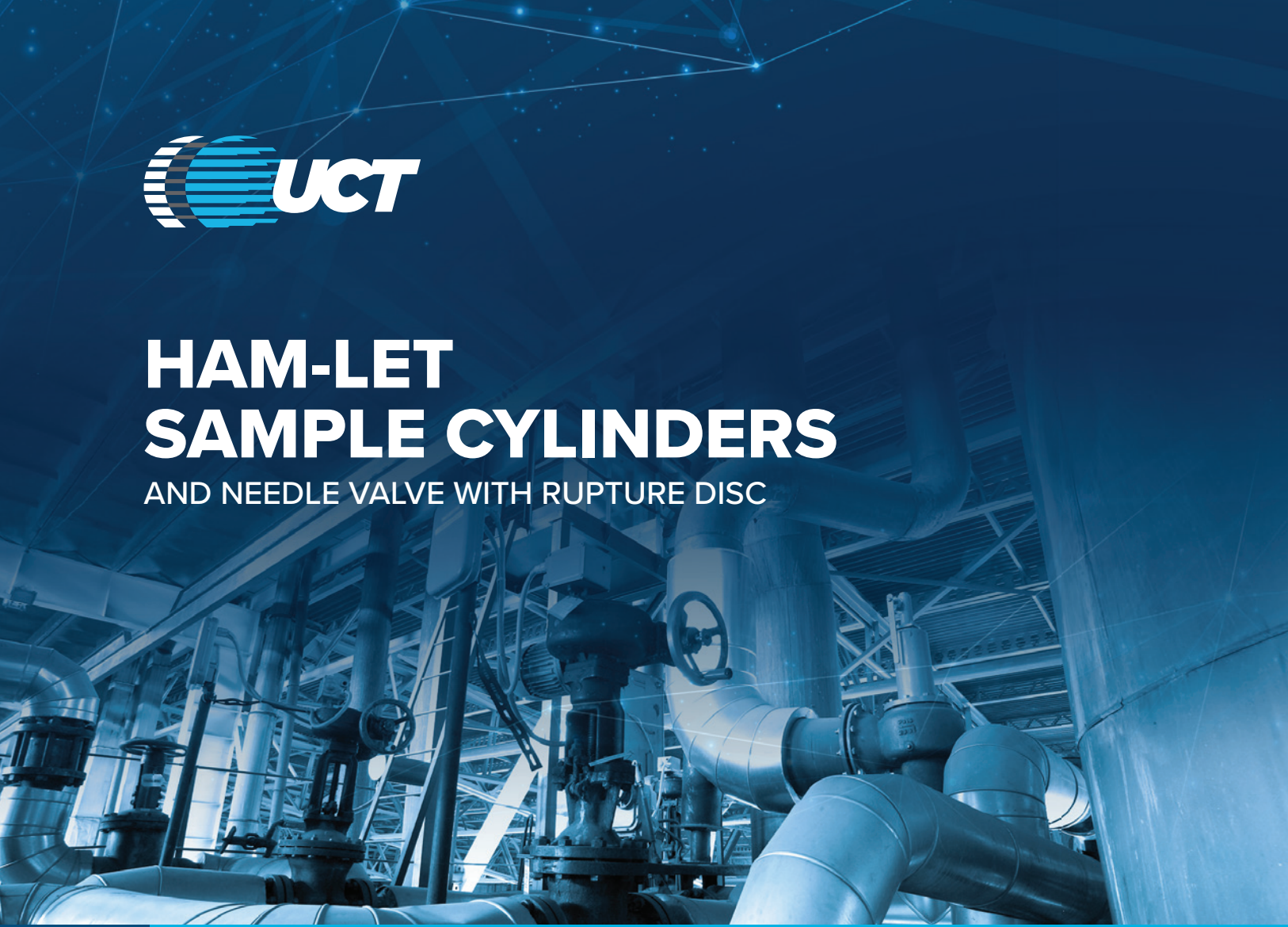
HAM-LET SAMPLE CYLINDERS

AND NEEDLE VALVE WITH RUPTURE DISC



- Safe storage vessel for transporting gas or liquids at a pressure of up to 200 bar (3000 psi)
- Produced from 316L stainless steel seamless tube
- Various of sizes and volumes from 50cc to 1000cc

SAMPLE CYLINDERS

GENERAL

Sample cylinders are designed for the safe collection, containment, and transportation of pressurized gas samples from remote process locations to a laboratory for analysis. By maintaining sample integrity and preventing leakage or contamination, they enable accurate offline testing for process monitoring, quality control, and compliance applications.

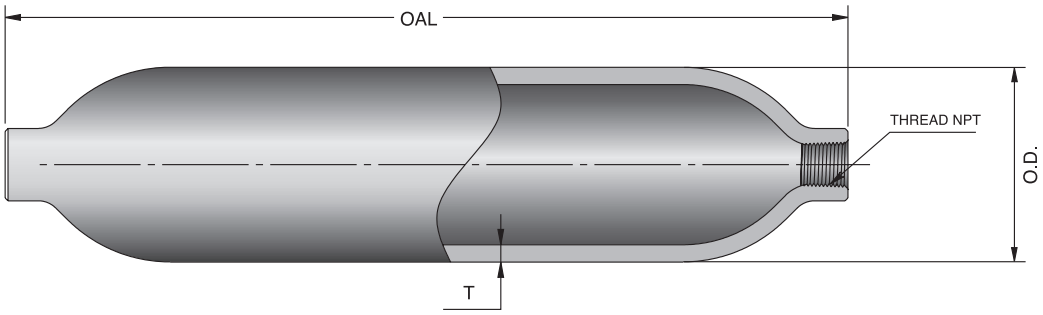
Our double ended cylinders are rated up to 200 bar (20 MPa, 2900 psi) pressure at room temperature for liquids and gases, and can be used for grab sampling, lab analysis, media storage and validating analyzer performance and more.

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.

FEATURES AND CHARACTERISTICS

1. Design, manufacturing and inspection in accordance with ISO 9809.4 / DOT / TPED (per model).
2. DOT-3E and DOT-3A stamped versions available.
3. Conformance with ASTM D1265-11 for liquefied petroleum gas (LPG) sampling
4. Thread ends per ANSI B1.20.1
5. Cylinders produced by spinning process, with unform wall thickness
6. Inner surface pickled and passivated
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. Other sizes and versions are available upon request



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 unform wall thickness
5. Inner surface pickeled and passivated
6. Suitable Media: Non-corrosive liquid, gas and gas-liquid mixtures, including toxic and harmful substance such as LPG, LNG, H2S and sulfur-containing water
7. Temperature range: -40°C to +60°C
8. Available accessories include carrying handle, valves, rupture disc and inert coatings
9. Typical valve for sample cylinder: Ham-Let H-285 (needle valve with rupture disc)

SAMPLE CYLINDERS TABLE 1: PROPERTIES

Design / certification	Size	Description	OAL		OD		T	NPT Thread	Pressure Rating Psi (Bar)
			mm	inch	mm	inch	inch		
ISO 9809-4 design	50cc	HSSC15-1BHE	140	5.51	32	1.26	0.11	1/4”	2900 (200)
	150cc	HSSC15-3BHE	160	6.3	51	2	0.14	1/4”	
	300cc	HSSC20-1BHE	280	11.02	51	2	0.14	1/4”	
	500cc	HSSC20-2BHE	334	13.14	60	2.36	0.17	1/4”	
DOT-3E design	150cc	HSSC15-3BHE D	210	8.27	38	1.5	0.083	1/4”	1800 (125)
	300cc	HSSC20-1BHE D	235	9.25	51	2	0.095	1/4”	
	500cc	HSSC20-2BHE D	352	13.85	51	2	0.095	1/4”	

Design / certification	Cylinder Volume	Description	OAL		OD		T	NPT Thread	Pressure Rating Psi (Bar)
			mm	inch	mm	inch	inch		
DOT-3E stamping	50cc	HSSC15-1BH DOT	96.5	3.8	38	1.5	0.083	1/4”	1800 (125)
	75cc	HSSC15-2BH DOT	124	4.88	38	1.5	0.083	1/4”	
	150cc	HSSC15-3BH DOT	210	8.27	38	1.5	0.083	1/4”	
	300cc	HSSC20-1BH DOT	235	9.25	51	2	0.095	1/4”	
	400cc	HSSC20-3BH DOT	293.6	11.56	51	2	0.095	1/4”	
	500cc	HSSC20-2BH DOT	352	13.88	51	2	0.095	1/4”	

Design / certification	Size	Description	OAL		OD		T	NPT Thread	Pressure Rating Psi (Bar)
			mm	inch	mm	inch	inch		
TPED stamping	150cc	HSSC15-3BH-TPED	214.6	8.45	38	1.5	0.95	1/4”	1800 (125)
	300cc	HSSC20-1BH-TPED	240	9.46	51	2	0.12	1/4”	
	500cc	HSSC20-2BH-TPED	369	15.43	51	2	0.12	1/4”	

Design / certification	Size	Description	OAL		OD		T	NPT Thread	Pressure Rating Psi (Bar)
			mm	inch	mm	inch	inch		
DOT-3A stamping	300cc	HSSC30-1BH-H DOT	172.7	6.8	76.2	3	0.313	1/2”	3000 (207)
	500cc	HSSC30-2BH-H DOT	238.7	9.4	76.2	3	0.313	1/2”	

*for other available volumes and dimensions, please contact your local representative.

NEEDLE VALVE WITH RUPTURE DISC

FEATURES

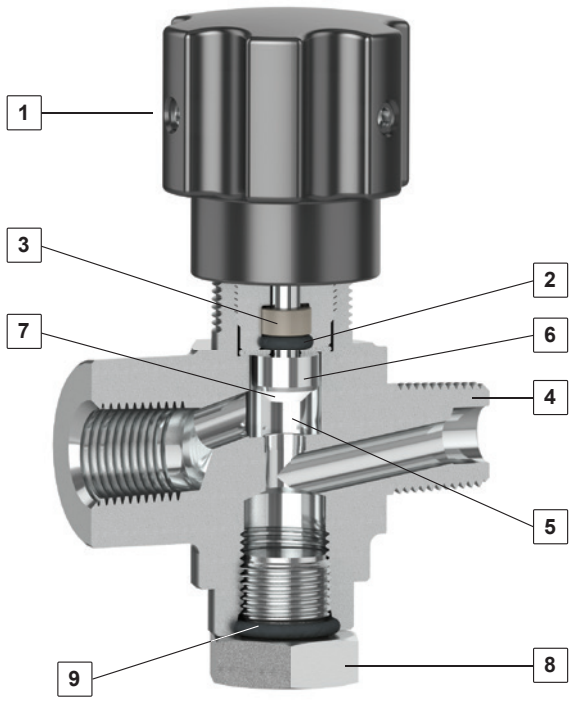
- Soft seat (PEEK) non-rotating stem
- MAWP 3000 psi (206 Bar)
- Temperature working range -20°C to 122°C (-4°F to 252°F)
- Rupture disc pressure ratings: 1900 psi (131 Bar), 2850 psi
- (196 Bar)
- Handle design prevents contaminants from entering into valve`s critical, functional parts
- Orifice size: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

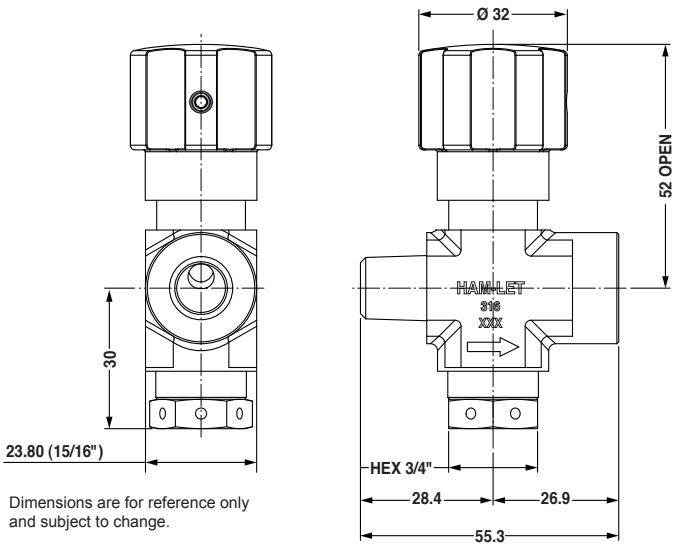
GENERAL

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.

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	SS ASTM A-182
5	Stem	1	SS ASTM A-276
6	Washer	1	SS 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





Dimensions are for reference only and subject to change.

ORDERING INFORMATION

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

Stem Tip Material	
P	PEEK

Rupture Pressure	
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 SS 316

MATERIALS OF CONSTRUCTION

No.	Component	Qty.	Material
1	Cup set screw	2	SS 304
2	Handle	1	Aluminum
3	Nut-M4	1	SS 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	SS 316
9	Stem+PEEK	1	SS 316L+PEEK
10	Body	1	SS 316L
11	O-Ring	1	FKM
12	Rupture disk	1	SS 316

Pressure – Temperature Rating		
Temperature (C°)	Pressure	
	Bar	psi
37	206	3000
65	192	2785
93	177	2570
122	169	2451

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.

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.