



ROLL STABILITY APPARATUS FOR LUBRICATING GREASE

Roll stability Apparatus for Lubricating Grease TT-1831

Roll Stability Apparatus for Lubricating Grease TT-1831 conforms to ASTM D1831 Standard Test Method for Roll Stability of Lubricating Grease.

This method determines the cone penetration of an approximately 50-gram sample of lubricating grease. The grease is then subjected to low shear at a temperature of 20 to 35°C (68 to 95°F) for 2 hours $\pm$ 5 minutes in a standard roll stability apparatus, after which the cone penetration is measured again. The difference in cone penetration before and after the rolling process is used to evaluate the effect of flow shear on grease consistency. This apparatus is ideal for testing the change in consistency of lubricating grease after working on the roller tester to assess the mechanical shear stability of the grease.

APPLICATIONS

The Torontech TT-1831 is used to evaluate the mechanical shear stability of lubricating greases as per ASTM D1831. The test simulates the effects of prolonged, low-shear rolling that a grease experiences in service. By measuring the change in consistency, it predicts the lubricant's ability to resist structural breakdown and maintain its protective properties over its operational life.

This analysis is essential for qualifying greases in applications involving continuous rolling contact:

- **Automotive:** Validating long-life greases for wheel bearings to ensure they maintain consistency over extended mileage, preventing lubricant failure and wear.
- **Industrial Gearboxes:** Ensuring semi-fluid and soft greases used in gearboxes do not soften excessively from the constant churning action of the gears, which could lead to seal leakage.
- **Electric Motors:** Qualifying greases for sealed-for-life bearings in continuously operating motors, where long-term shear stability is paramount to preventing lubricant breakdown and failure.

- **Steel & Paper Mills:** Selecting durable greases for the numerous roller bearings in mill equipment that are subjected to constant rolling, high loads, and long service intervals.

FEATURES

- Stainless Steel Roller: Diameter 90mm and length 180mm, weighing 5kg.
 - Idle Roller: Equipped with a locating ring to ensure normal operation of the roller.
 - Driving Motor: Positioned at the bottom to maintain a rotational speed between 155 and 180 revolutions per minute (r/min).
 - Gear Drive Roller: Utilizes gear drive mechanism.
 - Microcomputer Temperature Controller: Features a digital display with precision of $\pm 5^{\circ}\text{C}$. Equipped with a PT100 sensor.
 - Digital Timer: Records the working time and includes a buzzer alarm.
- Temperature Controller Operation Instructions: Adjustable from room temperature to 180°C .

TECHNICAL SPECIFICATIONS

1. Applicable Standard: Conforms to ASTM D1831.
2. Heating Method: Utilizes an electric heating element.
3. Time Method: Features a digital timer.
4. Temperature Control Range: Adjustable from room temperature to 180°C .
5. Motor Speed: Operates at 155 to 180 revolutions per minute (r/min).
6. Unit of Work: Includes 2 units.
7. Rated Voltage: Operates on AC 220V/50Hz.



Torontech Inc.

251 Consumers Road, Suite 1200
Toronto, Ontario, M2J 4R3, Canada 

Phone: +1 416 368 2721 | Fax: +1 416 981 7652
Email: info@torontech.com

Torontech, LLC

601 Brickell Key Drive, Suite 700
Miami, FL 33131, USA 

Toll-Free: 1-866-383-7919
Email: sales@torontech.com

Torontech ME FZE

Meydan Grandstand, 6th Floor,
Meydan Road, Nad Al Sheba,
Dubai-261440, UAE 

Phone: +971 488 19252
Email: me@torontech.com

