

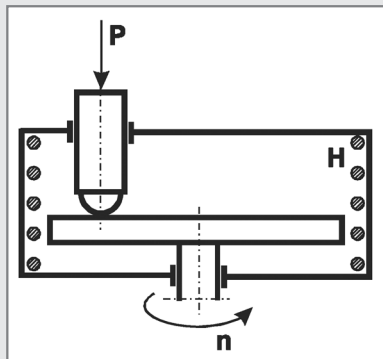
T-21 HIGH TEMPERATURE BALL-ON-DISK TESTING MACHINE FOR EVALUATION OF FRICTION AND WEAR



MAIN CHARACTERISTICS

T-21 High Temperature Testing Machine is intended for determining the tribological properties of materials exposed to high temperatures.

T-21 Machine makes it possible to determine the wear resistance and friction coefficient for a pair of materials, depending on the temperature in the test chamber, sliding velocity, applied load, and other factors.



The tribosystem consists of the stationary ball pressed at the required load P against the disk rotating at the defined speed n . The disk is made of the tested material. When testing a surface coating, it is deposited on the disk. The friction couple is inserted in the insulated test chamber equipped with the heater H , which enables increasing the temperature and keeping it constant.

T-21 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 the curves of the changes in the particular quantities versus time.

TECHNICAL SPECIFICATIONS

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| • Type of movement | sliding |
| • Contact geometry | non-conformal (point) |
| • Nominal ball diameter | 10 mm |
| • Nominal disk diameter | 25.4 mm (1 in.) |
| • Sliding velocity | up to 1 m/s |
| • Normal load | up to 100 N |
| • Wear track radius | up to 10 mm |
| • Test chamber temperature | up to 750°C |
| • Tribotester dimensions (W x H x D) | 500 x 710 x 300 mm |
| • Tribotester weight | 50 kg |
| • Power supply | 230 V / 50 Hz (optionally 110 V / 60 Hz) |
| • Max. power consumption | 1.5 kW |

