

External chamber

For level measurement with inserted sensors

Model BZG

WIKA data sheet BZG

Applications

- Level detection for almost all liquid media
- Individual design and corrosion-resistant materials make the products suitable for a broad range of applications
- Chemical industry, petrochemical industry, oil and natural gas extraction (on- and offshore), shipbuilding, machine building, power generating equipment, power plants

Special features

- Process- and procedure-specific production
- Operating limits:
 - Operating temperature: $T = -196 \dots +450 \text{ }^\circ\text{C}$
 - Operating pressure: $P = \text{Vacuum up to } 400 \text{ bar}$
- Wide variety of different process connections and materials
- Mounting of level sensors and guided wave radars possible as an option

Description

The external chamber model BZG consists of an external chamber vessel that is mounted laterally to a vessel using at least 2 process connections (flange, thread or weld stub). Through this type of arrangement, the level in the external chamber corresponds to the level in the vessel.

The level is measured by a measuring instrument inserted additionally in the external chamber, for example model FLR or FLS, or by a guided wave radar.



External chamber, model BZG

Model overview

Model	Description	Materials	Max. operating pressure in bar	Max. operating temperature in °C
BZG-S	Standard version	Stainless steel 304/304L	64 bar	-196 ... +450 °C
		Stainless steel 316/316L	64 bar	-196 ... +450 °C
BZG-H	High-pressure version	Stainless steel 316/316L	400 bar	-196 ... +450 °C
BZG-X	Steel version	A105/A106 Gr. B	255 bar	-29 ... +400 °C

Other materials on request

Design codes available

- ASME B31.3

PED Approvals

- 250 bar Max.
- DN 100 Max.

Approvals

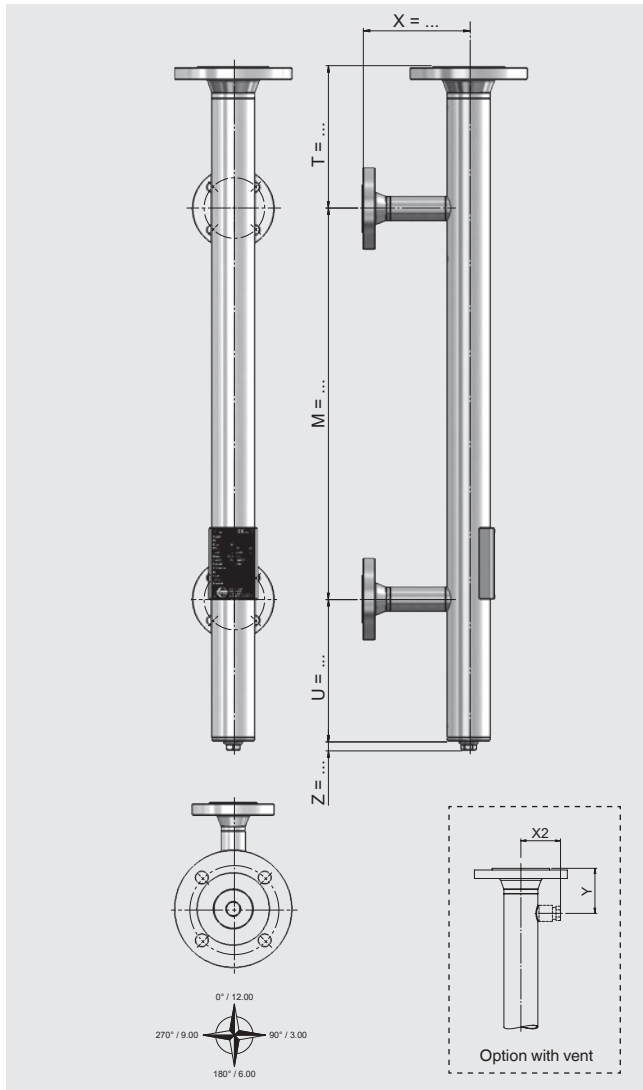
Logo	Description	Country
	EU declaration of conformity Pressure equipment directive (option)	European Union
	EAC Pressure equipment directive No. RU D-DE.MJU62.B.02027	Eurasian Economic Community

Approvals and certificates, see website

External chamber, standard version

Model BZG-S

External chamber and process connections made of stainless steel



Specifications	
Chamber end top	Flange <ul style="list-style-type: none"> ■ DIN EN 1092-1 DN 50 ... DN 100, PN 6 ... PN 63 ■ HG/T 20592 DN 50 ... DN 100, PN 6 ... PN 63 ■ DIN DN 50 ... DN 100, PN 6 ... PN 64 ■ ANSI B 16.5 2" ... 4", class 150 ... 600 ■ HG/T 20615 2" ... 4", class 150 ... 600 ■ Threaded bushing G / NPT 3/4" ... 2"
Chamber end bottom	Flange connection or pipe cap <ul style="list-style-type: none"> ■ Drain plug ■ Drain valve ■ Drain flange Options see page 6
Process connections	2 x lateral (options see page 7) Flange <ul style="list-style-type: none"> ■ DIN EN 1092-1 DN 25 ... DN 100, PN 6 ... PN 63 ■ HG/T 20592 DN 25... DN 100, PN 6 ... PN 63 ■ DIN DN 25 ... DN 100, PN 6 ... PN 64 ■ ANSI B 16.5 1/2" ... 4", class 150 ... 600 ■ HG/T 20615 1"...4", class 150 ... 600 Weld stub 1/2" ... 1" Threaded bushing G / NPT 1/2" ... 1" Threaded nipple G / NPT 1/2" ... 1"
Centre-to-centre distance	≥ 150 ... ≤ 6,000 mm (larger distances on request)
Material	<ul style="list-style-type: none"> ■ Stainless steel 304/304L ■ Stainless steel 316/316L
Max. nominal pressure	64 bar
Temperature range	<ul style="list-style-type: none"> ■ Stainless steel 304/304L -196 ... +450 °C ■ Stainless steel 316/316L

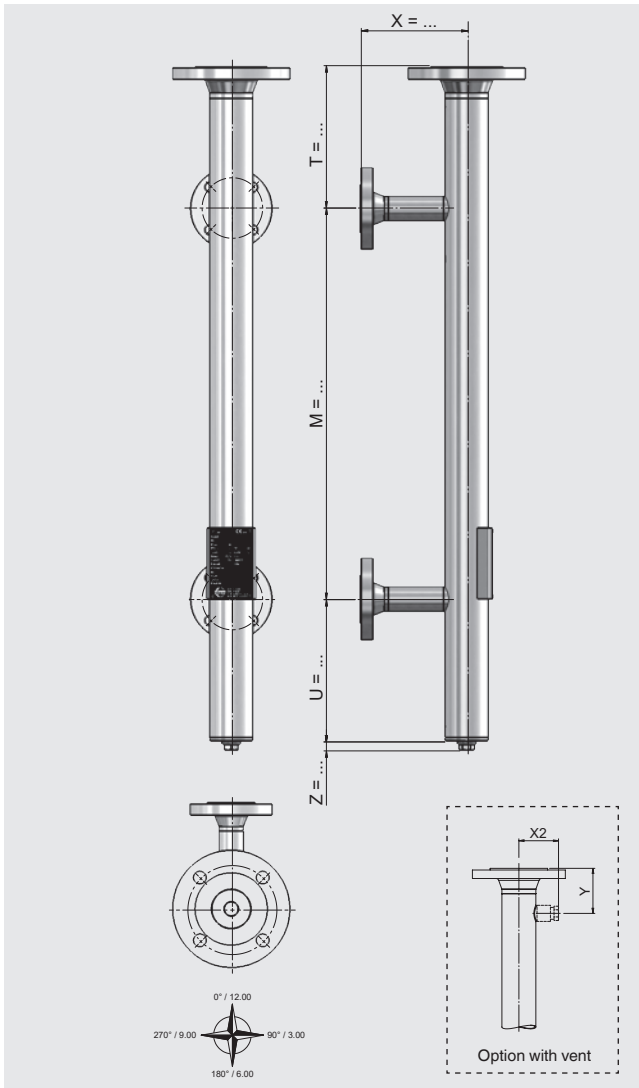
Special versions on request

Chamber dimensions

Dimensions in mm	Stainless steel 304/304L	Stainless steel 316/316L
60.3 x 2	x	x
60.3 x 2.77		x
88.9 x 3		x
114.3 x 3		x

External chamber, high-pressure version Model BZG-H

External chamber and process connections made of stainless steel



Specifications	
Chamber end top	Flange <ul style="list-style-type: none"> ■ DIN EN 1092-1 DN 50 ... DN 100, PN 100 ... PN 400 ■ HG/T 20592 DN 50 ... DN 100, PN100 ... PN 160 ■ DIN DN 50 ... DN 100, PN 100 ... PN 400 ■ ANSI B 16.5 2" ... 4", class 600 ... 2,500 ■ HG/T 20615 2"...4", class 600 ... 2500 ■ Threaded bushing G / NPT 3/4" ... 2"
Chamber end bottom	Flange connection or pipe cap <ul style="list-style-type: none"> ■ Drain plug ■ Drain valve ■ Drain flange Options see page 6
Process connections	2 x lateral (options see page 7) Flange <ul style="list-style-type: none"> ■ DIN EN 1092-1 DN 25 ... DN 100, PN 100 ... PN 400 ■ DIN DN 25 ... DN 100, PN 100 ... PN 400 ■ HG/T 20592 DN 25 ... DN 100, PN 100 ... PN 160 ■ ANSI B 16.5 ½" ... 4", class 600 ... 2,500 ■ HG/T 20615 1"...4", class 600 ... 2500 Weld stub ½" ... 1" Threaded bushing G / NPT ½" ... 1" Threaded nipple G / NPT ½" ... 1"
Centre-to-centre distance	≥ 150 ... ≤ 6,000 mm (larger distances on request)
Material	■ Stainless steel 316/316L
Max. nominal pressure	400 bar

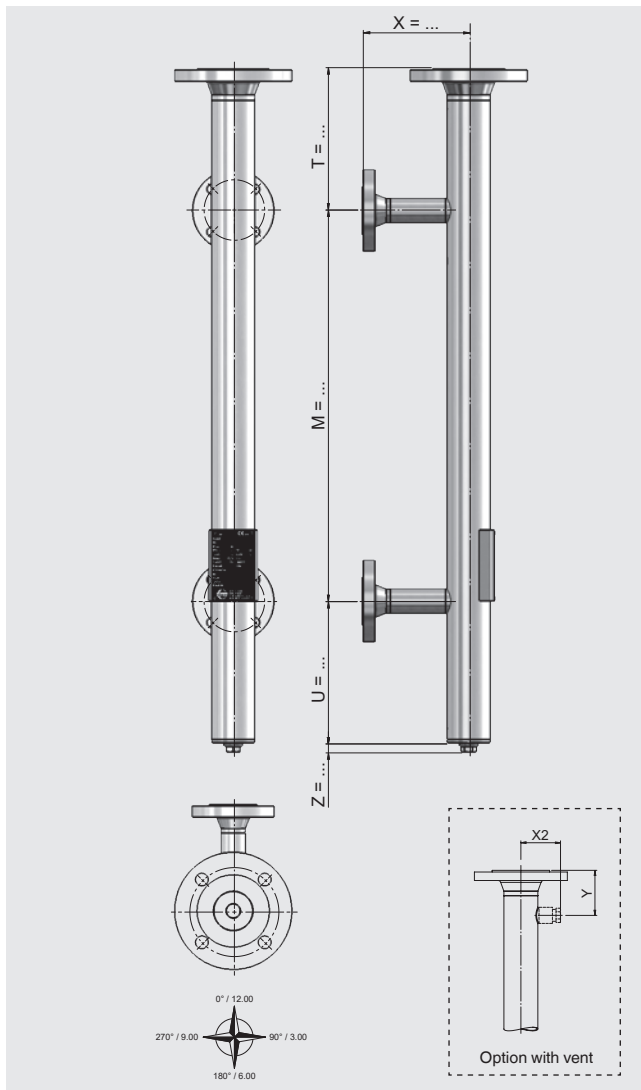
Special versions on request

Chamber dimensions

Dimensions in mm	Stainless steel 316/316L
60.3 x 3.91	x
60.3 x 5.54	x
88.9 x 4.5	x
88.9 x 7.62	x
114.3 x 4	x

External chamber, steel version Model BZG-X

External chamber and process connections made of steel



Specifications

Chamber end top	<p>Flange</p> <ul style="list-style-type: none"> ■ DIN EN 1092-1 DN 50 ... DN 100, PN 16 ... PN 400 ■ HG/T 20592 DN 50 ... DN 100, PN 16 ... PN 400 ■ DIN DN 50 ... DN 100, PN 16 ... PN 400 ■ ANSI B 16.5 2" ... 4", class 150 ... 2,500 ■ HG/T 20615 2"...4", class 150 ... 2500
Chamber end bottom	<p>Flange connection or pipe cap</p> <ul style="list-style-type: none"> ■ Drain plug ■ Drain valve ■ Drain flange <p>Options see page 6</p>
Process connections	<p>2 x lateral (options see page 7)</p> <p>Flange</p> <ul style="list-style-type: none"> ■ DIN EN 1092-1 DN 10 ... DN 50, PN 16 ... PN 400 ■ HG/T 20592 DN 25 ... DN 50, PN 16 ... PN 400 ■ DIN DN 10 ... DN 50, PN 16 ... PN 400 ■ ANSI B 16.5 ½" ... 4", class 150 ... 2,500 ■ HG/T 20615 ½"...4", class 150 ... 2500 <p>Weld stub ½" ... 1" Threaded bushing G / NPT ½" ... 1" Threaded nipple G / NPT ½" ... 1"</p>
Centre-to-centre distance	<p>≥ 150 ... ≤ 6,000 mm (larger distances on request)</p>
Material	<ul style="list-style-type: none"> ■ Steel A105/A106 Gr.B
Max. nominal pressure	<ul style="list-style-type: none"> ■ Steel A105/A106 Gr. B 255 bar
Temperature range	<ul style="list-style-type: none"> ■ Steel A105/A106 Gr. B -29 ... +400 °C

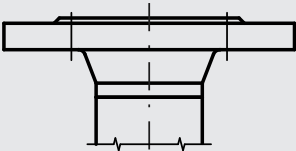
Special versions on request
Paintings on request

Chamber dimensions model BZG-X (made of steel)

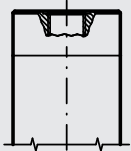
Dimensions in mm	Steel A105/A106 Gr. B
60.3 x 3.91	x
60.3 x 5.54	x
88.9 x 5.49	x
88.9 x 7.62	x
114.3 x 4.5	x

Options for chamber ends

Chamber end top (examples)

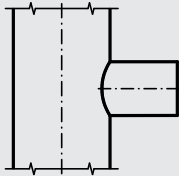


Flange connection

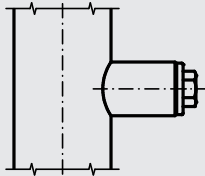


Threaded connection

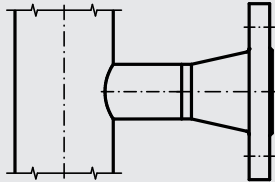
Vent (examples)



Weld stub

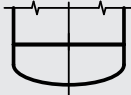


Vent plug G / NPT 1/2"

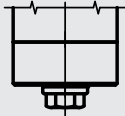


Flange connection

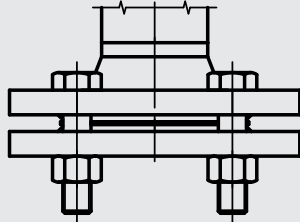
Chamber end bottom (examples)



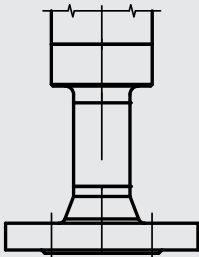
Pipe cap without drain



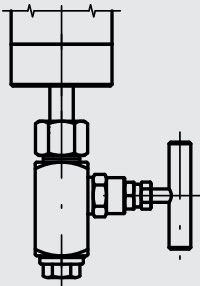
Pipe cap with drain plug
G / NPT 1/2"



Flange connection



Pipe cap with drain flange

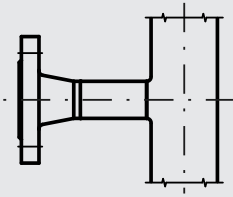


Pipe cap with drain valve

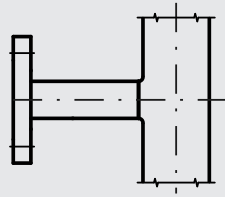
Other options on request

Options for process connection

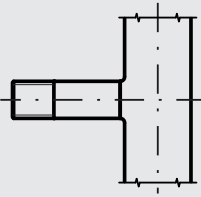
Process connection (examples)



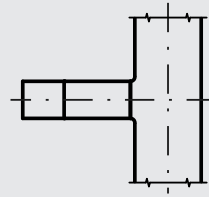
Welding neck flange



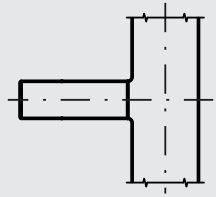
Blind flange



Threaded coupling GN ...
(Male thread)

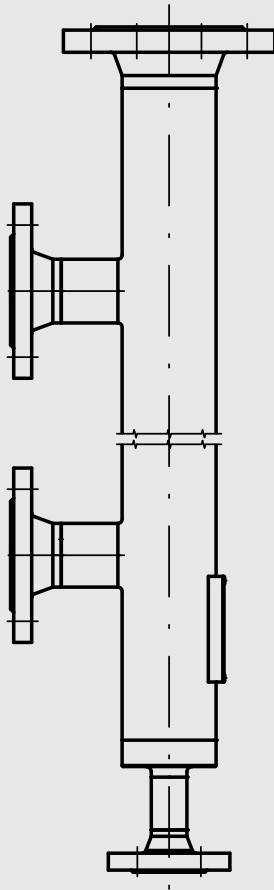


Threaded coupling GM ...
(Female thread)

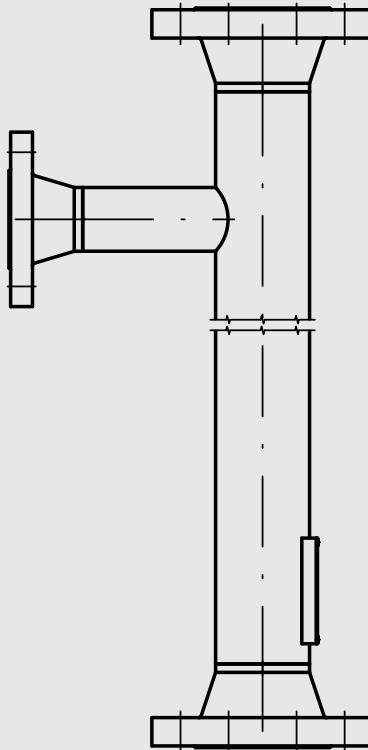


Weld stub S ...

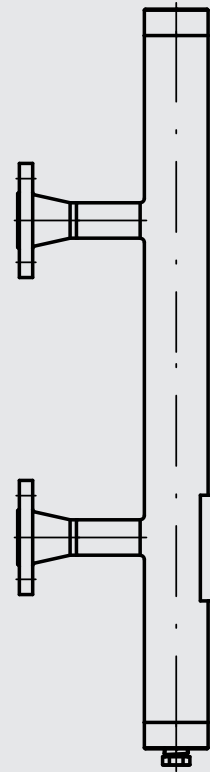
Complete instrument (examples)



Vertical flange connection (top)
Process connections 2 x lateral
Pipe cap with vertical drain flange (bottom)



Vertical flange connection (top)
Process connections 1 x lateral
Vertical flange connection (bottom)



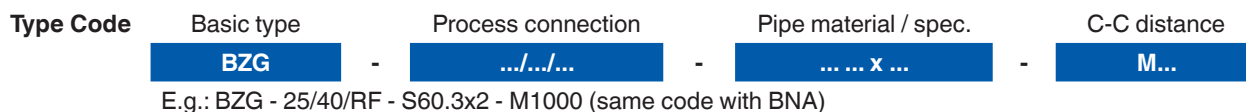
Vertical threaded connection (top)
Process connections 2 x lateral
Pipe cap with vertical drain plug
(bottom)

Other connections on request

Selectable tests

- Hydrostatic pressure test
- X-ray testing (RT)
- Dye penetrant test (PT)
- Visual testing (VT)
- Positive material identification test (PMI)

Other tests on request



Ordering information

Model / Material / Process specifications (operating temperature and pressure) / Process connection / Centre-to-centre distance M ...

Detailed information on sensors (reed chain and magnetostrictive) can be found in the following data sheets:

- Level sensor, magnetostrictive high-resolution measuring principle; model FLM; see data sheet LM 20.01
- Level sensor, with reed measuring chain; model FLR; see data sheet LM 20.02

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