

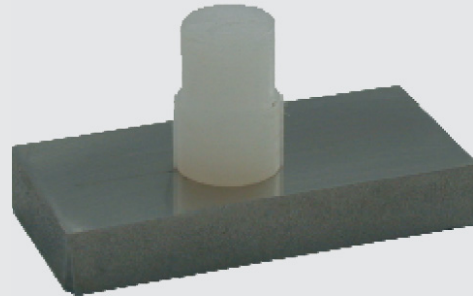
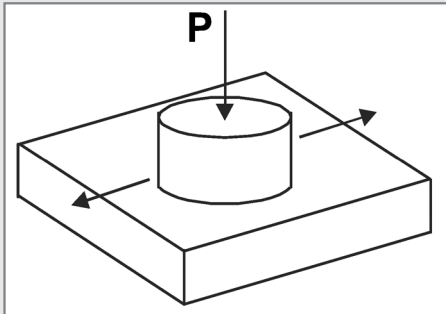
T-17 RECIPROCATING TESTING MACHINE WITH PIN-ON-PLATE TRIBOSYSTEM FOR TRIBOTESTING OF BIOMATERIALS



MAIN CHARACTERISTICS

T-17 Testing Machine is intended for the evaluation of combinations of sliding materials (e.g. metal-polymer couples) to be used as bearing surfaces of total-joint replacement prostheses for humans. The research is carried out on reciprocating motion.

Experiments can be carried out according to **ASTM F 732**.



The tribosystem consists of the stationary test pin and the plate moving at the desired oscillatory frequency and amplitude. The test pin is pressed against the plate at the defined load P . The lubricant may be optionally delivered to the contact zone in a circulating lubrication system equipped with a peristaltic pump, heating device and filter.

T-17 Testing Machine is equipped with a control-measuring system that consists of the following:

- A set of measuring transducers,
- Controller,
- Digital measuring amplifier,
- PC and special software for measurements and data acquisition,
- Peristaltic pump (option), and
- Lubricant heating and filtering system (option).

During the tests, the following quantities are measured:

- Friction force,
- Total linear wear of test specimens,
- Ambient temperature,
- Lubricant temperature (option), and
- Time and the number of cycles (sliding distance).

Before the run, the desired frequency and amplitude of reciprocating movement are set. Then, 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 cycles) is reached. After test completion, one can print a report presenting the curves of the changes in the particular quantities versus time.

TECHNICAL SPECIFICATIONS

• Type of movement	sliding - reciprocating
• Contact geometry	conformal
• Nominal pin diameter	9 mm
• Nominal plate dimensions	36 x 17 mm (rectangular prism) or Φ 36 mm (disk)
• Amplitude	0.5–12.5 mm
• Frequency	0.5–9.5 Hz
• Normal load	up to 245 N
• Lubricant temperature	37°C (stabilised)
• Tribotester dimensions (W x H x D)	600 x 430 x 200 mm
• Tribotester weight	30 kg
• Power supply	230 V / 50 Hz (optionally 110 V / 60 Hz)
• Max. power consumption	0.3 kW

