

Flash- & Firepoint Cleveland Method - CLA 5 (automatic)



ASTM D 92 - ISO 2592 - IP 36 - JIS K2265-4 - GOST 4333 - FTM 791-1103 - Superpave®

The CLA 5 is a logical further development of the tried-and-tested automatic flash and fire point testing device CLA 4.

In addition to further improved device handling, this automatic equipment features modern electronics with a 5.7" color graphics display, jog-shuttle control and several USB interfaces.

The firmware enables intuitive device operation as well as sophisticated data administration and management of several languages

Features

Automatically lights test flame, relights if necessary during the test, suppresses gas source at end of test

Built-in sensor for automatic barometric pressure correction

Overheating detection with automatic heat shut-off during the test

Pt-100 glass probe included, stainless steel type optional

Manual testing, preset or individually set programs

2 Calibration modes:

- dynamic calibration against certified ASTM-thermometer
- sample Pt-100 calibration by correction table with 21 calibration points (preset every 20°C or user defined)

Calibration protocol print out

Jog-Shuttle operation (turn & push) with LED indication for operation (blue flashing), cooling down (red), failure (red flashing)

Multi-language user support (English, French, German, others planned)

Memory for 1000 tests, 20 operator names, 100 sample names, 21 test methods

Message when result is out of specification

Statistical result analysis (MIN, MAX, AVE, Repeatability)

Password protection access for Service & Configuration level (supervisor master password)

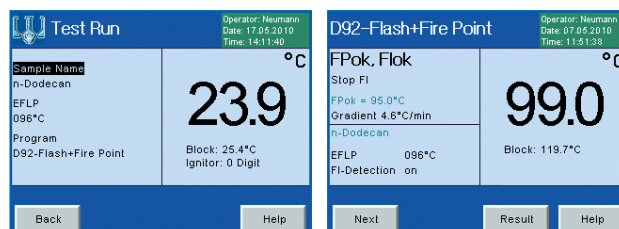
Easy firmware update and data handling via USB stick or import into EXCEL



12-5700



12-5700 & 12-5735, 12-5754, 12-5749, USB-Stick, Keyboard



Display after program selection

Display after flash- & firepoint detection

Program

The following programs are available:

- 2 ASTM Programs (1x Flash-, 1x Flash- & Fire-Point)
- 2 ISO Programs (1x Flash-, 1x Flash- & Fire-Point)
- 2 JIS Programs (1x Flash-, 1x Flash- & Fire-Point)
- 2 GOST Programs (1x Flash-, 1x Flash- & Fire-Point)
- 1 Bitumen Program
- 1 Search run
- 1 Calibration run (dynamic mode)
- 10 User programs

Main Unit



12-5700



12-5735



12-5749



12-5754



12-0970 12-5750



12-0952



12-5740



12-5753
(further as PT-100 tray)

CLA 5 - Automatic Flash- & Fire-Point Tester - Cleveland Method

Petroleum Products (except fuel oil) : ASTM D 92 - AASHTO T48 - FTM 791-1103
GOST 4333 - IP 36 - ISO 2592 - JIS K2265-4
Binder, Petroleum Products : Superpave® (AASHTO T48, ASTM D 92)

Consisting of:

- High-grade steel housing with two-color powder coating, electric heater with overheat protection, gas flame applicator and gas supply regulation valve
- Ionization sensor for detection of flash and fire points
- Built-in barometric pressure sensor
- Large 5.7" QVGA color LCD (115 X 85 mm), sample temperature indication 20 mm high, visible from up to 10 m distance
- Splash-proof membrane key panel and Jog-shuttle for input of test parameters, sample name and program selection
- Menu operation with Jog-Shuttle with LED indication
- Microprocessor electronics with test programs for flash and fire point

Supplied with:

- 1 cup "CL" (heat resistant handle)
- 1 temperature probe Pt-100 (glass) "CLA5"
- 1 drip pan (for Pt-100 and skimmer)
- 1 gas igniter with thermocouple, 1 electric igniter, 1 flame detection unit
- 1 flame extinguisher cover, 1 tool set "CLA5"

Technical Data:

Temperature Range : +79 to +400 °C (+175 to +752°F)
Display : 115 X 85 mm QVGA color LCD, °C or °F (selectable)
Sensing System : Ionization Method
Barometric Pressure : automatic correction of the measured values
Safety : overheat protection, automatic shut-off
Ignition : Gas flame (electric ignition, automatic control)
Gas Connection : for propane/butane or natural gas (max. 0.05 bar)
Interface : 1x USB (front), 2 x USB (rear), 1x RS232
Dimensions : 23 x 47 x 46 cm (WxDxH), Weight: 12 kg
Power supply : 110/230 V, 50/60 Hz, EU-plug, approx. 600 Watt
Power supply : 110/230 V, 50/60 Hz, US-plug

12-5700
12-5701

Accessories

- 12-5735 **Draft Deflector "CLA5"**
- 12-5749 **Temperature Probe Pt-100 (Metal) "CLA5"** for sample temperature measurement
- 12-5754 **Skimmer "CLA5"** for surface skin removal
- 12-5759 **Service Kit "CLA5"**
Consisting of: USB-Stick, storage card, 0-modem datacable
- 12-0970 **Cup "CL-NIRO"** with heat resistant handle, approx. 70 ml (with filling mark), stainless steel
Note! Flash-point results of stainless steel test inserts may deviate from standard results.
- 12-0956 **Calibration Set - "CLA"**
Consisting of: 1 base plate, 1 support rod, 1 boss head, 1 clamp, 1 thermometer ASTM 11C / IP 28C (officially certified)
- 50-9111 **Reference Liquid, Flash-Point "ASTM D 92"** (Flash Point: approx. +265°C), 250 ml
- 12-1763 **Storage Box** for spare parts and tools
- 25-0911 **Keyboard**, USB, 86 keys, english layout (25-0910 german layout / 25-0912 french layout)
- 25-0282 **Impact Printer** (mono) for single sheets & continuous paper (instead of a PC)
Power supply: 220/240 V, 50/60 Hz
Power supply: 100/130 V, 50/60 Hz
- 25-0283 **Laser Printer** (mono) duplex for single sheets (instead of a PC)
Power supply: 220-240 V, 50/60 Hz
Power supply: 100-115 V, 50/60 Hz
- 25-0902 **Receipt Impact Printer (POS)** (mono) for continuous paper
Power supply: 120/230 V

Spare Parts

- 12-0778 **Electric Igniter**
with connector cable and plugs
- 12-0952 **Gas Igniter** with thermocouple for monitoring the igniter flame
- 12-5740 **Drip Pan**, 20 ml, aluminum, pack of 10, to place under Pt-100 & skimmer
- 12-5750 **Standard Cup "CL"**
heat resistant handle (up to 250°C), approx. 70 ml with filling mark, brass
- 12-5751 **Temperature Probe Pt-100 (Glass) "CLA5"**
for sample temperature measurement
- 12-5753 **Flame Detection Unit "CLA5"**
for the detection of flash- & fire-points
- 12-5755 **Flame Arrest Cover "CLA5"**
to extinguish the fire in the cup
- 12-5758 **Tool Set "CLA5"**
Consisting of: 3 Allen keys