

# LOW VOLUME VESSELS

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### OVERVIEW

Cortest proof ring, load frame, and deadweight test systems can be used with a variety of low volume, pull-through test vessels. **These vessels can accommodate a wide variety of test conditions from ambient conditions to high temperature and high pressure.** For our proof ring system, the volume of these vessels is limited to 0.33 liters due to space constraints while typical load frames can accommodate larger vessels. If a larger volume is needed, please browse our available autoclaves.

**CATEGORIES :** OIL & GAS | STEEL | NUCLEAR | RESEARCH

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### ACRYLIC AMBIENT CONDITION VESSELS

The vessel that is most commonly used with Cortest proof rings is the ambient condition vessel. With 330 mL capacity, these vessels are made using acrylic top and bottom plates, a glass vessel wall, and o-ring seals. These vessels come standard with nylon tube fittings and can be fitted with quick-connect fittings as an option. Additionally, an environmental control coil can be added to the vessel if needed to help maintain a constant cell temperature. Each vessel accommodates one round tensile specimen, specimen sizes range from ¼" diameter to 7/16" diameter. These vessels can also be used in Cortest load frames or deadweight test systems.

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### PYREX VESSELS

Cortest offers Pyrex vessels as another ambient condition vessel. These vessels are one piece of Pyrex and are slightly simpler to assemble than the Acrylic vessels since they are all one piece. All fittings are compatible with those of standard vessel. Despite the fragility of these vessels, their specimen seals are designed such that the impact of the specimen failure is not absorbed by the cell. Because these vessels are made of Pyrex, they will not discolor during long tests.

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### ELEVATED TEMPERATURE VESSELS

Our elevated temperature vessels are popular choice amongst customers requiring elevated temperatures at atmospheric pressure. These vessels have a Pyrex glass wall installed between two metal end plates. O-rings provide sealing between the end plates and the test specimen. These 0.25-Liter vessels can handle a maximum temperature of 100°C (212°F) at ambient pressure. These vessels can accommodate the same range of specimen sizes that the standard acrylic vessel does. A thermocouple is included to monitor solution temperature. These vessels can also be used in Cortest load frames or deadweight testers.

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### TEMPRESSURE VESSELS

For a proof ring vessel that most closely matches the capabilities of our normal autoclave systems, look no further than our tempressure vessels. Available in 316 Stainless Steel, Hastelloy C-276, or Titanium alloys, these vessels are suitable for more extreme testing environments. Valve panels with an analog pressure gauge can be mounted on these vessels with needle valves for gas in, out, and purge. The standard operating conditions of these vessels are temperatures of 220°C (428°F) and pressures of 15.2 MPa (2200 PSI). Depending on the application and installation higher temperature and pressure rated assemblies may be available. For higher temperature and pressure, please browse our available autoclaves.

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