

WEISS INSTRUMENTS

Process Gauges

Diaphragm Seals

Accessories

Specialty Gauges



SPECIALTY GAUGE INTRODUCTION

This Specialty Gauge Catalog illustrates and describes the various pressure gauges available from Weiss Instruments in Solid Front (Safety), Solid Back Liquid-Filled or Dry configuration. These gauges ideally suit the requirements of the Process, Industrial, Power and Chemical Industries and are available with Phosphor Bronze/Brass, 316 Stainless Steel or Monel internals.

Gauge accessories such as: Siphons, Snubbers, Gauge Cocks, Needle Valves, Ball Valves and Diaphragm Seals (to prevent corrosion or clogging of Gauges) are also illustrated.

OPERATING CONDITIONS

Conditions which a pressure gauge will be subjected to are a major factor in choosing the correct indicator for each application. The following points are offered as a guide for the proper selection.

- Where vibration and pulsation exist, the liquid-filled type may be better suited.
- Gauge range should be twice that of the operating range. Additional information can be obtained by reading Pressure Gauge Standard ANSI/ASME B40.1.
- Liquid filled ambient temperature limits – Glycerine 0-150°F / Silicone 50-0-150°F
- Non-filled gauges can withstand continuous service temperatures as high as 300°F, however, excess operating temperatures should be avoided whenever possible since mid-scale accuracy will be affected by approximately 1% per 100°F ambient temperature change.
- Non-filled gauges with stainless steel components and welded joints will withstand higher temperatures for short periods of time, although other internals may be damaged and calibration permanently affected.
- For highly corrosive and/or viscous process media a diaphragm seal may be appropriate to isolate the gauge. Refer to page 11.

TO SPECIFY Ordering Information, see pages 7&8

1) Catalog Number

Dial Size	Series	Case Style	Internal Material
4 - 4 1/2"	AG-Altitude	B-Aluminum, Back Flange	1 - Bronze
6 - 6"	BG-Bellows	N-Aluminum w/o Flange	2 - 316 S.S.
8 - 8 1/2"	DG-Differential	E-Phenolic Turret	5 - Monel
	MG-Ammonia	F-Aluminum, Front Flange	
	PG-Pressure		
	UG-Ultra		
	RG-Refrigeration		
	TP-Duplex		

2) **Dial Range** - See page 9 for available Ranges

3) **NPT Size** - 1/4" or 1/2"

4) **Location of Connection** - Lower Mount (LM) or Lower Back Mount (LBM)

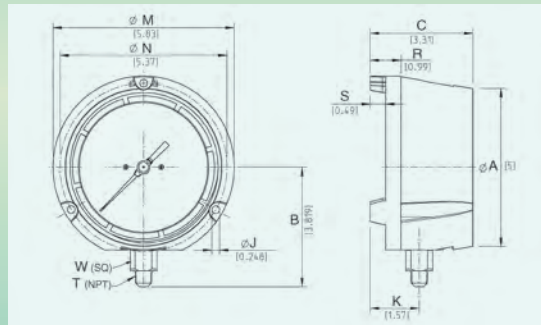
Ex: 6UGB-2 0-100psi 1/4"LM

4 1/2" Process Pressure Gauges

MOVEMENT - Bushed Stainless Steel Rotary
DIAL - White Aluminum, Black Markings
POINTER - Black Aluminum, Micrometer Adjustable
CASE - Black Fiberglass - Reinforced Thermoplastic (Pocan)
RING - Reinforced Polypropylene
WINDOW - Acrylic
GASKETS - Buna N
ACCURACY - 0.5% ASME B40.1 Grade 2A
CONNECTIONS - Lower 1/4" or 1/2" NPT
 Lower Back 1/4" or 1/2" NPT
 (applies to Y2 and Y5 versions)

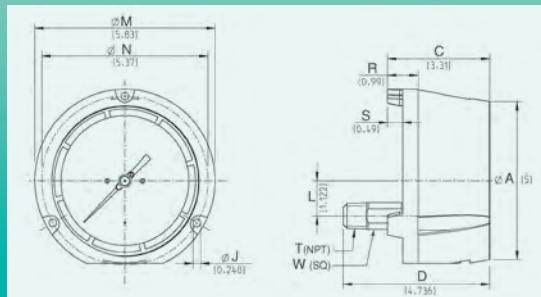


CONSTRUCTION	SOCKET	TUBE	CAT NO.
DRY	BRASS	BRONZE	NF4UGY1
DRY	316L S.S.	316L S.S.	NF4UGY2
DRY	MONEL	MONEL	NF4UGY5
LIQUID FILLED	BRASS	BRONZE	LF4UGY1
LIQUID FILLED	316L S.S.	316L S.S.	LF4UGY2
LIQUID FILLED	MONEL	MONEL	LF4UGY5



	A*	B	C	J	K	M	N	R	S	T NPT	W sq
mm	128	103 ¹	84	6.3	40	148	136.5	25	12.5	—	22
in	5.0	4.06 ¹	3.31	.248	1.57	5.83	5.37	.99	.49	1/2"	0.87

A* - Nominal Size. 1- Gauges with 1/4" NPT connection – dimension changes to 97mm (3.81 in.).



	A*	C	D	J	L	M	N	R	S	T NPT	W sq
mm	128	84	120.3	6.3	28.5	148	136.5	25	12.5	—	22
in	5.0	3.31	4.74	.248	1.12	5.83	5.37	.99	.49	1/2"	0.87

A* - Nominal Size. 1- Gauges with 1/4" NPT connection – dimension changes to 43.5mm (1.71 in.).

STANDARD RANGES

Process Pressure Gauges

PRESSURE – DUAL SCALES

OUTER (PSI)			INNER (KPa)		
Range	Graduations		Range	Graduations	
	minor graduation	figure interval		minor graduation	figure interval
0-15	0.1	2	0-100	1	10
0-30	0.2	5	0-200	2	20
0-60	0.5	5	0-400	5	50
0-100	1	10	0-600	5	100
0-160	1	20	0-1000	10	100
0-200	2	20	0-1200	10	200
0-300	2	50	0-2000	20	200
0-400	5	50	0-2500	20	500
0-600	5	50	0-4000	50	500
0-1000	10	100	0-6000	50	1000
0-1500	10	200	0-10000	100	1000
0-2000	20	200	0-12000	100	2000
0-3000	20	500	0-20000	200	2000
0-4000	50	500	0-25000	200	5000
0-5000	50	500	0-30000	200	5000
0-6000	50	500	0-40000	500	5000
0-10000	100	1000	0-60000	500	10000
0-15000	100	2000	0-100000	1000	10000
0-20000	200	2000	0-120000	1000	20000

VACUUM – DUAL SCALES

OUTER (inHg)			INNER (KPa)		
Range	Graduations		Range	Graduations	
	minor graduation	figure interval		minor graduation	figure interval
30-0	0.2	5	-100-0	1	10

COMPOUND – DUAL SCALES

OUTER (inHg/ PSI)					INNER (KPa)				
Range	Graduations				Range	Graduations			
	minor graduation	figure interval	minor graduation	figure interval		minor graduation	figure interval	minor graduation	figure interval
	vacuum (inHg)		pressure (PSI)						
30-0-15	0.5	10	0.2	5	-100-0-100	2	20	2	20
30-0-30	1	10	0.5	5	-100-0-200	2	50	2	50
30-0-60	1	10	0.5	10	-100-0-400	5	50	5	50
30-0-100	2	30	1	20	-100-0-600	5	100	5	100
30-0-150	2	30	1	20	-100-0-1000	10	100	10	200
30-0-200	5	30	2	20	-100-0-1200	20	100	20	200

ULTRA PRESSURE GAUGES

Solid Back Construction

SERIES UG-1

SOCKET - Brass

BOURDON TUBE - Phosphor Bronze C Tube to 1000 psi

CONNECTING JOINTS - Silver Brazed

MOVEMENT - Bushed Stainless Steel Rotary

DIAL - White Aluminum, Black Markings

POINTER - Black Aluminum, Micrometer Adjustable

WINDOW - Glass

ACCURACY - 0.5% ASME B40.1 Grade 2A

CONNECTIONS - 1/4" or 1/2" NPT, Lower or Lower Back

Available Dial Sizes

4 1/2" Bottom Conn.

4 1/2" Lower Back Conn.

6" Bottom & Back Conn.

6" Lower Back Conn.

8 1/2" Bottom or Lower Back

Case Styles

B, N

F

B

F

B



SERIES UG-2

SOCKET - 316 Stainless Steel

BOURDON TUBE - 316 S.S. C Tube to 1000 psi
Coiled Tube 1500 psi to 10,000 psi

CONNECTING JOINTS - Welded

MOVEMENT - Bushed Stainless Steel Rotary

DIAL - White Aluminum, Black Markings

POINTER - Black Aluminum, Micrometer Adjustable

WINDOW - Glass

ACCURACY - 0.5% ASME B40.1 Grade 2A

CONNECTIONS - 1/4" or 1/2" NPT, Lower or Lower Back

Available Dial Sizes

4 1/2" Bottom Conn.

4 1/2" Lower Back Conn.

6" Bottom & Back Conn.

6" Lower Back Conn.

8 1/2" Bottom or Lower Back

Case Styles

B, N

F

B

F

B



PRESSURE GAUGES

Solid Back Construction

SERIES PG-1

SOCKET - Brass

BOURDON TUBE - Phosphor Bronze C Tube to 1000 psi

CONNECTING JOINTS - Silver Brazed

MOVEMENT - Bushed Brass Rotary

DIAL - White Aluminum, Black Markings

POINTER - Black Aluminum, Slotted Adjustable

WINDOW - Glass

ACCURACY - 1.0% ASME B40.1 Grade 1A

CONNECTIONS - 1/4" or 1/2" NPT, Lower or Lower Back



Available Dial Sizes

4 1/2" Bottom Conn.

4 1/2" Lower Back Conn.

6" Bottom & Back Conn.

6" Lower Back Conn.

8 1/2" Bottom or Lower Back

Case Styles

B, N

F

B

F

B

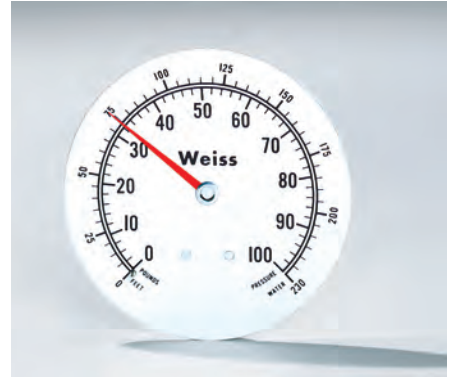
Optional Gauge Features



Flush Mounting Ring



Lazy Hand Assembly



Red Set Hand



Plastic Lens



Safety Glass Lens



Bladder for Liquid Fill Kit

SPECIAL APPLICATION GAUGES



Shown with B Case

DIFFERENTIAL GAUGES-SERIES DG-1*

Measures the difference between two independent pressure sources.

FEATURES:

- Brass Sockets-Phosphor Bronze Tubes.
- 1.0% Accuracy ASME B40.1 Grade 1A
- White Aluminum Dial with Black Markings
- Slotted Adjustable Pointer
- Connection 1/4" and 1/2"

Available Dial Sizes

4 1/2" Bottom Conn.

6" Bottom Conn.

Case Styles

B

B

* See pertinent data in available Range Table on page 9.



Shown with B Case

DUPLEX GAUGES - SERIES TP-1

Measures two related pressures on the same dial. Top pointer is orange and the bottom pointer is black.

FEATURES:

- Brass Sockets-Phosphor Bronze Tubes.
- 1.0% Accuracy ASME B40.1 Grade 1A
- White Aluminum Dial with Black Markings
- Pointer-Black Aluminum, Micrometer Adjustable
- Connection 1/4" and 1/2"

Available Dial Sizes

4 1/2" Bottom Conn.

Case Styles

B



Shown with E Case

BELLOWS GAUGES - SERIES BG-1**

Sensitive bellows element for accurate measurement of pressures below 15 psi.

FEATURES:

- Brass Socket-Phosphor Bronze Bellows.
- 1.0% Accuracy ASME B40.1 Grade 1A
- White Aluminum Dial with Black Markings
- Slotted Adjustable Pointer
- Connection 1/4" and 1/2"

Available Dial Sizes

4 1/2" Bottom Conn.

Case Styles

E

** Also available with 316 S.S. bellows and socket, Series BG-2.



Shown with B Case

ALTITUDE GAUGES - SERIES AG-1

Reads in both altitude and psi to indicate height of water in tanks (red set pointer provided).

FEATURES:

- Brass Socket-Phosphor Bronze Tube.
- 1.0% Accuracy ASME B40.1 Grade 1A
- White Aluminum Dial with Black Markings
- Slotted Adjustable Pointer
- Connection 1/4" and 1/2"

Available Dial Sizes

4 1/2" Bottom Conn.

Case Styles

B, N



Shown with N Case

REFRIGERATION GAUGES - SERIES RG-1

Reads in both psi and corresponding refrigerant temperature. For R12, R22 and R502

FEATURES:

- Brass Socket-Phosphor Bronze Tube.
- 1.0% Accuracy ASME B40.1 Grade 1A
- White Aluminum Dial with Black Markings
- Slotted Adjustable Pointer
- Connection 1/4" and 1/2"

Available Dial Sizes

4 1/2" Bottom Conn.

Case Styles

B, N



Shown with B Case

AMMONIA GAUGES - SERIES MG-2

Reads in both psi and corresponding ammonia temperature.

FEATURES:

- Stainless Steel Socket and Tube.
- 1.0% Accuracy ASME B40.1 Grade 1A
- White Aluminum Dial with Black Markings
- Slotted Adjustable Pointer
- Connection 1/4" and 1/2"

Available Dial Sizes

4 1/2" Bottom Conn.

Case Styles

B, N

STANDARD RANGES

SERIES UG-1 UG-2 PG-1 TP-1

PRESSURE		
PSI	GRADUATIONS	FIGURE INTERVAL
0-15	0.2	1
0-30	0.5	5
0-60	1	10
0-100	1	10
0-160	2	20
0-200	2	20
0-300	5	50
0-400	5	50
0-600	10	100
0-1,000	10	100
0-1,500	20	300
0-2,000	20	200
0-3,000	25	300
0-5,000	50	500
0-10,000	100	1,000
0-20,000	200	2,000
COMPOUND—In. Hg. Vac.-PSI		
30"-0- 15	1" & 0.5	5" & 3
30"-0- 30	1" & 1	10" & 5
30"-0- 60	1" & 1	10" & 10
30"-0-100	5" & 1	15" & 10
30"-0-150	5" & 5	30" & 25
30"-0-200	5" & 5	30" & 20
30"-0-300	5" & 5	30" & 50
30"-0-400	5" & 5	30" & 50
30"-0-600	5" & 10	30" & 100
VACUUM—In. Hg. Vac.		
0-30"	0.5"	5"

SERIES BG-1 BG-2

PRESSURE			
INCH/WATER	GRADS	FIG. INTV.	DIAL ARC
0- 10"*	0.2"	2"	90°
0- 15"	0.5"	5"	90°
0- 20"	1"	2"	180°
0- 30"	1"	5"	215°
0- 40"	1"	5"	270°
0- 60"	1"	5"	270°
0- 80"	1"	10"	270°
0-100"	1"	10"	270°
0- 5 psi	1 oz.	1	270°
0- 10 psi	2 oz.	1	270°
COMPOUND			
10" Water Pres. 10" Water Vac.	0.5"	2"	180°
40" Water Pres. 20" Water Vac.	1"	10"	270°
5 lbs. PSI & 10" Water Vac.	.2 & .1	2" & 1	270°
VACUUM			
0-5" Hg. Vac.	1"	1"	270°
0-10" Hg. Vac.	0.2"	2"	180°
0-40" Water-Vac.	1"	5"	270°

*Not available in BG-2

SERIES RG-1

REFRIGERATION		
INCH/PSI	GRADUATIONS	FIGURE INTV.
30"-0-150	5" & 5	30" & 25
30"-0-300	5" & 5	30" & 25
0-300	5	25
0-500	10	50

Temperature Scale R12, R22, R502

SERIES MG-2

AMMONIA		
INCH/PSI	GRADUATIONS	FIGURE INTV.
30"-0-150	5" & 5	30" & 25
30"-0-300	5" & 5	30" & 25

SERIES AG-1

ALTITUDE		
FEET	GRADUATIONS	FIGURE INTV.
0- 30	0.5	5
0- 70	1	10
0- 100	1	10
0- 160	2	20
0- 200	2	20
0- 300	5	50
COMBINATION		
PSI/Ft.	GRADUATIONS	FIGURE INTV.
15 & 35'	0.2 & 0.5'	3 & 5'
30 & 70'	1 & 1'	5 & 10'
60 & 140'	1 & 2'	10 & 20'
100 & 231'	2 & 5'	10 & 25'
150 & 345'	5 & 5'	25 & 20'
200 & 460'	5 & 5'	20 & 50'
300 & 690'	5 & 10'	25 & 50'

SERIES DG-1

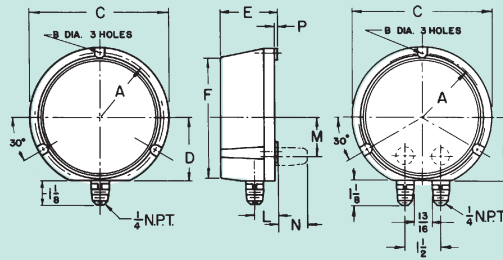
DIFFERENTIAL			
DGC RANGES	GRADS	FIG. INTV.	STATIC PRESSURE LIMITS
30-0- 30	1	5	45
50-0- 50	1	10	75
100-0-100	2	20	150
200-0-200	5	50	300
300-0-300	10	100	350
DGL RANGES	GRADS	FIG. INTV.	STATIC PRESSURE
0- 30	0.5	5	45
0- 60	1	10	90
0- 100	1	10	150
0- 160	2	20	240
0- 200	2	20	300
0- 300	5	50	450
0- 400	5	50	600
0- 600	10	100	600
0- 700	10	100	700
0- 800	10	100	800
0-1,000	10	100	1,000

*Differential Pressure Gauges measure the difference between two separate pressure sources. Dial with "O" at the top center indicates the amount one pressure source is higher than the other. Dial with "O" at the left side indicates the Differential between high and low pressure.

CASE DIMENSIONS

STYLE E - For Wall, Panel or Direct Mounting

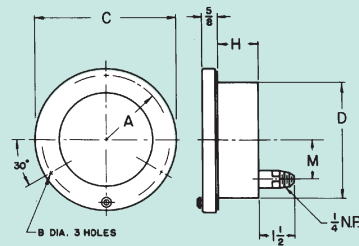
DIAL SIZE	A	B	C	D	E	F	L	M	N	P
4½"	2.69	.22	5.81	2.62	2.37	5.06	.91	1.62	1.62	.062
8½"	4.81	.28	10.25	4.69	2.47	8.97	1.06	2.12	1.62	.062



STYLE F - Black Aluminum with Hinged Ring Front Flange

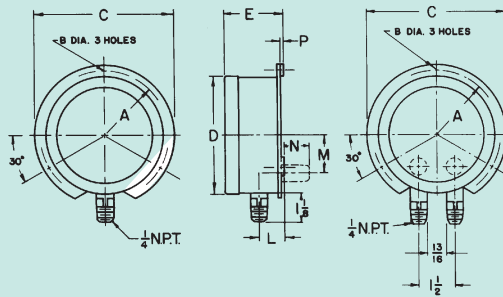
DIAL SIZE	A	B	C	D	H	M	X
4½"	2.69	.22	6	4.81	2.03	1.62	4.87
6"	3.50	.22	7.62	6.34	1.66	1.62	6.47

X - Panel Hole cut-out diameter.



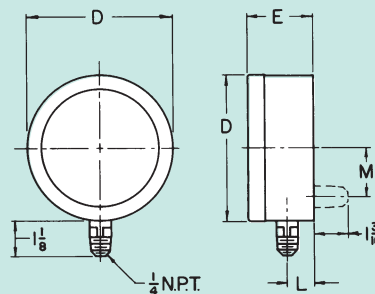
STYLE B - Black Aluminum Case & Twist Ring Back Flange

DIAL SIZE	A	B	C	D	E	L	M	N	P
4½"	2.68	.22x.29	5.87	4.97	2.44	1	1.62	1.62	.156
6"	3.5	.28x.36	7.62	6.47	2.58	1.03	1.62	1.62	.156
8½"	4.81	.28	10.25	8.94	2.94	.97	2.12	1.62	.062



STYLE N - Black Aluminum Case & Twist Ring No Flange

DIAL SIZE	D	E	L	M
4½"	4.97	2.40	.84	1.62



DIAPHRAGM SEALS



The Weiss line of Diaphragm Seals, in conjunction with Weiss pressure indicators, offers instrumentation that's rugged and carefully calibrated to withstand the most severe industrial, process or OEM service. Our diaphragm seals are available in a variety of metal housing materials and process connection sizes to fit most requirements.

Series DS/DV/DT

Max. Pressure/Temperature Limits: Vacuum thru 2300 psi to 100°F, 1500psi to 200°F, 600 psi to 400°F.

Top Housing: 1/4" or 1/2" NPT (304 S.S. standard)

Diaphragm: 316 L S.S. welded, Viton* or Teflon**

Nuts and Bolts: Stainless Steel

Lower Housing: 1/4" thru 1" NPT

* Viton is furnished for Vacuum, 30 psi and Compound 30-0-15 psi ranges.

** Teflon is available for ranges to 200 psi.

Ranges 0-30" HG, 30-0-15 psi, 30-0-30 psi. Silicone Filling only.

Ordering Code: -DS- DS=316 SS Ex: 25-DS12-50
 A -DV B C D DV=Viton
 -DT DT=Teflon

A. Top Connection

25 = 1/4" NPT
 50 = 1/2" NPT

B. Flushing/No Flushing

0 = No flushing conn.
 1 = Flushing conn.

C. Lower Housing Mat'l

2 = 316 SS

D. Process Conn.

25 = 1/4" NPT
 50 = 1/2" NPT
 75 = 3/4" NPT
 10 = 1" NPT

LIQUID FILLINGS: Food-Grade Glycerine • Silicone DC200

The Series MD/MN is a compact, lightweight, economical diaphragm seal. The upper and lower housing, as well as the diaphragm, are type 316 stainless steel - all welded together making a one piece integral unit, ideally suited for those applications where space is a factor.

The use of a hermetically sealed, liquid filled pressure gauge in conjunction with either a MD or MN seal protects the indicating gauge from both the process medium and atmospheric conditions, as well as reduces pointer fluctuations due to vibration and pulsation.

Series MD

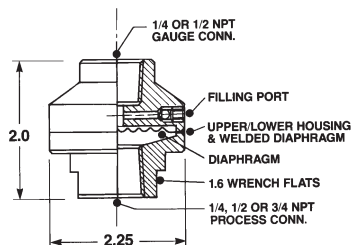
Opr. Pressure: 60 psi thru 1000 psi
 (minimum scale range 0-100 psi)

Temperature Limits: -5 to 300°F

Top Connection: 1/4" or 1/2" NPT

Process Connection: 1/4", 1/2" or 3/4" NPT

Ordering Code: -MDN2-
 A B
 Ex: 25-MDN2-50



A. Top Connection

25 = 1/4" NP
 50 = 1/2" NPT

B. Process Conn.

25 = 1/4" NPT
 50 = 1/2" NPT
 75 = 3/4" NPT

Series MN

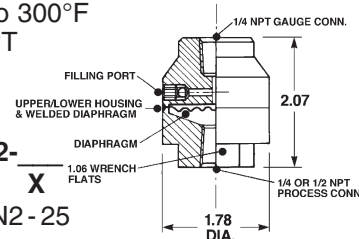
Opr. Pressure: 100 psi thru 1000 psi
 (minimum scale range 0-200 psi)

Temperature Limits: -5 to 300°F

Top Connection: 1/4" NPT

Process Connection: 1/4" or 1/2" NPT

Ordering Code: 25-MNN2-
 X
 Ex: 25-MNN2-25

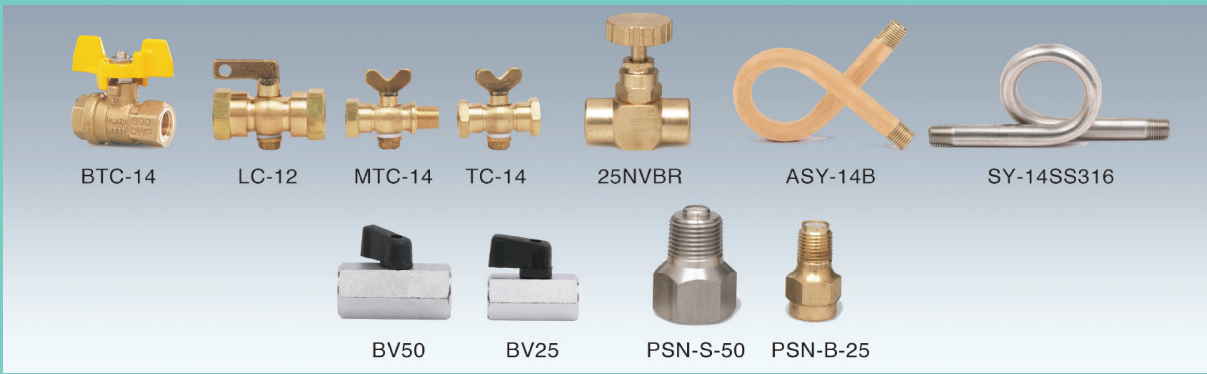


X. Process Connection

25 = 1/4" NPT
 50 = 1/2" NPT

REMOTE MOUNTING: Stainless Steel Plain Seamless or Armored Capillary with Stainless Steel Fittings can be provided for remote mounted applications. Fittings are available in 1/4" or 1/2" NPT.

GAUGE ACCESSORIES



FORGED BRASS COCKS

CAT. NO.	SIZE	MATERIAL	RATING
BTC-14	1/4" NPTF x 1/4" NPTF	Brass	200 psi Hydraulic

BRASS GAUGE COCKS

CAT. NO.	SIZE	MATERIAL	RATING
TC-14	1/4" NPTF x 1/4" NPTF	Brass	200 psi Hydraulic
MTC-14	1/4" NPTF x 1/4" NPTM	Brass	200 psi Hydraulic
LC-14	1/4" NPTF x 1/4" NPTF	Brass	200 psi Hydraulic
LC-12	1/2" NPTF x 1/2" NPTF	Brass	200 psi Hydraulic

NEEDLE VALVES

CAT. NO.	SIZE	MATERIAL	RATING
25NVBR	1/4" NPTF X 1/4" NPTF	Brass	600 psi & 300°F
25NVSS	1/4" NPTF X 1/4" NPTF	304S.S.	4000 psi & 150°F

SYPHONS

CAT. NO.	SIZE	MATERIAL	RATING
SY-14S	1/4" NPTM x 1/4" NPTM	Iron	300 psi & 300°F
SY-14B	1/4" NPTM x 1/4" NPTM	Brass	400 psi & 300°F
SY-14SS304	1/4" NPTM x 1/4" NPTM	304SS	430 psi & 800°F
SY-14SS316	1/4" NPTM x 1/4" NPTM	316SS	450 psi & 800°F
ASY-14S	1/4" NPTM x 1/4" NPTM	Iron (Angle)	300 psi & 300°F
ASY-14B	1/4" NPTM x 1/4" NPTM	Brass (Angle)	400 psi & 300°F

All Syphons Schedule 40. Schedule 80 available on request.

PRESSURE SNUBBERS

CAT. NO.	DESCRIPTION	MATERIAL	PSI RATING AT 70°F
PSN-B-25	1/4" NPT	Brass	1,500 psi
PSN-B-50	1/2" NPT	Brass	1,500 psi
PSN-S-25	1/4" NPT	303S.S.	1,500 psi
PSN-S-50	1/2" NPT	303S.S.	1,500 psi

CHROME PLATED BRASS BALL VALVES

CAT. NO.	SIZE	MATERIAL	RATING
BV25	1/4" NPTF x 1/4" NPTF	Chrome Plated Brass	450 psi & 250°F
MBV25	1/4" NPTF x 1/4" NPTM	Chrome Plated Brass	450 psi & 250°F
BV50	1/2" NPTF x 1/2" NPTF	Chrome Plated Brass	450 psi & 250°F

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Old World Craftsmanship NEW WORLD TECHNOLOGY
 Since 1882 • Celebrating 128 Years