

T-11 ELEVATED TEMPERATURE PIN-ON-DISK TRIBOTESTER

TECHNICAL CHARACTERISTIC

T-11 Elevated Temperature Tribotester (with pin-on-disk or ball-on-disk friction couple) is intended for determining tribological properties of lubricants and engineering materials used for sliding joints working at elevated temperatures. The tribotester makes it possible to determine the wear resistance and friction coefficient for a pair of materials, depending on the presence and kind of a lubricant, temperature in the test chamber, sliding velocity, applied load, kind of a gas in the test chamber, and other factors. The tribotester is especially suitable for tribochemical investigations under conditions of boundary lubrication. The tribosystem consists of the stationary pin (or ball) 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.

T-11 Testing Machine 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).

TECHNICAL SPECIFICATIONS

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| ▶ type of movement | sliding |
| ▶ contact geometry | conformal: pin-on-disk, or non-conformal: ball-on-disk |
| ▶ nominal pin diameter | 3 mm |
| ▶ nominal ball diameter | ¼ in. (optionally 1/8 in.) |
| ▶ nominal disk diameter | 25.4 mm (1 in.) |
| ▶ sliding velocity | up to 1 m/s |
| ▶ normal load | up to 49 N |
| ▶ wear track radius | up to 10 mm |
| ▶ test chamber temperature | up to 300°C |
| ▶ tribotester dimensions (W x H x D) | 300 x 750 x 450 mm |
| ▶ tribotester weight | 50 kg |
| ▶ power supply | 230 V / 50 Hz |
| ▶ max. power consumption | 1.6 kVA |



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