Level and pressure measurement technology for the pharmaceutical industry

VEGA HOME OF VALUES

MEASUREMENT TECHNOLOGY – DESIGNED FOR HYGIENIC AND STERILE PROCESSES

In the biotechnology and pharmaceutical industries, hygiene, consistent performance and flexibility are decisive factors for efficient, as well as safe production with a high degree of automation. VEGA offers world-class measurement technology for level and pressure. We are specialists in this area. To your advantage.

Optimal measurement technology

Production in the pharmaceutical industry has changed fundamentally. In fully automated processes, flexibility, sterility and consistent results are the decisive factors for high-investment biotechnological products.

To ensure that your production stays efficient and products remain safe throughout their entire life cycle. We can equip your processes with the best instrumentation available – naturally in compliance with the requirements and standards of FDA, ISPE GAMP, ASME-BPE, EHEDG.

Uncompromising quality

As a specialist in level measurement, VEGA offers a whole spectrum of suitable measuring principles. When it comes to level measurement, VEGA radar sensors have been setting technological milestones over and over again and they remain the market leader. These sensors are currently in use in well over 1,000,000 applications.

The measuring ranges of pressure sensors with metallic or ceramic measuring cells start at a few millibars, but can extend to pressures of up to 1,000 bar. VEGA are one of the few manufacturers who have developed and produced their own ceramic-capacitive CERTEC® measuring cells.

About VEGA

VEGA is a global manufacturer of process instrumentation. Its product portfolio includes sensors for measurement of level, point level and pressure, as well as the devices and software for integrating them into process control systems.

Founded in the Black Forest in 1959, today they employ 2,100 people worldwide, over 1,000 of whom work at the headquarters in Schiltach. Each and every one of them works with great passion to find the best solution for the customer's application – across all industries.

Level sensors, pressure and point level switches for efficient automation

The more flexibility required of the production equipment, the more effort that has to be put in to prevent cross contamination, and the more reliable and seamlessly traceable each process cycle must be.

Using proven digital solutions, such as the standard protocol IO-Link, VEGA sensors can be easily integrated into a system. This means their process data can be easily incorporated into business data and laboratory validation systems. In addition, standardized process fittings and a universal hygienic adapter system ensure maximum flexibility during installation.

Level, point level and pressure sensors for challenging measurement tasks

VEGA sensors are well equipped for the complex measuring tasks in future-oriented industries such as biotechnology and pharmaceuticals. From mass production to personalized medicines and single-use equipment.

The cleverly conceived plics® modular system and the wide range of connection options help with the continuous optimization of production facilities. Diffusion-proof and extremely robust, they offer the optimal solution for virtually every installation situation – whether in small containers, or in tanks with agitators or heating coils.

The compact radar sensors VEGAPULS, pressure switches VEGABAR as well as capacitive level switches VEGAPOINT with IO-Link. An innovative coloured light ring ensures better visibility from all directions and at a distance.

Customized plics® sensors for any measuring task in the process – from batch production to continuous processing.
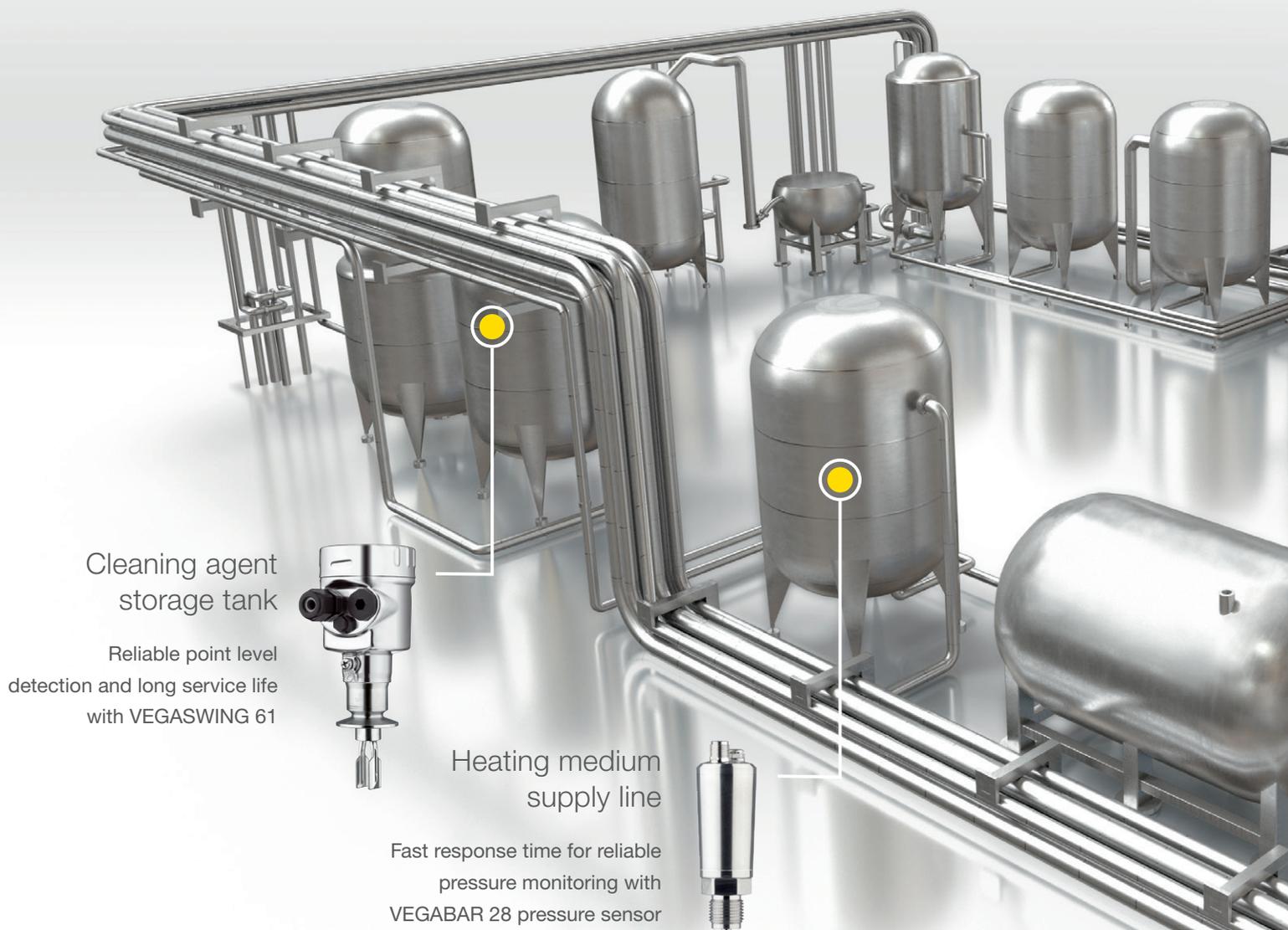
EASY CLEANING –
RELIABLE PROCESSES

To help ensure hygienic and sterile drug production processes, VEGA offers materials specially tailored to the strict requirements of the industry – with all necessary approvals and material properties. Our hygienic designs meet all the standards according to EHEDG, 3-A Sanitary and FDA.

Expertly designed

The sensors are especially characterised by their flush process fittings and leak-proof, robust housings (IP69K). Even while operating they can be CIP/SIP-cleaned with almost any cleaning agent up to 2 hours at 150 °C.

Perfect cleanability

VEGA sensors have been specially developed for the needs of the pharmaceutical industry, which are fulfilled by securely protected sealing, all-metal housings and process contacting surfaces with a finish as low as 0.3 µm RA.

Cleaning agent
storage tank

Reliable point level
detection and long service life
with VEGASWING 61

Heating medium
supply line

Fast response time for reliable
pressure monitoring with
VEGABAR 28 pressure sensor

Standardised hygienic adapters

The VDMA-standardized fittings of the hygienic adapters can be selected as needed and only require minimal effort to install. This end-to-end concept allows simple integration and fast maintenance – it also reduces spare parts inventories and production downtime.

Good manufacturing practice

Continuous monitoring of all production processes as well as routine inspection and testing of our sensors make us a reliable partner in adhering to good manufacturing practice. The basis for this is our quality management in compliance with ISO 9001 and our environmental management program based on ISO 14001.

Solvent tank

High measurement accuracy for dependable stock inventory with VEGAPULS 6X radar level sensors

Efficient CIP/SIP cleaning

VEGA sensors are perfectly designed for the critical aspects of CIP/SIP. During CIP cleaning, different liquids are pumped through the system piping one after the other. SIP sterilization is carried out with saturated steam at a pressure of 1 bar. Caustic and acidic solutions in various concentrations are used, as well as water and steam at extremely high temperatures.

VEGA sensors ensure that all required liquids are continuously available in sufficient amounts and reliably withstand the complex cleaning processes.

RELIABLE CONTAINMENT –
PERFECT REPRODUCIBILITY

VEGA sensors deliver a convincing performance in applications that require a 100 % hygienic environment: They minimize maintenance and downtime while significantly increasing safety and efficiency.

High-quality materials withstand the aggressive cleaning agents: The hygienic design is totally free of gaps, pockets and dead spaces which, even during steam jet cleaning, avoids leakage.

Whether for square or cylindrical tanks, for stand-alone operation or integration into a system, for large or small vessels or vessels with agitators and heating elements: VEGA offers a complete range of measuring instruments for precise and safe drug production.
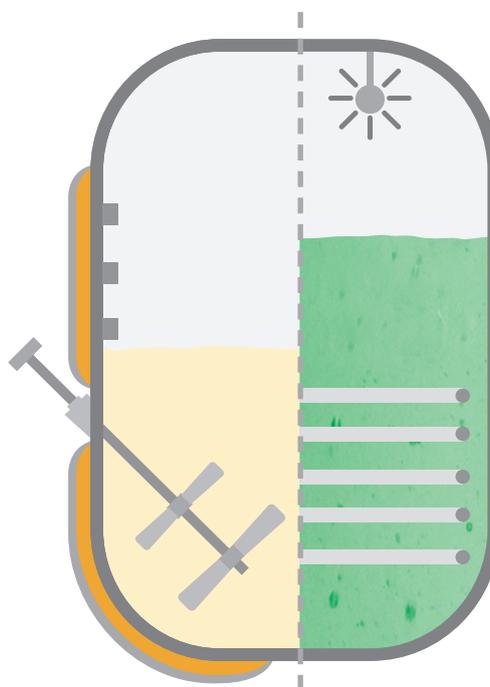
Pharmaceuticals production in 3D

Applications in pharmaceutical production facilities at:
**www.vega.com/pharmaceutical**
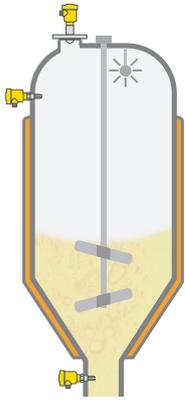
Agitator and spray ball

- Radar sensor VEGAPULS 6X for continuous level measurement
- Thanks to narrow focusing of the radar beam, it measures right past agitators
- Vibrating level switch VEGASWING 61 as overfill and dry run protection
- Reliable detection independent of product properties

Single use bioprocessing vessels

- Radar sensor VEGAPULS 6X for continuous level measurement
- Its high dynamic range allows level measurement from above, through the plastic container without actually any contact with the sensor
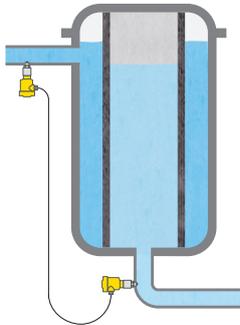
Filtration system

- Electronic differential pressure measurement with VEGABAR 83 for filter monitoring
- High product quality thanks to reliable monitoring of the filter
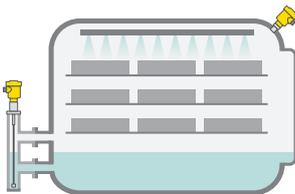
Autoclave

- Guided radar sensor VEGAFLEX 81 for continuous level measurement
- Reliable performance, unaffected by high levels of condensation and steam
- Pressure transmitter VEGABAR 83 for pressure measurement
- Metallic METEC® measuring cell – perfectly compatible for sterilization processes

Bulk solids container (BigBag)

- Radar sensor VEGAPULS 6X for continuous level measurement
- Non-contact measurement enables timely changing of BigBags without dismounting the sensor

MAXIMUM SYSTEM AVAILABILITY

VEGA supports efficient processes with the right components: Sensors that detect even the smallest level or pressure changes and that can be installed very quickly with standard connections. M12 and valve plug connectors make a significant contribution to reducing the costs of automated processes to a reasonable level.

Flexibility with IO-Link

VEGA uses IO-Link to provide a uniform communication standard for fast and error-free connections to higher-level systems. It enables sensors to be monitored and commissioned very efficiently.

Wireless operation via smartphone

The integrated wireless function allows remote sensor setup and monitoring from a distance of up to 50 metres. All you need for this is: The VEGA Tools app and a smartphone or tablet.

Small yet highly visible

Thanks to the 360° switching status display, all switching states can be easily seen from any direction. The colour can be freely selected to suit your production facilities.

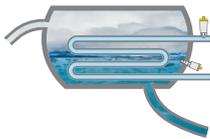The proven VDMA menu structure with additional plain text display reduces the amount of training required.
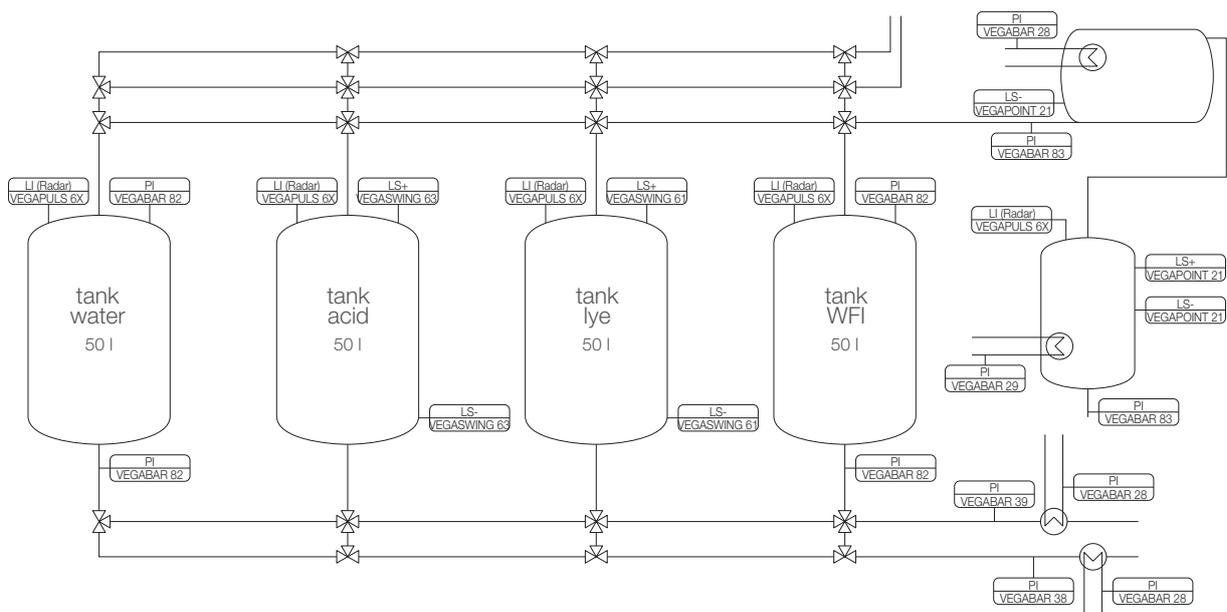
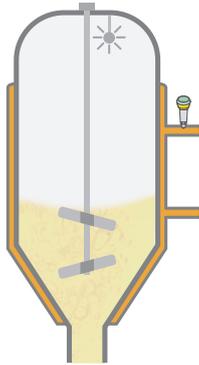Schematic of a CIP system with level, pressure and point level sensors
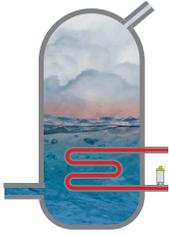
Saturated steam pipeline

- Pressure sensor VEGABAR 29 with IO-Link connection
- Precise pressure control with fast response time

Dry run protection

- Capacitive level switch VEGAPOINT 21 for point level detection
- Reliable switching point in water and steam

Heating medium supply line

- Pressure sensor VEGABAR 38 with IO-Link connection
- Simple operation thanks to VDMA menu structure and integrated display
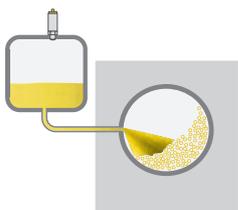
Supply tank

- Compact radar sensor VEGAPULS 42 with IO-Link connection
- Reliable and precise measurement in small containers
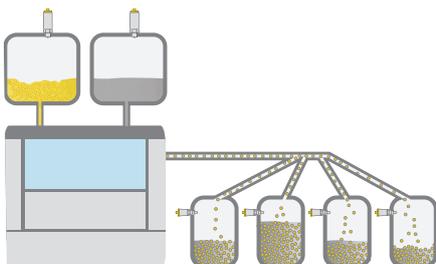
Capsule filling

- Capacitive level switch VEGAPOINT 31 for point level detection
- Full-colour, 360° switching status display for easy recognition of sensor operation
- Compact radar sensor VEGAPULS 42 with IO-Link connection
- Compact design ideal for tight spaces

INTERCONNECTED SOLUTIONS

To ensure that production facilities are competitive today and stay competitive tomorrow, process cycles have to be optimized and costs reduced – without compromising quality. With intelligent networking and unique services, VEGA makes processes noticeably more efficient and reliable throughout the entire value-added chain in pharmaceutical production.

Wireless operation

With Bluetooth, VEGA is looking far into the future. But even today, radio technology is already making processes more and more flexible. Wireless communication provides better accessibility: In clean rooms, in harsh industrial environments and in hazardous areas. It allows setup, display and diagnostics from a distance of up to 50 metres, thus saving time and avoiding hazardous situations. Simply via VEGA Tools app – on any available smartphone or tablet.

Bluetooth®
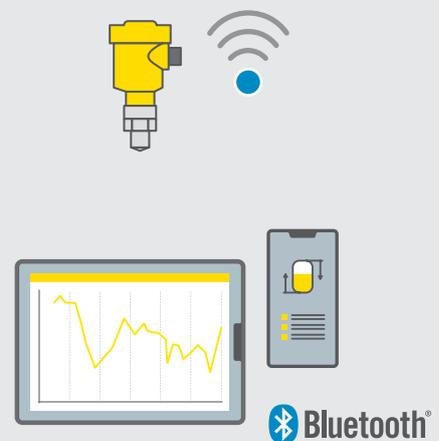
IO-Link

VEGA uses IO-Link to make optimal use of all possibilities in the pharmaceutical industry. With this manufacturer-independent, standard communication tool, sensors can be installed, parameterised and, if necessary, put back into operation faster and more cost-effectively. IO-Link is a digital interface that automatically re-commissions sensors if they are replaced.

⬡ IO-Link

The advantages of myVEGA

- Generate exact drawings of your instruments
- Get the current prices and delivery times quickly
- Request a quotation specifically tailored to your needs
- Order the products you want directly online
- Find all important order and instrument documents quickly
- Track the status of your order
- Save your instrument settings and documentation in the VEGA Cloud

myVEGA

In myVEGA, your personal customer portal, numerous online functions relating to VEGA products are available to you.

LOGIN

VEGA Inventory System

Optimal inventory levels mean lower costs. VEGA Inventory System makes all important process and forecast information visible and easy to grasp. Measuring instruments installed on containers, tanks or silos automatically inform the user when replenishments are required. In your plant, the user-friendly service software accesses not only the current measurement and predicted usage information, but also historical consumption data.
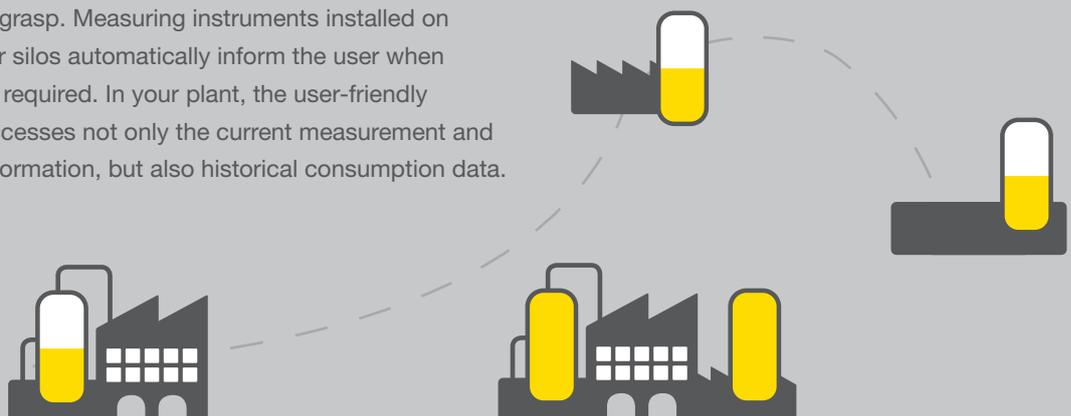
LEVEL MEASUREMENT

	PRO **VEGAPULS 6X**	BASIC **VEGAPULS 42**	PRO **VEGAFLEX 83**
Sensor	80 GHz radar sensor	80 GHz radar sensor	GWR sensor
Application	Liquids and bulk solids for all process conditions	Liquids and bulk solids at simple to moderate process conditions	Aggressive liquids or liquid media with stringent hygienic requirements, applications with steam, buildup, foam generation or condensation
Measuring range	up to 120 m	up to 15 m	Cable probe up to 32 m of PFA Rod probe up to 4 m of PFA or 1.4435 (BN)
Antenna	Integrated antenna, horn antenna, lens antenna, parabolic antenna	Integrated antenna	–
Version	–	–	Cable (ø 4 mm) Rod (ø 8 mm, ø 10 mm)
Process fitting	Thread from G¾", flanges from DN20/¾", hygienic fittings	Thread G¾", ¾ NPT", thread G1", 1" NPT, thread G1" for hygienic fittings	Flanges from DN 25, 1", hygienic fittings, clamp, slotted nut
Process temperature	-196 … +450 °C	-40 … +130 °C 15 min. @ +150 °C steam	-40 … +150 °C
Process pressure	-1 … +160 bar (-100 … +16000 kPa)	-1 … +16 bar (-100 … +1600 kPa)	-1 … +16 bar (-100 … +1600 kPa)
Accuracy	±1 mm	±2 mm	±2 mm
Frequency range	W-band (80 GHz), C-band (6 GHz), K-band (26 GHz)	W-Band (80 GHz)	–
Signal output	4 … 20 mA/HART, APL, Profibus PA, Foundation Fieldbus, Modbus	Three-wire: PNP/NPN, 4 ... 20 mA, IO-Link	4 ... 20 mA/HART, Profibus PA, Foundation Fieldbus, Modbus
Display/adjustment	PLICSCOM, PACTware/DTM, VEGADIS 81, VEGADIS 82, VEGA Tools app	PACTware/DTM, VEGA Tools app, IODD, Bluetooth, full-colour multi-directional switching status indication	PLICSCOM, PACTware/DTM, VEGADIS 81, VEGADIS 82, VEGA Tools app
Approvals	ATEX, UKEX, IECEx, FM, CSA, NEPSI, EAC (GOST), INMETRO, TIIS, KOSHA/KTL, CCOE, UKR Sepro, Overfill protection, Ship, SIL2/3, food	3A, EHEDG, FDA, FM, CSA	ATEX, UKEX, IECEx, FM, CSA, EAC (GOST), UKR Sepro, Overfill protection, Ship, SIL2, EHEDG, 3-A, FDA, INMETRO, NEPSI, KOSHA, CCOE
Benefit	✓ Universal use through different antenna versions	✓ Easy integration into control systems through IO-Link communication	✓ Gap-free hygienic design ensures good cleanability with simple methods

PRESSURE MEASUREMENT

	PRO **VEGABAR 81**	PRO **VEGABAR 82**	PRO **VEGABAR 83**
Sensor	Pressure transmitter	Pressure transmitter	Pressure transmitter
Application	Liquids and gases with high temperatures	Liquids and gases	Liquids and gases also with high pressures
Deviation	0.1 %	0.2 %; 0.1 %; 0.05 %	0.2 %; 0.1 %; 0.075 %
Measuring cell	Chemical seal system	CERTEC®, MINI-CERTEC®	Piezoresistive/thin film strain gauge/METEC®
Measuring cell seal	–	FKM, EPDM, FFKM	–
Process fitting	Thread from G½, ½ NPT, flanges from DN 25, 1", hygienic fittings of 316L, Alloy, Duplex, Tantalum, gold	Thread from G½, ½ NPT, flanges from DN 15, ½", hygienic fittings; 316L, Alloy, Duplex, PVDF, PEEK	Thread from G¼, ¼ NPT, flanges from DN 25, 1", hygienic fittings; 316L, Alloy
Process temperature	-90 … +400 °C	-40 … +150 °C	-40 … +200 °C
Measuring range	Absolute and relative -1 … +1000 bar (-100 … +100000 kPa)	Absolute and relative -1 … +100 bar (-100 … +10000 kPa)	Absolute and relative -1 … +1000 bar (-100 … +100000 kPa)
Overload resistance	Depending on chemical seal system	up to 200-fold measuring range	up to 150-fold measuring range
Signal output	4 … 20 mA, 4 … 20 mA/HART, Profibus PA, Foundation Fieldbus, Modbus	4 … 20 mA, 4 … 20 mA/HART, Profibus PA, Foundation Fieldbus, Modbus	4 … 20 mA, 4 … 20 mA/HART, Profibus PA, Foundation Fieldbus, Modbus
Display/adjustment	PLICSCOM, PACTware/DTM, VEGADIS 81, VEGADIS 82, VEGA Tools app	PLICSCOM, PACTware/DTM, VEGADIS 81, VEGADIS 82, VEGA Tools app	PLICSCOM, PACTware/DTM, VEGADIS 81, VEGADIS 82, VEGA Tools app
Approvals	ATEX, UKEX, IECEx, FM, CSA, NEPSI, EAC (GOST), INMETRO, CCOE, SEPRO, Overfill protection, Ship, SIL2/3, CE 1935/2004, FDA	ATEX, UKEX, IECEx, FM, CSA, NEPSI, EAC (GOST), INMETRO, CCOE, SEPRO, Overfill protection, Ship, SIL2/3, CE 1935/2004, FDA, 3-A	ATEX, UKEX, IECEx, FM, CSA, NEPSI, EAC (GOST), INMETRO, CCOE, SEPRO, Overfill protection, Ship, SIL2/3, CE 1935/2004, FDA, 3-A, EHEDG
Benefit	✓ Optimal process adaptation through selection of various wetted materials, media and temperature couplers	✓ High resistance to abrasion and corrosion through use of high-quality Sapphire Ceramic®	✓ Reliable measurement even at high pressures

PRESSURE MEASUREMENT

	BASIC **VEGABAR 18**	BASIC **VEGABAR 19**	BASIC **VEGABAR 28**
Sensor	Pressure sensor	Pressure sensor	Pressure sensor with switching
Application	Liquids and gases	Liquids and gases, even at high pressure	Liquids and gases
Deviation	0.5 %	0.5 %	0.3 %
Measuring cell Measuring cell seal	Ceramic measuring cell FKM	Metallic measuring cell –	Ceramic measuring cell FKM, EPDM, FFKM
Process fitting	½" standard thread, 316L	½", 1", standard thread, optional front-flush; 316L	Thread, optionally with front-flush and hygienic fittings, universal connection for hygienic adapter; 316L, Duplex, PEEK
Process temperature	-40 … +100 °C	-40 … +100 °C	-40 … +130 °C/ 1 h @ +135 °C steam
Measuring range	Relative 0 … +25 bar (0 ... +2500 kPa)	Relative 0 … +100 bar (0 ... +10000 kPa)	Absolute and relative -1 ... +60 bar (-100 ...+6000 kPa)
Overload resistance	Up to 150-fold measuring range	Up to 4-fold measuring range	up to 150-fold measuring range
Signal output	Two-wire: 4 … 20 mA	Two-wire: 4 … 20 mA	Two-wire: 4 ... 20 mA Three-wire: PNP/NPN, 4 ... 20 mA, IO-Link
Display/adjustment	–	–	PACTware/DTM, VEGA Tools app, IODD, Bluetooth, full-colour multidirectional switching status indication
Approvals	–	–	ATEX, UKEX, IECEx, cULus, NEPSI, EAC, INMETRO, IA, CCOE, TIIS, KOSHA/KTL, SEPRO, CE 1935/2004, FDA, China FDA, Ship
Benefit	✓ Low-cost version with extremely small installation dimensions	✓ Universally applicable due to fully welded metallic measuring cell construction	✓ Highly visible, adjustable full-colour multidirectional (360°) switch status indication

BASIC	BASIC	BASIC
VEGABAR 29	**VEGABAR 38**	**VEGABAR 39**

VEGABAR 29	VEGABAR 38	VEGABAR 39
Pressure sensor with switching	Pressure sensor with switching	Pressure sensor with switching
Liquids and gases, even at high pressure	Liquids and gases	Liquids and gases, even at high pressure
0.3 %	0.3 %	0.3 %
Metallic measuring cell –	Ceramic measuring cell FKM, EPDM, FFKM	Metallic measuring cell –
Optional front-flush thread and hygienic fittings, universal connector for hygiene adapter; 316L	Optional front-flush thread and hygienic fittings, universal connector for hygiene adapter; 316L, Duplex, PEEK	Optional front-flush thread and hygienic fittings, universal connector for hygiene adapter; 316L
-40 … +130 °C/ 1 h @ +135 °C steam	-40 … +130 °C/ 1 h @ +135 °C steam	-40 … +130 °C/ 1 h @ +135 °C steam
Absolute and relative -1 ... +1000 bar (-100 ... +100000 kPa)	Absolute and relative -1 ... +60 bar (-100 ...+6000 kPa)	Absolute and relative -1 ... +1000 bar (-100 ... +100000 kPa)
up to 4-fold measuring range	up to 150-fold measuring range	up to 4-fold measuring range
Two-wire: 4 ... 20 mA Three-wire: PNP/NPN, 4 ... 20 mA, IO-Link	Two-wire: 4 ... 20 mA Three-wire: PNP/NPN, 4 ... 20 mA, IO-Link	Two-wire: 4 ... 20 mA Three-wire: PNP/NPN, 4 ... 20 mA, IO-Link
PACTware/DTM, VEGA Tools app, IODD, Bluetooth, full-colour multidirectional switching status indication	Integrated on-site display and 3-key operation, PACTware/DTM, VEGA Tools app, IODD, Bluetooth, full-colour multidirectional switching status indication	Integrated on-site display and 3-key operation, VEGA Tools app, IODD, Bluetooth, full-colour multidirectional switching status indication
ATEX, UKEX, IECEx, cULus, NEPSI, EAC, INMETRO, IA, CCOE, TIIS, KOSHA/KTL, SEPRO, CE 1935/2004, FDA, 3-A, EHEDG, China FDA, Ship	ATEX, UKEX, IECEx, cULus, NEPSI, EAC, INMETRO, IA, CCOE, TIIS, KOSHA/KTL, SEPRO, CE 1935/2004, FDA, China FDA, Ship	ATEX, UKEX, IECEx, cULus, NEPSI, EAC, INMETRO, IA, CCOE, TIIS, KOSHA/KTL, SEPRO, CE 1935/2004, FDA, 3-A, EHEDG, China FDA, Ship
✓ Simple integration into control systems through IO-Link communication	✓ Simple setup thanks to large on-site display with VDMA operation and additional texts	✓ Simple setup thanks to large on-site display with VDMA operation and additional texts

POINT LEVEL DETECTION for liquids

	BASIC **VEGASWING 51/53**	**PRO** **VEGASWING 61/63**	**BASIC** **VEGAPOINT 11**
Sensor	Vibrating level switch	Vibrating level switch	Capacitive level switch
Application	Liquids	Liquids	Water-based liquids
Version	VEGASWING 51: Compact version VEGASWING 53: Tube extension up to 1 m	VEGASWING 61: Compact version VEGASWING 63: Tube extension up to 6 m	Compact version of 316L, PEEK
Measuring range	–	–	–
Material	316L	316L, ECTFE, PFA, enamel, Alloy 400, Duplex, Alloy C22	–
Process fitting	Thread from G½, ½ NPT, hygienic fittings	Thread from G¾, ¾ NPT, flanges from DN 25, 1", hygienic fittings	Threads from G½, ½ NPT, universal connector for hygiene adapter
Process temperature	-40 … +150 °C	-50 … +250 °C	-20 °C ... +100 °C/ 1 h @ +135 °C
Process pressure	-1 … +64 bar (-100 … +6400 kPa)	-1 … +64 bar (-100 … +6400 kPa)	-1 ... +25 bar (-100 ... +2500 kPa)
Signal output	Transistor output, contactless electronic switch, IO-Link	Relay, transistor, two-wire, NAMUR output, contactless electronic switch	Three-wire: PNP/NPN, IO-Link
Display	Control lamp (LED)	Control lamp (LED) or pluggable display module PLICSLED	LED
Approvals	VEGASWING 51: Overfill protection, Ship, CSA-OL, EHEDG, FDA, CE 1935/2004, EAC (GOST) VEGASWING 53: Overfill protection, CSA-OL, EHEDG, FDA, CE 1935/2004	ATEX, UKEX, IECEx, FM, CSA, EAC (GOST), UKR Sepro, Overfill protection, Ship, SIL2, KOSHA, NEPSI, INMETRO	CE 1935/2004, FDA, ADI
Benefit	✓ Minimal time and cost expenditure thanks to simple setup without medium		✓ Adjustment-free for easy setup

VEGAPOINT 21	**VEGAPOINT 23**	**VEGAPOINT 24**

Capacitive level switch	Capacitive level switch	Capacitive level switch
liquids	Liquids and bulk solids	Adhesive media or front flush mounting
Compact version of 316L, PEEK	Compact version of 316L, PEEK with tube extension up to 1 m	Compact version of 316L, PEEK
–	–	–
–	–	–
Threads from G½, ½ NPT, universal connector for hygiene adapter	Thread from G½, ½ NPT, universal connector for hygiene adapter	Thread from G½, ½ NPT, universal connector for hygiene adapter
-40 °C ... +115 °C/ 1 h @ +135 °C	Tube extension ≤ 250 mm: -40 °C ... +115 °C/1 h @ +135 °C Tube extension > 250 mm: -40 °C ... +80 °C/1 h @ +135 °C	-40 °C … +115 °C/1 h @ +135 °C
-1 ... +64 bar (-100 ... +6400 kPa)	-1 ... +64 bar (-100 ... +6400 kPa)	-1 ... +64 bar (-100 ... +6400 kPa)
Three-wire: PNP/NPN, IO-Link, Bluetooth	Three-wire: PNP/NPN, IO-Link, Bluetooth	Three-wire: PNP/NPN, IO-Link, Bluetooth
Full-colour multidirectional switching status indication	Full-colour multidirectional switching status indication	Full-colour multidirectional switching status indication
ATEX, UKEX, IECEx, CE 1935/2004, FDA, 3-A, EHEDG, ASME BPE, USP Class VI, ADI, China FDA, WHG, VLAREM, SVTI, Ship	ATEX, UKEX, IECEx, CE 1935/2004, FDA, 3-A, EHEDG, ASME BPE, USP Class VI, ADI, China FDA, WHG, VLAREM, SVTI, Ship	ATEX, UKEX, CE 1935/2004, FDA, 3-A, EHEDG, USP Class VI, ADI, China FDA, WHG, VLAREM, SVTI
✓ Highly visible, adjustable full-colour multidirectional (360°) switching status display	✓ Low-cost level switch with selectable switching point position/tube extension	✓ Optimised for adhesive media via front-flush installation

POINT LEVEL DETECTION for bulk solids

	BASIC	PRO
	VEGAPOINT 31	**VEGAWAVE 61/63**
Sensor	Capacitive level switch	Vibrating level switch
Application	bulk solids	Powders and fine-grained bulk solids
Version	Compact version of 316L, PEEK	VEGAWAVE 61: Compact version VEGAWAVE 63: Tube extension up to 6 m
Measuring range	–	Bulk solids from 8 g/l
Material	–	316L, Carbocer coating
Process fitting	Threads from G½, ½ NPT, universal connector for hygiene adapter	Thread G1½, 1½ NPT, flanges from DN 50, 2", hygienic fittings
Process temperature	-40 °C ... +115 °C/ 1 h @ +135 °C	-50 … +250 °C
Process pressure	-1 ... +64 bar (-100 ... +6400 kPa)	-1 … +25 bar (-100 … +2500 kPa)
Signal output	Three-wire: PNP/NPN, IO-Link, Bluetooth	Relay, transistor, two-wire, NAMUR output, contactless electronic switch
Display	Full-colour multidirectional switching status indication	Control lamp (LED) or pluggable display module PLICSLED
Approvals	ATEX, UKEX, IECEx, CE 1935/2004, FDA, 3-A, EHEDG, ASME BPE, USP Class VI, ADI, China FDA, WHG, VLAREM, SVTI, Ship	ATEX, UKEX, IECEx, FM, CSA, EAC (GOST), UKR Sepro, SIL2, NEPSI, KOSHA/KTL, CCOE
Benefit	✓ Highly visible, adjustable full-colour multidirectional (360°) switching status display	✓ Minimal time and cost expenditure thanks to simple setup without medium

HYGIENIC ADAPTERS FOR LEVEL, PRESSURE AND POINT LEVEL SENSORS

Metallic sealing

Elastomer O-ring

Any common adapter system that complies with EC 1935/2004, FDA, EHEDG or 3-A can be used for level sensors as well as for pressure and point level sensors.

Whether with metal or with O-ring seal: The sensors fit all standard, commercially available hygienic connections.

- Flexible and simple integration
- Fast exchange
- Reduced production downtime
- Fewer instrument versions in stock
- Standardized hygienic adapter system for level, pressure and point level sensors

Level switch
VEGAPOINT series 10, 20, 30
G½", G1"

Level sensor
VEGAPULS 42
G1"

Level switch
VEGASWING series 50
G1"

Pressure transmitter
VEGABAR series 20 and 30
G1"

Fitting for G½"
Varivent N DN 40

Clamp liner DN 40
(DIN 11864-3)

Clamp
1 – 1½"

Varivent F
DN 25

Collar connector
DN 40

Further hygienic fittings available.

OUR SERVICE FOR YOU!

From initial planning to setup or installation advice – we are here for you. Would you like to talk with one of our experts and work out together which sensor best suits your needs? Just get in touch! We're always happy to help and advise, so you can select the right instrument for the job!

Training with added value

Our seminars are designed to deliver our technical knowledge and experience to you in the most effective way possible. We can host training sessions at our facilities or come to your location.

24-hour service hotline

You can reach our technical support anytime there's an emergency – 24 hours a day.

Delivery with SPEED

Because time is money, we have a delivery concept called "SPEED". It ensures that our sensors are delivered to you within a few days.

CONSULTATION

Would you like to receive expert consultation?
Just give us a call.

Consultation on products and applications

Mon – Fri from 8:00 AM to 4:00 PM

+49 7836 50-0

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