SENSORS FOR FOOD AND BIOPHARMA.

HYGIENIC BY DESIGN

ANDERSON-NEGELE

PRODUCT OVERVIEW

ENGLISH

FOOD

BIOPHARMA

CONTROLS

HYGIENIC BY DESIGN

ANDERSON-NEGELE.COM

HYGIENIC BY DESIGN

WELCOME TO ANDERSON-NEGELE

The world is shrinking. Our customers – companies in the food and beverage industry and pharmaceutical companies – are being confronted with new markets and foreign cultures. This gives rise to excellent new opportunities. It is also, however, linked to new regulatory requirements. In addition, products need to come on the market at an accelerated rate and the production processes themselves are subject to increasing requirements for continuity and hygiene.

Food safety and consumer protection are central topics for our customers and, as a manufacturer of hygienic sensors and measurement equipment, for Anderson-Negele as well.

Our company philosophy, "Hygienic by Design", is directed at fulfilling your requirements for sensors and measuring equipment that operate in a hygienic, clean production environment. The products and solutions from Anderson-Negele meet the requirements of international standards and regulatory agencies. In our design, development and production efforts, we combine our technical knowledge in these areas with quality, thoroughness and diligence.



HYGIENIC BY DESIGN

ANDERSON-NEGELE

CONTENTS

FOOD. SENSORS FOR THE FOOD AND BEVERAGE INDUSTRY.

NO CHANCE FOR CONTAMINATION

Cost pressures, new statutory regulations, international competition and consumer desire for more transparency are formidable challenges facing the food and beverage industry today. Particularly demanding are the requirements pertaining to the adherence to regulations in dairies and breweries and anywhere where undesirable germs can endanger the production process or even the product quality. Anderson-Negele has therefore made "Hygienic by Design" its guiding principle.

For Anderson-Negele, supporting a continuous process means that our measurement equipment is designed to meet your production conditions

- through the adherence to the applicable international standards,
- through designs that eliminate dead legs and are front-flush mounted for optimal cleanability,
- through reliable products that withstand rough environmental conditions over long periods.

All components that come into contact with the medium are made of stainless steel 1.4404 or 1.4435 and have a roughness value (R_a) of ≤ 0.8 µm. The surfaces can be electropolished on request.

Naturally, Anderson-Negele sensors meet FDA (Food and Drug Administration) requirements and fulfill the applicable EC directives.

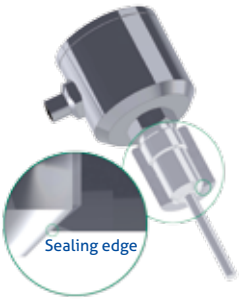
The guidelines of the EHEDG (European Hygienic Engineering & Design Group) and the North American 3-A (3-A Sanitary Standards Inc.) are the measure according to which we develop all of our products.

A SPECIAL DESIGN

What "Hygienic by Design" specifically means can be found in the two systems that Anderson-Negele developed for the process adaptation of its sensors in your line: CLEANadapt and FLEXadapt.

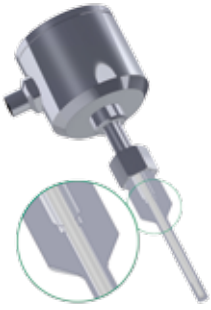
CLEANadapt

Sealing edges at the weld-in sleeves and conical sealing surfaces enable integration of our sensors in processes in a manner that is devoid of dead legs and free of elastomers. With CLEANadapt, the sensors can be hygienically installed in existing lines. Additional O-rings or sealants are not required with CLEANadapt.



FLEXadapt

Quite often the devil is in the detail. In unfavorable cases, the exchange of a sensor can result in the standstill of an entire line. A building block for minimizing downtime is FLEXadapt technology from Anderson-Negele. FLEXadapt permits the installation and removal of temperature sensors – at any time and without opening the process – for verification and recalibration. By its very design, FLEXadapt ensures that sensors from Anderson-Negele are installed in a hygienic manner.



In addition to prefabricated build-in systems, various adapters are available for welding in and retrofitting, along with the compatible temperature sensors. The risk of introducing traces of old products, foreign bodies and germs via the sensor is effectively eliminated when FLEXadapt is used.

FOOD

TEMPERATURE

TEMPERATURE MEASUREMENT WITHOUT OPENING THE PROCESS

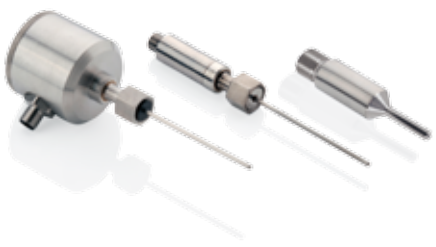
TEMPERATURE MEASUREMENT IN PIPES AND VESSELS

TEMPERATURE MEASUREMENT IN PIPES AND VESSELS

TFP FLEXadapt

TEMPERATURE SENSOR WITH HYGIENIC FLEXadapt BUILD-IN SYSTEM

- Flexible thermowell system – removal of the sensor without opening the process
- For pipes from DN 25 and vessels
- Easy, fast installation and calibration



TFP CLEANadapt

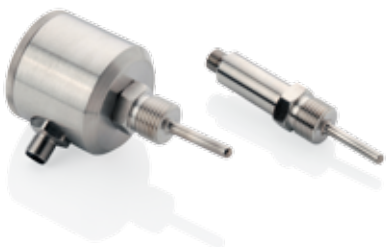
TEMPERATURE SENSOR WITH HYGIENIC CLEANadapt BUILD-IN SYSTEM

- M12 and G1/2" for pipes from DN15 and vessels
- Modular adaptation design concept for all standard process connections
- Elastomer-free, hygienic installation without dead legs

TFP Standard

TEMPERATURE SENSOR WITH STANDARD THREAD

- Universal G1/2" standard thread
- No product contact with the sensor when using thermowells



TEMPERATURE MEASUREMENT IN PIPES AND VESSELS

TFP Tri-Clamp

TEMPERATURE SENSOR WITH TRI-CLAMP CONNECTION

- Standard Tri-Clamp connection sizes
- Rapid response time
- Direct connection without adapter

TEMPERATURE MEASUREMENT IN PIPES AND VESSELS

TFP without thread

TEMPERATURE SENSOR WITHOUT THREAD

- Variable submersion depth of sensor with hygienic threaded clamp
- No product contact of sensor with use of thermowells

DIGITAL IN-SITU TEMPERATURE DISPLAY

FH-DTG

TEMPERATURE SENSOR WITH DIGITAL DISPLAY

- Large digital display (battery-operated)
- Optionally available with switch output and external power supply
- Model for temperature monitoring in autoclaves ("retort" DTG)

FOOD

LEVEL

CONTINUOUS LEVEL MEASUREMENT

NSL-F

CONTINUOUS LEVEL SENSOR

- 4-wire sensor for vessels up to 3 m
- User Interface with display
- Insensitive to foam and adherence
- Rapid response time, therefore ideal for control tasks (e.g. filler)

CONTINUOUS LEVEL MEASUREMENT

NSL-M

CONTINUOUS LEVEL SENSOR

- 2-wire sensor for vessels up to 3 m
- Compact design with minimal space requirement
- Measurement to 140 °C medium temperature
- Parameter adjustment via PC

HYDROSTATIC LEVEL MEASUREMENT

LAR

CLIMATE-INDEPENDENT LEVEL SENSOR WITH HYGIENIC CLEANadapt BUILD-IN SYSTEM

- Hermetically sealed measuring system – no drift problems due to condensation
- Very high accuracy and long-term stability
- Measurement to 130 °C medium temperature
- 3-year warranty

POINT LEVEL DETECTION AND CONTROL

NVS

CONDUCTIVE POINT LEVEL SWITCH FOR PIPES AND VESSELS

- Conductive measurement principle for conductive media
- Multi-rod sensors with external electronics for point level detection and control
- Electrodes can be shortened as needed

POINT LEVEL DETECTION IN PIPES AND VESSELS

NCS

CAPACITIVE POINT LEVEL SWITCH FOR PIPES AND SINGLE OR DOUBLE WALLED VESSELS

- Capacitive measurement principle – independent of the conductivity of the medium
- Insensitive to foam and adherence
- Small build-in length and very good cleanability

POINT LEVEL DETECTION IN VESSELS/OVERFILL PROTECTION

NCS-L

CAPACITIVE POINT LEVEL SWITCH FOR SINGLE OR DOUBLE WALLED VESSELS

- Reliable alarm in pasty media
- Rapid response time
- Heated electronics to avoid condensation
- Installation in vessels from above or below

FOOD

PRESSURE

PROCESS PRESSURE MEASUREMENT IN PIPES AND VESSELS

HH

COMPACT PRESSURE SENSOR

- Robust and durable – even at process temperatures up to 150 °C
- Rapid response time
- Available as relative or absolute pressure transmitter

MODULAR PRESSURE PLATFORM

PF Series

MODULAR PRESSURE SENSOR FOR HIGH PROCESS TEMPERATURES

- Useable in process temperatures up to 177 °C
- Integrated display
- No tools required for calibration and adjustment

DIGITAL IN-SITU PRESSURE DISPLAY

EN

DIGITAL PRESSURE GAUGE

- Large, digital display (battery-operated)
- Automatic registration of min and max values
- Optionally available with switch output and external power supply

PRESSURE MONITORING IN VESSELS

EL

PRESSURE GAUGE WITH DIRECT ADAPTATION

- Nominal size 90 mm
- High quality stainless steel model
- Numerous hygienic process connections
- 3-A certification

PRESSURE MONITORING IN SEPARATORS

MAN-63

COMPACT PRESSURE GAUGE WITH HYGIENIC CLEANadapt BUILD-IN SYSTEM

- Nominal size 63 mm
- High quality stainless steel model
- Numerous hygienic process connections
- 3-A certification

PRESSURE MONITORING IN HOMOGENIZERS

ELH

PRESSURE GAUGE WITH INTEGRATED TRANSMITTER FOR HOMOGENIZERS

- Designed for extreme process conditions and pressures up to 1000 bar
- Very high reliability and durability
- Optional analog output

FOOD

FLOW

FLOW MONITORING/ DRY-RUN PROTECTION

FLOW MEASUREMENT IN FLASH PASTEURIZERS

FLOW MEASUREMENT OF DEMINERALIZED WATER

FWS, FTS

FLOW MONITORING IN PIPES

- Ultrasonic doppler and calorimetric measurement principles offer diverse application possibilities
- Rapid response time; not influenced by temperature fluctuations (ultrasound)
- Models with switchable or analog output

FMI

MAGNETIC-INDUCTIVE FLOWMETER

- Very high measurement accuracy and reproducibility
- Vacuum-tight PFA coating for maximum resistance against aggressive media
- Easy and user-friendly configuration

HM

TURBINE FLOWMETER

- Cost-efficient and reliable alternative to magnetic-inductive flowmeters
- Hygienic design for the food and beverage industry
- 3-A certification
- Also usable in non-conductive media

CONCENTRATION MEASUREMENT AND CONTROL OF CIP PROCESS

ILM-2

INDUCTIVE CONDUCTIVITY METER

- Wear-free, inductive measurement principle
- Accurate measurement through compensation of temperature influence
- Analog outputs for conductivity and temperature
- High reproducibility and rapid response time
- Installation in pipe diameters of DN 40 and larger

PRODUCT MONITORING AND QUALITY ASSURANCE

ILM-3

INDUCTIVE CONDUCTIVITY METER FOR HIGH DEMANDS

- Extended measurement range – smallest range from 500 µS
- Up to 14 measurement ranges selectable, max. four are externally switchable
- Separate temperature coefficient for each measurement range

QUALITY ASSURANCE AND CONCENTRATION MEASUREMENT

ILM-4

INDUCTIVE CONDUCTIVITY METER, MODULAR SENSOR PLATFORM

- Modular design, exchangeable electronics and sensor spud
- Remote version
- Extended temperature range (TC for each measurement range)
- Concentration tables implemented

FOOD

TURBIDITY

CIP RETURN FLOW MONITORING

PHASE SEPARATION BETWEEN PRODUCT/WATER AND PRODUCT/PRODUCT

YEAST HARVEST IN BREWERIES

ITM-3

TURBIDITY METER
(BACKSCATTER LIGHT)

- Front-flush mounted, hygienic sensor
- For medium to high turbidities (e.g., milk, yeast)
- Wear-free LED technology, color-independent measurement (wave length 860 nm)
- Ideal for the requirements of the food industry
- Not influenced by reflections at small pipe diameters
- Usable with DN 25 and larger
- High reproducibility and rapid response time
- Analog and switch output (freely adjustable switch point and hysteresis)
- Four measurement ranges, of which two are externally switchable

FILTRATION MONITORING IN BEVERAGE PRODUCTION

WATER RECLAMATION AND PROCESSING (COW)

SEPARATOR MONITORING

ITM-4

TURBIDITY METER
(4-BEAM ALTERNATING LIGHT)

- Precise measurement at low to medium turbidities (e.g., fruit juice, beer)
- 90° scattered light/4-beam alternating light method as per EN 7027
- Units switchable between NTU and EBC

- Color-independent measurement (wave length 860 nm)
- Compact device, no separate evaluation unit needed
- Smallest pipe diameter: DN 25
- 3-A certification with Tri-Clamp process connection and hygienic thread connection

- Contamination of the optics is compensated
- Four freely selectable measurement ranges, externally switchable
- Smallest measurement range: 0...5 NTU or 0...1 EBC
- Largest measurement range: 0...5000 NTU or 0...1250 EBC