

GEMINI N HP

R290

Modular air-sourced heat pumps with Inverter scroll compressors
Nominal cooling capacity 62 - 125 kW
Nominal heating capacity 48 - 98 kW



Conditioning your ambient,
maximising your comfort.



GEMINI N HP

GEMINI N HP is a modular air-sourced heat pump designed with full inverter scroll technology, available in 4 sizes. Its modular architecture support his heating capacities that extend beyond 700 kW.

Built to perform in every climate

Hot water production up to 77°C, GEMINI N HP operates reliably in demanding climates with continuous performance down to -20°C and up to 45°C ambient, making it ideal for both new installations and boiler-replacement retrofits.

Efficiency that sets a new benchmark

Delivers top-tier seasonal efficiency in both heating and cooling, with SCOP values up to 4.5, powered by full inverter scroll technology and the thermodynamic strength of R290 to ensure low operating costs and sustainable performance.

Safety-forward design

Features a comprehensive safety pack based on MTA's SDS2E approach (Segregate, Detect, Stop, Signal, and Extract), including ATEX-certified leak management and safety relief valves. The optional integrated gas/water separator offers a unique solution by detecting and isolating leaks in the event of a BPHE failure. In parallel, the interlock system enhances protection in side-by-side modular installations.



LEAVING HOT WATER TEMPERATURE

Extended operating map delivering hot water up to 77°C and ensuring reliable performance down to -20°C.



QUIET OPERATION

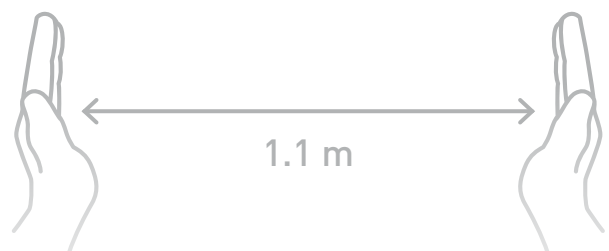
4 noise level versions to match most demanding applications.

EXTENDABLE RANGE

Scalable design allowing up to six units to be connected and managed through a single multi-manager controller.

COMPACT: JUST 1.1 METER WIDE

Compact, maneuverable units that easily fit through standard doorways and elevators, ideal for replacement projects or tight installation spaces.



Standard features

- Single inverter scroll compressor on sizes 018-023; 2 inverter scroll compressors in 2 independent circuits on sizes 030-035;
- EC Axial fans;
- Condenser coils with seamless copper tubes and aluminium fins;
- Water side plate heat exchanger with antifreeze protection electric heater;
- Microprocessor;
- Electronic expansion valve;
- ATEX certified leak detector and ventilation fan.

Options

- Water pump (single or double) with or without inverter;
- Buffer water tank (not available on size 018);
- Four sound power level versions;
- Protective coating on coils;
- Integrated gas/water separator;
- Protective grill on coils.

Kits

- Antivibration kit
- Modularity kit (up to 6 units)
- Interlock safety kit (up to 6 units)
- Victaulic kit

MODULAR PLATFORM ENGINEERED FOR GROWTH

Built on a fully modular platform, GEMINI N HP allows fast hydraulic connection and streamlined electronic control in banks of up to six units, delivering heating capacity up to 750 kW. The compact, easy-to-transport design simplifies installation and enables capacity to be added over time as building requirements evolve. Its side-by-side configuration minimizes site space, while the low refrigerant charge per circuit enhances both safety and environmental responsibility.

SAFETY INTERLOCK KIT

External electromechanical interlock links the leak-detection systems and ensures safety is enhanced for side-by-side installation

INDEPENDENT connection

ENHANCED system safety

ULTIMATE MODULARITY

Scalable up to 750 kW heating capacity



Flexible investment

GEMINI system can be extended on the installation site in terms of time and required features when necessary, by planning investment more flexibly.

Centralised system

For modular applications it is mandatory to select the Multi-Manager option, a centralized system that allows to manage by means of a single controller, the main functions and operating modes of a group of hydronic units in modular configuration.

Quick and easy water connections

The installation of units in modular configuration is facilitated by the new hydraulic connection kit which allows an easy and quick connection of the individual modules.

General technical data

Model		018	023	030	035
Cooling (1)					
Cooling capacity ▼	kW	48,7	63,84	81,27	97,81
Total power input ▼	kW	18,73	22,93	31,37	37,52
EER ▼		2,6	2,78	2,59	2,61
Water flow	m ³ /h	8,37	10,97	13,96	16,81
Water pressure drop	kPa	17,8	13,3	22	22,4
Heating (2)					
Heating capacity ▼	kW	62,86	82,5	104,9	125,2
Total power input ▼	kW	19,55	25,23	33,59	39,18
COP ▼		3,22	3,27	3,12	3,2
Water flow	m ³ /h	10,9	14,31	18,2	21,72
Water pressure drop	kPa	24,7	19,3	32,4	32,4
Heating (3)					
ns,h Seasonal space heating energy efficiency ▼	%	176,7	166,8	164,4	172,1
SCOP ▼		4,49	4,24	4,19	4,38
Efficiency class		A+++	A++	A++	A++
Number of refrigerant circuits	n	1	1	2	2
Number of compressors	n	1	1	2	2
Type of compressors		scroll			
Type of unloading		Inverter			
Refrigerant	-	R290			
Fans number	n	1	2	2	2
Sound power (4) ▼	dB(A)	87,4	88,1	90,7	90,4
Sound power (4) XXLN ▼	dB(A)	84,2	85	87,3	87,2
Electrical power supply		400/3/50			
Length (5)	mm	2145	2778	3763	3763
Width (5)	mm	1160	1160	1160	1160
Height (5)	mm	2440	2440	2440	2440
Shipping weight (5)	kg	615	700	1220	1250

Data declared according to UNI EN 14511, and they refer to units without options which require an electrical feeding source and in nominal working conditions

- (1) Evaporator water inlet/outlet temperature 12/7 °C, external air temperature 35 °C;
- (2) Outdoor temperature 7°C - 90% U.R. - hot water temperature in/out 40/45°C). Technical data in accordance to EN 14511;
- (3) Ecodesign rating at low temperature conditions. Outdoor temperature: 7°C dry bulb/6°C wet bulb and hot water temperature in/out: 30°C/35°C. ns,h / SCOP as defined in Directive 2009/125/EC of the European Parliament and of the Council with regard to Ecodesign requirements for Space heaters and combination heaters with Prated < 400kW - COMMISSION REGULATION (EU) N° 813/2013 of 2 August 2013.
- (4) Sound power level in cooling, in compliance with ISO 9614 for Eurovent certified units;
- (5) Please refer to dimensional drawings for extra dimensions and extra weights for hydraulic versions. Dimensional data and weight may change. For further information please contact our sales office.

▼ Eurovent certified data.



MTA is ISO9001 certified, a sign of its commitment to complete customer satisfaction.



MTA products comply with European safety directives, as recognised by the CE symbol.



MTA participates in the E.C.C. programme for LCP-HP. Certified products are listed on: www.eurovent-certification.com Certification applied to the units:
- Air/Water up to 600 kW
- Water/Water up to 1500 kW

www.mta-it.com

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