



INNOVATIVE
SOFTWARE PLATFORM
FOR MATERIAL TESTING EQUIPMENT

MATEST[®]
INNOVATIVE. GLOBAL. MANUFACTURER.



Matest software for connected test



JOIN THE INNOVATION
JOIN THE **SMARTLAB** UNIVERSE

WHAT IS SmartLab CONCRETE?

SmartLab Concrete is the module of the software platform developed by Matest, dedicated to tests on **concrete and cement**.

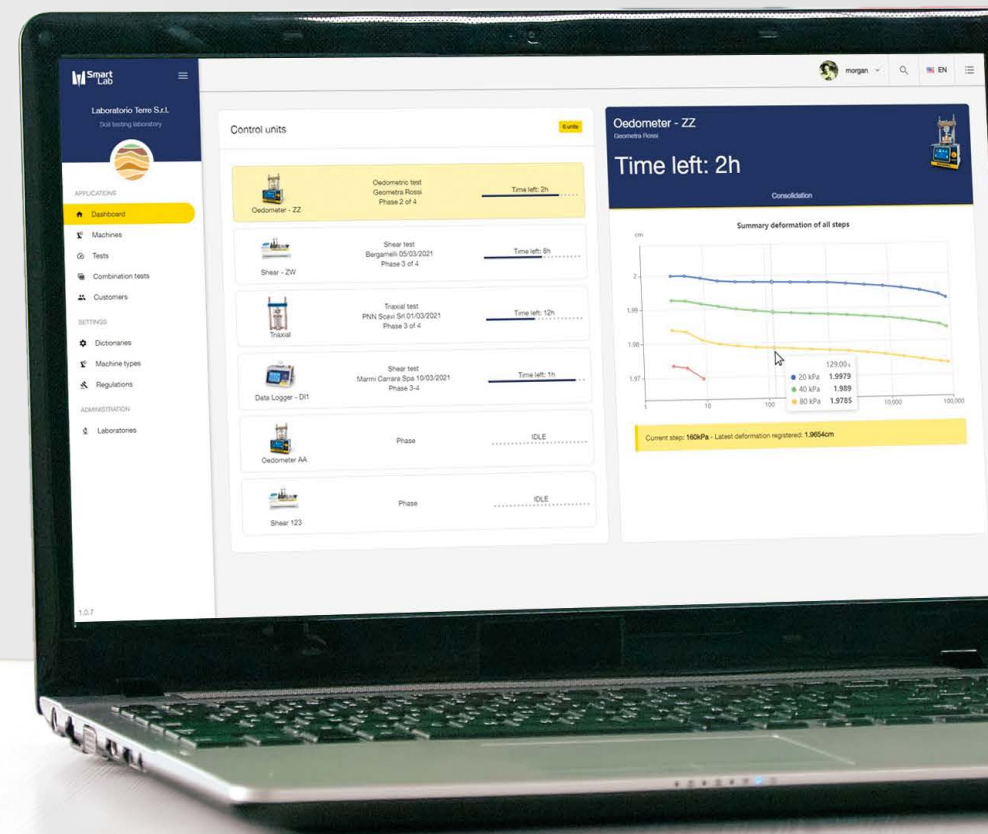
It allows the management and control of machines for performing **compression, flexure and indirect tensile tests** in load or pressure control.

In addition, the software offers the possibility to acquire and process data in accordance with international standards, guaranteeing accuracy and reliability.



Happy SmartLab

An intuitive interface allows real-time control and viewing of status of test equipment via a simple click.



HOW DOES SmartLab WORK?



COMPRESSION TEST

The compression test allows to determine the behaviour of a cylindrical or cubic specimen when subject to an increasing compressive load. Thus determining the compressive strength at failure of concrete and cement.

During the test, SmartLab automatically plots the load-time and the strength-time curves. When the failure occurs, the test is stopped automatically.

At the end of the test, SmartLab allows the data of the test to be exported, providing both a recap of the initial and acquired data and a complete report with all the processed data and graphs required by the standards.

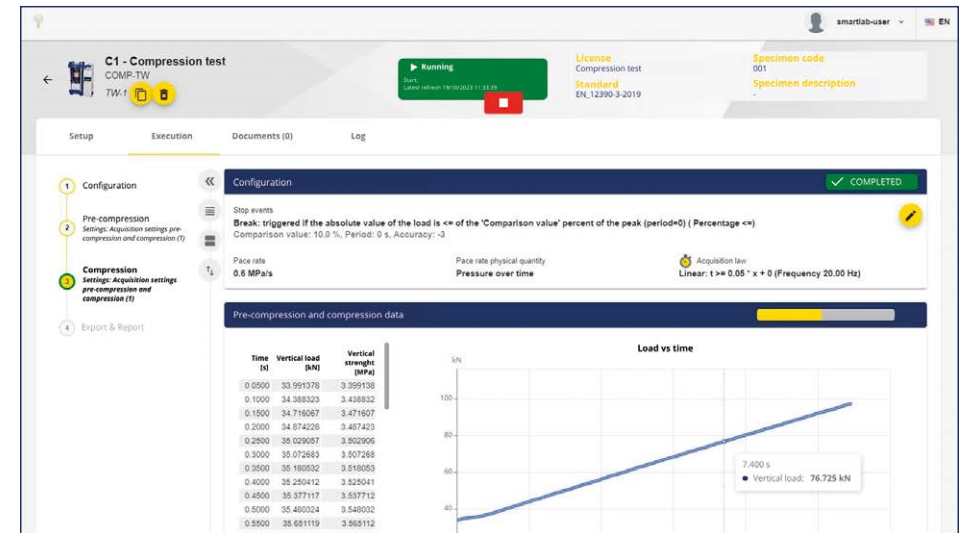


Reporting tools

Thanks to SmartLab, a complete and customizable report can be obtained without time-consuming manual calculations.

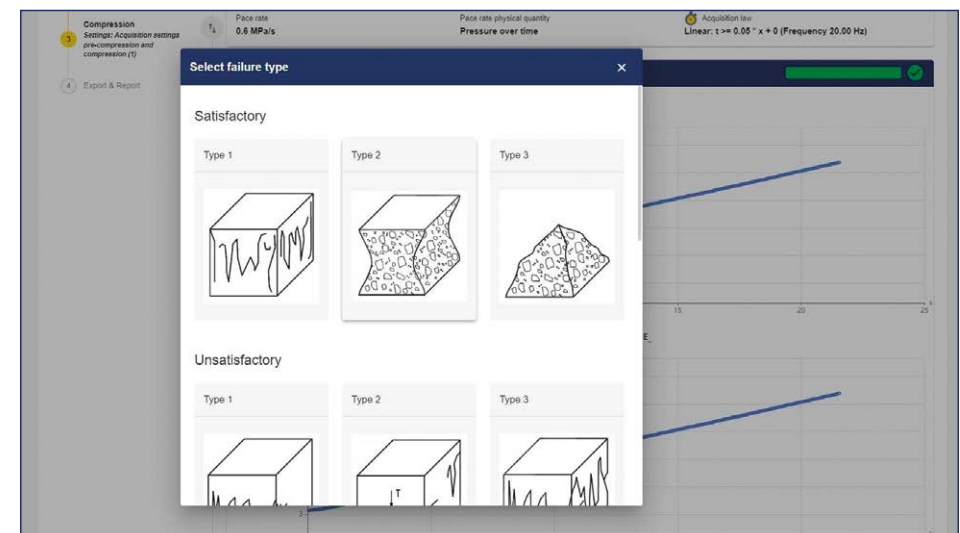
Ongoing compression

Real-time test visualization of a compression test



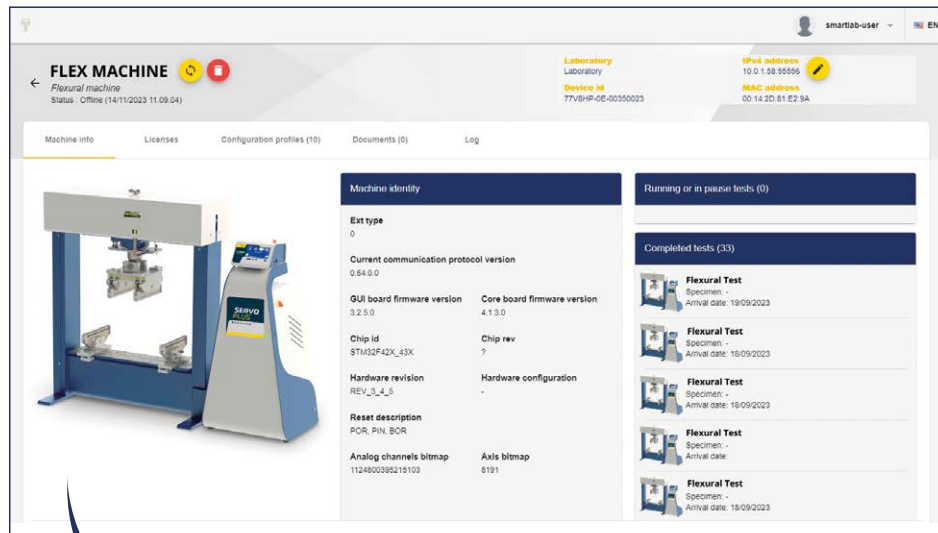
Final results

Failure type selection at the end of the test according to EN 12390-3



FLEXURE TEST

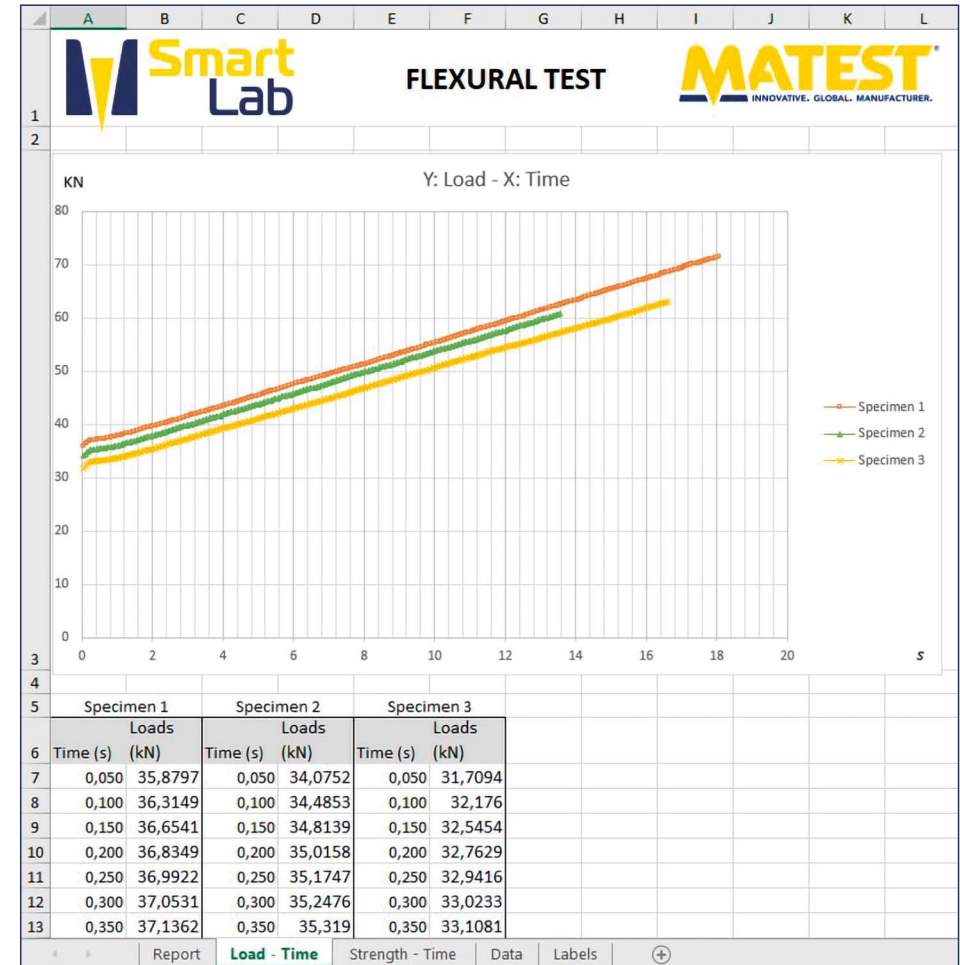
The flexure test allows to determine the flexural strength of a concrete or cement prism when subject to an increasing load that generates flexural stresses. When the maximum flexural load is achieved, the sample fails and SmartLab stops the test, saving the data relevant to maximum load and maximum strength.



Thanks to the "combined test" function, SmartLab allows different tests previously performed to be recalled, and put them together in the same report for an immediate comparison.

Excel Report for a Flexure Test

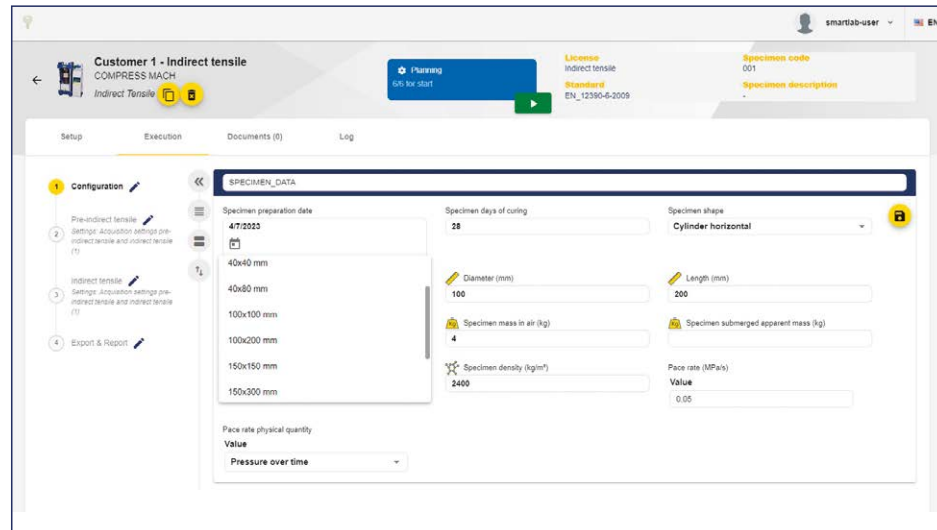
Graphical visualization of a report of three flexural tests



According to the relevant verification procedures for the determination of concrete quality, SmartLab allows to generate a report including different tests (up to 10) to easily compare the data.

INDIRECT TENSILE TEST

The indirect tensile test allows the evaluation of the strength of cylindrical or prismatic samples: applying a compressive load it is possible to **generate a tensional stress on the diametral plane**, which leads to the failure of the sample. At the end of the test, the maximum load and strength achieved are recorded.



Indirect Tensile Test

Display of a completed indirect tensile test



Possibility to download the obtained results with a customizable report.

SmartLab **CEMENT** and **MORTAR**

The SmartLab Concrete module allows compression and flexural tests on mortar and cement. According to the relevant **EN and ASTM standards** in load or pressure control.

With a single computer it is possible to monitor an unlimited number of testing equipment in real time, even remotely and with any device.



Simultaneous connection

SmartLab, through a LAN connection, can simultaneously and efficiently manage a virtually unlimited network of Matest machines.

HOW TO **ORDER** SmartLab?

Compression test configuration

C089-04N - (or other suitable models) - Automatic compression machine, high stability + accessories

SSW-CEM1 - SmartLab for Concrete and Mortar

SSW-LINKA - Unlocking code

C055N - (or other suitable models) - Semiautomatic compression machine + accessories

SSW-CEM1 - SmartLab for Concrete and Mortar

SSW-LINKA - Unlocking code



Flexure test configuration

C096N (or other suitable models) - Automatic flexural machine, 360 kN + accessories

SSW-CEM1 - SmartLab for Concrete and Mortar

SSW-LINKA - Unlocking code

C090-06N (or other suitable models) - Semiautomatic flexural machine, 200 kN + accessories

SSW-CEM1 - SmartLab for Concrete and Mortar

SSW-LINKA - Unlocking code



Indirect tensile test configuration

C089-04N (or other suitable models) - Automatic compression machine, high stability + accessories

C101-01 (or other suitable models) - Splitting device

SSW-CEM1 - SmartLab for Concrete and Mortar

SSW-LINKA - Unlocking code

C096N (or other suitable models) - Automatic flexural machine, 360 kN + accessories

C103-02 - Accessory for indirect tensile test

SSW-CEM1 - SmartLab for Concrete and Mortar

SSW-LINKA - Unlocking code

Compression and Flexure configuration for Cement and Mortar

E183N (or other suitable models) - Automatic compression/flexure machine, high performance + accessories

E170 Compression device for mortar

E172-01 - Flexure device for mortar

SSW-CEM1 - SmartLab for Concrete and Mortar

SSW-LINKA - Unlocking code

E160N (or other suitable models) - Semiautomatic compression/flexure machine + accessories

E170 Compression device for mortar

E172-01 - Flexure device for mortar

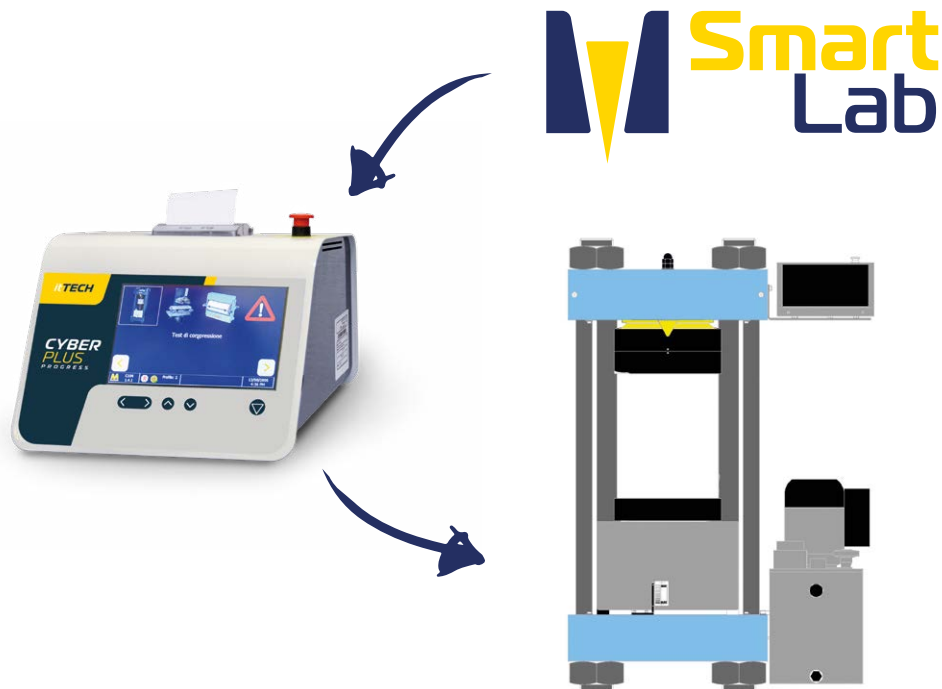
SSW-CEM1 - SmartLab for Concrete and Mortar

SSW-LINKA - Unlocking code

HOW TO UPDATE EXISTING MACHINES?

SmartLab platform together with Matest digital controller Cyber Plus Progress can be used to retrofit old Matest machines models or machines from other brands. This allows to take advantage of SmartLab functionalities without the need to purchase a new complete machine.

Compression and flexure machines will thus be able to join the SmartLab universe! To evaluate the compatibility of your machines and identify the best configuration, we invite you to contact our product specialists.



ANY QUESTIONS ABOUT SmartLab?

1. How is SmartLab installed?

Simple and immediate download via a link.

2. Does SmartLab require an internet connection?

It does not require an internet connection, because it works locally, but, if connected to the internet, it allows you to take advantage of all the extensive networkability functions it is equipped with.

3. Does SmartLab need a very high-performance PC?

No, the minimum requirements are as follows:

Processor (CPU): Intel Core i5 or AMD Ryzen 5

RAM memory: 16 GB

Mass memory: 100 GB reserved for SmartLab

Windows 11 64-bit: Home or Pro version 21H2 or higher, or

Enterprise or Education version 21H2 or higher.

Windows 10 64-bit: Home or Pro 21H1 (build 19043) or higher, or

Enterprise or Education 20H2 (build 19042) or higher.

On request, it is possible to order the PC that fulfils all requirements (SPC).

4. Can SmartLab be updated over time?

Yes, Matest periodically releases updates and it is also possible to add test modules that were not initially foreseen.

5. What is the Gateway protocol?

It is a communication protocol that allows SmartLab to interface bidirectionally with external software (LIMS and ERP).

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