Seta PM-93 35000-0

Automated Pensky-Martens Flash Point

ASTM D93 Procedures A, B & C; ASTM D8175; IP 34 Procedures A, B & C; ISO 2719 Procedures A, B & C MIL-STD-3004-1; MIL-DTL-5624; MIL-DTL-16884; MIL-DTL-83133

- Fast, accurate & safe
- Easy operation
- Single action raising & lowering of lid
- Superior safety
- Patented 'SafeFlash' auto fire extinguisher
- Complies with ISO 2719 annex b
- Gas or electronic ignition
- Unique test profiles
- Large touch screen
- Memory storage for 2000 results
- Compact footprint
- Statistical Quality Control software

Diesel • Biodiesel (FAME) • Heating Oil • Turbine Fuels
Lubricating Oils • Paints & Varnishes • Residual Fuel Oils • Bitumen

Stanhope-Seta, London Street, Chertsey, Surrey, KT16 8AP, UK
t: +44 (0) 1932 564391 | e: sales@stanhope-seta.co.uk | www.stanhope-seta.co.uk

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PM-93, three easy steps

Load → Lower → GO

PM-93 is the new solution for automatic Pensky-Martens flash point determinations, providing the ultimate level of fast, accurate and safe analysis.

Designed to provide operators with a high level of functionality combined with a class leading ease of use, robustness and safety.

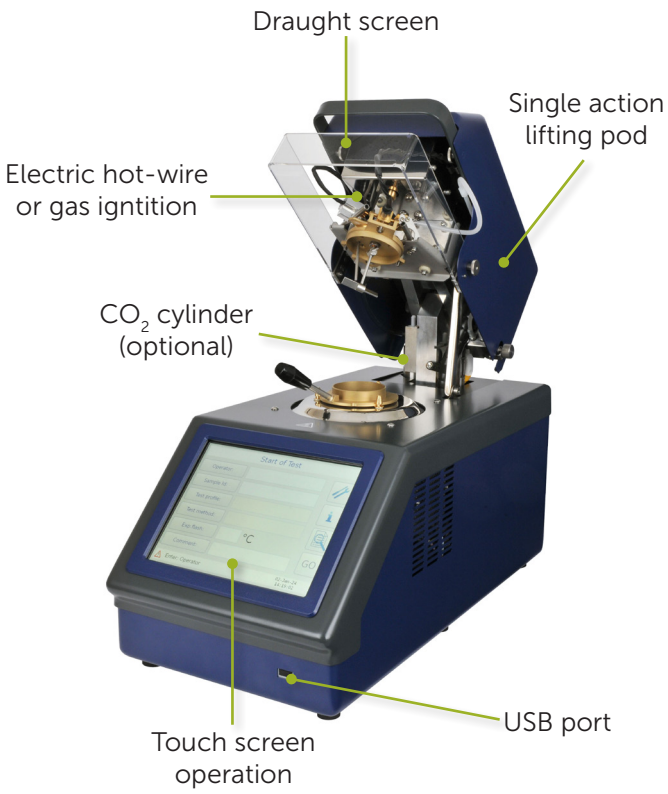
Flash points can be determined up to 400°C using standard mode, where the flash point is known, or search mode.

Fully compliant with international standard test methods and supplied pre-programmed with ASTM D93 test protocols for procedures A, B and C.

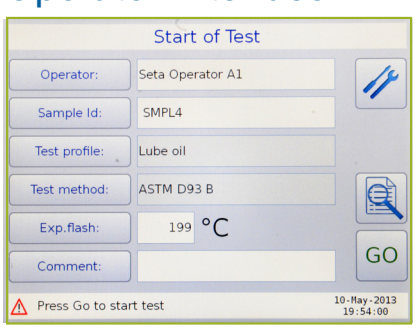
All routine functions are accessed by an intuitive menu system on a super-size industrial 8.4" colour touch screen. Test progress is clearly displayed, with large format characters for long range viewing.

"Safeflash" fire extinguisher system is available as a factory option for the latest ISO 2719 annex b requirements. An integrated and sealed CO_2 cylinder punctures automatically and discharges over the sample cup and lid, eliminating the need for external gas lines.

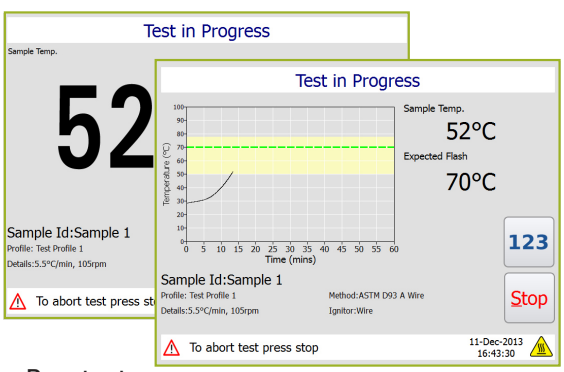
PM-93 Statistical Quality Control (SQC) software provides detailed analysis of test results, calculated mean, standard deviation, standard error, repeatability and plot of results in accordance with ASTM D6299 Statistical Standard.



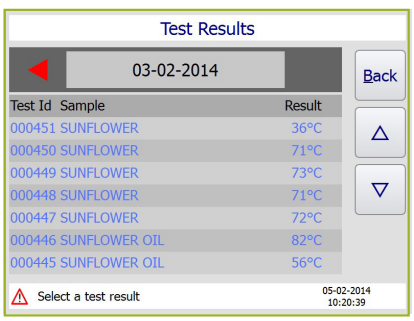
Operator Interface



> Enter test details



> Run test



> View test results

For more information please visit: www.stanhope-seta.co.uk

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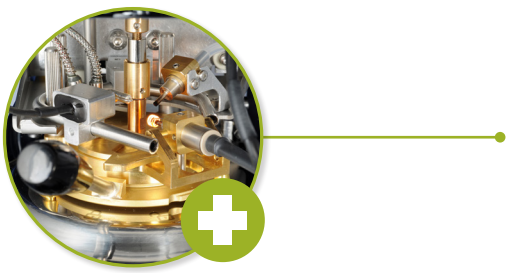


Ease Of Use

- Single raising or lowering action when loading or removing test cup
- Simple 3 step test operation - load, lower and go
- Intuitive user menu with colour touch screen operation
- Real time display of test progress
- Large capacity memory allows storage of test profiles, operator names, test methods and results
- Test status and results are graphically displayed
- Data format is compatible with most PC spreadsheets and a USB port allows results to be saved to portable memory devices
- QR code data transfer

Precision and Accuracy

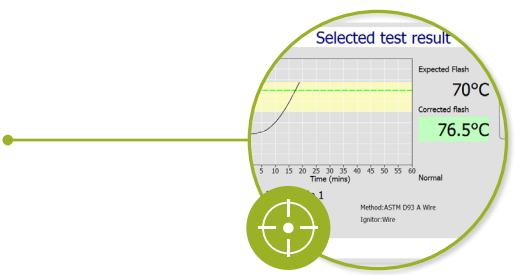
- Automatic flash point testing ensures test repeatability
- Unique alignment design ensures lid and cup locate perfectly every time
- Password protected 'calibration' mode allows verification of instrument performance
- SQC software to maintain instrument accuracy and enable product quality monitoring

Operator Safety

- A unique 'SafeFlash' system automatically and immediately activates an extinguisher in the event of excess flame or fire around the test cup
- If discharged, user is prompted to re-activate the extinguisher by replacing the integral CO_2 canister
- Additional safety features include PRT checks, safety dip before starting, over-temperature cut-out, gas flame relight, gas shut off and emergency stop
- Complies with ISO 2719 annex b

Enhanced Test Throughput

- Unique test profiles enable the test to be set up and repeated quickly without re-entering the same information
- Once a test profile is stored to memory, a user can select this option without the need to program test parameters
- The lid module can be cleaned in-situ to minimise down time between tests
- Fast warm up and high capacity air cooling minimises cycle time



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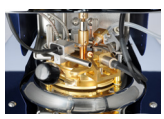
Seta PM-93 35000-0 Technical Specifications	
Operation	
Test modes	Expected flash or search
Ignition system	Electric hot-wire or gas flame
Flash detection	Thermal
Cooling	Forced air (integral fan)
Heating rate	Fast heating mode (>10°C/min) and standard rate 5.5°C/min, 3°C/min, 1.3°C/min, 1°C/min
Calibration	Calibration dates/data stored to memory, easy retrieval and password protected
Application range	Ambient to +5°C to +400°C
Stirrer speed	0-250 rpm
Measurement	
Sample temperature	PT 100 stainless steel probe
Units of temperature	°C or °F (user selectable)
Barometric pressure correction	Automatic correction with built-in pressure sensor
Data Management	
Information	Real-time display on screen of test progress and results
Internal memory - parameters	30 programmable test profiles, sample ID's, operator names and test methods
Internal memory - results	In excess of 2000 test results
SQC	ASTM D6299 Statistical Standard
Safety	
Fire detection	Thermal with integral CO_2 fire extinguisher (factory fitted option)
External fire alarm relay contact	240Vac max, 1A max resistive. External warning: 12V dc signal output
Gas Supply (optional)	
Gas type	Butane, propane or natural gas source
Gas supply	30mbar (3kPa)
Power Requirements	
Voltage	230 Vac +/-15% or 110Vac +/-15%. Frequency 50/60 Hz. Auto sensing - no selector switch required
Power	1.1 kW
Interface Specifications	
Display	8.4" LCD colour touchscreen (resistive - can be used with gloves), 800 x 600 pixel, USB keyboard, mouse and bar code scanner
Data input/output	Connection to LIMS via; Ethernet RJ45, USB Type A (x2 front and back RS232C, test results can be emailed, saved to memory stick or transferred via QR code
Printer options	USB, Ethernet or RS232C
Language	User selectable - English (default), Russian, German
Environmental conditions	
Operating temperature	5 to 35°C (50 to 104°F)
Relative humidity	Up to 80% at 35°C (not condensing)
Altitude	2000m maximum
Physical	
Dimensions (HxWxD)	38.5 x 24 x 50cm
Weight	25kg

Optional Accessories

Part No		Description
35002-0		Safeflash Fire Extinguisher System Note: Factory fit option only - must be ordered at time of purchase or the unit must be returned to the factory for installation. Comprises extinguisher, manifold assembly, regulator, fire sensor and remote operating button
35003-0		Barcode Scanner USB interface barcode scanner for 1D barcodes, connects in place of keyboard
80602-0		Serial printer, includes dot matrix printer, cable and roll of paper.
99851-0		Multi-Test Verification Material, ASTM D93-IP34 Gas Oil Flash point range 56 to 80 °C, 500ml
99852-0		Multi-Test Verification Material, ASTM D93-IP34 Fuel Oil Flash point range 92 to 122 °C, 500ml
SETA-0412-0051		SETA-CRM Pensky-Martens Flash Point (3 pack), ASTM D93-IP34 Flash point range 75 °C, 100ml

Minimal Servicing

Monthly:

- Check operation of shutter and stirrer

6 Monthly:

- Service fire extinguisher system
- Pressure calibration

Yearly:

- Temperature calibration
- Instrument verification using Certified Reference Material

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