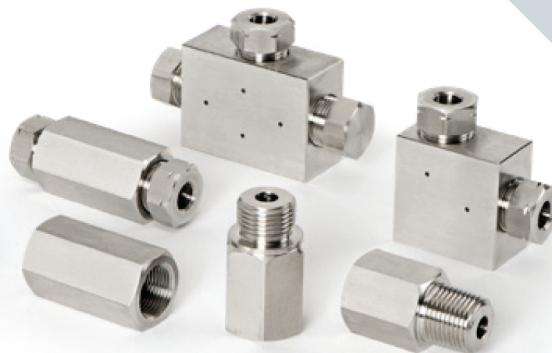


# HAM-LET HIGH PRESSURE

UP TO 60,000 PSI





# HAM-LET HIGH PRESSURE

Ham-Let Group, a worldwide company, has produced high quality fittings, valves, and instrumentation solutions since its establishment in 1950.

Our company standard of research and development, paired with our topnotch engineers has put us at the forefront of development.

We have developed the Ham-let 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 pressures 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.

HHP line can be provided in high tensile strength stainless steel and we consistently develop a variety of exotic materials and for sour gas applications.

As with all Ham-Let products, the HHP line is backed by Ham-Let's commitment to the highest quality-control standards and skilled craftsmanship.

HHP offering of a complete range of high quality High-Pressure components:

- High Pressure Valves
- High Pressure Fittings
- High Pressure Tubes
- 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



# HIGH PRESSURE UP TO **60,000 PSI** SERVICE

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

- HHP high pressure line provide wide range of fittings including coupling, elbow, tee and cross with cone and thread connection to pressure rating up to 60,000 PSI and for 1/4", 3/8", 9/16" O.D sizes.
- All fittings body material is from high tensile 316 stainless steel.
- All fittings are supplied with glands and sleeves.

High-pressure connections having an elastic metal-to-metal sealing. A complete connection consists of four parts: a high-pressure tube, a collar, a gland and a female part (fitting, valve or adapter). The tube has a cone point of 58° which is pressed in the 60° cone of the counterpart.

The gland and the collar are identical to the 58°/60° connection. A bleed hole prevents pressure build-up behind the gland in case of a leak. Ham-Let offers a complete range of fittings and adapters for high pressure applications, specially designed to match the performance of our valves and tubing.

We can supply fittings and adapters for virtually any configuration of systems designed for handling fluids and gases at extreme pressures and temperatures.

All fittings and adapters are marked with Ham-Let logo, ordering code, material specification, pressure rating for which they can be used and material batch number (refers to DIN 3.1.B material certificate).

On request most fittings and adapters are available to NACE MR0175 / ISO 15156 for sour gas service. For pressures up to 7000 bar (100.000 psi) fitting and adapter bodies are made of cold drawn stainless steel, type DIN 1.4404 (AISI 316L); for higher pressures bodies are made of specially treated stainless steel 17-4 PH. The glands are made of stainless steel, type DIN 1.4305 (AISI 303F) and the collars are made of DIN 1.4122.





# HIGH PRESSURE NEEDLE VALVES UP TO **60,000 PSI** SERVICE

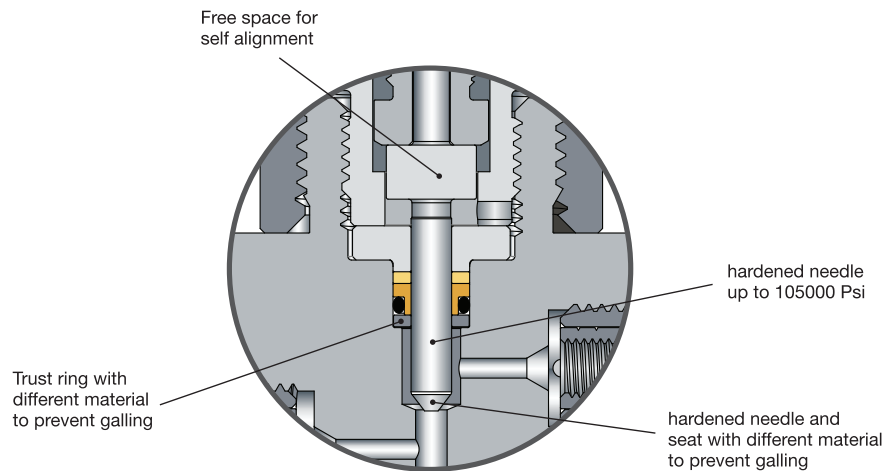
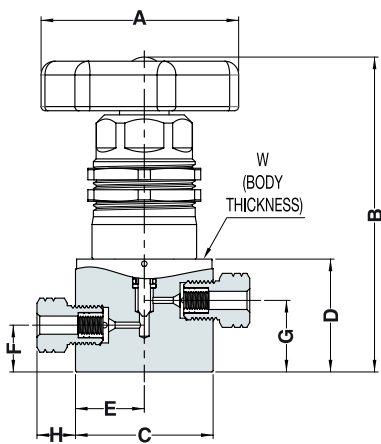
- **Connection type:** cone and thread connection is available in 1/4", 3/8", 9/16" sizes and for pressure rating of 60,000 Psi.
- **Tip stem:** all high pressure connection valves are with Non-rotating stem with Vee Tip as a default, non-rotating stem assure that there will not be any material reduction in the sealing area between the stem Tip and the body and to prevent galling. Large orifices at rated pressures

Panel mounting standard Safety cover protects the operator against blowout of valve internals  
Internal stem-lifting stop prevents stem blowout self-adjusting compensating packing requires minimal pre-loading

- **Materials:** valve body is from 316L stainless steel with high mechanical properties.
- **Packing:** PTFE packing is a default, suitable for working temperature from -10°C to 60°C

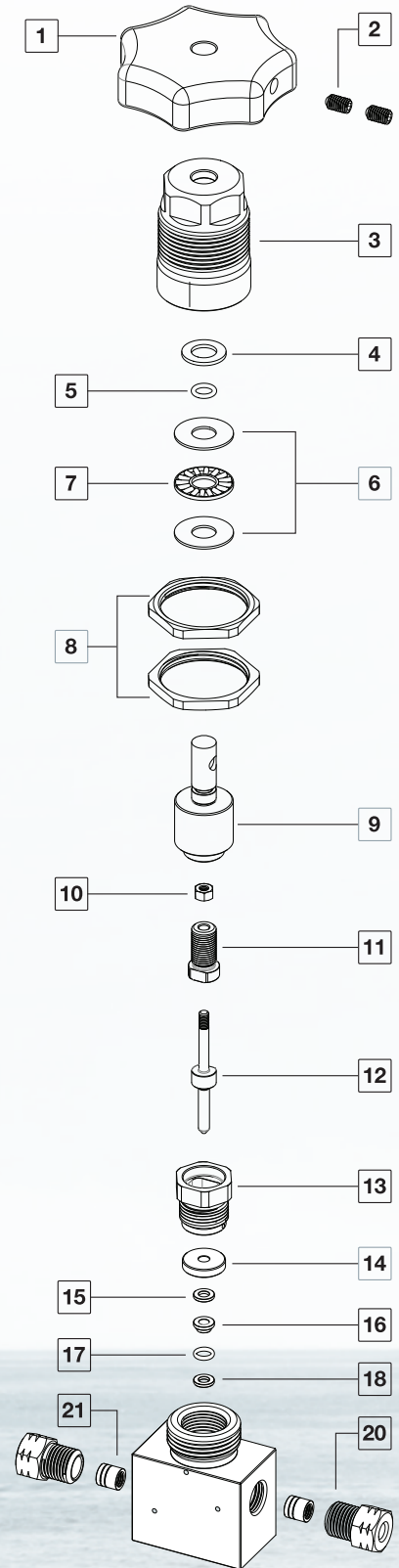
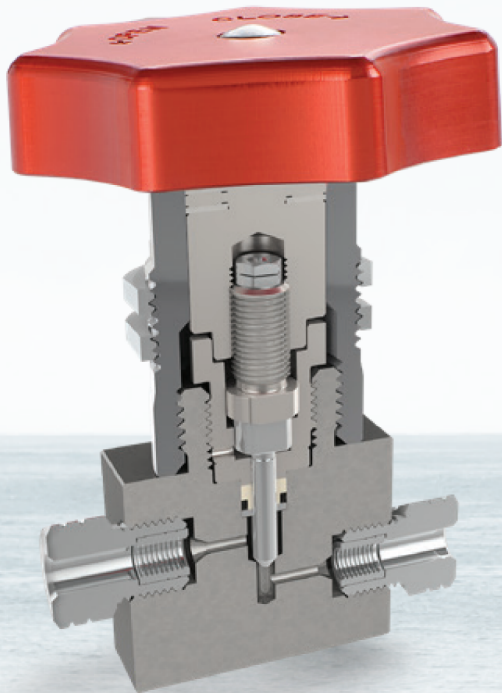
Ergonomically formed hand wheel prevents damage to valves by use of "strange tools" Needle thrust bearing ensures smooth operation  
Self-adjusting compensating packing requires minimal pre loading low frictional resistance and excellent chemical resistance of packing material. Wide internal orifices ensure excellent flow capabilities.

- **Actuators:** Pneumatic actuators are available for all valves type.



## NV VALVES MATERIAL OF CONSTRUCTION

Item No.	Component	Qty.	Material
			Pressure rating up to 60,000 psi (4,137 bar)
1	Hand wheel	1	Aluminum 51ST
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

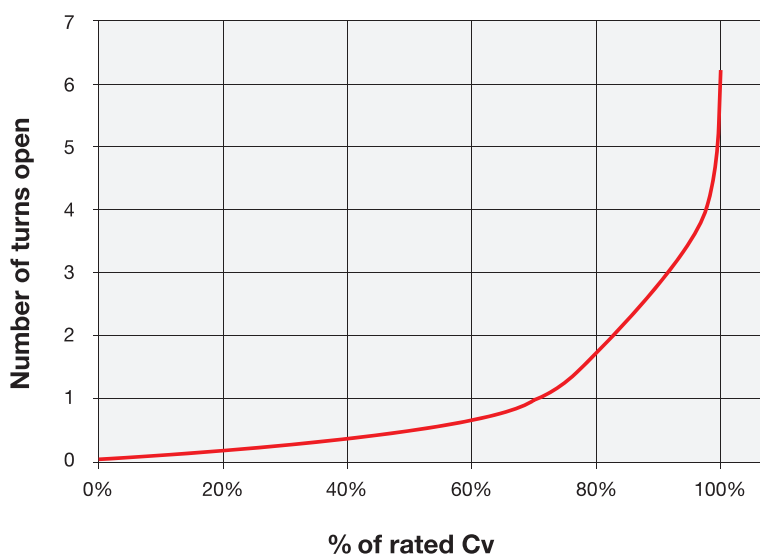


## MAWP+NEEDLE VALVE TECHNICAL DATE

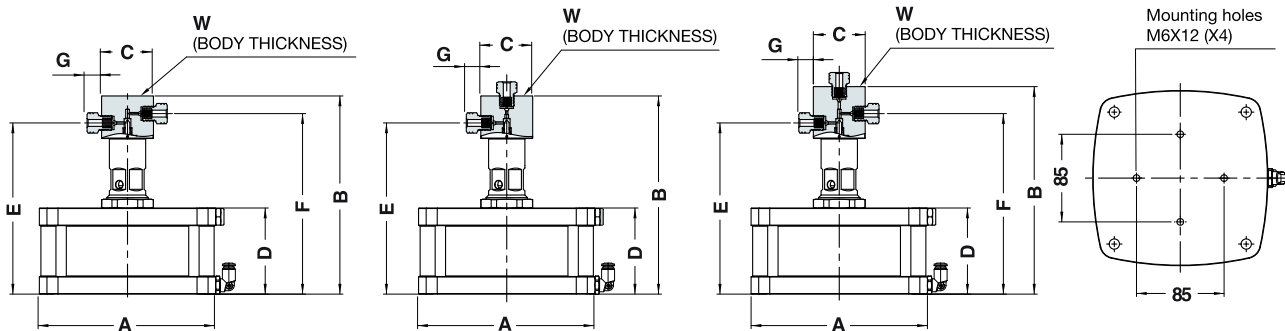
HAM-LET DESCRIPTION	Configuration	END			Orifice		MAWP		Rated Cv*		
		Connection	Size		inch	mm	inch	mm		bar	psi
			inch	mm							
High pressure: 10,000 psi (700bar)											
HHPVS10-NV2S-NF8	Straight	Female NPT	1/2	-	0.30	7.50	700	10000	0.60		
HHPVS10-NV2E-NF8	Angle								0.68		
High pressure: 30,000 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								-		
High 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								-		

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

**Generalized Flow Coefficient curves (Cv)**

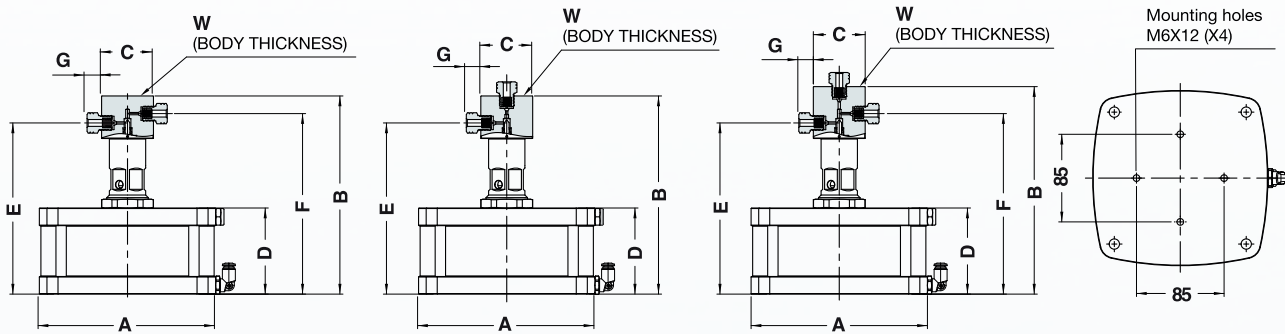


## NEEDLE VALVE - AIR OPERATED NO (NORMALLY OPEN) DIMENSIONS



HAM-LET DESCRIPTION	Configuration	END				Operation Preasure	Orifice		A		B		C		D		E		F		G		W
		Connection	Size																				
			inch	mm	bar	psi	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	mm
Medium pressure: 10,000 psi (700bar)																							
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	-	-			
High pressure: 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							-	-			
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							-	-			
HHPVS30-NV3B-HF9-AO	3 way - 2 on pressure										8.58	218.0							7.20	183.0			
High pressure: 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							-	-			
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							-	-			
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							-	-			
HHPVS60-NV3B-HF9-AO	3 way - 2 on pressure										8.58	218.0							7.20	183.0			

## NEEDLE VALVE - AIR OPERATED NC (NORMALLY CLOSE) DIMENSIONS



HAM-LET DESCRIPTION	Configuration	END				Orifice		Operation Pressure		A		B		C		D		E		F		G		W
		Connection	Size																					
			inch	mm	inch	mm	bar	psi	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	mm	
Medium pressure: 10,000 psi (700bar)																								
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	-	-				
High pressure: 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							-	-				
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							-	-				
HHPVS30-NV3B-HF9-AC	3 way - 2 on pressure										9.76	248.0							8.39	213.0				
High pressure: 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							-	-				
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							-	-				
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							-	-				
HHPVS60-NV3B-HF9-AC	3 way-2 on pressure										9.76	248.0							8.39	213.0				



# MEDIUM AND HIGH PRESSURE CONNECTION NEEDLE VALVE

## HOW TO ORDER

