



• Features

- base module of the AM 244 Automotive Engine Test Set
- asynchronous motor with frequency converter and precise adjustment of the drive and brake torque
- Connection of AM 244 and the driving or driven machine with a V-belt drive
- Setting up a complete test stand with various accessories

Tesca Automotive Universal Brake & Drive Unit 32751 is the base module of the AM 244 Automotive Engine Test Set, on which students can carry out experiments on fluid machinery. This equipment series covers five training courses on water and oil pumps, turbines, and systems engineering and engine technologies.

The complete experimental setup includes the base module AM 244, the fluid energy machine to be investigated and, where needed, a supply unit or a test stand. The fluid energy machine under investigation is connected to the AM 244 base module via a belt drive. Fasteners connect the HM 365 and the trainer to the accessories.

The main function of AM 246 is to provide the drive or brake power necessary to study the selected driving or driven machine. This power is generated by an air-cooled asynchronous motor with a frequency converter. The asynchronous motor operates as a generator or a motor, as required. As a generator, it acts as a brake on the fluid energy machine, in this case motors or turbines, and diverts the energy. As a motor, it powers the fluid energy machine under investigation, e.g. pumps or compressors.

The energy that is created during the braking process in generator mode is converted into heat at a load resistor. The drive and/or brake torque can be adjusted precisely. It is measured with a force sensor. For this purpose, the asynchronous motor is

suspended as a pendulum. The motor can be moved to tension the V-belt.

AM 246 is fitted with digital displays for speed and torque. Data between the base module and the accessories are exchanged through a data cable. The measured values can be transmitted simultaneously via USB directly to a PC. Each of the individual accessories is delivered with specific evaluation software.

Specifications

- Drive and brake unit used for studying different driving or driven machines
- 2 Asynchronous motor with frequency converter allows 4-quadrant operation: generator or motor mode
- Asynchronous motor with pendulum suspension, torque measurement via lever arm and force sensor
- Optical sensor for recording the speed
- Data exchange between base module and accessories through data cable
- Measured values for speed and torque are digitally displayed on the device

Technical Specifications

Asynchronous motor with frequency converter

- Power: 2200W
- Max. speed: approx. 3000min⁻¹
- Max. torque: approx. 12Nm

V-belt operation

- Length of V-belt: 1157mm, 1180mm, 1250mm
- Type of V-belt: SPA
- Diameter of V-belt pulley: 125mm

Resistive load: 72Ω, 2400W

Measuring ranges

- Torque: ±15Nm
- Speed: 0...5000min⁻¹

Experiments:

- Asynchronous motor as a drive or brake unit in connection with one of the accessories
- Torque measurement
- Speed measurement

Requirements

- Mains power 220 – 240V @ 50Hz 1 Ph & 400 440V @ 50Hz 3 Ph.

Note:

- 1) Specifications of Brake power can be provided as per customer requirements.
- 2) Computer interface & DAQ software can be offered against specific requirements.

Note: Specifications are subject to change.

Tesca Technologies Pvt. Ltd.

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,
Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,
Tel: +91-141-2771791 / 2771792; Email: info@tesca.in, tesca.technologies@gmail.com
Website: www.tescaglobal.com