

Mid-West[®] Instrument

“Diaphragm Type”

Differential Pressure Gauges for Ammonia Service Application

When it comes to tough application solutions Mid-West Instrument provides the answer!!



Model 130
Range 0-5" H2O

The Use of Differential Pressure gauges for Ammonia service in PowerGen emission control is a critical application. The use of special materials along with over 7 years of ammonia service experience has enabled our customers to have confidence that we provide a quality gauge that works not only at start up but for years to come in this harsh environment. Mid-West Instrument has optimized the internal wetted parts as well as the external parts to hold up to the rigors of this environment. We have optimized the design to improve removal of condensate from the system. Silicone and Ethylene Propylene elastomers are highly recommended in Ammonia service especially at elevated temperatures.

Model 130 Polysulfone or Stainless Steel is ideally suited for Ammonia service applications. Magnetic coupling between the sensing element and the indicating pointer provides for complete isolation of the process fluid within the pressure capsule. The Model 130 also has Over-range protection to full rated working pressure.

Model	Accuracy	Min. ΔP Range	Max. ΔP Range	Safe Working Pressure PSIG (Bar)	Optional Switches
130	±2% or *5%	0-5" H2O (0-12.4 mbar)	0-400" H2O (0-1 bar)	*300 (20) **500 (34)	1 or 2
* ±5% Range 0-5" to 0-9.9" H2O			* PolySulfone Engineered Plastic **Stainless Steel		
(Optional Switches available on Stainless Steel body only.)					
Body Materials		Glass Reinforced Polysulfone Engineered Plastic or 316 Stainless steel			
Seal & Diaphragm (under 20" H2O)		Silicone Diaphragm & Ethylene Propylene Seals			
Seal & Diaphragm (over 20" H2O)		Ethylene Propylene Diaphragm & Seals			
Wetted Parts		Body material & 316L Stainless Steel internal metal parts			
Process Connections		1/4" FNPT S.S. Adapters (Polysulfone Body)			
Process Connections		1/2" FNPT S.S. Adapters (316 Stainless Steel Body)			
Mounting		Panel Mount (Std.) Pipe Mount Optional			
Lens		Shatter Resistant Acrylic			
Gauge Front		4-1/2" Engineered Plastic (Ammonia Service Tested)			
Temperature Limits		-40°F to +200°F			

Contact Mid-West at 1-800-648-5778 for assistance with your Ammonia Service application.

SCR Post-Combustion NOx Control Model 130-PC or 130-SC

Nitrogen oxides (NOx) are a combustion by-product of fossil fuels burned to produce energy. NOx emissions are regulated under the Clean Air Act.

A Selective Catalytic Reduction System (SCR) is a post combustion technology used to reduce NOx emissions. Ammonia (NH3) is injected into the flue gas. This mixture flows through a catalyst bed where the NH3 and the NOx react to form nitrogen and water vapor.

Aqueous or anhydrous ammonia is pumped from a tank and sprayed into a vaporizer where it is heated and mixed with air. The ammonia-air mixture flows through a distribution manifold system into an injection grid. The injection grid distributes the mixture into the flue gas stream.

The amount of ammonia is adjusted to produce the desired degree of reaction with the NOx. Mid-West Instrument model 130-PC or 130-SC are used to balance the flow of the ammonia-air mixture throughout distribution manifold system. The model 130-PC or 130-SC are also used to monitor an ammonia filter prior to injection into the vaporizer.

