

Technical Datasheet



All Stainless Steel Diaphragm type Pressure Gauge SG Series



Key Features

- Nominal diameter options of 100mm, 150mm
- Degree of protection IP55/IP65.
- All stainless steel construction as standard
- Hazardous area certification
- Blowout protection
- Ranges available between -1 bar to 25 bar
- Threaded or Flanged Process connection
- Safety level "S1"



Series Overview

The SG diaphragm type pressure gauge (code 3700***), is manufactured according to EN 837-3, offers customers a high quality and versatile solution for the measurement of low and medium pressure for any industrial application.

The selection of the quality material and the wide range of options available including the internal overpressure system and the flanged process connection, make this instrument suitable for liquid and gaseous media, also for aggressive environments and for any industrial application, when pressure measurements are needed.

Other products

Other products we can offer :

- All Stainless Steel Bourdon type pressure gauges
- Manifolds
- Capsule type Pressure Gauges



Product applications

The SG range is suitable for a wide range of applications in:

- Oil & Gas
- Chemical
- Petrochemical
- Refining
- Power
- Food Industry
- OEM

The choice of models available ensures suitability for use in:

- Corrosive atmospheres
- Resistant to chemical attack
- Hazardous Area
- Low & Medium & pressure application

How can we help you?

Delta Mobrey' offers fast, efficient and knowledgeable support when and where you need it. Please visit our website at www.delta-mobrey.com to find your local support centre or call us on:


+44 (0) 1252 729140

Technical Specification

Enclosure casing:	IP55 Protection for dry execution (optional IP67 is available upon request).
Pressure connection material:	Standard: AISI 316L stainless steel (other, see below)
Dials:	White aluminium with black graduation
Pointer	Aluminium
Pressure ranges:	Ranges according to EN 837-3, max pressure value 25 bar
Over pressure:	Standard over pressure 115% (Option up to 10 times fsv available for ranges Up to 2,5 bar)
Process connection:	Threaded 1/2 Gas (BSP), BSPT or NPT external or EN / ANSI Flange as Standard with blind threaded holes. For pass through holes on direct flanges see DIMENSIONS. Construction with Spacer with trough holes on bottom flange, available as SPECIAL REQUIREMENT
Finishing of Flanged Connection	Raised Face RF as standard (other on request according to the ranges)
Accuracy:	1.6 per EN 837:3
Ambient temperature:	-20 to +60 °C
Process temperature:	-20 to +100 °C all standard version and P.T.F.E. coated -20 to +150 °C with Viton gaskets option
Enclosure material:	Standard AISI304; Optional AISI316
Wetted parts material :	Standard AISI316L, AISI316L+ PTFE or exotic material on request
Windows material:	Tempered glass (Methacrylate when filled) Laminated safety glass
Movements material:	Stainless Steel
Scale angle	Standard: 270°C

Diaphragm type Pressure Gauge
Models: SG

Model
A dedicated 3700*** code is assigned to each pressure gauge with technical characteristics selected based on the options listed in the tables below

CONSTRUCTION TYPES
Diaphragm type Pressure Gauge
Standard SG for industrial application
ATEX certified Diaphragm type Pressure Gauge
ATEX service SG  II 2 G D

Gauge Diameter

CASE DIAMETERS
100mm (nominal 4")
150mm (nominal 6")

Range

Different units or special scales are available. Please contact our sales department for any clarification

	Range	Bar	Kg/cm ²	mBar
Vacuum Gauge	-1 to 0	√	√	
	-16 to 0			√
	-25 to 0			√
	-40 to 0			√
	-60 to 0			√
	-100 to 0			√
	-160 to 0			√
	-250 to 0			√
	-400 to 0			√
Compound Ranges	-1 to + 0.6	√	√	
	-1 to + 1.5	√	√	
	-1 to + 3	√	√	
	-1 to + 5	√	√	
	-1 to + 9	√	√	
	-1 to + 15	√	√	
	-1 to + 24	√	√	
Gauge Pressure Ranges	0 to 0.6	√	√	
	0 to 1	√	√	
	0 to 1.6	√	√	
	0 to 2.5	√	√	
	0 to 4	√	√	
	0 to 6	√	√	
	0 to 10	√	√	
	0 to 16	√	√	√
	0 to 25	√	√	√
	0 to 40			√
	0 to 60			√
	0 to 100			√
	0 to 160			√
	0 to 250			√
0 to 400			√	

Over Pressure

Note 1: Overrange protection 10 times fsv is applicable also for range 0 to 400 mbar, but Pmax will be limited to 2.5 bar.

Note 2: For overpressure above the limits of the internal device, please consider the external overpressure protector series OVP

OVERPRESSURE
Standard construction with 115 per cent of full scale deflection
Internal protection 10 times fsv for ranges 0 to 16 up to 0 to 250 mbar
Internal protection 5 times fsv for ranges above 0 to 400mbar

Mounting

CONNECTION POSITION
Bottom Connection, Direct

Fill

Filled construction is available only for ranges from range 0 to 250 mbar (no vacuum or compound)

FILLING FLUID
No Fill
Unfilled
Silicone

Process Connection

1/2-14 NPT External
G1/2B
Flange EN 1092 DN 15 or ANSI B 16.5 1/2"
Flange EN 1092 DN 20 or ANSI B 16.5 3/4"
Flange EN 1092 DN 25 or ANSI B 16.5 1"
Flange EN 1092 DN40 or ANSI B 16.5 -1/2"
Flange EN 1092 DN50 or ANSI B 16.5 2"

Flange Rating

150 lbs
300 lbs
PN 6
PN 10
PN 16
PN 25

Material of Wetted Parts

In the construction with diaphragm covered with exotic material, the base diaphragm is always in 316SS

FORESEEN MATERIALS
P.T.F.E. covered Diaphragm & Process connection
Monel 400 covered Diaphragm & Process connection
Stainless steel AISI 316L Diaphragm and 316L process connection
Hastelloy C276 covered Diaphragm & Process connection
Titanium covered Diaphragm & Process connection
Tantalum covered Diaphragm & Process connection
316SS Process connection, Diaphragm covered with P.T.F.E.
316SS Process connection, Diaphragm covered with Monel 400
316SS Process connection, Diaphragm covered with Hastelloy C276
316SS Process connection, Diaphragm covered with Titanium
316SS Process connection, Diaphragm covered with Tantalum
Non standard requirement, see ES details

Material of Gauge Case

100mm case & ring iAISI 304 stainless steel with glass window
100mm case & ring AISI 316 stainless steel with glass window
100mm case & ring AISI 304 stainless steel with laminated safety glass
100mm case & ring AISI 316 stainless steel with laminated safety glass
150mm case & ring AISI 304 stainless steel with glass window
150mm case & ring AISI 316 stainless steel with glass window
150mm case & ring AISI 304 stainless steel with laminated safety glass
150mm case & ring AISI 316 stainless steel with laminated safety glass

Options Available

No additional options required
Tag number printed on dial face
Stainless steel tag plate.
Serial number printed on dial face
Red mark on dial
Stainless steel tag plate and Red mark on dial
2" pipe mounting support Stainless steel AISI 304

Treatments Available

No additional treatment required
Tropicalised
Wetted parts prepared for Oxygen service.

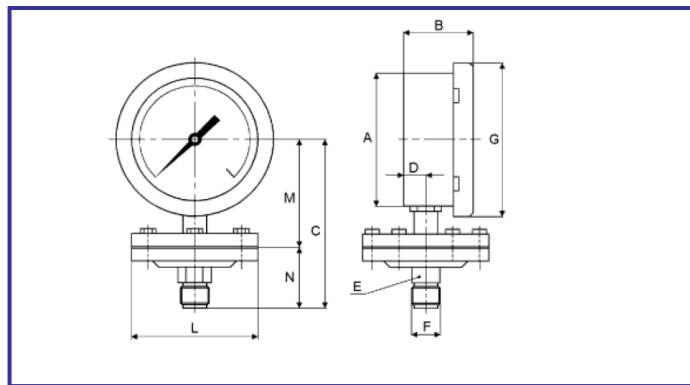
Special Requirements

Special requirements

Dimensions

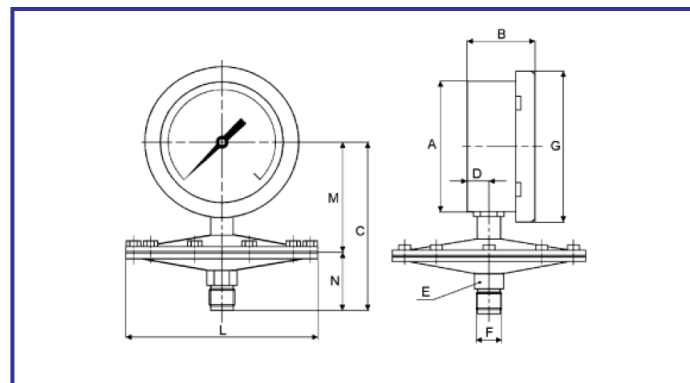
Pressure ranges between
0.6 and 25 bar

Threaded process connection



DN	A	B	C	D	E	F	G	H	I	L	M	N	Weight	
													No-fill	
100	103	50	132	15.5	22	1/2	118			95	88	44	1.40	
150	150	50	156	16.5	22	1/2	166			95	112	44	1.70	

Pressure ranges between
16 and 400 mbar



DN	A	B	C	D	E	F	G	H	I	L	M	N	Weight	
													No-fill	
100	103	50	142	15.5	22	1/2	118			95	93	49	1.55	
150	150	50	166	16.5	22	1/2	166			95	117	49	1.85	

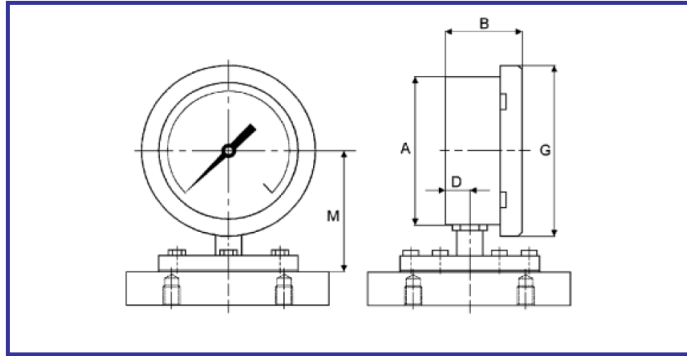
Dimensions

Blind threaded holes, Pressure ranges between 0.6 and 25 bar

Direct Flanges with pass through holes only for:

- **DN50 PN10/16/25**
- **DN80 PN6/10/16/25**
- **2" - 1/2 ANSI 150/300**

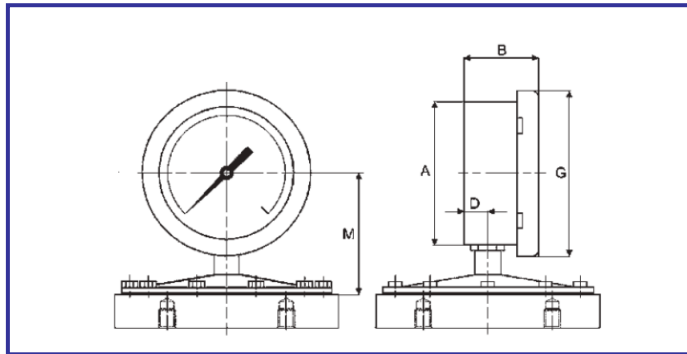
Flanged process connection



DN	A	B	C	D	E	F	G	H	I	L	M	N	Weight		
													No-fill		
100	103	50		16.5			118				88				
150	150	50		16.5			166				112				

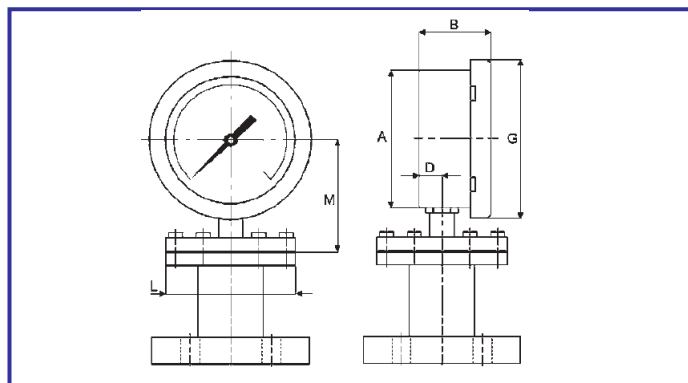
Blind threaded holes, Pressure ranges between 16 and 400 mbar

Direct Flanges with pass through holes not available for these ranges (see configuration below)



DN	A	B	C	D	E	F	G	H	I	L	M	N	Weight		
													No-fill		
100	103	50		16.5			118				93				
150	150	50		16.5			166				117				

Pass through holes with Spacer construction.



DN	A	B	C	D	E	F	G	H	I	L	M	N	RANGES
100	103	50		16.5			118			95	88		0.6-25 bar
150	150	50		16.5			166			95	112		0.6-25 bar
100	103	50		16.5			118			150	93		16-400 mbar
150	150	50		16.5			166			150	117		16-400 mbar

Approvals

EUROPEAN DIRECTIVE



Pressure Equipment Directive (PED) 2014/68/EU

Compliant to PED, Module A for static Pressure > 200 Bar, SEP for Static Pressure ≤200bar

ATEX Directive 2014/34/EU



CONSTRUCTION SAFETY— Technical file storage reference SGS21ATEX0095DR

Notified body for Technical storage file : SGS Fimko Oy, Helsinki, Finland, Notified Body No 0598

- Ex h IIC T6 Gb X
- Ex h IIIC T85°C Db X

UK REGULATION



Pressure Equipment (Safety) Regulation 2016

S.I. 2016 no. 1105, as amended, Module A for static Pressure > 200 Bar, SEP for Static Pressure ≤200bar

Equipment and Protective Systems Intended for use in Potentially

Explosive Atmospheres Regulation 2016



(S.I. 2016 No. 1107 as amended)

CONSTRUCTION SAFETY— Technical file storage reference BAS21UKEx0356TDR

Approved body for Technical storage file : SGS Baseefa Ltd, Buxton, United Kingdom, Approval Body No 1180

- Ex h IIC T6 Gb X
- Ex h IIIC T85°C Db X

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