

The primary considerations in specifying or purchasing a pressure gauge are the accuracy required and the media to be used in its application. This corrosion chart has been prepared to assist you in the selection of the gauge material that is best for your installation requirement.

The media being measured must be compatible with the wetted parts of the pressure instrument. To use the chart below, locate the media whose pressure is to be measured and select a suitable material from those available. This is a simplified chart and assumes the media temperature is below 200°F except for media with an * which must be below 100°F. Throttling devices and/or a liquid filled

instrument are recommended in applications with pulsation or vibration. These recommendations are only a guide, as service life is dependent on temperature, concentrations, catalysts that may be added, or other conditions beyond our control. Consult customer service for specific applications and for any media not listed.

MEDIA APPLICATION	Pressure Instrument Material				
	Brass or bronze	Steel	316 SS	Monel	Diaphragm seals**
Acetone*	•		•	•	
Acetic Acid <40%			•		
Acetic Anhydride				•	
Acetylene (Dry)		•	•		
Acrolein 100%				•	
Air	•	•	•	•	
Alcohol, Ethyl	•		•	•	
Alum. Chloride >10%				•	
Alum. Sulfate 10-50%				•	
Ammonia Gas (Dry)		•	•		
Ammonium Chloride <40%				•	
Ammonium Nitrate <50%			•		
Ammonium Sulfate <60%				•	
Aniline>99%			•		
Argon	•	•	•	•	
Beer			•		
Benzidine >99%				•	
Benzene <50%			•	•	
Benzoic Acid <70%				•	
Boric Acid <25%			•		
Bromine (Dry)				•	
Butane	•	•	•	•	
Butyric Acid <10%				•	
Calcium Chloride <80%				•	
Calcium Hydroxide <50%				•	
Carbon Dioxide	•	•	•	•	
Carbon Monoxide (Dry) >99%	•		•	•	
Chlorine (Dry)				•	
Chlorine (Moist)				•	
Chloroform (Dry)			•	•	
Chromic Acid				•	
Citric Acid 10-50%			•		
Corn Oil			•		

MEDIA APPLICATION	Pressure Instrument Material				
	Brass or bronze	Steel	316 SS	Monel	Diaphragm seals**
Crude Oil (Sour)				•	
Crude Oil (Sweet)			•	•	
Ethyl Acetate	•		•	•	
Ethylene Oxide >99%*	•		•	•	
Ferric Chloride <40%				•	
Ferric Sulfate <10%			•		
Ferrous Chloride <30%				•	
Ferrous Sulfate <50%				•	
Fluorine Gas (Dry) No Air				•	
Formaldehyde <95%			•	•	
Formic Acid*				•	
Freons		•	•		
Furfural <10%				•	
Gasoline (Flowing)	•		•		
Glycerin >99%	•	•	•	•	
Hydrobromic Acid				•	
Hydrochloric Acid				•	
Hydrofluoric Acid				•	
Hydrofluosilic Acid				•	
Hydrogen ⁽²⁾	•		•		
Hydrogen Peroxide <50%				•	
Kerosene	•	•	•	•	
Lactic Acid <70%*(2)			•		
Magnesium Chloride <40%				•	
Mercury >99%			•		
Milk				•	
Naphtha >99%	•	•	•	•	
Naphthalene >99%			•	•	
Nickel Chloride >99%				•	
Nitric Acid <95%*			•		
Nitrogen	•	•	•	•	
Oleic Acid	•			•	
Oxalic Acid*				•	

MEDIA APPLICATION	Pressure Instrument Material				
	Brass or bronze	Steel	316 SS	Monel	Diaphragm seals**
Oxygen (Gas) ⁽¹⁾	•		•	•	
Palmitic Acid >99%*			•		
Phosphoric Acid <80%*			•		
Picric Acid <10%			•		
Propane (Dry) DOT Quality	•	•	•	•	
Sea Water (Flowing)				•	
Silver Nitrate <70%				•	
Sodium Bicarbonate <20%			•	•	
Sodium Bisulfate <30%				•	
Sodium Carbonate <40%			•	•	
Sodium Chromate <60%	•	•	•	•	
Sodium Cyanide*		•	•		
Sodium Hydroxide < 40%				•	
Sodium Hypochlorite <25%				•	
Sodium Phosphate, Tri <60%		•	•	•	
Sodium Silicate <50%		•	•	•	
Sodium Sulfide <50%				•	
Stannous Chloride <10%				•	
Steam (Use siphon)	•	•	•	•	
Stearic Acid			•		
Sulfur Dioxide (Dry) >99%				•	
Sulfur Trioxide (Dry) >99%				•	
Sulfuric Acid				•	
Tannic Acid <80%		•	•	•	
Tartaric Acid <50%			•	•	
Tin Chloride (ous) <10%				•	
Toluene >99%	•	•	•	•	
Turpentine >98%	•	•	•	•	
Water (tap)	•	•	•	•	
Whiskey			•		
Zinc Chloride <25%*				•	
Zinc Sulphate <40%				•	

(1) Monel and 316 stainless steel are acceptable for oxygen service, provided the instrument has been cleaned for service and is free from oil. Order variation X6B.

(2) Over 1000 psi-entire system must be 316 stainless steel.

*Media temperature must be below 100°F.

**Any standard Bourdon tube or bellows material may be used in conjunction with a diaphragm seal (with bellows use a Viton or Kalrez diaphragm), but the gauge selection should take into consideration the corrosive environment in which it is to operate.

Table revised June 1st, 2005