

# NCL 440

## AUTOMATIC CLEVELAND OPEN CUP FLASH AND FIRE POINT TESTER



### STANDARDS

ASTM D 92, IP 36, ISO 2592, AASHTO T48 and related methods.

### SCOPE

This test method describes the determination of the flash point and fire point of petroleum products by a manual Cleveland open cup apparatus or an automated Cleveland open cup apparatus. The test method is applicable to all petroleum products with flash points above 79°C (175°F) and below 400°C (752°F) except fuel oils.

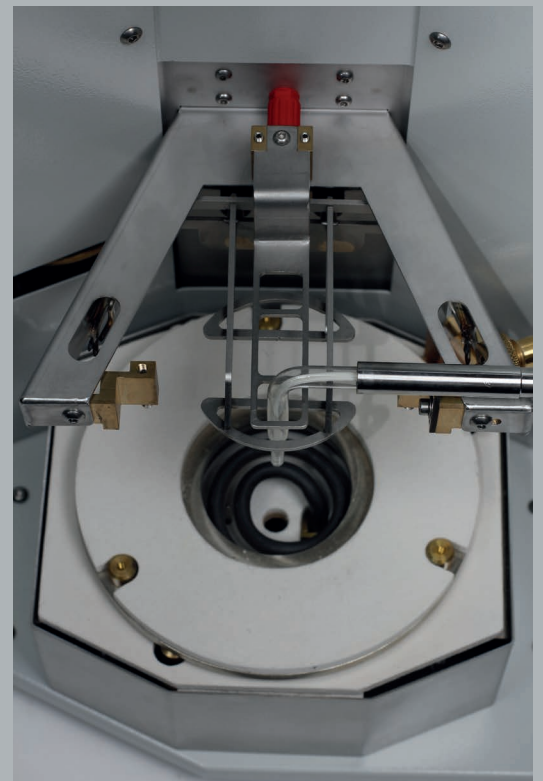
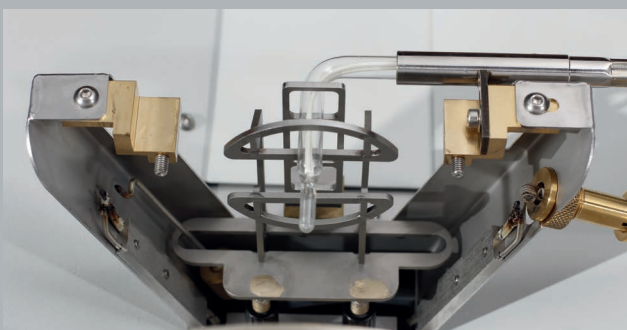
NCL 440 is a cleveland open cup tester developed by Normalab. Normalab has been designing and manufacturing petroleum testing instruments and glassware since 1963.



## « POLYVALENT INSTRUMENT FOR FLASH AND FIRE POINTS »

### SPECIFICATIONS

- Test temperature range ambient to 400°C
- Temperature resolution 0,1°C
- Angled glass probe type Pt100 class B
- Detections by ionisation rings
- Data storage: 200 results
- Pre-installed standard test method
- Automatic sampler 6 positions (Optional)
- Surface skimmer (Optional)



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

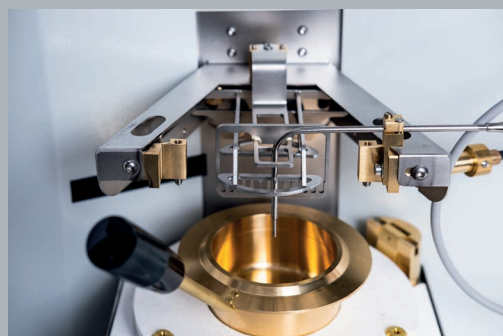
### APPLICATIONS

- Petroleum industry
- Research
- Bitumen
- Lubricants

## ACCESSORIES

Delivered in standard with the necessary accessories to run a test, you can complete your device with :

- **Automatic sampler - 6 positions (P/N 40440)**  
NCL 440 can be configured with an auto sampler that allows to launch 6 analysis at the same time and collect the results at the end of the cycle.
- **Surface skin skimmer (P/N 40480)**  
The surface skin from bituminous samples is removed during the test through the skimmer function. *This accessory is not compatible with the auto sampler.*
- **Gas cartridge kit (P/N 40484)**  
The option minimizes the volume of gas present in the lab.
- **Protective screen (P/N 40454)**  
Reduces the exposure of the sample cup to external disturbances during the analysis.
- **Pt 100 probe stainless steel delivered in standard with skimmer option (P/N 40467)**
- **Anti over flow cup (P/N 40422)**



## SAFETY FEATURES

For safety reasons, the NCL 440 is equipped with several protection user systems:

- Automatic flame lightening
- Emergency safety switch
- Safety probe
- Detection of gas with auto cut-off
- Automatic gas cut-off at the end of the test
- Thermal fuse (overheating protection)
- Shutter lid at the end of the test



## CONFIGURATION

Delivered ready to use, the device is user-friendly with its digital screen and the quick access keypad. You can easily choose the best program according to your application

- Standard
- Bitumen
- Manual
- Research

Access to calibration and service parameters can be protected by password.



## ORDERING INFORMATION

Fully automatic, NCL 440, combines leading flash and fire point detection. Easy to use, the evolution of the test is displayed in real time on the screen.

40400

### Scope of delivery:

NCL 440 is delivered ready to use with:

- Cup (P/N 40417)
- Pt 100 probe (P/N 40441)
- Electric ignitor
- Insulated plate mobile (P/N 40439)
- Insulated plate fixed (P/N 40437)

40480

NCL 440 **with** surface skin skimmer  
*(Can not be ordered separately from the instrument)*

### Site requirements:

- Power supply: 230 V - 50 Hz - 1000W
- Dimension: (W) 330 x (D) 400 x (H) 640 mm
- Weight: 20 kg

*Propane/Butane pressure: 50 mbar*

## SUMMARY

Temperature range	0 to 400°C	Gas connection	Propane / Butane
Sample temperature	Pt 100 probe Class B	Data storage	200 results
Ignition	Gas	Automatic gas cut off	Integrated
Flash detection	Ionisation ring		
Fire detection	Ionisation ring		



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