

O-ring Closure

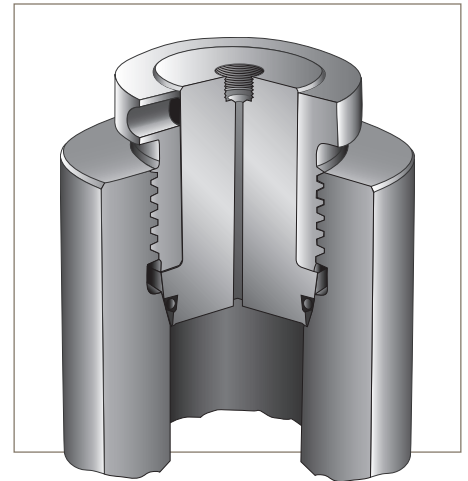
Pressure Vessel

Volume: 100 ml to 2000 ml

Vessel MAWP*: 10,500 to 60,000 psi @ 72°F (724 to 4137 bar @ 22°C)

Material of Construction: 316 Stainless Steel, Alloy Steel, A-286

* Maximum Allowable Working Pressure



Principle of Operation:

Parker 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 Parker Autoclave Engineers self-sealing closure where high temperature operation is not required. Standard O-ring material is Nitrile; however, optional O-ring materials are available on special order. Parker 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 (Design Pressure) vs. Temperature Rating for O-ring Models

Material * (Body, Cover, Seat Ring)	Nominal Capacity	Order Number Suffix	°F	-20 to 100°	150°	200°	250°	300°	350°	400°	450°	500°
			°C	-29 to 37.8°	66°	93°	121°	149°	177°	204°	232°	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 (1965)	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)

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



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Specifications and Part Numbers

Drawing Number	Model	Nominal Capacity	Dimensions: Inches (mm)			
			ID	OD	IL	OAL
30-2557	OR0010SS11 OR0010AS29 OR0010SL30	100 ml	1.25 (32)	2.50 (64)	5.50 (140)	12.75 (324)
30-2558	OR0025SS11 OR0025AS29 OR0025SL30	250 ml	1.25 (32)	2.50 (64)	13.00 (330)	20.25 (514)
30-2528	OR0050SS11 OR0050AS29 OR0050SL30	500ml	2.00 (51)	4.00 (102)	10.87 (276)	17.25 (438)
30B-1829	OR0100SS10 OR0100AS29 OR0100SL30	1000 ml	3.00 (76)	6.00 (152)	9.65 (245)	19.80 (503)
30B-1830	OR0200SS10 OR0200AS29 OR0200SL30	2000 ml	3.00 (76)	6.00 (152)	18.72 (476)	28.80 (732)

O-ring Closure Compression Cylinders

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.

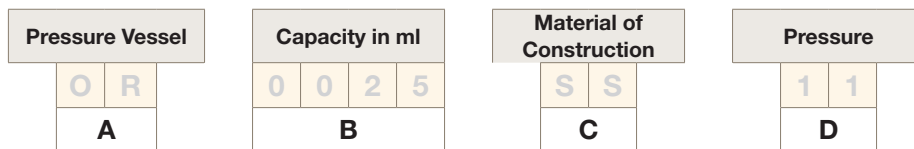
Specifications and Part Numbers

Drawing Number	Model	Nominal Capacity	Dimensions: Inches (mm)			
			ID	OD	IL	OAL
20-9006	OC0100SL15	1000 ml	3.00 (76)	4.94 (125)	9.00 (229)	17.69 (449)
20-9007	OC0100SL30	1000 ml	3.00 (76)	6.00 (152)	9.75 (248)	18.94 (481)
20-9008	OC0100SL60	1000 ml	2.00 (51)	6.00 (152)	19.50 (495)	28.00 (711)
20-9009	OD0200SL15	2000 ml	3.00 (76)	4.94 (125)	18.00 (457)	28.50 (724)
20-9010	OD0200SL30	2000 ml	3.00 (76)	6.00 (152)	18.00 (457)	28.50 (724)
20-9011	OD0200SL60	2000 ml	2.00 (51)	6.00 (152)	39.00 (991)	49.00 (1245)

Optional O-Ring Chart:

Material	Max. Temperature	
	° F	° C
Nitrile	250°	(121°)
EPR	300°	(149°)
Silicone	400°	(204°)
FKM	450°	(232°)
PTFE Encapsulated FKM	400°	(204°)
FFKM	500°	(260°)

Ordering Guide:



Part Number Example: **OR0025SS11** (example selections indicated in yellow below)

A - Pressure Vessel	
OR	O-Ring Vessel
OC	O-Ring Compression, Cylinder Single Ended
OD	O-Ring Closure Compression Cylinder, Double Ended

B - Capacity	
0010	100 ml
0025	250 ml
0050	500 ml
0100	1000 ml
0200	2000 ml

C - Material of Construction	
SS	316 Stainless Steel
AS	A-286 Stainless Steel
SL	Alloy Steel (SA-723)

D - Pressure: psi (bar)	
10	10,500 (724)
11	11,000 (758)
15	15,000 (1734)
29	28,800 (1986)
30	30,000 (2069)
60	60,000 (4137) (OC & OD models only)

Supporting Information:

Please refer to the following sections of the catalog for complimentary products and additional technical details.

- “**MagneDrives®**” (Agitation Section, Bulletin AG-SG)
- “**Controls**” (Instrumentation Section, Bulletin IN-SG)
- “**Complete Systems**” (Stirred Reactor Section, Bulletin SR-SG)
- “**Valves, Fittings, Tubing**” (VFT Catalog, www.autoclave.com)

Features and Available Options:

- Different Connections Available
- Other Materials of Construction
- Piston (available on OD series vessels)
- Heaters
- Stands
- ASME Code Stamp, CRN Registration available (consult factory)
- Consult factory to discuss your specific requirements

WARNING

FAILURE, IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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Bulletin PV-OR

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