Herschel Emulsifier 96700-2

Water Separability of Petroleum Oils and Synthetic Oils

ASTM D1401; ISO 6614; FTM 791-3201; IP 412

The Compact and Efficient Solution

- 4 independently controlled test stations
- Multiple operator safety features
- 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
- Large viewing window
- Large LCD touchscreen display
- Small footprint
- Intuitive software package

Petroleum Oils • Synthetic Fluids

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Innovative Design

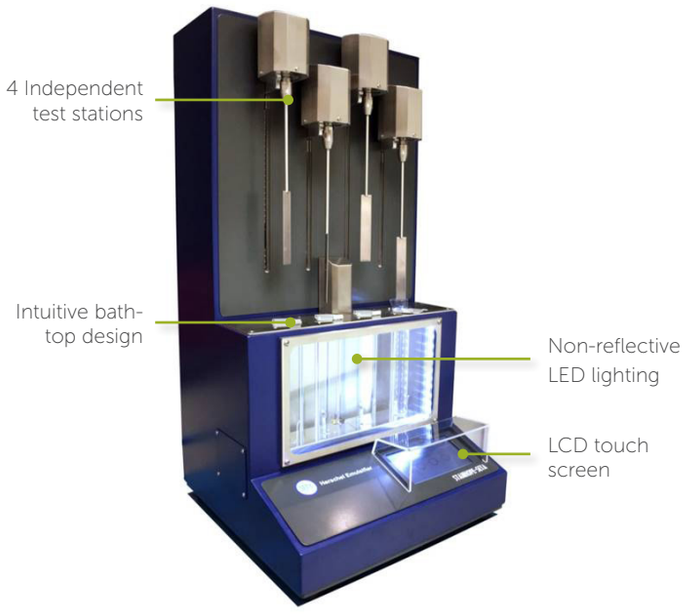
The Seta Herschel Emulsifier is a compact and efficient benchtop instrument designed to measure the ability of petroleum oils and synthetic fluids to separate from water. The instrument incorporates 4 test stirrers, with independent control and motorised raising and lowering. Samples can be tested simultaneously or individually to suit laboratory requirements.

Each stirrer is held by a self centering collet to ensure concentricity within 1mm and can remain in situ when removing or replacing cylinders. Positioning within 6mm from the bottom of the cylinder is automatically achieved using a motorised actuator.

After the stirring period the motorised head raises the stirrer until clear of the graduate cylinder to allow for wiping and on completion of the test, the stirrer will revert to the higher, home position.

Test cylinders are located in a temperature controlled bath with an adjustable set point of either 54 or 82°C. A large viewing window and non-reflective LED lighting assists operator reading. The bath top plate is designed to allow cylinders to tilt for easy removal. A drain valve is provided for service and maintenance.

A large colour touch screen display is used to initiate tests and provides automated sequencing with an audible and visual reminder at each recording interval. Custom test parameters are also user adjustable.



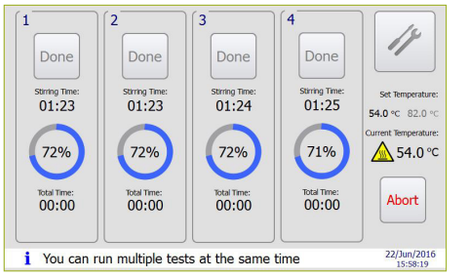
Typical Applications

- Petroleum Oils, Synthetic Fluids

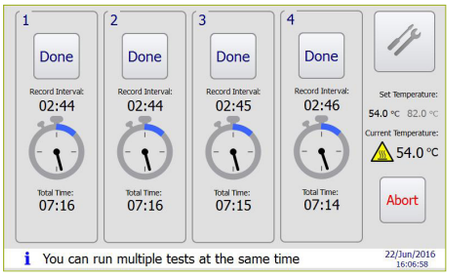
Test Method

ASTM D1401. A sample is mixed with water, heated in the bath and stirred for 5 minutes whilst immersed. After stirring, the time taken for the resultant emulsion to separate is recorded every 5 minutes until the emulsion separates completely or reduces to 3 ml or less.

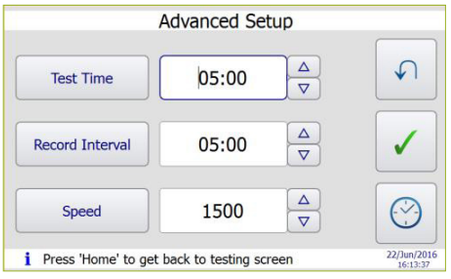
Operator Interface and Integrated Timing



Independent control allowing for simultaneous or individual testing



Timer 'prompt' at recording intervals to aid visual measurements



User adjustable test parameters

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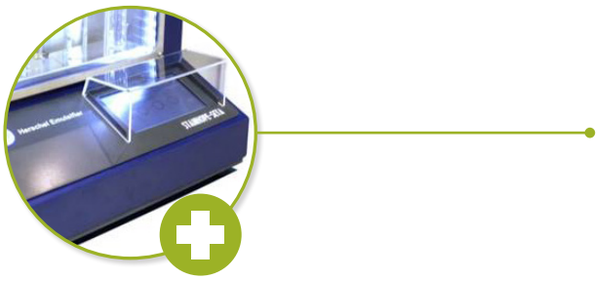


Operator Safety

- Obstruction override if paddles are placed under any resistant load
- Duplex protective viewing glass
- Automatic high temperature cut out
- Overflow prevention
- Automatic low-level liquid trip
- Abort button for emergency all stop

Ease Of Use

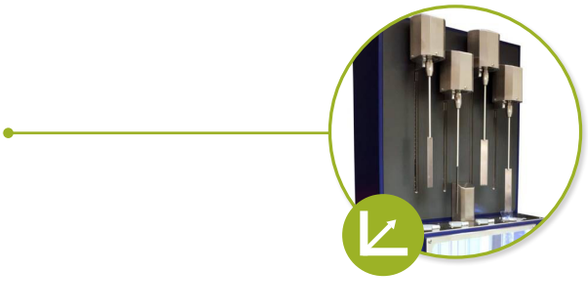
- Fully automated paddle movement with motorised raising and lowering
- Easy sample handling without removing the stirrer paddle
- Self-centering collet to ensure concentricity within 1mm
- Positioning within 6mm from the bottom of the cylinder automatically achieved
- Large LCD touch screen display
- Integrated timer with audible and visual reminders for recording intervals

Precision and Accuracy

- Non-reflective enhanced LED lighting for improved measurement precision
- User adjustable sample temperature stabilisation time
- Post stirring, intermediate scraping position ensures accurate readings
- Guaranteed paddle rotation speed, regardless of viscosity
- Large viewing window

Enhanced Test Throughput

- 4 independent test stations reduce waiting time
- Rapid bath heat up time



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Technical Specifications

Herschel Emulsifier	
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 ^{0}C and 82 ^{0}C
Bath temperature stability	$\pm 1^0$C
Stirrer speed	1500 $\pm$ 15 rpm
Voltage options	110 Vac, 50/60 Hz 240 Vac, 50/60 Hz
Current	10 A (max)* - 110 Vac model 5 A (max)* - 220 Vac model
Display	LCD touchscreen
Size: (H x W x D)	890 x 450 x 450 mm
Weight (empty)	49.5 kg

* In-rush current will be higher

Minimal Servicing

Herschel Emulsifier	
Weekly	Tighten paddle collets
Annually	Temperature calibration Paddle speed calibration

The instrument is supplied with the following:

- 4 graduated glass cylinders
- Screen protector
- Spatula

Accessories

Part Number		Description
51000-0		Digital thermometer 6 x 210 mm probe. 5 point UKAS calibration at -50, 0, 50, 100 and 150 ^{0}C
94630-0		Bath oil, blended with anti-oxidant Suitable for temperatures between 40 and 85 ^{0}C. Supplied in a 5 litre container
99960-2		Tachometer Accuracy $\pm$1.75 rpm at 1500 rpm
11227-0		Synthetic seawater solution Supplied with Certificate of Conformance to ASTM D665

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