



WATER SPRAY FOR LUBRICATING GREASE

Water Spray for Lubricating Grease TT-4049

Water Spray for Lubricating Grease TT-4049 adheres to the ASTM D4049 Standard Test Method, which evaluates a grease's resistance to water spray.

Water Spray for Lubricating Grease TT-4049 assesses the grease's capacity to remain attached to a metal surface when exposed to a water spray in controlled laboratory settings.

APPLICATIONS

The primary application of the Water Spray for Lubricating Grease TT-4049 apparatus is to determine the water spray resistance of lubricating greases, in compliance with the ASTM D4049 standard. The test evaluates the ability of a grease to adhere to a metal surface when subjected to a direct spray of water under controlled conditions. This is a critical performance test for greases intended for use in components that are exposed to water, rain, or high-humidity environments, such as in automotive chassis, construction equipment, and marine applications.

Key Industries

- **Lubricant Manufacturing:** This is a fundamental quality control and product development test for grease manufacturers. It allows them to evaluate the performance of their thickeners and tackifier additives and to certify that their greases meet the required specifications for water resistance.
- **Automotive and Heavy Equipment:** These industries are major consumers of water-resistant greases for applications like wheel bearings, chassis lubrication points, and pivot pins on off-road machinery. This test is used to qualify greases to ensure they will not wash off and will continue to provide protection in wet conditions.
- **Steel and Marine Industries:** These sectors operate in environments with high water exposure. Steel mills use grease in rolling equipment that is constantly sprayed with cooling water, and marine applications involve exposure to both fresh and salt water. This test is essential to ensure the grease will stay in place and protect critical components.

from wear and corrosion.

FEATURES

- The PMMA chamber provides convenient observation, while the precision pressure gauge clearly displays the spray pressure.
- The stainless steel plate meets standard requirements, measuring 152.4×50.75×6.35mm.
- The stainless steel grinding tool also conforms to standard requirements, measuring 203.2×76.2×11.11mm.
- Equipped with a stainless steel nozzle of $\Phi 3.18\text{mm}$, the apparatus includes a bypass valve in front of the pressure gauge set at $40\text{psi} \pm 1\text{psi}$.
- A microcomputer temperature controller with a digital display ensures accuracy to within $\pm 0.2^\circ\text{C}$, using a PT100 sensor.
- The setup features a full enclosed compressor for cooling and a digital timer to control the spraying time.
- Cooling of the medium is facilitated by a magnetic pump circulation system, with insulation provided on the drivepipe of the circulating pipe.

TECHNICAL SPECIFICATIONS

1. Heating is facilitated by an electrical heating pipe.
2. Timing is controlled via a digital timer.
3. Cooling is achieved through compressor cooling.
4. Temperature regulation is managed by a digital PID temperature controller.
5. The apparatus operates at a rated voltage of AC220V 50HZ, with a working temperature set at $38 \pm 0.2^\circ\text{C}$.
6. The working pressure is maintained at $40\text{psi} \pm 1\text{psi}$.

7. Water pressure is controlled using a by-pass valve.
8. The power consumption is 2.5KW.
9. Spraying is executed through a precision nozzle.



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