

# ESW

Economical SS (SS 304) Pressure Gauge  
Bourdon type (Dry Version)



Bottom Connection

## Special Features

- Stainless steel case & measuring system
- Socket directly welded to case
- Dry version Weather Proof
- Standard followed EN 837-1

## Application

- Pumps
- Diesel engines & Refrigerating plants
- Chemical & Petrochemical industries
- Environments & gaseous or liquid media that will not obstruct the pressure system.
- Hydro-cleaning machines
- Presses
- Engine compressors

## Specifications

### Standard Version : 100 mm & 150 mm

Accuracy	:	±1.6% of F. S.
Ambient temperature	:	- 25°C to + 65°C
Process temperature	:	Max 300°C
Operating pressure range	:	75% of Scale Value
Over pressure limit	:	< 100 bar : 125% of Max. Scale Value
	:	> 100 to < 600 bar : 115% of Max. Scale Value
	:	> 600 to < 1600 bar : 110% of Max. Scale Value

Case & Bezel	:	AISI 304 SS (Snap Action Bayonet Bezel)
Bourdon	:	AISI 316 SS
<b>Socket</b>	:	<b>AISI 304 SS (Directly Welded to Case)</b>
Movement	:	Brass Plated (Optional SS 304)
Joints	:	Tig Argon Arc Welding

Protection	:	IP 68
Dial	:	Aluminium, black graduation on white background
Pointer	:	Aluminium, black coloured
Window	:	Toughened Glass
Blow off Disc	:	Neoprene
Gasket & Filling Plug	:	Neoprene

### Dry But Fillable Version (Option DFG)

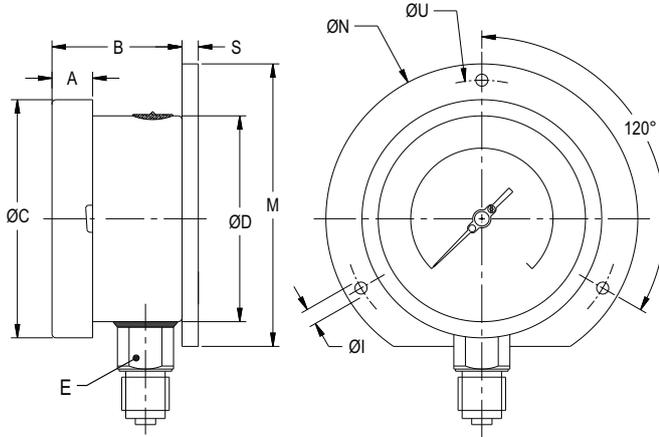
Fillable Dampening Liquid	:	Glycerine 99.7% (Option - DFG)
Ambient Temperature	:	Maximum 65°C
Process Temperature	:	Maximum 65°C
Window	:	Toughened Glass
Other Features	:	Refer Specification of Standard Version

### Temperature effect:

The variation of indication caused by effects of temperature is to be calculated by below formula; which is to be added in the specified accuracy while measurement :- Formula :  $\pm 0.04 \times (t_2 - t_1) \%$  of F. S. where  $t_1$  = reference temperature (+20°C) and  $t_2$  = ambient temperature in °C.

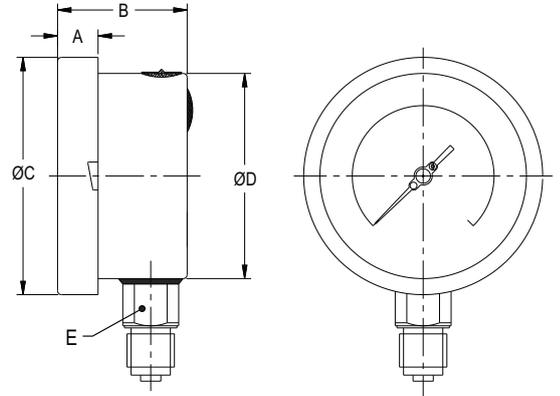
## Dimensions - Standard Version

**TYPE 1**



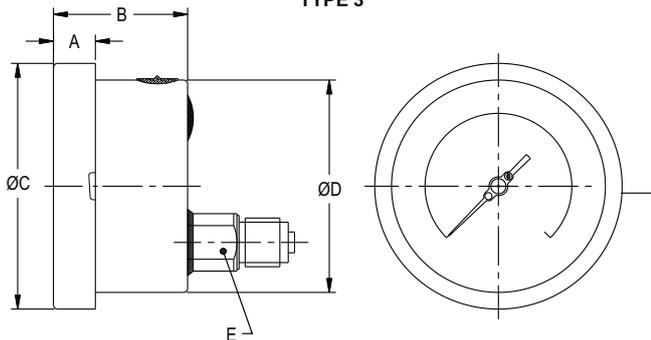
NS	A	B	ØC	ØD	E	M	S	ØI	ØN	ØU	Weight in gram (With Box)	Weight in gram (With Glycerin & Box)
100	6.5	35	111	100	17	128	5	6	134	118	450.0	650.00
150	15	40	161	149	17	174.5	5	6	186	168	850.0	1250.00

**TYPE 2**



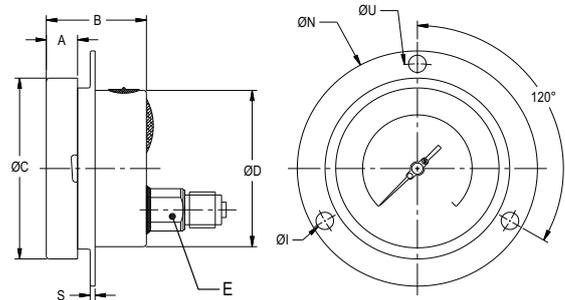
NS	A	B	ØC	ØD	E	Weight in gram (With Box)	Weight in gram (With Glycerin & Box)
100	6.5	35	111	100	17	430.00	630.00
150	15	40	161	149	17	800.00	1400.00

**TYPE 3**



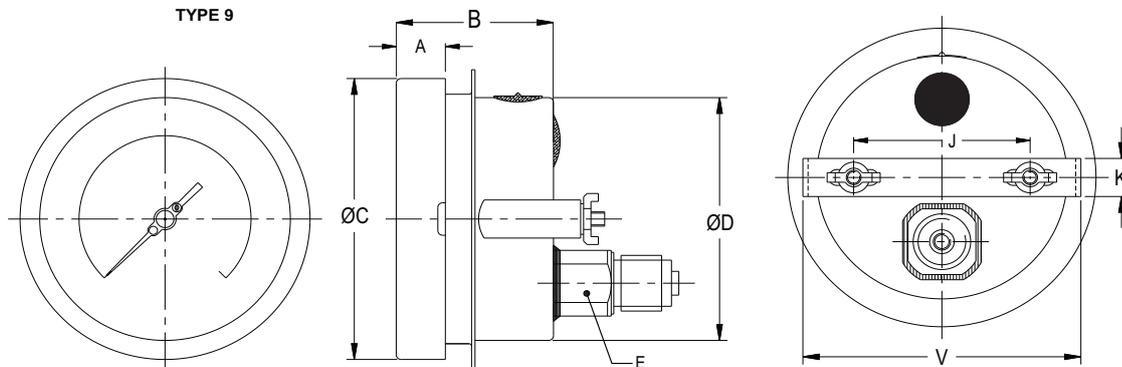
NS	A	B	ØC	ØD	E	Weight in gram (With Box)	Weight in gram (With Glycerin & Box)
100	12.5	47	111	100	17	430.00	630.00
150	15	49	161	149	17	800.00	1200.00

**TYPE 5**



NS	A	B	ØC	ØD	E	S	ØI	ØN	ØU	Weight in gram (With Box)	Weight in gram (With Glycerin & Box)
100	12.5	48	111	100	17	1	6	134	118	450.00	650.00
150	15	49	161	149	17	1	6	186	168	850.00	1250.00

**TYPE 9**



NS	A	B	ØC	ØD	E	J	K	V	Weight in gram (With Box)	Weight in gram (With Glycerin & Box)
100	12.5	48	111	100	17	62	16	108	450.00	650.00
150	15	49	161	149	17	100	16	166	850.00	1250.00

## Range Table

Note : We offer National / International Scales like kPa, MPa, bar, psi, kg/cm<sup>2</sup> & Dual Scale like kPa with psi, kPa with bar, bar with psi or Equivalent scales as per the requirement can be provided on request. Following are the example tables for kg/cm<sup>2</sup> & psi scales.

### Pressure

#### Single Scale (kg/cm<sup>2</sup> or bar)

0/0.6	0/4	0/25	0/160
0/1	0/6	0/40	0/250
0/1.6	0/10	0/60	0/400
0/2.5	0/16	0/100	0/600

#### Dual Scale (psi with kg/cm<sup>2</sup>)

psi	kg/cm <sup>2</sup>	psi	kg/cm <sup>2</sup>	psi	kg/cm <sup>2</sup>
0/15	0/1	0/400	0/28	0/4000	0/280
0/30	0/2	0/500	0/35	0/5000	0/350
0/60	0/4	0/600	0/40	0/6000	0/420
0/100	0/7	0/1000	0/70	0/10000	0/700
0/150	0/10	0/1500	0/100		
0/230	0/16	0/2300	0/160		
0/300	0/20	0/3000	0/200		

### Vacuum & Compound

#### Dual Scale (inHg with psi & mmHg with kg/cm<sup>2</sup>)

inHg with psi	mmHg with kg/cm <sup>2</sup>	inHg with psi	mmHg with kg/cm <sup>2</sup>	inHg with psi	mmHg with kg/cm <sup>2</sup>
- 30/0	- 760/0	- 30/60	- 760/4	- 30/200	- 760/14
- 30/15	- 760/1	- 30/100	- 760/7	- 30/300	- 760/21
- 30/30	- 760/2	- 30/150	- 760/10	- 30/350	- 760/25

#### Single Scale (kg/cm<sup>2</sup>)

- 1/0	- 1/1.5	- 1/5	- 1/15
- 1/0.6	- 1/3	- 1/9	- 1/24

### Receiver

Linear scale	Square root scale
(0 - 100% Internal Scale)	( 0 - 10 Sq - Root Internal Scale )
External Scale	External Scale
0.2 - 1 kg/cm <sup>2</sup> or 3 - 15 psi	0.2 - 1 kg/cm <sup>2</sup> or 3 - 15 psi
(0-100% linear scale)	(0.2 - 1 kg/cm <sup>2</sup> )

### Freon (with temperature scale)

### Ammonia (with temperature scale)

Note : For temperature scales, please provide refrigerant name.

Range (psi)	( kg/cm <sup>2</sup> )	( psi )
-30 inHg - 150	0-300	-1to12.5
-30 inHg - 300	0-500	-1to16
		-1to25
		0 - 300

### Accessories (refer datasheet for complete specifications)

<b>CT</b> Cooling tower	<b>GS</b> Over load protector (gauge saver)**	<b>SN</b> Snubber
<b>GC</b> Gauge cock	* Needle valve	<b>SP</b> Siphon

\* Refer catalogue for Valves & Manifolds.

\*\* For Pressure Ranges.

**Note : For Any Non Standard or Special Scale Marking Consult Factory**

How To Order				Example		
<b>Basic Model</b>				ESW		
<b>Code</b>						
<b>Nominal Size</b>		<b>40</b>	<b>60</b>	XX		
		100 mm	150 mm			
<b>Type of Mounting</b>				X		
1	Wall / surface / projection mounting with bottom entry					
2	Direct bottom entry					
3	Direct lower back entry					
5	Lower back entry with front flange					
9	Lower back entry with mounting bracket					
* MOC of bracket and 'U' clamp will be steel (painted). Ask factory for drawings, if required.						
<b>Gauge Connection</b>		<b>Nominal Size &gt;</b>	<b>40</b>	<b>60</b>	XXX	
2BM	¼" BSP (M)		✓	✓		
2NM	¼" NPT (M)		✓	✓		
2TM	¼" BSPT (M)		✓	✓		
3BM	3/8" BSP (M) Standard		✓	✓		
3TM	3/8" BSPT (M)		✓	✓		
<b>Note : Connections Above 3/8" Should Be Provided Through Adaptor if Required With Extra Cost..</b>						
<b>Range</b>				0/10 kg/cm <sup>2</sup>		
Refer range table ( Standard Ranges Should be in Dual Scale Kg/cm <sup>2</sup> & PSI )						
<b>Optional Extras</b>				XXX		
MRP	Maximum reading pointer with plexi glass	MTC	Material test certificates***		FRE	Freon range (with temperature scale)
OXS	Oxygen service (for dry version)	TRC	Calibration certificate traceable to National/International standards		AMO	Ammonia range (with temperature scale)
CDD	Custom designed dial				DFG	Dry But Fillable Version (Glycerin)
				DFS	Dry But Fillable Version (Silicon)	

\*\*\*Material test certificates will be provided for wetted parts only with chemical composition testing. For others, please consult factory.

**Ordering Example: ESW - XX - X - XXX - 0/10 kg/cm<sup>2</sup> - XXX**

For other optional items, please contact factory for delivery and minimum order quantity.

Note : Specifications and dimensions given in this product catalogue represents the state of engineering at the time of printing. Modifications may take place and materials specified may be replaced by others without prior notice.