



CEMENT TESTING EQUIPMENT

For over 30 years OFI Testing Equipment (OFITE) has provided instruments and reagents for testing drilling fluids, well cements, completion fluids, and wastewater. In addition to these product lines we also offer a range of instruments for core analysis. From our manufacturing facility in Houston, TX we provide customers all over the world with quality products and exceptional service.

Our cement product line includes innovative designs such as the Static Gel Strength Measurement Device (SGSM) which showcases our ability to develop new technology to meet customer and industry demands. We also offer Ultrasonic Cement Analyzers (UCA), Constant Speed Blenders, Automated HTHP Consistometers, and all other instruments required to evaluate cement properties according to API Specification 10.

As an independent manufacturer and supplier, OFITE has one priority, our customers.

OFI TESTING EQUIPMENT, INC.

11302 Steeplecrest Dr.

Houston, TX 77065

877.837.8683

www.ofite.com

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Pressurized Fluid Density Scale

Drilling fluids and cement slurries often have a considerable amount of entrained or trapped air that may give erroneous results when determining fluid density using conventional equipment. This air volume may be reduced or eliminated by pressurizing the sample cup, which will then give more accurate density readings of the fluid itself.

The OFITE Pressurized Fluid Density Scale is similar to a standard mud balance. A sample cup of known volume is balanced by a fixed counterweight at the opposite end of a balance beam. A sliding weight rider moves along the graduated scale and a level bubble on the beam indicates when the system is in balance. The position of the rider on the graduated scale indicates the density of the sample.



Features

- **Durability:** The machined stainless steel construction is stronger, less susceptible to corrosion, and more consistent from unit to unit.
- **Ease of Use:** The smooth finish is easy to clean and the laser-etched scales are clear and easy to read. The more consistent construction makes calibration easier.

Technical Specifications and Requirements

- #100-70 Pressurized Fluid Density Scale

Density Measurement Ranges:

- 52 - 164 lb / ft³
- 6.9 - 21.9 ppg
- 83 - 2.63 specific gravity
- 360 - 1130 PSI / 1000 ft

Introduction

Drilling fluids and cements often have a considerable amount of air entrained or trapped within the fluid that may give erroneous results when determining fluid density using conventional equipment. This air volume may be decreased to a negligible quantity by pressurizing the sample cup, which will then give more accurate density readings of the fluid itself.

Description

The OFITE Pressurized Fluid Density Scale is similar to a standard mud balance. A sample cup of known volume is balanced by a fixed counterweight at the opposite end of a balance beam. A sliding weight rider moves along the graduated scale and a level bubble on the beam indicates when the system is in balance. The position of the rider on the graduated scale indicates the density of the sample.

In the center of the lid is a check valve that allows a one-way flow of test fluid into the sample cup. A plunger attaches to the check valve and applies pressure to the sample cup. When the pressure in the sample cup increases, the check valve automatically closes, sealing off the pressure inside. A cap holds the lid in place.

The balance beam has four graduated scales:

- 52 – 164 lb / ft³
- 6.9 – 21.9 ppg
- .83 – 2.63 specific gravity
- 360 – 1,130 PSI / 1,000 ft

Components

Part Number	Description
#100-29	Level Bubble Vial
#100-56	Steel Shot
#100-60-09	Check Valve
#100-60-24	Retaining Ring for Check Valve
#100-70-01	Sample Cup and Mud Arm Assembly
#100-70-02	Lid
#100-70-03	Cap
#100-70-04	Rider
#100-70-05	Shot Well
#100-70-06	O-ring for Lid
#100-70-07	Plunger Assembly
#100-60-13	Packing Cup, Plastic
#100-70-010	Knob
#100-70-11	Piston Rod
#100-70-13	Compression Cylinder
#100-70-14	Lower Plunger Cap
#100-70-15	Upper Plunger Cap
#170-07	O-ring
#100-70-08	Carrying Case
#100-70-24	Base
#100-70-25	Cover for Level Bubble Vial
#115-32	Knife Edge
#142-54	O-ring for Check Valve Nozzle
#142-56	O-ring for Check Valve

Optional:

#100-70-101	Calibration Fixture
#100-70-SP	Spare Parts Kit
#100-60-13	Packing Cup for Plunger Assembly, Qty: 3
#100-60-24	Retaining Ring, Qty: 2
#100-70-06	O-ring for Lid, Qty: 6
#142-54	O-ring for Check Valve Nozzle, Qty: 6
#142-56	O-ring for Check Valve, Qty: 4
#170-07	O-ring for Plunger Assembly, Qty: 4

