

Catalytic Convertor Integral Temperature Sensor Option

Ver. 1902

APPLICATION

The **Analytical Hydrocarbon Catalytic Convertor** is a catalytic convertor to eliminate fugitive emissions from analyzer vents and sample systems. Samples have historically been vented to flare headers which resulted in fluctuating backpressures and possible reflux into and through the analyzer. Backpressure fluctuations can produce thousands of dollars in lost performance due to analyzer calibration shifts. Reflux of process into the analyzer can result in expensive repairs and/or complete analyzer replacement.

Fugitive emissions from analyzers pose a problem from an environmental standpoint. By converting the hydrocarbons to CO₂ and water vapor, the emissions are eliminated.

The **Analytical Hydrocarbon Catalytic Convertor** heats the incoming sample to initialize a catalytic reaction. Should intermittent hydrocarbons be present in the sample or flow interruptions, the heating element will re-initialize the reaction.

Determining proper operation of the **Analytical Hydrocarbon Catalytic Convertor** unit may be monitored by an integral temperature sensor. Use of an integral temperature sensor eliminates ambient condition errors experienced with externally mounted sensing devices. The sensor will indicate functioning of the cartridge heater and operation of the catalyst, assuring complete destruction. Part Number 0455-310TCJ-120 or 0455-031TCK-120 replaces the existing heating element with one containing an integral Type J or K, respectively, thermocouple.

Temperature indications of 500-1200° F assure the heating element is operating in a normal range. Temperatures greater than the established

baseline indicate operation of the catalyst cartridge.

MTI Analytical Technology offers a retrofit for existing **Analytical Hydrocarbon Catalytic Convertor** units and an option to add an internal temperature sensor prior to delivery of new units. A type J or K thermocouple is provided within the heating element cartridge and terminates in the existing junction box of the **Analytical Hydrocarbon Catalytic Convertor**. Temperature indication may then be displayed locally or remotely.

Routine maintenance of the **Analytical Hydrocarbon Catalytic Convertor** requires periodic replacement of the catalyst cartridge. Cost of the cartridge is less than \$450 and is recommended on a twelve-month interval.

MTI Analytical Technology is available to assist with environmental and process monitoring applications. Design, engineering, fabrication, installation, and commissioning may be accomplished, thus assuring integrity and performance of component units.

MTI Analytical Technology Products

Analyzers
Electrochemical Sensors
Hydrocarbon Emission Eliminators
Packaged Analytical Systems
Sample Handling / Conditioning Devices

Call, Fax, or E-mail for Additional Information

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