



HAM-LET SAMPLE CYLINDERS

AND NEEDLE VALVE WITH RUPTURE DISC



- ✓ Safe storage vessel for transporting fluids at up to 200 bar (3,000 psi), with NPTF end connections
- ✓ Produced from 316L stainless steel seamless tube
- ✓ Variety of sizes with volumes from 50cc to 1000cc



SAMPLE CYLINDERS

GENERAL

Sample 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.

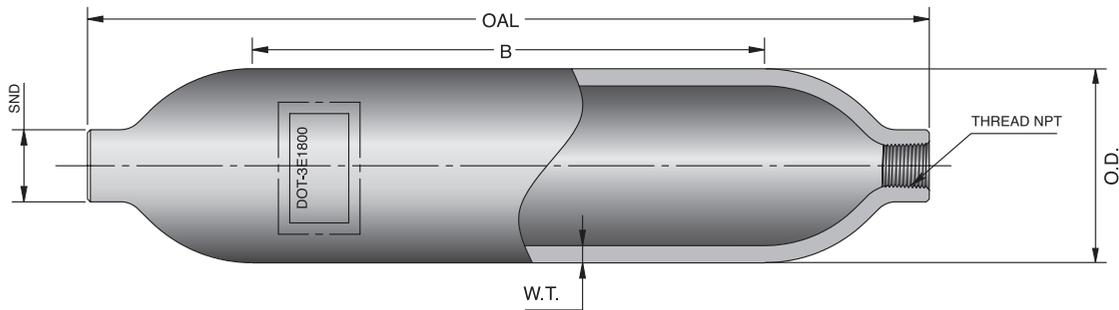
Our double ended cylinders are rated up to 200 bar (20 MPa, 2900 psi) pressure at room temperature for liquids and gases, and can be used for grab sampling, lab analysis, media storage and validating analyzer performance and more.

APPLICATIONS

Applications include hydrocarbon sampling in refineries, gas sampling in chromatography and condensation sampling in fossil-fuel and nuclear-power plants, petrochemical facilities, and gas processing plants.

TABLE 1: PROPERTIES

Min. Volume	Description	Material	Pressure Rating (bar/psi)	OAL (mm)	SND (mm)	Thread (NPT)	O.D. (mm)	W.T. (mm)
50 CC	HSSC15-1BH	SS 316L Seamless Tube	200/2900	115	20	1/4-18	38	3.7
150 CC	HSSC15-3BH			160	20	1/4-18	51	3.7
300 CC	HSSC20-1BH			280	20	1/4-18	51	3.7
500 CC	HSSC20-2BH			334	21	1/4-18	60	4.5
1000 CC	HSSC40-1BH			396	22	1/4-18	76	5.5



MATERIAL TRACEABILITY

The 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. Design, manufacturing and inspection in accordance with ISO 9809.4, compliance with CE / TPED
2. Conformance with ASTM D1265-11 for liquefied petroleum gas (LPG) sampling
3. Thread ends per ANSI B1.20.1
4. Cylinders produced by spinning process, with uniform wall thickness
5. Inner surface pickled and passivated
6. Marking includes production batch to enable tracing
7. Suitable Media: Non-corrosive liquid, gas and gas-liquid mixtures, including toxic and harmful substance such as LPG, LNG, H₂S and sulfur-containing water
8. Temperature range: -40°C to +60°C
9. Available accessories include carrying handle, valves, rupture disc and inert coatings
10. Typical valve for sample cylinder: Ham-Let H-285 (needle valve with rupture disc)

NEEDLE VALVE WITH RUPTURE DISC

FEATURES

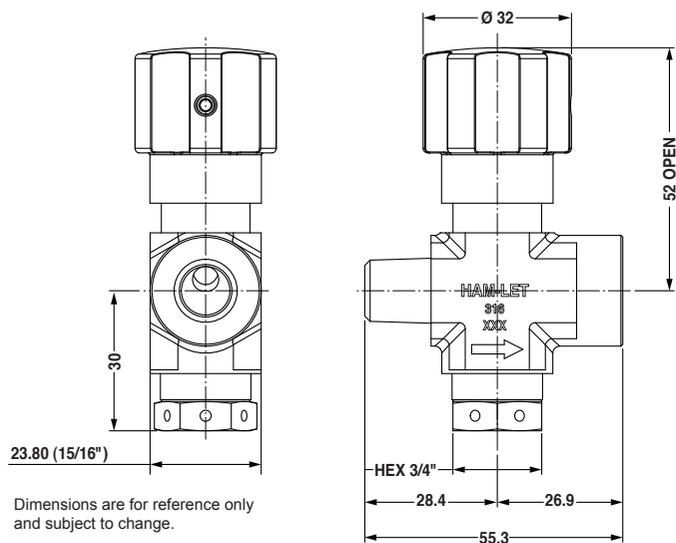
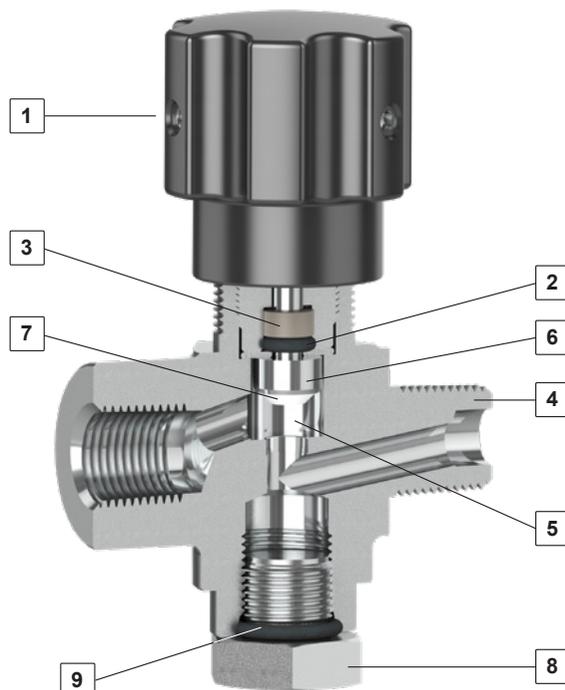
- Soft seat (PEEK) non-rotating stem
- MAWP 3000 Psi (206 Bar)
- Temperature working range -20°C to 122°C (-4°F to 252°F)
- Rupture disc pressure ratings: 1900 Psi (131 Bar), 2850 (196 Bar)
- Handle design prevents contaminants from entering into valve's critical, functional parts
- Orifice size: 5.6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

MATERIALS 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	SST ASTM A-182
5	Stem	1	SST ASTM A-276
6	Washer	1	SST ASTM A-276
7	Stem tip	1	PEEK
8	Rupture disc unit	1	SST ASTM A-276 + Alloy 600/B168
9	O-Ring	1	Fluorocarbon FKM
	Lubricant		Silicone based

GENERAL

HAM-LET Needle Valves with Rupture Discs are 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 while the valve remains connected to the sampling unit.



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	± 150 Psi @ 20°C

H-285 NON-ROTATING STEM NEEDLE VALVES USER INSTRUCTIONS

TESTING

The design of the Ham-Let H-285 Needle Valves have been tested for pressure and burst. Each valve is tested MAWP according to ISO 14246. Valves with rupture disc are tested at 0.8x MAWP. No detectable leakage is allowed during the shell test.

PRODUCT MARKINGS

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

- Pi symbol (π)
- Identification number of the notified inspection body
- CE symbol and identification number of the notified inspection body on the rupture disk
- Date of production (MM/YY)
- ASME Class 1250
- Material 316 SS

MATERIALS OF CONSTRUCTION

No.	Component	Qty.	Material
1	Cup set screw	2	SST 304
2	Handle	1	Aluminum
3	Nut-M4	1	SST 316
4	Spool-Al	1	Aluminum
5	Pack bolt	1	SST 316L
6	Backup ring	1	PTFE
7	O-Ring	1	NBR
8	Gasket	1	SS316
9	Stem+PEEK	1	SST 316L+PEEK
10	Body	1	SST 316L
11	O-Ring	1	FKM
12	Rupture disk	1	SST 316

Pressure – Temperature Rating	
Temperature (c°)	Pressure (Bar)
37	206
65	192
93	177
122	169

DOCUMENTATION

Declaration of conformity is available for all UCT 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 | January 2025

SAFETY INSTRUCTIONS

1. Do not use in a location where the release of cylinder contents might create a hazard.
2. The rupture disc vents to the atmosphere through radial holes in the body. Pressure is emitted with a loud noise, and gases are with high velocity.
3. Inspect rupture discs regularly. The strength of the rupture disc 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 cm³ (3 gal) for compressed gases or 5680 cm³ (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.

