

# Low-Pressure Filtration

Measurement of the filtration or water loss and wall cake building characteristics are basic to drilling fluid control and treatment. The filtrate collected is a measure of the relative amount of fluid in the drilling mud lost to permeable formations. Fluid loss values of 10 to 20 mL per 30 minutes are sufficient in most situations. Chemical studies of the filtrate are necessary in any successful mud control program. Analysis of the filter cake deposited in terms of thickness, composition, and consistency are also important considerations. These characteristics are controlled by the type and quantities of solids in the fluid and their physical and chemical interactions. Different temperatures and pressures can have a big effect on filtration control. Therefore, tests are run at both low-pressure / low-temperatures and high-pressure / high-temperatures.

The OFITE low-pressure filter press design features a cell body to hold the mud sample, a pressure inlet, and a base cap with screen and filter paper. Suitable for field and laboratory use, these units have become the industry standard for low-pressure / low-temperature filtration testing.

OFITE also manufactures other types of filter press units and inventories a full line of replacement and consumable parts. Stainless steel cases are available for most of the units. When several tests must be run simultaneously, as in a laboratory environment, multi-units are available in either two, four, or six-cell designs. These multi-units come complete with manifolds and all necessary air hoses and bleed-off valves. The field portable units are supplied with various pressurization assemblies and manifolds and rely mainly on carbon dioxide bulbs and nitrogen gas to provide pressure. The American Petroleum Institute (API) recommends a standard  $100 \pm 1.0$  PSI ( $690 \pm 6.9$  kPa) cell pressure be applied within 30 seconds for a 30 minute test.

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know?*

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## BENCH MOUNT FILTER PRESS - BASIC #140-20

**Size:** 8" x 5.5" x 19" (20 x 14 x 48 cm)

**Weight:** 9 lb 4 oz (4.2 kg)

### Cell Assembly Components:

- #141-00 Cell Body with #141-06 Pins
- #141-01 Base Cap with #141-03 Filtrate Tube
- #141-02 Top Cap for Cell
- #141-04 Screen, 60-Mesh
- #141-05 Gasket,  $\frac{3}{8}$ ", Neoprene
- #141-19 Air Hose Adapter for Top Cap
- #141-22 Filter, Felt

### Frame Assembly Components:

- #141-08 Frame
- #141-09 Threaded Insert with Set Screw for T-Screw
- #141-10 T-Screw
- #141-11 Support for Graduated Cylinder
- #141-12 Support Rod
- #141-18 Thumb Screw



API Low-Pressure Filter Press