Abso Pro

ROBUR®

caring for the environment

Index

Sustainable technology for the future. Our warmest welcome.

Since 1956, Robur has been leading the way towards a more sustainable energy future.

Our vision is shaped by creativity, ongoing innovation and a deep commitment to the environment, values that have always guided us in anticipating tomorrow's challenges.

Proudly Italian, we design and manufacture high-efficiency systems for heating and cooling, powered by natural gas, renewable sources and electricity. Technology and environmental responsibility come together to deliver smart, reliable and low-impact solutions.

Inspired by the principles of Albert Einstein, our GAHP technology — thermally driven heat pumps — stands at the forefront of energy efficiency, thanks to the significant integration of renewable energy. Building on this experience, Robur has developed Dual Energy solutions that intelligently combine gas and electricity, offering flexible systems built to meet the complexity of today's evolving energy landscape.

We believe that comfort and efficiency should go hand in hand. That's why we invest every day in research and the responsible use of resources, making a concrete contribution to a truly sustainable future.

Mission

Working with agility to develop and share safe, sustainable, energy-efficient solutions - driven by the sense of shared responsibility across our organisation.

Vision

To embody our love for beauty and enduring craftsmanship in climate solutions that are innovative by design and attuned to the unique needs of each individual.


ROBUR
caring for the environment
Proud Creator and Manufacturer
of Sustainable Heating and
Cooling Technologies
Est. 1956

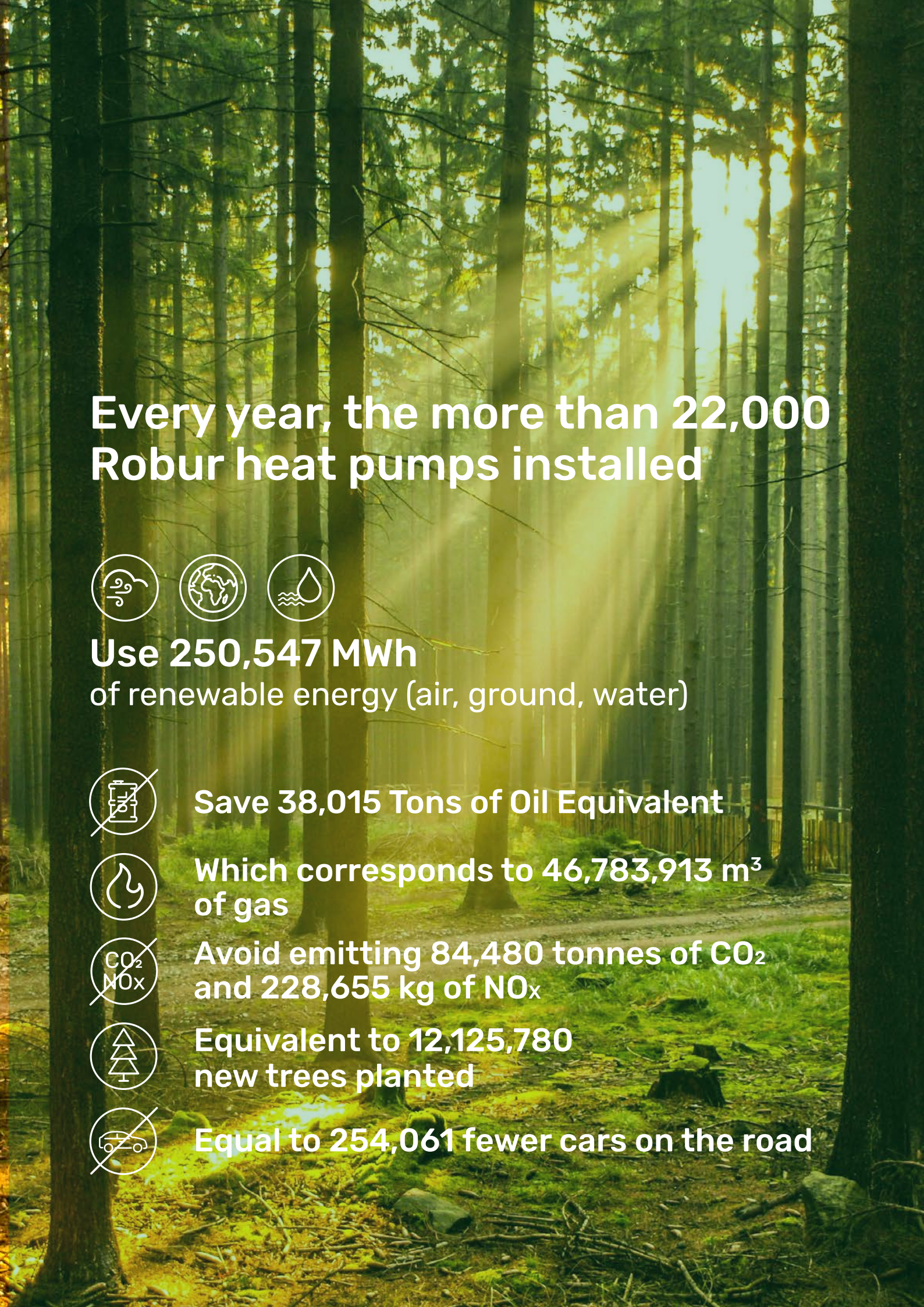
Our thought in two words: Ecological Conscience.

Two words capture the spirit of Robur: a driving force made tangible. Ecological conscience guides our strategy and shapes the way we design our products.

We believe in the efficient use of gas as a sustainable response to the energy needs of Italy and Europe.
Our GAHP absorption heat pumps reflect this vision: they combine gas efficiency with renewable energy from air, water and ground, achieving thermal efficiencies up to 174%.
This translates into savings of up to 50% compared to conventional boilers.

For us, efficiency also means respect for nature. Just one year of GAHP operation already makes a measurable difference.
And with ammonia - a natural, ozone-friendly refrigerant - our systems avoid the environmental impact of synthetic fluids.

A real solution, for people and for the planet.



Every year, the more than 22,000 Robur heat pumps installed

Use 250,547 MWh
of renewable energy (air, ground, water)

Save 38,015 Tons of Oil Equivalent

Which corresponds to 46,783,913 m^3 of gas

Avoid emitting 84,480 tonnes of CO_2 and 228,655 kg of NO_x

Equivalent to 12,125,780 new trees planted

Equal to 254,061 fewer cars on the road

Thermally driven heat pumps. Heating tomorrow, today.

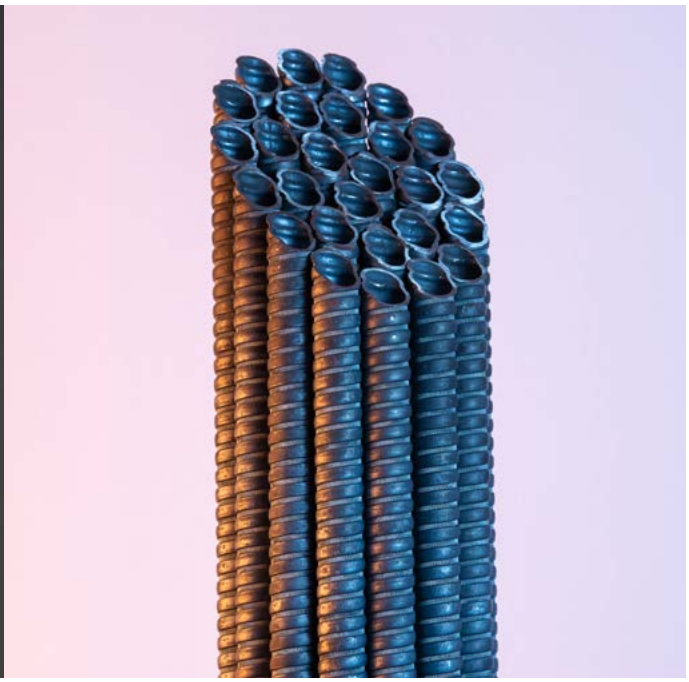
Robur technology.

Our GAHP absorption heat pumps are capable of producing hot water for space heating and domestic use, just like a condensing boiler – but with significantly higher efficiency. In their reversible versions, they also provide high-performance cooling for year-round comfort.

What sets GAHP technology apart is its ability to harness renewable energy from the air, water or ground. When this is combined with the heat generated through gas combustion and condensation, thermal efficiencies up to 174% can be achieved.

Unlike electric heat pumps, our GAHP units require very little electricity, as they are powered primarily by natural gas. They also avoid the use of environmentally harmful synthetic refrigerants, relying instead on ammonia - a natural, ozone-friendly alternative. In their reversible versions, they can also supply chilled water for summer cooling.

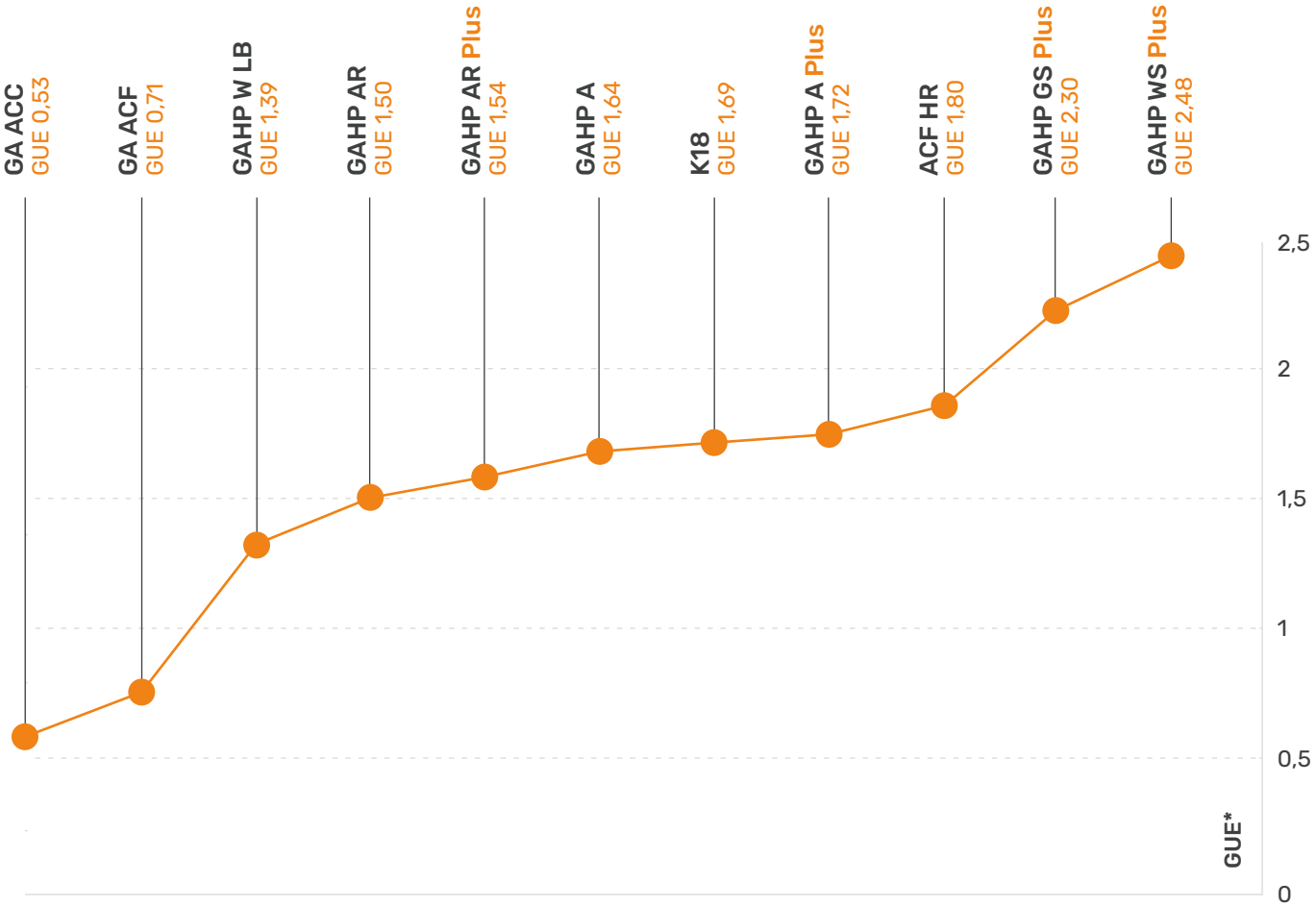
Ongoing technological development over the years has resulted in consistent improvements in energy performance across the entire GAHP range. This is a technology in continuous evolution – designed for efficiency, sustainability, and the energy challenges of the future.



Solid construction mirrors a solid organisation.
Research and Development department / GAHP heat pump pre-absorber

A technology that is constantly evolving and ready for further development.

Whether it's the first chillers or gas heat pumps using renewables, the continuous improvement of gas absorption technology has led to steady increases in energy efficiency in our various models.



GAHP Gas Absorption Heat Pump
***GUE** - Gas Utilization Efficiency

GA ACC the first gas chiller
GA ACF Made-in-Italy gas chiller
GAHP W LB the first water-to-water heat pump
GAHP AR the first reversible gas absorption heat pump
GAHP A the first absorption heat pump for heating and domestic hot water
K18 the absorption heat pump for the residential market
ACF HR the gas chiller with free heat recovery
GAHP GS the geothermal gas heat pump
GAHP WS the water-to-water heat pump for process applications
GAHP A Plus new generation of aerothermal heating-only GAHP
GAHP AR Plus new generation of reversible aerothermal GAHP
GAHP GS Plus new generation of geothermal GAHP
GAHP WS Plus new generation of hydrothermal GAHP

The best of both worlds.

Robur absorption heat pumps combine the advantages of the two most widespread heating technologies: condensing boilers and heat pumps.

GAHP Plus

Condensing boiler

Operates on combustible gas (fossil or renewable)
Uses 1/10 of the electrical energy compared to an electric heat pump
Can produce domestic hot water
Not affected by low outdoor temperatures

Heat pump

Uses a significant amount of renewable energy
Reduces energy consumption
Can do cooling

Renewable energies.

Robur heat pumps are available in 3 versions:

AEROTHERMAL: recovers heat from the outside air, which is always available even at low temperatures

GEOTHERMAL: capable of recovering the heat present in the ground

HYDROTHERMAL: recovers heat from water in reservoirs and both surface and underground aquifers

Energy balances of the three types of GAHP gas absorption heat pumps.

GAHP A Plus

Gas and aerothermal renewable energy absorption heat pump
Operating conditions A7 W35
(Air temperature = 7 °C
Hot water outlet temperature = 35 °C)

GAHP GS Plus

Gas and geothermal renewable energy absorption heat pump
Operating conditions B0 W35
(Cold water inlet temperature = 0 °C
Hot water outlet temperature = 35 °C)

GAHP WS Plus

Gas and hydrothermal renewable energy absorption heat pump
Operating conditions W10 W35
(Cold water inlet temperature = 10 °C
Hot water outlet temperature = 35 °C)

**The efficiency expressed as GUE of a GAHP should not be confused with the COP of electric heat pumps. To compare the values correctly, multiply the GUE by 2.5.*

GAHP Plus: the new generation of thermally driven heat pumps.

The technology of gas absorption heat pumps, developed over twenty years ago, has continued to evolve thanks to constant improvements in thermodynamic exchange processes.
The new **GAHP Plus** generation introduces significant technical innovations that increase efficiency, particularly during seasonal operation at partial load, guaranteeing excellent performance even with variable energy demands.

Key innovations introduced:

- **Redesigned sealed circuit**, with components optimised to improve thermal exchange even at low loads;
- **Completely revamped combustion circuit**, from the intake of combustion air to the flue gas heat exchanger;
- High-efficiency **brushless fans**, with continuous modulating control;
- **New electronic machine management**, including regulation of thermal input based on climatic conditions and gas type;
- **H_2Ready 20% technology**, enabling operation with gas mixtures containing up to 20% hydrogen, increasing compatibility with future sustainable energy grids.

Thanks to these updates, GAHP Plus heat pumps confirm their position among the most efficient, sustainable, and reliable solutions in the heating sector.

Advantages of the new GAHP Plus range

1 Maximum efficiency with no electricity use

Gas + Renewable energies

Up to 174% efficiency

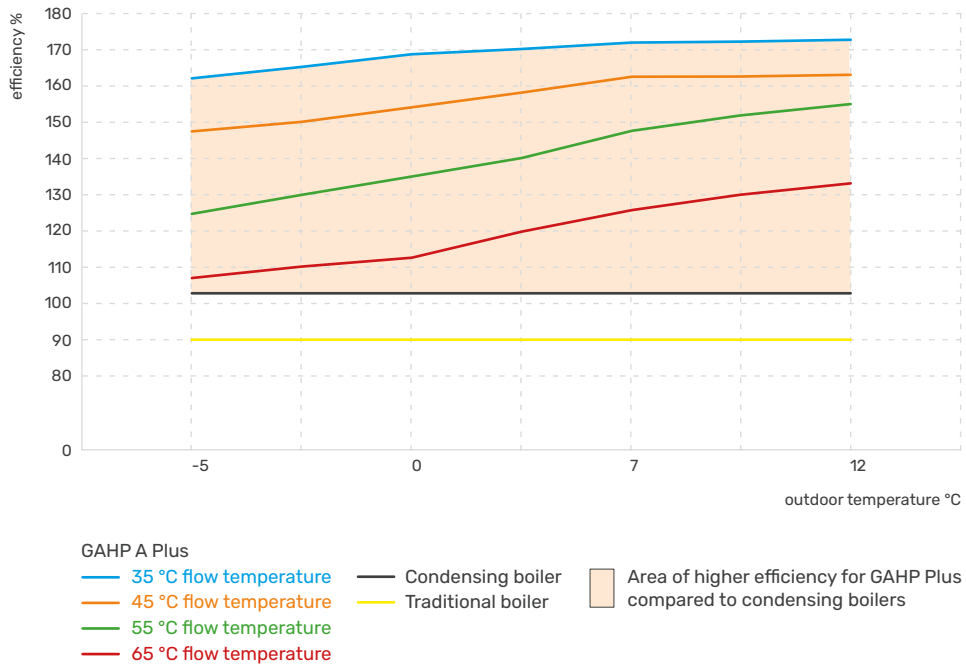
A rational use of energy brings the best results in terms of performance. By using heat that is present in large quantities in nature (air, ground, water) and a primary source such as natural gas, GAHP absorption heat pumps deliver high performance with up to 174% efficiency.

2 Hot water no matter what, even at -30 °C

65 °C for heating

70 °C for domestic hot water

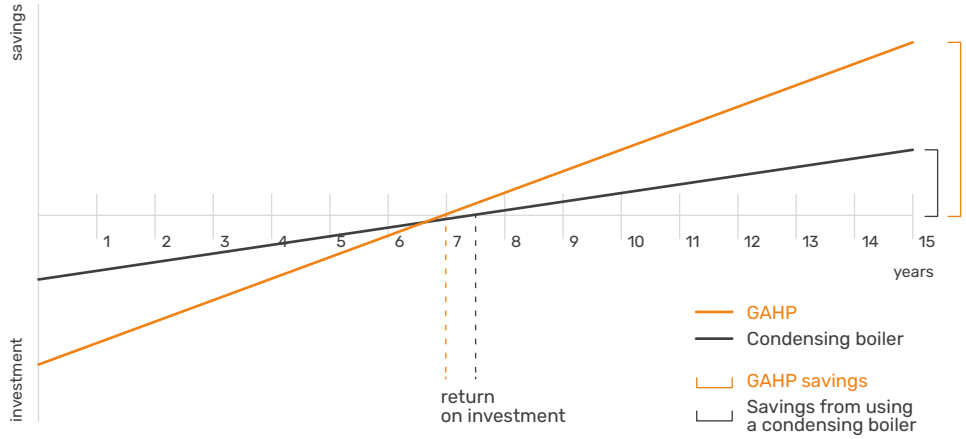
Thanks to the special features of the thermodynamic cycle, the performance of GAHP is barely affected by outdoor climatic conditions. This results in hot water production up to 70 °C even in extremely cold climates.



3 Real savings

-50% heating costs

The achievable economic result of the high thermal efficiency of GAHP over the whole lifetime of the system highlights the convenience compared to condensing boiler technology.



Fact: A state-of-the-art condensing boiler can achieve a maximum efficiency of 109%.

4 Perfect for integration

Plant and building energy class renovation

Even partially integrating an existing system with GAHP allows for the energetic refurbishment of the entire installation. Integrating a condensing boiler system with GAHPs is an advantageous choice from an energy, ecological and economic point of view.

GAHPs can improve a residential building performance and are a choice which can raise property value, helping to increase its value per square metre.

5 Only natural refrigerants

F-Gas free and zero GWP

Using a natural refrigerant (ammonia), which is not subject to restrictions or declaration obligations, GAHP systems have an almost zero global warming impact on heating, effectively solving the problem related to the use of fluorinated climate-altering gases such as HFCs and HFOs. They also comply fully with F-Gas regulations.

The Joint Research Centre – European Commission, along with two studies from the Universities of Marche and Pisa, comparing various air conditioning technologies, have highlighted that the GAHP heat pump is the technology with the lowest overall environmental impact in terms of harmful emissions to human health (NOx, PM, COV, COx).

6 In-Cloud Watcher

In-Cloud Watcher is Robur's remote monitoring system for absorption units. The control and management provided by In-Cloud Watcher facilitates the operation of your heating and cooling system to achieve maximum comfort levels, measurement and optimisation of performance based on defined objectives, and always availability. It enables energy consumption reduction and optimises maintenance interventions. Easy and intuitive to use, it is accessible remotely through your computer or mobile device.


ROBUR
GAHP | AR Plus
H2NG
HYDROGEN
READY 20%

Abso Pro GAHP Plus selection guide

Requirement	Benefits	Renewable energy	Functions
HEATING AND DOMESTIC HOT WATER	VERY HIGH EFFICIENCY	AEROTHERMAL	
		GEOTHERMAL	
		HYDROTHERMAL	
HEATING, COOLING AND DOMESTIC HOT WATER	VERY HIGH EFFICIENCY	AEROTHERMAL	
		HYDROTHERMAL	
COOLING	LOW-ENERGY CONSUMPTION		
	FOR **PARTICULARLY HOT CLIMATES** UP TO 50 °C		
	FREE DOMESTIC HOT WATER DURING COOLING		
SPECIAL APPLICATIONS	SIMULTANEOUS USE OF HOT AND COLD WATER	HYDROTHERMAL	
	PROCESS APPLICATION		
	REFRIGERATION		

ROBUR products

GAHP A Plus	gas and aerothermal renewable energy absorption heat pump	pag. 24
GAHP GS Plus	gas and geothermal renewable energy absorption heat pump	pag. 30
GAHP WS Plus	gas and hydrothermal renewable energy absorption heat pump	pag. 33
GAHP AR Plus	reversible gas and aerothermal renewable energy absorption heat pump	pag. 27
GAHP WS Plus	gas and hydrothermal renewable energy absorption heat pump	pag. 33
GA ACF	gas absorption chiller	pag. 41
GA ACF HT	gas absorption chiller for high ambient temperatures	pag. 43
GA ACF HR	gas absorption chiller-heater with free heat recovery	pag. 30
GAHP WS Plus	gas and hydrothermal renewable energy absorption heat pump	pag. 33
GA ACF TK	gas absorption chiller	pag. 43
GA ACF LB	gas absorption chiller for negative temperature water production	pag. 43

Legend

- Cooling
- Space heating
- Domestic hot water
- Domestic hot water from free heat recovery
- Simultaneous use of hot and cold water
- Process applications
- Refrigeration
- Cooling for tropical climates
- Aerothermal renewable energy
- Geothermal renewable energy
- Hydrothermal renewable energy

Overview | Abso Pro Range

The professional line that has become synonymous with cutting-edge technology for space heating, cooling and domestic hot water production. High-value added solutions powered by natural gas and renewable energy, dedicated to condominiums, hotels, companies, offices, public and commercial spaces. They offer **savings of up to 50%** compared to boilers, **thermal efficiency of up to 174% and a reduction of up to 86% of the electricity requirement** compared to electric heat pumps. Serving the well-being of people and the planet for over 30 years.

Find out more at robur.com

GAHP Plus Heat pumps

A range of gas and renewable energy absorption heat pumps for heating, cooling and domestic hot water production, in three different types: aerothermal, geothermal and hydrothermal.

GA

Chillers and absorption chiller-heaters to simultaneously cool and also produce free domestic hot water at the same time. This range guarantees a consistent reduction of electricity requirements compared to traditional electric chillers.

AY Boilers

Outdoor condensing boilers for heating and domestic hot water production up to 80 °C.
They're an ideal complement to heat pumps and absorption chillers for air conditioning in any environment.

LINK

Complete all-in-one solutions – including high power, for heating, cooling and domestic hot water – ready to be installed. Systems that are fully customisable to the needs of the project, specifically tested before installation, characterised by maximum flexibility of combinations, efficiency and performance.

GAHP Plus

Gas and renewable energy absorption heat pump

A highly efficient technology for today, already looking toward tomorrow. GAHP absorption heat pumps combine the use of natural gas with renewable energy from air, ground, and water to deliver top-performance heating - with even higher efficiency thanks to the new Plus range, reaching up to 174%. A technology capable of driving decarbonisation through a real and immediately available solution. A complete offering that delivers savings for all types of environments.

Efficient.
Naturally.

GAHP A Plus

Modulating condensing gas and aerothermal renewable energy absorption heat pump

High-efficiency heating and domestic hot water production.

A++ A+++ ↑ D

H2NG HYDROGEN READY 20%

NATURAL REFRIGERANT R717

Efficiency **172%**	Water temperature up to **70 °C**
Modulation range **100% ÷ 28%**	Air temperature down to **-30 °C**
Natural refrigerant	F-Gas **exempt**

Advantages

- Exceeds a thermal efficiency (GUE) by 172%[1] due to the use of aerothermal renewable energy
- Saves up to 40% on heating costs compared to the best condensing boilers
- Increases the total efficiency of the system when integrated with boilers with lower energy performance
- Enhances the value of the property by increasing its energy performance
- At -7 °C it guarantees an efficiency of 159%. This avoids the need for back-up systems (heating elements), which reduce seasonal performance coefficients and increase consumption
- Compatible with centralized control systems and remote management via In-Cloud Watcher
- Not subject to F-Gas regulations as it uses no climate-altering fluids, only a natural refrigerant that is not restricted or subject to declaration requirements
- Modulating brushless fan
- Condensing burner
- Centralized management via DDC

[1]GUE - Gas Utilization Efficiency - equivalent to COP 4,30 calculated with a 2.5x energy conversion factor.

Incentives

Thanks to its features and performance, this solution might be eligible for local eco-incentives, where available and subject to the laws and regulations of the country of residence.

Models

Outdoor

Standard
Low-noise

Applications

- Ideal for heating new or existing buildings with low-, medium- and high-temperature systems.

Outdoor in residential and large industrial buildings

Technical data

HEATING MODE

				GAHP A Plus Standard	GAHP A Plus Low-noise S1
Seasonal space heating energy efficiency class (ErP) medium-temperature application (55 °C)				A+	A++
Heat output	Outdoor temperature/ Water outlet temperature	A7W35	kW	44,6	
GUE efficiency	Outdoor temperature/ Water outlet temperature	A7W35	%	172	
Heat input	real		kW	26,0	
Hot water outlet temperature	maximum for heating		°C	65	
	maximum for DHW		°C	70	
Hot water inlet temperature	maximum for heating		°C	55	
	maximum for DHW		°C	60	
Heating water flow	nominal		l/h	2.500	
Pressure drop heating mode	nominal water flow		bar	0,31 (1)	
Ambient air temperature (dry bulb)	maximum		°C	45	
	minimum		°C	-15 (2)	

ELECTRICAL SPECIFICATIONS

Power supply	voltage		V	230	
	frequency		Hz	50	
Electrical power absorption	nominal		kW	0,84 (3)	0,77 (3)
	minimum		kW	-	0,45 (3)
Degree of protection	IP		-	25	

INSTALLATION DATA

Gas consumption	G20 natural gas (nominal)		m^3/h	2,79 (4)	
	G30 (nominal)		kg/h	2,09 (5)	
	G31 (nominal)		kg/h	2,05 (5)	
Sound pressure Lp at 5 metres	maximum		dB(A)	57,6 (6)	52,0 (6)
	minimum		dB(A)	-	49,0 (6)
Water connections	type		-	F	
	thread		"	1 1/4	
Gas connection	type		-	F	
	thread		"	3/4	
Flue gas exhaust	diameter (ø)		mm	80	
Dimensions	width		mm	854 (7)	
	height		mm	1.460 (7)	1.523 (7)
	depth		mm	1.264	
Weight	in operation		kg	395	405

(1) For flows other than nominal see Design Manual, Pressure losses Paragraph.
(2) As an option, a version for operation down to -30 °C is available.
(3) ±10% depending on power voltage and absorption tolerance of electric motors.
(4) NCV (G20) 34,02 MJ/m³ (15 °C - 1013 mbar).
(5) NCV (G30/G31) 46,34 MJ/kg (15 °C - 1013 mbar).
(6) Sound pressure levels in free field, with directionality factor 2, obtained from the sound power level in compliance with standard EN ISO 9614. Data referred to 50 °C outlet temperature.
(7) Overall dimensions excluding flue gas exhaust.

GAHP AR Plus

Modulating reversible gas and aerothermal renewable energy absorption heat pump

High-efficiency gas heating and cooling with minimal electrical requirement.

Efficiency
154%

Electricity
-86%

Modulation range
100% ÷ 46%

Cold water down to
7 °C

Heating and cooling
gas-powered

Natural
refrigerant

F-Gas
exempt

Advantages

- Exceeds a thermal efficiency (GUE) by 154%[1] thanks to the use of aerothermal renewable energy
- Saves up to 30% on heating compared to the best condensing boilers
- Enhances the value of the property by increasing its energy performance
- Reduces electricity requirements by up to 86% through the use of natural gas
- Compatible with centralized control systems and remote management via In-Cloud Watcher
- Not subject to F-Gas regulations as it uses no climate-altering fluids, only a natural refrigerant that is not restricted or subject to declaration requirements
- Modulating brushless fan
- Centralized management via DDC

[1]GUE - Gas Utilization Efficiency - equivalent to COP 3,85 calculated with a 2.5x energy conversion factor.

Incentives

Thanks to its features and performance, this solution might be eligible for local eco-incentives, where available and subject to the laws and regulations of the country of residence.

Models

Outdoor

Standard
Low-noise

Applications

- Ideal for heating and cooling new or existing buildings where there is limited electrical availability or where there is no intention to increase the existing electrical requirement.

Application in summer and winter operation with underfloor heating system, fan coils

Technical data

HEATING MODE				GAHP AR Plus Standard	GAHP AR Plus Low-noise S1
Seasonal space heating energy efficiency class (ErP) medium-temperature application (55 °C)				A+	
Heat output	Outdoor temperature/ Water outlet temperature	A7W35	kW	38,8	
GUE efficiency	Outdoor temperature/ Water outlet temperature	A7W35	%	154	
Heat input	real		kW	25,2	
Hot water outlet temperature	maximum for heating		°C	60	
	maximum for DHW		°C	65	
Hot water inlet temperature	maximum for heating		°C	50	
	maximum for DHW		°C	55	
Heating water flow	nominal		l/h	3.040	
Pressure drop heating mode	nominal water flow		bar	0,29 (1)	
Ambient air temperature (dry bulb)	maximum		°C	40	
	minimum		°C	-15(*)	
COOLING MODE					
Cooling output	Outdoor temperature/ Water outlet temperature	A35W7	kW	16,9	
GUE efficiency	Outdoor temperature/ Water outlet temperature	A35W7	%	67	
Cold water temperature (outlet)	minimum		°C	3	
Cold water temperature (inlet)	maximum		°C	45	
	minimum		°C	8	
Cold water flow	nominal		l/h	2.900	
Pressure drop cooling mode	at nominal water flow		bar	0,31 (1)	
Outdoor temperature	maximum		°C	45	
	minimum		°C	0	
ELECTRICAL SPECIFICATIONS					
Power supply	voltage		V	230	
	frequency		Hz	50	
Electrical power absorption	nominal		kW	0,84 (2)	0,77 (2)
	minimum		kW	-	0,50 (2)
Degree of protection	IP		-	25	
INSTALLATION DATA					
Gas consumption	G20 natural gas (nominal)		m^3/h	2,72 (3)	
	G30 (nominal)		kg/h	2,03 (4)	
	G31 (nominal)		kg/h	2,00 (4)	
Sound pressure Lp at 5 metres	maximum		dB(A)	57,6 (5)	52,0 (5)
	minimum		dB(A)	-	49,0 (5)
Water connections	type		-	F	
	thread		"	1 1/4	
Gas connection	type		-	F	
	thread		"	3/4	
Flue gas exhaust	diameter (ø)		mm	80	
Dimensions	width		mm	854	
	height		mm	1.446 (6)	1.523 (6)
	depth		mm	1.266	
Weight	in operation		kg	385	395

(1) For flows other than nominal see Design Manual, Pressure losses Paragraph.
(2) ±10% according to the power supply voltage and tolerance on electrical motors consumption. Measured at outdoor temperature of 30 °C.
(3) NCV (G20) 34,02 MJ/m³ (15 °C - 1013 mbar).
(4) NCV (G30/G31) 46,34 MJ/kg (15 °C - 1013 mbar).
(5) Maximum sound pressure levels in free field, with directionality factor 2, obtained from the sound power level in compliance with standard EN ISO 9614.
(6) Overall dimensions excluding flue gas exhaust.
(*) A special version for operation down to -30 °C is available as an option.

GAHP GS Plus

Modulating condensing gas and geothermal renewable energy absorption heat pump

High-efficiency heating and domestic hot water production in systems using geothermal renewable energy.

Efficiency **165%**	**Natural** refrigerant
Geothermal probe cost **-50%**	F-Gas **exempt**
Modulation range **100% ÷ 28%**	

Advantages

- Exceeds a thermal efficiency (GUE) by 165%[1], thanks to the use of renewable geothermal energy
- More than 50% cost savings on geothermal probes compared to electric heat pumps
- An efficient solution for domestic hot water production as well
- Saves up to 40% on heating costs compared to the best condensing boilers
- Enhances the value of the property by increasing its energy performance
- Minimises the need for electricity, thanks to the use of natural gas
- Compatible with centralized control systems and remote management via In-Cloud Watcher
- Not subject to F-Gas regulations as it uses no climate-altering fluids, only a natural refrigerant that is not restricted or subject to declaration requirements
- Condensing burner
- Centralized management via DDC

[1]GUE - Gas Utilization Efficiency - equivalent to COP 4,13 calculated with a 2.5x energy conversion factor.

Incentives

Thanks to its features and performance, this solution might be eligible for local eco-incentives, where available and subject to the laws and regulations of the country of residence.

Models

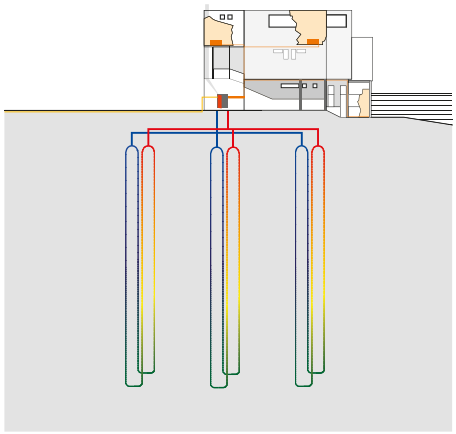
Indoor
Outdoor

Applications

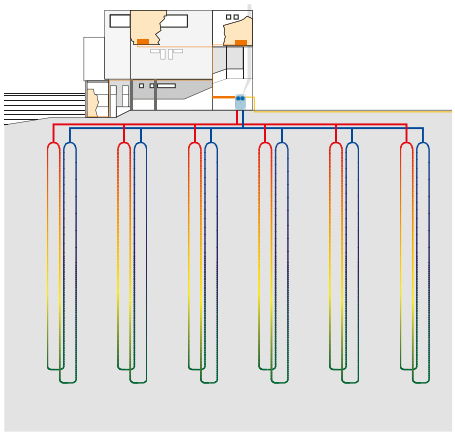
- Ideal for heating and domestic hot water production in new or existing buildings
- Enables cooling in 'free-cooling' mode (burner switched off) and active cooling (burner switched on)

Indicative example of application of a geothermal heating system of about 40 kW

The actual length of the probes depends on the conformation of the terrain and the conditions of use of the geothermal heat pump



GAHP GS Plus gas absorption heat pump
n. 3 probes of 125 meters



Electrical heat pump
n. 6 probes of 125 meters

Technical data

HEATING MODE				GAHP GS Plus Outdoor/Indoor
Seasonal space heating energy efficiency class (ErP) medium-temperature application (55 °C)				A++
Heat output	Evaporator inlet temperature/ Water outlet temperature	B0W35	kW	43,0
GUE efficiency	Evaporator inlet temperature/ Water outlet temperature	B0W35	%	165
Heat input	real		kW	26,0
Hot water outlet temperature	maximum for heating		°C	65
	maximum for DHW		°C	70
Hot water inlet temperature	maximum for heating		°C	55
	maximum for DHW		°C	60
Heating water flow	nominal		l/h	3.000
Pressure drop heating mode	nominal water flow (B0W50)		bar	0,46 (1)
Ambient air temperature (dry bulb)	maximum		°C	45
	minimum		°C	-15 (2)
RENEWABLE SOURCE OPERATING CONDITIONS				
Power recovered from renewable source	Evaporator inlet temperature/ Water outlet temperature	B0W35	kW	16,9
Renewable source water return temperature	maximum		°C	45
Renewable source delivery water temperature	minimum		°C	-5
Renewable source water flow rate (with 25% glycol)	nominal		l/h	3.020
Renewable source pressure drop	at nominal water flow		bar	0,57 (1)
ELECTRICAL SPECIFICATIONS				
Power supply	voltage		V	230
	frequency		Hz	50
Electrical power absorption	nominal		kW	0,41 (3)
Degree of protection	IP		-	25
INSTALLATION DATA				
Gas consumption	G20 natural gas (nominal)		m^3/h	2,79 (4)
	G30 (nominal)		kg/h	2,09 (5)
	G31 (nominal)		kg/h	2,05 (5)
Sound pressure Lp at 5 metres	maximum		dB(A)	44,1 (6)
Water connections	type		-	F
	thread		"	1 1/4
Gas connection	type		-	F
	thread		"	3/4
Safety valve outlet duct fitting			"	1 1/4 (7)
Flue gas exhaust	diameter (ø)		mm	80
Dimensions	width		mm	923
	height		mm	1.280 (8)
	depth		mm	729
Weight	in operation		kg	300

(1) For flows other than nominal see Design Manual, Pressure losses Paragraph.
(2) Data referred to the indoor version. For the outdoor version, the minimum ambient air temperature is 0 °C. A special outdoor version is available as an option for operation down to -30 °C.
(3) ±10% depending on power voltage and absorption tolerance of electric motors.
(4) NCV (G20) 34,02 MJ/m³ (15 °C - 1013 mbar).
(5) NCV (G30/G31) 46,34 MJ/kg (15 °C - 1013 mbar).
(6) Maximum sound pressure levels in free field, with directionality factor 2, obtained from the sound power level in compliance with standard EN ISO 9614; C type installation.
(7) Only for the indoor version.
(8) Overall dimensions excluding flue gas exhaust.

GAHP WS Plus

Modulating condensing gas and hydrothermal renewable energy absorption heat pump

High-efficiency heating, cooling and domestic hot water production in systems using hydrothermal renewable energy. Simultaneous use of hot and cold water.

Efficiency **174%**	**Natural** refrigerant
Overall energy efficiency **248%**	F-Gas **exempt**
Modulation range **100% ÷ 28%**	

Advantages

- Exceeds a thermal efficiency (GUE) by 248%[1], in the case of simultaneous use of hot and cold water
- Thermal efficiency (GUE) of 174%[2], using more than 50% hydrothermal renewable energy
- Efficient solution for domestic hot water production as well
- Saves up to 50% on heating costs compared to the best condensing boilers
- Minimises electricity requirements by using natural gas
- Compatible with centralized control systems and remote management via In-Cloud Watcher
- Not subject to F-Gas regulations as it uses no climate-altering fluids, only a natural refrigerant that is not restricted or subject to declaration requirements
- Condensing burner
- Centralized management via DDC

[1]GUE - Gas Utilization Efficiency - equivalent to COP 6,20 calculated with a 2.5x energy conversion factor.

[2]GUE - Gas Utilization Efficiency - equivalent to COP 4,35 calculated with a 2.5x energy conversion factor.

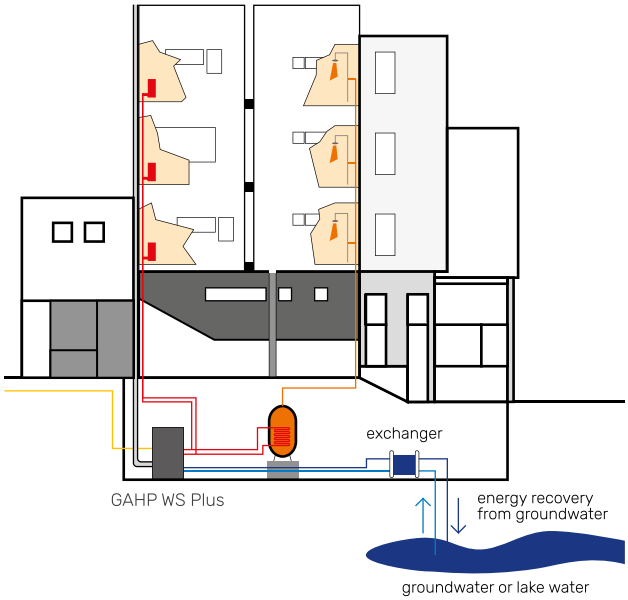
Incentives

Thanks to its features and performance, this solution might be eligible for local eco-incentives, where available and subject to the laws and regulations of the country of residence.

Models

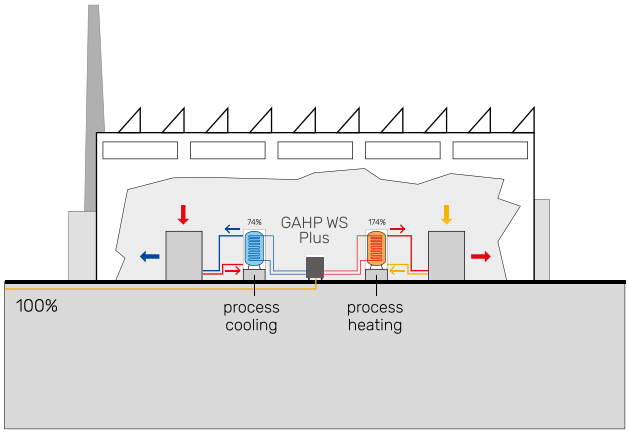
Indoor
Outdoor

Applications



Heating, cooling and domestic hot water production

- Ideal for heating and domestic hot water production in new or existing buildings
- Production of cold water for cooling in summer, pre-heating of domestic hot water or production of hot water for other uses (e.g. swimming pool heating)



gas thermal input	100%
heating	174%
cooling	74%
total efficiency	248%

Simultaneous use of hot and cold water

- Simultaneous production of heating and cooling for process plants (hospitals, production cycles or liquid ring systems)
- Thermal energy added to the cooling energy produced at the same time gives an overall efficiency of 248%

Technical data

HEATING MODE				GAHP WS Plus Outdoor/Indoor
Seasonal space heating energy efficiency class (ErP) medium-temperature application (55 °C)				A++
Heat output	Evaporator inlet temperature/ Water outlet temperature	W10W35	kW	45,3
GUE efficiency	Evaporator inlet temperature/ Water outlet temperature	W10W35	%	174
Heat input	real		kW	26,0
Hot water outlet temperature	maximum for heating		°C	65
	maximum for DHW		°C	70
Hot water inlet temperature	maximum for heating		°C	55
	maximum for DHW		°C	60
Heating water flow	nominal		l/h	3.200
Pressure drop heating mode	nominal water flow (W10W50)		bar	0,52 (1)
Ambient air temperature (dry bulb)	maximum		°C	45
	minimum		°C	-15 (2)
RENEWABLE SOURCE OPERATING CONDITIONS				
Power recovered from renewable source	Evaporator inlet temperature/ Water outlet temperature	W10W35	kW	19,3
Renewable source water return temperature	maximum		°C	45
Renewable source delivery water temperature	minimum		°C	3
Renewable source water flow rate	nominal		l/h	2.850
Renewable source pressure drop	at nominal water flow		bar	0,40 (1)
ELECTRICAL SPECIFICATIONS				
Power supply	voltage			230
	frequency			50
Electrical power absorption	nominal		kW	0,41 (3)
Degree of protection	IP		-	25
INSTALLATION DATA				
Gas consumption	G20 natural gas (nominal)		m^3/h	2,79 (4)
	G30 (nominal)		kg/h	2,09 (5)
	G31 (nominal)		kg/h	2,05 (5)
Sound pressure Lp at 5 metres	maximum		dB(A)	44,1 (6)
Water connections	type		-	F
	thread		"	1 1/4
Gas connection	type		-	F
	thread		"	3/4
Safety valve outlet duct fitting			"	1 1/4 (7)
Flue gas exhaust	diameter (ø)		mm	80
Dimensions	width		mm	923
	height		mm	1.280 (8)
	depth		mm	729
Weight	in operation		kg	300

(1) For flows other than nominal see Design Manual, Pressure losses Paragraph.
(2) Data referred to the indoor version. For the outdoor version, the minimum ambient air temperature is 0 °C. A special outdoor version is available as an option for operation down to -30 °C.
(3) ±10% depending on power voltage and absorption tolerance of electric motors.
(4) NCV (G20) 34,02 MJ/m^3 (15 °C - 1013 mbar).
(5) NCV (G30/G31) 46,34 MJ/kg (15 °C - 1013 mbar).
(6) Maximum sound pressure levels in free field, with directionality factor 2, obtained from the sound power level in compliance with standard EN ISO 9614; C type installation.
(7) Only for the indoor version.
(8) Overall dimensions excluding flue gas exhaust.

GA

Gas absorption chiller

Cooling that saves you money, even in electricity use. Gas absorption chillers and chiller-heaters, HFC-free, which guarantee operational continuity and reduced maintenance as they do not use compressors. From cooling in places with limited availability of electricity, to particularly hot climates or for the production of cooling and free domestic hot water at the same time. A complete and trustworthy range that can also be managed remotely.

The cold
born
of flames.

GA ACF HR

Gas absorption chiller-heater with heat recovery

Cooling and simultaneous production of free hot water thanks to heat recovery.

H2NG HYDROGEN READY 20%

NATURAL REFRIGERANT R717

Total efficiency **180%**

Production of free hot water **up to 75 °C** while in use

Electricity compared with an electric chiller **-86%**

Natural refrigerant

F-Gas **exempt**

Advantages

- During cooling operation, free hot water up to 75 °C is available for pre-heating and domestic hot water production
- Reduces electricity requirements by up to 86% through the use of natural gas
- Not subject to F-Gas regulations as it uses no climate-altering fluids, only a natural refrigerant that is not restricted or subject to declaration requirements
- Ideal for regions where the electricity supply is poor or not continuously guaranteed

Models

Outdoor

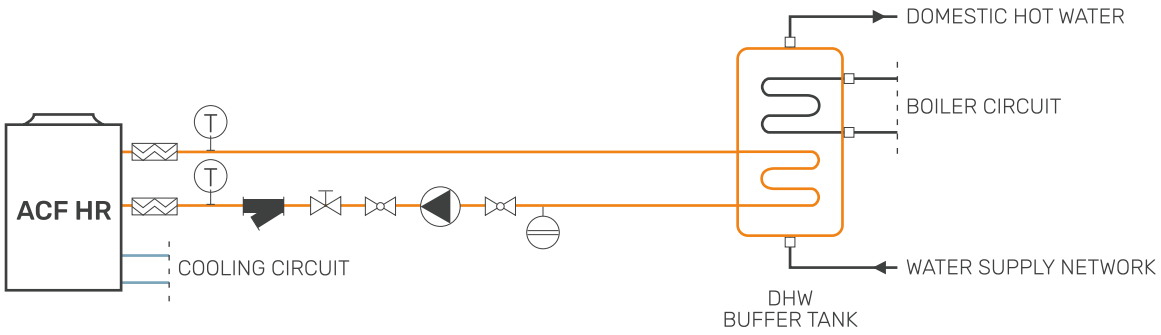
Standard
Low-noise

Applications

- Ideal for hotels, offices, shopping centres, wellness and sports centres requiring cooling in the absence or insufficient electrical supply
- Can be used in post-heating circuits connected to air handling units

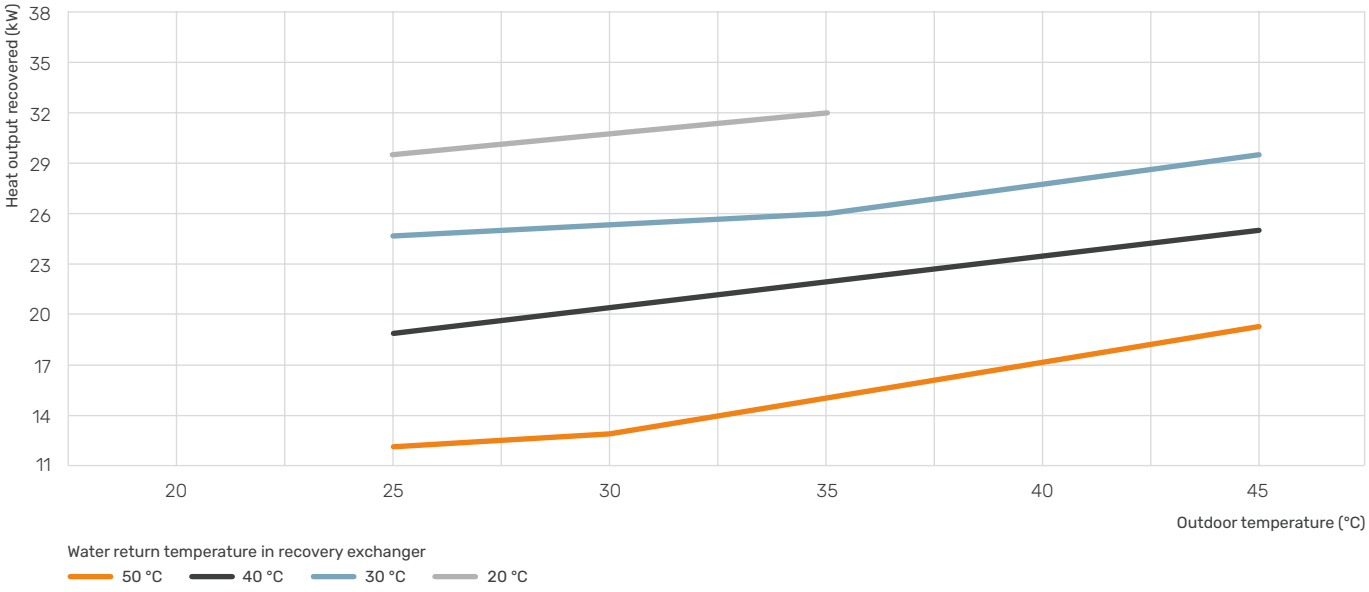
The ACF HR chiller is equipped with a dedicated heat recovery exchanger, installed in series with the condenser, capable of heating water for free by using the heat directed to the condenser. Whether or not heat is extracted from this recovery exchanger (e.g., to produce DHW) does not affect the chiller's cooling operation.

For the production of domestic hot water, different system solutions can be used, such as double coil buffer tanks or several tanks with dedicated preheating buffer tanks.
In both cases, the system must include the use of a support boiler, to guarantee the supply of domestic hot water even during the period of non-use or shutdown of the ACF HR unit.



Performance

Free heat output recovery in cooling



Values with chilled water at 7,2 °C and water recovery exchange flow rate of 1.000 l/h

Technical data

COOLING MODE

				ACF HR Standard	ACF HR Low-noise
Cooling output	Outdoor temperature/ Water outlet temperature	A35W7	kW	17,7	
Heat input	real		kW	25,0	
Cold water temperature (outlet)	minimum		°C	3 [1]	
Cold water temperature (inlet)	maximum		°C	45	
	minimum		°C	8	
Cold water flow	nominal		l/h	2.770	
Internal pressure drop	at nominal water flow		bar	0,29 [2]	
Outdoor temperature	maximum		°C	45	
	minimum		°C	0	

RECOVERY CIRCUIT OPERATION

Recovery unit heat output	Outdoor temperature/ Inlet temperature/ 1000 l/h water flow	A35W40	kW	21,0	
Hot water temperature (inlet)	nominal		°C	40	
Hot water temperature (outlet)	nominal		°C	58	
Hot water flow	nominal		l/h	1.000	
Total GUE (40 °C inlet temperature)	Outdoor temperature/ Inlet temperature/ 1000 l/h water flow	A35W7	%	155	

ELECTRICAL SPECIFICATIONS

			ACF HR Standard	ACF HR Low-noise
Power supply	voltage	V	230	
	type	-	single-phase	
	frequency	Hz	50	
Electrical power absorption	nominal	kW	0,82 [3]	0,87 [3]
Degree of protection	IP	-	X5D	

INSTALLATION DATA

			ACF HR Standard	ACF HR Low-noise
Gas consumption	G20 natural gas (nominal)	m^3/h	2,68 [4]	
	LPG G30/G31 (nominal)	kg/h	1,97 [5]	
Sound pressure Lp at 5 metres	maximum	dB(A)	57,6 [6]	53,0 [6]
Maximum water pressure in operation		bar	4,0	
Water fitting	type	-	F	
	thread	"	1 1/4	
Gas connection	type	-	F	
	thread	"	3/4	
Dimensions	width	mm	850	
	height	mm	1.446	1.516
	depth	mm	1.256	1.256
Weight	in operation	kg	390	

[1] To be set (on demand) during the first start-up. Default Minimum Temperature = 4,5 °C.
[2] For flows other than nominal see Design Manual, Pressure losses Paragraph.
[3] ±10% according to the power supply voltage and tolerance on electrical motors consumption. Measured at outdoor temperature of 30 °C.
[4] NCV (G20) 34,02 MJ/m³ (15 °C - 1013 mbar).
[5] NCV (G30/G31) 46,34 MJ/kg (15 °C - 1013 mbar).
[6] Maximum sound pressure levels in free field, with directionality factor 2, obtained from the sound power level in compliance with standard EN ISO 9614.

GA ACF

Gas-powered absorption chiller

Low-energy consumption cooling.

H2NG
HYDROGEN
READY 20%

NATURAL REFRIGERANT
R717

Electricity
-86%

Natural
refrigerant

F-Gas
exempt

Low-maintenance

Advantages

- Reduces electricity requirements by up to 86% through the use of natural gas
- Not subject to F-Gas regulations as it uses no climate-altering fluids, only a natural refrigerant that is not restricted or subject to declaration requirements
- Independent and modular, ensuring continuity of service to condition only when and how much is needed
- Low-maintenance (no compressors, thermostatic valves or inverters)

Models

Outdoor

Standard
Low-noise

Applications

- Ideal for cooling especially where the availability of electricity is expensive or limited

Technical data

COOLING MODE

				ACF Standard	ACF Low-noise
Cooling output	Outdoor temperature/ Water outlet temperature	A35W7	kW	17,7	
Heat input	real		kW	25,0	
Cold water temperature (outlet)	minimum		°C	3 (1)	
Cold water temperature (inlet)	maximum		°C	45	
	minimum		°C	8	
Cold water flow	nominal		l/h	2.770	
Internal pressure drop	at nominal water flow		bar	0,29 (2)	
Outdoor temperature	maximum		°C	45	
	minimum		°C	0	

ELECTRICAL SPECIFICATIONS

Power supply	voltage		V	230	
	type		-	single-phase	
	frequency		Hz	50	
Electrical power absorption	nominal		kW	0,82 (3)	0,87 (3)
Degree of protection	IP		-	X5D	

INSTALLATION DATA

Gas consumption	G20 natural gas (nominal)		m³/h	2,68 (4)	
	LPG G30/G31 (nominal)		kg/h	1,97 (5)	
Sound pressure Lp at 5 metres	maximum		dB(A)	57,6 (6)	53,0 (6)
Maximum water pressure in operation			bar	4,0	
Water fitting	type		-	F	
	thread		"	1 1/4	
Gas connection	type		-	F	
	thread		"	3/4	
Dimensions	width		mm	850	
	height		mm	1.446	1.516
	depth		mm	1.256	1.256
Weight	in operation		kg	360	

(1) To be set (on demand) during the first start-up. Default Minimum Temperature = 4,5 °C.
(2) For flows other than nominal see Design Manual, Pressure losses Paragraph.
(3) ±10% according to the power supply voltage and tolerance on electrical motors consumption. Measured at outdoor temperature of 30 °C.
(4) NCV (G20) 34,02 MJ/m³ (15 °C - 1013 mbar).
(5) NCV (G30/G31) 46,34 MJ/kg (15 °C - 1013 mbar).
(6) Maximum sound pressure levels in free field, with directionality factor 2, obtained from the sound power level in compliance with standard EN ISO 9614.

GA ACF special versions

Gas-powered absorption chiller

Process, refrigeration and cooling applications in particularly hot climates.

H2NG HYDROGEN READY 20%

NATURAL REFRIGERANT R717

Electricity **-86%**	Production of water at sub-zero temperatures **-10 °C**
Natural refrigerant	**Year-round** operation
F-Gas **exempt**	For tropical climates with outdoor air **up to 50 °C**

Advantages

- Reduces electricity requirements by up to 86% through the use of natural gas
- Not subject to F-Gas regulations as it uses no climate-altering fluids, only a natural refrigerant that is not restricted or subject to declaration requirements
- Independent and modular, ensuring continuity of service to condition only when and how much is needed
- Low-maintenance (no compressors, thermostatic valves or inverters)

Models

Outdoor

Standard
Low-noise

Applications

TK Version

- Process cooling (e.g. greenhouses, mould cooling or in the production cycle, curing rooms)
- Cooling of temperature-controlled rooms all year round (metrology rooms, datacenter, labs)
- Cooling of rooms with a high thermal load with the need for cooling even in cold seasons

HT Version

- Cooling of civil, commercial and industrial environments in areas and climatic zones with outdoor temperatures of up to 50 °C

LB Version

- Cooling of rooms which require internal temperatures in accordance with hygiene standards to be maintained
- Refrigeration of food storage rooms and counters
- Process cooling in plants requiring negative fluid temperatures down to -10 °C

Technical data

COOLING MODE				ACF TK std	ACF TK Low-n.	ACF HT std	ACF HT Low-n.	ACF LB std	ACF LB Low-n.
Cooling output	Outdoor temperature/ Water outlet temperature	A35W7	kW	17,7		17,1		--	
		A35W-5	kW	--				13,3	
Heat input	real		kW	25,0					
Cold water temperature (outlet)	minimum		°C	3 (1)		5		-10	
Cold water temperature (inlet)	maximum		°C	45					
	minimum		°C	8				-7	
Cold water flow	nominal		l/h	2.770		2.675		2.600	
Internal pressure drop	at nominal water flow		bar	0,29 (2)				0,42 (2)	
Outdoor temperature	maximum		°C	45		50		45	
	minimum		°C	-12		0			

ELECTRICAL SPECIFICATIONS									
Power supply	voltage		V	230					
	type		-	single-phase					
	frequency		Hz	50					
Electrical power absorption	nominal		kW	0,82 (3)	0,87 (3)	0,82 (3)	0,87 (3)	0,82 (3)	0,87 (3)
Degree of protection	IP		-	X5D					

INSTALLATION DATA									
Gas consumption	G20 natural gas (nominal)		m³/h	2,68 (4)					
	LPG G30/G31 (nominal)		kg/h	1,97 (5)			1,97 (5)		
Sound pressure Lp at 5 metres	maximum		dB(A)	57,6 (6)	53,0 (6)	57,6 (6)	53,0 (6)	57,6 (6)	53,0 (6)
Water fitting	type		-	F					
	thread		"	1 1/4					
Gas connection	type		-	F					
	thread		"	3/4					
Dimensions	width		mm	850					
	height		mm	1.446	1.516	1.446	1.516	1.446	1.516
	depth		mm	1.256					

(1) To be set (on demand) during the first start-up. Default Minimum Temperature = 4,5 °C.
(2) For flows other than nominal see Design Manual, Pressure losses Paragraph.
(3) ±10% according to the power supply voltage and tolerance on electrical motors consumption. Measured at outdoor temperature of 30 °C.
(4) NCV (G20) 34,02 MJ/m³ (15 °C - 1013 mbar).
(5) NCV (G30/G31) 46,34 MJ/kg (15 °C - 1013 mbar).
(6) Maximum sound pressure levels in free field, with directionality factor 2, obtained from the sound power level in compliance with standard EN ISO 9614.


ROBUR
GA | ACF
H2NG

AY Condensing

Condensing boiler

Robur AY series condensing boilers are the ideal complement to gas absorption heat pump solutions. They offer full compatibility, are reliable and easy to install, and can efficiently power underfloor radiant systems as well as traditional radiators. They provide peak power when weather or economic conditions make it advantageous and can also supply domestic hot water.

Three sizes to fit every need.

AY Condensing

Outdoor modulating condensing boilers

Heating and domestic hot water production.
An ideal complement to absorption solutions in any environment.

A A+++ ↑ D

H2NG
HYDROGEN READY 20%

Integration
Robur absorption solutions

Built for
outdoor installation

3 heat output options
up to 100 kW

Advantages

- Ideal for thermal integration with Robur absorption solutions, whether standalone or pre-assembled in LINK systems
- Provide optimal peak thermal power when weather or economic conditions make it advantageous
- Available in 3 modulating power sizes, with a modulation ratio up to 1:20
- Equipped with circulator, expansion vessel, and safety valve
- They are designed for outdoor installation for outdoor temperatures down to -15 °C

Models

Standard

Outdoor

Technical data

HEATING MODE

				AY 35	AY 50	AY 100
Seasonal space heating energy efficiency class (ErP)				A		-
Heat output	nominal (1013 mbar - 15 °C) [1]		kW	34,0	50,0	99,8
	minimum [1]		kW	4,1	5,0	
Effective power		operating point 80/60	kW	33,3	49,2	98,4
Efficiency		operating point 80/60	%	98,0	97,9	97,9
Efficiency	Nominal heat input	operating point 50/30	%	106,4	106,8	
Efficiency	Heat input 30%	operating point Tr=30 °C	%	108,6	108,8	
Ambient air temperature (dry bulb)	maximum		°C	45		
	minimum		°C	-25		

ELECTRICAL SPECIFICATIONS

			AY 35	AY 50	AY 100
Power supply	voltage	V	230		
	type	-	single-phase		
	frequency	Hz	50		
Electrical power absorption	nominal	kW	0,27	0,30	0,59

INSTALLATION DATA

			AY 35	AY 50	AY 100
Gas consumption	G20 natural gas (nominal)	m^3/h	3,60	5,29	10,58
	G30 (nominal)	kg/h	2,68	3,94	7,88
	G31 (nominal)	kg/h	2,64	3,88	7,77
Water connections	type	-	F		
	thread	"	1 1/4		1 1/2
Gas connection	type	-	M		
	thread	"	3/4		1
Circulating pump data	residual pressure head at nominal flow rate boiler only	bar	0,44		
	nominal flow at the maximum available head	l/h	2.600	2.350	4.700
Expansion tank volume		l	10		
Dimensions	width	mm	465		720
	height	mm	1.284		
	depth	mm	575		
Weight	in operation	kg	80	90	134

[1] Relative to NCV (net calorific value).

LINK

LINK gives you infinite combinations of heating, cooling and domestic hot water

Robur LINK preassembled packages are the complete all-in-one solutions for heating, cooling and domestic hot water production and are ready to be installed. Maximum customisation is guaranteed by a dedicated assembly line which combines gas and renewable energy absorption heat pumps with condensing boilers and chillers, both electric and gas, (depending on functional requirements) which bring together efficiency and maximum ease of installation in a single product. Take a look at the Robur LINK products to find the best one for your project

Modularity, functionality and efficiency. Here's the right LINK.

Multiple preassembled packages for heating, domestic hot water production and cooling. In a word: LINK.

The thermal energy requirements for heating, domestic hot water and cooling are typically never equal and balanced in cooling systems. In addition, the power draws are never constant, but follow very different load profiles.

That's why we created LINK. They are factory preassembled systems made up of groups of heat pumps, condensing boilers and chillers. They are appropriately mounted on a single supporting structure, hydraulically and electrically wired to form a true outdoor thermo-cooling plant best suited to the energy requirements of the system.

There are many possible combinations with a range of fittings and versions:

LINK, heating-only heat pumps

For a modular heating and domestic hot water production system

LINK, reversible heat pumps

For a modular heating and cooling system

LINK, mixed heat pump and condensing boilers

For a modular HYBRID heating and domestic hot water production system

LINK, mixed heat pump and chillers

For a system with the most appropriate ratio of heat output to cooling output

LINK, heat pumps, boilers and chillers

For systems requiring heating/cooling and domestic hot water output to be separate

LINKs can be "customised" according to different system requirements:

Water circuits	**2-**, **4-**, and **6** pipes
Fan model	**Standard** or **Low-noise**
Water circulation	with independent oversize circulation pumps (one for each installed unit) or without circulation pumps on board

All LINKS have the following characteristics:

- They are equipped with their **own electrical panel** to which all mounted units are connected. The power supply and remote control are connected at a single point
- They are equipped with **2"-diameter stainless steel manifolds**, protected by closed-cell insulation and aluminium foil for hydraulic connection to the system. Available in 2-,4-, and 6-pipes versions (1, 2 or 3 independent water circuits)
- They are built on **a base consisting of steel C-beams** of various lengths depending on the number and type of units installed, with steel crossbeams designed to receive anti-vibration supports (available as accessories)
- They are equipped with an **exhaust manifold for flue gas condensate** (for models using GAHP A Plus, GAHP GS Plus, GAHP WS Plus absorption heat pumps and AY boilers)
- The assembled units can be equipped with **their own high-efficiency circulation pump, check valve** and connections to the main manifold, suitably protected from weathering

Customised LINK examples

1 GAHP AR Plus + 1 AY35/4 boiler

For heating and cooling services on one circuit and domestic hot water production on the other.

It is possible to have the AY35 boiler diverted to the heating circuit to supplement the heat output of the heat pump in winter when it has satisfied the domestic hot water function (DDC and RB100 control systems must be used).

The number of heat pumps and boilers mounted on the LINK can be increased to obtain a higher total output.

1 GAHP A Plus + 1 AY35/4 boiler

A 4-pipe LINK system for high-efficiency heating and domestic hot water production, composed of a hybrid setup with a heat pump and a condensing boiler.

This is an efficient and cost-effective solution in which the heat pump handles the base load with maximum efficiency, while the modulating boiler covers peak heating demands and DHW production.

The heat pump will not be shut off under certain weather conditions but will always remain active, as its efficiency consistently exceeds that of the condensing boiler.

The number of heat pumps and boilers installed in the LINK system can be increased to achieve greater total capacity.

1 GAHP AR Plus + 1 ACF + 1 AY50/4

For heating and cooling services on one circuit and domestic hot water production on the other. Compared to the previous option, this LINK provides equal heating and cooling capacity, with a higher domestic hot water production capacity.

The heating and cooling capacities can be adjusted independently according to the load profile of the system by adding reversible heat pumps and chillers (gas or electric). The domestic hot water production part can also be modulated as required.

2 GAHP A Plus

LINK consisting of 2 (or more) absorption heat pumps, for heating and, if necessary, domestic hot water production. They're factory-assembled, electrically and hydraulically connected on a steel base to form a high-efficiency modular thermal unit for outdoor installation.

It is possible to create a LINK with a higher thermal output by adding appropriate modules.

1 GAHP AR Plus + 1 ACF

Link consisting of a reversible heat pump and a gas chiller (gas or electric), for heating and cooling, with equal heating and cooling capacities.

It is possible to create a Link with a higher heating and cooling capacity by adding the appropriate modules.

2 GAHP AR Plus

Link consisting of two reversible absorption heat pumps factory-assembled, electrically and hydraulically connected on a steel base to form a modular thermal-cooling unit for (alternating) gas heating and cooling services, for outdoor installation.

It is possible to create a Link with a higher heating and cooling capacity by adding the appropriate modules.

Robur Hybrid

Robur Hybrid is Robur's new hybrid solution, combining increasingly efficient and high-performance gas absorption heat pumps with an electric heat pump or electric chillers.
A solution that delivers excellent efficiency in both heating and cooling services by leveraging the best available technologies.

Contact the Robur sales network for all your configuration needs.

Unit controls and accessories

Robur technology, tailored to your needs.

Unit controls and accessories

DDC

Direct Digital Controller

For efficient and optimised management and diagnostics of all Robur absorption units and condensing boilers for integration

Functions

The direct digital controller is an optional accessory.

- Control the operation of heating/cooling units (up to 16 units, extendable to 48 using up to 3 DDCs connected together).
- Regulates and controls separable circuits for domestic hot water production and heating/cooling systems.
- Optimised management of cascade operation of connected units on each configured circuit.
- Monitoring of status, operating and fault conditions of controlled units with event history recording.
- Setting the climatic curve for heating and cooling services in combination with the outdoor temperature probe (optional).
- Possibility of interfacing via Modbus with other external management systems for displaying information and receiving operating settings.

RB100

Robur Box 100

To manage the demand for heating, cooling and domestic hot water and their corresponding switching devices

Functions

The device is able to interface requests from the system with the DDC which it must be paired with.

RB100 paired with the DDC:

- Manages service requests for heating, domestic hot water production and cooling.
- Provides for the actuation of switching valves for supplying DHW buffer tank with domestic hot water or for the summer/winter change of seasons.
- Handles unavailability reports of managed services.

RB200

Robur Box 200

To manage mixed cooling systems, consisting of Robur absorption units and chillers and/or boilers from other manufacturers installed on the same system

Functions

This device interfaces requests from a mixed system from the DDC, which it must be paired with and is capable to manage the activation of chillers and boilers from other manufacturers.

RB200 paired with the DDC:

- Allows you to interface with mixed air conditioning systems, i.e. consisting of Robur units and units from other manufacturers (boilers or chillers).
- Allows the actuation of switching valves for supplying DHW buffer tank with domestic hot water or for the summer/winter change of seasons.
- Manages reports of unavailability of services or alarms in connected components.
- Allows you to interface with system temperature probes (heating, cooling and separable domestic hot water).

CCI

Comfort Control Interface

An optional and alternative device to the Digital Control Panel for the modulation management of Robur absorption units

Functions

An optional device for managing the modular operation of Robur GAHP A Plus, GAHP GS Plus and GAHP WS Plus units.

- Regulates in modulation the heat output of heating-only units (up to 3 units). Heating and domestic hot water functions are supported in combination with an external system controller.
- Monitors the status, operating and fault conditions of the controlled units with event history recording.
- Allows interfacing with other external management systems via Modbus.
- Requires an external system controller (which will provide the setpoint values).

See more on robur.com

Robur absorption unit accessories

Adjustment and Unit Controllers

Accessory	Single unit GAHP - GA - AY	Link GAHP - GA - AY
DDC - Direct Digital Controller (1 controller for up to 16 units on the same system)	●	●
RB100 - Robur Box 100	●	●
RB200 - Robur Box 200	●	●
CCI - Comfort Control Interface for managing modulation of GAHP A Plus and AY boilers via external controller	●	●
Shielded CAN bus cable for DDC connection to Robur units	●	●
DDC outdoor temperature probe	●	●

Please refer to the Design Manual for the selection of the most appropriate control command according to the system application.

Anti-vibration mounts

Accessory	Single unit GAHP - GA - AY	Link GAHP - GA - AY
Kit with 4 spring-loaded anti-vibration mounts for base frame	●	●
Kit with 6 spring-loaded anti-vibration mounts for base frame		●
Kit with 8 spring-loaded anti-vibration mounts for base frame		●
Kit with 10 spring-loaded anti-vibration mounts for base frame		●

Circulation pumps

Accessory	Single unit GAHP - GA - AY	Link* GAHP - GA - AY
High-efficiency modulating circulation pump with oversized pressure head	●	

*Pumps must be installed on-site or factory-installed as options on specific modules

Tanks and buffers

Accessory	Single unit GAHP - GA - AY	Link GAHP - GA - AY
300 l thermal tank ErP energy class C	●	●
500 l thermal tank ErP energy class C	●	●
1000 l thermal tank		●
300 l DHW buffer tank with oversized coil (without additional solar coil) ErP energy class C	●	●
500 l DHW buffer tank with oversized coil (without additional solar coil) ErP energy class D	●	●
500 l DHW buffer tank with oversized coil (with additional solar coil) ErP energy class D	●	●
750 l DHW buffer tank with oversized coil (with additional solar coil)		●

System components

Accessory	Single unit GAHP - GA - AY	Link GAHP - GA - AY
230V AC actuator for ON/OFF zone valves, 90 sec.	●	●
3-way zone ball valve 1"1/4	●	●
3-way zone ball valve 1"1/2	●	●
Air separator filter 1"1/4	●	
Separator filter 1"1/4	●	
Ammonia discharge kit [1]	●	●
Flow regulation valve	●	

[1] *For indoor GAHP GS Plus and GAHP WS Plus.*

Learn more at robur.com

Innovation that never stands still. Explore the full range.

Uncover the rest of the story – with Robur's complete solution range.

In addition to the solutions offered by the Abso Pro range, learn more about the high-performance of our K18 gas absorption heat pump for the residential sector and our Classic Line, a long-standing leader in the heating sector for industrial, warehouses and commercial buildings. We have a complete range of air heaters, wall-mounted boilers, evaporative coolers, gas-fired convectors and air curtains.

Our sales team is at your complete disposal for any information or further explanations.

The Robur team

Explore our world on robur.com or drop us a line at export@robur.it

They’re round out the offer. Robur products at your service.

Gas-fired unit heaters

A complete range of solutions for heating (including by condensation) artisan, commercial and industrial environments efficiently and modularly.

Robur Hybrid

Dual Energy Heat Pump System: a fully hydronic solution combining gas and electricity, optimising energy use and costs by selecting the most efficient source. GAHPs can be paired with an electric heat pump or electric chillers.

e-NextPro

A 100% electric solution, this fully integrated Air-to-Air Split System provides heating and cooling for large industrial and commercial spaces, with no need for a hydraulic circuit and no compromise on efficiency.

Wall-mounted Condensing Boilers

Ideal for heating environments and the production of domestic hot water with the best cost-performance ratio.

Evaporative Coolers

Created to improve the summer comfort of working environments, cooling medium to large buildings, and guaranteeing low running costs.

Individual Gas-fired convectors

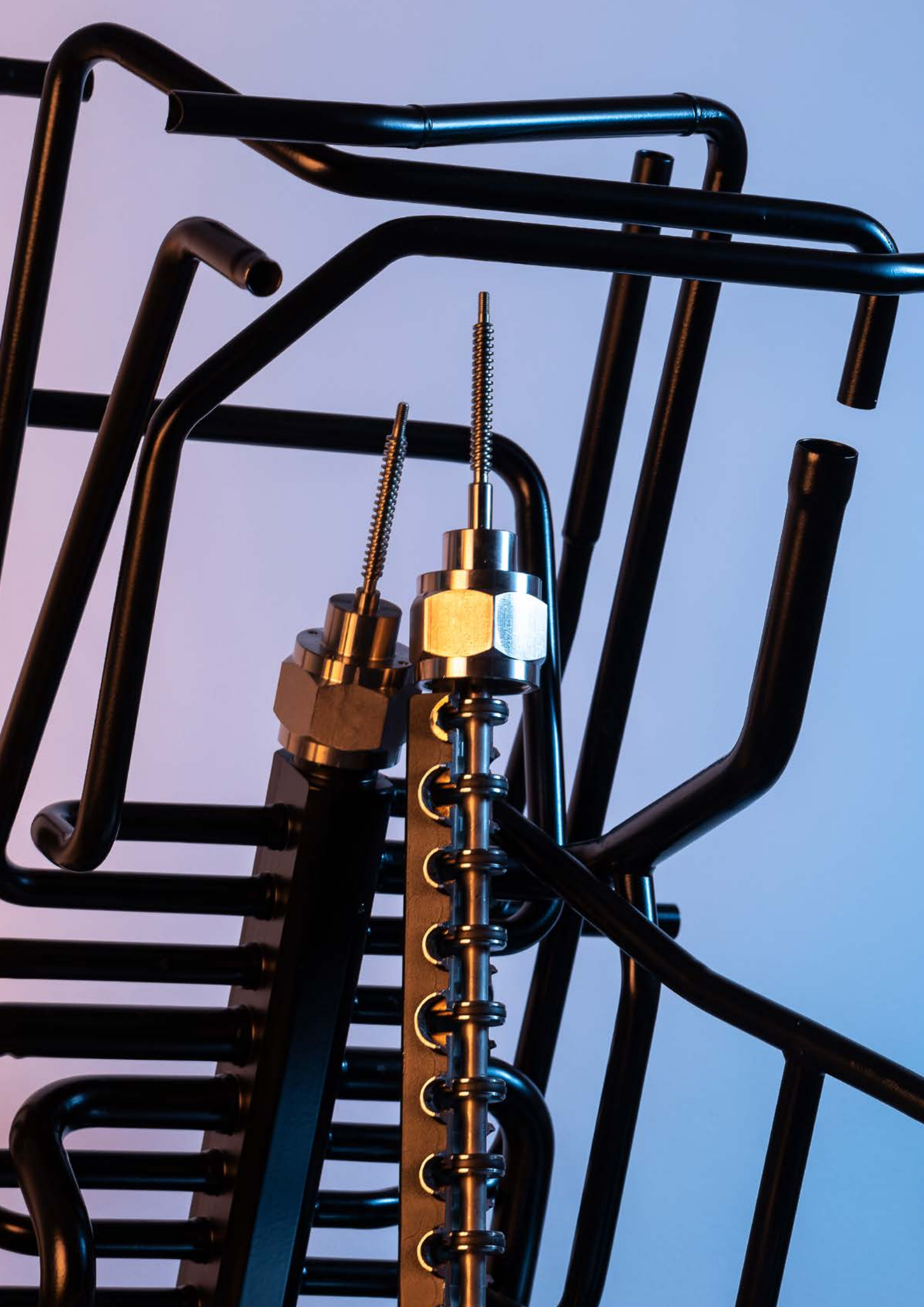
A long-standing range created to integrate the heating of environments, even with occasional use, without waiting times and even in the absence of a power supply.

Air curtains

They have the task of preventing or limiting the entry of cold air into doors and large openings of warehouses, industrial and commercial buildings.

K18 Heat Pumps

Condensing absorption heat pumps which use renewable aerothermal energy.
The perfect range for high-efficiency heating and domestic hot water production.



Explore our Abso references.

ABSO PRO X-DPL297 - JUNE 2025

caring for the environment

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