

Expertise in
Process Analytics



Process
Sensors



Continuous Measurement Gives You Maximum Control

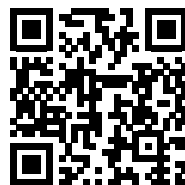
Anton Paar's process sensors ensure high product quality, optimize your raw material consumption, and maximize production capacity.

We're the one supplier for all of your needs: Whether it's for density, sound velocity, or refractive index, we're the only company that can provide you with all three methods for the concentration measurement of liquids. Likewise, we're the only company that can offer measuring instruments for CO₂, O₂, N₂, or N₂O. Our unique measuring principle for inline viscosity determination completes our portfolio.

We've developed one of the broadest portfolios of accurate sensor technologies for concentration determination on the market today, giving you a range of solutions for any application in a range of industries, such as:

- Petroleum
- Beverage and Food
- Chemical
- Metal and Mining
- Pharma
- Semiconductor
- Automotive and HVAC
- Pulp and Paper

FIND OUT MORE



[www.anton-paar.com/
process-sensors](http://www.anton-paar.com/process-sensors)



SEVERAL SENSORS UNDER ONE ROOF

We offer the most effective solution or sensor combination for your application with our broad sensor portfolio



EVALUATION UNITS AND SOFTWARE FOR DATA HANDLING

Our powerful evaluation unit, transmitter, and software support your visualization and handling of process data



GREAT PERFORMANCE, GREAT RESULTS

When it comes to precision and reliability in process measurement technology, our reputation speaks for itself



TAILORED SOLUTIONS

We develop solutions tailored to your needs, letting you measure your process liquids reliably, precisely, and continuously – no matter your application

Five Steps for Successful Process Measurements



Ranging from process and petroleum engineers to chemists and brewers, our specialized team of experts leverages its deep industry knowledge to develop tailored solutions for any application. In just five steps, we provide you with the comprehensive and professional support you need to develop applications and integrate our devices or complete systems into your plant.

1 Contact our global sales and service team

Whether you're dealing with commonly used process liquids or new, tailored applications, we help you reliably measure concentrations in your process with high precision. Once you contact us, we work with you towards a solution based on your requirements.

2 Develop an application together

We can provide you a solution from our extensive application database or we'll develop a concentration formula with Anton Paar laboratory meters for your sample, which helps us pick a suitable and accurate measurement system for you.

3 Use the right technology for the right results

Whether it's for density, sound velocity, or refractive index, we have a wide range of sensor technologies on hand, which means we can always provide the ideal measurement technology for your needs. We select the sensors that give you highly precise measurement results and meet your requirements.

4 Easily integrate our sensors into your processes

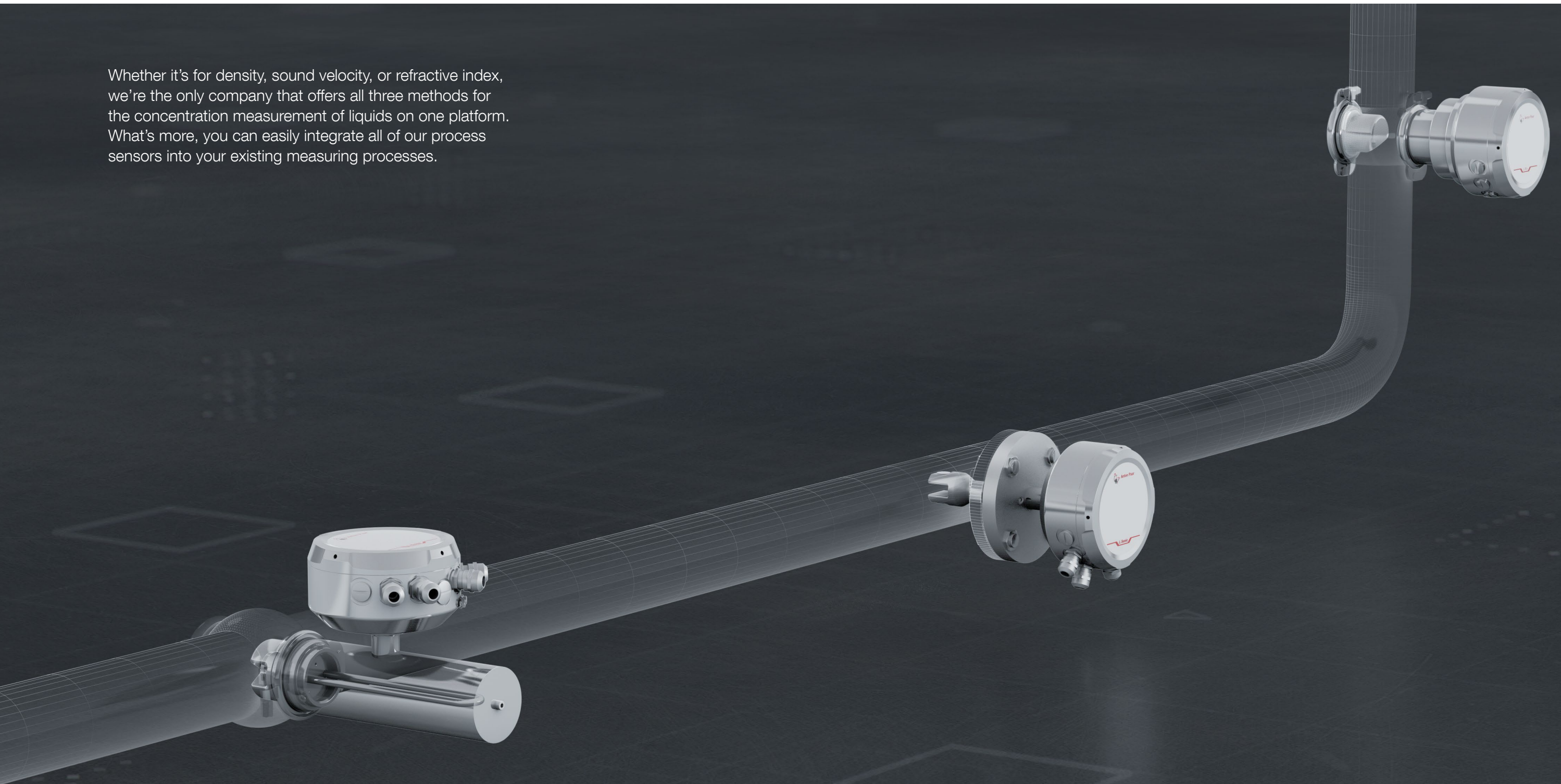
The measuring principles behind the sound velocity and refractive index sensors are easy to install and reduce factory downtime. The density sensors are even optimized for easy installation with a modular adapter system. No matter what you use, you'll be able to measure your process liquid reliably.

5 Access your results quickly and easily

To get your measurement results, choose from Pico 3000 (our smart transmitter) or our powerful mPDS 5 evaluation unit. Alongside intuitive operation, the wide range of fieldbus communication options means you can integrate both of these into your plant control system easily.

Access All Three Methods with Anton Paar

Whether it's for density, sound velocity, or refractive index, we're the only company that offers all three methods for the concentration measurement of liquids on one platform. What's more, you can easily integrate all of our process sensors into your existing measuring processes.

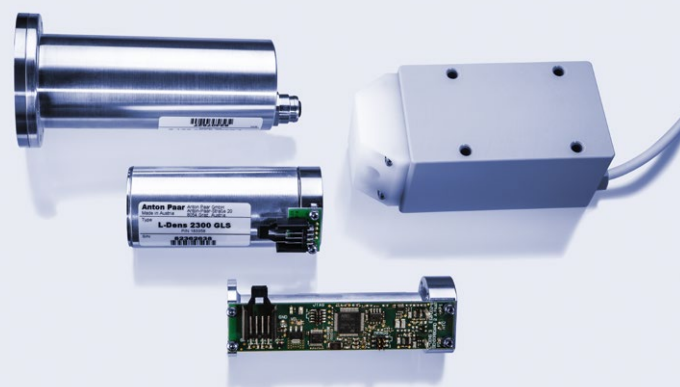


L-Dens and L-Com

Cover All Your Needs

L-Dens 2300: The flexible solution for OEM customers

- Small and flexible OEM modules let you easily integrate these density sensors into your measuring devices
- Measure the density and temperature of both non-corrosive and aggressive liquids with 3-digit accuracy with a stainless steel or glass U-tube



L-Dens 3300: The economical sensor

- Flexible, stand-alone sensors for density and concentration measurement with 3-digit accuracy
- A wide range of preinstalled applications makes them extremely versatile, even for small lab production setups and across various industries
- The wetted material – available in stainless steel or borosilicate glass – lets you measure both non-corrosive and aggressive media



L-Dens 7000: The highest-accuracy choice

- When it comes to high-accuracy density and concentration measurement, the L-Dens 7000 series has something for everyone
- While the entry-level L-Dens 7300 has been designed for the petroleum industry, L-Dens 7400 can be used across all industries and has 4-digit accuracy
- If you need 5-digit accuracy, then L-Dens 7500 is the way to go
- Whatever model you choose, don't worry: All sensors are maintenance-free and can be easily integrated into any process environment



L-Com 5500: The one sensor that measures three components

- Combines process density and sound velocity sensors, giving you the best of both worlds
- Conduct sophisticated concentration measurements of 3-component mixtures with a single instrument
- With their compact and modular design, easily integrate these maintenance-free process sensors into your existing processes



L-Rix

Real-Time Results around the Clock

With our durable L-Rix 4100/5100/5200 inline refractometers, conduct real-time concentration measurements and get production control of raw, intermediate, and final products. The sensors continuously measure concentration at the process temperature, giving you 24-hour production control. The built-in evaluation unit has a modern touchscreen. With the Pico 3000 software or the mPDS 5 evaluation unit, you don't need any special training to set up and use the instrument – just follow the directions on the interface.



- ✓ Operate with stored adjustment values for their entire lifetime, no maintenance needed
- ✓ Get real-time, accurate concentration results analogous to those of laboratory refractometers
- ✓ Durable, stainless-steel housing for reliable results under tough conditions and ingress protection of the enclosure guards against water jets and immersion
- ✓ EHEDG-certified
- ✓ User-friendly diagnostics in line with NAMUR NE 107

L-Sonic

Sound Velocity Sensors for Top Accuracy

With a 35-year development history behind it, the compact L-Sonic 5100/6100 delivers a repeatability up to 0.005 m/s.

L-Sonic 5100: The precise allrounder

- Fork-type sensor for immersion installation
- Easy integration into existing infrastructure, robust design, and various concentration formulas make it the cost-effective solution for every production process
- Use it for inline concentration measurements, interface detection, product identification, or precise production and quality control

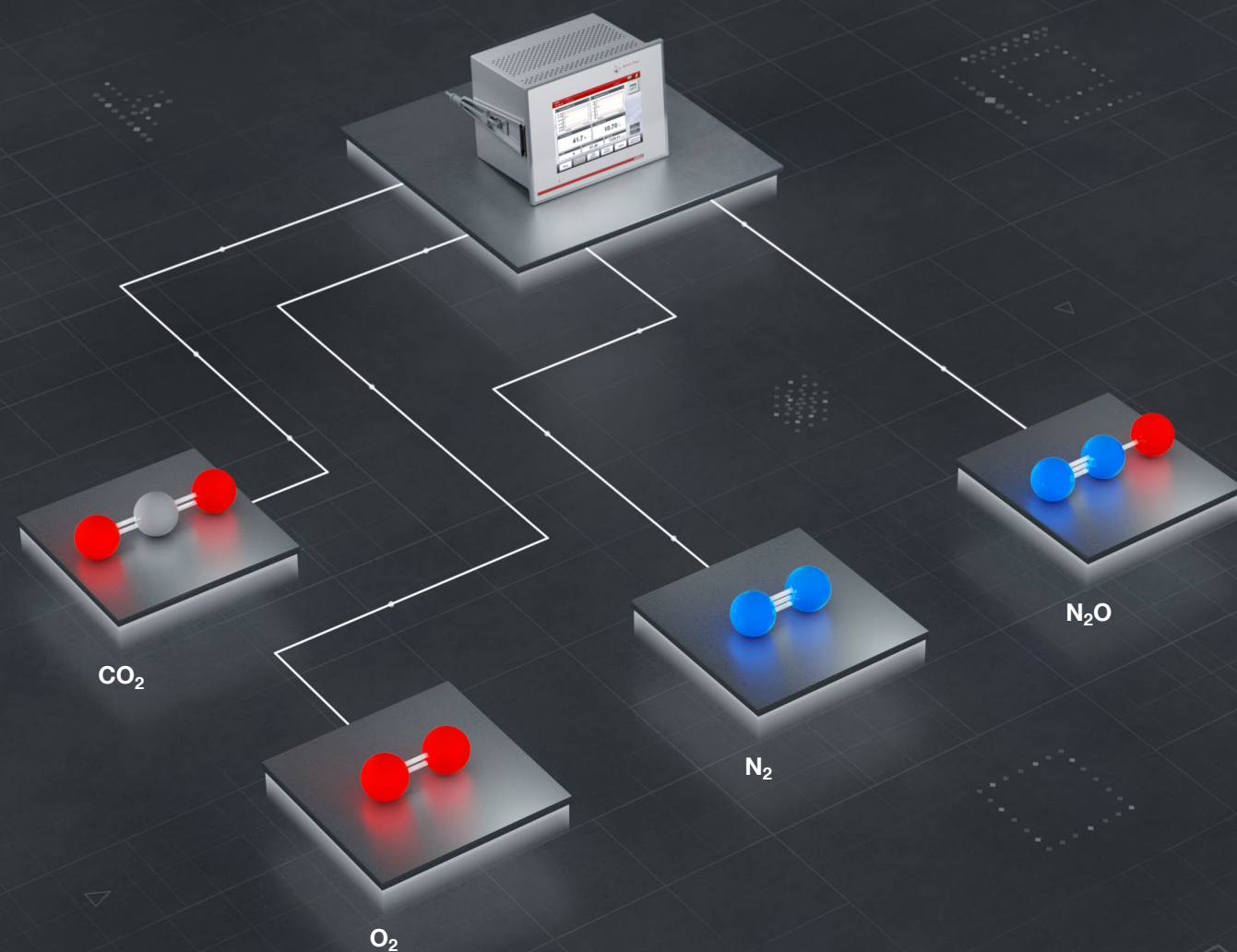
L-Sonic 6100: The plug-and-measure system

- Specially designed sound velocity sensor for oil in refrigerant (OCR) concentration measurements
- Optimize refrigeration circuits in the automobile as well as heating, ventilation, and air conditioning (HVAC) industry
- It comes as a “plug-and-measure” system, equipped with every need for a precise and ready-to-go measurement
- Many decades of experience, excellent know-how, and a comprehensive databank of oil to refrigerant concentration formulas make it an ideal sensor for every refrigeration circuit optimization



One Supplier for Four Dissolved Gases

CO₂. O₂. N₂. N₂O. We're the only company providing sensors that measure all four of these dissolved gases on one platform, which lets you improve your production process for a range of beverages, including beer, soft drinks, energy drinks, and much more.



Carbo

On-Target Beverage Quality

Dissolved gases play a major role in the drinks we love. From soft drinks to beer, we offer a range of solutions for this application in our dissolved carbon dioxide and dissolved oxygen portfolios.



Carbo 6100/6300: Ready to measure from day one

- Always know the actual CO₂ concentration of all beverages in your process, independent of the foreign gas level
- With our cutting-edge, optical measuring principle – attenuated total reflection (ATR) – get drift-free, accurate results in minimum time

Carbo 5100: Proven over decades

- Carbo 5100 keeps your beverage quality on target by continuously monitoring the CO₂ content
- Our self-developed volume expansion impeller method gives you drift-free measurement results in seconds
- We've continuously been developing this solution to the newest technology standards as well as customer requirements, so you can be sure your sensor meets today's demanding requirements

Oxy

One Sensor for the Entire Range

Oxy 5100: One sensor for the entire range

With real-time results, this sensor lets you measure directly in the production line independent of the solution medium and other dissolved gases. The sensor is also EHEDG-certified and SIP-ready.

- One sensor covers your complete liquid range portfolio: from trace range up to the wide and ultra-wide range
- Hassle-free sensor-cap exchange with Toolmaster technology
- Lifetime estimator predicts the remaining service life of the sensor cap
- Monitor the O₂ content in pressurized CO₂ recuperation pipes with CO₂ purity monitoring



L-Col

In-Line Color Measurement

L-Col 6100 detects the amount of absorbed light and assesses the product color to ensure it complies with standards such as EBC/MEBAK®/ASBC for beer color at 430 nm. Leverage tailored wavelength configurations to compensate for turbidity. With L-Col 6100, follow your entire production process, detect the maturity level of your beverage during storage, control the dosing of additives, and manage your blending process.

- Inline color measurement
- High-resolution optical measurement in a wide absorbance range
- Seamless integration with beverage analyzers
- Fully CIP/SIP compatible for temperatures up to 121 °C



- ✓ Inline color measurement for all kinds of beverages
- ✓ High-resolution optical measurement in a wide absorbance range
- ✓ EBC/MEBAK®/ASCB compliant
- ✓ Tailored wavelength configurations
- ✓ Optional turbidity compensation to eliminate the influence of sediments (e.g. yeast in unfiltered beers)
- ✓ Seamless integration with beverage analyzers
- ✓ LED light sources for long lifetime and minimized power consumption
- ✓ Fully CIP/SIP compatible for temperatures up to 121 °C

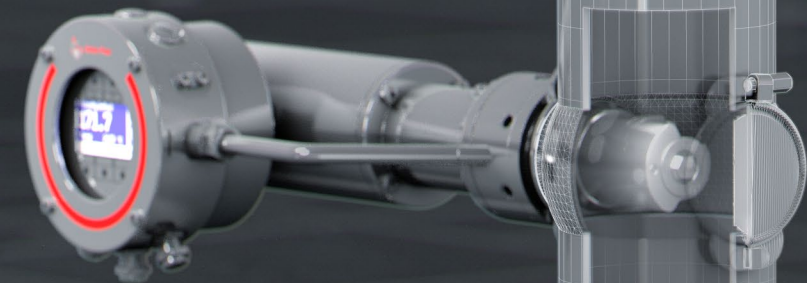
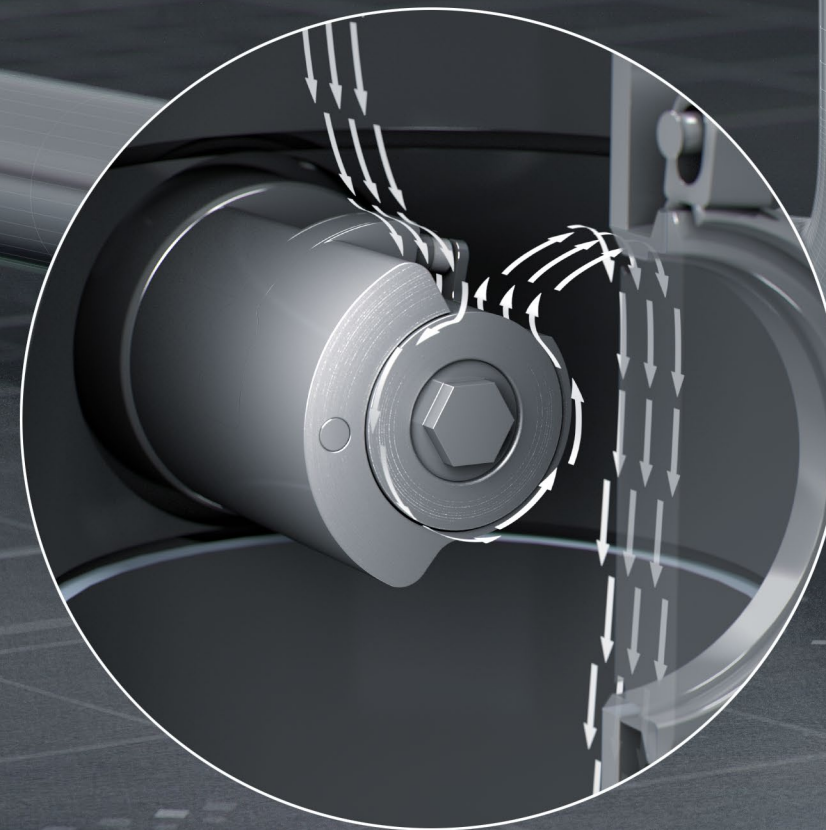
L-Vis

Effective Process Monitoring and Control

Inline viscometers

L-Vis is an inline viscometer that is immersed directly in the production liquid by installation in a pipe or tank. The measuring principle is based on dynamic fluid pressure, which makes the measurement unaffected by varying flow velocities or pressure drops. The shear-rate controlled, drift-free measurement with lab-correlatable results makes L-Vis perfect for process monitoring and control.

- ✓ Bringing lab measurement inline
- ✓ Adjustable shear rates for excellent lab-to-process correlation
- ✓ Fitted for measurements of inhomogeneous liquids and suspensions
- ✓ Various process installation and communication possibilities
- ✓ Automatic sample exchange



Electrical Integration for Reliable Monitoring and Control

Designed for continuous concentration measurement in industrial processes, our flexible suite of evaluation units gives you the information you need at your fingertips. Collect, display, and interact with your data, and transmit it to automated control systems with analog and digital interfaces. You can even use a variety of fieldbus communication protocols.



mPDS 5: Real-time process monitoring for 24/7 calculations

- Use mPDS 5, an evaluation unit with a color touchscreen, with all of your process sensors
- Continuously calculate the concentration of liquids and gases based on values delivered by the sensor
- From extract and alcohol measurement in distilleries to density and API gravity of petroleum products, several user programs are available
- Use customer-specific polynomials and special programs to create your own solutions

Pico 3000: High-performance transmitter for real-time measurements

- From analog outputs to high-end utilization via fieldbus communication
- Integrate it into your sensor or install it as a separate remote-control unit
- An optional TFT display with capacitive keys lets you quickly configure and display measured values
- An integrated quality control and error management system means automatic backup and restore functions

Davis 5: Simple, automated process monitoring

- Connect to our data acquisition and visualization software from any personal computer in your organization and analyze the production key performance indicators in real time
- View, download, and print production starts/stops, out-of-range values, trends, and statistics whenever you want
- Automated calibration and adjustment avoid transcription errors and document the workflow
- Leverage powerful reporting and complete traceability

Simple Mechanical Installation

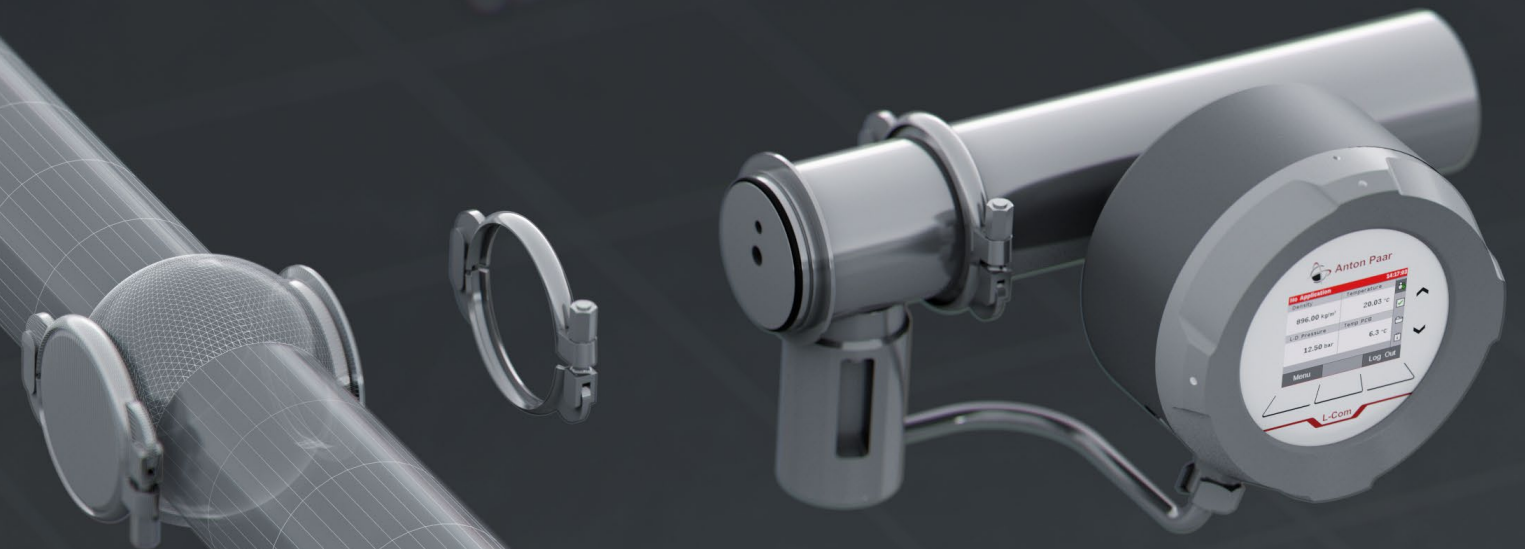
Our sensors provide you with concentration, density, and viscosity measurement data with minimal installation effort from your end.

Plug and measure

- Broad portfolio for standard installations plus extensive range of accessories to meet your specific requirements (e.g., adapters or bypass installation)
- Easy integration into pipes or tanks
- Cleaning devices that help you get best measurement results, even with challenging liquids
- Applicable to the sensor series of L-Rix, L-Sonic, L-Vis, Carbo, and Oxy

Modular density sensor design

- Say goodbye to density sensors that are tough to integrate; our density sensors are easy to install because of their modular design and various accessories
- If you have sufficient flow, you can integrate the density sensors with inline adapters just as easily as you can with other Anton Paar sensors
- If you have insufficient flow, extreme fluctuating flow rates, or tank installations, our integrated sample pumps, Inline Pump 300 and Inline Pump 520, ensure optimal media exchange for highly accurate measurement
- The Inline Pump 300 is also available as an Ex version, and can work with the L-Dens 7000 series and L-Com 5500



	L-Dens 2300 GLS (FCM) (PP)	L-Dens 2300 SST (E)	L-Dens 3300
	↓	↓	↓
Measuring range	500 kg/m³ to 2000 kg/m³	500 kg/m³ to 2000 kg/m³	500 kg/m³ to 2000 kg/m³
Accuracy in adjusted range	1 kg/m³	1 kg/m³	1 kg/m³
Process temperature	-10 °C to 60 °C	SST: 10 °C to 80 °C SST E: -10 °C to 60 °C	SST: 10 °C to 80 °C GLS: -10 °C to 60 °C
CIP/SIP temperature and duration		SST: 95 °C for 30 min	SST: 95 °C for 30 min.
Ambient temperature	-10 °C to 50 °C	SST: -10 °C to 50 °C SST E: -10 °C to 60 °C	-10 °C to 40 °C
Process pressure absolute	max. 6 bar	max. 16 bar	SST: max. 16 bar GLS: max. 6 bar
Material of the wetted parts	GLS: glass, PVDF, Kalrez GLS FCM: glass, PAS-PVDF, EPDM GLS PP: glass, PVDF, Kalrez	SST: 1.4571, 1.4404 SST E: 1.4571, 1.4404, FKM	SST: 1.4571, 1.4404, PVDF, Viton GLS: glass, PVDF, Kalrez
Communication	RS-232	RS-232	Analog, RS-232, RS-485, Relay
Process connections	GLS: Flange plate & adapters GLS FCM: Flange plate & adapters GLS PP: G 1/8"	Flange plate & adapters	G 1/8"
U-tube inner diameter	2.0 mm	2.1 mm	SST: 2.1 mm GLS: 2.1 mm
Recommended flow rate	10 L/h to 70 L/h	10 L/h to 80 L/h	SST: 10 L/h to 80 L/h GLS: 10 L/h to 70 L/h
Degree of protection	IP 65		
Certificates	CE		
Dimensions	GLS: 88 mm x 38 mm x 48 mm GLS FCM: 88 mm x 38 mm x 48 mm GLS PP: 126 mm x 56 mm x 46 mm	SST: 99 mm x 34 mm x 38 mm SST E: 134 mm x 64 mm x 64 mm	166 mm x 155 mm x 91 mm
Standard adjustment range	500 kg/m³ to 2000 kg/m³	500 kg/m³ to 2000 kg/m³	500 kg/m³ to 2000 kg/m³
Weight	GLS, gLS FCM: 105 g GLS PP: 275 g	SST: 105 g SST E: 400 g	1800 g

	Pico 3000	Pico 3000 RC
	↓	↓
Sensor input	L-Dens, L-Com, L-Sonic, L-Rix, Oxy, Carbo	
Communication interfaces	Analog/Digital, Frequency, HART, Modbus RTU, PROFIBUS DO, PROFINET IO, EtherNet/IP, Modbus TCP	
Mounting option	Within sensor	Wall, Cabinet
Housing material	Stainless steel 1.4305 (AISI 303)	
Display	45 mm x 60 mm TFT display incl. five capacitive keys	
Degree of protection	IP65; IP67	
Certificates	CE	
Supply voltage	DC 24 V (range DC 20 - 28.8 V)	
Power consumption	max. 3 W	
Dimensions	142 mm x 142 mm	142 mm x 142 mm x 100 mm (wall mount length 240 mm)

	L-Dens 7300 Petro	L-Dens 7400	L-Dens 7500	L-Com 5500
	↓	↓	↓	↓
Measuring range	max. 1500 kg/m³	max. 3000 kg/m³	max. 2000 kg/m³	max. 2000 kg/m³ 800 m/s to 2000 m/s
Accuracy in adjusted range	0.5 kg/m³	0.1 kg/m³ Tantalum 0.5 kg/m³	0.05 kg/m³	0.05 kg/m³ Repeatability Sound Velocity: 0.01 m/s
Process temperature non-Ex version	-40 °C to +125 °C			-25 °C to 125 °C
CIP/SIP temperature and duration non-Ex version	145 °C for max. 30 min.			
Ambient temperature non-Ex version	-40 °C to +70 °C			-25 °C to 65 °C
Process pressure absolute	max. 50 bar	max. 50 bar (HP version max. 180 bar)	max. 50 bar	max. 50 bar
Material of the wetted parts	1.4404	1.4404, Alloy C-276, Incoloy 825, Tantalum	Alloy C-276	Alloy C-276
Communication	can be combined with Pico 3000, Pico 3000 RC and mPDS 5			
Process connections	Adapter for inline, bypass and tank installation Flange: DIN/EN, ANSI, JIS, Tri-Clamp, VARIVENT® N, G 3/8", Tube OD 12 mm or 1/4"			
U-tube inner diameter	6.3 mm			
Recommended flow rate	100 L/h to 500 L/h			
Degree of protection	IP 66 / 67 / NEMA 4X			
Certificates	CE, ATEX, IECEx, NRTL, INMETRO			
Dimensions	Ex: 245 mm x 160 mm x 205 mm	245 mm x 145 mm x 185 mm (Ex: 245 mm x 160 mm x 205 mm)	190 mm x 145 mm x 185 mm (Ex: 190 mm x 160 mm x 205 mm)	258 mm x 142 mm x 192 mm (Ex: 258 mm x 156 mm x 214 mm)
Standard adjustment range	600 kg/m³ to 1200 kg/m³			700 kg/m³ to 1200 kg/m³ 800 m/s to 2000 m/s
Weight	4.5 kg	4.8 kg	4.5 kg	5.3 kg

L-Vis 510		L-Vis 520 Ex	
↓		↓	
Measuring range	1 mPa.s to 50,000 mPa.s		
Typical Accuracy	1% or 1 mPa.s		
Process temperature	-5 °C to +200 °C		-5 °C to +195 °C
Ambient temperature	-20 °C to +40 °C		
Process pressure absolute	25 bar		
Material of the wetted parts	Stainless steel 1.4548, diamond-coated SiC seal, Viton or EPDM O-Ring seals		
Communication	OT, ROT, mPDS 5		ROT, mPDS 5
Process connections	- L-Vis process flange DN 60 with welding set (25 bar @ 200 °C) - L-Vis process flange DN 60 with adapter (25 bar @ 200 °C) - EN 1092-1/05/DN 80/PN 16 - EN 1092-1/05/DN 100/PN 16 - ANSI flange 3", 4" CL150 - VARIVENT® Type N for L-Vis (10 bar @ 135 °C)		- L-Vis process flange DN 60 with welding set (25 bar @ 195 °C) - L-Vis process flange DN 60 with adapter (25 bar @ 195 °C) - EN 1092-1/05/DN 80/PN 16 - EN 1092-1/05/DN 100/PN 16 - ANSI flange 3", 4" CL150 - VARIVENT® Type N for L-Vis (10 bar @ 135 °C)
Degree of protection	IP 65		
Certificates	CE		CE, ATEX, IECEx
Installation orientation	Horizontal and vertical		Horizontal
Sealing	Single mechanical seal		Double mechanical seal with buffer fluid
Dimensions	500 mm x 210 mm x 150 mm		500 mm x 210 mm x 250 mm

	L-Rix 4100	L-Rix 5100	L-Rix 5200
	↓	↓	↓
Measuring range	1.3100 to 1.4910 (equivalent to 0 % to 80 % mass)	1.3100 to 1.5400 (equivalent to 0 % to 100 % mass)	1.3100 to 1.4600 (equivalent to 0 % to 65 % mass)
Accuracy	nD ±0.0002 (equivalent to ±0.1 % mass)	nD ±0.0002 (equivalent to ±0.1 % mass)	nD ±0.0001 (equivalent to ±0.05 % mass)
Process temperature	0 °C to 100 °C	-20 °C to +120 °C	0 °C to 105 °C
CIP/SIP temperature and duration	up to 145 °C for 30 minutes		
Ambient temperature	0 °C to 50 °C	-20 °C to +60 °C	
Process pressure absolute	100 mbar to 10 bar	100 mbar to 16 bar (10 bar @ >120 °C)	
Material of the wetted parts	Stainless steel 1.4404 (AISI 316L), PEEK, Sapphire (Al2O3 – 99.997%), O-ring: VARIVENT® connection - EPDM 70.10-02 (FDA approved)		
Communication	Pico 3000 - Analog	Pico 3000, Pico 3000 RC, mPDS 5	
Process connections	Tuchenhagen VARIVENT® Type N	Tuchenhagen VARIVENT® Type N, Tri-Clamp® 3“	
Degree of protection	IP65; IP67 / NEMA 6P		
Certificates	CE, EHEDG (Type EL - Class I)		
Light source	LED 589 nm		
Dimensions	142 mm x 142 mm x 172 mm		

Oxy 5100				
↓				
Sensor cap	Ultra-trace range	Trace range	Wide range	Ultra-wide range
Measuring range (dissolved O ₂ in liquids)	- (Gas phase only)	0 ppb to 2000 ppb	0 ppm to 22.5 ppm	0 ppm to 45 ppm
Measuring range (gas phase O ₂ in CO ₂)	0 ppmv to 200 ppmv (0 to 0.2 hPa)	0 % O ₂ to 4.2 % O ₂ (0 to 40 hPa)	0 % O ₂ to 50 % O ₂ (0 to 500 hPa)	0 % to 100 % O ₂ (0 to 1000 hPa)
Accuracy for liquids (the larger value is valid)	- (Gas phase only)	≤±1 % ppb or ± 3%	≤±0.042 ppm or ±3%	≤±0.1 ppm or ±5%
Process temperature	0 °C to 40 °C	-5 °C to +65 °C	-5 °C to +65 °C	-5 °C to +40 °C
CIP/SIP temperature and duration	Not suitable for CIP/SIP		max. 99 °C, max. 130 °C (max. 30 min)	
Ambient temperature	-5 °C to +50 °C			
Process pressure absolute	12 bar, max. 5 bar for measurements in gas phase			
Material of the wetted parts	Stainless steel 1.4404 (AISI 316L)			
Material of the wetted parts sensor cap	Sensor cap: Stainless steel 1.4404 (AISI 316L) Sensor spot coating: Silicone (FDA approved) O-Ring: FKM 75.16-04 (FDA approved)			
Communication	Pico 3000, Pico 3000 RC, mPDS 5			
Process connections	Tuchenhagen VARIVENT® Type N			
Degree of protection	IP65; IP67			
Certificates	CE, EHEDG (Type EL - Class I)			
Dimensions	162 x 162 x 215 mm			

	Carbo 5100	Carbo 6100	Carbo 6300
	↓	↓	↓
Measuring range	0 g/L to 20 g/L (0 vol to 10 vol)		0 g/L to 12 g/L (0 vol to g vol)
Accuracy	0.05 g/L (0.025 vol)		
Process temperature	- 5 °C to +40 °C		- 3 °C to +40 °C
CIP/SIP temperature and duration	Up to 121 °C for 30 minutes	Up to 95 °C for 4 h	Up to 95 °C for 4 h or up to 130 °C for 30 min
Ambient temperature	0 °C to 50 °C		-20 °C to +50 °C
Process pressure absolute	10 bar		
Material of the wetted parts	WC, SSiC, Stainless steel 1.4404 (AISI 316L) O-Rings, diaphragms: EPDM 70.10-02 (FDA-approved)	Stainless steel 1.4404 (AISI 316L), PEEK, Sapphire (Al2O3 – 99.997%), O-ring: VARIVENT® connection - EPDM 70.10-02 (FDA approved)	
Communication	Pico 3000, Pico 3000 RC, mPDS 5		
Process connections	Tuchenhagen VARIVENT® Type N		
Degree of protection	IP65; IP67		
Certificates	CE		CE, EHEDG (Type EL - Class I)
Dimensions	173 mm x 224 mm x 219 mm		142 mm x 142 mm x 220 mm

	L-Sonic 5100	L-Sonic 6100
	↓	↓
Measuring range	800 m/s to 2500 m/s	200 m/s to 1560 m/s
Repeatability*	0.005 m/s	0.01 m/s
Process temperature non-Ex version	-25 °C to 125 °C	
CIP/SIP temperature and duration	145 °C for max. 30 min.	
Ambient temperature	-25 °C to 65 °C without HMI -20 °C to 55 °C with HMI	
Process pressure absolute	According to flange specification	up to 70 bar @ 125 °C or 100 bar @ 50 °C
Material of the wetted parts	Stainless Steel 1.4404 (316L) HASTELLOY® HYBRID-BC1® Monel 400 24 k Gold-coated, Rhodium-coated	Stainless Steel 1.4404 (316L)
Communication	can be combined with Pico 3000, Pico 3000 RC and mPDS 5	
Process connections	VARIVENT® N, VARIVENT® G DIN 11851 EN 1092-1, ANSI B16.5	Tube end: OD 12 mm Compression Type Fitting (12mm, 1/2") Compression Type Fitting w. External Thread (NPT 3/4", G 3/4")
Fork length	56 mm, 125 mm (Standard) or Customer-specific	-
Recommended flow rate	0.1 m/s to 6 m/s	50 to 700 L/h
Degree of protection	IP 66 / 67 / NEMA 4X	
Certificates	CE, ATEX, IECEx, NRTL, INMETRO	
Dimensions	Depending on model	Non Ex: 150 mm x 145 mm x 175 mm Ex version: 160 mm x 160 mm x 190 mm

*Is a measure for the variations in measurement taken by a single L-Sonic 5100/6100 instrument = accuracy of a single L-Sonic 5100/6100 device

mPDS 5	
↓	
Sensor input	L-Dens, L-Com, L-Sonic, L-Rix, Oxy, Carbo, L-Col, DPR(n), SPR(n), DSR(n) and third-party sesnors via analog input
Transducer board only for old density/sound velocity transducers	Transd. 1/Transd. 2: DPR(n), SPR(n), DSR(n) 2 analog inputs: 4 to 20 mA active/passive 12 digital inputs/outputs or counter: e.g. filler stop, bottle counter, limit alarms
Input/Output board	4 analog outputs: connection to PLC 3 analog inputs: 4 to 20 mA active/passive 12 digital inputs/outputs or counter: e.g. filler stop, bottle counter, product selector 2 relay outputs: alarms
Fieldbus boards	PROFIBUS DP, PROFINET IO, EtherNet/IP, DeviceNet and Modbus TCP
Ambient temperature	5 °C to 40 °C
Mounting option	Control panel, Switch cabinet
Display	8.4" TFT color touch screen, 640 x 480 pixel
Degree of protection	IP54 from the front (only after proper installation in a control panel, switch cabinet,...)

	mPDS 5
	↓
Certificates	CE, ANSI/UL 61010-1, CAN/CSA C22.2
Embedded PC	1 GHz, 512 MB DDRAM, 1 gbyte Flash EtherNet (LAN) interface (Davis 5) 2 USB interfaces: backup, update
Supply voltage	DC 24 V -15% / +20% (UL Class 2)
Power consumption	max. 60 W
Dimensions	275 mm x 215 mm x 240 mm

Trademarks Cobrix (10025559), DAVIS (018615942), L-Dens (10025492), L-Sonic (10025583), L-Vis (10025534), L-Col (017873944), Toolmaster (3623873), FLEX-BLEND (017985571), ANIMO (017873939)



We're confident in the high quality of our instruments. That's why we provide **a full warranty for three years.**

All new instruments* include repair for three years. You avoid unforeseen costs and can always rely on your instrument. Alongside the warranty, we offer a wide range of additional services and maintenance options.

*Due to the technology they use, some instruments require maintenance according to a maintenance schedule. Complying with the maintenance schedule is a prerequisite for the three-year warranty.

Service and support directly from the manufacturer



Safeguarding your investment



The shortest response times



**Certified service
engineers**



**Our service
is global**

