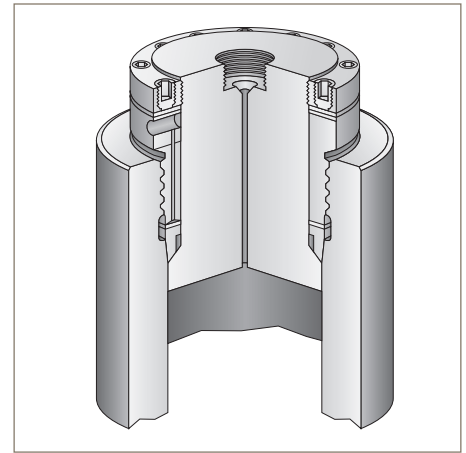


AE Closure

Pressure Vessels

Volumes:	100ml to 2000ml
Maximum Allowable Working Pressure:	10,500 to 30,000 psi @ 100°F (724 to 2070 bar @ 37.8°C)
Material of Construction:	316 Stainless Steel, Alloy Steel, A-286



Principle of Operation:

The “AE” self-sealing (modified Bridgman) pressure vessel utilizes the Bridgman Principle of “unsupported area.” The AE closure significantly improves the original Bridgman concept by utilizing an all-metal seal configuration. This not only permits very high temperatures, but also facilitates opening and closing the vessel.

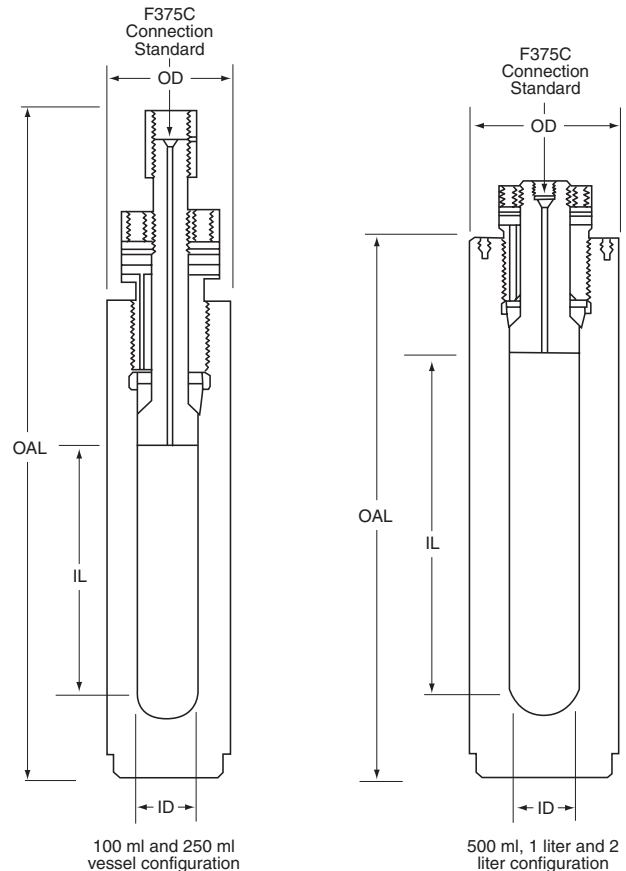
It works by harnessing the internal vessel pressure to reinforce the seal; the higher the pressure (within rated limits), the tighter the seal.

Features and Options:

- ASME Code stamp, CRN registration, PED
- Consult factory to discuss special requirements
- Different connections available
- Other materials of construction
- Heaters
- Stands
- MagneDrive® (see Agitation: Bulletin AG-SG)
- Controls (see Instrumentation: Bulletin IN-SG)
- Valves, Fittings and Tubing (see Autoclave.com)

Specifications and Part Numbers:

Model Drawing #	Nominal Capacity	Dimensions: inches (mm)			
		ID	OD	IL	OAL
AE 0010 30-2555	100 ml	1.25 (32)	2.50 (64)	5.00 (127)	13.75 (349)
AE 0025 30-2556	250 ml	1.25 (32)	2.50 (64)	12.54 (319)	21.30 (541)
AE 0050 30-2523	500 ml	2.00 (51)	4.00 (102)	10.00 (254)	18.20 (462)
AE 0100 30-2524	1000 ml	3.00 (76)	6.00 (152)	9.00 (229)	20.00 (508)
AE 0200 30-2525	2000 ml	3.00 (76)	6.00 (152)	18.00 (457)	29.00 (737)



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Maximum Allowable Working Pressure (Design Pressure) vs. Temperature Rating:

Material (Body, Cover and Seal Ring)	Size	Order # Suffix	°F (°C)	-20 to -100°	150°	200°	250°	300°	350°	400°	450°	500°	550°	600°
				(-29 to 37.8°)	(66°)	(93°)	(121°)	(149°)	(177°)	(204°)	(232°)	(260°)	(288°)	(316°)
Type 316 SS	100 ml 250 ml 500 ml	Add SS 11	psi (bar)	11,000 (758)	11,000 (758)	10,950 (755)	10,900 (752)	10,850 (748)	10,750 (741)	10,650 (734)	10,600 (731)	10,500 (724)	10,250 (707)	10,000 (689)
	1000 ml 2000 ml	Add SS 10	psi (bar)	10,500 (724)	10,500 (724)	10,500 (724)	10,450 (721)	10,300 (710)	10,250 (707)	10,050 (693)	10,025 (691)	10,000 (689)	10,000 (689)	10,000 (689)
A-286	All Sizes	Add AS 29	psi (bar)	28,800 (1986)	28,500 (1966)	28,450 (1962)	28,200 (1945)	27,850 (1921)	27,350 (1886)	26,500 (1828)	25,700 (1772)	25,200 (1738)	24,700 (1703)	24,350 (1679)
Alloy Steel	All Sizes	Add SL 30	psi (bar)	30,000 (2069)	30,000 (2069)	30,000 (2069)	30,000 (2069)	30,000 (2069)	30,000 (2069)	30,000 (2069)	30,000 (2069)	30,000 (2069)	30,000 (2069)	30,000 (2069)

Material (Body, Cover and Seal Ring)	Size	Order # Suffix	°F (°C)	650°	700°	750°	800°	850°	900°	950°	1000°	1050°	1100°	1150°	1200°
				(343°)	(371°)	(399°)	(427°)	(454°)	(482°)	(204°)	(538°)	(566°)	(593°)	(621°)	(649°)
Type 316 SS	100 ml 250 ml 500 ml	Add SS 11	psi (bar)	9,650 (665)	9,500 (655)	9,400 (648)	9,300 (641)	9,250 (638)	9,200 (634)	9,000* (621)	8,850* (610)	8,450* (583)	7,800* (538)	6,800* (469)	4,400* (303)
	1000 ml 2000 ml	Add SS 10	psi (bar)	9,650 (665)	9,500 (655)	9,400 (648)	9,300 (641)	9,250 (638)	9,200 (634)	9,000* (621)	8,850* (610)	8,450* (583)	7,800* (538)	6,800* (469)	4,400* (303)
A-286	All Sizes	Add AS 29	psi (bar)	24,000 (1655)	23,800 (1641)	23,650 (1631)	23,300 (1607)	23,000 (1586)	22,600 (1559)	22,000 (1517)	21,650 (1493)	21,150 (1459)	20,750 (1431)	20,000 (1379)	19,400 (1338)
Alloy Steel	All Sizes	Add SL 30	psi (bar)	30,000 (2069)	30,000 (2069)	23,650 (1631)	22,800 (1572)	21,500 (1483)	20,000 (1379)	Alloy Steel maximum 900°F (482°C)					

Maximum Recommended Operating Pressure (MROP) varies based on gauge, transducer, and rupture disk selection.

* For operation above 900°F (482°C), A-286 Main Nut must be used.

Ordering Guide:

Typical catalog number example: **AE0010SS11** (catalog number is created based on customer selection of product parameters, see below for example)

AE	0010	SS	11
Vessel Type	Capacity in ml	Material	Pressure - psi (bar)
AE = AE Vessel	0010 = 100ml 0025 = 250ml 0050 = 500ml 0100 = 1000ml 0200 = 2000ml	SS = 316 Stainless Steel AS = A-286 Stainless Steel SL = Alloy Steel (SA723)	10 = 10,500 (724) 11 = 11,000 (758) 29 = 28,800 (1986) 30 = 30,000 (2069)

WARNING

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Bulletin PV-AE

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