

TECH NOTES

VB-TN-006

September 16

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Out with the OLD, in with the NEW **241UV and 242UV – Automatic Pilot Ignition System for 239A** **Vs.** **244WL Waste Gas Burner with Biogas Pilot Ignition System**

The 241UV and 242UV Series Automatic Pilot Ignition System used on the 239A Waste Gas Burner is no longer available. The following are the main reasons why these systems are now obsolete.

a. UV Scanner for Pilot flame Monitoring

The UV scanner is located in the flame area where it is subjected to high heat. High heat exposure can potentially damage the scanner or the cabling. The lens is also subjected to constant exposure to the products of combustion that may provide false readings.

b. Spark Plug

The spark plug is located at the burner tip and is exposed to the excessive heat of combustion. Most importantly, in a downdraft condition where low-pressure air covers the flame, pilot re-ignition is close to impossible because the spark plug is exposed to the downdraft. We have found through experience that there is no downdraft preventer, or baffle or vortex vanes that can prevent downdraft from occurring and potentially extinguishing the pilot flame.

c. Pilot Gas Piping

The pilot gas piping is parallel to the stack. At normal flow rates, establishing a flame is not a problem. However, at varying flow rates, the pilot gas will not mix with the waste gas to attain proper air-gas mixture (stoichiometric mixture).

The three factors mentioned above are really common problems with most burner designs currently in the market today. We took these three problem factors, and designed a burner that incorporated the sophisticated flamefront technology of the 244W Series Waste Gas Burner and added a feature - effective utilization of biogas for pilot fuel.

The newly designed 244WL Waste Gas Burner with a Low Pressure Pilot Ignition System can effectively run on biogas for pilot fuel as low as 4 inches of W.C.

The burner can also run on natural gas or propane if required. As a result, pilot gas consumption is minimized because only a minimum of 4-inch W.C. pressure is required.

The burner uses inspirating venturi and a blower to pre-mix air and gas. Ignition takes place remote from the stack and away from the heat of combustion through flamefront generation.

The burner also has a pilot nozzle located 45° off vertical to ensure that the pilot flame extends through the waste gas flow profile for automatic ignition regardless of the flow rate.

We eliminated the need for a secondary stack because the unprotected pilot can withstand 110-mph winds. The burner is also designed to handle 150-mph windloading.

Whenever there is a requirement for a 241UV or 242UV, we will offer the 244WL as a more superior alternative. Please consult your local sales representative; or the factory if additional information and pricing is required

