



## ACE INSTRUMENTATION

- High accuracy class sampling system
- Upfront performance guarantee using CFD modeling
- Fully ISO, API, and ASTM compliant
- Low installation and maintenance cost
- Cross Contamination between batches are minimized

# Auto Sampling For Smaller Pipelines

The KPS fastloop or bypass sampling system provides a high accuracy solution on locations where the flow is already homogeneous. The fastloop sampling systems provide a higher accuracy compared to inline probe sampling systems, primarily due to the larger sampler inlet. It can be maintained without pipeline shutdown, and allows for an easy installation and maintenance of online analyzers such as e.g. BS&W, density, or viscosity analyzers.

The KPS fastloop sampling system makes use of the KPS byscoop and pump unit to create a bypass of the main pipeline. The KPS byscoop combines the loop take off and return in a single device, reducing the amount of hot tapping required on the main line. A KPS byscoop is placed in the central third of the pipeline, allowing for a representative flow to be transported to the KPS flowthrough CS-01 cell sampler.

The KPS CS-01 is installed in the sample receiver cabinet and transfers an accurate and representative 1cc sample grab from the loop to the receiver cans. The KPS CS-01 is a heavy duty automatic sampler, capable of handling crude oils containing high solid contents, and highly viscous crudes. The CS-01 uses a three-step technique to assure that the performance stays unaffected by variations in the process by pressure or viscosity of the liquid.



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## Applications

*Crude oil*

*Condensate*

*Low temperature hydrocarbons*

*Refined products*

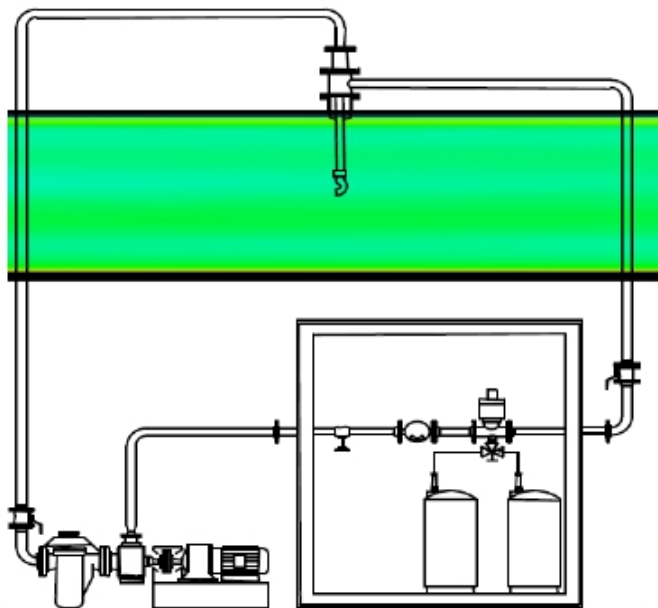
*Hazardous liquids*



Another advantage of fastloop sampling system compared to an inline probe system is the possibility to minimize the distance between the grab sampler and the receiver cans. This way the risk of cross contamination between batches is minimized and users can be assured of an accurate sample collection.

An important aspect of a fastloop sampling system, is that the fluid transferred through the sampling system should be representative for the whole cross-section of the pipeline. Since this is dependent upon many factors (e.g. pipeline size, flowrate, density, viscosity, etc), KPS has built up the knowhow and has the tools and capability of using advanced CFD modeling software to assist you with this. If mixing is required, a common mixing system used, which provides adequate mixing regardless of flow conditions, is the patented KPS jetmixing technology.

KPS automatic sampling systems are capable of providing a truly representative composite sample, giving both the user and his clients confidence. Please consult on of our experts to find out which system best suits your custody transfer application.



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## Typical specifications

Fluids mixed

Crude oil/water mixtures, refined hydrocarbons & chemicals

Max line pressure

Designed to suit

Line size range (typical)

4 - 12" (other sizes available on request)

Line tapping size

Typically 3"

Installation requirements

The byscoop is normally installed in a horizontal section of pipeline.

Please contact KPS for any further assistance.

Velocity range

Designed to suit

Options

Withdrawable Byscoop

Extractor tool for withdrawable byscoop

On-line analysers such as BS&W, densitometers, and viscosity meters can be integrated as part of the sampling loop ensuring an accurate signal and direct comparison of results.



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