

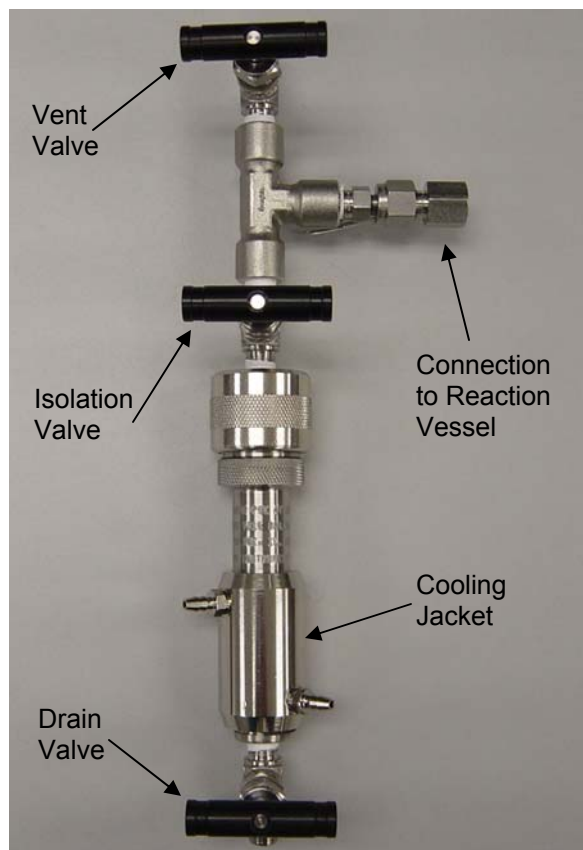
Sample Vessels

Sample Vessels for Liquid or Vapor Samples at 3000 psi (200 bar) at Temperatures to 300°C

Parr Instrument Company is pleased to announce the addition of a series of Sample Vessels designed to efficiently and safely withdraw liquid or vapor samples from its line of Pressure Reaction equipment at elevated temperatures and pressures.

These new quick close vessels have a volume of 10 mL, are self-sealing and are rated for operating pressures up to 3000 psi or 200 bar. They are available in a variety of configurations to meet each users individual sampling requirements.

These sample vessels can be equipped with up to three control valves. These valves are in addition to the Liquid Sampling Valve mounted on the head of the reaction vessel.



**Parr 10 mL Sample Vessel
Model 4351-I-D-V-C**

Isolation Valve. This valve is mounted on the head of the sample vessel and is used to seal the sample vessel once the sample is transferred from the reactor. It will be required when the sample vessel with its contained sample is removed from the reactor vessel and transferred under pressure to another location for analysis. It will certainly be required for sampling from the gas phase of a reaction. It may not be needed if samples are simply transferred to the sample vessel, cooled and drained to an open container.

Drain Valve. Samples can be removed from the sample vessel either by opening the vessel and pouring them out or by draining them thru this valve if it is installed.

Vent Valve. This valve is installed on a tee which connects the sample vessel to the sample valve on the head of the reactor. It is normally used to release any residual pressure in the line between the sample valve and the sample vessel. If it is connected to a high pressure nitrogen line, it can also be used to clear sample from the sample dip tube in the reactor or to discharge sample thru the bottom drain valve of the sample vessel.



**Parr 10 mL Sample Vessel Model 4351-I-D-V-C
on 600 mL Mini Reactor**

Sample Cooling

Cooling Jacket. The sample vessel, valves and connecting tubing has a mass of approximately 700 grams. In many cases this alone will be sufficient to rapidly cool samples to temperatures where they are safe to handle. An optional cooling jacket is available for users who need additional cooling for either single or rapid multiple samples.

Catalog Numbers

There are three basic catalog numbers.

4351 For connecting to vessels with 1/8" NPT Sampling Valve including Parr Series:

4590	5100
4560	5110
4520	5510
4530	5520

4352 For connecting to vessels with 1/4" NPT Sampling Valve including Parr Series:

4540
4550
4570
4580

4353 For connecting to vessels with 3/8" NPT Sampling Valve including Parr Series:

4555

Modular Catalog Numbers are used to specify the valve arrangement and cooling option selected using these codes.

I	Isolation Valve
D	Drain Valve
V	Vent Valve
C	Cooling Jacket

For example a sampling vessel for a Series 4550 one gallon Reactor with Isolation and vent valve plus cooling jacket would be:

4352-I-V-C



A number of custom modifications to these sample vessels can be assembled. These would include, for example:

Ball Valves instead of Needle Valve for sampling slurries.

Larger Volumes.

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