Threaded Process Connection, Diaphragm Seals Model 990.34, Welded Design

Applications

- Suitable for corrosive, contaminated or hot pressure media
- Chemical process industry
- Petrochemical industry
- Water treatment

Special Features

- All welded construction
- Wide selection of materials
- Suitable for high pressure ranges

Diaphragm Seal Model 990.34, Mb 52 mm process connection thread G ½ B (male), with Pressure Gauge Model 232.50 NS 100

Description

Process connection

- Thread G ½ B (male), G ¼ B (male) similar to EN 837-1, without centering spigot
- Thread G ½, G ¼ (female)
- Thread ½ NPT, ¼ NPT (male)
- Thread ½ NPT, ¼ NPT (female)
- Other on inquiry

Pressure ranges and diameter of diaphragm

The maximum pressure range is dependent on the effective diameter of the diaphragm (Mb) and the process temperature (here max. +50 °C)

Mb 22 mm: 0 ... 1000 bar
Mb 29 mm: 0 ... 600 bar
Mb 40 mm: 0 ... 400 bar
Mb 52 mm: 0 ... 160 bar

See also diagram pressure-temperature rating on page 3

Model 990.34
Mb 40 mm
thread G ½ B (male)

Model 990.34
Mb 22 mm
thread G ½ (female)

Material of wetted parts

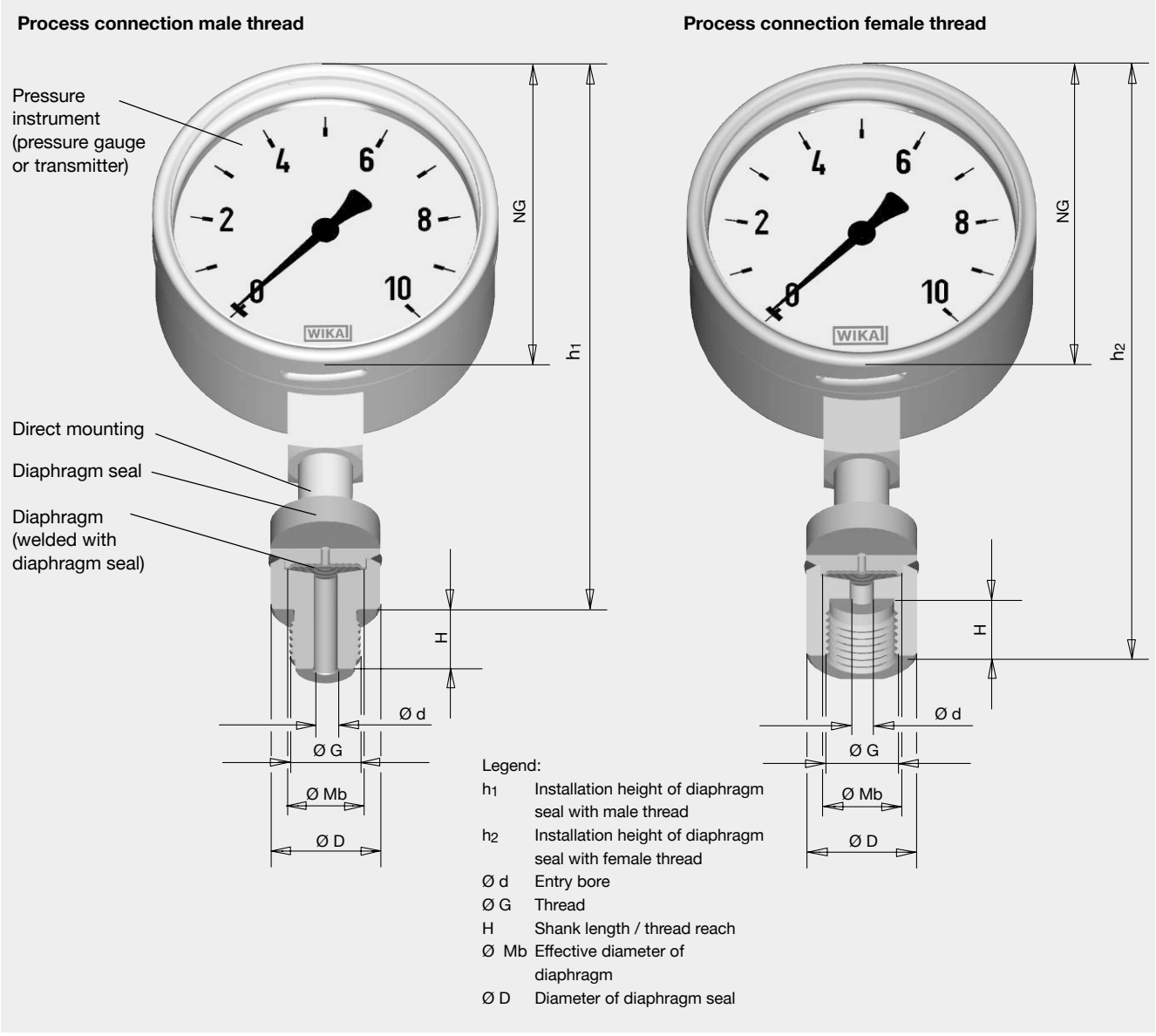
- Stainless steel 316L
- Special materials stainless steel 1.4539, 1.4541, Monel, Hastelloy B 2, Hastelloy C 4, Hastelloy C 276, Inconel 600, Incoloy 825, titanium

with diameter of diaphragm Mb 22 mm: Hastelloy C 276 or titanium

Instrument connection

- Pressure gauges directly welded, transmitter screw fitted via adaptor
- Assembly via cooling tower (for directly mounted gauge when temperature > +100 °C)
- Assembly via capillary extension (welded with upper body)

Example diaphragm seal model 990.34
with direct mounted pressure gauge

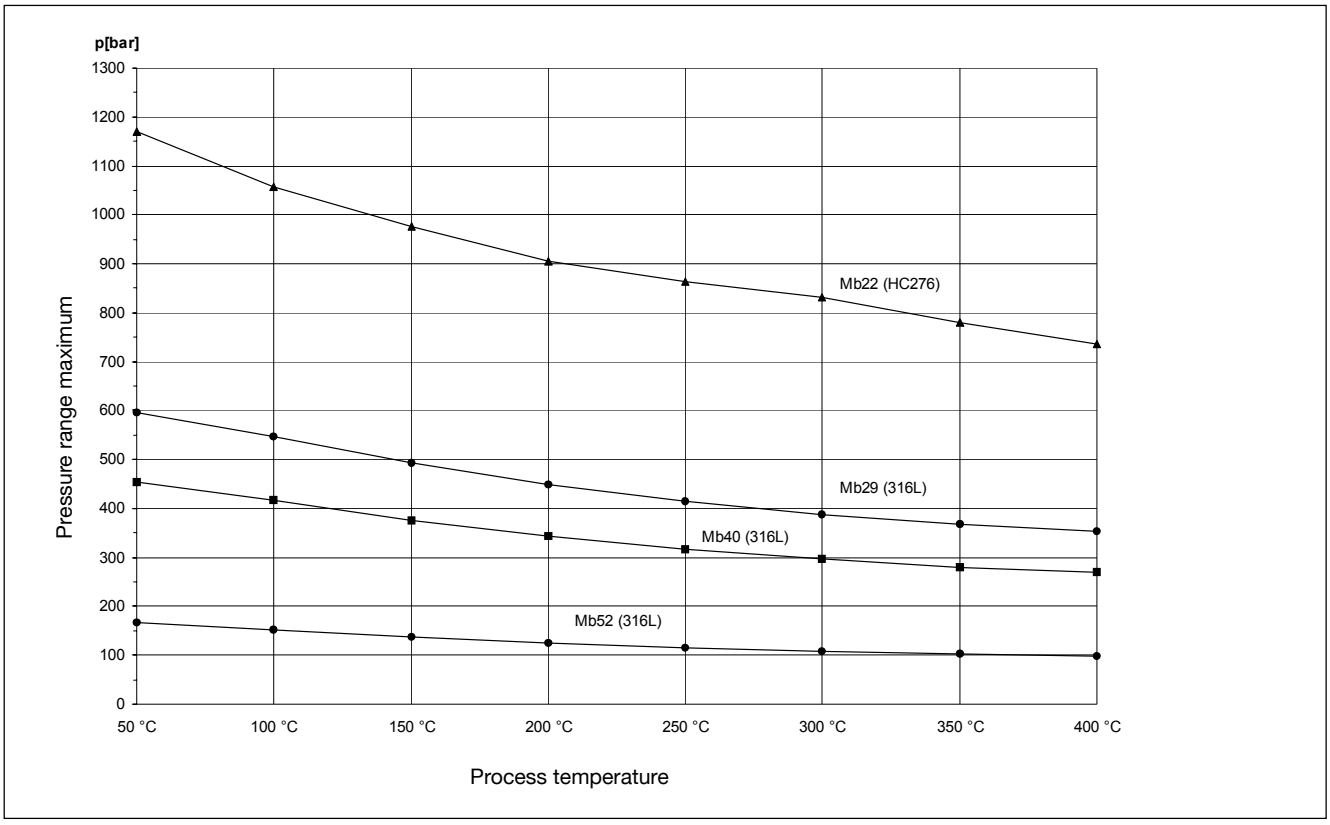


Dimensions in mm

Pressure gauge Nominal size	Dimensions in mm Mb	D	h_1	h_2 with process connection: G ½ female	G ¼ female	½ NPT female	¼ NPT female	Weight in kg
NS 63	22	32	113	126	118	121	116	0.4
	29	40	116	135	129	130	125	0.5
	40	54	118	135	129	135	125	0.7
	52	64	139	139	139	139	139	0.9
NS 100	22	32	166	178	170	173	168	0.7
	29	40	168	187	181	182	177	0.8
	40	54	191	187	181	187	177	1.0
	52	64	191	191	191	191	191	1.2

Process connection G	H	Entry bore d with Mb 52	Mb 40	Mb 29	Mb 22
G ½ male	20	7	10	10	7
G ½ female	19	7	7	7	7
G ¼ male	13	6	6	6	5
G ¼ female	13	5.5	5.5	5.5	5.5
½ NPT male	19	7	10	10	7
½ NPT female	-	17	17	17	17
¼ NPT male	13	5	5	5	5
¼ NPT female	-	11	11	11	11

Pressure-Temperature Rating



Process temperature > +100 °C: It has to be ensured that a suitable cooling tower or capillary extension is selected for assembly with the pressure instrument

Process temperature > +200 °C: In addition it has to be ensured that a suitable system fill fluid is selected (see Technical Information IN 00.06)

Possible combinations

Bourdon tube pressure gauges
Diaphragm seal Model 990.34 can be combined with a pressure gauge with bourdon tube if the following application conditions are taken into account:

- Pressure gauge directly combined with diaphragm seal
- System fill fluid KN 2 Silicon oil
- Temperature range process: +10 ... +200 °C
  ambient: room temperature +10 ... +40 °C or
  outside temperature -20 ... +40 °C

Choice	Diameter of diaphragm Mb							
	22 mm		29 mm		40 mm		52 mm	
Ambient temperature	from +10 °C	from -20 °C	from +10 °C	from -20 °C	from +10 °C	from -20 °C	from +10 °C	from -20 °C
Pressure gauge Model	232.50.63 232.50.100	232.50.63 232.50.100	232.50.63 232.50.100	232.50.63 232.50.100	232.50.63 23x.50/30.100	232.50.63 23x.50/30.100	232.50.63 23x.50/30.100	232.50.63 23x.50/30.100
Lowest measuring range	0 ... 100 bar	0 ... 100 bar	0 ... 2.5 bar	0 ... 2.5 bar	0 ... 1 bar -1 ... 1.5 bar	0 ... 1 bar -1 ... 1.5 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 from 0 ... 100 bar	-	2 x full scale value	-	2 x full scale value	2 x full scale value
Inductive alarm sensors (optional), suitable in zone 1 and zone 2 (Model 831)	-	-	possible from 6 bar	-	possible	-	possible	possible

Pressure transmitters
Diaphragm seal Model 990.34 can be combined with a pressure transmitter Model S-10 or universal transmitter Model UT-10 if the following application conditions are taken into account:

- Pressure transmitter directly combined with diaphragm seal
- Temperature range
  process: +10 ... +150 °C
  ambient: -20 ... +40 °C

Choice	Diameter of diaphragm Mb			
	22 mm	29 mm	40 mm	52 mm
Lowest measuring range	0 ... 2.5 bar	0 ... 1 bar	0 ...600 mbar	0 ...600 mbar

Further gauge variants, lower pressure ranges and further application conditions can be supplied after technical verification and clarification by WIKA.

Ordering information
Model / Diameter of diaphragm / Process connection / Material of wetted parts / Instrument connection: directly combined or capillary extension, capillary length / System fill fluid / Pressure gauge model / Process conditions as per questionnaire

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