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Dependable Products From People You Trust

Model 25 Constant Speed Blender

120-64: Cement, 115 Volt
120-64-1: Cement, 230 Volt
120-64-F: Fracturing Fluids, 115 Volt
120-64-1-F: Fracturing Fluids, 230 Volt

Instruction Manual

Updated 4/27/2020
Ver. 2

Table of Contents

Intro

OFITE's Model 25 Constant Speed Blender was designed to prepare well cements and fracturing fluids for testing according to the guidelines stated in API document. Research has demonstrated that the properties of well cements and fracturing fluids are highly dependent upon mixing procedures. In addition, studies have indicated that when constant speed blenders/mixers are used, data obtained from testing has greater reproducibility and generally correlates better with data obtained from other laboratories. The Model 25 was designed to provide a means of consistently preparing these fluids for testing purposes and can be utilized to mix cements and fracturing fluids according to the procedures stated by the API.

Description

The Model 25 Constant Speed Blender has two modes: Cement (for mixing cement slurries according to API guidelines) and Frac (for mixing fracturing fluids).

In Cement Mode, the proper amount of mix water is carefully weighed and poured into the mixing container of the blender. After pressing the CEM button, the blender automatically sets the rotational speed to 4,000 rpm and the timer to 15 seconds. The user then adds the dry cement to the mix water. After 15 seconds, the blender automatically adjusts the rotational speed to 12,000 rpm and mixes the slurry for an additional 35 seconds.

In Frac Mode, the components to be mixed are added to the mixing container of the blender. After pressing the FRAC button, the blender automatically sets the speed to 1,500 rpm and the timer to 5 minutes.

The microprocessor inside the blender maintains the rotational speed independent of fluctuations in line voltage and the viscosity of the fluid.

Components

#122-202	Stainless Steel Mixing Container, 1 Quart (For Cement)
#122-203	Lid for Mixing Container
#120-64-503	Blender Adapter
#152-64	Glass Mixing Container, 1 Quart (For Fracturing Fluids)

Optional:
#120-64-SP	Spare Parts Kit
#122-200	Blending Assembly / Square Drive
#122-204	Bottom Gasket
#122-207	Blade for Blender

Specifications

- Hardened stainless steel mixing blades
- 1-liter mixing container. Stainless steel for mixing cement. Glass for mixing fracturing fluids.
- One preset API mixing program, three user-defined programs, and variable speed operation
- Speed Range:
  - Cement Mode: 500 - 25,000 rpm (no load)
  - Frac Mode: 300 - 5,000 rpm (no load)
- Rotational speed is maintained at setpoint with microprocessor
- Timer automatically controls mixing times at required RPM
- Digital instrumentation provides excellent readability
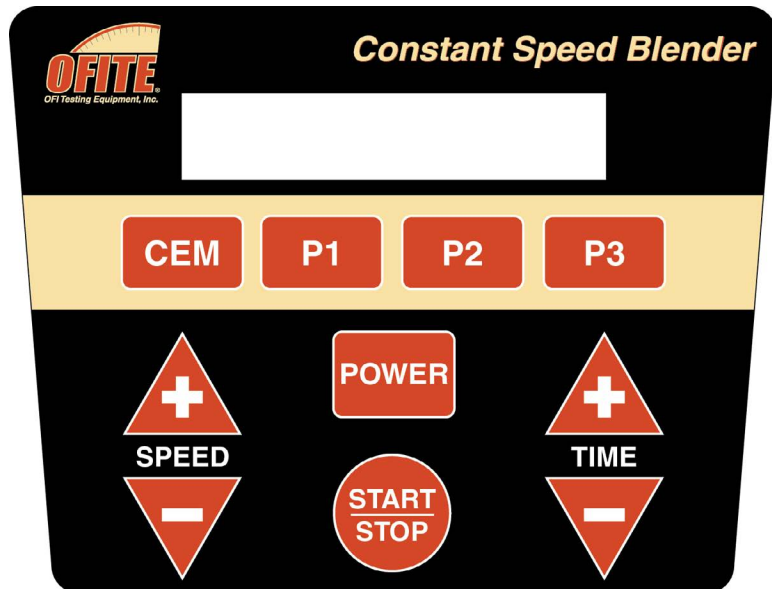
Model 25 Constant Speed Blender Keypad

Operation

Automatic Mode (Cement)

1. Press the POWER button to turn the unit on.

2. Fill the mixing container with the appropriate volume of water for your slurry.

3. Place the mixing container on the blender base.

4. Press the CEM button to start a cement mixing routine. The blender will automatically set the rotational speed to 4,000 rpm and the timer to 15 seconds.

5. Add the dry cement to the mixing cup within 15 seconds. The blender will automatically set the rotational speed to 12,000 rpm and the timer to 35 seconds.

6. When the timer is complete, the blender will stop. Remove the mixing container and continue with further testing.

7. After mixing is complete, clean the mixing container and lid as soon as possible to prevent any cement from building up.

Automatic Mode (Fracturing Fluid)

8. Press the POWER button to turn the unit on.

9. Fill the mixing container with the components to be mixed.

10. Place the mixing container on the blender base.

11. Press the FRAC button to start mixing. The blender will automatically set the rotational speed to 1,500 rpm and the timer to 5 minutes.

12. When the timer is complete, the blender will stop. Remove the mixing container and continue with further testing.

13. After mixing is complete, clean the mixing container and lid as soon as possible to prevent build up.

Manual Mode

1. Press the POWER button to turn the unit on.

2. Press the SPEED +/- buttons to adjust the rotational speed.

3. Press the TIME +/- buttons to adjust the timer. Set the timer to 0 for a user-timed operation.

4. Press the START/STOP button.

   The speed and time can be adjusted during mixing.

5. Press the STOP button to stop the blender immediately. Otherwise, the blender will stop when the timer reaches zero.

6. After mixing is complete, clean the mixing container and lid as soon as possible to prevent any cement from building up.

Note

Programming

The Model 25 Constant Speed Blender has four program buttons. By default, they are programmed as follows:

In Cement Mode:

- CEM: Performs an API cement mixing protocol. Sets speed to 4,000 rpm for 15 seconds and then 12,000 rpm for 35 seconds. This program cannot be altered.

- P1: Sets speed to 4,000 rpm for 15 seconds

- P2: Sets speed to 12,000 rpm for 35 seconds

- P3: Sets speed to 4,000 rpm for a user-timed duration and then 12,000 rpm for 35 seconds.

In Frac Mode:

- FRAC: 1,500 rpm for 5 minutes

- P1: 500 rpm with no time limit

- P2: 2000 rpm with no time limit

- P3: 5000 rpm with no time limit

To change the programming of the P1, P2, or P3 buttons:

1. Press and hold the SPEED + and SPEED - buttons simultaneously for three seconds.

2. Press the button you wish to program (P1, P2, or P3. The CEM and FRAC buttons cannot be programmed.)

3. Press the SPEED +/- buttons to adjust the speed.

4. TIME +/- buttons to adjust the time.

5. Press the program button (P1, P2, or P3) to save these settings and move to the next step.

6. Repeat steps 3 - 5 for each step of the program. You can program up to 10 steps for each button.

7. When you have finished adding steps, press the START/STOP button.

8. Press the START/STOP button to exit programming mode and return to the home screen.

Configuration

1. To access the configuration menu, press and hold the TIME + and TIME - buttons simultaneously for three seconds.

2. Press the SPEED +/- buttons to select a setting.

3. Press the TIME +/- buttons to change the setting.

4. Press the START/STOP button to save the setting and exit.

- LARGE FONT: Select YES to use a large font during mixing.

- MAX TIME: This setting sets the maximum mixing time (MM:SS) allowed. The time limit can range from 1 to 99 minutes in 1 minute increments.

Note

The time setting for all saved programs will be clipped to this limit. Lowering the MAX TIME limit may alter existing programs and cause them to perform unexpectedly.

- POWER OFF: Select AUTO to have the mixer power itself off after 30 minutes of inactivity. Select MANUAL to only turn off the mixer when the POWER button is pressed.

- FACTORY RESET: Select Y to reset all settings and programs to the factory defaults.

Warranty and Return Policy

Warranty:

OFI Testing Equipment, Inc. (OFITE) warrants that the products shall be free from liens and defects in title, and shall conform in all respects to the terms of the sales order and the specifications applicable to the products. All products shall be furnished subject to OFITE's standard manufacturing variations and practices. Unless the warranty period is otherwise extended in writing, the following warranty shall apply: if, at any time prior to twelve (12) months from the date of invoice, the products, or any part thereof, do not conform to these warranties or to the specifications applicable thereto, and OFITE is so notified in writing upon discovery, OFITE shall promptly repair or replace the defective products. Notwithstanding the foregoing, OFITE's warranty obligations shall not extend to any use by the buyer of the products in conditions more severe than OFITE's recommendations, nor to any defects which were visually observable by the buyer but which are not promptly brought to OFITE's attention.

In the event that the buyer has purchased installation and commissioning services on applicable products, the above warranty shall extend for an additional period of twelve (12) months from the date of the original warranty expiration for such products.

In the event that OFITE is requested to provide customized research and development for the buyer, OFITE shall use its best efforts but makes no guarantees to the buyer that any products will be provided.

OFITE makes no other warranties or guarantees to the buyer, either express or implied, and the warranties provided in this clause shall be exclusive of any other warranties including ANY IMPLIED OR STATUTORY WARRANTIES OF FITNESS FOR PURPOSE, MERCHANTABILITY, AND OTHER STATUTORY REMEDIES WHICH ARE WAIVED.

This limited warranty does not cover any losses or damages that occur as a result of:

- Improper installation or maintenance of the products

- Misuse

- Neglect

- Adjustment by non-authorized sources

- Improper environment

- Excessive or inadequate heating or air conditioning or electrical power failures, surges, or other irregularities

- Equipment, products, or material not manufactured by OFITE

- Firmware or hardware that have been modified or altered by a third party

- Consumable parts (bearings, accessories, etc.)

Returns and Repairs:

Items being returned must be carefully packaged to prevent damage in shipment and insured against possible damage or loss. OFITE will not be responsible for equipment damaged due to insufficient packaging.

Any non-defective items returned to OFITE within ninety (90) days of invoice are subject to a 15% restocking fee. Items returned must be received by OFITE in original condition for it to be accepted. Reagents and special order items will not be accepted for return or refund.

OFITE employs experienced personnel to service and repair equipment manufactured by us, as well as other companies. To help expedite the repair process, please include a repair form with all equipment sent to OFITE for repair. Be sure to include your name, company name, phone number, email address, detailed description of work to be done, purchase order number, and a shipping address for returning the equipment. All repairs performed as "repair as needed" are subject to the ninety (90) day limited warranty. All "Certified Repairs" are subject to the twelve (12) month limited warranty.

Returns and potential warranty repairs require a Return Material Authorization (RMA) number. An RMA form is available from your sales or service representative.

Please ship all equipment (with the RMA number for returns or warranty repairs) to the following address:

OFI Testing Equipment, Inc.
Attn: Repair Department
11302 Steeplecrest Dr.
Houston, TX 77065
USA

OFITE also offers competitive service contracts for repairing and/or maintaining your lab equipment, including equipment from other manufacturers. For more information about our technical support and repair services, please contact techservice@ofite.com.