



Level measurement

Ultrasonic

Overview	42
VEGASON series 60	44

VEGASON

Non-contact measurement with ultrasonics

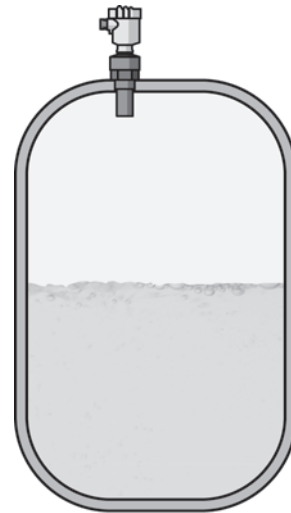


Measuring principle

Short ultrasonic impulses in the range of 10 to 70 kHz are emitted by the transducer to the measured product, reflected by the product surface and received again by the transducer. The pulses spread with sound velocity. The time from emission to reception of the signals is proportional to the level in the vessel. The proven ECHOFOX signal processing filters out the correct level echo from a number of false reflections. An adjustment with empty and full vessel is not necessary.

Applications in liquids

Sensors with frequencies between 30 and 70 kHz are used for these applications. They operate independent of product properties and are ideal for water/waste water applications and the measurement of slightly corrosive acids and lyes. Also applications in gas-Ex areas can be equipped with these sensors.



Applications in bulk solids

Sensors with frequencies between 10 to 30 kHz are used for measurement in bulk solids. The lower switching frequency enables a considerably better penetration of dusty atmosphere. An adjustment with medium is not necessary. For applications in dust-Ex areas, approved sensors are available.



Overview

VEGASON 61



VEGASON 62



VEGASON 63



Applications:	liquids and bulk solids in all industries, especially in the water and sewage water treatment	liquids and bulk solids in all industries, especially in the water and sewage water treatment	liquids and bulk solids in all industries
Measuring range:	liquids: 0.25 ... 5 m bulk solids: 0.25 ... 2 m	liquids: 0.4 ... 8 m bulk solids: 0.4 ... 3.5 m	liquids: 0.6 ... 15 m bulk solids: 0.6 ... 7 m
Process fitting:	G1½ A of PVDF	G2 A of PVDF	compression flange or mounting strap
Process temperature:	-40 ... +80 °C	-40 ... +80 °C	-40 ... +80 °C
Process pressure:	-0.2 ... +2 bar (-20 ... +200 kPa)	-0.2 ... +2 bar (-20 ... +200 kPa)	-0.2 ... +1 bar (-20 ... +100 kPa)

VEGASON 64



VEGASON 65



Applications:	bulk solids	bulk solids
Measuring range:	liquids: 1 ... 25 m bulk solids: 1 ... 15 m	liquids: 0.8 ... 45 m bulk solids: 0.8 ... 25 m
Process fitting:	flange with optional swivelling holder	flange with optional swivelling holder
Process temperature:	-40 ... +80 °C	-40 ... +80 °C
Process pressure:	-0.2 ... +0.5 bar (-20 ... +50 kPa)	-0.2 ... +0.5 bar (-20 ... +50 kPa)

VEGASON 61



Ultrasonic sensor for continuous level measurement

Application area

VEGASON 61 is suitable for measurement of liquids in storage tanks or open basins as well as flow measurements in open flumes. The sensor is also suitable for detection of bulk solids.

Advantages

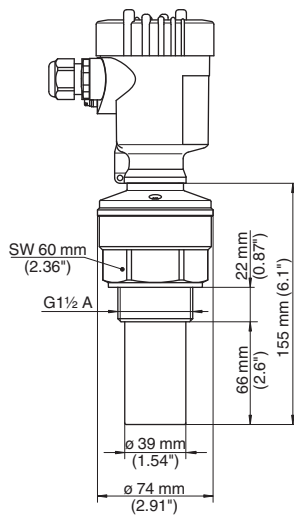
- Non-contact measurement
- Unaffected by product properties
- Adjustment without medium
- Integrated temperature sensor for correction of the sound running time

Measuring range:

- in liquids up to 5 m
- in bulk solids up to 2 m

Function

Short ultrasonic pulses are emitted by the transducer in the direction of the measured product, reflected by its surface and received back by the transducer. The elapsed time from emission to reception of the signals is proportional to the level in the vessel.



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

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

You will find mounting accessory and welded sockets in chapter "Information"

basic price:

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

Version / Process temperature

- A Seal EPDM -40...80°C

Process fitting / Material

- G Thread G1½A / PVDF
- N Thread 1½"NPT / PVDF

Electronics

- H Tw o-w ire 4...20mA/HART®
- V Four-w ire 4...20mA/HART®
- P Profibus PA
- F Foundation Fieldbus

Housing / Protection

- K Plastic / IP66/IP67
- A Aluminium / IP66/IP68 (0.2bar)
- D Aluminium double chamber / IP66/IP68 (0.2bar)
- 8 StSt (electropolished) 316L / IP66/IP68 (0.2bar)
- R Plastic double chamber / IP66/IP67

Cable entry / Plug connection

- M M20x1.5 / w ithout
- N ½NPT / w ithout

Indicating/adjustment module (PLICSCOM)

- X Without
- A Top mounted

Additional equipment

- X w ithout

SN61.									
-------	--	--	--	--	--	--	--	--	--



VEGASON 62



Ultrasonic sensor for continuous level measurement

Application area

VEGASON 62 is suitable for measurement of liquids and for use in small bulk solids vessels. Typical applications are the measurement of liquids in average-size storage vessels or open basins. The sensor is also suitable for detection of bulk solids.

Advantages

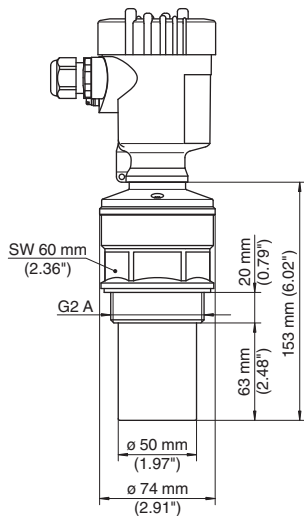
Non-contact measurement
 Unaffected by product properties
 Adjustment without medium
 Integrated temperature sensor for correction of the sound running time

Measuring range:

- in liquids up to 8 m
- in bulk solids up to 3.5 m

Function

Short ultrasonic pulses are emitted by the transducer in the direction of the measured product, reflected by its surface and received back by the transducer. The elapsed time from emission to reception of the signals is proportional to the level in the vessel.



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

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

You will find mounting accessory and welded sockets in chapter "Information"

basic price:

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

Version / Process temperature

- A** Seal EPDM/ -40...80°C

Process fitting / Material

- G** Thread G2A / PVDF
- N** Thread 2"NPT / PVDF

Electronics

- H** Tw o-w ire 4...20mA/HART®
- V** Four-w ire 4...20mA/HART®
- P** Profibus PA
- F** Foundation Fieldbus

Housing / Protection

- K** Plastic / IP66/IP67
- A** Aluminium / IP66/IP68 (0.2bar)
- D** Aluminium double chamber / IP66/IP68 (0.2bar)
- 8** StSt (electropolished) 316L / IP66/IP68 (0.2bar)
- R** Plastic double chamber / IP66/IP67

Cable entry / Plug connection

- M** M20x1.5 / w ithout
- N** ½NPT / w ithout

Indicating/adjustment module (PLICSCOM)

- X** Without
- A** Top mounted

Additional equipment

- X** w ithout

SN62.										
-------	--	--	--	--	--	--	--	--	--	--



VEGASON 63



Ultrasonic sensor for continuous level measurement

Application area

VEGASON 63 is suitable for measurement of liquids and bulk solids in all areas of industry. Typical applications are the measurement of liquids in average-size storage vessels or open basins. The sensor is also suitable for detection of bulk solids. The max. measuring range depends on the dust generation and the bulk solids consistency.

Advantages

Non-contact measurement

Unaffected by product properties

Adjustment without medium

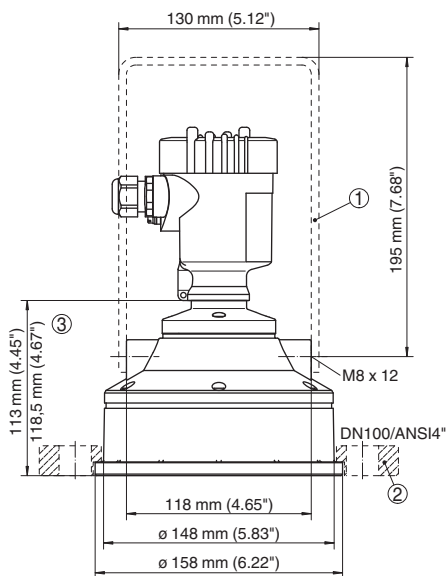
Integrated temperature sensor for correction of the sound running time

Measuring range:

- in liquids up to 15 m
- in bulk solids up to 7 m

Function

Short ultrasonic pulses are emitted by the transducer in the direction of the measured product, reflected by its surface and received back by the transducer. The elapsed time from emission to reception of the signals is proportional to the level in the vessel.



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

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

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

You will find mounting accessory and welded sockets in chapter "Information"

basic price:

Approval

- XX** without
- XM** Ship approval

Version / Process temperature

- A** Seal EPDM/ -40...80°C

Process fitting / Material

- X** without compression flange
- C** Mounting strap / 1.4301
- B** Compression flange DN100PN16 / 316L
- A** Compression flange DN100PN16 / PPH
- E** Compression flange ANSI 4" 150psi / 316L
- D** Compression flange ANSI 4" 150psi / PPH

Electronics

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

Housing / Protection

- K** Plastic / IP66/IP67
- A** Aluminium / IP66/IP68 (0.2bar)
- D** Aluminium double chamber / IP66/IP68 (0.2bar)
- 8** StSt (electropolished) 316L / IP66/IP68 (0.2bar)
- R** Plastic double chamber / IP66/IP67

Cable entry / Plug connection

- M** M20x1.5 / without
- N** 1/2 NPT / without

Indicating/adjustment module (PLICSCOM)

- X** Without
- A** Top mounted

Additional equipment

- X** without

SN63.										
-------	--	--	--	--	--	--	--	--	--	--



VEGASON 64



Ultrasonic sensor for continuous level measurement

Application area

VEGASON 64 is suitable for measurement of bulk solids, but also in liquids in all areas of industry. Typical applications are the measurement of bulk solids in silos and bunkers. The max. measuring range depends on the dust generation and the bulk solids consistency.

Advantages

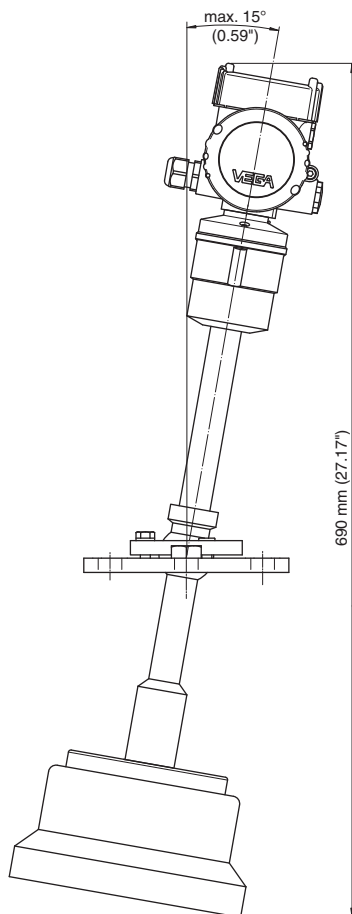
Non-contact measurement
 Unaffected by product properties
 Adjustment without medium
 Integrated temperature sensor for correction of the sound running time

Measuring range:

- in liquids up to 25 m
- in bulk solids up to 15 m

Function

Short ultrasonic pulses are emitted by the transducer in the direction of the measured product, reflected by its surface and received back by the transducer. The elapsed time from emission to reception of the signals is proportional to the level in the vessel.



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

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

You will find mounting accessory and welded sockets in chapter "Information"

basic price:

Approval

- XX** without
- GX** ATEX II 1/2 D IP66 T

Version / Process temperature

- A** Compact in flange version (version A) / -40...80°C
- B** Compact with swivelling holder (version B)/ -40...80°C
- C** Separate with swivelling holder (version C)/ -40...80°C
- D** Separate with thread (version D) / -40...80°C

Process fitting / Material

- GS** Thread G1A / galvanized steel¹⁾
- AS** Swivelling holder with flange DN50/2" / galvanized St²⁾
- BS** Swivelling holder with flange DN80/3" / galvanized St²⁾
- EA** Flange DN200 / Aluminium³⁾
- EP** Flange DN200 / PP³⁾
- LA** Flange 8" / Aluminium³⁾
- LP** Flange 8" / PP³⁾

Electronics

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

Housing / Protection

- D** Aluminium double chamber / IP66/IP67
- R** Plastic double chamber / IP66/IP67

Cable entry / Plug connection

- M** M20x1.5 / without
- N** 1/2 NPT / without

Indicating/adjustment module (PLICSCOM)

- X** Without
- A** Top mounted

Additional equipment

- X** without



¹⁾ Only for Version / Process temperature "D"
²⁾ Only for Version / Process temperature "B" and "C"
³⁾ Only for Version / Process temperature "A"

Connection cable in m

Connection cable > 5 m f. version C or D; per metre > 5 m



VEGASON 65



Ultrasonic sensor for continuous level measurement

Application area

VEGASON 65 is suitable for measurement of bulk solids, but also in liquids in all areas of industry. Typical applications are the measurement of bulk solids in silos and bunkers. The max. measuring range depends on the dust generation and the bulk solids consistency.

Advantages

Non-contact measurement

Unaffected by product properties

Adjustment without medium

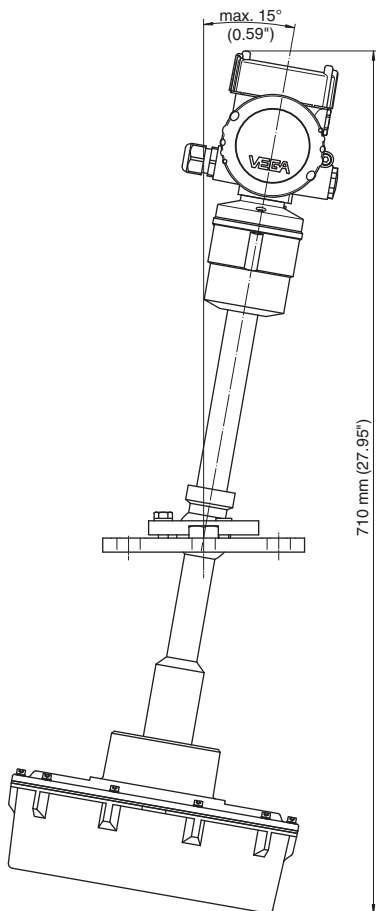
Integrated temperature sensor for correction of the sound running time

Measuring range:

- in liquids up to 45 m
- in bulk solids up to 25 m

Function

Short ultrasonic pulses are emitted by the transducer in the direction of the measured product, reflected by its surface and received back by the transducer. The elapsed time from emission to reception of the signals is proportional to the level in the vessel.



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

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

You will find mounting accessory and welded sockets in chapter "Information"

basic price:

Approval

- XX without
- GX ATEX II 1/2 D IP66 T

Version / Process temperature

- A Compact in flange version (version A) / -40...80°C
- B Compact with swivelling holder (version B) / -40...80°C
- C Separate with swivelling holder (version C) / -40...80°C
- D Separate with thread (version D) / -40...80°C

Process fitting / Material

- GS Thread G1A / galvanized steel¹⁾
- AS Swivelling holder with flange DN50/2" / galvanized St²⁾
- BS Swivelling holder with flange DN80/3" / galvanized St²⁾
- FA Flange DN250 / Aluminium³⁾
- FP Flange DN250 / PP³⁾
- MP Flange 10" / PP³⁾

Electronics

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

Housing / Protection

- D Aluminium double chamber / IP66/IP67
- R Plastic double chamber / IP66/IP67

Cable entry / Plug connection

- M M20x1.5 / without
- N 1/2NPT / without

Indicating/adjustment module (PLICSCOM)

- X without
- A top mounted

Additional equipment

- X without



¹⁾ Only for Version / Process temperature "D"
²⁾ Only for Version / Process temperature "B" and "C"
³⁾ Only for Version / Process temperature "A"

Connection cable in m

Connection cable > 5 m f. version C or D; per metre > 5 m



