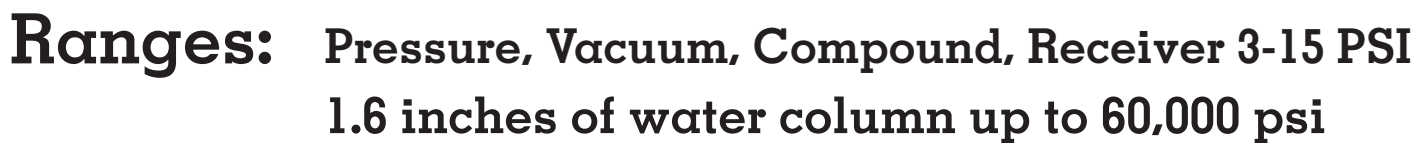


Safe • Accurate • Reliable • Durable • Guaranteed



McDaniel All Stainless Steel Gauges 1½", 2", 2½", 4" and 6"

Features

All Stainless Construction
Laminated Safety Glass Lens
Blowout Relief Grommet
Fillable Case

Accuracy: *1.5% on 1½" gauges -
ASME B40.1 Grade A
*1% on 2" and 2½" gauges -
ASME B40.1 Grade 1A
*½% on 4" and 6" gauges -
ASME B40.1 Grade 2A

(* 10,000 PSI and below)

Adjustable pointer standard on 4" and 6" only

Safe and Reliable

McDaniel designs and manufactures its gauges to minimize failure and to protect personnel and property. The use of laminated safety glass, rather than plexiglass or single strength glass, prevents dangerous pressure build-up in the case; the 2" glass breaks at 60 psi, the 2½" at 40 psi, the 4" at 15 psi and the 6" at 8 psi. The brittle glass cracks uniformly and the laminate remains intact. Additionally, the laminated safety glass won't craze or discolor.

Every All Stainless Steel McDaniel gauge is designed to withstand:

- 300% full scale pressure without rupture of the bourdon tube.
- 130% full scale pressure without loss of accuracy.
- 15,000 cycles of pressure pulsation from 10% to 90% full scale at a rate of 60 times a minute. The gauge is allowed to rest for 5 minutes and then can have no greater error than 1% above it's original accuracy as stated above; at any place on the dial.

Pulse/Vibration Protection

McDaniel offers liquid-filled gauges for applications involving vibration or pulsation. Glycerin is an excellent damper of bourdon tube movement. Emersion of the entire measuring assembly in a protective liquid envelope provides lubrication and shuts out corrosive or dirty atmospheres — thereby minimizing wear of moving parts and prolonging gauge life significantly.

Choice of Filling

When you order a McDaniel fillable gauge you may choose to fill it yourself or you may order it factory-filled with the liquid of your choice. Thus, you can maximize inventory utility and minimize inventory cost.

Glycerin filling has a lower operating temperature limit of 32°F (0°C) undiluted. The mixture of distilled water in proportions up to 35% will lower the limit commensurately, to -40°F (-40°C).

Silicone can extend the lower temperature limit to -60°F (-50°C).

The maximum temperature limit is not determined by the fluid but by the gauge's synthetic case seal. At elevated temperatures the seal may bake and lose its elasticity.

Warning: Glycerin filled gauges should not be used in applications involving strong oxidizing agents such as chlorine, nitric acid or hydrogen peroxide. (Refer to ASME B40.1)

Repair Feature

If any McDaniel gauge requires repair, downtime can be minimal because all gauges are field-repairable — quickly and easily — with only a screwdriver needed for disassembly.

If circumstances permit and factory repair is preferred, we will make the repair at a nominal service charge. See "WARRANTY & REPAIR" for further details.

Warranty

McDaniel warrants our pressure gauges to be free of defects in material and workmanship: Replacement of any defective gauge will be made at no cost to the purchaser. Gauge failures determined to be caused by abuse, over-range and incompatibility with environment or process media will not be considered under this warranty.

Repair / Refurbish

We will REPAIR and/or REFURBISH any regular stock McDaniel gauge for a charge to be determined after the gauge is examined by our Quality Control department. Damaged sockets or bourdon tubes cannot be repaired. Special units contact McDaniel for pricing.

Prices are F.O.B. Boutte, Louisiana 70039 U.S.A.

Case Styles

1½" (40MM) Filled or Fillable

Model S - 1/8" NPT*

*STANDARD — Also available in 1/4" NPT on Request. (Center-Back Conn. Only)

2" (50MM) Filled or Fillable

Model Q3 - 1/4" NPT*

*STANDARD — Also available in 1/8" NPT on Request.

2½" (63MM) Filled or Fillable

Model K - 1/4" NPT*

*STANDARD — Also available in 1/8" NPT on Request.

4" (100MM)

Non-Fillable

Model A - 1/4" NPT

Model C - 1/2" NPT

4" (100MM)

Filled or Fillable

Model E - 1/4" NPT

Model G - 1/2" NPT

6" (160MM)

Non-Fillable

Model B - 1/4" NPT

Model D - 1/2" NPT

6" (160MM)

Filled or Fillable

Model F - 1/4" NPT

Model H - 1/2" NPT

Range Selection *

* 1.6" inches of water column to 250" wc available. To order wc, mercury or other pressure calibrations, describe desired range, (rather than use a range code) after specifying code for case size.

Range Code	Range (psi)
3	0 – 3
5	0 – 5
6	0 – 6
10	0 – 10
A	0 – 15
B	0 – 30
C	0 – 60
D	0 – 100
E	0 – 160
F	0 – 200
G	0 – 300
H	0 – 400
I	0 – 600
J	0 – 800
K	0 – 1,000
L	0 – 1,500
M	0 – 2,000

Range Code	Range (psi)
N	0 – 3,000
O	0 – 5,000
6k	0 – 6,000
P	0 – 10,000
Q	0 – 15,000
R	0 – 20,000
30k	0 – 30,000
35k	0 – 35,000
S	30" Hg – 0 Vacum
T	Receiver 3 – 15 psi
U	Compound 30"Hg-0-15 psi
V	Compound 30"Hg-0-30 psi
W	Compound 30"Hg-0-60 psi
X	Compound 30"Hg-0-100 psi
Y	Compound 30"Hg-0-160 psi
2k	Compound 30"Hg-0-200 psi
Z	Compound 30"Hg-0-300 psi

Choice of Mounting Style

Mountings are specified by using the following suffixes as codes:

- P** = Panel mount/center-back connection (Models S and Q3) Panel mount/lower-back connection (Models A, C, E, G, B, D, F, H, K)
- L** = Lower-back connection* (Models A, C, E, G, B, D, F, H, K) Center-back connection (Model S)
- C¹** = Center-back connection Model Q3 only
- U** = U-Clamp for panel mounting (Center-back on S and Q3)
- R** = Rear flange for wall mounting (2½", 4" and 6" gauges only) (Models A, C, E, G, B, D, F, H, K)

(* Model Q3 center-back connection uses "C" to denote center-back connection not "L")

Special Configuration Adder Codes

- B** = psi/Bar (dual scale)
- K** = psi/kPa (dual scale)
- O** = O₂ (cleaned for oxygen service)
- S** = Solid front/blow-out back case (2½", 4" & 6" gauges only)
- C** = **Model K available with center-back connection by special order for psi ranges.**

(* inches of water column ranges, 4 inch dial models A & C, have center-back connection and still use "L" to designate, not "C")

Choice of Mounting Style



**Standard
Bottom Connection**



**Solid Front/
Blow-out Back (S)**



Rear Flange (R)



**U-Clamp
Panel Mount (U)**



Back Connection (L)



**Front Flange
Panel Mount (P)**

Choice of Scale

McDaniel offers from inventory many dual scale ranges. These include psi/kPa with the psi scale primary and kPa secondary; psi/Bar with the psi scale primary and Bar secondary; psi/kg/cm² with psi primary and kg/cm² secondary; kg/cm²/psi with kilograms per cm² primary and psi secondary.

A word about Non-Standard Ranges: McDaniel offers more ranges and special calibrations than any other manufacturer of gauges — for only a nominal charge if any. Consult your McDaniel distributor.

How to Order by Code Number

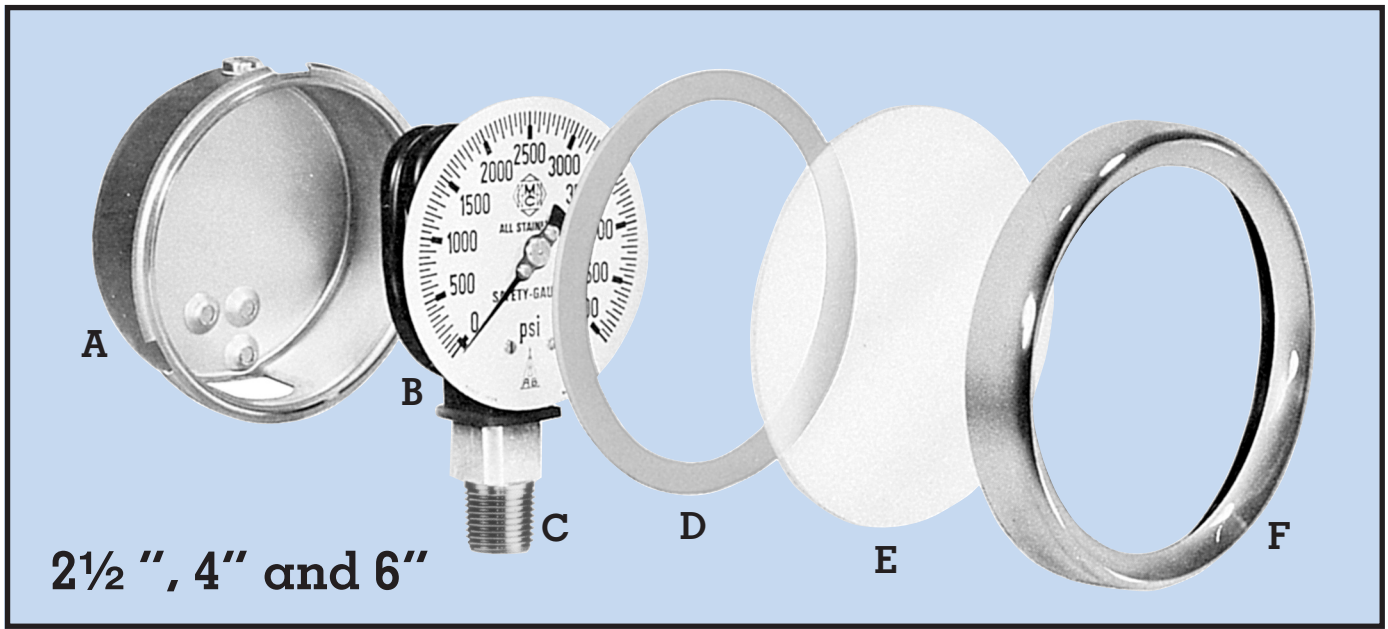
1. Select case style.
2. Select pressure range (Describe if requesting inches of water column, mercury, etc.).
3. Add mounting style if other than a standard bottom connection.
4. Add special configurations if needed — either by code or by written description.
5. Add choice of filling, if appropriate:
(GF = Glycerin Filled or SF = Silicone Filled)

Example:

Model	Range Code	Type of Mounting	Special Configuration	Type of Filling
E	6k	P	—	GF

Order: A 4" sealed gauge with a scale of 0 – 6000 psi, panel mounted/lower-back 1/4" NPT connection, filled at the factory with glycerin (E6kP-GF).





Durable

The best-known construction materials available are used in the manufacture of McDaniel gauges:

- A. 304 Stainless Steel Heavy Duty Case
- B. 316 Stainless Steel Heavy Duty Movement
- C. 316 Stainless Steel Heavy Duty Connection, Socket and Bourdon Tube
- D. Neoprene Gaskets
- E. Laminated Safety Glass Lens
- F. Polished 304 Stainless Steel Bayonet Ring

Spiral Bourdon Tube

Bourdon tube work hardening can cause premature rupture in a pulsation type service, especially if that service is above 800 psi, where heavy wall thickness of the Bourdon tube is encountered.

McDaniel, therefore, incorporates an annealed spiral bourdon tube as the sensing element of all gauge ranges above 800 psi to minimize bourdon tube failure possibilities.

Spiral Bourdon tube
(annealed)

Pointer shaft

Stainless sector gear

Vacuum Stop

All Stainless Steel
movement

"S" link

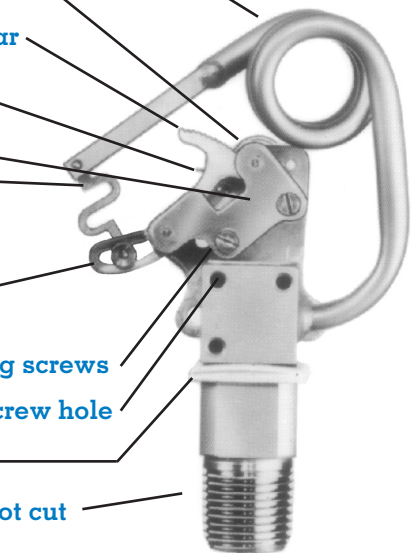
Span adjustment

Movement mounting screws

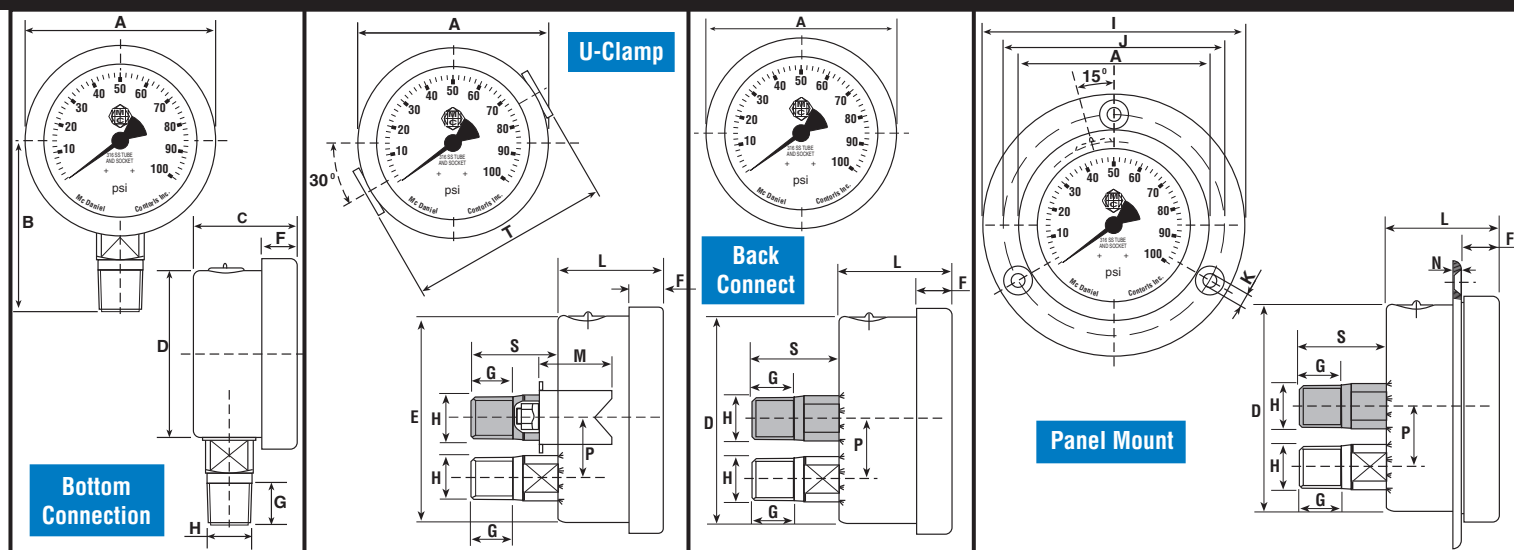
Case attachment screw hole

Stem gasket

Threads "rolled", not cut



Dimensional Data (+/- 1 MM = .04 inches)



Model	Nominal Size	Case Diameter	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	S	T
S	1½"	MM 38.5 In. 1.52	44	35	29	39.5	39.5	7	10	10	61	49	3.6	31	29	0.8	CB	16 ⁽¹⁾	45
Q3	2"	MM 50 In. 2.00	56	50 ⁽²⁾	30.5	49	49	10.5	12	13	77	65	4	30.5	22	2.5	CB	20.5 ⁽⁶⁾	59
K	2½"	MM 63 In. 2.48	68.5	55	31	62	62	11	10	13	85	72	3.6	37	31	3	8	23	71
A,C, E,G	4"	MM 100 In. 3.94	113	80	48	99	99	17	11.5	13	132	114	4.5	49	39.5	4	34	35 ⁽⁷⁾	108
B,D, F,H	6"	MM 160 In. 6.30	163	115 ⁽³⁾	48.5	159	159	18	17 ⁽⁴⁾	21	196	174	5.8	50	38	4	52	41 ⁽⁵⁾	172
K†	2½"	MM 62 In. 2.44	64	57	41	62	-	14	15	14	85	75	2.3	41	35	1	18	21	-
E,G†	4"	MM 100 In. 3.94	101	87	59	99	-	17.5	22	22	132	116	4.8	59	54.5	1	31	21	-
F,H†	6"	MM 160 In. 6.3	162	118	76	160	-	19	21.5	22	196	178	5.8	76	72	2	BM	BM	-

† Solid Front — Blow-out Back Case
CB Center-Back connection only
BM Bottom Mount connection only

(1) 30, 60, 100 PSI range = 13.5 MM, (0.53 Inches)
(2) ½" NPT = 45 MM (1.77 Inches)
(3) ¼" NPT = 117 MM (4.60 Inches)

(4) ¼" NPT = 11 MM (0.43 Inches)
(5) ¼" NPT = 36 MM (1.42 Inches)
(6) ½" NPT = 16.5 MM (0.65 Inches)

(7) ½" NPT = 40.5 MM (1.59 Inches)

Models S & Q3 are Center-Back
= (*inches of water ranges, 4" dial models
A & C are center-back)

McDaniel also makes gauges in other materials, in sizes and ranges to fit a wide variety of applications, and in many special configurations.

Ask your representative about McDaniel gauges with brass internals, gauges with Polyamid B cases, all brass gauges, test gauges, or other requirements.

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McDaniel Controls, Inc.

McDaniel

General Service Gauges

(Heavy Duty • Brass Internals)

Stainless Steel Case 2 1/2" Gauges



4" Polyamid Fiberglass Reinforced Case Gauges



McDaniel General Service Gauges

Brass Internals

McDaniel designs and manufactures a wide variety of gauges for almost every type of service and/or application.

The models in this catalog combine the cost advantage of brass internals with the proven ruggedness and accuracy of McDaniel engineering.

The selections include:

- **Polyamid** Case gauges reinforced with fiberglass in 4"
- **304 Stainless Steel** case gauges in durable 2½" models:

Safe and Reliable

McDaniel designs and manufactures its gauges to minimize failure and to protect personnel and property. The use of laminated safety glass, rather than plexiglass or single strength glass, prevents dangerous pressure build-up in the case; the glass breaks at pressures that vary with the glass diameter. The glass cracks uniformly and the laminate remains intact. Moreover, the laminated glass won't craze or discolor in service.

Repair Feature

If any McDaniel gauge requires repair, down-time can be minimal because these McDaniel gauges are field-repairable – quickly and easily – with only a screwdriver needed for disassembly.

If circumstances permit and factory repair is preferred, we will make that repair at a nominal service charge. See "WARRANTY & REPAIR / REFURBISHED" for further details.

Pulse/Vibration Protection

McDaniel offers liquid-filled gauges for applications involving vibration and/or pulsation. Glycerin is an excellent damper of bourdon tube movement. Emersion of the entire measuring assembly in a protective liquid envelope provides lubrication and shuts out corrosive or dirty atmospheres – thereby minimizing wear of moving parts and prolonging gauge life significantly.

Choice of Filling

When you order a McDaniel fillable gauge you may choose to fill it yourself or you may order it factory-filled with the liquid of your choice. Thus, you can minimize inventory cost.

Glycerin filling has a lower operating temperature limit of 32°F (0°C) undiluted. The mixture of water* in proportions up to 35% will lower the limit commensurately to – 40°F (-40°C) (we recommend distilled water).

The maximum temperature limit is not determined by the fluid but by the gauge's synthetic gasket. At elevated temperatures the gasket may bake and lose its elasticity.

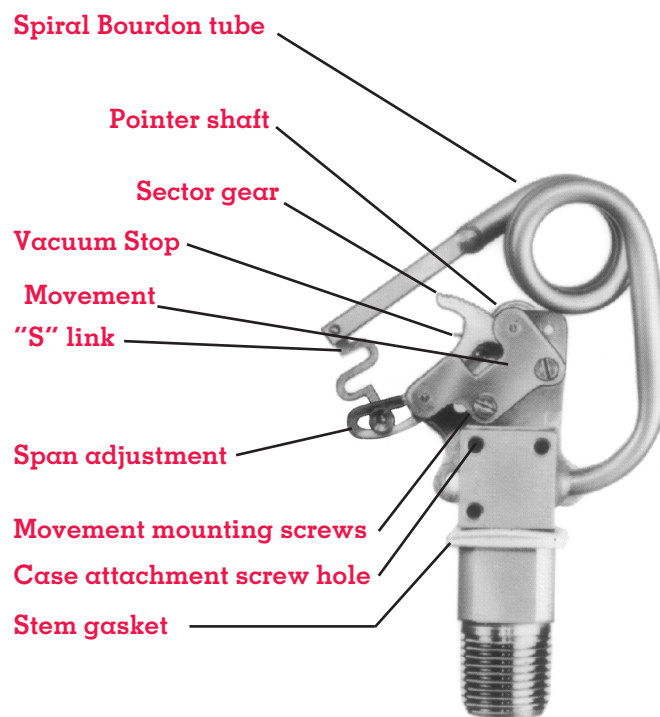
When ordering a gauge to be factory-filled, specify **GF** for Glycerin Filled or **SF** for Silicone Filled.

Warning: Glycerin filled gauges should not be used in applications involving strong oxidizing agents such as chlorine, nitric acid or hydrogen peroxide. (Refer to ASME B40.1)

Bourdon Tube

McDaniel General Service gauges incorporate phosphor bronze or brass bourdon tubes with precision brass movements for reliable service. Spiral bourdon tubes are used for pressure ranges from 1,000 psi and above in poly gauges, and from 800 psi and above in the other general service gauges. Above 800 psi are of 316 stainless steel.

The spiral tubes reduce work hardening at elevated pressures by spreading the higher degree of stress over more than 1,000 degrees of coil, thereby minimizing the possibilities of failure.



(Heavy Duty • Brass Internals)

Polyamid Gauges

Features

- Fiberglass reinforced case
- Blowout relief grommet
- Laminated safety glass lens
- No pointer stop on dial
- Adjustable pointer
- Quality construction
- Watertight case
- Brass/bronze Bourdon tube (alloy steel over 800 psi)
- Brass movement
- Pulsation dampened (restrictor screw)
- Accuracy: 1/2% full scale ASME B40.1-Grade 2A

Case Styles

4" (100 mm) Non-Fillable

Model L - 1/4" NPT

Model M - 1/2" NPT



4" (100 mm) Filled or Fillable

Model N - 1/4" NPT

Model P - 1/2" NPT



Ranges: Vacuum, Receiver, Compound, up to 0-35,000 psi and from 6"wc up to 250"wc, as well as feet of water and feet of sea water ranges.

Mounting Styles: Bottom connection. Other configurations available: P, L, U, R and S (see Mounting Style Code).

Warranty

McDaniel warrants our pressure gauges to be free of defects in material and workmanship: Replacement of any defective gauge will be made at no cost to the purchaser. Gauge failures determined to be caused by abuse, over-range and incompatibility with environment or process media will not be considered under this warranty.

Repair / Refurbish

We will REPAIR and/or REFURBISH any regular stock McDaniel gauge for a charge to be determined after the gauge is examined by our Quality Control department. Damaged sockets or bourdon tubes cannot be repaired. Special units contact McDaniel for pricing. Pricing are F.O.B. Boutte, Louisiana 70039 U.S.A.

Stainless Steel Case Gauges

2½" (63 mm) Fillable

Model J - 1/4"NPT (1/8" NPT, BSP threads, 7/16SAE, available)

Features

- 304 Stainless steel case and bayonet ring
- Blowout relief grommet
- Fillable case
- Laminated safety glass lens
- Pulsation dampened with restrictor screw (removable)
- Brass/bronze wetted parts
- Accuracy: 1% full scale
- ASME B40.1-Grade A



Ranges: Vacuum, Receiver, Compound, up to 0-6,000 psi

Mounting Styles: Bottom Connection,

(L) Lower back (* Center Back available by special order),

(P) Panel, (U) U-Clamp, (R) Rear Flange

Mounting Style Code

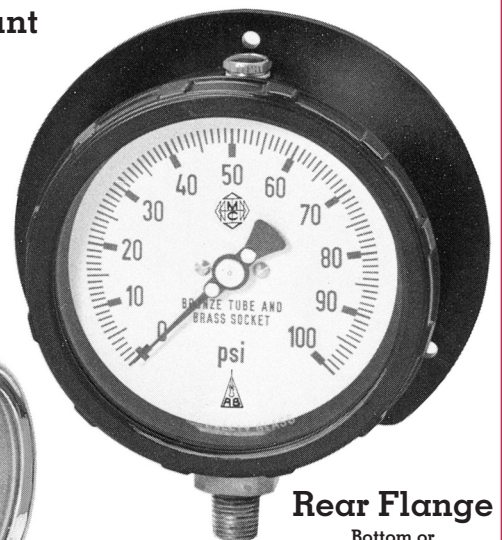
Code	Description
P =	Panel mount/lower back connection Models J, L, M, N, P
L =	Lower back connection (without panel mount flange) Models J, L, M, N, P
U =	Panel mount/lower back u-clamp Models J, L, M, N, P
R =	Rear flange for wall-mounting Models J, L, M, N, P
S =	Solid front/blow-out back (Fillable; not available with back connection) Models N, P (Stainless Steel Internals)

Choice of Mounting Styles



**Panel Mount
(P)**

**Lower Back
(L)**



**Rear Flange
Bottom or
lower Back Connection
(R)**



Range Selection *

Range Code	Range (psi)	Availability (✓) by gauge model		
		L,M	N,P	J
3	0-3	✓		✓
5	0-5	✓		✓
6	0-6	✓		
10	0-10	✓		✓
A	0-15	✓	✓	✓
B	0-30	✓	✓	✓
C	0-60	✓	✓	✓
D	0-100	✓	✓	✓
E	0-160	✓	✓	✓
F	0-200	✓	✓	✓
G	0-300	✓	✓	✓
H	0-400	✓	✓	✓
I	0-600	✓	✓	✓
J	0-800	✓	✓	✓
K	0-1,000	✓	✓	✓
L	0-1,500	✓	✓	✓
M	0-2,000	✓	✓	✓
N	0-3,000	✓	✓	✓
4k	0-4,000			✓
O	0-5,000	✓	✓	✓
6k	0-6,000	✓	✓	✓
P	0-10,000	✓	✓	✓
Q	0-15,000	✓	✓	
R	0-20,000	✓	✓	
30k	0-30,000	✓	✓	
35k	0-35,000	✓	✓	
S	30"Hg-0 Vacuum	✓	✓	✓
T	Receiver 3-15* psi	✓	✓	✓
U	Compound 30"Hg-0-15 psi	✓	✓	✓
V	Compound 30"Hg-0-30 psi	✓	✓	✓
W	Compound 30"Hg-0-60 psi	✓	✓	✓
X	Compound 30"Hg-0-100 psi	✓	✓	✓
Y	Compound 30"Hg-0-160 psi	✓	✓	✓
2k	Compound 30"Hg-0-200 psi	✓	✓	✓
Z	Compound 30"Hg-0-300 psi	✓	✓	✓

6" wc to 250" wc available. To order wc, mercury or other pressure calibrations, describe the desired range (rather than use a range code) after specifying the code for the model (Inches of H₂O ranges: standard case is 304 SS) (See Gauge Model Selection Guide for low pressure ranges).

* Receiver gauge is dual range

(0-100% primary, 0-10 square root secondary)

Choice of Scale

McDaniel offers from inventory many dual scale ranges. These include psi/kPa with the psi scale primary and kPa secondary; psi/Bar with the psi scale primary and Bar secondary.

McDaniel offers more ranges and special calibrations than any other manufacturer of gauges – for only a nominal charge, if any. Consult your McDaniel distributor.

Special Configuration Adder Codes

B = psi/bar (dual scale)
K = psi/kPa (dual scale)
O = O₂ (cleaned for oxygen service).
N = Non-standard internals (316 SS tube/tip/socket)
 Models: L, M, N, P,

How to Order By Code

1. Select the **model**.
2. Select the **pressure range** (describe if requesting inches of water, mercury, etc.)
3. Specify **mounting style code**, if other than standard bottom connection.
4. Add **special configurations**, if needed – either by code or written description.
5. Add choice of filling, if appropriate. (**GF** = Glycerin Filled or **SF** = Silicone Filled)

Example:

Model	Range Code	Mounting Style	Special Configuration	Type of Filling
N	J	U	–	GF

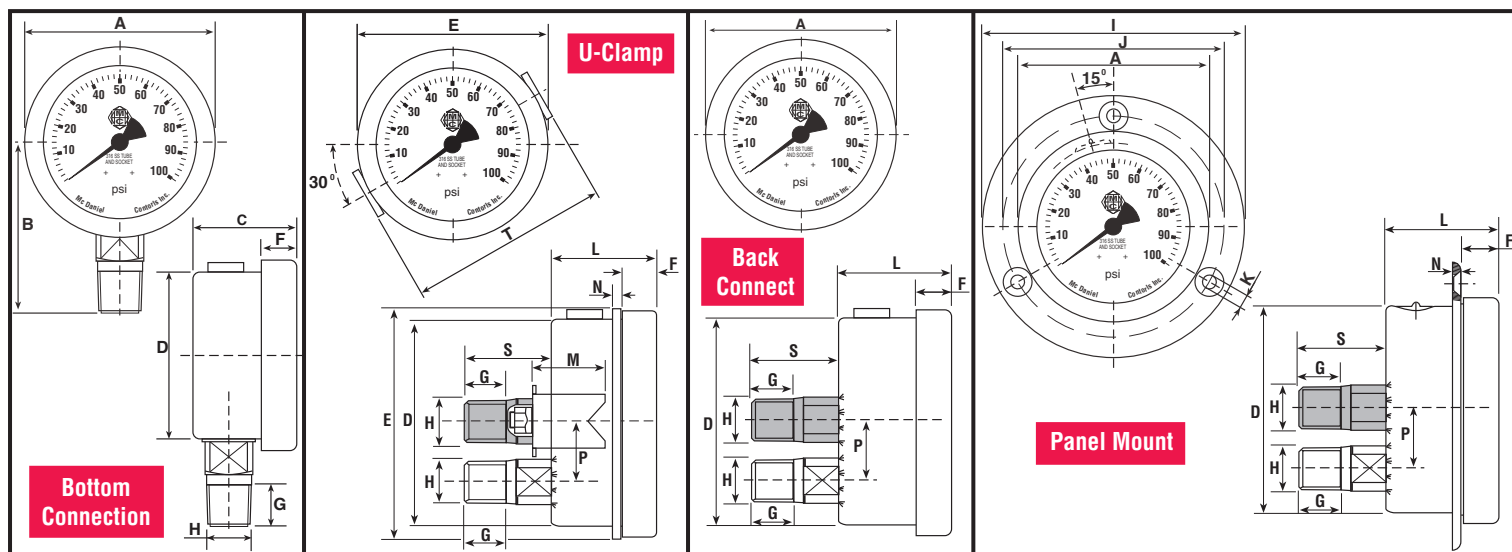
Order: A 4" Polyamid gauge with 1/4" NPT connection, range of 800 psi, with panel mount/lower back u-clamp configuration, filled at the factory with glycerin (NJU-GF)

Last Word

McDaniel 4" gauges with brass internals are also available in 304 SS cases on request (Inches of H₂O ranges: standard case is 304 SS). Options include maximum pressure pointers, hi/low adjustable electric contact gauges, special service gauges, diaphragm seals, pulsation snubbers, test gauges and more. Consult your McDaniel distributor. For all stainless gauges, see McDaniel blue brochure, AS 403, or latest revision.



Dimensional Data




Model	Nominal Size	Case Diameter	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	S
J	2½"	MM	68.5	57	31	62	67	12	15	14	85	75	3.8	37	31	3	18	25.5
		In.	2.70	2.24	1.22	2.44	2.64	0.47	0.59	0.55	3.35	2.95	0.15	1.46	1.22	0.12	0.71	1.00
L,M,	4"	MM	113	84	50	101	113	18	13	22	NA	NA	NA	52	--	--	34	28
N,P		In.	4.45	3.31	1.97	3.98	4.45	0.71	0.51	0.87	NA	NA	NA	2.05	--	--	1.34	1.10

NA = Not Available
CB = Center-Back connection only

(1) Inches of H₂O ranges are Center-Back
(2) 1/8" NPT = 11 MM (0.43 Inches)
(3) 1/4" NPT = 15 MM (0.59 Inches)

(4) 1/4" NPT = 32 MM (1.26 Inches)

 = inches of water ranges are Center-Back: Models J, L, & M.

McDaniel also makes gauges in other materials, in sizes and ranges to fit a wide variety of applications, and in many special configurations.

Ask your representative about McDaniel gauges with stainless steel internals, test gauges, or other requirements.

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McDANIEL

Process Gauges

When Durability Matters.

McDaniel designed the model **MPB/S** to meet and exceed the rigorous and harsh requirements of the process, petrochemical, and power industries.

With safety also a major consideration, McDaniel developed the MPB/S with a **solid front and hinged blow-out back**. The case is turret-style. Featuring a 4 mm thick **laminated safety glass lens** which also resists scratching; and will not craze or discolor.

The **elastomer compensating diaphragm** on the inside of the hinged blow-out back equalizes case pressure. It insures a quality seal against fill fluid leakage and corrosive atmospheric intrusions, while maintaining gauge accuracy.

Designed to withstand 300% full-scale pressure without bourdon tube rupture; and 130% full scale pressure without loss of accuracy!

Watertight, fillable, and trusted McDaniel heavy-duty construction make the MPB/S your first and **"lasting"** choice when it comes to process gauges.



MPB/S

SPECIFICATIONS

Accuracy:

0.5% full scale to ASME B40.1 standard (Grade 2A)

Dial:

Aluminum alloy, black figures, white background.

Case:

Molded fiberglass reinforced thermoplastic. PBTP (Fire retardant and impact resistant)

Case with integral rear flange.

Pointer:

Aluminum alloy, painted black. Micrometer adjustable.

Lens:

Laminated safety glass (4 mm / .16" thick).

Lens Ring:

Molded fiberglass reinforced thermoplastic. PBTP

Movement

Precision stainless steel. (mechanical over range stop)

Bourdon Tube:

316 Stainless steel (C Form 600 PSI & Below).
(Spiral 800 PSI & Above).

Liquid Fillable:

Glycerin (GF)

Blow-out Back:

Molded fiberglass reinforced thermoplastic. PBTP
Hinged for safety (will not become a projectile).

Compensating Diaphragm:

Unique **elastomer** with integral "O" ring seal.
(Field ready for filling, hermetically sealed, weatherproof. No fill kit required.)

Stem and Socket:

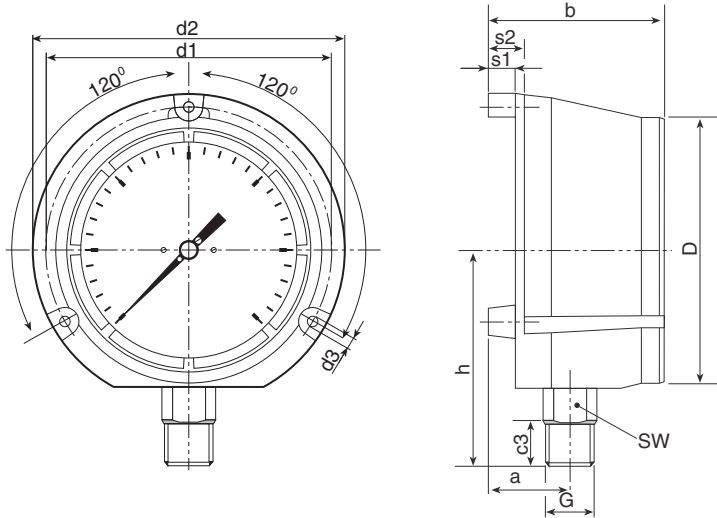
316 Stainless steel (7/8" / 22mm wrench flats)
Bottom connection (1/4", 1/2" NPT or Metric)
High quality **"rolled"** threads
(Helps to prevent galling).

McDaniel Controls, Inc.

P. O. Box 187, Luling, LA 70070 • 14148 Highway 90, Boutte, LA 70039 U.S.A.
(985) 758-2782 • New Orleans (504) 467-1333 • Fax (985) 758-1688

www.mcdanielcontrols.com

DIMENSIONAL DATA



* See website for dimensional data and downloadable auto cad files:
www.mcdanielcontrols.com

Size	a	b	c3	D	d1
130	mm	37.5	80	19	129
4 1/2	in.	1.48	3.15	.75	5.08

d2	d3	G	h	s1	s2	SW
148	6.1	1/2"	102	12.5	17	22
5.83	.24	NPT	4.02	.49	.67	.87

Weight Dry – 0.85 kilo., 1.88 lbs.
Weight Filled – 1.25 kilo., 2.76 lbs.

McDaniel also makes gauges in other materials; in sizes and ranges to fit a wide variety of applications, and in many special configurations.

Ask your representative about McDaniel gauges with brass or Monel® internals, all brass or all stainless steel gauges, test gauges, or other requirements.

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Range code	Range psi	Minor Increments
6	0 - 6	.1
10	0 - 10	.1
A	0 - 15	.25
B	0 - 30	.5
C	0 - 60	1
D	0 - 100	1
E	0 - 160	2
F	0 - 200	2
G	0 - 300	5
H	0 - 400	5
I	0 - 600	10
J	0 - 800	10
K	0 - 1000	10
L	0 - 1500	25
M	0 - 2000	20
N	0 - 3000	50
4k	0 - 4000	50
O	0 - 5000	50
6k	0 - 6000	100
P	0 - 10000	100
Q	0 - 15000	250
R	0 - 20000	200
VACUUM	VACUUM	VACUUM
S	VAC 30"Hg - 0	.5
RECEIVER	RECEIVER	RECEIVER
T	REC 3 - 15**	2
COMPOUND	COMPOUND	COMPOUND
U	30"Hg + 15	1-0-5
V	30"Hg + 30	1-0-5
W	30"Hg + 60	2-0-2
X	30"Hg + 100	5-0-2
Y	30"Hg + 160	5-0-5
Z	30"Hg + 300	10-0-5
2k	30"Hg + 200	10-0-5

** Receiver gauge is dual scale.
(0 - 100% primary, 0 - 10 square root secondary)

HOW TO ORDER

- 1 - Select the model number (**MPB/S**)
 - 2 - Specify connection code ("**A**" = 1/4" NPT) ("**C**" = 1/2" NPT)
 - 3 - Specify range code from list at left.
 - 4 - Specify mounting code (***Not applicable on model MPB/S, bottom mount only available**)
 - 5 - Specify special configurations or options. (Special scales, dual ranges, O₂ cleaned, etc.)
 - 6 - Add choice of filling, if appropriate. (GF = Glycerin Filled) (SF = Silicone Filled)
- Model #**
(Example: **MPB/SAE-GF** - "MPB/S" = Model - "**A**" = (1/4" NPT) - "**E**" = (0-160psi) - "**GF**" = (Glycerin Filled)
MPB/SC6 - "MPB/S" = Model - "**C**" = (1/2" NPT) - "**6**" = (0-6psi) - (Dry, not Filled)

OPTIONS:

Liquid Filled - Monel® Internals - Plastic Lens - SS Tags
Colored Cases, Yellow • Red • Blue
Glow Dial & Reflective Indicators - Panel Flange Kit

Warranty

McDaniel warrants our pressure gauges to be free of defects in material and workmanship: Replacement of any defective gauge will be made at no cost to the purchaser. Gauge failures determined to be caused by abuse, over-range and incompatibility with environment or process media will not be considered under this warranty.

Repair

We will REPAIR and/or REFURBISHED any regular stock McDaniel gauge for a charge to be determined after the gauge is examined by our Quality Control department. Damaged sockets or bourdon tubes cannot be repaired. Special units contact McDaniel for pricing. Prices are F.O.B. Boutte, Louisiana 70039 U.S.A.

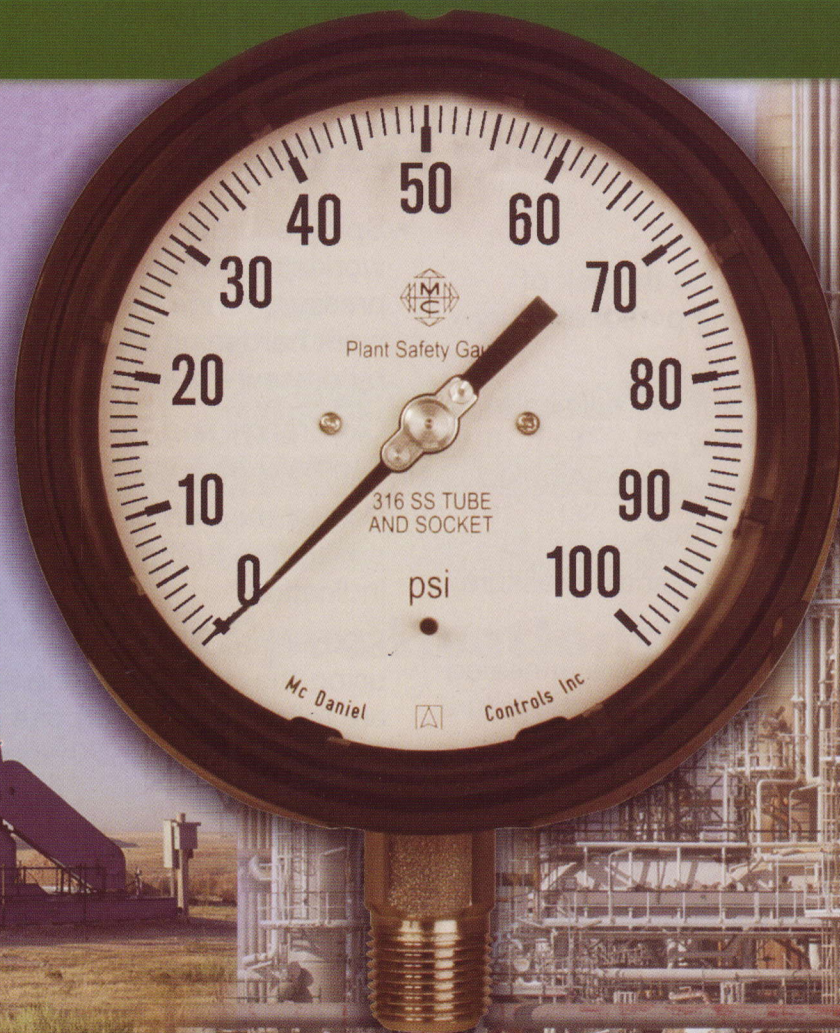
DISTRIBUTED BY:

It is recommended that users of pressure gauges become familiar with American National Standard ASME B40.1, entitled Gauges, Pressure and Vacuum - Indicating Dial Type - Elastic Element. This specification is available from:

American Society of Mechanical Engineers
3 Park Avenue
New York, New York 10016
Phone: 212-591-7722

McDANIEL

4 1/2" PLANT SAFETY GAUGE



MANUFACTURED BY:
McDaniel Controls Inc.

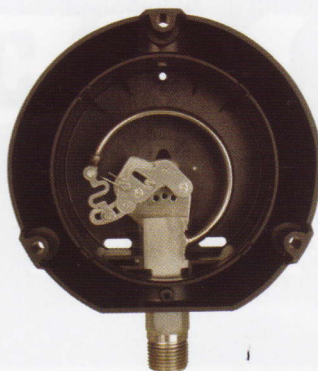
*Providing the **Ultimate** in **Safety**, **Durability** and **Accuracy** for over **35 Years**.*



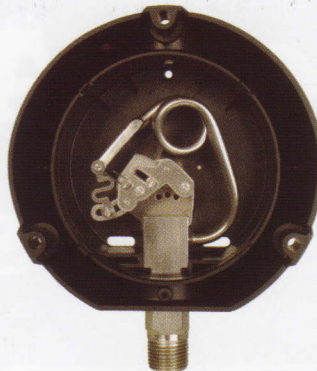
4 1/2" PLANT SAFETY GAUGE



Front View



Rear View C-Tube



Rear View Spiral Tube



Blowout Back

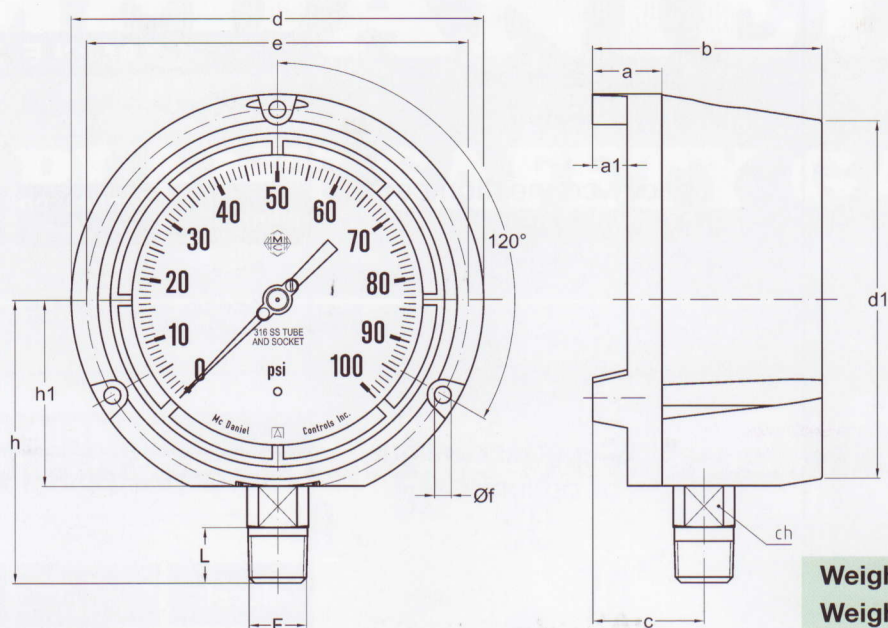
Standard Safety features include:

- Solid front/full blowout back.
- Blowout back hinged to reduce the risk of becoming a projectile causing personal injury or damage to equipment.
- Accuracy specification is $\frac{1}{2}$ of 1% full scale pressure. (ASME B40.1 grade 2A)
- Over range of 130% full scale pressure without loss of accuracy.
- Design over range of 300% full scale pressure without rupture of Bourdon tube.
- All wetted parts (tube and socket) are annealed for stress relief to minimize bourdon tube failure possibilities.
- No pointer stop at zero position on dial to possibly create a false indication of zero pressure per ASME B40.1.
- Spiral bourdon tube, which has an effective working radius of over 1000 degrees, is used on pressure ranges 800 psi and above to reduce work hardening and/or fatigue usually caused by pressure pulsation due to severe service.
- Over range and vacuum limits included internally as a standard safety feature.
- Pointer stop on dial located at the 6 o'clock position to further reduce a possibility of a false indication.
- All threads ($\frac{1}{4}$ " and $\frac{1}{2}$ " NPT) are manufactured using the best method available. The threads are rolled, for the purpose of reducing galling that can be an issue in most installation applications.

Other features include:

- Precision stainless steel series 300 movement
- Micro adjustable aluminum pointer
- Dial aluminum black on white
- Weather protected to IP 55
- Weather protected to IP 65 with optional fill kit
- Threads rolled to reduce possibilities of galling that can be a major issue in most installation applications

Dimensional Data



Weight Dry - 1.4 lbs.

Weight Filled - 2.4 lbs.

Nominal values

		Dia.	F	d	d1	h	h1	e	c	f	b	ch	L	a	a1
1/2-14 NPT	mm	130	1/2-14 NPT	148	129	102	67	137	40	6	82,5	22	20	25	12,5
1/2-14 NPT	inch.	4 1/2"	1/2-14 NPT	5,83	5,08	4,02	2,64	5,39	1,57	0,24	3,25	0,86	0,79	0,98	0,49
1/4-18 NPT	mm	130	1/4-18 NPT	148	129	97	67	137	40	6	82,5	22	15	25	12,5
1/4-18 NPT	inch.	4 1/2"	1/4-18 NPT	5,83	5,08	3,82	2,64	5,39	1,57	0,24	3,25	0,86	0,59	0,98	0,49

Specifications

Accuracy:

0.5% full scale to ASME B40.100-2005 standard (Grade 2A)

Dial:

Aluminum alloy, black figures, white background.

Case:

Molded fiberglass reinforced thermoplastic (PP-GF20) black.

Ring:

Molded fiberglass reinforced thermoplastic (PP-GF20) black.

Pointer:

Aluminum alloy, painted black. Micrometer adjustable.

Lens:

Polycarbonate
(Polymethylmethacrylat PMMA)

Movement:

Precision stainless steel series 300.

Bourdon Tube:

316 Stainless Steel annealed for stress relief
(C Form 600 PSI & Below, Spiral 800 PSI & Above)

Blow-out Back:

Polyacetale (POM), black
Hinged for safety (will not become a projectile).

Stem and Socket:

316 stainless steel
Bottom connection (1/4", 1/2" NPT or Metric)
High quality "rolled" threads (Helps to prevent galling).

Options:

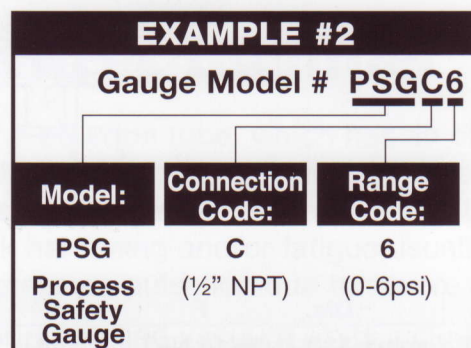
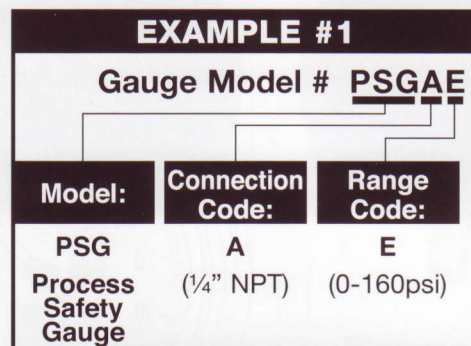
- Liquid fill kit (dealer installed)
- Laminated safety glass lens (dealer installed)
- Metric connections (BSPP, BSPT, 1/4, 1/2, minimum quantities required)



How to order

Range code	Range psi
6	0 - 6
10	0 - 10
A	0 - 15
B	0 - 30
C	0 - 60
D	0 - 100
E	0 - 160
F	0 - 200
G	0 - 300
H	0 - 400
I	0 - 600
J	0 - 800
K	0 - 1000
L	0 - 1500
M	0 - 2000
N	0 - 3000
4k	0 - 4000
O	0 - 5000
6k	0 - 6000
P	0 - 10000
Q	0 - 15000
R	0 - 20000
S	VAC 30"Hg -0
T	REC 3 - 15
U	30"Hg + 15
V	30"Hg + 30
W	30"Hg + 60
X	30"Hg + 100
Y	30"Hg + 160
2k	30"Hg + 200
Z	30"Hg + 300

- 1 - Select the model number (**PSG**)
- 2 - Specify connection code (**"A"** = 1/4" NPT)
(**"C"** = 1/2" NPT)
- 3 - Specify range code from list at left.
- 4 - Specify special configurations or options.



(Fill kit available, dealer installed)

Since 1972 McDaniel Controls has made safety and quality the two most important concerns in manufacturing and product offering. We offer many other Safety Gauges which include sizes 2 1/2", 4", 4 1/2", and 6" solid front blow out back for many other applications with safety and quality the primary consideration.

DISTRIBUTED BY

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McDaniel Controls, Inc.



McDANIEL

Liquid Filled, Stainless Steel Case Utility Gauges

"For the price-conscious buyer . . .

McDaniel utility gauges are designed for the price-conscious buyer and user who have an emphasis on maintaining quality and accuracy in a general purpose gauge.

Our utility line offers trusted McDaniel quality in an economical package. Special consideration given to rigorous McDaniel standards for durability, accuracy, and quality of construction.

Our Series 6: Glycerin filled, stainless steel case utility gauges with brass internals. Designed for applications with a corrosive atmosphere and where pulsation and/or vibration are present.

Standard features include a restrictor screw (removable) in the inlet port for pulsation dampening.

. . . and quality user."



SPECIFICATIONS

Accuracy:

ASME B40.1 standard (Grade B) (3 – 2 – 3%)

Dial:

Plastic (ABS).

Case:

304 Stainless steel.

Pointer:

Black enameled aluminum.

Lens:

Plastic (SAN).

Precision Movement

Brass.

Bourdon Tube:

Copper alloy (C Form 600 PSI & below).

Phosphorous bronze (Spiral 800 PSI & above).

Temperature Utilization:

-4 + 176 degrees Farenheit.

-20 + 80 degrees Celsius.

Pressure Utilization:

Static: 75% maximum scale.

Dynamic: 66% maximum scale.

Stem and Socket:

Brass. Restrictor screw standard.

J6 = 1/4" NPT (1/8" special order available)

T6 = 1/4" or 1/8" NPT available

Dial Sizes / Ranges Available

2" - (T6) / Vac, Comp, Rec 3-15, up to 5,000 psi

2 1/2" - (J6) / Vac, Comp, Rec 3-15, up to 15,000 psi

Configurations Available:

Bottom connected standard

(L) = Center-back connected

(U) = U-Clamp mounted, Center-back connected

(P) = Front flange, Center-back connected

McDaniel Controls, Inc.

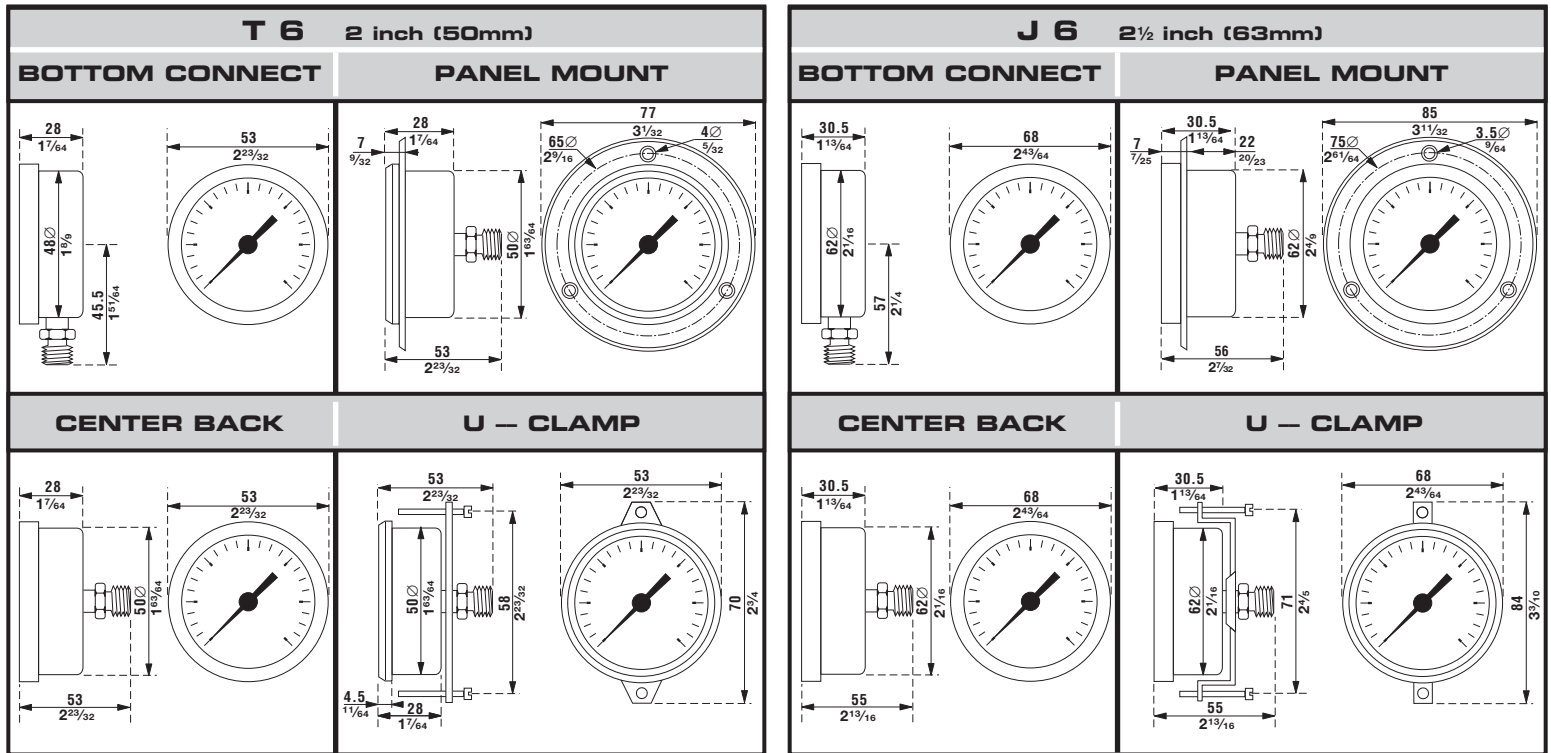
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DIMENSIONAL DATA

In millimeters (mm) and inches (in.)



* See website for dimensional data and downloadable AutoCAD files: www.mcdanielcontrols.com

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Range code	Range psi	Minor Increments
A	0 - 15	.5
B	0 - 30	1
C	0 - 60	1
D	0 - 100	2
E	0 - 160	5
F	0 - 200	5
G	0 - 300	10
H	0 - 400	10
I	0 - 600	20
J	0 - 800	20
1K*	0 - 1000	20
L	0 - 1500	50
M	0 - 2000	50
N	0 - 3000	100
4k	0 - 4000	100
O	0 - 5000	100
6k	0 - 6000	200
P	0 - 10000	200
Q	0 - 15000	500
VACUUM	VACUUM	VACUUM
S	VAC 30"Hg - 0	1
RECEIVER	RECEIVER	RECEIVER
T	REC 3 - 15"	2
COMPOUND	COMPOUND	COMPOUND
U	30"Hg + 15	1-0-2
V	30"Hg + 30	1-0-2
W	30"Hg + 60	2-0-5
X	30"Hg + 100	2-0-5
Y	30"Hg + 160	2-0-10
2k	30"Hg + 200	5-0-15
Z	30"Hg + 300	10-0-30

HOW TO ORDER

- Select the model number (**T6** or **J6**)
- Specify range code from list at left.
- Specify mounting code:
(Bottom connection is standard, no code)
"L" = (Center-back connection)
"U" = (U-Clamp, Center-back connection)
"P" = (Panel mount w/front flange, Center-back connection)
- Specify any other special configurations or options. (special NPT size, dual-scales, etc.)

Special Configuration Adder Codes

B = psi/Bar (dual scale) (nonstock)
K = psi/kPa (dual scale) (nonstock)
1/8 = 1/8" NPT (non stock on J6)

Model

(Example: **T6E**: "T6" = 2" (50mm) Dial - "E" = (0 - 160 psi range)
J61kP: "J6" = 2 1/2" (63mm) Dial - "1k" = (1000 psi range) - "P" = (Panel mount)

* Use 1K on T6 and J6 for 0 - 1000 psi range.

** Receiver gauge is dual scale. (0 - 100% primary, 0 - 10 square root secondary)

Limited Warranty

McDaniel warrants our utility gauges to be free of defects in material and workmanship: Replacement of any defective gauge will be made at no cost to the purchaser. Gauge failures determined to be caused by over-range and incompatibility with environment/product media or abuse will not be considered under this warranty.

DISTRIBUTED BY:

It is recommended that users of pressure gauges become familiar with American National Standard ASME B40.1, entitled Gauges, Pressure and Vacuum - Indicating Dial Type - Elastic Element. This specification is available from:

American Society of Mechanical Engineers
3 Park Avenue
New York, New York 10016
Phone: 212-591-7722

UG6 1113

George A. Rau & Co. Gretna, LA 70053 - 504-367-7822



McDANIEL

Stainless Steel Case Utility Gauges

"For the price-conscious buyer . . .

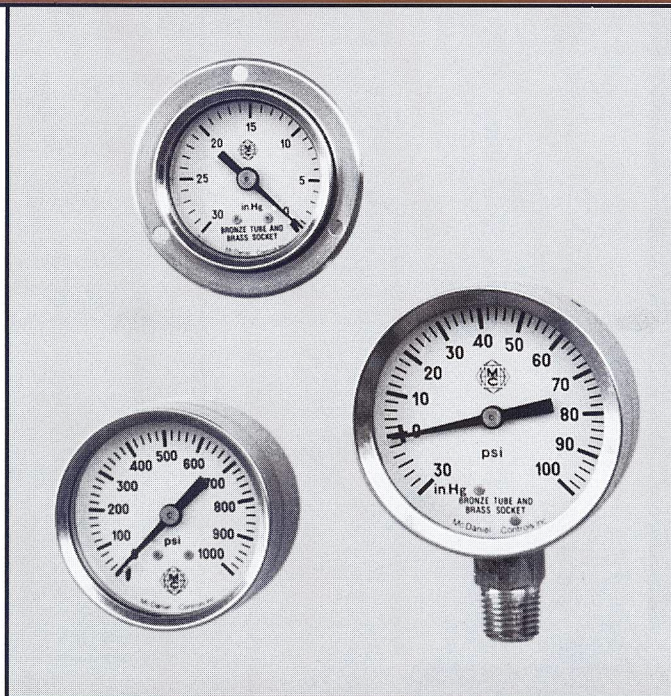
McDaniel designed its utility gauges for the price-conscious buyer and user who have an emphasis on maintaining quality and accuracy in a general purpose gauge.

Our utility line offers trusted McDaniel quality in an economical package. Special consideration given to rigorous McDaniel standards for durability, accuracy, and quality of construction.

Our Series 7: General purpose stainless steel case utility gauges with brass internals. Designed for applications with a corrosive atmosphere.

Standard features include a restrictor screw (removable) in the inlet port for pulsation dampening.

. . . and quality user."



SPECIFICATIONS

Accuracy:

ASME B40.1 standard (Grade B) (3 - 2 - 3%)

Dial:

White polycarbonate. Black figures.

Case:

304 Stainless steel.

Pointer:

Black Polycarbonate.

Lens:

Polycarbonate.

Precision Movement

Brass.

Bourdon Tube:

Copper alloy (C Form 600 PSI & below).

Phosphorous bronze (Spiral 800 PSI & above).

Temperature Utilization:

-4 + 176 degrees Farenheit.

-20 + 80 degrees Celsius.

Pressure Utilization:

Static: 75% maximum scale.

Dynamic: 66% maximum scale.

Stem and Socket:

Brass. Restrictor screw standard. (removable)

R7 = 1/8" NPT (1/4" NPT special order available)

T7 = 1/4" or 1/8" NPT available

J7 = 1/4" NPT (1/8" NPT special order available)

Dial Sizes / Ranges Available

1 1/2" - (R7) / Vac, Comp, Rec 3-15, up to 5,000 psi

2" - (T7) / Vac, Comp, Rec 3-15, up to 5,000 psi

2 1/2" - (J7) / Vac, Comp, Rec 3-15, up to 15,000 psi

Configurations Available:

Bottom connected standard

(L) = Center-back connected

(P) = Front flange, Center-back connected

McDaniel Controls, Inc.

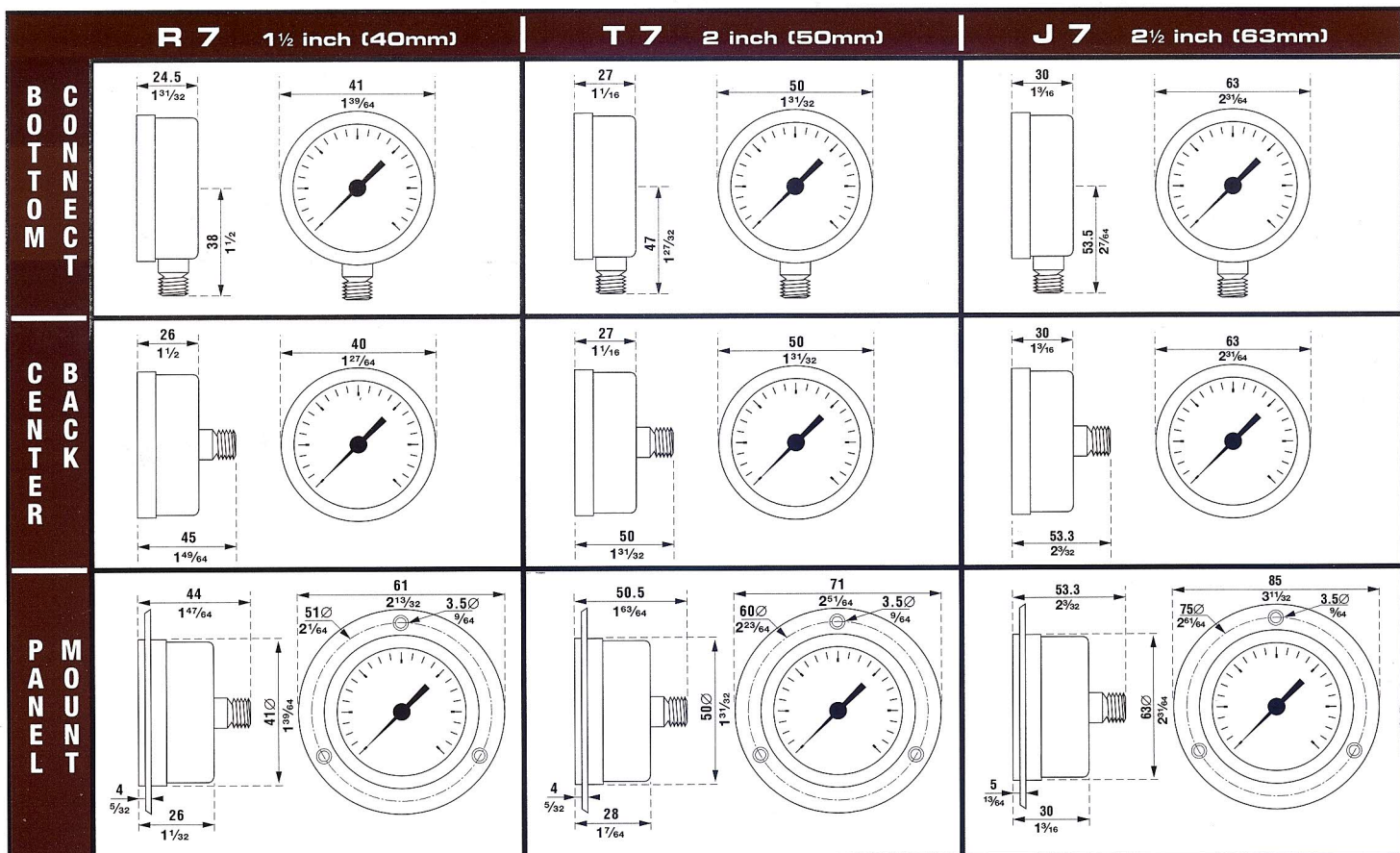
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DIMENSIONAL DATA

In millimeters (mm) and Inches (in.)



* See website for dimensional data and downloadable AutoCAD files: www.mcdanielcontrols.com

Range code	Range psi	Minor Increments
A	0 - 15	.5
B	0 - 30	1
C	0 - 60	1
D	0 - 100	2
E	0 - 160	5
F	0 - 200	5
G	0 - 300	10
H	0 - 400	10
I	0 - 600	20
J	0 - 800	20
K	0 - 1000	20
L	0 - 1500	50
M	0 - 2000	50
N	0 - 3000	100
4k	0 - 4000	100
O	0 - 5000	100
6k	0 - 6000	200
P	0 - 10000	200
Q	0 - 15000	500
VACUUM	VACUUM	VACUUM
S	VAC 30"Hg - 0	1
RECEIVER	RECEIVER	RECEIVER
T	REC 3 - 15"	2
COMPOUND	COMPOUND	COMPOUND
U	30"Hg + 15	1-0-2
V	30"Hg + 30	1-0-2
W	30"Hg + 60	2-0-5
X	30"Hg + 100	2-0-5
Y	30"Hg + 160	2-0-10
2k	30"Hg + 200	5-0-15
Z	30"Hg + 300	10-0-30

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HOW TO ORDER

- 1 - Select the model number (**R7**, **T7**, or **J7**)
- 2 - Specify range code from list at left.
- 3 - Specify mounting code:

(Bottom connection is standard, no code)

"L" = (Center-back connection)

"P" = (Panel mount w/front flange, Center-back connection)

- 4 - Specify any other special configurations or options. (special NPT size, dual-scales, etc.)

Model

(Example: **R7DP**: "**R7**" = 1 1/2" (40mm) Dial - "**D**" = (0 - 100 psi range) - "**P**" = (Panel Mount)

T7E: "**T7**" = 2" (50mm) Dial - "**E**" = (0 - 160 psi range)

J72k: "**J7**" = 2 1/2" (63mm) Dial - "**2k**" = (30"Hg + 200 psi range)

Special Configuration Adder Codes

B = psi/Bar (dual scale) (nonstock)

K = psi/kPa (dual scale) (nonstock)

1/8 = 1/8" NPT (use on T7 (stock), and J7 non stock)

Limited Warranty

McDaniel warrants our utility gauges to be free of defects in material and workmanship: Replacement of any defective gauge will be made at no cost to the purchaser. Gauge failures determined to be caused by over-range and incompatibility with environment/product media or abuse will not be considered under this warranty.

* Receiver gauge is dual scale.
(0 - 100% primary, 0 - 10 square root secondary)

DISTRIBUTED BY:

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American Society of Mechanical Engineers

3 Park Avenue
New York, New York 10016
Phone: 212-591-7722



McDANIEL

Black Steel Case Utility Gauges

"For the price-conscious buyer . . .

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Our utility line offers trusted McDaniel quality in an economical package. Special consideration given to rigorous McDaniel standards for durability, accuracy, and quality of construction.

Our Series 8: Black enameled steel case utility gauges with brass internals. General purpose gauge for non-corrosive atmosphere.

Standard features include a restrictor screw (removable) in the inlet port for pulsation dampening.

. . . and quality user."



SPECIFICATIONS

Accuracy:

ASME B40.1 standard (Grade B) (3 - 2 - 3%)

Dial:

White plastic (ABS). Black figures.

Case:

Black enameled steel.

Pointer:

Black plastic (ABS).

Lens:

Polycarbonate.

Precision Movement

Brass.

Bourdon Tube:

Copper alloy (C Form 600 PSI & Below).

Phosphorous bronze (Spiral 800 PSI & Above).

Temperature Utilization:

-4 + 176 degrees Fahrenheit.

-20 + 80 degrees Celsius.

Pressure Utilization:

Static: 75% maximum scale.

Dynamic: 66% maximum scale.

Stem and Socket:

Brass. Restrictor screw standard.

R8 = 1/8" NPT (1/4" NPT special order available)

T8 = 1/4" or 1/8" NPT available

J8 = 1/4" NPT (1/8" NPT special order available)

Dial Sizes / Ranges Available

1 1/2" - (R8) / Vac, Comp, Rec 3-15, up to 5,000 psi

2" - (T8) / Vac, Comp, Rec 3-15, up to 5,000 psi

2 1/2" - (J8) / Vac, Comp, Rec 3-15, up to 15,000 psi

Configurations Available:

Bottom connected standard

(L) = Center-back connected

(U) = U-Clamp mounted, Center-back connected

(P) = Front flange, Center-back connected

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DIMENSIONAL DATA

In millimeters (mm) and inches (in.)

	R 8 1 1/2 inch (40mm)	T 8 2 inch (50mm)	J 8 2 1/2 inch (63mm)
BOTTOM CONNECT			
CENTER BACK			
PANEL MOUNT			
U CLAMP MOUNT			

* See website for dimensional data and downloadable AutoCAD files: www.mcdanielcontrols.com

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Limited Warranty

McDaniel warrants our utility gauges to be free of defects in material and workmanship. Replacement of any defective gauge will be made at no cost to the purchaser. Gauge failures determined to be caused by over-range and incompatibility with environment/product media or abuse will not be considered under this warranty.

HOW TO ORDER

- Select the model number (R8, T8, or J8)
- Specify range code from list at left.
- Specify mounting code:
(Bottom connection is standard, no code)
"L" = (Center-back connection)
"U" = (U-Clamp, Center-back connection)
"P" = (Panel mount w/front flange, Center-back connection)
- Specify any other special configurations or options. (special NPT size, dual-scales, etc.)

Model

(Example: R8D: "R8" = 1 1/2" (43mm) Dial - "D" = (0 - 100 psi range)
T8EL: "T8" = 2" (50mm) Dial - "E" = (0 - 160 psi range) - "L" = (Center-back)
J82k: "J8" = 2 1/2" (63mm) Dial - "2k" = (30"Hg + 200 psi range)

* Receiver gauge is dual scale. (0 - 100% primary, 0 - 10 square root secondary)

Special Configuration Adder Codes

B = psi/Bar (dual scale) (nonstock)
K = psi/kPa (dual scale) (nonstock)
1/8 = 1/8" NPT (use on T8 (stock), and J8 non stock)

DISTRIBUTED BY:

It is recommended that users of pressure gauges become familiar with American National Standard ASME B40.1, entitled Gauges, Pressure and Vacuum - Indicating Dial Type - Elastic Element. This specification is available from:

American Society of Mechanical Engineers
3 Park Avenue
New York, New York 10016
Phone: 212-591-7722

Range code	Range psi	Minor Increments
A	0 - 15	.5
B	0 - 30	1
C	0 - 60	1
D	0 - 100	2
E	0 - 160	5
F	0 - 200	5
G	0 - 300	10
H	0 - 400	10
I	0 - 600	20
J	0 - 800	20
K	0 - 1000	20
L	0 - 1500	50
M	0 - 2000	50
N	0 - 3000	100
4k	0 - 4000	100
O	0 - 5000	100
6k	0 - 6000	200
P	0 - 10000	200
Q	0 - 15000	500
VACUUM	VACUUM	VACUUM
S	VAC 30"Hg - 0	1
RECEIVER	RECEIVER	RECEIVER
T	REC 3 - 15"	2
COMPOUND	COMPOUND	COMPOUND
U	30"Hg + 15	1-0-2
V	30"Hg + 30	1-0-2
W	30"Hg + 60	2-0-5
X	30"Hg + 100	2-0-5
Y	30"Hg + 160	2-0-10
2k	30"Hg + 200	5-0-15
Z	30"Hg + 300	10-0-30



McDANIEL

Liquid Fillable, All Stainless Steel Utility Gauges

The rugged construction of our Series 9 All Stainless Steel gauges provides resistance to corrosive media and harsh environments.

The McDaniel Series 9 gauges feature 316 Stainless Steel wetted parts and a 304 Stainless Steel case with crimped on bezel ring. The case and socket joint is welded. Liquid fillable, in the field, or factory.

This series is ideally suited for O.E.M. and corrosive applications that require an all stainless steel gauge at an economical price.



SPECIFICATIONS

Accuracy:

ASME B40.1 standard - Grade A (2-1-2%)

Dial:

White enameled aluminum. Black figures. Sizes:

2 1/2 inches (63mm) - Model **K9**

4 inches (100mm) - Models **E9** and **G9**

Case:

304 Stainless Steel, filled or fillable.

Ring:

304 Stainless Steel crimped on. (Polished on Panel, U-Clamp, and Back connected configurations)

Pointer:

Black enameled aluminum.

Lens:

Polycarbonate.

(Laminated Safety Glass by special order.)

Precision Movement

Stainless Steel

Bourdon Tube:

316 Stainless Steel (C Form 1000 PSI & Below).
(Spiral 1500 PSI & Above).

Pressure Utilization:

300% full scale pressure w/o rupture of the bourdon tube.
130% full scale pressure without loss of accuracy.

Stem and Socket:

316 Stainless Steel. **E9** 1/4" NPT and **G9** 1/2" NPT

K9 1/4" NPT standard (1/8" NPT by special order)

Removable restrictor screw standard on K9, optional on E9 and G9 models. One piece welded case and stem.

Ranges Available

Vacuum, Compound, Rec 3-15, up to 10,000 psi

Configurations Available:

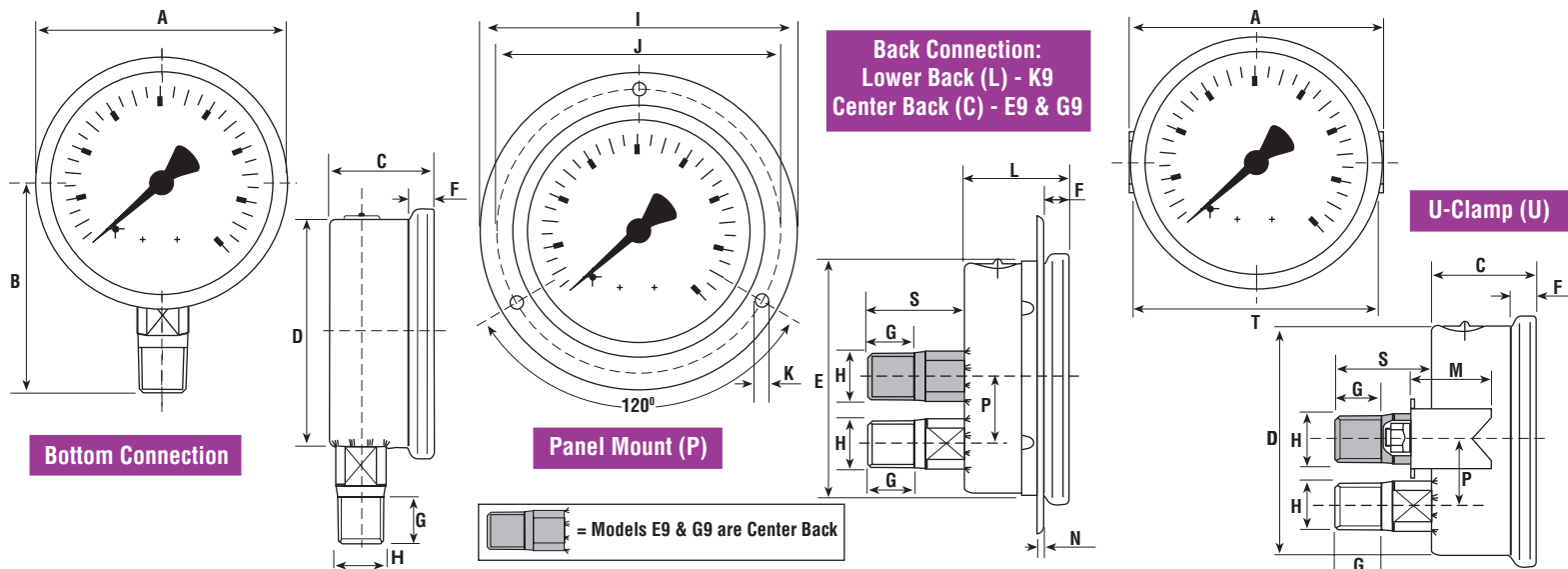
- Bottom connected standard
- (L) = Lower-back connected - K9
- (C) = Center-back connected - E9 and G9
- (U) = U-Clamp mounted, Lower-back connected on K9, Center-back on E9 and G9
- (P) = Front Flange, Lower-back connected on K9, Center-back on E9 and G9
- (R) = Rear flange for Back or Bottom connections

McDaniel Controls, Inc.

P. O. Box 187, Luling, LA 70070 • 14148 Highway 90, Boutte, LA 70039 U.S.A.
(985) 758-2782 • New Orleans (504) 467-1333 • Fax (985) 758-1688

www.mcdanielcontrols.com

DIMENSIONAL DATA



Model	Nominal Size	Case Diameter	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	S	T
K9	63	mm	68.5	57.5	31	62	64 ⁽⁴⁾	7	12	14	85	75	3.5	31	34	2	19	25	70
	2.48	inches	2.68	2.24	1.20	2.44	2.51	0.27	0.47	0.55	3.35	2.95	0.14	1.20	1.34	0.07	0.74	0.98	2.76
E9	100	mm	106	78	33.5 ⁽¹⁾	99 ⁽⁶⁾	100.6 ⁽⁵⁾	7	12	14	132	116 ⁽²⁾	4.8 ⁽⁷⁾	33.5 ⁽³⁾	32	3.5	—	27	102
	3.94	inches	4.17	3.07	1.32	3.89	3.96	0.27	0.47	0.55	5.20	4.57	0.19	1.32	1.26	0.14	—	1.06	4.02
G9	100	mm	106	88 ⁽⁸⁾	33.5 ⁽¹⁾	99 ⁽⁶⁾	100.6 ⁽⁵⁾	7	15	22	132	116 ⁽²⁾	4.8 ⁽⁷⁾	33.5 ⁽³⁾	32	3.5	—	40	102
	3.94	inches	4.17	3.48	1.32	3.89	3.96	0.27	0.59	0.87	5.20	4.57	0.19	1.32	1.26	0.14	—	1.57	4.02

(1) = 33.5±1 (mm) (5) = Ø 100.6 (mm)
 (2) = 116±0.1 (mm) (6) = 99±0.2 (mm)
 (3) = 33.5±1 (mm) (7) = 3 x 120°
 (4) = 64±0.5 (mm) (8) = 88±1 (mm)

* See website for dimensional data and downloadable AutoCAD files: www.mcdanielcontrols.com

HOW TO ORDER

- Select the **Model** number (K9=2½" dial, ¼" NPT. E9=4" dial, ¼" NPT. G9=4" dial, ½" NPT.)
- Specify **Range Code** from list at left.
- Specify **Type of Mounting**:
 (Bottom connection is standard, no code)
 "L" = (Lower-back connection - K9)
 "C" = (Center-back connected - E9 and G9)
 "U" = (U-Clamp, Lower-back connection on K9, Center-back connected on E9 and G9)
 "P" = (Front Flange, Lower-back connected on K9, Center-back on E9 and G9)
 "R" = (Rear Flange for Back or Bottom connection - not shown)
- Specify any other **Special Configuration** or options. (special NPT size, dual-scales, Ammonia-NH3, etc.)
- Add **Type of Filling**, if appropriate. (GF=Glycerin Filled)

Special Configuration Adder Codes

B = psi/Bar (dual scale) (nonstock)
 K = psi/kPa (dual scale) (nonstock)
 O = O₂ (oxygen cleaned) (nonstock)
 1/8 = 1/8" NPT (nonstock)
 NH3 = ammonia scale

Example:

Model	Range Code	Type of Mounting	Special Configuration	Type of Filling
K9	D	—	—	GF

Order: A 2½" all stainless steel utility gauge with ¼" NPT bottom connection standard, range of 100 psi, filled at the factory with glycerin. (K9D-GF)

Warning Glycerin filled gauges should not be used in applications involving strong oxidizing agents such as chlorine, nitric acid or hydrogen peroxide. (Refer to ASME B40.1)

** Receiver gauge is dual scale. (0 - 100% primary, 0 - 10 square root secondary)

Limited Warranty

McDaniel warrants our utility gauges to be free of defects in material and workmanship: Replacement of any defective gauge will be made at no cost to the purchaser. Gauge failures determined to be caused by over-range and incompatibility with environment/product media or abuse will not be considered under this warranty.

DISTRIBUTED BY:

It is recommended that users of pressure gauges become familiar with American National Standard ASME B40.1, entitled Gauges, Pressure and Vacuum - Indicating Dial Type - Elastic Element. This specification is available from:

American Society of Mechanical Engineers
 3 Park Avenue
 New York, New York 10016
 Phone: 212-591-7722

K9E9G91201

George A. Rau & Co. Gretna, LA 70053 - 504-367-7822

Range code	Range psi	K9 Minor Increments	E9/G9 Minor Increments
A	0 - 15	.5	.25
B	0 - 30	1	.5
C	0 - 60	2	1
D	0 - 100	2	1
E	0 - 160	5	2
F	0 - 200	4	2
G	0 - 300	10	5
H	0 - 400	10	5
I	0 - 600	20	10
J	0 - 800	20	10
K	0 - 1000	20	10
L	0 - 1500	50	25
M	0 - 2000	40	20
N	0 - 3000	100	50
4k	0 - 4000	100	
O	0 - 5000	100	50
6k	0 - 6000	200	100
P	0 - 10000	200	100
VACUUM	VACUUM	VACUUM	VACUUM
S	VAC 30"Hg - 0	1	.5
RECEIVER	RECEIVER	RECEIVER	RECEIVER
T	REC 3 - 15"	2	2
COMPOUND	COMPOUND	COMPOUND	COMPOUND
U	30"Hg + 15	2-0-1	2-0-1
V	30"Hg + 30	2-0-1	2-0-1
W	30"Hg + 60	5-0-2	1-0-1
X	30"Hg + 100	5-0-2	5-0-2
Y	30"Hg + 160	5-0-5	5-0-5
2k	30"Hg + 200	10-0-5	10-0-5
Z	30"Hg + 300	10-0-10	10-0-5



McDANIEL

Ammonia Gauges

Safe • Accurate • Reliable • Durable • Guaranteed



"When Durability Matters"™

McDaniel designs and manufactures its industrial and commercial ammonia refrigeration gauges to minimize failure and to protect personnel and property.


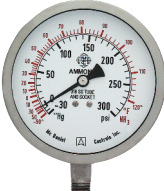



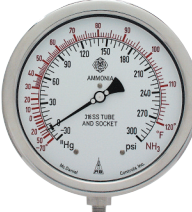
A laminated safety glass lens is standard on all ammonia gauges (optional on models K9, E9, or G9). The use of a laminated safety glass lens, rather than plastic, provides additional safety, and will not scratch, craze, or discolor.

We offer ammonia gauges in dial sizes 2½ inch (63mm), 4 inch (100mm), 4½ inch (130mm), and 6 inch (160mm) in all case configurations.

For all of your demanding applications where durability, accuracy, and safety are required, choose McDaniel.

McDaniel Controls, Inc.

P. O. Box 187, Luling, LA 70070 • 14148 Highway 90, Boutte, LA 70039 U.S.A.
(985) 758-2782 • New Orleans (504) 467-1333 • Fax (985) 758-1688
www.mcdanielcontrols.com

						
Models:	K9	E9 & G9	MPB/S	K	A, C, E, G	B, D, F, H
Dial Size:	2½ inch (63mm)	4 inch (100mm)	4½ inch (130mm)	2½ inch (63mm)	4 inch (100mm)	6 inch (160mm)
Case:	304 Stainless Steel, Liquid Fillable	304 Stainless Steel, Liquid Fillable	Molded Fiberglass, PBTP Liquid Fillable Solid Front Blowout Back Standard	304 Stainless Steel, Liquid Fillable Solid Front Blowout Back Optional	304 Stainless Steel, Liquid Fillable (E & G) Solid Front Blowout Back Optional	304 Stainless Steel, Liquid Fillable (F & H) Solid Front Blowout Back Optional
Ring:	304 SS, Crimped (Polished on Back Connections Only)	304 SS, Crimped (Polished on Back Connections Only)	Molded Fiberglass, PBTP Removable	Bayonet Oversized, 304 SS, Removable, Polished	Bayonet Oversized, 304 SS, Removable, Polished	Bayonet Oversized, 304 SS, Removable, Polished
Window:	Polycarbonate	Polycarbonate	Laminated Safety Glass	Laminated Safety Glass	Laminated Safety Glass	Laminated Safety Glass
Dial:	White background, black pressure scale, red temperature scale	White background, black pressure scale, red temperature scale	White background, black pressure scale, red temperature scale	White background, black pressure scale, red temperature scale	White background, black pressure scale, red temperature scale	White background, black pressure scale, red temperature scale
Pointer:	Black Aluminum	Black Aluminum	Black Aluminum Micrometer adjustable	Black Aluminum	Black Aluminum Micrometer adjustable	Black Aluminum Micrometer adjustable
Bourdon Tube:	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel
Movement:	304 Stainless Steel	304 Stainless Steel	304 Stainless Steel, Vacuum Stop and over range stop	304 Stainless Steel, Vacuum Stop and over range stop	304 Stainless Steel, Vacuum Stop and over range stop	304 Stainless Steel, Vacuum Stop and over range stop
Socket:	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel
Restrictor:	0.7mm orifice (removable) 316 Stainless Steel	Optional	Optional	0.7mm orifice (removable) 316 Stainless Steel	Optional	Optional
Connection:	¼" npt standard ½" npt option (1/8")	¼" npt Model E9 ½" npt Model G9	¼" npt (MPB/SA) ½" npt (MPB/SC)	¼" npt standard ½" npt option (1/8")	¼" npt Models A & E ½" npt Models C & G	¼" npt Models B & F ½" npt Models D & H
Service:	Utility	Utility	Heavy Duty	Heavy Duty	Heavy Duty	Heavy Duty
Accuracy:	AMSE B40.1 Grade A 2-1-2%	AMSE B40.1 Grade A 2-1-2%	AMSE B40.1 Grade 2A ½% FS	AMSE B40.1 Grade 1A 1% FS	AMSE B40.1 Grade 2A ½% FS	AMSE B40.1 Grade 2A ½% FS
Ranges:	30" Hg vac. - 0-160 psi 30" Hg vac. - 0-300 psi with equivalent ammonia temperature scales	30" Hg vac. - 0-160 psi 30" Hg vac. - 0-300 psi with equivalent ammonia temperature scales	30" Hg vac. - 0-160 psi 30" Hg vac. - 0-300 psi with equivalent ammonia temperature scales	30" Hg vac. - 0-160 psi 30" Hg vac. - 0-300 psi with equivalent ammonia temperature scales	30" Hg vac. - 0-160 psi 30" Hg vac. - 0-300 psi with equivalent ammonia temperature scales	30" Hg vac. - 0-160 psi 30" Hg vac. - 0-300 psi with equivalent ammonia temperature scales

* See website for dimensional data and downloadable AutoCAD files: www.mcdanielcontrols.com

McDaniel also makes gauges in other materials; in sizes and ranges to fit a wide variety of applications, and in many special configurations.

Ask your representative about McDaniel gauges with brass or Monel® internals, all brass or all stainless steel gauges, test gauges, or other requirements.

Connection Code

Bottom connected standard (no code)
(L) = Lower-back connected - K9, K, A, C, E, G, B, D, F, H
(C) = Center-back connected - E9 and G9, K(special order)
(U) = Panel, U-Clamp mounted, Lower-back connected on K9, K, A, C, E, G, B, D, F, H Center-back on E9 and G9
(P) = Panel, Front Flange, Lower-back connected on K9, K, A, C, E, G, B, D, F, H Center-back on E9 and G9
(R) = Rear flange for Back or Bottom connections

HOW TO ORDER

- 1 - Select the **model number from above**
- 2 - Specify **range code** - **YNH3** = 30"Hg - 0 - 160 psi or **ZNH3** = 30"Hg - 0 - 300 psi
- 3 - Specify **connection code** (*Not applicable on model MPB/S, bottom mount only available)
- 4 - Specify **special configurations**:
S = Solid Front Blow-out Back (optional on K, E, G, F, H), **1/8** = 1/8 inch npt (use on K & K9)
- 5 - Add **choice of filling**, if appropriate. (**GF** = Glycerin Filled) (**SF** = Silicone Filled)

Model

(Example: **MPB/SAYNH3** - "MPB/S" = Model, "A" = (1/4" NPT), "Y" = (30-0-160psi), "NH3" = (Ammonia Dial)
K9ZNH3-GF - "K9" = Model, "Z" = (30-0-300 psi), "NH3" = (Ammonia Dial), "GF" = (Glycerin Filled))

Warranty

McDaniel warrants our pressure gauges to be free of defects in material and workmanship: Replacement of any defective gauge will be made at no cost to the purchaser. Gauge failures determined to be caused by abuse, over-range or incompatibility with environment or process media will not be considered under this warranty.

Repair

We will REPAIR and/or REFURBISH any regular stock McDaniel gauge for a charge to be determined after the gauge is examined by our Quality Control department. Damaged sockets or bourdon tubes cannot be repaired. Special units contact McDaniel for pricing. Prices are F.O.B. Boutte, Louisiana 70039 USA (Not applicable to K9, E9, or G9)

DISTRIBUTED BY:

It is recommended that users of pressure gauges become familiar with American National Standard ASME B40.1, entitled Gauges, Pressure and Vacuum – Indicating Dial Type – Elastic Element. This specification is available from:

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3 Park Avenue • New York, New York 10016
Phone: 212-591-7722



McDANIEL



SAFE ZONE REFLECTIVE

GLO-GAUGE™

PATENT PENDING



ALL STAINLESS STEEL SPECIFICATIONS

Dial:

Luminescent polycarbonate.
Ambient temperature rated to 200°F. Black Figures.
Size – 4" (100mm).

Model "E" = 4 inch (100mm) dial,
All SS, fillable case, 1/4" NPT

Model "G" = 4 inch (100mm) dial,
All SS, fillable case, 1/2" NPT

Model "F" = 6 inch (150mm) dial,
All SS, fillable case, 1/4" NPT

Model "H" = 6 inch (150mm) dial,
All SS, fillable case, 1/2" NPT

Pointer:

Aluminum alloy, black with high visibility silver retro-reflective.
Micrometer adjustable.

Lens Ring:

Polished 304 SS bayonet,
oversized & removable.
Green retro-reflective
Min/Max tabs.

Lens:

Laminated safety glass (4 mm / .16" thick).

* (4" & 6" ALL SS VERSIONS: PLEASE ALLOW 4 TO 6 WEEK DELIVERY)

Accuracy:

0.5% full scale to ASME B40.1 standard (Grade 2A)

Bourdon Tube:

316 Stainless steel
(C Form 600 PSI & Below).
(Spiral 800 PSI & Above).

Case:

304 Stainless Steel

Movement

Precision stainless steel.
(mechanical over range stop)

Liquid Fillable:

Glycerin (GF), Silicone (SF)

Stem and Socket:

316 Stainless steel (4-sided wrench flats for easy wrench tightening)
Bottom connection (1/4", 1/2" NPT or Metric) High quality "rolled" threads (Helps to prevent galling).



PROCESS GAUGE SPECIFICATIONS

Dial:

Luminescent polycarbonate.
Ambient temperature rated to 200°F. Black Figures.
Size – 4.5 inches.

Model "MPB/SA" = 1/4" npt, bottom

Model "MPB/SC" = 1/2" npt, bottom

Pointer:

Aluminum alloy, black with high visibility silver retro-reflective.
Micrometer adjustable.

Lens Ring:

Molded fiberglass reinforced thermoplastic (PBTP).
303 SS insert with green retro-reflective Min/Max tabs.

Lens:

Laminated safety glass (4 mm / .16" thick).

Accuracy:

0.5% full scale to ASME B40.1 standard (Grade 2A)

Bourdon Tube:

316 Stainless steel
(C Form 600 PSI & Below).
(Spiral 800 PSI & Above).

Case:

Molded fiberglass reinforced thermoplastic (PBTP). (Fire retardant and impact resistant)
Case with integral rear flange.

Movement

Precision stainless steel.
(mechanical over range stop)

Liquid Fillable:

Glycerin (GF), Silicone (SF)

Blow-out Back:

Molded fiberglass reinforced thermoplastic (PBTP). Hinged for safety (will not become a projectile).

Compensating Diaphragm:

Unique **elastomer** with integral "O" ring seal. (Field ready for filling, hermetically sealed, weatherproof. No fill kit required.)

Stem and Socket:

316 Stainless steel (4-sided wrench flats for easy wrench tightening)
Bottom connection (1/4", 1/2" NPT or Metric) High quality "rolled" threads (Helps to prevent galling).

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(985) 758-2782 • New Orleans (504) 467-1333 • Fax (985) 758-1688 • www.mcdanielcontrols.com

- SAFE ZONE FEATURES -

For Easy Viewing of the SAFE OPERATING ZONE – Day or Night!

The McDaniel **Safe Zone Reflective Glo-Gauge™** with easy-view operating range markers was designed to allow anyone viewing the pressure gauge the ability to easily determine and judge if operating conditions have become abnormal.

Anyone can easily customize each “safe operating zone” simply by setting tabs located outside the gauge lens face. These tabs are given green retro-reflective enhancements and allow many different types of operating pressure zones to be indicated. Minimum and maximum limits can be indicated and set apart at acceptable and safe operating pressures; or, all the way apart for more relaxed operating zones, depending upon each application – On the spot customization!

This remarkably easy solution permits anyone viewing the gauge, up close in the light of day; or far away in lowlight conditions, to easily see if the process is operating in the “**Safe Zone**” as set during gauge installation. (A valuable benefit for out-of-the-way gauges up on catwalks, pipelines, and in contaminated areas, etc.)

According to ASME B40.1 pressure gauge specifications 4.3.1: “The pressure gauge selected should have a full scale pressure such that the operating pressure occurs in the middle half (25% to 75%) of the scale. The full scale pressure of the gauge selected should be approximately two times the intended operating pressure.”¹

The **Safe Zone Reflective Glo-Gauge™** is a visual guide that will assist operators in choosing and installing the proper pressure range per ASME B40.1 for the application due to tabs only in this “middle half of scale” (4.5” Process Gauge). This will help to reduce gauge wear and fatigue, and minimize hazardous situations because the correct pressure range is installed. Furthermore, by visually displaying the specific operating range specified for that application and alerting anyone viewing the gauge that the pressure is above or below normal, they can take immediate action to correct it. (T.P.M. “visual systems” compliance)

REFLECTIVE FEATURES

The pointer appears the standard black color and it has been given a retro-reflective enhancement which reflects silver when illuminated by a flashlight held at eye level. The green tabs also are retro-reflective. This allows anyone, from a great distance (up to 150+ feet!), to easily see and determine if the gauge pressure is in the safe operating zone specific for that process.

GLOW FEATURES

Additionally, with a charge from a flashlight, ambient light, or sunlight, the gauge dial will glow-in-the-dark for a short period of time to allow operators and technicians to monitor pressure readings while performing their maintenance tasks nearby.

Watertight, liquid-fillable, and trusted McDaniel heavy-duty construction with the added benefits of instantly knowing if you’re operating in the “**Safe Zone**” makes this gauge your first and “**lasting**” choice. Try one today!

* **DIMENSIONAL DATA AVAILABLE ON WEBSITE: www.mcdanielcontrols.com**

Range code	Range psi	Minor Increments
6	0 - 6	.1
10	0 - 10	.1
A	0 - 15	.25
B	0 - 30	.5
C	0 - 60	1
D	0 - 100	1
E	0 - 160	2
F	0 - 200	2
G	0 - 300	5
H	0 - 400	5
I	0 - 600	10
J	0 - 800	10
K	0 - 1000	10
L	0 - 1500	25
M	0 - 2000	20
N	0 - 3000	50
4k	0 - 4000	50
O	0 - 5000	50
6k	0 - 6000	100
P	0 - 10000	100
Q	0 - 15000	250
R	0 - 20000	200
VACUUM	VACUUM	VACUUM
S	VAC 30"Hg - 0	.5
RECEIVER	RECEIVER	RECEIVER
T	REC 3 - 15"	2
COMPOUND	COMPOUND	COMPOUND
U	30"Hg + 15	1-0-5
V	30"Hg + 30	1-0-5
W	30"Hg + 60	2-0-2
X	30"Hg + 100	5-0-2
Y	30"Hg + 160	5-0-5
Z	30"Hg + 300	10-0-5
2k	30"Hg + 200	10-0-5

** Receiver gauge is dual scale.
(0 - 100% primary, 0 - 10 square root secondary),

HOW TO ORDER

- 1 - Select the model number (**MPB/S** = 4.5" Process Gauge), or ("**E**" model = 4", All SS, 1/4"npt), or ("**G**" model = 4", All SS, 1/2 npt), or ("**F**" model = 6", All SS, 1/4"npt), or ("**H**" model = 6", All SS, 1/2 npt)
- 2 - Specify connection code (for MPB/S Process Gauge only "**A**" = 1/4" NPT, "**C**" = 1/2" NPT)
- 3 - Specify range code from list at left.
- 4 - Specify mounting code
(*Not applicable on model MPB/S, **bottom mount only available**)
- 5 - Specify special configurations or options.
(Glow dial with reflective indicators - "**G**")
- 6 - Add choice of filling, if appropriate. (**GF** = Glycerin Filled) (**SF** = Silicone Filled)

Examples:

¹Model # → **MPB/SAEG-GF** ²Model # → **GDG**

¹"MPB/S" = Model. "**A**" = (1/4" NPT). "**E**" = (0-160 psi). "**G**" = Glow dial with reflective indicators. "**GF**" = (Glycerin Filled)

²"GDG" = Model. "**G**" (4" Dial, 1/2" NPT, bottom connection). "**D**" = (0-100 psi). "**G**" = Glow dial with reflective indicators.

* (**4" & 6" ALL SS VERSIONS: PLEASE ALLOW 4 TO 6 WEEK DELIVERY**)

MOUNTING CODE

L = Lower Back
U = Panel Mount, U-Clamp
P = Panel Mount, Front Flange
R = Rear Flange
No Code = Bottom Connection

OPTIONS:

Liquid Filled - Monel® Internals - Plastic Lens - SS Tags
Higher pressures available upon request. - Calibration Certificate (N.I.S.T.)

Warranty

McDaniel warrants our pressure gauges to be free of defects in material and workmanship: Replacement of any defective gauge will be made at no cost to the purchaser. Gauge failures determined to be caused by abuse, over-range and incompatibility with environment or process media will not be considered under this warranty.

Repair

We will REPAIR and/or REFURBISH any regular stock McDaniel gauge for a charge to be determined after the gauge is examined by our Quality Control department. Damaged sockets or bourdon tubes cannot be repaired. Special units contact McDaniel for pricing.
Prices are F.O.B. Boutte, Louisiana 70039 U.S.A.

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It is recommended that users of pressure gauges become familiar with American National Standard ASME B40.1, entitled Gauges, Pressure and Vacuum – Indicating Dial Type – Elastic Element. This specification is available from:

**American Society of Mechanical Engineers,
United Engineering Center
345 East 47th Street
New York, New York 10077**