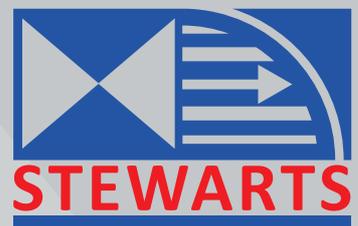
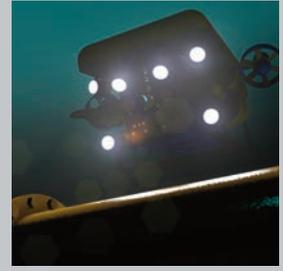


## SUBSEA Gauges



**Stewart-Buchanan Gauges Ltd**

**AN EMPLOYEE-OWNED COMPANY**



# About Us

At Stewart-Buchanan Gauges, we are a company that likes to stay one step ahead. Our commitment to innovation has led to an enviable reputation as a manufacturer of market-leading, technically advanced products. This reputation has enabled us to grow in highly competitive markets across Europe and around the world.

Founded in Glasgow in the 1870's, we have thrived over our long history because we put our customers at the heart of everything we do. As an employee-owned company, our workforce is dedicated to manufacturing products of the highest quality to meet or even exceed the needs of our customers.

We employ over 120 people at our 4,000 square metre production facility located near Glasgow, Scotland. The plant is home to state-of-the-art machinery, including the Manufacturing Resource Planning system (MRP II), 3D design and CNC machines, enabling us to use the very latest manufacturing techniques.

## VISION STATEMENT

An employee owned company responding to customer demands while setting the standards for Safety, Quality and Reliability.

## MISSION STATEMENT

To recognize and exceed customer expectations. To build a strong ownership culture to create sustainable employment and the opportunity for each employee to contribute and succeed.

## WE DESIGN & MANUFACTURE:

- Pressure Gauges
- Temperature Gauges
- High Pressure Needle & Ball Valves
- Needle Valve & Ball Valve Manifolds
- Monoflanges & OS&Y Monoflanges
- Double Block & Bleed Valves
- Injection Valves
- Sampling Valves
- Distribution Manifolds & Instrumentation
- Panel & Instrument Assemblies/Enclosures

## MAIN MARKETS

Our main markets include, but are not limited to:

- Oil and Petrochemical
- Gas and Compressed Air
- Power Generation
- Original Equipment Manufacturers (OEM)
- Food and Beverage
- Hydraulic
- Heating and Ventilation
- Test and Inspection
- Manufacturing Process

# MODELS - 3010, 3011, 3012



## SUBSEA Pressure Gauges

Standard Hyperbaric test 1.1 x Design Depth Pressure.

### APPLICATIONS

Specially developed to meet the need for gauges working at great depths under the sea and in Hyperbaric conditions. Measures the true pressure of the system with reference to sea level atmospheric pressure where the gauge case is sealed. Reinforced case prevents ambient pressure affecting the inlet pressure reading.

### STANDARD SPECIFICATION

SUBSEA Gauge (protected against complete, continuous submersion in water to IP68)

#### Sizes

63, 100 and 150 mm

#### Case/ Bezel

AlSI 316 Stainless Steel (Also available in Monel) (Manufactured from a solid billet). Pressure tight for depths up to 1,000 ft (300 mtr) of water.

**Special gauges can be manufactured for depths up to 10,000 ft (3,000 mtr) of water on 100mm (4") gauges only.**  
Liquid filled (recommended)

#### Socket & Element

316 Stainless Steel (Also available in Monel see **Optional Extras**)

#### Movement

Stainless Steel Construction

#### Dial

Anodised Aluminium

Gauges can be supplied with either White lettering on Black background (non glare) or Black lettering on White background (Please state preference)  
**bespoke colours and designs are available upon request.**

#### Pointer

Black Aluminium

#### Window

Toughened glass on 1000ft 63 & 100mm gauges

Acrylic on 1000ft 150mm gauge & 4000,5000 & 10000ft 100mm gauges.

#### Traceability

All instruments are individually calibrated and have an unique Serial Number on Dial.

#### Certification available on request

- Certificate of Conformity Traceable to National Standards
- Group Certification (Pressure Test Calibration Statement)
- Point to Point Test Certificate
- BS EN 10204 3.1 Material Certification

#### Installation instructions

Refer to EN 837-2 and our **Guidance On Use of Equipment** data sheet.

#### Accuracy class

	ACCURACY CLASS EN837-1 (Optional)			Higher Pressure
	0 - 600 bar	>600 - 1600 bar	>1600 - 2500 bar	
63mm	1.0	1.6 *	N/A	
100mm	1.0 (0.6)	1.0	1.6	
150mm	1.0 (0.6)	1.0	1.6	

0.5% Accuracy on request (Consult Sales)

Higher Ranges on request (Consult Sales)

#### Over-pressure

0 - 100 bar	>100 - 600 bar	>600 - 1600 bar	>1600 - 2500 bar
1.25 x FSD	1.15 x FSD	1.10 x FSD	1.10 x FSD

#### Scale Range

##### Rear Connect

Vacuum to 1,400 bar (20,000 psi) on 63mm gauge

Vacuum to 3,000 bar (45,000 psi) on 100 & 150mm gauges

##### Bottom Connect

Vacuum to 700 bar (10,000 psi) on 63mm gauge

Vacuum to 700 bar (10,000 psi) on 100 & 150mm gauges

#### Pressure Connection Thread

1/8", 1/4", 3/8", 1/2" NPT, BSP, BSPT (See High Pressure Options)

MAX PRESSURE EN 837-1			
THREAD EN837	NPT (316ss / Monel)	BSP (316ss / Monel)	BSPT (316ss / Monel)
1/8"	400 bar	400 bar	400 bar
1/4"	1000 bar	1000 bar	1000 bar
3/8"	1000 bar	1000 bar	1000 bar
1/2"	1000 bar	1600 bar	1000 bar

**Ordering Parameters, Please state the following: SIZE, MODEL NO, SCALE RANGE, CONNECTION, PRESSURE MEDIUM & OPTIONAL EXTRAS**

DATA SHEET REF: SUBSEA-REV01-15

**Specifications and dimensions in this leaflet, are subject to change without prior notice.**

**Dry, Liquid Fillable or Pre-Filled. VIBRAGAUGE® Option also available. VIBRAGAUGE® for Dampening of vibration & pulsation without liquid filling. With liquid-filled case for applications with high dynamic Pressure pulsations or vibration.**

Model-3012 Flush Mounted Screw Fixing (Rear Connection)



Model-3010 Direct Mounted (Bottom Connection)  
Model-3011 Surface Mounted (Bottom Connection)  
Model-3012 Flush Mounted Screw Fixing (Rear Connection)

**See Page-2 for dimension**

#### Operating Temperature Range EN837

-20° to 60°C (-4°F to 140°F) without loss of accuracy.

**Options for lower/higher operating ranges (Contact Sales)**

#### Temperature Error

Additional error when temperature changes from reference

Temperature of 20°C (68°F) ±0.4% for every 10°C (18°F) rising or Falling % of span

#### Optional Extras

- Optional dial materials & Custom markings
- Monel according to ISO 15156 / NACE MR-01-75 wetted parts
- Other pressure connections (Including high pressure)
- Orifice Restrictor Screw (standard Ø0.9mm, Ø0.4mm on request)
- Customer logo printed on dial
- Liquid filled / Suitable for liquid filling
- Nitelitegag® (See data sheet)
- Vibragaug® (See data sheet)
- Gauge over-pressure up to 130% of FSD

**Further options on request**

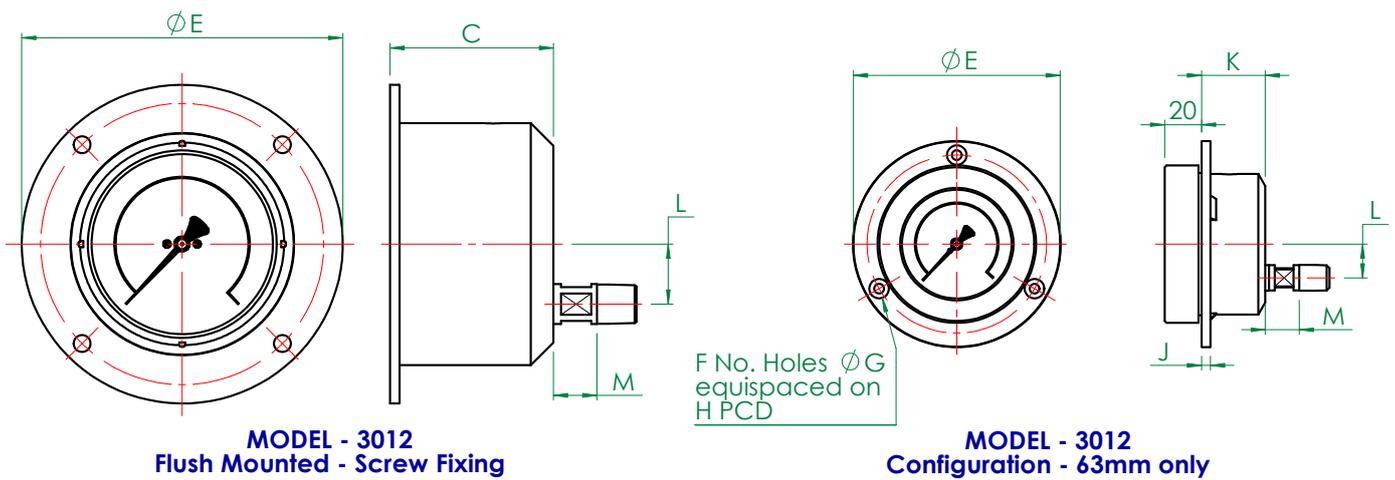
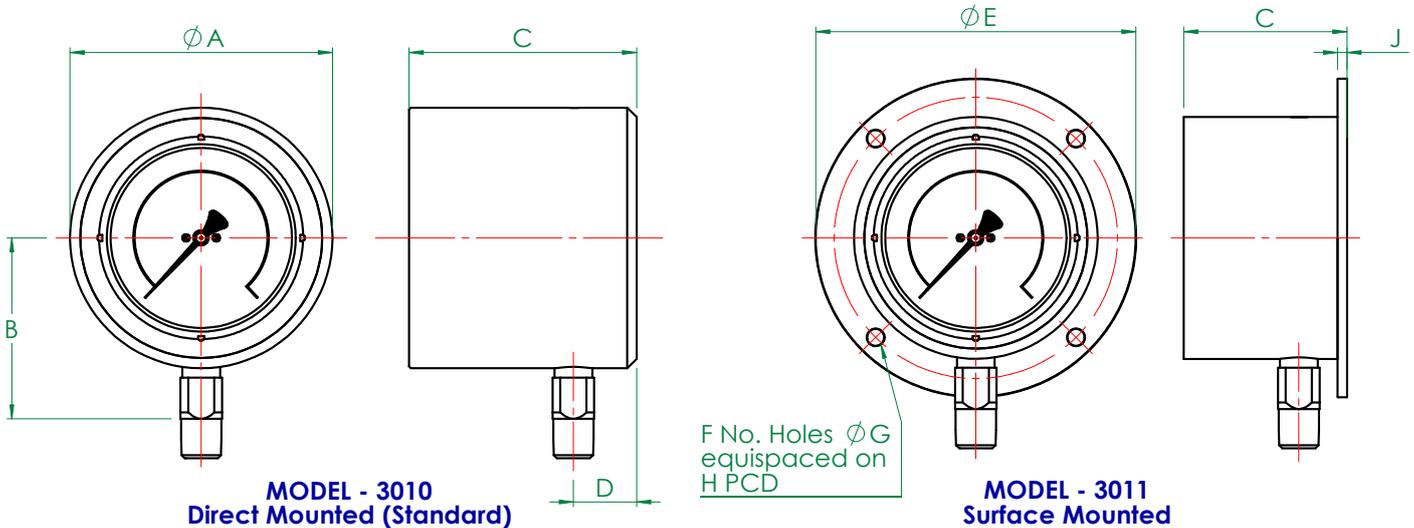
**\* Gauges can be Recalibrated (Please return to manufacturer)**

#### High Pressure Options Available

GAUGE	HIGH PRESSURE THREAD OPTIONS (Up to 2500 bar)					
	TUBE MP (Up to 20 ksi)			TUBE HP (Up to 36 ksi)		
	1/4"	3/8"	9/16"	1/4"	3/8"	9/16"
63mm	M	M				
100mm	M/F	M/F	M	M/F	M	M
150mm	M/F	M/F	M	M/F	M	M

# MODELS - 3010, 3011, 3012

## SUBSEA Pressure Gauges



DEPTH	General Arrangement Dimensions in mm, tol' $\pm 1$ mm													
	Dim	A	B	C	D	E	F (No.)	G	H	J	K	L	M	PANEL CUTOUT
1000ft/300m	2.5" (63mm)	84	50	53.3	19	110	3	5.2 (CSK)	95	4.75	34	18	18	80
	4" (100mm)	129	91.3	86.5	25.5	170	4	9	150	5	N/A	32	23	133
	6" (150mm)	178	116	134.5	33.5	240	4	10.5	208	10	N/A	32	23	185
4000ft/1,200m	4" (100mm)	129	91.3	105.5	33.5	170	4	9	150	5	N/A	32	23	133
5000ft/1,500m	4" (100mm)	132	92.8	105.5	33.5	170	4	9	150	5	N/A	32	23	136
10,000ft/3,000m	4" (100mm)	139	96.5	120.9	33.9	180	4	9	160	5	N/A	32	23	143

## STEWART-BUCHANAN GAUGES LTD

Sales Office & Manufacturing Facility - 7 Garrell Road, Burnside Industrial Estate, Kilsyth, Glasgow G65 9JX, SCOTLAND  
 Tel: +44 (0)1236 821533 | Fax: +44 (0)1236 824090 | E-mail: sales@stewarts-group.com | Web: stewarts-group.com



## Differential, Chemical-Seals & Thermometers

In addition to the 3000 series pressure gauges, at Stewart-Buchanan we further compliment the SUBSEA range with various other types of instrumentation. In catering for the needs of the subsea sector, Stewart-Buchanan are continuing to further develop products for full submersion use at various depths with increased options on standard specifications and customisable specials.

*For further details and to discuss your requirements with one of our team please contact our sales department.*

**SUBSEA  
Differential**



**SUBSEA  
Thermometer**



**SUBSEA  
Chemical-Seal**



### **Pressure & Chemical-Seal Gauges**

EN837 Calibration,  
PER 97/23/EC  
Standard Hyperbaric test 1.1 × Depth Pressure @ 10,000 Ft  
Optional (FAT to ISO 10423 Annex F.1.11)  
Optional (Hyperbaric to ISO 13628 Amex L)

### **Thermometers**

EN13190 Calibration  
PER 97/23/EC  
Standard Hyperbaric test 1.1 × Depth Pressure @ 10,000 Ft  
*Please note:- Should be used with a Thermowell*





### PRESSURE TEST CERTIFICATE

Customer	Stewart Buchanan Gauges Ltd		
Address	Burnside Ind Estate Kilsyth G65 9JX		
Tel No	01236 821533	Fax No	
Customer Order No	Pro Forma	Contact Name	I Carson

Product Tested	Differential Pressure Gauge Max Depth 500 Mtr range -10 / +10 Bar s/no: 14941974/1		
Test Authority	Macartney UK Ltd		
Date of Test	13/02/2015		
Test Required	Hyperbaric		
Depth / Pressure	50 Bar	Duration	60 min
Cycles / Sequence	One		
Result	Pass		
Test Medium	Freshwater	Temperature (°C)	Ambient
References	Pressure Transmitter Serial No 082655124, Calibration Cert No 548787.		
Comments			

Authorised Signature	M Mckessar	<i>M MCKESSAR</i>	Date	13/02/2015
----------------------	------------	-------------------	------	------------

Job No	UKP1508848	Certificate No	3940	Date	13/02/2015
--------	------------	----------------	------	------	------------



### PRESSURE TEST CERTIFICATE

Customer	Stewart-Buchanan Gauges Limited		
Address	Stewart-Buchanan Gauges Limited Burnside Industrial Estate Kilsyth Glasgow G65 9JX		
Tel No	01236 821533	Fax No	01236 824090
Customer Order No	10804482-1	Contact Name	Ian Carson

Product Tested	1 off Glycerine Filled Pressure Gauge serial no 10940468 / 1		
Test Authority	Macartney UK Ltd		
Date of Test	16-12-10		
Test Required	Hydrostatic		
Depth / Pressure	336 Bar	Duration	80Min
Cycles / Sequence	169 Bar 15 min 336 Bar 80 min 169 Bar 15 min		
Result	Passed		
Test Medium	Freshwater	Temperature (°C)	Ambient
References	AB PTM Pressure Transmitter Serial No 082655124, Calibration Cert No 548787.		
Comments	Gauge live tested during pressure test see purchase order 10804482-1 for details		

Authorised Signature	Keith Moir	Date	16-12-2010
----------------------	------------	------	------------

Job No	UKP1002279	Certificate No	1962	Date	16-12-2010
--------	------------	----------------	------	------	------------



### PRESSURE TEST CERTIFICATE

Customer	Stewart Buchanan Gauges Ltd		
Address	Stewart Buchanan Gauges Ltd Rodney Sinnott Burnside Industrial Estate Kilsyth Glasgow G65 9JX		
Tel No	01236 821533	Fax No	01236 824090
Customer Order No	13903305-2	Contact Name	Ian Carson

Product Tested	10000 Ft Subsea Chemical Seal Gauge 0-12000 PSI/BAR s/n 13922246/1		
Test Authority	Macartney UK Ltd		
Date of Test	24/09/13		
Test Required	Hydrostatic		
Depth / Pressure	330 Bar	Duration	4 Hours
Cycles / Sequence	1		
Result	Passed		
Test Medium	Freshwater	Temperature (°C)	Ambient
References	AB PTM Pressure Transmitter Serial No 082655124.		
Comments	Gauge live tested during pressure test 200 Cycles 0-800 Bar 1 x Cycle 828 Bar and hold for 15 min		

Authorised Signature	Keith Moir	<i>Keith Moir</i>	Date	24/09/13
----------------------	------------	-------------------	------	----------

Job No	UKP1305966	Certificate No	3516	Date	24/09/13
--------	------------	----------------	------	------	----------



### PRESSURE TEST CERTIFICATE

Customer	Stewart Buchanan Gauges Ltd		
Address	Stewart Buchanan Gauges Ltd Rodney Sinnott Burnside Industrial Estate Kilsyth Glasgow G65 9JX		
Tel No	01236 821533	Fax No	01236 824090
Customer Order No	13904272-1	Contact Name	Ian Carson

Product Tested	Subsea Thermometer S/No: 13933780/1		
Test Authority	Macartney UK Ltd		
Date of Test	22/11/13		
Test Required	Hydrostatic		
Depth / Pressure	337 Bar	Duration	1 Hour
Cycles / Sequence	1		
Result	Passed		
Test Medium	Freshwater	Temperature (°C)	Ambient
References	AB PTM Pressure Transmitter Serial No 082655124.		
Comments	Live camera test of gauge.		

Authorised Signature	Keith Moir	<i>Keith Moir</i>	Date	22/11/13
----------------------	------------	-------------------	------	----------

Job No	UKP1306703	Certificate No	3575	Date	22/11/13
--------	------------	----------------	------	------	----------

# SUBSEA Compensated Stainless Steel Pressure Gauges



Showing the STEWARTS Aegis-Guard

The **STEWARTS** range of compensated subsea pressure gauges have a 100% filled case that has a special compensation device, allowing the internals of the case to be pressurized equal to the external ambient pressure as the gauge is submerged to depth. The benefit of this method is that as the internal and external pressure remain in balance, there is no need for a pressure proof case, allowing our 8000 series compensated gauges to work at your deepest depth applications.

Conventional (zero ref = 1 atm) subsea pressure gauges rely on the strength of the case and window to withstand the external pressure of the water.

A conventional (zero ref = 1 atm) subsea gauge will compare the subsea reading to atmospheric or gauge pressure at the surface (i.e. the zero point equals 1 atmosphere or approximately 1 bar absolute). However, the compensated gauge will compare the subsea reading with the local ambient pressure at depth with the zero point being equal to the ambient pressure. Provided the system being measured is also affected by this increase in ambient pressure then the gauge reading will be correct. However, if the system pressure is not affected by the increase in ambient pressure, the gauge will start to read increasingly low as the depth increases.

## Unique features

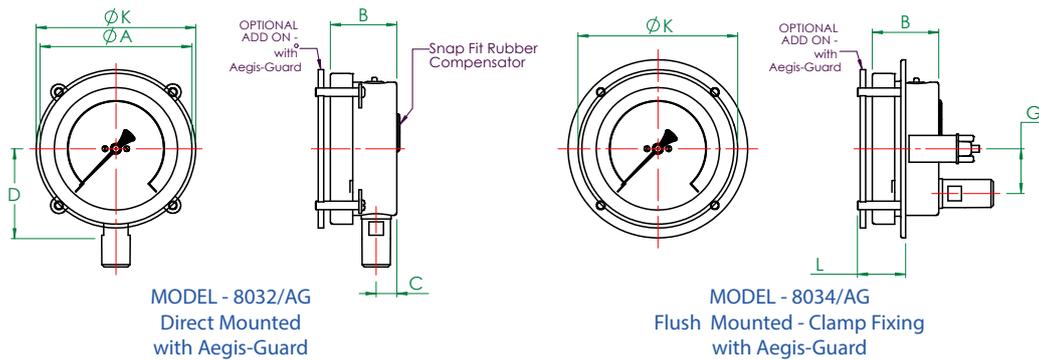
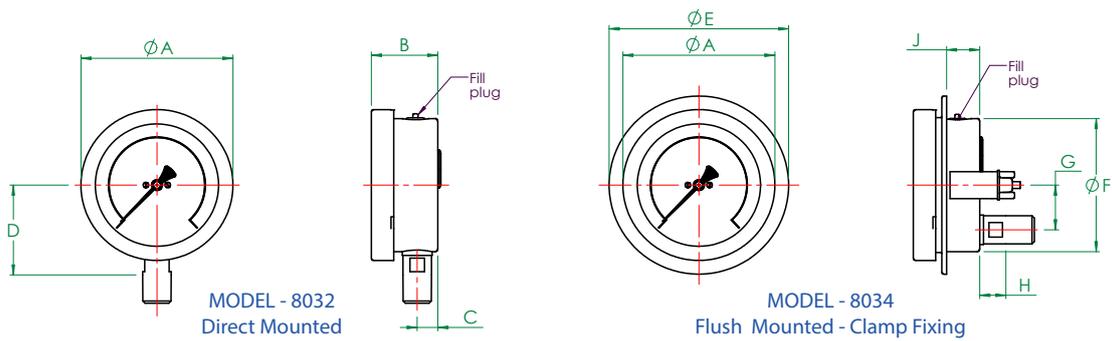
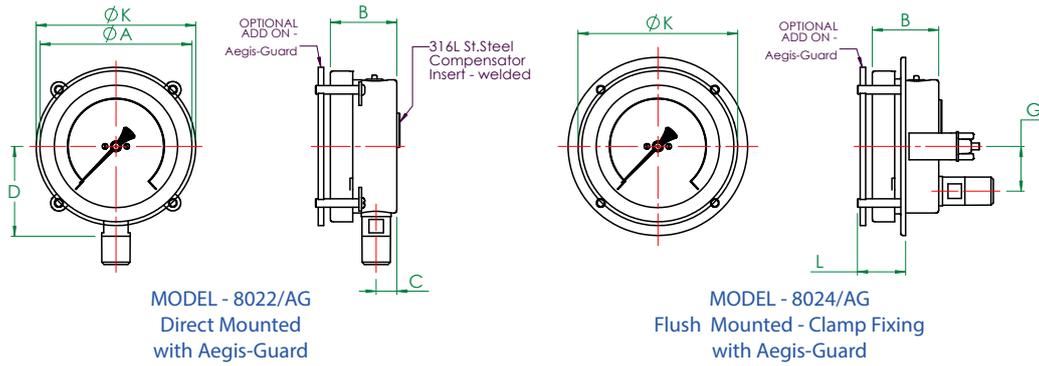
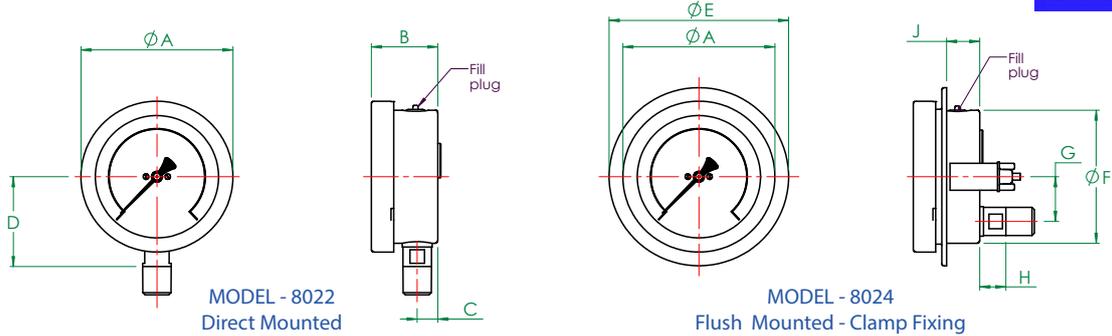
- We offer two types of compensation. Our unique welded stainless steel diaphragm (for durability) (8022/8024) & the conventional Nitrile rubber diaphragm (8032/8034).
- Robust 316 Stainless Steel Case/ Bezel / Flange / Socket & Element, (Bead blasted non reflective bezel and flange) removable bezel design allows repair or recalibration.
- STEWARTS has also developed a exclusive Aegis-Guard (Acrylic) which will offer protection to the gauge in the event of external contact. This will aid in protection against subsea construction and remediation applications when using subsea tooling or ROV's. The cover can be replaced manually if damaged, mitigating the need to replace an entire gauge.

*For further details and to discuss your requirements with one of our team members please contact our sales department.*

## STEWART-BUCHANAN GAUGES LTD

Sales Office & Manufacturing Facility - 7 Garrell Road, Burnside Industrial Estate, Kilsyth, Glasgow G65 9JX, SCOTLAND  
Tel: +44 (0)1236 821533 | Fax: +44 (0)1236 824090 | E-mail: sales@stewarts-group.com | Web: stewarts-group.com





General Arrangement Dimensions in mm, tol' ± 1mm												
	A	B	C	D	E	F	G	H	J	K	L	CUT OUT
(63mm) 2½ (Inches)	68.4 (2.7)	37.5 (1.5)	16.3 (0.64)	45.2 (1.8)	85.2 (3.35)	62 (2.4)	18 (0.71)	18.8 (0.74)	21.5 (0.85)	75 (2.95)	28 (1.1)	66 (2.6)
(100mm) 4 (Inches)	112.2 (4.4)	49 (1.9)	15.2 (0.60)	66.9 (2.6)	132.5 (5.22)	99 (3.9)	33.3 (1.31)	19.3 (0.76)	24.6 (0.97)	117.8 (4.64)	35.5 (1.4)	106 (4.17)
(115mm) 4½ (Inches)	129 (5.1)	49.2 (1.94)	15.5 (0.61)	74.8 (2.94)	160 (6.3)	114.8 (4.5)	33.3 (1.31)	19.3 (0.76)	26 (1.02)	150.5 (5.93)	37.2 (1.46)	122 (4.8)

# MODELS - 8022, 8024



## Welded Stainless Steel Diaphragm Compensated SUBSEA Stainless Steel Pressure Gauges

### APPLICATIONS

Pressure gauges with volume compensating diaphragm; developed to compensate systems that are affected by ambient pressure during submersion and to indicate the system pressure during subsea operations at depth. The compensated gauge 'red zone' indicates that depth (ambient) pressure is greater than that of the system in order to avoid negative (crushing) forces on more delicate components

### STANDARD SPECIFICATION

Design to EN 837-1.  
100% Pure Glycerin filled with no expansion bubble  
Welded, hermetically sealed, socket

### Compensating Device

**STEWARTS unique welded stainless steel diaphragm – for robustness and durability**

### Sizes

63mm (2½"), 100mm (4") and 115mm (4½")

### Case/ Bezel / Flange / Socket & Element

316 Stainless Steel (Bead blasted non reflective bezel and flange)  
Removable bezel design allows repair or recalibration

### Movement

Precision Stainless Steel Construction

### Dial

Anodised Aluminium  
All gauges supplied as white lettering on black background as standard (Non Glare), bespoke colours and designs are available upon request

### Pointer

White Painted Aluminium

### Window

Acrylic

### Traceability

All instruments are individually calibrated with a unique serial number on dial.

### Certification available on request

- Certificate of Conformity Traceable to National Standards
- Group Certification (Pressure Test Calibration Statement)
- Point to Point Test Certificate
- BS EN 10204 3.1 Material Certification

### Installation instructions

Refer to EN 837-2 and our [Guidance On Use of Equipment](#) data sheet.

### Accuracy class

	ACCURACY CLASS		Higher Pressure
	0 - 600 bar 0-8702 psi	>600 - 1600 bar >8702-23206 psi	>1600 - 2500 bar >23206-36259 psi
63mm (2½")	1.0	1.6 *	N/A
100mm (4")	1.0 (0.6)	1.0	1.6
115mm (4½")	1.0 (0.6)	1.0	1.6

0.5% Accuracy on request (Consult Sales)  
Higher Ranges on request (Consult Sales)

### Over-pressure

0-100 bar 0-1450 psi	>100-600 bar >1450-8702 psi	>600-1600 bar >8702-23206 psi	>1600-2500 bar >23206-36259 psi
1.25 x FSD	1.15 x FSD	1.10 x FSD	1.10 x FSD

### Scale Range

Vacuum / Compound to -1 to 0 to -1 to 24 bar  
63mm (2½") gauge 0 to 1400 bar \*  
100mm (4") & 115mm (4½") gauges 0 to 2500 bar  
Or other equivalent units of pressure or vacuum  
PED 2014/68/EU, GAS Group.1 <1000 bar, GAS Group.2 <3000 bar

### Pressure Connection Thread

⅛", ¼", ⅜", ½" NPT, BSP, BSPT (See High Pressure Options)

MAX PRESSURE EN 837-1			
THREAD EN837	NPT (316ss / Monel)	BSP (316ss / Monel)	BSPT (316ss / Monel)
⅛"	400 bar (5801 psi)	400 bar (5801 psi)	400 bar (5801 psi)
¼"	1000 bar (14504 psi)	1000 bar (14504 psi)	1000 bar (14504 psi)
⅜"	1000 bar (14504 psi)	1000 bar (14504 psi)	1000 bar (14504 psi)
½"	1000 bar (14504 psi)	1600 bar (23206 psi)	1000 bar (14504 psi)

**Ordering Parameters, Please state the following:** SIZE, MODEL NO, SCALE RANGE, CONNECTION, PRESSURE MEDIUM & OPTIONAL EXTRAS

DATA SHEET REF: COMPSUBSEA-REV01-15

**Specifications and dimensions in this leaflet, are subject to change without prior notice.**



Model-8022 Direct Mounted (Bottom Connection)  
Model-8024 Flush Mounted Clamp Fixing (Rear Connection)

[See Page-2 for dimension](#)

### Operating Temperature Range EN837

-20° to 60°C (-4°F to 140°F) without loss of accuracy.  
**Options for lower/Higher operating ranges (Contact Sales)**

### Temperature Error

Additional error when temperature changes from reference  
Temperature of 20°C (68°F) ±0.4% for every 10°C (18°F) rising or Falling % of span

### Optional Extras

- Aegis-Guard
- Micro adjustable pointer
- Dial White Anodised Aluminium (Black Printing)
- Dial Custom markings
- Monel according to ISO 15156 / NACE MR-01-75 wetted parts
- Other pressure connections (Including high pressure)
- Orifice Restrictor Screw (standard Ø0.9mm, Ø0.4mm on request)
- Customer logo printed on dial
- Vibragauge® (See data sheet)
- Gauge over-pressure up to 130% of FSD

**Further options on request**

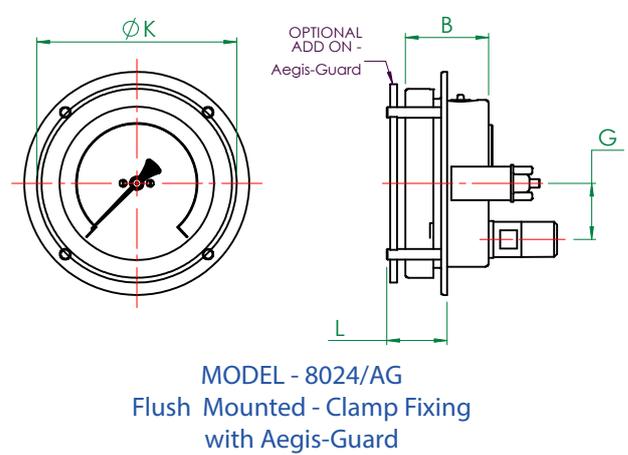
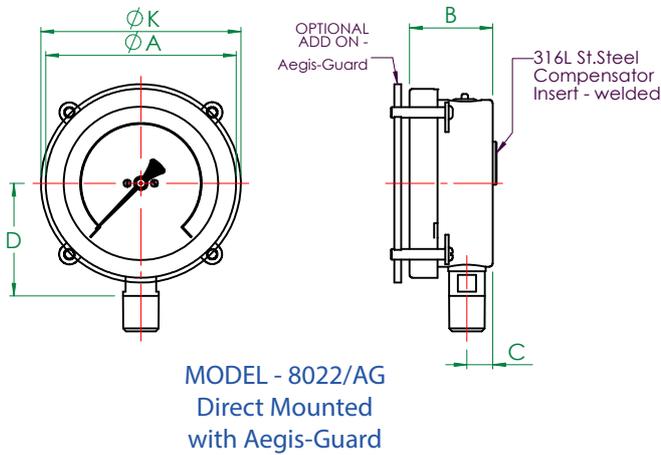
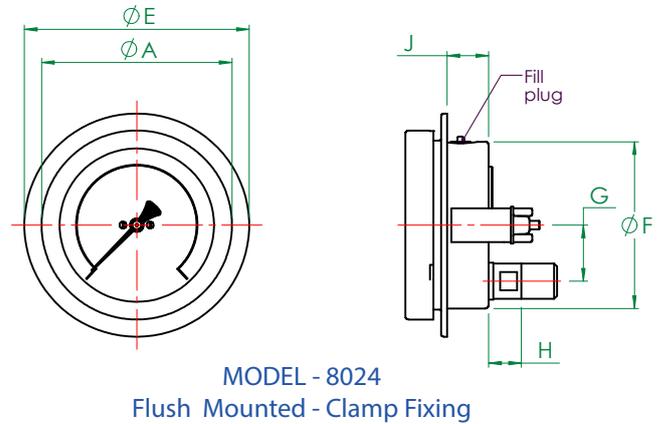
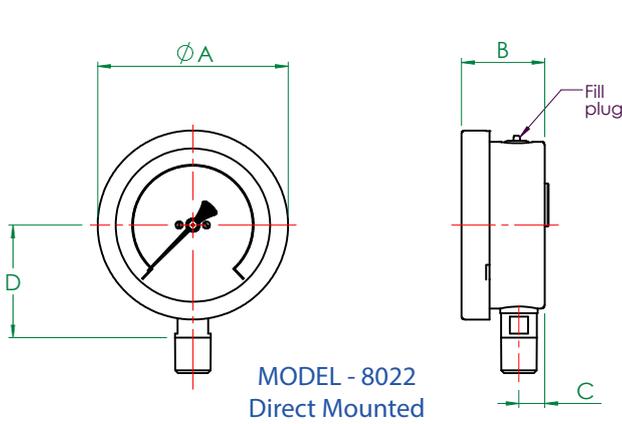
**Gauges can be Recalibrated (Please return to manufacturer)**

### High Pressure Options Available

GAUGE	HIGH PRESSURE THREAD OPTIONS (Up to 2500 bar)					
	TUBE MP (Up to 20 ksi)			TUBE HP (Up to 36 ksi)		
	¼"	⅜"	⅝"	¼"	⅜"	⅝"
63mm (2½")	M	M				
100mm (4")	M/F	M/F	M	M/F	M	M
115mm (4½")	M/F	M/F	M	M/F	M	M

# MODELS - 8022, 8024

## Welded Stainless Steel Diaphragm Compensated SUBSEA Stainless Steel Pressure Gauges



STEWARTS has developed a unique Aegis-Guard which will offer protection to the gauge in event of a collision.

General Arrangement Dimensions in mm, tol' ± 1mm													
Dialø	Dim	A	B	C	D	E	F	G	H	J	K	L	CUT OUT
(63mm)	2½ (Inches)	68.4 (2.7)	37.5 (1.5)	16.3 (0.64)	45.2 (1.8)	85.2 (3.35)	62 (2.4)	18 (0.71)	18.8 (0.74)	21.5 (0.85)	75 (2.95)	28 (1.1)	66 (2.6)
(100mm)	4 (Inches)	112.2 (4.4)	49 (1.9)	15.2 (0.60)	66.9 (2.6)	132.5 (5.22)	99 (3.9)	33.3 (1.31)	19.3 (0.76)	24.6 (0.97)	117.8 (4.64)	35.5 (1.4)	106 (4.17)
(115mm)	4½ (Inches)	129 (5.1)	49.2 (1.94)	15.5 (0.61)	74.8 (2.94)	160 (6.3)	114.8 (4.5)	33.3 (1.31)	19.3 (0.76)	26 (1.02)	150.5 (5.93)	37.2 (1.46)	122 (4.8)

### STEWART-BUCHANAN GAUGES LTD

Sales Office & Manufacturing Facility - 7 Garrell Road, Burnside Industrial Estate, Kilsyth, Glasgow G65 9JX, SCOTLAND  
Tel: +44 (0)1236 821533 | Fax: +44 (0)1236 824090 | E-mail: sales@stewarts-group.com | Web: stewarts-group.com

DATA SHEET REF: COMPSUBSEA-REV01-15



# MODELS - 8032, 8034



## Nitrile Rubber Diaphragm Compensated SUBSEA Stainless Steel Pressure Gauges

### APPLICATIONS

Pressure gauges with volume compensating diaphragm; developed to compensate systems that are affected by ambient pressure during submersion and to indicate the system pressure during subsea operations at depth. The compensated gauge 'red zone' indicates that depth (ambient) pressure is greater than that of the system in order to avoid negative (crushing) forces on more delicate components

### STANDARD SPECIFICATION

Design to EN 837-1.  
100% Pure Glycerin filled with no expansion bubble  
Welded, hermetically sealed, socket

### Compensating Device

*Nitrile (NBR) rubber with snap fit plastic insert*

### Sizes

63mm (2½"), 100mm (4") and 115mm (4½")

### Case/ Bezel / Flange / Socket & Element

316 Stainless Steel (Bead blasted non reflective bezel and flange)  
Removable bezel design allows repair or recalibration

### Movement

Precision Stainless Steel Construction

### Dial

Anodised Aluminium  
All gauges supplied as white lettering on black background as standard (Non Glare), bespoke colours and designs are available upon request

### Pointer

White Painted Aluminium

### Window

Acrylic

### Traceability

All instruments are individually calibrated with a unique serial number on dial.

### Certification available on request

- Certificate of Conformity Traceable to National Standards
- Group Certification (Pressure Test Calibration Statement)
- Point to Point Test Certificate
- BS EN 10204 3.1 Material Certification

### Installation instructions

Refer to EN 837-2 and our [Guidance On Use of Equipment](#) data sheet.

### Accuracy class

	ACCURACY CLASS			Higher Pressure
	0 - 600 bar 0-8702 psi	>600 - 1600 bar >8702-23206 psi	>1600 - 2500 bar >23206-36259 psi	
63mm (2½")	1.0	1.6 *	N/A	
100mm (4")	1.0 (0.6)	1.0	1.6	
115mm (4½")	1.0 (0.6)	1.0	1.6	

0.5% Accuracy on request (Consult Sales)

Higher Ranges on request (Consult Sales)

### Over-pressure

0-100 bar 0-1450 psi	>100-600 bar >1450-8702 psi	>600-1600 bar >8702-23206 psi	>1600-2500 bar >23206-36259 psi
1.25 x FSD	1.15 x FSD	1.10 x FSD	1.10 x FSD

### Scale Range

Vacuum / Compound to -1 to 0 to -1 to 24 bar

63mm (2½") gauge 0 to 1400 bar \*

100mm (4") & 115mm (4½") gauges 0 to 2500 bar

Or other equivalent units of pressure or vacuum

**PED 2014/68/EU, GAS Group.1 <1000 bar, GAS Group.2 <3000 bar**

### Pressure Connection Thread

⅛", ¼", ⅜", ½" NPT, BSP, BSPT (See High Pressure Options)

MAX PRESSURE EN 837-1			
THREAD EN837	NPT (316ss / Monel)	BSP (316ss / Monel)	BSPT (316ss / Monel)
⅛"	400 bar (5801 psi)	400 bar (5801 psi)	400 bar (5801 psi)
¼"	1000 bar (14504 psi)	1000 bar (14504 psi)	1000 bar (14504 psi)
⅜"	1000 bar (14504 psi)	1000 bar (14504 psi)	1000 bar (14504 psi)
½"	1000 bar (14504 psi)	1600 bar (23206 psi)	1000 bar (14504 psi)

**Ordering Parameters, Please state the following: SIZE, MODEL NO, SCALE RANGE, CONNECTION, PRESSURE MEDIUM & OPTIONAL EXTRAS**

DATA SHEET REF: COMPSUBSEA-REV01-15

*Specifications and dimensions in this leaflet, are subject to change without prior notice.*



Model-8032 Direct Mounted (Bottom Connection)

Model-8034 Flush Mounted Clamp Fixing (Rear Connection)

[See Page-2 for dimension](#)

### Operating Temperature Range EN837

-20° to 60°C (-4°F to 140°F) without loss of accuracy.

[Options for lower/higher operating ranges \(Contact Sales\)](#)

### Temperature Error

Additional error when temperature changes from reference

Temperature of 20°C (68°F) ±0.4% for every 10°C (18°F) rising or Falling % of span

### Optional Extras

- Aegis-Guard
- Micro adjustable pointer
- Dial White Anodised Aluminium (Black Printing)
- Dial Custom markings
- Monel according to ISO 15156 / NACE MR-01-75 wetted parts
- Other pressure connections (Including high pressure)
- Orifice Restrictor Screw (standard Ø0.9mm, Ø0.4mm on request)
- Customer logo printed on dial
- Vibragauge® (See data sheet)
- Gauge over-pressure up to 130% of FSD

[Further options on request](#)

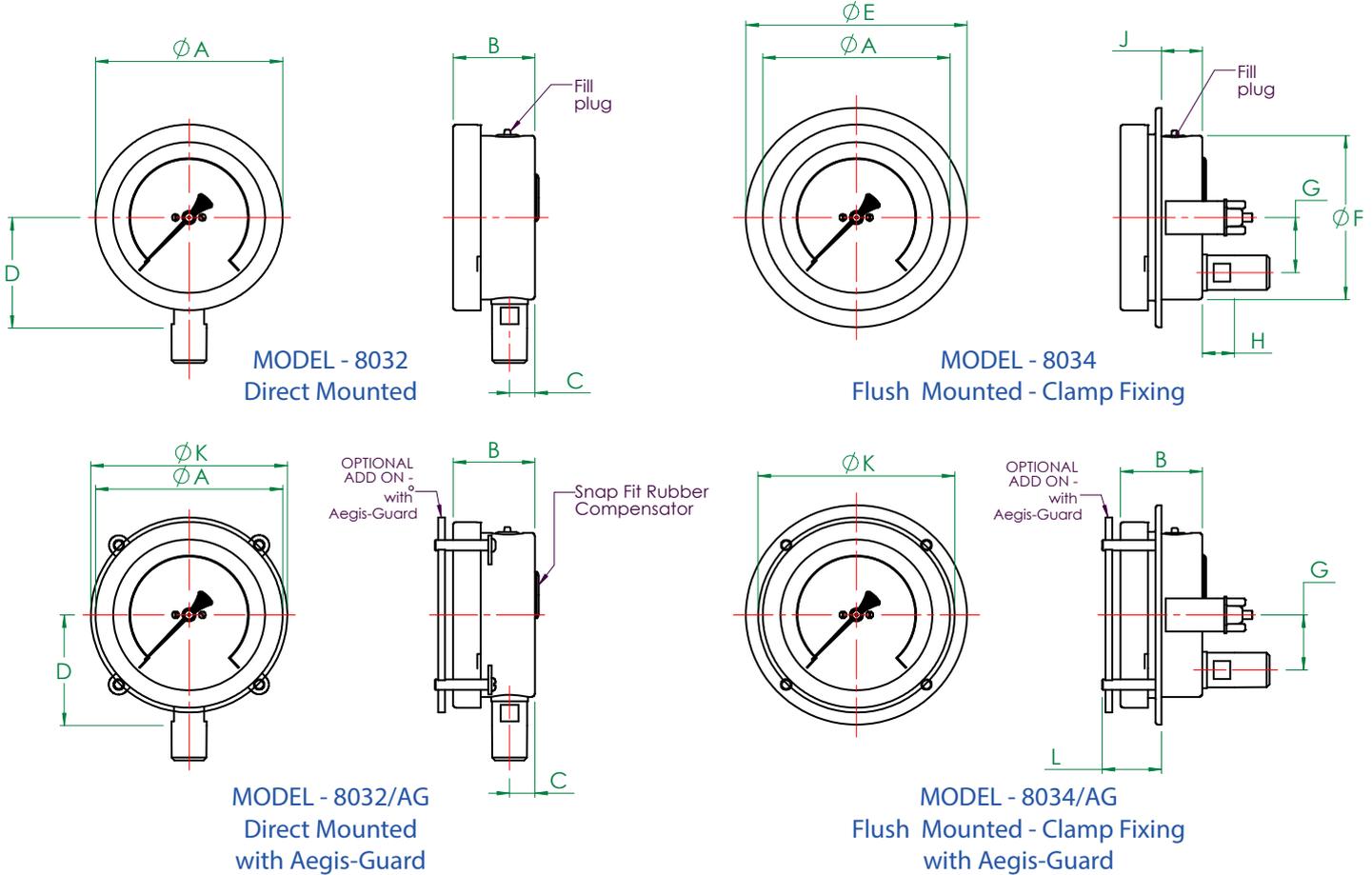
**Gauges can be Recalibrated (Please return to manufacturer)**

### High Pressure Options Available

GAUGE	HIGH PRESSURE THREAD OPTIONS (Up to 2500 bar)					
	TUBE MP (Up to 20 ksi)			TUBE HP (Up to 36 ksi)		
	¼"	⅜"	⅝"	¼"	⅜"	⅝"
63mm (2½")	M	M				
100mm (4")	M/F	M/F	M	M/F	M	M
115mm (4½")	M/F	M/F	M	M/F	M	M

# MODELS - 8032, 8034

## Nitrile Rubber Diaphragm Compensated SUBSEA Stainless Steel Pressure Gauges



STEWARTS has developed a unique Aegis-Guard which will offer protection to the gauge in event of a collision.

General Arrangement Dimensions in mm, tol' ± 1mm												
	A	B	C	D	E	F	G	H	J	K	L	CUT OUT
(63mm) 2½ (Inches)	68.4 (2.7)	37.5 (1.5)	16.3 (0.64)	45.2 (1.8)	85.2 (3.35)	62 (2.4)	18 (0.71)	18.8 (0.74)	21.5 (0.85)	75 (2.95)	28 (1.1)	66 (2.6)
(100mm) 4 (Inches)	112.2 (4.4)	49 (1.9)	15.2 (0.60)	66.9 (2.6)	132.5 (5.22)	99 (3.9)	33.3 (1.31)	19.3 (0.76)	24.6 (0.97)	117.8 (4.64)	35.5 (1.4)	106 (4.17)
(115mm) 4½ (Inches)	129 (5.1)	49.2 (1.94)	15.5 (0.61)	74.8 (2.94)	160 (6.3)	114.8 (4.5)	33.3 (1.31)	19.3 (0.76)	26 (1.02)	150.5 (5.93)	37.2 (1.46)	122 (4.8)

### STEWART-BUCHANAN GAUGES LTD

Sales Office & Manufacturing Facility - 7 Garrell Road, Burnside Industrial Estate, Kilsyth, Glasgow G65 9JX, SCOTLAND  
Tel: +44 (0)1236 821533 | Fax: +44 (0)1236 824090 | E-mail: sales@stewarts-group.com | Web: stewarts-group.com

DATA SHEET REF: COMPSUBSEA-REV01-15





**STEWARTS**

Valves & Gauges

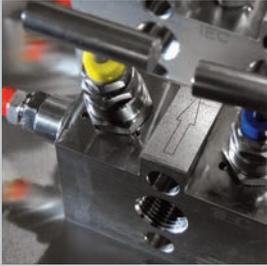
## Quality Standards

- ISO 9001
- P.E.R 2016 No. 1105
- P.E.D 2014/68/EU
- MOD/DEF STAN - 66-2/4

Note: Our pressure & temperature gauges are manufactured to meet the CE marking requirements of P.E.R 1999 and P.E.D (S2001) 97/23/EC together with ISO 9001 approval.

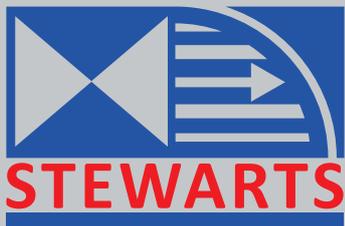


**98%** of all components used in the manufacture of our products are designed, manufactured and assembled in-house



# Stewart-Buchanan Gauges Ltd

AN EMPLOYEE-OWNED COMPANY



## Sales Office & Manufacturing Facility

Burnside Industrial Estate  
Kilsyth, Glasgow G65 9JX  
SCOTLAND

Tel: +44 (0)1236 821533

Fax: +44 (0)1236 824090

E-Mail: [sales@stewarts-group.com](mailto:sales@stewarts-group.com)

Web: [stewarts-group.com](http://stewarts-group.com)

