

Sterile Connection, Diaphragm Seals For Sterile Process Technology NEUMO BioConnect[®], Model 990.50

WIKA Data Sheet DS 99.50



Applications

- Food and beverage industry
- Biochemical and pharmaceutical industry, production of active ingredients
- Aseptic raw material production in the chemical industry

Special Features

- Quick cleaning of measuring point, without residue
- Flush, welded diaphragm
- Suitable for SIP and CIP
- 3A and EHEDG certified
- FDA approved

Description

Process connection

NEUMO BioConnect[®] connection

- Flange, Form R
- Thread with union nut

for pipes per DIN 11 850 and DIN EN ISO 1127

Pressure rating

Flange PN 70 bar, threads PN 16 bar
(higher pressure ratings on request)

Pressure ranges

0 ... 0.6 bar to 0 ... 70 bar

Material of wetted parts

Stainless steel 1.4435 (AISI 316L)

Instrument connection

Pressure gauge or transmitter directly welded,
process pressure transmitter with threaded adaptor

System fill fluid

KN 7 Glycerine, food compatible, FDA approved, per standard US Pharmacopoeia XXIV and European Pharmacopoeia (1998)



Diaphragm Seal, NEUMO BioConnect[®] Model 990.50 threaded connection with union nut, directly assembled on transmitter Model UT-10



Diaphragm Seal, NEUMO BioConnect[®] Model 990.50 flanged connection, Form R, directly assembled on pressure gauge Model 232.50.100

Options

Process connection

- Flange, Form V
- Threaded coupling, male
- Material: stainless steel 1.4435, electropolished

Diaphragm seal for connection to Zone 0

- Body with flame proof throttle

Pressure measuring instrument assembly

- Assembly via cooling tower
- Assembly via capillary, when ordering please specify length of capillary

System fill fluid

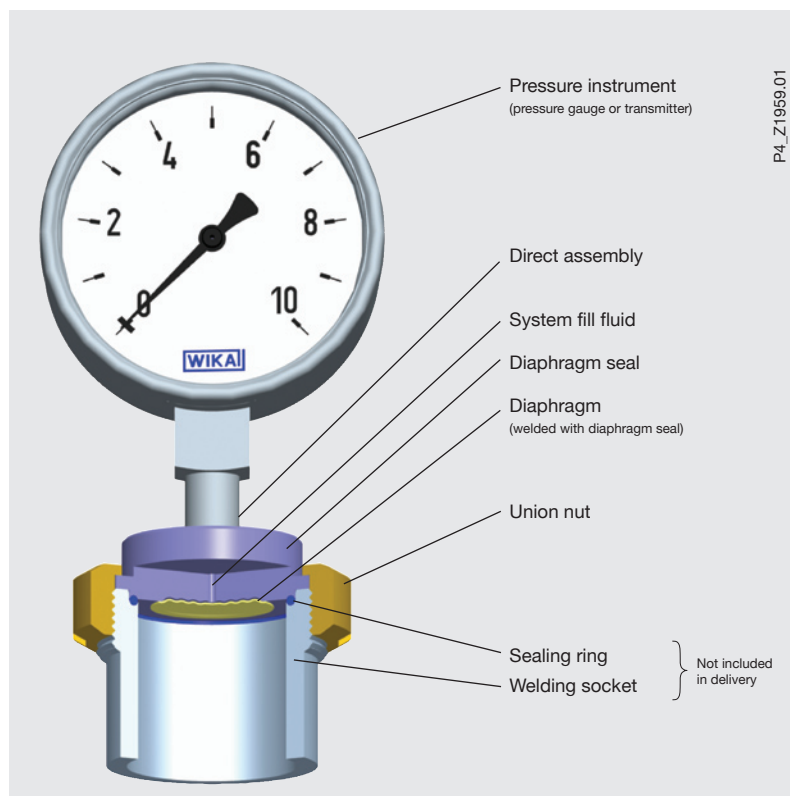
- KN 12 Glycerine/water, FDA approved
- KN 59 Neobee® M-20, FDA approved
- KN 92 Medicinal white mineral oil, FDA and USP approved

Documentation

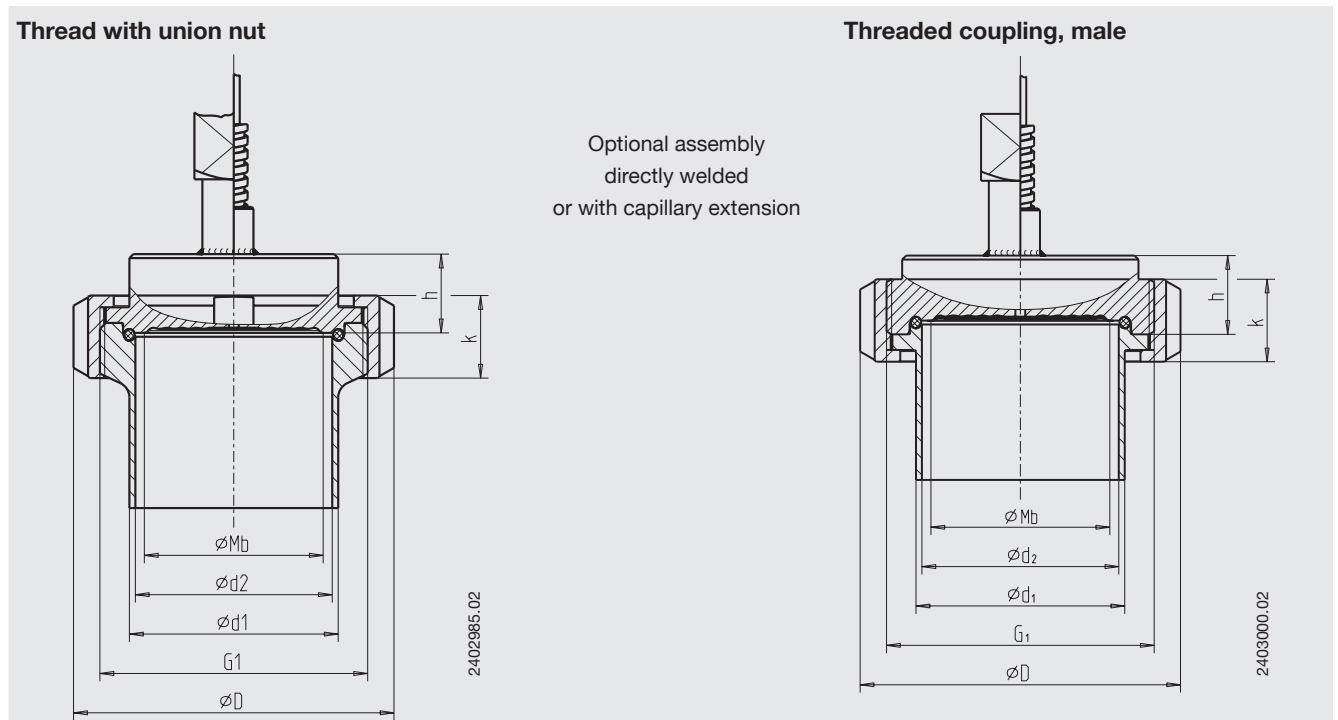
- 2.2 or 3.1 Material Certificate, DIN 10 204
 - Test and calibration certificates
 - Pressure and stability tests
 - Confirmation of FDA approval
 - 3-A and EHEDG marking and/or certificate
- Further certificates and documents on request

Example for installation

Diaphragm seal with union nut assembled on welding socket



Dimensions in mm



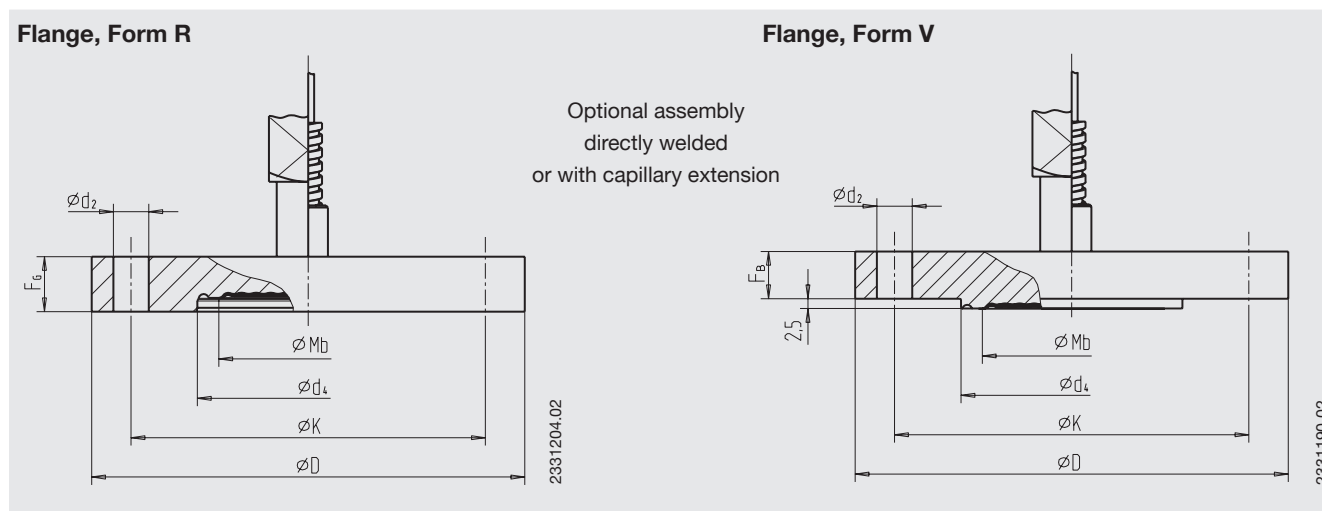
Diaphragm seals with union nut

Model	DN in mm	Dimensions in mm					D	k	h	Weight in kg
		d ₁	d ₂	M _b	G ₁	D				
990.50 for pipes per DIN 11 850	25	29	26	22	M42 x 2	55	18	20	0.3	
	32	35	32	25	M52 x 2	65	19	20	0.4	
	40	41	38	32	M56 x 2	70	21	20	0.5	
	50	53	50	45	M68 x 2	82	21	20	0.7	
	65	70	66	59	M90 x 3	105	27	20	1.3	
	80	85	81	72	M100 x 3	115	27	20	1.6	
990.50 for pipes per DIN EN ISO 1127	100	104	100	89	M130 x 4	145	29	20	2.6	
	25	33.7	29.7	25	M42 x 2	55	18	20	0.3	
	32	42.4	38.4	32	M52 x 2	65	19	20	0.4	
	40	48.3	44.3	40	M56 x 2	70	21	20	0.5	
	50	60.3	56.3	52	M68 x 2	82	21	20	0.7	
	65	76.1	71.5	59	M90 x 3	105	27	20	1.3	
990.50 for pipes per DIN EN ISO 1127	80	88.9	84.3	72	M100 x 3	115	27	20	1.6	
	100	114.3	109.1	89	M130 x 4	145	29	20	2.6	

Diaphragm seals with threaded coupling, male

Model	DN in mm	Dimensions in mm					D	k	h	Weight in kg
		d ₁	d ₂	M _b	G ₁	D				
990.50 for pipes per DIN 11 850	25	29	26	22	M42 x 2	55	18	20	0.2	
	32	35	32	25	M52 x 2	65	19	20	0.25	
	40	41	38	32	M56 x 2	70	21	20	0.3	
	50	53	50	45	M68 x 2	82	21	20	0.5	
	65	70	66	59	M90 x 3	105	27	28	0.9	
	80	85	81	72	M100 x 3	115	27	28	1.1	
990.50 for pipes per DIN EN ISO 1127	100	104	100	89	M130 x 4	145	29	30	1.9	
	25	33.7	29.7	25	M42 x 2	55	18	20	0.2	
	32	42.4	38.4	32	M52 x 2	65	19	20	0.25	
	40	48.3	44.3	40	M56 x 2	70	21	20	0.3	
	50	60.3	56.3	52	M68 x 2	82	21	20	0.5	
	65	76.1	71.5	59	M90 x 3	105	27	28	0.9	
990.50 for pipes per DIN EN ISO 1127	80	88.9	84.3	72	M100 x 3	115	27	28	1.1	
	100	114.3	109.1	89	M130 x 4	145	29	30	1.9	

Dimensions in mm



Diaphragm seals with flanged connection, Form R

Model	DN in mm	Dimensions in mm			F _G	k	d ₂	d ₄	Weight in kg
		M _b	D						
990.50 for pipes per DIN 11 850 line 2	25	22	85	12	65	4 x Ø 9	32.3	0.5	
	32	25	95	12	75	4 x Ø 9	38.3	0.6	
	40	32	100	12	80	4 x Ø 9	44.3	0.7	
	50	45	110	14	90	4 x Ø 9	56.3	1.0	
	65	59	140	16	115	4 x Ø 11	72.3	1.8	
	80	72	150	16	125	8 x Ø 11	87.3	2.0	
990.50 for pipes per DIN EN ISO 1127	100	89	175	18	150	8 x Ø 11	106.3	3.1	
	25	25	85	12	65	4 x Ø 9	36.0	0.5	
	32	32	95	12	75	4 x Ø 9	44.7	0.6	
	40	40	100	12	80	4 x Ø 9	50.6	0.7	
	50	52	110	14	90	4 x Ø 9	62.6	0.9	
	65	59	140	16	115	4 x Ø 11	77.8	1.8	
80	72	150	16	125	8 x Ø 11	90.6	2.0		
100	89	175	18	150	8 x Ø 11	115.4	3.1		

Diaphragm seals with flanged connection, Form V

Model	DN in mm	Dimensions in mm			F _B	k	d ₂	d ₄	Weight in kg
		M _b	D						
990.50 for pipes per DIN 11 850 line 2	25	22	85	12	65	4 x Ø 9	32	0.4	
	32	25	95	12	75	4 x Ø 9	38	0.5	
	40	32	100	12	80	4 x Ø 9	44	0.6	
	50	45	110	14	90	4 x Ø 9	56	0.9	
	65	59	140	16	115	4 x Ø 11	72	1.7	
	80	72	150	16	125	8 x Ø 11	87	2.0	
990.50 for pipes per DIN EN ISO 1127	100	89	175	18	150	8 x Ø 11	106	3.1	
	25	25	85	12	65	4 x Ø 9	35.7	0.4	
	32	32	95	12	75	4 x Ø 9	44.4	0.5	
	40	40	100	12	80	4 x Ø 9	50.3	0.6	
	50	52	110	14	90	4 x Ø 9	62.3	0.9	
	65	59	140	16	115	4 x Ø 11	77.5	1.7	
80	72	150	16	125	8 x Ø 11	90.3	2.0		
100	89	175	18	150	8 x Ø 11	115.1	3.2		

Assembly on bourdon tube pressure gauges

- Stainless steel version
Model 232.50/233.50,
without/with liquid filling
(see data sheet PM 02.02)



- Stainless steel, safety pattern version
Model 232.30/233.30,
without/with liquid filling
(see data sheet PM 02.04)



Following application conditions apply:

- Pressure gauge directly assembled on diaphragm seal
Temperature range
process: +10 ... +150 °C
ambient: +10 ... +40 °C

		NEUMO BioConnect® connection with DN				
for pipes per DIN 11 850		25	32 ... 40	50	65	80 ... 100
for pipes per ISO 1127		-	25 ... 32	40 ... 50	65	80 ... 100
Pressure gauge	Model	23x.50.63	23x.50.63 23x.50.100	23x.50.63 23x.50.100	23x.50.100 23x.30.100	23x.50.100 23x.30.100
Minimum measuring range		0 ... 4 bar -1 ... 3 bar	0 ... 1 bar -1 ... 3 bar	0 ... 1 bar -1 ... 3 bar	0 ... 0.6 bar -1 ... 1.5 bar	0 ... 0.6 bar -1 ... 1.5 bar
Overpressure safety (optional)		-	2 x full scale value	2 x full scale value	2 x full scale value	2 x full scale value
Inductive alarm contact (optional), suitable for Zone 1 and Zone 2 (Model 831)		-	■ possible	■ possible	■ possible	■ possible

Assembly on transmitters

- Pressure transmitter
Model S-10 or
Model F-20,
(see data sheet
PE 81.01 or
PE 81.19)



- Process pressure transmitter UniTrans,
Model UT-10 / IUT-10,
(see data sheet
PE 86.01 / PE 86.02)



- or with process pressure transmitter,
Model IPT-10,
(see data sheet
PE 86.11)



The above mentioned application conditions apply.

		NEUMO BioConnect® connection with DN				
for pipes per DIN 11 850		25	32 ... 40	50	65	80 ... 100
for pipes per ISO 1127		-	25 ... 32	40 ... 50	65	80 ... 100
Minimum measuring range		0 ... 2.5 bar	0 ... 1 bar	0 ... 600 mbar	0 ... 400 mbar	0 ... 250 mbar

Further versions of instruments and lower measuring ranges can be supplied subject to technical verification and clarification by WIKA.

Ordering information

Model / Process connection / DN / Corresponding pipe standard / Material of wetted parts / Assembly, if necessary length of capillary / System fill fluid / Assembly on pressure measuring instrument model / Process conditions as per questionnaire / Options or special versions

Modifications may take place and materials specified may be replaced by others without prior notice.
Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing.



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