

Expertise in **Process Analytics**

Process Sensors



Continuous Measurement Gives You Maximum Control

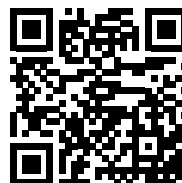
Anton Paar's process sensors ensure high product quality, optimize your raw material consumption, and maximize production capacity.

We are the one supplier for all of your needs: Whether for density, sound velocity, or refractive index, we are the only company that can provide you with all three methods for the concentration measurement of liquids. We are also the only company that can offer measuring instruments for CO₂, O₂, N₂, or N₂O.

We have developed one of the broadest portfolios of accurate sensor technologies for concentration determination on the market, 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
- Semiconductors
- 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

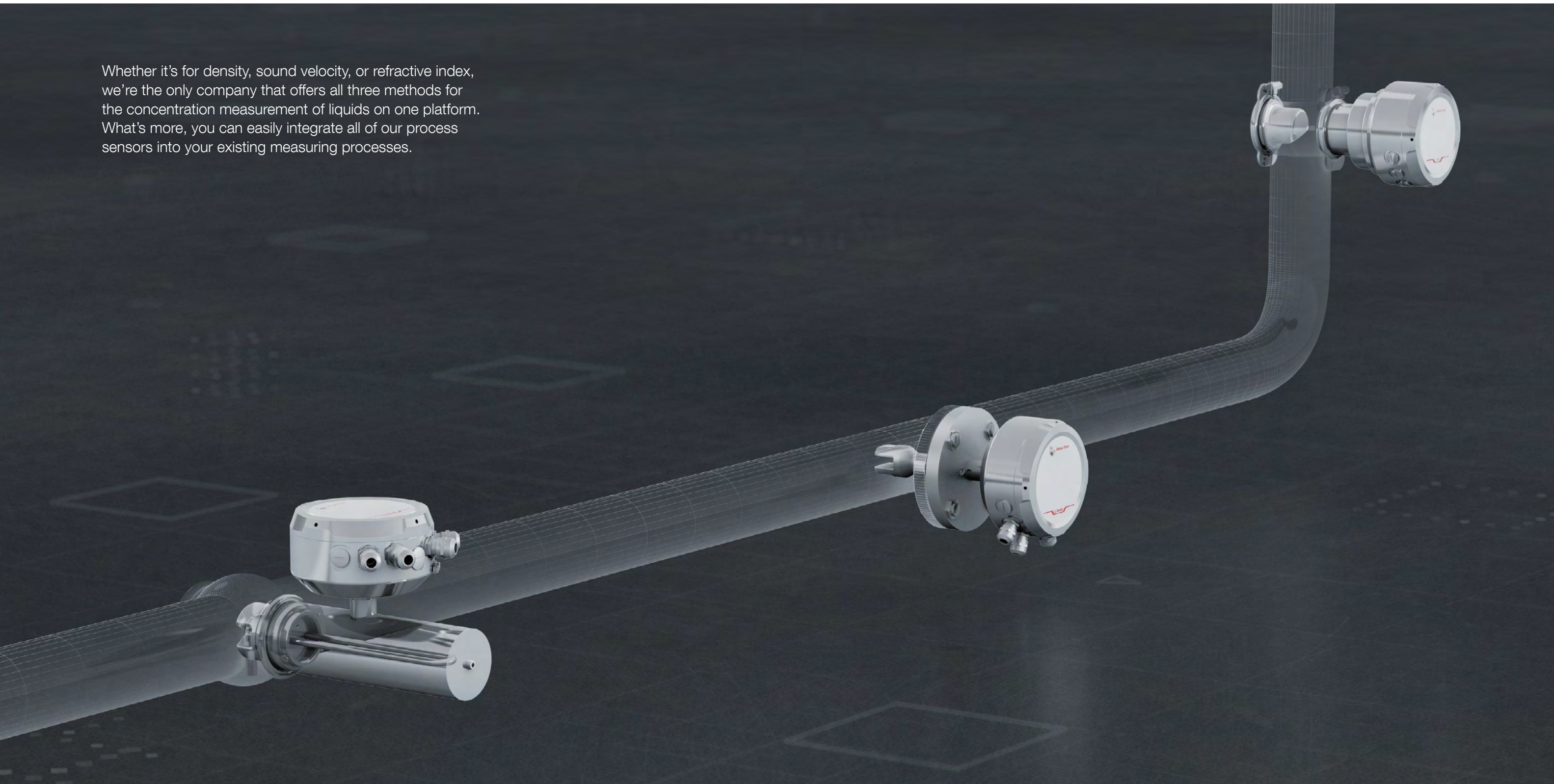
The measuring principles behind the sound velocity and refractive index sensors are easy to install and reduce factory downtime. The density sensors are even optimized for easy installation with a modular adapter system. No matter what you use, you'll be able to measure your process liquid reliably.

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

The L-Dens inline density and concentration meters cover all your needs across a wide variety of applications in virtually all industries, including the chemical, beverage, petroleum, pharmaceutical, and ethanol industries.

The L-Dens 3300 sensors are budget-friendly entry-level models. The L-Dens 7000 series combines high accuracy and a compact design, making it the number-one choice for precise density and concentration measurements. Thanks to the wide range of integration options, these instruments can be easily integrated into your plant.

L-Com 5500 is a smart density and sound velocity sensor that lets you conduct concentration measurements of three-component mixtures with just one instrument.



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 pre-installed 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
- Whichever 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.



L-Rix series: Inline and highly accurate

- Operate with stored adjustment values for their entire lifetime, no maintenance needed
- Get real-time, accurate concentration results comparable 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

Concentration Measurement, Phase Detection, Quality Control

With a 35-year development history, the compact sound velocity sensor L-Sonic 5100/6100 delivers a repeatability of up to 0.005 m/s.

The sensors are designed for concentration measurement, phase detection, product identification and quality control in the chemistry, petroleum, mining and steel industries, as well as for HVAC and brewery businesses – and much more.

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

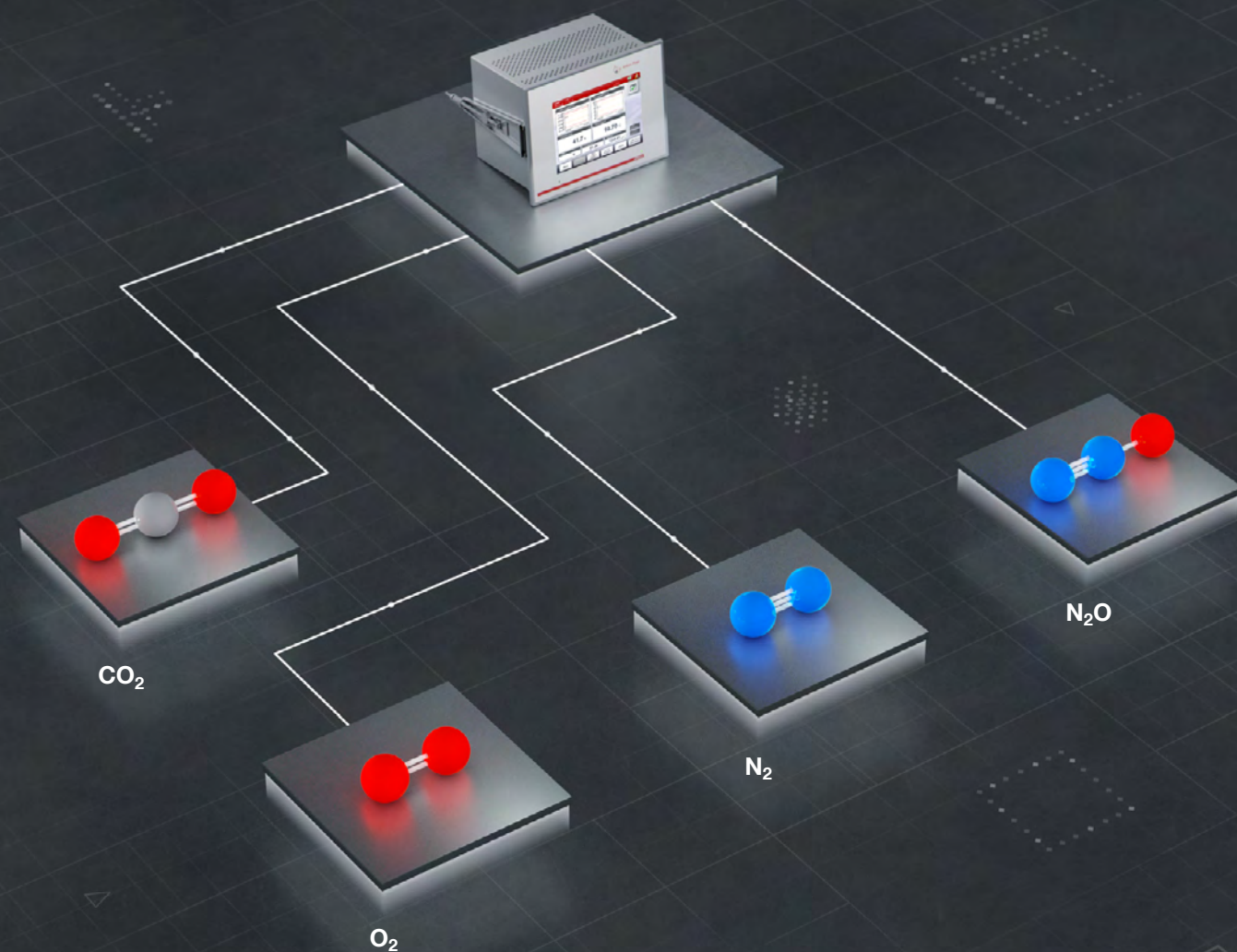
L-Sonic 6100: The plug-and-measure system

- 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 many 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

Dissolved Oxygen in Real Time

With real-time results, the Oxy 4100 transmitter and Oxy 5100 sensor measure dissolved oxygen directly in the production line, independent of the solution medium and other dissolved gases. They're both SIP-ready, and Oxy 5100 is also EHEDG-certified.

Oxy series: Inline oxygen sensor

- Clever sensor caps covering your complete liquid range portfolio: from trace range up to wide and ultra-wide range
- Hassle-free sensor-cap exchange with Toolmaster technology
- Oxy 5100 Lifetime estimator predicting remaining service life of the sensor cap
- O₂ content monitoring in pressurized CO₂ recuperation pipes with oxygen monitoring for gas purity



L-Col

Inline 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.



L-Col 6100: Color consistency where you need it

- 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

Simple Mechanical Installation

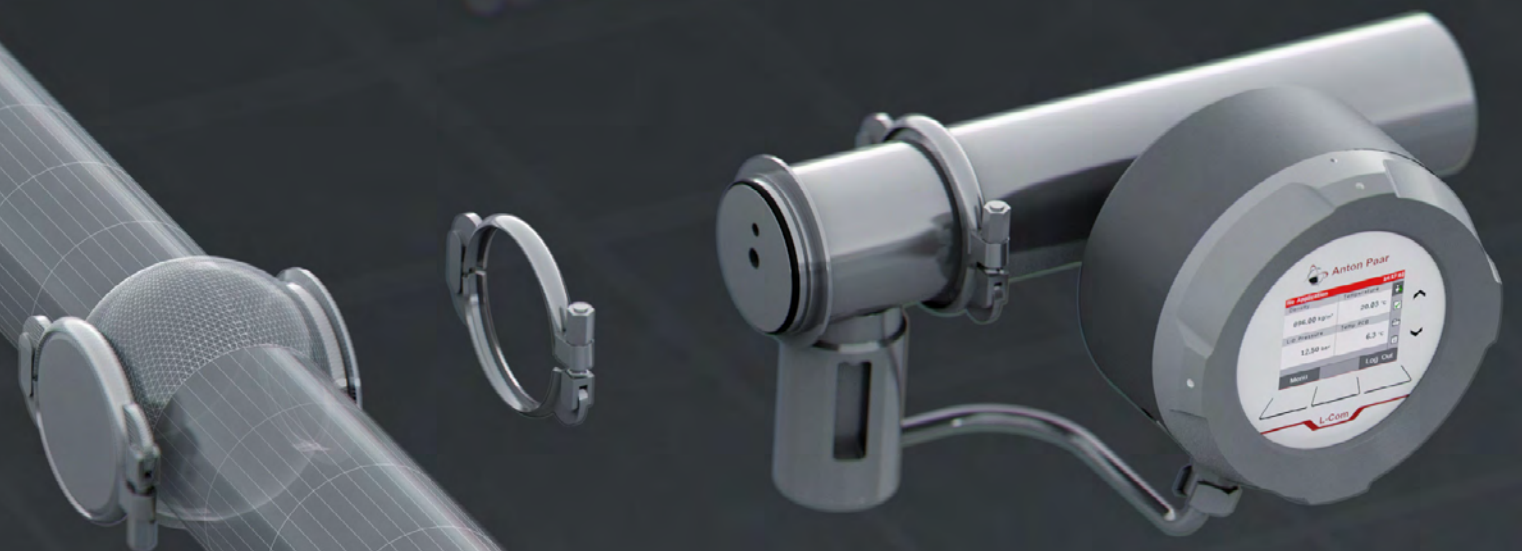
Our sensors provide you with process measurement data with minimal installation effort from your end. An outstanding range of adapters, pumps and cleaning solutions facilitate installation in your process, and ensure reliable operation.

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, 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



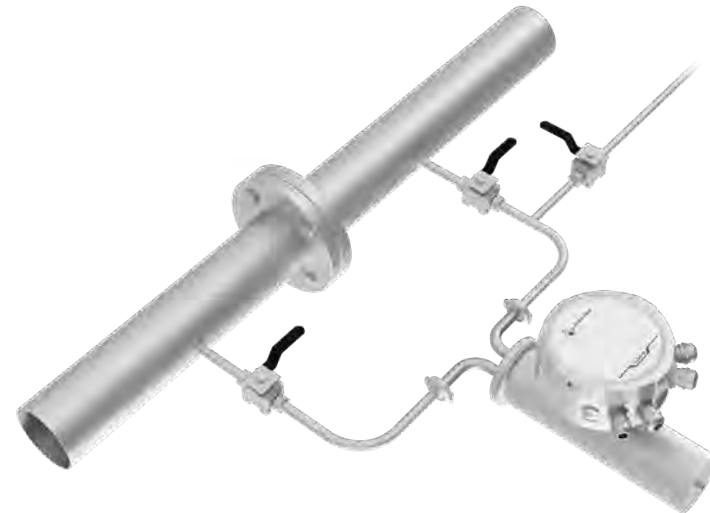
Installation Accessories

Simplifying Process Analysis



Adapters for inline installation

Minimizing installation effort. For L-Dens 7000 and L-Com 5500.



Adapters for bypass installation

Complete operational flexibility. For L-Dens 7000 and L-Com 5500.



Integrated pumps for tank or pipe installation, suitable for hazardous areas

Ensuring accurate flow volumes for precise and reliable measurements. For L-Dens 7000 and L-Com 5500.



Cut-off adapters

Simple inline installation offering bypass flexibility. For L-Dens 7000 and L-Com 5500.

⊕ Flashing adapter

Simple inline installation offering bypass flexibility. For L-Dens 7000 and L-Com 5500.



Deflection system

Utilize flow for cleaning to ensure measurement reliability. For L-Rix.



Installation tailored for small pipes

Meeting your needs. For L-Rix.

⊕ Prism wash system

Active cleaning designed for harsh conditions. For L-Rix.



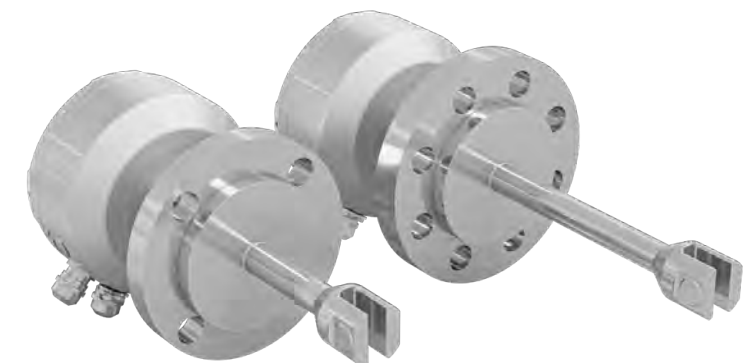
Out-of-the-box integration solutions

For fast sensor installation in stainless steel or PFA coated pipes. For L-Sonic 5100.



Cleaning nozzles

Ensure top measurement accuracy and reliable operation even under harsh conditions. For L-Sonic 5100.



DN 50/2" to DN 80/3" adapters and customized fork lengths

Tailor-made solutions fitting right into your plant. For L-Sonic 5100.

Electrical Integration for Reliable Control – Tailored to Your Needs

Designed for continuous concentration measurement in industrial processes, our flexible suite of evaluation units gives you the information you need at your fingertips. We offer high-performance evaluation units for single sensors, or process monitoring systems that collect information from all your sensors. 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.



Pico 3000: High-performance transmitter for individual sensors

- 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 ensures automatic backup and restore functions

mPDS 5: Real-time process monitoring for your complete instrumentation

- 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

Davis 5: Simple, automated process monitoring – leveraging your data

- 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

	L-Dens 2300 GLS (FCM) (PP)	L-Dens 2300 SST (E)	L-Dens 3300
	↓	↓	↓
Measuring range	500 kg/m³ to 2,000 kg/m³	500 kg/m³ to 2,000 kg/m³	500 kg/m³ to 2,000 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 2,000 kg/m³	500 kg/m³ to 2,000 kg/m³	500 kg/m³ to 2,000 kg/m³
Weight	GLS, gLS FCM: 105 g GLS PP: 275 g	SST: 105 g SST E: 400 g	1800 g

	L-Dens 7300 Petro	L-Dens 7400	L-Dens 7500	L-Com 5500
	↓	↓	↓	↓
Measuring range	Max. 1,500 kg/m³	Max. 3,000 kg/m³	Max. 2,000 kg/m³	Max. 2,000 kg/m³ 800 m/s to 2,000 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 1,200 kg/m³		700 kg/m³ to 1,200 kg/m³ 800 m/s to 2,000 m/s
Weight	4.5 kg	4.8 kg	4.5 kg	5.3 kg

	L-Sonic 5100	L-Sonic 6100
	↓	↓
Measuring range	800 m/s to 2,500 m/s	200 m/s to 1,560 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®, 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 L/h 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

	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 (Al ₂ O ₃ – 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 4100 / 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 2,000 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 1,000 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 (Oxy 5100) -5 °C to +40 °C (Oxy 4100)		-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			

*Not available for Oxy 4100

	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 6 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 (Al ₂ O ₃ – 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

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 sensors 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 ...)
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

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. 5 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)

Trademarks	Cobrix (10025559), Davis (018615942), L-Dens (10025492), L-Sonic (10025583), L-Col (017873944), Toolmaster (3623873), Flex-Blend (017985571), Animo (017873939)
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	Inline Pump 520	Inline Pump 300	Inline Pump 300 Ex d
↓			
Type	Magnetically coupled centrifugal pump		
Process temperature	+5 °C to +100 °C (+120 °C for max. 30 min.)	+5 to +105 °C (+145 °C for max. 30 min)	-25 °C to +80 °C (T4)
Pressure	1 bar to 16 bar	1 bar to 16 bar	1 bar to 50 bar Tproc ≤ +70 °C 1 bar to 16 bar Tproc ≤ +80 °C
Viscosity	max. 150 mPas	0.35 mPas to 10 mPas	0.35 mPas to 10 mPas
Ambient conditions	-20 °C to +40 °C	-5 °C to +60 °C	-25 °C to +60 °C
Power supply	SELV DC 24 V	powered by the sensor	powered by the sensor
Power consumption	max. 180 W	max. 10.5 W	max. 10.5 W
Wetted material	1.4404, SSiC, WC, EPDM	1.4404, SSiC, WC, EPDM	1.4404, SSiC, WC, EPDM or FKM
Ex certificates	-	-	ATEX, IECEx, CSA/UL/FM, UKEX

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