

Product Information 7322

Automatic Vicat Needle Apparatus ToniSET Compact

Application

PC controlled apparatus for determination of setting behavior of cement and gypsum in accordance with EN 196-3, ASTM C191 or DIN 1168. Initial and final setting time as well as the complete setting curve are determined.

Advantages

- automatic test process, even over night
- reproducible results
- user-friendly, self explanatory computer programm
- very fast, independent test start by pre-defined examinations and storage in databases
- independent test parameters for all 6 samples possible
- all results and presetting are saved in databases
- exact positioning of needle on the sample surface
- automatic cleaning and drying of Vicat needle
- complete service test program for hardware and software
- definable penetration schematic
- quick measurement modus with suppressible cleaning step
- representation of setting process as curve and as individual values
- automated detection of initial and final setting time
- free choice of test reports and certificates
- bidirectional data transmission to a host computer (LIMS)
- precise electronic measurement of penetration depth, by incremental system, resolution 0,05 mm
- connection of standard PC without any additional hardware direct by one RS 232
- solid construction of machine hardware reduces the daily maintenance and achieves a longevity

Design

The ToniSET COMPACT consists of a three axes machine with six measuring stations. They are circular located around the central movement tower. All axes are handled by gear driven stepmotors. The stop positions will be controlled by touchless optical switches. The drop rod with is equipped with frictionless electronic measuring system. The samples are installed in a round test tank. The test can be performed in air or under water. The level is adjustable. After each penetration an automatic cleaning system for the Vicat needle is used. According



application definition, the different weights of drop rods are ensured.

ToniSET COMPACT is designed and performed as measuring machine. All electrical and mechanical parts are in industrial version.

Working Principle

To control and evaluate the tests, a standard PC is needed. The software VICAT DB runs on Windows® (98 / NT / ME / 2000 / XP). It is self-explanatory and easy to handle. For tests, the sample identification has to be entered, only. Subsequently the sample is placed and the test will be started. This will be done totally automatically.

Penetration depths of the vicat needle are measured electronically and recorded. Evaluation takes place automatically or manual.

During testing it is always possible to read the actual measured value and follow the progress of setting at the display of the curve. A quick test procedure allows shortest penetrations, each 5 sec.

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Standard Delivery includes

- Basic unit model 7322 for 6 samples
- 6 complete specimen supports and centering devices, including moulds and glass plates
- Vicat needle
- Software VicatDB

Optional Accesories

Performance unit 5556

for placing the ToniSET Compact compatible to the ToniSYSTEMLABORTATORY

PC working table 5050

compatible to the ToniSYSTEMLABORTATORY

Test area protection 7322.10

consisting of a closed cage of Makrolon panes

Cover shield 7322.015

for higher humidity.

Thermostat 7322.020

for precise controlling of the temperature in the test tank, 220 Volt.

Wear Parts

Spare felt reels to clean the needle 7322.001

Conical mould ring (EN 196) 7322.002
dimensions Ø 70/80 mm x 40 mm height

Glass plate 7322.003

Ø 100 mm

Specimen support - centering device 7322.004

consists of a base plate and a fixing ring.

5 Vicat needles 7322.007

as per EN 196 part 3, Ø 1,13 mm

5 Vicat needles 7322.009

as per ASTM C 109, Ø 1 mm

Coninal moulding ring (ASTM) 7322.010

dimensions Ø 60/70 mm x 40 mm height

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Technical Data			
Type	7322/EN	7322/ASTM	7323
Application (cement / gypsum)	EN 196 T3	ASTM C 191	DIN 1168
Vicat-needle Ø in mm	1,13	1,00	immersion cone
Moulds Ø x Höhe in mm	70/80 x 40	60/70 x 40	70/80 x 40
Water cleaning of the needle	passive	passive	active
Drying of the the cleaned needle	Yes	Yes	Yes
Power supply V / Hz / kW (other voltages on request)	230 / 50 / 1	230 / 50 / 1	230 / 50 / 1
Dimensions in mm width x depth x height	500 x 660 x 800	500 x 660 x 800	500 x 660 x 800
Weight net in kg	35	35	35