Anton Paar

Kinematic Viscometer

SVM Series

Welcome to
New Viscometry!

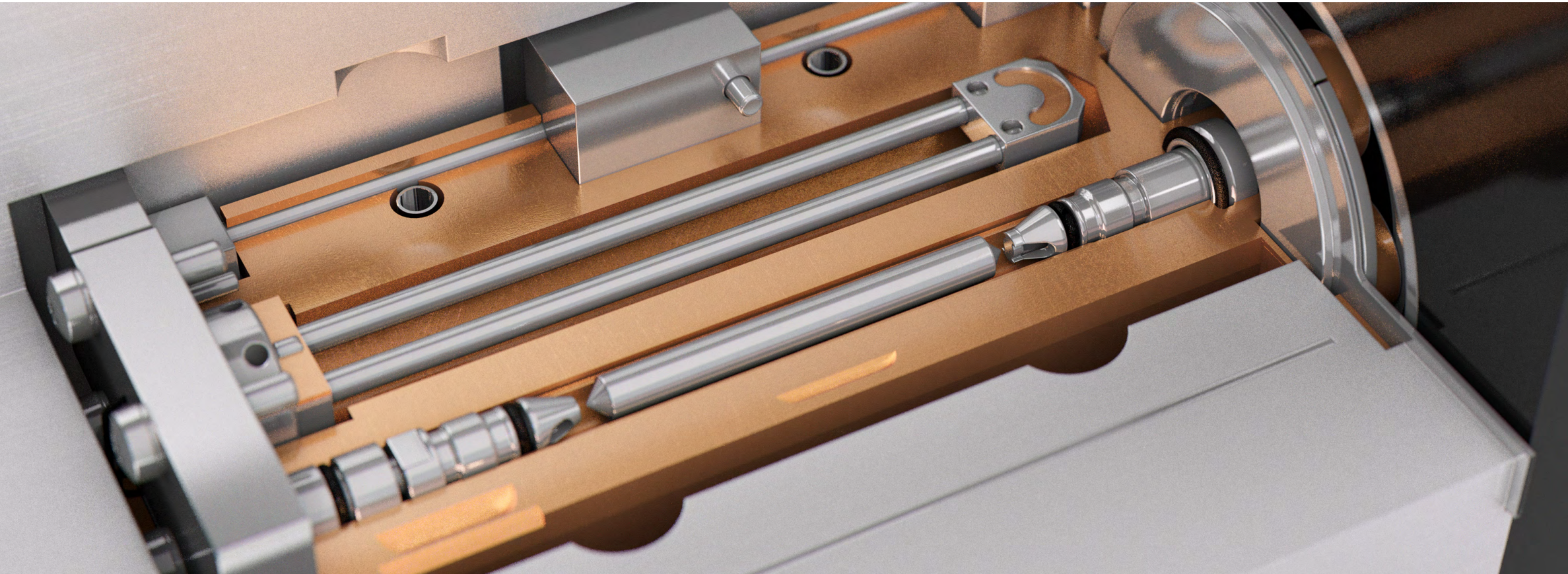
These values define Anton Paar
Progress and innovation, high-precision craft, and a passion for research underpin the viscosity measurement solutions we've been supplying to our customers for over 20 years. Components produced with the highest attention to detail, innovative measuring principles, and well-designed user interfaces represent our standard of quality. Building on our strong technological leadership, the SVM series is once again revolutionizing the world of viscometry, utilizing the latest technology to deliver the best kinematic viscometers on the market.

Measuring principle
The highly precise SVM smart viscometers are based on a modified Couette measuring principle and consist of a viscosity cell and a density cell. The compact viscosity measuring cell contains a tube that rotates at a constant speed and is filled with sample fluid, while a measuring rotor with a built-in magnet floats freely in the sample. The sample's shear forces drive the rotor, while magnetic forces delay its rotation. Shortly after the measurement begins, the rotor reaches equilibrium speed, which translates into the fluid's viscosity. The kinematic viscosity is automatically calculated from the dynamic viscosity and density of the sample.

Unique technology
The patented design of SVM enables tool-free access to the measurement cell. The revolutionary, patented FillingCheck™ monitors the filling quality of the density cell in real time to ensure the most accurate viscosity measurements.

Standard compliance
SVM is the only kinematic viscometer that delivers results in both ASTM D7042, ISO 23581, and ASTM D445, providing full compliance.

- → SAE J300
- → ASTM D6751
- → ASTM D396
- → ASTM D975
- → ASTM D1655
- → ASTM D7566
- → EN 590
- → JIG AFQRJOS



Setting the Standard in Viscosity and Density

SVM is one of the most trusted kinematic viscometers worldwide. Thousands of customers have been using their SVMs for decades, not only because they're the smartest way to perform measurements but because several other benefits make a crucial difference inside – and outside – the lab.

SVM 1001	SVM 1001 Simple Fill	SVM 1101 Simple Fill
-	With Simple Fill funnel	
Kinematic viscosity (ASTM D7042)	Kinematic viscosity (ASTM D7042)	Density (ASTM D4052)

- → **High flexibility:** No need for 12 or more glass capillaries to cover your full viscosity range – measure all your samples with just one viscometer.
- → **Zero errors:** Automatic calculations, along with digital data recording and storage, provide error-free measurements and excellent traceability.
- → **Improved safety:** Metal measuring cell for zero glass breakage and Peltier temperature control for safe handling without flammable liquids.
- → **Save time:** Increase your sample throughput with automated measurements and calibration, and free up operators for other tasks.
- → **Save costs – and the planet:** Keep your environmental footprint low – analyze with just 5 mL of sample and 6 mL of solvent, and use only 50 W of power.

SVM 2001	SVM 3001	SVM 3001 Cold Properties	SVM 4001
Kinematic viscosity (ASTM D7042)			
Dynamic viscosity			
Density (optional: ASTM D4052)	Density (ASTM D4052)		
Viscosity Index (VI) (optional)	Viscosity index (VI) (ASTM D2270)		
-	API grade		
-	Temperature scan		
-	Time scan		
-	-	Cloud point	-
-	-	Freeze point	-
-	-	Temperature at 12 cSt (viscosity borderline temperature)	-
-	-	Standard above freeze point (SFP)	-
-	-	-	Dual-cell design (2 viscometers and 2 density meters)

FIND OUT MORE

www.anton-paar.com/svm-series

The World Is Not **Made of Glass**

SVM 1001 **SVM 1001 Simple Fill**

SVM 1001 and SVM 1001 Simple Fill are your budget-friendly entry tickets into the world of digital automatic kinematic viscometry. The unbreakable measuring cell lets you measure samples from diesel to lubricants without needing a stopwatch, temperature bath, or additional glass capillaries. ASTM-compliant results are delivered in both D7042 and D445. The SVM 1001 series offers 150 % higher throughput and consumes 95 % less energy and 75 % less solvent compared to manual glass capillary viscometers. With SVM 1001 Simple Fill, you can directly pour the sample into the funnel, eliminating consumable costs for pipettes or syringes and making viscosity measurements easier than ever before.

1 measuring cell instead of 12 capillaries
The SVM 1001 series covers a wide viscosity range, from 0.3 mm^2/s to 5,000 mm^2/s, with a single, unbreakable metal measuring cell. This saves you time while reducing your costs for purchasing, calibrating, and replacing capillaries. When measuring unknown samples, no trial-and-error is needed to select the right capillary. This eliminates operator impact, saves further time and effort, and ensures precise measurements.

Higher throughput than any manual D445 viscometer
The SVM 1001 series has a 150 % higher throughput compared to its manual D445 glass capillary viscometer counterparts and handles up to 37 samples per hour. Rapid temperature equilibration is usually done in one minute or less instead of the 30 minutes recommended in ASTM D445. This gives operators time to focus on other tasks.

Simplicity at its best
Measuring viscosity has never been so easy. Just fill the sample directly from the container and press the start button. No pipette or syringe is needed. Cleaning and drying are easy – pour the solvent in the funnel and let the SVM 1001 Simple Fill do the rest.The SVM 1001 series can be battery-powered, so you can take the instrument with you into the field or keep measuring during power outages.

SVM 1001: Error-free
Thanks to its automatic digital data handling, the SVM 1001 series eliminates errors due to manual transcription and calculations. The internal data storage means no loss of data, and you can export data directly from the measuring device to a PC (using the free V-collect software) or a USB drive for further data processing.

Safety is key
SVM 1001 is the only budget-friendly ASTM-compliant kinematic viscometer on the market with zero risk of glass capillary breakage. Operators have less exposure to hazardous solvents, as only a few mL of solvent are required for cleaning. Since built-in Peltier thermostatting is used, no hot or flammable bath fluids are needed, further reducing operator risk and improving laboratory safety.

Minimal environmental footprint
The SVM 1001 series significantly reduces your environmental footprint: Energy consumption is 50 W instead of 1,000 W or more for manual glass capillaries. ASTM-compliant measurements require 5 mL of sample instead of 25 mL and only 6 mL of solvent per determination instead of 40 mL. This helps you save on yearly solvent purchasing and disposal costs, which ensures a sustainable measuring process.

SVM 1001

The Budget-Friendly Choice

Compliant with ASTM D396, D975, D3699, D6158, D8029, EN 590, and many more standards

- → Digital data handling for high traceability: no stopwatch, no mathematical errors due to manual calculations, and no manual reporting
- → Results can be shown as ASTM D7042 and D445 (using the integrated ASTM-defined bias correction)
- → Minimal sample required: just 1.5 mL
- → For kinematic viscosity at a constant temperature of choice between +15 °C and +100 °C; second temperature is available as an option
- → Intuitive user interface guides you through the measurement

LUBRICANTS

DIESEL

IN-SERVICE OIL

FUEL OIL

HEAVY FUEL

SVM 1001 Simple Fill

Simple. Safe. Magical.

Compliant with ASTM D396, D975, D3699, D6158, D8029, EN 590, and many more standards

- → Pour and play: Directly pour the sample into the funnel – no pipette or syringe needed
- → Effortless cleaning and drying with an integrated air pump prepares the instrument for the next test
- → Two-minute operator time per measurement
- → 150 % higher throughput than any manual glass capillary viscometer
- → For kinematic viscosity at a constant temperature of choice between +15 °C and +100 °C; a second temperature is available as an option

LUBRICANTS

DIESEL

FUEL OIL

HEAVY FUEL

IN-SERVICE OIL

SVM 1101 Simple Fill

Unmatched Portability and Precision

The SVM 1101 Simple Fill viscometer combines viscosity and density analysis at a competitive price. Say goodbye to syringes or pipettes with Simple Fill technology. Weighing only 6.5 kg compared to the standard 8 kg, SVM 1101 Simple Fill is truly portable, running on an optional battery with a low power consumption of only 75 W. It offers unmatched precision and value for multiparameter testing. Experience the freedom to test anywhere, anytime. SVM 1101 Simple Fill redefines possibilities in analysis, delivering simplicity, accuracy, and portability.

Truly flexible
The budget-friendly SVM 1101 Simple Fill viscometer offers comprehensive parameter measurement in a single instrument. Measure ASTM D4052 / ISO 12185-compliant density as well as viscosity simultaneously, saving on acquisition and maintenance costs. Enjoy the ability to determine essential parameters for your petroleum samples, such as API gravity, °API for crude oil classification, and more.

Truly portable
Experience the true meaning of portability with SVM 1101 Simple Fill. It is the only multiparameter device in this price range that provides battery operation for true mobility. Weighing just 6.5 kg, SVM 1101 Simple Fill is incredibly lightweight, allowing you to effortlessly carry it wherever you go. With its low power consumption of only 75 W, it optimizes energy usage, making it an eco-friendly choice. Explore the power of SVM 1101 Simple Fill, embrace the freedom of portability, enjoy unparalleled precision, and contribute to a greener future.

Truly simple
Discover effortless handling with Simple Fill. Experience unparalleled simplicity with the revolutionary Simple Fill funnel and say goodbye to pipettes and syringes. Just directly fill the sample from the container and press the start button. The intuitive user interface eliminates training time while the FillingCheck™ ensures accurate filling, eliminating human error.

Fully ASTM D4052- and ISO 12185-compliant density measurement, in combination with fast viscosity results

- → The only budget-friendly multiparameter kinematic viscometer on the market
- → Directly pour the sample into the funnel – no pipette or syringe needed
- → Automatic cleaning and drying with an integrated air pump prepares the instrument for the next test
- → Two-minute operator time per measurement

LUBRICANTS

DIESEL

FUEL OIL

HEAVY FUEL

One Instrument,
Many Samples

SVM 2001 **SVM 3001** **SVM 3001 Cold Properties** **SVM 4001**

Discover SVM 2001, SVM 3001, SVM 3001 Cold Properties, and SVM 4001. They're designed for users looking for measurements beyond kinematic viscosity, such as ASTM D4052-compliant density, viscosity index, freeze point, and cloud point, or those who require a wider temperature range and advanced automation with full connectivity for traceable data handling. The highly versatile SVM 2001/3001/3001 Cold Properties/4001 instruments deliver multiple test results for a wide range of samples from jet fuel to diesel and lubricants across an extensive temperature (-60 °C to +135 °C with SVM 3001) and viscosity (0.2 mm²/s to 30,000 mm²/s) range in both D7042 and D445. Automated solutions enable fully unattended measurements overnight and during weekends, ensuring seamless operation. Experience the power of affordable versatility.

Multiple parameters from a single sample
SVM 2001/3001/3001 Cold Properties/4001 deliver a number of parameters beyond kinematic viscosity: dynamic viscosity, density, API grades, viscosity index, cloud point, freeze point, temperature at 12 cSt (viscosity borderline temperature), and standard above freeze point (SFP) – all from a single syringe. Gone are the days of having to perform these measurements on different instruments.

Flexibility for every application
SVM 2001/3001/3001 Cold Properties/4001 let you cover a wide viscosity range, from 0.2 mm²/s to 30,000 mm²/s, with a single, unbreakable, metal measuring cell. Measure a huge variety of samples with zero capillary changing.

Reporting in ASTM D445
Implementation of ASTM bias statements for a multitude of samples (e.g., jet fuels, diesel and biodiesel fuels, fuel oils, formulated oils, and residual fuels) means you profit from the full range of benefits that come with our SVM smart viscometers, while confidently reporting your results in D7042 and D445.

Wide temperature range
The wide temperature range of SVM 3001 (-60 °C to +135 °C) and SVM 3001 Cold Properties (-60 °C to +100 °C) allows tests on a wide variety of samples (e.g., jet fuels, diesels, lubricants, waxes) with a single instrument. Temperatures down to -20 °C can be reached without external counter-cooling, and the fast heating and cooling rates of up to +20 °C/min help you quickly collect information about the properties of your sample across the entire temperature range.

Top-quality density measurements
SVM 2001/3001/ 3001 Cold Properties/4001 don't just measure viscosity but also density. The patented FillingCheck™ monitors the filling quality of the density cell and alerts the user in case of bubbles, which eliminates errors. These unique capabilities make this SVM series the most versatile kinematic viscometer on the market.

Your paperless lab
Eliminate transcription errors, trigger measurements with 10+ parameters, and centralize and access your data – regardless of where your office is located. With the AP Connect lab execution software, your data is just a click away and accessible from any network computer. Streamlining your data flow frees up time for analysis. Digital data handling is your key to an efficient, paperless lab.

SVM 2001

Out-of-the-Box Flexibility

Compliant with ASTM D396, D975, D3699, D6158, D6823, D7467, D8029, and many more standards

- → For kinematic viscosity at any temperature between +15 °C and +100 °C
- → 3-digit digital density measurement included
- → Optional ASTM D4052-compliant density measurement
- → Optional determination of viscosity index (VI)
- → Choice of full automation from a wide portfolio of sample changers: from single sample handling to overnight automation with multi-position samplers

LUBRICANTS

DIESEL

FUEL OIL

HEAVY FUEL

IN-SERVICE OIL

SVM 3001

The Gold Standard

Compliant with ASTM D396, D975, D1655, D7566, D2880, D3699, D6158, D6751, EN 590, and many more standards

- → One instrument for all samples – from jet fuel to wax
- → Widest temperature range – from -60 °C to +135 °C
- → Cooling down to -20 °C without external counter-cooling
- → Rapid heating and cooling rates (up to 20 °C/min.)
- → Quick temperature scan provides valuable insights into your samples' temperature behavior

FUEL (DIESEL, JET, MARINE, BIOFUEL)

LUBRICANTS

HEAVY FUEL

CRUDE OIL

ADDITIVES

IN-SERVICE OIL

CHEMICALS

WAXES

SVM 3001 Cold Properties

You Can Have It All

Compliant with ASTM D396, D975, D1655, D7566, D396, D975, EN 590, DEF STAN 91-091, JIG AFQRJOS, and many more standards

- → Your all-in-one solution for low-temperature applications – kinematic viscosity, density, cloud point, and freeze point in one run
- → Approved for jet fuel certification and fully compliant with ASTM D1655
- → Approved for diesel fuel certification and fully compliant with ASTM D975
- → Cooling down to -20 °C without counter-cooling
- → Cleaning and drying at sub-zero temperatures without warming up in between

- **JET FUEL**
- **DIESEL**
- **BIODIESEL**
- **HYDRAULIC FLUIDS**
- **LUBRICANTS**
- **BRAKE FLUIDS**

SVM 4001

Twice the Benefit

Compliant with ASTM D6823, D6158, D7467, D8029, D396, D975, D3699, and many more standards

- → Fastest viscosity index on the market: Measure in two measuring cells at 40 °C and 100 °C simultaneously
- → Integrated viscosity-temperature extrapolation according to ASTM D341
- → Viscosity index (VI) from the lowest sample volume (minimum: 2.5 mL)
- → Innovative and dependable dual viscosity and density meters for simultaneous measurements at any two temperatures between 15 °C and 100 °C. For example: 15 °C for density and 40 °C for viscosity of fuel oils
- → Self-contained: no additional equipment required (e.g., PC, external software)

- **LUBRICANTS**
- **FORMULATED OIL**
- **BASE STOCK**
- **ADDITIVES**
- **HYDRAULIC FLUIDS**
- **IN-SERVICE OIL**
- **FUEL OIL**
- **HEAVY FUEL**

ASTM D7042 – The Better Alternative to D445

Experience the power of ASTM D7042, a test method unique to SVM, widely referenced in national and international standards including ASTM, ISO, SAE, IP, EN, DIN, DEFSTAN, MIL, GB, GOST, and more.

Embrace D7042 as a superior and sustainable alternative to traditional D445: it minimizes sample, solvent, and energy usage, saving you time and costs, and reducing your environmental impact.

With D7042, you can measure a wide variety of samples effortlessly without the need to change capillaries. Benefit from a single unbreakable measurement cell, ensuring highly accurate viscosity results while eliminating operator variability. Streamline your quality control workload, as fewer documents need to be produced and maintained.

Join the industry standard revolution with ASTM D7042 and benefit from unparalleled efficiency and accuracy.

Petroleum industry
Whether you're certifying jet fuel according to ASTM D1655 or JIG AFQRJOS, performing quality control on diesel or biodiesel (ASTM D975, EN 590, or EN 14214), or classifying your engine oils in accordance with SAE J300, SVM is fully compliant with these standards. Additionally, you can measure the density of your petroleum samples according to ASTM D4052/ISO 12185 and determine various API parameters such as API gravity, °API for crude oil classification, and more.

Pharmaceutical industry
SVM viscometers are fully compliant with USP Chapters 912 and 841,* Ph. Eur. Chapters 2.2.5 and 2.2.10,* and are aligned with PQP qualification requirements.** You're also compliant with 21 CFR Part 11 on data integrity** and thus satisfy all relevant Pharmacopeia and other pharma industry-related standards and regulations. Our ready-to-use PQP documents save you time by reducing the qualification effort by up to 60 %.

*SVM 3001, SVM 3001 Cold Properties, and SVM 4001.
** Not available for SVM 1001 series.

Pass internal and external audits
SVM 2001/3001/3001 Cold Properties/4001 leave a meticulous audit trail and include user management, electronic signature, non-storage mode, and many more features that will help you easily pass internal and external audits. Full compliance with GMP 4 Annex 11 & 15/GLP, ALCOA+, and 21 CFR Part 11** means you're aligned with the data integrity and traceability standards these audits require.

ASTM bias corrections
Years of interlaboratory studies at ASTM have resulted in the ASTM bias corrections in SVM. Bias statements are available for a wide variety of samples, including formulated oil, diesel, biodiesel, jet fuel, and residual fuel oil. That's why D7042 is the official alternative to D445 accepted by ASTM. Just select the desired bias correction on the SVM user interface. SVM does the rest for you and shows the bias-corrected D445 results on the display. This lets you enjoy all the benefits of D7042 while reporting in D445 (if needed).

Customization
That Delivers Results

Maximize your productivity for in-service oil measurements

→ SVM 1001: the fastest kinematic viscosity measurements with the lowest acquisition and running costs

→ Heated magnetic particle trap (MPT) for effective removal of ferromagnetic particles from used oils

High Throughput Viscometer (HTV): When throughput is paramount

→ Ready-made solution based on Anton Paar's high-throughput platform (HTX)

→ Customized automation for high sample throughput and/or complex sample handling

→ Can be equipped with up to eight SVM 2001/3001/3001 Cold Properties/4001 viscometers to process up to 2,500 samples per day

→ Fully automated cleaning and periodical recalibration with standard oils fully compliant with ASTM D7042

Measure highly viscous samples with ease

→ Hot Filling Attachment (HFA) for easy measurement of samples with a high melting or pour point, such as waxes, fuel oils, or heavy fuels, is available for SVM 2001 and SVM 3001

→ Alternatively, the heated sample changers Xsample 610 and 630 provide fully unattended filling and cleaning, along with temperatures of up to +95 °C (available for SVM 2001, SVM 3001, and SVM 4001)

Make the most of your sample

→ Anton Paar's multiparameter measurement systems provide several parameters from a single sample in only one measuring cycle, delivering all the results you need on one screen at the push of a button.

  → The Ultimate Lube Analyzer determines the viscosity index and carbon-type analysis in a single setup in one run.

→ The All-In-One Jet Fuel Analyzer is a versatile solution for jet fuel analysis, which delivers crucial parameters such as viscosity, density, cloud point, freeze point, temperature at 12 cSt, and refractive index – all in a single test.

Support and Education

Every challenge can be overcome with the right partner. From helping you find the right measurement system to giving you all the background information and education you need, we at Anton Paar are committed to outstanding service and support – whenever you need it.

Sign up for demos & webinars
We regularly offer free online webinars and demonstrations where you can learn about various viscometry topics and meet our experts.

→ www.anton-paar.com/apb-visco-webinars

Dig into our extensive knowledge database
Access our big content hub of application reports, product documentation, and tutorial videos, or pick up some background knowledge from our Wiki.

→ www.anton-paar.com/apb-wiki-visco

Contact our experts
We're proud of our reputation for excellent service and support. We have a network of more than 30 Anton Paar subsidiaries, and over 60 responsible partners – so one of our viscometry experts is always just a call away and happy to help in your local language.

→ www.anton-paar.com/contact

Reliable.
Compliant.
Qualified.

Our well-trained and certified technicians are ready to keep your instrument running smoothly.

FIND OUT MORE

www.anton-paar.com/service

Maximum uptime

Warranty program

Short response times

A global service network

	SVM 1001	SVM 1001 Simple Fill	SVM 1101 Simple Fill	SVM 2001	SVM 3001	SVM 3001 Cold Properties	SVM 4001
	↓	↓	↓	↓	↓	↓	↓
Patents	AT516058 (B1), US10036695 (B2), CN105424556, EP2995928 (B1)		AT516058 (B1), US10036695 (B2), CN105424556, EP2995928 (B1), AT 516302 (B1), CN105628550	AT516058 (B1), US10036695 (B2), CN105424556, EP2995928 (B1)	AT516058 (B1), US10036695 (B2), CN105424556, EP2995928 (B1) AT516302 (B1), CN105628550		
Test methods	ASTM D7042, D445 bias corrected, ISO 23581, EN 16896		ASTM D4052, ISO 12185	ASTM D7042, D445 bias corrected, ISO 23581, EN 16896 ASTM D4052 (optional)	ASTM D7042, D445 bias corrected, ISO 23581, EN 16896 ASTM D4052, ISO 12185	ASTM D7042, D445 bias corrected, ISO 23581, EN 16896 ASTM D4052, ISO 12185 ASTM D2386 equivalent or better ASTM D2500 equivalent or better	ASTM D7042, D445 bias corrected, ISO 23581, EN 16896, ASTM D4052, ISO 12185
MEASURING RANGE							
Viscosity	0.3 mm²/s to 5,000 mm²/s		0.3 mm²/s to 1,000 mm²/s	0.2 mm²/s to 30 000 mm²/s*			
Density	-	-	0 g/cm³ to 3 g/cm³	0 g/cm³ to 3 g/cm³			
Temperature	15 °C to 100 °C (one temperature as standard, second temperature optional)		15 °C to 100 °C	15 °C to 100 °C	-60 °C to +135 °C	-60 °C to +100 °C	15 °C to 100 °C
PRECISION							
Viscosity repeatability** Viscosity reproducibility**	0.1 % 0.35 %		0.2 % 0.7 %	0.1 % 0.35 %			
Density repeatability** Density reproducibility**	-	-	0.00005 g/cm³ 0.0001 g/cm³	0.0002 g/cm³ (0.00005 g/cm² with ASTM D4052 option) 0.0005 g/cm³ (0.0001 g/cm² with ASTM D4052 option)	0.00005 g/cm³ 0.0001 g/cm³		
Cloud/freeze point repeatability** Cloud/freeze point reproducibility**	-	-	-	-	-	<0.5 °C / <0.5 °C <2.5 °C / <1.3 °C	-
Temperature repeatability	0.005 °C			0.005 °C			
Temperature reproducibility	0.03 °C from 15 °C to 100 °C			0.03 °C from 15 °C to 100 °C	0.03 °C from 15 °C to 100 °C 0.05 °C outside this range		0.03 °C from 15 °C to 100 °C
PERFORMANCE							
Sample volume min./typical	1.5 mL / 5 mL	3.5 mL / 8 mL		1.5 mL / 5 mL			2.5 mL / 6 mL
Solvent volume min./typical	1.5 mL / 6 mL	5 mL / 10 mL		1.5 mL / 6 mL			2.5 mL/ 10 mL
Max. sample throughput	37 samples/hour	21 samples/hour		33 samples/hour		30 samples/hour	24 samples/hour
FEATURES							
Optional upgrades	Second temperature		-	Automatic VI determination ASTM D4052 density	Chemical upgrade kit	-	-
					Modularity with Abbemat refractometers 5001, 5101, 5201, 7001, and 7201		
Accessories	Magnetic particle trap (MPT)	-	-	Magnetic particle trap (MPT), hot filling attachment (HFA)		Magnetic particle trap (MPT)	
Automation	-	Integrated Simple Fill Filling Device		Optional sample changer + High-Throughput Platform HTV			
TECHNICAL DATA							
Data memory	1,000 measurement results			1,000 measurement results			
HID (Human Interface Device)	7" touchscreen			10.4" touchscreen, optional keyboard, mouse, and 2D bar code reader			
Interfaces	4 x USB (3 x A, 1 x B)			4 x USB (2.0 full speed), 1 x Ethernet (100 Mbit), 1 X CAN bus, 1 x RS-232, 1 x VGA			
Power supply	At instrument: DC, 24 V /3A, AC adapter 90 VAC to 264 VAC, 47 Hz to 63 Hz, <75 W			AC 100 V to 240 V, 50 Hz to 60 Hz, 250 VA max.			
Ambient conditions	15 °C to 35 °C, max. 80 % r.h. non-condensing			15 °C to 35 °C, max. 80 % r.h. non-condensing			
Net weight in kg	5.6 kg	6.6 kg		15.9 kg	17.6 kg	18.0 kg	17.8 kg
Dimensions (W x D x H)	26.5 cm x 36.5 cm x 18 cm	33 cm x 36.5 cm x 20.5 cm		33 cm x 51 cm x 23.1 cm			

*Viscosity range with chemical upgrade kit from 1 mPa·s to 10,000 mPa·s.
**Attested at the points of the works adjustment or at calibration correction points, not including the uncertainty of the standards.

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