

NAB 440

FLASH POINT TESTER ABEL CLOSED-CUP METHOD



STANDARDS

ISO 13736, IP 170, NF M 07 011 and related methods.

SCOPE

These test methods cover procedures for determination of the manual and automated closed-cup flash point of combustible liquids having flash points between -30°C to 75°C . However, the precision given for this method is only valid for flash points in the range $-8,5^{\circ}\text{C}$ to $75,0^{\circ}\text{C}$.

NAB 440 is an ABEL flash point tester developed by Normalab. Normalab has been designing and manufacturing petroleum testing instruments and glassware since 1963.



« AUTOMATED MODEL »

SPECIFICATIONS

- Temperature range from -30°C to 110°C (cryostat is mandatory for temperatures below ambient)
- Temperature display in °C or °F
- 3 methods : NF M 07 011 - ISO 13 736 - IP 170
- Gas electric and ignition
- Double Flash point detection by ionisation ring and thermocouple
- Automatic Gas cut-off at the end of the test
- Data Storage: 200 results
- Optional low gas cartridge to work in all types of environments
- Auto diagnostic
- Quick access to calibration parameters



*Photos are non-contractual - they may differ from actual products.

CONNECTION

- RS232C output

APPLICATION



- Petroleum industry
- Cosmetics and perfumes
- Pharmaceutical industry
- Chemical industry
- REACH applications
- Transportation class for hazardous goods
- Biodiesel
- Lubricants
- Waste

SOFTWARE FEATURES

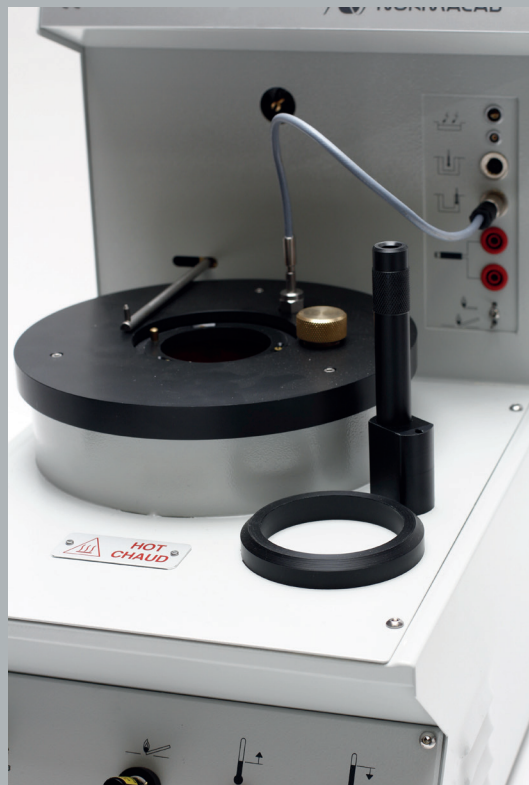
- Automatic barometric correction with manual input of atmospheric pressure
- Select units : °C, °F, mbar, mmHg
- Calibration of temperature measurements (regulated baths or decade unit)
- Deletion or holding of expected temperature after each test
- Buzzer (continuous or 3 min)
- Correction of deviation of result: $\pm 9.9^{\circ}\text{C}$
- Sample security device parametrable from 3°C to 10°C above the expected temperature
- Alarm = safety - 3°C
- Printing of results with or without heating gradient
- Configuration of ignition, gas or electric

SAFETY FEATURES

- Heating safety device : Heating cut off at 130°C measured in the bath independently of the micro-processor with audible alarm
- Sample safety device : Current test stopped with audible alarm. Safety device programmable from 2°C to 10°C above the expected $T^{\circ}\text{C}$
- Probe safety device : Probe missing on account of no increase in temperature (3°C in 10 min)
- Gas safety device : Optical detection of absence of flame with audible alarm and automatic cut off of gas with time delay of 30" and test stopped

OPTIONS

- Cryostat (needed below the ambient)
- RS 232 ticket printer
- NCAL, calibration kit
- Gas cartridge kit (P/N 60457) minimizes gas volume present in the lab.



ORDERING INFORMATION

41300

Automated Abel flash point, **NAB 440**, has 3 preset standard methods, and 1 quick search method. This apparatus has a dual detection system-thermal and ionization.

Scope of delivery:

The NAB 440 tester includes :

- Cup P/N 41301
- Cover P/N 41303
- Pt 100 probe P/N 41310
- Stirrer flexible P/N 41306
- Insulated tubing for connexion to cryostat P/N 60214
- Detection Thermocouple P/N 40379
- Detection Cable P/N 41309
- Electric Ignitor P/N 40613

Site requirements:

- Power supply: AC 230 V, 50/60 Hz, 4 A
- Dimension: (W) 270 x (D) 50 x (H) 550 mm
- Weight: 20 kg

SUMMARY

| | | | |
|-------------------------|---------------------------------|----------------|------------------------------------|
| Temperature range | - 30 à + 110°C | Detection | Thermocouple and /or Ionisation |
| Temperature accuracy | 0,1 °C | Ignition | Automatic gas or electric |
| Temperature measurement | Probe Pt 100 | Cooling system | Connected to cryostat |
| Stirring | 2 speeds : 30 rpm and 75 rpm | Data storage | 200 results |



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