



Application area

- Food industry
- Pharmaceutical industry
- Biotechnology

Technical data

Constructional design / case

Design:	High quality case with bayonet ring, material: st. steel mat.-no. 1.4301 (304) ventilation valve, material: PUR
Nominal size:	NS 63 or NS 100
Degree of protection per EN 60529:	IP 65
Case filling:	Option: Glycerine-water Further liquid fillings upon request.
Atmosph. pressure compensation:	Via ventilation valve.
Case seal:	Material gasket: NBR
Window:	Non-splintering laminated glass. Option: Non-splintering plastic (Macrolon)

Features

- High quality case with bajonet ring NS 63/100
- Nominal ranges 0...2,5 to 0...25 bar, -1...1,5 bar to -1...15 bar
- Case and measuring element of stainless steel
- Degree of protection IP 65
- Accuracy class 1.6/1.0 as per EN 837-1
- Flush mounted diaphragm
- Small temperature error by means of reduced-volume measuring element
- Temperature range up to 140 °C
- EAC declaration (upon request)

Options

- Approvals/Certificates
 - Certificate of measuring equipment for Russian Federation
 - Material certificate per EN 10204
 - Calibration certificate per EN 10204
- Case with liquid filling
- Hygienic design
- Autoclavable
- EAC declaration (upon request)

Application

The pressure gauge NS 63/NS 100 ECONomic is suitable for the use in applications in the food and pharmaceutical industry and biotechnology.

Measuring element:	Bourdon tube - c-type
	NS 63: screwed
	NS 100: pressure connection welded to process connection
System filling:	Synthetic oil, free of silicone FD1, FDA listed
Movement:	stainless steel segment
Scale:	Pure aluminium, white with black inscription. Option: with red marking or with fixed reference pointer Special scale upon request
Pointer:	NS 63: pure aluminium, black NS 100: pure aluminium, black, with micro adjustment for zero point correction

Weights:	NS 63 without filling:	approx. 0.5 kg
	NS 100 without filling	approx. 1.0 kg
	NS 63 with filling:	approx. 0.7 kg
	NS 100 with filling:	approx. 1.3 kg

Process connection

Design: Via diaphragm seal technology, see order details and product group D5

Material wetted parts

Membran: See order details

Nominal range

See order details, further ranges upon request

Overload protection Standard: 1.3 times

Accuracy

Accuracy class: per EN 837-1

NS 63: class 1.6

NS 100: class 1.0

Temperature influence: Max. $\pm 0.4\%$ / 10K of measuring span per EN 837-1

Process-temperature-influence: depending on active diaphragm diameter

dM 15.5 mm	upon request *
dM 22.6...24 mm	≤ 25 mbar / 10 K *
dM 27...30 mm	≤ 20 mbar / 10 K *
dM 34...36 mm	≤ 8 mbar / 10 K *
dM 40...46 mm	≤ 5 mbar / 10 K *
dM 51...58 mm	≤ 2 mbar / 10 K *

* A detailed calculation of accuracy can be submitted upon request.

Hygienic design

The wetted surfaces made of stainless steel are executed according to EHEDG Doc.8 and ASME BPE SF3 (Code: HY).

We guarantee the following surface roughness values:

Diaphragm foil: $Ra \leq 0.38 \mu\text{m}$

Laser welds: $Ra \leq 0.76 \mu\text{m}$

Turned parts: $Ra \leq 0.76 \mu\text{m}$

Further versions of hygienic design upon request.

Autoclav. design: Autoclavable without case filling, only. Please remove the ventilation valve before autoclaving.

Temperature ranges

	without filling	with filling
Ambient:	-10...50 °C	-10...50 °C
Media:	0...140 °C	0...140 °C
Storage:	-20...60 °C	-20...60 °C

Autoclave temperature: 130 °C for 1 hour (without filling)

Extended temperature range (-20...60 °C) optional.

The maximum values can be restricted by the following parameters:

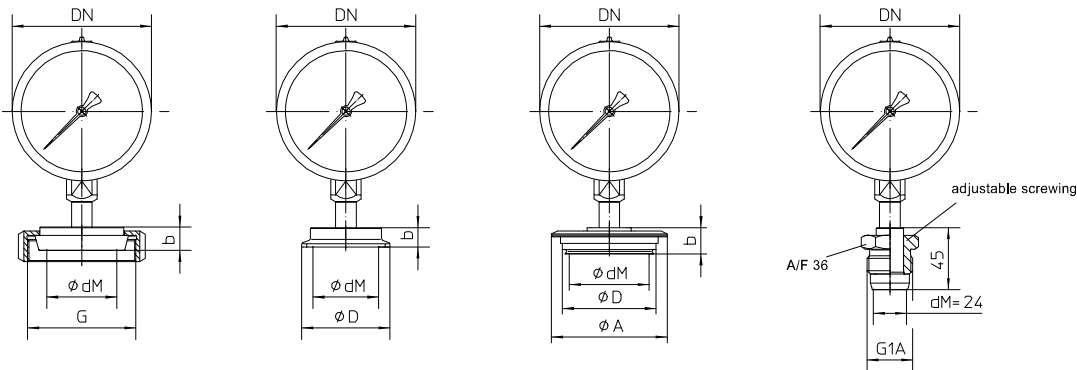
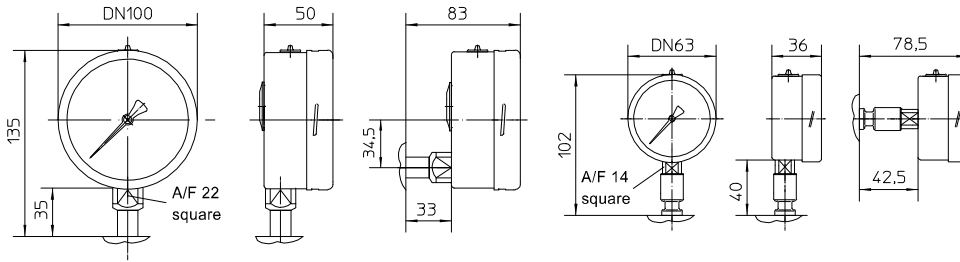
- diaphragm size
- measuring range
- pressure transmission fluid

Tests and certificates

- EAC declaration (upon request)
- Certificate of measuring equipment for Russian Federation

Information on other models see order details or upon request.

Dimensions



Sanitary pipe connection with union nut per DIN 11851

Clamp connection

VARIVENT-connection

Screw-in thread HYGIENIC G1A adjustable

All dimensions are in mm

Sanitary pipe connection with union nut per DIN 11851

DN	PN	dM	b	G
25	40	27	16	Rd.52x1/6"
32	40	34	16	Rd.58x1/6"
40	40	40	16	Rd.65x1/6"
50	25	51	17	Rd.78x1/6"

Clamp connection per DIN 32676 model B (OD, ISO) for pipes per DIN EN ISO 1127

DN	PN	dM	b	D
26.9	25	22.6	14	50.5
33.7	25	27	12	50.5
42.4	25	34	12	64
48.3	16	46	14	64

Aseptic screw joint collar connection with union nut per DIN 11864-1 type A

DN	PN	dM	G
25	40	24	Rd.52x1/6"
32	40	30	Rd.58x1/6"
40	40	34	Rd.65x1/6"
50	25	48	Rd.78x1/6"

Clamp connection per DIN 32676 model C (Tri-Clamp) for pipes per ASME BPE

DN	PN	dM	b	D
3/4"	25	15.5	15	25
1"	25	22.6	14	50.5
1 1/2"	25	34	12	50.5
2"	16	46	14	64

Clamp connection per DIN 32676 model A (metric) for pipes per EN 10357 (DIN 11850)

DN	PN	dM	b	D
25	25	22.6	14	50.5
32	25	27	12	50.5
40	25	34	12	50.5
50	16	46	14	64

Clamp connection per ISO 2852 for pipes per ISO 2037

DN	PN	dM	b	D
25	16	22.6	14	50.5
38	16	34	12	50.5
51	16	46	14	64

Varivent connection

DN / Zoll	PN	dM	A	D
25 / 1"	25	40	66	50
40-80/ 1 1/2" - 3"	25	58	84	68
100 / 4"	20	58	84	68
125 / 6"	10	58	84	68

Order details

Pressure gauge ECONomic for food/pharmaceutical/biotechnology, Type series BH5... ECO NS 63/100

Order details BH5...			
BH5100 ECO	case design IP 65, NS 63	without liquid filling	process connection bottom
BH5110 ECO			process connection at back
BH5120 ECO		with liquid filling	process connection bottom
BH5130 ECO			process connection at back
BH5200 ECO	case design IP 65, NS 100	without liquid filling	process connection bottom
BH5210 ECO			process connection at back
BH5220 ECO		with liquid filling	process connection bottom
BH5230 ECO			process connection at back
A55	nominal range [bar]	0...2,5	
A56		0...4	
A57		0...6	
A58		0...10	
A59		0...16	
A60		0...25	
A88		-1...1,5	
A89		-1...3	
A90		-1...5	
A91		-1...9	
A92		-1...15	
K102		process connection ¹ material: ASTM (316L)	sanitary pipe connection with union nut per DIN 11851
K103	DN 32		
K104	DN 40		
K105	DN 50		
K124	Clamp connection per ISO 2852 for pipes per ISO 2037		DN 25 (1")
K126			DN 38 (1 1/2")
K127			DN 51 (2")
K144	Clamp connection per DIN 32676, model A (metric) for pipes per EN 10357 (DIN 11850)		DN 25
K146			DN 32
K147			DN 40
K148			DN 50
K213	Clamp connection per DIN 32676, model B (OD, ISO) for pipes per DIN EN ISO 1127		DN 26.9
K214			DN 33.7
K215			DN 42.4
K216			DN 48.3
K134	Clamp connection per DIN 32676, model C (Tri-Clamp) for pipes per ASME BPE		DN 3/4" ^{2,3}
K136			DN 1"
K137			DN 1 1/2"
K138			DN 2"
K152	Varivent connection		D = 50 for Varivent case DN 25 and 1"
K153		D = 68 for Varivent case DN 40... DN 125 and 1 1/2" 6"	
K80		screw-in thread HYGIENIC	G 1 A rotatable, gasket-free
HY	surface roughness (wetted parts)	standard	Hygienic version as per EHEDG Doc.8 and ASME BPE SF3

Additional features (to be indicated if required)		
T2	marking	on scale (please specify)
T3		fixed reference pointer (please specify) ⁴
W1020	material certificate	per EN 10204-3.1, wetted parts
W1204	calibration certificate	per EN 10204-3.1, 3 measuring points
W1201		per EN 10204-3.1, 5 measuring points
W2673	certificate of measuring equipment for Russian Federation	
W4073	autoclavable (130 °C for 1 hour) ⁵	
W4090	extended temperature range	

Order code (example): BH5200 ECO – A56 – K102 - ...

¹ further process connections (diaphragm seals) upon request

² for case NS 63 only

³ for a function calculation and optimim system design it is necessary to specify the operation temperature

⁴ for case NS 100 only

⁵ for case without liquid filling and single strength glass only