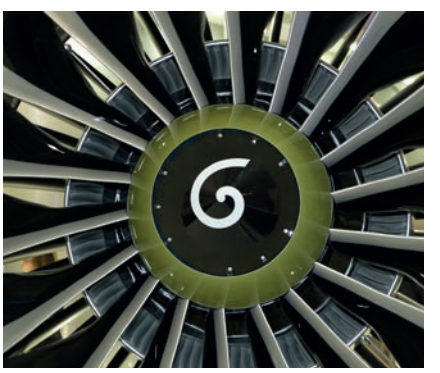
SETA STANHOPE-SETA

Product Profile

Laboratory instruments for quality control, analysis and calibration



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

Stanhope-Seta specialise in the design and manufacture of laboratory test instruments which are widely used to measure product quality and consistency. From its manufacturing base in the United Kingdom the company exports high quality instrumentation worldwide.

THE QUEEN'S AWARDS FOR ENTERPRISE: INTERNATIONAL TRADE 2012

THE QUEEN'S AWARDS FOR ENTERPRISE: INNOVATION 2014

The wide range of instruments, manufactured in the UK are regarded as a worldwide benchmark for quality control, with products that offer advanced performance, accuracy and reliability. The company holds ISO 9001 accreditation across all areas of the business. Stanhope-Seta is also proud to hold two Queens Awards for Industry in the Innovation and International trade categories.

Stanhope-Seta is an active member of major standardisation bodies including ASTM, IP, ISO, BSI and DIN. By working closely with industry our research and design group actively contributes to test method development and product specifications.

Stanhope-Seta instruments are supported by our global service guarantee which ensures that first class technical support is available across all the Seta product range wherever it is installed. Worldwide sales, service and support is available through our network of experienced and trained representatives.

Contact us:
t: +44 (0)1932 564391 | e: sales@stanhope-seta.co.uk | www.stanhope-seta.co.uk

Plus find us on:




Contents

Application	Jet A-1 DefStan 91-091	Aviation Turbine Fuel ASTM D1655	Aviation Gasoline ASTM D910	Motor Gasoline EN 228	Motor Gasoline ASTM D4814	Diesel EN 590	Diesel ASTM D975
Aromatics	ASTM D6379; IP 436	ASTM D6379; IP 436				EN 12916	
Ash						EN ISO 6245	ASTM D482
Carbon Residue						EN ISO 10370	
Cetane Number		ASTM D8183				IP 617; EN 17155	ASTM D8183
CFPP						EN 116	ASTM D6371
Cloud Point						EN 23015	ASTM D2500
Colour	ASTM D156; D6045	ASTM D156; D6045					
Conductivity	ASTM D2624; IP 274	ASTM D2624; IP 274	ASTM D2624				ASTM D2624
Copper Corrosion	IP 154; ASTM D130	IP 154; ASTM D130	ASTM D130	EN ISO 2160	ASTM D130	EN ISO 2160	ASTM D130
Silver Corrosion		IP 227			ASTM D7667; D7671		
Density	ASTM D1298; IP 160	ASTM D1298; IP 160	ASTM D1298	EN ISO 3675	ASTM D1298	EN ISO 3675	
Distillation	ASTM D86; IP 123	ASTM D86	ASTM D86	EN ISO 3405	ASTM D86	EN ISO 3405	ASTM D86
Existent Gum	IP 540	IP 540; ASTM D381		EN ISO 6246	ASTM D381		
FAME Content	IP 583	ASTM D7797; IP 583				ASTM D7963 or SetaCheck Biodiesel	ASTM D7963 or SetaCheck Biodiesel
Filter Blocking Tendency						IP 387; 618	
Freeze Point	ASTM D2386; IP 16	ASTM D2386	ASTM D2386				
Flash Point	ASTM D3828; D56; IP 170; 523	ASTM D3828; D56; D93; IP 170; 523; 34				EN ISO 2719	ASTM D93; D3828
Hydrogen Sulfide							
Oxidation Stability			ASTM D873	EN ISO 7536	ASTM D525	EN ISO 12205	ASTM D2274
Particle Counting	IP 565	IP 565; ASTM D7619					ASTM D7619
Particulates Contamination (Filtration)	IP 423; ASTM D5452	ASTM D2276; D5452; IP 216; 423				EN 12662	ASTM D6217
Pour Point							
Smoke Point	ASTM D1322; IP 598	ASTM D1322; IP 598					
Total Sediment							
Vapour Pressure		ASTM D323; D4953; D5190; D5191; IP 69; 394	ASTM D323; D5191	EN 13016-1	ASTM D5191; D4953; D5482; D5188; D6378		
Viscosity	ASTM D445; IP 71	ASTM D445; IP 71				EN ISO 3104	ASTM D445
Water Separation	ASTM D8073	ASTM D8073					

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

Laboratory instruments for quality control, analysis and calibration

SETA STANHOPE-SETA

	Marine Fuel ISO 8217	Fuel Oil ASTM D396	Bio-Heating Fuels EN 14213	FAME EN 14214	Bio-Fuel Blend Stock B20 ASTM D7467	Bio-Fuel Blend Stock B100 ASTM D6751	Instrument	Seta Reference Number
							Evochrom HPLC	SA2400-2
	ISO 6245	ASTM D482	ISO 3987	ISO 3987	ASTM D482	ASTM D874	Ash Furnace	99220-2
	ISO 10370; IP 398		EN ISO 10370	EN ISO 10370		ASTM D4530; D189	Micro Carbon Residue Tester	97400-3
				IP 617; EN 17155	ASTM D8183	ASTM D8183	AFIDA Cetane Number Analysis	SA6000-0
	IP 309		EN 116	EN 116	ASTM D6371		CFPP Apparatus Cloud & Pour Point Bath	94100-3 94150-0
	ISO 3015	ASTM D2500		EN ISO 23015	ASTM D2500	ASTM D2500	Cloud & Pour Point Bath Cloud & Pour Point Cryostat Compact Cloud & Pour Point Cryostat	94150-0 93531-7 94100-3
							Colorimeter	15260-4 15320-2
					ASTM D2624		Handheld Conductivity Meter	99708-0
		ASTM D130		ISO 2160; IP 154	ASTM D130	ASTM D130	Cu/Ag Corrosion Bath	11300-2 11400-7
							Cu/Ag Corrosion Bath	11300-2 11400-7
	EN ISO 3675	ASTM D1298		EN ISO 3675			Density, Handheld	12600-0
		ASTM D86			ASTM D86		Setastill Distillation	11860-3
							Existent Gum Bath	12200-3/12210-0
	ASTM D7963 or SetaCheck Biodiesel	ASTM D7963 or SetaCheck Biodiesel	SetaCheck Biodiesel		SetaCheck Biodiesel		SetaCheck BioDiesel FIJI Instruments	SA5500-0 SetaCheck SA5000-2 - FIJI Jet SA5100-0 - FIJI Distillates SA5200-0 - FIJI Multi Fuel
							Multi-Filtration Tester Cold Filter Blocking Tester	91600-3 91670-2
							Freezing Point Apparatus	16990-2
	EN ISO 3679; 2719	ASTM D93; D3828	EN ISO 3679; IP 523; 524	EN ISO 3679; 2719; IP 523; 524	ASTM D93; D3828; D56	ASTM D3828; D93	Pensky-Martens Setaflash Series 3 Range Setaflash Series 8 Range	35000-0 Series 3 Series 8
	IP 570						H2S Analyser with VPP	SA4000-3 SA4015-0
	ISO 12205	EN 15751					Oxidation Bath TOST Bath TOST Dry Block Bath	16900-7 16640-2 16645-2
					ASTM D7619		AvCount2 AvCount Lite	SA1000-2 SA1800-2
			EN 12662	EN 12662	ASTM D6217	ASTM D6217	Filtration Tests	Contact Seta for Filtration
	ISO 3016	ASTM D97	ISO 3016				Cloud & Pour Point Bath Cloud & Pour Point Cryostat Compact Cloud & Pour Point Cryostat	94150-0 93531-7 94100-3
							Smoke Point	10400-0
	ISO 10307						Total Sediment Tester	16120-2
							SetaVap2 SetaVap4	81000-2 80600-0
	EN ISO 3104; IP 71	ASTM D445	EN ISO 3104; EN ISO 3105; IP 71	EN ISO 3104	ASTM D445	ASTM D445	KV-6 Viscometer Bath KV-2 Viscometer Bath	84200-3 94710-3
							WSI Analyser	SA90000-0

Setaflash™ Series 3 Small Scale Flash Point Testing

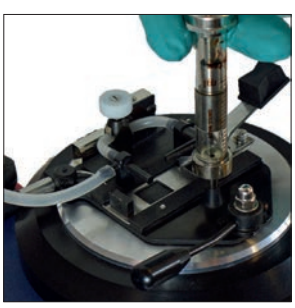
The safest choice

Approved in over 1000 international product specifications and regulations

ASTM D3278; ASTM D3828; ASTM D7236; ASTM D8174; E502; IP 523; IP 534; IP 602; ISO 3679; ISO 3680 (obs); ISO 9038; EPA 1020 B; CLP Regulations

The versatile range of Setaflash™ Series 3 instruments are ideal for use in the laboratory, production line or for portable test applications.

- Test time of under 2 minutes
- Small sample size, 2 or 4 ml
- Temperature range 10 to 130 °C or ambient to 300 °C
- Portable, lightweight, compact design
- Suitable for unknown samples using ramp mode
- Automatic flash detection
- Automatic barometric correction
- Full touch screen display
- USB output and results storage
- Sub-Ambient tests and rapid cool-down



Small Scale Certified Flash Point Material (99878-3), nominal certified flash point value of 75 °C

Small Scale Certified Flash Point Material (99879-0), nominal certified flash point value of 192 °C

	Series 3 Closed Cup 30000-2	Series 3 Open Cup 31000-0	Series 3 ActiveCool 33200-3	Series 3 ActiveCool (corrosion resisting) 33250-3
Temperature range	Ambient to 300 °C	Ambient to 300 °C	10 to 130 °C	10 to 130 °C
Cup material	Aluminium	Aluminium	Aluminium	Stainless steel insert
Ramp rate	up to 6 °C/min	n/a	up to 6 °C/min	up to 6 °C/min
Heating/cooling method	Cartridge	Cartridge	Peltier cell	Peltier cell
Results download	USB	n/a	USB	USB
Size (HxWxD) / Weight	195x295x140 mm / 5 kg	195x295x140 mm / 5 kg	195x295x140 mm / 5 kg	195x295x140 mm / 5 kg

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

Setaflash™ Series 8 Small Scale Flash Point Testing

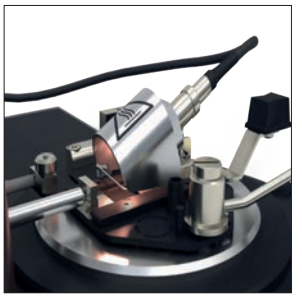
The safest choice

Approved in over 1000 international product specifications and regulations

ASTM D3278; ASTM D3828; ASTM D7236; ASTM D8174; E502; IP 523; IP 534; IP 602; ISO 3679; ISO 3680 (obs); ISO 9038; EPA 1020 B; CLP Regulations

The Setaflash™ Series 8 range are automated closed cup flash point testers with enhanced functionality over a wide temperature range.

- Automatic dipping and flash detection
- Electric ignitor (with gas option)
- Test time of under 2 minutes
- Small sample size, 2 or 4 ml
- Temperature range -30 to 135 °C or ambient to 300 °C
- ActiveCool electronic Peltier cooling, no external water bath
- Suitable for unknown samples using ramp mode
- Automatic barometric pressure correction
- Full touch screen display
- Fire detection (ActiveCool models)



Small Scale Certified Flash Point Material (99878-3), nominal certified flash point value of 75 °C

Small Scale Certified Flash Point Material (99879-0), nominal certified flash point value of 192 °C

	Series 8 High Temperature 82000-0	Series 8 ActiveCool 82100-2	Series 8 ActiveCool (corrosion resisting) 82150-2
Temperature range	Ambient to 300 °C	-30 to 135 °C	-30 to 135 °C
Cup material	Aluminium	Aluminium	Stainless steel insert
Ramp rate	2 °C/min	up to 10 °C/min	up to 10 °C/min
Heating/cooling method	Ceramic pad, forced air (post-test cooldown)	Peltier cell	Peltier cell
Results download	RS232 (printer port)	USB/RJ45	USB/RJ45
Size (HxWxD) / Weight	300x340x380 mm / 8 kg	300x340x380 mm / 8 kg	300x340x380 mm / 8 kg

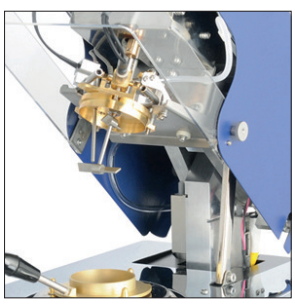
PM-93 Pensky-Martens Closed Cup Flash Point Tester (35000-0)

ASTM D93; IP 34; ISO 2719 Procedures A, B and C

The Seta PM-93 provides operators with high level functionality combined with class leading ease of use, robustness and safety.

- Fast, acccurate and safe
- Easy operation
- Single action lifting pod
- Unique SafeFlash fire extinguishing system
- Seta Ignite - a robust and long lasting ignitor
- 30 programmable test profiles, test methods and sample names
- Large touch screen
- Memory storage for 2000 results
- Statistical quality control software

Cooling	Forced air (integral fan)
Ignition system	Electric hot-wire or gas flame
Flash detection	Thermocouple
Heating rate	Fast heating mode (>15 °C/min) and standard rate; 5.5 °C/min; 3 °C/min; 1.3 °C/min; 1 °C/min
Temperature range	Ambient +5 to 400 °C (Ambient +41 to 752 °F)
Barometric pressure correction	Automatic correction with built-in pressure sensor
Fire detection	Thermal. Optional integral inert gas Fire Extinguisher (35002-0)
Size (HxWxD) / Weight	390x240x500 mm / 25 kg



Multiflash Automatic Multi-Method Flash Point Testers

Cleveland (ASTM D92); Abel (IP 170); Tag (ASTM D56)

A flexible automated flash point tester. Cleveland, Tag and Abel tests are supported via interchangeable modules.

- '3 in 1' solution
- Automated
- Low cost
- In-built safety features
- Universal base and interchangeable test modules

Tag 34000-0	Cleveland 34300-2	Abel 34200-0
Closed cup	Open cup	Closed cup
Non-Equilibrium, Equilibirum, Flash/no Flash	Flash point and fire point	Non-Equilibrium, Equilibirum
Ambient to 93 °C (199 °F) (5 to 93 °C with cooling)	Ambient to 400 °C (752 °F)	Ambient to 93 °C (199 °F) (5 to 93 °C with cooling)
Electric or Gas	Electric or Gas	Electric or Gas
Thermocouple	Ionisation ring	Thermocouple

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

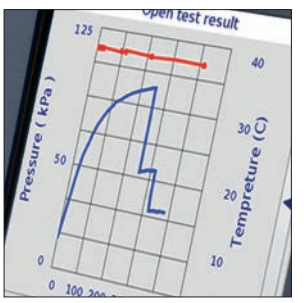
SetaVap4 Automatic Vapour Pressure Tester (80600-0)

ASTM D5191; ASTM D5188; ASTM D6377; ASTM D6378; EN 13016-1 & 3; IP 394
Correlates with ASTM D323; ASTM D2533; ASTM D4953; ASTM D5482

The SetaVap4 provides users with the latest generation of automated moveable piston based technology for vapour pressure testing.

- Piston design for triple and single expansion test methods
- Peltier cells for heating and cooling
- Integrated shaker for crude oil measurements
- Large LCD touchscreen display
- Simple test procedure
- Internal results storage with USB port
- Compact, rugged design ideal for portable field or laboratory use
- DVPE, RVP, EPA and CARB calculations
- Statistical quality control software

Pressure range	1000 kPa
Pressure resolution	0.01 kPa
Temperature range	0 to 120 °C (no external cooling required)
Temperature stability	0.01°C
Sample volume	1 ml, plus rinsing
Measurement time	<10 mins for D5191
Vapour to liquid ratio	0.02:1 to 20:1
Sample introduction	Automated via built in piston Reusable 80 µm filter Transfer tube or syringe
Size (HxWxD) / Weight	310x230x240 mm / 7.4 kg



SetaVap2 Automatic Vapour Pressure Tester (81000-2)

ASTM D5191; IP 394; IP 409; IP 481; EN 13016-1
Correlates with ASTM D323; ASTM D5482; ASTM D6378; IP 69

Pressure range	0 to 200 kPa ±0.5 kPA (0.1 kPa resolution)
Pressure resolution	0.1 kPa
Chamber temperature	37.8 °C (100 °F) 0.1 °C
Modes	Ptot, DVPE, EPA, Crude, Pabs
Power requirement	115 Vac or 220 Vac, 50/60 Hz, 70 W
Size (HxWxD) / Weight	370x130x200 mm / 3.5 kg

Salt in Crude Analyser (99700-6)

ASTM D3230; IP 265

The Seta Salt in Crude Analyser is a robust and portable instrument for determining the chloride (salt) content of crude oils.

- Automatic salt concentration calculation
- Pre-calibrated for immediate use
- No need for mixing of salt standards
- Typical test time of less than 30 seconds
- Interchangeable sensor
- 3 operating modes (ASTM, IP, user defined)
- Results can be displayed or exported to PC or a LIMS network
- Battery or mains voltage operation
- Moistureproof
- Fully portable

Conductivity range	0 .0 to 151 lb / 1000 bbl (Res: 0.1 lb/bbl) 0.0 to 430.0 g/m³ (Res: 0.1 g/m³)
Temperature range	-20 °C to 150 °C (Res: 0.1 °C)
Power supply	9 Vdc battery or mains adaptor 100/220 Vac, 50/60 Hz
Size (HxWxD) / Weight	230x120x50 mm / 1.6 kg

SaltCheck Verification Tool (99703-0)

ASTM D3230; IP 265

A set of 3 'SaltCheck' verification modules, supplied in a convenient storage case. The modules are calibrated to show equivalent salt values of:

- 0 g/m³ | 30 g/m³ | 190 g/m³

ASTM D3230, Mixed Salt Solution, 250 ml (99704-001)

ASTM D3230, Neutral Refined Oil, 250 ml (99704-002)

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

Seta Oil Test Centrifuge for Sediment and Water

ASTM D91; D893; D1290; D1796; D2273; D2709; D2711; D4007; ISO 3734; ISO 9030

The Seta Oil Test Centrifuge is a heating centrifuge fitted with a rotor head with four or six universal pivoting buckets, used to determine water and sediment in oils.

- Heated chamber, ambient to 80 °C
- Static, near vertical bucket positioning
- 4 or 6 place swing out rotor
- Pre-heat facility to ensure bowl is at test temperature
- Conforms to IEC 1010-1 & 1010-2-D
- Optional vapour extraction system

4-Place Centrifuge (90000-3)
6-Place Centrifuge (90100-0)

Maximum RCF	2214 g
Maximum RPM	3000
Temperature range	20 to 80 °C (±1 °C) (86 to 176 °F)
Power requirement	230 Vac (110 V transformer option) 50/60 Hz / 1 kW
Size (HxWxD) / Weight	410x560x640 mm / 72.5 kg

Crude Oil Filtration Apparatus (19727-0)

ASTM D4807

The Crude Oil Filtration Apparatus determines the sediment in crude oils by membrane filtration in accordance with ASTM D4807. This test method has been validated for crude oils with sediments up to approximately 0.15 mass %.

Filtration Kit for Middle Distillates, IP 440 & EN 12622 (19720-0)/ASTM D6217 (19724-0)

Filtration Kit for Biodiesel & Biodiesel Blends, ASTM D7321 (19730-0)

Seta Cloud, Pour Point and CFPP (94150-0)

ASTM D97; ASTM D5853; IP 15; IP 441; BS 2000-15, ISO 3016; Pour Point of Petroleum Products
ASTM D2500; IP 219; BS EN 23015, BS 2000-219, ISO 3015; Cloud Point of Petroleum Products
ASTM D6371; IP309; EN ISO 116; Cold Filter Plugging Point of Diesel and Heating Fuels

A compact desktop instrument with four test wells suitable for both Cloud and Pour and CFPP tests. The instrument features a rapid cool-down, temperature range of 0 to -69 °C and is based on dry block technology.

- Built in cooling
- Dry block bath no cooling medium required
- Independent modular system
- Low power consumption and energy loss
- Temperature stability +/-0.2 °C or better
- Small, compact footprint
- Low maintenance

Number of test jackets	4
Cooling temperature range	Adjustable between 0 to -69 °C with PID control
Temperature stability	+/- 0.2 °C or better
Power	100 V 240 Vac, 50/60 Hz
Size (HxWxD) / Weight	280x240x500 mm / 20 kg

Seta Cloud and Pour Point Cryostats

ASTM D97; ASTM D5853; IP 15; IP 441; BS 2000-15, ISO 3016; Pour Point of Petroleum Products
ASTM D2500; IP 219; BS EN 23015, BS 2000-219, ISO 3015; Cloud Point of Petroleum Products

- Three or four individually temperature controlled compartments
- Four air wells in each compartment
- CFC free refrigeration system
- Heated anti-condensation lid

	Seta Cloud and Pour Point Cryostat 93531-7	Seta Compact Cloud and Pour Point Cryostat 94100-3
Temperature range	Ambient to -35 °C (x3) -35 to -51 °C (x1)	Ambient to -34 °C
Compartment volume	2 Litres	2 Litres
Test positions	16	12
Cool down time	Approx 2 hrs (from 32 °C to -51 °C)	Approx 1 hr (from 32 °C to -34 °C)
Power supply	1.8 kW 110/220 Vac, 50/60 Hz	750 W 220/240 Vac, 50 Hz
Size (HxWxD) / Weight	950x630x620 mm / 115 kg	600x600x850 mm / 115 kg

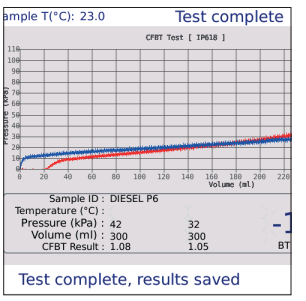
Stanhope-Seta, London Street, Chertsey, Surrey, KT16 8AP, UK
t: +44 (0) 1932 564391 | e: sales@stanhope-seta.co.uk | www.stanhope-seta.co.uk

Seta Cold Filter Blocking Tester (91670-2)

IP 618; BS EN 590; National Annex; IP 387; ASTM D2068 Procedure B

The Seta CFBT is a benchtop unit which measures the cold filter blocking tendency (CFBT) and cold filterability of middle distillate fuels containing biodiesel.

- Fully compliant with national annex to BS EN 590 for reporting IP 618 CFBT (-1 °C)
- IP 387/ASTM D2068 for measuring both FBT and CFBT
- Unique design for FBT of Diesel Fuel under cold conditions
- Easy to use, fully automated operation, fixed and programmable temperatures
- Touch screen colour display
- Typical 20 min test time for 2 test temperatures
- Automatic calculation of CFBT, FBT
- Temperature stability better than 0.5 °C
- Simple calibration/verification
- Ethernet and USB port
- LIMs compliant



Pump rate	20 ml/min, adjustable in software
Sample size	750 ml
Temperature range	-5 °C to +40 °C
Size (HxWxD) / Weight	320x530x540 mm / 24 kg

Seta Multi Filtration Tester (91600-3)

ASTM D2068; IP 387

The MFT is a compact instrument designed to test the Filter Blocking Tendency (FBT) of diesel, biodiesel, gas oil, gas turbine fuel and kerosene.

MFT Filter Blocking Tendency (FBT) range	1 to 30 (low number best)
Maximum pressure	200 kPa
Power requirement	110/120 V, 50/60 Hz 220/240 V, 50/60 Hz (switchable)
Size (HxWxD) / Weight	200x480x380 mm / 12 kg

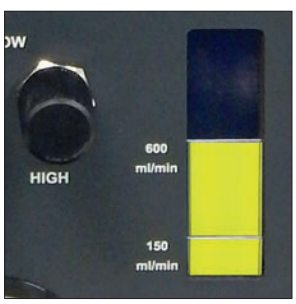
Micro Carbon Residue Tester (97400-3)

ASTM D4530; ASTM D189; IP 13; IP 398; ISO 10370

The Seta MCRT is an automatic instrument designed to determine the carbon residue formed after evaporation and pyrolysis of petroleum products.

- Carbon residue range 0.1% to 30.0% (m/m)
- Fully automatic, load and go
- 12 sample capacity
- Automatic temperature ramp and gas flow control
- Digital display flowmeter
- Equivalent to ASTM D189; IP 13
- Temperature range ambient to 500 °C
- User friendly interface
- Calibrated for precise temperature ramp rate
- Integrated fan for cooling
- Low pressure and over temperature cut out

Temperature range	Ambient to 500 °C ±2 °C
Ramp rate	10 to 15 °C/min
Pressure controller	20 to 750 kPa
Primary pressure	1400 kPa max
Flowmeter	0.1 to 1 litre/min
Flow rate	Automatic, 150 ml/min or 600 ml/min
Size (HxWxD) / Weight	460x350x390 mm / 21 kg



Setaclean Total Sediment Tester (16120-2)

ASTM D4870; BS ISO 10307-1; BS ISO 10307-2; BS 2000-390; IP 375; IP 390

- Measures sediment up to 0.5% m/m
- Sample viscosities up to 130 m/m^2/s
- 10 g sample size
- Two test stations

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

Seta Existent Gum Solid Bath

ASTM D381; IP 131; IP 540; BS EN ISO 6246; DIN 51 784

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.

- 5 test stations
- Suitable for air and steam or air only operation
- Integral steam superheater (12200-3 only)
- Digital temperature control
- Flow gauge calibrated for air and steam

	Air & Steam 12200-3	Air only 12210-0
Operating temperature range	140 to 260 °C (±5 °C) (284 to 500 °F)	
Heaters	Integral steam superheater	2 kW
Operational requirement	Steam generator or rotary compressor	Rotary compressor
Over temp cut out	280 °C (adjustable)	
Air/steam inlet	15 mm o.d pipe	
Size (HxWxD) / Weight	450x350x500 mm / 45 kg	

SSAFlab Filtration Kit for ASTM D5452, IP 423 (19722-0)

ASTM D5452; IP 423

SSAFlab Filtration Kit for the determination of particulate contamination in aviation fuels.

Comprises; ground/bond wire, 0.45 micron filter, matched weight pair of 0.8 micron filters, stainless steel filter holder with stainless steel screen, filter forceps, 25 mm solvent filtering dispenser, vacuum filtering flask, petrislide.

Seta Solid Block Bath 4 Way (16670-0)

ASTM D525; ASTM D873; IP 40; IP 157; BS EN ISO 7536, BS 2000-40, ISO 7536; BS 2000-138, IP 138

The Seta Solid Block Bath is an aluminium block bath with digital temperature control that has been designed to accept up to four oxidation vessels.

- 4 place dry block bath
- Small footprint
- Ambient +5 to 130 °C (heat up time of 80 minutes)
- Stability ± 0.1 °C
- Over temperature cut out
- Auto-Oxi control software available (15452-2)

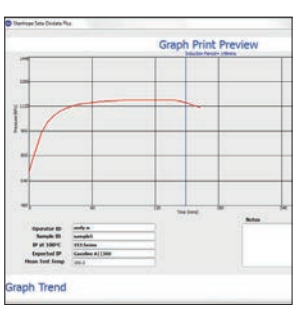
Bath type	Dry
Temperature range	Ambient 0 to 130 °C
Number of test stations	4
Heat up time to 100 °C	80 minutes
Power requirements	200/240 V, 50/60 Hz, 3 kW
Size (HxWxD) / Weight	300x600x280 mm / 65 kg

Seta Auto-Oxi Control System Software (15452-2)

Supports ASTM D525; IP 40; ASTM D873; IP 138; ASTM D5304

The Seta Auto-Oxi software is a data capture system for simultaneously monitoring up to four pressure vessels.

- Software for use with water or dry block baths
- Incorporates purge and leak test
- Automatic breakpoint determination
- Connects to Seta Pressure Transducers (15455-3)
- Connects to a PC via USB data cable



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

Seta TOST Solid Block Bath (16640-2)

ASTM D943; ASTM D2274; IP 157; IP 388; ISO 4263

The Seta TOST Bath is a compact solid block bath which can accept up to 12 sets of oxidation glassware, it is suitable for TOST tests and as an alternative to liquid filled baths.

- Suitable for TOST tests and as an alternative to liquid filled baths
- 12 positions dry block bath
- Ambient to 100 °C temperature range
- Integral Setatemp controller
- Seta Oxflo controller and flowmeters included

TOST Dry Block Bath - 6 Way with Oxflo (16645-2)
Oxidation Bath Liquid - 6 Way with Oxflo Controller (16900-7)

Temperature range	Ambient to 100 °C
Temperature control at 95 °C	Uniformity ±0.1 °C Stability ±0.03 °C
Bath type	Solid block
Power requirements	220/240 V, 50/60 Hz / 2 kW
Size (HxWxD) / Weight	Bath: 500x250x640 mm / 110 kg Oxflo Control Unit: 440x350x260 mm / 11 kg

Seta Oxi-Corrosion Bath (15550-3)

ASTM D130; D525; D873; D4048; D4814; D5304; D7667; D7671; BS 2000-112; IP 112; BS 2000-138; IP 138; IP 40; IP 154; IP 611; BS EN ISO 2160; BS 2000-154; ISO 2160; BS EN ISO 7536; BS 2000-40; ISO 7526

- 34 Litre liquid bath for Copper/Silver corrosion and oxidation tests
- Ambient +5 to 150 °C temperature range
- 4 test stations (3 when used for Oxidation tests)

Seta Copper Silver Block Bath (11310-0) also available

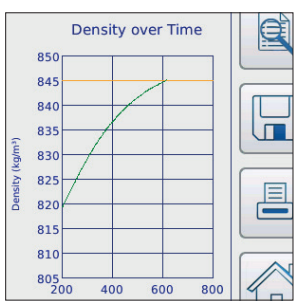
Air Release Value System (15840-0)

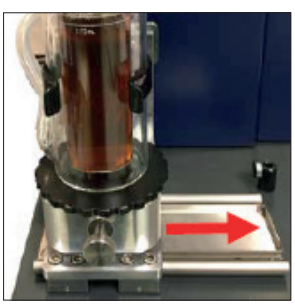
ASTM D3427; IP 313; BS 2000-313; ISO 9120

Seta Air Release Value (ARV) System is a benchtop, automated instrument, used to evaluate the ability of turbine, hydraulic and gear oils to release entrained air.

- Integrated solution
- Multi-station sample management platform
- Simple test menu
- Automated density monitoring
- Circulated sample heating
- Quick connectors for ease of sample handling
- Integral sinker warmer
- Automatic result calculation
- Results storage for over 10,000 tests
- Full LIMS connectivity

Sample size	200 ml
Test temperature range	Ambient to 75 °C (air to 85 °C)
Set temperatures	25 °C, 50 °C, 75 °C (custom temp available in software)
Sample temperature stability	±0.1 °C
Air temperature stability	±0.2 °C
Water supply	10 l/min, adjustable from 25 °C to 80 °C
Density	0.0001 g/ml (0.1 kg/m³)
Size (HxWxD) / Weight	820x440x500 mm / 29 kg





Setafoam Dual Twin Foam Test Baths (14020-8)

ASTM D892; IP 146; ISO 6247

Setafoam Dual Twin Foam Test Baths are a pair of highly transparent water baths for detecting foaming characteristics in lubricating oils.

- High and low temperature baths
- Up to two simultaneous tests per bath
- Two pre-heating stations per bath
- Two integral normalising coils
- Digital or Analogue flow meter options available
- LED back lighting

Temperature range	Ambient to 100 °C, ±0.5 °C
No. of baths	2
No. of cylinders	4 (2 per test)
Cylinders	1000 ml, borosilicate glass, graduated
Diffuser	Cylindrical or Spherical
Flowmeters	2 per bath, 94 ±5ml/min
Size (HxWxD) / Weight	700x480x400 mm / 50 kg

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

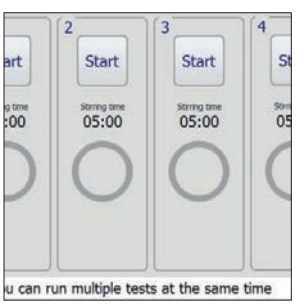
Herschel Emulsifier (96700-2)

ASTM D1401; IP 412; ISO 6614

The Herschel Emulsifier is a bench top, automated instrument, used to measure the ability of petroleum oils or synthetic fluids to separate from water.

- 4 independently controlled test stations
- Multiple operator safety features, including emergency stop button
- Motorised raising and lowering
- Automated test sequence
- Intermediate scraping position
- Integrated timing
- Easy handling and removal of sample
- No removal of the paddles required
- Guaranteed paddle rotation speed
- Non-reflective enhanced LED lighting

Bath volume	5 Litres
Bath liquid	Water or white oil
Sample size	40 ml oil 40 ml distilled water 1% sodium chloride solution or synthetic seawater
Test temperatures	54 °C and 82 °C
Bath temperature stability	±1 °C
Stirrer speed	1500 ±15 rpm
Size (HxWxD) / Weight	890x450x450 mm / 49.5 kg



Seta Autowash (14024-2)

ASTM D892; D6082; IP 146

- Automatic, unattended cleaning of diffuser and air tube
- Cleans and dries cylindrical metal or spherical diffusers
- Ensures consistent cleaning everytime
- Up to 10 factory washing programs available
- Low solvent use
- No operator exposure to solvents
- Quick and simple operation

Seta-Shell Four Ball Lubricant Testers

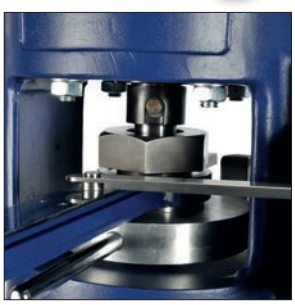
ASTM D2266; D2596; D2783; D4172; IP 239; BS ISO 26422; BS EN ISO 20623; DIN 51350; CEC-L-45-99

Seta-Shell 4-Ball lubricant testers are used to determine the effectiveness of lubricants and greases at preventing component wear under extreme loads.

- Applied loads range up to 800 kgf
- Drive speed from 1200 to 1760 rpm
- Digital timer and display with selectable range 0.1s to 9999hr
- Digital displays and microprocessor control of Applied Load and Torque (19900-3)
- Automatic torque limiting and cut-off
- Interlocked guards for maximum safety
- Optional heating pad and controller

Seta-Shell Four Ball Autoload (19900-3)

Seta-Shell Four Ball Manual Load (19800-7)



	Autoload 19900-3	Manual Load 19800-7
Speed range	1200 to 1760 rev/min	1200 to 1760 rev/min
Load range	40 to 800 kgf	0 to 800 kgf
Timing	0.1s to 9999hr	0.1s to 9999hr
Power supply	220/240 V, 50/60 Hz, 2.6 kW	220/240 V, 50/60 Hz, 2.6 kW
Size (HxWxD) / Weight	1690x630x620 mm / 150 kg	1690x820x620 mm / 161 kg

Viscosity Shear Stability Head (19820-3)

CEC L-45-99; ISO 26422

- Temperature control via an external chiller
- PC connectivity for temperature data logging
- Secondary over temperature monitoring with automatic shutdown
- Quick release mounting system for easy bearing access

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

Stanomatic Dual Grease Workers

ASTM D217; ASTM D7342; BS 2000-50; IP 50; ISO 2137

The Stanomatic Dual Grease Worker removes the variations that can occur in the hand operation of grease workers, particularly with hard greases.

- Quick release heavy duty brass or stainless steel worker cups
- Works two grease cups simultaneously
- Auto-stop at up to 99,999 strokes
- 60 ±10 strokes per minute
- Cover and plunger assemblies with 51 x ¼ inch hole perforated plates
- Safety screen with auto shut off
- Large bore cock for thermometer insertion

Grease Worker with Brass Cups (17790-2)
Grease Worker with Stainless Steel Cups (17792-2)

	Grease Worker with Brass Cups 17790-2	Grease Worker with Stainless Steel Cups 17792-2
Speed	60 strokes per min ±10	60 strokes per min ±10
Worker plate	51 x 1/4 inch holes	51 x 1/4 inch holes
Grease pot	2 x brass	2 x stainless steel
Power supply	110/120 V, 60 Hz, 220/240 V, 50/60 Hz, 450 W	110/120 V, 60 Hz, 220/240 V, 50/60 Hz, 450 W
Size (HxWxD) / Weight	460x370x500 mm / 35 kg	460x370x500 mm / 38 kg

Setamatic Penetrometer (17500-0)

ASTM D1403; ASTM D1831; ASTM D217; ASTM D7342; ASTM D937; IP 179; IP 310; IP 50; ISO 2137

- Microprocessor controlled automatic penetrometer
- Penetration range 0 to 630 Pen (63 mm)
- Timer range 1 to 9999 seconds
- Automatic plunger release and retention
- Flexi light and inbuilt spirit level
- RS232C interface

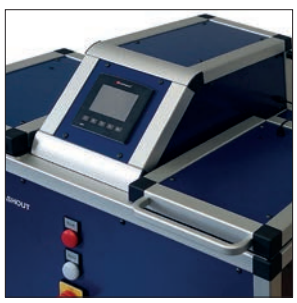
Dual Water Washout Tester (19650-0)

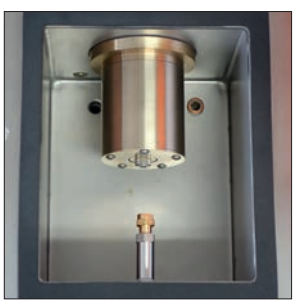
ASTM D1264; DIN 51 807; IP 215; ISO 11009

The Seta Dual Water Washout Tester estimates the resistance of a lubricating grease to washout by water from a bearing.

A dual bath instrument with the capability for simultaneous testing at 38 °C and 79 °C allowing significant time savings for D1264 tests.

- Twin bearing and housing for duplicate or independent testing
- Two separate water tanks and jets
- All parameters are independently adjustable
- Magnetic bearing drive for easy disassembly and removal
- PLC for an automatic test procedure and display of test parameters
- Spacious and easy to clean water tank
- Integral bath drain
- All water wet parts are resilient to salt water
- Rapid warm up time





Single Bath Water Washout Tester (19610-4)

Test capacity	Dual bath
Rotation speed	600 ±30 rpm
Temperature range	Up to 80 °C, preset ranges of 38 °C and 79 °C
Power supply	220/240 V, 50 Hz
Size (HxWxD) / Weight	520x730x500 mm / 55 kg

Roll Stability Testers

ASTM D1831

- 165 rpm or 100 to 200 rpm variable speed control
- Air bath temperature range ambient to 200 °C
- Integral timer
- Variable speed control
- Polished stainless steel or mild steel cylinder/roller options
- Optional venting hood for ambient tests

Seta High Temperature Roll Stability Tester (19400-5)

Seta High Temperature Roll Stability Tester SC, variable speed (19450-0)

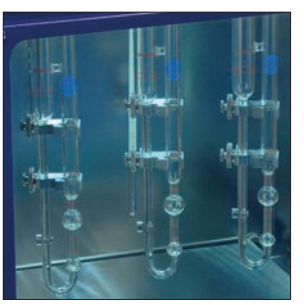
Stanhope-Seta, London Street, Chertsey, Surrey, KT16 8AP, UK
t: +44 (0) 1932 564391 | e: sales@stanhope-seta.co.uk | www.stanhope-seta.co.uk

KV-6 Viscometer Bath (84200-3)

ASTM D2170; ASTM D2270; ASTM D445; ASTM D446; IP 71; IP 226; IP 319; BS 188; BS 2000-71; ISO 3105; BS EN 12595; BS 2000-319; EN 3104; DIN 51 366; DIN 51 562

The KV-6 Viscometer Bath precisely maintains the temperature of viscometer tubes, which are used to measure the viscosity of liquid petroleum products.

- Up to 6 viscometer tubes
- 50 litre oil/water bath
- Temperature stability ±0.01 up to and including 100 °C, ±0.03 above 100 °C
- Digital display with 0.01 °C resolution
- Oil, silicone fluid or water filled depending on temperature of use
- Double wall glass front panel ensures optimum insulation and reduce heat loss
- Toughened glass front panel and integral back lighting



Temperature range	Ambient to 150 °C (302 °F)
Temperature stability	±0.01 °C up to and including 100 °C, ±0.03 °C above 100 °C
Tube capacity	up to 6
Bath fluid	Oil/silicone/water
Bath capacity	50 Litres
Power requirements	220/240 V, 50/60 Hz / 2.2 kW
Size (HxWxD) / Weight	460x350x390 mm / 21 kg

KV-2 Viscometer Bath (94710-3)

ASTM D445; ASTM D446; IP 71; BS 188; BS EN ISO 3104; BS 2000-71.1; ISO 3104; BS 2000-71-2; ISO 3105

Temperature range	-40 °C to 20 °C
Temperature stability	±0.01 °C at -20 °C
Tube capacity	up to 2
Bath fluid	Anhydrous methanol or water/ ethylene glycol (50/50)
Bath capacity	7 Litres
Size (HxWxD) / Weight	750x370x700 mm / 56 kg

SetaCheck Biodiesel (SA5500-0)

ASTM/IP pending

SetaCheck Biodiesel is a handheld instrument designed to provide fast, accurate and repeatable on-site measurement of biodiesel content in diesel fuel blends.

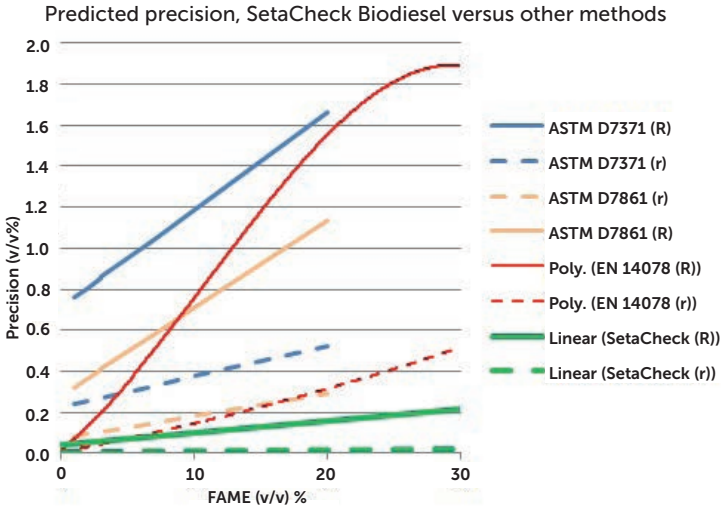
- No dilution required, samples measured directly
- Correlates with EN 14078
- Unique Mid-IR technology
- Simple to use
- Bright, backlit screen displays the Biodiesel concentration (% by volume)
- User calibration available via PC software

Range	0.1% to 40%
Operating temperature	5 - 40 °C
Test duration	Less than 1 minute
Sample volume	2 ml
Power supply	Rechargeable Lithium Ion battery
Size (HxWxD) / Weight	215x150x360 mm / 1 kg

1) Switch instrument on

2) Fill cell

Predicted precision, SetaCheck Biodiesel versus other methods



3) Press play

4) Results display

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

In-Line Conductivity Sensors, JF-1A

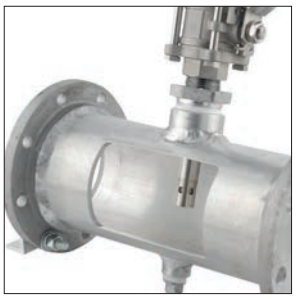
ASTM D2624; IP 274

The Seta D2 In-line Conductivity Sensor continuously measures the conductivity of distillate fuels in distribution systems.

- 16 Bar pressure or 100 Bar with the high pressure unit
- High accuracy AC measurement technology
- Allows precise control and measurement of SDA Additive Injection
- Stainless steel construction
- Easily fitted and retracted from the pipeline via a retractable mount (16 Bar version only)
- Can be fitted to pipes of various diameters
- ATEX, FM, FMc, IEC Certified for Zone 1, Hazardous Areas
- All water wet parts are resilient to salt water

Inline Conductivity Sensor (99500-0)
High Pressure Inline Conductivity Sensor (99505-0)

Conductivity range	0-2000 pS/m
Accuracy	±2 pS/m or ±2% of reading
Temperature range	-40 to 85 °C
Pressure	16 Bar or 100 Bar
Resolution	0.1 pS/m / 0.1 °C
Process connection types	ANSI, DIN, NPT, BSP
Weight	6.8 kg



Handheld Conductivity Sensors, JF-1A-HH

ASTM D2624; IP 274

- High accuracy AC measurement (± 1.5 % of reading)
- Conductivity and temperature output capability
- Measure in any sample container
- No need to relax the fuel
- Calibration kit available
- Stores up to 8 data locations
- USB interface for ease of data transfer to user

Conductivity Meter for Fuels (99708-0)	0-2000 pS/m ±2.5 pS/m (±1.5% of reading)
Conductivity Meter for Oils (99707-0)	0-2000 pS/cm ±1.5 pS/cm (±1.5% of reading)
Conductivity Meter for Ink & Paints (99706-0)	0-10,000 pS/cm ±1 pS/cm (±1.5% of reading)
Resolution	0.1 pS/m (99708-0), 0.1 pS/cm (99707-0)
Temperature range	0 to 35 °C (±0.1 °C) (32 to 95 °F)
Size (HxWxD) / Weight	310x110x100 mm / 0.5 kg

FIJI FAME Measurement

ASTM D7797; ASTM D7963; IP 583; ASTM D1655; Defence Standard 91-091; ISO 8217

The FIJI FAME Analysers offer a rapid and easy check on Parts Per Million levels of fatty acid methyl ester (FAME) content in fuels, C8 to C22.

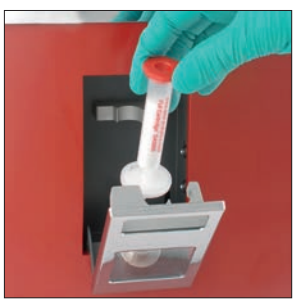
- Analysis time 20 minutes
- Certified range 10-150 mg/kg FAME in AVTUR
- Measuring range 0-1000 mg/kg in AVTUR
- Certified range 20 ppm to 20% in Distillate and Residual fuels
- Fully automatic
- Suitable for untrained operators
- No cleaning solvents required
- No pre-sample preparation required
- 50 ml sample volume

FIJI FAME in Jet (SA5000-2)

FIJI FAME in Middle Distillate & Residual Fuel (SA5100-0)

FIJI FAME MultiFuel (SA5200-0)

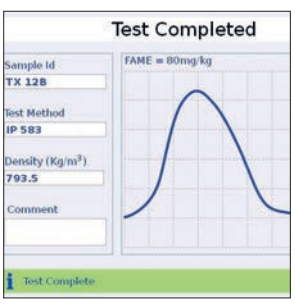
Sample size	50 ml
Connectivity	2 x USB
User interface	Colour touch screen
Power supply	50 W
Size (HxWxD) / Weight	550x380x420 mm / 27 kg



1) Load cartridge

2) Place sample

3) Press GO



4) Test completed

FIJI uniquely uses state of the art FTIR (Fourier Transform Infra-Red Spectroscopy) technology coupled with a patented sample preparation system. FAME detection is from 10mg/kg and the instrument has full ASTM and IP method precision from 10mg/kg level upwards.

FIJI can be used as a lab or field based screening tool. Rapid screening of fuels using the FIJI technique avoids the need for both expensive and complex analytical tests, and can prevent costly delays when releasing jet fuel.

The FIJI instrument is robust, extemely easy to use and is fully automatic so no specialist operator training is involved. Tests require less than 50 ml of sample and typically take under 20 minutes. Results are presented in mg/kg units together with an optional traffic light system for flagging go/no go FAME contamination levels of the fuel.

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

H_2S Analyser with Vapour Phase Processor (SA4000-3 & SA4015-0)

ASTM D7621; IP 570;
ISO 8217

The H_2S Analyser is a compact bench-top instrument, used to measure the total hydrogen sulphide (H_2S) content of fuel oils and dead crude oils.

- Measurement range from 0-250 mg/kg H_2S (0-250 ppm H_2S) in the liquid phase
- Vapour Phase Processor proven to eliminate effects of chemical interference
- A non chemical method, no wet chemistry involved
- Small lab bench footprint, fully portable operation
- Suitable for monitoring residual marine fuel blends, refinery feedstock components, cargoes and products in the distribution system and crude oils
- Critical measurement method for product safety and release

Measurement range	0-250 mg/kg
Viscosity range	30-3000 mm^2/s
Principle of measurement	Electro-chemical sensor
Test duration	15 minutes with VPP
Sample size	1 ml, 2 ml, 5 ml (depending on H_2S concentration)
Diluent volume	20 ml
H_2S size (HxWxD) / Weight	220x290x380 mm / 8 kg
VPP size (HxWxD) / Weight	220x230x380 mm / 7.8 kg

IP 570 Proficiency Test Scheme (PTS) (SA4032-0)

ASTM D7621; IP 570

- Evaluate and monitor laboratory and instrument performance
- Demonstrate compliance with laboratory accreditation requirements
- World-wide inter-laboratory comparison of test results and performance
- Identify any potential equipment or operational bias
- Provide added confidence to laboratory staff and customers

Seta AvCount Lite (SA1800-2)

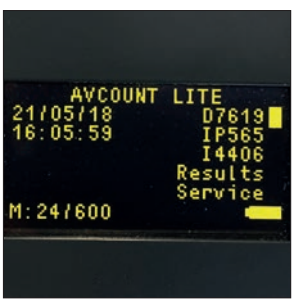
Fuels • Hydraulic oil • Light lubricants

ASTM D7619; IP 565; ASTM D975; Defence Standard 91-86; Defence Standard 91-091; ISO 4406

The AvCount Lite particle counter provides reliable results for determining the particle concentration in liquid fuels and oils.

- ISO 11171 calibration
- Cumulative Particles/ml
- ISO 4406 Cleanliness Codes
- Simple operation
- Portable, compact instrument
- Under 3 minute test time
- Bottle samples or on-line (high and low pressure with ProTrend)
- Stand alone or PC controlled
- Programmable via PC
- Integrated printer
- Battery power optional

Counts per measurement (max)	600,000
Sample viscosity (max)	68 mm^2/s
Test methods	3 stored at any one time, unlimited on PC
Number of measuring channels	6 and 15 (programmable)
Results	600 measurements internal, unlimited on PC
Sample temperature range	0 to 70 °C
Connectivity	USB connection for PC
Power supply	100 – 240 Vac, 50/60 Hz power adaptor Optional 12 Vdc battery and charger
Size (HxWxD) / Weight	260x320x150 mm / 6 kg



Seta AvCount2 (SA1000-2)

ASTM D7619; IP 565; ASTM D975; Defence Standard 91-86; Defence Standard 91-091; NAS 1638

- ISO 11171 calibration
- Cumulative and distributive particle counts
- Cleanliness code reporting
- Uses 'straight from the bottle' samples
- Rugged case for laboratory or portable use
- Under 6 minute test time
- 16 fixed measuring channels
- 13 embedded test methods
- Data storage for up to 2300 measurements
- Optional in-line high pressure testing up to 315 Bar

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

Seta AvCount Lube (SA1900-0)

Fuels • In-service lubricants
Hydraulic fluids • Insulating oils

ASTM D7647*; ISO 4406*; ISO 60970*; ASTM D678; NAS 1638; AS 4059F; ISO 11500; SAE A6D; SAE 749D; GOST 17216; GB 5930; GJB 420-A-1996; GJB 4208-2006
*Does not require connection to a computer

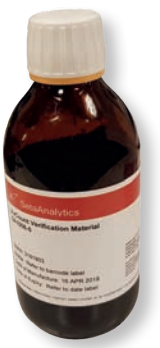
The AvCount Lube is a fully configured particle counter and sample delivery system suitable for testing higher viscosity samples such as lubricating oils.

- ISO 11171 calibration
- Up to 200 mm^2/s viscosity
- FFKM seals resistant to many synthetic oils
- PC controlled via ProTrend software
- User friendly software
- Integral compressor
- Programmable via PC
- Under 3 minute test time

Counts per measurement (max)	600,000
Sample viscosity (max)	200 mm^2/s with integral Sample Delivery System
Total sample volume used	80 ml
Number of measuring channels	6 and 15 (programmable)
Results	600 measurements internal, unlimited on PC
Sample temperature range	0 to 70 °C
Connectivity	USB connection for PC
Power supply	100 – 240 Vac, 50/60 Hz
Size (HxWxD) / Weight	640x320x280 mm / 16 kg

AvCount Verification Material (SA1006-0)

- Manufactured in accordance with ISO 11171 Annex F
- Supplied in 250 ml bottles with a Certificate of Measurement



AvCount ProTrend (SA1810-0)

- Allows AvCount Lite to be controlled from a PC
- Create local custom test methods, run tests and download data
- Supports up to three AvCount Lite units and can synchronise sampling and measurement to allow trend analysis

AFIDA (SA6000-0)

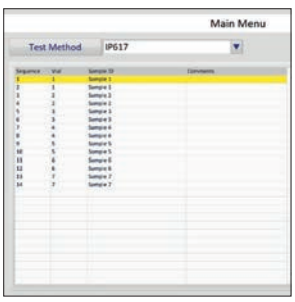
ASTM D8183; IP 617; EN 17155
Correlates with ASTM D613; EN ISO 5165 & DIN 51773
ASTM D975; ASTM D6751; ASTM D7467; EN 590 5.7.4

AFIDA provides fully automated determination of the Indicated Cetane Number (ICN) of diesel and diesel related fuels.

- Indicated Cetane Number by CVCC
- Highly automated with auto sampler
- Primary Reference Fuel Calibration
- No bias correction to engine values
- Excellent precision to minimise giveaway
- Easy to use, suitable for 24/7 operation
- Load and go

Carousel capacity	36 samples
Range for ICN	35 - 85
Chamber temperature	580 °C
Chamber pressure	17.5 bar
Injection pressure	1000 bar
Compressed air	20.9 ± 0.5 % O2
Sample volume	Approx 40 ml for analysis and cleaning
Warm up time	Approx 45 mins
Analysis time	Approx 25 min per sample
Size (HxWxD) / Weight	1300x800x600 mm / 160 kg

1) Place sample in carousel and select location

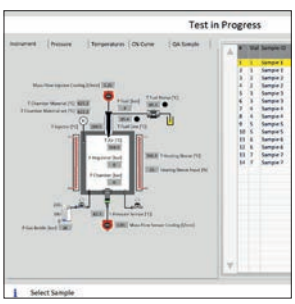


2) Select test sequence and press go

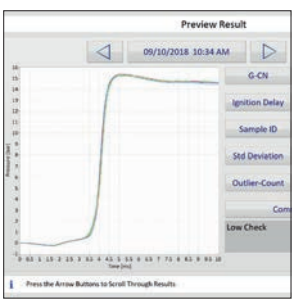
AFIDA incorporates a unique and patented high pressure injection system that generates fine fuel droplets similar to modern common rail injectors in most diesel engines.

A temperature controlled piezo electric injector provides highly repeatable fuel metering, offering improved performance and consistency when compared with solenoid controlled injectors and pintle type nozzles.

The analyser provides very fast, efficient and calibrated ICN determinations using an integral 36 position carousel and auto sampler.



3) Monitor instrument status, pressure, temperature or CN curve during test



4) View results

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

Water Separation Instrument (WSI) (SA9000-0)

ASTM D8073; IP 624
ASTM D1655

The WSI measures how effectively a fuel sample releases entrained and emulsified water when pumped through a water coalescing filter.

- Substantial cost saving per test
- Fully automated sample handling
- Simple operation for non-chemists
- Patented Ultra Sonic Mixer
- 10 minute test duration
- Minimal operator time required (under 3 minutes)
- Sonic mixing sequences providing consistent water droplet size and stable emulsion
- Featuring an API/EI 1581 5th edition filter material
- High resolution optical water detector measuring to <1ppm water concentration

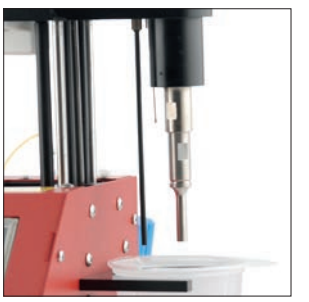
Measurement range	5-100 Water Separation Index (WSI)
Temperature range	15 °C to 35 °C
Sample size	230 ml
Power	Universal, AC 85-264 Vac, 42-63 Hz
Outputs	USB, digital display
Size (HxWxD) / Weight	380x310x350 mm / 8 kg

The WSI is designed to predict filter coalescer failure. The instrument is fully automatic with simple touch screen operation. The WSI features a patented Sonic Mixing Technology which eliminates any variables with water droplet size and ensures the same amount of energy is applied to each sample.

Filter cartridges use latest generation API/EI 5th edition filter material which is less sensitive to weak surfactants and eliminates uncertainty over static dissipator additives, but is responsive to the presence of ester based additives.

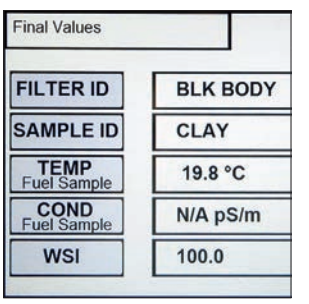
In use, an automated test sequence first emulsifies the sample with dyed water using the ultra-sonic mixer. Once emulsified the sample is pumped through the filter cartridge and onto the sensitive water detection system. As the test progresses the filter effectiveness decreases and the detection system measures the water passing through the filter. At the end of the test the result is shown as the Water Separation Index (WSI).

> Filter cartridge



> Patented Ultra Sonic Mixer

> Supports bar code reader



> Touch screen display

SETA STANHOPE-SETA

Product Profile

Multi Test Verification Materials

- Highly cost effective solution to laboratory verification requirements
- Verification to ASTM/CEN/ISO/IP
- Certified values
- 2 year shelf life from manufacture

99850-0 Seta MTVM - Kerosene (Jet Turbine Fuel) 500 ml

Test Name	ASTM / Method	Range	Amount/test
Density	IP 365	0.798 to 0.807 kg/l	2 ml
Distillation IBP	D86; IP 123; EN ISO 3405	140 to 180°C	100 ml
Distillation 10%	D86; IP 123; EN ISO 3405	159 to 188°C	100 ml
Distillation 50%	D86; IP 123; EN ISO 3405	183 to 218°C	100 ml
Distillation 90%	D86; IP 123; EN ISO 3405	220 to 252°C	100 ml
Distillation FBP	D86; IP 123; EN ISO 3405	241 to 269°C	100 ml
Distillation Residue	D86; IP 123; EN ISO 3405	1.1 to 1.3% vol	100 ml
Distillation Loss	D86; IP 123; EN ISO 3405	0.4 to 0.8% vol	100 ml
Flash Point	IP 170; EN ISO 13736	35 to 60°C	85 ml
Freezing Point	D2386;IP 16	-62 to -43°C	25 ml
Aromatics FIA	D1319; IP 156	16 to 22% vol	0.75 ml
Smoke Point	D1322; IP 57; ISO 1322	20 to 25 mm	20 ml
Kin Vis -20°C	D445; IP 71; EN ISO 3104	2 to 8 mm^2/s	20 ml
Acid Number	D3242; IP 354	< 0.100 mg KOH/g	100 ml
Mercaptans	D3227; IP 342; ISO 3012	0.0003 to 0.0100% (m/m)	40 ml

99851-0 Seta MTVM - Gas Oil 500 ml

Test Name	ASTM / Method	Range	Amount/test
Density at 15°C	D4052; IP 356	0.83 to 0.854 kg/l	2 ml
Distillation IBP	D86; IP 123; EN ISO 3405	160 to 190°C	100 ml
Distillation 10%	D86; IP 123; EN ISO 3405	198 to 242°C	100 ml
Distillation 50%	D86; IP 123; EN ISO 3405	255 to 290°C	100 ml
Distillation 90%	D86; IP 123; EN ISO 3405	319 to 350°C	100 ml
Distillation 95%	D86; IP 123; EN ISO 3405	335 to 368°C	100 ml
Distillation FBP	D86; IP 123; EN ISO 3405	347 to 385°C	100 ml
Distillation Residue	D86; IP 123; EN ISO 3405	1.25 to 1.42% vol	100 ml
Distillation Loss	D86; IP 123; EN ISO 3405	0.26 to 0.7% vol	100 ml
FAME Content	IP 579	0.03 to 19.03% (V/V)	
Flash Point	D93; IP 34; EN ISO 2719	56 to 80°C	75 ml
Cloud Point	D2500; D5771-IP 444; D5772; IP 445; D5773; IP 446; IP 219; ISO 3015; EN 23015	-17 to -4°C	Up to 38 ml
CFPP	D6371; IP 309; EN 116	-30 to 0°C	45 ml
Pour Point	D97; IP 15; D5950; D5949; D6749; D6892; D5985; EN ISO 3016	-33 to -6°C	Up to 38 ml
Kin Vis 40°C	D445; IP 71; EN ISO 3104	2.3 to 3.5 mm^2/s	Up tp 40 ml
Lubricity HFRR	D6079; IP 450; ISO 12156-1	212 to 512 µm	2 ml
Water Karl Fischer	D1744; IP 438; EN ISO 12937	23.4 to 63.9 mg/kg	5 ml

99852-0 Seta MTVM - Fuel Oil 500 ml

Test Name	ASTM / Method	Range	Amount/test
Density at 15°C	D4052; IP 356	0.94 to 0.994 kg/l	2 ml
Pour Point	D97; IP 15	-14 to 7°C	Up to 38 ml
Kin Vis 50°C	D445; IP 71; EN ISO 3104	150 to 1800 mm^2/s	Up to 40 ml
Kin Vis 100°C	D445; IP 71; EN ISO 3104	20 to 95 mm^2/s	Up to 40 ml
Micro Carbon	D4530; IP 398; ISO 10370	0.10 to 30.0% (m/m)	2 ml
Flash Point	D93 (b); IP 34 (b); EN ISO 2719 (b)	88.9 to 121.6°C	75 ml

99854-0 Seta MTVM - Motor Gasoline 500 ml

Test Name	ASTM / Method	Range	Amount/test
Motor Octane No.	D2700; ISO 5163	82 to 90 MON	-
Research Octane No.	D2699; ISO 5164	90.5 to 101 RON	-
Density at 15°C	D4052; IP 356; ISO 12185	0.721 to 0.763 kg/l	2 ml
Distillation IBP	D86; IP 123; EN ISO 3405	26 to 39°C	100 ml
Distillation 70°C	D86; IP 123; EN ISO 3405	15 to 44 % vol	100 ml
Distillation 100°C	D86; IP 123; EN ISO 3405	36 to 70 % vol	100 ml
Distillation 150°C	D86; IP 123; EN ISO 3405	75 to 95 % vol	100 ml
Distillation FBP	D86; IP 123; EN ISO 3405	175 to 205°C	100 ml
Aromatics FIA	D1319; IP 156	19 to 42% vol	0.75 ml
Olefins FIA	D1319; IP 156	1.5 to 15% vol	0.75 ml
Saturates FIA	D1319; IP 156	42 to 72% vol	0.75 ml
Vapour Pressure	D5191; IP 394; EN 13016-1	50 to 95 kPa	3 ml

99856-0 Seta MTVM - Bitumen 200ml

Test Name	ASTM/Method	Range	Amount/test
Softening Point	IP 58; EN ISO 1427	37 to 54°C	7.5 ml
Needle Penetration	IP 49; EN ISO 1426	35 to 200 Pen	130 ml

99853-2 Seta MTVM - Lubricating Oil 500 ml (guide 34)

Test Name	ASTM / Method	Range	Amount/test
Flash Point	D93 Procedure A	196 to 225°C	80 ml
Pour Point	D97; IP 15	-49.1 to -33°C	50 ml
Kinematic Viscosity 40°C	D445	53 to 165 mm^2/s	30 ml
Kinematic Viscosity 100°C	D445	9 to 22 mm^2/s	30 ml
Viscosity Index	D2270	139 to 180	60 ml
Density	D4052	0.85 to 0.88 g/mL	10 ml
Zinc	D5185	800 to 1275 mg/kg	5 ml
Calcium	D5185	3000 to 5000 mg/kg	5 ml
Phosphorus	D5185	800 to 1600 mg/kg	5 ml
Acid Number	D664	1 to 5 KOH/g	2 ml
Base Number	D2896	5 to 15 KOH/g	3 ml

Single Test Verification Materials

- Verification to ASTM/CEN/ISO/IP
- Certified values
- 2 year shelf life from manufacture

Seta STVM - Kerosene 50 ml

Seta Part Number	Test Name	ASTM/Method	Range
99857-0	Napthalenes	D1840	1.33 to 2.4% vol
99858-0	Sulfur ED X-ray	D4294; IP 336; EN ISO 8754	0.003 to 0.110% m/m
99898-0	Aromatics-Di HPLC	D6379; IP 436	1.44 to 2.90% m/m
99898-0	Aromatics-Mono HPLC	D6379; IP 436	15.2 to 21.2% m/m
99898-0	Aromatics-Total HPLC	D6379; IP 436	16.9 to 22.8% m/m

Seta STVM - Gas Oil 50 ml

Seta Part Number	Test Name	ASTM/Method	Range
99867-0	Sulfur WD X-ray	D2622	0.0009 to 0.013% m/m
99869-0	Aromatics HPLC	D6591; IP 391; EN 12916	0.6 to 3.6% m/m

99905-0 Seta SIMDIS STVM - Kerosene (Jet Turbine Fuel) 10 ml

Test Name	ASTM/Method	Range	Amount/Test
SIMDIS IBP	D2887; IP 406	100 to 180°C	1 ml
SIMDIS 10%	D2887; IP 406	142 to 188°C	1 ml
SIMDIS 50%	D2887; IP 406	183 to 218°C	1 ml
SIMDIS 90%	D2887; IP 406	220 to 249°C	1 ml
SIMDIS 95%	D2887; IP 406	230 to 259°C	1 ml
SIMDIS FBP	D2887; IP 406	244 to 297°C	1 ml

99906-0 Seta SIMDIS STVM - Gas Oil 10 ml

Test Name	ASTM/Method	Range	Amount/Test
SIMDIS IBP	D2887; IP 406	120 to 190°C	1 ml
SIMDIS 10%	D2887; IP 406	177 to 242°C	1 ml
SIMDIS 50%	D2887; IP 406	260 to 290°C	1 ml
SIMDIS 90%	D2887; IP 406	320 to 355°C	1 ml
SIMDIS 95%	D2887; IP 406	335 to 375°C	1 ml
SIMDIS FBP	D2887; IP 406	350 to 414°C	1 ml

99980-0 Seta STVM - Gasoline 5 x 5 ml

Test Name	ASTM/Method	Range	Amount/Test
Motor Gasoline Aromatics	D6839; ISO 22854; EN 14517	22.41 to 35.41% vol	0.1 µL
Motor Gasoline Olefins	D6839; ISO 22854; EN 14517	0.31 to 14.50% vol	0.1 µL
Motor Gasoline Saturates	D6839; ISO 22854; EN 14517	43.62 to 77.2% vol	0.1 µL
Motor Gasoline Oxygenates	D6839; ISO 22854; EN 14517	0.04 to 12.3% vol	0.1 µL
Motor Gasoline Oxygen	D6839; ISO 22854; EN 14517	0 to 2.58% vol	0.1 µL
Motor Gasoline Benzene	D6839; ISO 22854; EN 14517	0.051 to 0.888% vol	0.1 µL

99981-0 Seta STVM - Gas Oil 50 ml

Test Name	ASTM/Method	Range	Amount/Test
Gas Oil Sulphur	D5453; IP 490; ISO 20846	3 to 10 mg/kg	1 ml

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 | Issue 3