



GEMINI G HP

Air source heat pumps featuring hermetic scroll compressors

Nominal cooling capacity 49,8 – 116 kW

Nominal heating capacity 54,6 – 130 kW



R454B



*Conditioning your ambient,
maximising your comfort.*



THE SCALABLE SOLUTION: HIGH EFFICIENCY, MAXIMUM FLEXIBILITY

GEMINI G HP is the new MTA heat pump range designed to always meet the requirements of air conditioning applications, combining high efficiency with multiple customization possibilities and easy installation.

GEMINI G HP's modularity provides maximum configuration flexibility, even when capacity extension is required, minimizing the risk of plant downtime.

VERSIONS

Basic version

H Heat Pump

Energy version (1)

D Desuperheater (partial recovery)

Acoustic versions (1)

L Low noise with compressors sound jackets

S Super low noise with enhanced sound jacket for compressors

Hydraulic versions (1)

B/M/A Hydraulic kit including 1 or 2 pumps (ON-OFF or Inverter driven), with low (B) or high (A) available head pressure

Hydraulic versions with water tank (1)

SB/SA - XB/XA Hydraulic kit including N.1 (S) or N.2 (X) pumps (ON-OFF or Inverter driven), with low (B) or high (A) available head pressure, expansion vessel and 120 l buffer tank

(1) TO BE COMBINED WITH BASIC VERSIONS

LOW GWP REFRIGERANT R454B

- F-GAS phase-down compatible;
- Composition 69% R32 + 31% R1234yf;
- A2L low-toxicity, mildly flammable (ISO 817);
- Non-Ozone depleting.



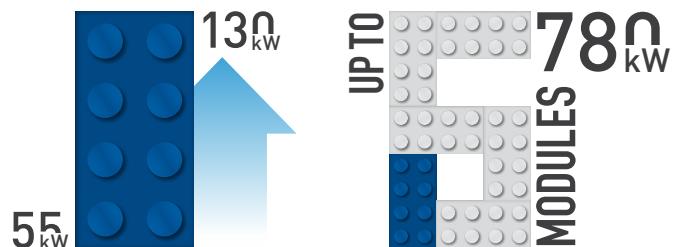
LEAVING HOT WATER TEMPERATURE

Large operating map to address specific design criteria of applications such as hospitals, office buildings, larger apartment buildings, warehouses and industrial applications. Leaving hot water temperatures up to +60 °C. Also available a 3-way valve (optional) for hot sanitary water production.



EXTENDABLE RANGE

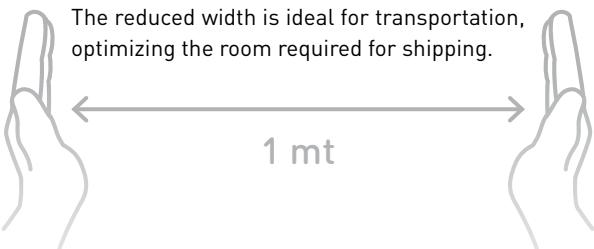
GEMINI heat pumps are available in 10 sizes to cover any thermal load request up to 130 kW with a single unit. The range is extendable combining up to 6 modules reaching up to 780 kW.



COMPACT: JUST 1 METRE WIDE

GEMINI heat pumps can be easily lifted and moved. They fit through doorways and into standard elevators, making them a perfect choice for installation in old buildings and/or confined spaces.

The reduced width is ideal for transportation, optimizing the room required for shipping.



Standard features

- Scroll compressors;
- Eco-Profile axial fans statically and dynamically balanced;
- Condensing pressure control with variable fan speed modulation;
- Evaporator stainless steel AISI 316 brazed plate type, externally insulated, complete with differential pressure switch and antifreeze protection electric heater;
- Air side heat exchanger high efficiency finned coils with seamless copper tubes expanded into corrugated aluminium;
- Electronic expansion valve;
- Microprocessor;
- Housing and panels in galvanised and painted steel;
- Communication card RS485.

Kits

- Sea container kit;
- Remote control display;
- Flow switch;
- Automatic water filling;
- Water strainers;
- Water gauges;
- Rubber and spring anti vibration mounts.

Options

- Hybrid smart coolingR (2 way modulating valve, brazed heat exchanger);
- Power factor correction to cos phi 0,91;
- Control panel electric heater with thermostat;
- Phase failure protection relay;
- TP Serial card with BacNet Protocol MS/TP or TCP/IP;
- Gateway Modbus LonTalk™;
- Low ambient temperature kit in cooling mode (down to -10 °C);
- Low ambient temperature kit in heat pump mode (down to -15 °C);
- 3-way valve for domestic hot water (DHW);
- Eco-Profile Electronic fans;
- Soft-Starter;
- Automatic circuit breakers;
- Eco-Profile electronic fan - high head pressure (100 Pa);
- Refrigerant gauges;
- Protection grilles;
- Special treatment for condenser coils;
- Oversized water pump seal for operation with glycol > 25% or > 40%;
- Anti-freeze protection for hydraulic versions with hydraulic kits.

Options & kits required for modular configuration

- Multi-Manager System (mandatory);
- Hydraulic connection kit for connection between single modules;
- Victaulic clamps and caps (2 pcs to be mounted on the unit manifold);
- Victaulic clamps (2 pcs to be mounted on the unit manifold).

ULTIMATE MODULARITY

Scalable up to 800 kW heating capacity



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.

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.

General technical data

Model	Version	055	060	065	070	075	080	085	110	120	130
Cooling (1)											
Cooling capacity	H	kW	49,8	53,3	58,5	61,2	66,3	69,2	76,7	100	108
		kW	16,5	18,0	20,4	22,0	23,6	25,4	25,6	36,7	41,4
		-	3,02	2,96	2,87	2,78	2,81	2,73	2,99	2,73	2,61
		m ³ /h	8,57	9,18	10,1	10,5	11,4	11,9	13,2	17,2	18,6
		kPa	27,7	31,7	38,0	41,6	20,6	22,4	27,5	24,8	29,0
Heating (2)											
Heating capacity	H	kW	54,6	58,6	64,9	69,0	72,4	76,3	83,7	109	120
		kW	17,4	18,6	20,5	21,8	22,3	23,7	26,6	34,7	38,1
		-	3,13	3,15	3,16	3,16	3,24	3,22	3,15	3,16	3,15
		m ³ /h	9,47	10,2	11,3	12,0	12,6	13,2	14,5	19,0	20,8
		kPa	32,6	37,5	45,8	51,5	24,1	26,8	32,1	29,1	34,9
		%	134	135	136	136	136	141	127	131	133
		SCOP	-	3,41	3,44	3,47	3,47	3,48	3,60	3,25	3,35
		Efficiency class	-	A+	A+	A+	A+	A+	A+	A+	A+
Cooling (3)											
SEER		-	3,94	3,94	3,83	3,79	3,77	3,74	3,81	3,65	3,64
Seasonal cooling energy efficiency		%	155	154	150	149	148	147	150	143	143
Circuits/compressors		N°							1/2		
Sound power	L	dB(A)	55	55	56	56	56	56	58	60	60
Sound pressure	L	dB(A)	87	87	87	88	88	88	90	92	92
Sound power	S	dB(A)	54	54	55	55	55	55	57	59	59
Sound pressure	S	dB(A)	86	86	86	87	87	87	89	91	91
Electrical power supply		V/Ph/Hz							400/3+n/50		
Dimensions and weights (4)											
Length	H	mm	2489	2489	2489	2489	2489	2489	2489	2489	2489
Width	H	mm	1004	1004	1004	1004	1004	1004	1004	1004	1004
Height	H	mm	2408	2408	2408	2408	2408	2408	2408	2408	2408
+A	SB-SM-SA	mm	571	571	571	571	571	571	571	571	571
	XB-XM-XA	mm	571	571	571	571	571	571	571	571	571
Shipping weight	L	kg	817	824	828	836	853	860	905	1031	1034
	S	kg	856	863	867	875	892	899	944	1066	1069
	D	kg	10	10	10	10	10	10	13	13	13
	B1	kg	81	81	81	81	83	83	83	93	93
	A1	kg	133	133	133	133	133	133	133	165	165
	B2	kg	120	120	120	120	124	124	124	144	144
	A2	kg	224	224	224	224	224	224	224	288	288
	SB	kg	256	256	256	256	258	258	258	268	268
	SA	kg	308	308	308	308	308	308	308	340	340
	XB	kg	295	295	295	295	299	299	299	319	319
Extra weight	XA	kg	399	399	399	399	399	399	399	463	463

Data declared according to UNI EN 14511:2018.

- (1) External air temperature 35 °C - chilled water temperature IN/OUT 12/7 °C;
- (2) External air temperature 7 °C - 90% U.R. - hot water temperature IN/OUT 40/45 °C;
- (3) Ecodesign rating for comfort chiller - fan coil application. Seasonal cooling energy efficiency/SEER as defined in Directive 2009/125/EC of the European Parliament and of the Council with regard to Ecodesign requirements for Comfort Chillers with 2000 kW maximum capacity - COMMISSION REGULATION (EU) N° 2016/2281 of 20 December 2016;
- (4) 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.



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

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Cooling, conditioning, purifying.