

DATA SHEET

30kN Modular Electro mechanical servo actuation asphalt and unbound material tester AsphaltQube Pro



AsphaltQube Pro with Indirect Tensile Resilient Modulus jig

General description

Designed around the third generation Integrated Multi-Axis Control System (IMACS2) controller, AsphaltQube30 EmS is a welcome addition to the current IPC Global range of modular testing systems. The new 30kN capacity dynamic actuator benefits from the revolutionary Electromechanical Servoactuation Technology (EmS) allowing to perform an infinite range of QA / QC or new materials' development tests.

Main features

- The new EmS electromechanical actuator with high pre-load ball screw delivering 30kN backlash-free dynamic force over 100mm travel, with minimum noise
- Adjustable motorized reaction frame, controlled by software or integrated joystick controller, able to adjust the vertical daylight according to the test configuration.
- An optional modular temperature-controlled cabinet, available with a range -40°C to +80°C, easy to set-up and maintain thanks to a two-piece modular construction. Fixed or ramp temperature can be set-up with IPC Global's UTS Neutron software.
- Exceptional cooling performance especially at low temperature, with possibility to perform thermal cracking tests.
- Suitable for Triaxial cell for 100mm and 150mm dia. asphalt mix or unbound granular material specimens. Optional air compressor that comes integrated in the machine
- All test transducers, confinement pressure line and Four-Point bend jig clamping motors can connect directly to the rack inside the temperature controlled cabinet.
- Clarity in results with the 3rd Generation Integrated Multi Axis Control System (IMACS2)
- Fully integrated and very compact in design, a perfect solution for both static and mobile testing facilities
- All-in-one touchscreen PC (optional)

Specifications

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Load capacity: Static 25 kN, Dynamic 30kN

Frequency range: 0.01 to 70 Hz sinusoidal loading

Actuator stroke: 100 mm (+/- 50 mm stroke)

Actuator type: E-Mech electro-mechanical actuator

Noise level less than 70 db at 2m

Computer control: integrated all-in-one PC touch screen (optional)

Temperature controlled cabinet: required, to be ordered separately depending on the required range (see accessories)

Air compressor and dryer: low noise, integrated, automated-on-demand (optional)

Dimensions (H x W x D): 2060 x 820 x 1320 mm with environmental chamber (to be ordered separately)

Weight :: 400 kg

Transducers

Load cell: low profile pancake type, 30kN capacity

Built-in LVDT actuator: 100 mm stroke

Plug-and-Play: up to 8 channels

Services

Power without air compressor: 380 V, 50 Hz, three-phase, 14 A or 220 V, 60 Hz, three-phase, 28 A

Power with air compressor: 380 V, 50 Hz, three-phase, 16 A or 220 V, 60 Hz, three-phase, 32 A

Air: Clean dry air at 450-800 kPa; 2 L / sec (optional integrated air compressor available)



Detail of the two-piece modular construction temperature controlled cabinet

Products

79-PV72Q35/I2

AsphaltQube Pro EmS, 30kN modular electro-mechanically operated asphalt mix and unbound tester with inbuilt IMACS2 controller. 220-380V/50-60Hz/3ph.

Accessories and consumables

79-PV71001

AMPT Pro compressor assembly, Max air flow 137 L/min, 8 Bar cap., 5 litres tank, with air dryer with molecular sever 230V/50Hz/1ph

79-PV71002

AMPT Pro compressor assembly, Max air flow 137 L/min, 8 Bar cap., 5 litres tank, with air dryer with molecular sever 220V/60Hz/1ph

79-PV72002

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AsphaltQube - All-in-One Touch Screen PC Assembly

79-PV72E32

AsphaltQube Pro temperature controlled cabinet controller, range -40 +80°C, with possibility to perform static setpoints or decreasing temperature ramps. 110-230V/50-60Hz/1Ph.