



### SPECIAL FEATURES

- EXTERNAL ZERO ADJUSTMENT (OPTIONAL)
- SOLID FRONT DESIGN FEATURES BAFFLE WALL INTERPOSED BETWEEN THE SENSING SYSTEM & THE WINDOW, AND A PRESSURE RELIEVING BACK FOR INCREASED SAFETY.
- DRY OR FILLABLE VERSION.
- ACCURACY  $\pm 0.5\%$  F. S. (OPTIONAL)
- STAINLESS STEEL BLOW OFF BACK
- STANDARD FOLLOWED EN 837-1L

### APPLICATIONS

SUITABLE FOR HIGH PRESSURE GAS, CORROSIVE / HAZARDOUS ENVIRONMENT THAT WILL NOT OBSTRUCT THE PRESSURE SYSTEM.

### SPECIFICATIONS

STANDARD VERSION : 63 mm, 100 mm & 150mm

<b>Accuracy</b>	: $\pm 1.0\%$ of F. S. for NS 100 mm & 150 mm
	: $\pm 1.6\%$ of F. S. for NS 63 mm
<b>Ambient temperature</b>	: - 20°C to + 65°C
<b>Process temperature</b>	: Max 300°C
<b>Operating pressure Range</b>	: 75 % of Scale Value
<b>Over pressure limit</b>	: $\leq 100$ bar : 125% of Max. Scale Value
	: $> 100$ to $\leq 600$ bar : 115% of Max. Scale Value
	: $> 600$ to $\leq 1600$ bar : 110% of Max. Scale Value

<b>Case &amp; Bezel</b>	: AISI 304 SS (Bayonet Type)
<b>Bourdon</b>	: AISI 316L SS
<b>Socket</b>	: AISI 316L SS (Directly welded to case)
<b>Movement</b>	: AISI 304 SS
<b>Joints</b>	: Tig Argon Arc Welding

<b>Protection</b>	: IP 65
<b>Dial</b>	: Aluminum, black graduation on white background
<b>Pointer</b>	: Aluminum, black Coloured Micrometer Zero Adjustable (Fixed for NS 63 mm)
<b>Window</b>	: Shatterproof / Safety Glass
<b>Blow off Disc</b>	: AISI 304 SS
<b>Gasket &amp; Filling Plug</b>	: Neoprene

### DRY BUT FILLABLE VERSION (OPTION FG)

<b>Fillable Dampening Liquid</b>	: Glycerine 99.7%
<b>Ambient Temperature</b>	: Maximum 65°C
<b>Process Temperature</b>	: Maximum 65°C
<b>Window</b>	: Shatterproof / Safety glass
<b>Other Features</b>	: Refer Specification of Standard Version

### GLYCERINE FILLED VERSION (OPTION PY)

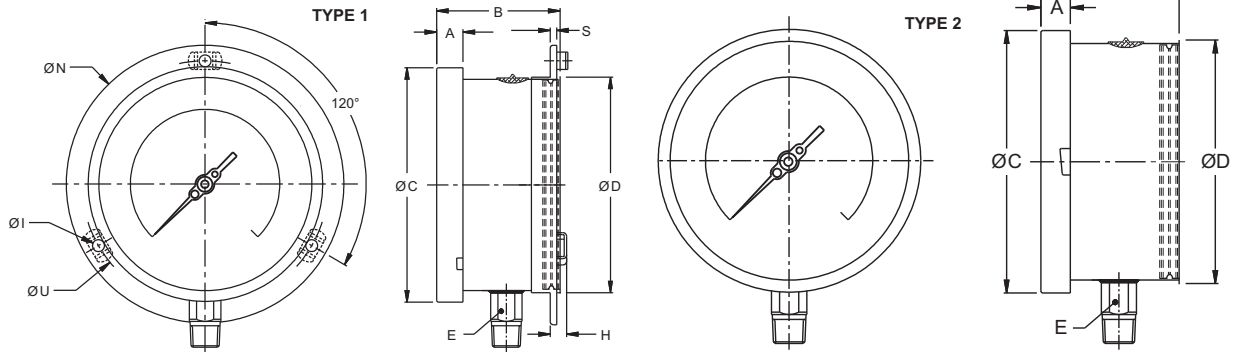
<b>Accuracy</b>	: $\pm 1.0\%$ of F. S. for NS 100mm & 150 mm
	: $\pm 1.6\%$ of F. S. for NS 63mm
<b>Ambient Temperature</b>	: Maximum 65°C
<b>Window</b>	: Shatter Proof / Safety Glass
<b>Dampening Liquids</b>	: Glycerine 99.7% (Others available as Option)
<b>Other Features</b>	: Refer Specification of Standard Version

### Temperature effect:

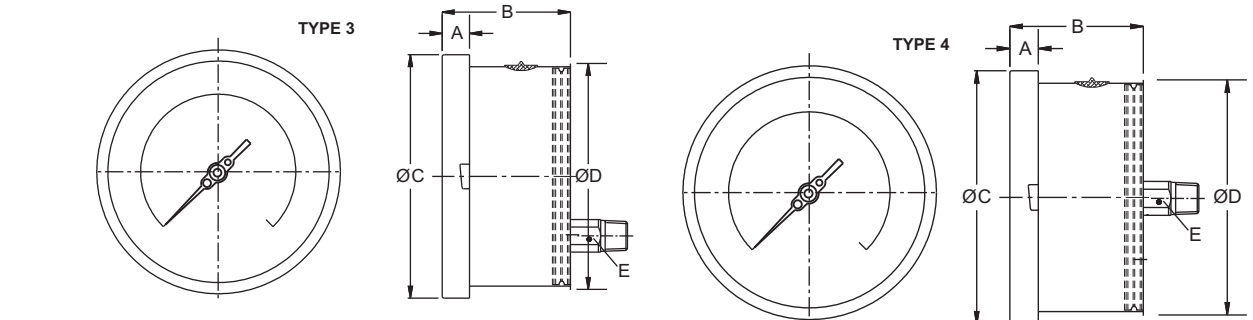
The variation of indication caused by effects of temperature is to be calculated by below formula; which is to be added in the specified accuracy while measurement :- Formula :  $\pm 0.04 \times (t_2 - t_1) \%$  of F. S. where  $t_1$  = reference temperature (+20°C) and  $t_2$  = ambient temperature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



**DIMENSIONS - STANDARD VERSION**



NS	A	B	ØC	ØD	E	ØN	ØU	H	ØI	S	Weight in gram (With Box)	Weight in gram (With Glycerin & Box)
63	11	56	69.5	62.5	14	86	75	11	3.5	1	320.0	430.0
100	12.5	70	111	100	22	134	118	15	6	1	860.0	1170.0
150	15	70	161	149	22	186	168	15	6	1	1440.0	2230.0



NS	A	B	ØC	ØD	E	Weight in gram (With Box)	Weight in gram (With Glycerin & Box)
100	12.5	64	111	100	22	700.0	1010.0
150	15	66	161	149	22	1200.0	1990.0

NS	A	B	ØC	ØD	E	Weight in gram (With Box)	Weight in gram (With Glycerin & Box)
63	11	56	69.5	62.5	14	290.0	400.0

Notes : • Drawings are not to scale. • All Dimensions are in mm . • NS = Nominal Seize  
 • Weights mentioned are approximate and for standard product. Weight can be different after selection of options.

**RANGE TABLE**

Note : Waaree 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 RANGE**

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	0/400
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*

\* Applicable for NS 100 mm & 150 mm only.

## VACUUM &amp; COMPOUND RANGE

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>
- 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		
SINGLE SCALE (kg/cm <sup>2</sup> or bar)					
- 1/0	- 1/1.5	- 1/5	- 1/15		
- 1/0.6	- 1/3	- 1/9	- 1/24		

## ACCESSORIES (Refer Datasheet for complete specifications)

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

\* Refer catalogue for Valves &amp; Manifolds

\*\* For Pressure Ranges.

## HOW TO ORDER

Example

## BASIC MODEL

## CODE

## NOMINAL SIZE

D

F

H

63 mm

100 mm

150 mm

## TYPE OF MOUNTING

- 1 WALL / SURFACE / PROJECTION MOUNTING WITH BOTTOM ENTRY
- 2 DIRECT BOTTOM ENTRY
- 3 DIRECT LOWER BACK ENTRY (NEVER FILLABLE)
- 4 DIRECT CENTRE BACK ENTRY (NS 63 mm & NEVER FILLABLE)

## GAUGE CONNECTION (\* Preferred for NS 63 mm)

<b>2BM</b> 1/4" BSP (M)(Standard)*	<b>3BM</b> 3/8" BSP (M)	<b>4BM</b> 1/2" BSP (M)(Standard)
<b>2NM</b> 1/4" NPT (M)(Standard)*	<b>4NM</b> 1/2" NPT (M)(Standard)	

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 $\pm$ 0.5% OF F. S. ** (DRY VERSION & MAXIMUM READING POINTER)	<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 FACTORY CALIBRATION CERTIFICATE
<b>PZ</b> DAMPENING LIQUID MINERAL LIQUID FILLED	<b>SG</b> OXYGEN SERVICE (FOR DRY VERSION)
<b>PX</b> DAMPENING LIQUID FLOUROLUBE FILLED	<b>RH</b> CUSTOM DESIGNED DIAL
<b>PY</b> DAMPENING LIQUID GLYCERINE FILLED	<b>QB</b> INTEGRAL DAMPENING SCREW (AISI 316 SS)
<b>QA</b> DAMPENING LIQUID SILICON OIL FILLED*	<b>SA</b> INTERNAL OVER PRESSURE STOP**
<b>RW</b> PLEXI GLASS	<b>SB</b> INTERNAL VACUUM STOP**
<b>SF</b> MOVEMENT WITH DAMPENING JELLY	<b>PS</b> AISI 316 SS CASE & BEZEL
<b>RR</b> ENCLOSURE PROTECTION IP 66	<b>SD</b> AISI 316 SS MOVEMENT **
<b>RE</b> ENCLOSURE PROTECTION IP 67	<b>KA</b> ON - OFF TYPE VENT PLUG
<b>PU</b> CALIBRATION CERTIFICATE TRACEABLE TO NATIONAL/ INTERNATIONAL STANDARDS	<b>ZL</b> OVER RANGE PROTECTION 150% OF F. S.**
<b>GH</b> MATERIAL TEST CERTIFICATES***	<b>EZ</b> EXTERNAL ZERO ADJUSTMENT**

\*Gasket &amp; Filling plug of NBR. Refer Price List for Viton.

\*\*Applicable for NS 100 mm &amp; 150 mm only.

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

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

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

FOR OTHER OPTIONAL ITEMS, PLEASE CONTACT FACTORY FOR DELIVERY AND MINIMUM QUANTITY OF ORDER.

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.