

VH1 & VH2



VH1 Single solvent VH2 Dual solvent

Using a “Houillon” capillary tube, ISL’s VH Series Viscometers automatically determine kinematic viscosity of lubricating oils, used oils, fuels, polymers and similar materials over a wide viscosity range. Initially developed for lubricant blending facilities, research laboratories and used oil monitoring where small sample size and quick results were required, the ISL VH viscometer offers exceptional performance, providing results in 60 seconds using less than 1 ml of sample.

The Model VH1 integrates a single solvent capacity for tube cleaning, while the Model VH2 accommodates

two solvents, offering added flexibility in solvent selection for efficient tube cleaning and drying. Furthermore, the VH2 withstands the use of aggressive solvents.

In both models, ISL’s custom Windows-based management software enables central monitoring of up to 16 capillaries spanning up to 4 baths. Results are displayed, saved to the database, and printed or sent directly to a LIMS following user-defined protocols. With 40°C and 100°C bath temperatures programmed, viscosity index can be performed, calculated and printed within minutes.

Houillon Viscosity Method

The term “Houillon” refers to the specific capillary tube used to measure viscosity in ISL’s VH systems.

The principle

- based on straight flow approach
- requires less than 1ml of sample, therefore speeding the warm-up and analysis time. Because the specimen flows through the detection points only once, the houillon method is ideal for both transparent and opaque samples.

ADVANTAGES

- High throughput with complete results in minutes; up to 75 tests per hour
- Sample size: <1 ml
- Easy to use & maintain
- Automated cleaning and drying programs with minimal solvent usage
- Multi-instrument networking; PC-based data management

APPLICATION RANGE

- Viscosity
- Used oil analysis
 - Lubricant blending
 - Metalworking fluids
 - Pharmaceuticals
 - Research & development

STANDARD METHODS

In compliance with:

- ASTM D7279
- ASTM D2270

In correlation to:

- ASTM D445
- ASTM D341
- IP 71
- IP 226
- EN3104



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ISL by PAC

ISL is a global provider of scientific apparatus and instruments for testing petroleum and petrochemical products in the lab and online. More than 20 automatic analyzers bearing the ISL brand are recognized for increasing test precision, boosting laboratory efficiency and reducing costs.

RAPID, SMART AND VERSATILE OPERATION

- Modular design with ultimate configuration flexibility
 - grows to accommodate increasing workload demands
 - enables up to 16 simultaneous test runs
- Easy constant calibration with reference fluids
- ±0.01°C bath temperature stability
- Built-in cooling coil for perfect stability at sub-ambient temperatures
- Rapid bath temperature adjustment and stabilization
- Informative on-screen and printed reports; unlimited results storage; LIMS export following user-defined protocols
- Easy tube replacement in minutes; no need to drain bath media

EFFICIENT CLEANING PROCEDURE

- Automated cleaning system, individually programmable for each tube
- Minimal solvent consumption for cleaning cycle
- All solvent removed under vacuum, not under pressure
- Enhanced cleaning options with Model VH2:
 - dual-solvent washing option for hard-to-clean samples and fast drying
 - withstands use of aggressive solvents

POWERFUL PC-BASED DATA MANAGEMENT

- Standard and/or averaged viscosity measurements
- Viscosity Index computation in minutes when 40°C and 100°C bath temperatures are programmed
- Tags outlier results according to user preferences
- Informative evaluation reports:
 - viscosity for a given temperature
 - blends
 - temperature for a given viscosity
 - viscosity index
- Saves calibration parameters for multiple bath temperature settings, making bath immediately ready for use following a temperature change (i.e. no need to recalibrate)
- Diagnostic menus for service

SPECIFICATIONS

ORDERING INFORMATION	
ISL's Automatic Houillon Viscometers are delivered with main cables, spirit level, funnel, bath draining tube, bath tube cap, dust proof cover, four Houillon tubes,* and four detection clamps. Select from 115 or 230 VAC. <i>* Contact your PAC representative for list of tube constant choices.</i>	
STANDARD TEST METHOD	
In compliance with: ASTM D7279, ASTM D2270 In correlation to: ASTM D445, ASTM D341, IP 71, IP 226, EN3104	
PERFORMANCE	
Viscosity Range	2 to 2000 cst (mm ² /s) at 40°C
Temperature Range	User programmable: 20°C to 120°C
Bath Temperature Stability	±0.01°C
DOCUMENTATION	
On-screen and printed reports: date & time, viscosity, sample ID, average viscosity, bath & tube number, viscosity index, unlimited results storage, LIMS export following user-defined protocols	
UTILITY REQUIREMENTS	
115V 50/60 Hz or 230V 50/60 Hz; Vacuum Kit (available from ISL, see Options and Accessories)	
COMPUTER REQUIREMENTS	
Minimum system requirements	Pentium ii 350mhz processor
Operating systems	Windows 98, NT®, 2000 pro or XP pro
Drives	Cd rom drive
Ethernet	100Mb free hard disk space
USB	1 Free serial port, free parallel port, mouse
DIMENSIONS & WEIGHT	
VH1	30cm (12") W x 45cm (18") D x 82cm (33") H; 28 kg (62 lb)
VH2	30cm (12") W x 45cm (18") D x 87cm (35") H; 35 kg (77 lb)
Vacuum Kit	50cm (20") W x 27cm (11") D x 76cm (31") H; 27 kg (59 lb)
INTERFACE SPECIFICATIONS	
Display	LCD, ¼ VGA monochrome; Alphanumeric keypad with dedicated function keys
Data input/Output	Centronics® parallel link for text printer (40 columns); RS232C serial link for direct connection to LIMS or external PC; ISL ALAN Suite connection for multi-instrument networking
SAFETY	
Adjustable over-temperature protection	
OPTIONS & ACCESSORIES	
PC Kit includes Windows-based software and hardware to control up to 4 baths (16 tubes). PC and printer not included. Contact your PAC representative for computer requirements. 115 or 230 VAC	
Vacuum Kit facilitates solvent removal. 115 or 230 VAC	
Varied selection of ASTM control thermometers, bath medias and calibration reference materials available.	

Due to continuing product development, specifications subject to change at any time without notice. All products are CE compliant.