-HF6	3 way-2 on pressure								4.88	124.0			1.97	50.0			1.02	26.0	1.38	35.0			
HHPVS30-NV2S-HF9	Straight	High pressure C&T	9/16	14.29	0.30	7.5	2.95	75.0	5.08	129.0	2.52	64.0	2.13	54.0	1.26	32.0	0.83	21.0	1.38	35.0	0.82	21.90	36.0
HHPVS30-NV2E-HF9	Angle								5.08	129.0			2.13	54.0			-	-	1.38	35.0			
HHPVS30-NV3B-HF9	3 way-2 on pressure								5.59	142.0			2.68	68.0			1.38	35.0	1.93	49.0			
60,000 psi (4,200 bar)																							
HHPVS60-NV2S-HF4	Straight	High pressure C&T	1/4	6.35	0.10	3.5	2.95	75.0	4.53	115.0	1.97	50.0	1.02	26.0	0.98	25.0	0.67	17.0	1.02	26.00	0.59	15.09	31.0
HHPVS60-NV2E-HF4	Angle								4.53	115.0			1.02	26.0			-	-	1.02	26.0			
HHPVS60-NV3B-HF4	3 way-2 on pressure								4.88	124.0			1.97	50.0			1.02	26.0	1.38	35.0			
HHPVS60-NV2S-HF6	Straight	High pressure C&T	3/8	9.53	0.14	3.5	2.95	75.0	4.53	115.0	1.97	50.0	1.61	41.0	0.98	25.0	0.67	17.0	1.02	26.0	0.64	16.21	31.0
HHPVS60-NV2E-HF6	Angle								4.53	115.0			1.61	41.0			-	-	1.02	26.0			
HHPVS60-NV3B-HF6	3 way-2 on pressure								4.88	124.0			1.97	50.0			1.02	26.0	1.38	35.0			
HHPVS60-NV2S-HF9	Straight	High pressure C&T	9/16	14.29	0.20	5.0	2.95	75.0	5.08	129.0	2.52	64.0	2.13	54.0	1.26	32.0	0.83	21.0	1.38	35.0	0.82	20.92	36.0
HHPVS60-NV2E-HF9	Angle								5.04	128.0			2.13	54.0			-	-	1.38	35.0			
HHPVS60-NV3B-HF9	3 way-2 on pressure								5.59	142.0			2.68	68.0			1.38	35.0	1.93	49.0			

NEEDLE VALVE – AIR-OPERATED, NORMALLY OPEN – DIMENSIONS



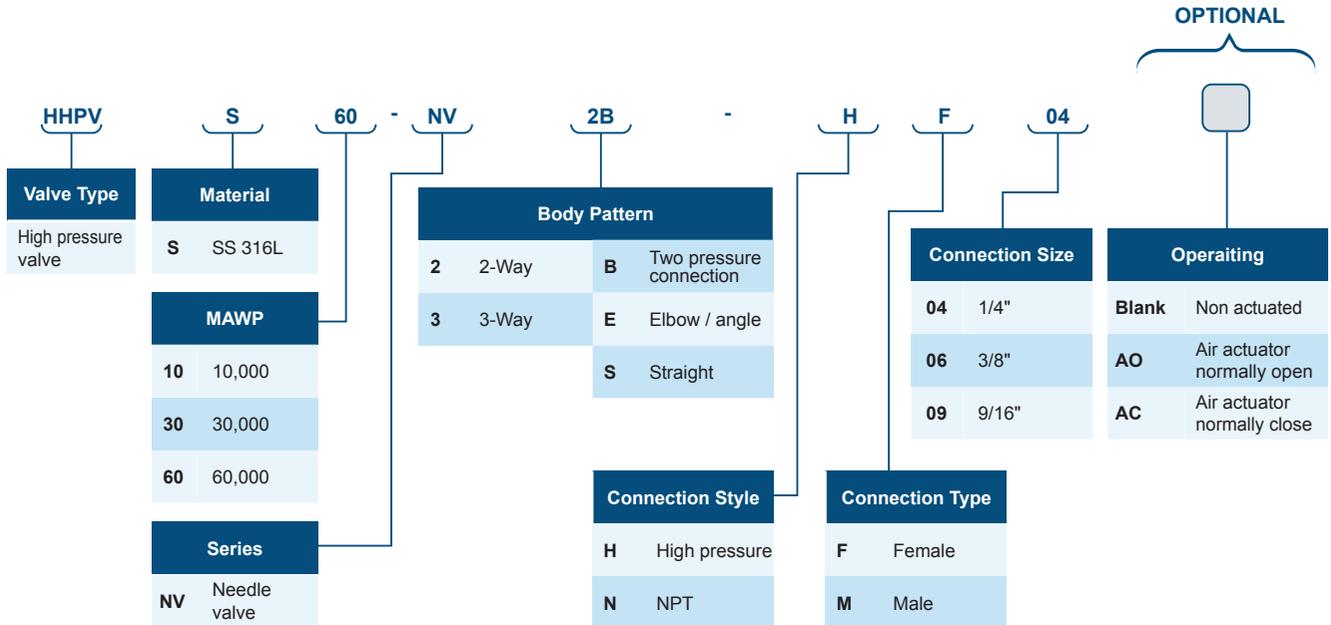
DESCRIPTION	Configuration	END		Operation Pressure	Orifice		A		B		C		D		E		F		G		W		
		Connection	Size		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm			
			inch																			mm	bar
10,000 psi (689.5 bar)																							
HHPVS10-NV2S-NF8-AO	Straight	Female NPT	1/2	-	5.0	72.5	0.30	7.50	6.69	170.0	8.03	204.0	2.52	64.0	3.27	83.00	6.93	176.0	6.93	176.0	-	-	36.0
HHPVS10-NV2E-NF8-AO	Angle		8.23	209.0	6.65	169.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
30,000 psi (2,100 bar)																							
HHPVS30-NV2S-HF6-AO	Straight	High Pressure C&T	3/8	9.53	5.0	72.5	0.20	5.00	6.69	170.0	7.52	191.0	1.97	50.0	3.27	83.00	6.50	165.0	6.85	174.0	0.64	16.21	31.0
HHPVS30-NV2E-HF6-AO	Angle										7.52	191.0							6.85	174.0			
HHPVS30-NV3B-HF6-AO	3 way - 2 on pressure										7.87	200.0							6.85	174.0			
HHPVS30-NV2S-HF9-AO	Straight	High Pressure C&T	9/16	14.29	5.0	72.5	0.30	7.50	8.35	212.0	8.03	204.0	2.52	64.0	3.27	83.00	6.65	169.0	7.20	183.0	0.82	21.90	36.0
HHPVS30-NV2E-HF9-AO	Angle										8.03	204.0							7.20	183.0			
HHPVS30-NV3B-HF9-AO	3 way - 2 on pressure										8.58	218.0							7.20	183.0			
60,000 psi (4,200 bar)																							
HHPVS60-NV2S-HF4-AO	Straight	High Pressure C&T	1/4	6.35	5.0	72.5	0.10	3.50	6.69	170.0	7.52	191.0	1.97	50.0	3.27	83.00	6.50	165.0	6.85	174.0	0.59	15.09	31.0
HHPVS60-NV2E-HF4-AO	Angle										7.52	191.0							6.85	174.0			
HHPVS60-NV3B-HF4-AO	3 way - 2 on pressure										7.87	200.0							6.85	174.0			
HHPVS60-NV2S-HF6-AO	Straight	High Pressure C&T	3/8	9.53	5.0	72.5	0.14	3.50	6.69	170.0	7.52	191.0	1.97	50.0	3.27	83.00	6.50	165.0	6.85	174.0	0.64	16.21	31.0
HHPVS60-NV2E-HF6-AO	Angle										7.52	191.0							6.85	174.0			
HHPVS60-NV3B-HF6-AO	3 way - 2 on pressure										7.87	200.0							6.85	174.0			
HHPVS60-NV2S-HF9-AO	Straight	High Pressure C&T	9/16	14.29	5.0	72.5	0.20	5.00	8.35	212.0	8.03	204.0	2.52	64.0	3.27	83.00	6.65	169.0	7.20	183.0	0.82	20.92	36.0
HHPVS60-NV2E-HF9-AO	Angle										8.03	204.0							7.20	183.0			
HHPVS60-NV3B-HF9-AO	3 way - 2 on pressure										8.58	218.0							7.20	183.0			

NEEDLE VALVE – AIR-OPERATED, NORMALLY CLOSE – DIMENSIONS



DESCRIPTION	Configuration	END		Orifice	Operation Pressure	A		B		C		D		E		F		G		W			
		Connection	Size			inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm				
			inch	mm	inch															mm	bar	psi	inch
10,000 psi (689.5 bar)																							
HHPVS10-NV2S-NF8-AC	Straight	Female NPT	1/2	-	6.50	87.00	0.30	7.50	6.69	170.0	9.21	234.0	2.52	64.0	4.45	113.0	8.11	206.0	8.11	206.0	-	-	36.0
HHPVS10-NV2E-NF8-AC	Angle										9.41	239.0					7.83	199.0	-	-			
30,000 psi (2,100 bar)																							
HHPVS30-NV2S-HF6-AC	Straight	High Pressure C&T	3/8	9.53	6.50	87.00	0.20	5.00	6.69	170.0	8.70	221.0	1.97	50.0	4.45	113.0	7.68	195.0	8.03	204.0	0.64	16.21	31.0
HHPVS30-NV2E-HF6-AC	Angle										8.70	221.0							8.03	204.0			
HHPVS30-NV3B-HF6-AC	3 way - 2 on pressure										9.06	230.0							8.03	204.0			
HHPVS30-NV2S-HF9-AC	Straight	High Pressure C&T	9/16	14.29	6.50	87.00	0.30	7.50	8.35	212.0	9.21	234.0	2.52	64.0	4.45	113.0	7.83	199.0	8.39	213.0	0.82	21.90	36.0
HHPVS30-NV2E-HF9-AC	Angle										9.21	234.0							8.39	213.0			
HHPVS30-NV3B-HF9-AC	3 way - 2 on pressure										9.76	248.0							8.39	213.0			
60,000 psi (4,200 bar)																							
HHPVS60-NV2S-HF4-AC	Straight	High Pressure C&T	1/4	6.35	6.50	87.00	0.10	3.50	6.69	170.0	8.70	221.0	1.97	50.0	4.45	113.0	7.68	195.0	8.03	204.0	0.59	15.09	31.00
HHPVS60-NV2E-HF4-AC	Angle										8.70	221.0							8.03	204.0			
HHPVS60-NV3B-HF4-AC	3 way-2 on pressure										9.06	230.0							8.03	204.0			
HHPVS60-NV2S-HF6-AC	Straight	High Pressure C&T	3/8	9.53	6.50	87.00	0.14	3.50	6.69	170.0	8.70	221.0	1.97	50.0	4.45	113.0	7.68	195.0	8.03	204.0	0.64	16.21	31.00
HHPVS60-NV2E-HF6-AC	Angle										8.70	221.0							8.03	204.0			
HHPVS60-NV3B-HF6-AC	3 way-2 on pressure										9.06	230.0							8.03	204.0			
HHPVS60-NV2S-HF9-AC	Straight	High Pressure C&T	9/16	14.29	6.50	87.00	0.20	5.00	8.35	212.0	9.21	234.0	2.52	64.0	4.45	113.0	7.83	199.0	8.39	213.0	0.82	20.92	36.0
HHPVS60-NV2E-HF9-AC	Angle										9.21	234.0							8.39	213.0			
HHPVS60-NV3B-HF9-AC	3 way-2 on pressure										9.76	248.0							8.39	213.0			

HHP NEEDLE VALVES ORDERING INFORMATION



HIGH-PRESSURE CHECK VALVES UP TO 60,000 PSI

FEATURES

- Cone-and-thread connection for secure high-pressure sealing
- Available in 1/4", 3/8", and 9/16" sizes
- 316L stainless steel valve body with high mechanical strength
- Ball-seal poppet with durable metal-to-metal seat
- Soft-seal poppet with reliable O-ring seat
- Nominal cracking pressure of 15 psi (1.0 bar)
- Two design options to suit a wide range of applications

⚠ Check valves are designed exclusively for directional flow control and must not be used as code safety relief devices, isolation valves, or shut-off valves. Improper use of UCT check valves in these applications can create hazardous conditions and compromise system integrity.

⚠ If valves remain inactive for an extended period, the initial cracking pressure may exceed the specified set pressure.

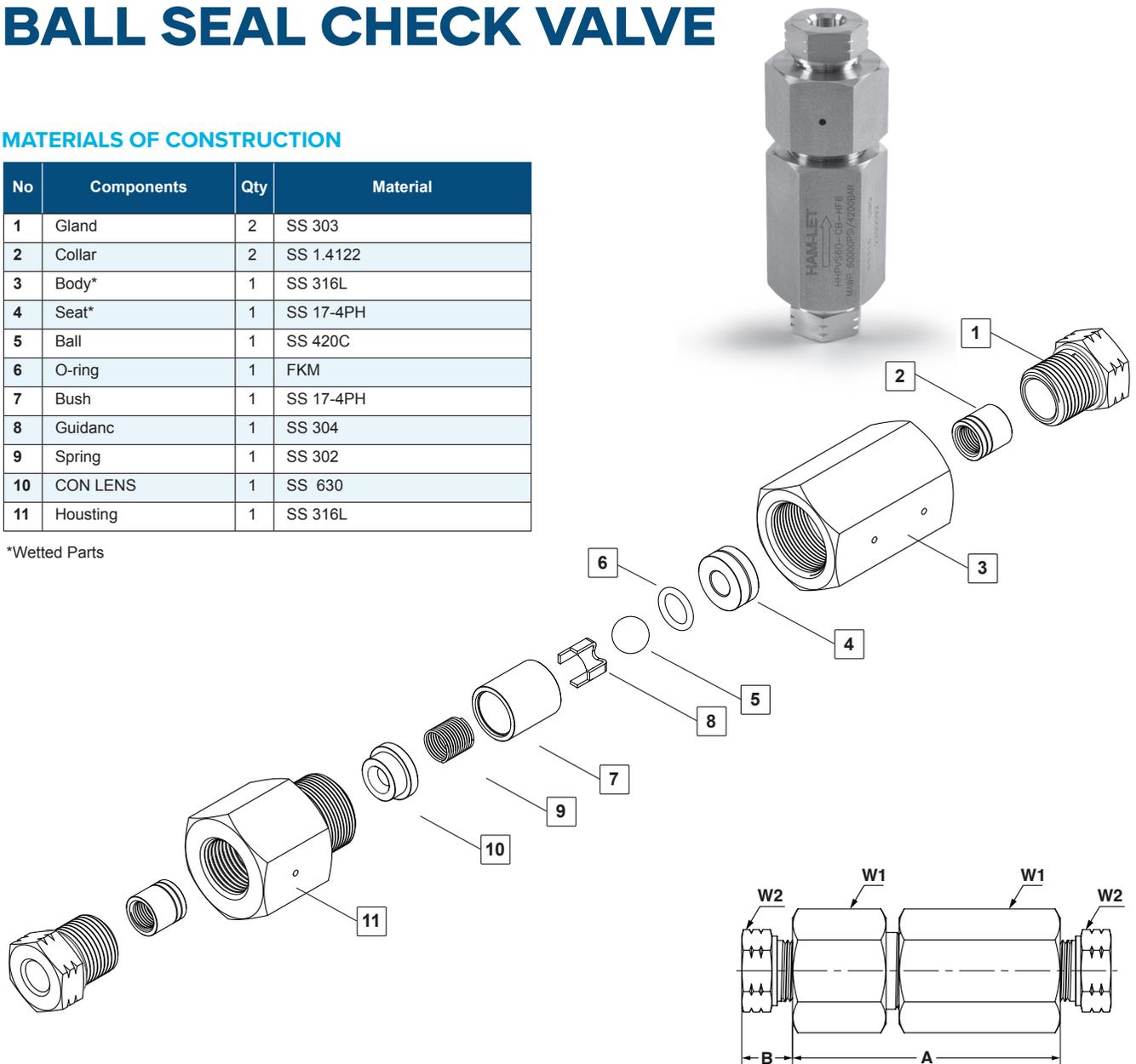


BALL SEAL CHECK VALVE

MATERIALS OF CONSTRUCTION

No	Components	Qty	Material
1	Gland	2	SS 303
2	Collar	2	SS 1.4122
3	Body*	1	SS 316L
4	Seat*	1	SS 17-4PH
5	Ball	1	SS 420C
6	O-ring	1	FKM
7	Bush	1	SS 17-4PH
8	Guidanc	1	SS 304
9	Spring	1	SS 302
10	CON LENS	1	SS 630
11	Housing	1	SS 316L

*Wetted Parts



BALL SEAL CHECK VALVE DIMENSIONS

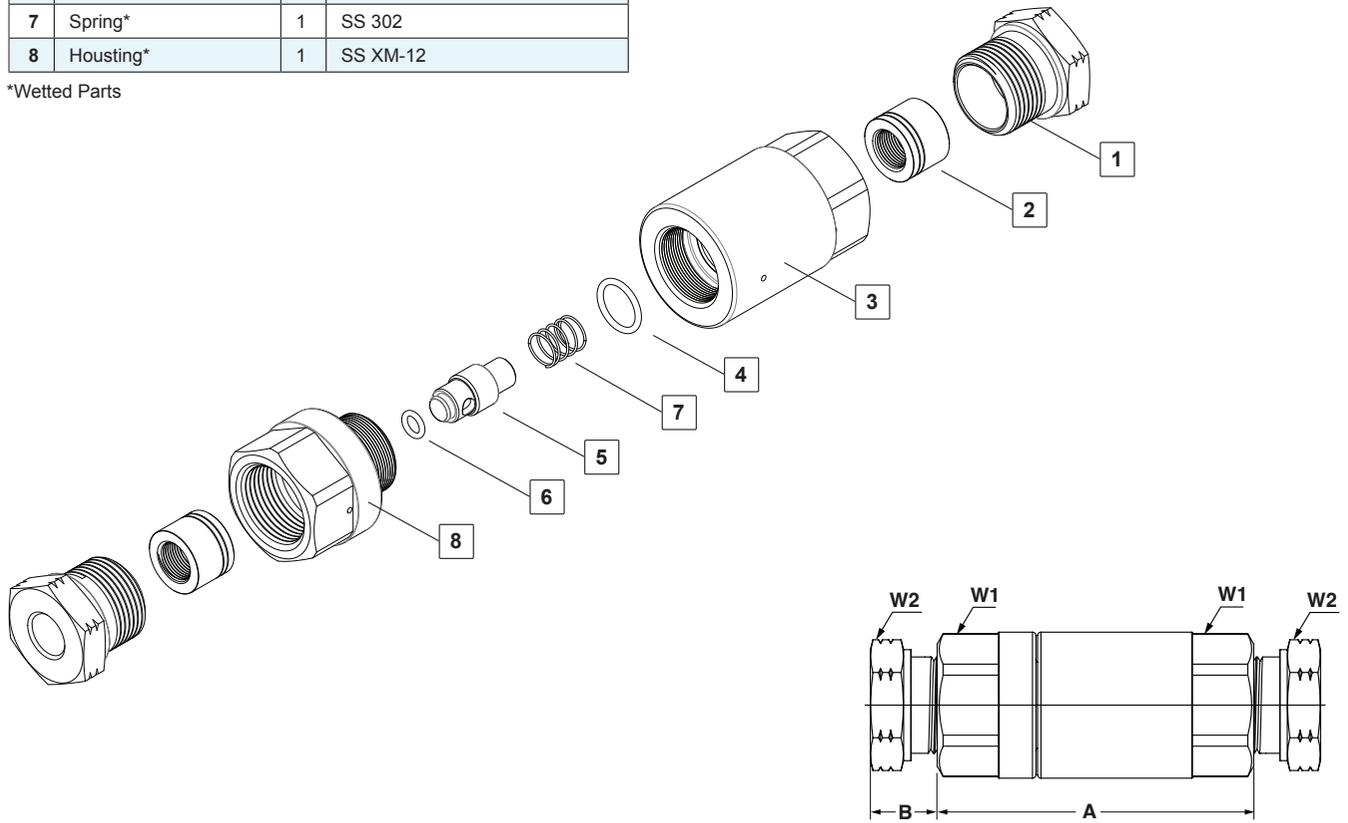
UCT DESCRIPTION	Connection	END		Orifice		Tube O.D.		A		B		W1	W2
		Size		inch	mm	inch	mm	inch	mm	inch	mm	Hex flat	Hex flat
		inch	mm										
30,000 Psi (2,100 bar)													
HHPVS30-CB-HF6	HF	3/8	9.53	0.02	5.00	3/8	9.53	3.27	83.00	0.64	16.21	1-5/16	1-5/16
60,000 Psi (4,200 bar)													
HHPVS60-CB-HF4	HF	1/4	6.35	0.09	2.20	1/4	6.35	74.00	93.00	0.59	15.09	1-5/16	1-5/16
HHPVS60-CB-HF6	HF	3/8	9.53	0.14	3.50	3/8	9.53	3.11	79.00	0.64	16.21	1-5/16	1-5/16

POPPET SEAL CHECK VALVE

MATERIALS OF CONSTRUCTION

No.	Components	Qty	Material
1	Gland	2	SS 303
2	Collar*	2	SS 1.4122
3	Body*	1	SS Alloy 15-5 PH
4	O-ring 2-010*	1	FKM
5	Poppet*	1	SS 316L
6	O-ring 6-005*	1	FKM
7	Spring*	1	SS 302
8	Housing*	1	SS XM-12

*Wetted Parts



POPPET SEAL CHECK VALVE DIMENSIONS

UCT DESCRIPTION	Connection	END		Orifice		Tube O.D.		A		B		W1	W2
		Size		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
		inch	mm										
30,000 Psi (2,100 bar)													
HHPVS30-CP-HF9	HF	9/16	14.29	0.30	7.50	9/16	14.29	3.66	93.0	0.82	20.9	1-1/2	1-5/16
60,000 Psi (4,200 bar)													
HHPVS60-CP-HF9	HF	9/16	14.29	0.20	5.00	9/16	14.29	3.66	93.0	0.82	20.9	1-1/2	1-5/16

HIGH PRESSURE CHECK VALVE ORDERING INFORMATION

Valve Type	Material	MAWP	Series	Connection Style	Connection Type	Connection Size
High pressure valve	S SS 316L	10 10,000 30 30,000 60 60,000	CB Ball seal CP Poppet seal	H High pressure N NPT	F Female M Male	4 1/4" 6 3/8" 9 9/16"

HIGH PRESSURE FILTERS UP TO 30,000 PSI

FEATURES

- In-line mounting for easy integration
- Temperature range: -20°C to 60°C
- Cone-and-thread connection, available in 1/4" and 3/8" sizes
- Robust stainless steel 15-5 PH body material
- Replaceable filter elements in 5 μm , 20 μm , and 40 μm ratings
- Easy maintenance with quick replacement of filter element

GENERAL

The UCT high-pressure filter is engineered for maximum filtration capacity in demanding high-pressure applications. Its large filter surface minimizes the need for frequent element replacements and ensures long service life. The filter is supplied with high-pressure connections and can be installed in-line to optimize space.

Filter element replacement is quick and simple, requiring only basic tools. Standard assemblies are available with 5 μm absolute, 20 μm nominal, and 40 μm nominal filter elements to cover a wide range of typical applications. Custom element sizes can be available upon request.



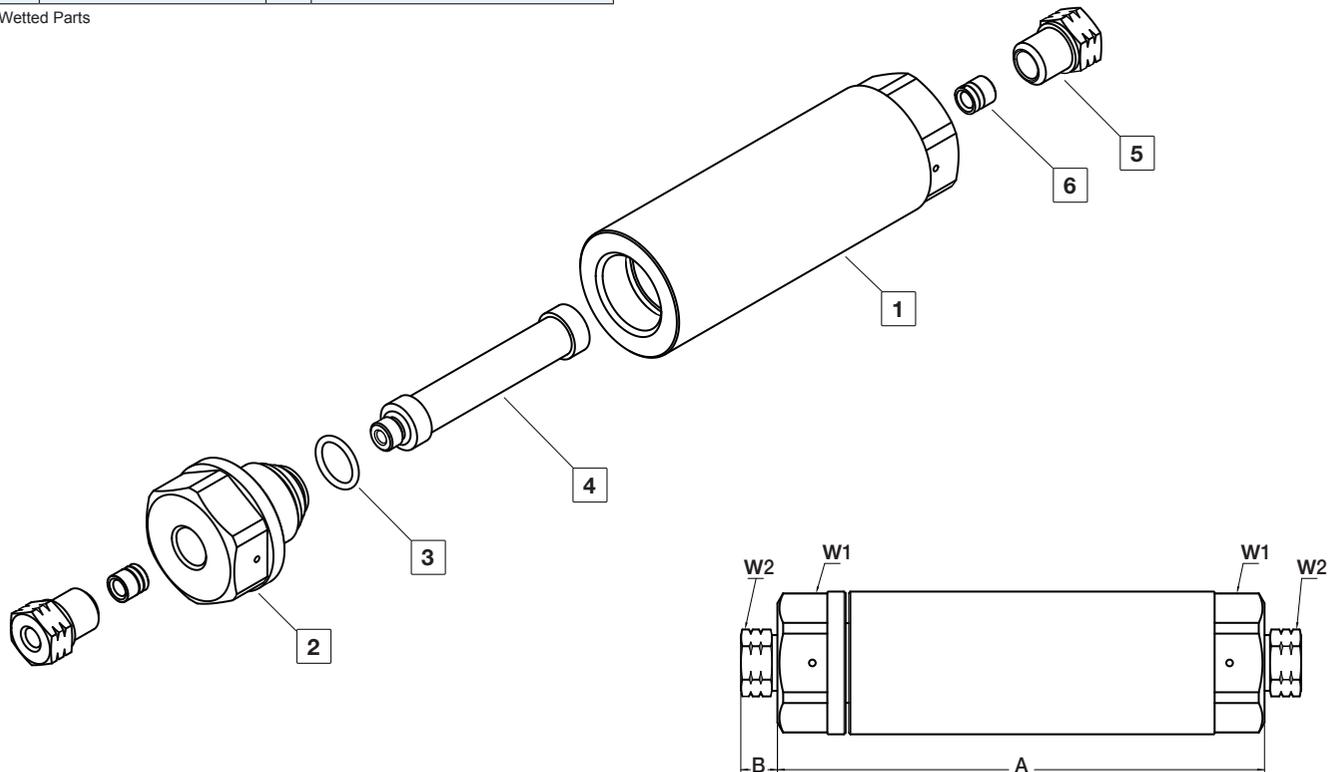
HIGH-PRESSURE FILTER

MATERIALS OF CONSTRUCTION



No.	Components	Qty	Material
1	Housing*	1	SS 15-5 PH
2	Body*	1	SS 15-5 PH
3	O-Ring	1	BUNA-A
4	Filter*	1	SS 316
5	Gland	2	SS 303
6	Collar	2	SS 1.4122

*Wetted Parts



HIGH PRESSURE FILTER DIMENSIONS

Description	END		Orifice		A		B		W1	W2	
	Connection	Size	inch	mm	inch	mm	inch	mm	Hex	Hex	
									flat	flat	
inch	mm	inch	mm	inch	mm	inch	mm	inch	inch		
HHPVZ30-F5-HF4	HF	1/4	6.35	0.086	2.20	5.76	146.40	0.59	15.09	1-1/2	11/16
HHPVZ30-F5-HF6	HF	3/8	9.53	0.14	3.50	5.76	146.40	0.64	16.21	1-1/2	7/8
HHPVZ30-F20-HF4	HF	1/4	6.35	0.086	2.20	5.76	146.40	0.59	15.09	1-1/2	11/16
HHPVZ30-F20-HF6	HF	3/8	9.53	0.14	3.50	5.76	146.40	0.64	16.21	1-1/2	7/8
HHPVZ30-F40-HF4	HF	1/4	6.35	0.086	2.20	5.76	146.40	0.59	15.09	1-1/2	11/16
HHPVZ30-F40-HF6	HF	3/8	9.53	0.14	3.50	5.76	146.40	0.64	16.21	1-1/2	7/8

HIGH PRESSURE FILTER ORDERING INFORMATION

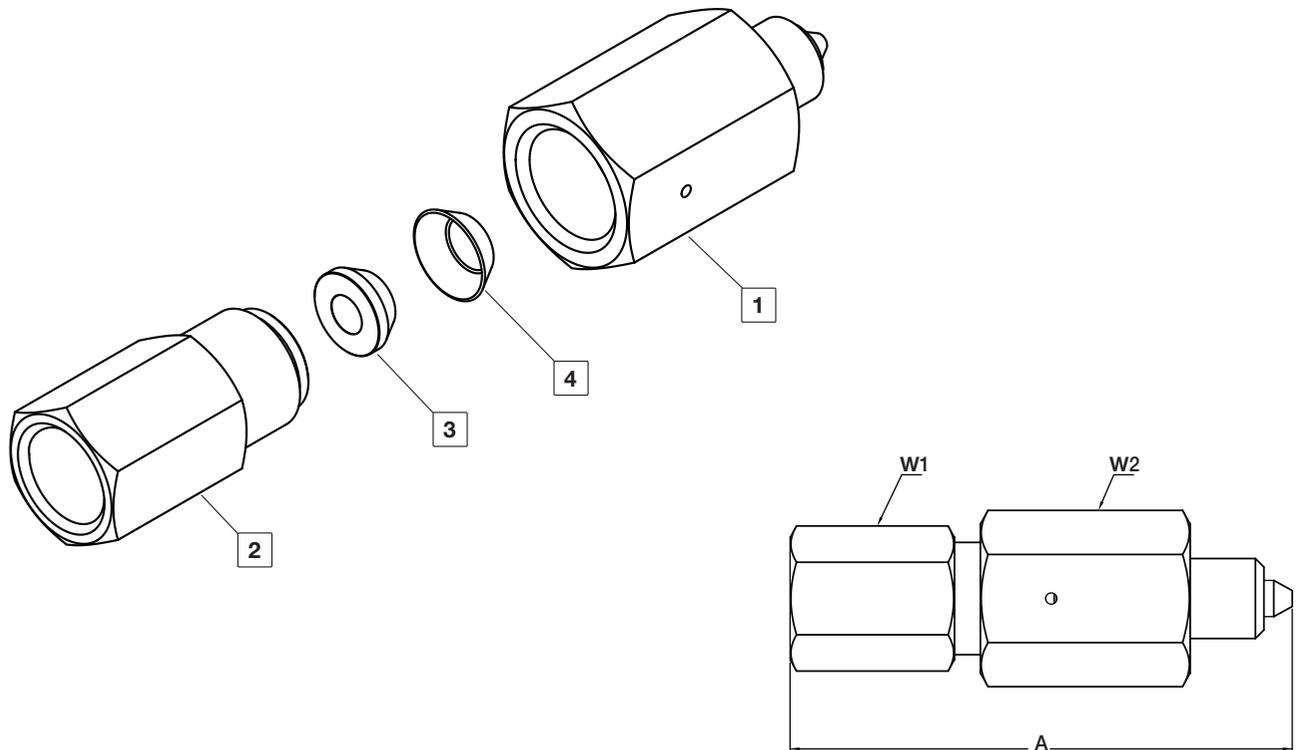
HHPV		Z		30		-		F5		-		H		F		4	
Valve Type		Material		MAWP		Filter Element		Connection Style		Connection Type		Size					
High pressure valve		Z	SS 15-5 PH	30	30,000 psi	F5	5 Micron	H	High-pressure cone and thread	F	Female	4	1/4"				
						F20	20 Micron	M		Male	6	3/8"					
						F40	40 Micron										

HIGH-PRESSURE RUPTURE DISC

MATERIALS OF CONSTRUCTION

No.	Components	Qty	Material
1	*Body	1	SS 316L
2	Gland	1	SS 316L
3	Lens	1	SS 17-4 PH
4	*Disc	1	SST 316

*Wetted Parts



HIGH PRESSURE RUPTURE DISC DIMENSIONS

Description	END		Orifice		A		W1 Hex flat	W2 Hex flat	
	Connection	Size		inch	mm	inch			mm
		inch	mm						
HHPFS60-RD-HF4	HF	1/4	6.35	0.08	2.20	3.48	88.60	7/8	1-1/16
HHPFS60-RD-HF6	HF	3/4	19.05	0.14	3.50	3.56	90.60	7/8	1-1/16

HIGH PRESSURE RUPTURE DISC ORDERING INFORMATION

Valve Type		Material		MAWP		Rupture Disc		Connection Type		Size		Burst Pressure - Optional	
High pressure valve		S	SS 316L	60	60,000 psi	RD	Rupture Disc	F	Female	4	1/4"	1.8K	130 bar / 1,885 psi
								M	Male	6	3/8"	2.5K	175 bar / 2,540 psi
												2.9K	200 bar / 2,900 psi
												3.7K	260 bar / 2,770 psi
												4.6K	320 bar / 4,640 psi
												6.2K	430 bar / 6,235 psi
												7.2K	500 bar / 7,250 psi
												7.9K	550 bar / 7,975 psi
												9.4K	650 bar / 9,425 psi
												10K	750 bar / 10,875 psi
												12K	865 bar / 12,545 psi
												14K	1,000 bar / 14,505 psi
												18K	1,250 bar / 18,130 psi
												23K	1,600 bar / 23,205 psi
												25K	1,725 bar / 254,020 psi
												27K	1,900 bar / 24,555 psi
												29K	2,000 bar / 29,005 psi
												37K	2,585 bar / 37,490 psi
												47K	3,250 bar / 47,135 psi
												50K	3,450 bar / 50,035 psi
												62K	4,310 bar / 62,510 psi

HIGH PRESSURE RUPTURE DISC SPARE PARTS

Z-RD	-		50K
Rupture Disc	Burst Pressure		
1.8K	130 bar /	1,885 psi	
2.5K	175 bar /	2,540 psi	
2.9K	200 bar /	2,900 psi	
3.7K	260 bar /	3,770 psi	
4.6K	320 bar /	4,640 psi	
6.2K	430 bar /	6,235 psi	
7.2K	500 bar /	7,250 psi	
7.9K	550 bar /	7,975 psi	
9.4K	650 bar /	9,425 psi	
10K	750 bar /	10,875 psi	
12K	865 bar /	12,545 psi	
14K	1,000 bar /	14,505 psi	
18K	1,250 bar /	18,130 psi	
23K	1,600 bar /	23,505 psi	
25K	1,725 bar /	25,020 psi	
27K	1,900 bar /	27,555 psi	
29K	2,000 bar /	29,005 psi	
37K	2,585 bar /	37,490 psi	
47K	3,250 bar /	47,135 psi	
50K	3,450 bar /	50,035 psi	
62K	4,310 bar /	62,510 psi	

CONE AND THREAD TOOLING

In addition to all the fittings and valves in the HHP line, tools that create a complete set of high pressure line assembly are available.

There are 3 types of Cone and Thread tubes available in the HHP line:

- Nipple in standard length
- Smooth tube that needs to be Coned and Threaded by the customer

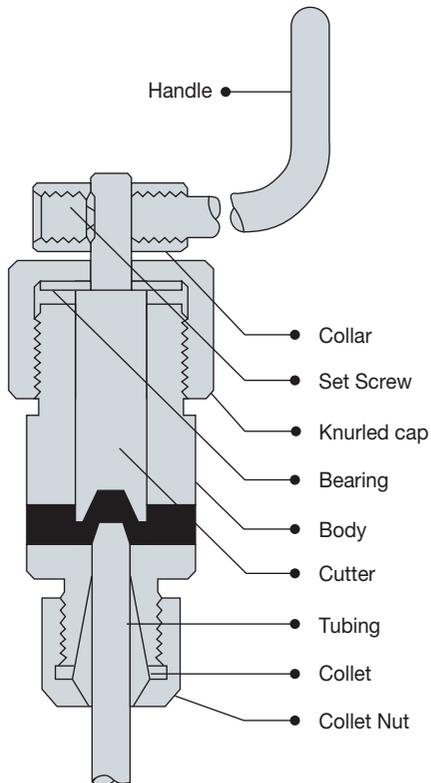
HHP Cone and Thread tools are used for high pressure connections and are simple to handle. Cutting fluid is supplied with each order of coning tool in order to preform the cone properly. Some parts are interchangeable from one tube size to another on both the threading and cone tools.

CONING TOOL

The HHP cone tool is used in order to perform a cone in approximately 57°-59°

in Medium pressure, High pressure, and Ultra-High-pressure tubing ends.

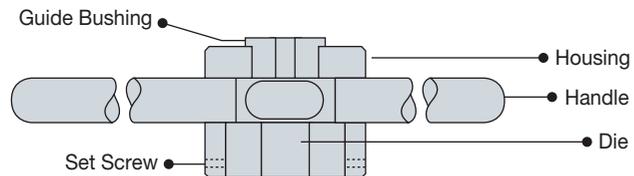
The cutter and collet are interchangeable in all assemblies except for 9/16", in order to permit easier changing from one tube size to another.



THREADING TOOL

The HHP threading tool is used in order to provide left-handed thread preparation on high pressure tubing ends.

The die and guide bushing are interchangeable in all assemblies except for 1/8" in order to permit easier changing from one tube size to another.



CONING AND THREADING INSTRUCTIONS

CONING TUBING ENDS

In order to get a proper sealing, you must use the HHP coning tool that provides approximately a 57°-59° cone in the end of the tube by completing the following steps:

1. Cut the tube with a UCT Tube cutter and make sure to clean it properly with a UCT Deburring tool.
2. Place the coning tool on a suitable vise and secure the body so you will have excess to the collet nut and knurled cap.
3. Rotate the knurled cap as far as possible towards the coning tool body.
4. Take the knurled cap back away from the coning body by rotating counterclockwise for a number of complete rotations as indicated below:

Tubing O.D. size	Number of turns
1/8"	3
1/4"	4.5
3/8"	4.5
9/16"	8

- amount of oil (cutting fluid) that is provided by HHP into the cutter and the coning body.
9. Reassemble the cutter and knurled cap back on the body until the cutter touches the tubing end.
 10. Rotate the handle of the cutting tool clockwise rapidly with one hand while simultaneously slowly rotating the knurled cap clockwise with your other hand. Do not force the cutter against the tubing because it will bend. In order to perform the cone completely please rotate the knurled cap as indicated below

Tubing O.D. size	Number of turns
1/8"	2.5
1/4"	3.5
3/8"	4.54
9/16"	7.5

5. Insert the cut tube into the collet until it stops against the inside of the cutter.
6. Tighten the collet nut on the tube in order to secure its position.
7. Remove the knurled cap and cutter from the coning body by rotating the knurled cap counter-clockwise.
8. After removing the knurled cap and cutter apply a small

11. After finishing coning the tube remove the tube from the collet by loosening the collet nut.
Make sure to clean the cutting fluid and metal chips that remain in the body for the next assembly, after removing the knurled cap and cutter.

THREADING TUBING ENDS

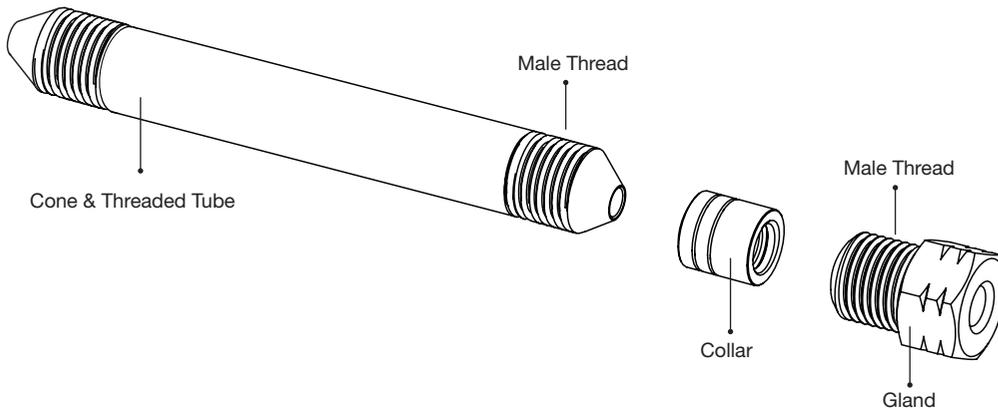
In order to get a left-hand thread onto the end of the tube to receive a proper connection you must use HHP threading tool and operate by the following steps:

1. Remove the knurled cap and the cutter from the coning tool as it will be used as a tube holder for the threading operation.
2. After the tube is secured in place please put a small amount of oil (cutting fluid) on the end of the tube.
3. Place the threading tool onto the tubing while the guide busing side is first.
4. Start rotating the threading tool counterclockwise and after you start gaining momentum begin to rotate it with the handles.
You may need to move back and forth in order to remove chips from the tube end, please continue placing the oil on the end of the tube at all times.
5. Remove the tube from the threading tool and clean the oil and chip leftovers.
6. The tube is ready for use.

NOTE: If the tube collar feels too tight or too loose while screwing on the tube, the die needs to be adjusted. Please remove the die from the holder by loosening the outer set screw, on the side of the die there is a small adjustment screw that can be turned in order to precisely set the die.

UCT HIGH PRESSURE -HHP INSTALLATION INSTRUCTIONS

Any installation of HHP elements with cone & thread (c&t) end connection, either to fitting, adapter or a valve, must be conducted by the following steps:



1. Lubricate all male threads with any anti-seize lubricant.
2. Apply the same lubricant to the cone end of the tubing.
3. Thread the collar counter-clock wise (left-hand thread) to the tube, up to 1-2 full thread spaces from the cone end of the tube.
4. Insert the tube with the collar into the fitting body.
5. Before applying the final torque, pay attention that the tube is on full contact with the female cone on the fitting body, a full metal face to face contact should be achieved.
6. Thread the gland into the fitting body until finger tight.
7. Hold the fitting body steady and tighten the gland to the required torque.



CONING AND THREADING INSTRUCTIONS

Manual coning and threading tool for optimum performance with tubing sizes up to 9/16" (14.3 mm) outside diameter. These manual tools permit on-site end preparation for UCT high pressure fittings and tubing installations.



Turn the knurled cap counterclockwise to remove cap and cutter from tool. Apply a very liberal amount of cutting fluid to the end of the cutter. Screw cap and cutter back into the body until the cutter contacts the end of the tubing.

THREADING THE TUBING



The coning tool (with the knurled cap and cutter removed) provides an ideal way to hold the tubing for the threading operation.

CONING TUBING ENDS



Secure the coning tool body in a suitable devise. Angle position is preferred to have better access to the collet nut and knurled cap. Rotate the knurled cap clockwise into the tool as far as it will go. Back off knurled cap by rotating counterclockwise a number of complete rotations as indicated in the table below. (A mark on the knurled cap may be useful)



Rotate the handle of the of cutting tool clockwise fairly rapidly with one hand while slowly rotating the knurled cap clockwise with the other hand in order to continuously feed the cutter into the tubing. Do not overly force the cutter against the tubing as it will bend. (You will quickly develop the proper feel). You will need to rotate the knurled cap a complete number of turns as per the chart below in order to complete the cone on the end of the tubing.



Apply a liberal amount of cutting fluid to the end of the tubing. Place the threading tool (guide bushing side first) onto the tubing.



Place the palm of your hand firmly against the center of the threading tool and rotate your wrist counterclockwise. This will help "start" the die onto the tube. After you feel the die start onto the tubing, continue to rotate the threading tool using the handles. Remove the threading tool and clean off the cutting fluid and chips.

Tubing Size	"Back off Turns"
1/2 O.D.	3 turns
1/4 O.D.	4-1/2 turns
3/4 O.D.	4-1/4 turns
9/16 O.D.	8 turns

Tubing Size	"Back off Turns"
1/2 O.D.	2-1/2 turns
1/4 O.D.	3-1/2 turns
3/4 O.D.	4 turns
9/16 O.D.	7-1/2 turns



Insert tubing through the collet nut and collet until tubing stops up against the inside cutter. Tighten the collet nut to secure tubing into position.

After coning the tubing end, loosen the collet nut and remove tubing from the tool. Remove the knurled cap and cutter from the tool to clean off the cutting fluid and steel chips in preparation for the next tube.

The 1/4" O.D. and 3/8" O.D. tubing sizes are relatively easy to cone. The 1/8" O.D. size is "delicate" (be especially careful not to force the cutter). The 9/16" O.D. size requires the most amount of firmness in the cutting.

As with other tools, it is not uncommon for a collet to "stick" even after the collet nut has been released. Should this occur, simply tap the side of the collet nut firmly with the wrench to release the collet.

Note: The tubing collar should easily screw onto the tubing. If it feels too tight or too loose, the die should be adjusted accordingly. Simply remove the die from the holder by loosening the outer set screw. The small adjustment screw located on the side of the die can be turned to precisely set the die.

CONING AND THREADING TOOLS

How to order

Coning Tool

Ordering Information	TUBE O.D. Connection		TUBE I.D. Connection		Ordering Information Spare Cutter	Ordering Information Spare Collet
	inch	mm	inch	mm		
High Pressure: 60,000 psi (4,200 bar)						
HHPT60-CT-HF4	1/4	6.35	0.109	2.77	HHPT60-CT-HF4-CUT	HHPT60-CT-HF4-COL
HHPT60-CT-HF6	3/8	9.52	0.203	5.16	HHPT60-CT-HF6-CUT	HHPT60-CT-HF6-COL
HHPT60-CT-HF9	9/16	14.29	0.312	7.92	HHPT60-CT-HF9-CUT	HHPT60-CT-HF9-COL

Threading Tool

Ordering Information	TUBE O.D. Connection		Ordering Information Threading Die	Ordering Information Guide Bushing
	inch	mm		
High Pressure: 60,000 psi (4,200 bar)				
HHPT60-TT-HF4	1/4	6.35	HHPT60-TT-HF4-TD	HHPT60-TT-HF4-GB
HHPT60-TT-HF6	3/8	9.52	HHPT60-TT-HF6-TD	HHPT60-TT-HF6-GB
HHPT60-TT-HF9	9/16	14.29	HHPT60-TT-HF9-TD	HHPT60-TT-HF9-GB