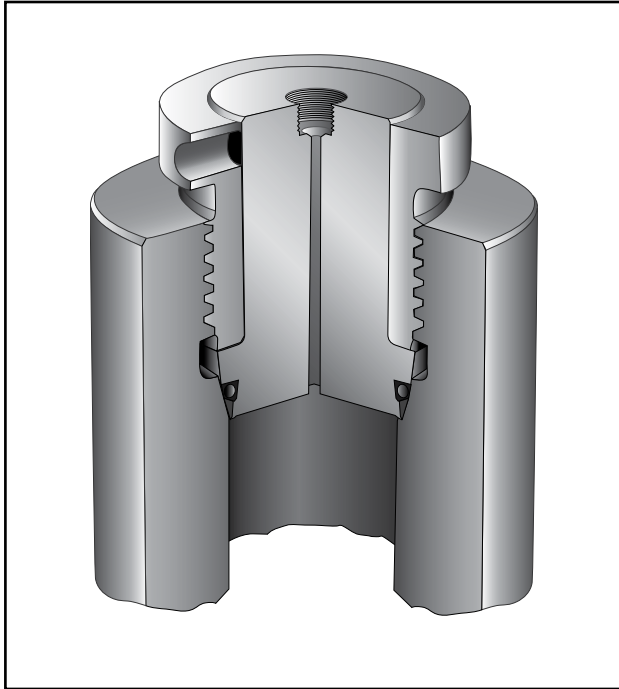


O-ring Closure Pressure Vessels



At A Glance

Volumes: 100 ml to 2000 ml
 MAWP: 10,500 to 30,000 psi @ 72°F (724 to 4137 bar @ 22°C)
 Materials of Construction: 316 Stainless Steel, Alloy Steel, A-286

Principle of Operation

Autoclave Engineers O-ring closure pressure vessels, model OR and O-ring closure compression cylinders, model OC and OD, offer a simple, reliable and economical alternative to the Autoclave Engineers self-sealing closure where high temperature operation is not required. Standard O-ring material is Buna-N; however, optional O-ring materials are available on special order. Autoclave Engineers welcomes your special product request. Please contact the factory for review of your application.

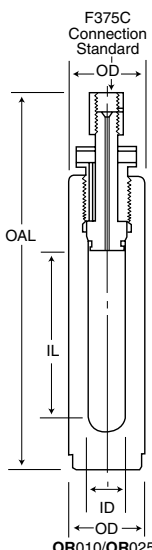
The main nut screws into the vessel body until it tightens the cover against the angle in the body, as shown in the figure. The groove in the cover is sized to put the proper squeeze on the O-ring to create a seal. The metal-to-metal contact between the cover and body prevents O-ring extrusion.

MAWP vs. Temperature Ratings

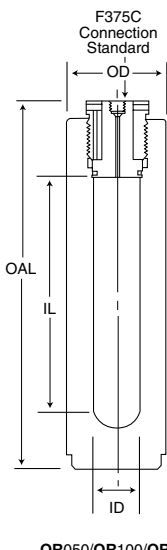
*Material (Body, Cover and Seal Ring)	Nominal Capacity	Order No. Suffix	°F (°C)	-20 to 100° (-29 to 37.8°)	150° (66°)	200° (93°)	250° (121°)	300° (149°)	350° (177°)	400° (204°)	450° (232°)	500° (260°)
Type 316 SS**	100 ml 250 ml 500 ml	Add SS 11	psi (bar)	11,000 (758)	11,000 (758)	10,950 (755)	10,900 (752)	10,850 (748)	10,750 (741)	10,650 (734)	10,600 (731)	10,500 (724)
	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)
A-286	All Sizes	Add AS 29	psi (bar)	28,800 (1986)	28,500 (1966)	28,450 (1962)	28,200 (1945)	27,850 (1920)	27,350 (1886)	26,500 (1827)	25,700 (1772)	25,200 (1738)
Alloy Steel** (SA-723)	All Sizes	Add SL 30	psi (bar)	30,000 (2068)	30,000 (2068)	30,000 (2068)	30,000 (2068)	30,000 (2068)	30,000 (2068)	30,000 (2068)	30,000 (2068)	30,000 (2068)

**ASME Code stamp available (contact factory)

Model	Nominal Capacity	Dimensions: Inches (mm)			
		ID	OD	IL	OAL
OR0010SS11 OR0010AS29 OR0010SL30	100 ml	1.25 (32)	2.50 (64)	5.49 (139)	12.75 (324)
OR0025SS11 OR0025AS29 OR0025SL30	250 ml	1.25 (32)	2.50 (64)	12.99 (330)	20.25 (514)
OR0050SS11 OR0050AS29 OR0050SL30	500 ml	2.00 (51)	4.00 (102)	10.87 (276)	17.25 (438)
OR0100SS10 OR0100AS29 OR0100SL30	1000 ml	3.00 (76)	6.00 (152)	9.68 (246)	18.93 (481)
OR0200SS10 OR0200AS29 OR0200SL30	2000 ml	3.00 (76)	6.00 (152)	18.74 (476)	27.93 (709)



OR010/OR025

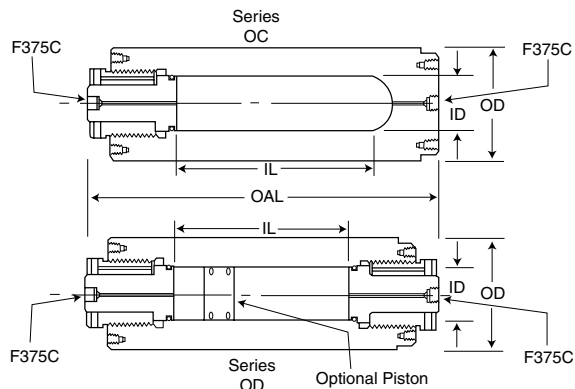


OR050/OR100/OR200

O-ring Closure Compression Settings

Models OC and OD O-ring closure compression cylinders are available as single-ended or double-ended vessels. Double-ended vessels allow for easier cleaning. All models have an F375C AE high pressure connection at both ends plus four 3/8" -24 tapped holes for eye bolts and mounting. Standard material of construction is alloy steel. Optional pistons are available. Refer to the model code chart for information on pressure ratings. Other materials of construction and volumes are available on special order.

Model	Nominal Capacity	Dimensions: Inches (mm)			
		ID	OD	IL	OAL
OC0100SL15	1000 ml	3.00 (76)	4.94 (125)	8.99 (228)	17.69 (449)
OC0100SL30	1000 ml	3.00 (76)	6.00 (152)	9.70 (246)	18.94 (481)
OC0100SL60	1000 ml	2.00 (51)	6.00 (102)	19.90 (505)	28.00 (711)
OD0200SL15	2000 ml	3.00 (76)	4.94 (125)	18.00 (457)	28.50 (724)
OD0200SL30	2000 ml	3.00 (76)	6.00 (152)	18.00 (457)	28.50 (724)
OD0200SL60	2000 ml	2.00 (51)	6.00 (152)	38.50 (978)	49.00 (1245)



Optional O-ring Chart

Material	Max Temp °F	Max Temp (°C)
Buna N	250°	(121°)
EPR	300°	(149°)
Silicone	400°	(204°)
*Viton®	450°	(232°)
*Teflon® Encapsulated *Viton®	450°	(232°)
*Kalrez®	500°	(260°)

*Products are registered trademarks of DuPont Dow Elastomers

Ordering Guide

OR	0010	SS	10
O-ring	Capacity in ml	Material of Construction	Pressure psi (bar)
OR - O-Ring Vessel	0010 - 100 ml	SS - 316 Stainless Steel	10 - 10,500 (724)
OC - O-Ring Compression Cylinder Single Ended	0025 - 250 ml	AS - A-286 Stainless Steel	11 - 11,000 (758)
OD - O-Ring Closure Compression Cylinder, Double Ended	0050 - 500 ml	SL - Alloy Steel (SA-723)	15 - 15,000 (1734)
	0100 - 1000 ml		29 - 28,800 (1986)
	0200 - 2000 ml		30 - 30,000 (2069)
			60 - 60,000 (4137)

Features & Other Available Options

- Different connections available
- Other materials of construction
- Piston (available on OD series vessels)
- Heaters
- Stands
- ASME Code Stamp, CRN registration
- Consult factory to discuss your special requirements.

Supporting Information

MagneDrives®: (See Agitation Section of this catalog) (AG-SG)
 Controls: (See Instrumentation Section of this catalog) (IN-SG)
 Valves, Fittings and Tubing: (See VFT catalog)



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