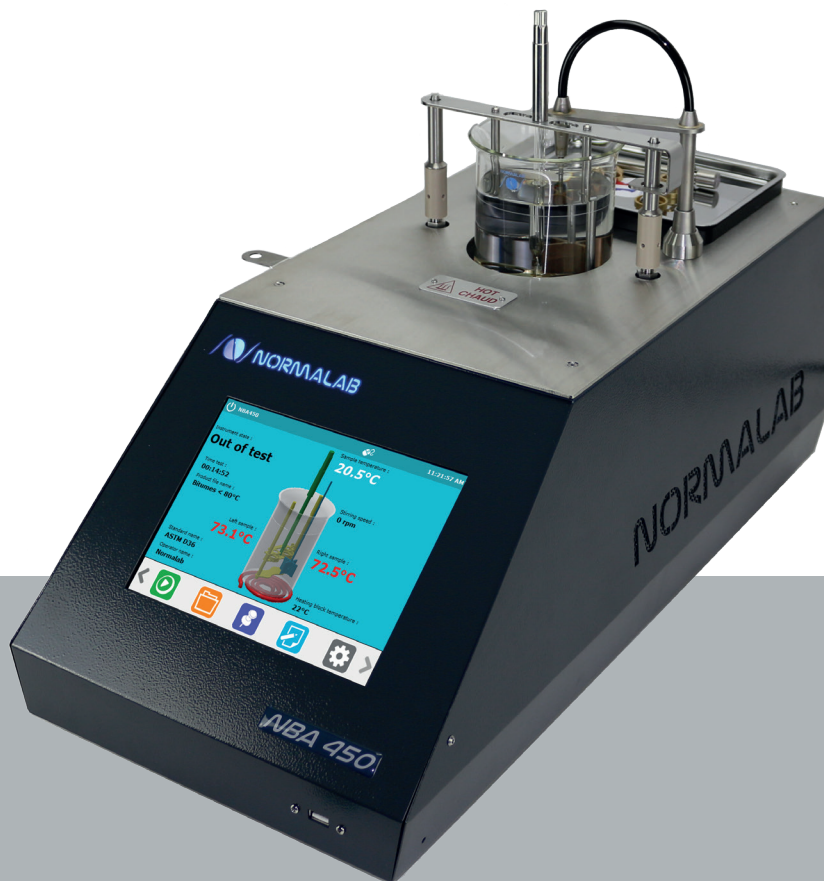


MODEL NBA 450

SOFTENING POINT TESTER RING AND BALL METHOD



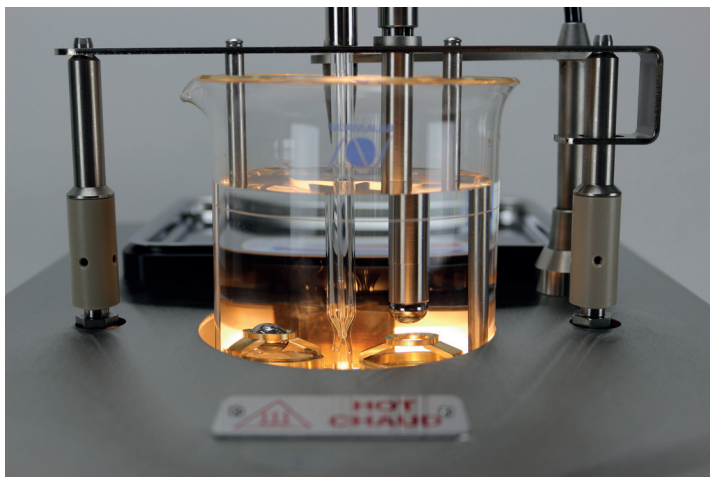
STANDARDS

ASTM D 36, IP 58, EN ISO 1427 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 or USP glycerin (above 80 to 157°C). 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: 0 to 200°C
- **Smaller footprint - Compact instrument**
- Automatic detection of softening point by optical cells
- **Easy handling of the ball with the grip**
- User-friendly software
- **4 preset methods**
- Controlled heating rate and stirring speeds
- Cooling by fan at the end of the test
- **Fast cooling in less than 20 minutes**
- Capacitive touch screen
- Easier positioning of the beaker in the heating block
- Stainless steel tray for easy handling of accessories
- Centering system for better positioning of the beaker



CONNECTIVITY

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

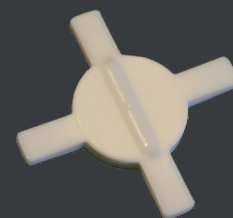
« FULLY CONFIGURABLE PRODUCTS FILES FROM QC TO R&D LAB APPLICATIONS »

SAFETY FEATURES

- User access
- Sample overheating protection
- Audible alarm
- Heating sensors
- Probe safety sensor
- Waterproof heater
- Hardware security in case of software crash to avoid all risks

ACCESSORIES

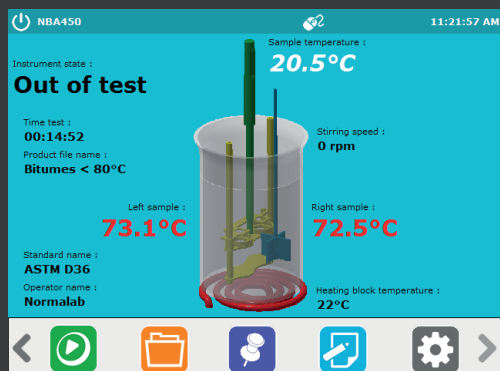
- Positioning and centering tools
- Magnetic stirrer
- Different types of rings (optional)
- Printer (optional)



Centering tools - Ref 60705

SOFTWARE FEATURES

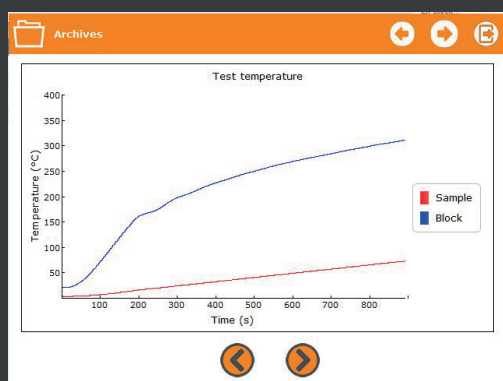
- Backup via USB connectors
- USB upgrade
- Possibility to connect a keyboard, a mouse, a barcode reader and a printer
- Lifetime data storage - 320 Go HDD
- Report fully settable
- Friendly software interface



EASY CONFIGURATION

Our NBA 450 is user-friendly with its digital screen and the quick access keypad. You can easily program the parameters. The integrated software allows you to :

- Export data through USB, LIMS, PDF or e-mails.
- Set user and password
- Transfer the select result on local printer
- Configure product files



ORDERING INFORMATION

Fully automatic analyzer of softening point with the ring and ball method

60700

NBA 450 is a reliable and resistant instrument designed in the legacy of the previous model. It is operable through integrated touch screen and offers the possibility to test bitumen, waxes, resins...

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)
- Holder (P/N 60703)
- Pt 100 probe (P/N 40139)
- Magnetic and mechanical stirrer
- Magnetic tool (P/N 60705)
- Moldeling plate (P/N 60706)

Site requirements:

- Power supply: AC 230 V, 50 Hz - 4 A
- Dimension:(W) 260x (D) 535 x (H) 500 mm
- Weight: 20 kg

SUMMARY

Operating temperature	+5 to + 30 ° C	Detection	Optical
Temperature range	0 to + 200 ° C	Stirring speeds	From 0 to 250 rpm
Temperature unit	° C or ° F	Cooling system	Mechanical ventilation
Temperature measurement	Pt 100 Probe	Data Storage	320 Go HDD