

AUTOMAX

Super-Automatic compression testers
for cubes and cylinders

COMPACTline

EN SERIES

- Four column high stiffness welded frame tested for stability
- Heavy duty spherical seat in lubricating oil bath - Automatic control of test execution conforming to Standards
- Automatic performance of the complete test cycle with closed-loop digital feedback
- Fully computerized system
- Dual user interface display and PC
- Accuracy Class 1 (EN) and Class A (ASTM) starting from 10% of full scale (from 1% on request)
- Compatible with the new intuitive easy to use DATA MANAGER Software
- Reduced power consumption and silent operation by ES Energy Saving Technologies
- Double stage hydraulic pump with rapid approach: high throughput of tests (up to 40/hour)
- Soft platen-to-specimen contact and smooth load rate from the ramp start
- Double frame control as standard with optional control of additional third frame: active frame selection via console display or software
- Optional internal graphic printer including Load-Time plot
- Remote verification of settings and performances for malfunctions debugging
- Storage of up to 10 test profiles for each channel for quick start



Frame

Four column high stiffness welded frame tested for stability to EN 12390-4.

Heavy duty spherical seat in lubricating oil bath, allowing initial free alignment at the initial contact with the specimen and automatic jamming up to the end of test.

Compression platens

See table. Traceable certificate of surface hardness available on request.

Automax, fully computerized Super-Automatic power and control system

Dual stage pump, centrifugal for fast approach and multi-piston for loading, DC motor, ES Energy Saving technology electronic valves for automatic loading/unloading and frame selection via display/software.

Hardware

132,000 points effective resolution, three channels, touch screen graphic display 240x128 pixel, sampling rate 50/sec, large storing capacity on USB pen drive, test data downloadable to PC, Ethernet port, real time management software (optional, see accessories 82-SW/DM DATAMANAGER)

Firmware

Simultaneous display of load-specific load, actual load rate and load/time graph; LAN connection to PC; advanced memory management; multi coefficient calibration. Recording facility of up to 10 test profiles for each channel including type of test (e.g. compression, flexural, indirect tensile), specimen size and shape, load rate, standard in use and other general information. Each one of the recorded test profile can be recalled automatically to save time

Safety features

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

Standards EN 12390-4

kN 2000	kN 3000	kN 4000	kN 5000
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Cubes
up to 300* mm



Cylinders up to dia.
160 x 320 mm,
250 x 500* mm

**With the 4000 and 5000 kN versions only.*

CVI TECH

CUSTOMER VALUE DRIVES
THE INNOVATIONS

Technical Specifications

Model 50-	C46D02 C46D04	C56D02 C56D04	C68D02 C68D04	C78D02 C78D04
Capacity kN	2000	3000	4000	5000
Max vertical daylight, mm*	350	350	525	525
Horizontal daylight, mm	350	370 mm	425	425
Max. piston travel*, mm	50	50	50	50
Platen dimensions	300 mm dia.	300 mm dia.	305x305 mm	305x305mm
Platen surface hardness	55.5 HRC (600 HV)	55.5 HRC (600 HV)	55.5 HRC (600 HV)	55.5 HRC (600 HV)
Platens flatness toll.	0.03 mm	0.03 mm	0.03 mm	0.03 mm
Overall dimensions, mm	930x420x1530	1020x475x1550	1125x570x1555	1250x570x1555
Weight approx., kg	740	1105	2010	2010

*Use distance pieces conforming to the specimen size to avoid piston overtravel.

Ordering information

50-C46D02

AUTOMAX, Super- Automatic Compact-Line compression tester, 2000 kN cap. for cubes up to 200 mm and cylinders up to dia. 160x320 mm. 230 V, 50-60 Hz, 1 ph

50-C46D04

Same as above but 110 V, 60 Hz, 1 ph

50-C56D02

AUTOMAX, Super-Automatic Compact-Line compression tester, 3000 kN cap. for cubes up to 200 mm and cylinders up to dia. 160x320 mm. 230 V, 50-60 Hz, 1 ph

50-C56D04

Same as above but 110 V, 60 Hz, 1 ph

50-C68D02

AUTOMAX Super-Automatic Compact-Line compression tester, 4000 kN cap. for cubes up to 300 mm and cylinders up to dia. 250x500 mm. 230 V, 50-60 Hz, 1 ph

50-C68D04

Same as above but 110 V, 60 Hz, 1 ph

50-C78D02

AUTOMAX, Super-Automatic Smart-Line control consol connected to 5000 kN cap. compression frame for cubes up to 300 mm and cylinders up to dia. 250 x 500 mm. 230 V, 50-60 Hz, 1 ph

50-C78D04

Same as above but 110 V, 60 Hz, 1 ph

Machine Accessories

Distance pieces to adjust the vertical daylight

50-C9080

Distance piece dia. 200x30 mm

50-C9082

Distance piece dia. 200x50 mm

50-C9083

Distance piece dia. 200x68 mm

50-C9086

Distance piece dia. 200x100 mm

Note: The above distance pieces are also available with threaded centering pin which are recommended for testing high strength/ explosive failures specimens. They are identified adding the suffix /P after the code number.

Software

82-SW/DM

Datamanager PC Software suitable for remote control of the machine, data acquisition, processing and filing. Allows printout of customized test certificates.

Fragment guard lock switch

50-C50/P1

Fragment guard lock switch .
To prevent test execution with the front door open

Verification of force transfer

The conformity of the compression tester to the EN 12390-4 requirements in terms of stability (force transfer) is performed by the verification of the self-alignment of machine components and the restraint on movement of the upper platen.

The compliance of all our EN testers to these stringent requirements is precisely verified using specific apparatus (82-E0105/1 and 82-P0804/E). An incorrect load application may cause premature sample failure and, consequently the resultant strength could be significantly lower than the true resistance.



All testers are verified and delivered with traceable certificate of the verification of force transfer

Test Accessories



50-C9000/B

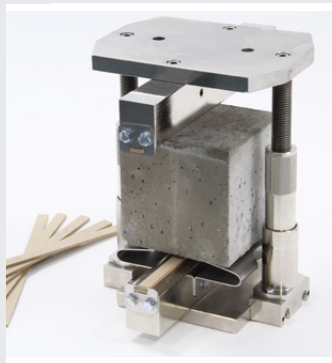
Splitting tensile test device for cylinders up to dia. 160x320 mm (6.3"x12.6"). Conforming to EN 12390-6 and ASTM C496

50-C9002

Hardboard strips 4 x 14 x 345 mm for 50-C9000/B conf. to EN Standards. Pack of 50.

50-C9002/A

Hardboard strips 4 x 14 x 345 mm for 50-C9000/B conf. to ASTM Standards. Pack of 50.



50-C9070/B

Splitting tensile test device for concrete block pavers and concrete cubes. Conforms to EN 1338 and EN 12390-6.

50-C9002

Hardboard packing strips 4 x 15 x 345 mm, to EN 1338 and 12390-6. Pack of 50.



50-C9030/H

Compression device to test portions of 40x40x160 prisms broken in flexure to EN 196-1. High stiffness model. Total height 225mm.

50-C9032/H

Compression device to test 50mm (2") cubes to ASTM C109. High stiffness model. Total height 225mm.

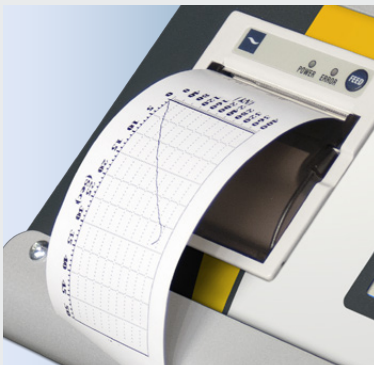


50-C9010/B

Flexural test device for concrete beams 100x100x400/500 and 150x150x600/750 mm, to EN 12390-5, ASTM C78, ASTM C293 and AASHTO T97

Upgrading Options

(To be specified at time of order: these items has to be factory installed.)



Serial printer for Automax testers

50-C10B/PR

Upgrade of a PILOT or AUTOMAX system to incorporate a serial graphic printer in the front panel, allowing results (including a load/time plot) to be printed at the end of test

Third frame connection

The AUTOMAX System, which can control two frames as standard, can be upgraded with a hydraulic valve for controlling (not simultaneously) a third frame.

Note: when connecting a low capacity frame (i.e. flexural or cement) pressure regulator 65-L1400/X5 may be necessary. Please ask our technical department.

50-C10D/3F

Three-way valve for AUTOMAX System to control a third frame. This item must be factory installed.

Special calibration procedure

50-C0050/CAL

Special calibration of compression testers assuring Class 1 (EN) and Class A (ASTM), from 1% to full load range.

Traceable certificate of surface hardness

50-C0050/HRD4

Supply of the compression machine/frame complete with traceable certificate of hardness of 300 mm dia. platens surfaces

50-C0050/HRD6

Same as above but for 305x305 mm square platens

Explosion proof test kit

Upgrading kit comprehending: safety cables securing the upper platen to the frame, metallic perforated fragment guard and bottom platen anti-fall safety system.

50-C59/EKD

Explosion proof test kit for C56D02 series

50-C69/EK

Explosion proof test kit for C68xxx and C78xxx series

AUTOMAX
Super-Automatic
compression tester
50-C56D02 controlling
a second cement
compression frame
65-L18Z10 and, by
the hydraulic valve
50-C10D/3F, a third
flexural frame
50-C1201/BFR and
accessories



AUTOMAX
Super-Automatic
compression tester
50-C56D02 controlling a
second flexural frame
50-C1400/FR with
accessory. Active frame
selection via console
display or software



The complete range of Compact-Line compression testers

This data sheet concern just one of the compression tester series produced by Controls.
The range also comprehends:

EN | ASTM | GENERAL UTILITY

COMPACTline

Automatic tester

EN 12390-4

kN 2000 3000 4000 5000



Super-Automatic tester

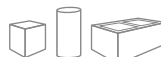
kN 2000 3000 4000 5000



Super-Automatic tester

EN 12390-4, 772-1

kN 2000 3000 4000



Automatic tester

kN 2000 3000 4000



Automatic tester

ASTM C39, 335, 450

K lbf 335 450 660



Semi-Automatic tester

K lbf 335 450 660



Automatic tester

ASTM C39, 140, 1314

K lbs 660



Automatic tester

kN 1500 2000 3000



Automatic tester

kN 2000 3000



Semi-Automatic tester

kN 2000 3000



Semi-Automatic tester

kN 1500 2000 3000



*GENERAL UTILITY models mainly relate to European National Standards (e.g. NF, UNI, etc.)

Our range includes many other special compression and flexural frames, automatic control consoles to combine advanced and sophisticated Testing systems.
Ask for more information at controls@controls.it.

CONTROLS GROUP

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CONTROLS S.R.L.
is certified **ISO 9001:2008**

In line with its continual program of product research and development, CONTROLS S.R.L. reserves the right to alter specifications to equipment at any time.

