

T-15 ELEVATED TEMPERATURE RING-ON-DISK TRIBOTESTER

TECHNICAL CHARACTERISTIC

T-15 Elevated Temperature Tribotester is intended for determining tribological properties of engineering materials used for sliding joints, and lubricants. It is especially suitable for evaluation of materials used for axial seals, and metal-polymer friction pairs. The tribotester makes it possible to determine the wear resistance and friction coefficient for a pair of materials, depending on the temperature in the test chamber, presence and kind of a lubricant, sliding velocity, applied load, kind of a gas in the test chamber, and other factors. Experiments can be carried out in accordance with the Russian Standard GOST 23.210-80.

The tribosystem consists of the stationary ring pressed at the required load against the disk rotating at the defined speed. The friction couple is inserted in the insulated test chamber equipped with the heater, which enables to raise the temperature and keep it constant. It is possible to control the atmosphere by introducing a gas into the test chamber.

The tribotester is equipped with a control-measuring system which consists of:

- a set of measuring transducers,
- controller,
- digital measuring amplifier,
- 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,
- chamber temperature,
- rotational speed,
- time and number of disk 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 sliding distance (number of disk 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 |
| • contact geometry | conformal |
| • nominal outer ring diameter | 31.75 mm |
| • nominal disk diameter | 36 mm |
| • sliding velocity | up to 4 m/s |
| • normal load | up to 200 N |
| • test chamber temperature | up to 300°C |
| • tribotester dimensions (W x H x D) | 670 x 630 x 290 mm |
| • tribotester weight | 53 kg |
| • power supply | 230 V / 50 Hz |
| • max. power consumption | 1.7 kVA |

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