

S-flow automated Houillon viscometer

KINEMATIC VISCOMETRY SYSTEM FOR
PETROLEUM PRODUCTS

"The S-flow system was designed for maximum throughput and ease of use while minimizing sample quantity and solvent consumption. It is the ideal viscometer for quick and accurate results".



EASY
TUBE EXCHANGE



SMALL SAMPLE
VOLUME



HIGH
THROUGHPUT



HIGHLY
ACCURATE



LOW SOLVENT
CONSUMPTION

- Fast & Easy tube replacement
- Small sample volume, low solvent consumption
- High throughput: up to 80 samples per hour per bath
- Integrated Viscosity Index calculations on S-flow 3500

The S-flow range of instruments consist of compact, bench-top automated viscometry systems for the analysis of Newtonian fluids. It complies fully with in ASTM D7279 and as such, gives full correlation with ASTM D445. It is the ideal system for used oil analysis labs that need to test a wide range of lubricant viscosities.

Fast & accurate

The S-flow system is a self-contained viscometer system that consists of a thermostatic bath with circular heater and a control touchscreen. The bath contains 4 viscometer tubes together with optical sensors to detect the flow of the sample through the viscometer tubes. All measuring viscometer tubes function independently of each other. The system contains a touchscreen with storage up 10.000 measurement results. The touchscreen allows the user to control and operate the system. Although a PC is not required to

operate the instrument, additional software is available for LIMS connection and fully data storage and reporting.

The user has the option to operate in two modes, standard viscosity determination or tube calibration. In both modes, the operator chooses how many determinations have to be made for an average result. Additional parameters such as tube constants and cleaning cycle are also controlled by the operator, because the sample volume is very low (0.3-1 ml), the entire measurement cycle is very short.

After the user injects the sample into the tube, the sample travels down towards the optical sensors and heats up to the test temperature quickly. Upon reaching the first sensor, the time measurement is started. When the second sensor is reached, the measurement is stopped and the result is displayed on the touchscreen or through the PC software. Then, a predefined cleaning cycle automatically commences, cleaning and drying the viscometer tubes. The entire cycle time ranges between 3-10 minutes per tube, allowing a throughput of up to 80 tests per hour per bath. After the injection of the sample, operator presence is no longer required. The operator needs only to return after the system has completed the measurement and cleaned the viscometer tube.

AUTOMATED HOUILLON VISCOMETER KINEMATIC VISCOMETRY SYSTEM FOR PETROLEUM PRODUCTS

SPECIFICATIONS

Measuring range	0.3 - 3,000 mm ² /s @40°C
Temperature range	20 - 120°C *
Temperature stability	Better than ±0.02°C
Timer resolution	0.001 s
Sample volume	0.3 - 1.0 ml
Solvent consumption	2 - 3 ml per cycle
Maximum throughput	Up to 80 samples per hour per bath
Viscometer type	Houillon
Sensor type	Optical
PC Control	Multiple instruments controlled with 1 PC
Dimensions	44 x 48 x 62 cm. Single bath models 70 x 48 x 62 cm. Double bath model
Weight	32 kg. Single bath models 62 kg. Double bath model
Data export	USB

* For temperatures around ambient, an external chiller is required

AVAILABLE MODELS

Features	S-flow 870	S-flow 1250	S-flow 3500
Auto time measurement	X	X	X
Integrated cleaning pump	X	X	X
Chemically resistant	X	X	X
Automatic solvent injection		X	X
Integrated Viscosity Index			X
Dual solvent option		X	X
Duplo measurement option	X	X	X
Integrated backflush	X	X	X
Warmup prior to measuring	X	X	X
Software (optional)	X	X	X
Samples per hour **	25-40	40-80	80-160

** It depends on the sample viscosity and testing temperature.

THE S-flow IS SUPPLIED WITH

Viscometer tubes
Starter kit
Reference standards
Bath oil

OPTIONS AND ACCESSORIES

Dual solvent injection
Duplo measurement
Advanced PC software
Cooling spiral
EasyFlow tubes for highly viscous samples
External cooling system
Air compressor
Robotic autosampling
Silicone oil



S-flow 870



S-flow 1250



S-flow 3500



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