



Dependable Products From People You Trust



**Shown here with optional carrying case.*

Model MB Wall-Mount Filter Press

with CO₂ Pressuring Assembly

Part No. 142-53

Instruction Manual

Updated 6/1/2009

Ver. 2.0

OFI Testing Equipment, Inc.

*11302 Steeplecrest Dr. · Houston, Texas · 77065 · U.S.A.
Tele: 832.320.7300 · Fax: 713.880.9886 · www.ofite.com*

©Copyright OFITE 2011

Table of Contents

Intro	2
Specifications	2
Components	3
Operation	4

Intro

Measurements of filtration behavior and wall cake-building characteristics of a drilling fluid are fundamental to control and treatment of drilling fluids, as are various characteristics of the filtrate such as oil, water, or emulsion content. These factors are affected by the types and quantities of the solids in the fluid and their physical and chemical interactions, which in turn are affected by changing temperatures and pressures.

The OFITE Model MB Full-Area filter press helps determine filtration and wall cake-building properties of drilling fluids. The filter press design features a cell body to hold the mud sample, a CO₂ pressuring assembly with regulator, a base cap with screen, and filter paper.

Specifications

Size:	7" × 7.5" × 6.5" (18 × 19 × 17 cm)
Weight:	5.4 lbs (2.44 kg)
Shipping Size:	11" × 6" × 6" (28 × 15 × 15 cm)
Shipping Weight:	7 lbs (3.2 kg)
Maximum Pressure:	200 PSI (1,379 kPa)
Pressure Source:	CO ₂ Cartridge

Components

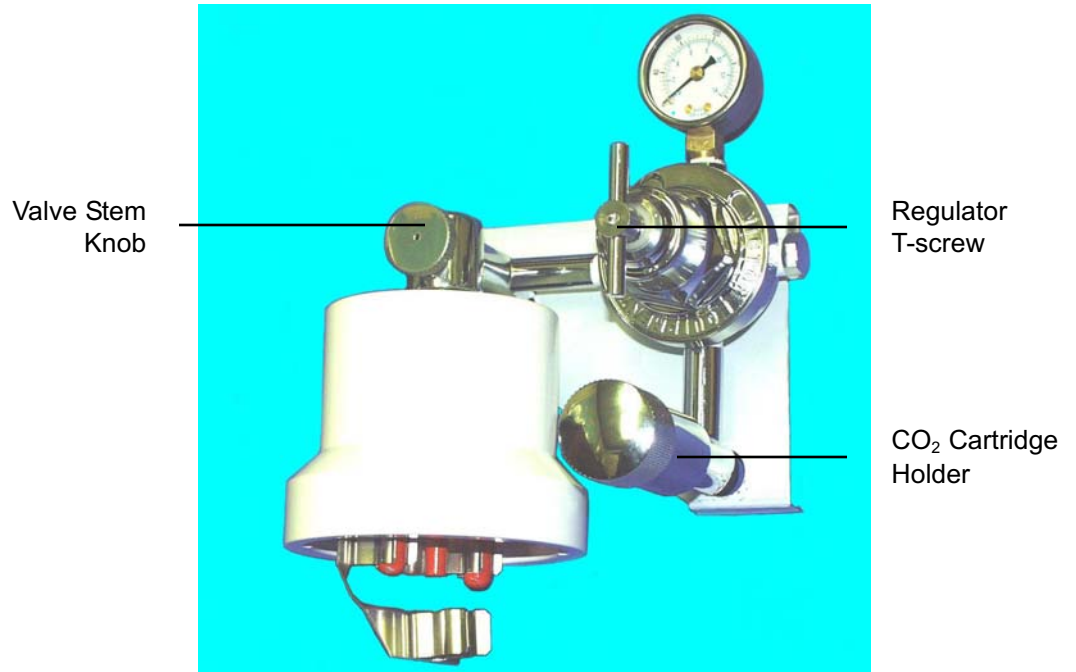
- #140-55 Filter Paper for Low Pressure; 3½" (9.0 cm); Box of 100
- #142-37 Victor Regulator
- #142-53-1 Complete Cell Assembly**
- #142-53-2 Test Cell Lid:**
 - #142-23 60-Mesh Screen; Stainless Steel; 3-1/8" Diameter
 - #142-53-7 Male Connector
 - #142-56 Coupling O-ring
 - #142-60 Test Cell O-ring
- #142-53-3 CO₂ Cap Holder (Barrel)
- #142-53-4 CO₂ Cartridge Holder Assembly:**
- #143-02-11 Puncture Pin Holder Assembly:**
 - #143-02-12 Puncture Pin
 - #143-02-13 O-ring for Puncture Pin Holder Assembly; CO₂ Cartridge
 - #143-02-14 O-ring for Puncture Pin Holder Assembly;
- #142-53-5 Female Coupling Assembly
- #142-53-6 Valve Stem (Bleed Off Screw)
- #142-53-9 Support Bracket
- #142-53-10 Graduated Cylinder Holder
- #142-54 O-ring for T-fitting; Qty: 2
- #142-58 O-ring for HTHP Coupling
- #143-01 200-PSI Gauge; 1/8" Bottom Connection
- #144-15 Plated Brush Bushing; ¼" NPT Male to 1/8" NPT Female; Qty: 2

Optional:

- #142-53-8 Stainless Steel Case
- #142-53-SP Spare Parts for #142-53:**
 - #142-23 60-Mesh Screen; Stainless Steel; 3-1/8" Diameter; Qty: 4
 - #142-53-6 Valve Stem (Bleed Off Screw)
 - #142-54 O-ring for T-fitting; Qty: 12
 - #142-56 Coupling O-ring; Qty: 2
 - #142-58 O-ring for HTHP Coupling; Qty: 12
 - #142-60 Test Cell O-ring; Qty: 6
 - #143-01 200-PSI Gauge; 1/8" Bottom Connection
 - #143-02-13 O-ring for Puncture Pin Holder Assembly; CO₂ Cartridge; Qty: 6
 - #143-02-14 O-ring for Puncture Pin Holder Assembly; Qty: 4
 - #143-05 EZ-Puncture CO₂ Bulbs; 8-Gram; UN #1013; Package of 10; Qty: 20
 - #143-19 Repair Kit for Victor Regulator

Operation

1. Close the valve stem knob by turning it completely clockwise.
2. Measure the initial temperature of the mud sample and record it for later analysis.



3. Remove the CO₂ cartridge holder and insert a new cartridge. Turn the regulator T-screw completely counter-clockwise. Puncture the CO₂ cartridge by tightening the holder.



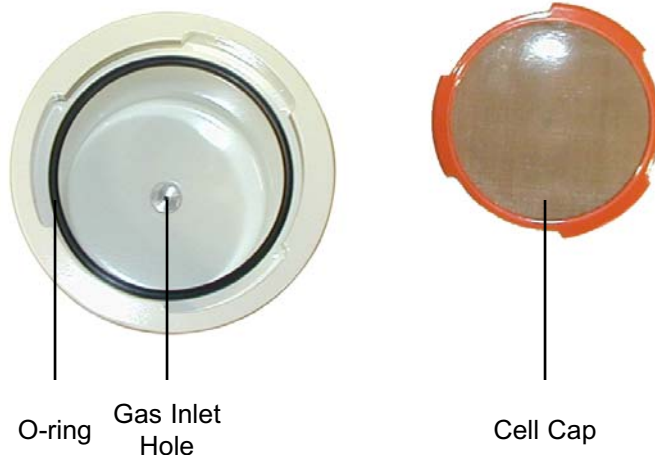
Note

If pressure is released through the regulator while the regulator T-screw is unscrewed, the regulator is faulty and should be repaired before proceeding with the test.



Tip

Apply a small amount of grease to the tip of the pressure cartridge to increase the life of the sealing gasket.



Tip

4. Fill the filter cell to within ¼” of the o-ring ledge with test fluid. Wipe away any fluid along the gasket edge.

Block the gas inlet hole on the outside of the cell with your finger or a piece of tape to prevent fluid from leaking.

5. Place an o-ring on the provided ledge and place a sheet of filter paper on top of it. Install and lock the cell lid into place on the cell body.
6. Attach the filter cell to the regulator assembly by aligning the male coupling on top of the cell assembly to the female coupling on the regulator assembly. Turn the cell ¼ turn counter-clockwise to lock it into place.
7. Place a clean, dry graduated cylinder beneath the cell directly below the drain tube.
8. Turn the regulator T-screw clockwise until the pressure gauge reads 100 PSI. Turn the valve stem knob counter-clockwise two complete turns to initiate filtration. Maintain 100 PSI throughout a 30-minute period. When the test is complete, turn the regulator T-screw completely counter-clockwise.
9. Bleed off any remaining pressure from the cell by slowly turning the valve stem knob clockwise while listening for venting gas from the valve stem hole (about one turn). When the pressure flow stops, disengage the cell.



Important

Do not remove the cartridge from the holder until the pressure has been completely exhausted. To do so may damage the sealing gasket.

10. Record the volume of filtrate collected in cubic centimeters to the nearest .1 cm³. Label this value “API Filtrate”. Record the time interval and the initial mud temperature. Save the filtrate for chemical analysis.



Tip

11. Carefully save the filter paper and deposited cake. Wash the excess filter cake on the paper with a gentle stream of water.

If you are testing oil mud, use diesel oil to clean the filter cake instead of water.

12. Measure and record the thickness of the filter cake to the nearest $1/32$ " (0.8 mm). A cake thickness less than $2/32$ " is usually considered acceptable. Observe and record the quality of the cake: hardness, softness, toughness, slickness, rubberiness, firmness, flexibility, sponginess, etc.
13. After each test, disassemble the test cell and thoroughly clean all surfaces with soap and water. Make sure all parts are clean and dry before storing the unit.