

T-05 BLOCK-ON RING WEAR TESTER FOR EVALUATION OF LUBRICANTS AND ENGINEERING MATERIALS



MAIN CHARACTERISTICS

T-05 Wear Tester is intended for determining wear preventive properties of solid film lubricants, lubricating fluids, greases, as well as engineering materials used for sliding joints.

Experiments can be conducted in accordance with the **ASTM D 2981**, **ASTM D 3704**, **ASTM G 77** and **ASTM D 2714** standards.



The tribosystem consists of the stationary block, made of the tested material, pressed at the required load P against the ring rotating at the defined speed or oscillating at the defined frequency and amplitude. Two test configurations can be used - either with non-conformal (line) or conformal contact. The friction couple is inserted in the reservoir equipped with a heater that enables increasing the temperature of the tested lubricating fluid before the run. The temperature of the test block can be measured using the thermocouple inserted in the special hole of the block.

T-05 Block-on-Ring Tester is equipped with a control-measuring system that consists of the following:

- A set of measuring transducers,
- Controller,
- Digital measuring amplifier, and
- PC and special software for measurements and data acquisition.

During the tests, the following quantities are measured:

- Friction force,
- Total linear wear of test specimens,
- Test block temperature,
- Oil temperature in the reservoir,
- Rotational speed, and
- Time or the number of ring revolutions (sliding distance).

The measured values are displayed on the monitor screen and saved on the computer disk. The motor of the tribotester is automatically stopped when the preset time elapses or when the preset sliding distance (the number of ring revolutions) is reached. After test completion, one can print a report presenting curves of changes in the particular quantities versus time.

TECHNICAL SPECIFICATIONS

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| • Type of movement | sliding or oscillating |
| • Contact geometry | non-conformal (line) or conformal |
| • Nominal outer ring diameter | 35 mm |
| • Nominal block width | 6.35 mm |
| • Sliding velocity | up to 5.5 m/s |
| • Oscillating frequency | up to 8 Hz |
| • Oscillating angle | up to 90° |
| • Normal load | up to 3150 N |
| • Lubricating fluid temperature | up to 150°C |
| • Tribotester dimensions (W x H x D) | 700 x 500 x 350 mm |
| • Tribotester weight | 110 kg |
| • Power supply | 230 V / 50 Hz (optionally 110 V / 60 Hz) |
| • Max. power consumption | 1.7 kW |

