

Seta AvCountHV SA1110-0

Laboratory Particle Counter for High Viscosity Lubricants and Hydraulic Oils

ASTM D6786; ASTM D7647; GJB 420; GOST 17216; ISO 4406; ISO 11171;
ISO 60970; NAS 1638; NAVAIR 01-1A-17; SAE AS 4059

- High viscosity, up to 1500 mm²/s at 20 °C
- ISO 11171 calibration
- Cumulative counts/ml
- ISO 4406 cleanliness codes
- Colour touch screen
- Dilution ratio calculation
- Real time display of test progress
- User programmable
- LIMS, network and VNC connectivity
- Programmable alarm limits
- User and sample identification
- Embedded test methods
- Integral printer
- 500,000 test memory



Hydraulic Oil • Lubricants

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AvCountHV Particle Counter

The AvCountHV is a compact bench-top automatic particle counter, used to measure the size and distribution of particles and water droplets in lubricants and hydraulic oils with viscosities up to 1500 mm²/s at 20 °C.

The test process is fully automated. Having prepared your sample in accordance with method instructions, simply insert the metal dip tube into the sample container, select a test method and initiate the test, the test proceeds without any further operator intervention.



Operator Interface

Start of Test

Operator:

Sample:

Method:

1 measurement

Dilution: No multiplier Sample: 200 ml Diluent: None

Comment:

Press ▶ to start a test

21-Jun-2021 16:33:01

Test in Progress

Flush 10ml

Measure 1

4µm cumulative counts per ml (corrected):

Sample: FUEL A Method: ISO 4406 Operator: RAA Dilution: 0%

Flushing

21-Jun-2021 15:42:07

Result Display

21 Jun 2021 15:41

Operator: RAA

Sample: FUEL A

Method: ISO 4406

Dilution: 0% (No multiplier)

Comment:

Corrected		Raw data	
Sizes µm (c)	Average Particles per ml	ISO codes	
4.0	8298.6	20	
6.0	1144.9	17	
14.0	65.8	13	
25.0	10.4	11	
38.0	5.6	10	
70.3	3.4	9	

Test passed

20/17/13

21-Jun-2021 15:42:37

- > Enter operator and sample details, select method, press ▶
- > Test begins, instrument sequences are detailed
- > Final result displays either numerically or graphically

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

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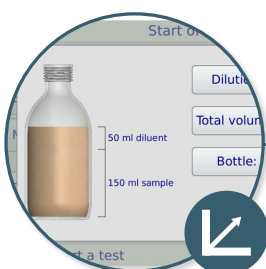
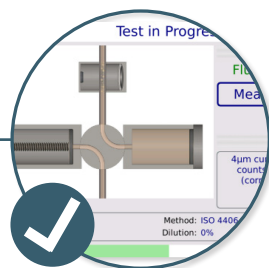


Cost Saving

- Low operator time due to simplicity of set up and automation, giving operators the option to work on something else and reduce labour costs
- Small test volume, 150 ml, can reduce cost and waste
- LIMS or network compatible for quick result interpretation, increasing productivity
- In-field calibration eliminates time and costs associated with sending the instrument to a service centre

Ease Of Use

- Features simple user interface with touchscreen display
- The fully-automated test means extensive operator training is not required before using the instrument
- User-defined test methods are easily programmed

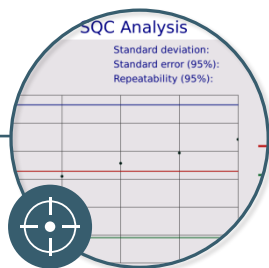


Enhanced Functionality

- Dilution protocol for testing of high viscosity samples
- Real-time display of test progress and ability to view previous results whilst running a sample
- Password-protected levels for security
- 4 embedded test methods
- User and sample identification - track and trace

Precision and Accuracy

- Fully automatic test sequence and consistent sample handling ensures test repeatability and reproducibility
- ISO 11171 calibration protocol
- Programmable alarm limits
- SQC analysis allows analysis of results in accordance with ASTM D6299



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Operation	
Principle of operation	Laser obscuration
Test methods	13 embedded test methods, user programmable, including: ASTM D6786; ASTM D7647; GJB 420; GOST 17216; ISO 4406; ISO 11171; ISO 60970; NAS 1638; NAVAIR 01-1A-17; SAE AS 4059
Particle size range	4µm(c) to 70µm(c) (ISO 11171), 1µm to 100µm (ISO 4402), 1 to 200µm (ISO 21501-3 available on request)
Test duration	Less than 3 minutes
Pressure (max)	Online pressure 10 bar gauge
Sample temperature range	Ambient 0 to 70 °C
Operating temperature range	Ambient 5 to 40 °C
Relative humidity (max)	80% @ 40 °C
Sampling method	Bottle sample and continuous
Programmable test method parameters (via PC)	Size Protocol (number of repeat measurements, flush volume before first measurement, flush volume between measurements, flush between measurements) Single or automated repeat tests, interval between repeat tests
Display and control system	Real time test progress and results, touchscreen
Measurement	
Measuring channels	16 size channels displayed on instrument
Counts per measurement (max)	30,000 per ml
Coincidence error limit	30,000 particles/ml $\geq 4\mu\text{m(c)}$ with $\leq 5\%$ co-incidence error (ISO 11171)
Sample viscosity (max)	1500 mm ² /s at 20 °C (no external pump required)
Sample volume (typ)	150 ml (includes 10 flush cycles and 5 measures)
Sample delivery	Integral Dual Piston Pump (DPS) upstream of the cell
Sample flow rate	30 ml/min ± 5 ml/min
Data Management	
Results format	Cumulative, Particles/ml, ISO 4406 cleanliness codes/classes Numerical and graphical display
Memory	500,000 result memory, print via internal printer, export to LIMS, USB or QR code
Connectivity	RJ45 Ethernet or USB
Number of calibration points	16 (MTD)
Power requirements	
Voltage	100/240 V, 50/60 Hz, Auto-sensing universal power supply
Physical	
Size (HxWxD) / Weight	370 x 230 x 270 mm / 6 kg