

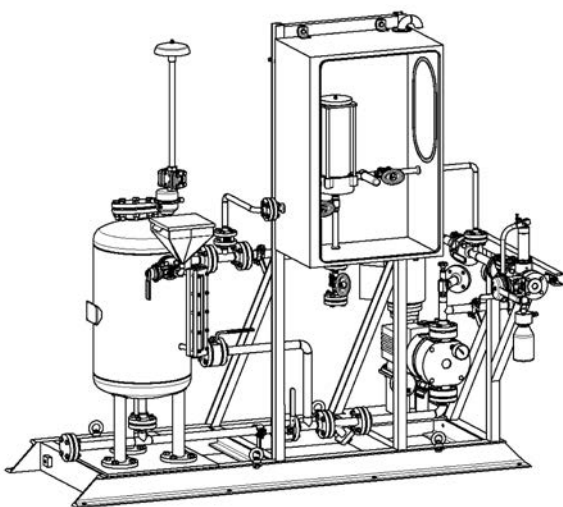


Barthel SAMPLING SYSTEMS

Jet A1 Sampling Unit

The Jet A1 sampling unit is an established closed system that is used for the visual inspection and full quality control of aviation fuel. The design of the tankside fast-flush facility implements all the advantages of a closed sampling system, e.g. easy handling, safety, environmental compatibility and minimal product loss. The arrangement allows the safe and efficient fast-flush drainage of water from the storage tank through the sump. The main components of the Jet A1 sampling unit consist of Visijar test equipment installed in a stainless steel protection cabinet, a separate self-closing (spring-loaded) sampling valve to take lab samples, a bypass pump, a drain tank and a funnel with a mesh strainer for sample returns.

The protection cabinet with fuel test and recycling equipment provides optimum environmental control and safe operation. The fuel can be sampled in a closed system. The sample fuel is stored in a recovery tank after a sample has been taken and controlled.



VISIJAR Assembly

Fuel enters the glass vessel via a ball valve with a spring-return handle, usually under gravity. Incoming fuel is forced to create a vortex thereby concentrating dirt and/or suspended water at the centre of the vessel making it easier to detect visually.

In addition, various checks can be carried out, such as density, temperature and tests to detect chemicals in water ('clear and bright' quality check / SWD Shell Water Detector) depending on the accessories fitted. When the checks are completed, the drain valve is opened and the sample is released into the recovery tank.



A funnel installed on the recovery tank can be used to dispose of unnecessary samples. The drain vessel is also equipped with a sight glass indicating the fill level. The tank needs to be emptied by pumping the fuel back into the storage tank if the fuel level is reaching the maximum level.

All materials that come into contact with the fuel are stainless steel. The support frame has a robust design and is made of galvanised steel.

Continuous Sampler (CS)

CS samplers are designed for continuously taking samples of liquids – this is also known as proportional sampling. A standard application is the collection of subsamples during truck and tanker bunkering operations.

The sampling system is automatically controlled through the use of a solenoid valve. The intervals between subsamples must be preselected and specified by an external controller. The CS sampler uses the operating pressure of the product to fix the volume of the subsamples. Other supplementary energy is not needed to operate it (e.g. control air). The sampling point is located at the centre of the product flow through the use of a probe. Dead space is avoided. The subsamples extracted are collected in a standard laboratory glass bottle connected by means of a quick coupling.

Standard CS samplers are designed for operating conditions of 6 to 10 bar (g) and 65 °C. They are made of stainless steel.



An Overview of Barthel Sampling Systems



It is necessary to design and construct optimum sampling systems individually to meet the wide range of balanced requirements. It is vital to work closely with customers, represented by operators and analytical, safety and process engineers, in order to reach this goal. We will gladly put our many years of experience and high flexibility in construction and manufacturing at your disposal.

We provide individual solutions for:

- Liquid sampling
- Liquid sampling with sample cooling
- Sampling systems with sample cylinders
- Gas sampling
- Molten mass sampling
- Solid sampling