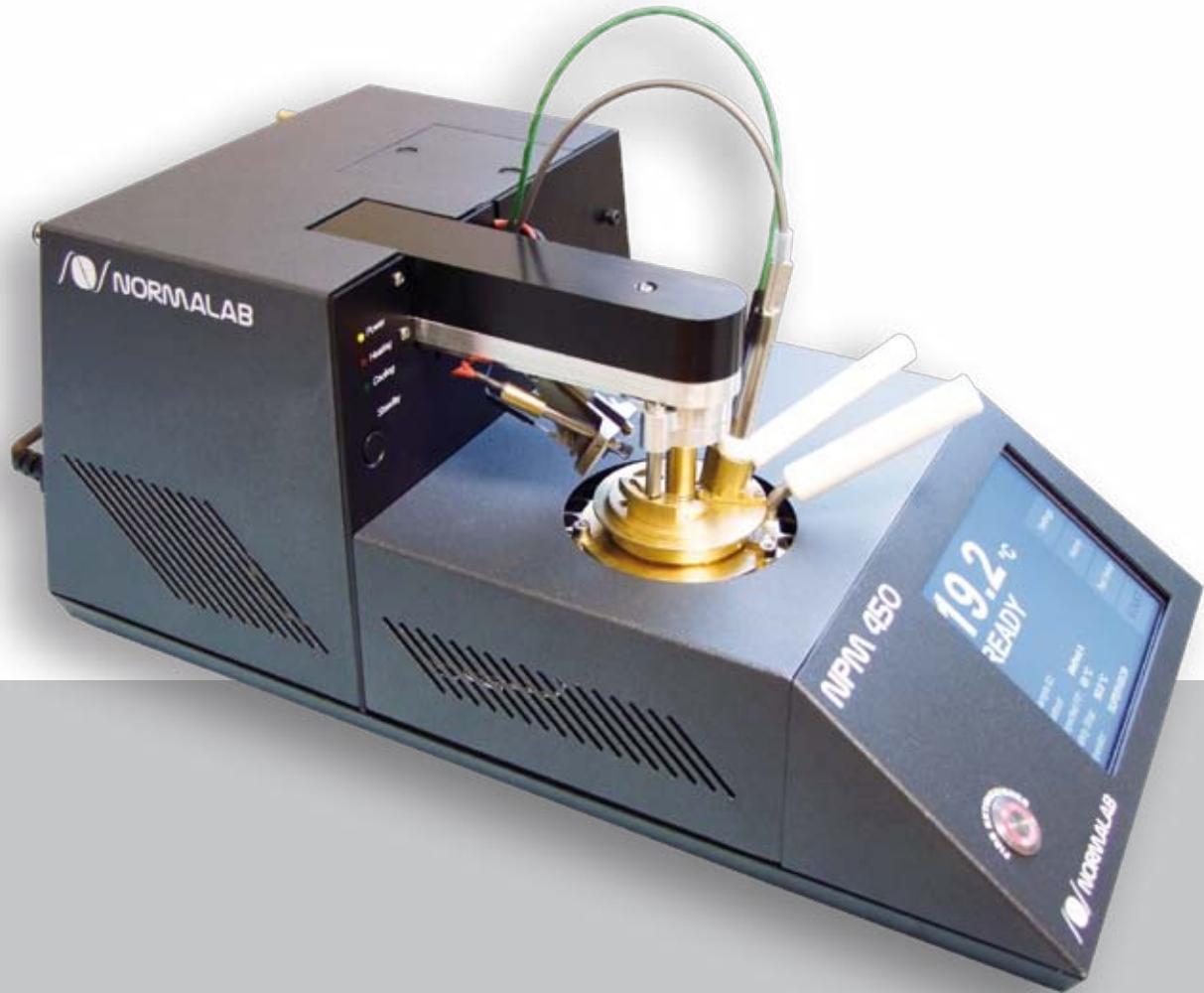


MODEL NPM 450

AUTOMATED FLASH POINT BY PENSKY - MARTENS CLOSED CUP TESTER



STANDARDS

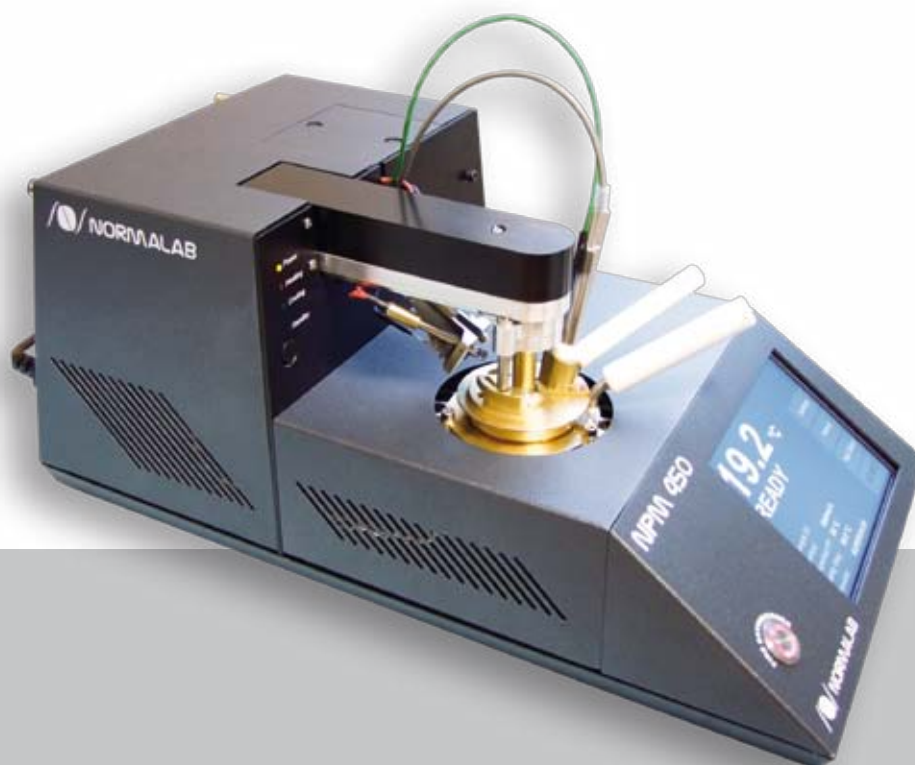
ASTM D 93, IP 34, NF M07019, ISO 2719, DIN 51758, GBT 261, JIS K 2265-3 and related methods.

SCOPE

These test methods cover the determination of the flash point of petroleum products in the temperature range from 40 to 360°C and biodiesel from 60 to 190°C by manual or automated Pensky-Martens closed cup apparatus.

NPM 450 is the 5th generation of automated flash point developed by Normalab. Normalab has been designing and manufacturing petroleum testing instruments and glassware since 1963.

◀◀ THE MOST EFFICIENT AND COMPACT UNIT ▶▶



SPECIFICATIONS

- **Test temperature range: 0 to 410°C**
- Flash point detection by thermocouple
- **Electric and gas ignition (unique combined system)**
- **Regulated electric ignitor**
- Automatic gas flame relighting
- Integrated barometric correction
- One hand easy operation
- **6,4 inch high definition screen**
- Capacitive touch screen (gloves usable)
- Standard methods: A, B, C
- User programmable methods
- **Predictive heating regulation**
- Heavy sample preheating and automatic stirring start
- Fast heating and cooling
- Sample cup, probe, thermocouple holder stand
- **Small size**



Revolutionary stirring & dipping arm

SAFETY FEATURES

- **Automatic N₂ fire extinguisher**
- Illuminated extinguisher push button
- **Integrated hydrocarbon sensor**
- Over-temperature protection



Unique Gas & Electric System

WIRING

- 4 USB ports
- 2 LAN port
- 1 RS232C port
- 1 VGA port

SOFTWARE FEATURES SUMMARY

- One hand easy operation
- **Windows 8® operating system**
- Lifetime data storage - 16 GByte SSD
- **Reporting: PDF, Email, LIMS**
- Different level access settable (Operator - Supervisor Maintenance...)
- Remote operation



Friendly & Professional Software

ACCESS TO EVERY DATA PROCESSING AVAILABLE



Send the select result to LIMS: by RS-232 connector



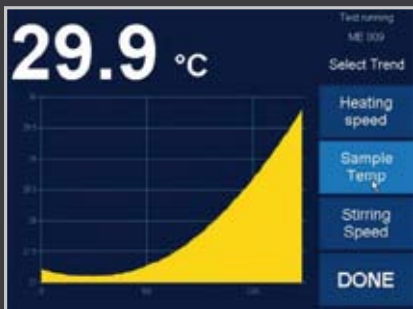
Print the selected result: on local printer or network printer



Export the selected result to PDF: use USB key or Intranet network



Send the selected result by Email



Live trends follow up

EASY CONFIGURATION



Regional options: date and time, language, temperature units and pressure units



User and password: user name, password for level access



Software update: by USB key



Instrument: instrument name, serial number and network information

ORDERING INFORMATION

NORMALAB production - Fully automated Pensky Martens Flash Point tester

60400

NPM 450 operable through integrated touchscreen and Windows8® based software.

Scope of delivery:

NPM 450 delivered ready to use with:

- Cup (P/N: 40346)
- Cover (P/N: 60447)
- Pt 100 probe (P/N: 60453)
- Detection thermocouple Cable (P/N: 60448)
- Electric ignitor (P/N: 60480)

Site requirements:

- Power supply: AC 110/240V - 50/60 Hz - 4A
- Dimensions: (W) 260 x (D) 460 x (H) 185 mm
- Weight: ± 12 kg
- Propane/Butane pressure: mini 20 to 40 mBar max
- Nitrogen pressure: mini 4 to 12 Bar max

SUMMARY

Flash point range	0 to 410°C	Gas connections	Propane/Butane, Nitrogen
Heating rate	0 to 15°C/min	Automatic switch off	Integrated
Safety stop	0 to 30°C (Above expected flash point)	Hydrocarbon detection	Integrated
Ignition	Electric and gas	Overheating protection	Integrated 600°C
Electric ignition	Regulated / monitored	Real time clock	Integrated
Stirring speeds	50 to 300 RPM (±3 RPM)	Fire detection	Ionization
Flash detection	Thermocouple	Automatic fire extinguisher	Integrated (nitrogen network or bottle)
Cooling	Integrated - Forced air	Extinguisher push button	Integrated & illuminated



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