AUTOVICAT
AUTOMATIC VICAT NEEDLE

Standards:

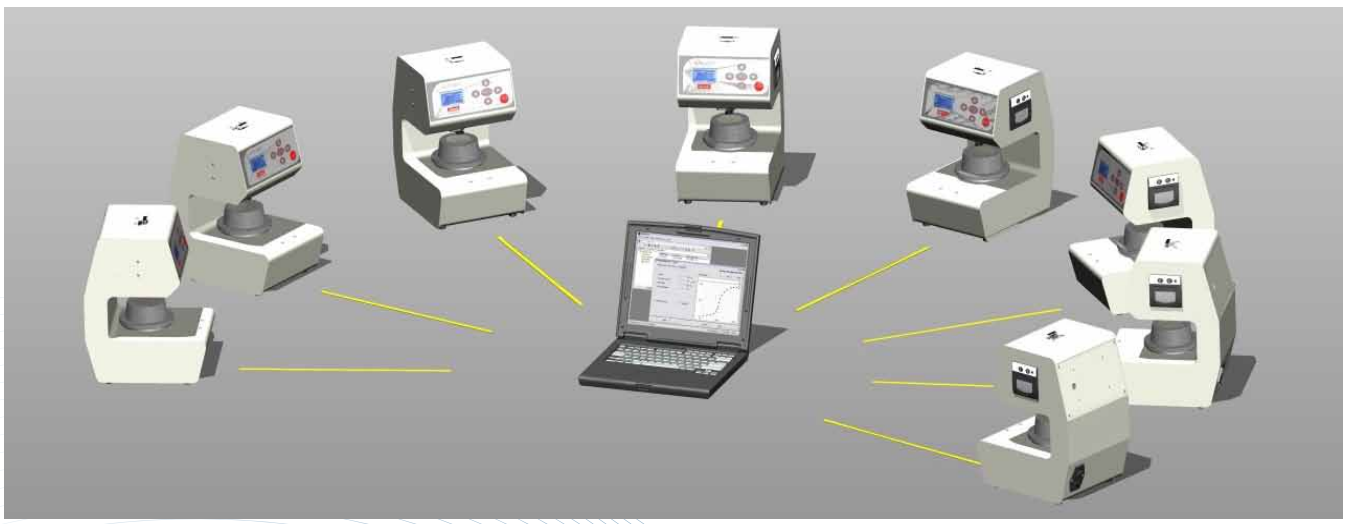
- Initial and final setting time in cement, as per EN 196-3: 2005 and ASTM C191.
- Setting times in gypsum as per EN 13.279-2.
- Normal consistency as per EN 196-3: 2005 and ASTM C187.
- Setting times in additives for concretes, mortars and pastes, as per EN 480-2.
- Any other standard or testing procedure, by means of standard editor incorporated and easily programmable by the user himself.

APPLICATIONS

The AUTO-VICAT automatic Vicat needle is a 32 bits equipment, of the last generation which enables to perform the following tests automatically.

The AUTO-VICAT developed by the R&D department of S.A.E IBERTEST, combines the following main features:

- Attractive design and extremely easy to use
- Light with reduced dimensions
- Components of the last generation.
- Maximum performance qualities. Completely reliable
- The test is completely registered in the graphic screen as in the integrated printer.
- Free fall or guided fall, can be selected by the user.
- Total connectivity via USB 2.0 for external control and data acquisition via PC by means of specific software, under WINDOWS.



Detail of the screen.

Detail of the front panel with 6-keys sensitive keyboard and graphic screen

- Possibility of configuration by the user, depending on his particular test needs. The user can choose the time between penetrations, the number of penetrations in each interval, the distance between concentric and repeated penetrations, the distance of penetration to the mould edge, if a second operation is required, etc.
  An algorithm calculates the maximum number of penetrations to comply with the conditions imposed by the user and applies it automatically.

- Possibility of forming groups, in battery, of practically an unlimited number of equipment and commanded by one sole PC (thanks to a multiport USB 2.0 hub) and a software package VICATEST, of 32 bits, under WINDOWS.

TECHNICAL CHARACTERISTICS

- Multi-standard. 6 standards (EN and ASTM) configured and pre-recorded and 9 additional standards programmed by the user according to his specific needs, directly on the equipment menus or externally from a PC by means of an application for WINDOWS.
- Controlled by a 32 bits last generation microprocessor
- High resolution (128 x 64 points) LCD graphic screen in inverted blue, with retro-illumination.

NOTE 1.- The final setting time in cement (as per EN 196-3) and in additives, mortars and pastes (as per EN 480-2) must be validated by the user by comparison with results obtained with the standardized manual method.

- Frontal membrane board, with 6-keys sensitive keyboard. It protects display and allows surfing menus, select and / or configure tests, parameters, start the test, etc.
- Control of the exact position of penetration by stepping motors.
- Extraordinarily precise measurement (better than +/- 0.1 mm) of penetration depth by digital encoder.
- Thermal printer, which allows the printing of complete test reports (parameters, graphs, indivi dual measures and results: initial and final setting time, duration of test, etc). Paper width: 58 mm. Printing width: 48 mm.
- Needle automatic cleaning device.
- Language selectable by user: Spanish, English, French or Portuguese.
- Time between penetrations modifiable by user from 1 to 99 minutes at any time during test.
- EEPROM memory that stores user different configurations and 100 complete tests perfomed, even in those cases of electrical supply failure.
- USB Connection to computer, allowing remote control from the PC as well as automatic data acquisition (by means of optional software package, of 32 bits, under Windows) realization of graphs, complete test reports, statistics, etc.
- Mains: single phase 220 V, 50 / 60 Hz or 110 V, 60 Hz (to be specified)
- Rated power: lower than 40 W.
- Dimensions: 230 x 290 x 355 mm (width x depth x heigth)
- Weight: 16 kg
- Working temperature: from -10 to +40º C

NOTE 2.- The setting time in gypsum requires the manual cleaning of the conical needle after each penetration. It is also possible to use the needle 1,13 mm diam and valid the results by comparison with the standardized manual method.

STANDARD DELIVERY

The equipment is supplied complete with:

- 1 stainless steel sliding weight needle-holder for setting tests as per EN 196-3 or ASTM C191 (according to the needle mounted).
- 2 needles: 1.13 mm diam as per EN or 2 needles: 1 mm diam as per ASTM (to be specified).
- 3 truncoconical moulds as per EN or ASTM (to be specified)
- 1 immersion bath with centring ring for mould and glass plate.
- 1 circular glass plate.
- 1 needle cleaning device.
- 1 thermal printer with 5 rolls of paper.
- 1 USB port for a connexion to the PC.

Mould, glass and sliding weight with needle as per EN-196-3.

Mould, glass and sliding weight with needle as per ASTM C191

Immersion bath, centring ring and glass plate (EN and ASTM).

Mould, glass and sliding weight with conical needle for gypsum as per EN 13.279-3.

Mould, glass and sliding weight with needle and counterweight for additives as per EN 480-2

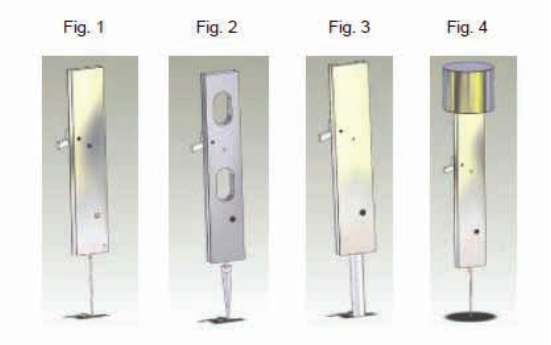
ACCESORIES AND SPARE PARTS

Stainless steel sliding weight needle-holder for setting tests as per EN 196-3 or ASTM C191, according to the needle mounted (EN or ASTM). These needles are interchangeable. Total weight of the mobile set 300 g. (Fig. 1).

Light alloy sliding weight and stainless steel conical needle (total weight of the mobile set 100 g) for gypsum tests as per EN 13.279-2 (Fig. 2).

Stainless steel sliding weight probe-holder, with a 10 mm diameter x 50 mm length probe (total weight of the mobile set 300 g), for consistency tests as per EN 196-3 and ASTM C-187 (Fig. 3).

Stainless steel sliding weight needle-holder with 1,13 mm diameter needle and total weight of the mobile set of1000 g (for setting times tests in additives for concrete, mortar and paste, as per EN 480-2) (Fig. 4).



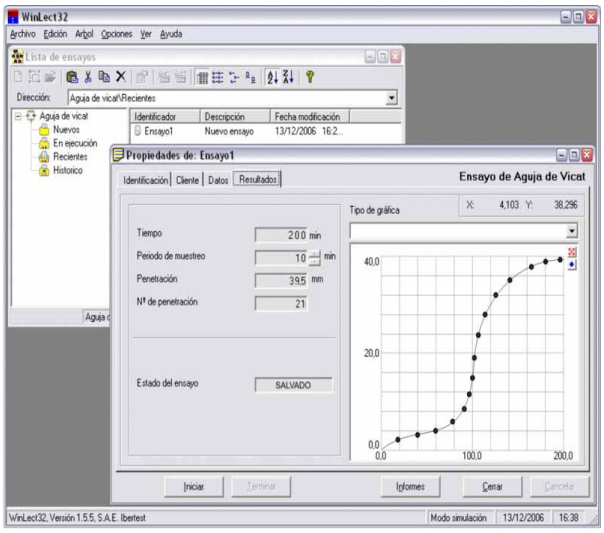
1.13 mm diam needle as per EN 196-3 and EN 480-2 (for codes 111-101055 and 111-100410)
1 mm diam. needle as per ASTM C191 (for code 111-101055)
Stainless conical needle for gypsum as per EN 13.279-3 (for code 111-100376)
Stainless probe, 10 mm diameter x 50 mm length, for consistency tests as per EN 196-3 and ASTM C-187 (for code 111-100409).
Truncoconical mould as per EN 196-3, EN 480-2 and EN 13.279-2
Truncoconical mould as per ASTM C191 and C187
Immersion bath with centring ring for moulds as per EN and ASTM
Circular glass plate 109 mm diam
Set of 2 Brushes for the needle cleaning device.
Pack of 5 rolls of printer paper.

COMPLEMENTARY EQUIPMENT

Software package VICATEST, 32 bits, for WINDOWS XP.

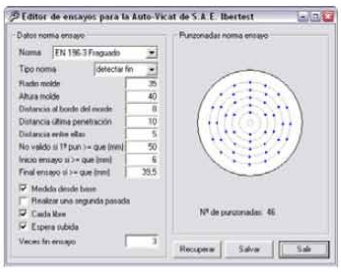
It allows programming, control and data acquisition (results and test graphs, curves comparison, statistics, etc) of practically an unlimited number of AUTO-VICAT equipment, simultaneously, from one sole PC, through a multiport USB 2.0 hub.

It includes a tests editor which enables to program and display the division and number of resulting penetrations to send directly the data to the equipment once they are validated.

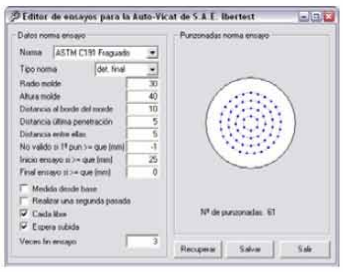


Results screen of VICATEST software, with graphs of the test.

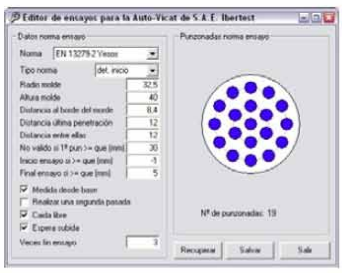
Examples of configuration of different standards achieved with the VICATEST software testing editor



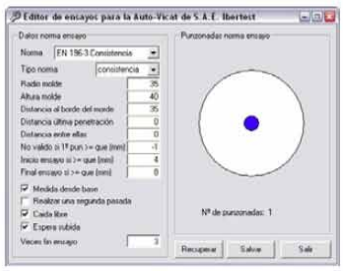
Cement setting
as per EN 196-3



Cement setting
as per ASTM C-191

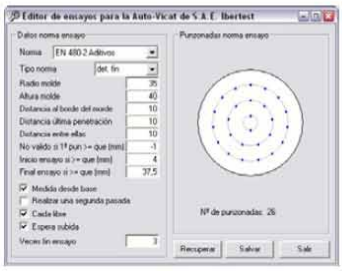


Gypsum setting
as per 12.379-2



Cement consistency
as per EN 196-3

Cement consistency
as per ASTM C-187



Additives setting
as per EN 480-2

IBERTEST Internacional S.A.
European Union Manufacturer
Ramon y Cajal 35
Daganzo de Arriba, Madrid, Spain
Ph: (+34) 91 884 53 85
Fax: (+34) 91 884 50 02
sales@ibertestint.com
www.ibertestint.com

Ibertest Internacional reserves the right to modify this technical information, without prior notice