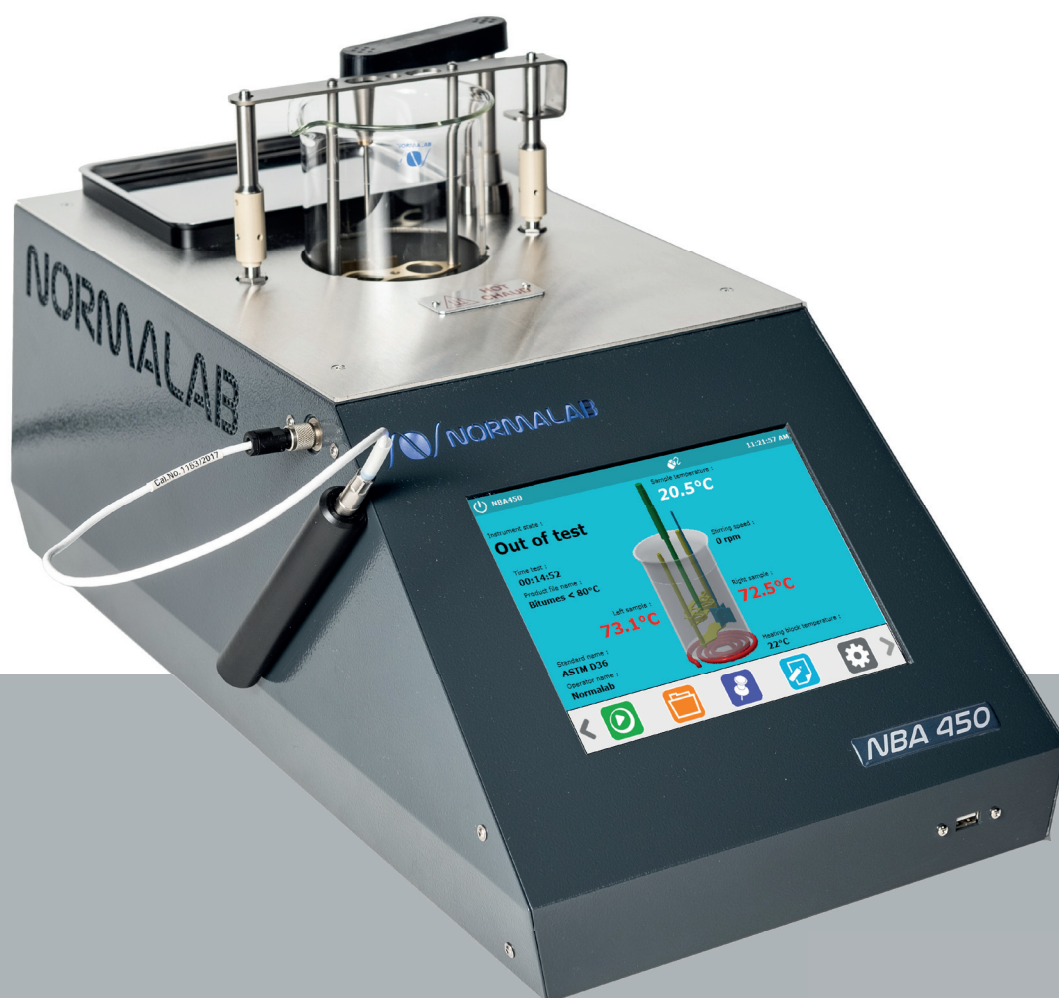


NBA 450

SOFTENING POINT TESTER

RING AND BALL METHOD



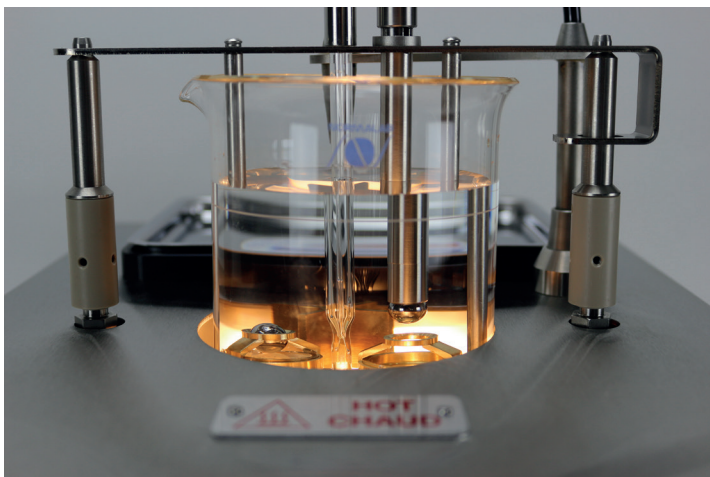
STANDARDS

ASTM D 36, ASTM E28, IP 58, EN ISO 1427, DIN 52011, AASHTO T53 and related methods.

SCOPE

This test method covers the determination of the softening point of bitumen in the range from 30 to 157°C using the ring-and-ball apparatus immersed in distilled water, silicone or glycerin. Bitumens are viscoelastic materials without sharply defined melting points; they gradually become softer and less viscous as the temperature rises.

NBA 450 is a softening point tester developed by Normalab. Normalab has been designing and manufacturing petroleum testing instruments and glassware since 1963.



« FULLY AUTOMATIC
MODEL FOR RELIABLE
MEASUREMENTS »

SPECIFICATIONS

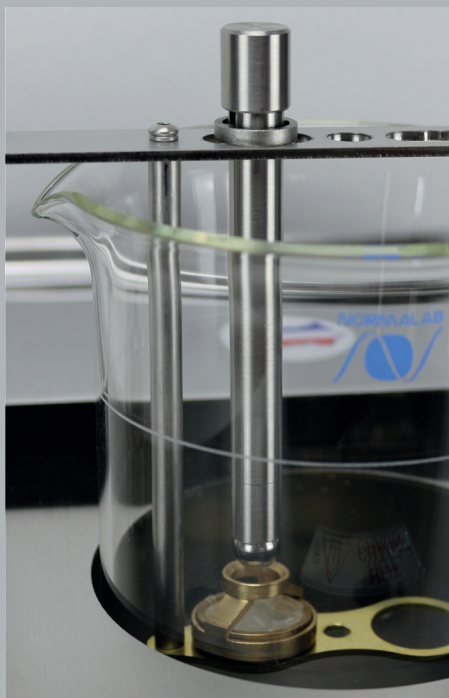
- **Test temperature range: up to 200°C**
- Automatic detection by optical cell barrier
- **3 preset methods (water, glycol, glycerin)**
- Adjustable heating rate and stirring speeds
- **Capacitive touch screen 8,4"**
- User-friendly software
- Stainless steel tray for easy handling of accessories
- Easy positioning of the beaker in the heating block
- Optimized centering system
- **Easy handling of the ball with the magnetic ball dropper**
- Quick cooling by fan at the end of the test
- **Small footprint - Compact instrument**



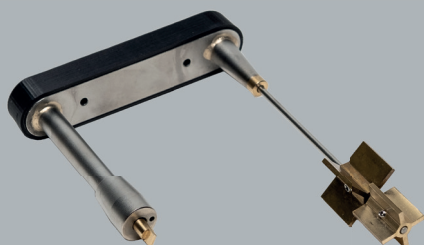
CONNECTIVITY

- 3 rear USB ports
- 1 front USB port
- 1 LAN port
- 1 RS232C port

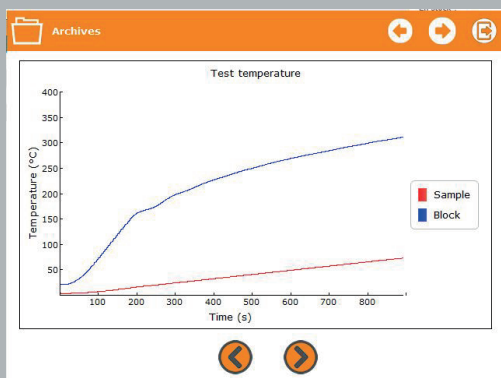
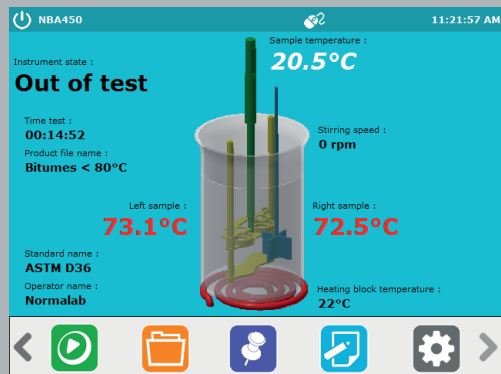
« FROM QC TO R&D LAB APPLICATIONS »



Magnetic ball dropper - P/N 60705



Mechanical stirrer

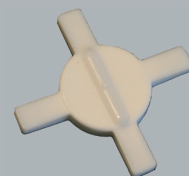


SAFETY FEATURES

- User access with different levels
- Sample overheating protection
- Acoustic and visual alarms
- Automatic shut off if missing probe
- Waterproof heater
- Solvent proof display screen

ACCESSORIES

- Magnetic Ball Dropper
- Mechanical and magnetic stirrers
- Removal magnetic stick for magnetic stirrer
- Different types of rings available
- ASTM D 36 or ISO EN 1427 beaker
- Molding plate
- Ball centering guide
- Optional Printer
- Optional ASTM E28 beaker with specific treatment



Magnetic stirrer

SOFTWARE FEATURES

- Backup and software update by USB
- Keyboard, mouse, barcode reader and printer connection
- Data storage - 320 Go HDD
- Fully settable report
- Friendly software interface

EASY CONFIGURATION

Access from basic to advanced parameters made easy through the intuitive software and large screen.

- Data export through USB, LIMS, PDF or e-mails.
- User and password settings
- Data transfer to local printer
- Product files configuration

ORDERING INFORMATION

Fully automatic analyzer of softening point - Ring and Ball method

60700

NBA 450 is a reliable and resistant instrument dedicated to automatic softening point detection. Quick and easy operation through integrated touchscreen.

Scope of delivery:

NBA 450 is delivered ready to use with:

- 2 standardized beakers (P/N 17487)
- 10 shouldered rings (P/N 20765)
- 10 balls (P/N 20766)
- 1 holder (P/N 60703)
- 1 Pt 100 probe (P/N 40139)
- 1 mechanical stirrer (P/N 60702)
- 1 magnetic stirrer (P/N 60708)
- 1 removal magnetic stick (P/N 20030)
- 1 magnetic ball dropper (P/N 60705)
- 2 centering guides (P/N 60704)
- 1 molding plate (P/N 60706)

Site requirements:

- Power supply: AC 200-250 V, 50 Hz - 4 A
- Dimension: (L) 290x (W) 580 x (H) 380 mm
- Weight: 14,8 kg

SUMMARY

Operating temperature	+5 to + 30 ° C	Detection	Optical
Temperature range	Up to 200 ° C	Stirring speeds	Up to 250 rpm
Temperature unit	°C or °F	Cooling system	By fan
Temperature measurement	Pt 100 Probe	Data Storage	320 Go HDD



CONTACT : sales@normalab.com

Normalab FRANCE SAS
ZA Caux Multipôles 1 - 76190 Valliquerville
Tel. : +33 232.700.100
Fax : +33 232.704.732

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