



BQM Closed Sampler

• Introduction

Our company follows SH/T 0233-92 "Liquefied petroleum gas sampling Method" and "Petrochemical closed sampling Safety Requirements" standards, absorbing foreign advanced technology, to meet the needs of the industry constantly improve the design, upgrade the process, successfully developed BQM series closed sampler (gas/liquid closed sampler), safe and reliable, easy to operate. To adapt to higher requirements, higher quality sampling.

It is suitable for sampling all kinds of medium in petrochemical plant, especially the medium and low pressure gas medium which is poisonous and harmful, inflammable and explosive. The collected samples have high authenticity and accuracy, and no residual liquid/gas emissions. Effectively prevent the harm of toxic and harmful medium to the operator. At the same time, it will not pollute the environment and avoid dangerous accidents caused by flammable and explosive media in sampling. Meet the requirements of environmental protection, fire prevention and explosion protection standards. Closed sampling, that is, the sample flow sampled from the process or equipment pipeline will return to the process pipeline or flow to the discharge pipeline, forming a closed loop to realize closed sampling. Throughout the sampling process, no process media will be exposed to the air, resulting in personal injury or environmental pollution.

BQM closed sampler is widely applied in wastewater treatment, acid gas, circulating hydrogen, sour water, hydrogen sulphide, water, ammonia, water containing hydrogen sulfide, ammonia, blackwater, condensate, deaeration water, the changes of condensate, poor methanol, process gas, syngas, overhead gas, gas, half the poor methanol, methanol, rich raw material liquid, corrupt methanol, methanol, sulfur tower exhaust gas, carbon dioxide, CO₂, Flash steam, gas purification, the raw material gas, hydrogen gas, light hydrocarbon, chlorine gas, carbon monoxide CO, liquefied gas, alkali, acid fog, the air, the reaction product of hydrocarbon gas, reaction intermediate, nitrogen gas, reaction of water, methanol and catalyst, ether thick carbon/carbon four three, dimethyl ether, fractionating tower gas, low gas, gas desulfurization tower, low oil, fuel gas, acid, alkylation discharge reactor, Natural gas, sodium hydroxide aqueous solution, wastewater, washing alcohol liquid, crude methanol, methanol, non-condensing gas, methanol synthesis tower gas and other media.



●Working Principle & Main Features

Working Principle:

Gaseous media or volatile liquid media are collected in seamless cylinders, which are opened by safe and reliable needle valves at both ends of the inlet and outlet of seamless cylinders, and equipped with stainless steel quick connectors, which make the installation and removal of sampling cylinders safe, convenient and fast.

Non-volatile liquid medium is collected by closed pressure bottle/open bottle, superior airtight performance, stainless steel protective sleeve to ensure the safety of operators.

Main Features:

1. The box body is made of 304/316 stainless steel, with two forms of box type and panel type, anti-rust and anti-corrosion, beautiful appearance.
2. Quick connection between sampling bottle and process pipeline, user-friendly design, reasonable layout, simple and convenient operation.
3. Sampling bottles are available in glass bottles (open bottles & closed pressure bottles) and stainless steel sampling cylinders.
4. The sampling process is equipped with an emptying and purging port to drain the residual medium in the line, so that the samples are authentic and accurate, safe and environmentally friendly.
5. High temperature (low temperature) medium sampling, need to cool (heating) to room temperature 20℃ or so, can be equipped with cooling (heating) system.
6. Equipped with sampling cylinder for one spin molding, no welding defects, smooth inner wall corrosion resistance.
7. According to the different physical and chemical properties of the medium, users can choose to add various functions to ensure the accuracy and safety of the sampling process.

• Main Technology Parameters

No.	Tech Indicator	Description
1	Scope of Application	Most of the physical and chemical properties of liquid, gas, liquefied gas and mixed gas liquid medium sampling.
2	Sampling Temperature	-20 ~ 450℃
3	Design Pressure	0 ~ 20.0mpa (in order to ensure the sample circulation, the sampling inlet/outlet pressure difference is required to be greater than 0.01mpa)
4	Sample Volume	250ml or 500ml
5	Structure	BQM closed sampler is based on linear sampler, composed of box, valve fittings, sampling cylinder/closed pressure sampling cylinder, flange, pressure gauge and other components.

•Usage Method

Taking BQM-G closed sampler (sampling cylinder container) as an example, the sampling medium is LIQUEFIED gas, and the specific steps are as follows:

1. To prepare for sampling, select sampling cylinders (seamless cylinders) of the corresponding volume according to the amount of samples required by the test. The cylinders should be kept clean and dry, and the tare weight of the sampling cylinders should be measured.
2. Empty and flush the chamber and inner surface of each part in the closed sampler.
3. Follow the sampling steps specified on the instructions on the panel of the closed sampler.
4. Adjust the sampling amount: discharge liquid samples that exceed 80% of the sampling cylinder volume. Use weighing method or reserved volume tube.

The weight of the cylinder filled with liquid samples was weighed by the weighing method, and the sample weight of 80% of the sampling cylinder volume at 20℃ was determined. The sampling cylinder is then placed in a position to discharge the liquid sample, and the valves at both ends of the sampling cylinder are slightly opened to release the excess sample.

Note: If the sampling cylinder cannot be weighed immediately, a small amount of sample should be released to prevent excessive pressure due to sample expansion due to temperature rise. The method is as follows:

After filling the sample, place the sampling cylinder in an upright position and slightly open the valves at both ends of the sampling cylinder to discharge the liquid immediately. When the vapor just appears, close the needle valves at both ends of the sampling cylinder. If no liquid sample is discharged after opening the valves at either end of the sampling cylinder, the sample shall be scrapped and re-sampled.





• Optional Functions

- 1.quantitative type: equipped with quantitative tank to make the sampling amount more accurate
- 2.heat tracing type: used for low temperature, easy to condense medium sampling
- 3.circulation type: samples can be recycled back to the equipment pipeline, avoid waste, economic and environmental protection
- 4.cooling type: used for high temperature medium sampling, the cooler can be built into the inside of the box can also be separately connected externally
- 5.purge type: used for high viscosity, toxic and harmful media sampling, purge gas is often high pressure nitrogen
- 6.decompression type: equipped with a decompression device, used for high pressure gaseous medium sampling, prevent over pressure damage sampling equipment pipe fittings
- 7.coagulation type: used for collecting liquid medium easy to condense
- 8.filter type: used for impurity more impurity impurity medium sampling
- 9.the other: buffer, pipeline mirror, level meter, rotor flow meter, check valve and so on

Our company produces the stainless steel sampling steel cylinder is made of a hot spinning forming, such as pickling passivation technology, due to the complexity of sampling site environment, also have different laboratory analysis instruments, the diversification of the cylinder can collect sample and so on many factors, it is difficult to unify fixed sampling steel cylinder with accessories, need to users according to actual needs to choose and buy.