

**C109M**  
**CYBER-PLUS PROGRESS**

Matest Cyber-Plus Progress is the latest generation digital controller for concrete, cement and steel testing. A versatile compact PC that can be combined with multiple frames for compression, flexural and tensile tests.

Its technology allows to control, acquire, display and transfer data while offering the possibility to connect Matest software for remote control and printout of results and certificates.

Also suitable to upgrade or retrofit non-Matest frames.

Firmware is designed to be easily updated with add-on functions sent by email and just with the help of a USB stick.

**CYBER**  
**PLUS**  
PROGRESS

**MODULAR. REACTIVE. PROGRESSIVE.**

- ONE MODEL FITS ALL FRAMES AND TESTS
- CONTROL FREQUENCY UP TO 1 kHz AND SAMPLING FREQUENCY UP TO 2 kHz
- LIMS COMPATIBLE



In-line keyboard for use with gloves

Wider touch-screen display 7" and user-friendly interface

## MODULARITY TO ITS MAXIMUM EXTENT

Cyber-Plus Progress technology is the core feature of Matest control units, a PC-based and touch screen system which is modular, flexible and multi-functional, according to the Matest IT TECH concept which aims to offer innovative and user-friendly technology to control and manage the most advanced material testing machines for the construction industry.

### MULTIPLE FRAMES AND TESTS

- 8 or 16 channels unit for connection of any sensors
- 10 profiles for up to 80 (or 160) configurations to cover any test need and setup
- Allowing load, displacement and deformation test control
- Automatic or semi-automatic load application
- Fully automatic oil discharge
- Connect up to four testing frames



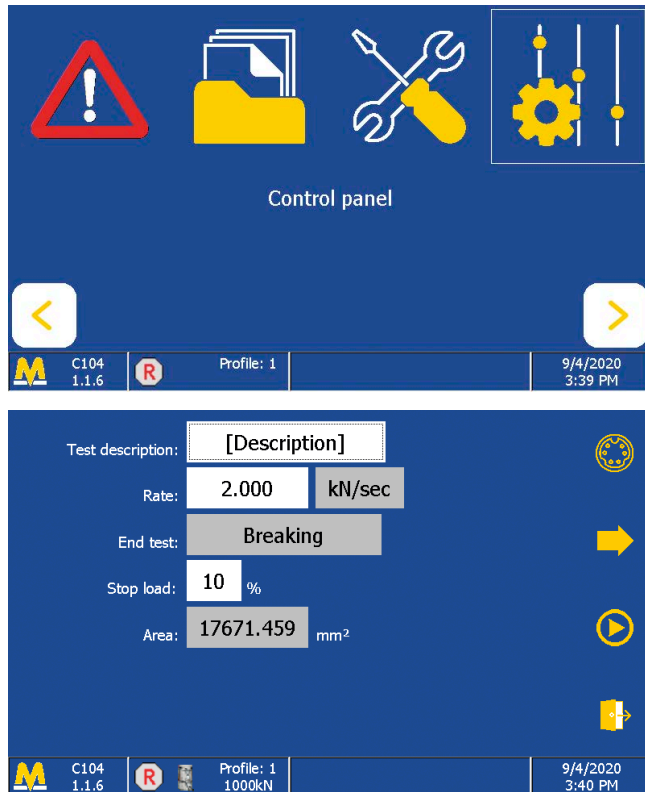
### Technical Specifications

Display	LCD, TFT, 800x480 pixels, 7 inches, graphic touchscreen
Channels	8 or 16 analog inputs (24 bit) suitable for connection of load, displacement, deformation, LVDT, temperature (PT100, PT1000, NTC) transducers and strain gauges (by using an external adapter)
Control/sampling frequency	Up to 1 kHz / 2 kHz
Ports	Ethernet, RS485, 2 x USB Host-port, Slot for Micro SD card (internal)
Motor control	3 controllers for step motors
Keyboard	5 in-line keys
Memory capacity	Unlimited using USB sticks
Power supply	230V 1ph 50Hz 70W
Dimensions	260x270x160 mm
Weight	5 kg approx.
Accessories	C127N graphic printer and C127-11 thermic paper

## REACTIVITY TO ULTIMATE LIMITS

Cyber-Plus Progress is a dual-board controller, equipped with a highly responsive gradient focused electronic card. It grants top sampling and control frequencies allowing high precision tests such as those in control of displacement or deformation on fiber-reinforced concrete samples.

A dedicated board features user-friendly graphic interface (800x480 pixels), with simultaneous visualization of test data and graphics and allows users to immediately gain confidence with Cyber-Plus technology.



### Features

- Control frequency: up to 1 kHz
- Sampling frequency: up to 2 kHz
- Windows base interface (no external PC required either for advanced tests)
- 10 profiles, with a potential of 80 or 160 storable calibrations, for an immediate use of multiple sensors.
- Ethernet port for remote control and data management.
- Two USB ports for an easy firmware maintenance, licence updates and unlimited memory.
- Internal slot for micro SD
- Real time display of time, load, deformation, displacement and graph simultaneously.

## DETAILS MAKE THE DIFFERENCE

NEW ICONS FOR A MODERN  
AND INTUITIVE APPROACH

### Show active alarms

Errors or malfunctions



### Test archive

Saved test data / results



### System configuration

Channels, profiles  
and parameters setup



### Control panel

Date, time, language and firmware  
configurations



## READY FOR FUTURE, KEEP UP WITH PROGRESS

Electronics that provide state-of-the-art performance and the connectivity with the interactive SmartLab software make the Cyber Plus Progress suitable for any future research purposes on new materials and according to new test procedures.



SmartLab is the innovative software platform developed by Matest which enables the remote control of testing equipment and allows to acquire and process all the test data.

Composed of different modules, specific to each type of machine and test, SmartLab features:

- Easy and fast test configuration
- Remote and real-time display of test results
- Tidy and easy-to-navigate overview of all the connected machines
- Automatic communication with LIMS and ERP through Smartlab Gateway module
- Tablet friendly to easily share data with customers
- Advanced and customizable data processing and test reports



Example of connection to SmartLab

Trough IP address working mode, user defined or DHCP automatically assigned, Cyber Plus Progress communicates and transmits directly to your computer and company server via ethernet, allowing simple retrieval of local test files or full remote control through Matest PC softwares and data export to Microsoft Excel.

## ONE TECHNOLOGY, MANY SOLUTIONS

Our Cyber Plus Progress is the most versatile controller for modern laboratories. The same device and technology accompany the majority of Matest testing systems for any sector, from concrete to asphalt, from steel to soil, reducing learning times and costs and accelerating support processes.



B045

B038AM

H001BS

S205

## THE SUPERIOR INTELLIGENCE OF **CYBER-PLUS** *PROGRESS* FITS ALL MATEST FRAMES

Matest has the widest and most complete range of compression and flexural testing machines today available on the global market, making Matest a leading manufacturer of material testing equipment.

Matest manufactures compression machines using four-columns frames only, which guarantee tensional uniformity at all load levels, available with two designs:

- Prestressed frames complying with ASTM C39 | BS 1610 | NF P18-411 | AASHTO T22 standards
- High stability frames complying with EN 12390-4 | BS 1881 | DIN 51220 standards



### **MATEST TECHNOLOGY**

In-house developed technology to perform also sophisticated tests, such as elastic modulus, post failure and strain tests.

### **STURDY FRAME**

Extremely strong load frames, available with:

- 1300kN, 1500kN, 2000kN, 3000kN, 4000kN, 5000kN capacities to test cubes, cylinders and blocks in compression
- 150kN, 200kN, 320kN, 360kN capacity for flexural tests
- low ranges for tests on cements

### **HYDRAULIC SYSTEM**

Semi-automatic or completely automatic option available, both designed to work at low pressure with a longer life of the hydraulic components and higher precision in the results. Fast ram approach and multipiston power pump to improve efficiency and load stability.

### **CALIBRATION AND PRECISION**

All testing machines are calibrated in CLASS 1 (max. error  $\pm 1\%$ ) also starting from 1% of the full range. Calibration certificate supplied.

### **INVERTER DEVICE**

The optional inverter enhances motor efficiency and reliability while further reducing energy consumption and noise during operation.

### **BAR CODE SCANNER**

Automatic registration of specimen data in order to avoid manual input errors.



### **CONSOLE**

Stylish and lined with sound-proofing material for noise reduction.



## A TIME-PROVEN GENERATION OF TESTING MACHINES

A deep knowledge based on more than 35 years of experience and research into mechanics and firmware technology, led Matest to design a complete range of compression machines suitable for any customer's need and budget. Thanks to their versatility, Matest machines can be used to perform basic quality control test to assess specific requirements up to advanced research on new materials.



**DIGITEC**

**AUTOTEC**

**CYBER-PLUS**

	DIGITEC	AUTOTEC	CYBERPLUS
TEST CONTROL	semiautomatic	automatic	semiautomatic
TESTS	COMPRESSION FLEXURE SPLITTING	COMPRESSION FLEXURE SPLITTING	COMPRESSION FLEXURE SPLITTING CUSTOM COMPRESSION
FRAME SELECTION	manual	manual	manual
DISPLAY	LCD, 192x64 pixel	LCD, 192x64 pixel	LCD, color, touchscreen, 7", 800x480 pixel
CHANNELS FOR SENSORS	2	2	4 (expandable up to 8)
CONTROL/SAMPLING FREQUENCY	10 Hz / 10 Hz	10 Hz / 10 Hz	Up to 1 kHz / 2 kHz
CONNECTIVITY	RS 232	RS 232	Ethernet, USB, WI-FI
PC CONTROL	optional	optional	optional
LIMS AND 4DLAB COMPATIBLE	X	X	√

## FROM QUALITY CONTROL LABORATORIES TO RESEARCH CENTERS

For specific and complex requests, our team is available to guide the client through the optimal configuration comprising suitable accessories and licences to perform all test procedures and keep up with new standard updates. From basic failure (compression, flexure, splitting) to advanced tests, such as modulus of elasticity and displacement controlled flexure on metallic and synthetic fiber-reinforced concrete.



**SERVO-PLUS**



**SERVO-PLUS + C125N/A150N**



**SERVO RESEARCH**

SERVOPLUS	SERVO PLUS + C125N/A150N	SERVO RESEARCH
automatic	automatic	automatic
COMPRESSION	COMPRESSION	COMPRESSION
FLEXURE	FLEXURE	FLEXURE
SPLITTING	SPLITTING	SPLITTING
CUSTOM COMPRESSION	CUSTOM COMPRESSION	CUSTOM COMPRESSION
PISTON DISPLACEMENT CONTROL	PISTON DISPLACEMENT CONTROL	PISTON DISPLACEMENT CONTROL
DISPLACEMENT/DEFORMATION CONTROL	DISPLACEMENT/DEFORMATION CONTROL	DISPLACEMENT/DEFORMATION CONTROL
PUNCHING	PUNCHING	PUNCHING
ENERGY ABSORPTION	ENERGY ABSORPTION	ENERGY ABSORPTION
STEEL TENSILE TESTS (with suitable frame)	STEEL TENSILE TESTS (with suitable frame)	STEEL TENSILE TESTS (with suitable frame)
ACV/TFV	ACV/TFV	ACV/TFV
DEFLECTION ON METALLIC FRC	DEFLECTION ON METALLIC FRC	DEFLECTION ON BOTH METALLIC AND SYNTHETIC FRC
	ELASTIC MODULUS AND POISSON'S RATIO	ELASTIC MODULUS AND POISSON'S RATIO
		STATIC AND LOW FREQUENCY DYNAMIC TESTS
manual	manual	from display, via interface
LCD, color, touchscreen, 7", 800x480 pixel	LCD, color, touchscreen, 7", 800x480 pixel	LCD, color, touchscreen, 7", 800x480 pixel
8 (expandable up to 16)	16	16
Up to 1 kHz / 2 kHz	Up to 1 kHz / 2 kHz	Up to 1 kHz / 2 kHz
Ethernet, USB, WI-FI	Ethernet, USB, WI-FI	Ethernet, USB, WI-FI
optional	optional	optional
√	√	√