NewLab 300
Pour Point

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CE

ASTM D97 (correlated)
ASTM D5853
ASTM D5950
ASTM D6749 (correlated)
ASTM D6922
IP 15
IP 441
ISO 3016

Subject

Pour Point of petroleum products, crude oils, motor and engine oils, additives, lubricating oils, …
Determination (D6922) if an automotive engine oil is homogeneous and will remain so, and if it is miscible with certain standard reference oils after being submitted to a prescribed cycle of temperature changes.

Measuring Pour Point Principle

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 Pour Point Devices

- Two PT100 detection probes placed on the surface of the product
- Mechanical moving arm bringing the test jar in horizontal position

Measuring Temperature Probe

- Platinum resistance PT100 class A

Measuring Parameters

- Temperatures: in °C
- Measuring range: -110°C … +100°C
- Range of analysis: -90°C … +60°C (300/2-SA)
- 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
  · (external) without sample pre-heating
- Optional methods:
  · T-sample – T-bath (Delta T constant)
  · cooling rate °C / h
  · selectable bath steps
  · fast bath
  · selectable tilt out test temperature
- 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 introduction of operator and product name
- Archive viewer for files recall
- All analysis stored in Excel® compatible format
- Storage capacity for more than 60'000 analysis
- LIMS compatible

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NewLab 300 ST

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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

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 (only for motor-compressor units)
- LAB-300/007-01: main electronic board Pour Point
- LAB-300/002-16: precision potentiometer
- LAB-300/008-12: PT100 product w/connector
- LAB-300/008-13: PT100 detection
- LAB-300/008-04: calibrated test jar
- LAB-300/008-041: o-ring for test jar

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

NewLab 300 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