

Product Description

The Vessel Sampling System (VM 100) allows full, representative samples to be taken from a dip pipe mounted at the top of a vessel. The models vary based on their size and method of drawing the sample up the dip pipe.

Applications

Vessel sampling systems are ideal for the sampling of batch processing within reactors or storage vessels holding intermediate product or bulk chemicals.

Features

Vessel samplers can be supplied with all wetted parts manufactured from stainless steel or PTFE/PFA-lined components for corrosive media. Our vessel mounted sampling systems are varied in their construction and often designed to meet specific requirements of the customers existing plant. The sample can be drawn up the dip pipe using site vacuum, eductor, recirculating pump or pressure within the vessel.

Specifications

- Temperature range up to 350°F (180°C)
- Pressure up to 150 psig (10 bar)

Options

- Cabinets
- Various materials of construction available
- Catchpots
- Automation

VESSEL MOUNTED SINGLE SAMPLING SYSTEM

The sample is drawn from the vessel up the dip pipe using site vacuum. The sampler is cleared by nitrogen purge and / or wash liquor.

Features

- Many different sight glass volumes
- Floating hollow PTFE ball acting as non return sight glass
- Robust PFA-lined valve for long service
- Spare flange connection for future upgrade
- PFA-lined stainless steel manifolds with flanged connections



RECIRCULATING SAMPLING SYSTEM

Designed to be mounted to a reactor dip pipe, the recirculating sampling system allows samples to be discharged back into the vessel either through a separate nozzle or an instrument tee back around the outside of the dip pipe.

Features

- Globe type sample dispensing valve, allowing no product hold up.
- PFA lined valves used for isolation are extremely robust and offer large bores for use with slurries.
- Robust PFA lined flanged manifold ports for nitrogen and wash introduction.
- Top manifold has spare top connection to allow future upgrade for fitment of pH probe, pressure gauge etc.
- Integral stainless steel safety cabinet housing bottle adaptor.



COMPACT RECIRCULATING SAMPLING SYSTEM

This sampling system's compact design is safe, accessible and easy for the operator to use.

Features

- In-line sampling device with self draining flow path
- Air operated diaphragm pump
- Elbow bulls eye sight glass with instrumentation port
- Inlet isolation valve with flush/purge port above
- 180 degree easy access sample cabinet for sample bottle with banded base and ventilation
- Continuously lined dip pipe with integral return flow instrument tee
- Return flow isolation valve and PTFE hose



Typical dispensing options available from our standard product range include:

Hand Held Bottle Sampling

Offers a simple sample dispensing method being a straightforward PTFE or stainless steel dip tube. The operator simply offers up a hand-held sample bottle to the dip tube and operates the sample valve to acquire the sample. This option is intended for samples that are not toxic or dangerous to the operator. The bottle vents freely into the atmosphere around the dip tube.



Threaded Bottle Connector

The most common type of sample dispensing supplied is the PTFE threaded bottle connector. The operator screws the sample bottle up into the adaptor before taking the sample. The threads on the bottle adaptor are machined to suit the customer's own sample bottle. The bottle adaptor has an integral vent supplied with a PTFE compression fitting and a short length of PTFE tubing to carry fumes away from the operator. This can be piped into the site process vent system if required.



Septum Capped Bottle Assemblies

The sample bottle is fitted with an aperture cap and septum to seal the contents of the bottle from the atmosphere. The sample bottle is offered up to the sample valve and pushed on to the two non coring needles which puncture the septum - one for filling the other for venting. As the operator fills the sample bottle, the fumes from the sample media and bottle travel safely down the vent line away from the operator. When the bottle is pulled free from the needles, the septum seals the bottle preventing fumes or sample media from escaping from the sample bottle to the atmosphere or the atmosphere entering and contaminating the sample.



Syringe Samplers

Syringe samplers differ from the other types of sample dispensing methods as no sample bottle is used. Instead the sample is drawn directly from the process and contained within a borosilicate glass tube within the syringe assembly. The sample is automatically taken from the sample valve when the syringe is offered up to its mount using a pin and cam arrangement. When the syringe is released the sample valve and syringe automatically close preventing any release of fumes or product. The sample is contained within a borosilicate glass tube contained within a sturdy stainless steel carrier. The syringe can then be taken to the lab and safely dispensed using the syringe dispensing attachment.



For additional protection, sample bottles can be contained within a safety cabinet.

When samples are to be taken from hot process lines, we offer a range of heat exchangers to cool the sample to a safe temperature before being dispensed.

