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Herzog OptiFlash® Tag & Abel

Easy, Safe and Accurate Flash Point Determination

- Innovative instrument design for improved ease of use and easy cleaning
- Excellent analysis performance and robustness
- High safety standards with preventive fire detection & safety monitoring system
- Complies with ASTM D56 and EN ISO 13736 methods
- Reduce cost and benchspace with built-in cooling system

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Herzog OptiFlash® Tag & Abel

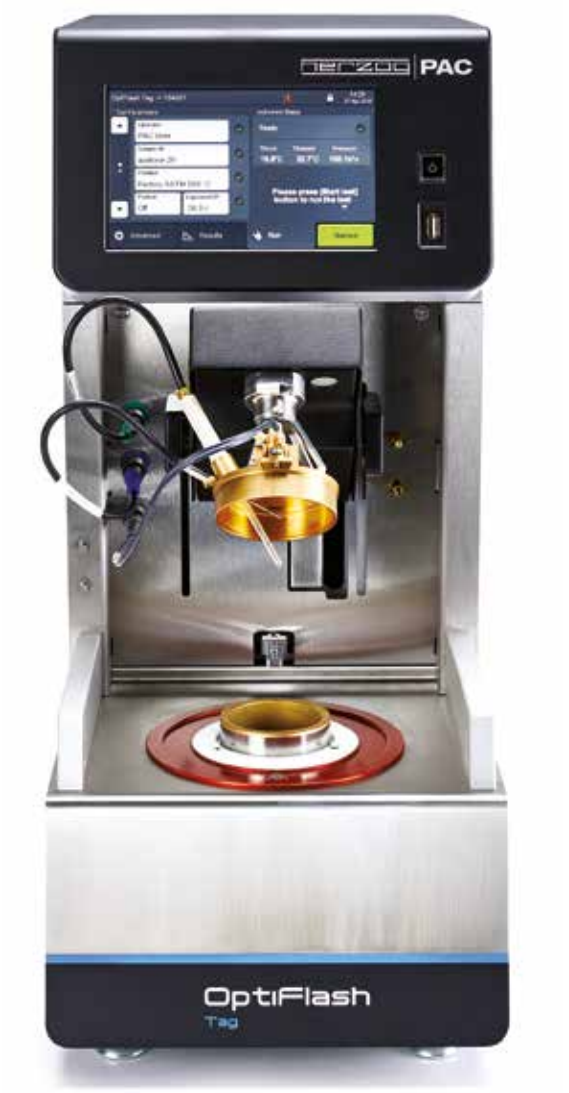
OPTIFLASH®, THE BENCHMARK IN FLASH POINT DETERMINATION

PAC's Herzog OptiFlash® is the new benchmark in flash point analysis, fully designed to meet today's expectations on user convenience, quality and safety compliance. The Optiflash® accurately detects flashpoint from -30°C to 120°C for petroleum products, alcohols, solvents, chemicals, food and beverages. The OptiFlash® is fully compliant with leading global standards.

EASY 3-STEP OPERATION

STEP 1 Place the cup
STEP 2 Enter Sample ID. Select product and expected flash point
STEP 3 Press start

The cup cover automatically installs and the flashpoint analysis starts



Tag model without stirrer

Abel model with stirrer

KEY ADVANTAGES

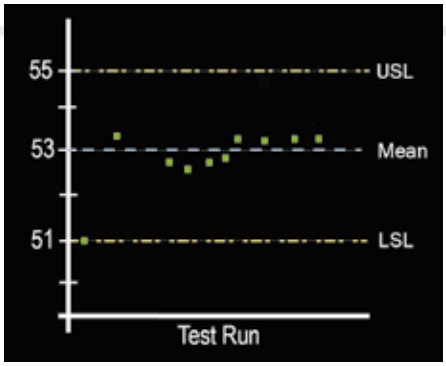
HIGH SAFETY STANDARDS

- Built in fire extinguisher:
  - Ultra fast optical fire detector
  - Fire detection in extended range around test cup
  - External inert gas (CO2, N2...) connection
- Detect “Flash” outside the cup
  - Test aborted with warning message
  - Closing the shutter stops the flame
  - No need to activate fire extinguisher
- Safety monitoring system:
  - Safety pre test interval to avoid fire
  - Over heating protection
  - No sample drops from stirrer going into heater block

Optical fire detecting system covers entire hot area

PROVEN PERFORMANCE

- Robust hardware design for improved parts lifetime and low maintenance:
  - Hands-free operation minimizes risk to damage the igniter
  - Continuous monitoring the ignitor allows preventive actions to avoid down-time
  - More rugged metal sample thermometer
- Built-in quality control (QC) functions:
  - Automatic QC procedure with QC chart on the instrument screen for trend monitoring
  - Calibration monitoring of the Pt100 and pressure sensor remind user if recalibration is necessary
  - Automatic diagnostic help maintenance team in case of instrument failure



Quality control charts allow monitoring the instrument performance

IMPROVED EASE OF OPERATION

- Automatic lift-arm for hands-free cup cover installation
- No need for the user to handle Pt100, Flash Point Sensor, Ignitor and Shutter Drive
- Straightforward user interface:
  - Easy sample ID input with alpha numeric keypad
  - Option to enter user name, sample description or a note
  - Get Pass/Fail display by defining Min and Max values for the flash point result for the different products
  - Supports multiple languages

Lift-arm and touch-screen make it easy to operate

EASY CLEANING

- Simple push button to disconnect cup cover from lift arm
- Allows external cleaning for the cup cover
- Remove the shutter without any tools
- Large tilt angle of the cup cover allows easy cleaning for Pt100 and stirrer

Easy disconnection, for easy and external cleaning of the cup-cover

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SPECIFICATIONS

Standards	
Abel	EN ISO 13736, IP 170
Tag	ASTM D56
Configuration	
Measuring Range Flash Points +10°C to 120°C Flash Points -10°C to +10°C Flash Points below -10°C	Automated OptiFlash Tag or Abel flash point analyzer With built in Peltier Cooler (No external cooler required) With built in Peltier Cooler and external cooler with 80W @ -20°C With built in Peltier Cooler and external cooler with 110W @ -40°C
Cooling System	Built in Peltier Cooling system for fast pre-cooling and cooling at test end
Heating System	Separate heater element allow for fast heating mode Test method or user-defined heat rate from 0.2 to 6 °C/min.
Temperature Measurement	Intelligent Pt 100 probe with built in calibration, 10 calibration points Glass or metal Pt 100, temperature range -50°C to +450°C, resolution 0.1°C
Sample Stirrer (for Abel only)	Automatic Stirrer, Test Method or user-defined RPM from 0 to 300 RPM
Ignition Source	Intelligent electric igniter with automatic power management over life time or automatic gas ignition with gas flame monitoring, test method or user-defined test interval from 0.5 °C to 5°C
Barometric Pressure Sensor	Built in barometric pressure sensor for automatic barometric pressure correction for the flash point, pressure units mbar, hPa, kPa, mmHg or Torr.
Flash Detection System	Unique thermal flash point detection which can detect flash point for all sample types
User Interface	7” colored touch screen, alpha numeric data input, barcode reader
Result Documentation	500 results, 200 products, user defined result reports for printer and LIMS
Printer	Any printer with USB interface and PCL5 or higher. Automatic print out
LIMS interface	Ethernet or RS232, used defined data string, automatic LIMS transfer
Data Export	USB memory stick, import into Excel
QC-Functions	Automatic QC-sample handling and QC-chart
Safety Features	
Fire Extinguisher	2 built-in fire sensors for detection of fire or just flash outside of the cup Fire extinguishing system with external inert gas, alarm relay to link OptiFlash to a lab alarm system
Safety pre-test	Safety pre-dips can detect high volatile contamination in normally high flash point samples and avoid a risk of fire
Alarm Functions	Automatic detection of method or safety violations. User selects test termination or alarm message
Password Protection	Different access levels for operator, service or lab manager
Calibration and Diagnostics	User defined calibration intervals. Automatic diagnostic functions
Operating Requirements	
Electrical	115V or 230VAC ±10% switchable; 50-60Hz ; 500 W
Ambient Conditions	Humidity: 80% rel. at 35°C
Storage temperature:	-15°C to +55°C
Dimensions	25 cm (9.85”) wide, 51 cm (22”) deep, 56 cm (20.1”) tall
Weight	25kg, (55 lb)
Options & Accesories	
Options	Fire extinguishing system with ultra fast optical sensor Cooling module for external cooling connection External Cooler for Flash Points down to -10°C with 80W @ -20°C or below -10°C with 110W @ -40°C
Accesories	Printer, barcode reader, metal temperature sensor

Continuing research and development may result in specifications or appearance changes at any time

ABOUT PAC

PAC develops advanced instrumentation for lab and process applications based on strong **Analytical Expertise** that ensures **Optimal Performance** for our clients. Our analyzers help our clients meet complex industry challenges by providing a low cost of ownership, safe operation, high performance with fast, accurate, and actionable results, high uptime through reliable instrumentation, and compliance with standard methods.

Our solutions are from industry-leading brands: AC Analytical Controls, Advanced Sensors, Alcor, Antek, Herzog, ISL, Cambridge Viscosity, PSPI, and PetroSpec. We are committed to delivering superior and local customer service worldwide with 16 office locations and a network of over 50 distributors. PAC operates as a unit of Roper Technologies, Inc., a diversified technology company and a constituent of S&P 500, Fortune 1000, and Russell 1000 indices.

HEADQUARTERS

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