MODEL NDI 450

AUTOMATED ATMOSPHERIC
DISTILLATION OF PETROLEUM PRODUCTS

STANDARDS

ASTM D86 - D850 - D1078 - ISO 3405 - IP 123 - IP 195 - GOST B - JIS K2254 - DIN 51751 and related methods.

SCOPE

This test method covers the atmospheric distillation of petroleum products. Natural, motor and aviation gasolines, aviation turbine fuels, special boiling point spirits, naphtas, white spirit, kerosene, gas oils, distillate fuel oils.

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NDI 450 is the 5th generation of automated distillation developped by Normalab. Normalab has been designing and manufacturing petroleum testing instruments and glassware since 1963.

‹‹ OUR FLEXIBLE SOFTWARE WILL MEET YOUR EXPECTATIONS ››

Automatic N_2 Fire Extinguisher

SPECIFICATIONS

- **Temperature measurement range: ambient to 450°C**
- Temperature accuracy: 0.05°C
- **Low voltage heating element (850W)**
- **Automatic positioning of heating element**
- Quick cooling of heater by fan
- Condenser temperature: 0 to 60°C
- Receiver compartment temperature: 0 to 60°C
- Level follower accuracy: 0.1 ml with resolution of 0.05ml
- **Built-in Peltier Cooling System**
- Ready for Biodiesels analysis
- Integrated colour touch screen display (10,4 inch)
- **Windows® based software**
- Preprogrammed with Standard Methods
- User programmable methods
- Automatic Barometric pressure correction
- Automatic Cetane Index calculation (ISO 4264)
- **Equipment ready to use as per ASTM D86 and related methods (**Optional kit for ASTM D850, D1078)
- Additional Test Method : ASTM D189, D524 & D4530 10% Distillation residue with 100ml sample.

SAFETY FEATURES

- Automatic Fire detection
- **Automated Fire extinguisher (N_2 bottle delivered with the unit)**
- Extinguisher push button
- Sample overheating protection at 600°C
- Sensors:
    - Receiver in position
    - Compartment door: closed
    - Drip deflector in position
    - PT 100 probe: in position
    - Coolant liquid: low level detection
    - N_2 minimum pressure required

CONNECTIVITY

- 3 USB ports
- 1 RS232 port
- 1 LAN port
- 1 VGA port

Friendly & Professional Software

Various report formats

Quality glassware

SOFTWARE FEATURES SUMMARY

- **Windows® based software**
- Result comparison and analysis
- **Different level access settable** (Operator - Supervisor - Maintenance - Others…)
- Multi-Language software
- Results database: > 1000 results
- Product files database: > 1000 files
- **Reporting: LIMS, E-MAIL, PDF, DOC and XLS**
- **Reporting: complete or synthetic single page format**
- Printer – Network Printer : Any commercial printers
- USB Key : Any commercial keys
- Barcode Reader: Any commercial barcode readers
- Mouse, Keyboard and screen
- Fast and easy access to all parameters

ACCESS TO EVERY DATA PROCESSING AVAILABLE

Send the selected 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

Export the selected result to DOC+XLS: Use USB Key or Intranet network

Send the selected result by e-mail

EASY CONFIGURATION

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

User and password: user name, user account, password and security level

Software update: by USB key

Instrument: instrument name, serial number and network information

NORMALAB production - Fully automated atmospheric distillation unit

60502

NDI 450 operable through integrated touch screen and Windows® based software. Equipment with built in fire extinguishing system and external N$_2$ bottle fitted with manometer for pressure control.

Scope of delivery
NDI 450 delivered ready to use for D86 and related standards:
- 125 ml distillation flask (P/N: 24019)
- 100 ml receiver (P/N: 26111)
- 38 mm heating plate (P/N: 60507)
- 50 mm heating plates (P/N: 60508)
- 5 ml residue receiver (P/N: 12609EC)
- Pt 100 probe (P/N: 60510)
- Pt 100 probe centering device
- Dry point Thermocouple (P/N: 60509)
- Bag of Pumice (20g) (P/N: 60514)
- Condenser cleaning cable (P/N: 60513)
- 3 Stoppers: condenser stopper (P/N: 60515) / flask probe stopper D86 (P/N: 40065) / flask probe stopper D86 for dry point application (P/N: 40064)

Site requirements
Power Supply: **AC 230 V, 50/60 Hz - 9A**
Dimensions: (W) 54cm x (D) 45cm x (H) 63cm
Weight: ±70 kg

60503

Same as 60502 except:
Power Supply: **AC 115 V, 50/60 Hz - 9A**

*Optional kit for ASTM D850, D1078 and related methods (P/N: 60517)

Temperature range	Ambient to 450°C	**Barometric pressure correction**	Automatic
Temperature accuracy	0,05°C	**Sample overheating protection**	Integrated 600°C
Condenser temperature	0 to 60°C	**Fire detection**	Integrated
Receiver Comp temperature	0 to 60°C	**Fire extinguisher**	Integrated
Heating element power	Low voltage 850W	**Extinguisher push button**	Integrated
Heating element positioning	Automatic	**N$_2$ bottle**	Integrated
Cooling system	Peltier integrated	**Software**	Windows®
Level follower	2 Photoelectric forks	**LIMS connection**	RS232 / LAN
Level follower accuracy	0,1 ml	**LIMS format**	XML/ASCII/CSV
Level follower resolution	0,05 ml	**Email reporting**	Integrated

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