The Variflame II features COOLburn™ and COOLflame™, two breakthrough NOx-reduction techniques that join forces with TODD’s advanced burner design for remarkably clean, remarkably efficient combustion.

For package boiler applications with burner heat inputs up to 150 million Btu/hr, the Variflame II offers:
- Sub-30 ppm NOx on natural gas – without FGR or steam injection
- Less than 80 ppm NOx firing #2 oil with ultra-low atomizing steam usage and zero FGR
- Low CO, VOC and particulate emissions
- No moving parts for ultimate reliability – a standard feature on all TODD burners

COOL Combustion, Dynamic Performance

COOLburn™ uses the energy of incoming combustion air to entrain inert furnace gases and reduce burner emissions while firing gaseous or liquid fuels. This advantage makes the Variflame II an excellent choice for multi-fuel applications.
- Outstanding NOx reduction on gas and liquid fuels
- Compact flame patterns minimize furnace requirements
- Wide range of turndown ratios for maximum operating flexibility

COOLflame™ stages gas injection into the furnace, mixing a portion of the fuel with large quantities of high-temperature furnace gases prior to combustion. The diluted fuel and furnace-gas mixture limit the temperature rise resulting from the combustion process, significantly reducing the formation of thermal NOx.
- Controlled peak flame temperatures when firing gas fuels
- Increased burner stability at low-NOx levels
- Minimized CO and VOC formation

Experience, Resources, Technology, Commitment

Developed at our International Research and Development Test Center – the most sophisticated facility of its kind in the world – the Variflame II is a product of John Zink Company’s relentless commitment to problem solving, diverse specializations and outstanding technological achievements.

Our premier innovations, unrivaled resources and engineering expertise lead the industry in clean combustion with solutions designed to meet the toughest challenges – today and long into the future.

Find out today why TODD advanced burner systems are the industry’s choice for clean, economical combustion.
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- Superior flame stability over existing zero-FGR designs
- No increase in flame length over conventional low-NOx burners
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