

# ALL SS PRESSURE GAUGE

## BOURDON TYPE



IPS-PG-01

### SPECIAL FEATURES

- EXTERNAL ZERO ADJUSTMENT (OPTIONAL)
- STAINLESS STEEL CASE & MEASURING SYSTEM
- SOCKET DIRECTLY WELDED TO CASE
- DRY AND LIQUID FILLED VERSION
- STANDARD FOLLOWED EN 837-1 (FOR NS 100, 150 & 250 mm).
- CE MARKING (AS PER PED 97/23/EC) (FOR NS 100 mm & 150 mm)

### APPLICATIONS

FOOD & BEVERAGE, PHARMACEUTICAL, CRYOGENICS, CHEMICAL & PETROCHEMICAL INDUSTRIES, CONVENTIONAL & NUCLEAR POWER PLANTS, PUMPS, HYDRO-CLEANING MACHINES, PRESSES, ENGINE COMPRESSORS, TURBINES, DIESEL ENGINES & REFRIGERATING PLANTS.

SUITABLE FOR CORROSIVE ENVIRONMENTS & GASEOUS OR LIQUID MEDIA THAT WILL NOT OBSTRUCT THE PRESSURE SYSTEM.

### SPECIFICATIONS

#### STANDARD VERSION : 100 mm, 125 mm, 150 mm, 200 mm & 250 mm

Accuracy	: ±1.0% 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
Case & Bezel	: AISI 304 SS (Bayonet Type)
Bourdon	: AISI 316L SS
Socket	: AISI 316L SS (Directly Welded to Case)
Movement	: AISI 304 SS
Joints	: Tig Argon Arc Welding
Protection	: IP 65
Dial Pointer	: Aluminium, black coloured Micrometer zero adjustable
Window	: Sheet Glass
Blow off Disc	: Neoprene
Gasket & Filling Plug	: Neoprene

#### DRY BUT FILLABLE VERSION (OPTION FG)

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

#### GLYCERINE FILLED VERSION (OPTION PY)

Accuracy	: ±1.0% of F.S.
Ambient Temperature	: Maximum 65°C
Process Temperature	: Maximum 65°C
Window	: Plexi Glass
Dampening Liquids	: Glycerine 99.7% (others available as option)
Other Features	: Refer Specification of Standard Version



**Industrix Precise Solutions Private Limited**

Room No – 303, Bhumika Residency, Plot No-21, Sector-20, Roadpali, Kalamboli, Panvel (Tal.), Raigad (Dist.), Maharashtra, India – 410218.

Mobile: +91 99309 98399 / +91 99674 97447

E-mail: [admin@ipspl.in](mailto:admin@ipspl.in) / [sales@ipspl.in](mailto:sales@ipspl.in) Website: [www.ipspl.in](http://www.ipspl.in)

CIN : U52399MH2021PTC368555

### Temperature effect:

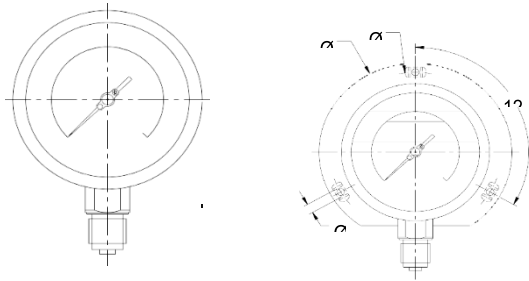
The variation of indication caused by effects of temperature is to be calculated by below formula; which is to be added in the specified accuracy while measurement :-

Formula :  $\pm 0.04 \times (t_2 - t_1) \% \text{ of F. S.}$

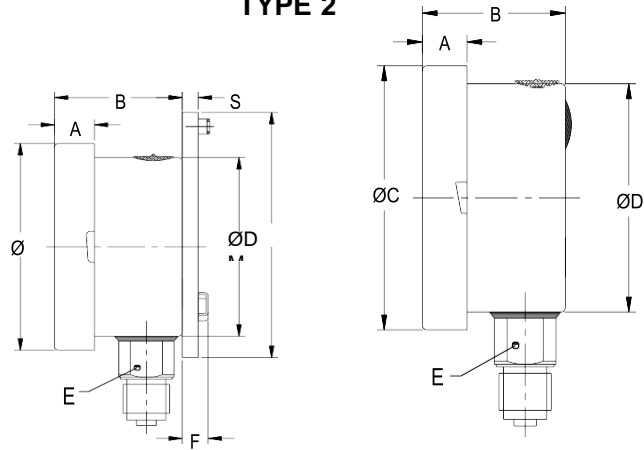
where  $t_1$  = reference temperature (+20°C) and  $t_2$  = ambient temperature in °C.

## DIMENSIONS - STANDARD VERSION

### TYPE 1



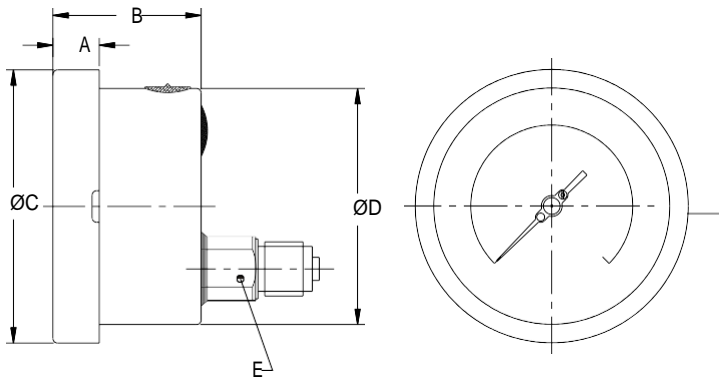
### TYPE 2



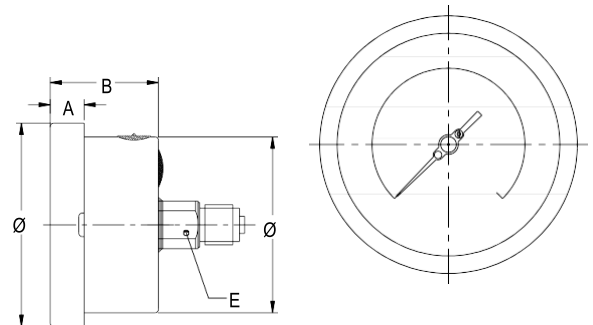
NS	A	B	ØC	ØD	E	M	S	F	ØI	ØN	ØU	Weight in gram (With Box)	Weight in gram (With Glycerin & Box)
100	12.5	45	111	100	22	128	6	14.5	6	134	118	720.0	1025.0
125	15	46	129	119	22	-	4	14.5	6	150	137	845.0	1165.0
150	15	46.5	161	149	22	174.5	6	14.5	6	186	168	1160.0	1895.0
200	18	49	216.5	201.5	22	-	1.5	14.5	7	245	230	2020.0	2780.0
250	18	52	263	250	22	286.5	1.5	14.5	7	290	276	2400.0	3220.0

NS	A	B	ØC	ØD	E	Weight in gram (With Box)	Weight in gram (With Glycerin & Box)
100	12.5	47	111	100	22	640.0	935.0
125	15	48	129	119	22	750.0	1070.0
150	15	49	161	149	22	1020.0	1755.0
200	18	49	210.5	201.5	22	1720.0	2480.0
250	18	52	263	250	22	2000.0	2820.0

### TYPE 3



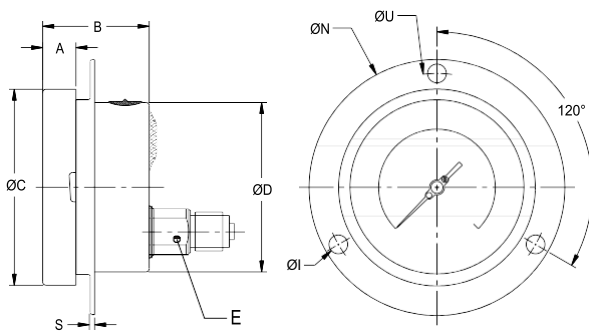
### TYPE 4



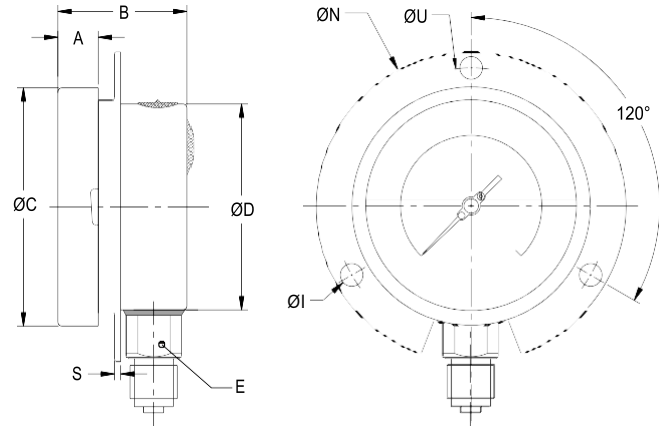
NS	A	B	ØC	ØD	E	Weight in gram (With Box)	Weight in gram (With Glycerin & Box)
100	12.5	47	111	100	22	640.0	935.0
125	15	48	129	119	22	750.0	1070.0
150	15	49	161	149	22	1000.0	1735.0
200	18	49	216.5	201.5	22	1500.0	2260.0
250	18	52	263	250	22	1800.0	2620.0

NS	A	B	ØC	ØD	E	Weight in gram (With Box)	Weight in gram (With Glycerin & Box)
100	12.5	47	111	100	22	640.0	935.0

### TYPE 5



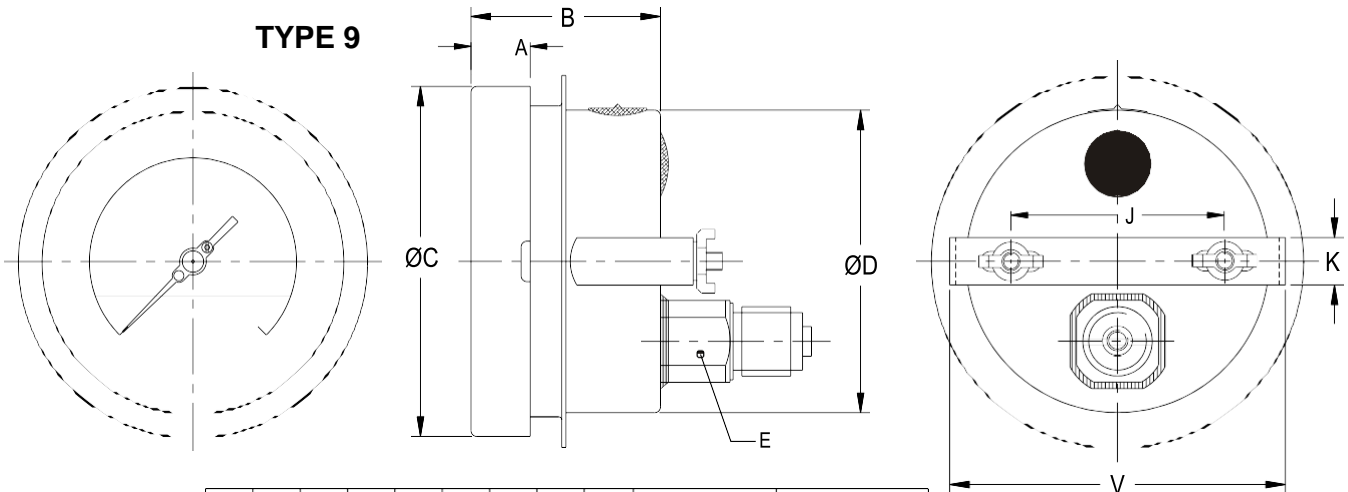
### TYPE 11



NS	A	B	ØC	ØD	E	S	ØI	ØN	ØU	Weight in gram (With Box)	Weight in gram (With Glycerin & Box)
100	12.5	47	111	100	22	1	6	134	118	695.0	990.0
125	15	48	129	119	22	4	6	150	137	850.0	1170.0
150	15	49	161	149	22	5	6	186	168	1100.0	1835.0
200	18	49	216.5	201.5	22	1.5	7	245	230	2000.0	2760.0
250	18	52	263	250	22	1.5	7	290	276	2250.0	3070.0

NS	A	B	ØC	ØD	E	S	ØI	ØN	ØU	Weight in gram (With Box)	Weight in gram (With Glycerin & Box)
100	12.5	47	111	100	22	1	6	134	118	730.0	1025.0
125	15	48	129	119	22	4	6	150	137	815.0	1135.0
150	15	49	161	149	22	5	6	186	168	1100.0	1835.0

### 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	47	111	100	22	72	16	108	740.0	1035.0
125	15	48	129	119	22	75	16	125	890.0	1210.0
150	15	49	161	149	22	106.5	16	166	1100.0	1835.0
200	18	49	210.5	201.5	22	165	16	208	1920.0	2680.0
250	18	52	263	250	22	180	30	270	2300.0	3120.0

Notes : • Drawings are not to scale. • All Dimensions are in mm . • NS = Nominal Seize

- \* Refer catalogue for Valves & Manifolds. Weights mentioned are approximate and for standard product.
- Weight can be different after selection of options.

## RANGE TABLE

**Note :** IPSPL offers 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	0/1000	
0/1	0/6	0/40	0/250	0/1600	
0/1.6	0/10	0/60	0/400	0/2100	
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	0/15000	0/1000
0/220	0/16	0/2200	0/160	0/22000	0/1600
0/300	0/20	0/3000	0/200	0/30000	0/2000

## 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	-1 to 12.5	-30 inHg - 150
-30 inHg - 300	0-500	-1 to 16	-30 inHg - 300
		-1 to 25	0 - 300

## ACCESSORIES (Refer Datasheet for complete specifications)

EB COOLING TOWER	ED OVER LOAD PROTECTOR (GAUGE SAVER)**	EG SNUBBER
EC GAUGE COCK	* NEEDLE VALVE	EH SIPHON

\* Refer catalogue for Valves & Manifolds.

\*\* For Pressure Ranges.



# Industrix Precise Solutions Private Limited

Room No – 303, Bhumika Residency, Plot No-21, Sector-20, Roadpali, Kalamboli, Panvel (Tal.), Raigad (Dist.), Maharashtra, India – 410218.

Mobile: +91 99309 98399 / +91 99674 97447

E-mail: [admin@ipspl.in](mailto:admin@ipspl.in) / [sales@ipspl.in](mailto:sales@ipspl.in) Website: [www.ipspl.in](http://www.ipspl.in)

CIN : U52399MH2021PTC368555

## HOW TO ORDER BASIC MODEL CODE

### NOMINAL SIZE

F	G	H	I	J
100 mm	125 mm	150 mm	200 mm	250 mm

### TYPE OF MOUNTING

- 1 WALL / SURFACE / PROJECTION MOUNTING WITH BOTTOM ENTRY
- 2 DIRECT BOTTOM ENTRY
- 3 DIRECT LOWER BACK ENTRY
- 4 DIRECT CENTER BACK ENTRY (FOR NS 100 mm ONLY)
- 5 LOWER BACK ENTRY WITH FRONT FLANGE
- 6 2" PIPE / YOKE MOUNTING WITH BOTTOM ENTRY\*
- 9 LOWER BACK ENTRY WITH MOUNTING BRACKET
- 11 BOTTOM ENTRY WITH FRONT FLANGE (FOR NS 100 mm, 125 mm & 150 mm)

\* MOC OF BRACKET AND 'U' CLAMP WILL BE STEEL (PAINTED). ASK FACTORY FOR DRAWINGS, IF REQUIRED.

### GAUGE CONNECTION

	F	G	H	I	J
<b>2BM</b> 1/4" BSP(M)	✓	✓	✓	×	×
<b>2NM</b> 1/4" NPT(M)	✓	✓	✓	×	×
<b>2TM</b> 1/4" BSPT(M)	✓	✓	✓	×	×
<b>3BM</b> 3/8" BSP(M)	✓*	✓	✓	✓	✓
<b>3TM</b> 3/8" BSPT(M)	✓	✓	✓	✓	✓
<b>4BM</b> 1/2" BSP(M) STANDARD	✓	✓	✓	✓	✓
<b>4NM</b> 1/2" NPT(M) STANDARD	✓	✓	✓	✓	✓
<b>4TM</b> 1/2" BSPT(M)	✓	✓	✓	✓	✓
<b>4MM</b> M 20x 1.5(M)	✓	✓	✓	✓	✓

\* Standard for NS 100 mm.

Note : Connections like Metric/ PT/ PF/ Flaired/ UNF/ G/ R etc. can be provided on request.

### RANGE

REFER RANGE TABLE

### OPTIONAL EXTRAS

<b>OA</b> ACCURACY ± 0.5% OF F.S (FOR DRY VERSION)	<b>SX</b> SS TAG PLATE
<b>TI</b> MONEL BOURDON & SOCKET (MONEL VERSION)**	<b>SW</b> DIAL TAG MARKING
<b>FL</b> INTEGRAL DAMPENING SCREW (MONEL)**	<b>TB</b> HELIUM LEAK TEST
<b>FS</b> FILLABLE LIQUID SILICON OIL*	<b>TF</b> CONFORMITY AS PER NACE MR 0175
<b>FG</b> FILLABLE LIQUID GLYCERINE	<b>PW</b> FIVE POINT CALIBRATION CERTIFICATE
<b>PZ</b> DAMPENING LIQUID MINERAL LIQUID FILLED	<b>PU</b> CALIBRATION CERTIFICATE TRACEABLE TO NATIONAL/INTERNATIONAL STANDARDS
<b>PX</b> DAMPENING LIQUID FLOUROLUBE FILLED	<b>SG</b> OXYGEN SERVICE (FOR DRY VERSION)
<b>PY</b> DAMPENING LIQUID GLYCERINE FILLED	<b>RH</b> CUSTOM DESIGNED DIAL
<b>QA</b> DAMPENING LIQUID SILICON OIL FILLED*	<b>QB</b> INTEGRAL DAMPENING SCREW (AISI 316 SS)
<b>RR</b> ENCLOSURE PROTECTION IP 66	<b>SA</b> INTERNAL OVERPRESSURE STOP
<b>RE</b> ENCLOSURE PROTECTION IP 67	<b>SB</b> INTERNAL VACUUM STOP
<b>RW</b> PLEXI GLASS	<b>ZB</b> RECEIVER RANGE
<b>RX</b> SHATTERPROOF/SAFETY GLASS	<b>ZC</b> FREON RANGE (WITH TEMPERATURE SCALE)
<b>RZ</b> TOUGHENED GLASS	<b>ZD</b> AMMONIA RANGE (WITH TEMPERATURE SCALE)
<b>SF</b> MOVEMENT WITH DAMPENING JELLY	<b>PS</b> AISI 316 SS CASE & BEZEL◆
<b>SI</b> KNIFE EDGE POINTER	<b>SD</b> AISI 316 SS MOVEMENT
<b>SJ</b> MAXIMUM READING POINTER WITH PLEXI GLASS (EXCEPT OPTION OA & ONLY FOR DRY VERSION)◆	<b>CK</b> EPOXY PAINTED CASE & BEZEL
<b>CE</b> CE MARKING (AS PER PED 97/23/EC)◆◆	<b>ZM</b> ELECTRO POLISHED CASE & BEZEL
<b>GH</b> MATERIAL TEST CERTIFICATES***	<b>SQ</b> CASE WITH ROLLING TYPE BEZEL (FOR NS 100 mm)
<b>KA</b> ON - OFF TYPE VENT PLUG	<b>ZL</b> OVER RANGE PROTECTION 150% OF F. S.
<b>PV</b> IBR APPROVAL#	<b>JU</b> 2" PIPE/YOKE MOUNTING BRACKET & 'U' CLAMP (AISI 304 SS)
<b>RG</b> ANTI PARALLAX MIRROR BAND DIAL##	<b>FN</b> 2" PIPE/YOKE MOUNTING BRACKET & 'U' CLAMP (AISI 316 SS)
<b>EZ</b> EXTERNAL ZERO ADJUSTMENT (EXCEPT MOUNTING TYPE 5 & 11)	<b>GO</b> SHORT OVERPRESSURE

\*\*INTEGRAL DAMPENING SCREW WILL BE IN MONEL IF ORDERED. REFER OPTION FL.

\*\*\* MATERIAL TEST CERTIFICATES WILL BE PROVIDED FOR WETTED PARTS ONLY WITH CHEMICAL COMPOSITION TESTING. FOR OTHERS, PLEASE CONSULT FACTORY.

# FOR NS 150 mm & ABOVE. SCALE SHALL BE MARKED IN kg/cm<sup>2</sup> ONLY. CONSULT FACTORY FOR MORE DETAILS.

## FOR NS 150 mm & ABOVE. ◆ FOR NS 100 mm to 150 mm. ◆◆ FOR NS 100 mm & 150 mm

X

X  
OR  
XX

XXX

0-10  
kg/cm<sup>2</sup>

XX



## Industrix Precise Solutions Private Limited

Room No – 303, Bhumika Residency, Plot No-21, Sector-20, Roadpali, Kalamboli, Panvel (Tal.), Raigad (Dist.), Maharashtra, India – 410218.

Mobile: +91 99309 98399 / +91 99674 97447

E-mail: [admin@ipspl.in](mailto:admin@ipspl.in) / [sales@ipspl.in](mailto:sales@ipspl.in) Website: [www.ipspl.in](http://www.ipspl.in)

CIN : U52399MH2021PTC368555