

B059M
SMARTIP
FULLY AUTOMATIC PENETROMETER

STANDARDS: EN 1426 | ASTM D5 | AASHTO T49 | ASTM D217 | BS 1377-2 | NF T66-004 | DIN 52210 | IP 49 | JIS K 2207

SMARTIP is an automatic apparatus for the determination of the needle penetration value, avoiding any possible operator lack of concentration and ensuring a reliable repeatability of the results. It is a smart instrument thanks to the latest technologies adopted, the integrated microprocessor control and the user-friendly interface.

The instrument automatically reaches the contact point before starting the test and the penetration result is measured thanks to a high performance contactless displacement transducer. An ultra-bright LED lamp helps the operator in checking the touching point of the needle while a stepper motor controls the vertical movement to reach exactly the desired point without any manual movement of the plunger. The needle probe is automatically released for each penetration thanks to an electromagnetic system and automatically blocked at the end of the test.

The plunger comes back at the initial position at the end of each test by a simple recall command in order to re-positioning the needle before the new measurement.

A 7" touch screen display is included in the SMARTIP frame, easy to use. It shows in real time the penetration/time graph, the test temperature and the average result according to the number of tests done. Unlimited results can be saved on USB device for preparing a laboratory report and for further analysis.

SMARTIP is supplied complete with the accessories for determination of the needle penetration according to EN 1426, ASTM D5 and AASHTO T49 standards, and USB flash drive for saving data. Thermostatically controlled water bath, chiller, temperature probe PT100, device for an automatic measurement of electrically conductive samples and mirror can be ordered separately as accessories.

MAIN FEATURES

- Fully automatic test, simply pressing the START button: approach, touch point, penetration.
- Automatic identification of the needle contact point and needle positioning, avoiding any possible operator lack of concentration and ensuring a reliable repeatability of the results.
- Electro-magnetic needle probe release to perform the test.
- Automatic zero at the contact before starting penetration.
- Penetration measurement thanks to a high-tech contactless displacement transducer with 0.01 mm resolution, in a range of 0 - 50 mm.
- 7" touch screen display equipped with an user-friendly software and clear interface.
- Real time display of penetration/time curve, average result and test temperature.


B059M

TECHNICAL SPECIFICATION

- Measuring range: 0 – 50 mm;
- Resolution: 0.01 mm;
- 7" touch screen display;
- Test time 5 s (adjustable from 0 to 9999 s);
- Programmable delay time: from 0 to 999 s;
- Programmable reference positions for holder assembly: 8;
- Test simultaneously displayed: up to 10;
- Connection: USB port and LAN port for PC connection;

Power supply: 200V 50-60Hz 1ph

Overall dimensions: 325x400x730 mm

Weight approx.: 25 Kg approx.



B058M



B058

B058-01



B058-01

ACCESSORIES

B058 THERMOSTATICALLY controlled water bath.
Technical details: see p. 142

B058-01 WATER BATH DISH with incorporated thermostatic coil, to be connected to the bath mod. B058. It keeps the temperature of the bitumen sample directly on the penetrometer, by avoiding to transfer it.
Dimensions Ø 151x90 mm

B058M WATER CHILLER: 7.5 l capacity, with electronic temperature controller with ± 0.1 °C accuracy and fluid temperature range between 5 and 30°C. Suitable for chilling penetrometer water baths or temperature controlled setting time tests.

- 230 V 50-60Hz 1ph
- Power consumption: 350 W
- Overall dimensions: 415x300x420 mm
- Weight: 15 kg approx.

B059M-11 TEMPERATURE PROBE, PT100: Measurement of the sample temperature in real time. It's connected with the monitor in order to show the temperature during each test.

B057-08A THERMOMETER ALCOHOL, IP 78C - ASTM 38C

B057-06 PENETRATION NEEDLE conforming to EN 1426 and ASTM D5, supplied with official UKAS certificate.

B057-07L LONG NEEDLE hardened

B057-03 GLASS TRANSFER DISH

B056-09 PENETRATION BALL

B057-09 STANDARD PENETRATION CONE conforming to ASTM D217 and EN 13880-2



SPARES for B059M

V122-05 Sample cup 55x35 mm

V122-06 Sample cup 70x45 mm

B057-07 PENETRATION NEEDLE, individually verified

B057-04N 50 g slotted weight

B057-05N 100 g slotted weight