

TRIAXIAL LOAD FRAME 50KN, DIGITAL TOUCH-SCREEN

This versatile, compact, heavy duty load frame has been designed for routine tests, for central laboratories, but also for research purposes.

The frame is of rigid chromed steel twin column construction.

The electronic color digital touch-screen display with microprocessor control system allows to perform tests within a speed range of 0.00001 to 12 mm/min.

The maximum load capacity is 50 kN, and it is suitable either for cells S305 (max. specimen size 70x140mm) and S306 (max. specimen size 100x200mm),

Matest or other manufacturers made. The system guarantees high resolutions in real time.

The load plate is foreseen of electric end of stroke, to save the machine from wrong manipulations.

Frame Specifications:

- Maximum load capacity: 50kN
- Infinitesimal testing speed: from 0.00001 to 12 mm/min.
- Minimum vertical clearance: 400 mm (140 mm with ring)
- Maximum vertical clearance: 1100 mm (840 mm with ring)
- Horizontal clearance: 380 mm
- Platen diameter: 177 mm

Firmware:

- Electronic control unit "Cyber-plus Evolution" with Touch-Screen color graphic display ¼ VGA, that runs like a standard PC based on Windows operating system for the management of the data. (Analysis of the data, test results, graphs with S335-10N software; optional accessory).
- The Touch-Screen icon interface allows an easy set-up of the parameters and immediate execution of the test.
- The machine can perform the tests without any external PC, because of the "Cyber-Plus" grants performances like a PC.
- Direct connection to Intranet (connection to a LAN network) and Internet to establish a remote communication and receive an immediate diagnosis from Matest technicians, or for upgrades of the Firmware.
- Unlimited memory storage with: 2 USB ports, 1 SD card.
- Possibility to select different languages.
- Hardware technical details: see p. 00
- The machine is equipped with 8 connectors for the acquisition and data processing system up to 8 analogical/digital channels (that is activated with the S301-05 optional firmware) for load cells and transducers. Extra slot available to expand the on-board channels to 16 (with S301-06)

The frame is supplied with loading ram and sphere, but **without** load rings, dial gauges, electric load cells or displacement transducers that **have to be ordered separately** (see next pages).

Power supply: 230V 1ph 50-60Hz 600W

Dimensions: 490x510xh1800 mm

Weight: 115 kg approx.

Note: Triaxial load frame 50kN is available also with wider variable speed range from 0.00001 to 100 mm/min. See model S301-02 at pag. 000.



S301N with load ring



S301N with data acquisition



Detail of the 8 connectors

UPGRADING ACCESSORIES

S301-05 FIRMWARE FOR ACQUISITION AND DATA PROCESSING system up to 8 analogical/digital channels for load cells and transducers. Graphic and numbers visualization, processing, printing and storing of the test results. This software activates the 8 connectors foreseen on the load frame.

S301-06 8-CHANNEL INTERNAL MODULE, for system expansion to 16 channels of the triaxial load frame. This upgrade is possible only in Matest factory.

S335-10N SOFTWARE TRIAXLAB CONNECT & REPORTS See p. 000

S301-02 TRIAXIAL LOAD FRAME 50 KN, EXPANDED VARIABLE SPEED RANGE

Matest **S301-02** is the new high performance load frame specifically designed for advanced laboratories where **maximum testing speed up to 100 mm/min** is desired.

The expected variable speed range of this electro-mechanical machine makes it suitable to perform Unconfined, CBR and Marshall tests other than standard triaxial on soil specimens **up to 150 mm diameter**.

This heavy duty load frame has provision for automatic load or displacement/deformation control and employs new technologies to precisely follow the **shape with elegantly rounded corners**. A **touch-orientable display**, front mounted, allows an easy and innovative control of the main functions and data acquisition.

MAIN FEATURES

- Maximum testing speed: 100 mm/min
- Maximum specimen diameter: 150 mm
- Maximum compression capacity: 50kN
- Innovative shape with elegantly rounded corners
- Touch-orientable high-resolution display
- Suitable to perform Unconfined, CBR, Marshall and Standard Triaxial tests

FOTO

TRIAXIAL LOAD FRAMES: TECHNICAL SPECIFICATIONS

| MODELS | S301-02 (NEW) | S301N | S301-01 (suitable for fully automatic triaxial tests with CDAS S303) |
|--------------------------------------|------------------------|-----------------------|---|
| Maximum Sample Diameter, mm | 150 | 150 | 150 |
| Minimum testing speed, mm/min | 0.00001 | 0.00001 | 0.00001 |
| Maximum testing speed, mm/min | 100 | 12 | 12 |
| Maximum compression force, kN | 50 | 50 | 50 |
| Minimum vertical clearance, mm | 390 | 400 | 400 |
| Maximum vertical clearance, mm | 1110 | 1100 | 1100 |
| Horizontal clearance, mm | 380 | 380 | 380 |
| Platen diameter, mm | 177 | 177 | 177 |
| Platen travel, mm | 100 | 100 | 100 |
| Dimensions, mm (h x w x d) (approx.) | 1675x50 x530 | 1800x490x510 | 2000x490x510 |
| Power supply: | 230V 1ph 50/60Hz 1500W | 230V 1ph 50/60Hz 600W | 230V 1ph 50/60Hz 600W |
| Weight, kg (approx.) | 130 | 115 | 130 |