Precise Capillary Viscometry –
Easy, Flexible and Independent: AVS® 470

No PC needed: “Suction” and “Pressure” measurements with just one instrument

The AVS® 470 is the first viscosity measurement device that allows “suction” and “pressure” measurements completely independent of a PC. This allows for maximum independence and flexibility; set up a measuring station that meets the highest requirements even under difficult conditions, e.g. to monitor production or quality control in the polymers and mineral oil industry.

Perfectly equipped for fully automatic viscosity measurements

The AVS® 470 is a measuring system that includes almost everything you need to take precise and reproducible measurements. All common types of viscosity calculation are integrated into the device, a small PS2 keyboard allows you to enter additional data. A serial printer can be used to conveniently document your results.

So, in a minimum of space, you can set up a measuring station equal in every way to complex measuring installations in terms of precision and reproducibility.

"Suction" or "Pressure"?
Preferred applications in comparison

		"Pressure"	"Suction"
highly viscous samples e.g. oils, polymers		■	■
Solvents: (examples)	highly volatile	■	–
	Dichloromethane	■	–
	Chloroform	■	–
	Sulfuric acid	–	■
	Dichloroacetic acid	–	■
	Toluene	■	■
	Hexafluoro-isopropanol	■	■
	m-cresol	–	■
	Formic acid	–	■
	Phenol-dichlorobenzene	–	■
	Phenol-Tetrachloroethane	–	■

Simple and updateable Modular Concept

The AVS® 470 is of a modular design and an optional optical or TC version ViscoPump II module.

You can use your existing accessories such as thermostats, stands, flow-through coolers or automatic cleaners e.g. AVS® 26. Also, virtually all customary capillary viscometers can be used.

Advantages AVS® 470

- Automatic and highly precize measurements – independent of a PC
- "Suction" and "pressure" measurements with the same system
- Simple data input and parameterization via included PS2-mini-keyboard
- GLP documentation compliant when connected to an optional printer

AVS® 470 – Precise and Reliable

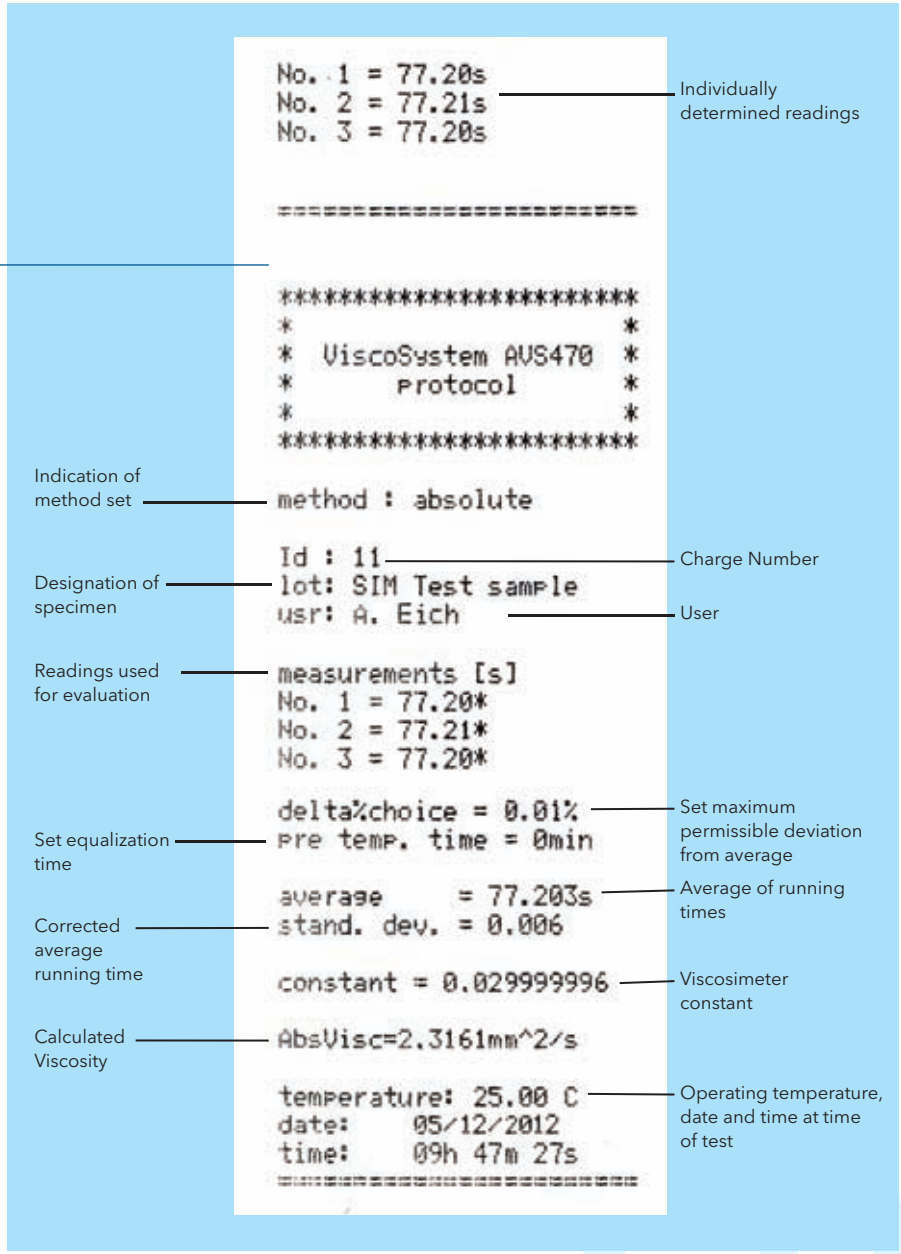
Working with the AVS® 470 is easy

The desired measurement method can be preselected and started on the device. The entire measurement is automatic to eliminate subjective measurement errors. Once the set pre-heating time is reached, the desired number of measurements are taken and the viscometer automatically cleaned if required.The status of the measurements is continuously displayed.

If required, individual parameters may be input via an included PS 2 keyboard. A serial printer can be used to print measurement logs.

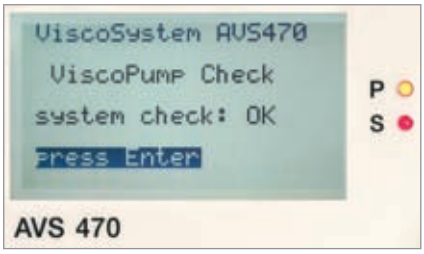
The connections are on the front panel of the device for easy control. Over-pumping and oversuction are prevented by the use of a an optional capacitive sensor.

The print-out shows everything you need for reliable documentation of your test.

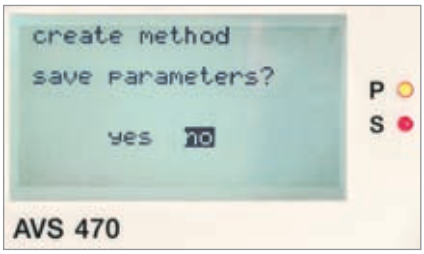


Technical data

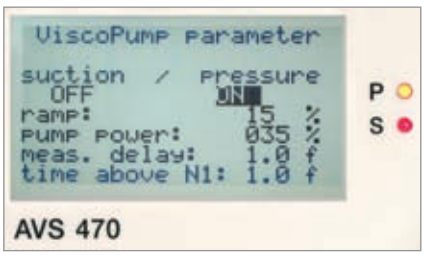
Clear user guidance, clear status – even without PC!



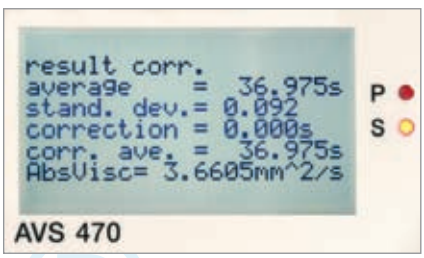
After switching on the AVS® 470 a self test is run and then an entry prompt appears.



The parameters can be set in the test mode. The t_0 value is determined automatically.



All setup parameters can be preset conveniently, e.g. pressure/suction, velocity, waiting time between two tests, etc.



The readings can be read off conveniently on the display regardless of whether or not a printer is connected.

Measuring range (time)	up to 9,999.99 s; resolution 0.01 s	
Measuring range (viscosity)	pressure:	0.35 to 1,800 mm²/s (cSt)
	suction:	0.35 to ~5,000 mm²/s (cSt)
Measured parameter	flow-through time [s]	
Time measuring accuracy	± 0.01 %	
Measured value display	LC-Display	
Display accuracy	± 0.01 s, ± 1 Digit, but not exceeding 0.1%	
Pumping pressure	fully automatically controlled	
	suction up to ~-160 mbar, pressure up to ~+160 mbar	
Preselectable tempering period	0 to 20 min	
Preselectable no. of measurements	1 to 99 for each sample	
Connections	Pneumatic connections	threaded connections for viscometers
	Electrical connections	circular connector with bayonet lock for viscometer
		4-pin DIN socket for TC viscometer
		4-pin circular connector for capacitive sensor
		7-pin circular connector for AVS® 26, with bayonet lock
	RS232-C interface	9-pin for serial printer
	Mains connection	connector in acc. with EN 60320
	Pump connection	socket outlet in accordance with EN 60320
Ambient Conditions	Ambient temperature	+10 to +40 °C for operation and storage
	Air humidity	max. 80 % in acc. with EN 61010, Part 1
Housing	Material	steel aluminium housing;
		with chemically resistant 2-component coating
	Dimensions	(W x H x D) ~255 x 205 x 320 mm
	Weight (incl. pump module)	~5.4 kg
Power supply	90 to 240 V ~, 50 to 60 Hz	
Equipment safety	EMC in acc. with Council Directive 89/336/EWG;	
	low-voltage directive	

The AVS® 470 allows the use of the following viscometers:
Ubbelohde viscometer to DIN, Ubbelohde viscometer to ASTM, micro Ubbelohde viscometer to DIN, micro Ostwald viscometer, Cannon-Fenske routine viscometer, TC Ubbelohde viscometer, TC micro Ubbelohde viscometer.

We reserve the right to make technical changes.
AVS® is a registered trademark of SI Analytics and stands for: "Automatic Viscosity System".