# 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.



### **EP (Extreme Pressure) and Lubricity Tester**

The EP and Lubricity tester from OFITE is a high-quality instrument used to measure the lubricating quality of drilling fluids, provide data to evaluate the type and quantity of lubricating additives that may be required, and predict wear rates of mechanical parts in known fluid systems.

#### EP (Extreme Pressure) Test

This test produces an indication of the film strength of the fluid being tested by applying a measured force to a torque-sensitive bearing cup with the torque arm. The EP test is typically run at a high shear rate, 1,000 RPM, with fluid pressures ranging from 5,000 to 100,000 PSI between the steel surfaces.

#### Lubricity (Surface to Surface Drag) Test

The more common lubricity test measures fluid resistance of various lubricating additives. For the standard lubricity coefficient test, 150 in-pounds of force (the equivalent of 5,000 to 10,000 PSI pressure on the intermediate fluid) is applied between two hardened steel surfaces, a block, and a ring rotating at 60 RPM.



### Features

- Digital Control The digital control board provides more accurate data than older, analog methods.
- Automatic Speed Control The motor automatically increases torque to maintain a constant speed when force is applied to the ring and block. Manual speed adjustments are unnecessary.
- User-Friendly Interface The simple, intuitive interface makes testing quick and easy. Functions include preset speeds (60, 200, 600, and 1000 RPM), manual speed control, and torque zeroing.
- Optional software<sup>\*</sup> records torque reading and temperature with respect to time.
- Maximum Speed 1,000 RPM
- Maximum Torque 600 inch-pounds



## **Technical Specifications and Requirements**

- #112-00 115 Volt
  - #112-00-1 230 Volt
- #112-00-T With Data Acquisition, 115 Volt
- #112-00-1-T With Data Acquisition, 230 Volt
- #112-00-C With Heat Cup, Ultrasonic Cleaner, Data Acquisition, and Carrying Case, 115 Volt
- #112-00-1-C With Heat Cup, Ultrasonic Cleaner, Data Acquisition, and Carrying Case, 230 Volt

### Specifications

- Belt-Driven Motor: ½ horsepower, 90 Volt DC, 5.5 Amps
- Maximum 600 inch-pounds of torque
- Shear rate: 1,000 RPM Maximum
- Fluid Pressure Range: 5,000 to 10,000 PSI (34,500-69,000 kPa)
- Size: 19" × 15" × 14" (48.3 × 38.1 × 35.6 cm)
- Weight: 56 lb (25.4 kg)
- Crated Size: 22" × 20" × 21" (56 × 51 × 53 cm)
- Crated Weight: 95 lb (43 kg)
- Power Requirement: 115 / 230 VAC, 50/60 Hz

## **Optional Items**

- #111-01 Padded Transport Case
- #111-13 Grinding Compound, Fine, 16 oz can
- #111-14 Grinding Compound, Coarse, 16 oz can
- #206-06 Deionized Water 1 gal (3.785 L)
- #280-31 Acetone (UN1090), 16 oz (500 ml)

## Data Acquisition Features\*

Records torque reading and temperature with respect to time

		9.4 - 250.0 - 0	-250	Torque	
Test Informat	ion	9.3 240.0	-240	RPM	
rescivative		9.2 230.0	230	Temperature	
Comments		9.1 220.0	-220		
comments		9.0 210.0	-210	Cursors:	X Y
		8.9 200.0	-210	Torque	00:00 6.
		8.9 200.0	-200	RPM	00:00 22
				Temperatur	e 0000 43
		8.7 180.0	180	Torque	00:00 6.
		8.6 170.0	170	RPM Temperature	00:00 22
		8.5 160.0	-160		
Current Dat	a Torque	8.4 150.0	150		
Torque Average NaN	0.0	8.3 140.0	-140		
RPM	Temperature	8.2 ≥ 130.0 8.1 120.0	130		
0.00	0	<sup>6</sup> 8.1 <sup>∞</sup> 120.0 <sup>1</sup>	-120	atur	
Elapse Time		8.0 110.0	-110	*	
00:00:00		7.9 100.0	100		
		7.8 90.0			
Control Parameters Motor PPM		7.7 80.0	-80		
	RPM	7.6 70.0	-70		
Disable Motor	0.0	7.5 60.0	-60		
Zero Torque	0.0	7.4 50.0	-50		
Start Average (MM:SS)	Span (MM:SS)	7.3 40.0	40		
00:00	00:00	7.2 30.0	30		
		7.1 20.0	20		
		7.0 10.0	10		
Start Te			-0		

\*Software available on #112-00-T, #112-00-1-T, #112-00-C, and #112-00-1-C only.

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