

AUTOMATIC UNIAXIAL AND TRIAXIAL TEST SYSTEM

The Automatic configuration for determining the elastic modulus and strength characteristics of rock specimens under uniaxial and triaxial conditions is based on the AUTOMAX Multitest control console for axial load and SERCOMP 7 for confining pressure. The 2 consoles are operated independently and the failure envelope is obtained by few individual tests (single - stage) with automatic application of axial load and confining pressure at different levels. AUTOMAX Multitest allows to perform tests under load and strain control.

The confining pressure into the Hoek cell, applied by SERCOMP 7 is also measured by AUTOMAX Multitest for simultaneous plot of all test quantities, e.g. stress, strain and cell pressure.

Note: For a typical configuration of an Automatic triaxial test system see Additional information.



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SPECIFICATION

AUTOMAX Multitest

The AUTOMAX Multitest consists of an ergonomic control console which houses the power unit and the PC.

Specifications

Hydraulics

- Dual stage pump: centrifugal low pressure for fast approach and automatic switching to radial multi-piston high pressure for loading
- DC motor. 720 W, 50-60 Hz
- Maximum working pressure 650 bar
- Third and fourth frame option, active frame selection by software
- Flow-sharing technology to perform loading and unloading cycles

- ES Energy Saving technology to reduce power consumption and silent operation

Hardware

- 131.000 points effective resolution
- Closed-loop P.I.D. control
- 4 channels for load sensors (pressure transducers/load cells)
- 1 channel for confining pressure (acquisition only)
- 6 channels for strain/displacement transducers (potentiometers, magnetostrictive, LVDTs)
- 3 channels for strain gauges
- Memorization of the calibration curve enables sensors to be connected and used immediately
- Digital linearization of the calibration curve (multi-coefficient)

SERCOMP 7

The hydraulic unit SERCOMP 7 controls the lateral pressure in the Hoek cell in case of triaxial testing. A cooling device is incorporated, for superior control and uniformity of pressure throughout the test.

The control console includes a large graphic display with a membrane keyboard allowing easy setting and test monitoring.

Specifications**Hydraulics**

- Maximum working pressure: 700 bar
- Maximum oil delivery: 0.7 litres/min
- Flow control: by servo-valve system
- Hydraulic ports: 2
- Power: 750 W
- Voltage: 230 V, 50 Hz, 1 ph (other voltages are available - see Ordering info)
- Dimensions: 470x410x1000 mm(d x w x h)
- Weight: 120 kg (approx.)

Hardware

- Large graphic display with a membrane keyboard for inputting test data
- 65.000 points effective resolution
- Closed-loop P.I.D. control

STANDARDS

- EN 14580
- EN 1926
- ASTM D2664
- ASTM D3148
- ASTM D5407
- ASTM D2938
- ASTM D7012

FEATURES

- Automatic performance of uniaxial and triaxial tests with individual but combined control of axial load and confining pressure
- Axial and horizontal stress are increased isotropically up to a defined level in automatic way

- The 2 consoles are operated independently and the failure envelope is obtained by few individual tests (single - stage) with automatic application of axial load and confining pressure at different levels
- Cell pressure is maintained constant ($\pm 1\%$) and axial stress is increased automatically at constant load rate up to specimen failure (single-stage)
- AUTOMAX Multitest console allows to perform tests under load and strain/displacement console

ORDERING CODE**32-C7022/S**

Sercomp 7, servohydraulic control console for lateral pressure to perform triaxial rock testing. 230V, 50 Hz, 1ph.

32-C7023/S

Sercomp 7, servohydraulic control console for lateral pressure to perform triaxial rock testing. 220V, 60Hz, 1ph.

32-C7024/S

Sercomp 7, servohydraulic control console for lateral pressure to perform triaxial rock testing. 110V, 60Hz, 1ph.

50-C20M82

AUTOMAX MULTITEST computerized control console for up to 2 frames (expandable up to 4) capable to perform the following tests: - compression, flexure, indirect tensile strength (software module included); - Elastic modulus and Poisson ratio determination...

50-C20M84

AUTOMAX MULTITEST computerized control console for up to 2 frames (expandable up to 4) capable to perform the following tests: - compression, flexure, indirect tensile strength (software module included); - Elastic modulus and Poisson ratio determination...



