

Pressure Vessels and Reactors

Tubular Series Reactors

The Tubular Series Reactors are double ended pressure vessels made from commercial quality cold drawn Type 304 stainless steel seamless tubing. Outside (non-wetted) caps are alloy steel. These are both economical and versatile vessels proven in demand for many applications. Finishes are commercial cold drawn finishes, with honed internal finishes.

Standard sizes are shown in the chart on page 137, but special lengths and modifications are easily supplied on request. One pressure connection for $\frac{1}{4}$ " O.D. high pressure coned and threaded tubing at each end is standard. Additional end connections are possible on the larger size models. Also, side connections and end cover thermowells can be supplied when required. Consult factory for special requirements.

O-Ring Closures are standard when temperatures do not exceed 250°F. This is an easily assembled closure requiring minimal torque for positive sealing. The standard O-ring material used is BUNA-N (nitrile) with various other O-ring materials available on request.

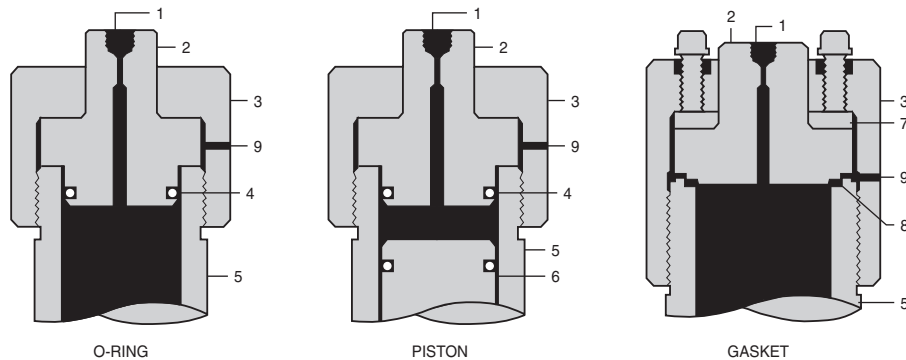
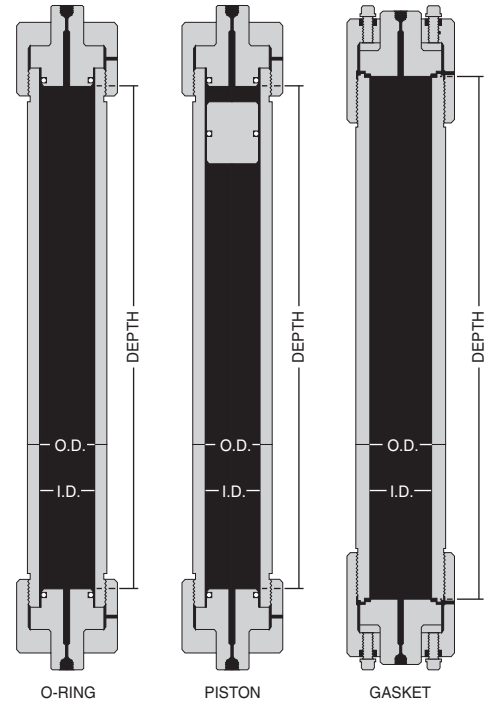
Confined Gasket Closures are available for temperatures up to 800°F. A 15% reduction in the listed working pressure is required at this elevated temperature level. These closures utilize a metal gasket (316 stainless steel) which can be torqued down for positive sealing. Torque requirements on the thrust bolts will range from 60 to 110 foot pounds depending on size, pressure, temperature and media being pressurized. These confined gasket closures are available for all models except the TOC1 and TOC3 series. When ordering, simply specify catalog number and add suffix "(W/Gasket)".

Piston Separators can be supplied with the O-ring closure vessels for use as compression cylinders. These are ideal for separating a liquid from a gas and other similar applications. The tubing body is supplied with a honed inside diameter surface to accommodate the piston. When ordering, simply specify catalog number and add suffix "(W/Piston)".



Tubular Series Reactors

Tubing Size		Pressure Rating psi	Material	Catalog Number (O-Ring Closure)			
I.D.	O.D.			20"IL	40"IL	60"IL	72"IL
1"	1½"	5,000	Body 304 S.S. Covers 316 S.S.	TOC1-20	TOC1-40	TOC1-60	TOC1-72
¾"	1½"	10,000		TOC3-20	TOC3-40	TOC3-60	TOC3-72
1¼"	2"	6,000		TOC5-20	TOC5-40	TOC5-60	TOC5-72
1"	2"	10,000		TOC7-20	TOC7-40	TOC7-60	TOC7-72
1¾"	2½"	4,000		TOC9-20	TOC9-40	TOC9-60	TOC9-72
1½"	2½"	7,000		TOC11-20	TOC11-40	TOC11-60	TOC11-72
2¼"	3"	3,000		TOC13-20	TOC13-40	TOC13-60	TOC13-72
2"	3"	5,000		TOC15-20	TOC15-40	TOC15-60	TOC15-72
2¾"	3½"	3,000		TOC17-20	TOC17-40	TOC17-60	TOC17-72
2½"	3½"	4,500		TOC19-20	TOC19-40	TOC19-60	TOC19-72
3¼"	4"	2,500		TOC21-20	TOC21-40	TOC21-60	TOC21-72
3"	4"	4,000		TOC23-20	TOC23-40	TOC23-60	TOC23-72
3½"	4½"	3,000		TOC25-20	TOC25-40	TOC25-60	TOC25-72
3"	4½"	5,000		TOC27-20	TOC27-40	TOC27-60	TOC27-72
4"	5"	3,000		TOC29-20	TOC29-40	TOC29-60	TOC29-72
3½"	5"	5,000		TOC31-20	TOC31-40	TOC31-60	TOC31-72



1. PRESSURE CONNECTION
2. COVER
3. CAP
4. "O" RING
5. BODY (BOTH ENDS ALIKE)
6. PISTON
7. THRUST RING
8. GASKET
9. WEEP HOLE

How To Order Tubular Series Reactors

With O-Ring Closure:

Specify catalog number, see ordering table above.

Note: Use of Buna-N O-ring limits maximum working temperature to 250°F. For higher temperatures to 800°F, order gasket closure.

With Piston Separators:

Specify catalog number, see ordering table above and add "(W/Piston)" as suffix.

Because of temperature limitations pistons are not normally ordered in combination with the gasket closure.

With Gasket Closure:

Specify catalog number, see ordering table above and add "(W/Gasket)" as suffix.

* Gasket closure is not available on 1½" O.D. tubing size vessels.

Example:
TOC15-20 (W/Gasket).