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Gillain & Co
HYGIENIC EQUIPMENT FOR FOOD & LIFE SCIENCES

part of heleon group

SENSORS FOR FOOD AND LIFE SCIENCES.

HYGIENIC BY DESIGN
ANDERSON-NEGELE

Sensor Technology for the Brewing Process

- TEMPERATURE
- PRESSURE
- LEVEL
- POINT
- FLOW
- CONDUCTIVITY
- TURBIDITY
- WEIGHING SYSTEMS
- PROCESS ADAPTERS

What can Anderson-Negele offer me to optimize my brewing process?

How can I save energy with measurement technology?

What advantage do remote sensors offer me?

How can analytical sensors contribute to process automation?

ANDERSON-NEGELE.COM

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What can Anderson-Negele offer me to optimize my brewing process?

Every brewer has the aspiration to offer his customers a **consistent, distinctive beer experience.** But he also has to ensure an **economically successful operation** of the business by permanently **optimizing processes, resource consumption and costs.**

It is an expression of the art of brewing to achieve both at the same time for a product that is subject to so many influences and has such a wide variety as beer.

Intelligent measurement technology can help you ensure consistent product quality throughout the brewing process, automate processes, minimize energy and resource consumption, and avoid production downtime.

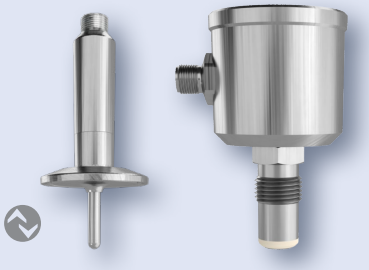
Our tip: Take a look at our product portfolio and compose your "dream sensor technology".

As diverse as the raw material quality, the recipes and the procedures in the brewing process are, so are the requirements for the measurement technology.

That's why we offer a **complete sensor program,** each with a wide range of variants and options, so that you get exactly the **performance you want** for every application and every plant, from craft breweries to large industrial breweries - no more and no less.

Temperature

They are essential in almost **every step** of the brewing process and for CIP control. That is why we offer them in 2 standards (Big and Mini), with a **comprehensive performance range** and an almost infinite variety of **customization, process connections and options.**



TSMF / TSBF

- ✓ For vessels and pipes from DN25
- ✓ Flush design available
- ✓ Accuracy < ±0,1 K
- ✓ Extremely robust and permanently precise
- ✓ Optional programming display

Pressure

Keep **optimum control of process or vessel pressure** at all times. Many sensor options provide the most suitable solution for **every application, every requirement and every desired pressure measuring range**, be it as an on-site display or for PLC connection.

Transmitter: P41 / P42

- ✓ Extremely robust, even with pressure shocks
- ✓ Absolute, Relative or Compound measurement
- ✓ Temperature compensated

Gauge: EL

- ✓ Extremely robust, even with pressure shocks
- ✓ Accuracy up to ±0,25 %
- ✓ 90 mm display
- ✓ Two-point adjustment

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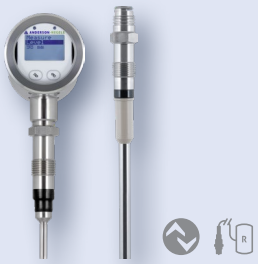
Level

Different temperatures, different vessel shapes, sometimes pressurized, different densities, differently foaming media, different turbidity and solids contents - highly **different requirements and dynamic changes** influence the control of the filling level of your various vessels and containers. However, at all times you need to know exactly **how much product is in the vessel** or ensure that a **vessel does not overflow or run dry.**
That's why we offer **different measuring techniques and many different designs and options**, so that you get the best solution for every purpose and application.

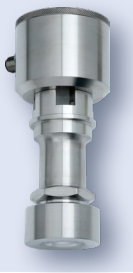
Hydrostatic: L3

- ✓ Always precise due to significantly reduced temperature effect
- ✓ Direct output of volume, levelor pressure
- ✓ Integrated tank linearization and density compensation



Potentiometric: NSL-F / NSL-M

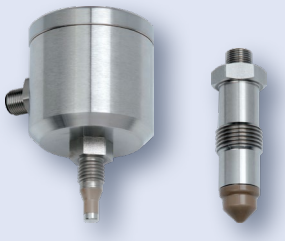
- ✓ Highly accurate even with foam, pasty or adhering media such as yeast
- ✓ Installation from the top, below, or side, rod can be adapted to vessel shape
- ✓ Also for pressure vessels and up to 3 m



Hydrostatic: LAR

- ✓ Hermetic measuring system, ideal for wet conditions
- ✓ One-touch zeroing
- ✓ Superior accuracy

Point Level



Capacitive: NCS
Conductive: NVS

- ✓ Reliable point level indicator even with foam or adhering media such as yeast
- ✓ Hygienic installation on top, below, or side
- ✓ Very short response time
- ✓ Also for double-walled vessels
- ✓ Optionally heated to prevent condensate

How can I save energy with measurement technology?

Energy consumption is influenced in particular by **temperature, process duration and media quantity.** A **temperature** that is slightly too high, or too low in the fermentation cellar, can already mean costs of several hundred dollars per year.

If the **lautering process** runs for 10 minutes too long, energy is also wasted here. And a **CIP process** that lasts longer due to time control, even though the desired degree of cleaning has already been achieved, also consumes resources and energy unnecessarily.

Plate heat exchangers and vapor condensers can in turn be used for energy recovery. High-precision sensors with **active output for process control and automation** can help preventing energy losses and optimizing energy recovery.

Our tip: Examine all processes for their optimization potential. We will be happy to help you on site

Many of our sensors are available as "remote" version. The actual measuring device and the electronics unit with operating display are separated. This **protects the electronics from vibrations and high temperatures** and can significantly increase the service life. It is also extremely practical, as you can simply place the electronics and displays where it is most **convenient and accessible for easy and quick reading or programming.**

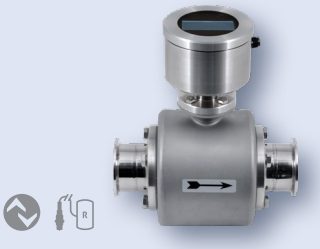
Our tip: Get the perfect overview of all processes and containers without having to bend down or walk around and ensure easy programming and longer service life with remote sensors.

= Remote version available

What advantage do remote sensors offer me?

Flow Meters

Here is how you **maintain control** over your brewing **recipes and the technical safety** of your plant: Precise flow control with electromagnetic flow meters shows you **in every process step, from the mash tun to the keg filler,** exactly what volume of media is flowing in the processes.



FMQ

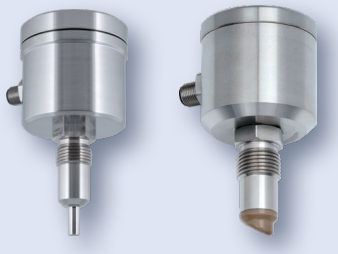
- ✓ Compact, robust, low-cost all-arounder
- ✓ Measuring range 30 l/h to 640,000 l/h (8 gal/hr to 169,000 gal/hr)
- ✓ Measuring accuracy ±0.5 % ±2 mm/s
- ✓ For process temperature up to 165 °C / 325 °F (Remote), CIP up to 130 °C / 30 min.
- ✓ Many current process connections

FMI

- ✓ High-end version for highest demands
- ✓ Measuring range 30 l/h to 640,000 l/h (8 gal/hr to 169,000 gal/hr)
- ✓ Measuring accuracy ±0.2 % ±1 mm/s
- ✓ - For process temperature up to 165 °C / 325 °F (Remote), CIP up to 130 °C / 30 min.
- ✓ Multifunctional interfaces, e.g. Profibus

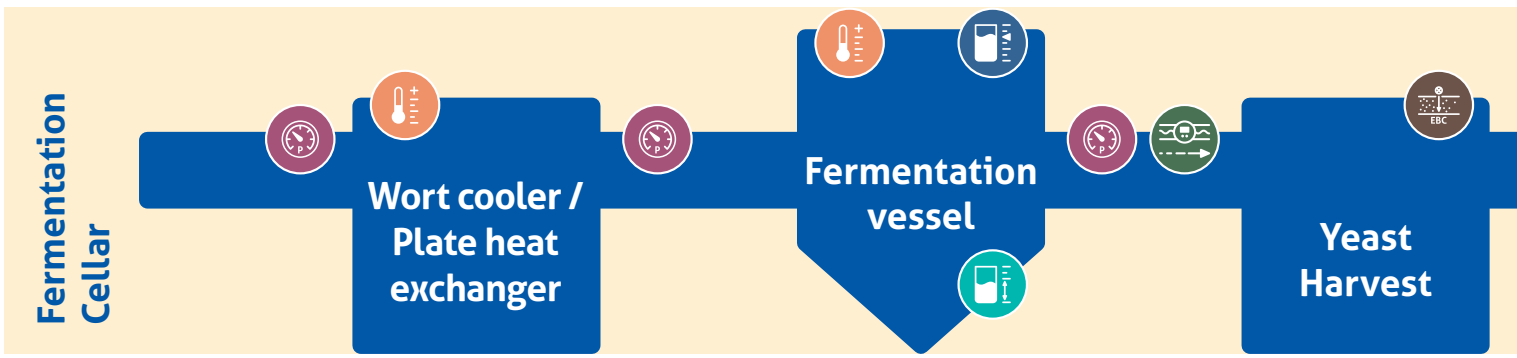
Flow Switches

Flow monitors give an alarm when the flow stops and are ideal for **monitoring pump systems, filters, cooling circuits, the CIP return or for detecting misdirected media.**



Calorimetric: FTS
Ultrasonic: FWS / FWA

- ✓ Measuring range 0.1...3 m/s
- ✓ Very short response time
- ✓ Temperature compensated
- ✓ Thanks to different technologies the right solution for any, even high-purity, media



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Turbidity

Do you want to start **lautering** at the perfect moment, saving time and energy? Ensure maximum reusability during **yeast harvesting?** Achieve **maximum separator effectiveness? Reuse weakly contaminated CIP media** and thus save costs? **Minimize wastewater costs** through pollution monitoring? **Maintain precise product quality?**
Then our turbidity sensors are **your perfect solution.**

ITM-51

- ✓ Front-flush design with backscatter light technology
- ✓ Easy installation due to screw or clamp connection
- ✓ Measuring range: 50...75,000 EBC
- ✓ High safety and durability due to glass-free sapphire optics

ITM-4

- ✓ Four-beam alternating light technology (90° scattered + 180° transmitted light)
- ✓ Measuring range: 0...1,250 EBC
- ✓ Measuring accuracy: resolution 0.1 %
- ✓ Response time < 1 sec.
- ✓ Many process connections from DN25 to DN100

Conductivity Sensors

For active, automated phase transition, control of the CIP return of acid / caustic / water and concentration control of the CIP cleaners: ILM-4, your safeguard for process reliability.

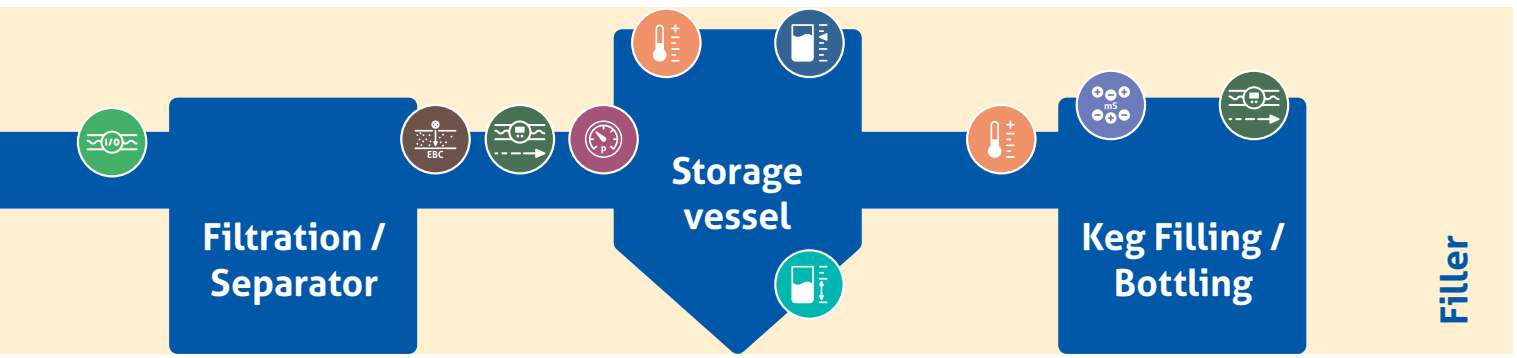
ILM-4

- ✓ Measuring range: ≤ 1... ≤ 999 mS/cm
- ✓ Sensor response time only 1.2 sec.
- ✓ Configurable from basic to high-end model
- ✓ Extremely robust and durable: 5 years warranty

How can analytical sensors contribute to process automation?

Many processes in the brewery are based on a **differentiation according to turbidity, conductivity or concentration.** In practice, deviations in these criteria are often not easy to detect. But they are **crucial for the quality** of the end product, and for the **efficiency of the process.** Analytical sensors are your "eye in the pipe", your view inside the process, and can **automatically control the process** through an active output. This can replace manual sampling or time-controlled phase changeovers.

Our tip: In multiple processes such as lautering, yeast harvesting, whirlpool, bottling, and CIP control, this allows you to save working time, avoid product losses, reduce the amount of wastewater, ensure consistent quality, and ensure that the beer ends up in the bottle and the rinse water in the drain.



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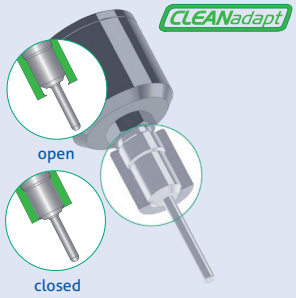
What exactly does "Hygienic by Design" mean?

Anderson-Negele products are designed and built **exclusively for food applications.** Therefore, they meet all requirements for hygiene-sensitive production areas from the very beginning, as **evidenced by certifications** such as 3-A and EHEDG. This means **maximum hygienic protection** of your products, easy **equipment cleaning,** and ultimately maximum **peace of mind and enjoyment for your customers.** When it comes to process connections, we also offer a wide range of solutions that ensure sanitary integration into your plants through dead space-free design and superior material and surface quality.

Our tip: With CLEANadapt and FLEXadapt, we have specially developed process connection systems that simplify hygienic installation and operation and can even be retrofitted.

Process adapters

For a wide range of sensor types, our connection systems offer a **consistent hygienic installation concept:** High-quality stainless steel or PEEK for all wetted components, simple and secure screw connection or even installation in thermowells for sensor removal without disrupting the process.



CLEANadapt

- ✓ Installation in flow-optimized weld-in sleeves, pipe tees or adapters for existing process connections.

FLEXadapt

- ✓ Installation without media contact in a thermowell permanently welded into the process. Many sockets, adapters or pipes available.

Weighing Systems

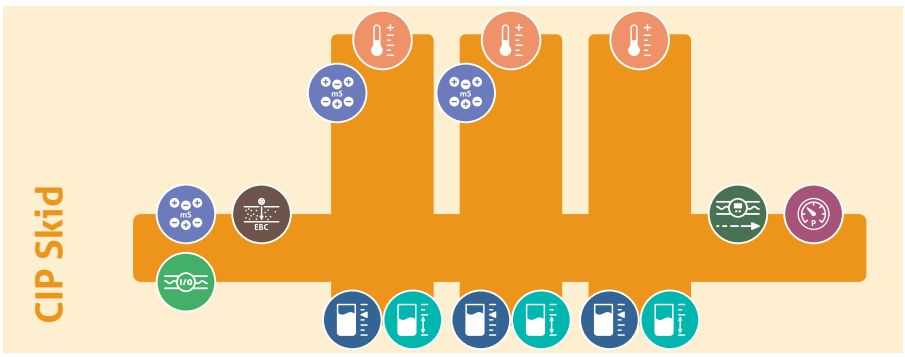
Turn your vessel into a **precision scale.** When integrated level control systems reach their limits, load cells come into play. **In the process as a load disc** for installation under the vessel, or for barley silos as a **bolt-on load cell** on the vessel support construction.

Load Disc

- ✓ For loads from 100 kg to 45 t
- ✓ Measuring accuracy 0.03%
- ✓ Long service life
- ✓ Individually configurable

L-Cell / Microcell

- ✓ Mounting on metal silo structure or skirted silos, also retrofit
- ✓ Measuring accuracy 3-5 %
- ✓ For outside and inside use



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What can digitization with IO-Link do?

Most Anderson-Negele sensors with IO-Link are equipped with **"Flex-Hybrid Technology"**, i.e. **digital IO-Link and analog 4...20mA communication in parallel.** Even if the plant is operated analog, you can commission all sensors with only one software via computer. Specific programming can be easily transferred to other sensors by copy-paste. And in the case of a sensor exchange, the entire individual programming is transferred simply by plugging it in.

👍 **Our tip:** With Flex Hybrid Technology, you already have advantages in installation and commissioning. And if you switch to digital IO-Link technology later, there is no need for new sensors.

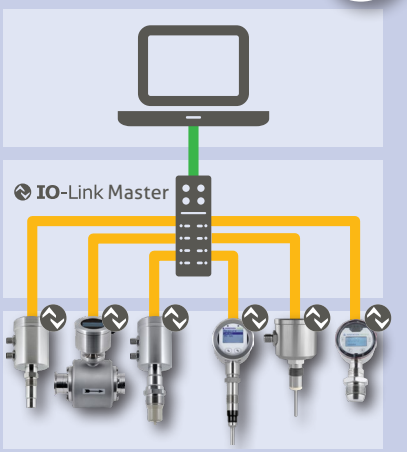
= IO-Link version available

IO-Link

Your key to greater efficiency: sensors with IO-Link in Flex Hybrid technology. These make **planning, commissioning and operating** your plants **easier, faster and more flexible.** For **existing analog plants**, Flex-Hybrid means easier programming, sensor changes with "plug-and-play", and if you upgrade to IO-Link control at some point, the sensors are changed over just by plugging them in.

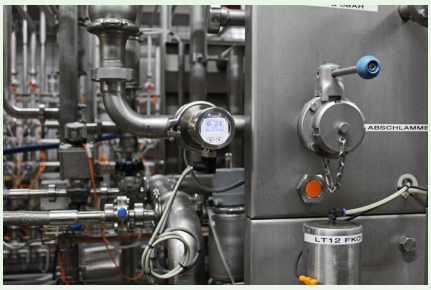
- ✓ Extensive sensor program for almost all measuring categories
- ✓ Only one software for programming and configuration
- ✓ Suitable for all IO-Link masters
- ✓ Add-on instructions (AOI) available
- ✓ The programming is automatically transferred when the sensor is replaced

More info at www.io-link.com



And does all this really work in practice?

Many customers use our sensors under a wide **variety of everyday requirements.** Discover how other breweries are successfully overcoming their challenges with Anderson-Negele sensors. Our **case studies show examples** where we have been able to help our customers achieve their goals through application consulting, product testing or technical support. You can **find our case studies** and application reports online here: **https://www.anderson-negele.com/uk/brewery/**



👍 **Our tip:** Our case studies can give you a small overview of the variety of applications where intelligent sensor technology, used correctly, can make your work easier, improve quality and reduce costs. We would be happy to visit you to find answers to your questions on site. **Please contact us!**

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Click or Scan

Find more details about our products and practical applications

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Consult videos about the installation, commissioning and operation of our sensors

= Product category online link

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