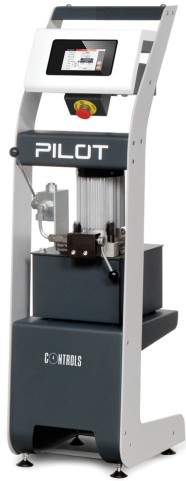


## DATA SHEET

# Pilot PRO SMART Line, Fully Automatic Control Console



Pilot PRO SMART line

## General description

**PILOT PRO** is CONTROLS' new versatile automatic Smart-Line control consoles for standard failure tests.

It is the best choice for Quality Control laboratories to carry out a high throughput of routine failure tests including compression, flexure and indirect tensile tests.

PILOT PRO introduces new features and capabilities that will revolutionize the operations of any progressive construction quality testing laboratories.

**LinkLAB** is CONTROLS' new proprietary Laboratory Connectivity Package.

It allows your PILOT PRO to be a connected part of your laboratory infrastructure by taking inputs from any number of ancillary measuring systems and devices increasing efficiency and eliminating transposing errors.

## Main features

**Smart automatic and connected concrete Power and Control System for standard failure testing.**

PILOT PRO is the best choice for Quality Control laboratories to carry out a high throughput of routine failure tests including compression, flexure and indirect tensile tests.

- **Huge boost in efficiency and error elimination:** Link-LAB – Integrated testing station solution for seamless connection and data inputs from many ancillary devices for dimensional measurement, weight, bar code, etc.
- **Automatic – time saving:** test-cycle automation maximizes productivity and ensures tests are performed accurately according to pre-set methods, eliminating operator variables.
- **Highly accurate and energy saving:** Our DC motor technology quietly and efficiently delivers super accurate load control at both low-speed and low-loads.
- **Intuitive, quick and simple operation:** The integrated control system features an intuitive 5.1" color graphical display, which works like a tablet or smart-phone, and makes PILOT PRO quick and simple to operate.
- **Standards compliant – peace of mind:** Hardware and firmware are in total compliance with all the main international concrete testing standards including ASTM C39 and EN 12390-3.
- **Multilingual functionality:** The system is available in multiple languages and is fully compatible with non-Latin characters for Chinese, Cyrillic (and more).

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### Specifications

#### PILOT PRO AUTOMATIC POWER AND CONTROL SYSTEM

##### Hydraulics

Dual-stage pump: centrifugal low pressure for fast approach automatically switches to radial multi-piston high pressure for loading  
DC motor, 720W, 50-60Hz  
Maximum working pressure 700 bar  
Load/unload valve  
Second/third frame selection valve available as option

##### Hardware

524,000 points high-resolution/stability analog channels  
3 channels for load sensors  
Control frequency 250 Hz  
Sampling frequency 250 Hz  
5.1", 800 x 480 pixel, 16 M colors, icon-driven capacitive sensing touchscreen graphic display  
Unlimited storage capacity for test data on internal 16 GB SD card  
USB port for test data storage on external USB memory stick and for firmware upgrade  
Ethernet port for PC / Internet /network communication  
Optional integrated graphic printer including Load-Time plot  
RS 232 port for data downloading in ASCII format

##### Firmware

Execution of compression, flexure, indirect tensile, ACV tests in automatic mode with load rate controlled by a closed-loop P.I.D. system  
Execution of loading ramps with the possibility to manually increase or decrease the test speed during the test  
Pause command to maintain steady load can be enabled at a pre-set value before the test or as required while testing  
Simultaneous display of load, specific load, actual load rate, load/time graph  
Saving of the specimen failure type (to EN or ASTM) in the test results  
Download data to internal printer (optional) or to PC via RS 232 port or to USB memory stick  
PC / network communication via Ethernet  
Multi-coefficient linearization of the calibration curve for better accuracy at low loads thus avoiding the use of a second pressure transducer  
Recording facility for up to 9 test profiles for each channel including: type of test (e.g. compression, flexural, indirect tensile), specimen size and shape, load rate, test standard and other general information. Each one of the recorded test profiles can be recalled automatically to save time  
Improved PID algorithm and multi PID selection. Up to 3 different PID settings can be tuned for a variety of materials (e.g. cylinder with neoprene pads, low strength specimens) and test methods (e.g. ACV, flexure, indirect tensile).  
Compatible with the newly released Datamanager software, tailored for construction material testing laboratories, for real-time data acquisition, display and management  
Peripheral devices integration with Link-LAB  
Automatic load measurement verification procedure, by connecting suitable load cells and our digital readout unit to PC  
Language selection (including Cyrillic and Chinese)  
Unit selection (kN, ton, lbf)  
USB port for firmware upgrade and safe backup of the original configuration data (PID, calibration, etc.), in case of loss and/or data corruption. The restore of the machine to the factory settings is easy avoiding the need of any technical support.

##### Physical Specifications

Overall dimensions: (hxlxd) 1292x350x450 mm

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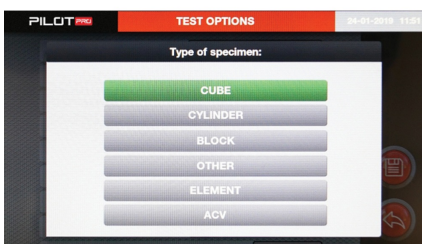
Weight approx. : 80 kg



Language selection



Main menu



Selection of specimen type

## Products

### 50-C10P02

PILOT PRO SMART Line automatic control console for compression and flexure frames including hydraulic power and control unit with touch screen display. - PILOT PRO automatic control system - PID Closed loop control of the load rate - High control and data sampling frequency: 250 Hz- Variable speed permanent magnet DC motor for superior performances at low load rates and low load values - 5.1", 800 x 480 pixels, 16 M colors, icon-driven capacitive sensing touchscreen graphic display - RS232 serial port for data transmission (including

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load/time values for graph plot) in ASCII format - USB port for data storage, export to PC and firmware upgrade - Ethernet port for PC / Internet /network communication - Integrated printer available on request - 8 GB Internal permanent memory on SD card - 524000 points high-resolution/stability channels- Second/third frame selection valve available as option - Accuracy (when connected to suitable frames): Class 1 (EN), Class A (ASTM) starting from 10% of full scale, on request starting from 1% of f.s. (see code 50-C0050/CAL) 230V/50-60Hz/1Ph

### 50-C10P04

PILOT PRO SMART Line automatic control console for compression and flexure frames including hydraulic power and control unit with touch screen display. - PILOT PRO automatic control system - PID Closed loop control of the load rate - High control and data sampling frequency: 250 Hz- Variable speed permanent magnet DC motor for superior performances at low load rates and low load values - 5.1", 800 x 480 pixels, 16 M colors, icon-driven capacitive sensing touchscreen graphic display - RS232 serial port for data transmission (including load/time values for graph plot) in ASCII format - USB port for data storage, export to PC and firmware upgrade - Ethernet port for PC / Internet /network communication - Integrated printer available on request - 8 GB Internal permanent memory on SD card - 524000 points high-resolution/stability channels- Second/third frame selection valve available as option - Accuracy (when connected to suitable frames): Class 1 (EN), Class A (ASTM) starting from 10% of full scale, on request starting from 1% of f.s. (see code 50-C0050/CAL) 110V/60Hz/1Ph

## Accessories and consumables

### 50-SW/DM

DATAMANAGER PC software compatible with DIGIMAX, PILOT, AUTOMAX, PILOT PRO, AUTOMAX PRO and PRO-M. Suitable for remote control of the system (except DIGIMAX), data acquisition, processing and filing. LAN cable included.

### 65-L1400/X5

Hydraulic pressure regulator for 15kN frames (both single and double chamber models) connected to PILOT and AUTOMAX control unit.

### 50-C10C/2F

Second frame facility for PILOT series. Frame selection via manual lever

### 50-C10C/3F

Three-way valve for PILOT System to control a second and a third testing frame. Frame selection via manual lever.

### 50-Q60P/PRINT

Upgrading the AUTOMAX PRO and PILOT PRO series to incorporate a serial graphic printer in the rear panel allowing load/time plot (printing available for languages with latin characters only)

### 50-KLAB/E

Link-LAB Enterprise laboratory connectivity package for machines controlled by PC via DATAMANAGER Software.

### 50-KLAB/L

Link-LAB Local laboratory connectivity package for PILOT and AUTOMAX PRO, PRO-M machines. Note: caliper and barcode cannot be both connected on the compression machine.