How to Select an Oxidizer

Electric Catalytic or Gas? Which way do I go?

Catalytic Convertible Gas Oxidizers:

If the site has extremely high contaminate concentrations, the Gas Fired oxidization is the technology to use. PRM manufactures a line of Catalytic Convertible Gas fired thermal oxidizers. These units prove to be more reliable than others due to our plenum and combustion burner design. A typical gas fired oxidizer may only yield 98-99% destruction whereas a comparable PRM unit will typically offer >99.99% of destruction. The difference is our unique design that allows for a complete mixing of the inlet gases being directed into the burner. Most manufacturers rely on the ambient mixing in the body of the oxidizer to provide oxidation. The gases and air are heated to 1400° Fahrenheit and destruction occurs. With the PRM design, the inlet gases are heated to much higher temperatures at the exhaust of the burner. These temperatures are typically in excess of 3000° Fahrenheit. At these temperatures it is natural for increased oxidation to occur.

When in Catalytic mode, the Gas fired unit operates at peak performance, supplying superior oxidation. Catalytic units typically run with a combustion chamber temperature of 550° to 800° Fahrenheit. This reduced temperature yields much lower destruction efficiencies with competing units, because the Catalyst is doing all the work. With the PRM unit, the inlet gases are still exposed to the tremendous temperatures at the discharge of the burner which are typically in excess of 2000° Fahrenheit at this point. This allows for a majority of the oxidation of the gases to happen prior to final oxidization from the catalyst module. Results are extremely high levels of destruction.

PRM Gas oxidizers also offer the balanced control from a gas-ratio regulator driving the gas valve. Typical oxidizers have a gas valve controlled by the temperature in the oxidizer body. With the PRM unit, the gas valve is driven off of the combustion air blower operating pressures. What this means is that less gas is used, reducing operational costs.

Absolute Quality is our Goal... Genuine Service is our Habit.

PRM is a division of Phillips Electric Company of Durham, Inc.
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