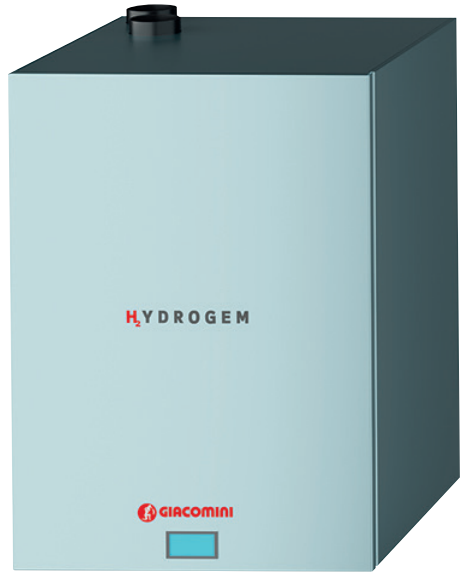
H_2ydroGEM

GIACOMINI
WATER E-MOTION

EH2025 ↻ 02/2025

Hydrogen heat generator for heating and hot domestic water production



Thanks to a patented catalytic process, the prototype Giacomini **H_2ydroGEM Generation 5** uses hydrogen to generate heating and hot domestic water without producing in the process any harmful substance like CO_2 or NO_x. The latest evolution of H_2ydroGEM has been designed to decarbonize existing buildings without the need of major renovations, as it is capable of supplying existing high temperature heating systems with high efficiency and limited cost. Furthermore, the catalytic process is flameless and, therefore, intrinsically safe.

Main features

- Flame-free catalytic reaction, 300 °C
- High or low-temperature heating
- Instant hot domestic water production
- Patented exhaust steam recirculation system
- Exhaust fumes (steam) free of greenhouse gases (CO_2 and NO_x)

Why choose Hydrogen?

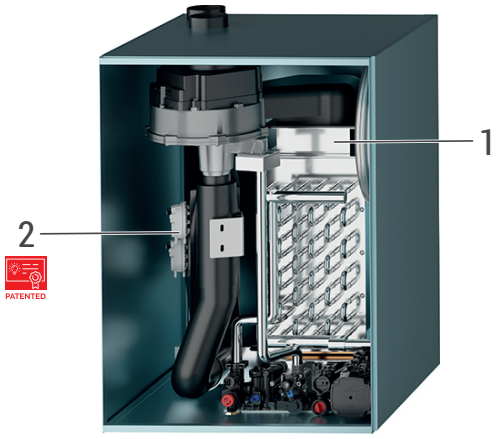
- Zero emissions (no CO_2 and no NO_x)
- Optimizes electrical demand and integrates with renewable energy sources
- Suitable for minimally invasive renovations

VIDEO
Scan the QR code with your smartphone or tablet to view the video.

Operation

A	Air
S	Exhaust fumes (steam) free of greenhouse gases
H_2	Hydrogen
	High or Low temperature heating - supply
	High or Low temperature heating - return
	Hot domestic water
	Cold domestic water

Components



1	Flame-free catalytic reaction
2	Patented exhaust fumes recirculation system (steam)

Our milestones: decades-long R&D experience

2005
Kick-off R&D

2012
Evolution to single-channel solution

2017
Partnership with Solenco Power

2023
Partnership with Hylife Innovations for Innovahub District

2024
First prototype for series production H_2ydroGEM 5

2025
Installation in pilot projects

2006
Presentation at the Turin Olympics

2016
EU-funded BIG H_2IT project

2022
R&D agreement with Politecnico di Milano

2023
First prototype H_2ydroGEM 5

2024
IHTA Award "Innovation in the Application Field"

2025
Start of pre-series production Generation 5

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