

# SAMPLE CYLINDER



**APPLICATION:**

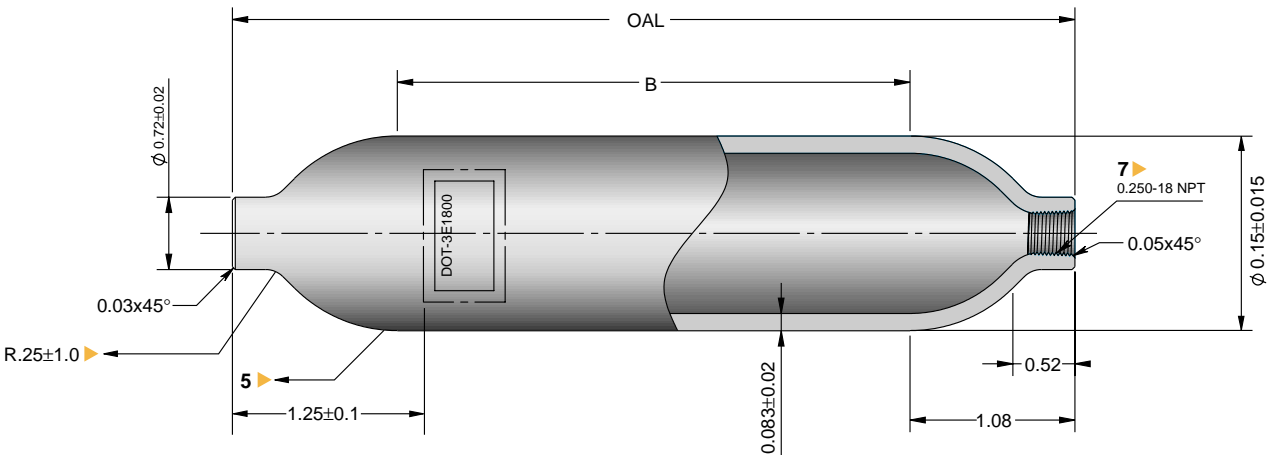
Sampling Cylinders permit the extraction of a sample from a remote process location and provide safe containment for storage and transportation to the laboratory for analysis. These cylinders are rated to 1800 psi at room temperature for liquids and gases. Some applications include hydrocarbon sampling in refineries, gas sampling in chromatography and condensate 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:**

#	Description	Raw Material	Pressure Rating (PSI)	DOT Stand.	Part No.
1	50-cc Sampling Cylinder	See Table 1	1800	3E	HSSC15-1BH
2	75-cc Sampling Cylinder		1800	3E	HSSC15-2BH
3	150-cc Sampling Cylinder		1800	3E	HSSC15-3BH
4	300-cc Sampling Cylinder		1800	3E	HSSC20-1BH
5	500-cc Sampling Cylinder		1800	3E	HSSC20-2BH
6	1000-cc Sampling Cylinder		1800	3A	HSSC40-1BH
7	2250-cc Sampling Cylinder		1800	3A	HSSC40-2BH
8	1 gallon Sampling Cylinder		1800	3A	HSSC40-3BH

**TABLE 1**

Part No.	Min VOLUME	MAX. WEIGHT	"B" ± .10	"OAL" ± .10	GRADE
	<b>12</b>	<b>13</b>			<b>3</b>
-1AH	50 CC (3.05 IN3)	0.5 LBS	1.64	3.80	304
-2AH	75 CC (4.6 IN3)	0.6 LBS	2.72	4.88	
-3AH	150 CC (9.2 IN3)	1.0 LBS	6.09	8.25	
-1BH	50 CC (3.05 IN3)	0.5 LBS	1.64	3.80	
-2BH	70 CC (4.6 IN3)	0.6 LBS	2.72	4.88	
-3BH	150 CC (9.2 IN3)	1.0 LBS	6.09	8.25	316



Transportation Specifications: **DOT-3E1800 per 49CFR 178.42**

**Material Traceability:**

Raw material is heat code traceable. This traceability follows each cylinder through manufacture, 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.

- Approval of T.P.E.D. { Transportation Pressure Equipment Directive} is imminent.

**Applicable Valves with Sample Cylinders:**

- Hamlet H-300 Needle Valve Series
- Hamlet HM Diaphragm Valve Series

**Notes:**

1. Dimensioning and tolerancing 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. (See table 1 for grade specification).
4. Lot size 500 cylinders.
- ▶ 5. Heads formed using spinning process.
- ▶ 6. Sandblasted inside surfaces.
- ▶ 7. Thread ends per ANSI B1.20.1 (1/4"-18 NPT).
- ▶ 8. Part free of grease, machine oil & other debris inside and out. Rinsed with deionized water.
- ▶ 9. Rotation sand entire cylindrical outer surface to finish.
- ▶ 10. Destructive acceptance criteria (one cylinder per lot) per DOT 3E:
  - Cylinder burst between 6,000 and 12,000 psi without fragmentation.
  - or -Cylinder holds 12,000 psi for 30 seconds without burst, and withstands flattening test to six times wall thickness without cracking.
11. Non-destructive acceptance criteria (all cylinders) per DOT 3E: hydrostatic proof test at 3,000 +100/- 0 psi for 30 seconds minimum without failure or evidence of defect.
- ▶ 12. Minimum water volume: see table 1.
- ▶ 13. Maximum cylinder weight: see table 1.
- ▶ 14. Cylinder operating pressure: 1800 psi.