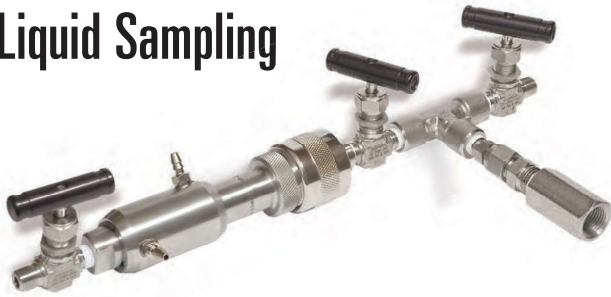


Liquid Sampling



Sample Collection Vessel

A sample collection vessel can be added to most reactor systems. Designed to efficiently and safely allow for the withdrawal of liquid or vapor samples at elevated temperatures and pressures, this quick close, O-ring seal vessel has a volume of 5 mL or 10 mL and is designed for operating pressures to 3000 psi (200 bar).

The typical arrangement for this sample vessel includes a cooling sleeve, isolation and vent valves. A drain valve may also be added to the vessel.

The isolation valve is mounted at the head of this vessel and is used to seal the vessel once the sample is transferred. The vent valve is installed in a tee and is used to release

any residual pressure in the line between the sample valve and the sample vessel. Samples can be removed either by opening the collection vessel and pouring it out or by use of the drain valve.

Standard material of construction is T316 Stainless Steel but it can be provided in any of the other alloys if required. A high pressure 25 mL or 75 mL sample collection vessel without a cooling sleeve for pressures to 5000 psi is available upon request.

Sample Collection Vessels

Part No.	Description
4351	Sample Collection vessel, 10 mL, with cooling sleeve, isolation & vent valves for connection to 1/8" NPT valves
4352	Sample Collection vessel, 10 mL, with cooling sleeve, isolation & vent valves for connection to 1/4" NPT valves
4353	Sample Collection vessel, 10 mL, with cooling sleeve, isolation & vent valves for connection to 3/8" NPT valves
-D	Optional Drain Valve



4878 Automated Liquid Sampler

A safe and reliable method for collecting multiple liquid samples from heated and pressurized reactors has been sought for many years. Parr Instrument Company is pleased to introduce the Parr 4878 Automated Liquid Sampler which can extract up to six liquid samples at a user-defined interval without the need for the continued presence of an operator. Controlled through a user-friendly touch screen, a series of precision switching valves allows collection and deposition of samples with consistent volumes into individual vials. The 4878 can operate up to the maximum working pressure of all standard Parr reactors and pressure vessels. A multi-step loop sequence ensures clearing of the reactor dip tube between samples to yield samples representative of the bulk reactor fluid.

Features include:

- Touch screen controller with easy-to-navigate graphical displays
- Compact footprint 14-in wide x 16-in deep (35cm x 40cm)
- Stand alone design compatible with any new or existing Parr reactors and pressure vessels
- User-definable parameters including time between samples, number of samples, and number of loop sequences
- Various sample loop volumes available to accommodate a wide variety of sampling scenarios
- Capability to connect with mobile devices on both iOS and Android platforms
- Possible customizations include: design for use in hazardous locations, increased number of samples, special alloy components. Contact Parr Technical Service for additional options to fit your requirements.



Filtered Dip Tubes

To assure you collect only liquid from a vessel, the solids must be removed. Parr recommends press-on filters, or in some instances screw-on filters, at the end of the dip tube to remove solids from the liquid sample. These sintered metal filters are available in a variety of materials, with a variety of nominal pore sizes, often from 0.5 microns to

40 microns. Most of these filters have a relatively small filtration area, so the user should consider how long it will take for a sample of desired volume, viscosity, and solids content to be collected in a sampling device. If clogging of a press-on filter is a possibility, Parr recommends purchasing a second easy-to-install complete filtered dip tube as the filters are factory-installed and not easily replaced in the field. Screw-on filters are field-replaceable and have a larger surface area, but due to their larger size usually only supplied for use with 1 Liter and larger vessels.