



solid partners  
proven solutions



# Herzog OptiFlash<sup>®</sup> Cleveland Open Cup

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 D92, ISO 2592, EN ISO 2592, IP 36, GB/T 3536 methods

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# Herzog OptiFlash®

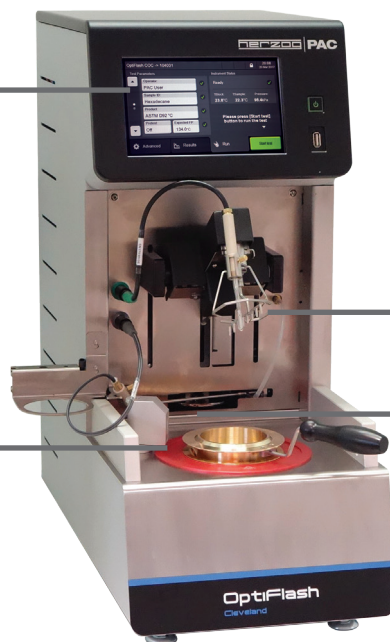
## Cleveland Open Cup

### 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 up to 400°C for petroleum products, lube oil, gear oil, food & beverages, chemicals, and fluxed bitumen. The OptiFlash is fully compliant with leading global standards.

SIGNIFICANTLY IMPROVED  
EASE OF OPERATION

UNIQUE OPTICAL  
FLASHPOINT DETECTION

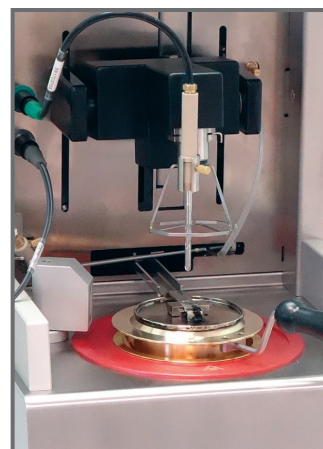


EASY TO CLEAN

GAS OR ELECTRIC  
IGNITION



**BITUMEN RAKE**  
Optional rake to  
remove surface skin  
that might form on  
certain bitumen  
samples during the test

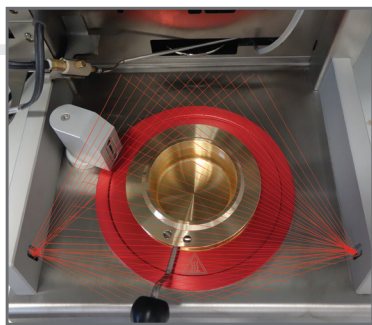


**CUP COVER**  
Automatic damper  
covers the cup to  
reduce vapor escape  
and extinguish  
possible fires

# KEY ADVANTAGES

## HIGH SAFETY STANDARDS

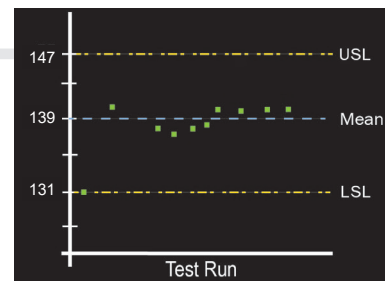
- Built in fire extinguisher:
  - Ultra fast optical fire detector
  - Fire detection in extended range around test cup
  - Independent fire extinguisher as additional safety feature to flame damper
  - External inert gas (CO<sub>2</sub>, N<sub>2</sub>) connection
- Safety monitoring system:
  - Safety pre-test interval to avoid fire
  - Over heating protection



Optical fire detecting system covers entire hot area

## PROVEN PERFORMANCE

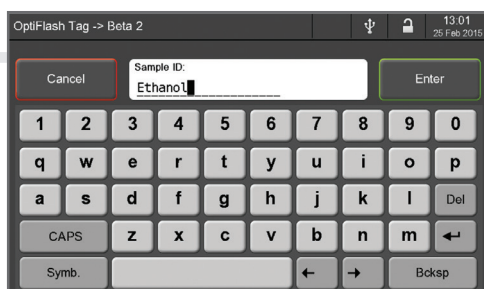
- Robust hardware design for improved parts lifetime and low maintenance:
  - Continuous monitoring the ignitor allows preventive actions to avoid down-time
  - More rugged metal sample thermometer
- Built-in quality control (QC) functions:
  - Automatic QC procedure with QC chart on the instrument screen 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

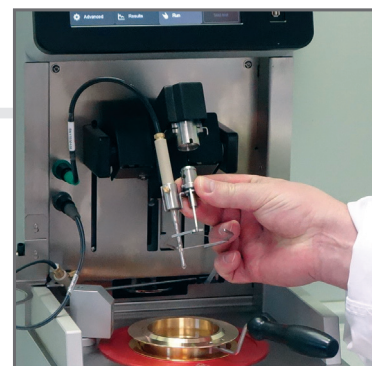
## IMPROVED EASE OF OPERATION

- Automatic lift-arm
- No need for the user to handle Pt100, Flash Point Sensor and Ignitor
- 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



## EASY CLEANING

- Simple push button to disconnect flash point sensor from lift arm
- Large tilt angle of the arm allows easy cleaning for Pt100 and flash point sensor
- Easy cleaning for high viscous samples with stand-by temperature to keep the sample hot and liquid at test end



Easy disconnection, for easy and external cleaning



## SPECIFICATIONS

Standards	
ASTM D92; ISO 2592; EN ISO 2592; IP 36; GB/T 3536	
Configuration	
	Automated Cleveland Open Cup Flash Point analyzer OptiFlash Flash Point Measuring Range ambient temperature up to 400 °C
Heating System	Heater plate for uniform heating of the cup, 2 heat rates, test method or user-defined heat rate from 0.5 to 17 °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
Rake for skin forming samples	Automatic Rake, for accurate handling of skin forming samples
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 to 50 °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	Ionization Flash Point Detection or unique Optical Flash Point Detection which works on all sample types
User Interface	7" Colored Touch screen, Alpha Numeric data input, Barcode Reader Languages: English, German, Spanish, Portuguese, French, Chinese, Polish, Italian, Russian
Result Documentation	500 results, 200 products/ specifications. User defined result reports for printer and LIMS
Printer	Any printer with USB interface and PCL5 or higher. Netware printer through Ethernet with PCL5 or higher and Internet Print Protocol IPP. 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. For maximum safety, works independently from the automatic cup cover.
Safety pre-test	The unit 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 ; 1100 W, Protection class II, Pollution degree 2
Ambient Conditions	Operating temperature: max. 10° to 35 °C; recommended 15° to 25 °C; Humidity: 80% rel. at 35 °C
Storage temperature	-15 °C to +55 °C
Dimensions & Weight	25 cm (9.85") wide, 51 cm (20.1") deep, 56 cm (22") tall. 25kg, (55 lb)
Options & Accessories	
Options	Bitumen rake for skin-forming samples, fire extinguishing system with ultra fast optical sensor, optical flash point sensor
Accessories	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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