

Threaded Process Connection, Diaphragm Seals Model 990.34, Welded Design

WIKA Data Sheet DS 99.04

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

Description

Process connection

Thread G ½ B (male) per EN 837-1

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

Material of wetted parts

Stainless steel 316L

Mb 22 mm: Hastelloy C 276

Instrument connection

Pressure gauges directly welded, transmitter screw fitted via adaptor



Diaphragm Seal, Model 990.34 Mb 22 mm with
Pressure Gauge Model 232.50 NS 100



Diaphragm Seal, Model 990.34 Mb 40 mm and Mb 52 mm

Optional extras

Process connection

- Thread G ½ (female), ½ NPT (female) or ½ NPT (male)
- Other on inquiry

Material of wetted parts

- Stainless steel 1.4571, 1.4435, 1.4539, Monel, Hastelloy B 2, Hastelloy C 4, Hastelloy C 276, Inconel 600, Incoloy 825, titanium

Instrument connection

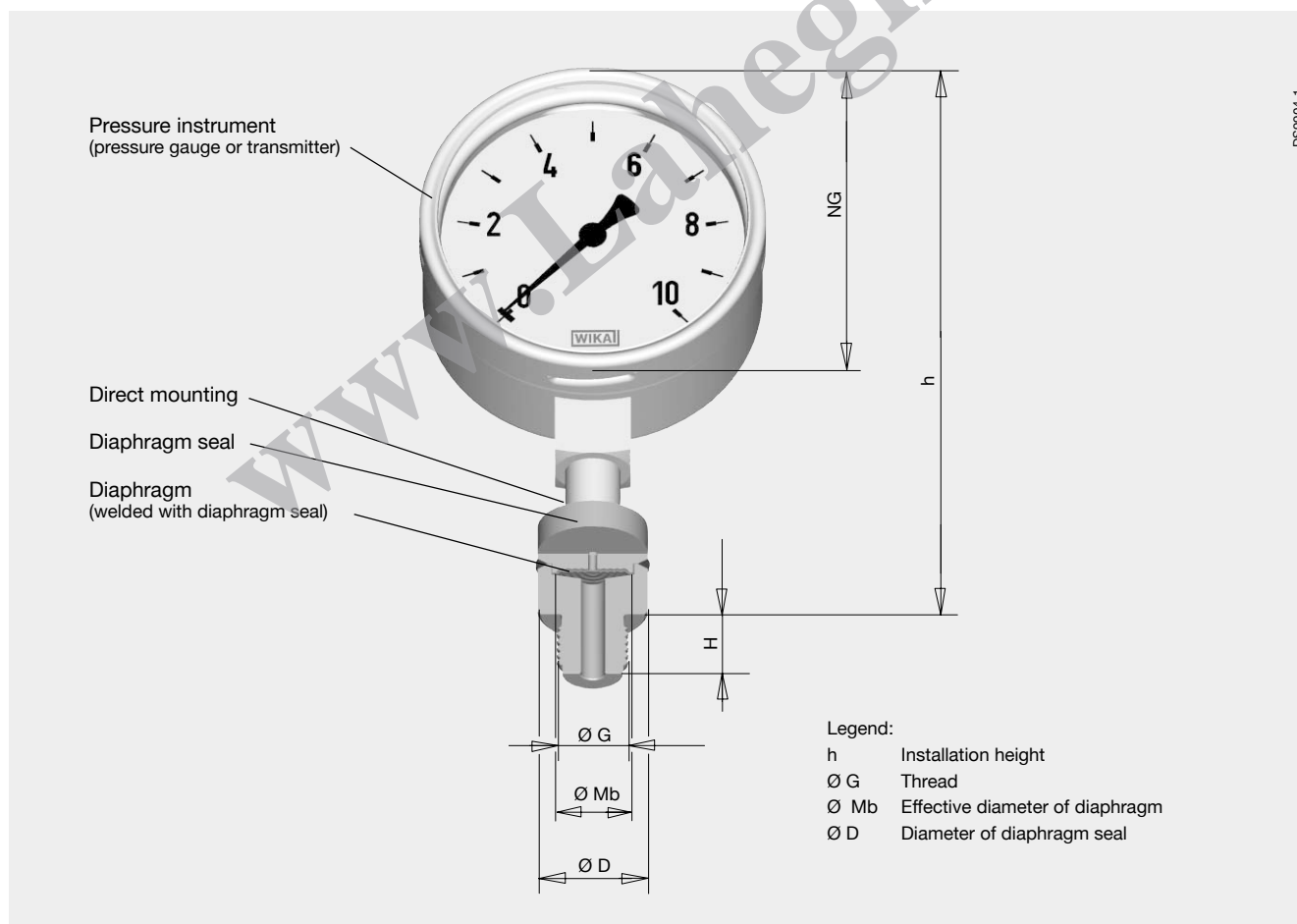
- Assembly via cooling tower (for directly mounted gauge when temperature > +100 °C)
- Assembly via capillary extension (welded with upper body)

Dimensions in mm

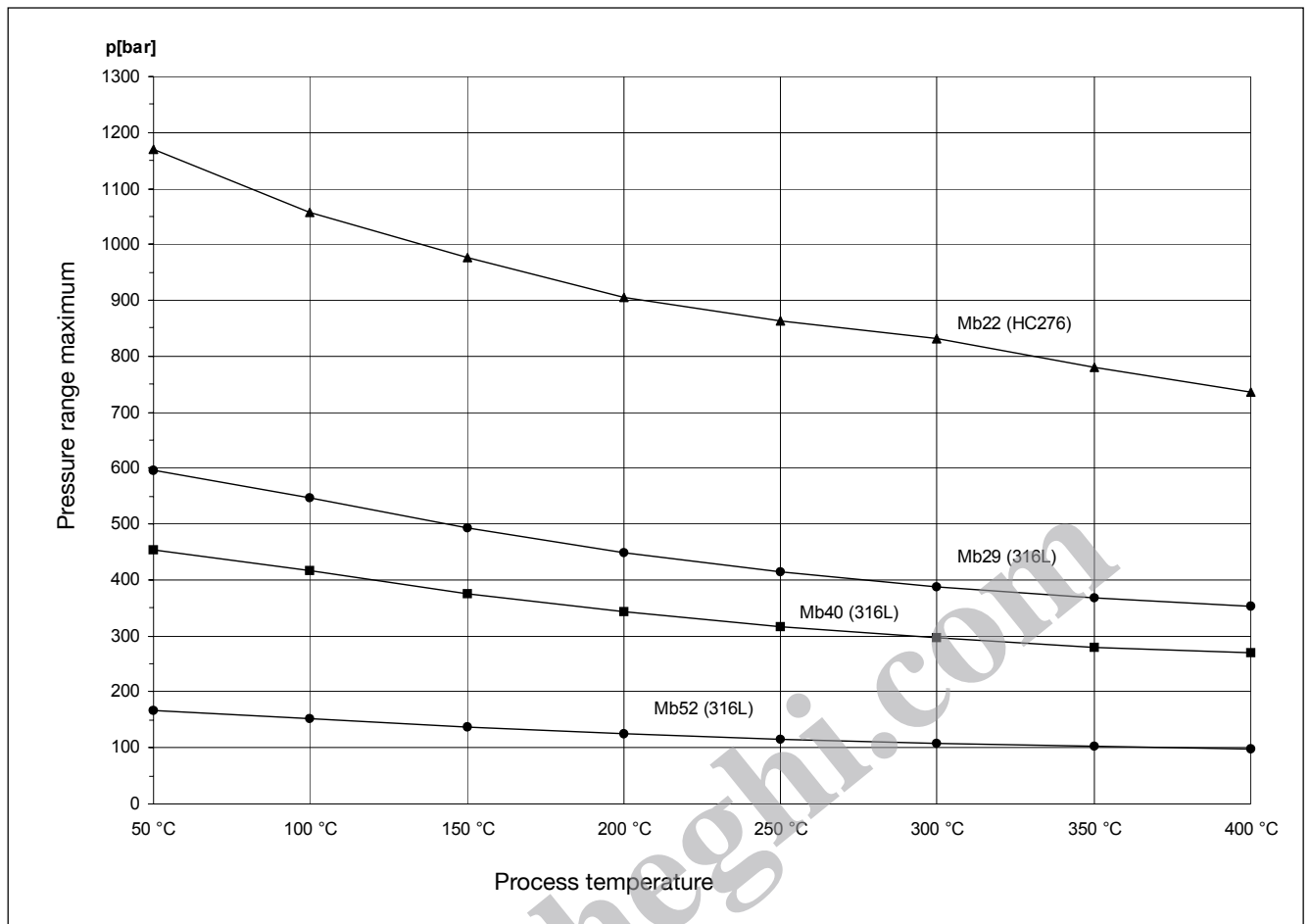
Pressure gauge Nominal size	Dimensions in mm			Weight in kg
	Mb	D	h	
NS 63	22	32	113	0.4
	29	40	116	0.5
	40	54	116	0.7
	52	64	114	0.9
NS 100	22	32	167	0.7
	29	40	170	0.8
	40	54	170	1.0
	52	64	168	1.2

Process connection G	Dimensions in mm H
G ½ (male)	20
G ½ (female)	19
G ¼ (male)	13
G ¼ (female)	13
½ NPT (male)	19
½ NPT (female)	15
¼ NPT (male)	13
¼ NPT (female)	11

Example for a diaphragm seal model 990.34 with direct mounted pressure gauge



Pressure-Temperature Rating



When process temperature > +200 °C, it has to be ensured that a suitable fill fluid is selected (see technical information IN 00.06).

When 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.

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
- 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	
Pressure gauge	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	
Model	232.50.63 232.50.100		232.50.63 232.50.100		232.50.63 232.50.100		23x.50/30.100 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	
Overpressure safety (optional)	-		-		2 x full scale value from 0 ... 100 bar		-	
Inductive alarm sensors (optional), suitable in zone 1 and zone 2 (Model 831)	-		-		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 / Fill fluid / Pressure gauge model / Process conditions as per questionnaire

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.

