TEST STAND
DYNOFIT EDULAB

PURPOSE AND APPLICATION

The **DYNOFIT EDULAB** test stand is designed, in particular, for technical schools and universities. With its construction the test stand is optimized for a quick mechanical connection of a selected set of electric motors up to the power of 3 kW, which can be used for demonstrating the basic physical principles of electric machines, measuring their characteristics, practising the basic knowledge of students, etc.
The test stand is based on an active electric brake - asynchronous dynamometer type ASD 3000-2 which is powered from a frequency converter UNIDRIVE SP and controlled by the control unit with measurement type M350.

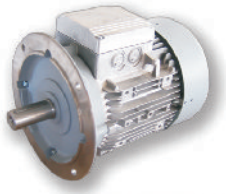
STRUCTURAL LAYOUT

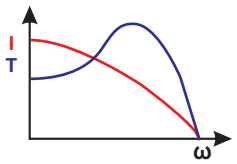
The test stand consists of five principal parts:

- ★ dynamometer ASD 3000-2
- ★ worktable with power supply for ASD
- ★ bracket, flanges and a set of electric motors
- ★ control unit with measurement type M350 including its holder
- ★ DYNOFIT SW - application software

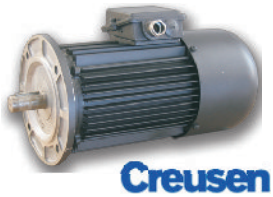
There are the following optional accessories to the test stand:

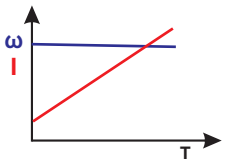
- ★ PC
- ★ power analyzers
- ★ power supply units



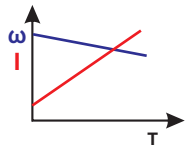


asynchronous motor

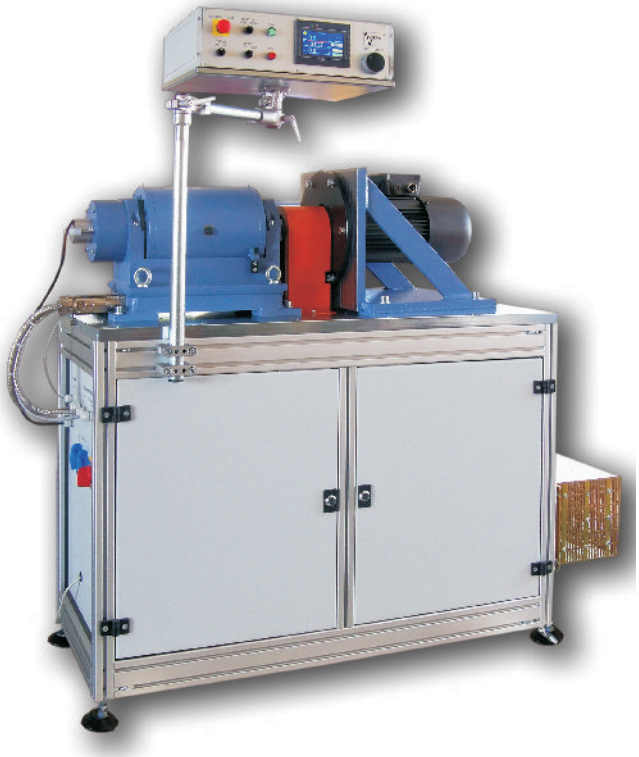


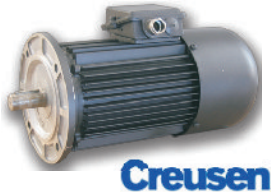


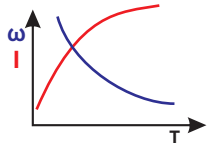
DC compaund motor



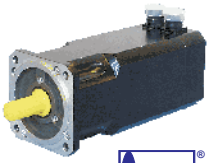
DC shunt motor

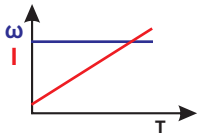






DC series motor





synchronous motor with permanent magnets

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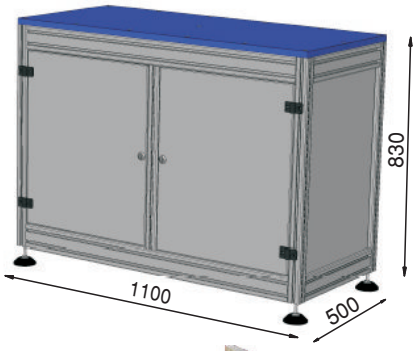
BASIC COMPONENTS

DYNAMOMETER ASD 3000-2

Basic technical parameters of asynchronous dynamometer ASD 3000-2:

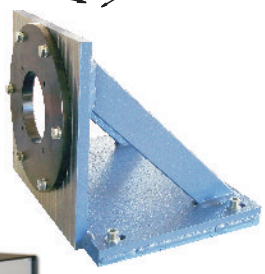
- ★ torque / max. torque 9.5 / 15 Nm
- ★ power 3 kW
- ★ speed / max. speed 3 000 / 6 000 rpm
- ★ speed measuring accuracy ± 0.01%
- ★ torque measuring accuracy ± 0.5%

WORKTABLE WITH POWER SUPPLY



The worktable forms an ideal pedestal for the permanent location of the dynamometer and the quick clamping of tested machines. The worktable also contains the power supply unit for the asynchronous dynamometer ASD 3000-2.

BRACKET, FLANGES AND A SET OF ELECTRIC MOTORS



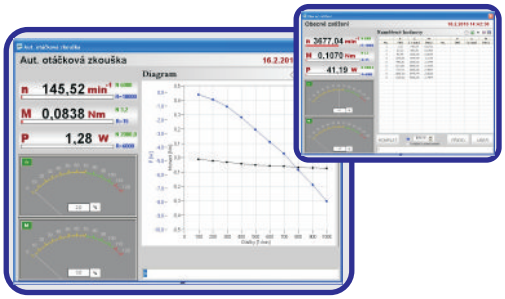
The bracket with the appropriate flange is optimized for a specific tested machine:

- ★ asynchronous motor - 1 100 W / 3.7 Nm / 2845 rpm / 230 VD/400 VY
- ★ synchronous motor - 524 W / 2.5 Nm / 2 000 rpm / 210 V
- ★ DC compaund/shunt motor - 600 W / 2.87 Nm / 2 000 rpm / 24 V
- ★ DC series motor - 600 W / 2.87 Nm / 2 000 rpm / 24 V

CONTROL UNIT WITH MEASUREMENT TYPE M350

The unit is designed primarily for the manual operation in four-quadrant mode (motor/generator). The unit enables control in speed or torque loop.The display of measured values, setting of limit levels of dynamometer winding and bearings temperatures are provided by a touch LCD panel. The operation mode is defined by controls and the setting of the setpoint values is provided by a digital potentiometer.

DYNOFIT SW



The application software DYNOFIT SW is available for easy measurement and measured data collection. It contains general measurement, loading test and cycle test. The measured data can be exported to MS Excel.

OPTIONAL ACCESSORIES

PC

Notebook including pre-installed application software DYNOFIT SW.

POWER ANALYZERS

Power analyzers are intended for electric parameters measurement of tested machines (AC and DC motors).

POWER SUPPLY UNITS

Power supply units are intended for supplying of tested machines (AC and DC motors).

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