B230
30 KN SERVO-HYDRAULIC DYNAMIC TESTING SYSTEM (DTS-30)

The DTS-30 Dynamic Testing System is a servo-hydraulic testing machine utilizing digital control of a high performance servo valve to provide accurate loading wave shapes up to 100 Hz. The DTS-30 can be operated in tension, compression dynamic loading and is suited to testing a diverse range of materials such as asphalt, soil, unbound granular materials, fibres and plastics. The DTS-30 is underpinned by Pavetest's leading edge CDAS digital controller, TestLab software and a full complement of accessories, hardware and software in perfect unison.
The DTS-30 Dynamic Testing System is compact, fully integrated, user and environmentally friendly.

MAIN FEATURES

- Compact, robust load frame.
- Small footprint; 90 cm x 135 cm, including hydraulic power supply and climatic chamber.
- Reaction frame embedded in the test chamber.
- Portable temperature control unit.
- Fully configurable to suit a large range of testing applications.
- Digital Servo-Hydraulic control.
- Dynaflo™ HPS provides dynamic speed control of the pump motor ensuring quiet operation.
- 4 axis control and 16 channel data acquisition as standard.

The machine includes:

- Rigid two column load frame
- 30 kN Servo-hydraulic actuator (100 mm Stroke)
- 2.2 kW Hydraulic Power Supply
- 16 Channel Control and Data Acquisition System (CDAS) & TestLab software
- Load cell (± 30 kN)
- 100 mm actuator LVDT

B230 30 KN
Servo-Hydraulic
Dynamic Testing System with **B231** temperature controlled cabinet

TECHNICAL SPECIFICATIONS

Load frame
- Between Columns 600 mm
- Vertical Space 800 mm

Servo actuator
- Capacity ± 30kN static, ± 25kN dynamic
- Frequency up to 100Hz
- Stroke 100 mm

Hydraulic Power Supply
- Pressure up to 160 bar, user defined
- Flow rate up to 7.5 litres/min
- Dimensions: 650(h) x 550(d) x 450(w) mm
- Power Supply: 230V 50-60Hz 1ph 2.5kW

Power Supply:
230V 50-60Hz 1ph 2.5kW (B230)
230V 50Hz 1ph 1.3kW (B231)
230V 50Hz 1ph 3.1kW (B232)

Dimensions:
2100(h) x 1220(d) x 800(w) mm load frame
2100(h) x 1320(d) x 800(w) mm with temperature controlled cabinet

Weight:
430 kg approx. load frame
650 kg approx. load frame with temperature controlled cabinet and oil-filled HPS

TECHNICAL FEATURES

- **The DTS-30 fatigue rated, servo-hydraulic actuator utilizes metal labyrinth bearings and seals.**
  The labyrinth bearings and seals are designed to reduce friction and maintain low operating temperatures.
  The bearings experience little-to-no wear, operate at high speeds and offer a long service life.
- **A bottom loading machine.** Before this current crop of universal testing machines, many dynamic testing machines were bottom loading. More recently, the Asphalt Mixture Performance Tester (AMPT) changed the mindset of the testing community by highlighting the benefits of a bottom loading machine.
- **Portable temperature control unit.** The temperature control unit attaches to the test chamber using a magnetic seal and can be wheeled away when not required or for servicing. It can be removed without dismantling the machine or disrupting the testing program.

NEEDED ACCESSORIES

B231 Temperature controlled cabinet:
-20 °C to +80 °C to suit DTS-30 or DTS-130

or

B232 Temperature controlled cabinet:
-40 °C to +80 °C to suit DTS-30 or DTS-130

B233 Temperature controlled cabinet:
-50 °C to +100 °C to suit DTS-30 or DTS-130

These temperature controlled cabinets may be supplied with humidity control, if required.

RECOMMENDED ACCESSORIES

H009-01EN PC complete with LCD monitor 22", keyboard, mouse, cables and installation of Testlab software

B250-07 KIT Temperature measuring kit comprising:
- **B292-01** Temperature transducer (-80 °C to +80 °C) (2 pieces)
- **B250-10** Dummy asphalt specimen
- **B250-11** 100 mm O ring (3 pieces)
- **B250-12** Thermal conducting grease (about 56 g)

We can upgrade your existing UTM (also from other manufacturers)

For test configurations and related jigs, please consult p. 182-192

Can't see the Control and Data Acquisition System (CDAS)? That's because **it's housed neatly, in the cabinet in front of the machine**.
You won't see a tangle of cables either; they enter the cabinet through the floor of the test chamber or through the back of the cabinet and connect to the CDAS.
The door of the cabinet can be held ajar to allow transducers to be re-allocated or opened completely for servicing. Unused transducers can also be stored out of harm's way.
Moreover, the DTS-30 reaction frame is symmetrical; **the servo-hydraulic actuator and reaction shaft can be interchanged to make the DTS-30 top loading**.

B206 16 Channel CDAS