HDT – VICAT MP3

TECHNICAL DATASHEET

The 3-station apparatus determine the temperature at which a standard hammer shaped head, with a load calculated to obtain a known stress, deflects at a conventional value a specimen during an incremental linear temperature gradient (HDT: Heat Deflection Temperature) and the temperature at which a standard needle, under a known load, penetrates of 1± 0.01 mm the surface of a specimen during an incremental linear temperature gradient (VICAT).
Measuring the resistance to the deflection temperature is very important for the characterization of products, for the Quality Control process and to evaluate the product conformity to the required standards.

MP Series

Microprocessor controlled equipments

The system prevents executing errors, enhances the precision, the reliability and the repeatability of the results, by controlling the test times. The set specimen deformation – or penetration – is detected by using linear transducers performing with a precision better of 0.01 mm. Data are constantly transferred to the microprocessor and displayed on the digital display. The system also prevents any problems due to incorrect calibrations.



Microprocessor system specifications:

- Touch screen display TFT Colour for test functions and programming
- Detection of the initial deflection – or penetration – for each specimen at starting temperature and zeroing of this value when the test starts.
- Setting of the deflection, or penetration.
- Bath temperature stabilization before that the test starts.
- Test result display the temperature at which each specimen reaches the set deflection or penetration.
- EACH Station temperature measuring at 0.1 °C accuracy
- Automatic return to starting temperature at the end of the test.
- Test results are continuously displayed during the bath cooling time and up to the setting of new parameters for another test.

Reference standards		
ASTM	D648	D1525
DIN	53460	53461
EN	75-2	306
ISO	75-2	306
UNI	75-2	306

Common features for all models:

- Steel structure painted with epoxy resin
- Compact stainless steel inner oil bath with volume designed to guarantee a perfect heat exchange even with lower heating and cooling times
- Working temperature: from ambient to 300°C.
- Testing stations equipped with a patented system to perform tests with a maximum error of 0.01 mm.
- Temperature uniformity: ±0.2°C on all the volume bath, by means of stirring and circulation system of the diathermic liquid.
- Cooling by means of forced water circulation inside a cooling jacket, offering a quicker cooling than traditional coils. The system prevents the risk of pollution of the diathermic liquid.
- Typical recovery time from 200°C to 30°C, with cooling water at 18°C, taker about 30 minutes, due to the bath and the cooling jacket dimension.

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Code	Description
10001002	HDT-Vicat MP3
10001005	HDT-Vicat model for specimens up to 210 mm long
10001019	Vicat MP3
10001081	Adapter for flat wise tests ISO 75-2, 64 mm 1 test station
00100106	HDT-VICAT Software
40311282	Silicon Oil AK350 (5 Kg)



Electronic displacement transducer which measures the sample displacement to 0.01mm as standard or to 0.001mm as an option. The on board microprocessor ensures test result accuracy and repeatability and the display TFT, provides simple on screen instructions reducing user error.

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3-station model including:

- Microprocessor, Touch Screen TFT colour
- 3 HDT heads (one for each station)
- 1 centring tool for HDT heads
- 3 series of 12 weights for HDT tests (1-2-4-8-16-32-64-128-256-512-1024-2048 g with binary increase) to obtain 455 or 1820 kPa
- 3 Vicat heads (one for each station)
- 3 series of 2 weights for Vicat tests (910-4000 g) to obtain 9,85 or 49,5 N
- Volume of the bath: 8 litres
- Cooling water inlet/outlet system complete with filter
- Tap for oil discharge
- Power supply: 230V, single phase, 50Hz, 1,6kVA
- Dimensions: 600x710x500h mm
- Weight: approx 86 kg, including standard equipment

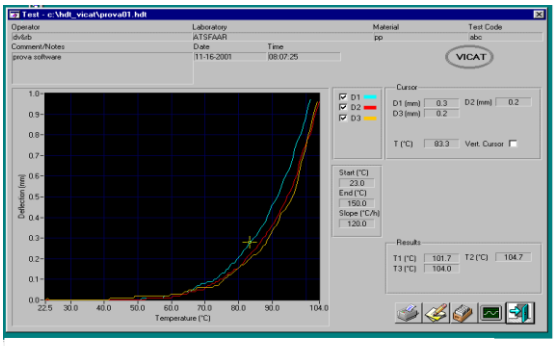




Software for data acquisition

Running on Windows 9X, 2000, NT™, XP O.S. and allows to:

- Set the bath temperature (starting, ending, thermal increase)
- Set the specimen data for each test station with automatic calculation of the load to apply depending on:
  - specimen dimensions
  - required stress
- Set the deformation or the penetration
- The bath temperature stabilization before starting the thermal increasing
- Run, data acquisition and display the test status
- Data acquisition of the test temperature for each specimen when it reaches the set deformation – or penetration -
- Display the test results and the specimen deformation graph in real time as a function of the bath temperature.
- Print the test results and graphs for each test station.
- Save the test results



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