Taha Kimia Tajhiz Co.

Fann Co.

Mixing/Blending/Shearing Devices

Datasheet

Drilling Fluids Testing / Blenders and Mixers Equipment

Mixing/Blending/Shearing Devices
for Preparation of Drilling Fluids

Description

Most drilling fluid formulations contain a base liquid and additives which must be dissolved or mechanically dispersed into the liquid to form a homogenous fluid. The resulting fluid may contain one or more of the following: water-dispersible (soluble) polymers or resins, clays or other insoluble but dispersible fine solids, and soluble salts. The fluids are mixed or sheared for times appropriate to achieve a homogenous mixture and are then set aside to "age." Drilling fluid aging is the process in which a drilling fluid sample, previously subjected to a period of shear, is allowed to more fully develop its rheological and filtration properties. Aging is done under conditions which vary from static to dynamic and from ambient to highly elevated temperatures.

Five Spindle Multi-Mixer Model 9B

The Five-Spindle Multi-Mixer™ Model 9B mixer is recommended for use in general purpose mixing of drilling fluids in preparation for laboratory tests of mud materials, with 11,500 rpm and 115V/60Hz. These mixers are supplied with No. 9B29X impeller blades. Each spindle is fitted with a single sine-wave impeller approximately 25 mm in diameter mounted flash side up. Conforms to API 13A for mixing water-based and oil-based drilling fluids. Multi-mixers are also used to mix cement for field or laboratory testing. Cups for Multi-Mixer™ mixers are sold separately. Mixer Cups No. 205967 are Stainless Steel, 32 oz. 180 mm deep, 97 mm at top and 70 mm at bottom.

Five Spindle Multi-Mixer™ Mixer

Hamilton Beach™ Mixers

Drilling fluid formulations are commonly mixed with various shearing devices which may be either fixed speed or variable speed. The motors may turn mixing shafts with rounded "propellers," sharp blades, wave-form shapes, or others. Single shaft or multiple shaft devices are used. Some examples of the more widely used mixer types are: Hamilton Beach™ mixer, Dispersator™ high shear mixer, Waring Blendor™ mixer, Multi-Mixer™ Model 9B mixer with 9B29X impeller, Silverson™ Model 14LR mixer. Stainless Steel 32 oz Mixer Cups No. 205967 are included with Hamilton Beach™ Mixers.

Hamilton Beach™ Model HMD 400

Hamilton Beach™ Model HMD 200

fann®

Laboratory Mixers

Fann Laboratory Mixers are two speed mixers, available in both 115 and 230 volt models. No load test speeds of 11,000 and 15,000 rpm. Supplied with the standard impeller blade for mixing either water-base or oil-based drilling fluids. Powerstat™ variable transformers (sold separately) provides an extended mixing speed range. Shearing devices vary widely in the amount of shear they impart. Longer shearing times may be required for low shear devices to achieve complete dissolution/hydration of fluid components; high shear devices may produce nearly completely yielded drilling fluid blends in a few minutes. Aging of drilling fluid samples tends to minimize differences in properties which can result from shearing treatment.

Laboratory Mixer (shown with optional Powerstat™)

Field Portable Mixer

The Field Portable Mixer is designed for use with field test kits. Speed is 15,000 rpm. It features a spring clip and mud shield for direct attachment to the No. 202 High-Impact Plastic Measuring Cup.

Dispersator

The Fann High Shear Mixer (Dispersator™) utilizes a patented mixing head that pumps material into the hollow mixing chamber and outward through the chamber openings. The suction of the blades and flow through the chamber provide a more homogeneous material mix compared to other mixers which rely exclusively on centrifugal force. This mixer achieves a higher shear in less time and maintains a homogeneous material mix without shear degradation. The high speed mixing head and shaft are replaceable. High Shear Mixer with Stainless Steel Stand, 115 Volt, AC/DC, 10,000 rpm, 1hp, Capacity – 30 gallons, material weight of 18 lb/gallon. Powerstat™ variable transformer (sold separately) provides a variable mixing speed range.

Ordering Information

Part No.	Description
205976	Multi-Mixer™ 9B with 9B29X impellers
205967	Stainless Steel Mixer Cup 32 oz
205971	Hamilton Beach™ HMD400 (115V/60Hz)
205970	Hamilton Beach™ HMD400 (230V/50Hz)
205966	Hamilton Beach™ HMD200 (115V/60Hz)
205974	Hamilton Beach™ HMD200 (230V/50Hz)
206562	Laboratory Mixer (115V/60/Hz)
208760	Laboratory Mixer (230V/50/Hz)

Part No.	Description
206536	Powerstat™ (115V)
208772	Powerstat™ (230V)
205986	Field Portable Mixer with Cup (115V)
205722	Transformer (230V)
206889	No. 202 High-Impact Plastic Cup
206008	High Shear Mixer

Fann Instrument Company offers a complete line of equipment, materials, and supplies for analyzing various drilling fluids and oil well cements in accordance with API Specifications and API Recommended Practices.

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