



► **SAMPLEX startJET** **Sampling & Mixing Solution**

Combination of Fast-Loop Sampler
and Mixing System

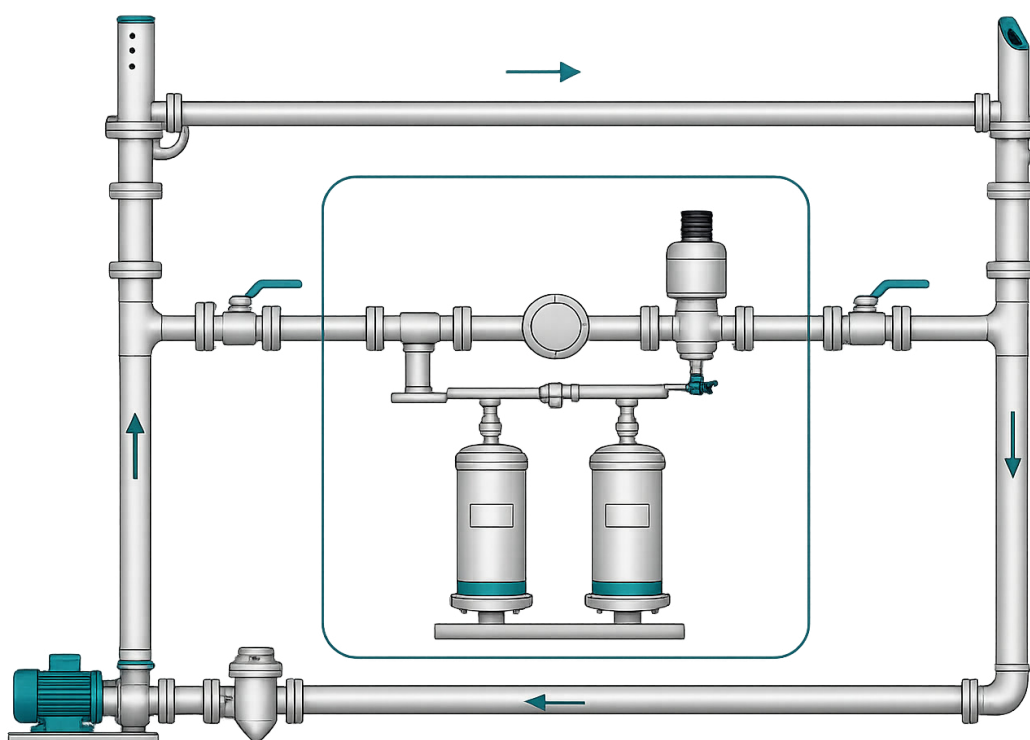
The SAMPLEX™ StartJET System is a high-precision liquid hydrocarbon sampling system. It provides low measurement uncertainty and delivers an excellent return on investment for high-value custody transfer applications.

SAMPLEX™ StartJET is the ideal system for custody transfer units, allocation measurement, and quality measurement applications where a mixing process is required.

The StartJET System combines a Fast-Loop sampling system with a motorized mixing system. The sampling system is integrated into the mixing loop, providing optimal mixing performance in the pipeline without creating pressure drop in the main process line. It is suitable for applications with a wide range of flow rates or where pressure drop limitations could create a bottleneck in the process.

Benefits

- Custody transfer sampling for liquid hydrocarbons.
- Low measurement uncertainty.
- Compliant with API, ASTM, and ISO standards.
- Verifiable according to API performance testing procedures.
- Low risk of sample contamination between batches.
- User-friendly operation.
- Simple and easy maintenance.
- Low installation costs.



Typical Schematic of the SAMPLEX™ StartJET System

Mixing energy is added to the flow through injection nozzle jets, ensuring proper mixing conditions for sampling across all flow rates.

The flow is extracted into the sampling loop circuit through a large bypass nozzle inserted into the center of the main pipeline. The nozzle features a sufficiently large inlet area to reduce sampling system uncertainty.

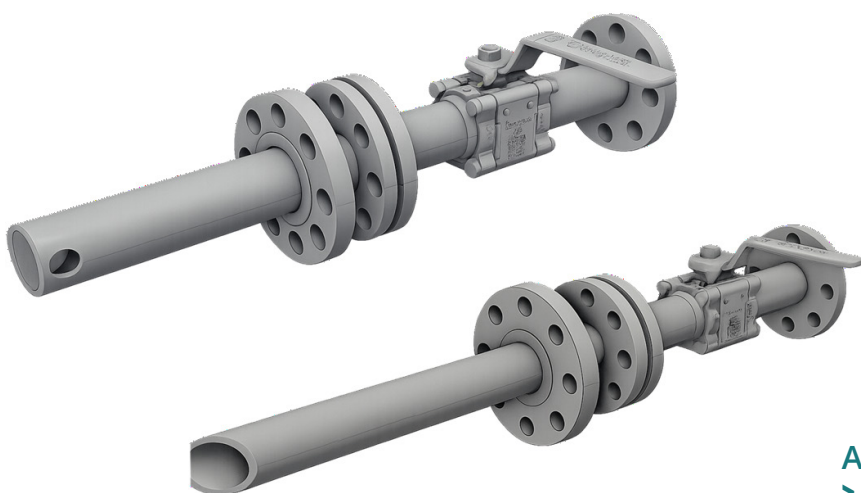
The sampling loop circuit is designed to prevent water accumulation and ensure sufficient fluid velocity to maintain a representative and homogeneous sample throughout the entire system. The circuit passes through a sample receiver enclosure (standard construction material: 316 stainless steel), which can be integrated into a complete skid with the mixing circuit or fully isolated for maintenance activities without affecting the main process operation.

The sample receiver enclosure contains a cell-type sample extractor with a standard sample volume of 1 cc, which transfers the sample into a sample receiver. The short sample travel distance minimizes the risk of cross-contamination between batches.

The sample receiver enclosure can be supplied with a heating system to maintain a uniform temperature and prevent solids formation. Sample receivers are available in 3, 5, or up to 10-gallon capacities. These sample receivers can be integrated with the SAMPLEX™ WS20 Weighing System for dynamic measurement of sample collection performance.

When the SAMPLEX™ StartJET System is integrated with the SAMPLEX™ Control-X Controller, it provides enhanced ease of operation. The controller includes an operating philosophy based on API automatic sampling requirements and is specifically designed to work with the main equipment within the SAMPLEX™ product line.

The suction and injection nozzles can be installed by hot tapping on either the top or bottom section of the pipeline. In-line analyzers, such as water cut meters, in-line viscosity meters, and in-line density meters, can be integrated into the sampling circuit, ensuring optimal representativeness and accuracy while allowing direct comparison of measurement results.



Injection Nozzle & Suction Nozzle startJET

Applications

- Crude Oil
- Condensates
- Refined Products
- Hazardous Liquids