



STANHOPE-SETA Product Profile

- Fuels
- Biofuels
- Petroleum feedstock
- Crude oil
- Chemicals
- Lubricants
- Cosmetics
- Paints and varnishes
- Bitumens
- Recycled product



Laboratory instruments
for quality control, analysis and calibration

SETAFLASH SERIES 8 ACTIVECOOL CLOSED CUP TESTER (FLASH/NO FLASH & RAMP MODES)

ASTM D3278; ASTM D3828; ASTM D7236; ASTM E502; IP 523; IP 524; IP 534; IP 303 (obs); ISO 3679; ISO 3680

- Flash/no flash & ramp mode
- Temperature range of -20°C to 130°C (-4 to 266°F)
- Small sample size, 2 or 4ml
- Corrosion Resistant cup option
- Electric ignitor (with gas option)
- Automatic dipping and flash detection
- ActiveCool electronic Peltier cooling
- 64 Test memory & RS232 interface
- °C or °F temperature display



82000-0 →

Seta Part No:	82100-0	82150-0	82000-0
Temperature Range:	Air: 10 to 130°C (50 to 266°F) Water Assisted: -20 to 130°C (-4 to 266°F)	Air: 10 to 130°C (50 to 266°F) Water Assisted: -20 to 130°C (-4 to 266°F)	Ambient +5 to 300°C (Ambient +9 to 572°F)
Test Modes:	Rapid Equilibrium and Ramp	Rapid Equilibrium and Ramp	Rapid Equilibrium and Ramp
Sample Size:	2 or 4ml according to method	2 or 4ml according to method	2 or 4ml according to method
Test Duration, Rapid Equilibrium Mode:	1 minute <100°C, 2 minutes >100°C FAME 1 minute or user defined 1 to 99 minutes	1 minute <100°C, 2 minutes >100°C FAME 1 minute or user defined 1 to 99 minutes	1 minute <100°C, 2 minutes >100°C FAME 1 minute or user defined 1 to 99 minutes
Test Duration Ramp Mode:	Typically 7 minutes	Typically 7 minutes	Typically 7 minutes
Cup material:	Aluminium	Corrosion resisting steel	Aluminium
Heating/Cooling Method:	Peltier Cell	Peltier Cell	Ceramic Pad, Forced Air (post-test cooldown)
Size/weight:	30 x 34 x 38 cm / 8kg	30 x 34 x 38 cm / 8kg	30 x 34 x 38 cm / 8kg



33200-2 →

SETAFLASH SERIES 3 ACTIVECOOL (RAPID EQUILIBRIUM AND RAMP TESTS)

ASTM D3278; D3828; D7236; IP 303 (Obs); IP 523; IP 524; IP 534; ASTM E502; ISO 3679; ISO 3680

- Sub-Ambient Tests and Rapid Cool Down
- Temperature range 10 to 135°C (50 to 275°F)
- Rapid Equilibrium and Ramp tests
- Corrosion Resistant option
- 1 Minute Flash / No Flash and Actual Flash Point
- 2/4ml Sample Size

Seta Part No:	33200-2	33250-2	33000-0	30000-0
Temperature Range:	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)
Test Modes:	Rapid Equilibrium and Ramp	Rapid Equilibrium and Ramp	Rapid Equilibrium and Ramp	Rapid Equilibrium
Sample Size:	2 or 4ml according to method	2 or 4ml according to method	2 or 4ml according to method	2 or 4ml according to method
Test Duration, Rapid Equilibrium Mode:	1 minute <100°C, 2 minutes >100°C FAME 1 minute or user defined 1 to 99 minutes	1 minute <100°C, 2 minutes >100°C FAME 1 minute or user defined 1 to 99 minutes	1 minute <100°C, 2 minutes >100°C FAME 1 minute or user defined 1 to 99 minutes	1 minute <100°C, 2 minutes >100°C FAME 1 minute or user defined 1 to 99 minutes
Ramp Rate:	2°C/min ramp	2°C/min ramp	2°C/min ramp	
Cup material:	Aluminium	Corrosion resisting steel	Aluminium	Aluminium
Size/weight:	26 x 28 x 26cm / 5kg	26 x 28 x 26cm / 5kg	26 x 28 x 26cm / 4kg	26 x 28 x 26cm / 4kg

MULTIFLASH AUTOMATIC MULTI-METHOD FLASH POINT TESTERS

PENSKY-MARTENS; ABEL; TAG; SMALL SCALE

- Highly automated low cost Modular System with in-built safety
- Strict conformity to test methods
- Fast and reliable performance
- Gas or Electric Ignition
- Temperature in °C or °F



34000-0 + 34100-2 →

Seta Model:	34100-2	34200-0	34400-0	34700-0
Method:	Pensky-Martens	Abel	TAG	Small Scale
Cup Type:	Closed Cup	Closed Cup	Closed Cup	Closed Cup
Mode:	Procedure A, B, C, GB/T, Search	Non Equilibrium, Equilibrium, Flash/No Flash	Non Equilibrium, Equilibrium, Flash/No Flash	Flash/No Flash, Non Equilibrium, Search
Temperature Range:	Ambient to 400°C	Ambient to 93°C, (5 to 93°C with cooling)	Ambient to 93°C, (5 to 93°C with cooling)	Ambient to 300°C (-20 to 300°C with cooling)
Ignition Method:	Electric or Gas	Electric or Gas	Electric or Gas	Electric or Gas
Flash Detection:	Thermocouple	Thermocouple	Thermocouple	Thermocouple
Bath Type:	Solid Block/Air	Liquid/Liquid	Liquid	Solid Block
Power Requirement:	115V or 230Vac (switchable)	115V or 230Vac (switchable)	115V or 230Vac (switchable)	115V or 230Vac (switchable)
Size (HxWxD):	34 x 47 x 42cm	44 x 47 x 42cm	34 x 47 x 42cm	34 x 47 x 42cm
Weight (inc. Base unit):	12kg	12kg	12kg	12kg

12200-3 SETA EXISTENT GUM SOLID BATH

ASTM D381-IP 131; IP 540; BS 2000 Part 131; BS 4348 (obs); ISO 6246; DIN 51 784; NF M07-004; FTM 791 3302; JIS K2261

- 5 Test stations
- Integral steam superheater
- Digital temperature control
- 140 to 260°C temperature range
- Flow gauge calibrated for air and steam

A Solid Block Bath designed to carry out up to five simultaneous tests for determining existent gum content in fuels by the Jet Evaporation method.

Operating temperature range:	140 to 260°C ±5°C
Heaters:	2 x 1kW
Over-temperature cut-out:	280°C (adjustable)
Air/Steam inlet:	15mm o.d pipe
Size (HxWxD):	45 x 35 x 50cm
Weight:	45kg

12200-3 →



81000-2 SETAVAP 2 RAPID AUTOMATIC VAPOUR PRESSURE TESTER

ASTM D5191; IP 409; IP 481; IP 394, EN 13016; Correlates with ASTM D323; D5842; D6378; IP 69; IP 402 (Obs)

- Multi-Mode - Ptot, DVPE, EPA, Crude, Pabs
- Fixed Liquid/Vapour ratio
- "Mini" method uses only 3ml sample size
- Automatic Drain and Purge

A quick and simple to use instrument for determining the vapour pressure of gasoline, solvents, light crude oils, and similar products using the "Mini" test method.

SetaVap 2 is highly automated with step by step instructions and prompts being displayed on the control panel. Once the test procedure has been started operator intervention is only required to inject the sample into the chamber, even the purging and cleaning cycle is carried out automatically.

Test Pressure Range:	0 to 200kPa ±0.5kPa (0.1kPa resolution)
Units of Measurement:	kPa or psi (user selectable)
Chamber Temperature:	37.8°C (100°F) ±0.1°C
Modes:	Ptot, DVPE, EPA, Crude, Pabs
Power Requirement:	115Vac or 220Vac (switchable), 50/60Hz, 70W
Size (HxWxD) / Weight:	37 x 13 x 20cm / 3.5kg

81000-2 →



11860-3 SETASTILL DISTILLATION UNIT

ASTM D86; D216 (obs); D447 (obs); D850; D1078; E133; IP 123; IP 191; IP 195

- Ambient to 400°C distillation range
- Adjustable height heater/flask platform
- Toughened glass window
- Cooling fan

The distillation unit, mounted to the left, comprises a flask support mechanism, heater elements, and the heater controller. The flask is supported by a drop-in ceramic-glass support board mounted to a platform that is adjustable for height. The quartz enclosed heating elements are attached to the platform, and are powered by a solid-state energy regulator and calibrated control. A cooling fan is installed in the rear of the distillation unit to reduce cooling time between distillations. A toughened glass observation window is fitted in the front of the distillation unit, and a spillage collection tray with outlet is mounted beneath the heaters.

Distillation Range:	Ambient to 400°C
Voltage Range:	110/120V or 220/240V, 50/60Hz (switchable)
Power:	1000W maximum
Condenser Volume:	7.2 litre
Size (HxWxD) / Weight:	Condenser Unit: 47 x 37 x 25cm, Distillation Unit: 47 x 21 x 21cm / 12kg total

11860-3 →



11400-6 SILVER AND COPPER CORROSION BATH

ASTM D130-IP 154, ASTM D4048, ASTM D4814, BS 2000 Parts 112 & 154, DIN 51 811, EN 2160, FTM 791 5325, IP 112, IP 227 (obs), IP PM-DJ 2005, JIS K2513, NF M07-015

- Ambient +5°C to 150°C temperature range
- 9 test stations
- Copper/Silver corrosion tests

The Silver and Copper Corrosion Bath is a stainless steel water or oil bath digitally temperature controlled to $\pm 0.1^\circ\text{C}$ over a temperature range of ambient +5°C to 150°C.

11400-6 →



Temperature range:	Ambient +5°C to 150°C
Temperature stability:	$\pm 0.1^\circ\text{C}$
Bath fluid:	Water or Oils
Bath capacity:	35 Litres
Water Inlet Nozzle:	10mm
Overflow drain:	10mm

99700-4 SALT CONTENT IN CRUDE ANALYSER

ASTM D3230; IP 265

- ASTM and IP methods
- Automatic salt concentration calculation
- Pre-calibrated for immediate use
- 2 user defined calibration modes
- RS232 interface
- Battery or mains voltage operation
- Weatherproof

A portable instrument for determining the approximate chloride (salts) content of crude oils. The instrument is pre calibrated and automatically calculates the salt concentration in g/m3 or pounds per thousand barrels (ptb) (lb/1000bbl). Measurements can be displayed or downloaded to a PC. Supplied with carry case, mains adaptor, software, RS232 cable & instruction manual.



99700-4 →

Conductivity range:	0.0 to 151 lb/1000bbl (Res: 0.11lb/1000bbl) 0.0 to 430.0 g/m3 (Res: 0.1 g/m3)
Temperature range:	-20 to 150°C (Res: 0.1°C)
Power supply:	9 volt dc battery or mains adaptor 110/120/220/240, 50/60Hz adaptor supplied
Size (HxWxD):	20 x 7 x 3.5cm
Weight (including carry case):	1.6kg

90000-3 SETA OIL TEST CENTRIFUGE FOR SEDIMENT & WATER IN CRUDE OIL

ASTM D91; D96 (Obs); D893; D1290; D1796; D1966; D2273; D2709; D4007; IP 75 (Obs); IP 539 (Obs)

- Specifically designed for testing oils
- Heated chamber, ambient to 80°C
- Static, near vertical bucket positioning
- 4 place swing out rotor
- Membrane 'touch' control panel
- Pre-heat facility to ensure bowl is at test temperature prior to test
- Conforms to IEC 1010-1 & 1010-2-D safety requirements

With a temperature range of 30 to 80°C and a rotational speed of up to 3000rpm, this heated chamber centrifuge is specifically designed for testing oils. The large diameter chamber, four place rotor and cushioned adaptors allow the use of the correct 6 and 8 inch conical, pear-shaped and trace sediment tubes as specified by the various test methods. The swing out rotor ensures that the samples are held near vertical when at rest allowing more precise measurement of sediment.

Maximum RCF:	72.5kg
Maximum RPM:	3000
Temperature Range:	30 to 80°C $\pm 2^\circ\text{C}$
Timer Range:	1 to 60 minutes in 1 minute steps, Continuous Operation
Rotor Capacity:	4 Samples
Power Requirement:	230Vac (110V transformer option) 50/60Hz / 1kW
Size (HxWxD) / Weight:	40.1 x 56.41 x 63.93cm / 86kg

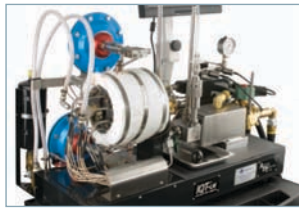
90000-3 →



92000-3 IGNITION QUALITY TESTER (IQT™) - DERIVED CETANE NUMBER ANALYSIS

EN 15195: 2005(E); ASTM D6890; IP 498; Correlates with ASTM D613

- All Diesel Fuels and Biodiesels
- Automated Test Procedure
- Small (<100ml) Sample
- 20 Minute Test
- Precise results - repeatability of 0.91, reproducibility 2.66 @ 51 CN
- Approved specification test for EN 590, ASTM D975, D7467, BS 2869

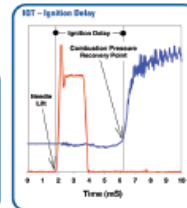
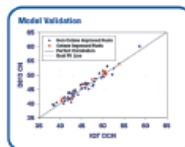


92000-3 →



The Ignition Quality Tester (IQT) is a reliable, affordable and approved alternative to a cetane engine. It is a fully automated test instrument for deriving the cetane number for a wide range of middle distillate fuels including conventional and oil sands-based diesels, biodiesels, refinery streams, plus fuels using oxygenate and nitrate based cetane enhancers.

Measuring Principle:	Constant Volume Combustion Chamber
Injection System:	Pintle Type, single hole nozzle, air actuated
Computer:	Pentium based PC with interface and screen (supplied)
Compressed Gas Requirement:	Air (20.9% O2) for combustion, Air (Industrial Grade) for actuation, Nitrogen (Industrial Grade) for fuel delivery
Power Requirement:	120/220Vac @60Hz or 220Vac @50Hz
Size (HxWxD) / Weight:	151 x 98 x 57cm / 125kg



91600-3 →

91600-3 SETA MULTI FILTRATION TESTER - PORTABLE TEST FOR FILTERABILITY/BLOCKING TENDENCY

ASTM D2068; IP 387 (Procedures A, B & C); Correlates with ASTM D6426
NEW IP PM EA/08 Cold Soak Test Method for EN 590 Biofuel and FAME material.

- Compact and easy to use
- Result in less than 15 mins
- Interface for PC or Printer

Filter Blocking Tendency (FBT) Range:	1.0 to 30 (low number best)
Filterability Quality Factor (FQF):	100 to 1 (high number best)
Maximum Pressure:	200kPa
Power Requirement:	110/120Vac or 220/240Vac (switchable)
Size (HxWxD) / Weight:	27 x 43 x 26cm / 10kg

The MFT is a unique instrument designed to test the Filter Blocking Tendency (FBT) and Filterability Quality Factor (FQF) of diesel, biodiesel (B100 & B5/7/20), gas oil, gas turbine fuel and kerosine.

Test parameters for IP 387/ D2068 and D6426 test are pre-programmed.

94100-3 SETA COMPACT CLOUD AND POUR POINT CRYOSTAT FOR COLD FLOW TESTS

ASTM D2500-IP 219, ASTM D5853-IP 441, ASTM D6422, ASTM D97-IP15, BS 2000 Parts 15 & 219, DIN 51 597 (obs), EN 23015, FTM 791 201, ISO 3015, ISO 3016, JIS K2269, NF T60-105

- 3 Individually Temperature Controlled Compartments
- 4 Air Wells in each Compartment
- Large Two Litre Capacity Compartments for Temperature Stability
- Single Stage CFC Free Refrigeration

The cryostat is equipped with three individually temperature controlled compartments. Each two litre compartment can accommodate four air wells. The 94100-3 is supplied with a compartment thermometer and 12 test jars, each comprising graduated glassware, thermometer cork, and insulating gasket and disk. A lower temperature (-51°C) four compartment Cloud & Pour Point Cryostat is also available, Seta part number 93531-7.

94100-3 →



Seta part no:	94100-3	93531-7
Temperature Range:	Ambient to -34°C	Ambient to -51°C
Number and Volume of Compartments:	3 compartments, 2 litres each	4 compartments, 2 litres each
Total No of Test Wells:	12	16
Cool down Time:	1 hour approx. (32 to -34°C)	Approx 2 hrs (from 32°C to -51°C)
Power Requirement:	110/120Vac or 220/240Vac, 50/60Hz, 750W	110/120V, 60Hz 220/240V, 50Hz/1.8kW
Size (HxWxD) / Weight:	60 x 60 x 85cm / 115kg	95 x 63 x 63cm/115kg

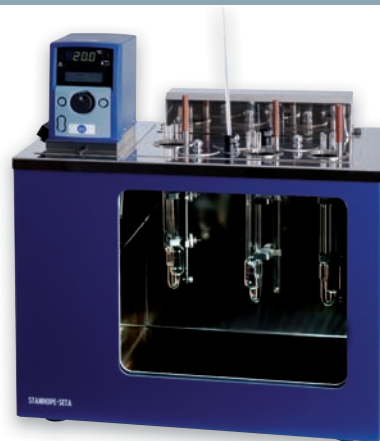
84200-0 KV6 VISCOMETER BATH

ASTM D2170-IP 319, ASTM D445-IP 71, ASTM D446, BS 188, BS 2000 Parts 71 & 319, DIN 51 366, DIN 51 562, EN 12595, EN 3104, FTM 791 305, ISO 3105, JIS K2283, NF T60-100, NF T60-136

- Up to 6 viscometer tubes
- 50 litre oil/water bath
- Temperature stability ± 0.01 up to 100°C and ± 0.02 between 100 and 150°C
- Temperature range ambient to 150°C
- Digital display with 0.01°C resolution
- Toughened glass front panel
- Integral back lighting

The Seta KV-6 has a 50 litre temperature controlled bath that can accommodate up to six standard viscometer tubes. Digital temperature control and an inbuilt cold water cooling coil provide accurate and stable test temperatures from ambient to 150°C (± 0.01 °C up to 100°C and ± 0.02 °C between 100 and 150°C). The bath is protected by low liquid level and overtemperature cut-outs.

Equipped with a toughened glass front window, easily accessible drain valve, integral back lighting, top plate, provision for reference thermometer and attachments.



84000-0 →

Temperature Range:	Ambient to 150°C
Temperature Stability:	± 0.01 ° up to 100°C ± 0.02 ° between 100 and 150°C
Temperature Uniformity:	± 0.02 ° at 40 and 100°C
Tube Capacity:	up to 6
Bath Fluid:	Oil or Water
Bath Capacity:	50 Litres
Size (HxWxD):	56 x 35 x 44cm
Weight:	33kg



16960-0 →

16960-0 SETA 6 WAY OXIDATION BATH WITH WINDOW + OXFLO

ASTM D943; D2274; D4310; D7462; IP 157; IP 388

- 6 position oil bath
- Reliable digital thermostat unit
- Seta Oxflo Controller and flowmeters included
- Low liquid protection
- Over temperature cut out
- Light tight viewing window

Oil bath and oxygen flow control unit used for quantitative analysis of the tendency of oils and fuels to form sludge, acids and deposits when exposed to oxygen in the presence of metallic catalysts over extended periods.

The separate Oxflo control unit (not shown) includes a gas inlet pressure regulator, pressure gauge and six precision flowmeters calibrated for oxygen at 3 litres/hour, 21°C and 0.4 bar pressure. Safety features include low level liquid protection and over temperature cut-outs.

Temperature Range:	Ambient to 120°C
Stability:	± 0.1 °C
Bath Capacity:	35 litres
Voltage:	110/120V, 50/60Hz or 220/240V, 50/60Hz
Size (HxWxD):	Bath: 44 x 35 x 26cm, Oxflo Control Unit: 64 x 36 x 33cm
Weight:	Bath: 15kg, Oxflo Control Unit: 11kg

16670-0 SETA OXIDATION SOLID BLOCK BATH - 4 WAY

ASTM D525; IP 40

- 4 position
- Dry block
- Over temperature cut out
- Small footprint
- Stability ± 0.1 °C

The Seta Oxi Solid Block Bath is an aluminium block bath with digital temperature control that has been designed to accept up to four oxidation vessels for carrying out tests equivalent to the IP 40/D525 test method.

Temperature Range:	Ambient +5° to 100°C
Bath Type:	Dry Block
Max No. of Test Vessels:	4
Heat-Up Time to 100°C:	80 mins



16670-0 →

99708-0 HAND HELD CONDUCTIVITY METER

ASTM D2624; IP 274

- Higher Accuracy AC Measurement ($\pm 2\%$ of reading)
- Conductivity and temperature output capability
- Stores up to 10 Data Locations
- USB interface for ease of data transfer to user
- Fully Temperature Compensated Measurement

Conductivity range:	0-2000 pS/m ± 2 pS/m ($\pm 2\%$ of reading)
Resolution:	0.1 pS/m
Temperature Range:	0-35°C* ($\pm 0.1^\circ\text{C}$)
Size (HxWxD):	31 x 11 x 10cm
Weight:	0.5kg

The Seta Handheld Conductivity Meter provides an accurate and rapid conductivity measurement of distillate fuels; and is specifically designed for testing low conductivity fluids such as aviation kerosene, ULSD, home heating fuel, Naphtha, and printing ink.

99708-0 →



← 86400-2



86400-2 PORTABLE FUEL INTEGRITY TEST KIT - RAPID CHECK FOR CONTAMINATION IN AVIATION FUEL

- Suitable for Jet fuel and other light distillate fuels
- Multiple tests in single kit
- Compact, easy to carry rucksack
- Ideal for shipboard use for Cargo Inspection and assurance

A self contained kit of test equipment for rapid detection of contamination in fuels. The kit has been designed to fit into a small purpose made rucksack enabling it to be easily transported to test sites which have only limited or difficult access. It is ideally suited for shipboard use providing both rapid and easy verification of product integrity prior to off-loading.

The kit comprises of 5 key tests that allow go/no go testing of fuels;

- Flashpoint (ASTM D3828) – using the Series 3 Closed Cup Tester, complete with syringes and portable gas supply
- Density – An ATEX approved digital density meter, IP 559
- Conductivity (ASTM D2624) – Using a digital conductivity meter Water Content - Shell Water Capsules offer detection to 30ppm (80 tests & syringes)
- Digicell – Digital readout of Water content, 100-3000ppm, 200-10000ppm and 0-10% (50 tests)

SETA REFERENCE & VERIFICATION MATERIALS – SINGLE & MULTI TEST VERIFICATION MATERIALS

Products: Diesel, Biodiesel, Gasoline, Jet & Lubricating Oil

- Verification to ASTM/CEN/ISO/IP
- Traceable to ISO 9001:2000
- 18 Month Validity

All Seta instruments are manufactured to the highest possible standards to provide accurate, reliable and repeatable results demanded by modern laboratories. To maintain the confidence of those who use the results it is essential to carry out regular verification of those results and also to maintain the calibration of Seta instruments.

The range of Seta Verification Materials for fuels testing includes;

- Simulated Distillation (SIMDIS)
- Water determination by Karl Fischer
- Lubricity of Ultra Low Sulphur Diesel (ULSD) by HFRR
- Vapour Pressure by evacuated chamber test
- Referee values for Low Sulphur Gasoline meeting ASTM and IP test method protocols

The range of Seta Verification materials includes 'Multi Test' samples, which are a unique secondary reference material that provide traceable validation of several different test parameters from one source of sample.



Seta Analytics provide analytical solutions for Hydrocarbon Petroleum products. It is a division of Stanhope-Seta which combines long established experience of testing petroleum products with the latest measurement technologies to provide enhanced analytical solutions for exploration, refining, petrochemical, distribution and marketing operations.

Current developments include laser based measurement for particle counting, electrochemical sensors for H₂S detection and miniature FTIR technology for low level detection of FAME in Jet Fuels.



H₂S Analyser

ASTM D7621, IP 570, ISO 8217
Marine Fuel Specification



FIJI - Fame in Jet Instrument

Rapid Screening to IP 583



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