ASHCROFT®
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Ten Steps to Selecting a Pressure Gauge

Use this grid to select your pressure gauge or go to the Pressure Gauge Selection Tool available on our website.

(1) Choose industry application.
Your choice will depend on application requirements for your industry. For instance, a gauge used in a high purity environment has different requirements than one used in hydrogen systems.

(2) Verify approval requirements.
Some industry applications require approvals from nationally or internationally recognized agencies. If applicable, select a gauge that has the necessary requirements for your application.

(3) Confirm pressure type.
Ashcroft offers two styles of gauges. One for measuring differential pressure and one for measuring gauge pressure, including compound and vacuum pressure. Select the type of pressure you are going to measure.

(4) Determine gauge size.
Pressure gauge sizes range from less than 1˝ to 16˝ diameters. Generally, readability requirements, space limitations and required gauge accuracy determine the size. Accuracies of 0.25% or 0.5% generally have sizes of 4½˝ or larger since more dial graduations are required.

(5) Select case style.
Choosing an open-front or solid-front case depends on your application. Both options are designed with safety features, however solid-front gauges provide a solid wall and blow-out back feature for an added layer of protection. Solid-front cases are often used in systems susceptible to overpressure, or involve flammable or explosive media, compressed gases, hazardous environments, oxygen or hydrogen.

(6) Choose case material.
Pressure gauge cases are available in aluminum, stainless steel, phenolic/thermoplastic, steel/black metal. Select your preferred case material that aligns with specific industry specifications and/or requirements.

(7) Identify connection location.
Consider where the pressure gauge will connect to the process when choosing the mounting options for your application: center back, lower, lower back and in-line.

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

(9) Verify accuracy requirements.
Accuracy is defined as a percentage of span of the pressure range. While requirements differ from one industry to another, the following are general guidelines:
- **Test Gauges and Standards:** ± 0.25% through ±0.05% of span.
- **Critical Processes:** ±0.5% of span accuracy.
- **General Industrial Processes:** ±1.0% of span accuracy.
- **Less Critical Commercial Uses:** ±2.0% of span accuracy.

Refer to ASME B40.100 for more information on accuracy.

(10) Determine required wetted materials.
The wetted materials of the gauge need to be compatible with the process media you are going to measure. Options include Aluminum/Brass/Bronze/Copper, Hastelloy® C276, Monel®, Stainless Steel or Teflon™ (PTFE/PFA).

		(1) Applications								(2) Approvals							
Product Category	Model	Differential Pressure Measurement (Liquid Level or Flow Measurement, Filtration Monitoring, Leak Detection)	Hydrogen (Hydrocracking, On-site Hydrogen Production, Refueling Equipment, Fuel Cell, Fueling Stations)	OEM Equipment (Hydraulics & Pneumatics, Pumps & Compressors, Water Jetting & Blasting)	Process Plant (Chemical & Petrochemical, Oil & Gas, Power, Water & Wastewater, Metals & Minerals)	Sanitary/Hygienic (Pharmaceutical & Biotechnology Operations, Food & Beverage Equipment and Systems)	Semiconductor/High Purity (Ultrapure & Dionized Water Etching, High-Purity Gas Panel & Gas Delivery Systems)	Test & Measurement (Secondary Pressure Standard, Pressure Gauge Calibration, Calibration Lab, or Test Kit)	Industrial Applications (HVAC/R, Ammonia, Industrial & Process Equipment Manufacturing, Medical Health & Safety)	3-A	CE (PED, RoHS)	CRN	Hazardous Locations (ATEX/FM/CSA)	Natural Gas (NGV 3.1/R110)	NSF	UL (252A, 404)	UL (61010-1)
Process Gauges	1187				●						●						
	1188				●						●						
	1189				●						●						
	1209		●	●	●						●	●					
	1279		●	●	●						●	●			●		
	1377			●	●						●	●					
	1379			●	●						●	●					
	1259			●	●						●	●					
	N5500				●						●						
	P5500				●						●						
	P6500				●						●						
	T5500		●	●	●						●	●	●				
	T6500		●	●	●				●		●	●	●				
Stainless Steel Case & Industrial Gauges	8008S		●	●					●		●	●		●		●	
	8009S		●	●					●		●			●		●	
	1008S (63/100)		●	●					●		●	●			●		
	1008S (40/50)		●	●					●		●	●					
	1008S (02C) (63/100)			●							●	●					
	1009		●	●					●		●	●			●		
	1010			●							●	●					
	1017			●							●	●					
	1220			●							●	●					
	1038			●								●					
	1490			●													
Sanitary Gauges	1032					●			●	●							
	1032 Fractional					●						●					
	1033					●											
	1036					●			●	●							
	2030					●				●							
Differential Gauges	1125	●			●						●						
	1125A	●			●						●						
	F5504	●			●						●						
	1127	●			●						●						
	1128	●			●						●						
	1130	●															
	1140	●															
	1131	●															
	1141	●															
	1132	●															
	1142	●															
	1133	●															
	1143	●															
	1134	●															
	1147	●															
Digital Gauges	2089							●				●	●				
	2086							●				●	●				
	2084							●				●	●				
	2074/2174/2274			●								●	●				
	2030					●			●	●							
	DG25			●				●			●	●					●
Test Gauges	2089							●				●	●				
	2086							●				●	●				
	2084							●				●	●				
	1084			●	●	●		●			●	●					
	1082			●	●			●			●	●					
	A4A							●									
Commercial Gauges	8008A			●					●		●	●					
	1001T			●								●					
	1005H			●					●			●				●	
	1005P			●					●			●				●	
	1005S			●					●			●					
	1000			●								●					
	1008A			●					●		●	●					
	2071A								●			●					
High Purity Gauges	HPX						●				●						
	HPS						●				●						
	HPT						●				●						

		(3) Pressure Type		(4) Size				(5) Case Style		(6) Case Material				(7) Connection Location			
Product Category	Model	Differential Pressure	Gauge Pressure (including Vacuum/Compound)	≤2˝ (50 mm)	2.5˝ (63 mm) to 3.5˝ (90 mm)	4˝ (100 mm) to 6˝ (160 mm)	8.5˝ (215 mm) and above	Open Front	Solid Front	Aluminum	Phenolic/ Thermoplastic	Stainless Steel	Steel/Black Metal	Lower	Lower Back	Center Back	In-Line
Process Gauges	1187		●			●			●	●					●		
	1188		●			●			●		●			●	●		
	1189		●			●			●	●				●	●		
	1209		●			●			●			●		●			
	1279		●			●			●		●			●	●		
	1377		●			●	●		●	●				●	●		
	1379		●			●	●		●	●				●	●		
	1259		●			●			●		●			●			
	N5500		●			●		●				●		●		●	
	P5500		●			●		●				●		●			
	P6500		●			●			●			●		●			
	T5500		●			●		●				●		●	●		
	T6500		●			●			●			●		●			
Stainless Steel Case & Industrial Gauges	8008S		●		●	●		●	●			●		●	●	●	
	8009S		●		●	●		●	●			●		●	●	●	
	1008S (63/100)		●		●	●		●				●		●	●		
	1008S (40/50)		●	●				●				●		●		●	
	1008S (02C) (63/100)		●		●	●		●				●				●	
	1009		●		●	●		●	●			●		●	●		
	1010		●			●	●		●	●				●	●		
	1017		●			●			●	●				●	●		
	1220		●			●	●	●		●	●			●	●		
	1038		●			●		●		●				●	●		
	1490		●		●			●			●			●		●	
Sanitary Gauges	1032		●	●	●	●		●				●		●	●		
	1032 Fractional		●	●				●				●		●			
	1033				●			●				●		●	●		
	1036		●		●			●				●		●			●
	2030		●		●			●				●		●			●
Differential Gauges	1125	●				●		●		●				●	●		
	1125A	●				●		●		●				●	●		
	F5504	●				●		●				●		●			
	1127	●				●		●		●				●			
	1128	●				●		●		●				●			
	1130	●		●	●	●		●				●		●	●		●
	1140	●			●	●		●			●			●	●		●
	1131	●			●	●		●				●		●	●		●
	1141	●			●	●		●			●			●	●		●
	1132	●			●	●		●				●		●	●		●
	1142	●			●	●		●			●			●	●		●
	1133	●				●		●				●		●	●		●
	1143	●				●		●			●			●	●		●
	1134	●				●		●				●			●		●
	1147	●				●		●			●			●	●		●
Digital Gauges	2089		●		●			●				●		●			
	2086		●		●			●				●		●			
	2084		●		●			●				●		●			
	2074/2174/2274		●		●	●		●		●		●		●			
	2030		●		●							●		●			●
	DG25		●		●			●			●			●			
Test Gauges	2089		●		●			●				●		●			
	2086		●		●			●				●		●			
	2084		●		●			●				●		●			
	1084		●		●			●				●		●			
	1082		●			●	●		●	●				●	●		
	A4A		●			●	●		●	●				●	●		
Commercial Gauges	8008A		●		●	●		●				●		●	●	●	
	1001T		●	●	●			●					●			●	
	1005H		●	●	●			●						●		●	
	1005P		●	●	●			●			●			●		●	
	1005S		●	●				●				●		●		●	
	1000		●			●		●					●	●			
	1008A		●		●	●		●				●		●		●	
	2071A		●			●		●		●				●			
High Purity Gauges	HPX		●	●	●			●				●		●	●	●	
	HPS		●	●				●				●		●			
	HPT		●		●			●			●			●		●	

		(8) Pressure Ranges						(9) Accuracy				(10) Process Media (Gauge Wetted Parts)				
Product Category	Model	≤10 psi (0.7 bar)	10 to 5,000 psi (0.7 bar to 350 bar) (including Vacuum/Compound)	5,000 to 20,000 psi (350 bar to 1,400 bar)	20,000 to 100,000 psi (1,400 to 7,000 bar)	≤10 psid (0.7 bar)	10 to 1,000 psid (70 bar)	≤±0.25% of span	±0.5% to 1.0% of span	±1.6% to 2.5% of span	≥±3.0% of span	Aluminum/Bronze/Brass/Copper Socket	Hastelloy® C276	Monel®	Stainless Steel	Teflon™ (PTFE/PFA)
Process Gauges	1187	●							●	●		●		●	●	
	1188	●							●	●		●		●	●	
	1189	●							●	●		●		●	●	
	1209		●	●	●				●					●	●	
	1279		●	●	●				●			●		●	●	
	1377		●	●	●				●			●		●	●	
	1379		●	●	●				●			●		●	●	
	1259		●	●	●				●					●	●	
	N5500	●								●					●	
	P5500	●	●	●						●					●	
	P6500	●	●							●					●	
	T5500		●	●	●				●					●	●	
	T6500		●	●	●				●					●	●	
Stainless Steel Case & Industrial Gauges	8008S		●	●					●	●					●	
	8009S		●	●					●	●	●				●	
	1008S (63/100)		●	●					●	●					●	
	1008S (40/50)		●	●						●	●				●	
	1008S (02C) (63/100)		●	●						●	●				●	
	1009		●	●	●				●			●		●	●	
	1010		●	●	●				●			●		●	●	
	1017		●	●	●				●			●		●	●	
	1220		●	●	●				●			●		●	●	
	1038		●						●	●		●				
	1490	●	●						●	●		●				
Sanitary Gauges	1032						●			●			●		●	
	1032 Fractional						●				●				●	
	1033															
	1036						●			●					●	
	2030		●					●							●	
Differential Gauges	1125		●						●	●		●				
	1125A		●							●		●				
	F5504					●	●		●	●			●	●	●	
	1127	●	●						●	●					●	
	1128	●	●						●	●					●	
	1130					●	●			●		●			●	
	1140					●	●			●		●			●	
	1131					●	●			●		●			●	
	1141					●	●			●		●			●	
	1132					●	●			●		●			●	
	1142					●	●									
	1133					●				●		●			●	
	1143					●				●		●			●	
	1134					●					●				●	
	1147					●				●		●			●	
Digital Gauges	2089	●	●	●				●							●	
	2086	●	●	●				●							●	
	2084	●	●	●				●							●	
	2074/2174/2274				●			●							●	
	2030		●					●							●	
	DG25		●	●	●			●	●						●	
Test Gauges	2089	●	●	●				●							●	
	2086	●	●	●				●							●	
	2084	●	●	●				●							●	
	1084		●						●						●	
	1082		●					●				●		●		
	A4A		●	●	●			●							●	
Commercial Gauges	8008A		●	●					●	●		●				
	1001T		●	●						●	●	●				
	1005H		●	●						●	●	●				
	1005P		●	●						●	●	●				
	1005S		●							●		●				
	1000		●	●						●		●				
	1008A		●	●						●		●				
	2071A								●	●		●				
High Purity Gauges	HPX		●							●	●				●	
	HPS		●							●					●	
	HPT						●			●						●

If you have additional questions about pressure gauges or would like to discuss your unique requirements with one of our experts, please contact us today!

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