Anton Paar

::: Consistency and Ductility

PNR 12

Penetrometer

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PNR 12 automatically measures the resistance a material provides against being pierced by a specifically shaped penetrator. The harder the test material, the more pointed and needle-like the penetrator 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 have proven practical for measurements on bitumen, wax, food, cosmetics, etc.
  Cones have proven practical for measurements on fats, greases, jellies, creams and similar materials
  Perforated disks are primarily used for measuring fluid and highly viscous materials
  Rods & 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 - 240 V, 50/60 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 penetrators PNR 12 is a modular system and comes without a penetrator.

Your distributor:

www.anton-paar.com

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