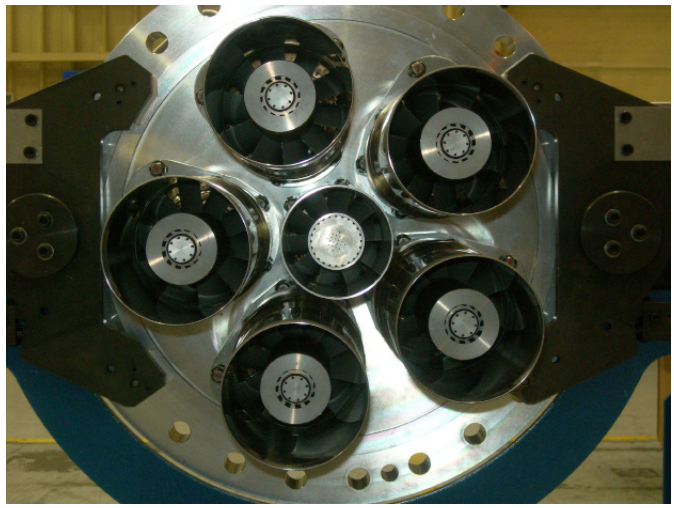
Dry Low NO_X 2.6+ Combustion System 9FA/9FB Gas Turbines

Evolving economic and regulatory requirements continue impacting the operational needs of today's gas turbines. Demand for renewable resources, operational flexibility, and higher fuel prices are driving increasing needs for cyclic operation. In addition to delivering lower NO_X and CO emissions performance, GE's Dry Low NO_X (DLN) 2.6+ combustion system is designed to expand operational flexibility so you can meet your power demand needs while reducing operational costs. The DLN 2.6+ combustion system is available for 9FA and 9FB gas turbines, including the 9FB.05 which shares the same combustor architecture.

DLN 2.6+ technology can broaden your operational flexibility by combining attributes of the DLN 2+ and DLN 2.6 combustion systems, resulting in a design with six fuel nozzles instead of five. This configuration allows for asymmetric fuel flow that provides additional control of the combustion system, and lower NO_X emissions; sub-15 ppm NO_X (30 mg/z) on 9FA units, 15 ppm NO_X (30 mg/Nm^3) on 9FB units (version .03), and 25 ppm NO_X (50 mg/Nm^3) on 9FB (version .05) units with potential to achieve 15 ppm NO_X (15 mg/Nm^3). This technology has accumulated more than 1,000,000 fired hours and 18,000 fired starts.

The DLN 2.6+ combustion system also serves as a foundation for additional solutions, including GE Energy's OpFlex* suite, an advanced controls platform designed to improve operational performance. The OpFlex AutoTune solution, for example, enables continuous, reliable turbine operation with up to +/-20% variation of Modified Wobbe Index (MWI) for 9FA and +/-10% variation of Modified Wobbe Index (MWI) for 9FB. Additionally, DLN 2.6+ technology helps enhance your availability to the grid by extending combustion inspection intervals to 24,000 hours or 900 starts.

With more than 75million hours of DLN operation, and over 23 million hours at or below 9 ppm NO_X, GE has the expertise to help you meet your emissions and broader operational objectives. The DLN 2.6+ combustion system is available with new 9FA or 9FB gas turbines, and can be installed during a combustion, hot gas path, or major inspection for existing units.



Benefits

- Turndown down to 35% of gas turbine load
- Satisfies increasingly stringent emission regulations
- Lower fuel costs, as much as $1.5 million per year, while maintaining emission compliance
- Reduced off-peak cycling requirements, resulting in fewer starts
- Faster dispatch capability
- Fuel flexibility for various fuel grades
- Increased availability through extended combustion inspection intervals of 24,000 hours or 900 starts
- Serves as a platform for adding OpFlex* advanced controls solutions
- Reduced startup emissions

Features

- Patented combustion system, more than 1,000,000 operating hours on more than 70 gas turbines
- Mark* Ve and Mark VI solutions
- Packaging and controls changes, including piping, manifold, and fuel skid redesigns; option for compliance to PED, ATEX, machinery safety, low voltage, and EMC European Union directives
- Enhanced combustion liner geometry and fuel nozzle
- Tuning valves, cloth seals, dynamics reduction, and flame stability technologies contribute to the reduction of can-to-can variation and combustion dynamics
- Field tunable by controlling the fuel split to the combustion zones
- Continuous dynamics monitoring and remote DLN tuning

Applicability

This upgrade offering is available for all 9FA and 9FB gas turbines equipped with DLN 2.0 or DLN 2+ combustion systems, and on new 9FA and 9FB gas turbines. The DLN 2.6+ combustion system can be configured to burn either natural gas only, or as a dual fuel system capable of burning either natural gas or distillate oil.

To learn more about this offering, contact your GE sales representative or visit **powergen.gepower.com.**

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fact sheet