# MILJOCO CORPORATION



MFG. of

INDUSTRIAL THERMOMETERS
BI-METAL THERMOMETERS
PRESSURE GAUGES

# **CATALOG 599**

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#### INTRODUCTION

Miljoco Corporation is an international manufacturer of indicating temperature and pressure instruments and was founded in 1979 by Howard M. Trerice. Presently, its headquarters are located in Warren, Michigan, USA.

Miljoco manufactures a very diverse line of products from fine glass items to heavy metal castings, from plumbing parts to electronic instruments. Currently, most items are covered in two general catalogs. This catalog (599) covers a series of industrial thermometers, bi-metal thermometers, and pressure gauges suited for the commercial HVAC building trades, as well as a wide spectrum of industrial and OEM applications.

Catalog 898 covers one of the broadest lines of remote reading thermometers available anywhere in the world.

Miljoco also offers component services to OEMs in the instrumentation field, as well as various plumbing and related items.

#### **WARRANTY**

We guarantee products of our manufacture to be free from defects in workmanship and material for a period of one year from date of shipment to the original purchaser, and will repair or replace such products, F.O.B. Factory, which our examination shall reveal to be defective under normal use. We assume no other responsibility whatsoever, implied or otherwise. Equipment and specifications are subject to change without notice. CAUTION: Electronic products may be subject to further conditions.

#### WARNING

When selecting the proper thermometer for a particular application, care should be exercised in considering all factors, such as, but not limited to the following: operating temperature, maximum process temperature, ambient temperature, and material compatibility both process and ambient. Although utmost care is used packaging, damage to the instrument may occur in shipment, therefore, the instrument should be tested for accuracy before use.

Pressure gauges are also subject to similar conditions as described above and personnel responsible for selecting instruments should read ANSI B40.1, copies of which may be obtained from the American Society of Mechanical Engineers, United Engineering Center, 345 E. 47th Street, New York, NY 10017

FAILURE DUE TO IMPROPER APPLICATION AND USE CAN CAUSE PERSONAL INJURY OR PROPERTY DAMAGE.



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# 7" & 9" INDUSTRIAL THERMOMETERS

#### **ADJUSTABLE ANGLE**

Miljoco industrial thermometers are designed for commercial construction & industrial applications such as piping & air ducts. This instrument represents the accepted worldwide engineering standard for industrial thermometers with die cast aluminum case construction for rugged durability. The nontoxic, green organic spirit-filled tube provides an accurate and quick response while maintaining environmental safety.

#### **GENERAL SPECIFICATIONS**

**CASE:** Precision Die Cast Aluminum for maximum durability in the most abusive installations. Furnished with a anti-scratch, dark green, hard powder coat finish.

**LENS:** Standard clear shatter proof polycarbonate, or optional double strength glass.

**SCALE:** Aluminum with white finish and black markings. The scale is V-shaped for optimum readability.

**TUBE:** Furnished standard with non-toxic, green organic spirit-filled glass tube. The tube is shock mounted to reduce separation during shipment and use. The bore over the spirit column is filled with nitrogen to prevent oxidation.

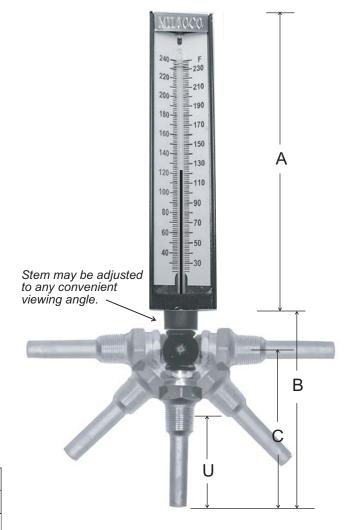
**ADJUSTABLE FITTING:** Finished to match the case and provides 180 of vertical plane, and 360 in the horizontal plane, which is locked in place with a screw.

**CONNECTION:** A brass swivel or commonly used 1-1/8"-18 thread jam nut is used to secure a union hub or separate socket over the sensory bulb.

**STEM & BULB CHAMBER:** Die Cast Aluminum, tapered to fit standard industrial sockets. The bore of the stem chamber is filled with graphite, encompassing the thermometer bulb, to provide maximum speed of temperature response.

ACCURACY: + 1 Scale Division

	SCALE		DIME	NSI	ONS	(IN.)
CATALOG NO.	SIZE	LENGTH	Α	В	С	U
SX935	9"	3-1/2"	10.25	6.0	5.25	2.5
SX960	9"	6"	10.25	8.5	7.75	5.0
SX735	7"	3-1/2"	8.25	6.0	5.25	2.5
SX760	7"	6"	8.25	8.5	7.75	5.0



<sup>\*</sup> Add Range number to Basic catalog number i.e. SX935-50, see pages 5 & 6.



# INDUSTRIAL THERMOMETERS

**CATALOG NUMBERS FOR STANDARD RANGES** 

RANGE NO.	RANGE	MAJOR GRADUATIONS	MINOR GRADUATIONS
30	-40 to 110°F	10°	<b>2</b> °
35	0 to 120°F	5°	<b>1</b> °
75	0 to 160°F	10°	<b>2</b> °
77	30 to 180°F	<b>10</b> °	<b>2</b> °
50	30 to 240°F	10°	<b>2</b> °
60	30 to 300°F	10°	<b>2</b> °
31	-40 to 110°F & -40 to 40°C	10°& 5°	2°& 1°
36	0 to 120°F & -10 to 50°C	5°	1°
51	30 to 240°F & 0 to 115°C	10°& 5°	2°& 1°
61	30 to 300°F & 0 to 150°C	10°& 5°	2°& 1°

Add the range number from this scale to the catalog number from the opposite page to complete the full catalog number for ordering, i.e.: SX93550-W35B, which would be a 9" adjustable angle industrial thermometer with a 3-1/2" stem and a 3-1/2" brass socket, with a range of 30 to 240 F. To order a thermometer without a socket - specify i.e. SX93550. \* Most ranges are stocked in 9" scale size thermometers.

# COMPANION SEPARABLE SOCKETS







6" SOCKET w/EXT. NECK



3-1/2" SOCKET

CC	MPANION 3/4	4" NPT SEPA	RABLE SO	CKET
STEM	IMMERSION	EXT. NECK	CATALOG	NUMBERS
LENGTH	LENGTH	LENGTH	BRASS	316 S.S.
3-1/2"	2-1/2"	NONE	W35B	W35316
3-1/2"	1-1/2"	1"	W351B	N/A
6"	5"	NONE	W60B	W60316
6"	2-1/2"	2-1/2"	W62B	W62316

Longer stem lengths are available as options - consult factory for price and availability. Cap & chain can be supplied for test well service.



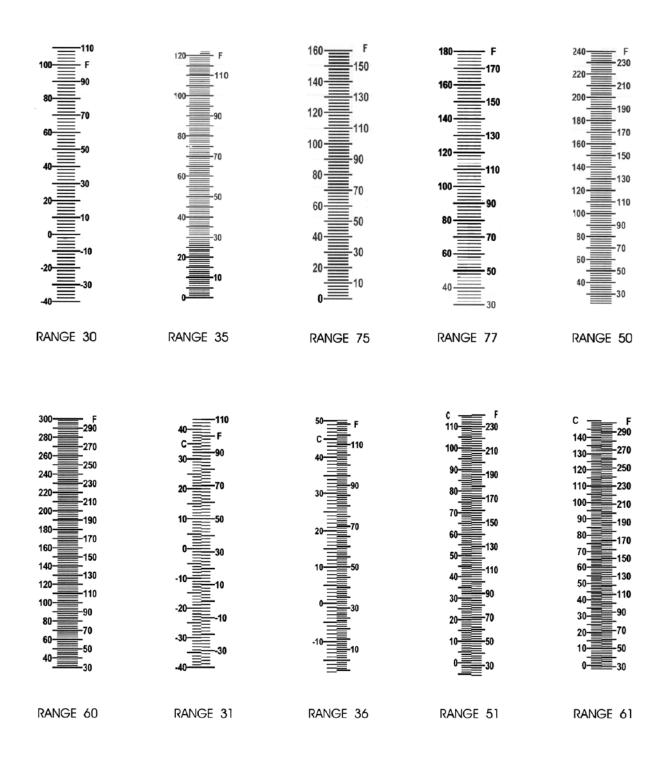
3-1/2" SOCKET w/EXT. NECK



# INDUSTRIAL THERMOMETERS

#### **SCALES FOR STANDARD RANGES**

The ranges listed below are normally available from stock in the 9" scale size with 3-1/2" stem length. Other ranges are also available on special order.



# 5" INDUSTRIAL CONTRACTORS THERMOMETER

STRAIGHT OR ANGLE

This industrial general purpose thermometer features a red reading, non-toxic filled tube. The 5 scale is easily read against the wide front magnifying glass tubing. Rugged & economical, the 5 industrial thermometer meets most specifications for the general construction industry. Common applications are hot water boilers, steam service, refrigeration lines, and chillers.

#### **GENERAL SPECIFICATIONS**

**CASE:** Rigid gray ABS plastic

LENS: Glass.

**SCALE:** Aluminum with white finish and black markings.

The scale is V-shaped for maximum readability.

**TUBE:** Lens front, red spirit filled, non-toxic.

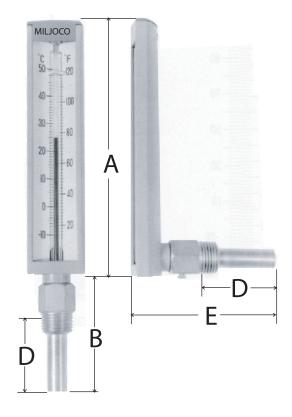
**STEM:** Brass

JAM NUT: Brass

SEPARABLE SOCKET: Brass 1/2 NPT, with 1-1/2Ž

immersion length for pressurized systems.

ACCURACY: + 1 Scale Division



CATALOG NUMBERS AND RANGES					ENSIC	DNS	(IN.)
STYLE	RANGE	CATALOG NUMBER	SCALE DIVISIONS	Α	В	D	Е
STRAIGHT	-40 to 110°F/C	S531S	2°F and 2°C	6.44	3.13	1.5	
FORM	30 to 240°F/C	S551S	5°F and 2°C	6.44	3.13	1.5	
ANGLE	-40 to 110°F/C	S531A	2°F and 2°C	6.44		1.5	3.88
FORM	30 to 240°F/C	S551A	5°F and 2°C	6.44		1.5	3.88



3" & 5" ADJUSTABLE ANGLE BI-METAL TYPE

Miljoco adjustable angle Bi-metal dial thermometers are a favorite for their versatility. The construction industry values this instrument, where on the job piping requires reading the instrument from a variety of angles. The face can be rotated 360° and angled 180° for the user's convenience. Bi-metal thermometers are designed to withstand vibration and other rugged abuse. The stainless steel components and casing, along with a waterproof seal, greatly reduce the amount of corrosion that may occur, due to the elements that the instrument may be exposed to.

#### **GENERAL SPECIFICATIONS**

CASE & RING: Hermetically sealed 300 Series Stainless Steel

ADJUSTABLE BRACKET: 300 Series Stainless Steel

**LENS:** Furnished standard with double strength glass.

Also available in optional polycarbonate.

DIAL: Anti-Parallax, Aluminum with white finish and

black markings.

**POINTER:** Black

**RECALIBRATOR:** Furnished standard with an external recalibrator

on the back of the case.

CONNECTION: 316 Stainless Steel, 1/2" NPT

STEM: 300 Series Stainless Steel - 1/4" dia.

ACCURACY: + 1 Scale Division



**DIMENSIONS (IN.)** 

С D Ε

.45 1/2" .25

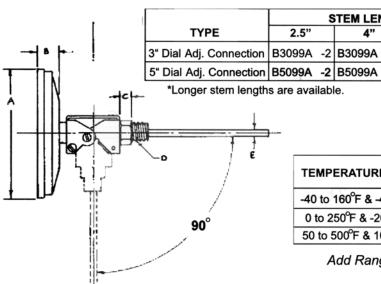
В

#### **BASIC CATALOG NUMBERS**

-2 B3099A

2.5"

STEM LENGTH\*



TEMPEDATURE RANGE	°F SC	ALE	°C SC	ALE	CATALOG
TEMPERATURE RANGE	Fig.	Div.	Fig.	Div.	NUMBER
-40 to 160°F & -40 to 70°C	20	2	10	1	39
0 to 250°F & -20 to 120°C	50	2	20	2	54
50 to 500°F & 10 to 260°C	50	2	20	2	94.

-4 B3099A -6 3.18

-4 B5099A -6 5.14

Add Range number to Basic catalog number (i.e. B5099A39-4)



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3" & 5" REAR CONNECTION BI-METAL TYPE

Miljoco Bi-Metal dial thermometers are designed to withstand vibration and other rugged abuse a thermometer may experience. The stainless steel components and casing, along with a waterproof seal, greatly reduce the amount of corrosion that may occur due to the elements that the instrument may be exposed to.

#### **GENERAL SPECIFICATIONS**

CASE & RING: Hermetically sealed 300 Series Stainless Steel

**LENS:** Furnished standard with double strength glass. Also available with polycarbonate as an option.

**DIAL:** Anti-Parallax, Aluminum with white finish and black markings.

**POINTER:** Black

**RECALIBRATOR:** Furnished standard with an external

recalibrator on the back of the case.

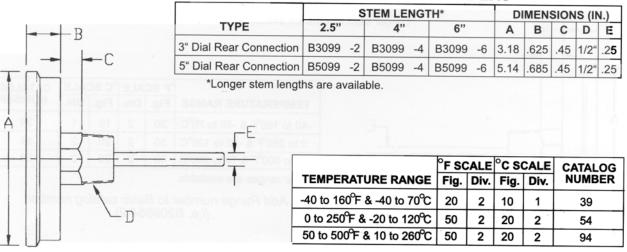
CONNECTION: 316 Stainless Steel, 1/2" NPT

STEM: 300 Series Stainless Steel, 1/4" dia.

ACCURACY: ± 1 Scale Division



#### **BASIC CATALOG NUMBERS**



Add Range number to Basic catalog number (i.e. B3099**54**-4)



2" REAR CONNECTION BI-METAL TYPE

Miljoco Bi-Metal dial thermometers are designed to withstand vibration and other rugged abuse a thermometer may experience. The stainless steel components and casing, along with a waterproof seal, greatly reduce the amount of corrosion that may occur due to the elements that the instrument may be exposed to, making it an ideal choice for installations on commercial & industrial machinery.

#### **GENERAL SPECIFICATIONS**

CASE & RING: Hermetically sealed 300 Series Stainless Steel

**LENS:** Furnished standard with polycarbonate lens on units not exceeding 250 Deg. F maximum range. Glass lens is furnished standard on higher ranges and available as an option on all others.

DIAL: Aluminum with white finish and black markings.

POINTER: Black

**RECALIBRATOR:** Furnished standard without external recalibration feature. Available as an option, consult factory for further details.

CONNECTION: 316 Stainless Steel, 1/4" NPT

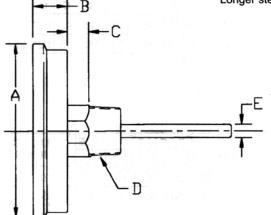
STEM: 300 Series Stainless Steel, 1/4" dia.

ACCURACY: + 1 Scale Division



	STEM LENGTH*				DI	MEN	SION	IS (IN	l.)		
TYPE	2.5"		4"		6"		Α	В	С	D	E
2" Dial with plastic lens	B2098	-2	B2098	-4	B2098	-6	2.15	.675	.25	1/4"	.25
2" Dial with glass lens	B2099	-2	B2099	-4	B2099	-6	2.15	.675	.25	1/4"	.25

\*Longer stem lengths are available.



	°F SC	°F SCALE		CALE	
TEMPERATURE RANGE	Fig.	Div.	Fig.	Div.	NUMBER
-40 to 160°F & -40 to 70°C	20	2	10	1	39
0 to 250°F & -20 to 120°C	50	2	20	2	54
50 to 500°F & 10 to 260°C	50	2	20	2	94

<sup>\*</sup>Other ranges are available.

Add Range number to Basic catalog number (i.e. B2098**54**-2)



# **BI-METAL THERMOMETERS** SEPARABLE SOCKETS

These separable sockets are designed for use with Miljoco bi-metal thermometers as shown on pages 8 & 9 of this catalog. They are intended to separate the thermometer from the process or media being measured to allow for removal of the thermometer without disturbing existing piping connections. They are available in brass, 304 stainless, or 316 stainless steel construction to suit a wide range of applications.

# SEPARABLE SOCKETS





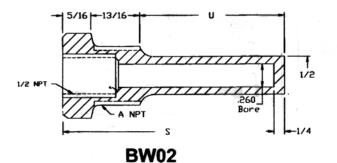
#### STANDARD SEPARABLE SOCKET

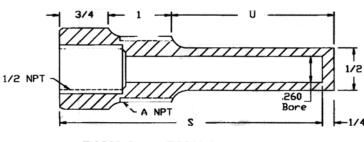
#### SEPARABLE SOCKET WITH EXTENSION NECK

	CATALOG	NUMBERS A	ND DIMENSI	ONAL DATA		
THERMOMETER STEM LENGTH "S"	PROCESS CONN."A"	IMMERSION LENGTH "U"		CA BRASS	TALOG NUMBI 304 S.S.	316 S.S.
2-1/2"	3/4" NPT	1-5/8"	NONE	BW02B	BW02304	BW02316
4"	3/4" NPT	2-1/2"	NONE	BW04B	BW04304	BW04316
6"	3/4" NPT	4-1/2"	NONE	BW06B	BW06304	BW06316
6"	3/4" NPT	2-1/2"	2"	BW62B	BW62304	BW62316

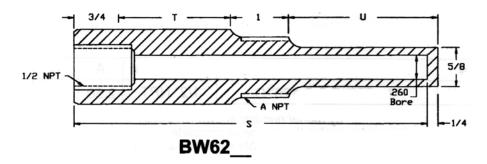
Longer stem lengths are available as options

- consult factory for price and availability. Cap & chain can be supplied for test well service.





BW04 . BW06





# ECONOMY BI-METAL THERMOMETER WITH BRASS SEPARABLE SOCKET

The Miljoco economy bimetal thermometer represents the maximum value for installations where a higher quantity of instruments may be required, and where temperature accuracy is less critical & there would be no corrosive elements in the environment or process media. This thermometer comes with its own 1/2 NPT brass separable socket that the thermometer simply press fits into place. (See inset below) Typical installations would be heating coils, hydronic radiant in-floor systems, outdoor wood furnaces, etc.

#### **GENERAL SPECIFICATIONS**

CASE: Zinc plated Brass

RING: Chrome plated Brass

LENS: Glass

DIAL: White with Black Farenheit &

Red Celsius Markings

**POINTER:** Black

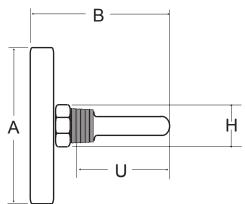
STEM: Brass

SEPARABLE SOCKET: Brass, 1/2 NPT, included

ACCURACY: +5°F or +2°C







MODEL#	TEMPERATURE RANGE	Connection	Α	В	Н	U
B259951-2W	30-250°F & 0-120°C	1/2 NPT	2.50	2.54	.875	1.56

Order by model number shown (B259951-2W) to receive thermometer complete with companion separable socket as shown.



**CORPORATION** 

# PLASTIC REAR FLANGE CASE

The plastic case, 2" Bi-Metal thermoemter is a less expensive alternative to the stainless steel case and has a rear flange case for surface mounting. The Bi-Metal thermometer is designed to withstand vibration and other abuse a thermometer may experience. This instrument has a shallow case depth, which is ideal for space conservation. Common applications are food coolers, floral cases, hot food holding cases, & air ducts.



**CAUTION**: The maximum ambient temperature for a polycarbonate lens is 200°F or 93°C

#### **GENERAL SPECIFICATIONS**

CASE: ABS, black or white.

LENS: Polycarbonate.

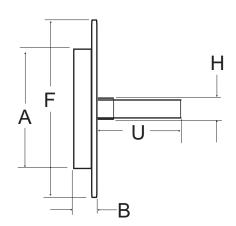
**DIAL**: Aluminum, black or white finish standard.

Other colors available as special order.

POINTERS: Black or White, Non-Adjustable

**CONNECTION**: Plain

STEM: 300 series S.S. 1/4" OD ACCURACY: + 1 Scale Division



#### **CATALOG NUMBERS & DIMENSIONAL DATA**

	BASIC CATALOG		DIME	NSIO	NS (IN	.)
TYPE	NUMBER	Α	U	В	Н	F
2" Rear Stem Conn.	B20146 -2	2.18	1.74	.577	0.37	2.94
4" Rear Stem Conn.	B20146 -4	2.18	3.97	.577	0.37	2.94

	°F SCALE		°C SC	CALE	CATALOG
TEMPERATURE RANGE	Fig.	Div.	Fig.	Div.	NUMBER
-40 to 110°F & -40 to 40°C	10	2	10	1	31
30 to 240°F	20	2	-	-	50

Add Range number to Basic catalog number (i.e. B20146**50**-2)



# PRESSURE/TEMPERATURE DUAL INDICATING INSTRUMENT "TRIDICATOR"

The Miljoco dual indicating pressure/temperature gauge, more commonly referred to as a "tridicator", combines the value of an individual pressure gauge and thermometer in one instrument. It is an ideal choice for boilers and other hot water applications where space limitations and installation costs are a consideration.

This instrument contains a bourdon tube assembly that reads pressure in both psi & kPa, and also has a bimetal coil assembly, which indicates temperature in both fahrenheit and celsius on a dual scale.



#### **GENERAL SPECIFICATIONS**

Case: Black Painted C.R.S.

Lens: Glass

Dial: White with Red Temperature and Blue Pressure Markings

Pointers: Black Non-Adjustable

**Movement:** Brass

Bourdon Tube: Phosphor Bronze

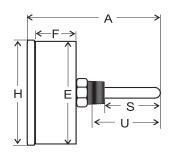
Connection: Brass ½ NPT rear or lower, ¼ NPT rear

Stem: Brass, 0.32" O.D.

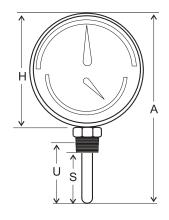
Accuracy: ±3-2-3%, Grade B - Pressure, ±1 Scale Division - Temperature



MODEL NUMBER	PRESSURE RANGE	TEMPERATURE RANGE	CONNECTION	A	н	E	F	U	s
PB300804-1-25	0 to 60 psi/kPa	80° to 290°F/C	1/4 NPT CBM	3.25	3.30	3.06	1.25	1.20	1.00
PB300804-2-25	0 to 60 psi/kPa	80° to 290°F/C	1/4 NPT CBM	5.18	3.30	3.06	1.25	3.23	2.98
PB300804-2-25E	0 to 60 psi/kPa	80° to 290°F/C	1/4 NPT CBM (ext. shank)	4.50	3.30	3.06	1.25	1.32	1.00
PB300804-2-50	0 to 60 psi/kPa	80° to 290°F/C	½ NPT CBM	5.22	3.30	3.06	1.25	3.00	2.60
PB3008L04-2-50	0 to 60 psi/kPa	80° to 290°F/C	½ NPT LM	6.66	3.30	3.06	1.25	2.80	2.36
PB300807-2-50	0 to 200 psi/kPa	80° to 290°F/C	½ NPT CBM	5.22	3.30	3.06	1.25	3.00	2.60
PB3008L07-2-50	0 to 200 psi/kPa	80° to 290°F/C	½ NPT LM	6.66	3.30	3.06	1.25	2.80	2.36









#### **BI-METAL POCKET THERMOMETER**

The pocket thermoemter is furnished standard in a 1" dial size, stainless steel case with a clear plastic lens. A hex nut located at the rear of the case is provided for recalibrating if necessary; all instruments are tested at the factory prior to shipment. A stainless steel pointed stem, 5" in length, and .145" in diameter, allow for the stem to easily penetrate into meats and like substances without damaging the product or thermometer. The instrument is supplied in a convenient plastic carrying case with a pocket clip and is designed for general testing.



RANGE	CATALOG NUMBER
*25 to 125°F	B1098D43A-5.0
-40 to 160°F	B1098D90A-5.0
*0 to 220°F	B1098D82A-5.0
50 to 500°F	B1098D95A-5.0

\*NSF listed range

#### **MOUNTING FLANGES**

Stainless steel mounting flanges are designed to secure and display 1" bi-metal thermometers. The instruments are mounted to a surface with a flange held by two screws. Upon mounting, the stem projects through a surface, exposing the sensor to the environment being read.





BI-METAL 1" DIAL SIZE

#### BI-METAL POCKET THERMOMETER with HIGH MAGNIFYING LENS

This pocket thermometer is furnished in a 1" dial size, stainless steel case with a raised, clear acrylic magnifying lens, enhancing the readability of the small dial from greater distances. A hex nut located at the rear of the case is provided for recalibrating if necessary; all instruments are tested at the factory prior to shipment. A stainless steel pointed stem, 5" in length, and .142" in diameter, allows for the stem to easily penetrate into meats and like substances without damaging the product or thermometer. The instrument is supplied in a convenient plastic carrying case with a pocket clip and is designed for general testing.



RANGE	STEM	CATALOG NUMBER
*25 to 125°F	5"	B1098M43C-5.0
-40 to 160°F	5"	B1098M90C-5.0
*0 to 220°F	5*	B1098M82C-5.0
50 to 500°F	5*	B1098M95C-5.0

\*NSF listed range

# 1" BIMETAL THERMOMETER with THREADED STEM & NUT

This thermometer is furnished in a 1" dial size, stainless steel case with a domed, clear acrylic lens, and a 1/4"-28 threaded fitting on the stem with matching nut for permanent installation on refrigerated display cases or similar equipment. A hex nut located at the rear of the case is provided for recalibrating if necessary. All instruments are tested at the factory prior to shipment. A stainless steel pointed stem is furnished in a nominal 2.5" or, 5" lengths, and is .142" in diameter. Other stem lengths can be made available for higher volume needs. Please consult the factory for details.

RANGE	STEM	CATALOG NO.		
-40 to 60°F/C	2-1/2"	B1098D18D-2.5		
-40 to 60°F/C	5"	B1098D18D-5.0		





#### HAND HELD DIGITAL TESTERS

Hand held digital thermometers are convenient and mobile, and are ideal for testing the temperature of a wide variety of media from food products to air ducts, while being completely portable. Their LCD displays have large easy to read numbers, with a range of -58 to 302 F and -50 to 150 C. A switch is provided to change from Farenheit to Celsius and a button is furnished to hold temperature readings for logging purposes. The CD300 has a convenient, 3" gray & white plastic pocket size case with many features of more expensive testers. The CD400 is a larger hand held device, encased in a 5-1/4" rigid ABS housing, which features a larger display, readings in full degrees or tenths of degrees, and a removable/replaceable probe system to accommodate longer probe cables.



#### LCD DIGITAL POCKET THERMOMETER

The digital pocket thermometer is ideal for the user who wants a more precise reading to the tenth degree. The face is 1-1/4" in diameter and is in a plastic case. The instrument updates its reading in one second intervals and has an on-off switch for long battery life. The stem is stainless steel, which is 5" long, having a diameter of .145" A protective pocket sheath and clip comes with the thermometer for carrying purposes.



#### GRADE 2A +1/2% ACCURACY

4-1/2" DIAL SIZE - DRY

The Miljoco P4509LX is designed to offer the very maximum value to any installation where a more accurate gauge is required, and the media being measured is compatible to brass and bronze componentry. This gauge features the versatility of a removable flange to suit virtually any installation, as well as the rugged reliability of a stainless rotary type movement to enhance service life. The gauge case is equipped with a rubber safety blowout disc in the rear, to help protect the operator in the event of gauge failure due to overpressure. The instrument is suited for service on air, water, glycol solutions, and gas. CAUTION: A coil syphon must be installed on the connection when used with steam applications.

300

**MILJOCO** 

kPa

30

20

#### **GENERAL SPECIFICATIONS**

**CASE**: Black epoxy finished steel case with removable 3-hole mounting flange and rubber safety blowout disc on rear.

RING: Stainless steel.

LENS: Double strength glass.

**DIAL**: Aluminum, white finished with black markings.

POINTER: Aluminum, black, micro-adjustable.

MOVEMENT: Stainless steel rotary type.

**BOURDON TUBE**: Phosphor bronze.

CONNECTION: 1/4" NPT brass, bottom outlet

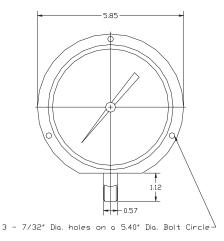
ACCURACY: +1/2% of total range span,

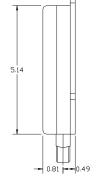
ANSI B40.1 Grade 2A

\_

TYPE	BASIC CATALOG NO.*
WITH FLANGE	P4509LX

<sup>\*</sup>Add range code to basic catalog number (i.e. P4509LX-05)





STANDARD RANGES				
RANGE CODE	RANGE			
001	30"hg - 0psi			
006	30"-0- 150psi			
008	30"-0- 300psi			
03	0 - 30psi			
04	0 - 60psi			
05	0 - 100psi			
06	0 - 160psi			
07	0 - 200psi			
08	0 - 300psi			
10	0 - 600psi			
11	0 - 1000psi			

80

90

100



#### **PROCESS GAUGE**

#### 4-1/2" DIAL SIZE DRY OR LIQUID FILLED

Process gauges are furnished in a solid front turret style case, moulded in hi-impact polypropylene, which is ideally suited for corrosive and difficult environments. The solid wall behind the dial face provides protection for the operator in case of bourdon tube rupture, and the lens is sealed for weather proof operation. This gauge can be provided dry (standard) or liquid filled (optional).

#### **GENERAL SPECIFICATIONS**

CASE: Hi-Impact polypropylene (black)

RING: Hi-Impact polypropylene (black)

LENS: Acrylic, for weather resistance.

DIAL: Aluminum, white finished with black markings.

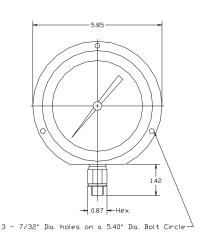
POINTER: Aluminum, black, adjustable.

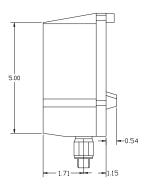
**MOVEMENT**: Stainless steel.

**BOURDON TUBE**: Stainless steel.

CONNECTION: 1/4" NPT bottom outlet (1/2" NPT is available)

ACCURACY: +1/2% of total range span, (ANSI grade 2A)





TYPE	BASIC CATALOG NO.*
DRY GAUGE	P4520L
LIQUID FILLED	PLF4520L

<sup>\*</sup>Add range code to basic catalog number (i.e. P4520L-05)



STANDARD RANGES			
RANGE CODE	RANGE		
001	30"hg - 0psi		
006	30"-0- 150psi		
008	30"-0- 300psi		
03	0 - 30psi		
04	0 - 60psi		
05	0 - 100psi		
06	0 - 160psi		
07	0 - 200psi		
08	0 - 300psi		
10	0 - 600psi		
11	0 - 1000psi		



#### **CONTRACTOR'S SERIES**

4-1/2" DIAL SIZE - DRY

The contractor's gauge is modestly priced and is the most popularly accepted standard in the commercial HVAC and building trades. The instrument is suited for service on air, water, glycol solutions, and gas. CAUTION: A coil syphon must be installed on the connection when used with steam applications.



TYPE	BASIC CATALOG NO.*
NO FLANGE	P4598L
WITH FLANGE	P4509L

<sup>\*</sup>Add range code to basic catalog number (i.e. P4598L-05)

#### **GENERAL SPECIFICATIONS**

CASE: Black fiber reinforced nylon (P4509L)

Brightly finished stainless steel (P4598L)

RING: Stainless steel.

LENS: Model P4509L - Glass

Model P4598L - Acrylic

**DIAL**: Aluminum, white finished with black markings.

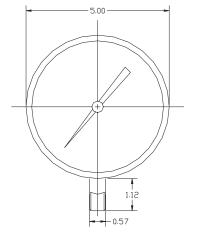
POINTER: Aluminum, black, adjustable.

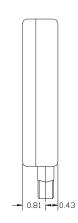
**MOVEMENT**: Precision brass with milled teeth.

**BOURDON TUBE**: Phosphor bronze. **CONNECTION**: 1/4" NPT bottom outlet

ACCURACY: +1% of total range span, (exceeds ANSI grade A)







STANDARD RANGES			
RANGE CODE	RANGE		
001	30"hg - 0psi		
006	30"-0- 150psi		
008	30"-0- 300psi		
03	0 - 30psi		
04	0 - 60psi		
05	0 - 100psi		
06	0 - 160psi		
07	0 - 200psi		
08	0 - 300psi		
10	0 - 600psi		
11	0 - 1000psi		



#### **SEVERE SERVICE - LIQUID FILLED**

2-1/2" (63mm) or 4" (100mm) DIAL SIZE

This severe service gauge is rugged, yet attractive on any machine where it is mounted. The stainless steel case is filled with a glycerine and water solution, which is suitable dampening to protect the internals against vibration and pulsation. This unit is completely weather proof and excellent for pumps, air compressors, irrigation systems, and other installations suitable for brass components. Stainless internals are available as an option, please contact the factory for details. CAUTION: A coil syphon must be installed on the connection when used on steam service.

#### **GENERAL SPECIFICATIONS**

CASE: Stainless Steel.

RING: Stainless Steel.

LENS: Acrylic, for weather resistance.

DIAL: Aluminum, white finished with black markings for psi

and blue markings for bars and kPa.

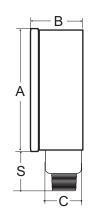
POINTER: Aluminum, black, non-adjustable.

**MOVEMENT**: Brass, with precision milled teeth.

**BOURDON TUBE:** Brass.

CONNECTION: 1/4" NPT bottom outlet with choke screw.

ACCURACY: 3-2-3% - ANSI B40.1 Grade B



OLZE	BASIC CATALOG	DIMENSIONS			
SIZE	NUMBER*	Α	В	S	С
2-1/2"	PLF2598L	2.68	1.26	0.76	0.56
4"	PLF4098L	4.32	1.63	1.25	0.56

\*Add range code to basic catalog number (i.e. P2598L-05)





STANDARD RANGES				
RANGE CODE	RANGE			
001	30"hg - 0psi/bar			
006	30"-0- 150psi/bar			
008	30"-0- 300psi/bar			
03	0 - 30psi/bar			
04	0 - 60psi/bar			
05	0 - 100psi/bar			
06	0 - 160psi/bar			
07	0 - 200psi/bar			
08	0 - 300psi/bar			
10	0 - 600psi/bar			
11	0 - 1000psi/bar			
12	0 - 2000psi/bar			
13	0 - 3000psi/bar			
14	0 - 5000psi/bar			
15	0 - 10,000psi/bar			

\*\*Other ranges available - please consult the factory for more details

#### **UTILITY SERVICE**

1-1/2", 2", 2-1/2", & 3-1/2" DIAL SIZES

An economic line of pressure gauges for general in plant service on air, water, gases, and other light duties suitable for brass gauge components. This instrument has an attractive appearance featuring a highly polished chrome plated ring and a dual colored dial face. CAUTION: A coil syphon must be installed on the connection when used for steam service.

#### **GENERAL SPECIFICATIONS**

CASE: Black finished C.R.S.

RING: Chrome plated

LENS: Acrylic

DIAL: White finished with black markings for psi

and blue markings for bars & kPa scale.

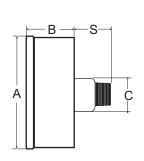
POINTER: Black, non-adjustable.

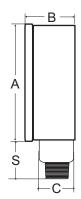
**MOVEMENT**: Brass.

**BOURDON TUBE:** Brass.

CONNECTION: 1-1/2" size is 1/8" NPT bottom or center back outlet. 2", & 2-1/2" sizes are 1/4" NPT bottom or center back outlet. 3-1/2" size is 1/4" NPT bottom.

ACCURACY: 3-2-3% ANSI B40.1, Grade B.





CIZE	CONNECTION	BASIC CATALOG		DIMENS	IONS	
SIZE	CONNECTION	NUMBER*	Α	В	S	С
1-1/2"	1/8" NPT bottom	P1508L	1.65	0.90	0.60	0.43
1-1/2"	1/8" NPT back	P1508	1.65	0.90	0.74	0.43
2"	1/4" NPT bottom	P2008L	2.08	1.04	0.74	0.55
2"	1/4" NPT back	P2008	2.08	1.04	0.86	0.55
2-1/2"	1/4" NPT bottom	P2508L	2.48	1.20	0.92	0.55
2-1/2"	1/4" NPT back	P2508	2.48	1.20	0.86	0.55
3-1/2"	1/4" NPT bottom	P3508L	3.52	1.12	0.94	0.55

*Add range code to	basic catalog number
(i.e. PŽ508L-05)	3



STANDARD RANGES					
RANGE CODE	RANGE				
001	30"hg - 0psi/bar				
003	30"-0- 30psi/bar				
004	30"-0- 60psi/bar				
006	30"-0- 150psi/bar				
008	30"-0- 300psi/bar				
02	0 - 15psi/bar				
03	0 - 30psi/bar				
04	0 - 60psi/bar				
05	0 - 100psi/bar				
06	0 - 160psi/bar				
07	0 - 200psi/bar				
08	0 - 300psi/bar				
10	0 - 600psi/bar				

\*\*Other ranges are available. Please consult the factory for further details.



#### PANEL MOUNT - FRONT FLANGE 2", 2-1/2", & 3-1/2" DIAL SIZES

Miljoco offers a variety of panel mounted pressure gauges, matching our line of vapor actuated remote reading panel mounted thermometers. These instruments are rugged, reliable, & accurate for a wide variety of uses such as air compressors, portable chillers, packaged pump sets, etc. Front flanged gauges are designed to be installed in a panel using 3 screws from the front. CAUTION: A coil syphon must be used when gauges are installed for steam service.

#### **GENERAL SPECIFICATIONS**

CASE: Brightly finished 300 series stainless steel.

**LENS:** Polycarbonate

**DIAL**: White finished with black markings.

POINTER: Black, adjustable.

MOVEMENT: Brass, with precision milled teeth.

**BOURDON TUBE**: Phosphor bronze.

**CONNECTION**: 1/8" NPT center back outlet is standard to 400psi 1/4" NPT center back outlet is furnished standard from

600psi to 1000psi

ACCURACY: 2-1-2% ANSI B40.1, Grade A.



**RANGE CODE** 

	001	30"hg - 0psi		
	003	30"-0- 30psi		
	004	30"-0- 60psi		
	006	30"-0- 150psi		
	008	30"-0- 300psi		
	02	0 - 15psi		
	03	0 - 30psi		
	04	0 - 60psi		
6	05	0 - 100psi 0 - 160psi		
8	06			
0	07	0 - 200psi		
0	08	0 - 300psi		
	10	0 - 600psi		
	11	0 - 1000psi		

STANDARD RANGES

**RANGE** 

DIAL OIZE	0405	LENS	BASIC		DIMENS	SIONS		
DIAL SIZE	CASE	(Polycarbonate)		Α	В	С	D	Е
2"	S.S.	Press-in	P2036	2.94	1.09	2.05	1.28r	.156
2"	S.S.	Threaded	P2037	2.94	1.09	2.05	1.28r	.156
2"	ABS	Press-in	P2036P	2.94	1.09	2.06	1.28r	.148
2-1/2"	S.S.	Threaded	P2537	3.48	1.09	2.56	1.60r	.180
3-1/2"	S.S.	Threaded	P3537	4.30	1.09	3.50	2.00r	.180

\*Add range code to basic catalog number (i.e. P2036-05)



\*\*Other ranges and custom graphics are available. Please consult the factory for further details.

#### **PANEL MOUNT - U-CLAMP**

2", 2-1/2", & 3-1/2" DIAL SIZES

Miljoco offers a variety of panel mounted pressure gauges, matching our line of vapor actuated remote reading panel mounted thermometers. These instruments are rugged, reliable, & accurate for a wide variety of uses such as air compressors, portable chillers, packaged pump sets, etc. U-clamp gauges are designed to be installed in a panel from the rear using mounting bracket and case studs. CAUTION: A coil syphon must be used when gauges are installed for steam service.

#### **GENERAL SPECIFICATIONS**

CASE: Brightly finished 300 series stainless steel.

LENS: Polycarbonate

**DIAL**: White finished with black markings.

POINTER: Black, adjustable.

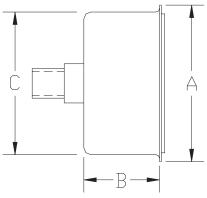
**MOVEMENT**: Brass, with precision milled teeth.

**BOURDON TUBE**: Phosphor bronze.

**CONNECTION**: 1/8" NPT center back outlet is standard to 400psi 1/4" NPT center back outlet is furnished standard from

600psi to 1000psi

ACCURACY: 2-1-2% ANSI B40.1, Grade A.



DIAL CIZE	OLZE CAGE LENS BASIC		CASE LENS		DIMENS	SIONS	
DIAL SIZE	CASE	(Polycarbonate)	CATALOG NO*	Α	В	С	S
2"	S.S.	Press-in	P2066	2.24	1.09	2.05	.736
2"	S.S.	Threaded	P2067	2.24	1.09	2.05	.736
2"	ABS	Press-in	P2046	2.24	1.09	2.06	.736
2-1/2"	S.S.	Threaded	P2567	2.86	1.09	2.56	.736
3-1/2"	S.S.	Threaded	P3567	3.94	1.09	3.50	.736

<sup>\*</sup>Add range code to basic catalog number (i.e. P2567-05)



STANDARD RANGES					
RANGE CODE	RANGE				
001	30"hg - 0psi				
003	30"-0- 30psi				
004	30"-0- 60psi				
006	30"-0- 150psi				
008	30"-0- 300psi				
02	0 - 15psi				
03	0 - 30psi				
04	0 - 60psi				
05	0 - 100psi				
06	0 - 160psi				
07	0 - 200psi				
08	0 - 300psi				
10	0 - 600psi				
11	0 - 1000psi				

<sup>\*\*</sup>Other ranges and custom graphics are available. Please consult the factory for further details.



# PRESSURE GAUGES SURFACE MOUNT - REAR FLANGE

2", 2-1/2", 3-1/2, & 4" DIAL SIZES

Miljoco offers a variety of panel mounted pressure gauges, matching our line of vapor actuated remote reading panel mounted thermometers. These instruments are rugged, reliable, & accurate for a wide variety of uses such as air compressors, portable chillers, packaged pump sets, etc. Rear flanged gauges are designed to be installed on a wall or panel using 3 screws from the front. CAUTION: A coil syphon must be used when gauges are installed for steam service.

#### **GENERAL SPECIFICATIONS**

CASE: Brightly finished 300 series stainless steel.

**LENS:** Polycarbonate

**DIAL**: White finished with black markings.

POINTER: Black, adjustable.

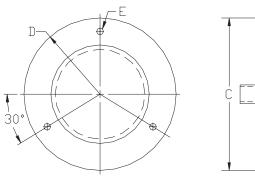
MOVEMENT: Brass, with precision milled teeth.

**BOURDON TUBE**: Phosphor bronze.

**CONNECTION**: 1/8" NPT center back outlet is standard to 400psi 1/4" NPT center back outlet is furnished standard from

600psi to 1000psi

ACCURACY: 2-1-2% ANSI B40.1, Grade A.



					<b>→</b> B	-		
DIAL OUTE	DIAL CIZE CAGE LENS BASIC DIMENSIONS							
DIAL SIZE	CASE	(Polycarbonate)	CATALOG NO*	Α	В	С	D	Е
2"	S.S.	Press-in	P20146	2.24	1.09	3.50	1.59r	.156
2"	S.S.	Threaded	P20147	2.24	1.09	3.50	1.59r	.156
2-1/2"	S.S.	Threaded	P25147	2.85	1.25	3.67	1.60r	.172
3-1/2"	S.S.	Threaded	P35147	3.94	1.25	4.87	2.00r	.180

\*Add range code to basic catalog number (i.e. P20146-05)



STANDARD RANGES					
RANGE CODE	RANGE				
001	30"hg - 0psi				
003	30"-0- 30psi				
004	30"-0- 60psi				
006	30"-0- 150psi				
008	30"-0- 300psi				
02	0 - 15psi				
03	0 - 30psi				
04	0 - 60psi				
05	0 - 100psi				
06	0 - 160psi				
07	0 - 200psi				
08	0 - 300psi				
10	0 - 600psi				
11	0 - 1000psi				

\*\*Other ranges and custom graphics are available. Please consult the factory for further details.



# **ACCESSORIES**

#### 1/4" NPT GAUGE ISOLATOR VALVE





Model #1075 (MxF)

Model #1050 (FxF)

The Miljoco brass ball valve cock is an ideal isolating valve between a pressure gauge & the medium being measured. The valve is a positive shutoff rated at 600 psi W.O.G., & facilitates the repair or replacement of a gauge without comprising the piped system. CAUTION: A coil syphon should be used between ball valve and steam service.

#### 1/4" NPT BRASS NEEDLE VALVE



Model #1100

This sturdy Miljoco brass needle valve, with teflon packing glands, is designed especially for pressure gauge service, and will operate freely up to 2000 psi. The large round knurled handle offers maximum ease and precise control to throttle the pressure on & off to the gauge. CAUTION: A coil syphon should be used between needle valve and steam service.

# 1/4" NPT BRASS SNUBBER



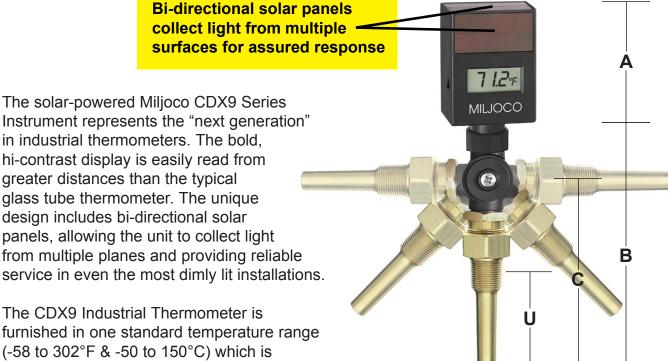
Miljoco porous stone pressure gauge snubbers are designed to dampen pressure pulsations to enhance gauge life. They have no moving parts, thus are completely reliable to 1000 psi. They can be piped together in pairs for certain applications where severe pulsations exist.

# 1/4" NPT STEEL COIL SYPHON



Model #1300

Miljoco coil syphons are required for use with gauges on steam lines, and are designed to form a barrier of water in the coil, preventing steam from attacking the bourdon tube solder joints.



furnished in one standard temperature ran (-58 to 302°F & -50 to 150°C) which is switchable in the field. This wide range covers most applications for this type of product, while offering an environmentally friendly alternative to the commonly specified mercury-in-glass thermometer.

CATALOG	NOMINAL STEM	DIMENSIONS (IN.)			
NUMBER	LENGTH	Α	В	С	U
CDX93585	3½"	3.20	7.56	5.75	2.50
CDX96085	6"	3.20	10.06	8.25	5.00

Fits any standard industrial thermometer well.

#### **SPECIFICATIONS**

CASE: High impact ABS black plastic

STEM: Aluminum, 31/2" or 6"

**CONNECTION:** 1½"-18 UNEF Brass jam nut **SENSOR:** Glass passivated thermistor

RANGE: -58° to 302°F (-50° to 150°C), field-switchable between °F & °C

DISPLAY: LCD, black character, 1/2" high with gray background,

ILLUMINANCE: Bi-directional solar collectors, 35 Lux

**UPDATE TIME:** 6 times per minute

ACCURACY: Greater value of 1° or 1% of reading

**RESOLUTION:** 0.10° between -58° to 199.9°F (-50° to 93°C)

**RECALIBRATION:** Internal potentiometer

**ENVIRONMENTAL CONDITIONS:** 

Ambient Temperature: -30° to 140°F (-35° to 60°C)

Ambient Temperature Error: None

Maximum Humidity: 100%



The Miljoco low pressure diaphragm gauge offers the pinnacle in both performance and accuracy for typical pressure and vacuum applications up to and including 10 psi. Such uses include gas draft indication, air flow & filtration, leak detection, etc..

The LP2507/LP2507L is constructed from a single beryllium copper diaphragm affixed to a precision machined brass plate. This advanced design, coupled with a high precision, milled-teeth brass movement and silver-nickel pinion and bearing surface, provides the user with a low pressure instrument that is without equal.



**CASE:** Black finished C.R.S **LENS:** Polycarbonate

**DIAL:** White finished aluminum with black markings

**POINTER:** Black non-adjustable **DIAPHRAGM:** Berylium Copper

CONNECTION: Brass, 1/4 NPT Lower or Center Back

**MOVEMENT:** Precision milled brass

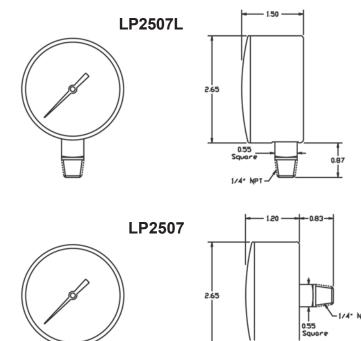
**RANGES:** See Table

**RESTRICTOR:** .013 restrictor on ranges above 10" H<sub>2</sub>O

ACCURACY: ±1.5% Full Scale

AMBIENT TEMPERATURE: -40° to 160°F





STANDARD RANGES						
RANGE	RANGE	GRADU	IATIONS			
CODE		FIGURE	DIVISION			
	VACUUM R	ANGES				
0210	15" H <sub>2</sub> O-0	3	.3			
0220	30" H <sub>2</sub> O-0	5	.5			
0240	60" H <sub>2</sub> O-0	10	1			
0250	100" H <sub>2</sub> O-0	10	1			
0260	160" H <sub>2</sub> O-0	40	2.5			
	PRESSURE	RANGES				
210	0-15" H <sub>2</sub> O	3	.3			
220	0-30" H <sub>2</sub> O	5	.5			
240	0-60" H <sub>2</sub> O	10	1			
250	0-100" H <sub>2</sub> O	10	1			
260	0-160" H <sub>2</sub> O	40	2.5			
232	0-35" H <sub>2</sub> O & oz/in <sup>2</sup>	5/2	1 / .5			
300	0-5 psi	1	.1			
310	0-10 psi	1	.1			

STANDARD PANCES





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MANUFACTURERS OF TEMPERATURE AND PRESSURE INSTRUMENTS

CATALOG 599