

Cased Hole Field Transfer Unit

Improved, fast sample transfer and validation

APPLICATION

- Single-phase reservoir fluid sample validation and transfer

BENEFITS

- Fast sample transfer
- Fewer high-pressure connections necessary per transfer
- Safer operation and increased reliability

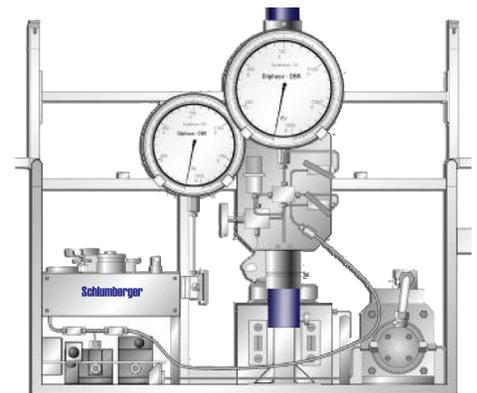
FEATURES

- Sample validation cell
- All-stainless-steel construction
- High-pressure quick-connect couplings
- High-pressure nitrogen intensifier
- Contamination-free pretransfer pressure test
- Dedicated hoses and pumps for all displacement fluids
- Mercury-free operation

The field transfer unit (FTU) is a customized field workstation designed for the transfer and validation of single-phase reservoir fluid samples into single-phase transport cylinders. Sample transfer can be performed in less than one hour with no compromise in sample quality.

To allow for fast field rig-up, a nitrogen intensifier and two air-operated high-pressure pumps, for synthetic oil and water, are built into the unit. The FTU supports the Single-Phase Reservoir Sampler and sample bottle together and offers increased reliability by requiring a minimum of new connections to be installed and tested before commencing the transfer. Dedicated hoses for all displacement fluids ensure no cross-contamination of samples, and stainless-steel construction prevents contamination caused by line corrosion. High-pressure quick-connect couplings ensure easy operation with no thread galling or cross-threading and permit easy field maintenance.

Following transfer, sample validation can be confirmed by field bubblepoint measurement. This validation is performed using a constant-volume cell (2 cm³) connected to a calibrated dial test gauge. This cell removes the risk of error and ensures that identical volumes are progressively removed during depressurization, producing reliable field bubblepoint determination.



Field transfer unit.

Specifications

Length, in [m]	41 [1.04]
Width, in [m]	21 [0.533]
Height, in [m]	26 [0.66]
Weight, lbm [kg]	196 [88.9]
Test pressure, psi [MPa]	22,500 [155]
Working pressure, psi [MPa]	15,000 [103] 20,000 [138], optional
Material	Stainless steel
Recommended air supply	55 scf/min at 1,035 kPa [150 psi]
Design code	API 6A