

# Diaphragm Seal

990.26 with flange and internal diaphragm  
with pressure gauge

E 06.02.01

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<b>Design</b>	Diaphragm Seal with flange and internal diaphragm acc.to EN 1092-1 or ASME B 16,5 Pressure gauge in stainless steel
<b>Type</b>	<b>990.26</b>
<b>Lower body</b>	Flange connection and internal diaphragm acc.to EN 1092-1 or ASME B 16,5
<b>Flange EN 1092-1</b>	DN 15 or DN 20 Sealing face form B1 (B2 in special materials) Pressure rate PN 10 to PN 40
<b>Flange ASME B 16,5</b>	DN 1/2", 3/4" or 1" Sealing face RF 125...250 AA Option RFSF, RJF-groove, small tongue, large tongue Pressure rate 150 or 300 lbs
<b>Material standard</b>	Body of stainless steel 1.4404 (316L) Wetted parts of stainless steel 1.4435 (316L) Special materials see page 2
<b>Level of cleanliness</b>	Oil and grease free per ASTM G93-03 level E (< 550 mg/m <sup>2</sup> )
<b>Working Pressure</b>	90% of full scale range by fluctuating pressure full scale value by short time pressure
<b>Process temperature</b>	Process temperature standard max +200°C Option lowest temperature to max -90°C Option highest temperature to max +400°C Max temperature depending on material and filling media
<b>Ambient temperature</b>	Ambient temperature standard +10+40°C Option lowest temperature to max -40°C Option highest temperature to max +60°C
<b>Cooling/capillary</b>	The pressure instrument must be protected in process temperatures over +200°C with cooling tower or capillary
<b>Filling media</b>	KN 2 silicone oil (standard) temperature -45+300°C KN 17 silicone oil for low temperatures -90+200°C KN 32 silicone oil for high temperatures -25+400°C KN 21 halocarbene for oxygen and chlorine -60+175°C KN 70 silicone free filling -20+200°C KN 59 Neobee M-20 FDA (Food & Pharma) -35+260°C KN 92 white mineral oil FDA (Food & Pharma) -15+260°C
<b>Certificate (option)</b>	EN 10204-3.1 Certificate wetted parts incl. chemical analysis EN 10204-3.1 Certification of class and accuracy EN 10204-3.1 Accuracy calibration values listed EN 10204-3.1 Pressure and stability test EN 10204-3.1 Helium leak test
<b>More options</b>	Mounted TAG-schild with customer numbers Design according to NACE MR 0175 or MR 0103 Origin of wetted parts from EU, Schweiz or USA Flange acc.to Gost 33259, API 6A or JIS B 2220

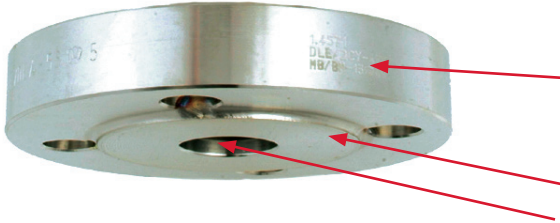


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## Material for body and wetted parts



### Flange body

Standard = stainless steel 1.4404 (316L)

### Wetted parts

Wetted parts channel, internal diaphragm and sealing face  
Standard = stainless steel 1.4435 (316L)

Body stainless steel 1.4404 (316L) Wetted parts	Temperature
Stainless steel 1.4435 (316 L) <b>standard</b>	max +400°C
Stainless steel 1.4541 (321)	max +400°C
Stainless steel 1.4571 (316Ti)	max +400°C
Stainless steel with ECFTE-coating	max +150°C
Stainless steel with PFA-coating	max +260°C
Stainless steel with Gold-plating	max +400°C
Hastelloy C22 (2.4602)	max +260°C
Hastelloy C276 (2.4819)	max +400°C

Body stainless steel 1.4404 (316L) Wetted parts	Temperature
Inconel 600 (2.4816)	max +400°C
Inconel 625 (2.4856)	max +400°C
Incoloy 825 (2.4858)	max +400°C
Monel 400 (2.4360)	max +400°C
Nickel	max +260°C
Titanium (3.7035)	max +150°C
Titanium (3.7235)	max +150°C
Tantalum	max +150°C

Flange + wetted parts	Temperature
Syrafast stål 1.4571 (316Ti)	max +400°C
Duplex 2205 (1.4462)	max +300°C
Superduplex 2507 (1.4410)	max +300°C
Hastelloy C22 (2.4602)	max +260°C
Hastelloy C276 (2.4819)	max +400°C

Flange + wetted parts	Temperature
Incoloy 825 (2.4858)	max +400°C
Monel 400 (2.4360)	max +400°C
Nickel	max +400°C
Titanium (3.7035)	max +400°C
Titanium (3.7235)	max +260°C

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## Pressure gauges for mounting with diaphragm seal 990.26



### Stainless steel version

Case of stainless steel dim 100 mm, wetted parts of stainless steel  
Accuracy Cl.1,0%, pressure range max 250 bar  
Ingress protection IP 65 EN 60529/IEC 529  
Pressure limitation 90% of full scale value by fluctuating pressure  
**2840** = lower mount - standard without case filling  
**2841** = back mount - standard without case filling  
**2940** = lower mount - with liquid filled case (glycerine)  
**2941** = back mount - with liquid filled case (glycerine)  
**2880** = with vibration damped movement



### Stainless steel safety version

Case of stainless steel dim 100 mm, wetted parts of stainless steel  
Safety version EN 837-1 (S3) with safety wall behind the scale  
Accuracy Cl.1,0%, pressure range max 250 bar  
Ingress protection IP 65 EN 60529/IEC 529  
Pressure limitation 90% of full scale value by fluctuating pressure  
**232.30** = standard without case filling  
**233.30** = with liquid filled case (glycerine)



### With electrical switch

Case of stainless steel dim 100 mm, wetted parts of stainless steel  
Safety version EN 837-1 (S3) with safety wall behind the scale  
Accuracy Cl.1,0%, pressure range max 250 bar  
Ingress protection IP 65 EN 60529/IEC 529  
Pressure limitation 90% of full scale value by fluctuating pressure  
Magnet spring switch 821 or inductive switch 831  
Single switch with function max or min  
Double switch with function max-min, min-max, 2x max or 2x min  
**PGS23.100** = case with or without liquid filled case

## Options for pressure gauges

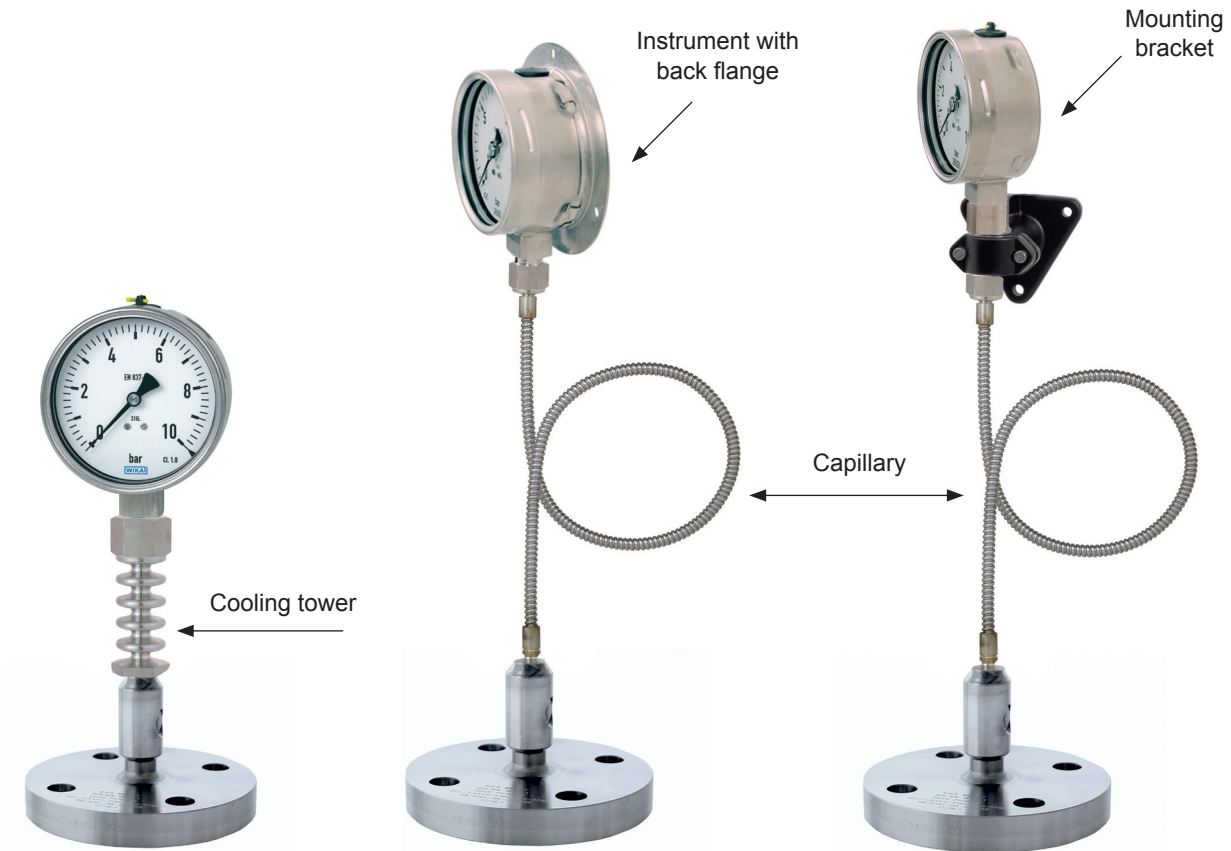
- Dial with unit bar/Pa, bar/psi, kPa, MPa, psi
- ATEX protection c with device cat 2G/2D
- Design acc.to NACE Sour Gas Service
- Design Oxygen Oil- and Grease free
- Silicone free version
- Dial with colored fields or customer logo
- Ingress protection IP 66 or IP 67
- Case in stainless steel 316 Ti
- Case polished
- Case epoxy-coated
- Case PTFE-coated
- Liquid filled case silicone M50 for low ambient temperatures

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## Cooling tower and capillary



### Cooling tower

Cooling tower is mounted to protect the pressure instrument from high process temperature. Air circulation through the perforated capillary protector reduces the temperature of the filling liquid. Material stainless steel. Length: 116,5 mm

### Capillary

Stainless steel capillary with stainless steel spiral armour provides connection between chemical seal and pressure instrument to enable distant reading or remote control. Capillary lengths from 0,5 meter to max 10 meter.

### Mounting of pressure gauge

Alternative 1 = Pressure gauge with back flange for wall mounting

Alternative 2 = Mounting bracket in aluminium or stainless steel for wall mounting

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Flange EN 1092-1, form B1  
DN 15, 20 or 25

x = mounting holes

DN	PN	Dimension mm					Sealing face			Weight kg
		Mb	D	b	d <sub>2</sub>	k	f	d <sub>4</sub>	x	
15	10/40	40	95	22	14	65	2	45	4	1,0
20	10/40	40	105	22	14	75	2	58	4	1,3

Flange ASME 16,5, RF 125...250 AA  
DN 1/2", 3/4" or 1"

x = mounting holes

DN	Class	Dimension mm					Sealing face			Weight kg
		Mb	D	b	d <sub>2</sub>	k	f	d <sub>4</sub>	x	
1/2"	150	32	90	22	16	60,5	2	35	4	1,0
	300	40	95	22	16	66,5	2	35	4	1,0
3/4"	150	40	100	22	16	70	2	43	4	1,1
	300	40	120	22	20	82,5	2	43	4	1,6
1"	150	52	110	22	16	79,5	2	51	4	1,4
	300	52	125	22	20	89	2	51	4	1,7

