



Press release – Milan, September 10th, 2025

ITAS Invistableflame: Fives' new game-changer flameless burner for low emission combustion

At Gastech 2025, Fives, a worldwide leader in industrial combustion, unveiled ITAS Invistableflame — a breakthrough flameless burner designed for ultra-low NOx emissions. Hydrogen proven, Fives' innovation sets a new benchmark in emissions control, safety, and flexible combustion.

A new solution for decarbonization and environmental regulations

As industries face mounting pressure to decarbonize and comply with stricter NOx regulations, Fives delivers a solution that goes one step beyond. ITAS Invistableflame has been developed, tested and validated at the Fives European Combustion Centre, one of Europe's largest R&D centers for industrial combustion.

The results demonstrated **a reduction of up to 30% in NOx emissions compared to conventional low NOx burners**, along with **unmatched fuel flexibility regarding fuel mix**—from 100% natural gas to 100% hydrogen—and **improved operational safety**. Further developments are ongoing to enhance these initial results.

Compact, efficient, retrofit-ready

With its integrated design combining ignition and operation in a single compact unit, **ITAS Invistableflame is ideal for upgrading existing installations. It significantly lowers installation and maintenance costs** and is perfectly suited for steam methane reformers (SMRs), ethylene cracking furnaces, and other process heaters operating at high temperatures.

Patented technology, now on the market

"This burner reflects Fives group commitment to sustainable innovation," said Francesco Giudici, CEO of Fives ITAS in Monza, Italy. "We are proud to bring this patented and unique technology—recognized by the 2024 Fives Innovation Awards—to market and look forward to its first industrial applications."

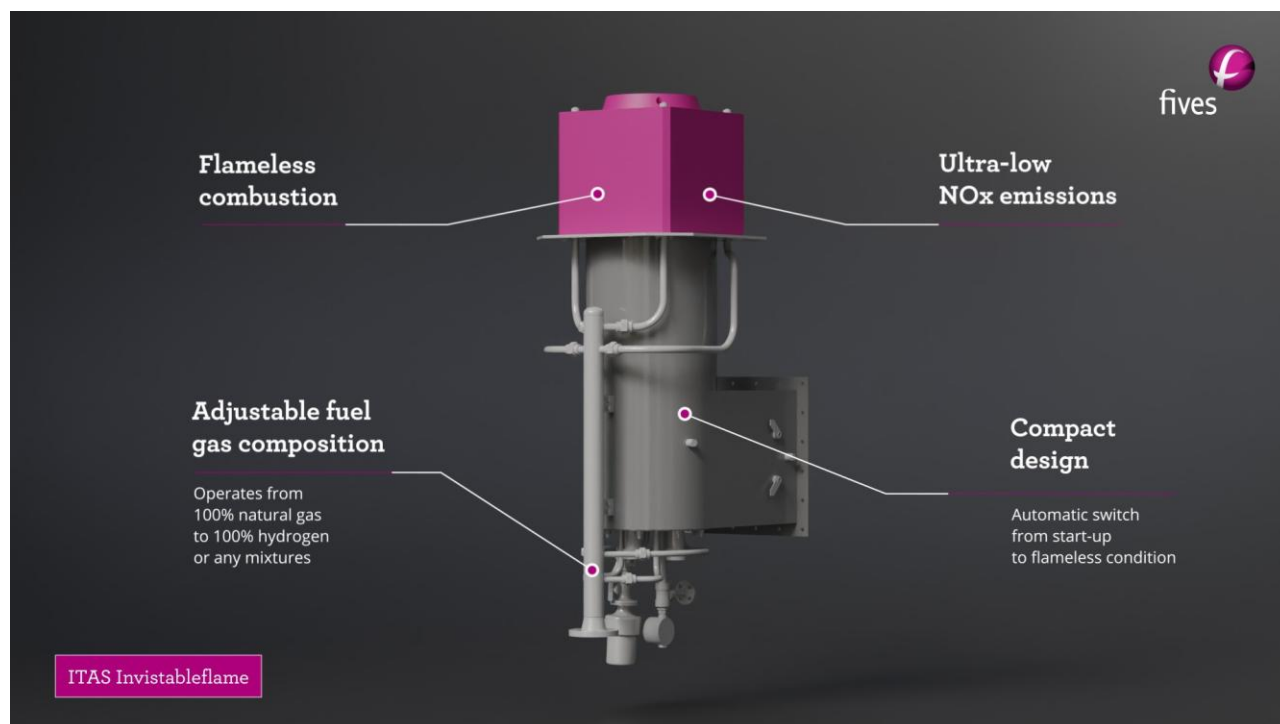
ITAS Invistableflame is now available across Europe, Asia, and North America—providing SMRs and heating processes the right solution to move toward a more sustainable, efficient and safer industry.

Discover ITAS Invistableflame in [video](#).

Technical features:

- **Seamless fuel switching** from up to 100% natural gas to 100% hydrogen and other fuels with one gas circuit
- **Automatic transition** from startup to flameless combustion mode
- **Compact design** eliminating the need for mechanical switches or dual-burner setups
- **Future compatibility** with CCS-based SMR processes
- **UV flame detection** for enhanced safety in all conditions

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©Fives: ITAS Invistableflame, Fives' new patented burner for a flameless and low emission combustion

Fives, your partner for a more efficient and virtuous industry

From the first railway lines to the Eiffel Tower lifts and factory 4.0, for over 200 years Fives has been designing the disruptive solutions and technologies that make up industry. As a pioneer of decarbonization and digitalization, Fives is always one innovation ahead thanks to its ability to anticipate customer needs. By responding to the specificities of each market locally, Fives combines economic and environmental performance in 25 countries thanks to its 9,200 employees.

The Energy | Combustion Business Unit of Fives, under the renowned names ITAS, North American and Pillard®, designs, supplies and manufactures customized burners, combustion systems, and controls for furnaces, flares, and boilers. Fives' offer also includes maintenance services, process optimization and reduction of environmental footprint.

More information: www.fivesgroup.com

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