

Process pressure



Overview

VEGABAR series 10

VEGABAR 81, 82, 83

Accessory

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VEGABAR

Level and pressure measurement

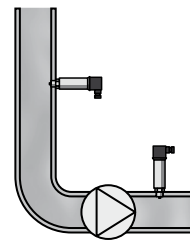
Measuring principle

The pressure measuring cell converting the pressure into an electrical signal is the heart of the pressure transmitter. This pressure-dependent signal is converted by the integrated electronics into a standardised output signal. Different measuring cells are used to detect the pressure. The ceramic cells have the advantage of an excellent long-term stability and high overload resistance. The metal measuring cell enables fully welded versions and covers even higher temperature ranges.

VEGABAR series 10

Pressure measurement in gases and liquids

The pressure transmitters are designed for pressure measurements of liquids and gases in all areas of industrial measurement technology. The available measuring ranges are suitable for detection of absolute pressure, gauge pressure and vacuum in the range from -1 ... +1000 bar. The focus however, are smaller process fittings of ½" and 1".








VEGABAR series 80

For all industries

This instrument series is developed for all applications of the industrial measurement technique. The VEGABAR series 80 can be used universally for the measurement of gases, vapours and liquids. The pressure transmitter is suitable for special as well as standard applications. The setup remains always the same. The VEGABAR series 80 offers maximum reliability and safety. It can be used in all industries.



Overview

Instrument type		Deviation	Process fitting	Process temperature	Measuring range
VEGABAR 14 CERTEC®		0.3 %	Thread from G½, ½ NPT	-40 ... +100 °C	-1 ... +60 bar (-100 ... +6000 kPa)
VEGABAR 17 Piezoresistive/thin film strain gauge		0.5 %	Thread from G½, ½ NPT	-40 ... +150 °C	-1 ... +1000 bar (-100 ... +100000 kPa)
VEGABAR 81 Chemical seal system		0.2 %	Thread from G½, ½ NPT, flanges from DN 25, 1", hygienic fittings	-90 ... +400 °C	-1 ... +1000 bar (-100 ... +100000 kPa)
VEGABAR 82 CERTEC®, MINI-CERTEC®		0.2 %; 0.1 %; 0.05 %	Thread from G½, ½ NPT, flanges from DN 15, hygienic fittings	-40 ... +150 °C	-1 ... +100 bar (-100 ... +10000 kPa)
VEGABAR 83 Piezoresistive/thin film strain gauge/METEC®		0.2 %; 0.1 %; 0.075 %	Thread from G½, ½ NPT, flanges from DN 25, hygienic fittings	-40 ... +200 °C	-1 ... +1000 bar (-100 ... +100000 kPa)



VEGABAR 14



Process pressure transmitter with ceramic measuring cell

Application area

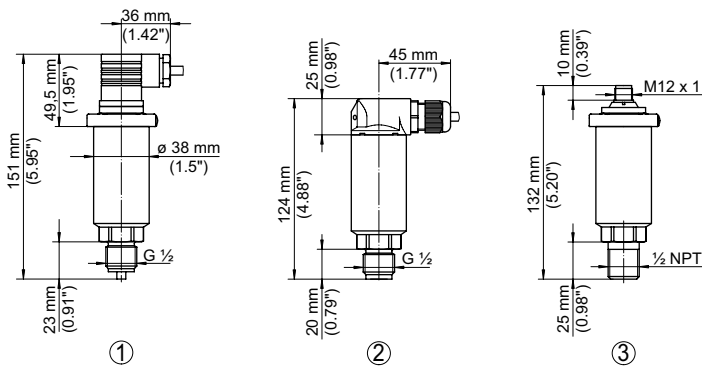
The VEGABAR 14 pressure transmitter can be used universally for measurement of gases, vapours and liquids. The small pressure transmitter offers maximum reliability and operational safety. The VEGABAR 14 is an economical solution for a number of applications in all industries.

Your benefit

- High plant availability through maximum overload and vacuum resistance of the ceramic measuring cell
- Price-favourable version with small mounting dimensions
- Low costs for maintenance through wear-free ceramic measuring cell

Technical data

Measuring cell:	CERTEC®
Measuring range:	-1 ... +60 bar (-100 ... +6000 kPa)
Process fitting:	thread from G $\frac{1}{2}$, $\frac{1}{2}$ NPT
Process temperature:	-40 ... +100 °C
Accuracy class:	0.3 %
Output signal:	4 ... 20 mA



- 1 Threaded version G $\frac{1}{2}$, manometer connection EN 837 with plug connection ISO 4400
- 2 Threaded version G $\frac{1}{2}$, inner G $\frac{1}{4}$ with direct cable outlet
- 3 Threaded version $\frac{1}{2}$ NPT, inner $\frac{1}{4}$ NPT with plug connection M12 x 1

You will find further process fittings and options under www.vega.com/configurator.

You will find further drawings and tables under www.vega.com/downloads.

You will find mounting accessory, welded sockets and housing overviews in chapter "Accessory".

Approval

- .X** without
- .M** Ship approval
- .Z** ATEX II 3G nA II T4...T1 X

Pressure / Measuring range

- 1U** rel. / 0...+0.4 bar (0...+40 kPa)
- 1A** rel. / 0...+1 bar (0...+100 kPa)
- 1C** rel. / 0...+2.5 bar (0...+250 kPa)
- 1F** rel. / 0...+10 bar (0...+1000 kPa)
- 1H** rel. / 0...+25 bar (0...+2500 kPa)
- 1J** rel. / 0...+60 bar (0...+6000 kPa)
- 1K** rel. / -0.05...+0.05 bar (-5...+5kPa)
- 3U** rel. / -0.2...+0.2 bar (-20...+20 kPa)
- 3A** rel. / -0.5...+0.5 bar (-50...+50 kPa)
- 3C** rel. / -1...+1.5 bar (-100...+150 kPa)
- 3F** rel. / -1...+9 bar (-100...+900 kPa)
- 3G** rel. / -1...+15 bar (-100...+1500 kPa)
- 2A** abs. / 0...+1 bar (0...+100 kPa)
- 2C** abs. / 0...+2.5 bar (0...+250 kPa)
- 2F** abs. / 0...+10 bar (0...+1000 kPa)
- 2G** abs. / 0...+16 bar (0...+1600 kPa)

Electrical connection / Protection

- A1** 4-pole plug connection ISO4400, PG9 / IP65
- A2** 4-pole plug connection with hinged cover ISO4400 / IP 65
- C1** Direct cable outlet 5 m cable / IP 67
- M1** M12x1 / IP65
- M4** M12x1 with connection cable / IP68 (0.2 bar)

Process fitting / Material

- GV** Thread G½ PN60, EN837; manometer connection / 316L
- GP** Thread G½, inside G¼ PN60, ISO228-1 / 316L
- GS** Thread G½, inside G¼ PN10, ISO228-1 / PVDF
- GN** Thread ½NPT, inside ¼NPT PN60, ASME B1.20.1 / 316L
- GB** Thread M20x1.5 PN60, EN837; manometer connection / 316L
- GG** Thread G1½ PN60, DIN3852-A / 316L

Sealing concept / Wetted seal / Process temperature

- 1** Single / FKM (VP2/A) / -20...+100°C
- 3** Single / EPDM (A+P 75.5/KW75F) / -40...+100°C
- N** Double / FFKM (Perlast G75B) / -15...+100°C

Customer-specific adjustment

- A** in bar
- No

BAR14

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VEGABAR 17

Process pressure transmitter with metallic measuring cell

Application area

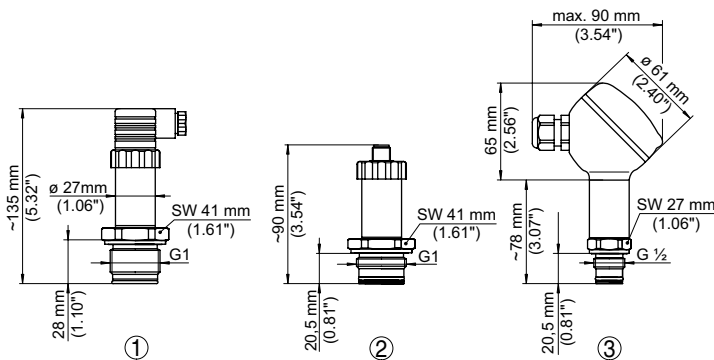
The VEGABAR 17 is a universal pressure transmitter for measurement of gases, vapours and liquids. The VEGABAR 17 is an economical solution for a number of applications in all industries.

Your benefit

- Price-favourable version with smallest mounting dimensions
- Universal use through completely welded measuring cell
- High chemical resistance through high quality diaphragm materials

Technical data

Measuring cell:	piezoresistive/thin film strain gauge
Measuring range:	-1 ... +1000 bar (-100 ... +100000 kPa)
Process fitting:	thread from G½, ½ NPT
Process temperature:	-40 ... +150 °C
Accuracy class:	0.5 %
Output signal:	4 ... 20 mA



- 1 Threaded version G1, hygienic with angle plug connection DIN 43650
- 2 Threaded version G1, front-flush with plug connection M12 x 1
- 3 Threaded version G½, front-flush with terminal housing

You will find further process fittings and options under www.vega.com/configurator.

You will find further drawings and tables under www.vega.com/downloads.

You will find mounting accessory, welded sockets and housing overviews in chapter "Accessory".

VEGABAR 81

Pressure transmitter with chemical seal

Application area

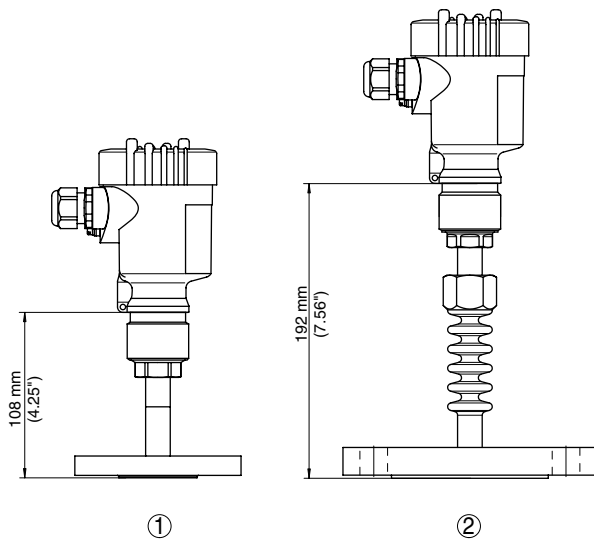
The VEGABAR 81 is a pressure transmitter with chemical seal for pressure and level measurement. The chemical seal systems of VEGABAR 81 adapted to the process, ensure a reliable measurement even with highly corrosive and hot products.

Your benefit

- Simple adaptation thanks to various configuration options
- Reliable measurement with temperatures up to 400 °C
- Reliable measurement independent of foam generation or tank installations

Technical data

Measuring cell:	chemical seal system
Measuring range:	-1 ... +1000 bar (-100 ... +100000 kPa)
Process fitting:	thread from G $\frac{1}{2}$, $\frac{1}{2}$ NPT flanges from DN 25, 1" hygienic fittings
Process temperature:	-90 ... +400 °C
Accuracy class:	0.2 %



- 1 Flange version +150 °C
- 2 Flange version with cooling element +300 °C

Adjustment according to customer specification free-of-charge.

You will find further process fittings and options under www.vega.com/configurator.

You will find further drawings and tables under www.vega.com/downloads.

You will find mounting accessory, welded sockets and housing overviews in chapter "Accessory".

Scope

- A** Europe
- I** worldwide
- Approval**
 - X** for Ex-free area
 - C** ATEX II 1G, 1/2G, 2G Ex ia IIC T6
 - O** ATEX II 1G, 1/2G, 2G Ex ia IIC T6 + Ship approval
 - E** ATEX II 1/2G, 2G Ex d IIC T6
 - C** IEC Ex ia IIC T6
- Process fitting / Material**
 - HU** Flange DN25 PN40 Form D, DIN2501 / 316L
 - I5** Flange DN50 PN40 Form D, DIN2501 / 316L
 - ID** Flange DN80 PN40 Form D, DIN2501 / 316L
 - CA** Flange 2" 150lb RF, ASME B16.5 / 316L
 - KO** Cell DN50 PN16-100 / 316L
- Isolating liquid / Process temperature**
 - A** Silicone oil KN2.2 / -40...+150°C (Pabs <1bar -40...+150°C)
 - G** Silicone oil KN2.2 and cooling element / -40...+200°C (Pabs <1bar -40...+150°C)
 - C** High temperature oil KN3.2 and cooling element / -10...+300°C (Pabs<1bar -10...+200°C)
 - M** Medical white oil KN92 / -10...+150°C (Pabs <1bar -10...+150°C)
- Diaphragm material**
 - 1** 316L
 - 2** Alloy C276 (2.4819)
 - 5** Tantalum
- Pressure**
 - A** Absolute pressure
 - G** Relative pressure
- Measuring range**
 - C** 0...+0.4bar (0...+40kPa)
 - D** 0...+1.0bar (0...+100kPa)
 - E** 0...+2.5bar (0...+250kPa)
 - G** 0...+10.0bar (0...+1000kPa)
 - J** 0...+40.0bar (0...+4000kPa)
 - K** 0...+60.0bar (0...+6000kPa)
 - W** -1...+10.0bar (-100...+1000kPa)
 - N** 0...+250.0bar (0...+25000kPa)
- Vacuum service**
 - X** Without
 - V** with, with measuring ranges < 0.5bar abs
- Accuracy class**
 - S** 0.2%
- Electronics**
 - Z** Two-wire 4 ... 20mA
 - H** Two-wire 4...20mA/HART®
 - A** Two-wire 4...20mA/HART® with SIL qualification
 - P** Two-wire Profibus PA
 - F** Two-wire Foundation Fieldbus
 - S** Slave electronics for electronic differential pressure
- Additional electronics**
 - X** without
 - Z** Additional current output 4...20mA
- Housing**
 - K** Plastic single chamber
 - A** Aluminium single chamber
 - D** Aluminium double chamber
 - 8** Stainless steel single chamber (electropolished)
 - R** Plastic double chamber
- Housing version / Protection**
 - I** compact / IP66/IP67; NEMA 6P
 - A** Axial cable outlet IP68 (PUR) with external housing / IP66/IP67; NEMA 6P
- Cable entry / Connection**
 - M** M20x1.5 / Cable gland PA black (ø5-9mm), standard
 - N** ½NPT / Blind plug
- Display/Adjustment module PLICSCOM**
 - X** without
 - A** Mounted
- Certificate**
 - M** yes (e.g. FDA; EN 10204-3.1; NACE)
 - X** no

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Cable length

per 100 mm cable of PUR

VEGABAR 82



Pressure transmitter with ceramic measuring cell

Application area

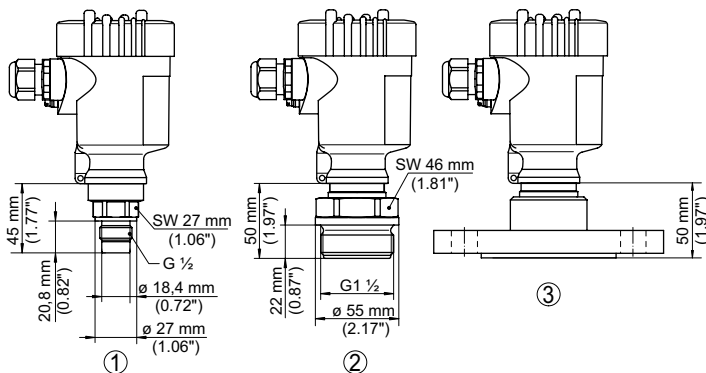
The VEGABAR 82 pressure transmitter can be used universally for the measurement of gases, vapours and liquids. Substances such as sand can be handled easily thanks to the abrasion-resistant ceramic measuring cell. The VEGABAR 82 offers maximum reliability. The transmitter can be used in all industries.

Your benefit

- High plant availability through maximum overload and vacuum resistance of the ceramic measuring cell
- Measurement down to the last drop through smallest measuring ranges with high accuracy
- Low maintenance costs thanks to wear-free ceramic measuring cell

Technical data

Measuring cell:	CERTEC [®] , MINI-CERTEC [®]
Measuring range:	-1 ... +100 bar (-100 ... +10000 kPa)
Process fitting:	thread from G $\frac{1}{2}$, $\frac{1}{2}$ NPT flanges from DN 15, 1 $\frac{1}{2}$ " hygienic fittings
Process temperature:	-40 ... +150 °C
Accuracy class:	0.2 %; 0.1 %; 0.05 %



- 1 Threaded version G $\frac{1}{2}$, front-flush
- 2 Threaded version G 1 $\frac{1}{2}$
- 3 Flange version DN 50

Adjustment according to customer specification free-of-charge.

You will find further process fittings and options under www.vega.com/configurator.

You will find further drawings and tables under www.vega.com/downloads.

You will find mounting accessory, welded sockets and housing overviews in chapter "Accessory".

Scope

- A Europe
- I worldwide

Approval

- X for Ex-free area
- C ATEX II 1G, 1/2G, 2G Ex ia IIC T6
- O ATEX II 1G, 1/2G, 2G Ex ia IIC T6 + Ship approval
- E ATEX II 1/2G, 2G Ex d IIC T6
- C IEC Ex ia IIC T6

Process fitting / Material

- C3 Thread G $\frac{1}{2}$, ISO228-1; front-flush / 316L
- DA Thread G $\frac{1}{2}$, DIN3852-A / 316L
- DU Thread G $\frac{1}{2}$, EN837; manometer connection / 316L
- AV Clamp 1" PN16 (\varnothing 50.5mm) DIN32676, ISO2852 / 316L
- B5 Flange DN80 PN40 Form C, DIN2501 / 316L

Sealing concept

- S Single
- D Double

Measuring cell seal / Process temperature

- A FKM (VP2/A) / -20...+130°C
- D EPDM (A+P 75.5/KW75F) / -40...+130°C
- G FFKM (Perlast G75S) / -15...+150°C

Pressure

- A Absolute pressure
- G Relative pressure

Measuring range

- A 0...+0.025bar (0...+2,5kPa)
- B 0...+0.1bar (0...+10kPa)
- C 0...+0.4bar (0...+40kPa)
- D 0...+1.0bar (0...+100kPa)
- E 0...+2.5bar (0...+250kPa)
- G 0...+10.0bar (0...+1000kPa)
- I 0...+25.0bar (0...+2500kPa)
- L 0...+100.0bar (0...+10000kPa)
- W -1...+10.0bar (-100...+1000kPa)

Accuracy class

- H 0.050%
- E 0.1%
- S 0.2%

Electronics

- Z Two-wire 4 ... 20mA
- H Two-wire 4...20mA/HART®
- A Two-wire 4...20mA/HART® with SIL qualification
- P Two-wire Profibus PA
- F Two-wire Foundation Fieldbus
- S Slave electronics for electronic differential pressure

Supplementary electronics

- X without
- Z Additional current output 4...20mA

Housing

- K Plastic single chamber
- A Aluminium single chamber
- D Aluminium double chamber
- 8 Stainless steel single chamber (electropolished)
- R Plastic double chamber

Housing version / Protection

- I compact / IP66/IP67; NEMA 6P
- A Axial cable outlet IP68 (PUR) with external housing / IP66/IP67; NEMA 6P

Cable entry / Connection

- M M20x1.5 / Cable gland PA black (\varnothing 5-9mm), standard
- N $\frac{1}{2}$ NPT / Blind plug

Display/Adjustment module PLICSCOM

- X without
- A Mounted

Certificate

- M yes (e.g. FDA; EN 10204-3.1; NACE)
- X no

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Cable length
per 100 mm cable of PUR



VEGABAR 83



Pressure transmitter with metallic measuring cell

Application area

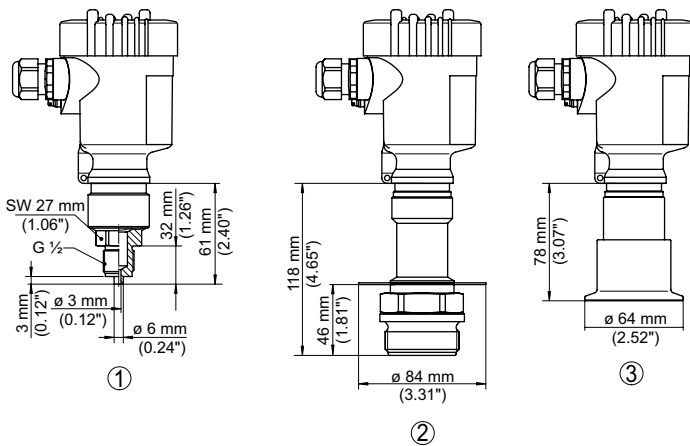
The VEGABAR 83 is a pressure transmitter for pressure measurement of gases, vapours and liquids in all industries. The VEGABAR 83 offers special advantages in applications with high pressures.

Your benefit

- Universal use due to welded measuring cell
- High reliability through vacuum resistant version
- Maximum dependability and safety through proven technology

Technical data

Measuring cell:	piezoresistive/thin film strain gauge/METEC®
Meas. range:	-1 ... +1000 bar (-100 ... +100000 kPa)
Process fitting:	thread from G½, ½ NPT flanges from DN 25 hygienic fittings
Process temperature:	-40 ... +200 °C
Accuracy class:	0.2 %; 0.1 %; 0.075 %



- 1 Threaded version G½, manometer connection EN 837
- 2 Threaded version, front-flush with shroud (-12 ... +200 °C)
- 3 Clamp version

Adjustment according to customer specification free-of-charge.

You will find further process fittings and options under www.vega.com/configurator.

You will find further drawings and tables under www.vega.com/downloads.

You will find mounting accessory, welded sockets and housing overviews in chapter "Accessory".

Scope

- A Europe
- I worldwide

Approval

- X for Ex-free area
- C ATEX II 1G, 1/2G, 2G Ex ia IIC T6
- O ATEX II 1G, 1/2G, 2G Ex ia IIC T6 + Ship approval
- E ATEX II 1/2G, 2G Ex d IIC T6
- C IEC Ex ia IIC T6

Process fitting / Material

- C5 Thread G1, ISO228-1 / 316L
- DA Thread G1½, DIN3852-A / 316L
- DU Thread G1½, EN837; manometer connection / 316L
- AR Clamp 2" PN16 (ø64mm) DIN32676, ISO2852 / 316L
- CQ Flange DN50 PN40 Form B1, EN1092-1 / 316L

Process temperature / Seal

- S Standard / -40...+105°C / without
- E Extended temperature range / -40 ... +150°C / without
- H High temperature -12...+180°C / without
- T High temperature with heat shield -12...+200°C / without

Pressure

- A Absolute pressure
- G Relative pressure

Measuring range

- C 0...+0.4bar (0...+40kPa)
- D 0...+1.0bar (0...+100kPa)
- E 0...+2.5bar (0...+250kPa)
- G 0...+10.0bar (0...+1000kPa)
- I 0...+25.0bar (0...+2500kPa)
- L 0...+100.0bar (0...+10000kPa)
- N 0...+250.0bar (0...+25000kPa)
- O 0...+600.0bar (0...+60000kPa)
- P 0...+1000.0bar (0...+100000kPa)
- W -1...+10.0bar (-100...+1000kPa)

Accuracy class

- M 0.075%
- E 0.1%
- S 0.2%

Electronics

- Z Two-wire 4 ... 20mA
- H Two-wire 4...20mA/HART®
- A Two-wire 4...20mA/HART® with SIL qualification
- P Two-wire Profibus PA
- F Two-wire Foundation Fieldbus
- S Slave electronics for electronic differential pressure

Supplementary electronics

- X without
- Z Additional current output 4...20mA

Housing

- K Plastic single chamber
- A Aluminium single chamber
- D Aluminium double chamber
- 8 Stainless steel single chamber (electropolished)
- R Plastic double chamber

Housing version / Protection

- I compact / IP66/IP67; NEMA 6P
- A Axial cable outlet IP68 (PUR) with external housing / IP66/IP67; NEMA 6I

Cable entry

- M M20x1.5 / Cable gland PA black (ø5-9mm), standard
- N ½NPT / Blind plug

Display/Adjustment module PLICSCOM

- X without
- A Mounted

Certificate

- M yes (e.g. FDA; EN 10204-3.1; NACE)
- X no

B83.

Cable length

per 100 mm cable of PUR

Valve



Application area

The use of a valve allows the simple installation and setup of the pressure transmitter.

The valve has a ventilation possibility to ensure a reliable setup.

Your benefit

- Simple mounting and dismounting of the pressure transmitter
- Ensures the simple sensor calibration without process interruption



Version / Input / Output

- E** 1-fold / G $\frac{1}{2}$ manometer connection and pin / G $\frac{1}{2}$ socket
- G** 1-fold / $\frac{1}{2}$ NPT adapter end / $\frac{1}{2}$ NPT socket
- F** 2-fold / $\frac{1}{2}$ NPT adapter end / $\frac{1}{2}$ NPT socket
- D** 2-fold / G $\frac{1}{2}$ manometer and plug DIN16272 Form A
- M** 2-fold / M20x1.5 manometer and pin DIN16272 Form
- H** 2-fold / pin $\frac{1}{2}$ NPT on both sides / 316L

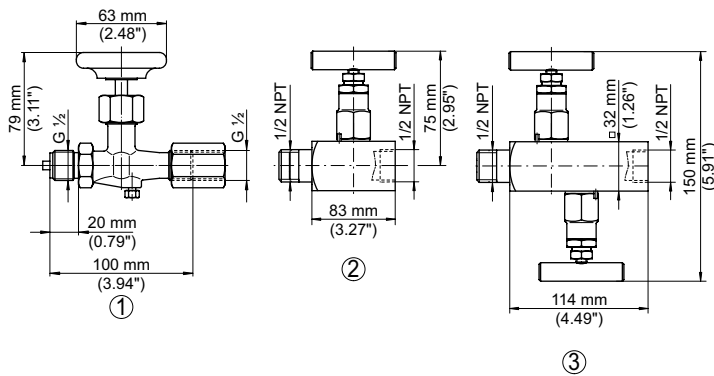
Material

- V** Stainless steel
- S** Steel

Certificate / Standard

- B** (C)Certificate 3.1 (mat.) / EN10204
- X** without

BARVALVE. [] [] [] []



- 1 1-fold / G $\frac{1}{2}$ manometer / G $\frac{1}{2}$ socket
- 2 1-fold / $\frac{1}{2}$ NPT adapter end / $\frac{1}{2}$ NPT socket
- 3 2-fold / $\frac{1}{2}$ NPT adapter end / $\frac{1}{2}$ NPT socket

Measuring instrument holder for wall/tube mounting



For mounting of pressure transmitters

The measuring instrument holder is used for mounting of pressure transmitters of VEGABAR series 50/80 as well as submersible pressure transmitters VEGAWELL 52.

The adaptation to different instrument diameters is enabled via an attached reduction piece.

The materials used are 316L and 304.

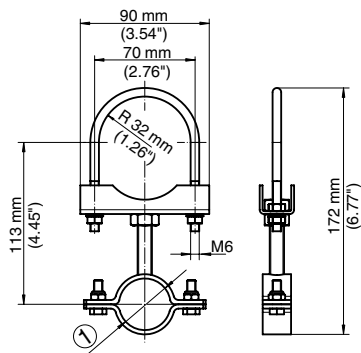


Version

D for VEGABAR series 50/80; VEGAWELL ø22, 32, 38...40 mm

E for VEGABAR series 50/80; VEGAWELL ø33, 36, 44 mm

BARMONT.



1 Adaptable diameter from 22 ... 44 mm

Siphon



Application area

Siphons are used to decouple pressure transmitters from process temperatures above the specification.

Technical data

Material: 316Ti with nominal pressure PN 400
 1.0345 with nominal pressure PN 400 up to 150 °C from 250 °C PN 275

Standard: DIN 16282

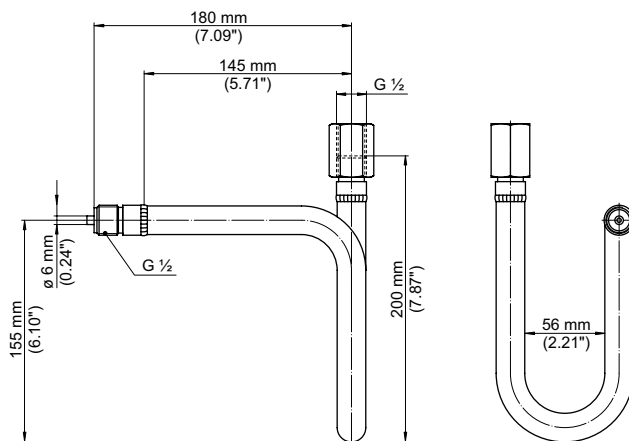


Version / Material

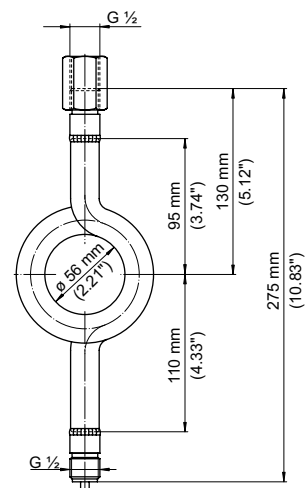
- 40127 U-form, thread G ½ Form A, DIN16282 / 1.0345
- 40128 Circular form, thread G ½ Form D, DIN16282 / 1.0345
- 40129 U-form, thread G ½ Form A, DIN16282 / 316Ti
- 40130 Circular form, thread G ½ Form D, DIN16282 / 316Ti
- 41534 U-form, thread ½NPT / 1.0345
- 41535 U-form, thread ½NPT / 316Ti
- 41536 Circular form, thread ½NPT / 1.0345
- 41537 Circular form, thread ½NPT / 316Ti

2.

Siphon in U-form



Siphon in circular form



Welded socket VEGABAR 14

For process fitting	
GV	Thread G½ PN60, EN837; manometer connection / 316L
GB	Thread M20x1.5 PN60 / 316L
GP	Thread G½ PN60, inside G¼, ISO228-1 / 316L
Outer dimensions	
B	30x34mm
T	65x39.5mm
V	70x40mm
S	79 x 102 mm
Certificate / Standard	
B	C 3.1-Certificate/Mat.
X	without
Seal	
X	without
Material	
V	316L

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Welded socket VEGABAR 17

For process fitting	
GDX	G½B manometer connection
TBX	G½A, inner G¼A
861	Thread G½B, front-flush
86L	Thread G½B, front-flush
86B	Thread G½B, front-flush
851	Thread G1B, front-flush
85L	Thread G1B, front-flush
85B	Thread G1B, front-flush
84L	Thread G1B, aseptic
84B	Thread G1B, aseptic
Outer dimensions	
A	30x21mm
B	30x34mm
I	50x21mm
J	50x25.5mm
T	65x39.5mm
V	70x40mm
S	79 x 102 mm
Seal	
X	without
Material	
V	316L
Certificate / Standard	
B	C 3.1-Certificate/Mat.
X	without

ESMBR17.					
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Welded socket with accessory VEGABAR series 80

Process fitting / Material

- C3** Thread G1½, ISO228-1; front-flush / 316L
- DA** Thread G1½, DIN3852-A / 316L
- DU** Thread G1½, EN837; manometer connection / 316L
- AV** Clamp 1" PN16 (ø50.5mm) DIN32676, ISO2852 / 316L

Process seal

- 1** without
- A** FKM
- D** EPDM

Welded socket

- X** without
- M** with

Welding dummy / Material

- X** without welding dummy
- M** with welding dummy / brass

Blind plug / Material

- X** without
- M** with blind plug / 316L
- H** with blind plug / Alloy

Certificate

- M** yes (e.g. FDA; EN 10204-3.1; NACE)
- X** no

WDSB80.

You will find further welded sleeves and welded sockets in chapter "Accessory".