

T-12U UNIVERSAL BACK-TO-BACK SPUR GEAR TEST RIG

TECHNICAL CHARACTERISTIC

T-12U Universal Gear Test Rig is intended for testing of an effect of lubricants and engineering materials on scuffing of gears, and optionally, pitting and micropitting. The machine is intended for performing:

- ▶ FZG scuffing test methods:
 - A/8.3/90 according to: ISO 14635-1, CEC L-07-A-95, DIN 51354, IP 334, ASTM D 5182, PN-78/C-04169,
 - A10/16.6R/120 according to: ISO 14635-2 and CEC L-84-02,
 - S-A10/16.6R/110 according to FVA Information Sheet No. 243 [2000],
 - A/2.8/50 according to ISO 14635-3.
- ▶ Pitting tests by methods PT C/9/90 and PT C/10/90 – according to FVA Information Sheet No. 2/IV [1997]
- ▶ Micropitting tests by methods GT – C/8.3/90 according to FVA Information Sheet No. 54/7 [1993] and GFKT-C/8.3/90 according to DGMK 575.

The tribosystem consists of a pair of special gears (pinion and gear wheel), known as FZG type "A", "C-PT" or "GF/C" gears, loaded at the required torque and rotating at the defined speed. The motor rotates clockwise or anti-clockwise (reverse – "R"), depending on the test method performed. The tested oil can be heated to a set temperature before running, it is possible to stabilize the temperature during the run, using the supplied heat exchanger. The transmission is lubricated by immersion or spray – using the supplied circulating lubrication system.

T-12U Universal Gear Test Rig is equipped with a control-measuring system which consists of a set of measuring transducers and controller. During the tests the following quantities are measured: rotational speed, lubricant (oil) temperature, time and number of motor revolutions. The measured values are displayed on the controller. The motor of the tribotester is automatically stopped when the preset time elapses. It is possible to set the desired initial oil temperature, speed and to reverse the direction of rotation of the motor. The tribotester is supplied with a precise scale (comparator masses) and a laboratory dryer for heating the test wheels to facilitate their installation.

PARAMETRY TECHNICZNE

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| ▶ test gear type | FZG type A, C-PT, or GF/C |
| ▶ rotational speed of the motor | up to 3000 rpm |
| ▶ direction of motor rotation | clockwise or anti-clockwise |
| ▶ max. load stage | 12 (refers to the torque on pinion of 534.5 Nm) |
| ▶ temperature of the tested oil | up to 120°C (stabilisation possible with the cooling system) |
| ▶ type of oil lubrication | dip lubrication (spray lubrication possible with the oil circulation system) |
| ▶ tribotester dimensions (W x H x D) | 1300 x 1300 x 700 mm |
| ▶ tribotester weight | 150 kg (+1250 kg – weight of the base) |
| ▶ power supply | 380 V / 50 Hz |
| ▶ max. power consumption | 21 kVA |

