

P R E S S U R E   G A U G E



SHEEN KONG INDUSTRIAL CO., LTD

No. 10, Siyu St., Da-Li Dist., Taichung City 412, Taiwan  
Tel 886-4-24936966 Fax 886-4-24936559  
Email skon@skon.com.tw http:// www.skon.com.tw



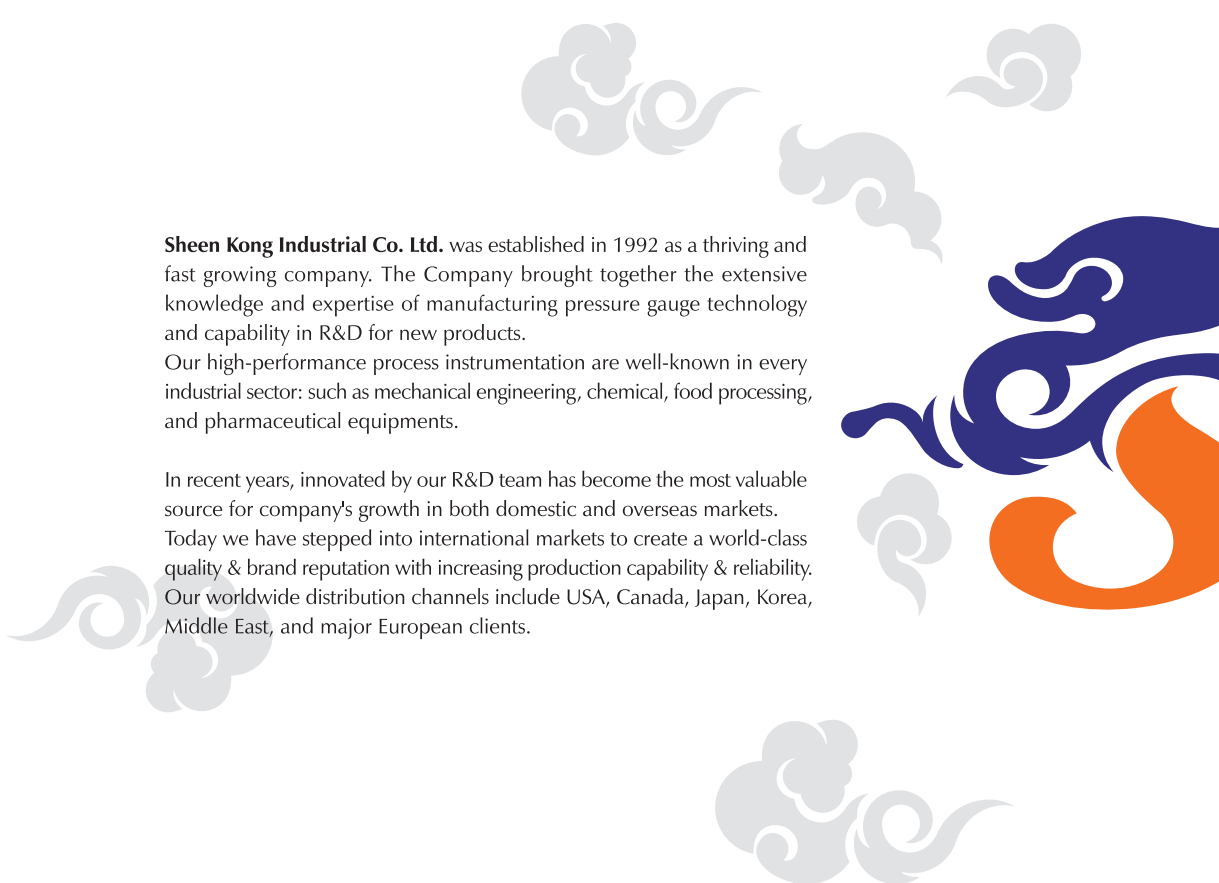
Electrical Connections  
with High Technology Standard.

pressure gauges



Steady Growth





**Sheen Kong Industrial Co. Ltd.** was established in 1992 as a thriving and fast growing company. The Company brought together the extensive knowledge and expertise of manufacturing pressure gauge technology and capability in R&D for new products.

Our high-performance process instrumentation are well-known in every industrial sector: such as mechanical engineering, chemical, food processing, and pharmaceutical equipments.

In recent years, innovated by our R&D team has become the most valuable source for company's growth in both domestic and overseas markets.

Today we have stepped into international markets to create a world-class quality & brand reputation with increasing production capability & reliability. Our worldwide distribution channels include USA, Canada, Japan, Korea, Middle East, and major European clients.



# Steady Growth

P R E S S U R E   G A U G E S





## Do the best from the beginning

In year 1999, we were approved by EU TÜV standard to enter the European market as well as a committed manufacturer under the ISO9001 certification.

By the year 2002, we have registered patent (NO.156413) as well as patents in both USA and China for our own "Movement design" & "Diaphragm system". Hence then we have started to customise design both mechanical and electrical measuring instruments.

We are persistent in our belief for:

1. The Most Reasonable Price
2. The Shortest Delivery Duration
3. The First-Class Service.

We are looking forward to fulfill your every expectation and the soonest service upon your request.





# INDEX PAGE

## Pressure Gauges

Pressure Gauges Ordering Details	01
Equivalent Table of Pressure Gauges	02
Pressure Gauges Exploded Drawings	03
Pressure Gauges Standard Dial Graduations	05
Pressure Gauges Purchasing & Installation	07
2.5" Digital Switch Gauges	11
2.5" Digital Pressure Gauges	13
4" Digital Switch Gauges	17
General Pressure Gauges, Vacuum Gauges, Compound Gauges-Bottom Mounting	19
General Pressure Gauges, Vacuum Gauges, Compound Gauges-LBM/CBM	21
Freon Pressure Gauges	23
Micro Pressure Gauges-Bottom Mounting	25
Micro Pressure Gauges-LBM/CBM	27
Filled Bourdon Tube Pressure Gauges	29
All Stainless Steel Filled Pressure Gauges	35
All Stainless Steel Pressure Gauges with Magnetic Contact	39
Test & Calibration Precision Pressure Gauges	41
Teflon Diaphragm Pressure Gauges	43
PP Filled Diaphragm Pressure Gauges	45
Bottom Flange with Diaphragm Pressure Gauges	47

## Thermometers

Electric Contact Thermometers for Bottom Mounted Capillaries Connection	49
Electric Contact Thermometers for Back Mounted Capillaries Connection	51
Bi-Metal Thermometers	53

## Accessories

Needle Valve Specifications	56
Pressure Gauges Accessories	57

The background of the page is an abstract composition of large, flowing, organic shapes in two shades of blue: a vibrant cyan and a deep, rich purple. The shapes overlap and curve, creating a sense of movement and depth. The overall effect is modern and artistic.

Pressure Gauges

## PRESSURE GAUGES ORDERING DETAILS

Nominal Size	Basic Application	Type of Case	Material of Case	Material of Connector	Type of Connector	Size of Connector	Type of Liquid	Contact Type

ORDER CODE    3    2    1    -    2    1    -    2    2    2    -    15000A

0	Special	0	Special	0	Special	0	Special	0	Special	0	Special	0	Special				
1	40mm	1	General	1	Bottom Mount without Flange	1	Steel	1	Brass	1	PF	1	1/8"	1	Dry	1	Single Contact on
2	50mm	2	Crimped on Bezel	2	Bottom Mount with Back Flange	2	Stainless Steel	2	Brass Plated	2	PT	2	1/4"	2	Glycerine	2	Double Contact on / off
3	60mm	3	Push Twist Removable Bezel	3	Lower Back Mount without Flange	3	Brass	3	Stainless Steel	3	NPT	3	3/8"	3	Silicone	3	Double Contact on / on
4	100mm	4	Push Twist Removable Bezel Zero Adjusted Pointer	4	Center Back Mount without Flange	4	Steel Bezel Plated	4	P.P Inner Thread	4	UNF	4	1/2"	4	Silicone 100ø	4	Single Contact off
5	150mm	5	Electric Contact Point on/off	5	Lower Back Mount with Front Flange	5	Steel Wholly Plated	5	Teflon Inner Thread	5		5	7/16"	5		5	
6	75mm	6	Digital Gauge	6	Center Back Mount with Front Flange	6	P.P Diaphragm	6		6		6		6		6	
7		7		7	Lower Back Mount without Flange with L Bracket	7	Teflon Diaphragm	7		7		7		7		7	
8		8		8	Center Back Mount without Flange with U Bracket	8	Aluminum Alloy	8		8		8		8		8	Red Pointer
9		9		9	Lower Back Mount with Back Flange	9	PP Case	9		9		9		9		9	Magnetic Mark Pointer

©REMARK

Psi/Bar/Kpa=P/B、Kg/Psi=K/P、Psi/Kpa=P/K、Mpa/Kg=M/K、Mpa/Bar=M/B、Psi/Psi=P/P、

          ||                                  ||                                  ||                                  ||                                  ||                                  ||

          A                                  B                                  C                                  D                                  E                                  F

Psi、Bar、Mpa、Bar/Psi=B/P、Kg、Others

          ||          ||          ||                  ||                  ||          ||          ||

          G          H          I                  J                  K          Z

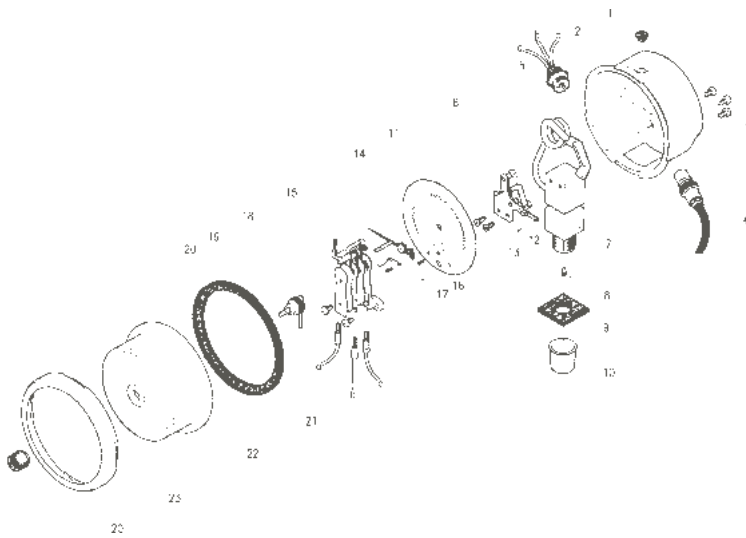


## EQUIVALENT TABLE OF PRESSURE GAUGES

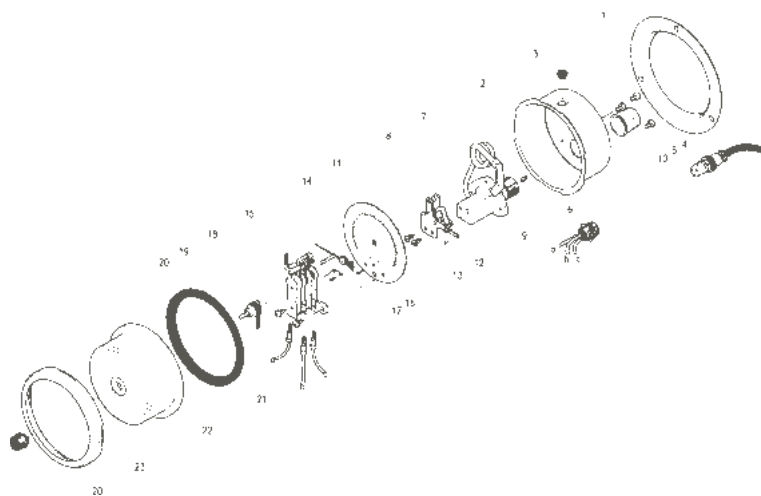
psi	atms	Ft.Hd. H <sub>2</sub> O at 20°C	in H <sub>2</sub> O	Kg/cm <sup>2</sup>	Metres H <sub>2</sub> O	inHg. at 20°C	mmHg	cmHg	bar	Millibar (mbar)	kPa
1	0.0680	2.310	27.720	0.0700	0.704	2.043	51.884	5.188	0.0690	68.947	6.895
14.696	1	33.659	407.513	1.0330	10.351	30.019	762.480	76.284	1.0130	1013.0	101.325
0.433	0.0290	1	12.000	0.0300	0.305	0.884	22.452	2.245	0.0300	29.837	2.984
0.036	0.0025	0.833	1	0.0025	0.025	0.074	1.871	0.187	0.0025	2.486	0.249
14.233	0.9680	32.867	394.408	1	10.018	29.054	737.959	73.796	0.9810	980.662	98.066
1.422	0.0970	3.287	39.370	0.0990	1	2.905	73.796	7.379	0.0980	98.066	9.807
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

UNIT	bar	mbar	kbar	Pa	kPa	MPa
1bar	1	1000	0.001	10 <sup>5</sup>	100	0.1
1mbar	0.001	1	10 <sup>-6</sup>	100	0.1	10 <sup>-4</sup>
1kbar	1000	10 <sup>6</sup>	1	10 <sup>8</sup>	10 <sup>5</sup>	100
1Pa	10 <sup>-5</sup>	0.01	10 <sup>-8</sup>	1	0.001	10 <sup>-6</sup>
1kPa	0.01	10	10 <sup>-5</sup>	1000	1	0.001
1MPa	10	10 <sup>4</sup>	0.01	10 <sup>6</sup>	1000	1

## PRESSURE GAUGES EXPLODED DRAWINGS



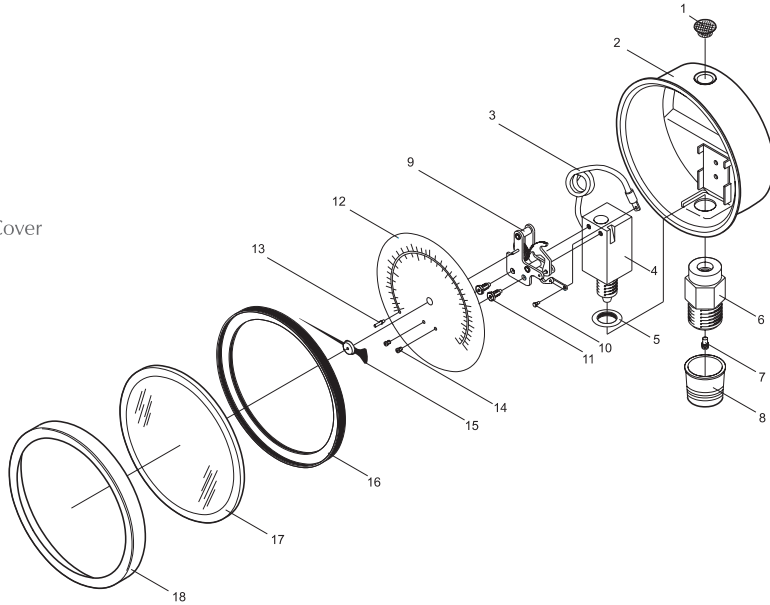
1. Safety Device
2. Case
3. Set Screw
4. External Connection Kit
5. Internal Connection Kit
6. Bourdon Tube
7. Brass Socket
8. Shock Reducer
9. Oil Valve
10. Connector Protective Cover
11. Movement
12. Internal Screw
13. Hexagon Screw
14. Dial
15. Adjustable Pointer
16. Dial Screw
17. Spring Stop Pointer
18. Electric Connector Set
19. Set Screw
20. Dual Twisting Bolt
21. Oil Valve (Oil seal)
22. Window
23. Upper Cap



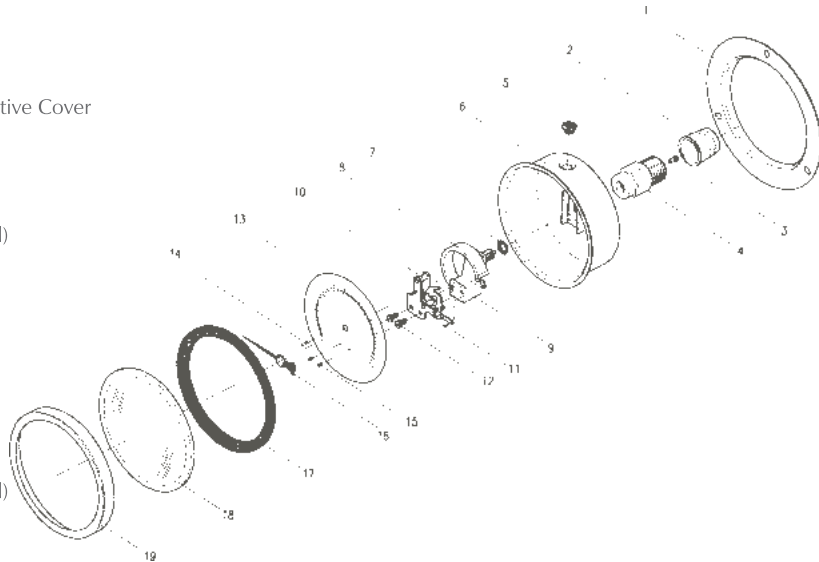
1. Flange
2. Case
3. Safety Device
4. Set Screw
5. External Connection Kit
6. Internal Connection Kit
7. Bourdon Tube
8. Brass Socket
9. Shock Reducer
10. Connector Protective Cover
11. Movement
12. Internal Screw
13. Hexagon Screw
14. Dial
15. Adjustable Pointer
16. Dial Screw
17. Spring Stop Pointer
18. Electric Connector Set
19. Set Screw
20. Dual Twisting Bolt
21. Oil Valve (Oil seal)
22. Window
23. Upper Cap

## PRESSURE GAUGES EXPLODED DRAWINGS

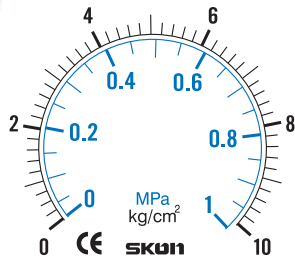
1. Safety Device
2. Case
3. Bourdon Tube
4. Brass Socket
5. Oil Valve (Oil seal)
6. Connector Part
7. Shock Reducer
8. Connector Protective Cover
9. Movement
10. Internal Screw
11. Hexagon Screw
12. Dial
13. Stop Pointer
14. Dial Screw
15. Pointer
16. Oil Valve (Oil seal)
17. Window
18. Upper Cap



1. Flange
2. Connector Protective Cover
3. Shock Reducer
4. Connector Part
5. Safety Device
6. Case
7. Oil Valve (Oil seal)
8. Bourdon Tube
9. Brass Socket
10. Movement
11. Internal Screw
12. Hexagon Screw
13. Dial
14. Stop Pointer
15. Dial Screw
16. Pointer
17. Oil Valve (Oil seal)
18. Window
19. Upper Cap



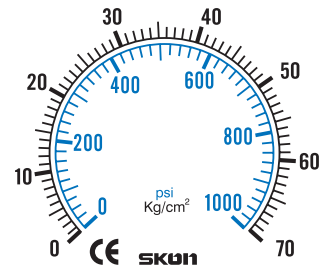
## PRESSURE GAUGES STANDARD DIAL GRADUATIONS



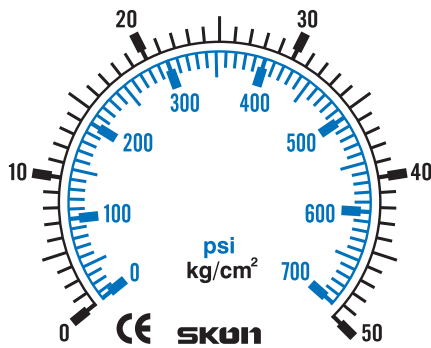
Mpa and kg/cm<sup>2</sup>  
Size: 40mm acc.±2.0%



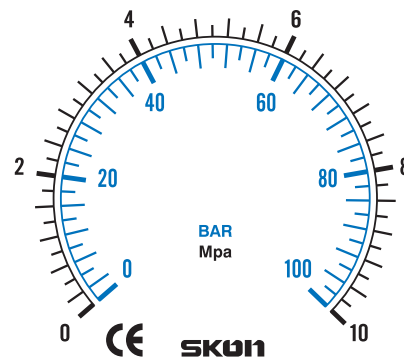
BAR and Mpa  
Size: 50mm acc.±2.0%



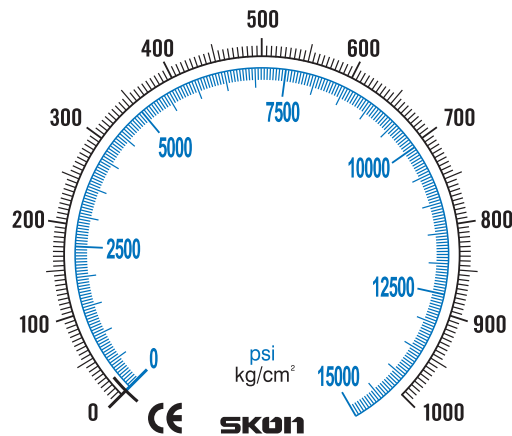
PSI and kg/cm<sup>2</sup>  
Size: 63mm acc.±1.5%



PSI and kg/cm<sup>2</sup>  
Size: 75mm acc.±1.5%

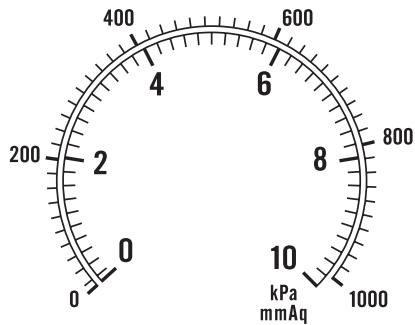


BAR and Mpa  
Size: 100mm acc.±1.0%

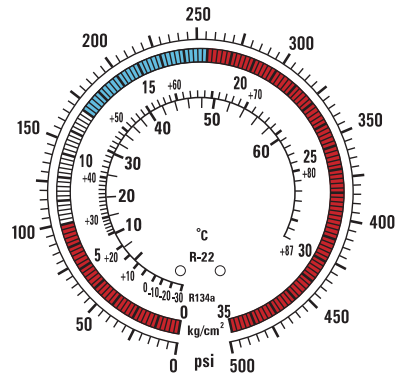


PSI and kg/cm<sup>2</sup>  
Size: 150mm acc.±0.2%

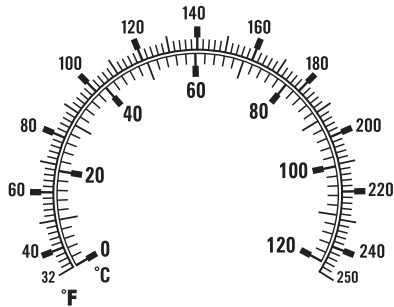
# PRESSURE GAUGES STANDARD DIAL GRADUATIONS



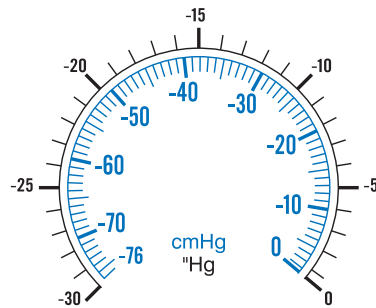
kPa and mmAq acc.  $\pm 1.5\%$   
Micro Pressure Gauge



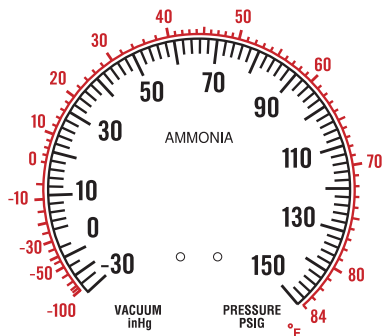
PSI and kg/cm<sup>2</sup> acc.  $\pm 1.5\%$   
Freon Gauge



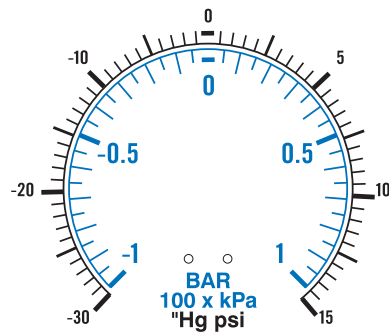
BC and BF acc.  $\pm 1.5\%$   
Thermometer



cmHg and "Hg acc.  $\pm 1.5\%$   
Vacuum Pressure Gauge



inHg and Psi acc.  $\pm 1.5\%$   
Ammonia Gauge



BAR and Psi acc.  $\pm 1.5\%$   
Compound Pressure Gauge

## PRESSURE GAUGES PURCHASING & INSTALLATION

### 01.

The operating pressure should be in the mid-third of the pressure range specified for the gauge. The maximum pressure load should not exceed 75% of full scale value at static loads, or 65% of full scale value for pulsating loads.

### 02.

When selecting pressure gauges the selection criteria and installation recommendations provided here must be observed. The use of pressure gauges which do not meet the requirements encountered in practice can cause great consequential damage.

### 03.

When using hazardous pressure media, for example, oxygen, acetylene, combustible substances, toxic substance, as well as refrigerating units, compressors etc. the applicable regulations must be observed. Fluid filled pressure gauges must be equipped with blow-out devices.

### 04.

The repair of pressure gauge should leave to skilled staff. Generally, pressure gauges will not require any maintenance. These instruments may only be repaired by the manufacturer.

### 05.

For sealing connections with a parallel thread, for example, flat gaskets or profile seals must be fitted or on the other hand, the corresponding sealing lens has to be provided in case of high pressure connection.

### 06.

The pressure gauge needs to be mounted at the proper position so that it will not be subjected to vibration for accurate dial reading.

### 07.

If the temperature of the pressure medium at the point where it is measured deviates from the operating temperature specified for the pressure gauge, then a sufficiently high pressure gauge, a siphon or a chemical seal with a capillary line must be mounted to the pressure gauge.

### 08.

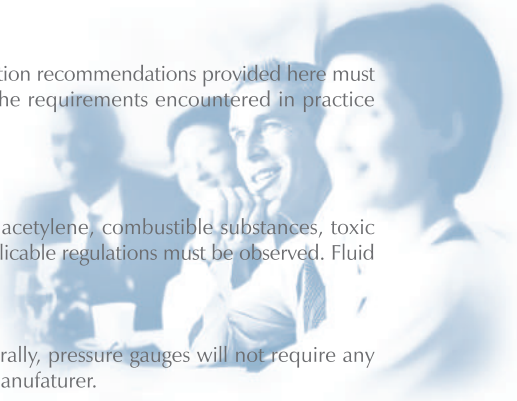
For services at corrosive atmospheres or fluid elements, suitable casings and components made of corrosion resistant materials must be provided. Also special material may help to protect the outside of the pressure gauge. For example SS316, PP, or teflon. Because of the restricted choice of materials for the elastic elements, diaphragm pressure gauges with protective lining will possibly have to be used, or chemical seals made of pressure media resistant materials needed to be mounted to a bourdon tube pressure gauge.

### 09.

Before installation, the tapered threads (PT & NPT Threads) are to be sealed off with additional sealants like PTFE tape, for example. As fo PF & PS threads, it is recommended to use suitable flat gaskets in the material of brass or teflon to be fitted.

### 10.

During installation or removal of a lower mounting pressure gauge, apply the wrench to the wrench flats provided. It must be ensured that the matching process connection has been selected (nominal width, suitable sealing face, if required).



## PRESSURE GAUGES PURCHASING & INSTALLATION

### 11.

During installation or removal of the lower back or center back mounting pressure gauge, do the same steps as point 10, in the case of flange joints or mounting bracket, the flanges are joined using suitable bolts to tighten the joints, do the same with the mounting bracketed until it is leaktight.

### 12.

During installation or removal never apply any forces to the case of the pressure gauges, as it might affect the accuracy of the pressure gauge.

### 13.

Do not touch the diaphragm as it might cause consequential damage to the pressure gauge.

### 14.

For pressure gauges with pressure relief vent at the top of the case it is recommended for pressure ranges lower than or equal (7 KG/CM<sup>2</sup>/100 PSI) to cut off the nipple at the filling plug so that the gauge can be vented in order to compensate the internal pressure.

### 15.

When the installation is completed, start the device for measuring point slowly in order to avoid sudden pressure spikes during start-up and cause damage to the gauge.

### 16.

Precision inspection is recommended once every year for bourdon tubes, capsule & diaphragm type of gauges.

### Service Guideline

1.The Manufacturer provides one year of warranty for compliance of goods. In case of defective goods being claimed, Distributor / Suppliers are to fax a copy of claim document & description of compliance failure to the Manufacturer within three days after checking. Once the Manufacturer agrees to investigate the claim, Distributor / Suppliers can then send the defective parts by prepaid postage back to the Manufacturer.

2.The Manufacturer is responsible for compliance of goods before leaving the factory. In case of defective caused by material, or production errors, the manufacturer is responsible to provide swift corrective actions plans & improvements.

However Distributor / Suppliers remain the right to accept the remedy provided by the Manufacturer or request to return all defective quantity to Manufacturer. The Distributor / Supplier also has the right to request the manufacturer to compensate the total amount equal to the defective quantity or to replace the defective items with the good quantity items by prepaid transportation. For any other costs incurred by compliance failure, the Manufacturer will negotiate with Distributor / Supplier to finalise the responsibility for compensation details according to national directive regulations in each country.

3.Distributors / Suppliers are legally responsible for goods supplied into the application. This also means the Manufacturer has the right to know every detail about the application before taking any legal responsibility.

## PRESSURE GAUGES PURCHASING & INSTALLATION

### **Do not tighten by grasping the case of the gauge as this may cause damage.**

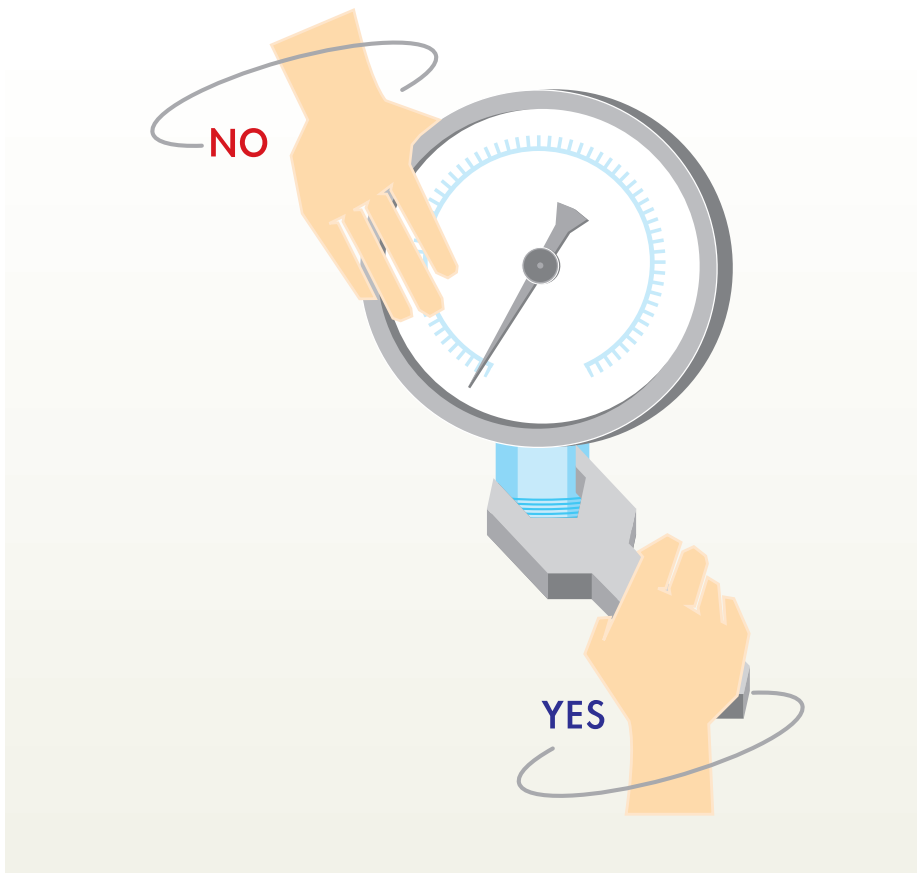
1. Before installing a pressure gauge, consideration should be given to temperature, humidity, vibration, pulsation, shock and other climatic and ambient conditions of the service application, and to the possible need for protective attachments and/or special installation requirements.

See further: ASME B40.1-1991 and NEN-EN 837.

2. The user shall ensure that the correct gauge has been selected with the correct range and construction.

3. When a gauge incorporates a blow-out device or blow-out back, a minimum distance of 20 mm from any obstacle shall be ensured.

4. When tightening direct mounting gauges, one should have a tightening torque applied to the connection by means of a spanner, to prevent damaging the gauge.





## PRESSURE GAUGES PURCHASING & INSTALLATION

### Pressure connection

The positions of the connections can be chosen in the technical sheets. Thread forms and sizes are as shown in the table below. The different screw threads are parallel thread with symbol BSP or G, according to ISO 228-1, and taper pipe threads with symbol NPT according to ANSI/ASME B1.20.1. Of course are other threads like SAE flair, specific to certain industries deliverable. The connections can be made of hexagon, square or flats

#### PARALLEL PIPE THREADS

G 1/8" B

G 1/4" B

G 3/8" B

G 1/2" B

#### TAPER PIPE THREADS

1/8 -27 NPT EXT

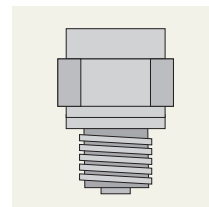
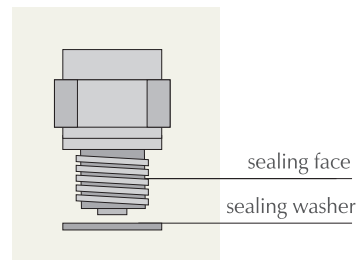
1/4 -14 NPT EXT

1/2 -14 NPT EXT

Note: G3/8" B is not preferred.

With parallel thread the pressure seal is made on the sealing face using a sealing washer which is compatible with the fluid.

With NPT thread the pressure seal is normally made by the fitting of the thread, but it is common practice to apply material to the male thread before assembly.



### Important

All pressure gauges sealed for the purpose of liquid-filling have a device to assure atmospheric compensation. A sticker glued on the case shows how to open after installation. See illustration below. If this device is not opened severe personal damage may be caused when operating. For all standard gauges on request the sticker without illustration as shown alongside can be stuck on the casing. Please specify with ordering.



**WARNING** : A failure resulting in injury or damage may be caused by pressure beyond top of scale, excessive vibration, pressure pulsation, excessive instrument temperature, corrosion of the pressurized parts, or other misuse. Refer to ASME. B40.1.

**DO NOT USE ON OXYGEN SERVICE**

## 2.5" DIGITAL SWITCH GAUGES



SDI2.5-L-□-□-□□□



SDI2.5-B-□-□-□□□

### APPLICATIONS

Hi-techs; Process control; Compressors Refrigeration; Fluids Pumps; Sprinkling system; Agriculture Hydraulic; Pneumatic; average industry

### FEATURE OF PRODUCTS

- High precision at  $\pm 0.5\%$
- Backlight display; Zero reset; Switching between 4 types of PSI · Bar · kg/cm<sup>2</sup> · Mpa ·
- 17-4PH one-piece-formed sensor, 100% without welds, O-ring or silicone oil; 100% leakage-proof.
- PP casing, can be used in weak acid or alkaline environment.
- Capable of -10~60°C temperature compensation.
- Capable of Peak-Hold.
- Diaphragm Base installable
- Corrupt pressure: 5 times working pressure
- Over-pressure protection: Twice working pressure
- Service life: 10 million

### SPECIFICATIONS

### CONTENTS

DIMENSION	63mm
ACCURACY	$\pm 0.5\%$ FS
FLUIDS SUITED	Water, Air, Hydraulic fluid
PRESSURE RANGE	-1~700 BAR
TEMPERATURE	Working temp -10°C-60°C (non-frozen condition) Storage temp -20°C-70°C (F66non-frozen condition) Medium temp -55°C-125°C (non-frozen condition) Storage humidity 35-85%
CONNECTORS	1/4" PT.NPT.BSP or other. SS316, LM or CBM
DIGIT SIN DISPLAY	4-digit LCD. WINDOW 36X19mm
CASE	PP
DIAL	PC
SOURCE VOLTAGE	DC:12V-24V
CURRENT DRAWN	Max:25mA (Single back-light) Not include control output drawn
CONTROL OUTPUT	2 sets of output : NPN/PNP-Open Collector Load current: <100mA Voltage (NPN): Max DC30V Voltage (PNP): Max supplied voltage

## 2.5" DIGITAL SWITCH GAUGES



SDI2.5-L-□-□-□□□

SDI2.5-B-□-□-□□□

## 2.5" DIGITAL PRESSURE GAUGES



SDI2.5-L-3-□-□□□

### APPLICATIONS

Hi-techs; Process control; Compressors Refrigeration; Fluids Pumps; Sprinkling system; Agriculture Hydraulic; Pneumatic; average industry

### FEATURE OF PRODUCTS

- High precision at  $\pm 0.5\%$
- Backlight display; Zero reset; Switching between 4 types of PSI · Bar ·  $\text{kg}/\text{cm}^2$  · Mpa ·
- AISI Stainless Steel 17-4PH one-piece-formed sensor, 100% without welds, O-ring or silicone oil; 100% leakage-proof.
- PP casing, can be used in weak acid or alkaline environment.
- Capable of  $-10\sim 60^\circ\text{C}$  temperature compensation.
- Capable of Peak-Hold.
- Diaphragm Base installable
- Corrupt pressure: 5 times working pressure
- Over-pressure protection: Twice working pressure
- Service life: 10 million

### SPECIFICATIONS

### CONTENTS

DIMENSION	63mm
ACCURACY	$\pm 0.5\%$ FS
FLUIDS SUITED	Water, Air, Hydraulic fluid
PRESSURE RANGE	-1~700 BAR
TEMPERATURE	Working temp $-10^\circ\text{C}\sim 60^\circ\text{C}$ (non-frozen condition) Storage temp $-20^\circ\text{C}\sim 70^\circ\text{C}$ (F66non-frozen condition) Medium temp $-55^\circ\text{C}\sim 125^\circ\text{C}$ (non-frozen condition) Storage humidity 35-85%
CONNECTORS	1/4" PT.NPT.BSP or other. SS316. LM
DIGIT SIN DISPLAY	4-digit LCD. WINDOW 36X19mm
CASE	PP
DIAL	PC
SOURCE VOLTAGE	9V Battery
CURRENT DRAWN	Max:25mA (single back-light)
BATTERY LIFE	4000 hours(non back-light)

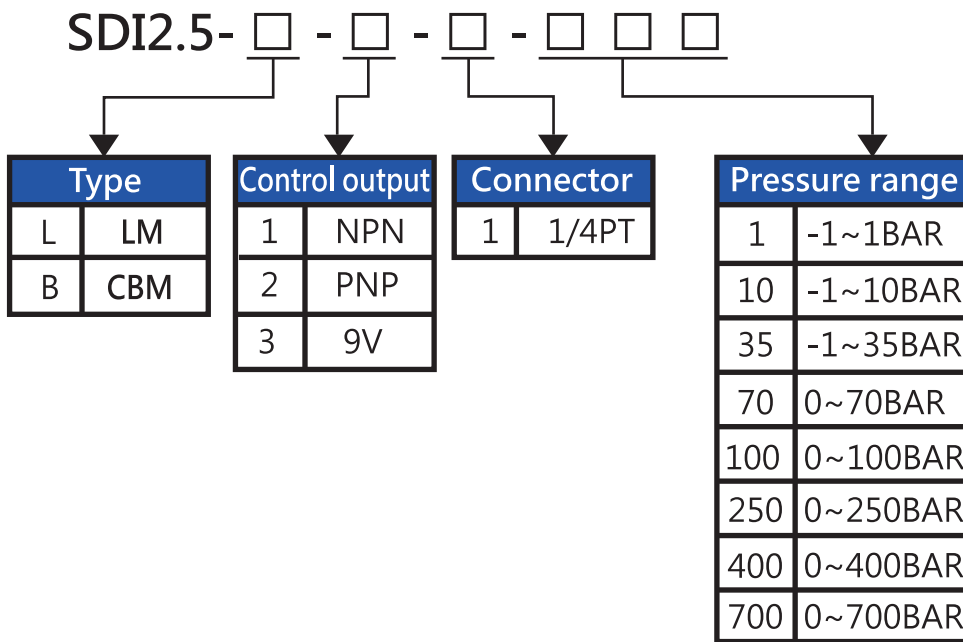
## 2.5" DIGITAL PRESSURE GAUGES



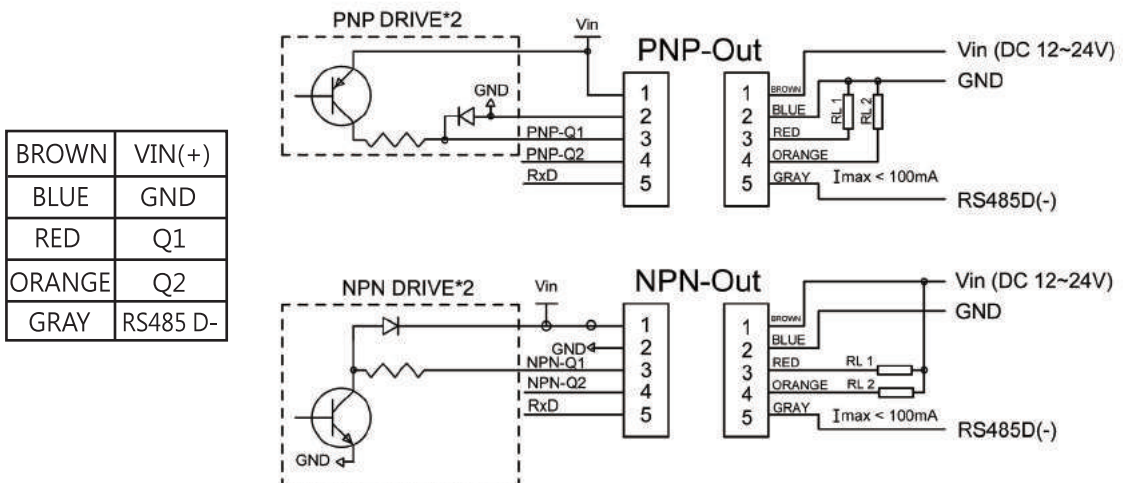
SDI2.5-L-3-□-□□□

## 2.5" Digital Switch Gauges Ordering Details and Description of Wiring

### MODEL CODING



### Description of Wiring



## 4" Digital Switch Gauges Ordering Details and Description of Wiring

### MODEL CODING

SDI 04-  -  -  -

Type	
L	LM
B	LBM

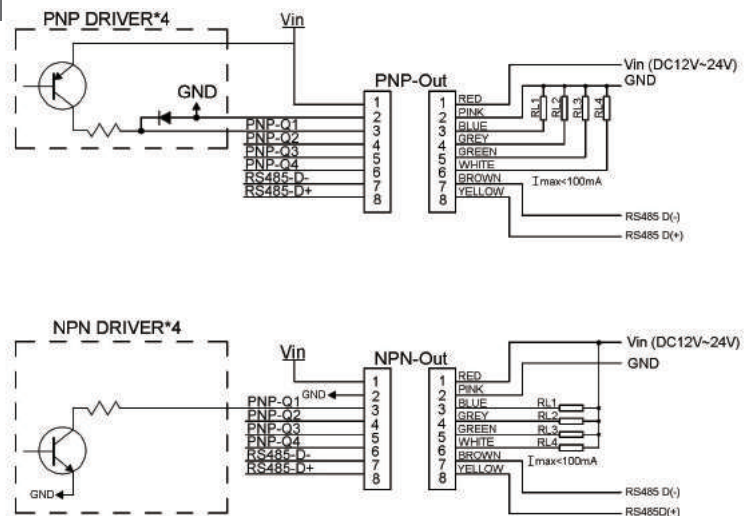
Control output	
1	NPN
2	PNP

Connector	
1	1/2PT
2	1/2NPT

Pressure range	
1	-1~1BAR
10	-1~10BAR
35	-1~35BAR
70	0~70BAR
100	0~100BAR
250	0~250BAR
400	0~400BAR
700	0~700BAR

### Description of Wiring

RED	VIN(+)
PINK	GND
BLUE	Q1
GRAY	Q2
GREEN	Q3
WHITE	Q4
BROWN	RS485 D-
YELLOW	RS485 D+



## 4" DIGITAL SWITCH GAUGES



SDI 04-L-□-□-□□□



SDI 04-B-□-□-□□□

### APPLICATIONS

Hi-techs; Process control; Compressors; Fluids; Refrigeration; Pumps; Sprinkling system; Agriculture Hydraulic; Pneumatic; average industry

### FEATURE OF PRODUCTS

- High precision at  $\pm 0.5\%$
- Backlight display; Zero reset; Switching between 8 types of units Psi, Bar, kg/cm<sup>2</sup>, Kpa, Mpa, in-Hg, cm-Hg, Atm
- SUS316 one-piece-formed sensor, 100% without welds, O-ring or silicone oil; 100% leakage-proof.
- Incorporating RS485 communication, allows in-house monitoring.
- SUS304 casing, can be used in weak acid or alkaline environment.
- Capable of  $-10\sim 60^{\circ}\text{C}$  temperature compensation.
- Capable of Peak-Hold.
- Diaphragm Base installable
- 4 sets of I.O output; 8 setting of Higher limit (H) and Lower limit (L)
- Corrupt pressure: 5 times working pressure
- Over-pressure protection: Twice working pressure
- Service life: 10 million

### SPECIFICATIONS

### CONTENTS

DIMENSION	100mm
ACCURACY	$\pm 0.5\%$ FS
FLUIDS SUITED	Water, Air, Hydraulic fluid
PRESSURE RANGE	-1~700 BAR
TEMPERATURE	Working temp $-10^{\circ}\text{C}\sim 60^{\circ}\text{C}$ (non-frozen condition) Storage temp $-20^{\circ}\text{C}\sim 70^{\circ}\text{C}$ (F66non-frozen condition) Medium temp $-55^{\circ}\text{C}\sim 125^{\circ}\text{C}$ (non-frozen condition) Storage humidity 35-85%
CONNECTORS	1/2" PT.NPT or other. SS316. LM or LBM
DIGIT SIN DISPLAY	4-1/2-digit LCD. WINDOW 28X68mm
CASE	SUS304
DIAL	PC
SOURCE VOLTAGE	DC:12V-24V
CURRENT DRAWN	Max:150mA (Single back-light) Not include control oupt drawn
CONTROL OUTPUT	4 sets of output: NPN/PNP-Open Collector Load current: <100mA Voltage (NPN): Max DC30V Voltage (PNP): Max supplied voltage
COMMUNICATION	RS485 (RTU MODE)
ACCESSORIES	Wires for waterproof connector
ADDITION	SS Diaphragm Base PP Diaphragm Base



# 4" DIGITAL SWITCH GAUGES



## GENERAL PRESSURE GAUGES, VACUUM GAUGES, COMPOUND GAUGES-BOTTOM MOUNTING



### APPLICATIONS

This industrial pressure gauge is designed for fluid medium which does not clog connection or corrode copper alloy. And gas processes compatible with cupreous metals of the sensing element and connection.

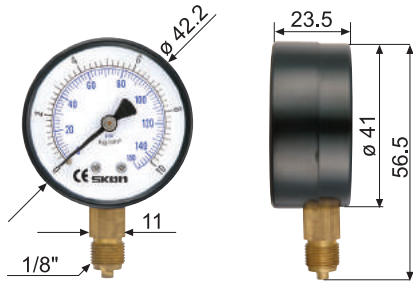
Fields include: Pneumatics, hydraulics, compressors, mechanical and energy system engineering, heating, ventilation, air conditioning, cryogenics, food industry, pharmaceutical and biotechnical industry.

### SPECIFICATIONS

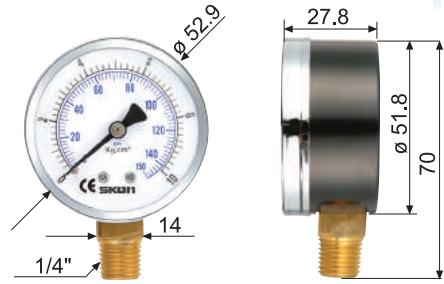
### CONTENTS

DIMENSIONS	40mm, 50mm, 63mm 75mm, 100mm
ACCURACY	Class $\pm 3\%$
PRESSURE RANGES	-1/0 to -1/20 kg/cm <sup>2</sup> (bar) 0/1 to 0/250 kg/cm <sup>2</sup> (bar)
TEMPERATURE	Working temperature 60°C max. Ambient temperature around: -25°C~60°C Copper Alloy, LM 40mm thread : 11mm 50mm, 63mm thread: 14mm
CONNECTIONS	1/4", 1/8", PT, NPT, PF, BSP 75, 100mm, thread : 17mm 3/8", 1/2", PT, NPT, PF, BSP Bourdon tube, brass alloy
SENSING ELEMENT	< 70kg/cm <sup>2</sup> (bar) Coil $\geq 70$ kg/cm <sup>2</sup> (bar) Helicoil
MOVEMENT	Brass alloy
DIAL	White aluminium, black lettering
POINTER	Black aluminium
CASE	Black-painted steel
UPPER RING	Black-painted steel
WINDOW	Normal glass or Acrylic
ORDER OPTIONS	Flange

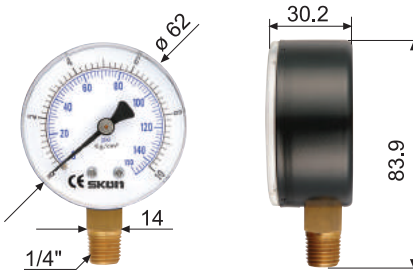
## GENERAL PRESSURE GAUGES, VACUUM GAUGES, COMPOUND GAUGES-BOTTOM MOUNTING



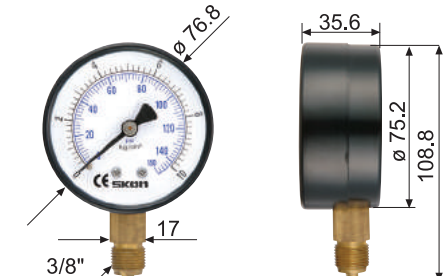
111.11



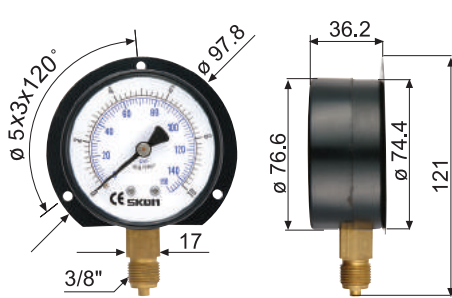
211.41



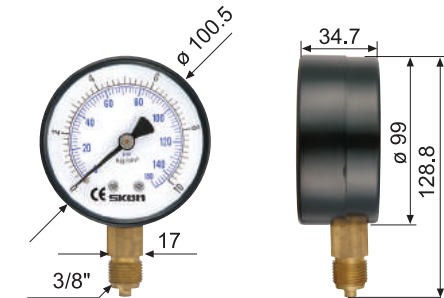
311.11



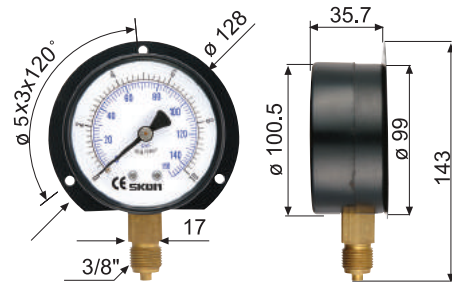
611.11



612.11



411.11



412.11

## GENERAL PRESSURE GAUGES, VACUUM GAUGES, COMPOUND GAUGES-LBM/CBM



### APPLICATIONS

This industrial pressure gauge is designed for fluid medium which does not clog connection or corrode brass alloy. Also for gas compatible with cupreous metals of the sensing element and connection.

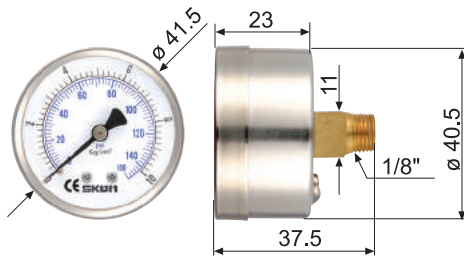
Fields include : Penumatics, hydraulics, compressors, mechanical and energy system engineering, heating, ventilation, air conditioning, cryogenics, food industry, Pharmaceutical and Biotechnical industry.

### SPECIFICATIONS

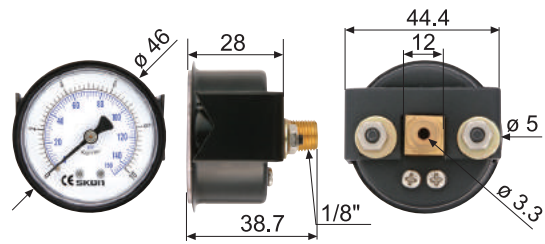
### CONTENTS

DIMENSIONS	23mm, 40mm, 50mm, 63mm
ACCURACY	Class $\pm 3\%$
PRESSURE RANGES	-1/0 to -1/20 kg/cm <sup>2</sup> (bar) 0/1 to 0/250 kg/cm <sup>2</sup> (bar)
TEMPERATURE	Working temperature 60°C max. Ambient temperature around: -25°C~60°C Brass alloy, LBM/CBM 23mm thread: 12mm 40mm thread: 11mm
CONNECTIONS	50mm, 63mm thread: 14mm 1/4", 1/8", PT, NPT, PF, BSP Bourdon tube, brass alloy
SENSING ELEMENT	< 70kg/cm <sup>2</sup> (bar) Coil $\geq 70$ kg/cm <sup>2</sup> (bar) Helicoil
MOVEMENT	Brass alloy
DIAL	White aluminium, black lettering
POINTER	Black aluminium
CASE	Black-painted steel
UPPER RING	Black-painted steel
WINDOW	Normal glass Acrylic
ORDER OPTIONS	Flange

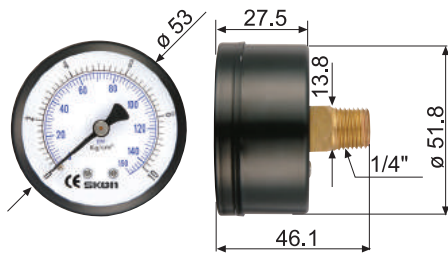
## GENERAL PRESSURE GAUGES, VACUUM GAUGES, COMPOUND GAUGES-LBM/CBM



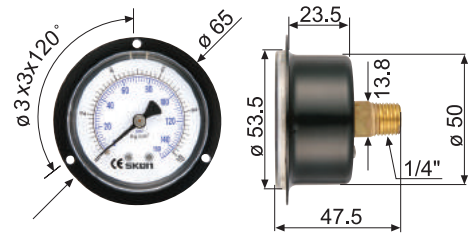
114.51



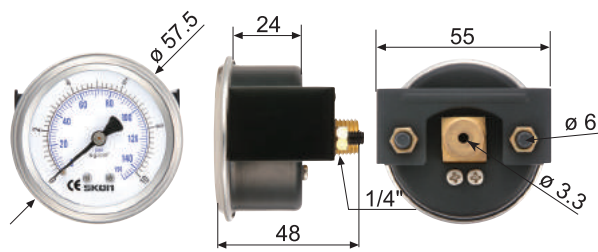
118.11



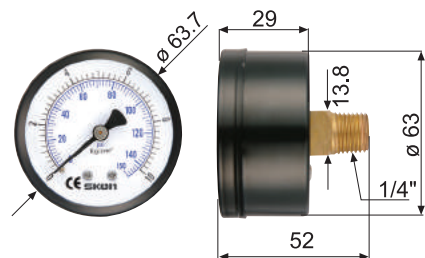
214.11



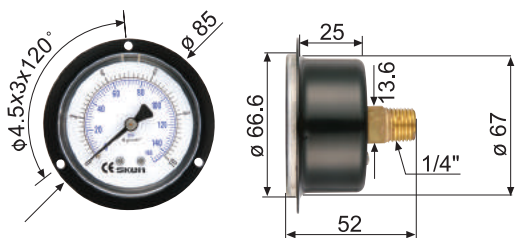
216.11



228.11



314.11



316.11

## FREON PRESSURE GAUGES



### APPLICATIONS

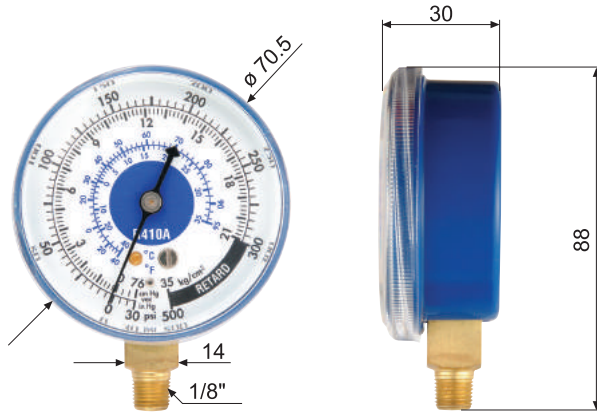
Suitable for using on all freon service applications.  
Fields include: refrigerating units, compressors etc.

### SPECIFICATIONS

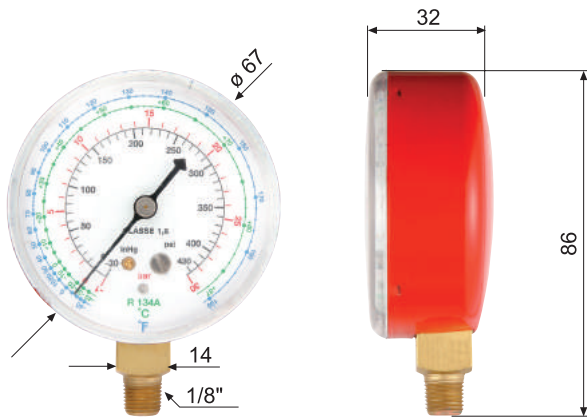
### CONTENTS

DIMENSIONS	63mm
ACCURACY	Class $\pm 1.5\%$
PRESSURE RANGES	-30 inHg ~ 500 psi -76 cmHg ~ 35 kg/cm <sup>2</sup>
TEMPERATURE	Working temperature 60°C max. Ambient temperature around: -25°C~60°C
CONNECTIONS	Brass alloy, LM or LBM/CBM Size: 14mm LM: 1/8" NPT LBM/CBM: 7/16" UNF
SENSING ELEMENT	Bourdon tube, brass alloy < 70kg/cm <sup>2</sup> (bar) Coil
MOVEMENT	Brass alloy
DIAL	White aluminium, Black lettering
POINTER	Black aluminium
CASE	Dry case : Painted stainless steel or ABS plastic, colour coded, blue for low pressure and red for high pressure Fluid Filled: AISI 304
UPPER RING	LBM/CBM: AISI 304 LM: PC
FILLING	Glycerine (99.5%)
WINDOW	PC
ORDER OPTIONS	1. Silicone 2. Flange

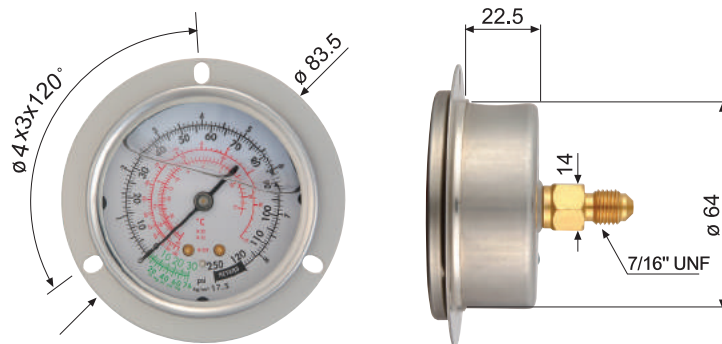
## FREON PRESSURE GAUGES



FRG-A



FRG-S



FRG-L

## MICRO PRESSURE GAUGES-BOTTOM MOUNTING



### APPLICATIONS

For low and negative pressure measurements on clean and non corrosive gases.

Convenient for measuring gas circuits or pharmaceutical equipments.

### SPECIFICATIONS

#### DIMENSIONS

63mm, 75mm, 100mm

#### ACCURACY

63mm      Class  $\pm 2.5\%$

75mm      Class  $\pm 1.5\%$

100mm     Class  $\pm 1.5\%$

#### PRESSURE RANGES

-300mm Aq Vac to 5000mm Aq

#### TEMPERATURE

Working temperature 60°C max.

Ambient temperature around: -20°C~60°C

Brass Alloy, LM

#### CONNECTIONS

63mm thread: 14mm

75, 100mm thread: 17mm

1/4", 3/8", 1/2", NPT, BSPT, BSP

#### SENSING ELEMENT

Brass alloy diaphragms

When pressure is supplied to one side of the diaphragm, the degree of flexing becomes a measure for the pressure

#### MOVEMENT

Brass alloy

#### DIAL

White aluminium, black lettering

#### POINTER

Black aluminium

#### CASE

Black painted steel or anodized

#### UPPER RING

Black painted steel or anodized

#### WINDOW

Normal glass

Acrylic

#### ORDER OPTIONS

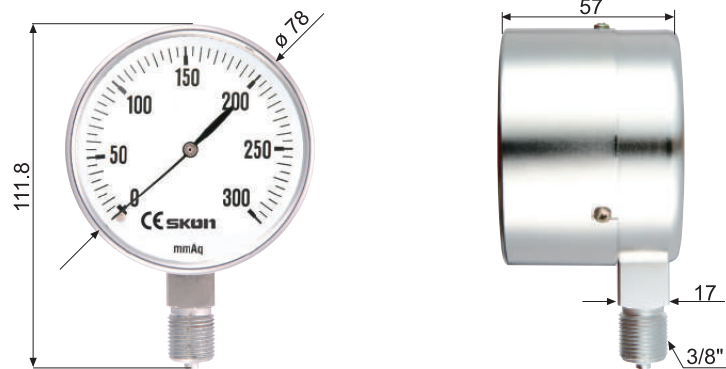
Flange



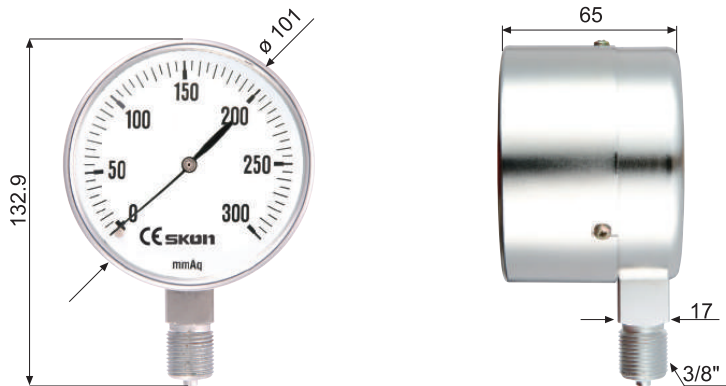
## MICRO PRESSURE GAUGES-BOTTOM MOUNTING



311.12



611.52



411.52

## MICRO PRESSURE GAUGES-LBM/CBM



### APPLICATIONS

For low and negative pressure measurements on clean and non corrosive gases.

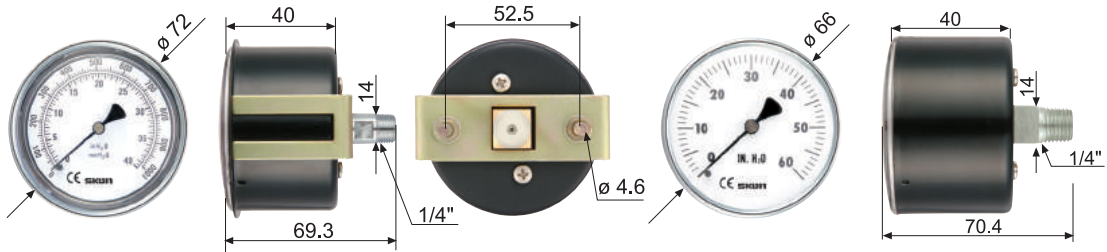
Convenient for measuring gas circuits or pharmaceutical equipments.

### SPECIFICATIONS

### CONTENTS

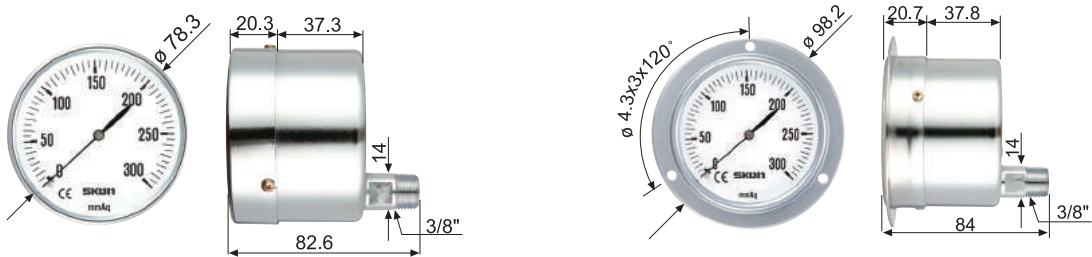
DIMENSIONS	63mm, 75mm, 100mm
ACCURACY	63mm      Class $\pm 2\%$
	75mm      Class $\pm 1.5\%$
	100mm     Class $\pm 1.5\%$
PRESSURE RANGES	-300mm Aq Vac to 5000mm Aq
TEMPERATURE	Working temperature 60°C max.
	Ambient temperature around: -20°C~60°C
CONNECTIONS	Brass Alloy, LBM/CBM
	63mm thread: 14mm
	75, 100mm thread: 17mm
SENSING ELEMENT	1/4", 3/8", 1/2", NPT, BSPT, BSP
	Brass alloy diaphragms
MOVEMENT	When pressure is supplied to one side of the diaphragm, the degree of flexing becomes a measure for the pressure
	Brass alloy
DIAL	White aluminium, black lettering
POINTER	Black aluminium
CASE	Black painted steel or anodized
UPPER	Black painted steel or anodized
WINDOW	Normal glass
	Acrylic
ORDER OPTIONS	Flange

## MICRO PRESSURE GAUGES-LBM/CBM



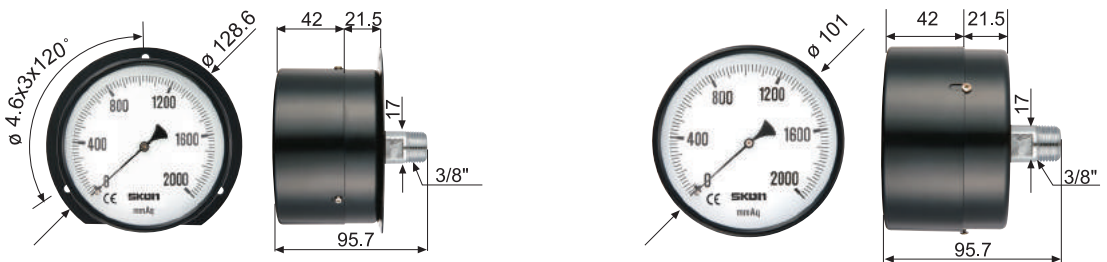
318.12

314.12



613.52

615.52



410.12

414.12

## FILLED BOURDON TUBE PRESSURE GAUGES



### APPLICATIONS

For gases, pressurized gases (oxygen, air ect.) and low viscosity liquids up to 60 degrees celcius, with liquid filling for measurement points subject to vibrations and high dynamic pressure loads, no formation of condensation.

### SPECIFICATIONS

DIMENSIONS	40mm, 50mm
ACCURACY	Class $\pm 2\%$
PRESSURE RANGES	0/1 to 0/500 kg/cm <sup>2</sup> (bar)

### TEMPERATURE

Working temperature 60°C max.  
Ambient temperature around: -25°C~60°C

### CONNECTIONS

Brass Alloy, LM or LBM/CBM  
40mm thread: 12mm  
50mm thread: 14mm  
1/4", PT, NPT, PF, BSP

### SENSING ELEMENT

Bourdon tube, brass alloy  
< 70kg/cm<sup>2</sup> (bar) Coil  
 $\geq 70$ kg/cm<sup>2</sup> (bar) Helicoil

### MOVEMENT

Brass alloy

### DIAL

White aluminium, black lettering

### POINTER

Black aluminium

### CASE

AISI 304

### UPPER RING

AISI 304

### FILLING

Glycerine (99.5%)

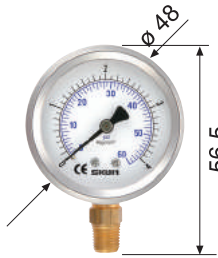
### WINDOW

Laminated safety glass  
Acrylic

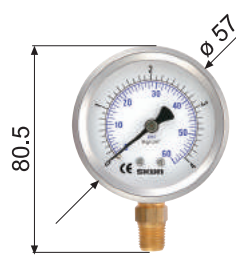
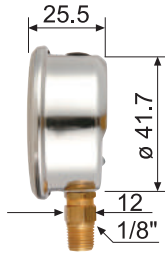
### ORDER OPTIONS

1. Filling fluid optional
2. Flange
3. Red mark pointer
4. Clamp fixations

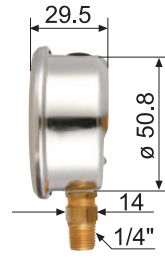
## FILLED BOURDON TUBE PRESSURE GAUGES



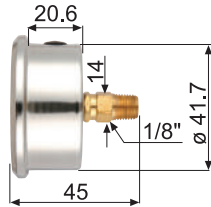
121.21



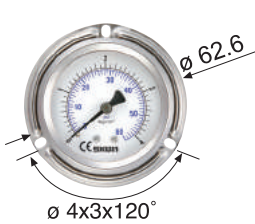
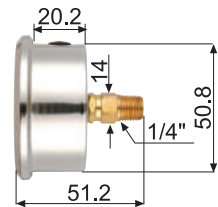
221.21



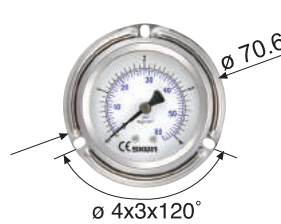
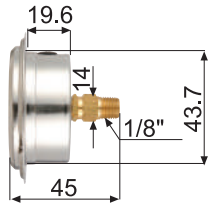
124.21



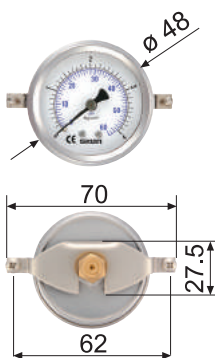
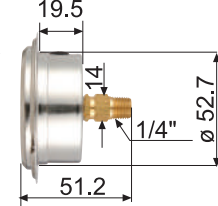
224.21



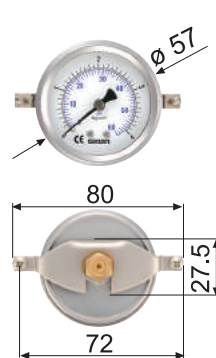
126.21



226.21



128.21



228.21

## FILLED BOURDON TUBE PRESSURE GAUGES



### APPLICATIONS

For gases, pressurized gases (oxygen, air ect.) and low viscosity liquids up to 60 degrees celcius, with liquid filling for measurement points subject to vibrations and high dynamic pressure loads, no formation of condensation.

### SPECIFICATIONS

#### DIMENSIONS

63mm

#### ACCURACY

Class  $\pm 1.5\%$

#### PRESSURE RANGES

-1/0 to -1/+20 kg/cm<sup>2</sup> (bar)  
0/1 to 0/1000 kg/cm<sup>2</sup> (bar)

#### TEMPERATURE

Working temperature 60°C max.  
Ambient temperature around: -25°C~60°C  
Brass Alloy, LM or LBM/CBM

#### CONNECTIONS

Size : 14mm  
1/4", PT, NPT, PF, BSP

#### SENSING ELEMENT

Bourdon Tube, brass alloy  
< 70 kg/cm<sup>2</sup> (bar) Coil  
 $\geq 70$  kg/cm<sup>2</sup> (bar) Helicoil

#### MOVEMENT

Brass alloy

#### DIAL

White aluminium, black lettering

#### POINTER

Black aluminium

#### CASE

AISI 304

#### UPPER RING

AISI 304

#### FILLING

Glycerine (99.5%)  
Normal glass

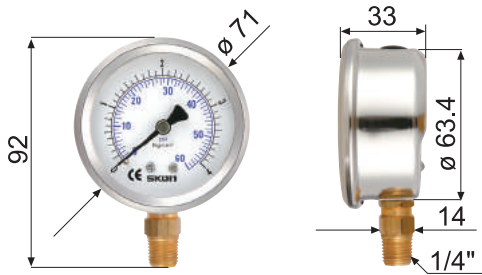
#### WINDOW

Laminated safety glass  
Acrylic

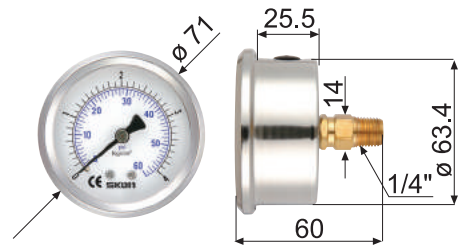
#### ORDER OPTIONS

1. Filling fluid optional
2. Flange
3. Red mark pointer
4. Clamp fixations

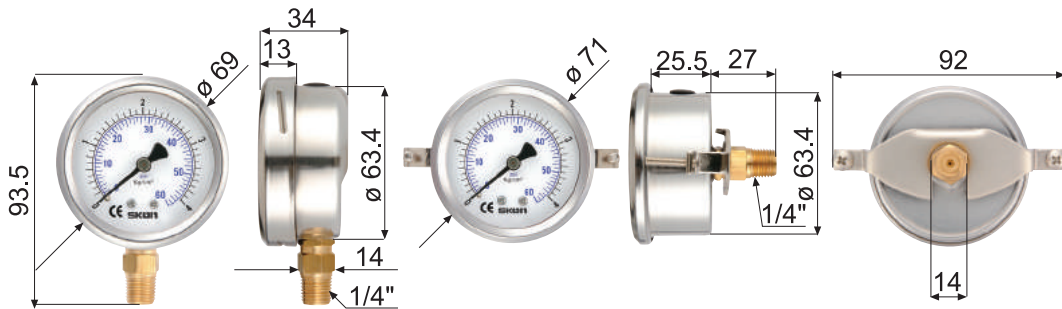
## FILLED BOURDON TUBE PRESSURE GAUGES



321.21

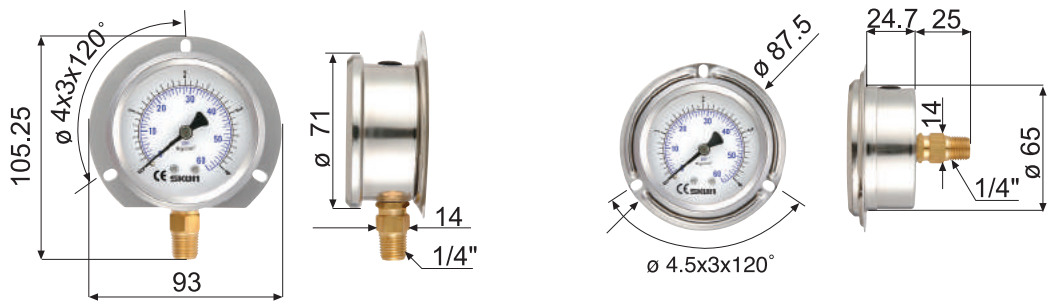


324.21

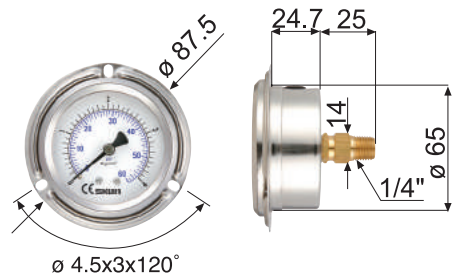


331.21

328.21



322.21



326.21

## FILLED BOURDON TUBE PRESSURE GAUGES



### APPLICATIONS

For gases, pressurized gases (oxygen, air ect.) and low viscosity liquids up to 60 degrees celcius, with liquid filling for measurement points subject to vibrations and high dynamic pressure loads, no formation of condensation.

### SPECIFICATIONS

#### DIMENSIONS

100mm

#### ACCURACY

Class  $\pm 1.0\%$

#### PRESSURE RANGES

-1/0 to -1/+20 kg/cm<sup>2</sup> (bar)

0/1 to 0/1000 kg/cm<sup>2</sup> (bar)

#### TEMPERATURE

Working temperature 60°C max.

Ambient temperature around: -25°C~60°C

#### CONNECTIONS

Size: 22mm

3/8", PT, NPT, PF, BSP

1/2", PT, NPT, PF, BSP

#### SENSING ELEMENT

Bourdon tube, brass alloy

< 70 kg/cm<sup>2</sup> (bar) Coil

$\geq 70$  kg/cm<sup>2</sup> (bar) Helicoil

#### MOVEMENT

Brass alloy

#### DIAL

White aluminium, black lettering

#### POINTER

Black aluminium

#### CASE

AISI 304

#### UPPER RING

AISI 304

#### FILLING

Glycerine (99.5%)

#### WINDOW

Normal glass

Acrylic

Laminated safety glass

#### ORDER OPTIONS

1. Silicone filling

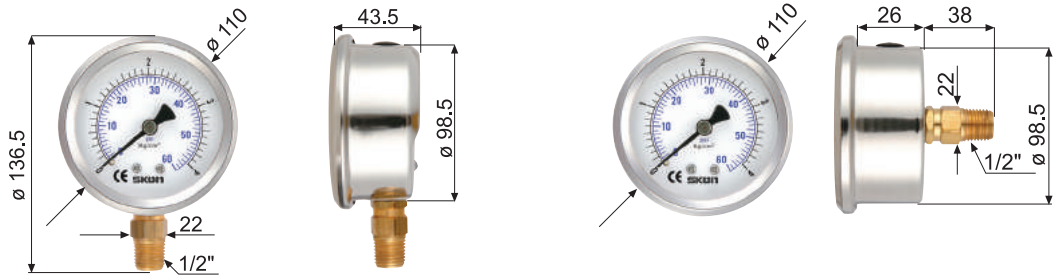
2. Flange

3. Red mark pointer

4. U-shape clamp

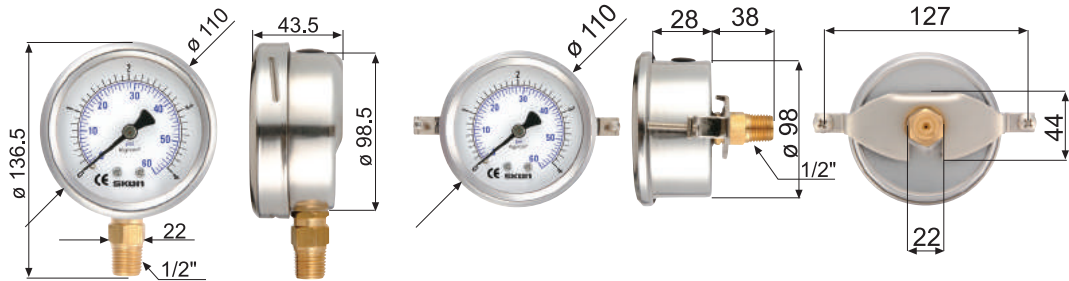


## FILLED BOURDON TUBE PRESSURE GAUGES



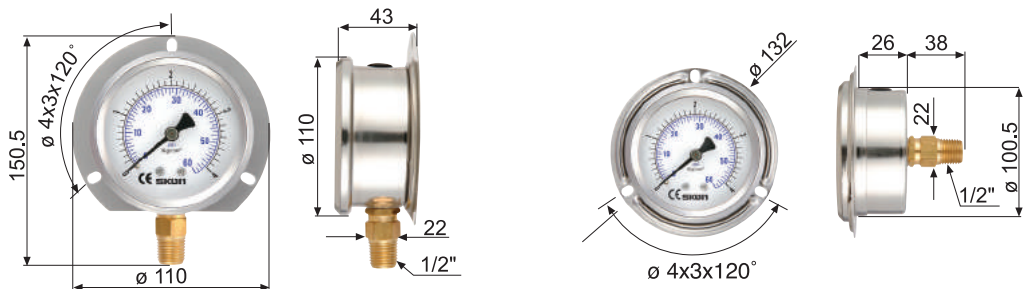
421.21

424.21



431.21

428.21



422.21

426.21

## ALL STAINLESS STEEL FILLED PRESSURE GAUGES



### APPLICATIONS

For corrosive atmospheres and fluids, resistant to high dynamic pressure loads and vibrations.

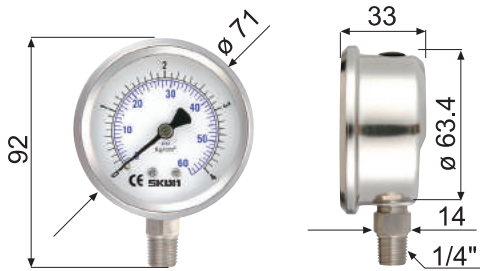
Well suited for the process industry applications including: Petrochemical, Chemical plants, and energy etc.

### SPECIFICATIONS

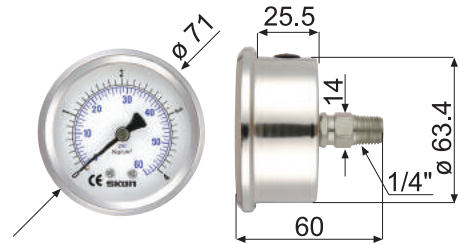
### CONTENTS

DIMENSIONS	63mm
ACCURACY	Class $\pm 1.5\%$
PRESSURE RANGES	-1/0 to -1/+20 kg/cm <sup>2</sup> (bar) 0/1 to 0/1000 kg/cm <sup>2</sup> (bar)
TEMPERATURE	Working temperature 100°C max. Ambient temperature around: -25°C~60°C AISI 316, LM or LBM/CBM
CONNECTIONS	Size:14mm 1/4", PT, NPT, PF, BSP
SENSING ELEMENT	Bourdon tube, AISI 316 DIN 50049 (AISI 316 Ti) < 70 kg/cm <sup>2</sup> (bar) Coil $\geq 70$ kg/cm <sup>2</sup> (bar) Helicoil
MOVEMENT	AISI 316
DIAL	White aluminium, black lettering
POINTER	Black aluminium
CASE	AISI 304
UPPER RING	AISI 304
FILLING	Glycerine (99.5%) Normal glass,
WINDOW	Laminated safety glass Acrylic
ORDER OPTIONS	1. Filling fluids optional 2. Flange 3. Red mark pointer 4. U-shape clamp

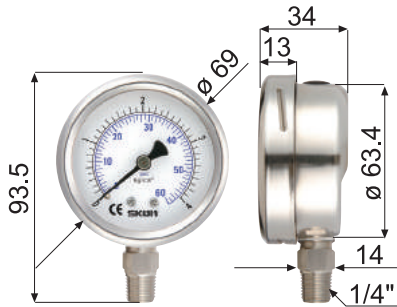
## ALL STAINLESS STEEL FILLED PRESSURE GAUGES



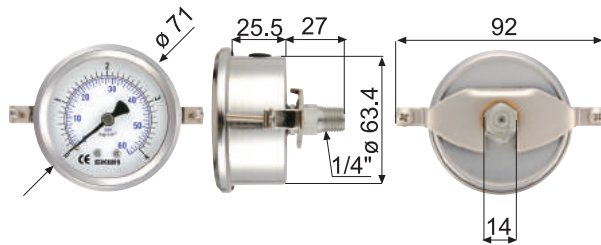
321.23



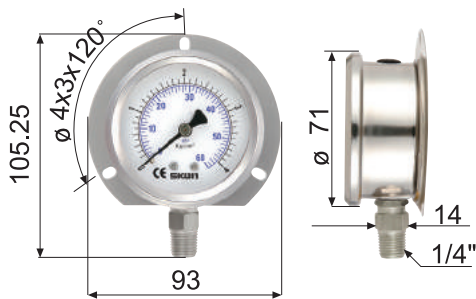
324.23



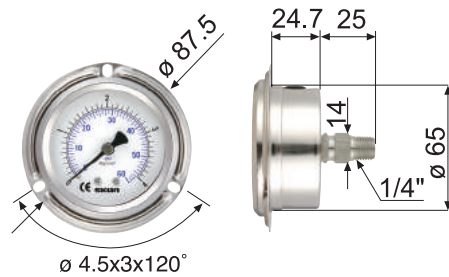
331.23



328.23



322.23



326.23

## ALL STAINLESS STEEL FILLED PRESSURE GAUGES



### APPLICATIONS

For corrosive atmospheres and fluids, resistant to high dynamic pressure loads and vibrations.

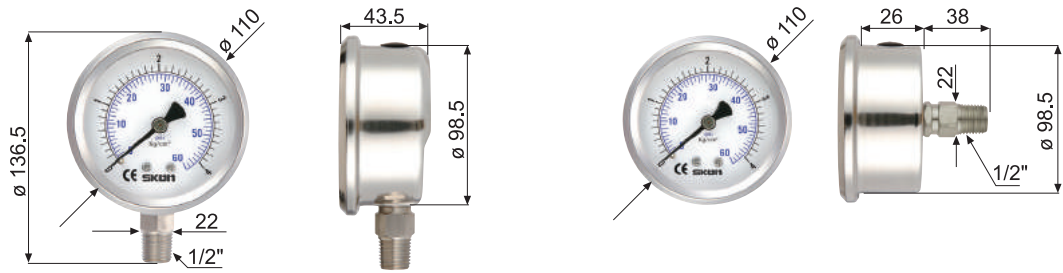
Well suited for the process industry applications including: Petrochemical, Chemical plants, and energy etc.

### SPECIFICATIONS

### CONTENTS

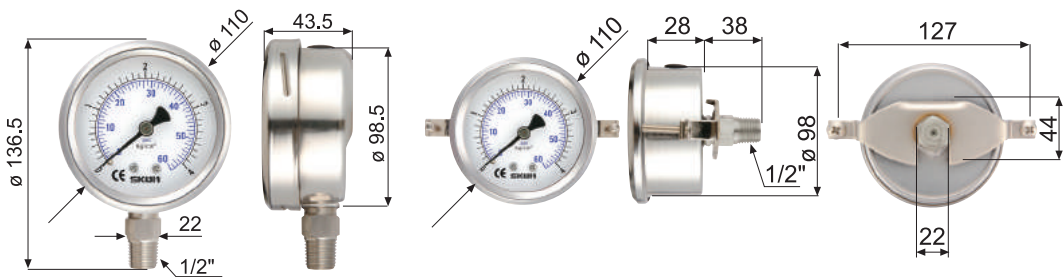
DIMENSIONS	100mm
ACCURACY	Class $\pm 1.0\%$
PRESSURE RANGES	-1/0 to -1/+20 kg/cm <sup>2</sup> (bar) 0/1 to 0/1500 kg/cm <sup>2</sup> (bar)
TEMPERATURE	Working temperature 100°C max. Ambient temperature around: -20°C~60°C
CONNECTIONS	AISI 316, LM or LBM/CBM Size : 22mm 3/8", PT, NPT, PF, BSP 1/2", PT, NPT, PF, BSP
SENSING ELEMENT	Bourdon Tube, AISI 316 DIN 50049 (AISI 316 Ti) < 70 kg/cm <sup>2</sup> (bar) Coil $\geq 70$ kg/cm <sup>2</sup> (bar) Helicoil
MOVEMENT	AISI 316
DIAL	White aluminium, black lettering
POINTER	Black aluminium
CASE	AISI 304
UPPER RING	AISI 304
FILLING	Glycerine (99.5%) Normal glass,
WINDOW	Laminated safety glass Acrylic
ORDER OPTIONS	1. Filling fluids optional 2. Flange 3. Red mark pointer 4. U-shape clamp

## ALL STAINLESS STEEL FILLED PRESSURE GAUGES



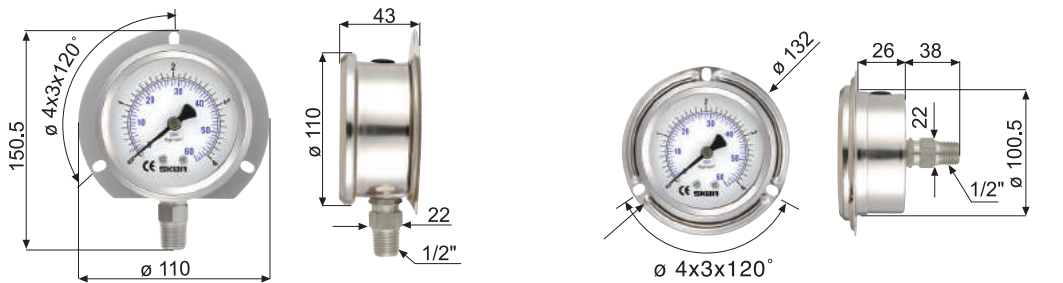
421.23

424.23



431.23

428.23



422.23

426.23

## ALL STAINLESS STEEL PRESSURE GAUGES WITH MAGNETIC CONTACT



### APPLICATIONS

With magnetically assisted contact, designed to prevent damage from high dynamic pressure load to circular contact.

### NOTE

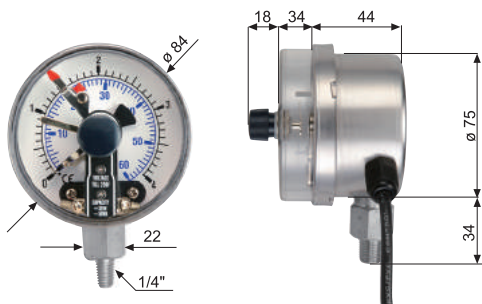
Select suitable pressure gauge specifications, unit measures, applications including indicator contact, detector, pressure gauge and micro contact.

### SPECIFICATIONS

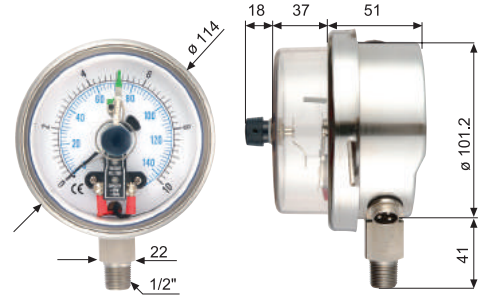
### CONTENTS

DIMENSIONS	75mm, 100mm
ACCURACY	Class $\pm 1.0\%$
PRESSURE RANGES	-1/0 kg/cm <sup>2</sup> (bar) to -1/20 kg/cm <sup>2</sup> (bar) 0/1 to 0/1000 kg/cm <sup>2</sup> (bar)
TEMPERATURE	Working temperature 100°C max. Ambient temperature around: -25°C~60°C AISI 316, LM or LBM/CBM
CONNECTIONS	75mm thread : 22mm 100mm thread : 22mm 1/4", 3/8", 1/2", PT, NPT, PF, BSP
SENSING ELEMENT	Bouron tube, AISI 316 DIN 50049 (AISI 316 Ti) < 70 kg/cm <sup>2</sup> (bar) Coil $\geq 70$ kg/cm <sup>2</sup> (bar) Helicoil
CONTACT TYPE	Fast magnetic contact
MOVEMENT	AISI 316
DIAL	White aluminium, black lettering
POINTER	Black aluminium
CASE	AISI 304
UPPER RING	AISI 304
WINDOW	Acrylic
ORDER OPTIONS	Flange

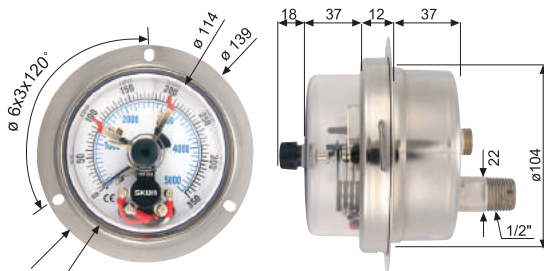
## ALL STAINLESS STEEL PRESSURE GAUGES WITH MAGNETIC CONTACT



651.23



451.23



455.23

ELECTRIC CURRENT			
Voltage	DC	AC	Electric Load
230V	100mA	120mA	65mA
110V	200mA	240mA	130mA
50V	300mA	450mA	200mA
24V	400mA	600mA	250mA
CURRENT : 30W/~50VA T/C : 0.7A			

SINGLE / DOUBLE CONTACT POINTS			
Contact diagram	Contact type	When pointer reach mark point	When pointer below the mark point
	Single Contact on	Switch on	Switch off
	Single Contact off	Switch off	Switch on
	Double Contact on/on	Switch on point 1 & point 2	Switch off point 1 & point 2
	Double Contact on/off	Switch off point 1 & switch on point 2	Switch on point 1 & switch off point 2

## TEST & CALIBRATION PRECISION PRESSURE GAUGES



### APPLICATIONS

For corrosive environment and fluids, can be used on equipments with vibrations and high dynamic pressure loads, no formation of condensation. Such as food processing and petrochemical equipments.

### NOTE

The precision pressure gauges are designed for calibration of master gauges, test gauges, pressure transducers and pressure switches. They can be used on industrial and laboratory equipment requiring high precision pressure measurements, like pressure generator or dead weight tester. An externally adjustable device is situated at the bottom of the bezelring, thus providing an adjustment of variance of 5% of full scale.

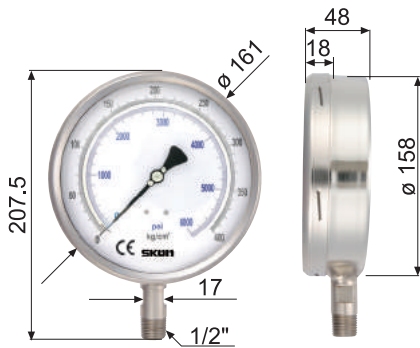
### SPECIFICATIONS

### CONTENTS

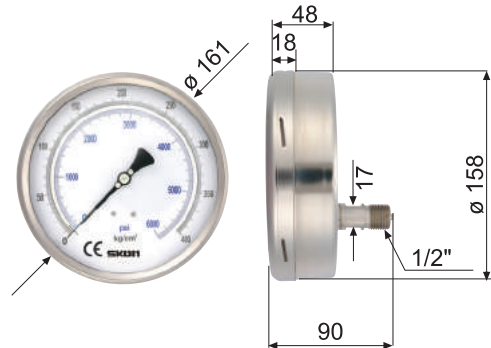
DIMENSIONS	150mm
ACCURACY	Class $\pm 0.2\%$
PRESSURE RANGES	-1/0 to -1/+20 kg/cm <sup>2</sup> (bar) 0/1 to 0/2000 kg/cm <sup>2</sup> (bar)
TEMPERATURE	Working temperature 100°C max. Ambient temperature around: -20°C~60°C
CONNECTIONS	AISI 316, LM or LBM/CBM Size : 22mm 1/2", PT, NPT, PF, BSP
SENSING ELEMENT	Bourdon tube, AISI 316 DIN 50049 (AISI 316 Ti) < 70 kg/cm <sup>2</sup> (bar) Coil $\geq 70$ kg/cm <sup>2</sup> (bar) Helicoil
MOVEMENT	AISI 316
DIAL	White aluminium, black lettering
POINTER	Black aluminium
CASE	AISI 304
UPPER RING	AISI 304
FILLING	Glycerine (99.5%)
WINDOW	Laminated safety glass
ORDER OPTIONS	1.Flange 2.Filling fluids optional 3.Red mark pointer



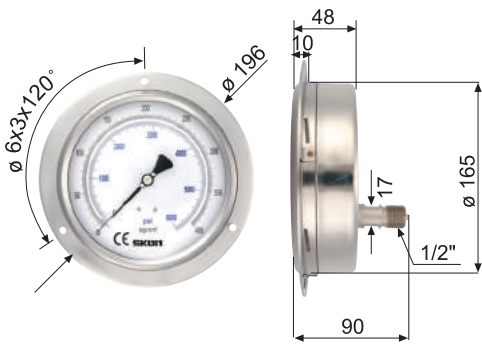
## TEST & CALIBRATION PRECISION PRESSURE GAUGES



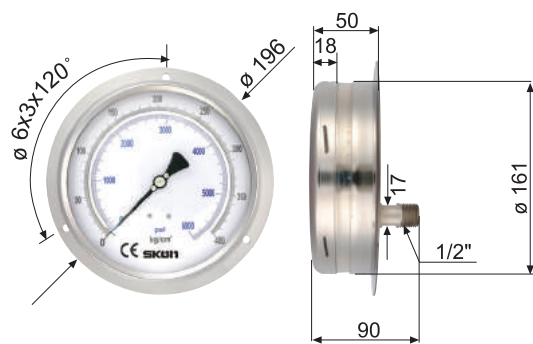
541.23



543.23



545.23



549.23

## TEFLON DIAPHRAGM PRESSURE GAUGES



### APPLICATIONS

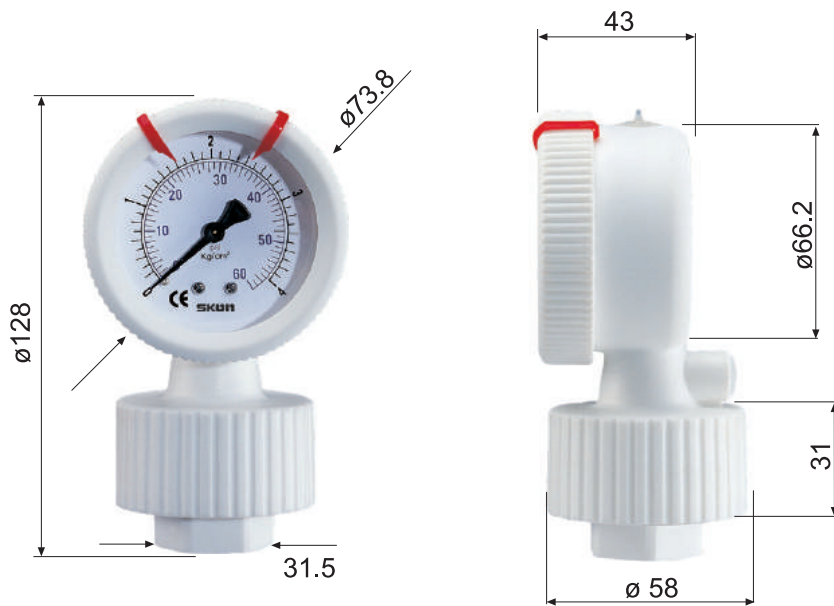
Specialized used in PCB/LCD, high-tech zone, IC equipments, pipe-line installation and the internal outfit of dust-free chamber with all in one case covered around in order to its unbreakable function and excellent efficacy of anti-corrosion.

### SPECIFICATIONS

### CONTENTS

DIMENSIONS	63mm
ACCURACY	Class $\pm 1.5\%$
PRESSURE RANGES	0/1 to 0/10 kg/cm <sup>2</sup> (bar)
TEMPERATURE	Working temperature 60°C max. Ambient temperature around: -20°C~60°C
CONNECTION	Standard inner thread 1/2" PT or other ranges internally & externally
SENSING ELEMENT	Bourdon tube : AISI 316 Diaphragm capsule, TEFLON
MOVEMENT	AISI 316
DIAL	White aluminium, black lettering
POINTER	ABS, black
CASE	TEFLON anti-impact, all in one Protect from acidification & alkalization excellent stability with its deform temperature is 150°C.
UPPER RING	TEFLON
WINDOW	Laminated safety glass Acrylic
CODE NO	331-75

## TEFLON DIAPHRAGM PRESSURE GAUGES



331-75

## PP FILLED DIAPHRAGM PRESSURE GAUGES



### APPLICATIONS

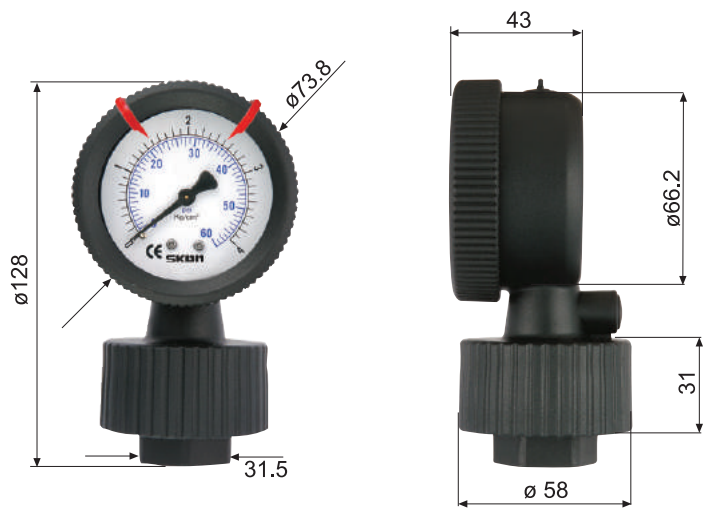
For filter and pump control on liquid and gases. Housing in all PP material can resist transient overpressure and maintain leaktight connection. It is also designed to satisfy requirements in corrosive atmosphere & fluids.

### SPECIFICATIONS

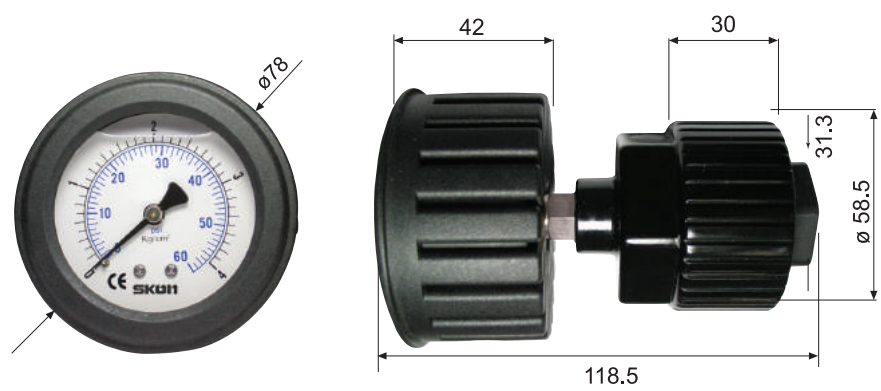
### CONTENTS

DIMENSIONS	63mm
ACCURACY	Class $\pm 1.5\%$
PRESSURE RANGES	0/1 to 0/20 kg/cm <sup>2</sup> (bar)
TEMPERATURE	Working temperature 60°C max. Ambient temperature around: -20°C~60°C
CONNECTION	PP, LM (A), CBM (B) standard (M) connector 1/2" NPT
SENSING ELEMENT	C-Tube brass alloy VITON Diaphragm capsule EPDM Diaphragm capsule
MOVEMENT	Brass alloy
DIAL	White aluminium, black lettering
POINTER	ABS, black
CASE	PP anti-impact, all in one Protect from acidification & alkalization excellent stability with its deform temperature is 130°C
UPPER RING	PP
FILLING	Glycerine (99.5%) Normal glass
WINDOW	Laminated safety glass Acrylic

## PP FILLED DIAPHRAGM PRESSURE GAUGES



331-64



334-64

## BOTTOM FLANGE WITH DIAPHRAGM PRESSURE GAUGES



### APPLICATIONS

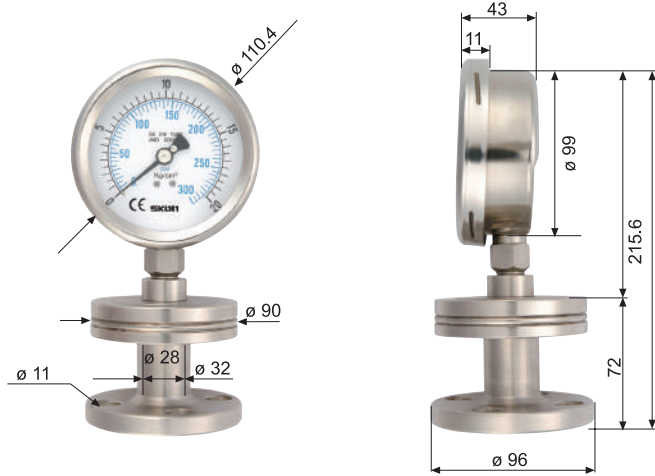
Suitable for liquids and gases that are corrosive and aggressive. This section contains bottom flanges for pressure gauges with diaphragms for special conditions and substances. Such as chemical and petrochemical industries.

### SPECIFICATIONS

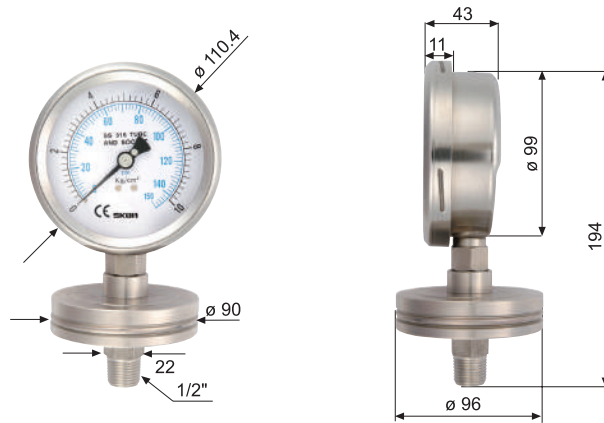
### CONTENTS

DIMENSIONS	100mm
ACCURACY	Class $\pm 1.0\%$
PRESSURE RANGES	0~25 kg/cm <sup>2</sup> (bar)
TEMPERATURE	Working temperature 100°C max. Ambient temperature around: -20°C~60°C
CONNECTIONS	Size : 22mm 1/2, PT, PF, NPT, BSP
FLANGE	AISI 304, 316 Diaphragm capsule, AISI 316
SENSING ELEMENT	Bourdon tube, AISI 316 DIN 50049 (AISI 316 Ti)
MOVEMENT	AISI 316
DIAL	White aluminium, black lettering
POINTER	Black aluminium
CASE	AISI 304
UPPER RING	AISI 304
FILLING	Glycerine (99.5%)
WINDOW	Laminated safety glass Silicone
ORDER OPTIONS	Red mark pointer

## BOTTOM FLANGE WITH DIAPHRAGM PRESSURE GAUGES



JF-200-15-S316



JF-100-90-S316



Thermometers



## ELECTRIC CONTACT THERMOMETERS FOR BOTTOM MOUNTED CAPILLARIES CONNECTION



### APPLICATIONS

Transformer dyeing, drier, food processing, boiler, air conditioning equipment, and other industrial machines.

### Mechanism & Circuit structure of electric contactor

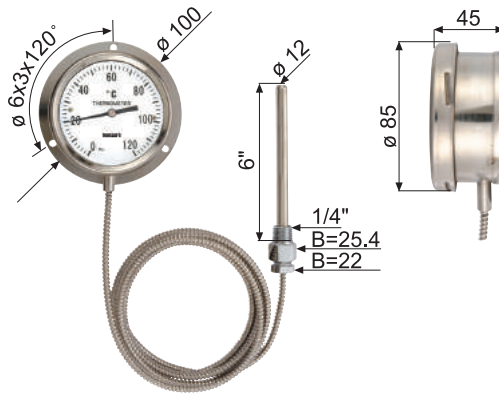
- Thermometers with contactor have made possible the automation of temperature control and increased the safety of energy consuming.
- Electric contact acts as a switch control that follows the dial value on the thermometer.
- The pointer can be adjusted to send signals for the contactor to switch ON or OFF.
- Thermometers equipped with this optional feature will turn alarm signals "ON" or "OFF" automatically when the adjusted value is reached.
- And where appropriate relays are incorporated in the installation circuit, contacts will turn "ON" or "OFF" electric motors, heaters, valves, etc.

### SPECIFICATIONS

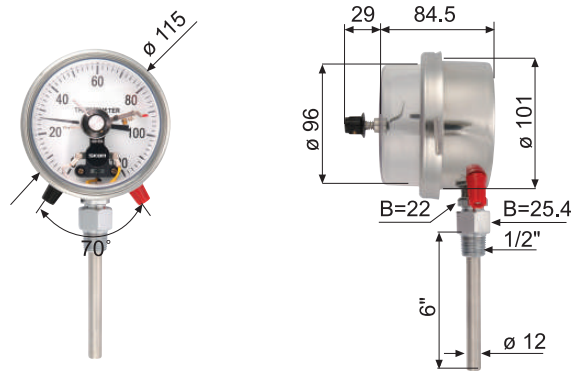
### CONTENTS

DIMENSION	100mm
CASE	AISI 304
SENSOR STEM MATERIAL	AISI 304 or AISI 316
TEMPERATURE	-50~+600°C
CAPILLARY LENGTH	Standard 3M, max. 15M
CONTACTOR TYPE	Single /Double contact, external adjusting
ACCURACY	± 1 %

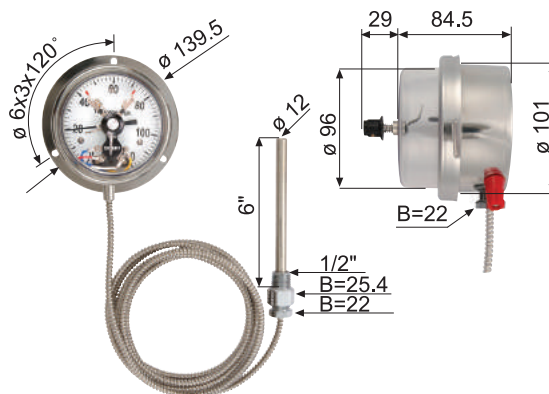
## ELECTRIC CONTACT THERMOMETERS FOR BOTTOM MOUNTED CAPILLARIES CONNECTION



CW-4



CW-4-1



CW-4-2

▽

## ELECTRIC CONTACT THERMOMETERS FOR BACK MOUNTED CAPILLARIES CONNECTION



### APPLICATIONS

Transformer dyeing, drier, food processing, boiler, air conditioning equipment, and other industrial machines

### Mechanism & Circuit structure of electric contactor

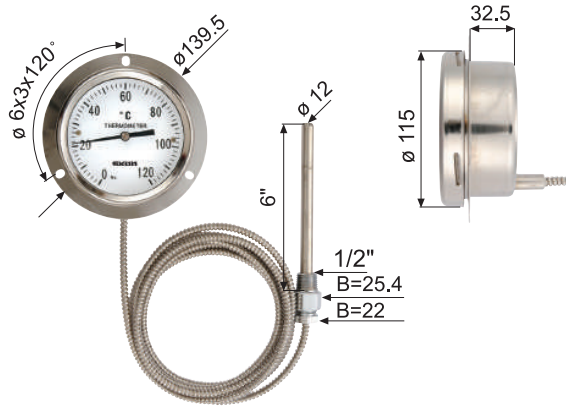
- Thermometers with contactor have made possible the automation of temperature control and increased the safety of energy consuming.
- Electric contact acts as a switch control that follows the dial value on the thermometer.
- The pointer can be adjusted to send signals for the contactor to switch ON or OFF.
- Thermometers equipped with this optional feature will turn alarm signals "ON" or "OFF" automatically when the adjusted value is reached.
- And where appropriate relays are incorporated in the installation circuit, contacts will turn "ON" or "OFF" electric motors, heaters, valves, etc.

### SPECIFICATIONS

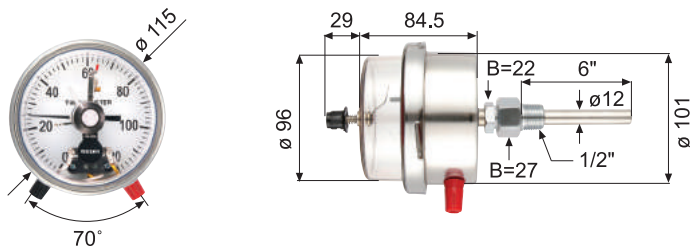
### CONTENTS

DIMENSION	100mm
CASE	AISI 304
SENSOR STEM MATERIAL	AISI 304 or AISI 316
TEMPERATURE	-50~+600°C
CAPILLARY LENGTH	Standard 3M, max. 15M
CONTACTOR TYPE	Single /Double contact, external adjusting
ACCURACY	± 1 %

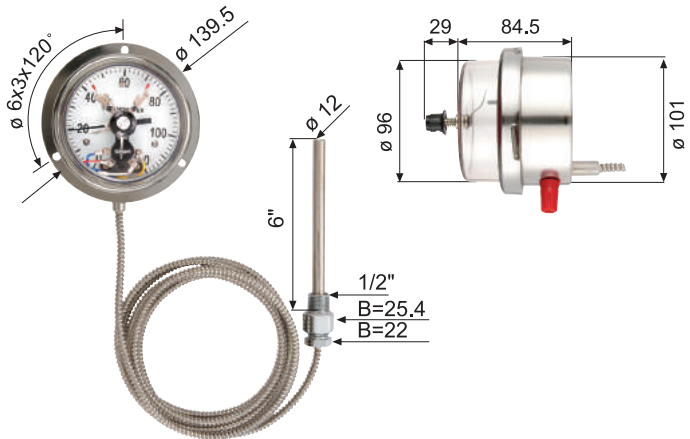
# ELECTRIC CONTACT THERMOMETERS FOR BACK MOUNTED CAPILLARIES CONNECTION



CT-4



CT-4-1



CT-4-2

## BI-METAL THERMOMETERS



### APPLICATIONS

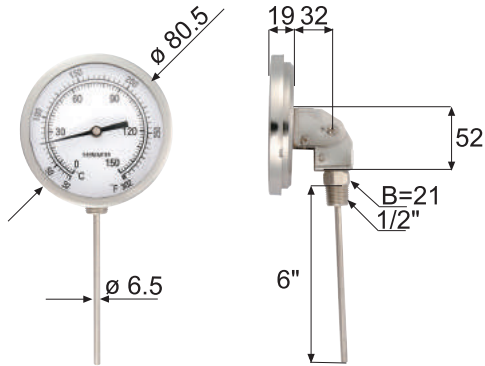
Transformer dyeing, drier, food processing, boiler, air conditioning equipment, and other industrial machines

### SPECIFICATIONS

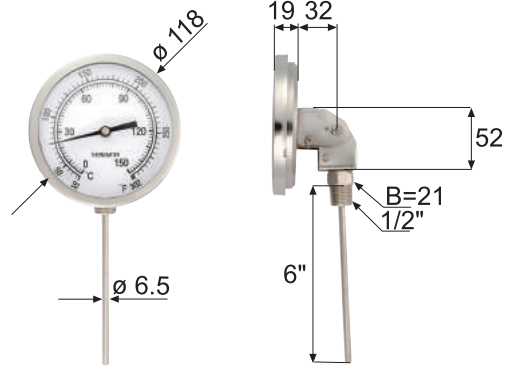
### CONTENTS

DIMENSION	26.5mm, 35mm, 50.6mm, 65mm, 80.5mm, 118mm, 130mm, 160mm
CASE	AISI 304
SENSOR STEM MATERIAL	AISI 304 or AISI 316
DIAL	White aluminium, black lettering
TEMPERATURE	-50~+600°C
O.D. OF SENSOR STEM	Standard: $\varnothing$ 6.5mm, range 4~12mm
LENGTH OF SENSOR STEM	2"~25"
ACCURACY	$\pm$ 1.0%

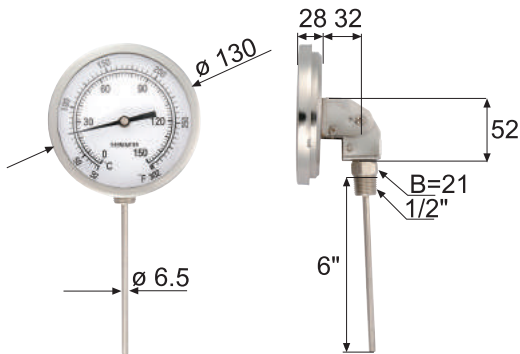
## BI-METAL THERMOMETERS



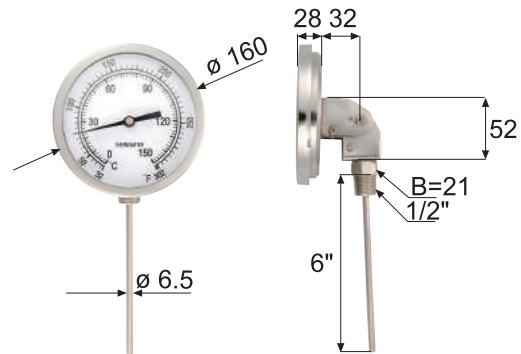
BA-3



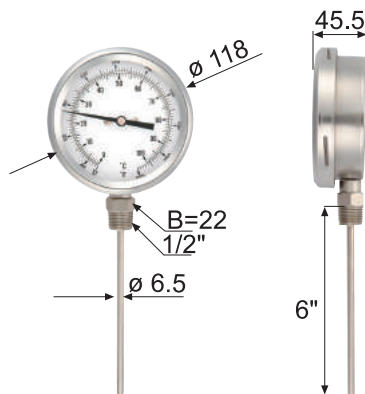
BA-4



BA-5

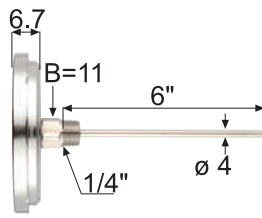


BA-6

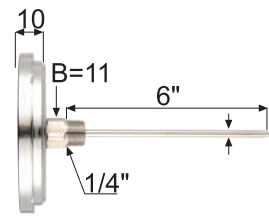


BS-4

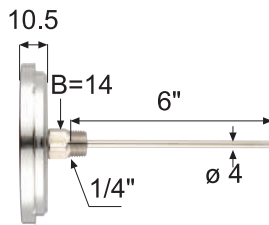
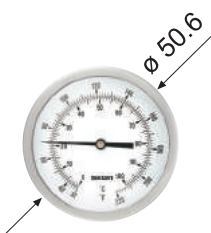
## BI-METAL THERMOMETERS



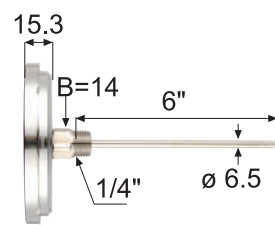
BL-1



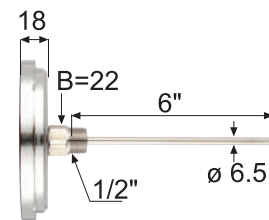
BL-1.5



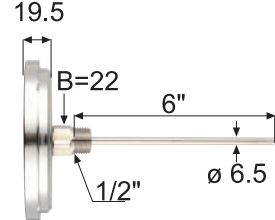
BL-2



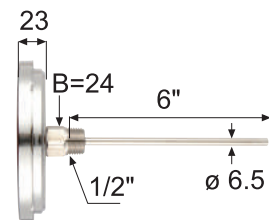
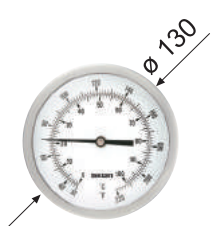
BL-2.5



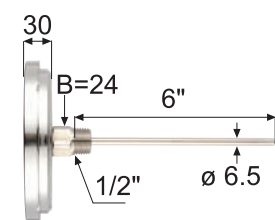
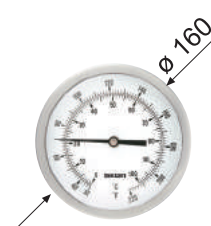
BL-3



BL-4



BL-5



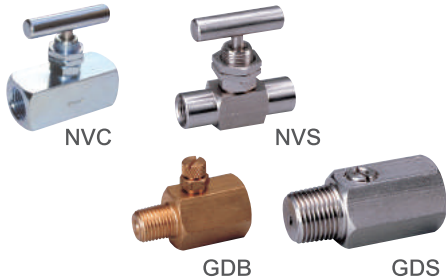
BL-6



Accessories



## NEEDLE VALVE SPECIFICATIONS

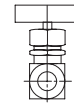
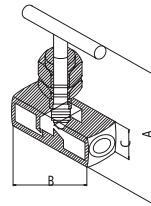
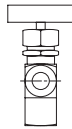
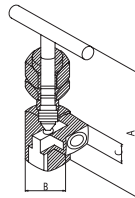
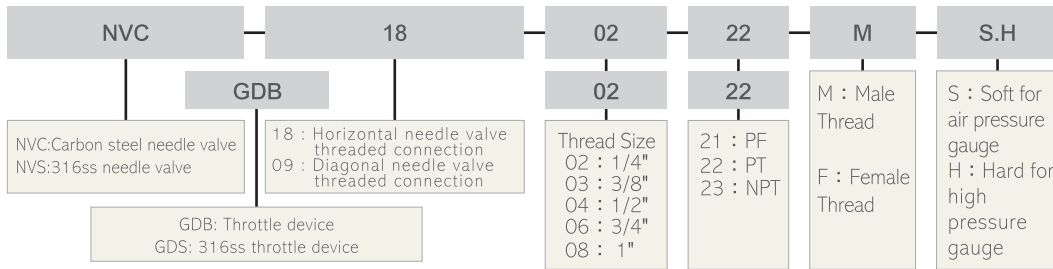


### NVC/NVS/GDB/GDS Series-Needle Valves

#### APPLICATIONS

Needle valves control the vibration flow and shut off by turning the tape screw.

Max. working pressure: 420 bar (6000psi)  
 Carbon steel size: 1/4", 3/8", 1/2", 3/4" and 1".  
 High pressure needle valves (NVS series):  
 Material: Stainless steel AISI 316  
 Max. pressure: 1000bar (15000psi)  
 Max. working temperature: 200°C (392°F)



ITEM No.	PT	LPM	bar	kg(1b.)	A mm(in)	B mm(in)	C mm(in)
NVC-02-18	1/4"	2	420	.3(.66)	97(3.81)	49(1.92)	25(.98)
NVC-03-18	3/8"	21	420	.3(.66)	97(3.81)	49(1.92)	25(.98)
NVC-04-18	1/2"	30	420	.64(1.42)	125(4.92)	64(2.51)	32(1.25)
NVC-02-9	1/4"	2	420	.34(.75)	111(4.37)	42(1.65)	24(.94)
NVC-03-9	3/8"	21	420	.34(.75)	111(4.37)	42(1.65)	24(.94)
NVC-04-9	1/2"	30	420	.7(1.54)	125(4.92)	64(2.51)	32(1.25)
NVS-02-18	1/4"	2	700	.34(.75)	97(3.81)	51(2.00)	22(0.86)
NVS-03-18	3/8"	21	700	.34(.75)	97(3.81)	51(2.00)	22(0.86)
NVS-04-18	1/2"	30	700	.7(1.54)	108(4.25)	65(2.55)	32(1.25)
NVS-06-18	3/4"	100	1000	1.10(2.44)	128(5.03)	80(3.14)	38(1.49)
NVS-08-18	1"	300	1000	2.3(5.10)	141(5.55)	95(3.74)	51(2.00)
GDB-02/GDS-02	1/4"	0.5	210/700	.11(.24)	45(1.77)	32(1.25)	21(.82)
GDB-03/GDS-03	3/8"	1	210/700	.16(.35)	45(1.77)	30(1.18)	23(.90)
GDB-04/GDS-04	1/2"	2	210/700	.2(.44)	50(1.96)	35(1.37)	27(1.06)

\* Please contact us for customised size required

## PRESSURE GAUGES ACCESSORIES

### MAGNETIC MARK POINTER



### FEATURES

The mark pointer (Larger pointer) will stay at the maximum amplitude dial level during pressure rising, while the smaller pointer (Black pointer) is in movement with the pressure range. The mark pointer can be: re-set to the fixed dial level, or manually adjust the mark level accordingly.

### TRIPLE FUNCTION DIGITAL PRESSURE GAUGE FOR VEHICLE TIRE PRESSURE, TIRE THREAD DEPTH & TEMPERATURE



### FEATURES

Measures vehicle tire air pressure, tire thread depth, and temperature. Measuring unit in BAR/PSI.

### SPECIFICATIONS

### CONTENTS

PRESSURE RANGE 0~120 PSI (0.15~7.00 BAR)

ACCURACY  $\pm 1.5$  PSI

TIRE SURFACE

Measuring range : 0~16mm, a warning signal will flash if below the minimum range of 1.6mm

## PRESSURE GAUGES ACCESSORIES

### PROTECT COVERS



### FEATURES

Apply in 2 1/2" and 4" bottom and center back connection gauges, the covers were made of SBR rubber, anti-abrasion, excellent flexibility, perfectly protect the gauges from heavily impact and bump with other objects during operation.

### U-CLAMP



### FEATURES

Material: AISI304, 1 1/2", 2" and 2 1/2", 4" suitable for both CBM & LBM and upgrading the stability of pressure gauges.

### DIAPHRAGM BASE

### FEATURES

Suitable for liquids and gases that are corrosive and aggressive. Specialized used in PCB/LCD, high-tech zone, IC equipments pipe-line installation and internal outfit of dust-free chamber.



PP



TEFLON



SS



