



## NewLab 1300 Cloud and Pour Point



### Cloud Point:

ASTM D5771  
DIN 51597  
EN 23015  
EN 590  
IP 444

### Correlated:

ASTM D2500  
ASTM D5772  
ASTM D5773  
IP 219  
IP 445  
IP 446  
ISO 3015  
JIS K2269

### Pour Point:

ASTM D97  
ASTM D5853  
ASTM D5950  
ASTM D6074  
ASTM D6158  
IP 15  
IP 441  
ISO 3016  
EN ISO 22995

### Subject

Cloud Point of petroleum products and biodiesel fuels.

Pour Point of petroleum products, crude oils, motor and engine oils, additives, lubricating oils, ...

### Measuring Principle

#### Cloud Point

The sample is cooled down according to the methods while the clouds appearance is observed on the silver bottom of the test jar by means of an optical sensor. The measurement is done by reflection on the silver bottom of the test jar via a fast light detector. The signal from light detector is traded by the LabLink software. The dynamic measurement is performed regardless of the sample's colour.

#### Pour Point

According to the methods, the sample is cooled down at a specified rate and, at the prescribed temperature intervals, the mechanical arm of the analyser lifts the test jar from the cooling jacket and tilts it in order to bring it in horizontal position to test the flow of the product. The sample movement is detected by the thermal probes (PT100 detection) placed above the sample surface which react if touched by the cooled sample.

### Measuring Cloud and Pour Point Devices

- Cloud: light pulsed emission on I.R spectrum through a coaxial fiber optic
- Pour: platinum resistance PT100 class A
- Pour: mechanical moving arm bringing the test jar in horizontal position

### Measuring Temperature Probe

- Platinum resistance PT100 class A
- The Cloud Point PT100 is touching the bottom of the test jar

### Measuring Parameters

- Temperatures: in °C
- Measuring range: +80°C ... -80°C
- Resolution: 0.06 °C
- Accuracy: ± 0.1 °C
- Repeatability / Reproducibility: as per standards methods or better

### Software Features

- New LabLink software able to manage up to 6 analytical heads simultaneously (stand alone)
- User friendly interface
- All analytical parameters recorded
- Customizable analysis parameters and methods
- Customizable results report
- Printable graphs and results
- Self-identification of the typology of the analysers connected

The software includes:

#### Analysis Menu

- Standard method as per ASTM / IP / ISO / EN / DIN... norms of reference:
  - internal, with sample pre-heating, for Pour Point only
  - external, without sample pre-heating, for Pour Point only
- Optional methods:
  - fast bath, to reduce the time of analysis
  - T-sample – T-bath (delta T constant)
  - cooling rate °C / h
- Audible alarm and displayed messages at the end of the analysis and in case of errors and/or malfunctions

#### Diagnostic Menu

- Direct access to all analog, digital, inputs and outputs

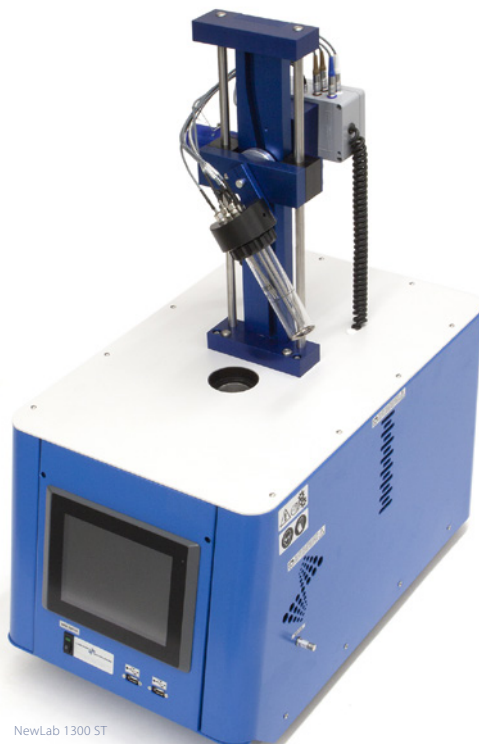
- Selectable value displaying: °C / Volt

#### Calibration Menu

- Automatic calibration of each temperature probe
- Last calibration date referred to each single probe displayed and relative data printable
- Display of calibration diagram
- Insertion of offset values
- Standard and advanced calibration modes
- Data Utilities
- Fields for operator and product name



# NewLab 1300 Cloud and Pour Point



NewLab 1300 ST

- Archive viewer for files recall
- All analysis stored in Excel<sup>®</sup> compatible format
- Storage capacity for more than 60'000 analysis
- LIMS compatible

**Integrated Touch Screen Panel PC**

- TFT/LCD 12"
- Resolution 1024 × 768, 16.2 M colours
- 2 USB ports for connection to an external printer and/or external PC
- Storage capacity for more than 60'000 analysis

**Test Jar**

- Same dimensions and volume as described by the standard test methods
- Product level mark
- Small edge on the top in order to fix the glass cell to the analytical head
- Silvered bottom with anti-scratch film protection

**Cooling System**

- Integrated gas CFC free motor compressors:
  - Single stage (for temperatures up to -40°C / 1)
  - Double stage (for temperatures up to -80°C / 2)
- Equipped with an automatic energy power save system. After 15 minutes from the end of the analysis the cooling system goes in stand-by mode.

**Safety Devices**

- Pressure controller for 1st stage motor compressor
- Pressure controller for 2nd stage motor compressor
- Thermostat for 2nd stage activation
- Thermo-switch for each cooling / heating jacket

- Motor compressors equipped with internal overload devices

**Electrical Supply**

- 220V ± 15% / 50 to 60 Hz
- 115V ± 15% / 60 Hz

**Cord Cable:**

- 3 conductors flexible cable 2 m (7 feet) length with PVC sheath oil and heat resistant as per CENELEC directives

**Ambient Temperature**

- Max 32 °C
- H.R. 80%

**Dimensions and weight**

- 1 test pos.: w 66 × d 60 × h 80 cm, 60 kg
- 2 test pos.: w 66 × d 60 × h 80 cm, 90 kg / 100 kg
- 3 test pos.: w 100 × d 60 × h 80 cm, 130 kg
- 4 test pos.: w 134 × d 60 × h 80 cm, 160 kg
- 6 test pos.: w 130 × d 75 × h 170 cm, 280 kg

**Spare Parts**

- LAB-xxx/005-03: heater + auto adhesive + insulation
- LAB-xxx/005-04: thermo switch
- LAB-xxx/005-06: PT100 bath
- LAB-xxx/007-02: static relay
- LAB-xxx/007-04: PCB fuse 1.6 A, box of 10 pcs.
- LAB-xxx/006-01: cooling fluid valve + fitting
- LAB-1300/007-01: main electronic board Cloud and Pour Point
- LAB-100/008-06: fibber optic
- LAB-100/008-07: light board
- LAB-1300/008-12: PT100 product w/connector Cloud Point
- LAB-100/008-04: test jar with silver bottom
- LAB-100/008-041: o-ring for test jar
- LAB-300/002-16: precision potentiometer
- LAB-300/008-12: PT100 product w/connector Pour Point
- LAB-300/008-13: PT100 detection Pour Point

**Calibration Tools**

- OilLab 80: calibration decade box – PT100 simulator
- OilLab 81: set of connectors and cables for cold range

**NewLab 1300 ST**

- Measuring range: -110°C ... +100°C
- Range of analysis: -110°C ... +55°C
- Resolution: 0.01 °C
- Width: 34 cm
- Depth: 60 cm
- Height: 80 cm
- Weight: 34 kg