



TIMKEN LOAD TESTER

Timken Load Tester TT-2509

Timken Load Tester TT-2509 is widely acknowledged for assessing the load carrying capacity of extreme pressure lubricants.

This tester evaluates fluid lubricants and greases that contain extreme-pressure additives. It adheres to the ASTM D2509-93 Standard Test Method for Measurement of Load-Carrying Capacity of Lubricating Grease (Timken Method) and ASTM D2782-94 Standard Test Method for Measurement of Extreme-Pressure Properties of Lubricating Fluids (Timken Method).

APPLICATIONS

The primary application of the Timken Load Tester TT-2509 is to determine the load-carrying capacity and extreme-pressure (EP) properties of lubricating fluids and greases. In compliance with ASTM D2782 (for oils) and ASTM D2509 (for greases), the test measures the maximum load a lubricant can withstand before the rubbing surfaces begin to score or seize. This is a critical performance test for lubricants designed to protect heavily loaded gears and bearings from wear and failure.

Key Industries

- **Lubricant Manufacturing:** This is an essential quality control and product development tool for companies that formulate and blend EP lubricants. It allows them to certify the load-carrying performance of their industrial gear oils, automotive axle oils, and heavy-duty greases.
- **Steel and Heavy Industry:** Industries like steel manufacturing, mining, and cement production operate equipment (e.g., rolling mills, crushers, gearboxes) under extreme loads. They rely on this test for quality assurance of the EP lubricants they purchase to prevent catastrophic and costly equipment failures.
- **Automotive and Heavy Equipment:** This test is crucial for qualifying the gear oils and greases used in the drivelines (axles, differentials) of trucks, construction machinery, and agricultural equipment. These components operate under high-stress conditions where EP protection is paramount for preventing wear.

TECHNICAL SPECIFICATIONS

Working conditions

1. Operating conditions: Room temperature between 10-35°C, with relative humidity not exceeding 80%.
2. Environmental requirements: Ensure no vibration, corrosive media, or strong magnetic field interference in the surrounding environment.
3. Power supply stability: The fluctuation range of the supply voltage should not exceed $\pm 10\%$ of the rated voltage.
4. Installation: Horizontally install the equipment on a solid base.

Technical parameters

1. Max. test force: 5000N
2. Accuracy for test force: $\pm 1\%$
3. Max. friction force: 300N
4. Accuracy for friction force: $\pm 2\%$
5. Spindle speed range: 100~3000r/min
6. Spindle speed error: $\pm 2\%$
7. Spindle speed display range: 0-9999999

8. Time display range: 0~9999s or min

9. Test temperature: Ambient~300°C

10. Temperature control accuracy: $\pm 2\%$

11. Dimension: 1000*700*1470mm

12. Weight: 700kg



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