

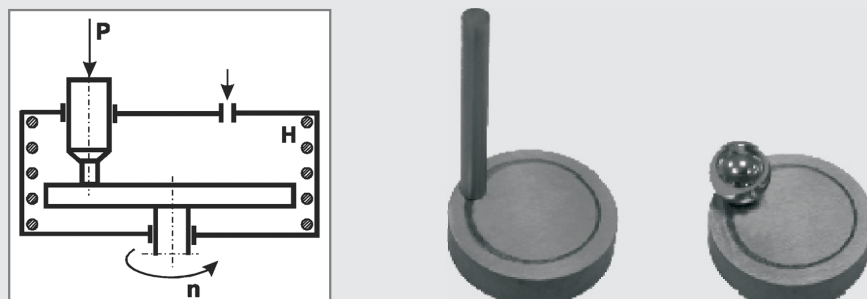
# T-11 ELEVATED TEMPERATURE PIN-ON-DISK TESTING MACHINE FOR TRIBOTESTING OF LUBRICANTS AND ENGINEERING MATERIALS



## MAIN CHARACTERISTICS

T-11 Elevated Temperature Testing Machine (with pin-on-disk or ball-on-disk friction couple) is intended for determining the tribological properties of lubricants and engineering materials used for sliding joints working at elevated temperatures.

T-11 Machine 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 Machine is especially suitable for tribochemical investigations under conditions of boundary lubrication.



The tribosystem consists of the stationary pin (ball) pressed at the required load  $P$  against the disk rotating at the defined speed  $n$ . The friction couple is inserted in the insulated test chamber equipped with the heater  $H$ , which enables increasing the temperature and keeping 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 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,
- The total linear wear of test specimens,
- Chamber temperature,
- Rotational speed, and
- Time and the 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 time elapses or 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

• Type of movement	sliding
• Contact geometry	conformal: pin-on-disk, or non-conformal: ball-on-disk
• Nominal pin diameter	3 mm
• Nominal ball diameter	10 mm
• 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 (optionally 110 V / 60 Hz)
• Max. power consumption	1.6 kW

