



# Crude Oil Package

## The Official Standard Method for Vapor Pressure of Crude Oil

The Crude Oil Package is a comprehensive solution for the transport and measurement of the vapor pressure of crude oil according to ASTM D6377. The unique Floating Piston Cylinder allows safe sample transfer of “live crude oils” according to ASTM D3700 and eliminates the risk of evaporation of light hydrocarbon ends during transport.



- **Floating Piston Cylinder (FPC 250)**  
Collecting crude oils in constant pressure, floating-piston cylinders can avoid changes in gas/liquid composition. The Grabner Floating Piston Cylinder (FPC250) is a high quality stainless steel cylinder, which was carefully developed in cooperation with Norwegian offshore personnel. The small and handy cylinder holds 250 mL of sample and allows the collection, mixing, transfer and handling of crude oils. It fully complies with ASTM D3700, D6377 and GOST R 52340 methods.

- **Easy to Use**  
Attach the FPC to the sample source and flush it either manually or purge it with a continuous bypass stream of the sample. Then collect a representative sample and seal it inside the cylinder.

- **Mechanical Stirrer**  
The FPC includes a built-in mechanical stirrer, to maintain a representative and uniform sample.
- **Manual Filling for ASTM D3700**  
The handle of the mechanical stirrer extends from the air-inlet side and contains a compact pressure gauge to monitor the pressure of the crude oil inside the cylinder. The mechanical stirrer also enables manual positioning, making a back-pressure source in field unnecessary. When the piston is in forward position, the filling of the FPC 250 automatically creates a back pressure of approximately 150 psi of air, which is suitable and sufficient for numerous sampling conditions.

- **Safety First**  
Two valves with spring-loaded packing are built-in on the inlet side, together with a built-in rupture disc, for safety. Another valve with a Swagelok® Quick-Connector is attached to the cylinder's air or nitrogen inlet. All valves can readily be locked from unintentional opening during transport or storage.

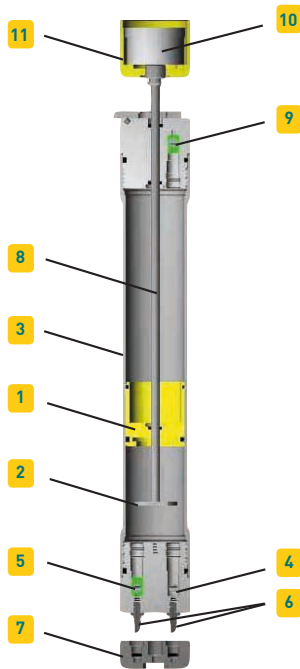
### Key Features FPC 250

- ASTM D3700, D6377, GOST R52340
- Up to 70 bar Pressure
- 250 mL Sample Volume
- Only 10 mL Sample per Test Required
- Manual or Pressurized FPC Filling
- Manual Stirrer Included
- Stainless Steel Valves
- High Quality Fittings

## RELEVANT METHODS

- ASTM D6377 Crude Oil (VPCR<sub>x</sub>), specified for EPA TVP measurements
- GOST R 52340 Crude Oil (VPCR<sub>x</sub>)
- ASTM D3700 (LPG/Crude Oil sampling)
- Excellent correlation to ASTM D323, IP 409, JIS K2258-1 RVP

## FPC 250



## FPC CROSS SECTION

- 1 Piston with O-ring and free volume in the back. The small O-ring is for better gliding only.
- 2 Stirrer Plate
- 3 Cylinder Tube
- 4 Inlet head with inlet and purging valve
- 5 Inlet head with inlet and purging valve
- 6 Inlet and purging quick connector
- 7 Protection plate and seal for quick connector
- 8 Stirrer rod with 1 mm bore
- 9 Back pressure head with back pressure valve
- 10 Manometer for sample pressure
- 11 Handle for manual stirrer

## MANUAL STIRRER



## CRUDE OIL PACKAGE



Floating Piston Cylinder	Max. 7000 kPa (1000 psi), 250 mL sample volume, incl. stirrer, manometer and rupture disk
Filling Tube (Stainless Steel)	Pressurized filling up to max. 7000 kPa (1000 psi)
Filling Tube (PTFE)	Pressurized filling up to max. 2000 kPa (290 psi)
Calibration Tube (PTFE)	Filling at atmospheric pressure
Filters for FPC 250	Spare filters to prevent clogging / wax contamination
Pressure Regulator	Reduces inlet pressure (required only for VPXpert)
Coupling	Special coupling for crude oil filling tubes
Optional	Additional manometer for back pressure measurement, with built-in relief valve

Your distributor: