Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Саранск (8342)22-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70 **Казахстан** +7(7172)727-132 **Киргизия** +996(312)96-26-47

www.delta-mobrey.nt-rt.ru | | dye@nt-rt.ru

Технические характеристики на манометры для измерения давления для использования в агрессивных средах, мембранные GS, AS, SG, GG, AG, CP компании Delta Mobrey

Technical **Datasheet**

delta-mobrey

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.

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

Other products

Other products we can offer :

• All Stainless Steel Bourdon type pressure gauges

• Manifolds

• Capsule type Pressure Gauges

Diaphragm type Pressure Gauge
Models: SG

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

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 ⟨Ex⟩ II 2 G D

Gauge Diameter

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

Diaphragm type Pressure Gauge
Models: SG

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

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

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

Mounting

CONNECTION POSITION
Bottom Connection, Direct

Fill

FILLING FLUID
No Fill
Unfilled
Silicone

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

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.

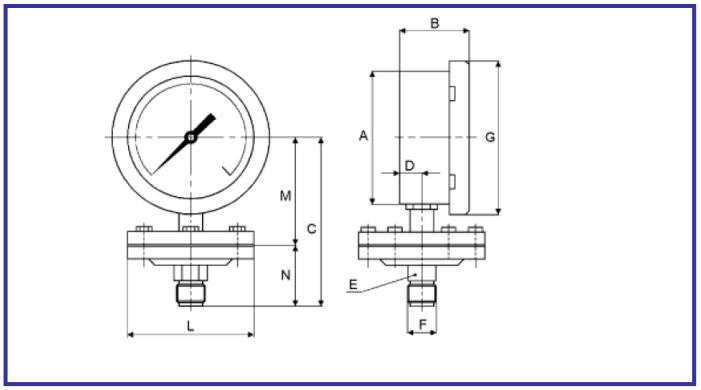
Special Requirements

Special requirements

Dimensions

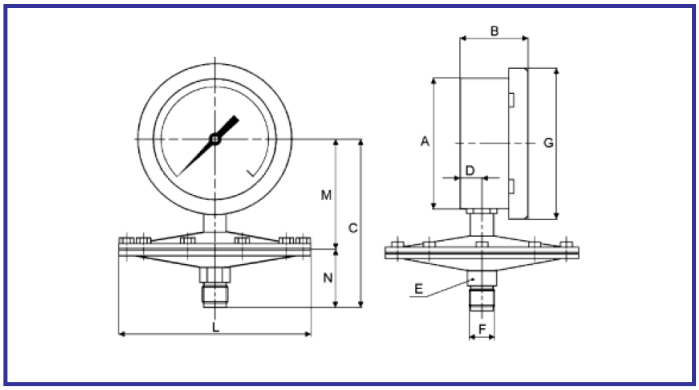
Threaded process connection

Pressure ranges between 0.6 and 25 bar



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

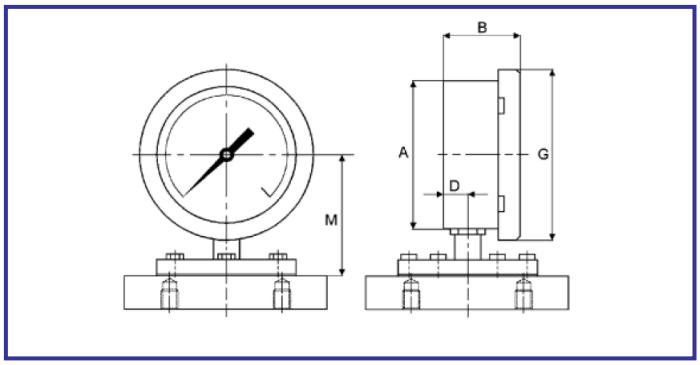
Dimensions

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**

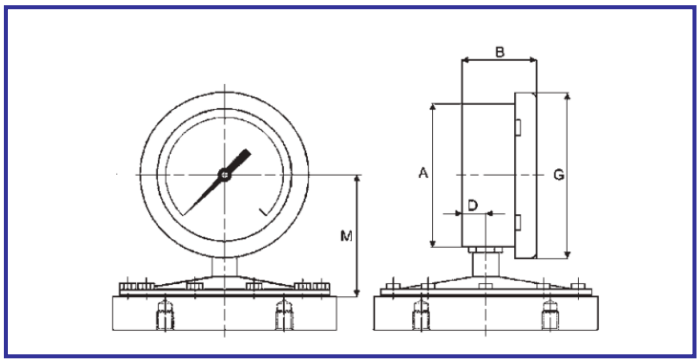
Flanged process connection



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		

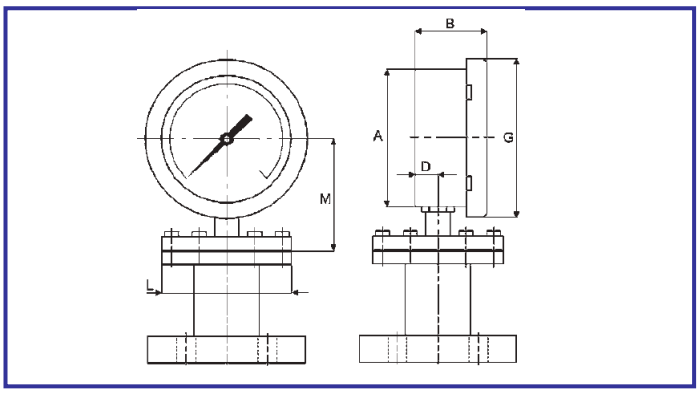
Blind threaded holes, Pressure ranges between 16 and 400 mbar

Direct Flanges with pass through holes <u>not available</u> 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

II 2GD

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

II 2GD

(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

Technical **Datasheet**

delta-mobrey

All Stainless Steel Solid Front Bourdon Type Pressure Gauge
GS Series

Key **Features**

- Nominal diameter options of 100mm and 150mm stainless steel case
- Degree of protection IP55/IP65
- Stainless steel enclosure as standard
- Hazardous area certification
- Blowout protection
- Ranges available up to 4000 bar
- Monel pressure connection, material and options available

Series **Overview**

The GS solid front safety pattern pressure gauges offers customers a cost- effective and reliable solution for applications in process control where safety level S3 according to EN 837-1 is required.
Safety is guaranteed by a protection baffle wall positioned between the pressure element assembly and the dial, and by a blow-out device made of a back plate which allows an eventual pressure vent from the casing.
Available with a wide variety of casing options and size, the GS pressure gauge can be used for a variety of applications when pressure measurements are needed.

Product **applications**

The GS range is suitable for a wide range of applications where a safety barrier & blow out back are required to give added safety:

- 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
- Medium and High Pressure application

Other products

Other products we can offer:

• All Stainless Steel Bourdon tube type pressure gauges

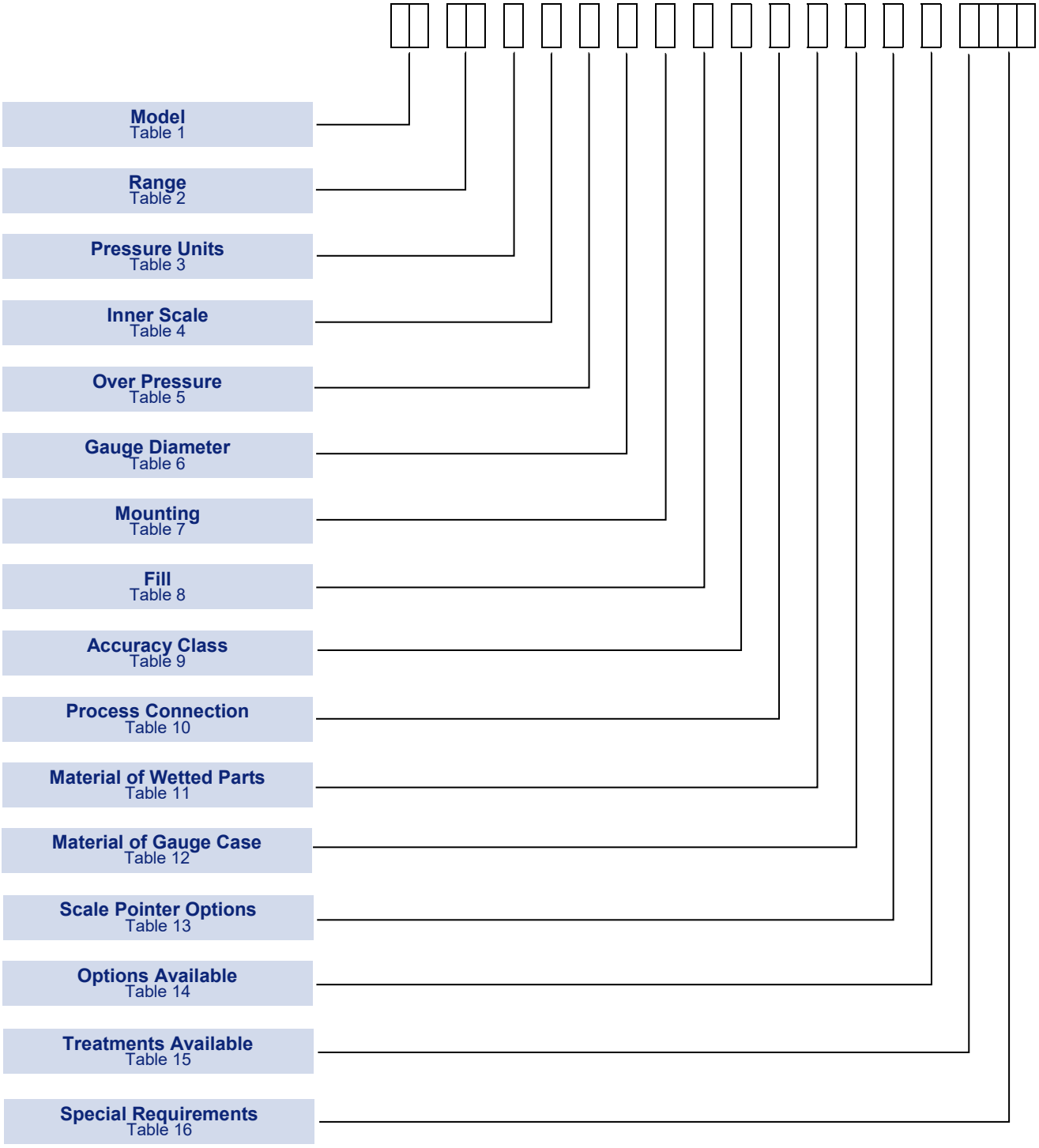
• Manifolds

• Diaphragm Pressure Gauges

Solid Front Bourdon type Pressure Gauges
Models: GS & AS

How to order

Gauges can be configured by selecting codes representing the desired features from the tables that follow. The chart below, describes how the model code is built up. For assistance in configuring a switch that best suits your needs, please contact your local sales office.



***NOTE**: Options shaded in the following tables are the most common options and are available on the quickest lead-times and at the lowest cost.*

***NOTE:** Only the most common options are shown in this data sheet. Should you require a feature that is not shown, please contact your local sales office for further details.*

Technical Specification

Enclosure casing:	IP55 Protection for dry execution IP67 Protection for filled execution
Pressure connection material:	AISI 316L stainless steel up to 1600 bar Ni-Span C (Fe Ni Cr Alloy) for scale values 2500 and 4000 bar Monel material available upon request
Dials:	White aluminium with black graduation (for dial modifications see available options - Table 14)
Pressure ranges:	Ranges according to EN 837-1,
Process connection:	G 1/2 B (1/2 Gas or BSP) or 1/2 -14 NPT External (1/2 NPT) thread for NS 100, 125 and 150 with ranges up to 1600 bar 9/16-18 UNF, 5/8-18 UNF or M16x 1.5 Female thread with tapered seal, for NS 100 and 150 with ranges 2500 and 4000bar
Accuracy:	Class 1.0 per EN 837·1:1998 Options ± 0.5 % and ± 0.6 % accuracy available on request
Ambient temperature:	-40 to +60 °C non fluid -20 to +60 °C glycerine filled execution -40 to +60 °C silicone fluid filled execution
Process temperature:	-40 to +250 °C non fluid -20 to +100 °C glycerine filled execution -40 to +120 °C silicone fluid filled execution Note: 80°C max operating temperature for glycerine filled instruments, 120°C for silicone fluid filled ones
Windows material:	Laminated safety glass Polycarbonate (phenolic case only)
Thermal drift	Change in instrument accuracy of 0.3% every 10°C
Scale angle	-270°C

Model

TABLE 1

ENCLOSURE TYPES	Code
Industrial Service Pressure Gauge	
100mm and 150 mm	**GS**
ATEX certified Industrial Service Pressure Gauge	
ATEX service pressure gauge - Other specification as GS ⟨Ex⟩ II 2 G D	**AS**

Range

TABLE 2

	Range	Bar	Kg/cm^2	MPa	KPa	PSI	inHg & PSI	Code
Vacuum Gauge	-1 to 0	√	√					A0
	-100 to 0				√			AA
	-30 to 0						√	AB
Compound Ranges	-1 to + 0.6	√	√					CF
	-1 to + 1.5	√	√					G3
	-1 to + 3	√	√					CG
	-1 to + 5	√	√					CH
	-1 to + 9	√	√					CI
	-1 to + 15	√	√					CJ
	-1 to + 24	√	√					CK
	-30 to +15						√	CL
	-30 to +30						√	CM
	-30 to +150						√	CN
	-100 to +150				√			GJ
	-100 to +300				√			CA
	-100 to +500				√			CD
	-100 to +900				√			CP
	-100 to +1500				√			CQ
	-100 to +2400				√			CR
Gauge Pressure Ranges	0 to 1	√	√					DA
	0 to 1.6	√	√					DB
	0 to 2.5	√	√					DC
	0 to 4	√	√					DD
	0 to 6	√	√	√				DE
	0 to 10	√	√	√				EA
	0 to 15					√		DK
	0 to 16	√	√	√				EB
	0 to 25	√	√	√				EC
	0 to 30					√		DP
	0 to 40	√	√	√				ED
	0 to 60	√	√	√		√		EE
	0 to 100	√	√	√	√	√		FA
	0 to 160	√	√	√	√	√		FB
	0 to 200					√		PF
	0 to 250	√	√	√	√			FC
	0 to 300					√		ER
	0 to 400	√	√	√	√	√		FD
	0 to 600	√	√		√	√		FE
	0 to 1000	√	√		√	√		GA
	0 to 1500					√		F6
	0 to 1600	√	√		√			GB
	0 to 2000					√		UB
	0 to 2500	√	√		√	√		GC
	0 to 3000					√		UF
	0 to 4000	√	√		√	√		V2
	0 to 5000					√		W2
	0 to 6000					√		W9
	0 to 10000					√		YF
	0 to 15000					√		YK
	0 to 20000					√		YP

Pressure Units

TABLE 3

	Code
Kg/cm^2	**B**
Vacuum inches Hg and pressure PSI	**C**
Bar	**H**
MPa	**I**
KPa	**J**
PSI	**P**
Other units available – consult the Delta Mobrey sales team	**TBA**

Inner Scale

TABLE 4

	Code
Inner Scale not required	**0**
Kg/cm^2	**B**
Vacuum inches Hg and pressure PSI	**C**
Bar	**H**
KPa	**J**
PSI	**P**
Other units available – consult the Delta Mobrey sales team	**TBA**

Over Pressure

TABLE 5

Note:

For code 2 and 3 high over pressure protector must be used.

	Code
130 per cent of full scale deflection up to 1600 bar ranges	**1**
160 per cent of full scale deflection up to 60 bar ranges	**2**
250 per cent of full scale deflection up to 60 bar ranges	**3**
Equal to full scale deflection (2500/4000 bar)	**0**

Gauge Diameter

TABLE 6

Note:

DN 125 (4 -$^1/_2$ “) Phenol case is not standard and is available only on request

	Code
100mm (nominal 4”) St. Steel case only	**4**
150mm (nominal 6”) St. Steel case only	**6**
125mm (nominal 4 -$^1/_2$ ”) phenolic case only	**5**

Mounting

TABLE 7

	Code
Bottom Connection, Direct	**A**
Bottom Connection, Surface, Case Mounting Plate	**B**

Fill

TABLE 8

	Code
No Fill	0
Glycerine	G
Silicone	S

Accuracy Class

TABLE 9

	Code
Class 1.0 (+/-1 percent of full scale deflection)	A
Class 1.6 (+/-1.6 per cent of full scale deflection)	B
Class 0.6 (+/-0.6 percent of full scale deflection for ranges 1600bar or less)	C
Class 0.6 (+/-0.6 percent of full scale deflection for ranges 2500 and 400 bar)	E
Class 0.5 (+/-0.5 percent of full scale deflection)	G

Process Connection

TABLE 10

	Code
Fitted with Chemical Seal which affects the accuracy of the instruments.	9
High Pressure 5/8-18 UNF	F
High Pressure M16 x 1.5	G
1/2-14 NPT External	J
G1/2B	K

Material of Wetted Parts

TABLE 11

	Code
NACE AISI 316L St. St. wetted parts	K
Monel Bourdon tube and process connection also suitable NACE MR.01.75	M
Stainless steel AISI 316Ti Bourdon tube and 316L process connection. (For ranges 2500 / 4000 bar, 2500 / 4000 kg/cm2, 250 / 400 Mpa material is Ni-Span C (Fe Ni Cr alloy)	S

Material of Gauge Case

TABLE 12

	Code
Gauge nominal diameter 100 or 150mm diameter - Case and ring in AISI 304 stainless steel with laminated safety glass window	0
Gauge nominal diameter 100mm (4inch), case and ring with bayonet bezel in AISI 316 stainless steel with laminated safety glass window	1
Gauge nominal diameter 150mm (6inch), case and ring with bayonet bezel in AISI 316 stainless steel with laminated safety glass window	2
Gauge nominal diameter 125mm (5inch), phenolic case with methacrylate window	5
Gauge nominal diameter 125mm (5inch), phenolic case with laminated safety glass window	6

Scale Pointer Options

TABLE 13

	Code
Standard only no options this model	0
Elastic pointer stop in case of sudden return to zero	5

Options Available

TABLE 14

	Code
No additional options required	0
Tag number printed on dial face Stainless Steel casing	1
Stainless steel tag plate	4
Serial number printed on dial face Stainless Steel casing	5
Stainless steel tag plate and Red mark on dial	9
Writings on dial	A
Stainless steel tag plate and Stainless steel (AISI304) 2" pipe mounting	B

Treatments Available

TABLE 15

	Code
No additional treatment required	0
Tropicalised	1
Wetted parts prepared for Oxygen service	4

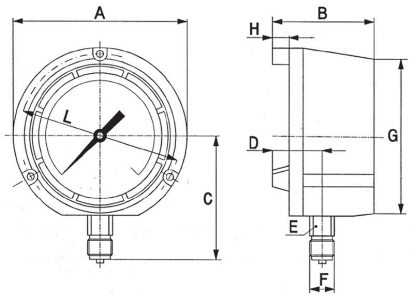
Special Requirements

TABLE 16

	Code
Special requirements	XXX

Type of Mounting
Table 7

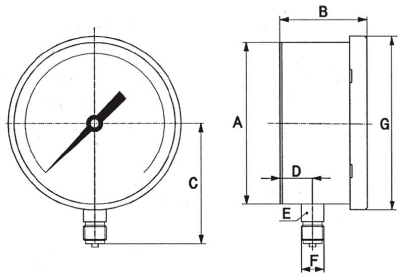
Code A



Bottom Connection, Surface, Case Mounting Plate

DN	A	B	C	D	E	F	G	H	L	Hole Ø at 120°	Weight	
											No-fill	Filled
125	148	86	103	42	22	1/2	129	14	137	6	1,00	1,50

Code B



Bottom Connection, Direct

DN	A	B	C	D	E	F	G	H	L	Hole Ø at 120°	Weight	
											No-fill	Filled
100	100	50	90	16	22	1/2	112				0,70	1,04
150	151	52	114	16	22	1/2	166				1,15	2,02

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

II 2GD

- 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

II 2GD

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

Technical **Datasheet**

Industrial Service Pressure Gauge
GG Range

Key **Features**

- Nominal diameter options of 63mm, 100mm, 150mm, 200mm and 250mm
- Degree of protection IP55/IP65
- Stainless steel enclosure as standard
- Blowout protection
- Ranges available between -1 bar to 1000 bar
- Monel pressure connection, material and options available

Product **applications**

The GG 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

Series **Overview**

- The GG pressure gauge offers customers a cost effective and accurate solution to their individual process requirements.
- Available with a wide variety of casing options and size, the GG pressure gauge can be used for a variety of applications when pressure measurements are needed.

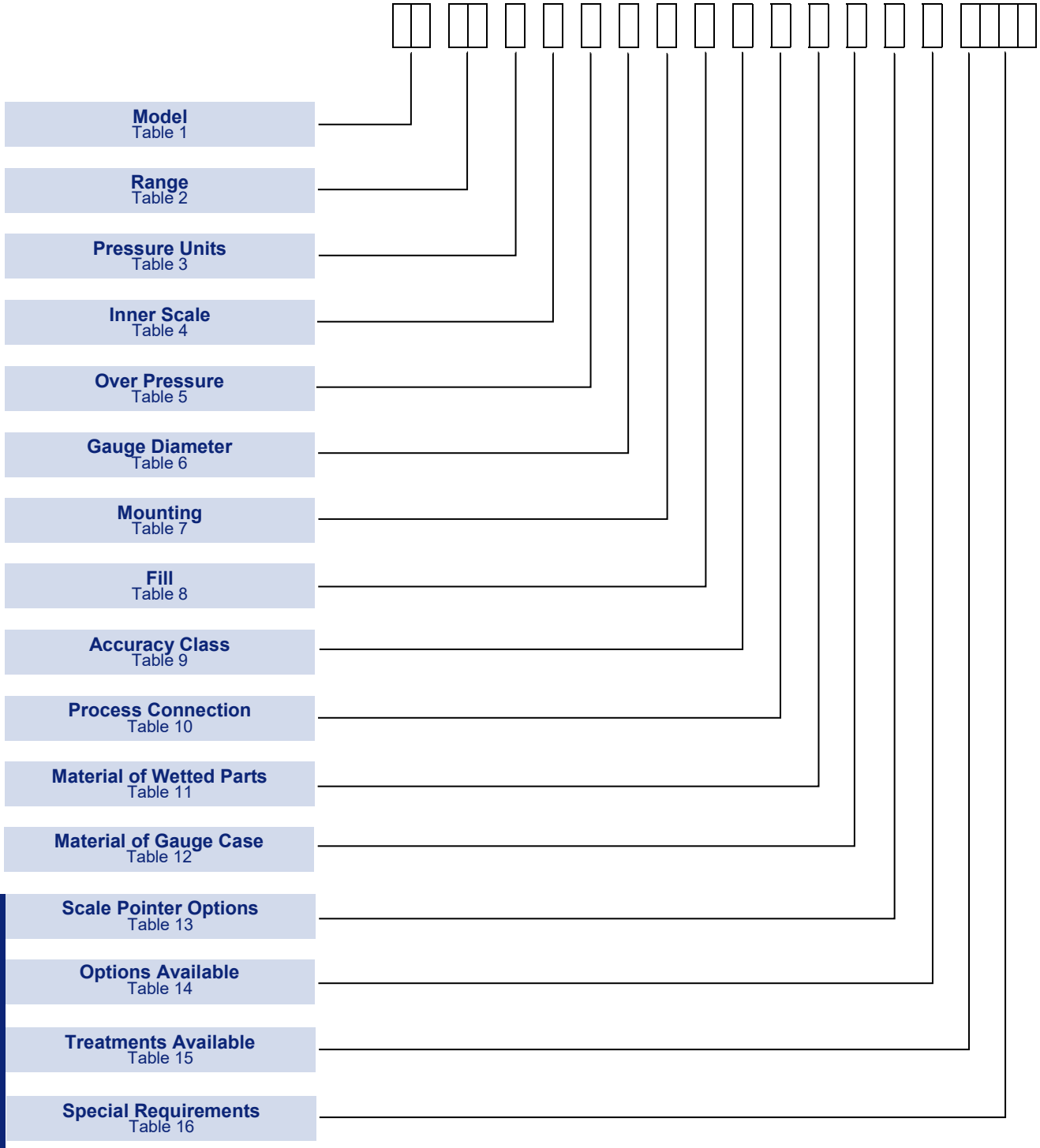
Other products in the series include:

- Solid Front Safety Pattern: Model GS
- Diaphragm Pressure Gauges: Model SG

Industrial Service Gauge
Models: GG & AG

How to order

Gauges can be configured by selecting codes representing the desired features from the tables that follow. The chart below, describes how the model code is built up. For assistance in configuring a switch that best suits your needs, please contact your local sales office.



***NOTE**: Options shaded in the following tables are the most common options and are available on the quickest lead-times and at the lowest cost.*

***NOTE:** Only the most common options are shown in this data sheet. Should you require a feature that is not shown, please contact your local sales office for further details.*

Technical Specification

Enclosure casing:	IP55 Protection for dry execution (optional IP67 is available upon request. IP67 Protection for filled execution
Pressure connection material:	AISI 316 stainless steel (special material available upon request)
Dials:	White aluminium with black graduation
Pressure ranges:	Ranges according to EN 837-1, max pressure value 1600 bar
Over pressure:	Standard over pressure 130% (Option 160% and 250% over pressure for size 100&150mm up to nominal range 40 bar)
Process connection:	Model GG (63mm): 1/4" Gas(BSP), BSPT or NP (Special sizes available upon request) Model GG (100, 150, 200 and 250mm):1/2 Gas (BSP), BSPT or NPT (Special sizes available upon request)
Process connection:	Rc 1/4 (BSP), 1/4 NPT Internal, 1/2 NPT Internal, 1/2 NPT External
Accuracy:	Model GG (63mm): 1.6 per EN 837·1:1998 Model GG (100, 150, 200, 250mm): 1.0 per EN 837·1:1998 Options with 0.5% and 0.6% accuracy available on request (NS 63 excluded)
Ambient temperature:	-40 to +60 °C non fluid and silicone fluid filled execution -20 to +60 °C glycerine filled execution
Process temperature:	-40 to +250 °C non fluid -20 to +100 °C glycerine filled execution -40 to +120 °C silicone fluid filled execution
Windows material:	Tempered glass for 63mm, 100mm and 150mm Methacrylate for 200mm and 250 mm Laminated safety glass

Model

TABLE 1

ENCLOSURE TYPES	Code
Industrial Service Pressure Gauge	
63mm, 100mm, 150mm, 200mm and 250 mm	**GG**
ATEX certified Industrial Service Pressure Gauge	
ATEX service pressure gauge - Other specification as GG Ex II 2 G D	**AG**

Range

TABLE 2

	Range	Bar	Kg/cm^2	MPa	KPa	PSI	inHg & PSI	Code
Vacuum Gauge	-1 to 0	√	√					A0
	-30 to 0				√			AA
	-100 to 0						√	AB
Compound Ranges	-1 to + 0.6	√	√					CF
	-1 to + 1.5	√	√					G3
	-1 to + 3	√	√					CG
	-1 to + 5	√	√					CH
	-1 to + 9	√	√					CI
	-1 to + 15	√	√					CJ
	-1 to + 24	√	√					CK
	-30 to +15						√	CL
	-30 to +30						√	CM
	-30 to +150						√	CN
	-100 to +300				√			CA
	-100 to +500				√			CD
	-100 to +150				√			GJ
	-100 to +900				√			CP
	-100 to +1500				√			CQ
	-100 to +2400				√			CR
Gauge Pressure Ranges	0 to 0.6	√	√					CE
	0 to 2.5	√	√					DC
	0 to 4	√	√					DD
	0 to 6	√	√	√				DE
	0 to 10	√	√	√				EA
	0 to 15					√		DK
	0 to 16	√	√	√				EB
	0 to 25	√	√	√				EC
	0 to 30					√		DP
	0 to 40	√	√	√				ED
	0 to 60	√	√	√	√	√		EE
	0 to 100	√	√	√	√	√		FA
	0 to 160	√	√	√	√	√		FB
	0 to 200					√		PF
	0 to 250	√	√		√			FC
	0 to 300					√		ER
	0 to 400	√	√		√	√		FD
	0 to 600	√	√		√	√		FE
	0 to 1000	√	√		√	√		GA
	0 to 1500					√		F6
	0 to 2000					√		UB
	0 to 2500				√			GC
	0 to 3000					√		UF
	0 to 4000				√	√		V2
	0 to 5000					√		W2
	0 to 6000					√		W9
	0 to 10000					√		YF
	0 to 15000					√		YK

Pressure Units

TABLE 3

	Code
Kg/cm^2	**B**
Vacuum inches Hg and pressure PSI	**C**
Bar	**H**
MPa	**I**
KPa	**J**
m H2O	**M**
PSI	**P**
mm Hg	**V**

Inner Scale

TABLE 4

	Code
Inner Scale not required	**0**
Kg/cm^2	**B**
Vacuum inches Hg and pressure PSI	**C**
Bar	**H**
MPa	**I**
KPa	**J**
PSI	**P**
Other units available – consult the Delta Mobrey sales team	**TBA**

Over Pressure

TABLE 5

Optional: Higher Over Pressure up to 160% and 250% available with 100mm and 150mm for ranges up to 40bar

	Code
130 per cent of full scale deflection	**1**

Gauge Diameter

TABLE 6

Case diameter 200 and 250 are also available. Please consult Delta Mobrey sales team.

	Code
63mm (nominal 2.5”) – (Inner scale not available in this size)	**2**
100mm (nominal 4”)	**4**
150mm (nominal 6”)	**6**

Mounting

TABLE 7

	Code
Bottom Connection, Direct	**A**
Bottom Connection, Surface, Case Mounting Plate	**B**
Lower Back Connection, Direct	**D**
Lower Back Connection, Flush, Cover Mounting Plate	**F**
Lower Back Connection, Flush, Cover Mounting Bracket	**H**

Fill

TABLE 8

	Code
No Fill	**0**
Unfilled	**E**
Glycerine	**G**
Silicone	**S**

Accuracy Class

TABLE 9

	Code
1.0 PER EN837·1:1998, Only available with DN>100	**A**
1.6 PER EN837·1:1998, Only available with DN63	**B**
Class 0.6 (+/-0.6 per cent of full scale deflection) (for BS and ANSI +/-0.5 per cent of full scale deflection). Gauge nominal diameters 100mm (4inch) and 150mm (6inch).	**E**

Process Connection

TABLE 10

	Code
Fitted with Chemical Seal which aftects the accuracy of the instruments	**9**
R1/4	**B**
1/2-14 NPT External	**J**
G1/2B	**K**
G1/4B	**L**
M20 X 1.5	**M**
1/4-18 NPT External	**S**
Non standard	**X**

Material of Wetted Parts

TABLE 11

	Code
NACE AISI 316L St. St. wetted parts	**K**
Monel Bourdon tube and process connection also suitable NACE MR.01.75 (Sour service) applications	**M**
Stainless steel AISI 316Ti Bourdon tube and 316L process connection	**S**
Non standard requirement, see ES details	**X**

Material of Gauge Case

TABLE 12

	Code
63 mm case and ring in AISI 304 stainless steel fitted with laminated safety glass	0
63 mm case and ring in AISI 316 stainless steel fitted with laminated safety glass	1
63 mm case and ring in AISI 304 stainless steel fitted with Methacrylate window	2
63 mm case and ring in AISI 316 stainless steel fitted with Methacrylate window	3
63 mm case and ring in AISI 304 stainless steel fitted with glass window	4
63 mm case and ring in AISI 316 stainless steel fitted with glass window	5
100 mm case and ring in AISI 304 stainless steel fitted with glass window	A
100 mm case and ring in AISI 316 stainless steel fitted with glass window	B
100 mm case and ring in AISI 304 stainless steel fitted with laminated safety glass	C
100 mm case and ring in AISI 316 stainless steel fitted with laminated safety glass	D
150 mm case and ring in AISI 304 stainless steel fitted with glass window	E
150 mm case and ring in AISI 316 stainless steel fitted with glass window	F
150 mm case and ring in AISI 304 stainless steel fitted with laminated safety glass	G
150 mm case and ring in AISI 316 stainless steel fitted with laminated safety glass	H
Non standard requirement	X

Scale Pointer Options

TABLE 13

	Code
Aluminium, micrometer adjustment without fill, no adjustment for filled cases (however can be adjusted after removing the fill) and no adjustment for NS63	0
Non standard requirement	X

Options Available

TABLE 14

	Code
No additional options required	0
Tag number printed on dial face	1
Stainless steel tag plate.	4
Serial number printed on dial face	5
Red mark on dial	8
Stainless steel tag plate and Red mark on dial	9
2” pipe mounting support Stainless steel AISI 304	C

Treatments Available

TABLE 15

	Code
No additional treatment required	0
Tropicalised	1
Wetted parts prepared for oxygen service.	4

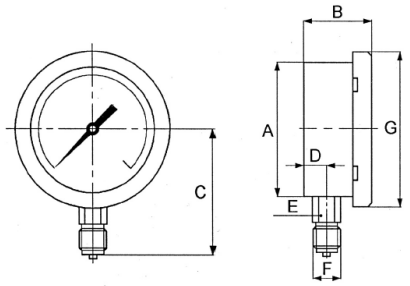
Special Requirements

TABLE 16

	Code
Special requirements	XXX

Type of Mounting
Table 7

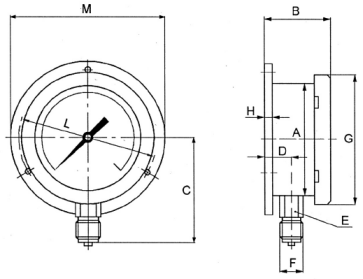
Code A



Bottom Connection, Direct

DN	A	B	C	D	E	F	G	H	I	L	M	N	Hole Ø at 120°	Weight	
														No-fill	Filled
63	62	32	56	10	14	1/4	69							0,16	0,23
100	100	49	90	15	22	1/2	112							0,57	0,91
150	151	49	114	15	22	1/2	166							0,92	1,79
200	202	51	144	15	17	1/2	216							1,32	
250	248	56	168	15	17	1/2	262							1,78	

Code B

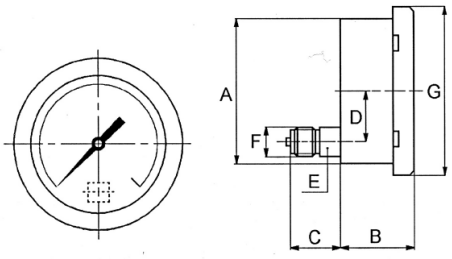


Bottom Connection, Surface, Case Mounting Plate

DN	A	B	C	D	E	F	G	H	I	L	M	N	Hole Ø at 120°	Weight	
														No-fill	Filled
100	100	49	90	15	22	1/2	111	1		116	132		5	0,62	0,96
150	151	56	114	22	22	1/2	166	7		178	192		5	1,16	2,03
200	202	60	144	24	17	1/2	216	9		220	240		6,5	1,92	
250	248	58	168	17	17	1/2	262	2		276	290		7	2,82	

Type of Mounting
Table 7

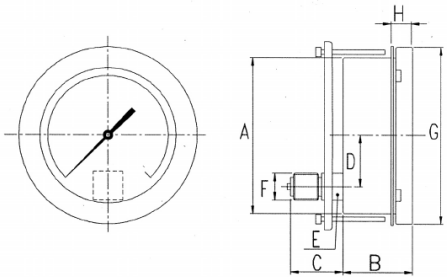
Code D



Lower Back Connection, Direct

DN	A	B	C	D	E	F	G	H	I	L	M	N	Hole Ø at 120°	Weight	
														No-fill	Filled
63	62	31	23	0	14	1/4	69							0,16	0,96
100	100	50	35,5	28	22	1/2	110							0,51	0,85
150	150	50	35,5	33	17	1/2	166							0,98	1,82

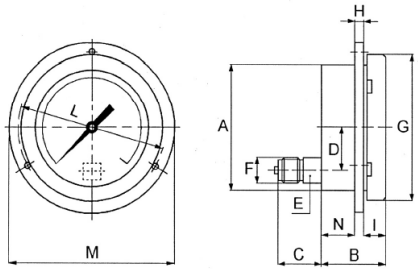
Code H



Lower Back Connection, Flush, Cover Mounting Bracket

DN	A	B	C	D	E	F	G	H	I	L	M	N	Hole Ø at 120°	Weight	
														No-fill	Filled
63	62	31	23	0	14	1/4	69	12						0,19	0,26
100	100	50	35,5	28	22	1/2	110	15						0,58	0,92

Code F



Lower Back Connection, Flush, Cover Mounting Plate

DN	A	B	C	D	E	F	G	H	I	L	M	N	Hole Ø at 120°	Weight	
														No-fill	Filled
63	64	31	23	0	14	1/4	69	2,5	12	75	84	16,5	3,6	0,18	0,25
100	100	50	35,5	28	22	1/2	110	3	16	116	134	31	5	0,56	0,90
150	150	50	35,5	33	17	1/2	166	7	19	178	192	27	5	1,04	1,88

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

Technical **Datasheet**

Capsule type Pressure Gauges
CP Series

Key **Features**

- Nominal Diameter of 100 & 150 mm
- Degree of Protection IP55 / IP67
- Stainless Steel construction as standard
- Hazardous area certification
- Blowout Protection
- Ranges available see page 2

Series Overview

The CP capsule type pressure gauges (code 3700***) are manufactured according to EN 837-3 with case and wetted parts, in stainless steel and are suitable for clean process fluid. For this reason, they are particularly suitable for installation in aggressive and corrosive environments, very common in the process industry. The optional 316 stainless steel case & ring, also make the instrument suitable for off shore installations.
The sensing element is a capsule that expands under pressure, transfering the movement to the pointer trough high precision stainless steel movements.
Due to the sensitivity of this type of sensing element, overpressures are not permitted. For this reason it is suggested to select the scale with the operating pressure between 1/10 to 2/3 of fsv.

Product applications

The CP range is suitable to meet the requirements of OEM manufacturers of :

- Burners & furnace
- Air & exhaust gasses treatment system
- Low pressure systems air & gas system

The choice of models available ensures suitability for use in:

- Corrosive atmospheres
- Resistant to chemical attack
- Hazardous areas

Other products

Other products we can offer :

• All stainless steel bourdon tube type pressure gauges

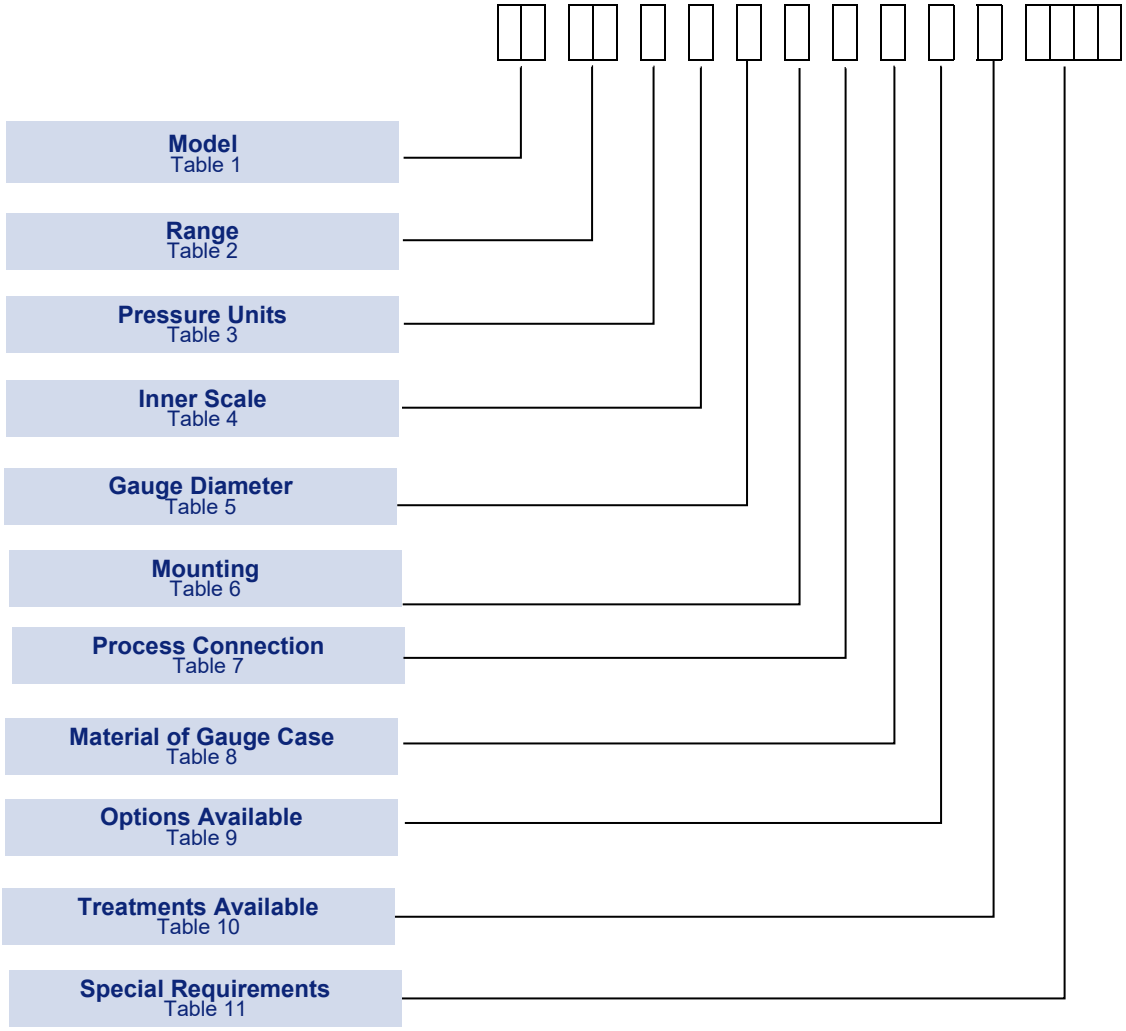
• Manifolds

• Diaphragm pressure gauges: Model SG

Capsule type Pressure Gauge
Series: CP

How to order

Gauges can be configured by selecting codes representing the desired features from the tables that follow. The chart below, describes how the model code is built up. For assistance in configuring a switch that best suits your needs, please contact your local sales office.



***NOTE**: Options shaded in the following tables are the most common options and are available on the quickest lead-times and at the lowest cost.*

***NOTE:** Only the most common options are shown in this data sheet. Should you require a feature that is not shown, please contact your local sales office for further details.*

***NOTE:** Instruments are identified with the below codification and a unique part umber 37xxxx for each combination of selection and options.*

Technical Specification

Enclosure casing:	IP55 Protection for dry execution (optional IP67 casing not fillable, is available
Pressure connection material:	AISI 316 stainless steel
Dials:	White Aluminium with black graduation on 270 °
Pointer:	Aluminium pointer
Pressure ranges:	Pressure, vacuum and compound ranges according to EN 837-3, max pressure value 400 mbar
Overpressure :	Not permitted
Casing :	Enclosure case and ring in AISI 304 stainless steel with bayonet bezel Optional 316 stainless steel
Window material :	Glass or Safety glass
Blow out :	Upper rubber cap
Process connection material:	316L stainless steel
Capsule material :	316 L stainless steel
Internal movement material:	Stainless Steel
Process connection:	Rc 1/4 (BSP), 1/4 NPT Internal, 1/2 NPT Internal, 1/2 NPT External
Accuracy:	1.6 per EN 837·3
Ambient temperature:	-10 to +50 °C
Process temperature:	-10 to +120 °C

Model

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

ENCLOSURE TYPES
Capsule type Pressure Gauge
Standard CP for industrial application
ATEX certified Industrial Service Pressure Gauge
ATEX service CP ⟨Ex⟩ 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	mBar
Vacuum Gauge	-0.6 to 0	
	-1 to 0	
	-1.6 to 0	
	-2.5 to 0	
	-4 to 0	
	-6 to 0	√
	-10 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	√
Gauge Pressure Ranges	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	√
Compound ranges	Available on request	

Pressure Units

SCALES AVAILABLE
inches H_2O
mBar
KPa
mmH_2O

Mounting

Bottom Connection, Direct
Bottom Connection, Surface, Case Mounting Plate
Central Back Connection, Direct
Central Back Connection, Flush, Cover Mounting Plate

Process Connection

R1/4
1/2-14 NPT External
G1/2B
G1/4B
M20 X 1.5
1/4-18 NPT External
Non standard

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

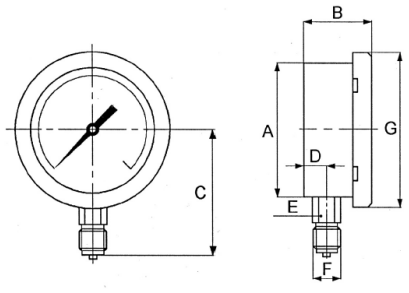
No additional treatment required
Tropicalised
Wetted parts prepared for oxygen service.

Special Requirements

Special requirements

Type of Mounting

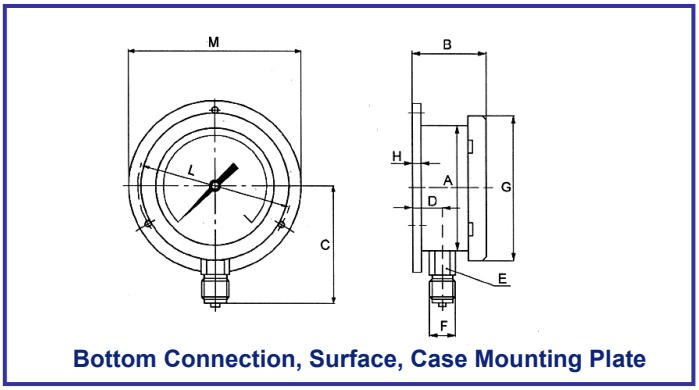
Code A



Bottom Connection, Direct

DN	A	B	C	D	E	F	G	H	I	L	M	N	Hole Ø at 120°	Weight No-fill
100	103	50	92	16.5	22	1/2	118							0,51
150	150	50	116	16.5	22	1/2	166							0,78

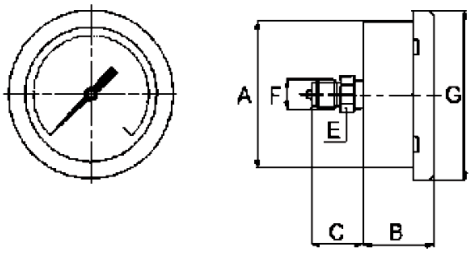
Code B



Bottom Connection, Surface, Case Mounting Plate

DN	A	B	C	D	E	F	G	H	I	L	M	N	Hole Ø at 120°	Weight No-fill
100	103	57	92	23.5	22	1/2	118	7		126	140		5	0,64
150	150	57	116	23.5	22	1/2	166	7		178	192		5	1,02

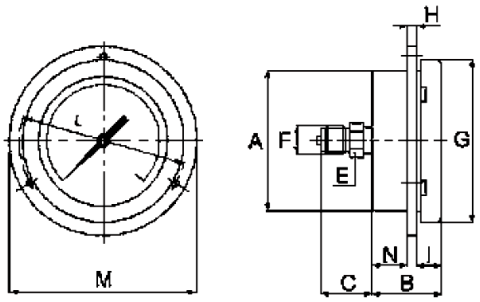
Code D



Central Rear Connection, Direct

DN	A	B	C	D	E	F	G	H	I	L	M	N	Hole Ø at 120°	Weight No-fill
100	103	50	38		22	1/2	118							0,51
150	150	50	38		22	1/2	166							0,78

Code F



Central Rear Connection, Flush, Cover Mounting Plate

DN	A	B	C	D	E	F	G	H	I	L	M	N	Hole Ø at 120°	Weight No-fill
100	103	50	38		22	1/2	118	7	19	126	140	24	5	0,60
150	150	50	38		22	1/2	166	7	19	178	192	24	5	0.91

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

II 2GD

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

II 2GD

(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

Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Саранск (8342)22-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70 **Казахстан** +7(7172)727-132 **Киргизия** +996(312)96-26-47

www.delta-mobrey.nt-rt.ru | | dye@nt-rt.ru