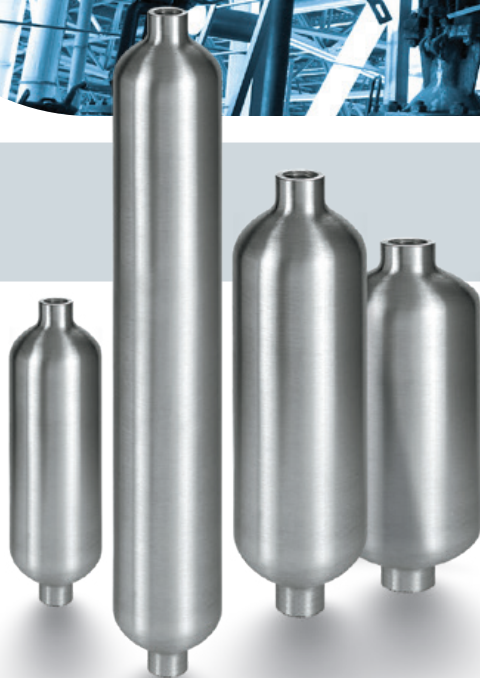


# SAMPLE CYLINDERS

AND NEEDLE VALVE WITH RUPTURE DISC



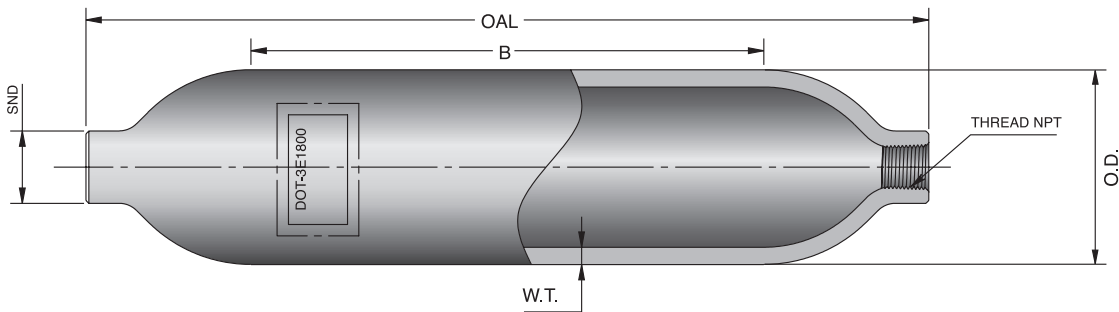
# SAMPLE CYLINDERS

## APPLICATION:

Sampling Cylinders permit the extraction of a sample from a remote process location and provide safe containment for storage and transportation to the laboratory for analysis. These cylinders are rated to 1800 psi at room temperature for liquids and gases. Some applications include hydrocarbon sampling in refineries, gas sampling in chromatography and condensation sampling in fossil-fuel and nuclear-power plants. In similar applications, petrochemical facilities and gas processing plants utilize sample cylinders. Pressure surge accumulators or reaction vessels are other common uses for sample cylinders.

**PROPERTIES: TABLE 1**

No.	Description	Material	Pressure Rating (psi)	DOT Stand	Min. Volume	Max. Weight	B	OAL	SND	Thread (NPT)	O.D.	W.T.
1	HSSC15-1BH	St.St.316	1800	3E	50 CC (3.05 IN <sup>3</sup> )	0.5 LBS	1.64"	3.80"	0.72"	1/4-18	1.5"	0.083"
2	HSSC15-2BH				75 CC (4.6 IN <sup>3</sup> )	0.6 LBS	2.72"	4.88"				
3	HSSC15-3BH				150 CC (9.2 IN <sup>3</sup> )	1.0 LBS	6.09"	8.25"				
4	HSSC15-4BH				150 CC (9.2 IN <sup>3</sup> )	1.0 LBS	6.09"	8.54"	0.85"	3/8-18		
5	HSSC20-1BH				300 CC (18.3 IN <sup>3</sup> )	1.8 LBS	6.79"	9.25"	0.74"	1/4-18		
6	HSSC20-2BH				500 CC (30.5 IN <sup>3</sup> )	2.5 LBS	11.42"	13.88"	0.74"			



### Material Traceability

Raw material is heat code traceable. This traceability follows each cylinder through manufacturing, heat treating, cleaning and pressure testing.

### Cylinder Manufacturing Standards

DOT CFFC, FRP-1, FRP-2, 3A, 3AA, 3AL, 3E, 3HT, 39, NGV2, FMVSS, HSE FW1/FW2, TUV, KHK, MIL-C-7905, MS26545, MIL-R-8573, EN1975, 12245 and others.

### Applicable Valves with Sample Cylinders

HAM-LET H-285 Needle Valve with Rupture disc.

### Notes:

1. dimensions and tolerances per ANSI Y 14.5M.
2. Cylinder manufactured and inspected in accordance with DOT '49 CFR 178.42 Specification 3E.
3. Material: seamless cold-finished stainless steel tubing per ASTM A269.
4. Heads formed using spinning process.
5. Sandblast inside surfaces.
6. Thread ends per ANSI B1.20.1.
7. Cylindrical outer surface to finish 32µInch.
8. Cylinder operating pressure: 1800 psi.

■ The Sample Cylinders product variety in the catalog covers our standard line. Extensive options are available per request.

# NEEDLE VALVE WITH RUPTURE DISC

## FEATURES

- Soft seat (PEEK) Non-rotating stem
- MAWP 3000 Psi (206 Bar)
- Temperature working range -20°C to 122°C (-4°F to 252°F)
- Rupture disc pressure ratings: 1900 Psi (131 Bar), 2850 (196 Bar)
- Handle design prevents contaminants from entering into valve's critical, functional parts
- Orifice size: 5.6 mm (0.218 inch)
- Flow Coefficient (Cv): 0.53
- Comply with TPED (2010/35/EU) as standard

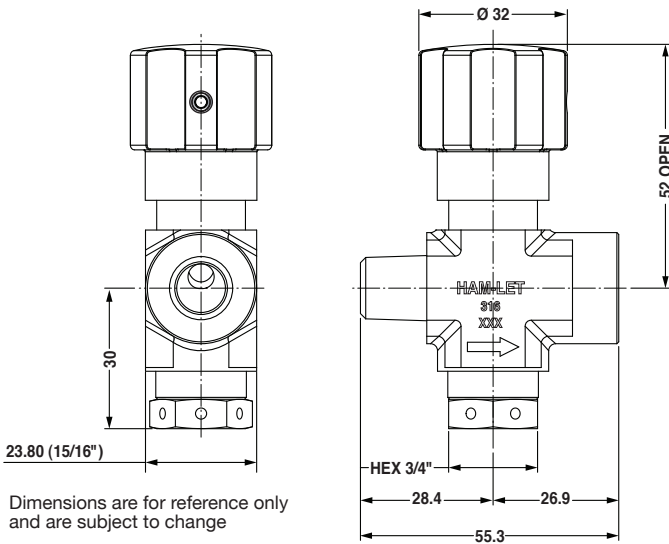
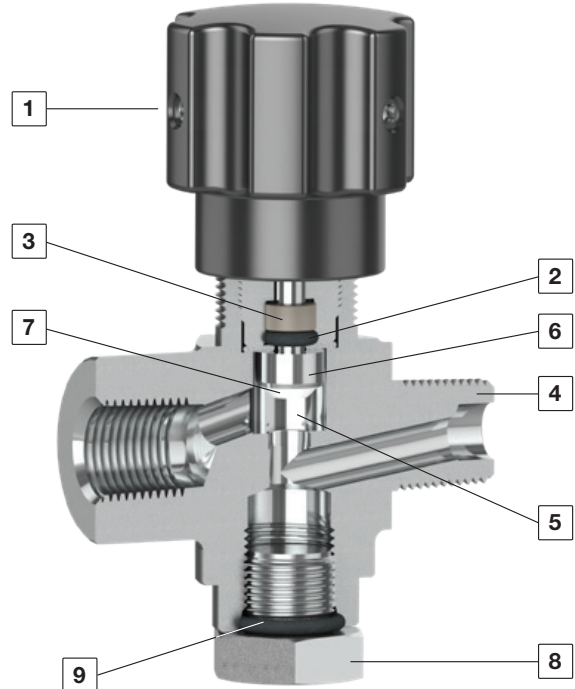
## MATERIAL OF CONSTRUCTION

No.	Component	Qty.	Material
1	Handle	1	Aluminum 6061
2	Back up O-Ring	1	PTFE
3	O-Ring	1	NBR
4	Body	1	St.St. ASTM A-182
5	Stem	1	St.St. ASTM A-276
6	Washer	1	St.St. ASTM A-276
7	Stem Tip	1	PEEK
8	Rupture Disc Unit	1	St.St. ASTM A-276 + Alloy 600/B168
9	O-Ring	1	Fluorocarbon FKM
	Lubricant		Silicone based

\* Wetted parts

## GENERAL

HAM-LET Needle Valves with Rupture discs were designed to be mounted on HAM-LET sample cylinders. The rupture disc provides protection against over pressure in sampling units by venting the media to the atmosphere. The Rupture disc element is welded to a carrier that is assembled to the Valve with an O-Ring seal. A Rupture Disc unit can be easily replaced in the field while the valve remains connected to the sampling unit.



Dimensions are for reference only and are subject to change



## ORDERING INFORMATION

H- 285 - SS - N - P - 1/4 - RD1900

Stem Tip Material	Rupture Pressure
P PEEK	1900 1900 Psi 2850 2850 Psi

## ORDERING INFORMATION FOR RUPTURE DISC UNIT

Z - RDU - 1/4 - 1900

Rupture Pressure	Pressure rating
1900 1900 Psi	± 100 Psi @ 20°C
2850 2850 Psi	± 100 Psi @ 20°C

# H-285 Non-rotating Stem Needle Valves User Instruction

## TESTING

The designs of the Ham-Let H-285 Needle Valves have been tested for pressure and burst.

Every H-285 Ham-let needle valve is tested at 1.2x MAWP according to ISO 14246. Valves with rupture disc are tested at 0.8x MAWP of the rupture disc. No detectable leakage is allowed during shell test.

Product Markings

Ham-Let TPED H-285 needle valves are marked with:

- Pi symbol ( $\pi$ )
- Identification number of the notified inspection body
- CE symbol and identification number of the notified inspection body on the rupture disc.
- Date of production (MM/YY)

ASME Class 1250

Material 316 SS

No.	Component	Qty.	Material
1	CUP SET SCREW	2	SS304
2	HANDLE	1	ALUMINUM
3	NUT-M4	1	SS316
4	SPOOL-AL	1	ALUMINUM
5	PACK BOLT	1	SS316L
6	BACKUP RING	1	PTFE
7	O-RING	1	NBR
8	GASKET	1	SS316
9	STEM+PEEK	1	SS316L+PEEK
10	BODY	1	SS316L
11	O-RING	1	FKM
12	RUPTURE DISK	1	SS316

## Pressure – Temperature Rating

Temperature [c°]	Pressure [Bar]
37	206
65	192
93	177
122	169

## DOCUMENTATION

Declaration of conformity is available for all Ham-Let TPED complaint products

## Precautions

This device should be assembled and tested by a trained person only. Be sure to heed precautions for compressed gas cylinders in accordance to the required specifications.

## 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.

Sample Cylinders | 2019\_Rev00

## SAFETY INSTRUCTIONS

### Precautions

#### Valve with Rupture Disc Precautions

1. Do not use devices with rupture disc in a location where the release of the cylinder contents might create a hazard.
2. The rupture disc vents to the atmosphere through radial holes in the body. Pressure is released with loud noise, and gases release with high velocity.
3. Inspect rupture discs regularly. The strength of rupture discs deteriorates with time due to temperature, corrosion, and fatigue. Pulsating pressure, vacuum/pressure cycling, heat, and corrosive fluids and atmospheres can reduce the disc's burst pressure.
4. Do not use rupture discs to protect vessels with volumes greater than 11 355 cm<sup>3</sup> (3 gal) for compressed gases or 5680 cm<sup>3</sup> (1 1/2 gal) for liquefied gases.
5. In cylinders with liquefied gases, a small temperature increase during transportation or storage will cause the liquid to expand and may cause the rupture disc to release its contents. See local regulations and other appropriate guidelines for safe filling limits for your application.

