



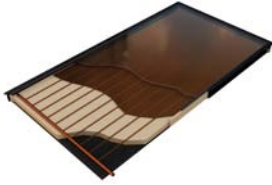
GIACOMINI SYSTEMS
THE COMFORTABLE
AND SUSTAINABLE HOME

GIACOMINI 
Technology in Comfort

1 Hydrogen catalytic burner



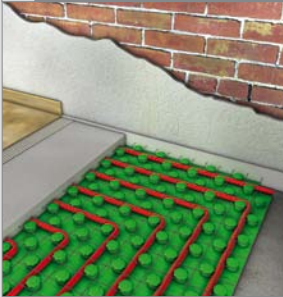
2 Solar thermal system



3 Heating and cooling radiant walls



4 Heating and cooling underfloor system



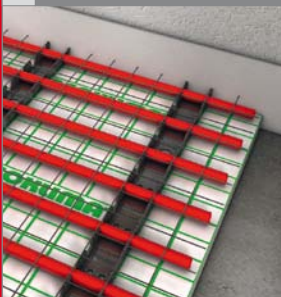
5 Bus technology heating and cooling control system



6 Distribution manifolds for radiant floor and wall

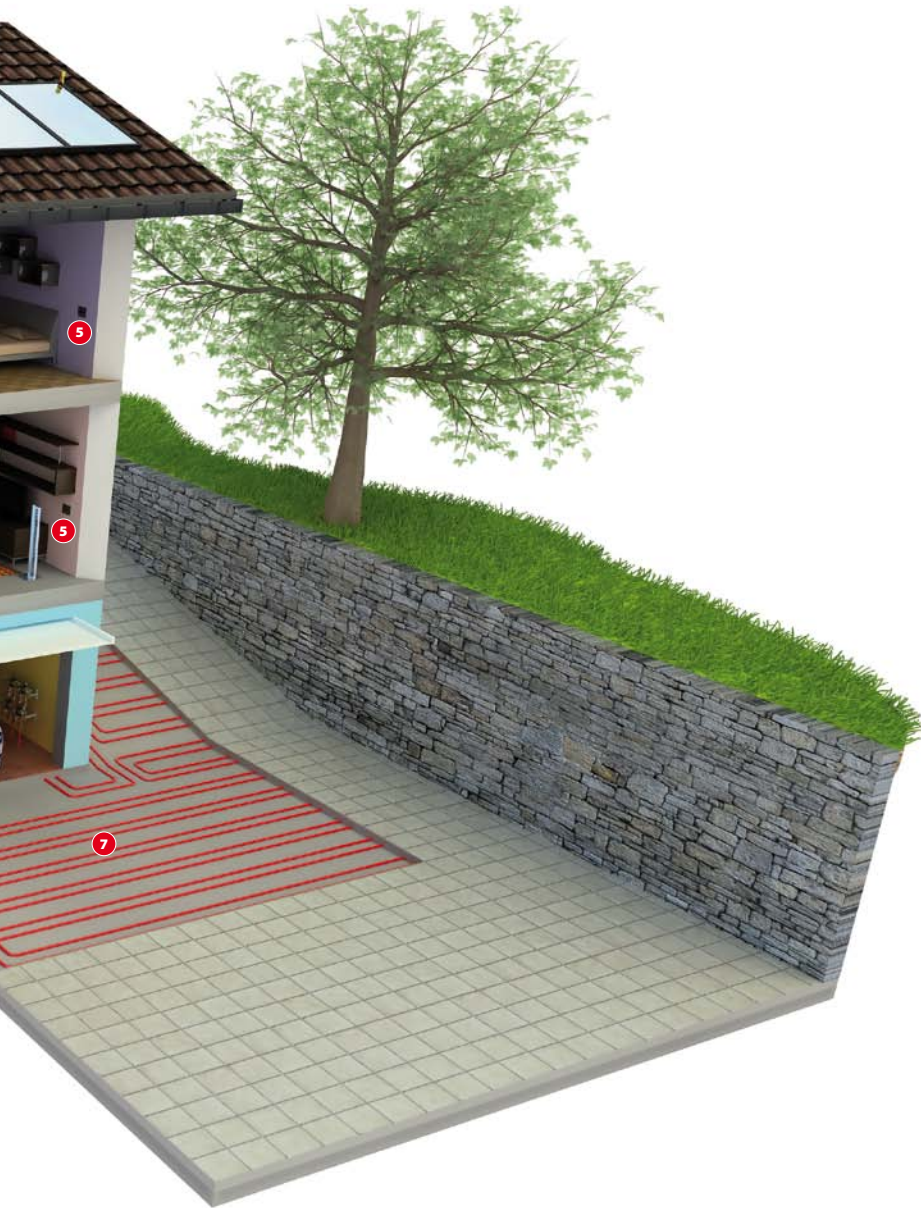


7 Snow melting system

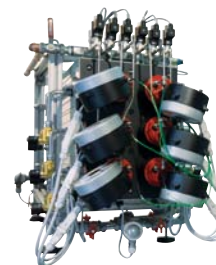


8 Distribution manifolds for geothermal application





H₂ydrogem® is the innovative catalytic burner that allows producing thermal energy totally fossil-fuel free.



H₂ydrogem® is the result of R&D activity by Giacomini aimed at creating a ZERO EMISSION heating cycle for the building. H₂ydrogem® uses just hydrogen, produced with renewable sources, and air taken from the atmosphere to produce the heat needed to heat the zones of the home.

WHY HYDROGEN?

Hydrogen is a CLEAN and revolutionary ENERGY VECTOR, with quite UNRESTRICTED AVAILABILITY that in the future will help releasing the world from dependency on fossil fuels, with huge benefits for planet's environment and climate. Through an electrolyser, hydrogen can be produced wherever water and electric power are available. The molecule of water is broken down in its two constituting elements: hydrogen (H₂) and oxygen (O₂). The produced hydrogen is sent to the catalytic burner directly or through an intermediate storage, whereas oxygen can be stored for other uses.

HOW DOES IT WORK?

For its operation, H₂ydrogem® uses a catalytic reaction so it is a thermal generator WITHOUT FLAME. H₂ydrogem® is available in different sizes: with 1, 2, 3 or 6 channels according to the thermal energy needs. H₂ydrogem® is MODULAR: channels are independent. In each channel a catalyser allows hydrogen and oxygen to combine in a molecule of water, simultaneously releasing heat. Heat produced by the reaction is removed by a heat exchanger embedded in the burner. The water temperature is between 35 and 40°C, IDEAL to feed LOW TEMPERATURE heating systems such as radiant floor wall or ceiling panels. The absence of carbon in reagents determines a reaction WITHOUT CO₂ EMISSIONS, whereas low combustion temperature (300-350°C) AVOIDS THE FORMATION OF NO_x. The only other product of the reaction is simple steam that can be released in the atmosphere without risks.

PATENT PENDING

 TRUEMADE IN ITALY

GIACOMINI 
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