

McDaniel

General Service Gauges

(Brass Internals)

Polyamid 'B' Case 4" and 6" Gauges

(Fiberglass reinforced)



Stainless Steel Case

1 1/2" and 2 1/2" Gauges



All Brass

2" and 2 1/2" Gauges



McDaniel General Service Gauges

Brass Internals

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

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 'B'** Case gauges reinforced with fiberglass in 4" and 6" models;
- **Stainless Steel** case gauges in durable 1½" and 2½" models;
- **All Brass** gauges with heavy-duty die-cast solid brass cases in 2" and 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 brittle 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 all 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" for further details.

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 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).

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.

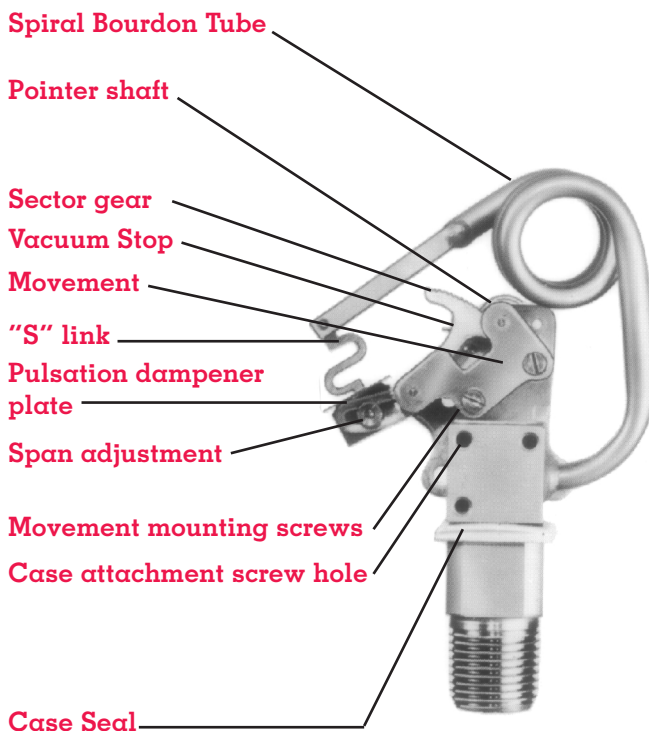
When ordering a gauge to be factory-filled, specify GF for Glycerin Filled, SF for Silicone Filled or FF for Flourlube Filled.

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 or helical bourdon tubes are used for pressure ranges from 1,000 psi and above in poly 'B' gauges, and from 800 psi and above in the other general service gauges above 800 psi are of alloy steel.

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



Polyamid 'B' Gauges

Features

- Fiberglass reinforced case
- Full blowout relief
- 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: ½% full scale ASME B40.1-Grade 2A

Case Styles

4" (100 mm) Non-Fillable

Model L - ¼" NPT

Model M - ½" NPT

4" (100 mm) Filled or Fillable

Model N - ¼" NPT

Model P - ½" NPT

6" (160 mm) Non-Fillable

Model Y - ¼" NPT

Model Z - ½" NPT

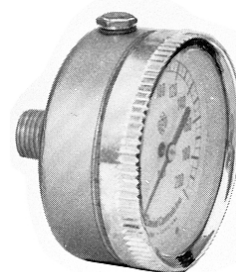


Ranges: Vacuum, Rec., Compound, 0-35,000 psi, 6" wc-250" wc.

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

Mounting Style Order Code

Code	Description
P	Panel mount/center back connection Model R7
P	Panel mount/lower back connection Models J, L, M, N, P, Y, Z
L	Center back connection (without panel mount flange) Models U, R7, T
L	Lower back connection (without panel mount flange) Models J, L, M, N, P, Y, Z
U	Panel mount/lower back u-clamp Models J, L, M, N, P, Y, Z
U	Panel mount/center back u-clamp Models T and U
R	Rear flange for wall-mounting Models J, L, M, N, P, Y, Z
S	Solid front/blow-out back (Fillable; not available with back connection) Models N, P



Center Back (L)

Warranty and Repair

We warrant 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.

We will repair any McDaniel gauge for a cost of \$15.00 on 4" and larger sizes; \$7.50 on 2½" and smaller sizes. Prices are F.O.B. Paradis, Louisiana. (Damaged sockets, and/or bourdon tubes cannot be repaired.)

Stainless Steel Case Gauges

2 1/2" (63 mm) Fillable

Model J - 1/4" NPT



Features

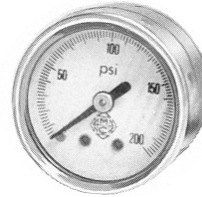
- 304 Stainless Steel Case and bayonet ring
- Blow-out relief
- Fillable case
- Laminated safety glass lens
- Pulsation dampened with restrictor screw
- Brass/bronze wetted parts
- Accuracy: 1% full scale ASME B40.1-Grade A

Range: Vacuum, Rec., Compound, 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

1 1/2" (40 mm) Non-Fillable

Model R7 - 1/8" NPT



Features

- Restrictor screw (removable)
- Condensation proof
- Quality construction
- Polycarbonate lens
- Accuracy: 3-2-3% ASME B40, 1-Grade B

Range: Compound, Rec., Vac., 0-5,000 psi

Mounting Styles: Bottom Connection, (L) Center Back Connection, (P) Panel Mount with Front Flange

All Brass Gauges

2" (50 mm) Fillable

Model T - 1/4" NPT

(1/8" NPT available on request)



2 1/2" (63 mm) Fillable

Model U - 1/4" NPT

(1/8" NPT available on request)



Features

- Heavy duty construction
- Safety blow-out disc with case vent
- Screwed front ring
- Laminated safety glass Lens
- Fillable case
- Accuracy: 1% full scale ASME B40.1 - Grade A

Range: Vacuum, Rec., Compound, 0-6,000 psi; Model U-10,000 psi

Mounting Styles: Bottom Connection, (L) Center Back, (U) U-Clamp

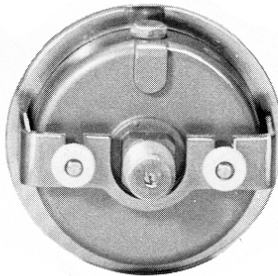
Choice of Mounting Styles



Panel Mount
(P)



Lower Back
(L)



U-Clamp
(U)



Rear Flange
Bottom or lower Back Connection
(R)



Range Selection *

Range Code	Range (psi)	Availability (✓) by gauge model						
		L,M Y,Z	N,P	J	R7	T	U	
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	0-1000	✓	✓	✓	✓	✓	✓	✓
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	✓	✓					
30k	0-30000	✓	✓					
35k	0-35000	✓	✓					
S	VAC 30"Hg-0	✓	✓	✓	✓	✓	✓	✓
T	REC 3-15*	✓	✓	✓	✓	✓	✓	✓
U	COMP 30"Hg+15	✓	✓	✓	✓	✓	✓	✓
V	COMP 30"Hg+30	✓	✓	✓	✓	✓	✓	✓
W	COMP 30"Hg+60	✓	✓	✓	✓	✓	✓	✓
X	COMP 30"Hg+100	✓	✓	✓	✓	✓	✓	✓
Y	COMP 30"Hg+160	✓	✓	✓	✓	✓	✓	✓
2k	COMP 30"Hg+200	✓	✓	✓	✓	✓	✓	✓
Z	COMP 30"Hg+300	✓	✓	✓	✓	✓	✓	✓

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.

* 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, Y, Z

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 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, SF = Silicone Filled, or FF = Fluorlube Filled)

Example:

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

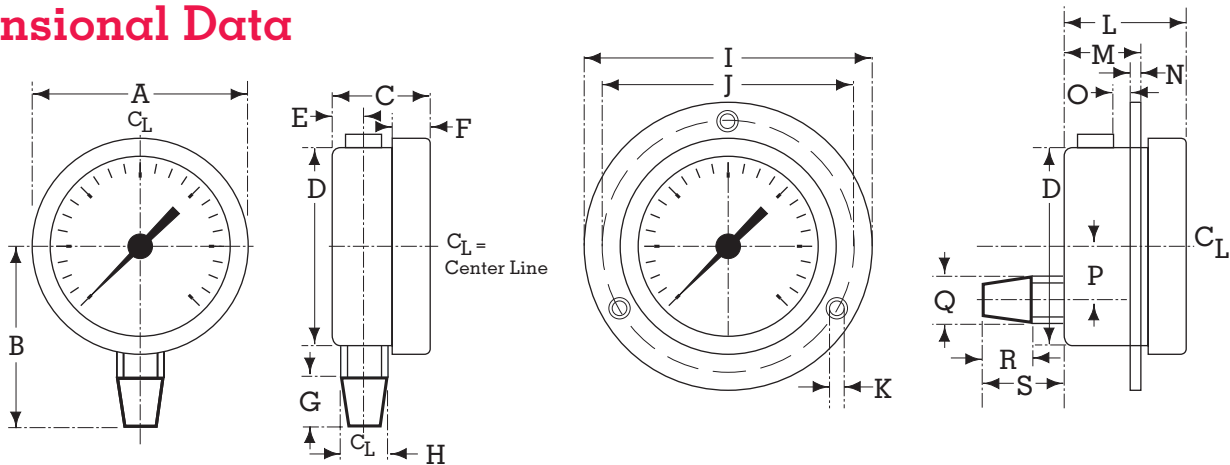
Order: A 4" Polyamid "B" gauge with 1/4" NPT connection, range of 800 psi, with panel mount/lower back u-clamp configuration, filled at the factory with glycerin (NJU-GF)

Last Word

McDaniel 4" and 6" gauges with brass internals are also available in 304 s/s cases on request. Options include maximum pressure pointers (lazy hands), hi/low adjustable electric contact gauges, special service gauges, steam siphons, diaphragm seals, pulsation snubbers, test gauges and more. Consult your McDaniel distributor. For all-stainless gauges, see McDaniel blue brochure, AS594, or latest revision .



Dimensional Data

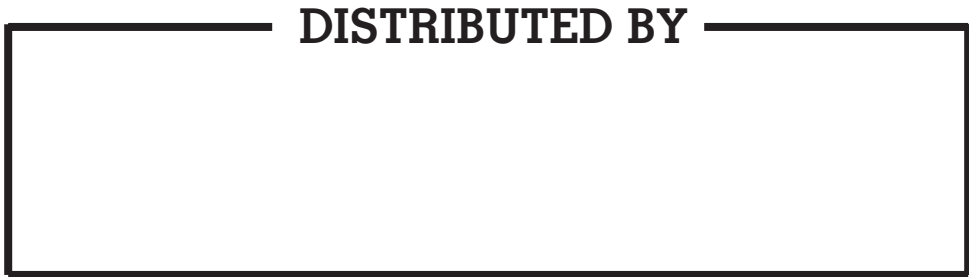


Model	Nominal Size	Case Diameter	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
R7	1½"	MM	43	39	27	42	8	10	12.5	14	56	48	3.5	27	25	1.5	-	*	14	11	18
		In.	1.69	1.54	1.06	1.65	0.31	0.39	0.49 ⁽¹⁾	0.55 ⁽²⁾	2.20	1.89	0.137	1.06	0.98	0.06			0.55	0.43	0.71
T	2"	MM	54	46	29.5	52	7	8	15	14	60	-	-	30	27.5	2	12	*	15	22	22
		In.	2.13	1.81	1.16	2.05	0.28	0.31	0.59 ⁽³⁾	0.55	2.36			1.18	1.08	0.08	0.47		0.60	0.87	0.87
J	2½"	MM	68.5	57	31	62	10	12	15	14	75 ⁽⁷⁾	75	3.8	37	24	3	4	18	14	15	25.5
		In.	2.70	2.24	1.22	2.44	0.39	0.47	0.59	0.55	3.35	2.95	0.15	1.46	0.94	0.12	0.16	0.71	0.55	0.60	1.00
U	2½"	MM	64	54	31	63	7	11.5	14	14	75	-	-	30	23	3	5	*	14	15	22
		In.	2.52	2.13	1.22	2.48	0.28	0.39	0.55	0.55	2.95			1.18	0.91	0.12	0.20		0.55	0.60	0.87
L, M, N, P,	4"	MM	113	83	49	100	13	16	21.5	22	113	-	-	49	-	1.3	16	34	21	15	34
		In.	4.45	3.27	1.93	3.94	0.51	0.63	0.85 ⁽⁴⁾	0.87	4.45			1.93		0.06	0.63	1.33	0.83	0.59	1.34
Y, Z,	6"	MM	160	118	50	160	20	21	20	22	196 ⁽⁸⁾	178	5.8	56	44.0	2	-	50	21	20	36
		In.	6.30	4.65	1.97	6.30	0.79	0.83	0.79	0.87	7.72	7.01	0.23	2.20	1.73	0.08		1.97	0.83	0.79 ⁽⁵⁾	1.42 ⁽⁶⁾

Notes: * Not applicable on center-back connected gauges (3.) ⅛" NPT = 11 mm (0.43) (6.) ¼" NPT = 32mm (1.26)
 (1.) ¼" NPT = 13 mm (0.51) (4.) ¼" NPT = 15 mm (0.59) (7.) "U" Clamp model reduced to 68.5 mm (2.70)
 (2.) ¼" NPT = 14 mm (0.55) (5.) ¼" NPT = 15 mm (0.59) (8.) "U" Clamp model reduced to 165.5 mm (6.49)

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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