

COMPACTline GENERAL UTILITY

PILOT

Automatic compression testers
for cubes and cylinders

- Rigid welded steel construction
- Spherical seat allows free alignment at the initial contact with the specimen
- Automatic control of test execution conforming to Standards
- 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
- Optional control of a second and third frame
- 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

Rigid welded steel construction. Spherical seat allows free alignment at the initial contact with the specimen.

Compression platens

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

Pilot, Automatic power and control system

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

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 and rear transparent flexible fragment guard.

Standards

These series generally relate to previous European national Standards

kN	kN	kN
1500	2000	3000
K lbf	K lbf	K lbf
335	450	660



Cubes
up to 200* mm



Cylinders up to dia.
160 x 320 mm

*with the 3000 kN cap. only

CVI TECH

CUSTOMER VALUE DRIVES
THE INNOVATIONS

Technical Specifications

Model 50-	C13C02 C13C04	C23C02 C23C04	C34C02 C34C04
Capacity kN (lbf)	1500 (335,000)	2000 (450,000)	3000 (660,000)
Max vertical daylight, mm* (inches)	340 (13.4")	350 (13.8")	350 (13.8")
Horizontal daylight, mm (inches)	265 (10.4")	340 (13.4")	370 (14.6")
Max. piston travel*, mm (inches)	50 (2")	50 (2")	50 (2")
Platen dimensions, mm (inches)	dia. 216 (8.5")	dia. 216 (8.5")	dia. 300 (11.8")
Platen surface hardness	55.5 HRC (600 HV)	55.5 HRC (600 HV)	55.5 HRC (600 HV)
Platens flatness toll, mm (inches)	0.03 (0.0012")	0.03 (0.0012")	0.03 (0.0012")
Overall dimensions, mm (inches)	760 x 370 x 1085 (30" x 14.6" x 42.7")	835 x 440 x 1090 (32.9" x 17.3" x 42.9")	765 x 450 x 1160 (30.1" x 17.7" x 45.7")
Weight approx., kg	315	530	760

*With accessory 50-C50CYL vertical clearance is increased by 20 mm. See test accessories.

Ordering information

50-C13C02

PILOT Automatic Compact-Line Gen.
Util. compression tester, 1500 kN cap.,
for cubes up to 150 mm and cylinders
up to dia. 160 x 320 mm. 230 V, 50-60
Hz, 1 ph.

50-C13C04

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

50-C23C02

PILOT Automatic Compact-Line Gen.
Util. compression tester, 2000 kN cap.,
for cubes up to 150 mm and cylinders
up to dia. 160 x 320 mm. 230 V, 50-60
Hz, 1 ph.

50-C23C04

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

50-C34C02

PILOT Automatic Compact-Line Gen.
Util. compression tester, 3000 kN cap.,
for cubes up to 200 mm and cylinders
up to dia. 160 x 320 mm. 230 V, 50-60
Hz, 1 ph.

50-C34C04

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

Machine Accessories

Fragment guard lock switch**50-C50/P1**

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

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.

Steel platen for capped cylinders**50-C50/CYL**

Lower compression platen
dia. 165 x 30 mm for testing capped
cylinders dia. 150 x 300 mm (6"x12").
Resulting compression machine
vertical clearance is increased by
20 mm.

Force verification

The conformity of the compression tester to the stringent requirements
of the ASTM C39 Standards is precisely verified using specific
traceable apparatus (load cells 82-E0100 series and 82-P0801/E
digital tester).



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



50-C99/B, 50-C29/B, 50-C39/B

Accessories suitable for 50-	C13C02 C13C04	C23C02 C23C04	C34C02 C34C04
Frame pedestal (optional)	50-C99/B	50-C29/B	50-C39/B
Front door (optional)	50-C19/FG	50-C29/FG	50-C39/FG

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-C9070/B

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

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-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**

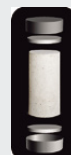
Compression device to test 50mm (2") cubes to ASTM C109. High stiffness model. Total height 225mm.

**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

Unbonded caps

This method is used as an alternative to the sulphur capping. The system consists of two alloy steel cap retainers and two neoprene pads which are in contact with the upper and lower concrete surfaces. Pads can be re-used for many tests. Different versions available conforming to the size of the specimen.

**Capping retainers****55-C0122/A4**

Capping retainers (couple) for 4" dia. concrete cylinders

55-C0122

Capping retainers (couple) for 150 mm (6") dia. cylinders

55-C0122/B

Capping retainers (couple) for 160 mm dia. cylinders

Neoprene pads**55-C0122/A44**

Neoprene pads for 4" dia. cylinders. Set of two.

55-C0122/2

Neoprene pads for 6" dia. cylinders. Set of two.

55-C0122/4

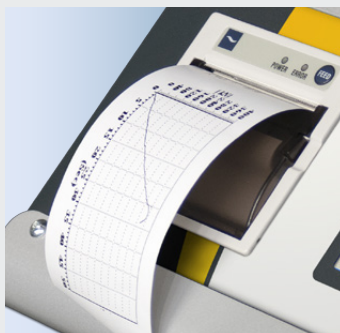
Neoprene pads for 160 mm dia. cylinders. Set of two.

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

**Second and third frame connection**

The PILOT System can be upgraded with a hydraulic valve for controlling (not simultaneously) a second and 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-C10C/2F

Two-way valve for PILOT System to control a second frame. This item must be factory installed.

50-C10C/3F

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



50-C13C02 with 50-C10C/3F three way valve, flexural frame
50-C1201/BFR, cement compression frame 65-L18Z10 and accessories

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/HRD3**

Supply of the compression

machine/frame complete with traceable certificate of hardness of 310 x 510 x 90 mm platen surfaces.

50-C0050/HRD4

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

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	kN	kN	kN
2000	3000	4000	5000



Super-Automatic tester

kN	kN	kN	kN
2000	3000	4000	5000



Super-Automatic tester

EN 12390-4, 772-1

kN	kN	kN
2000	3000	4000



Automatic tester

kN	kN	kN
2000	3000	4000



Automatic tester

ASTM C39, 335, 450

K lbf	K lbf	K lbf
335	450	660



Semi-Automatic tester

K lbf	K lbf	K lbf
335	450	660



Automatic tester

ASTM C39, 140, 1314

K lbs
660



Automatic tester

kN	kN	kN
1500	2000	3000



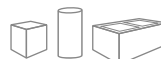
Automatic tester

kN	kN
2000	3000



Semi-Automatic tester

kN	kN
2000	3000



Semi-Automatic tester

kN	kN	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.

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