



MOTORIZED GREASE WORKER

Motorized Grease Worker TT-217G

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

Motorized Grease Worker TT-217G 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 presetting 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-217G automates the mechanical shearing of lubricating greases for cone penetration testing in full compliance with ASTM D217. It is an essential instrument for determining the shear stability of a grease—its ability to retain its consistency after being subjected to mechanical work. Featuring a programmable counter for up to 99,999 strokes and a powerful gear-reduction motor, the TT-217G delivers the precise, repeatable working required for accurate "worked

penetration" analysis.

This assessment of mechanical stability is a critical quality and performance metric in:

- **Automotive:** Qualifying greases for wheel bearings, chassis, and constant-velocity (CV) joints to ensure they resist softening and leakage under the constant shearing of road use.
- **Industrial Manufacturing:** Verifying the shear stability of greases for high-speed bearings in electric motors, pumps, and robotics to prevent structural breakdown and ensure long service life.
- **Mining & Heavy Equipment:** Testing the durability of greases used in pivot pins and articulation points that experience extreme pressures and mechanical forces, preventing lubricant failure in the field.
- **Aerospace:** Certifying the performance of specialty greases for landing gear and flight control actuators, where maintaining consistency under high stress and vibration is paramount to safety.

FEATURES

- **Motor:** A horizontal single-phase capacitor start motor. The rated voltage is 220V, the power output is 370W, and the speed is 1400 rpm. It is connected to the turbo reducer via a coupling.
- **Coupling:** A plum-shaped elastic coupling 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:** Installed 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, operating continuously at approximately 60 movements per minute.
- **Counting Display:** A 5-inch color LCD touch screen. 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 drive the relay to work and cut off the motor power. This worker is a double-acting reciprocating test equipment comprising 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 protect the motor from damage.

- Ambient Temperature Monitoring: It has a function to monitor the ambient temperature. The screen will display a prompt if the temperature exceeds the test range of 15-30°C.
- Non-Oil Reduction Gearbox



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