

## INSTITUTE FOR SUSTAINABLE TECHNOLOGIES NATIONAL RESEARCH INSTITUTE - RADOM

PW-004 Multi-Year Programme

DEVELOPMENT OF INNOVATIVE SYSTEMS OF MANUFACTURING AND MAINTENANCE 2004–2008



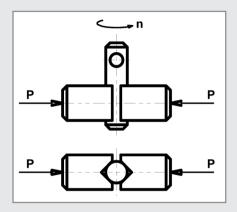
## T-09 JOURNAL AND VEE BLOCK TESTER FOR TRIBOTESTING OF LUBRICANTS AND ENGINEERING MATERIALS



## **MAIN CHARACTERISTICS**

T-09 Journal and Vee Block Tester is intended for the determination of the extreme pressure (EP) properties of lubricants and the resistance to wear of engineering materials during sliding friction.

Experiments can be conducted in accordance with the Polish Standard PN-75/M-04308. This standard generally conforms to the ASTM D 2625, ASTM D 2670 and ASTM D 3233 standards, however some minor differences exist.





The tribosystem consists of the two V-blocks, made of the tested material, pressed at the constant or increasing load P against the journal that rotates at the constant speed n. Experiments may be carried out under conditions of dry friction. The friction contact may also be lubricated by a grease or solid film lubricant - deposited once before a run, or lubricated by an oil poured into the reservoir, after the immersion of the test specimens in the oil.

T-09 Tester is equipped with a control-measuring system that consists of the following:

- A set of measuring transducers,
- Digital measuring amplifier, and
- PC and special software for measurements and data acquisition.

During the tests, the following quantities are measured:

- Friction torque,
- Applied load,
- Ambient temperature, and
- Time and the number of journal revolutions (sliding distance).

The measured values are displayed on the monitor screen and saved on the computer disk. The run is finished when the brass shear pin that locks the test journal breaks or the applied load reaches a predefined value. 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 slidina

Contact geometry non-conformal (line)

 Nominal journal diameter 6.3 mm Nominal V-block angle 90°

 Rotational speed 290 rpm

 Applied load up to 15 kN (constant or increasing) uncontrolled Test oil temperature

• Tribotester dimensions (W x H x D) 600 x 360 x 250 mm Tribotester weight 30 kg

Power supply 230 V / 50 Hz (optionally 110 V / 60 Hz) Max. power consumption

0.6 kW

