



Modulating heat pump, for outdoor installation, for the production of hot water up to 65 °C (70 °C for DHW). Guarantees up to 165% efficiency, thanks to the use of air source renewable energy.

High efficiency condensing gas absorption heat pumps + air source renewable energy for heating

GAHP Line A - RTA Series

Advantages

- Up to 39.4% utilisation of air source renewable energy, exceeding peak efficiencies of 165% and guaranteeing up to 39.4% reductions in annual heating costs and in CO₂ emissions compared to the best condensing boilers.
- The most beneficial heating system to enhance the energy qualification of buildings because it permits a considerable promotion of the building's energy classification with the consequent increase in the value of the building.
- Increases the total efficiency of the heating system when it is combined or integrated with boilers with a lower energy performance.
- All data are tested by certificates and approvals from ENEA for Italy, DVGW-Forschungsstelle and VDE for Germany, California Energy Commission for USA.
- Its polluting emissions are lower than the limits set by the Blue Angel certification

(www.blauer-engel.de).

- Ensures efficiency levels in excess of 145% even at -7 °C, so it is also used in especially cold climates. It thus avoids activating back-up systems (boilers and electrical heaters), which reduce the seasonal performance coefficients and hence increase consumption.
- With a GAHP-A, every year 4.4 Tons of CO₂ emissions are saved, which are equivalent to those absorbed by 604 trees or those produced by 2 green cars; every year 2 TOE are saved.
- The installation of air source gas absorption heat pumps is supported by national and local incentive programs.

Applications

- Ideal for heating and DHW production in residential, industrial, commercial, accommodation and tertiary utilities, for upgrading or integrating existing systems.
- For outdoor installation.

The models

- HT: for the production of water at high temperature (for retrofitted radiator systems);
- LT: optimized to produce hot water at low temperature (new systems with radiant panels or fan coils).
- On request GAHP-A units can be pre-assembled as links with the same units (RTA Series) or with other units (see p. 46).



			GAHP-A HT ⁽¹⁾	GAHP-A LT ⁽¹⁾
HEATING OPERATION MODE ⁽²⁾				
Working point A7/W35	G.U.E. (gas utilization efficiency) *	%	--	165
	heating capacity	kW	--	41.7
Working point A7/W50	G.U.E. (gas utilization efficiency)	%	152	--
	heating capacity	kW	38.3	--
Nominal water flow rate ($\Delta T = 10$ °C)		m ³ /h	3.0	3.0
Nominal water pressure loss (A7/W50)		kPa	30	30
Maximum outlet water temperature heating/DHW		°C	65/70	55/70
Maximum inlet water temperature heating/DHW		°C	55/60	45/60
Outdoor operating temperature (dry bulb)	maximum	°C	45	45
	minimum ⁽³⁾	°C	-20	-20

BURNER CHARACTERISTICS

Thermal input (actual)		kW	25.2	25.2
Gas consumption (actual)	natural gas G20 ⁽⁴⁾	m ³ /h	2.67	2.67
	GPL G30/G31 ⁽⁵⁾	kg/h	1.99/1.96	1.99/1.96

ELECTRICAL CHARACTERISTICS

Voltage			230 V – 50 Hz	
Nominal electrical power ⁽⁶⁾	standard version	kW	0.90	0.90
	low noise version	kW	1.09	1.09

INSTALLATION DETAILS

Operational Weight	standard version	kg	390	390
	low noise version	kg	400	400
Sound pressure at 10 metres ⁽⁷⁾	standard version	dB(A)	54	54
	low noise version	dB(A)	45	45
Connections	water	" F	1 1/4	1 1/4
	gas	" F	3/4	3/4
	exhaust flue pipe	mm	80	80
Residual flue pressure		Pa	80	80
Dimensions	width	mm	854	854
	depth	mm	1,256	1,256
	height (standard version) ⁽⁸⁾	mm	1,281	1,281
	height (low noise version) ⁽⁸⁾	mm	1,537	1,537
Electrical degree of protection		IP	X5D	X5D

Pre-assembled model RTA	Units	Heating capacity kW	Dimensions w/d/h mm	Weight kg
RTA 00-266 HT S CC	n. 2 GAHP A HT S	76.6	2,314 x 1,245 x 1,650	970
RTA 00-399 HT S CC	n. 3 GAHP A HT S	114.9	3,610 x 1,245 x 1,650	1,435
RTA 00-532 HT S CC	n. 4 GAHP A HT S	153.2	4,936 x 1,245 x 1,650	1,920
RTA 00-665 HT S CC	n. 5 GAHP A HT S	191.5	6,490 x 1,245 x 1,650	2,395
RTA 00-282 LT S CC	n. 2 GAHP A LT S	83.2	2,314 x 1,245 x 1,650	970
RTA 00-423 LT S CC	n. 3 GAHP A LT S	124.8	3,610 x 1,245 x 1,650	1,435
RTA 00-564 LT S CC	n. 4 GAHP A LT S	166.4	4,936 x 1,245 x 1,650	1,920
RTA 00-705 LT S CC	n. 5 GAHP A LT S	208.0	6,490 x 1,245 x 1,650	2,395

Multiple pre-assembled links RTA HT or LT are available with (CC) or without circulators (SC) and in standard or low noise version. On request, GAHP-A units can be pre-assembled with other units (gas heat pumps, gas chillers and gas condensing boilers), to create multiple assemblies configured on demand for heating, cooling and DHW production.

⁽¹⁾ Data refer to version without circulators (SC)

⁽²⁾ Nominal conditions according to EN 12309-2.

⁽³⁾ In case of operation at -30 °C, the GAHP-A requires the winter kit (optional). Operating condition without winter kit: -20 °C

⁽⁴⁾ PCI 34.02 MJ/m³ (9.45 kWh/m³) at 15 °C - 1013 mbar.

⁽⁵⁾ PCI 46.34 MJ/kg (12.87 kWh/kg) at 15 °C - 1013 mbar.

⁽⁶⁾ ± 10% depending on the power supply voltage and on the tolerance of the electrical motors power consumption.

⁽⁷⁾ Free field, at the front, direction factor 2.

⁽⁸⁾ The dimensions refer to the unit without flue exhaust pipe.

* Equivalent COP: 4.13 calculated on energy conversion factor of 2.5.