PRM and PRG

THE NEW REVERSIBLE HEAT PUMPS WITH NATURAL REFRIGERANT R290

In recent years, the evolution in the use of refrigerants in heat pumps has required a constant commitment to research and development of more environmentally friendly solutions. The new F-Gas Regulation update now requires, in a phased manner by 2030, the use of low and ultra-low GWP refrigerants for all heat pumps.

The propane gas R290, the natural refrigerant par excellence, seems to meet these requirements perfectly. In addition, its use allows heat pumps to work better than those using traditional refrigerants, making the air-conditioning and DHW production system even more environmentally friendly, but it requires special precautions in its use to ensure maximum safety.

Aermec, which has always been at the forefront of environmental protection, wanted to anticipate the times required by the new regulation, designing and developing in its Design Centre and state-of-the-art Laboratories, the new PRM and PRG series reversible heat pumps.
Both series safely use the natural refrigerant R290 (propane) with ultra-low direct greenhouse effect (GWP = 3); the dual cooling circuit design allows for extremely low refrigerant content in each circuit (3.8 kg per circuit), which guarantees suitability for all applications according to EN378-1.

PRM, THE SERIES WITH MODULAR DESIGN

PRM, available in one size of 100 kW nominal heating capacity, was developed with a modular architecture.

The presence of optimised tandem scroll compressors and the special architecture of the cooling circuit with regenerative exchanger allow high seasonal efficiency.

Thanks to its modular hydronic manifolds and advanced regulation and safety functions, the PRM heat pump can be easily connected in parallel with other identical units to form a thermo-cooling control unit capable of serving systems of all sizes.

PRG, SUITABLE FOR YEAR-ROUND AIR-CONDITIONING OF ALL ROOMS

The PRG series reversible heat pump, available in different sizes in a power range from 50 kW to 145 kW, is suitable for year-round air-conditioning of all rooms.

As with the modular PRM version, Aermec has opted for R290-optimised scroll compressors and tandem and trio connection on each circuit to achieve the highest average seasonal efficiency.

PRG and PRM, in all sizes and versions, are suitable for use on hydronic systems serving rooms with any occupancy profile due to their low refrigerant content per cooling circuit (<5 kg/circuit), in accordance with EN 378-1.

PRM and PRG are characterised by high operating limits, producing water up to 75°C.

All sizes of both series are equipped with an electronic valve, internal leak detector, double safety valves with exchange isolation valve and robust protection grids as standard.

Find out more about PRM

Find out more about PRG

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