

T-02U UNIVERSAL FOUR-BALL TRIBOTESTER

TECHNICAL CHARACTERISTIC

T-02U Universal Four-Ball Tribotester is intended for determination of extreme pressure and antiwear properties of lubricants and engineering materials, as well as determination of the tendency of lubricants and engineering materials to produce surface fatigue failures (pitting). All the tests may be carried out at an elevated temperature. The tribotester makes it possible to conduct research in accordance with the standards: PN-76/C-04147, ASTM D 2783, ASTM D 2596, ASTM D 4172 (Procedure B), ASTM D 2266, IP 239, DIN 51350. Pitting tests are carried out according to IP 300 standard.

During testing of extreme pressure and antiwear properties the tribosystem consists of the three stationary balls fixed in the ball pot and pressed at the required load against the top ball. The top ball is fixed in the ball chuck and rotates at the defined speed. The ball pot is equipped with a heater.

During pitting tests the tribosystem consists of the three bottom balls rotating in the special race and pressed at the required load against the top ball. The top ball is fixed in the ball chuck and rotates at the defined speed. The holder of the race is equipped with a heater. In case of testing of engineering materials instead of the top ball it is possible to mount a cone-shaped specimen made of the tested material. During the tests the following quantities are measured: friction torque, applied load, lubricant temperature, vibration level of the tribosystem, rotational speed, and time. The motor of the tribotester is automatically stopped when the preset time elapses, the preset friction torque is reached, or the preset vibration level is exceeded due to occurrence of a pit on one of the test specimens. A unique feature of tribotester T-02U is a possibility of automatic, continuous increasing of the load during the run.



TECHNICAL SPECIFICATIONS

▶ type of movement	sliding or rolling
▶ contact geometry	non-conformal (point): four-ball or cone-balls
▶ test material	lubricants, engineering materials
▶ nominal ball diameter	1/2"
▶ rotational speed	from 300 to 1800 rpm
▶ applied load	from 0 do 7850 N
▶ speed of load increase	409 N/s
▶ initial tribosystem temperature	up to 180°C
▶ tribotester dimensions (W x H x D)	1700 x 1700 x 620 mm
▶ tribotester weight	210 kg
▶ power supply	380 V / 50 Hz;
▶ max. power consumption	2.1 kVA

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