



MOTORIZED GREASE WORKER TT-217GS

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Motorized Grease Worker TT-217GS conforms to ASTM D217 Standard Test Methods for Cone Penetration of Lubricating Grease.

Motorized Grease Worker TT-217GS is designed for automatically shearing lubricating grease. Mechanical Grease Workers are used for "worked penetration" and "prolonged worked penetration" tests to determine the consistency of lubricating greases. This grease worker consists of single or dual steel ASTM grease workers mounted on a sturdy base, driven by a powerful gear reduction motor, and meets ASTM specifications for stroke length and rate. It is equipped with a preset electronic counter that automatically shuts off the drive motor after any desired number of strokes, up to 99,999. The steel grease workers feature a threaded cup and cover, and a steel plunger plate with a shaft and handle that connects to an eccentric cam on the drive unit. An accessory dial thermometer inserts into a plated vent cock. Spring-loaded tightening clamps hold the grease workers securely on the base, and steel pins in the base facilitate disassembly of the grease workers after testing.

Penetration tests are performed on petroleum products to determine consistency and shear stability of lubricating greases for design, quality control, and identification purposes. A standard cone or needle is released from a penetrometer and allowed to drop freely into the sample for 5 seconds (or a different specified interval) at a constant temperature. The depth of penetration of the cone or needle into the sample is measured in tenths of a millimeter by the penetrometer.

APPLICATIONS

The Torontech TT-217GS automates the mechanical working of lubricating grease samples as required by ASTM D217. It is a fundamental tool for evaluating a grease's shear stability—its ability to maintain consistency after prolonged mechanical stress. The programmable drive motor provides precise, repeatable working for accurate "worked penetration" and "prolonged worked penetration" analysis.

This evaluation of mechanical stability is essential for quality control in:

- **Automotive:** Qualifying greases for wheel bearings and chassis components to ensure they resist softening and maintain lubrication under constant operational shear.
- **Industrial Manufacturing:** Verifying grease stability for bearings in high-speed motors, pumps, and conveyors to prevent mechanical breakdown and extend service life.
- **Heavy Equipment:** Testing greases for pivot points and gear sets that endure extreme pressures, ensuring the lubricant remains in place to protect against wear.
- **Steel & Mining:** Certifying the durability of lubricants used in roller bearings and heavy machinery subjected to high loads and continuous, harsh operation.

FEATURES

- **Motor:** A horizontal single-phase capacitor starting motor. It operates at a rated voltage of 220V, delivering 370W of power at a speed of 1400 rpm. It is connected to the turbo reducer through the coupling.
- **Coupling:** An elastic coupling with a plum-shaped design connects the reducer and the motor.
- **Turbo Reducer:** This is a double output shaft reducer with a transmission ratio of 25:1. A pair of eccentric mechanisms are installed on the turbine shaft at both ends of the reducer.
- **Worker:** Positioned on the frame on both sides of the reducer, it is driven by the motor through the coupling and the eccentric mechanism of the reducer. It operates continuously at approximately 60 movements per minute.
- **Counting Display:** A digital display counting device is utilized. When selecting the number of computer relays, use the wave switch to set a number (time) arbitrarily. When the number reaches the set value, it can activate the relay to work and cut off the motor power. This worker is a double-acting reciprocating test equipment consisting of a motor coupling, a reducer, an eccentric mechanism, a worker, and a machine base.
- **Computer Monitoring:** The computer monitors the motor temperature and torque parameters in real-time to safeguard the motor from damage.
- **Ambient Temperature Monitoring:** It includes the function of monitoring the ambient temperature. The screen will prompt if the temperature exceeds the test range of 15-30°C.



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