

## **Pressure Gauge Options**

CODE	DESCRIPTION					PR	ESSURE	GAUGE T	YPE					
	TEST &	PROCESS (	GAUGES	STAINLE	SS STEE	L CASE	INDUS	TRIAL G	AUGES		COMME	RCIAL G	AUGES	
		TEST GAUGES	PROCESS GAUGES	1009 (21/2, 31/2)	1009 (41/2, 67)	1008S	GENERAL SERVICE	SPECIAL SERVICE	1490/1495 SERIES	11001T	1005/1000 SERIES	1007P	1008A/3005/3005P	1005/1000 SERIES
XLL	<b>PLUS!</b> ™ Performance		•	•		•								
XSF	FlutterGuard™									•	•	STD	•	•
XNP	Nickel Plated Socket									•	•		•	
XBF	Wall mounting bracket				•									
XFW	Back flange			•										
XFF	Front flange			•	•	•				•			•	
XUC	U-clamp			•	•			•	•	STD			•	
XLJ	Dry liquid-fillable gauge			•	•	•							•	
XOS	Overload stop	STD	•	STD	•	STD <sup>(1)</sup>	•	•		•	•		•	
XVS	Underload stop	STD	•	STD	•	STD <sup>(1)</sup>								
XTS	Throttle screw	•	•		•		•	•						
XT <sup>(2)</sup>	Throttle plug			•		•			•	•	•	STD	•	•
XS4	Slotted link movement (decrease)		•		•		•	•						
XRJ	Slotted link (increase)		•		•		•	•						
XAP	Adjustable pointer			•	•		•	•		•	•		•	
XMP	Micrometer pointer		STD	•	STD		STD	•						
XSH	Red set hand stationary		•	•	•		•	•						
XEO	Red set hand adjustable	•	•	•	•		•	•						
XEP	Maximum pointer	•	•		•		•	•		•	•			
XEQ	Minimum pointer	•	•		•		•	•						
XPD	Plastic window	•	•	STD	•	STD <sup>(1)</sup>	•	•	STD	STD	STD	STD	STD	STD
XSG	Safety glass	•	•	•	•		•	•						
XMG	Metric version gauge			•		•								
XDA	Dial marking	•	•	•	•	•	•	•	•	•	•		•	•
XNN	Paper tag	•	•	•	•	•	•	•	•					
XNH	Stainless steel tag	•	•	•	•	•	•	•	•					
XAB	Absolute pressure		•		•		•							
XAJ	1/2% optional accuracy		STD		•		•	•						
XAN	1% optional accuracy			STD	STD		STD		•					
XRA	Retard scale		•		•		•			•	•			
XWN	White dial	STD	STD	•	•	STD	•	•	STD	STD	STD	STD	STD	STE
XBD	Black dial	•	•	•	•	•	•	•	•	•	•	•	•	•
X6B	Oxygen-cleaned gauges (gaseous)	•	•	•	•	•	•	•		•	•		•	•
XTB	Tip bleed	•	•			-								
XED	High and low electric contacts		•											
XEE	Double high-electric contacts		•											
XEF	Double low-electric contacts		•											
XEG	Electric contacts off at low or high and in-between		•											
XGV	Silicone-filled gauge		•	•	•	•							•	
XGX	Halocarbon-filled gauge		•	•	•	•								
XCH	Carrying handle	•	_											
	Jan jing nanaro													



- (1) Available on 40mm and 50mm.
- (2) Denotes various sizes.
- Not all variations available for each size, connection, range in a specific gauge, model/type; minimums may apply.

# Seven Steps to Select a Pressure Gauge

#### 1. ACCURACY

For a mechanical pressure gauge, accuracy is defined as a percentage of the full-scale range. While requirements differ from one industry to another, the following are general guidelines:

- Test Gauges and Standards: 0.25% through 0.10% full scale accuracies.
- Critical Processes: 0.5% full scale accuracy.
- General Industrial Processes: 1.0% accuracy. Less Critical Commercial Uses: 2.0% accuracy.
   Refer to ASME B40.100 or the DIN specifications for more information on accuracy.

#### 2. DIAL SIZE

Pressure gauge dial sizes range from 1½" to 16" diameters. Generally, readability requirements, space limitations and required gauge accuracy determine dial size. Accuracies of 0.25% or 0.5% generally have dial sizes of 4½" or larger since more dial graduations are required.

### 3. CASE STYLE / MATERIAL

Environmental considerations include ambient temperature, air-borne particulate, condensation, humidity, water and chemicals, all of which can affect gauge performance.

Ambient temperature may affect the accuracy and integrity of the gauge. Gauges are available either temperature compensated or non-temperature compensated. Ambient conditions may require that the gauge be isolated from temperature extremes. When required, the gauge should be isolated from temperature extremes with a flexible line assembly.

When ambient conditions are corrosive, contain a large number of particulate or if the gauge will be exposed to a wet or humid environment like humidity, wash-downs or rain, specify a gauge that is weatherproof/hermetically sealed or liquid filled.

#### 4. MEDIA / WETTED PARTS

The wetted parts of the pressure gauge, the Bourdon tube and socket must be compatible with the process media. If not compatible with the wetted parts of the gauge, corrosion will occur. Corrosion of gauge wetted parts will eventually cause gauge failure and possibly safety issues. When the gauge wetted parts are not compatible with the process media, a diaphragm should be considered.

#### **5. CONNECTION SIZE**

Gauges are available with a variety of connections including NPT, DIN, JIS, BSP & SAE. Process pressure gauges with 4½" dial sizes or larger are most often supplied with a ½" NPT connection to best support the gauge. Factors to consider when selecting a pressure gauge connection include process pressures, gauge size and weight, space limitations, leak integrity, and past experience.

#### **6. CONNECTION LOCATION**

Consider the following mounting options when selecting a pressure gauge:

- Stem mount lower connect
- Wall/surface mount lower connect
- Panel mount back connect
- U-clamp flush mount back connect, for panel mounting
- Front flange flush mount back connect, for panel mounting

#### 7. PRESSURE RANGES

ASME B40.100 recommends that normal operating pressure be confined to 25%-75% of the scale. If pulsation is present in the process, maximum operating gauge pressure should not exceed 50% of the full-scale range.

#### CONCLUSION

To properly select a pressure gauge, consider the gauge process, range, environment, accuracy, dial size, connection and mounting requirements.



All specifications are subject to change without notice.
All sales subject to standard terms and conditions.

© Ashcroft Inc. 2007

Ashcroft Inc., 250 East Main Street, Stratford, CT 06614 USA Tel: 203-378-8281 • Fax: 203-385-0408 email: info@ashcroft.com • www.ashcroft.com

## **Seven Steps to Pressure Gauge Selection**



														2					3 4 5 6 7																																																		
		ACCURACY											DIAL SIZE							S	CASE Style Material				PROCESS MEDIA (GAUGE WETTED PARTS)						C	INO:	NECT Size	ΓION	CONNECTIO LOCATION			TION RANGE																															
PRODUCT CATEGORY	MODEL NUMBER	0 05% Snan		Orio Copan	0.22./0 opail	U.S./o Span		1% at 0, 2% 3/4 scale, 5% last 1/4 scale	2%,1%,2%	1.5% Span	1.6% Span	2% Span	2% at setpoint	2.5% Span	 20/ unecodo 50/ dounecodo	0/0:0	3/o opan	zsmm	es	es,	2.0 Inches, 50mm	2.5 Inches, 63mm	3 Inches	3.5 Inches	4 Inches, 100mm	4.5 Inches	6 Inches, 160mm	8.5 Inches	12 Inches			Thermoset or Thermoplastic Case	un u			Aliminim	IIIII	Brass	Beryllium Copper/Brass	1000	316 Stainless Steel/Carbon Steel Socket	316 Stainless Steel	Stainless Steel		Inconel v MDT	% NT .	A NP I	h Pressure	p Type		¥	In-Line	of Water - incl. IW vacuum and compound	0-600 PSI (including vacuum & compound)	0-1000 PSI (including vacuum & compound)	0-6000 PSI (including yacuum & compound)		0.10 DON DOL (including vacuum & compound)	nciduning vacuum & compoun	vacuum &	vacuum & compou	0-30,000 PSI (including vacuum & compound)	0 -100,000 PSI (including vacuum & compound)	Absolute	0-1 IWID to 50 IWD	0-5 PSID to 150 PSID	0-5 PSID to 100 PSID	0-1 PSID to 60 PSID	0-11WD to 25 IWD
TEST	2089 2086 2084 1084 1082	•		•		•																	•				•	•						•				•				•			•					0			•					•						•					
PROCESS GAUGES	1279 1377 1379 2462 1259 T5500 T6500 1288						•																		•	•	•	•		•		•	•					•			•	•			•						•										•	•	•						
STAINLESS STEEL CASE & INDUSTRIAL GAUGES	1008S 1009 1109 1010 1017 1220 1020S 1038 1339 1150H 1122 1187 1188 1189 1490						•		•											•	•	•		•	•	•	•	•	•		•	•									•	•		•						•	•				•						•	•							
DIFFERENTIAL GAUGES	1125 1125A 5503 5509 1127 1128 1130 1131 1131 1132 1133								•		•	•									•	•		•	•	•	•						•	•				•					•								•	•			•										•	•	•	•	•
COMMERCIAL GAUGES	1032 1036 1001T 1005 1005P 1005S 1000 1007P 1008A 2071A 3005 3005P 12MFX/15MFX 12DDG/15DDG 23DDG 40DDG/50DDG							•	•	•		•							•	•	•	•		•		•						•	•	•					•			•							•		•			•						•									

NOTE: Some model numbers may not be available in all sizes, ranges and connections.