



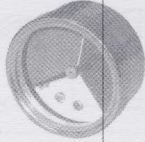





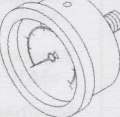

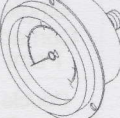

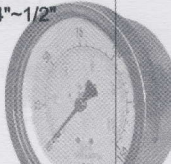
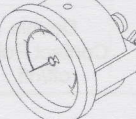

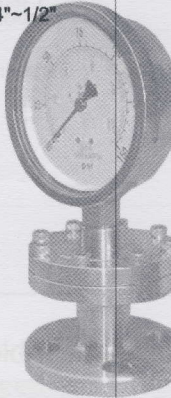


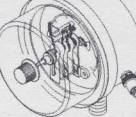
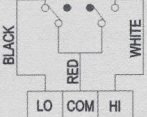
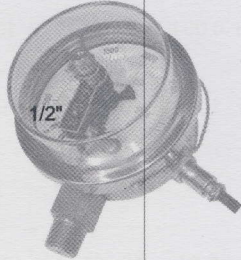
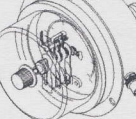
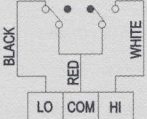
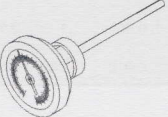





# PRESSURE GAUGE

PRESSURE GAUGES -LIQUID FILLED TYPE	Graphic Symbol	Material Of Casing	P Range bar(PSI)	Size Of Connection (PT/NPT/BSPP)	Ref Page			
 <p>SIZE: 40mm 50mm TYPE:121-21- 221-21-</p>		Stainless Steel	0~350 (0~5000)	1/8"				
 <p>SIZE: 40mm 50mm TYPE:126-21- 226-21-</p>		Stainless Steel						
 <p>SIZE: 63mm 100mm TYPE:321-21- 521-21-</p>		Stainless Steel	0~1000 (0~14500)					
 <p>SIZE: 63mm 100mm TYPE:322-21- 522-21-</p>		Stainless Steel						
 <p>SIZE: 63mm 100mm TYPE:324-21- 524-21-</p>		Stainless Steel				1/4"~1/2"		
 <p>SIZE: 63mm 100mm TYPE:326-21- 526-21-</p>		Stainless Steel						
 <p>SIZE: 63mm 100mm TYPE:328-21-L 528-21-L (L CLAMPS)</p>		Stainless Steel						
 <p>SIZE: 63mm 100mm TYPE:328-21-U 528-21-U (U CLAMPS)</p>		Stainless Steel						
 <p>SIZE: 100mm TYPE:451-21-**-2 BOTTOM, DOUBLE CONTACT</p>		Stainless Steel					1/2"	
 <p>SIZE: 100mm TYPE:555-21-**-2 BACK, DOUBLE CONTACT</p>		Stainless Steel						
 <p>Thermometers SIZE: 40mm 50mm 63mm 100mm</p>		Stainless Steel	-50°C   +600°C	1/8"~1/2"				

**E**

■ Ordering Code

3 2 3 - 1 1 - 2 2 2 - 250<sup>B/P</sup>

Dial Size	Basic Application	Type of Case	Material of Cap & Case	Material of Connector	Type of Connector	Size of Connector	Type of Liquid	Pres. Range and Scale

0	Special	Special	Special	Special	Special	Special	Special	Special	Pressure Range
1	40mm	General	Bottom Mount without Flange	Steel Black	Brass	PF (BSPP)	1/8"	Dry	-1 to +1000 bar
2	50mm	Crimped on Bezel	Bottom Mount with back Flange	Stainless Steel	Chrome Brass	PT (BSPT)	1/4"	Glycerin	Scale and Code PSI/bar/Kpa =P/B
3	63mm	Push Twist Removable Bezel	Lower Back Mount without Flange	Brass	Stainless Steel	NPT	3/8"	Silicone 1000 <sup>o</sup>	kg/PSI =K/P
4	75mm	Push Twist Removable Bezel Zero Adjusted Pointer	Center Back Mount without Flange	Steel Cap Chrome Case Black		UNF	1/2"	Silicone 100 <sup>o</sup>	PSI/Kpa =P/K
5	100mm	Electric Contact Point on/off	Lower Back Mount with Front Flange	Steel Wholly Chrome			7/16"		Mpa/kg =M/K
6	150mm	Diaphragm	Center Back Mount with Front Flange						Mpa/bar =M/B
7			Lower Back Mount without Flange with L Bracket						Type of Electric Contacts
8			Center Back Mount without Flange with U Bracket						
									Double Contact Point off/on
									Double Contact Point off/off

■ Equivalent Table of Pressure Ranges

Unit	bar	mbar	kbar	Pa	kPa	MPa	psi	atms	Ft. Hd. H <sub>2</sub> O at 20°CXC	in H <sub>2</sub> O	Kg/cm <sup>2</sup>	Metres H <sub>2</sub> O	in. Hg. at 20°CXC	mm Hg.	cm Hg.	bar	Millibar (mbar)	kPa
1bar	1	1000	0.001	10 <sup>5</sup>	100	0.1	14.696	1	33.659	407.513	1.0330	10.351	30.019	762.480	76.284	1.0130	1013.0	101.325
1mbar	0.001	1	10 <sup>-6</sup>	100	0.1	10 <sup>-4</sup>	0.433	0.0290	1	12.000	0.0300	0.305	0.884	22.452	2.245	0.0300	29.837	2.984
1kbar	1000	10 <sup>6</sup>	1	10 <sup>8</sup>	10 <sup>5</sup>	100	0.036	0.0025	0.833	1	0.0025	0.025	0.074	1.871	0.187	0.0025	2.486	0.249
1Pa	10 <sup>-5</sup>	0.01	10 <sup>-8</sup>	1	0.001	10 <sup>-6</sup>	14.233	0.9680	32.867	394.408	1	10.018	29.054	737.959	73.796	0.9810	980.662	98.066
1kPa	0.01	10	10 <sup>-5</sup>	1000	1	0.001	1.422	0.0970	3.287	39.370	0.0990	1	2.905	73.796	7.379	0.0980	98.066	9.807
1MPa	10	10 <sup>4</sup>	0.01	10 <sup>6</sup>	1000	1	0.489	0.0330	1.131	13.575	0.0340	0.345	1	25.400	2.540	0.0340	33.753	3.375
							0.019	0.0013	0.045	0.534	0.0014	0.0136	0.039	1	0.100	0.0010	1.329	0.133
							0.193	0.0131	0.445	5.340	0.0140	0.1360	0.393	10.000	1	0.0133	13.290	1.328
							14.503	0.9870	33.514	402.164	1.0200	10.2110	29.625	752.470	75.247	1	1000.0	100.00
							0.014	0.0009	0.033	0.402	0.0010	0.0102	0.029	0.752	0.075	0.001	1	0.100
							0.145	0.0098	0.335	4.021	0.0100	0.1020	0.296	7.525	0.752	0.010	10.000	1

1Pa=1N/m<sup>2</sup> 1kPa=1kN/m<sup>2</sup> 1MPa=1MN/m<sup>2</sup>

## DESCRIPTION

- GLYCERINE LIQUID FILLING BOURDON TUBE PRESSURE GAUGES
- ALL STAINLESS STEEL LIQUID FILLING PRESSURE GAUGES FOR CHEMICAL INDUSTRY APPLICATION
- BOURDON TUBE PRESSURE GAUGES WITH LIMIT SWITCH FOR INDUSTRY APPLICATION

			
221.21.***	326.21.***	324.21.***	322.21.***
			
327.21.***.L	328.21.***.U	551.21.***	555.21.***

### APPLICATION

For gaseous and liquid aggressive media which are not highly viscous and would crystallize. Can be used in aggressive environments. For measuring points subject to vibrations and high dynamic pressure load.

### ALL STAINLESS GAUGES

All stainless steel liquid filled pressure gauges for chemical and food industry application

### NOMINAL SIZE

40, 50, 63, 75, 100mm

### ACCURACY CLASS

Class	Size (mm)
2%	40, 50
1.0~1.5%	63, 75, 100

### PRESSURE RANGES

Pressure Range	Size (mm)
0/1 to 0/200 bar	40, 50
-1/0 to -1/+20 bar	63, 75, 100
0/1 to 0/1000 bar	63, 75, 100

### OPERATING TEMPERATURES

Ambient: T min=-25°C  
T max=+60°C  
Measured medium: T max=+60°C

### THERMAL CHARACTERISTICS

Inaccuracy in case of temperature deviated of +20°C from normal temperature at measuring system: with increasing temp. approx. ± 0.3% / 10K with decreasing temp. approx. ± 0.3% / 10K of max. or min. scale value

### STANDARD VERSION CONNECTION

Size	Wrench	Connection
40mm	12mm	1/8" PT,NPT,PF,BSF
50mm	14mm	1/4" PT,NPT,PF,BSF
60mm	14mm	1/4" PT,NPT,PF,BSF
75mm	14mm	1/4" PT,NPT,PF,BSF
100mm	22mm	3/8, 1/2"PT,NPT,PF,BSF

### MEASURING SYSTEM

Bourdon tube element, copper alloy  
≤ 70 bar circle  
> 70bar helical

### MOVEMENT SYSTEM

Brass  
All Stainless(Type all stainless only)

### FACE

Aluminum, white  
Graduation and figures black

### POINTER

Aluminum, black

### CASE

Stainless steel AISI 304

### BAYONET RING

Stainless steel AISI304

### TYPE OF LIQUID

Glycerine (99.5%)

Code	Liquid
1	Dry
2	Glycerine (99.5%)
3	Silicone
4	Silicone 100%

### WINDOW

Acrylic or glass

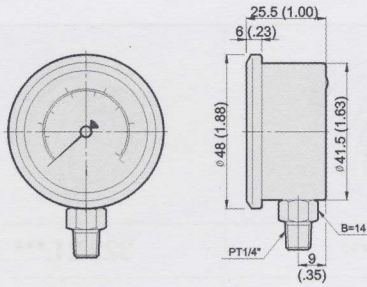
### OPTIONS

Rear fastening edge  
Three-square front ring  
Three-hole front flange  
Special scale

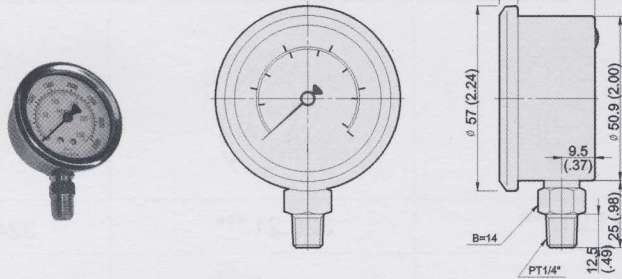
INSTALLATION DETAILS

MILLIMETERS(INCHES)

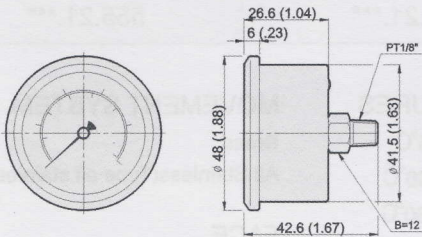
121.21.\*\*\*  
40 mm



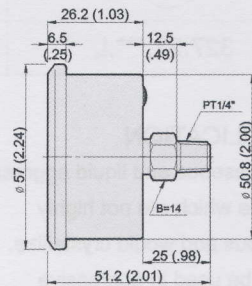
221.21.\*\*\*  
50 mm



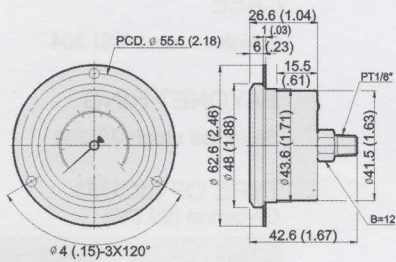
124.21.\*\*\*  
40 mm



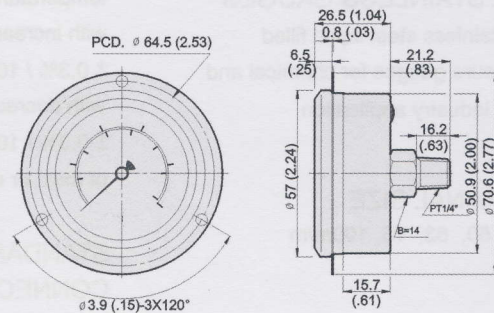
224.21.\*\*\*  
50 mm



126.21.\*\*\*  
40 mm

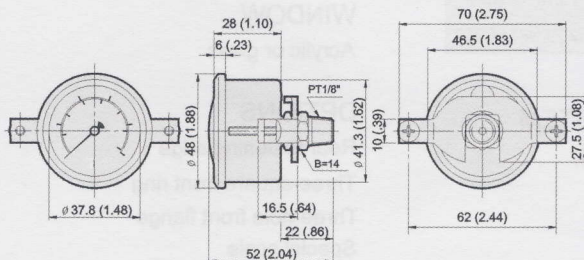


226.21.\*\*\*  
50 mm

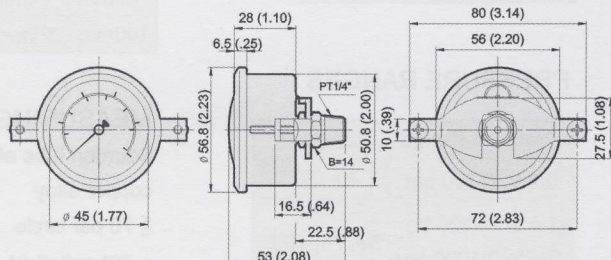


121.21.\*\*\*  
40 mm

128.21.\*\*\*



228.21.\*\*\*  
50 mm

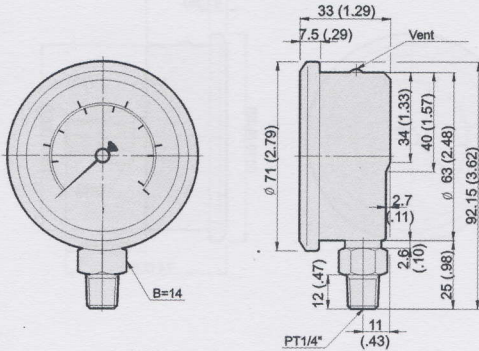




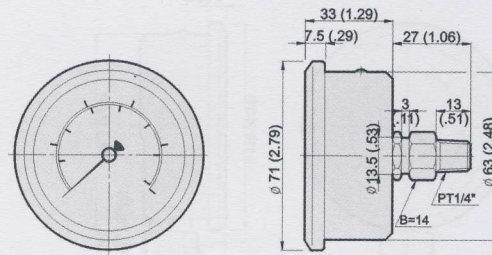
## INSTALLATION DETAILS

MILLIMETERS(INCHES)

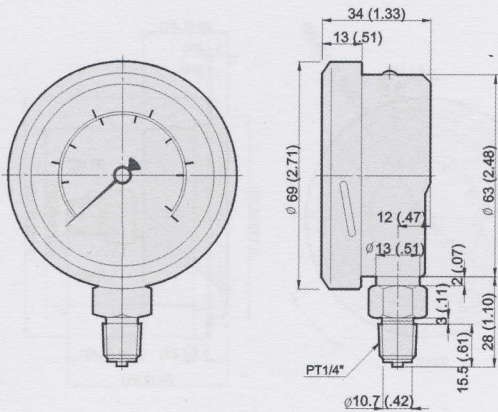
321.21.\*\*\*  
321.23.\*\*\* 63 mm



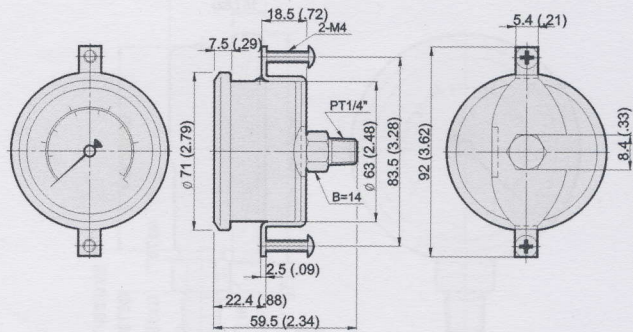
324.21.\*\*\*  
324.23.\*\*\* 63 mm



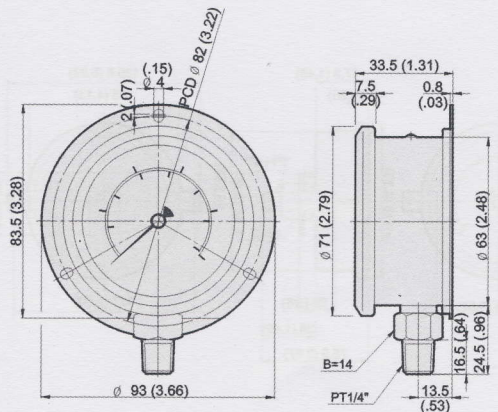
331.21.\*\*\*  
331.23.\*\*\* 63 mm



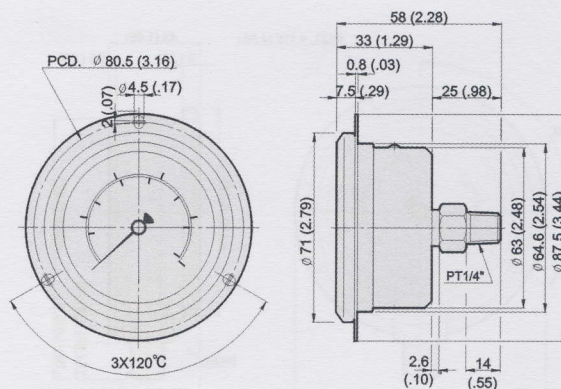
328.21.\*\*\*  
328.23.\*\*\* 63 mm



322.21.\*\*\*  
322.23.\*\*\* 63 mm



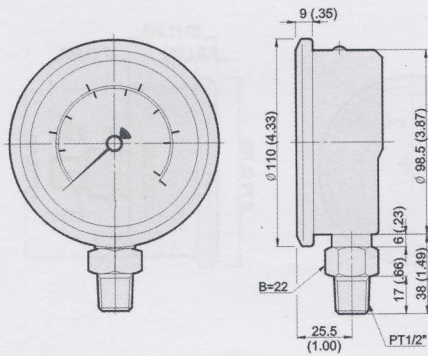
326.21.\*\*\*  
326.23.\*\*\* 63 mm



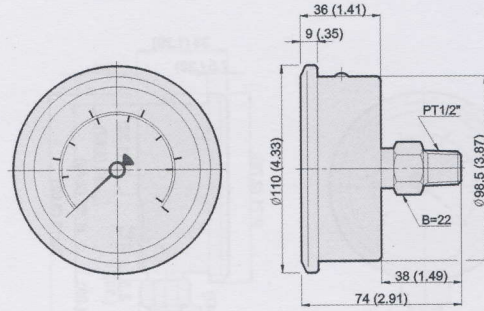
INSTALLATION DETAILS

MILLIMETERS(INCHES)

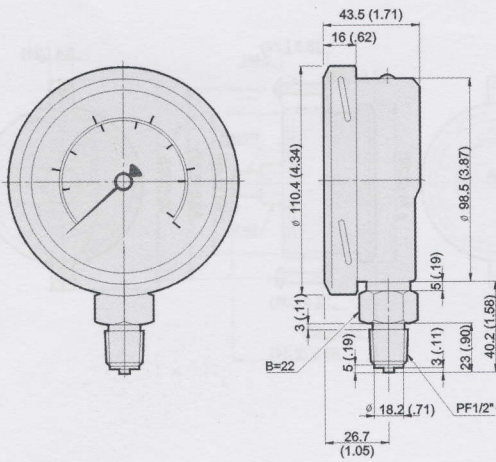
521.21.\*\*\*  
521.23.\*\*\* 100 mm



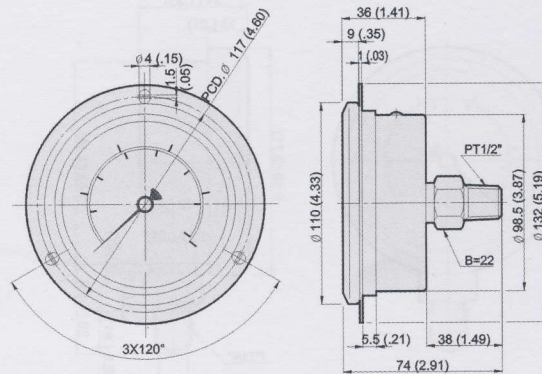
524.21.\*\*\*  
524.23.\*\*\* 100 mm



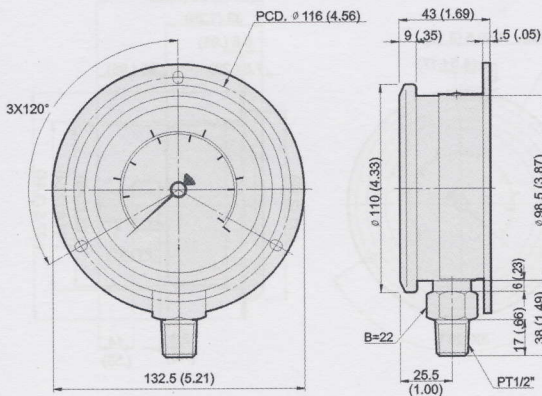
531.21.\*\*\*  
531.23.\*\*\* 100 mm



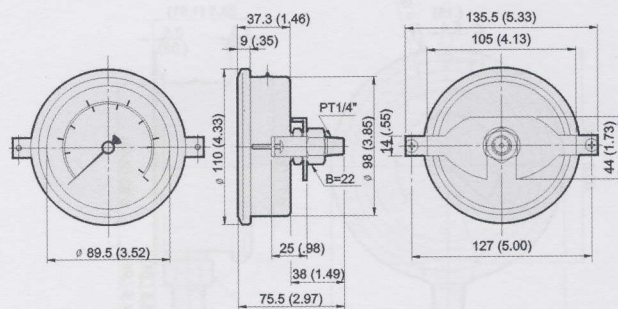
526.21.\*\*\*  
526.23.\*\*\* 100 mm



522.21.\*\*\*  
522.23.\*\*\* 100 mm



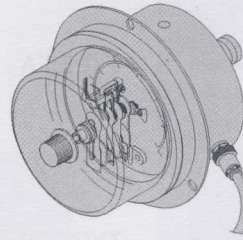
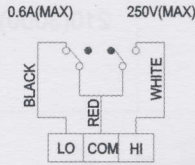
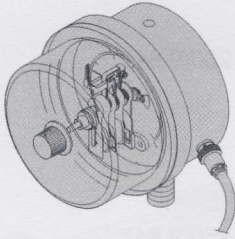
528.21.\*\*\*  
528.23.\*\*\* 100 mm



## INSTALLATION DETAILS

MILLIMETERS(INCHES)

ALL STAINLESS STEEL LIQUID FILLING PRESSURE GAUGES FOR CHEMICAL AND FOOD INDUSTRY APPLICATION



### APPLICATION

For gaseous and liquid media which are not highly viscous, do not crystallize and are not aggressive to copper alloys.  
For high measuring accuracy.

### NOMINAL SIZE

100m/m

### ACCURACY CLASS

Class 1.0%

### PRESSURE RANGES

-1/0 bar  
0/1 to 0/1000 bar

### CONTACT TYPES

Snap action contact (magnet)(MK)  
Inductive contact (IK)

### MINIMUM RANGES

MK single 1 bar  
MK double 2.5 bar  
IK single 1 bar  
IK double 1.6 bar

### OPERATING TEMPERATURES

Ambient:  $T_{min} = -25^{\circ}C$   
 $T_{max} = +60^{\circ}C$   
Measured medium:  $T_{max} = +100^{\circ}C$

### THERMAL CHARACTERISTICS

Inaccuracy in case of temperature deviated of  $+20^{\circ}C$  from normal temperature at measuring system: with increasing temp. approx.  $\pm 0.3\% / 10K$   
with decreasing temp. approx.  $\pm 0.3\% / 10K$   
of max. or min. scale value

### STANDARD VERSION CONNECTION

Brass, bottom, or back(eccentric)  
Size 100m/m - wrench 22m/m  
1/2 PT, NPT, PF, BSP

### MEASURING SYSTEM

Bourdon tube element  
 $\leq 70$  bar circle, copper alloy  
 $> 70$  bar helical, CrNi steel

### MOVEMENT SYSTEM

Stainless steel and Brass

### FACE

Aluminum, white  
Graduation and figures black

### POINTER

Aluminum, black

### CASE

Stainless steel SUS 304

### BAYONET RING

Stainless steel AISI 304

### WINDOW

Plastic window

551.21.\*\*\*

555.21.\*\*\*

