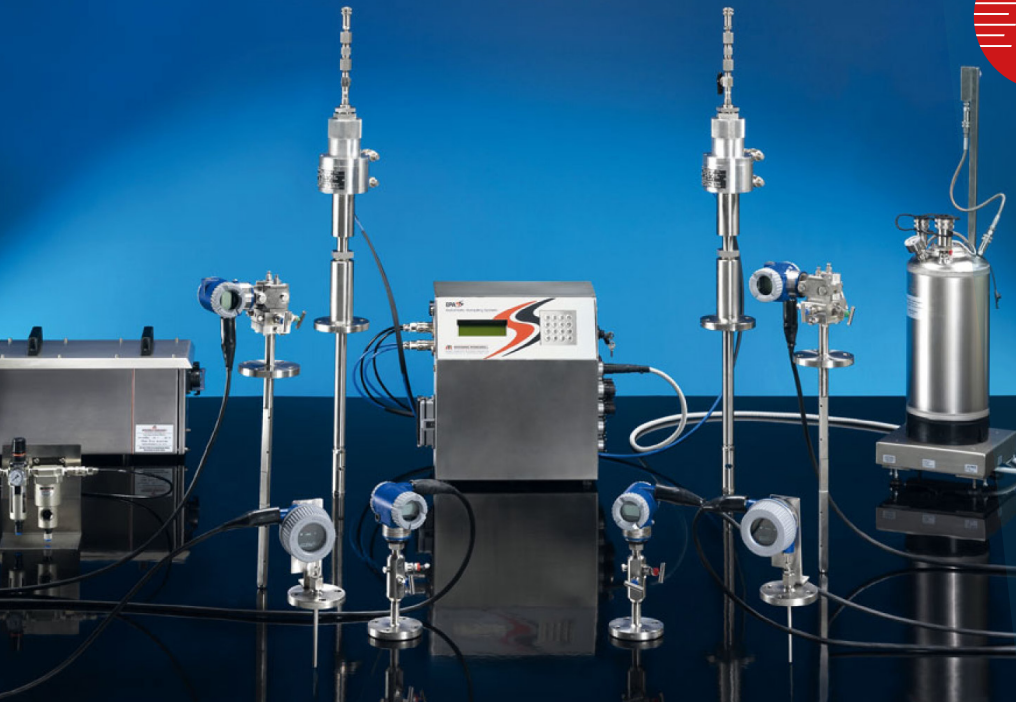




Dawcul's partnership with Autocontrol Technologies focuses on crude oil and petroleum product sampling in the oil and petrochemical industries, especially where custody transfer takes place. Autocontrol has a range of products designed to conduct automatic sampling of crude oil and refined products with high measurement accuracy.



Sampling of cargoes is recommended to guard against contamination or higher than expected water content, which has the potential to greatly reduce the value of the cargo.

Accurate sampling reduces costs over time, providing a swift return on investment and quality assurance guarantees.

Sampling systems can be designed for use wherever they are needed, for example at marine oil terminals, along pipelines, on offshore oil platforms, refineries, loading and unloading operations, storage depots, etc. Collected samples are laboratory tested to monitor quality and performance.

All samples are taken in accordance with the International Standards Organisation ISO3171 and American Petroleum Institute API8.2 which guarantees each sample has the physical or chemical characteristics identical to the average characteristics of the total volume being sampled.

Established in 1994 to offer customers cutting edge solutions in the on-line instrumentation, process measurement and control automation fields, the company's core business is in design, engineering, construction, and installation of high technology process instruments for the oil & gas, petrochemical and power industries.

Applications

Petrochemical Industry

Oil terminals
Production wells
Off-shore platforms

Tankers
Refineries
Metering skids



Autocontrol Technologies

Products

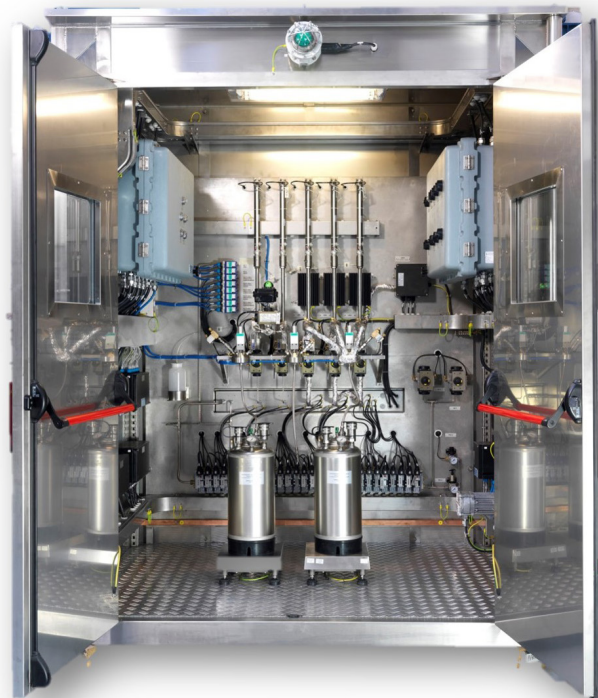
PRIME-RC1 or PRIME-RCX (2-6 sample lines) Single or Multiple In-Line Premium Technology

On some continuous flow pipelines, or in a continuous process operation in a refinery, it is necessary to collect samples continually for regular analysis. In these cases, often, a simple In-Line sampling system is sufficient to collect a sample. Calculations can be made to determine the mixing profile of the pipeline and a mixing device (either Jet Mix or Static Mixer) can be added upstream of the chosen sample point if required. A pneumatic or electrically operated sample probe can be inserted into the pipeline with a sample receiver cabinet placed close by to collect either Flow or Time proportional samples for analysis in the laboratory.

Many loading/unloading applications occur on marine jetties where the Custody Transfer Point is usually considered to legally be the loading/unloading arms. In these situations, there is often a chronic lack of space on the jetty which leads to difficulties in adding a mixing device.

Fortunately, the unloading arm is the best sampling point available due to the presence of the ship's pumps, valves, reductions and bends upstream of the sampling point, which guarantee almost perfect mixing. A multiple In-Line sampling system is capable of sampling each loading arm simultaneously and collecting a single sample which is fully representative of the entire cargo being unloaded.

In-line instruments can be added for measuring physical parameters, such as pressure, temperature, and density.



Prime RC-X

Performance control is ensured by the presence of Grab Checkers that directly verify the performance of each probe by means of a volume comparison, delivering the most accurate results.

Sample collection lines can be purged with Nitrogen in order to ensure that all of the sample is collected and there is no product remaining in the connecting sample tubing.



Quality Assurance

Autocontrol Technologies certified Quality Management System meets the requirements of ISO 9001:2015. The company is also ATEX notified for applications in hazardous areas.



Autocontrol Technologies

Fastloop and SmartLoop® Sampling Systems

In addition to the standard Fastloop Sampling System, which implements the classic bypass loop configuration and is the ideal sampling solution for use in pipelines that are already homogeneous, such as refined products, Autocontrol has also designed a SmartLoop® Sampling System. This can be used on small diameters (up to 8" - based on viscosity) and combines the standard Fastloop and the Nozzle and Quill from our DyMix® Systems thus eliminating the need for static mixer, thus ensuring optimal mixing with no pressure drop.

Several different inline measuring devices, such as Densitometers and Water in Oil Monitors can be incorporated into the sampling loop if required, negating the need for separate tappings in the pipeline. The system is designed according to the specific needs of each single application.

A cell sampler is used as a sample extraction device. SmartLoop sampling systems can be included in a DyMix System exploiting its large pumps if mixing is required, or a Static Mixer can be used to provide homogenisation of the pipeline if required. The SmartLoop® system is equipped with a dedicated pump skid, with one or two pumps in case redundancy is required.



Fastloop

DyMix® Dynamic Mixer System (Jet Mix)

Available for pipelines with diameters of up to DN1500 (60"), these systems are designed and sized to generate enough Jet Mix energy to homogenise the pipeline content.

Although it can be used together with an in-line sampling system it is more usually combined with a fast loop circuit and cell sampler.

The system can be supplied with two redundant pumps for reducing the maintenance downtime to zero, allowing it to operate continuously with one of the two pumps.

Unlike Static Mixer devices, virtually no pressure drop is introduced into the main pipeline. Its large sample-intake opening maximizes accuracy and minimizes uncertainty during sample separation, allowing it to obtain the most representative sample.

The investment return is very quick - the accuracy in detecting water in oil is so high that the price of the system is usually recovered in as little as 3 - 6 months.



DyMix®

Autocontrol Technologies

CMS

Compact Mixing Skid

The CMS stems from the DyMix® but limited to the mixing section. It can be used coupled with an inline system when space is a major constraint. It has many applications for blending and also can be used to ensure that liquids are properly mixed prior to measurement by online instruments such as Densitometers.

Electronic Portable Automatic Sampling System (EPASS)

Portable multiline

This portable sampling system can be used when a fixed system is not a viable option (e.g. where there is lack of space or infrequent sampling operations are needed). For more information, please contact your local Dawcul representative.

Ancillary Products

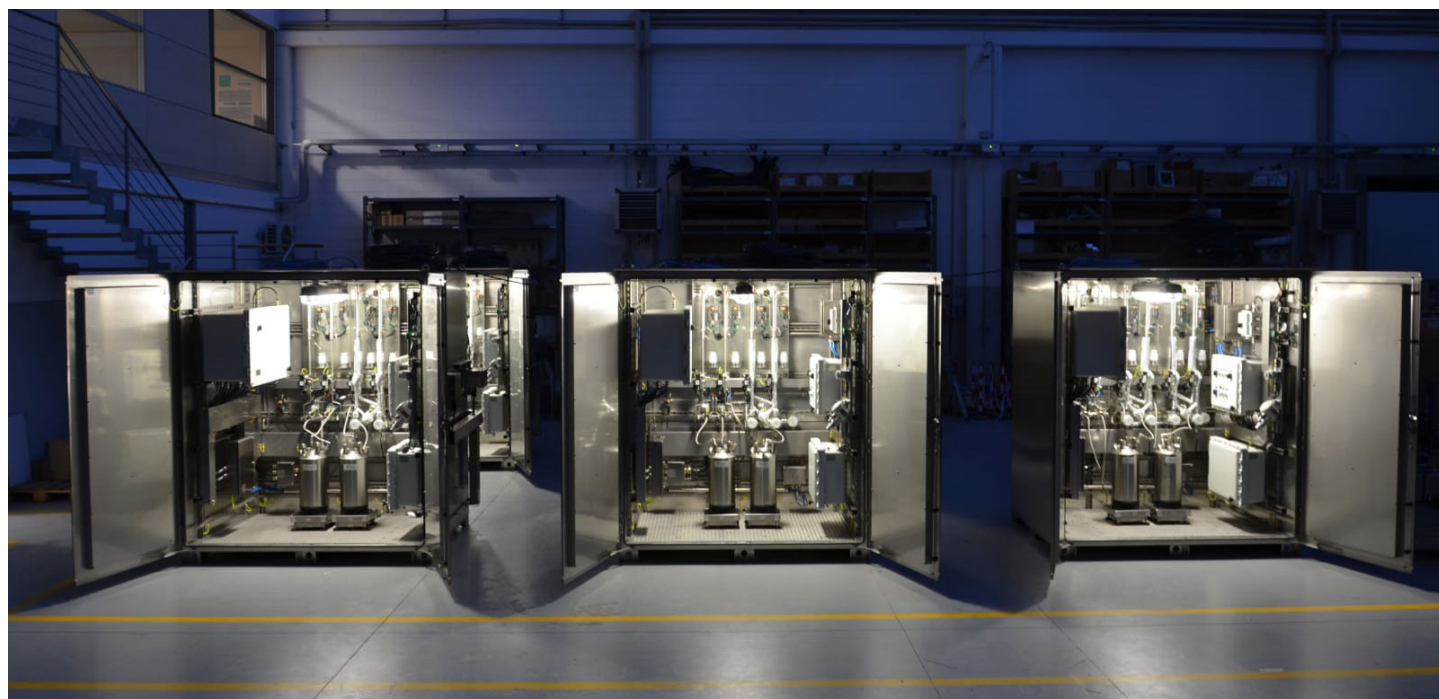
A range of sample receivers and accessories are also available to complement the sampling system range. These include:

- ◆ Atmospheric Sample Receivers in either 9L or 18L capacity for low volatility liquids.



EPASS

- ◆ Constant Pressure Cylinders (CPC's) for volatile liquids and gases.
- ◆ Fixed Volume Sample Bombs for taking spot samples during sampler operation.
- ◆ A range of Laboratory Mixers for re-homogenising the sample before analysis.



Dawcul is an Authorised Distributor for Autocontrol Technologies across Eastern Europe. For more information please contact your local regional representative.



Your partner in energy since 1977