

# Gemini® Nozzle

for improved utility boiler cleaning

Diamond Power's Gemini® nozzle, designed specifically for utility boiler applications, outperforms other nozzle designs with its patented, cast body and staggered jets. Engineered to reduce steam consumption and increase cleaning energy up to 29% (compared to alternative designs), the Gemini® nozzle offers Diamond Power's best available technology.

## Design Benefits

The Gemini® sootblower nozzle dramatically enhances cleaning performance while significantly reducing operation and maintenance costs as well as steam consumption. Diamond Power's experienced engineers and sales representatives can assist you in calculating the steam savings and economic payback of installing Gemini sootblower nozzles.

The Gemini sootblower nozzle's unique design:

- Improves cleaning effectiveness by up to 29% due to innovative internal flow path of two high-performance nozzle jets
- Provides equal cleaning distribution thereby reducing the potential for sootblower-induced boiler tube erosion by approximately 60%
- Increases average impact energy delivered by the two nozzle jets at any given steam supply pressure



***The Gemini® sootblower nozzle has a cast body with staggered nozzle jets to ensure the most effective cleaning path.***

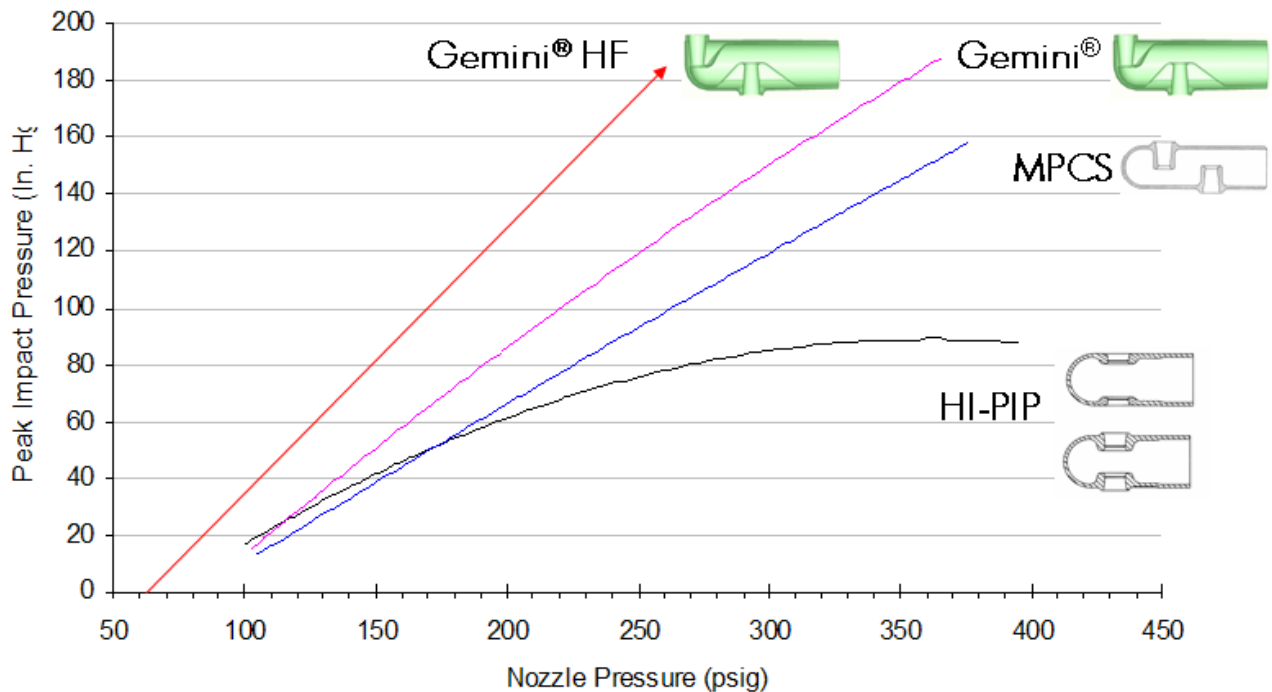


***Gemini® sootblower nozzle (cutaway side-view)***

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## Comparing Average Performance of Various Design Nozzle Designs



**Compares peak impact pressure (PIP) of the Gemini® Sootblower Nozzle, and the Gemini® Low Pressure Sootblower Nozzle, to previous Diamond Power high performance nozzles. The result is better cleaning at a wide-range of supply pressures.**

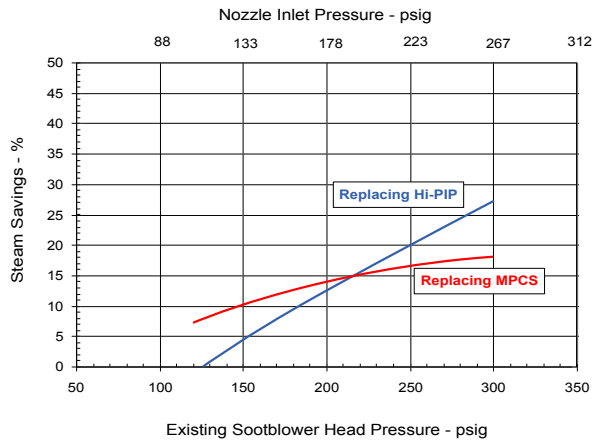
## Applications

The family of Gemini® nozzles includes a variety of configurations that have been developed for specific utility boiler applications. These include:

- Minimization of Cleaning Fluid Consumption for Air Applications
- Cleaning Between Platens and Pendants
- Lane Cleaning
- Cleaning at Lower Velocities to Minimize Tube Erosion
- Maximum Cleaning Efficiency for Applications Requiring High Cooling Flow (Gemini® HF)

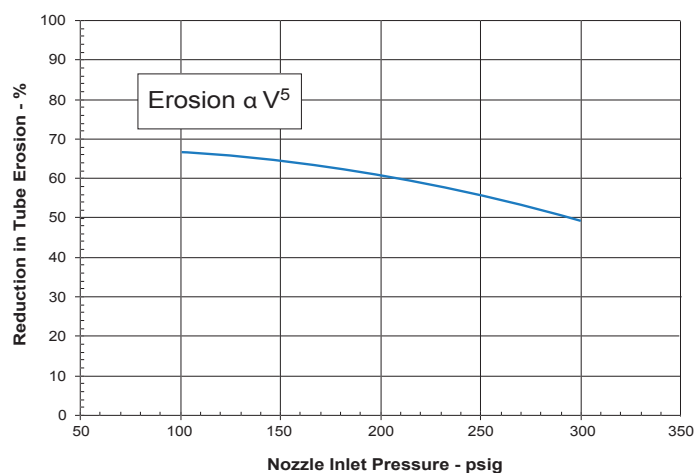
Diamond Power's experienced engineers and field representatives are available to assist you in determining the right nozzle for your application, calculating the cleaning benefit and economic payback of installing Gemini® sootblower nozzles.

## Relative Steam Savings from Upgrading to Gemini® Nozzle



**Illustrates steam reduction and related savings by converting from previous nozzles to the Gemini® Sootblower Nozzle.**

## Potential Reduction in Tube Erosion by Using Gemini® Sootblower Nozzle vs. MPCS



**Demonstrates how equal cleaning from Gemini® Sootblower Nozzle jets results in reduced boiler tube erosion.**

Diamond Power International, Inc. is the leading name in the design, manufacture and service of ash-handling and boiler-cleaning systems, knowledge-based control systems, and boiler diagnostic, sensor and imaging technology. For more information, visit [www.diamondpower.com](http://www.diamondpower.com).

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