



Differential pressure measurement with VEGADIF

Reliability makes the difference

The new differential pressure transmitter VEGADIF 65 offers a unique combination of performance features: It combines a broad application spectrum and robust technology with the advantages of the modular product concept plics®. The result: High-precision measurements, long-term security and economy for many industrial sectors.

Versatility for process automation

Due to its extremely versatile application possibilities, differential pressure measurement has achieved great significance in the world of instrumentation. The measuring technique is just as indispensable in the petrochemical, chemical and energy producing industries as it is in offshore applications and the pharmaceutical industry. The newly developed VEGADIF 65 measures not only pressure and differential pressure but also level, interface and product density change.

Customized connection to any process

In view of the wide variety of measurements and applications, VEGA offers tried and tested chemical seal technology for process adaption. The chemical seal systems used with VEGADIF are custom configured to ensure the quality of the measurement. The electronic, self-monitoring measuring cell and mechanical overload protection diaphragm also offer the user high levels of safety and stability.



“We’ve been building pressure transmitters for over 35 years at VEGA. By completely integrating VEGADIF into our modular product concept plics® we have taken another decisive step towards offering the ideal instrument range.”



VEGADIF 65: All advantages at a glance

- Finely graduated Δp measuring ranges from 10 mbar up to 40 bar for very high measuring precision
- Maximum static pressure up to 630 bar provides additional security
- Overload membrane provides protection in case of incorrect use of fittings
- Self-monitoring measuring cell
- Additional user convenience with option of remote electronics housing
- An IP 68 (IP 69K) protection rating allows cleaning with high pressure equipment

Modularly adaptable: VEGADIF in the plics[®] system





Trend-setting measurement technology orientates itself around the people who use it. That's why we developed plics® – the world's first modular product system for instrumentation. Every one of our sensors is custom built from plics® components and thus optimally fulfils the requirements of every industry and its specific applications.

Simpler planning with plics®

The free choice and combination of sensor, process fitting, electronics and housing simplifies instrument selection and engineering for use in machines and on plants. With plics®, cost reduction starts right at the planning stage.

Clear advantages in plant construction

Short delivery time, uncomplicated connection, fast setup and commissioning save the plant builder significant time and costs. The configuration of VEGA instruments, their wiring and their commissioning is always the same. Whoever knows this can work with any plics® measuring principle and application at any time.

Assistance for the user

plics® delivers a convincing performance in daily use due to its high operational reliability, simplified servicing and reduced spares stock through the use of many common parts. The consistency of technology and operation simplifies and accelerates working with different plics® instruments.

The plics® advantages for VEGADIF

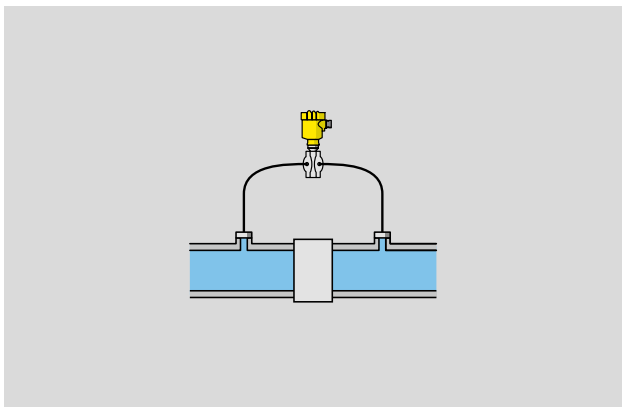
As a plics® sensor, VEGADIF 65 utilizes all the advantages of the modular system:

- Housings of plastic, aluminium or stainless steel for any application
- Wide variety of process fittings and materials
- Standardized electrical connection concept
- Electronics in a remote housing with IP 68 (IP 69K) protection rating
- Fast setup and commissioning via application-specific menu driven operation

A suitable mounting solution for every measuring task

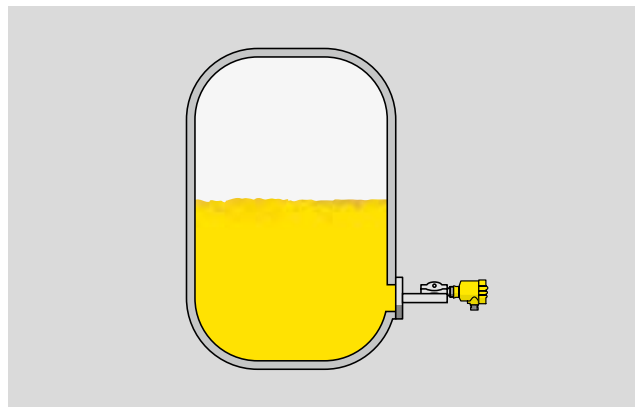
The differential pressure measuring technique with the various mounting possibilities of the chemical seal, make VEGADIF extremely versatile. As well as differential pressure, the instrument can also measure flow, level, interface or density change in vessels.

Mounting options for widely different applications



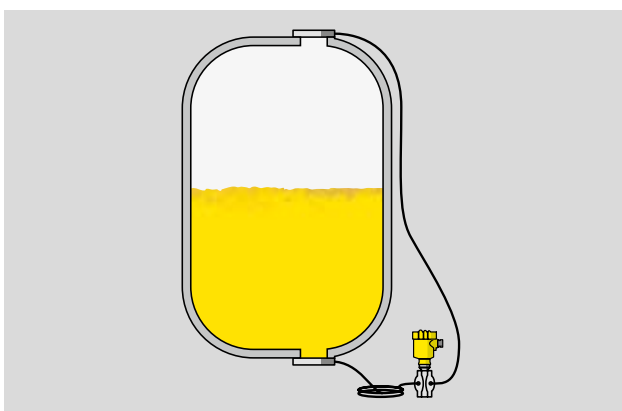
Direct connection or connection via impulse line

- For flow rate measurement with DP flow element, e.g. orifice plate or Venturi tube
- For filter monitoring and pump control



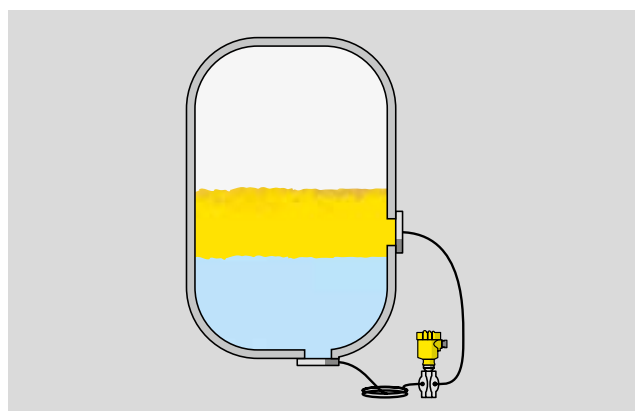
Chemical seal single side assembly (CSS)

- For pressure measurement
- For level measurement in ventilated or open containers



Chemical seal both side assembly (CSB)

- For level measurement in vessels with head pressure



Chemical seal both side assembly (CSB)

- For density or interface measurement



Configuration and function of VEGADIF 65

Pressure acting on the high or low pressure side causes a deflection of the separating diaphragms. The filling oil in the sensor hydraulically transfers the pressure to the piezoresistive measuring bridge. An overload membrane inside the sensor ensures that the measuring bridge isn't damaged if one-sided overloading occurs.

Technical data

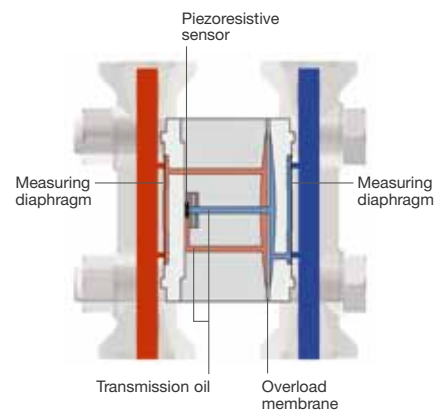
Operating voltage	12 ... 36 V DC
Δp measuring range	0.01 ... 40 bar
Static pressure	160 or 420 bar
Temperature range	-40 ... +120 °C (basic version) -40 ... +400 °C (with chemical seal)
Diaphragm material	316L, Alloy C276, Monel, Tantalum, Rhodium/Gold on Alloy
Process fittings	acc. to IEC 61518 or prepared for chemical seal mounting
Approvals	ATEX, IEC

Accessories

- Venting valves
- Mounting angle
- 3-fold valve block
- 5-fold valve block
- Oval flange adapter

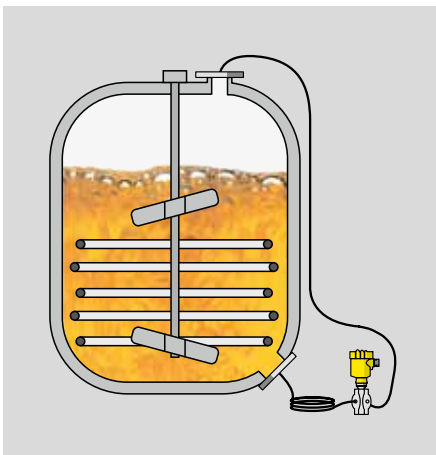
Chemical seal additions

- Chemical seal single side assembly (CSS)
- Chemical seal both side assembly (CSB)



VEGADIF – versatile in use

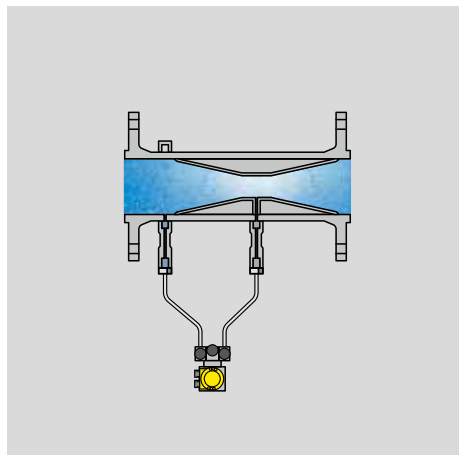
The differential pressure transmitter VEGADIF 65 measures gases, vapours and liquids. Pressure differences in extremely viscous media can also be reliably measured. As different as the applications and operating conditions may be, VEGADIF 65 is very accurate and provides long-term stability due to the precision differential pressure measuring cell.



Level measurement in a reactor

The differential pressure transmitter VEGADIF 65 also measures the level reliably in pressurized vessels containing foam-generating products.

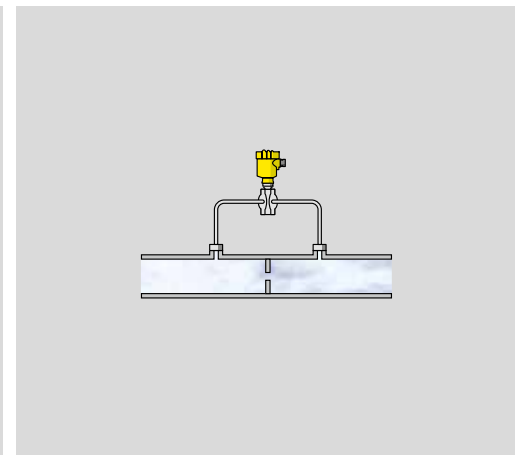
- Product temperature
-40 ... +400 °C
- Simple and reliable measurement
- Chemical seal coatings of PA, PP, ceramic or gold



Flow rate measurement in a fresh water pipeline

Flow rate measurement using a VEGADIF 65 in conjunction with a Venturi tube results in very minimal pressure losses in the line.

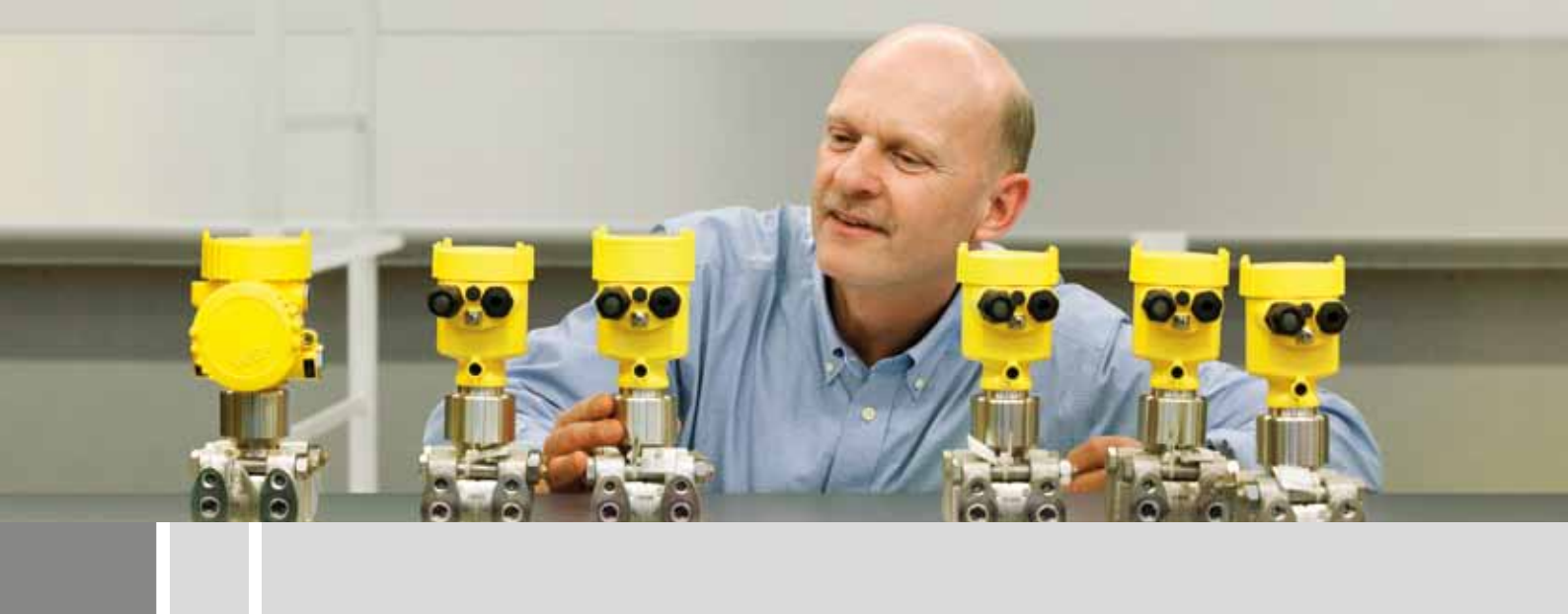
- Up to 40 bar feed pressure
- Insensitive to deposits and abrasion by minerals



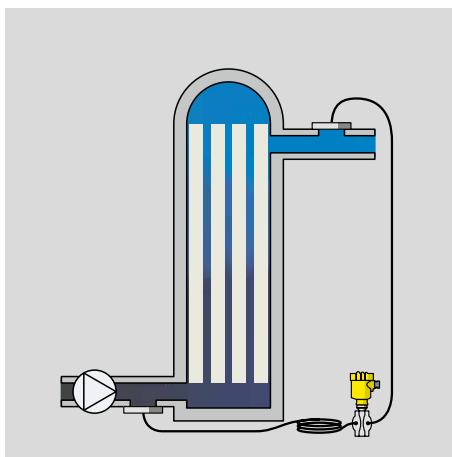
Quantity measurement of combustion air

The throughput of combustion air can be measured with the VEGADIF 65 via the differential pressure drop across a measuring orifice.

- Δp measuring range 0 ... 10 mbar
- Direct mounting on the DP flow element
- Overload resistant up to 630 bar
- Shut-off valves for impulse lines available as accessories



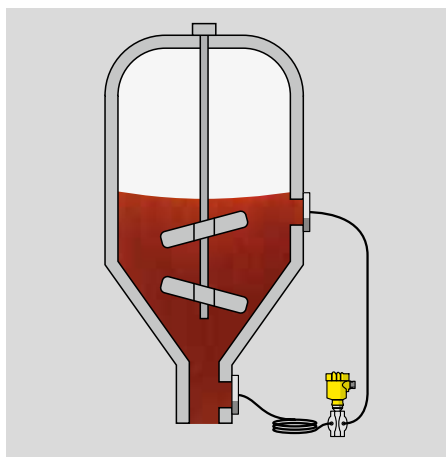
“Calibration is decisive for the measuring precision of our pressure transmitters. That’s why we use certified test benches and guarantee that every single pressure transmitter receives an individual inspection certificate.”



Monitoring of filtration systems

The effectiveness of a filtration system depends on the permeability of the filter. VEGADIF 65 detects the level of buildup in a filtration system with no difficulty, because it can measure even the smallest pressure difference between filter inlet and outlet.

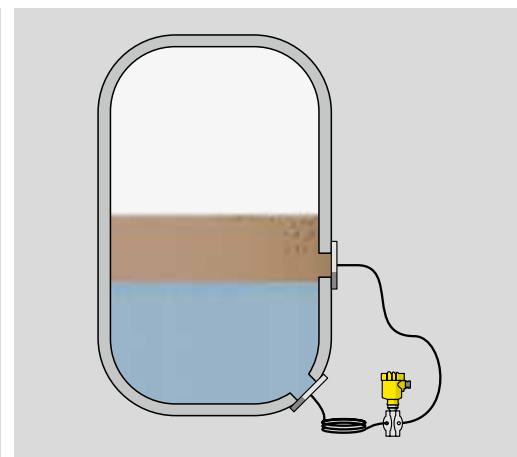
- For liquid and gaseous media
- Front-flush chemical seal assemblies
- Chemical seal mounting as of measuring range 100 mbar



Density measurement in a fruit juice tank

The differential pressure transmitter VEGADIF 65 enables also density measurement of fruit juice. A change of medium density causes a change of differential pressure, which is easily detected by the calibrated instrument.

- Hygienic, front-flush process fittings
- Independent of superimposed pressures



Interface measurement in a separator vessel

With appropriate connection and mounting, interface measurement with VEGADIF 65 is suitable both for pressurized and unpressurized vessels. In both cases the interface can be precisely and reliably detected.

- Simple installation and setup

Setup made easy



“With VEGA technology, any user can set up his measuring point exactly as the system requires. Remote parameter adjustment via a control system is just as easy and flexible as setup on site.”

Both DTM and EDD are available for remote parameter adjustment of VEGADIF. Fast and reliable setup is ensured through the simple selection of the application in the adjustment software. Setup can also be carried out with the help of the indicating and adjustment module PLICSCOM or with a HART handheld 375. If the measurement point is not easily accessible, an external electronics or the indicating and adjustment unit VEGADIS 61 can be used.

PLICSCOM – multi-function ability

The indicating and adjustment module PLICSCOM is used for measured value indication, adjustment and diagnosis directly on the sensor. Its menu structure is clearly arranged and makes setup simple. Status messages are displayed in plain, readable text. In addition, all instrument data like measuring range, process fitting and seal material can be read out.

External indicating and adjustment unit VEGADIS 61

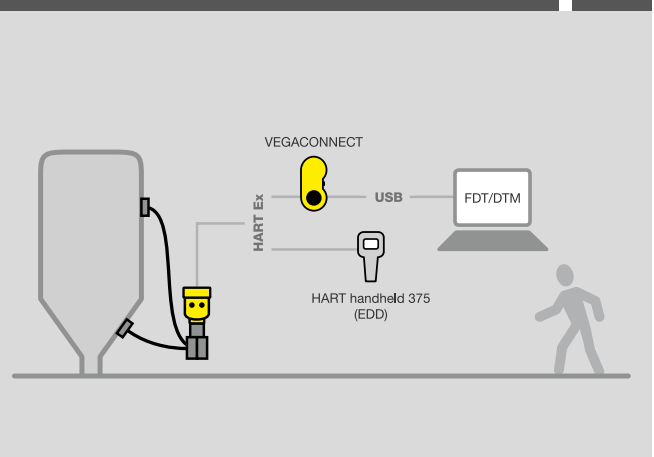
The external indicating and adjustment unit VEGADIS 61 with integrated PLICSCOM can be connected to the sensor via standard cable up to 50 metres long. It allows setup of the measuring point even in difficult to access locations and requires no external power.

PC adjustment with VEGACONNECT

Versatility allows flexible working: the mobile VEGACONNECT easily connects communication-capable VEGA instruments to any PC via the USB interface. The parameter adjustment of these instruments is carried out via the well-proven adjustment software PACTware with DTM. VEGACONNECT can also be used as a universal HART modem for sensors of other manufacturers.

Setup with the HART handheld 375

The HART handheld 375 also enables on-site sensor parameter adjustment. To be able to access the HART parameters of a sensor, it must be connected to the sensor cable via a minimum working resistance of 220 ohms.





VEGA Grieshaber KG
Am Hohenstein 113
77761 Schiltach
Germany

Phone +49 7836 50-0
Fax +49 7836 50-201
E-mail info@de.vega.com
www.vega.com

Looking Forward **VEGA**