

# 233B / 234B / 235B / 236B / 237B

## PROCESS PRESSURE GAUGES

### FULL STAINLESS STEEL TYPE



#### MAIN FEATURES

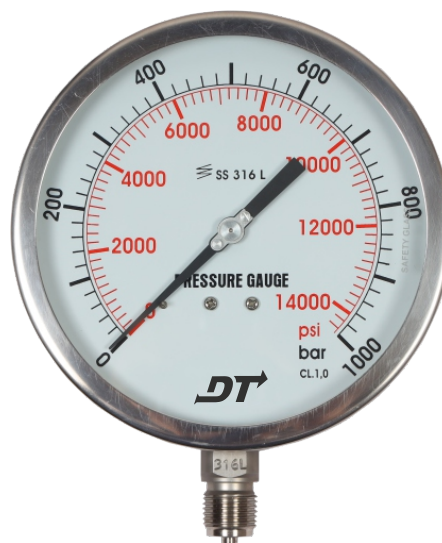
All SS measuring system  
Socket-case, direct welded  
Dry / liquid filled

#### SUGGESTED APPLICATIONS

Liquid & gaseous mediums  
Corrosive environments  
Oil & Gas applications  
Chemical & Petrochemical  
Food & Beverages  
Nuclear power plants

#### TEMPERATURE EFFECT

When temperature of the measuring system deviates from reference temperature (+20°C) : max error  $\pm 0.4\%$  / 10K of true scale value.



### FULL STAINLESS STEEL PROCESS PRESSURE GAUGES

#### BASIC DESCRIPTION

Sensing element : Bourdon Tube  
( $< 100$  bar : C - type ,  $> 100$  bar : Helical)  
Accuracy:  $\pm 1.0\%$  F.S.D.  
Ambient temperature:  $-40...+65^{\circ}\text{C}$   
Service temperature:  $300^{\circ}\text{C}$  max.  
Steady pressure: Up to FS value  
Fluctuating pressure: Up to 90% of FS value  
Over-pressure:  $1.3 \times \text{FS value} \leq 100$  bar  
:  $1.15 \times \text{FS value} \geq 100$  bar  
Weld joints: TIG argon arc welding

#### PRODUCT SPECIFICATION

##### STANDARD VERSION [CODE : 233B]

Dial size : DN100 / DN115 / DN150 / DN250  
Range :  $-1...0...1,600$  bar  
Mounting pattern : Direct, Bottom connection  
Process connection :  $1/2''$  NPT (M) /  $1/2''$  BSP (M)  
Ingress protection : IP 67  
Execution : Dry but fill-able  
Case & Ring material : AISI 304 SS (Bayonet type)  
Bourdon tube & Shank : AISI 316L SS (Shank welded directly to case)  
Movement mechanism : AISI 304 SS  
Dial : Aluminum, black graduation on white background  
Pointer : Micro-zero adjustable, aluminum, black powder coated  
Gaskets, Blow off disc & filling plug : Neoprene  
Window : Shatterproof safety glass

##### LIQUID FILLED VERSION (GLYCERIN) [CODE : G]

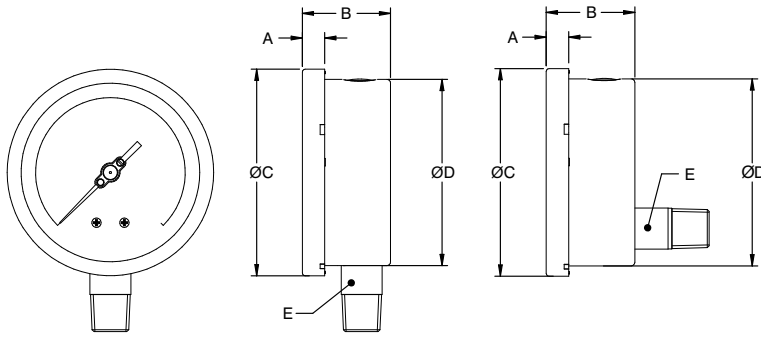
Ambient temperature:  $-20...+65^{\circ}\text{C}$   
Dampening liquid : Glycerin 99.7%

##### LIQUID FILLED VERSION (SILICON OIL) [CODE : S]

Ambient temperature:  $-40...+65^{\circ}\text{C}$   
Dampening liquid : Silicon oil

## DIMENSIONAL DRAWINGS

100mm / 115mm / 150mm / 250 mm



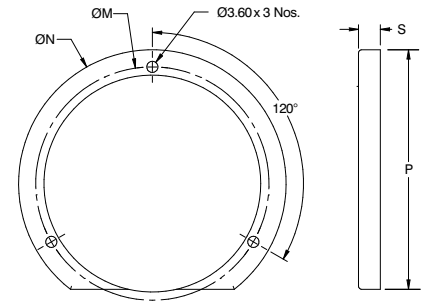
**BD - Direct Bottom**

**BC - Center back**

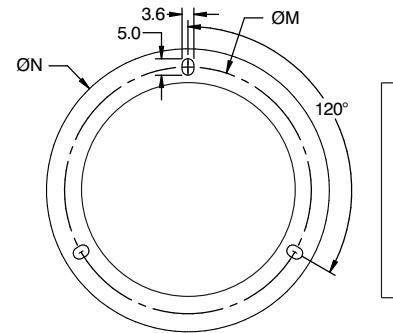
NS	A	B	ØC	ØD	E
100	12	48	111	100	□ 22
115	15	48	129	119	□ 22
150	15	48	161	149	□ 22
250	18.5	50	263	250	□ 22

All dimensions are in mm.

## MOUNTING ACCESSORIES



**BF - BACK FLANGE**



**FF - FRONT FLANGE**

NS	P	S	ØN	ØM
100	128	7	134	118
150	172	7	186	168

All dimensions are in mm.

## MODEL CODING

MODEL	-	DIAL SIZE	MOUNTING	CONNECTION	CASE EXECUTION	/	RANGE	/
232B = Open front, Case SS 304, Bourdon SS 316		04 = 100 mm	B = Direct Bottom	M2N = ¼" NPT (M)	D = Dry but fill-able		0...10 to 0...15000 psi	
242B = Open front, Case SS 316, Bourdon SS 316		45 = 115 mm	L = Lower Back	M2B = ¼" BSP (M)	G = Glycerin filled		or	
233B = Open front, Case SS 304, Bourdon SS 316L		06 = 150 mm		M4N = ½" NPT (M)	S = Silicon oil filled		0...0.6 to 0...1000 bar	
243B = Open front, Case SS 316, Bourdon SS 316L		10 = 250 mm		MBN = ½" BSP (M)			or	
234B = Open front, Case SS 304, Monel 400				M2M = M12 X 1.0P			or	
244B = Open front, Case SS 316, Monel 400				M4M = M20 X 1.5P			or	
235B = Open front, Case SS 304, Hastelloy C				M3B = ¾" BSP (M)			or	
245B = Open front, Case SS 316, Hastelloy C							or	
236B = Open front, Case SS 304, Inconel							or	
246B = Open front, Case SS 316, Inconel							or	
237B = Open front, Case SS 304, Stainless steel*							or	

### OTHER OPTIONS

BF = Back flange for bottom mounting	XA = Tag plate in SS 304	TA = 5 - point factory calibration certificate
FF = Front flange for lower back/center back mounting	XB = Tag plates in SS 316	TC = Material test certificate, 3.1
UC = "U" Clamp mounting for lower back mounting	XD = Custom Dial Design / Private labeling	TO = Certificate of De-greasing
2P = 2" Pipe mounting bracket for bottom mounting	XG = SS 316 movement mechanism	TN = Tested to NACE standards
RG = Receiver Gauge	XP = Maximum Reading Pointer	OR = Over range protection 1.5 of FSD
VS = Vacuum stop		OS = Overload stop

**ORDERING EXAMPLE** 233B-04.B.M4N.D/0-10kg/cm<sup>2</sup>/psi/TA.XA.

## QUICK ORDER DETAILS / FEEDBACKS