CAIROX

REFRIGERANT R32

R-AQUA®

AIR/WATER HEAT INVERTER HEAT PUMPS WITH R32

A+++

A++

www.cairox.com

AIR/WATER HEAT PUMPS WITH R32

HYDRAULIC MODULE

Air/water heat pumps with high-efficiency energy-saving DC inverter and R32 refrigerant. The energy from the outdoor air is absorbed and transmitted to the water using the advanced heat pump technology for heating and cooling of the home and domestic hot water.
The smart control for the compressor and expansion valve allows for quick, precise adjustment of the water temperature, thereby reducing energy consumption.

APPLICATION

- Heating of new or existing homes
- Heating via radiators, fan convectors, underfloor or wall heating
- Heating of domestic hot water

R-AQUA-CGW-IU A1
(hydraulic module)

R-AQUA-CGW-ID A1
(with boiler
for domestic hot water)

Hot water at 60 °C

All R-Aqua air/water heat pumps are equipped with a twin rotary compressor. This heat pump provides water at 60°C without the need to use an electric backup heater, even at temperatures below 0 °C.

USER-FRIENDLY CONTROL

All of the menus can be easily accessed via the colour LCD screen. We have opted for a user-friendly layout, with the functions and parameters (adjustment, display and commissioning) on a single page.

- Several timers
- Weekly program
- Back-up heater
- Quick provision of domestic hot water
- Protection against Legionella
- Adjustment of the underfloor heating

No.	Functions	No.	Functions
1	Current operating mode	6	View the parameters
2	Date	7	Commissioning parameters
3	Time	8	ON/OFF
4	Adjustment of the functions	9	General settings
5	Adjustment of the parameters	10	Overview

WI-FI CONTROL

All models have Wi-Fi as standard, making it easier to view the operating status and adjust the pump remotely.

- Wi-Fi & Modbus interface as standard
- Adjustment according to the meteorological conditions
- Inverter technology
- User-friendly functions
- High efficiency
- A+++ energy class
- Wide operating range

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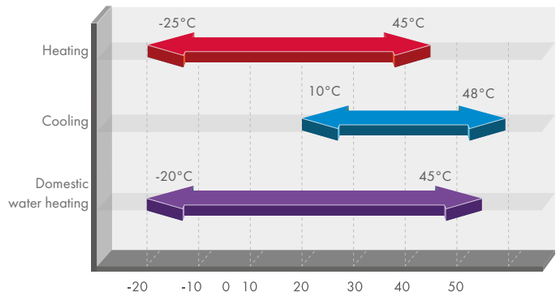
R-AQUA®

SPECIFICATIONS

OPERATING RANGE

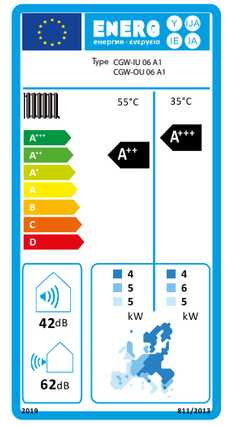
Wide operating range
Heating: -25 ~ 45 °C
Cooling: 10 ~ 48 °C
Domestic water heating: -20 ~ 45 °C

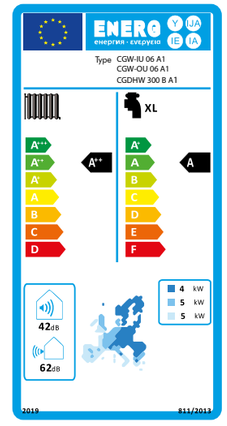
Domestic hot water temperature
Domestic hot water: 40 to 80 °C



THE LATEST TECHNOLOGY

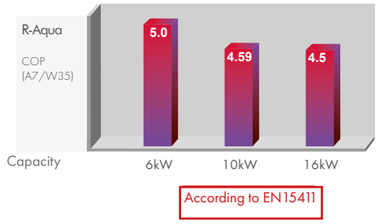
- High-efficiency plate heat exchanger
- Wilo circulator pump
- DC inverter compressor
- Energy-saving DC fans





COP OF UP TO 5.0

R-Aqua offers highly efficient heating with a COP of up to a maximum of 5.0.



According to EN15411

FAN & MOTOR

Efficient axial fan
The R-Aqua units are equipped with efficient, energy-saving axial fans, which ensures the system provides reliable, stable and ultra-quiet operation.

Direct current fan motor
The continuously variable DC fan motor guarantees a high air flow rate and lower energy consumption.

ULTRA QUIET OPERATING MODE

By modifying the power of the compressor and fan, the operating noise can be decreased by more than 3 dB(A) during the night or when ultra-quiet operation is preferable, thereby halving the sound level.

HIGH QUALITY GOLD FIN COATING

The outdoor unit coil features a Gold Fin coating which guarantees a long service life and shortens the defrosting time.

HIGH EFFICIENCY

The stainless steel (316L) plate heat exchanger ensures maximum heat transmission between the refrigerant and water in the system. The heat exchangers have been carefully selected to guarantee the highest possible level of performance.

BOILER FOR DOMESTIC HOT WATER

The **R-AQUA SANI** is a water boiler designed for storing domestic hot water. This boiler is equipped with a coil which can be connected to a heat pump or another heat source. Furthermore, the boiler features an additional input for integrating an electrical heater. The boiler is manufactured from steel with an enamel coating to protect the interior from corrosion. A magnesium anode is provided in the boiler as additional protection against ionisation. The boiler has a layer of grey synthetic material on the exterior which provides thermal insulation. The R-AQUA SANI is available with a volume of 300 or 500 litres.

APPLICATION

- Storage of domestic hot water
- Suitable for residential applications
- Suitable for non-residential applications (offices, shops and commercial spaces, catering and hotels, fitness centres, housing, etc.)

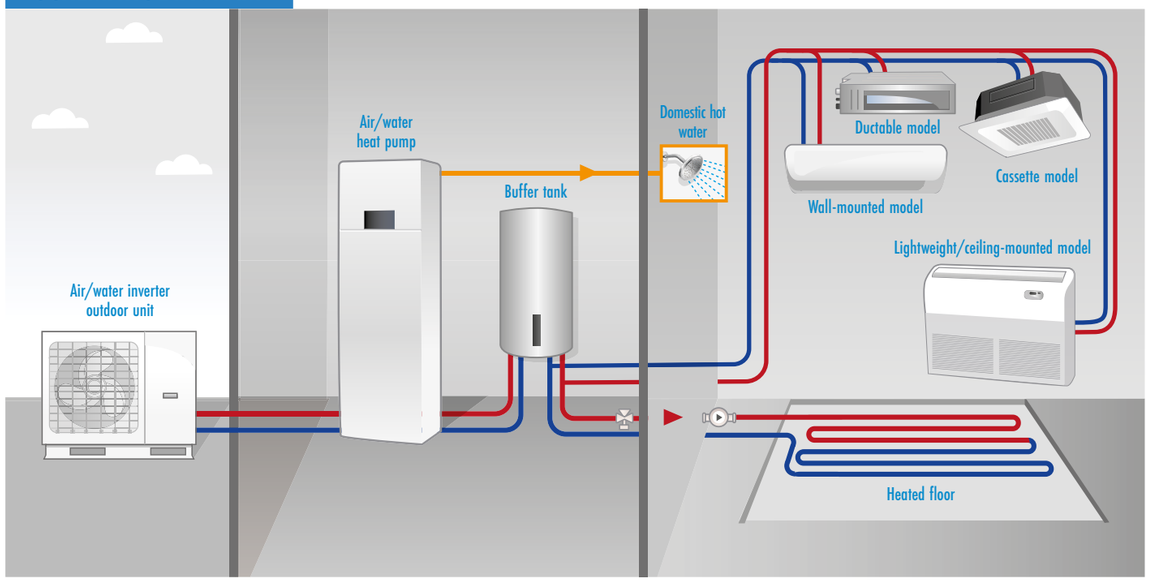
BOILER FOR DOMESTIC HOT WATER WITH DUAL HEAT EXCHANGER

The **R-AQUA SANI-S** is a water boiler designed for storing domestic hot water. This boiler is equipped with two coils which can be connected to a heat pump and an additional heat source. The upper coil uses the energy from the pump and the lower coil uses the thermal energy from solar collectors or the boiler, for example. Furthermore, the boiler is manufactured from steel with an enamel coating to protect the interior from corrosion. A magnesium anode is provided in the boiler as additional protection against ionisation. The boiler has a layer of polyurethane heat insulation (50 mm thick) and is also finished with a layer of grey synthetic material on the exterior. The R-AQUA SANI-S is available with a volume of 300 or 500 litres.

APPLICATION

- Storage of domestic hot water
- Suitable for residential applications
- Suitable for non-residential applications (offices, shops and commercial spaces, catering and hotels, fitness centres, housing, etc.)
- Connection of a second heat source

SCHEMATIC DIAGRAM



SPLIT SYSTEM

HYDRAULIC MODULE

Indoor unit			R-Aqua-CGW-IU 06 A1	R-Aqua-CGW-IU 10 A1	R-Aqua-CGW-IU 16 A1 1ph
Heating capacity A7/W35		kW	6.0	9.5	15.5
COP A7/W35			5.0	4.59	4.5
Heating capacity A7/W45		kW	5.9	9.5	16,09
COP A7/W45			3.91	3.60	3,62
Heating capacity A2/W35		kW	5.1	8.1	13,13
COP A2/W35			4.26	3.85	3,74
Heating capacity A2/W45		kW	5.0	8.1	13,13
COP A2/W45			3.44	3.17	3,13
Heating capacity A-7/W35*		kW	4.2	6.7	10,81
COP A-7/W35			3.05	2.81	2,74
Heating capacity A-7/W45*		kW	4.1	6.7	10,81
COP A-7/W45			2.42	2.23	2,21
Heating capacity A-10/W35*		kW	3.9	6.2	10,04
Heating capacity A-10/W45*		kW	3.8	6.2	10,04
Refrigerant (PRP)			R32 (675)	R32 (675)	R32 (675)
Power supply		V / Ph / Hz	230/1/50		230/1/50
Heat pump seasonal efficiency (%) **		(35 °/55 °C)	178,7 / 127,4	181/127	181,2/137
Heat pump annual energy consumption ***		kWh (35 °/55 °C)	2729/3169	4038/5091	5886/8045
Energy class		35 °/55 °C	A+++/A++	A+++/A++	A+++/A++
Components	Heating electrical	Type	-	Dry resistor		Dry resistor
		Material	-	Stainless steel		Stainless steel
		Adjustment	-	Automatic		Automatic
		Number of steps	-	2		2
		Power	kW	3	6	6
		Combination	kW	1,5 + 1,5	3 + 3	3 + 3
	Heat exchangeur	Type	-	Plate exchanger		Plate exchanger.
		Number	-	1		1
Sound pressure level @ 1 m			dB(A)	29		29
Back-up heater power cable cross section			mm²	3G 2.5	3G 6	3G 6
Indoor unit power cable cross section			mm²	3G 2.5	3G 6	3G 6
Automatic fuse (slow burn)			A	20	32	32
Dimensions	Device (LxDxH)		mm	460 x 320 x 860		460 x 320 x 860
	Weight		kg	62		62
Corresponding outdoor unit				**R-AQUA-CGW-OU 06 A1**	**R-AQUA-CGW-OU 10 A1**	**R-AQUA-CGW-OU 16 A1 1ph**

* Including defrosting cycle | ** According to EN14825 | *** According to EN14511

SPLIT SYSTEM

HYDRAULIC MODULE WITH INTEGRATED BOILER

Indoor unit				R-Aqua-CGW-OU 06 A1	R-Aqua-CGW-OU 10 A1
Heating capacity A7/W35			kW	6.0	9.5
COP A7/W35				5.0	4.59
Heating capacity A7/W45			kW	5.9	9.5
COP A7/W45				3.91	3.60
Heating capacity A2/W35			kW	5.1	8.1
COP A2/W35				4.26	3.85
Heating capacity A2/W45			kW	5.0	8.1
COP A2/W45				3.44	3.17
Heating capacity A-7/W35*			kW	4.2	6.7
COP A-7/W35				3.05	2.81
Heating capacity A-7/W45*			kW	4.1	6.7
COP A-7/W45				2.42	2.23
Heating capacity A-10/W35*			kW	3.9	6.2
Heating capacity A-10/W45*			kW	3.8	6.2
Refrigerant (PRP)				R32 (675)	R32 (675)
Power supply			V / Ph / Hz	230/1/50	
Heat pump seasonal efficiency (%) **			(35 °/55 °C)	178,7 / 127,4	181/127
Heat pump annual energy consumption ***			kWh (35 °/55 °C)	2729/3169	4038/5091
Energy class			35 °/55 °C	A+++/A++	A+++/A++
Components	Electric heating	Type	-	Dry resistor	
		Material	-	Stainless steel	
		Adjustment	-	Automatic	
		Number of steps	-	2	
		Power	kW	3	6
		Combination	kW	1,5 + 1,5	3 + 3
	Heat exchanger	Type	-	Plate exchanger	
		Number	-	1	
	Water tank	Volume	L	185	
		Electric heater	kW	3	
		Type	-	XL	
Sound pressure level @ 1 m			dB(A)	29	
Back-up heater power cable cross section			mm²	3G 2.5	3G 6
Indoor unit power cable cross section			mm²	3G 2.5	3G 6
Automatic fuse (slow burn)			A	20	32
Dimensions	Device (BxDxH)		mm	803 x 683 x 2000	
	Weight		kg	210	
Corresponding outdoor unit				**R-AQUA-CGW-OU 06 A1**	**R-AQUA-CGW-OU 10 A1**

* Including defrosting cycle | ** According to EN14825 | *** According to EN14511

R-AQUA®

SPLIT SYSTEM

OUTDOOR UNIT

This outdoor unit for air/water heat pump with **R32** refrigerant and DC inverter compressor is used to connected an **R-AQUA-CGW-IU A1** or **R-AQUA-CGW-ID A1** type hydraulic module (with integrated boiler). The DC twin rotary compressor guarantees ultra-quiet operation and a long service life.

This outdoor unit is always sold in combination with the R-AQUA-CGW-IU A1 ou R-AQUA-CGW-ID A1 indoor unit.

Outdoor unit		R-Aqua-CGW-OU 06 A1	R-Aqua-CGW-OU 10 A1	R-Aqua- CGW- OU 16 A1
Refrigerant (PRP)		R32 (675)	R32 (675)	R32 (675)
Maximum air flow rate	m³/h	3200	3512	5044
Power supply	V	230/1+N	230/1+N	230/1+N
Nominal current (F/C)	A	10/10	22,0/15,0	17,4/30,3
Compressor type		Rotary DC	Rotary DC	Rotary DC
Sound pressure level (F/C)	dB(A)	52/52	55/55	60/61
Dimensions (H x L x D)	mm	702x975x396	787x982x427	820x940x460
Weight	kg	55	82	104
Refrigerating pipes	inches	1/4 - 1/2	1/4 - 1/2	1/4 - 5/8
Precharged quantity of refrigerant	g (TCO_2eq)	1000 (0,675)	1600 (1,08)	1840 (1,242)
Quantity of additional refrigerant per metre	g/m	16	16	0
Number of precharged metres	m	10	10	15
Maximum length/height refrigerating piping	m/m	20/15	25 /15	15/15
Minimum length, refrigerating piping	m	5	5	5
Operation temperature range in cooling mode	°C	+10~+48	+10~+48	+10 + 48
Operation temperature range in heating mode	°C	-25~+35	-25~+35	-25 +35
Domestic hot water operating temperature range	°C	-25~+45	-25~+45	-25 +45
Power cable cross section	mm²	3G 2.5	3G 4	3G 6
Automatic fuse (slow burn)	A	16	25	32

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A DEDICATED MOBILE APPLICATION

Control via smartphone or tablet

- Control remotely
- User-friendly menu
- Suitable for Apple & Android

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Download on the App Store

... AND MUCH MORE

- Wi-Fi & Modbus interface as standard
- Adjustment according to the meteorological conditions
- Inverter technology
- User-friendly functions
- High efficiency
- A+++ energy class
- Wide operating range

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