



DRILLING FLUIDS 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 drilling fluids product line includes innovative designs such as the Model 900 Viscometer, which showcases our ability to develop new technology to meet customer and industry demands. We also offer Retorts, Aging Cells, Roller Ovens, Mud Balances, Filter Presses, and all other instruments required to evaluate drilling fluid properties according to API Recommended Practice 13B-1 and 13B-2.

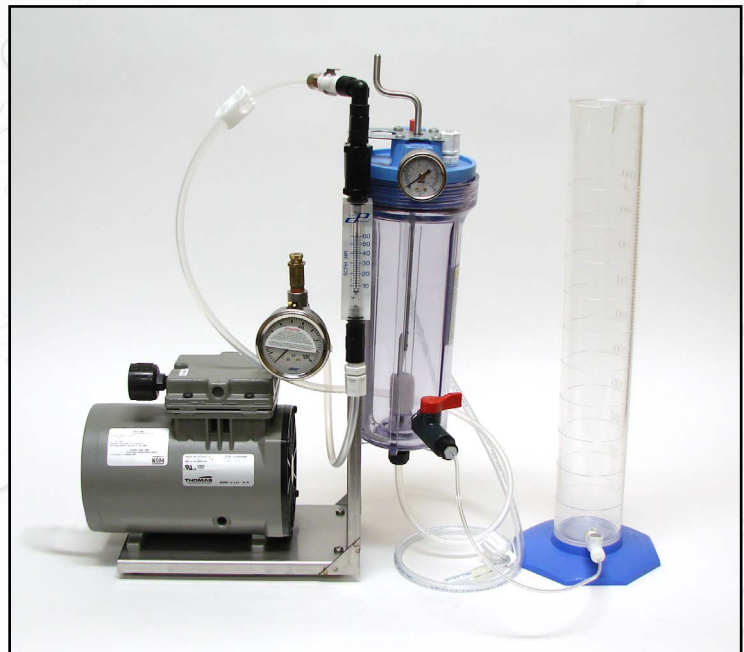
As an independent manufacturer and supplier, OFITE has one priority, our customers.



Dissolved Air/Diffused Air Flotation Test Apparatus (DADAFTA)

Dissolved Air Flotation and Diffused Air Flotation (both referred to as DAF), are water treatment processes that clarify wastewater by removing suspended matter such as oils and solids. Fine gas bubbles (usually from compressed air) are introduced into the liquid. The bubbles attach to the particulate matter and float them to the surface to form a froth. Chemical flotation aids are often used to enhance the DAF process.

The Diffused Air / Dissolved Air Flotation Test Apparatus (DADAFTA) simulates the DAF process on a small scale. The DADAFTA can be used to measure the floatability of a particular sludge when designing treatment plants and to evaluate chemical flotation aids.



Features

- Clear, unibody pressure cell withstands pressures up to 125 PSI (8.6 bar)
- Oil-less piston air compressor for high efficiency and constant performance
- Permeable ceramic disk used for the diffuser can be removed, cleaned, and reused
- Chemical flotation aid inlet with septum
- Stainless steel paddle for additional mixing capabilities
- Easy-to-read flow meter and pressure gauge
- Quick disconnect fittings



Applications

- Separation of flocculated matter in the clarification of surface water
- Separation of flocculated or non-flocculated oil in wastewater from refineries, airports, and steelworks
- Separation of metallic hydroxides or pigments
- Thickening of the activated sludge (or mixed sludge and primary sludge) from organic wastewater treatment plants

Technical Specifications and Requirements

- #298-00 115 Volt, 60 Hz
- #298-00-1 230 Volt, 50 Hz

Specifications

- Maximum Pressure: 100 PSI (689.5 kPa)

Requirements

- 115 Volt, 60 Hz or 230 Volt, 50 Hz

Intro

The performance of dissolved air flotation units can be enhanced by the addition of polymers. Polymers can increase solids recovery in the floated sludge from 85% to 99% and also reduce the suspended solids in the subnatant.

Bench testing utilizing the Poly Prep "N" Floc and Diffused Air Dissolved Air Flotation Test Apparatus (DADAFTA) are commonly used to evaluate the performance of a dissolved air flotation unit. Both test apparatus are effective for the purpose of selecting an appropriate polymer product and dosage.

Components

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|------------|---|
| #135-04 | External Retainer Ring |
| #141-22 | Felt Filter |
| #143-01-1 | 200 PSI Gauge; 1/8" Back Connection |
| #153-09-2 | 1,000 mL Graduated Cylinder, PMP Nalgene |
| #171-90-04 | 1/4" NPT Cross, 316 Stainless Steel |
| #171-90-12 | 1/4" NPT Male Elbow, 316 Stainless Steel |
| #298-01 | Stainless Steel Stand |
| #298-02 | 10" Clear Filter Housing with 3/8" Connection |
| #298-03 | Barb Insert |
| #298-04 | 50 mm Flowmeter (0 - 30 SCFH) |
| #298-06 | 1/4" Straight Coupling, Nylon |
| #298-07 | Reducer Bushing, 1/4" x 1/8" |
| #298-08 | 1/4" Female/Male Elbow; Nylon |
| #298-09 | 8 mm Septum |
| #298-10 | Liquidtight Straight Connector |
| #298-11 | Reducer Bushing; 3/8" Male x 1/8" Female |
| #298-12 | Dura Clamp |
| #298-13 | Poly Pak Seal |
| #298-16 | Quick Disconnect Coupling; Barbed Male; 1/16" x 1/8" |
| #298-17 | Quick Disconnect Coupling; Threaded Male |
| #298-18 | Quick Disconnect Coupling; Straight Comp Fit; 3/8" x 0.250" |
| #298-19 | Plastic Pinch Valve |
| #298-20 | Rubber Stopper |
| #298-21 | Pressure Relief Valve; 100 PSI (689.5 kPa) |
| #298-22 | Pump, 115 Volt |
| #298-22-1 | Pump, 230 Volt |
| #298-23 | Reducing Bushing; 3/8" x 1/4" |
| #298-24 | Male Pipe Straight Adapter; 3/16" x 1/4" |
| #298-25 | Male Pipe Adapter; Elbow; 3/16" x 1/4" |
| #298-26 | Acetal Check Valve; 1/4" Female x 1/4" Female |
| #298-27 | Stopcock Valve; 1/4" Male x Female |
| #298-28 | Polyethylene Tubing; 3/16" ID x 5/16" OD; Qty: 5' |
| #298-29 | Polyurethane Flexible Tubing |
| #298-30 | In-Line Hose Barb; 1/16" ID |
| #298-31 | Hose Adapter; 1/16" x 1/8" |
| #298-32 | Stainless Steel Gauge; 100 PSI, 2 1/2" Face; 1/4" Back Connection; Glycerine Filled |
| #298-33 | Air Diffuser; 1.5" L x 0.75" W, 3/16" OD; Barbed; 4 mm |

Optional:

- #291-00 Poly Prep "N" Floc Test Kit
- #155-05 Electronic Clock / Timer
- #154-22 Pocket Thermometer; 0° – 220°F (-17.7° – 104.4°C)
- #147-16-1 Waterproof pH Test

Specifications

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|----------------------------|--|
| Maximum Pressure: | 95 PSI (655 kPa) |
| Temperature Range: | 40–100°F (4.4–37.7°C) |
| Fluid Capacity: | 1,125 mL |
| Dimensions: | 15" × 18" × 8" (38 × 46 × 20 cm) |
| Weight: | 17 lb (7.7 kg) |
| Shipping Dimensions: | 22" × 12.5" × 19" (55.6 × 31.8 × 48.3 cm) |
| Shipping Weight: | 23 lb (10.4 kg) |
| Power Requirements: | 115 Volt, 60 Hz or 230 Volt, 50 Hz |
| Typical Ranges: | |
| Air to Solids Ratio (A/S): | 0.004–0.080 mL (air) / mg (solids) |
| Rise Rate: | 0.2–4.5 gal/min/ft ² (9–170 L/m ² /min.) |
| Recycle Gage Pressure: | 40–80 PSI (275.8–551.6 kPa) |
| Recycle Rate: | 20–100% of the influent |

Required Reagents & Samples

- Water or wastewater sample that requires liquid/solid separation.
- Primary effluent from the treatment plant's clarifier, or existing DAF.
- Various types of polymers prepared in accordance with manufacturer's instructions.
- Recommended Polymer Preparation Procedure
- A total volume of 1 liter (1,000 mL).