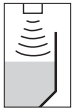


## Level measurement - Ultrasonic

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## VEGASON:

### Non-contact measurement of liquids and solids with ultrasonic waves



#### Measuring principle

Short ultrasonic pulses between 10 kHz and 70 kHz are emitted by the transducer to the measured product, reflected by the product surface and received again by the transducer. They spread with sound velocity and the time from emission to reception of the signal is proportional to the level in the vessel.

Latest microcomputer technology and proven ECHOFOX software detect the level echo reliably from a number of false reflections and measure it precisely.

By simply entering the vessel dimensions, a level-proportional signal can be displayed. An adjustment with emptied and filled vessel is no longer necessary!

#### Wide application range

With different emitting frequencies, levels can be measured in a measuring range between 5 m and 70 m. Optional swivelling holders enable an ideal orientation of the sensors in the solid range.

#### Unaffected by product properties

Different product compositions or complete product changes do not influence the measurement result. A fresh adjustment is not necessary.



**Overview**

**VEGASON 61**



**VEGASON 62**



**VEGASON 63**



Applications:

liquids and solids in virtually all industries, especially in the water and sewage water treatment

liquids and solids in virtually all industries, especially in the water and sewage water treatment

liquids und solids in virtually all industries

Measuring range:

liquids: 0.25 ... 5 m  
solids: 0.25 ... 2 m

liquids: 0.4 ... 8 m  
solids: 0.4 ... 3.5 m

liquids: 0.6 ... 15 m  
solids: 0.6 ... 7 m

Process fitting:

G1½A of PVDF

G2A 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**



**VEGASON 66**



Applications:

solids

solids

solids

Measuring range:

liquids: 1 ... 25 m  
solids: 1 ... 15 m

liquids: 0.8 ... 45 m  
solids: 0.8 ... 25 m

liquids: 1.4 ... 70 m  
solids: 1.4 ... 45 m

Process fitting:

flange with optional swivelling holder

flange with optional swivelling holder

flange with optional swivelling holder

Process temperature:

-40...80°C

-40...80°C

-40...150°C

Process pressure:

-0.2...0.5 bar (-20...50 kPa)

-0.2...0.5 bar (-20...50 kPa)

-0.2...2 bar (-20...200 kPa)









## VEGASON 65

### Ultrasonic sensor for continuous level measurement

Especially suitable for measurement of solids with optional swivelling holder for optimum adaptation to the vessel geometry and material cone

- transducer of UP with diaphragm of Al and PE foam rubber coating as well as integrated temperature sensor for correction of the running time
- sensor in compact version or with separate transducer
- accuracy +/- 10mm
- ECHOFOX signal processing with Fuzzy-Logic
- adjustment with PLICSCOM, HART handheld or PC
- instrument from the plics® family



### Measuring range:

- Liquids : 0.8...45 m
- Solids : 0.8...25 m



### 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 connection/Material

- FP** Flange DN250 / PP<sup>1)</sup> .....
- FA** Flange DN250 / Aluminium<sup>1)</sup> .....
- MP** Flange 10" / PP<sup>1)</sup> .....
- AS** Swivelling holder w. flange DN50/2" / galv. St<sup>2)</sup> .....
- BS** Swivelling holder w. flange DN80/3" / galv. St<sup>2)</sup> .....
- GS** Thread G1A / galvanized steel<sup>3)</sup> .....

### Electronics

- V** Four wire 20...72VDC, 20...250VAC/4...20mA HART® .....
- P** Profibus PA .....
- F** Foundation Fieldbus .....

### Housing/Protection

- D** Aluminium double chamber/IP66/IP67 .....

### Cable entry/Plug connection

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

### Indicating-adjustment module (PLICSCOM)

- X** without .....
- A** top mounted .....

SN65. | | | | | | | |

<sup>1)</sup> Only for version "A"

<sup>2)</sup> Only for version "B" and "C"

<sup>3)</sup> Only for version "D"

### Connection cable in m

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

- Further options on request
- Electronics "P" and "F" with separate external voltage 20...72VDC, 20...250VAC



## VEGASON 71 - 75

**Ultrasonic sensors with processing electronics for continuous level measurement of liquids and solids**

- non-contact and maintenance-free
- adjustment without vessel filling and emptying
- for level, difference or flow measurement
- relay output and pulse counter as option
- transducer and electronics connected with coax cable

Process fitting	: G1A
Transducer housing	: PVDF
Process temperature	: -20...80°C
Process pressure	: up to 1 bar (100 kPa)
Protection transducer	: IP68



### Instrument type

<b>71-D</b>	VEGASON71-D (meas. range 0.4...4m flow measurement)	.....
<b>72-1</b>	VEGASON72-1 (meas. range 0.5...5m 1 channel)	.....
<b>72-2</b>	VEGASON72-2 (meas. range 0.5...5m 2 channels)	.....
<b>73-1</b>	VEGASON73-1 (meas. range 0.8...10m 1 channel)	.....
<b>73-2</b>	VEGASON73-2 (meas. range 0.8...10m 2 channels)	.....
<b>74-1</b>	VEGASON74-1 (meas. range 0.8...20m 1 channel)	.....
<b>74-2</b>	VEGASON74-2 (meas. range 0.8...20m 2 channels)	.....
<b>75-1</b>	VEGASON75-1 (meas. range 1.0...30m 1 channel)	.....
<b>75-2</b>	VEGASON75-2 (meas. range 1.0...30m 2 channels)	.....

### Approval

**X** without .....

### Supply voltage

**M** 16...42VAC/16...60VDC .....

**L** 90...250VAC/120...250VDC .....

### Material transducer

**D** PVDF .....

### Current output

**X** without .....

**L** 4...20mA, galvanically separated .....

**J** 4...20mA, individually galvanically separated .....

### Relay output

**X** without .....

**1** 1 module, 2 relays(1 count.rel., 1 relay with type ..D) .....

**2** 2 modules, 4 relays(1 count. rel., 3 relays w.type ..D) .....

### Integrated pulse counter

**C** with (on VEGASON ..D and relay output 1 or 2) .....

**X** without .....

SON

### Cable measurement loop 1 in m

deviating from standard length (5 m) per m

### Cable measurement loop 2 in m

deviating from standard length (5 m) per m

### Swivelling holder VEGASON 70

Swivelling holder for transducer SW 71...75 suitable for counter flange  
DIN - DN150 PN16, ANSI - 6" 150psi

**Holder material**

- V StSt 316Ti .....
- S Galvanized steel .....

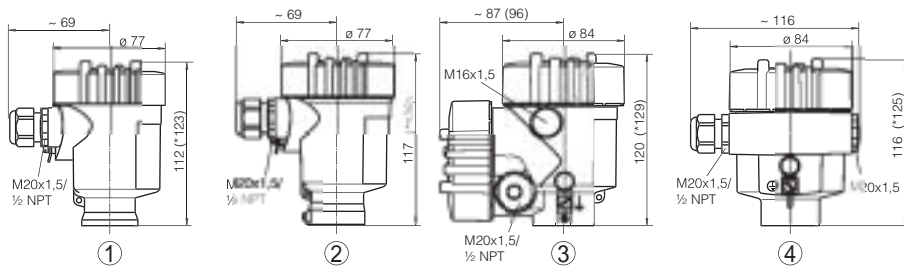


**SONHALT.**

- Mounting accessory see chapter "Accessory"

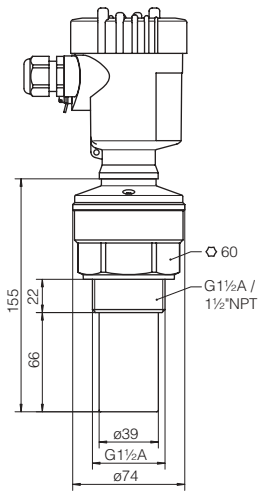


## Housing

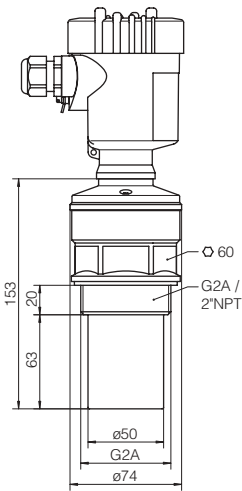


- 1 Plastic housing (\* dimension with integrated PLICSCOM)
- 2 Stainless steel housing (\* dimension with integrated PLICSCOM)
- 3 Aluminium double chamber housing (\* dimension with integrated PLICSCOM)
- 4 Aluminium housing (\* dimension with integrated PLICSCOM)

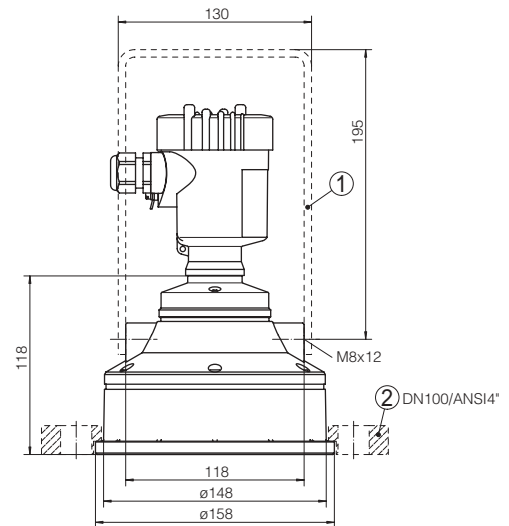
## VEGASON 61



## VEGASON 62

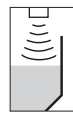
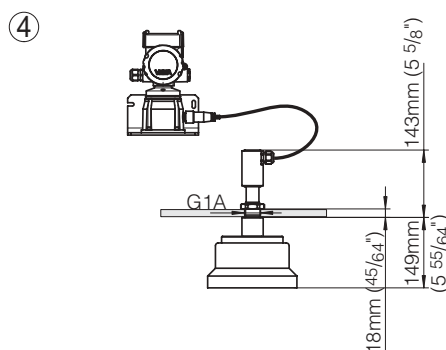
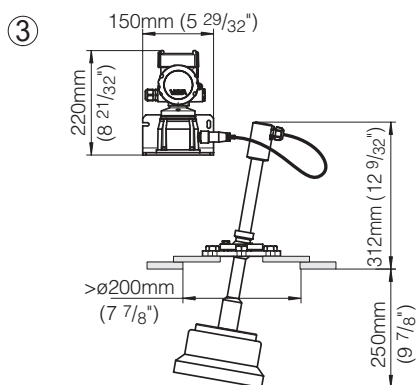
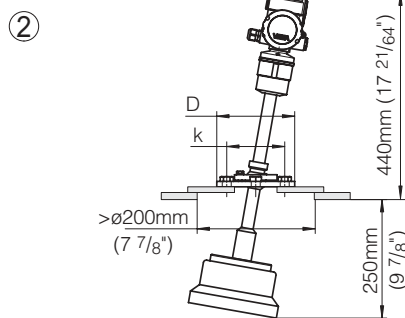
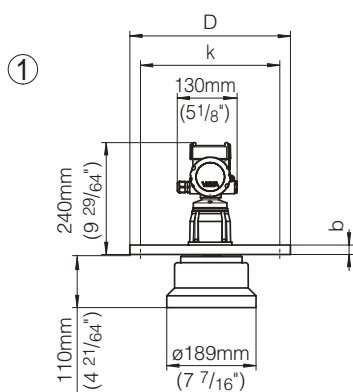


## VEGASON 63



- 1 Mounting strap
- 2 Compression flange

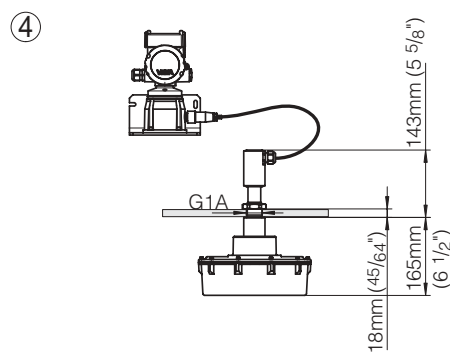
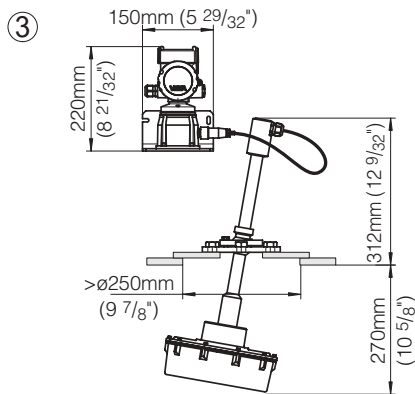
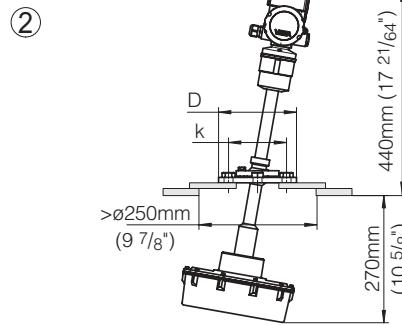
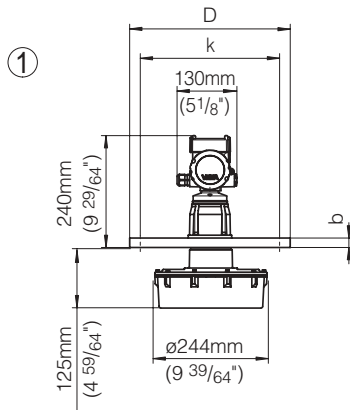
**VEGASON 64**



	D	b	k	d		D	b	k	d
DN 50 PN16/40	165mm	20mm	125mm	4x ø18mm	2" 150lb	6"	3/4"	4 3/4"	4x ø3/4"
DN 80 PN16/40	200mm	24mm	160mm	8x ø18mm	3" 150lb	7 1/2"	15/16"	6"	4x ø3/4"
DN 200 PN16	340mm	24mm	295mm	12x ø22mm	8" 150lb	13 1/2"	1 1/8"	11 3/4"	8x ø7/8"
DN 250 PN16	405mm	26mm	355mm	12x ø26mm	10" 150lb	16"	1 3/16"	14 1/4"	12x ø 1"

- 1 Version A
- 2 Version B
- 3 Version C
- 4 Version D
- d Diameter and number of holes in the flange

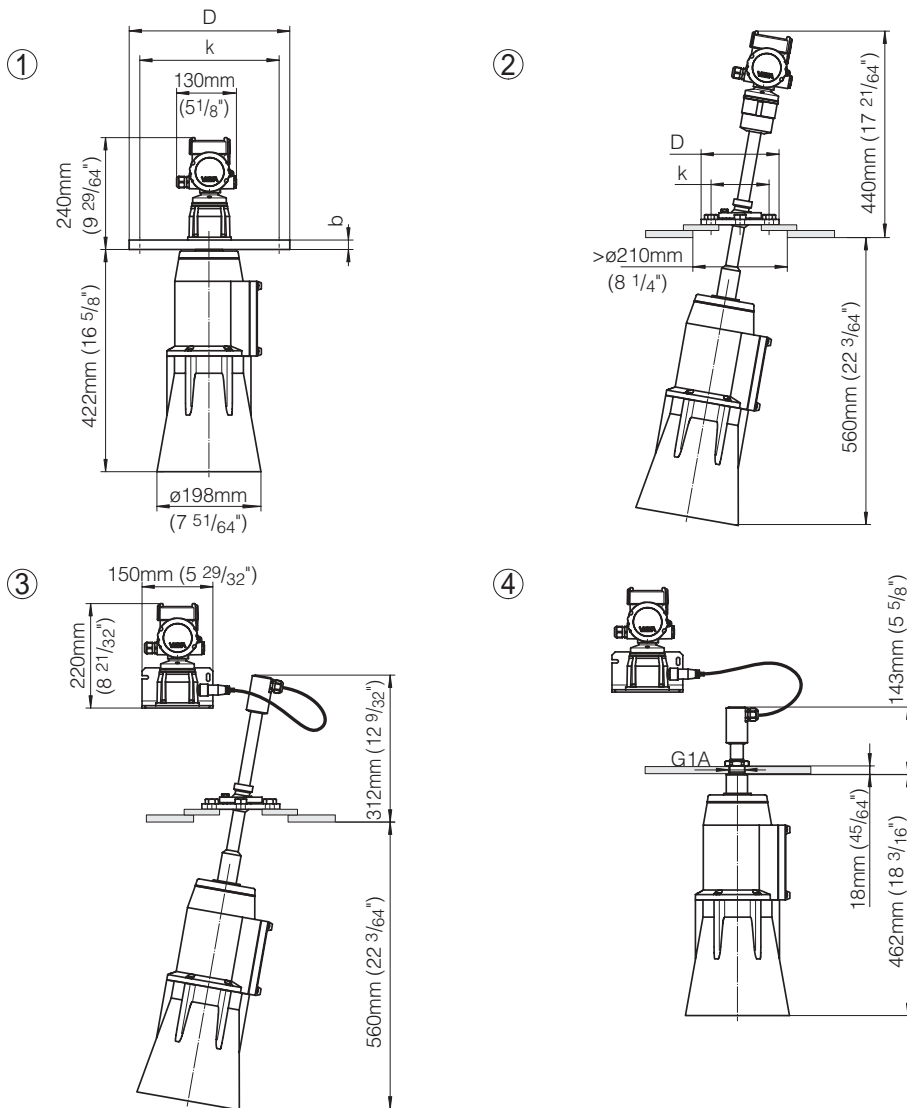
## VEGASON 65



	D	b	k	d		D	b	k	d
DN 50 PN16/40	165mm	20mm	125mm	4x ø18mm	2" 150lb	6"	3/4"	4 3/4"	4x ø3/4"
DN 80 PN16/40	200mm	24mm	160mm	8x ø18mm	3" 150lb	7 1/2"	15/16"	6"	4x ø3/4"
DN 200 PN16	340mm	24mm	295mm	12x ø22mm	8" 150lb	13 1/2"	1 1/8"	11 3/4"	8x ø7/8"
DN 250 PN16	405mm	26mm	355mm	12x ø26mm	10" 150lb	16"	1 3/16"	14 1/4"	12x ø 1"

- 1 Version A
- 2 Version B
- 3 Version C
- 4 Version D
- d Diameter and number of holes in the flange

**VEGASON 66**



	D	b	k	d		D	b	k	d
DN 50 PN16/40	165mm	20mm	125mm	4x ø18mm	2" 150lb	6"	3/4"	4 3/4"	4x ø3/4"
DN 80 PN16/40	200mm	24mm	160mm	8x ø18mm	3" 150lb	7 1/2"	15/16"	6"	4x ø3/4"
DN 200 PN16	340mm	24mm	295mm	12x ø22mm	8" 150lb	13 1/2"	1 1/8"	11 3/4"	8x ø7/8"
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- 1 Version A
- 2 Version B
- 3 Version C
- 4 Version D
- d Diameter and number of holes in the flange

**VEGASON 72-1 ... 75-1**  
**VEGASON 72-2 ... 75-2**  
**VEGASON 71D**

