

## SETAFLASH SMALL SCALE FLASH POINT

## 33200-2 SETAFLASH SERIES 3 ACTIVE COOL

ASTM D3278; D3828 ; D7236; E502; IP 303 (obs) Parts 1 & 2; IP 523; IP 524; IP 534; ISO DIN 3679; ISO 3680; BS EN 456; BS 3900 Part A13; BS 6664 Part 3 & 4; UN Class 3 Non-viscous Flammable Liquids; CHIPS Regulations; EPA 1020 A & B; Classification of Dangerous Goods for Carriage: Viscous and Non Viscous Liquids;

- Flash / No Flash & Ramp modes
- 10 to 130°C temperature range
- Flash point test in less than 2 minutes
- Small sample size (2 or 4ml)
- Automatic flash detection
- Electronic peltier cooling
- Audible and on-screen prompts
- Portable operation
- °C or °F display



33200-2

Active Cool is the latest instrument in the Setaflash Series 3 range. It has been designed to rapidly and efficiently carry out Flash / No Flash tests and to determine the flash point of liquids and semi-solids in the 10 to 130°C (50 to 266°F) temperature range.

When used in Ramp mode the temperature of the sample increases at a rate of 2°C/min. An audible prompt to carry out a flash test occurs every 1°C rise up to 100°C (every 2°C rise above 100°C), until a flash is detected, allowing rapid determination of a flash point in accordance with ASTM D7236 and IP 534.

The sample cup is heated / cooled by peltier cells. This gives very accurate and stable sub-ambient test temperatures and the benefit of rapid temperature normalisation between tests.

All functions are accessed via a two button keypad and the Seta Multifunctional And Rotational Test (SMART) control feature. The digital display shows test parameters, instrument status, and the test result. An audible prompt is sounded when an action is required from the operator.

Gas for the test jet/shutter assembly is supplied from an integral gas tank, which is filled using a standard butane (lighter) refill cartridge.

The automatic flash detection system is tuned to ignore halo and other false flash effects, reducing the chance of mis-interpretation of the test result, and enhancing repeatability. Barometric pressure is measured by an internal barometer, and the correction is automatically applied to the test result.

The instrument is lightweight and suitable for mobile use when operated from the optional DC power adaptor.

SUPPLIED WITH: 2ml syringe, mains lead and instruction manual.

FOR SPECIFICATIONS, ACCESSORIES & CONSUMABLES, SEE PAGE 14.



BIO-FUEL TESTING



CALIBRATION &amp; VERIFICATION MATERIALS



SETAPLUS EXTENDED WARRANTY AVAILABLE



TECHNICAL DATASHEETS AVAILABLE

## 33250-2 SETAFLASH SERIES 3 ACTIVE COOL (CORROSION RESISTING)

- Corrosion resisting version of Setaflash 33200-2

The 33250-2 is similar to the 33200-2 with the addition of a corrosion resisting insert in the sample cup.

SUPPLIED WITH: 2ml syringe, mains lead and instruction manual.

FOR SPECIFICATIONS, ACCESSORIES & CONSUMABLES, SEE PAGE 14.



CALIBRATION &amp; VERIFICATION MATERIALS



SETAPLUS EXTENDED WARRANTY AVAILABLE



TECHNICAL DATASHEETS AVAILABLE

**33000-0 SETAFLASH SERIES 3 PLUS CLOSED CUP TESTER**

**ASTM D3278; D3828 ; D7236; E502; IP 303 (obs) Parts 1 & 2; IP 523; IP 524; IP 534; ISO DIN 3679; ISO 3680; BS EN 456; BS 3900 Part A13; BS 6664 Parts 3 & 4; UN Class 3 Non-viscous Flammable Liquids; CHIPS Regulations; EPA 1020 A & B; Classification of Dangerous Goods for Carriage: Viscous and Non Viscous Liquids**

- Ramp mode for ASTM D7236 & IP 534
- Flash point test in less than 2 minutes
- Small sample size - 2 or 4ml
- Ambient to 300°C temperature range
- Automatic flash detection
- Audible and on-screen prompts
- Portable operation
- Simple calibration

33000-0 Setaflash 3 is an easy to use instrument that can complete a flash/no-flash test in less than two minutes, or determine the flash point of a sample within a temperature range of 0 to 300°C in typically 8 minutes.

All functions are accessed via a two button keypad and the Seta Multifunctional And Rotational Test (SMART) control feature. The digital display shows test parameters, instrument status, and the test result. An audible prompt is sounded when an action is required from the operator. An automatic flash detector reduces the chance of mis-interpretation of the test result by the operator, and enhances repeatability.

The temperature ramp mode allows rapid determination of the flash point of a sample in accordance with ASTM D7236 and IP 534. The cup is heated at a rate of 2°C per minute from the start temperature. An audible prompt to carry out a flash test occurs every 1°C rise up to 100°C, every 2°C rise over 100°C. For safety purposes, if no flash is detected when the temperature reaches 40°C above the start temperature, the flash tester automatically terminates the test. A new higher start temperature would have to be entered and the test started again.

Gas for the test jet/shutter assembly is supplied from an integral gas tank, which is filled using a standard butane (lighter) refill cartridge.

The instrument is lightweight and suitable for mobile use when operated from the optional 12 volt power supply adaptor.

**SUPPLIED WITH:** 2ml syringe, ignitor, mains lead and instruction manual.

*Note: For close-to-ambient tests the sample cup requires cooling with 13870-0 Seta Coolant Module.*

*FOR SPECIFICATIONS, ACCESSORIES & CONSUMABLES, SEE PAGE 14.*



33000-0



BIO-FUEL TESTING



CALIBRATION &amp; VERIFICATION MATERIALS



SETAPLUS EXTENDED WARRANTY AVAILABLE



TECHNICAL DATASHEETS AVAILABLE

**30000-0 SETAFLASH SERIES 3 CLOSED CUP TESTER**

**ASTM D3278; D3828 ; E502; IP 303 (obs) Parts 1 & 2; IP 523; IP 524; ISO DIN 3679; ISO 3680; BS EN 456; BS 3900 Part A13; BS 6664 Parts 3 & 4; CHIPS Regulations; EPA 1020 A & B; UN Class 3 Non-viscous Flammable Liquids; Classification of Dangerous Goods for Carriage: Viscous and Non Viscous Liquids;**

- Flash point test in less than 2 minutes
- Small sample size - 2 or 4ml
- Ambient to 300°C temperature range
- Cost effective
- Portable operation
- Simple calibration

The original Setaflash Series 3 tester. Basically a 33000-0 without the temperature ramp mode, the 30000-0 is a simple to use, reliable and cost effective instrument that is to be found in laboratories, refineries, storage and transport facilities world-wide.

**SUPPLIED WITH:** 2ml syringe, mains lead and instruction manual.

*Note: For close-to-ambient tests the sample cup requires cooling with 13870-0 Seta Coolant Module.*

*FOR SPECIFICATIONS, ACCESSORIES & CONSUMABLES, SEE PAGE 14.*



BIO-FUEL TESTING



CALIBRATION &amp; VERIFICATION MATERIALS



SETAPLUS EXTENDED WARRANTY AVAILABLE



TECHNICAL DATASHEETS AVAILABLE

## SETAFLASH SMALL SCALE FLASH POINT

SPECIFICATIONS				
<b>Seta Part No:</b>	33200-2	33250-2	33000-0	30000-0
<b>Temperature Range:</b>	10 to 130°C (50 to 266°F)	10 to 130°C (50 to 266°F)	Ambient to 300°C (0 to 300°C with 13870-0)	Ambient to 300°C (0 to 300°C with 13870-0)
<b>Cup Material:</b>	Aluminium	Corrosion Resisting Steel	Aluminium	Aluminium
<b>Test Modes:</b>	Rapid Equilibrium and Ramp	Rapid Equilibrium and Ramp	Rapid Equilibrium and Ramp	Rapid Equilibrium
<b>Sample Size:</b>	2ml for flash points up to 100°C 4ml for flash points above 100°C	2ml for flash points up to 100°C 4ml for flash points above 100°C	2ml for flash points up to 100°C 4ml for flash points above 100°C	2ml for flash points up to 100°C 4ml for flash points above 100°C
<b>Test Duration, Rapid Equilibrium Mode:</b>	1 minute below 100°C, 2 minutes above 100°C, or user determined 1 to 99 minutes	1 minute below 100°C, 2 minutes above 100°C, or user determined 1 to 99 minutes	1 minute below 100°C, 2 minutes above 100°C, or user determined 1 to 99 minutes	1 minute below 100°C, 2 minutes above 100°C
<b>Ramp Rate:</b>	2°C/min ramp	2°C/min ramp	2°C/min ramp	
<b>Heating and Cooling System:</b>	Peltier Cell	Peltier Cell	Cartridge heater	Cartridge heater
<b>Power:</b>	200W (maximum)	200W (maximum)	200W (maximum)	200W (maximum)
<b>Voltage:</b>	100/240V, 50/60Hz (switchable) 12Vdc with optional power adaptor	100/240V, 50/60Hz (switchable) 12Vdc with optional power adaptor	110/120V or 220/240V, 50/60Hz (switchable) 12Vdc with optional adaptor	110/120V or 220/240V, 50/60Hz (switchable) 12Vdc with optional adaptor
<b>Gas Supply:</b>	Laboratory gas, 3kPa (0.44psi) maximum pressure or Butane from optional Portable Gas Tank 13667-0	Laboratory gas, 3kPa (0.44psi) maximum pressure or Butane from optional Portable Gas Tank 13667-0	Laboratory gas, 3kPa (0.44psi) maximum pressure or Butane from optional Portable Gas Tank 13667-0	Laboratory gas, 3kPa (0.44psi) maximum pressure or Butane from optional Portable Gas Tank 13667-0
<b>Size (HxWxD):</b>	26 x 28 x 26cm	26 x 28 x 26cm	26 x 28 x 26cm	26 x 28 x 26cm
<b>Weight:</b>	5kg	5kg	4kg	4kg

## ACCESSORIES - Setaflash Series 3

OPTIONAL	33200-2	33250-2	33000-0	30000-0
13666-0 BUTANE REFILL CYLINDER, pack of 24.	●	●	●	●
13746-0 DRAUGHT SCREEN, SETAFLASH, stainless steel, size (HxWxD) 36 x 48 x 24cm.	●	●	●	●
13747-0 SETA SOLID SAMPLE DISPENSER, (for details see page 16).	●	●	●	●
13770-311 SYRINGE, 4ml, for tests above 100°C.	●	●	●	●
13870-0 SETA COOLANT MODULE, to reduce temperature of cup below ambient down to 0°C. Uses dry ice and methanol freezing mixture.			●	●
13880-0 SETA METAL COOLING BLOCK, to cool cup after test.			●	●
26000-0 LIQUID RECOVERY SYSTEM, with pump and trap to extract and collect hot sample from cup, (for details see page 15).	●	●	●	●
30005-0 ADAPTOR FOR 12V POWER SUPPLY, 12Vdc to 230Vac			●	●
30006-0 CARRY CASE	●	●	●	●
33205-0 PORTABLE POWER ADAPTOR, 12Vdc to 19Vdc	●	●		
45001-0 SETAPLUS EXTENDED 12 MONTH WARRANTY	●	●	●	●
CALIBRATION, VERIFICATION & TRAINING				
13751-0 THERMOMETER, 0 to 110°C.	●	●	●	●
13775-0 THERMOMETER, 100 to 300°C.	●	●	●	●
99878-3 SMALL SCALE CERTIFIED FLASH POINT MATERIAL, (for details see page 15).	●	●	●	●
99928-0 SETATHERM, digital thermometer, -20 to 150°C, (for details see page 140).	●	●	●	●

## CONSUMABLES - Setaflash Series 3

2 Years / 2000 Tests	Qty 33250-2	Qty 33200-2	Qty 33000-0	Qty 30000-0
13730-005 SILICONE RUBBER TUBE, 4 metres.	1	1	1	1
13740-004 SAMPLE WELL 'O' RING, Viton, (pack of 5).	4	4	4	4
13740-009 SYRINGE, 2ml.	2	2	2	2
13740-017 HEAT SINK COMPOUND	1	1	1	1
13770-004 SAMPLE WELL 'O' RING, Silicone, (pack of 5).	4	4	4	4
13770-311 SYRINGE, 4ml, for tests above 100°C.	1	1	1	1
13740-425 FLASH DETECTOR	2	2	2	2