

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



### 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:	Glycerine-water (optional) Further liquid fillings upon request.
Atmosph. pressure compensation:	Standard case, filled, ≤ 10 bar: with ventilation valve > 10 bar: filling plug, material: PUR
Case seal:	Material gasket: NBR

### Features

- High quality case with bajonet ring NS 63/100 per EN 837-1 S1
- Nominal ranges 0...4 to 0...25 bar, -1...3 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

### Application

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

Window:	Non-splintering laminated glass. Option: Non-splintering plastic (Macrolon)
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, class USDA-H1
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 22.6...24 mm	$\leq 25$ mbar / 10 K
	dM 27...30 mm	$\leq 20$ mbar / 10 K
	dM 34...36 mm	$\leq 8$ mbar / 10 K
	dM 40...46 mm	$\leq 5$ mbar / 10 K
	dM 51...58 mm	$\leq 2$ mbar / 10 K

A detailed calculation of accuracy can be submitted upon request.

#### Hygienic design

The surface quality of the wetted parts made of stainless steel is of major importance. The hygienic type device (Code: HY) guarantees the following surface roughness values:

Diaphragm foil:	$Ra \leq 0.4 \mu\text{m}$
Laser welds:	$Ra \leq 0.8 \mu\text{m}$
Turned parts:	$Ra \leq 0.8 \mu\text{m}$

Further versions of hygienic design upon request.

Autoclav. design: Autoclavable without case filling, only. Please remove the elastomer filling plug before autoclaving.

#### Temperature ranges

	without filling	with filling
Ambient:	-20...60°C	-20...60°C
Process:	0...140°C	0...140°C
Storage:	-20...60°C	-20...60°C
Autoclave temperature:	130°C for 1 hour (without filling)	

The maximum values can be restricted by the following parameters:

- diaphragm size
- measuring range
- pressure transmission fluid

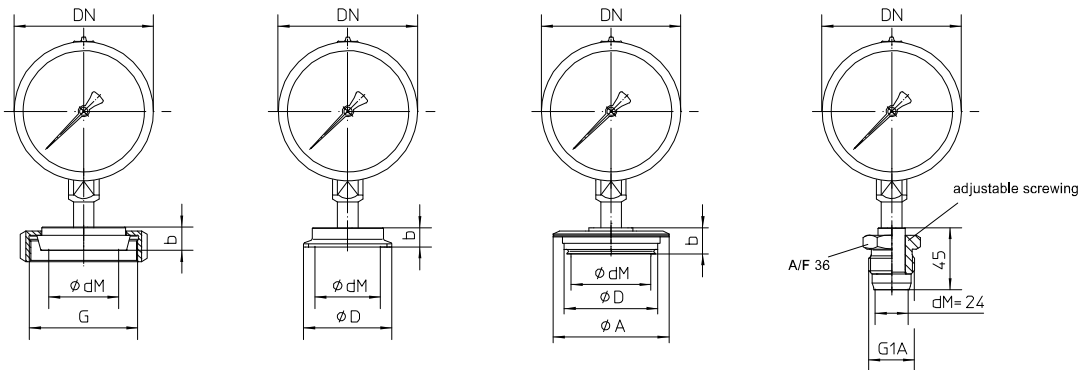
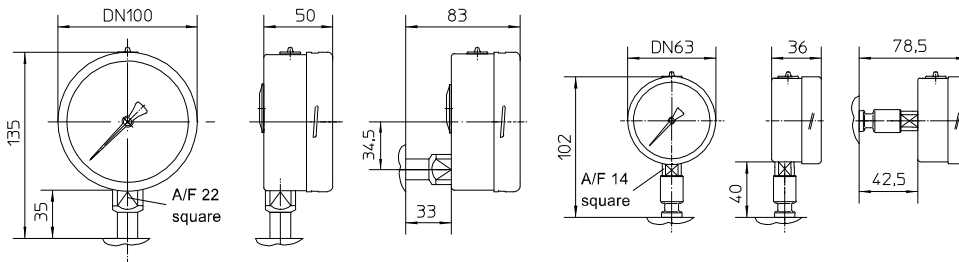
Extended temperature range upon request.

#### Approvals/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	30	16	Rd.58x1/6"
40	40	34	16	Rd.65x1/6"
50	25	48	17	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

## 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

## 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	
A56	nominal range [bar]	0...4		
A57		0...6		
A58		0...10		
A59		0...16		
A60		0...25		
A89		-1...3		
A90		-1...5		
A91		-1...9		
A92		-1...15		
K102	process connection <sup>1</sup> material: ASTM (316L)	sanitary pipe connection with union nut per DIN 11851	DN 25	
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	
K136		Clamp connection per DIN 32676, model C (Tri-Clamp) for pipes per ASME BPE	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		
	surface roughness	standard		
HY	(wetted parts)	according to hygienic design		
Additional features (to be indicated if required)				
T2	marking	on scale (please specify)		
T3		fixed reference pointer (please specify) <sup>2</sup>		
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) <sup>3</sup>			

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

<sup>1</sup> further process connections (diaphragm seals) upon request

<sup>2</sup> for case NS 100 only

<sup>3</sup> for case without liquid filling only