# Ultrasonic


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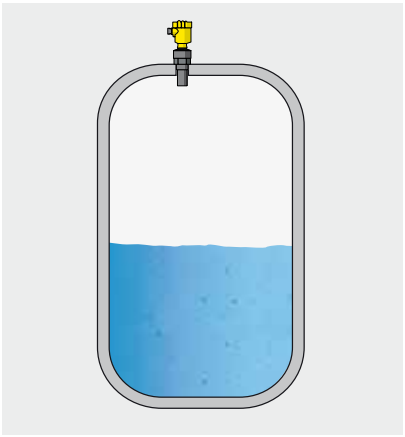
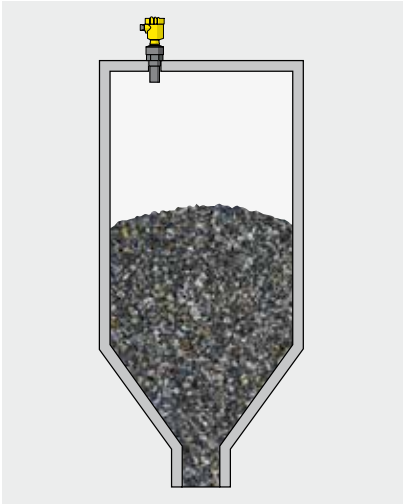
# Overview VEGASON





## Area of application

The ultrasonic sensors of the VEGASON series are suitable for non-contact level measurement of liquids and bulk solids in simple applications with stable measuring conditions. Typical applications with liquids are storage tanks and open basins. Bulk solids applications usually involve level measurement in open containers and small vessels.

## Measuring principle

VEGASON sends short ultrasonic pulses in the direction of the measured medium. These pulses are reflected by the material surface and then received by the sensor. The instrument calculates the level from the running time of the sound wave and the entered tank height.

## Advantages

The compact design allows for easy installation of the sensor. Since the properties of the medium do not affect the level measurement, setup and commissioning can be carried out without medium. The low-cost, non-contact measuring method allows wear and maintenance-free operation.

| | VEGASON 61 | VEGASON 62 | VEGASON 63 |
|---|---|---|---|
| | | | |
| Application | Liquids and bulk solids in small vessels | Liquids and bulk solids in small vessels | Liquids and bulk solids in all industries |
| Measuring range | Liquids: 0.25 … 5 m<br>Bulk solids: 0.25 … 2 m | Liquids: 0.4 … 8 m<br>Bulk solids: 0.4 … 3.5 m | Liquids: 0.6 … 15 m<br>Bulk solids: 0.6 … 7 m |
| Transducer | of PVDF | of PVDF | of UP, 316L, PPH |
| Process fitting | Thread G1½, 1½ NPT | Thread G2, 2 NPT | Compression flange DN 100, mounting strap |
| Process temperature | -40 … +80 °C | -40 … +80 °C | -40 … +80 °C |
| Process pressure | -0.2 … +2 bar<br>(-20 … +200 kPa) | -0.2 … +2 bar<br>(-20 … +200 kPa) | -0.2 … +1 bar<br>(-20 … +100 kPa) |
| Accuracy | ±10 mm | ±10 mm | ±10 mm |
| Signal output | 4 … 20 mA/HART, Profibus PA, Foundation Fieldbus | 4 … 20 mA/HART, Profibus PA, Foundation Fieldbus | 4 … 20 mA/HART, Profibus PA, Foundation Fieldbus |
| Display/Adjustment | PLICSCOM, PACTware, VEGADIS 81, VEGADIS 82 | PLICSCOM, PACTware, VEGADIS 81, VEGADIS 82 | PLICSCOM, PACTware, VEGADIS 81, VEGADIS 82 |
| Approvals | ATEX, IEC, FM, CSA, GOST, Ship, SIL2 | ATEX, IEC, FM, CSA, GOST, Ship, SIL2 | Ship, SIL2 |

# VEGASON 61

**Ultrasonic sensor for continuous level measurement**

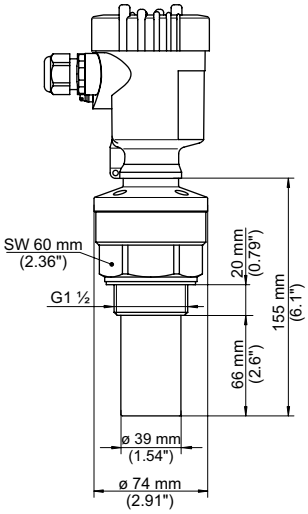
**Application area**
The VEGASON 61 is an ultrasonic sensor for continuous level measurement of liquids or bulk solids. Typical applications are the measurement of liquids in storage tanks or open basins. The sensor is also suitable for the detection of bulk solids in small vessels or open containers. The non-contact measuring principle is independent of product features and allows a setup without medium.

**Your benefit**
- Maintenance-free operation through non-contact measuring principle
- Reliable measurement independent of product features
- Price-favourable solution for simple applications

**Technical data**

| | |
|---|---|
| Measuring range: | in liquids: 0.25 … 5 m<br>in bulk solids: 0.25 … 2 m |
| Process fitting: | thread G1½, 1½ NPT |
| Process temperature: | -40 … +80 °C |
| Process pressure: | -0.2 …+2 bar (-20 … +200 kPa) |
| Accuracy: | ±10 mm |
| SIL qualification: | optionally up to SIL2 |

Delivery time: SPEED




Beam angle 11°

Instrument documentation and drawings:
**www.vega.com/downloads**

Mounting accessories, welded sockets and housing overview:
**Chapter Accessory**

**Approval**

- **XX** without
- **XM** Ship approval
- **CX** ATEX II 1G, 1/2G, 2G Ex ia IIC T6
- **CM** ATEX II 1G, 1/2G, 2G Ex ia IIC T6 + Ship approval
- **CI** IEC Ex ia IIC T6

**Version / Process temperature**

- **A** Seal EPDM / -40...+80°C
- **B** Seal FKM (Viton) / -20...+80°C

**Process fitting / Material**

- **G** Thread G1½ PN2, DIN3852-A-B / PVDF
- **N** Thread 1½NPT PN2, ASME B1.20.1 / PVDF
- **A** Clamp 2" DN50 PN2 (ø64mm) DIN32676, ISO2852 / 316L
- **B** Clamp 3" DN65 PN2 (ø91mm) DIN32676, ISO2852 / 316L
- **C** Clamp 3½" DN80 PN2 (ø106mm) DIN32676, ISO2852 / 316L
- **D** Clamp 4" DN100 PN2 (ø119mm) DIN32676, ISO2852 / 316L
- **J** Slotted nut 2", DN50 PN2, DIN11851 / 316L
- **K** Slotted nut 3", PN2, DIN11851 / 316L
- **L** Slotted nut DN80 PN2, DIN11851 / 316L
- **M** Slotted nut 4", DN100 PN2, DIN11851 / 316L

**Electronics**

- **H** Two-wire 4...20mA/HART®
- **V** Four wire 4...20mA/HART®
- **P** Two-wire Profibus PA
- **F** Two-wire Foundation Fieldbus

**Housing / Protection**

- **K** Plastic single chamber / IP66/IP67
- **R** Plastic double chamber / IP66/IP67
- **A** Aluminum single chamber / IP66/IP68 (0.2 bar)
- **D** Aluminium double chamber / IP66/IP68 (0.2bar)
- **8** Stainless steel single chamber (electropolished) / IP66/IP68 (0.2 bar)
- **W** Stainless steel double chamber / IP66/IP68 (0.2 bar)

**Cable entry / Plug connection**

- **M** M20x1.5 / without
- **N** ½NPT / without

**Display/adjustment module PLICSCOM**

- **X** without
- **A** Mounted

**Additional equipment**

- **X** Without

| SN61. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|

# VEGASON 62

**Ultrasonic sensor for continuous level measurement**

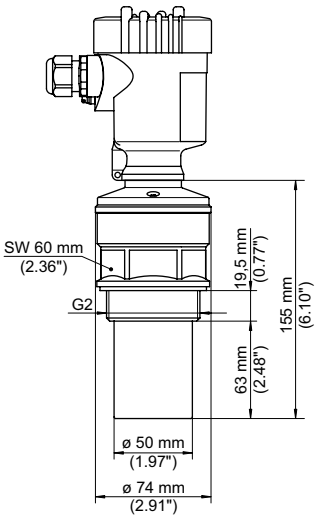
**Application area**
The VEGASON 62 is an ultrasonic sensor for continuous level measurement of liquids and bulk solids. Typical applications are the measurement of liquids in storage vessels or open basins. The sensor is also suitable for the detection of bulk solids in small vessels or silos. Application areas can be found in all industries. The non-contact measuring principle is unaffected by product features and allows a setup without medium.

**Your benefit**
- Maintenance-free operation through non-contact measuring principle
- Reliable measurement independent of product features
- Price-favourable solution for simple applications

**Technical data**

| | |
|---|---|
| Measuring range: | in liquids: 0.4 … 8 m<br>in bulk solids: 0.4 … 3.5 m |
| Process fitting: | thread G2, 2 NPT |
| Process temperature: | -40 … +80 °C |
| Process pressure: | -0.2 …+2 bar (-20 … +200 kPa) |
| Accuracy: | ±10 mm |
| SIL qualification: | optionally up to SIL2 |

Delivery time: SPEED




Beam angle 11°

Instrument documentation and drawings:
**www.vega.com/downloads**

Mounting accessories, welded sockets and housing overview:
**Chapter Accessory**

**Approval**

**XX** without

**XM** Ship approval

**CX** ATEX II 1G, 1/2G, 2G Ex ia IIC T6

**CM** ATEX II 1G, 1/2G, 2G Ex ia IIC T6 + Ship approval

**CI** IEC Ex ia IIC T6

**Version / Process temperature**

**A** Seal EPDM / -40...+80°C

**B** Seal FKM (Viton) / -20...+80°C

**Process fitting / Material**

**G** Thread G2 PN2, DIN3852-A-B / PVDF

**N** Thread 2NPT PN2, ASME B1.20.1 / PVDF

**Electronics**

**H** Two-wire 4...20mA/HART®

**V** Four wire 4...20mA/HART®

**P** Two-wire Profibus PA

**F** Two-wire Foundation Fieldbus

**Housing / Protection**

**K** Plastic single chamber / IP66/IP67

**R** Plastic double chamber / IP66/IP67

**A** Aluminum single chamber / IP66/IP68 (0.2 bar)

**D** Aluminium double chamber / IP66/IP68 (0.2bar)

**8** Stainless steel single chamber (electropolished) / IP66/IP68 (0.2 bar)

**W** Stainless steel double chamber / IP66/IP68 (0.2 bar)

**Cable entry / Plug connection**

**M** M20x1.5 / without

**N** ½NPT / without

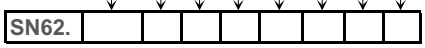
**Display/adjustment module PLICSCOM**

**X** without

**A** Mounted

**Additional equipment**

**X** Without



# VEGASON 63

**Ultrasonic sensor for continuous level measurement**

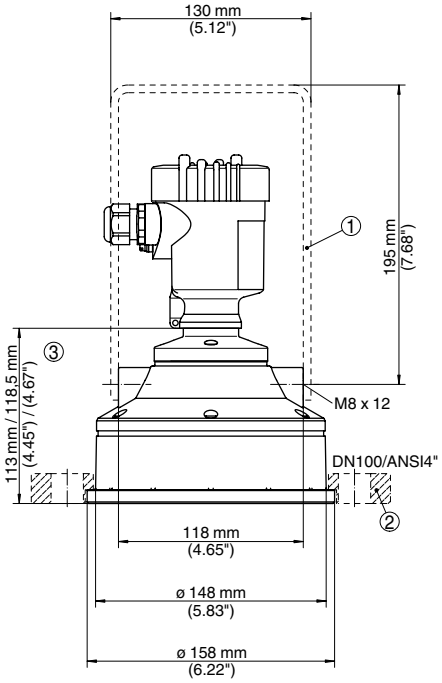
**Application area**
The VEGASON 63 is an ultrasonic sensor for continuous level measurement of liquids and bulk solids. Typical applications are the measurement of liquids in storage tanks and open basins. The sensor is suitable for continuous level measurement of bulk solids in small up to average-size vessels. The non-contact measuring principle is independent of product features and allows a setup without medium.

**Your benefit**
- Maintenance-free operation through non-contact measuring principle
- Reliable measurement, independent of product features
- Proven measurement technology for standard applications

**Technical data**

| | |
|---|---|
| Measuring range: | in liquids: 0.6 … 15 m<br>in bulk solids: 0.6 … 7 m |
| Process fitting: | compression flange DN 100<br>mounting strap |
| Process temperature: | -40 … +80 °C |
| Process pressure: | -0.2 …+1 bar (-20 … +100 kPa) |
| Accuracy: | ±10 mm |
| SIL qualification: | optionally up to SIL2 |

Delivery time: SPEED




① Mounting strap
② Compression flange
③ Dimension for Aluminium housing/adapter

Beam angle 6°

Instrument documentation and drawings:
**www.vega.com/downloads**

Mounting accessories, welded sockets and housing overview:
**Chapter Accessory**

**Approval**

**XX** without

**XM** Ship approval

**Version / Process temperature**

**A** Seal EPDM / -40...+80°C

**Process fitting / Material**

**X** without

**A** Compression flange suitable for flange DN100 PN16 / PPH

**B** Compression flange suitable for flange DN100 PN16 / 316L

**C** Mounting strap / Stainless steel (1.4301)

**D** Compression flange suitable for flange 4" 150lb, ASME / PPH

**E** Compression flange suitable for flange 4" 150lb, ASME / 316L

**F** Compression flange suitable for flange DN100 10K, JIS / PPH

**G** Compression flange suitable for flange DN100 10K, JIS / 316L

**Electronics**

**H** Two-wire 4...20mA/HART®

**V** Four wire 4...20mA/HART®

**P** Two-wire Profibus PA

**F** Two-wire Foundation Fieldbus

**Housing / Protection**

**K** Plastic single chamber / IP66/IP67

**R** Plastic double chamber / IP66/IP67

**A** Aluminum single chamber / IP66/IP68 (0.2 bar)

**D** Aluminium double chamber / IP66/IP68 (0.2bar)

**8** Stainless steel single chamber (electropolished) / IP66/IP68 (0.2 bar)

**Cable entry / Plug connection**

**M** M20x1.5 / without

**N** ½NPT / without

**Display/adjustment module PLICSCOM**

**X** without

**A** Mounted

**Additional equipment**

**X** Without