

DATA SHEET

MULTIPURPOSE 500-600 and 500-600/15 kN Cement Compression and Flexural Machines, Multipurpose Models. WIZARD AUTO Control System



600 kN automatic compression machine with pressure transducer C92W02

General description

These Multipurpose compression / flexure testers have been designed for various applications in which a limited maximum load is requested, together with a large testing space. They are suitable to determine compressive strength on lightweight concrete, soil-cement specimen, high strength cement and refractory.

The large testing space is ideal for performing, with the suitable accessory, splitting tests and flexural tests on concrete specimens. The pedestal is not included and has to be ordered separately. See accessories.

They are available in the two different versions:

single compression station, 500 kN or 600 kN cap.:

for compression tests on low strength specimens. The Class 1 accuracy can be extended from 1% of testing machine full scale with special calibration procedures (see Technical Specifications).

double station model, 600/15 kN cap.:

extends the possible applications to flexural tests on cement and compression tests on low strength specimens. The Class 1 accuracy can be extended with special calibration procedures (see Technical Specifications).

Frames and compression platens

High rigidity solid one piece steel frame. Spherical seat allows free alignment at the initial contact with the specimen. For compression platens see Technical Specifications. Pedestal not included. See accessories.

WIZARD AUTO Automatic Power and Control system

- Two channels for load sensors
- Wide graphic display 128 x 80 pixel
- Graphic printer available as option
- AC motor fitted with VFD INVERTER device: high efficiency, low consumption, silent operation
- Dual stage pump for fast approach and automatic switch to high pressure for loading

The WIZARD AUTO can be factory fitted with a internal serial printer. See accessories.

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Safety features

Includes: pressure valve to avoid machine overloading; piston travel limit switch; emergency stop button; front door and rear transparent guard.

Main features

WIZARD AUTO is CONTROLS new standard automatic Quality Control machine for compression and flexural testing and includes many new features and enhancements to improve the user-friendliness, efficiency, operator comfort and energy savings.

QC testing performance has just taken a step change improvement with CONTROLS abandoning manual test control and now feature automatic closed-loop PID control of loading-rate using VFD inverter-technology control of the high specification AC motor.

Wizard Auto automatically and accurately performs tests at the correct test speed, ensuring compliance to Standards and with no effect due to operator variables.

Multipurpose machine ideal for Central laboratories, for testing Cement, Mortars, Resins, Refractory, Lightweight concrete, Soil-cement specimens etc;

WIZARD AUTO is the perfect solution to ensure total certainty of testing accuracy and strict conformity to international Standards. In fact being an automatic system it allows:

- **Reduced opportunities for operator errors**, improving accuracy of results and repeatability
- **Easy-to-use**: even for operators with limited expertise.
- **Conforming to Standards**: the machine automatically performs the test at correct test speed. Conformance to Standards can be easily proven.
- **High performance**: high speed pump closes the daylight above the specimen at the fastest speed allowing a very high throughput of tests.
- **Operator comfort** due to the significant noise reduction.
- **Energy saving**, with 50% reduction in energy consumption.

Standards

- ASTM C109
- EN 196-1
- ASTM C348
- ASTM C349
- ASTM C1609

Specifications

WIZARD AUTO AUTOMATIC POWER AND CONTROL SYSTEM

Hydraulics

Max pressure 700 bar

Power 750 W

Dual stage pump: low pressure/high delivery for fast piston approach and high pressure/low delivery for loading.

AC motor fitted with VFD inverter device featuring high efficiency, reduction of power consumption and silent operation.

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Second frame optional facility using valve selector.

Hardware

Two 16 bit analog channels for load sensors
Wide graphic display 128 x 80 pixel
Sampling rate 50 Hz
Internal memory
RS 232 port for data download (including load/time graph points) to PC in ASCII format
Integrated printer as optional. See accessories

Firmware

Real time display of load and stress
Automatic application of the selected load rate
Execution of loading ramps with the possibility to manually increase or decrease the test speed during the test
Peak detection and saving
Language selection
Multi-coefficient linearization of the calibration curve for better accuracy at low loads
Multiple units: Lbf / Ton / kN.

PHYSICAL SPECIFICATION TABLE

Model 50-	C92W0x	C92W1x	C92W2x
Capacity, kN	600	500	15/600
Load measurement	Pressure transducer	Load cell	Load cell/ P. transducer
Max. Vertical daylight, mm	355	255	205/355
Horizontal daylight, mm *	265	265	-/265
Platen dimension, mm	Dia. 165	Dia. 165	Dia. 165
Surface hardness	55 HRC	55 HRC	55 HRC
Flatness tolerance, mm	0.03	0.03	0.03
Ram travel, mm	50	50	30/50
Class 1 range	60-600 kN	50-500 kN	1.5-15 kN 60-600 kN
With 50- C0050/CAL	-	-	-
Dimensions l x d x h, mm (base excl.)	850x400x1100		1100x400x1100
Weight approx., Kg	270	280	340

*To be adjusted using the suitable distance pieces.

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500 kN automatic compression machine with load cell C92W12



15/600 kN Double Station automatic compression machine C92W22

Products

50-C92W02

WIZARD AUTO COMPACT-Line automatic compression machine, 600 kN cap. for testing cement, mortar, resin, hydraulically bound mixtures and other materials. 230 V, 50-60 Hz, 1 Ph.

50-C92W04

WIZARD AUTO COMPACT-Line automatic compression machine, 600 kN cap. for testing cement, mortar, resin, hydraulically bound mixtures and other materials. 110 V, 60 Hz, 1 Ph.

50-C92W22

WIZARD AUTO COMPACT-Line automatic compression machine double chamber 600/15 kN cap. for testing cement, mortar, resin, hydraulically bound mixtures and other materials. 230 V, 50-60 Hz, 1 Ph.

50-C92W12

WIZARD AUTO COMPACT-Line automatic compression machine, 500 kN cap. for testing cement, mortar, resin, hydraulically bound mixtures and other materials. 230 V, 50-60 Hz, 1 Ph.

50-C92W14

WIZARD AUTO COMPACT-Line automatic compression machine, 500 kN cap. for testing cement, mortar, resin, hydraulically bound mixtures and other materials. 110 V, 60 Hz, 1 Ph.

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50-C92W24

WIZARD AUTO COMPACT-Line automatic compression machine double chamber 600/15 kN cap. for testing cement, mortar, resin, hydraulically bound mixtures and other materials. 110 V, 60 Hz, 1 Ph.

Accessories and consumables

50-C0050/HRD2

Supply of the compression machine with dia.165mm platens complete with traceable certificate of hardness of testing platens surfaces (upper and bottom platen certification included). Available only for ordering with compression machine.

65-L0050/HRD

Supply of the machine cement machines/frames L28xxx complete with traceable certificate of hardness of testing platens surfaces (one upper and one bottom platen certification included). Available only for ordering with machine.

50-A19/B

Base for frames and testing machines model 50-A12xxx

50-C9084

Distance piece dia 96 x 158 mm

65-L1000/20

Distance piece 165 mm dia. x 20 mm height.

65-L1000/30

Distance piece 165 mm dia. x 30 mm height.

65-L1000/40

Distance piece 165 mm dia. x 40 mm height.

65-L1000/68

Distance piece 165 mm dia. x 68 mm height.

50-C10W/2F

Second frame facility for WIZARD AUTO series. Frame selection via manual lever

50-Q60W/PR

Upgrading the WIZARD AUTO series to incorporate a serial graphic printer in the rear panel

50-C50/P1

Application of a magnetic switch to the safety guard (for automatic testers only). Suitable for automatic compression machines.

50-C99/P

Rigid safety guard for the 15kN chamber of the multipurpose machines