Material Compatibility Guidelines

Blower Material By Gas Type		
Gas	**Blower Material***	**Special Comments**
Acetic Acid	304SS	
Ammonia	CS	If moisture is present, no copper alloys are used.
Argon	STD	
Benzene	STD	
Butane	STD	
Carbon Dioxide	STD	If moisture is present, 304SS is recommended.
Carbon Tetrachloride	CS	Corrosive to aluminum.
Chlorine	Hastelloy® or Inconel®	Very corrosive when wet; CS is acceptable for anhydrous chlorine
Coke Oven Gas	304SS	Corrosive with sulfur; Monel wearplate is recommended for non-sparking construction.
Compost Fumes	304SS	
Digester Gas	304SS	Anodized aluminum impellers are recommended.
Ethane	STD	
Ethanol	304SS	
Flue Gas	304SS	Corrosive with sulfur, otherwise CS is acceptable.
Fluorine	Hastelloy or Inconel	Very corrosive when wet; CS is acceptable for anhydrous fluorine.
Gasoline Vapor	CF	AMCA spark-resistant design is recommended.
Helium	STD	
Hexane	STD	
Hydrochloric Acid	Hastelloy or Inconel	Very corrosive.
Hydrogen	CF	
Hydrogen Sulfide	304SS	Corrosive in concentrations above 10%. If moisture is present, 316SS is recommended.
Krypton	STD	
Landfill Gas	304SS	
Methane	STD	
Methanol	CS or 304SS	
Natural Gas	STD	
Nitric Acid	316SS	Very corrosive.
Nitrogen	STD	
Nitric Oxide	STD	If moisture is present, 304SS is recommended.
Oxygen	Monel and 304SS	AMCA spark-resistant design is recommended.
Pentane	STD	
Phenol	CS	Corrosive to aluminum.
Propane	STD	
Saturated Air	STD	
Sludge Gas	STD	If water vapor or H_2S is present, 304SS is recommended.
Sodium Hydroxide	Hastelloy	Very corrosive.
Styrene	STD	
Sulfur Dioxide	316SS	Corrosive.
Sulfur Hexafluoride	STD	
Steam	STD or 304SS	
Toluene	STD	

*STD = Standard construction with carbon steel casing, aluminum impellers. CS = carbon steel. CF = consult factory.

Material selections cited here assume ambient temperature operation. Elevated temperatures or impurities in the gas stream can affect material selection, as can the presence of adverse factors such as high pressures, high temperatures and corrosive conditions in combination. Testing under actual service conditions is advisable to establish suitability for a given purpose. Final selection of the materials of construction is the user's responsibility; user accepts all risk and liability in connection with material selection.