

Volatility

LUBRICANTS

RESIDUAL FUELS

BITUMINOUS MATERIALS



AUTOMATED Cleveland Flash and Fire Tester

ADVANTAGES

- **User-friendly keypad programming**
- **Automatic test-flame lighter**
- **550 results memory storage**
- **Statistical results analysis (AVE, MIN, MAX, SD)**
- **Alert messages for out-of-spec results**
- **Multiple safety features**
- **Special equipment for efficient asphalt testing**
- **Optional six-position sample changer**

HFP 370

The Cleveland Flash Point HFP 370 automatically determines flash and fire points of volatile materials in accordance to ASTM D 92 or equivalent methods. **Automated operation**, backed by leading technology, greatly increases laboratory productivity while improving repeatability and reproducibility.

The system automatically **corrects results for barometric pressure** before storing the data to permanent memory. Test progress displays in real time on the easily viewable screen. **Sophisticated quality control features**—including traceable automatic calibrations with lock-out control, and automated quality verification—fulfill your ISO 9000 quality system requirements.

For enhanced automation, add HFP 371 Six-Position Sample Changer at any time. On-screen prompts guide you through the **quick, simple test setup** and allow you to program new sample positions even as another test is in progress. Each of the six test cups is equipped with its own heating plate; once a completed sample's flame has been extinguished, the **next test begins immediately** with a cold plate.

METHODS

ASTM D 92

ISO 2592

EN ISO 2592

IP 36

JIS K 2265

DIN EN ISO 2592

NF EN ISO 2592

HERZOG HFP 370 AUTOMATED CLEVELAND OPEN CUP

Maximum flexibility, precision, safety

SPECIFICATIONS	
Ordering Information	HFP 370 Automated Cleveland Open Cup Flash & Fire Point Tester with draft protection shield. LCD display & alphanumeric keypad with dedicated function keys.
Test Methods Standard	20 different methods, including: ASTM D 92, ISO 2592, EN ISO 2592, DIN EN ISO 2592 NF EN ISO 2592, IP 36, JIS K 2265
Operation	<p>Temperature Range Heating: 1°C to 400°C (38° to 760°F) in 0.1°C increments 2 different heating rates, one fast pre-heat mode; low voltage, low mass heater</p> <p>Ignition System: Gas Ionization</p> <p>Detection System: PT100 probe; glass (standard) or stainless steel; delivered with calibration certificate</p> <p>Temperature Measurement: Low voltage heating element; fire protection with thermal fuse; external alarm connection</p> <p>Safety: User, Fast, Pass/Fail and Search methods</p> <p>Customizable Password Security: Multi-level password protection</p>
Calibration & Diagnostics	Automatic calibration with programmable frequency 21-point probe offset correction table Automatic diagnostic routines on analyzer functions Upload/download service features via PC; calibration parameters and unit program backup/restore feature
Documentation	<p>Reports/Statistics: Real time on-screen display of test progress; stores 550 tests, 20 sample specifications, 20 operator names and 20 different test methods Automatic result barometric pressure correction according to methods; computation of average, minimum & maximum values, and standard deviation</p> <p>Data Input/Output Printer Output: RS 232C connections standard Parallel (Centronics®)</p>
Utility Requirements	<p>Electrical: 115/230 VAC; 800 W; 50/60 Hz; conforms to CE</p> <p>Gas (gas ignition only): Butane or propane source, 40 mbar maximum pressure</p> <p>Operating Environment: 15 to 35°C (60 to 95°F)</p>
Dimensions & Weight	<p>W x D x H</p> <p>HFP 370: 36 x 48 x 33 cm (13" x 20" x 13"); 32 kg (61 lbs)</p> <p>HFP 370 and HFP 371: 69 x 48 x 33 cm (27" x 20" x 13"); 42 kg (92 lbs)</p>
Options & Accessories	<p>Sample Changer Asphalt Test Kit: HFP 371; Six-position automatic sample changer For testing bituminous materials; can not be used in conjunction with HFP 371 sample changer</p> <p>Metal Probe: Durable sample temperature Pt100 probe in metal thermowell</p>

Due to continuing product development, specifications subject to change at any time without notice.



UNPARALLELED VERSATILITY, ABSOLUTE SIMPLICITY

- Test initiated by selecting sample name from pre-programmed list
 - preset and programmable test methods: search, fast, pass/fail
 - programmable heating rate; various heating combinations
- Sample pre-heating capability with adjustable duration
- Optional device for skin removal in bitumen applications
- Optional six-place sample changer may be added by user at any time
- Real-time display during testing, viewable from 5 meters (16½')

POWERFUL PRECISION, ENHANCED QUALITY FEATURES

- Low mass, low inertia heating element for precise heating rate control and quick cooling
- Automatic barometric pressure correction according to method
- Automatic, time-recorded calibrations with lock-out control
- Warning message when result falls outside of specification
- Temperature probe correction table (21-point offset)
- Multi-level password-protected access

SAFE, DEPENDABLE OPERATION

- Endurance tested and proven for long-term operation
- Heating and insulating plates in strict accordance with method
- Automatically lights and, if necessary, relights flame during operation; suppresses gas source at end of test
- Automatic fire detection system with external fire alarm connection; special 2-position extinguisher for use with sample changer
- Over-heating detection with automatic heat shut-off during test

*Shown with optional
HFP 371 Six-Position
Sample Changer.*



FOR ADDITIONAL INFORMATION

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