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

How can we **help you?**

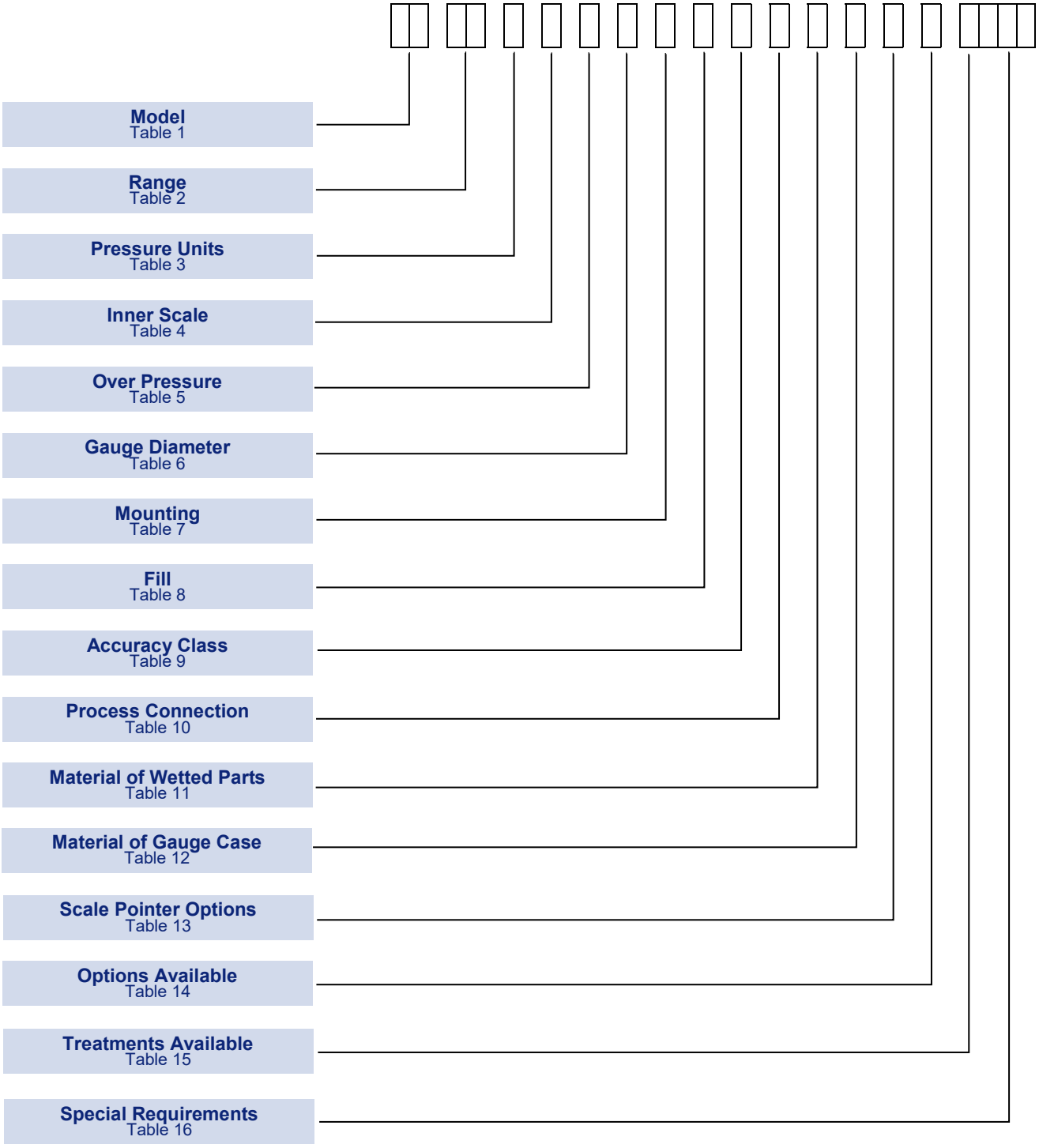
Delta Mobrey offers fast, efficient and knowledgeable support when and where you need it. Please visit our website at www.delta-mobrey.com to find your local support centre or call us on:

+44 (0) 1252 729140

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

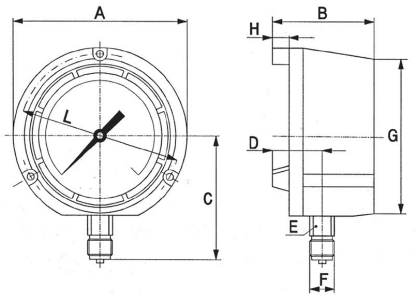
Special Requirements

TABLE 16

	Code
Special requirements	XXX

Type of Mounting
Table 7

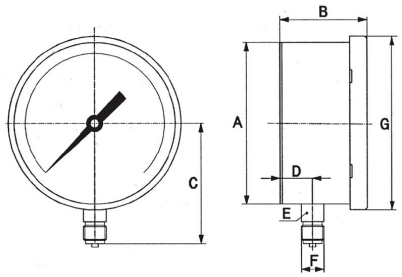
Code A



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

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