



Anton Paar

∴ Consistency and Ductility



PNR 12

Penetrometer

PNR 12 Penetrometer

PNR 12 automatically measures the resistance a material provides against being pierced by a specifically shaped test body. The harder the test material, the more pointed and needle-like the test body should be.

The penetrometer is used for consistency and plasticity determination of pasty, creamy, semi-solid or highly viscous samples.

Benefits at a Glance

- ▶ The patented force sensor plunger (optional) will detect the surface of samples even underneath a layer of water. It starts the standardized test sequence automatically and digitally reports the results on the display. Suitable samples are bitumen < 160 PU*, waxes and other comparable hard materials.
- ▶ 20 programs (16 of which are individual user-definable)
- ▶ Automatic data conversion (NLGI-class, EN-bitumen value, ¼-cone to solid cone and ½-cone to solid cone)
- ▶ Limit indicator which gives alarm when test value falls outside preset values
- ▶ Statistical and database functionality (storage of 200 tests, evaluation of Min, Max, Mean)
- ▶ Data readout with USB stick, conversion to Excel®
- ▶ Automatic measurements of electrically conductive samples

Convenient Operation

- ▶ Magnifier and extra bright LED sample illumination for reliable manual surface detection
- ▶ Jog wheel driven menu (turn and push)
- ▶ Password protection

Customized User Flexibility

- ▶ Typical PNR 12 accessories:
 - Needles** are suitable for measurements on bitumen, wax, food, cosmetics, etc.
 - Cones** are used for measurements on fats, greases, jellies, creams and similar materials
 - Perforated disks** are primarily used for measuring fluid and highly viscous materials
 - Rods and rams** are suitable for semi-liquid fats, greases and pastes, emulsions, honey, paints, varnishes, potting compounds, ceramic pastes, bread and confectionery
 - Test kits** for grease, waxes, food, cosmetics, sealing mass, pharmaceuticals, etc. are available
- ▶ Calibration kit (optional), officially certified for time, distance and temperature check
- ▶ Sensor (optional) for temperature measuring and recording

*) Penetration Unit = 0.1 mm



Standard Methods

Needle Penetration: ASTM D5, EN 1426, JIS K 2207, JIS K 2235
Cone Penetration: ASTM D217, ASTM D937, ASTM D1321, ASTM D1403, ASTM D7342, ISO 2137, EN 13880-2, DIN 51579, European Pharmacopoeia 2.9.9.

Accessories to serve many more standards are available.

Technical Specifications

Measuring range	0 mm to 80 mm (plunger-dependent)
Max. test load	2 kg
Resolution	±0.01 mm
Test duration	0.1 s to 999,999 s
Start delay	up to 600 s
Interfaces	USB, LAN, LIMS compatibility
Power supply	100 V to 240 V, 50 Hz/60 Hz, 1.5 A, 70 W
Dimensions	300 mm x 370 mm x 570 mm (W x D x H)
Weight	11 kg

Note: Due to the variety of available test bodies PNR 12 is a modular system and comes without a test body.

Your distributor: