

# Diaphragm Seal

990.34 male threaded welded design  
with pressure gauge

E 06.01.06

Ed.17.01

<b>Design</b>	Diaphragm Seal in compact welded design With pressure gauge in stainless steel
<b>Type</b>	<b>990.34</b>
<b>Pressure rating</b>	PN 160 for pressure range 0-1 bar to 0-160 bar
<b>Material standard</b>	Upper body of stainless steel 1.4404 (316L) Lower body and connection of stainless steel 1.4404 (316L) Diaphragm of stainless steel 1.4435 (316L) Special material 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>Process connection</b>	G1/2" male or 1/2"NPT male Option G1/4" or G1" male Option G1/4", G1/2" or G1" female Option 1/4"NPT, 1/2"NPT, 3/4"NPT or 1"NPT male Option 1/4"NPT, 1/2"NPT, 3/4"NPT or 1"NPT female
<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 Origen of wetted parts from EU, Schweiz or USA



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## Material for upper body and wetted parts

Diaphragm seal 990.34 has a welded design with upper body, lower body och diaphragm.  
Standard material for upper body and lower body is stainless steel 1.4404 (316L)  
Standard material for the diaphragm is stainless steel 1.4435 (316L)

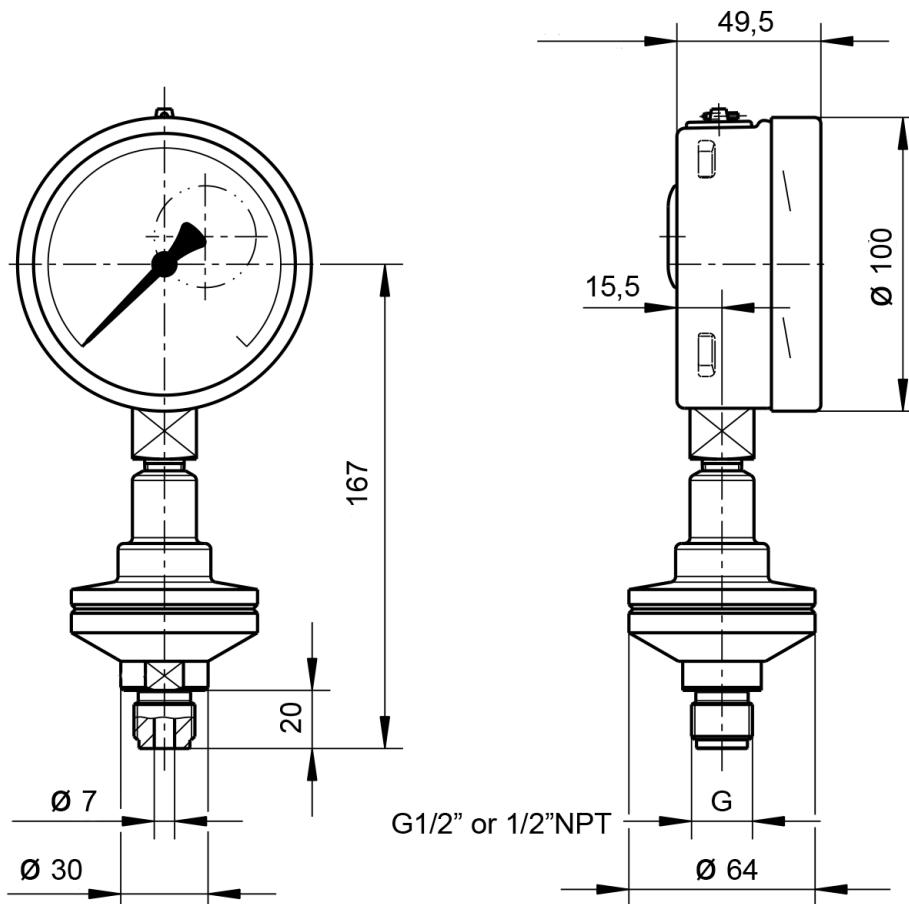


## In special materials all parts are in the same material

Lower body and diaphragm = material wetted parts	Temperature
Stainless steel 1.4571 (316Ti)	max +400°C
Stainless steel 1.4466 (urea grade)	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

Lower body and diaphragm = material wetted parts	Temperature
Inconel 600 (2.4816)	max +400°C
Inconel 625 (2.4856)	max +400°C
Incoloy 825 (2.4858)	max +400°C
Titanium (3.7035)	max +400°C
Titanium (3.7235)	max +260°C
Monel 400 (2.4360)	max +400°C

## Pressure gauge type 2840.100, 2880.100 or 2940.100



Dimensions refers to 990.34 with pressure rate PN 160 and in material stainless steel  
Specified dimensions may be different in other materials or other pressure rates

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## Pressure gauges for mounting with diaphragm seal 990.34



### 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** = standard without case filling

**2940** = 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