R-AQUA

**J.01**

Air to Water Heat Pumps

**CGW-IU A1**

- R-AQUA
- Air/water split
- Hydromodule
- R32


# A2W heat pumps R32 hydromodule type CGW-IU A1

Air/water inverter controlled heat pump with R32 refrigerant. Thanks to the advanced heat pump technology, the energy from the outside air is absorbed and transferred to the water for heating and cooling of the home and the domestic hot water.
The intelligent control of the compressor and expansion valve ensures a precise and fast control of the water temperature, thus reducing the energy consumption.

## Brand

- R-AQUA

## Application

- Heating of new or existing houses
- Heating by means of radiators, convectors or floor, wall or ceiling heating
- Cooling by means of convectors, floor, wall or ceiling cooling
- Production of domestic hot water, provided a hot water heater is installed

## Composition

- 3-way valve
- Communication cable included
- High efficiency plate heat exchanger
- Energy-efficient circulation pump
- Colour touch screen controller (wired)
- Expansion vessel (10 liters)
- Safety valve (3 bar)
- Electrical backup heater
- Water pressure sensor

## Refrigerant

- R32

## Specifications

- Split system
- 1 device for heating, cooling and domestic hot water
  - Heating assured at outside temperatures down to -25°C
  - Water temperature up to 55°C at outside temperatures down to -10°C
- A+++ at 35°C water temperature

- Bivalent setup possible
  - The heat pump will send a signal to an external heat source (eg gas boiler) depending on the outside temperature. This causes the heat pump stoped, and the second source present will provide the heating.
- Standard equipped with WiFi
- Standard equipped with Modbus interface
- Easy installation
- EUROVENT EN 14511 and EN 14825 certification
- Keymark certification

## Accessories

- Room Thermostat, type **TS-CLOUD, TS-CLOUD RF** (only suitable for heating)
- Smart Grid module, type **SMART GRID**
- Cascade module, type **CASCADE**
- Buffer tank, type **BTE 60, BTE 100**
- Deaerator, type **AAS**
- Magnetic dirt separator, type **ADS**
- Differential pressure regulator, type **DPC**
- Filling set, type **WFS**
- Expansion vessel for heating, type **HEV**
- Expansion vessel console, type **EVC**
- Protector, type **PAB**
- Coding plug for permanently disabling the cooling function, type **COD-IU-H**
- Start-up is strongly recommended, type **XSTARTUPJ**

Water filter, safety group and expansion vessel MUST be provided on site.

## Applicable outdoor units

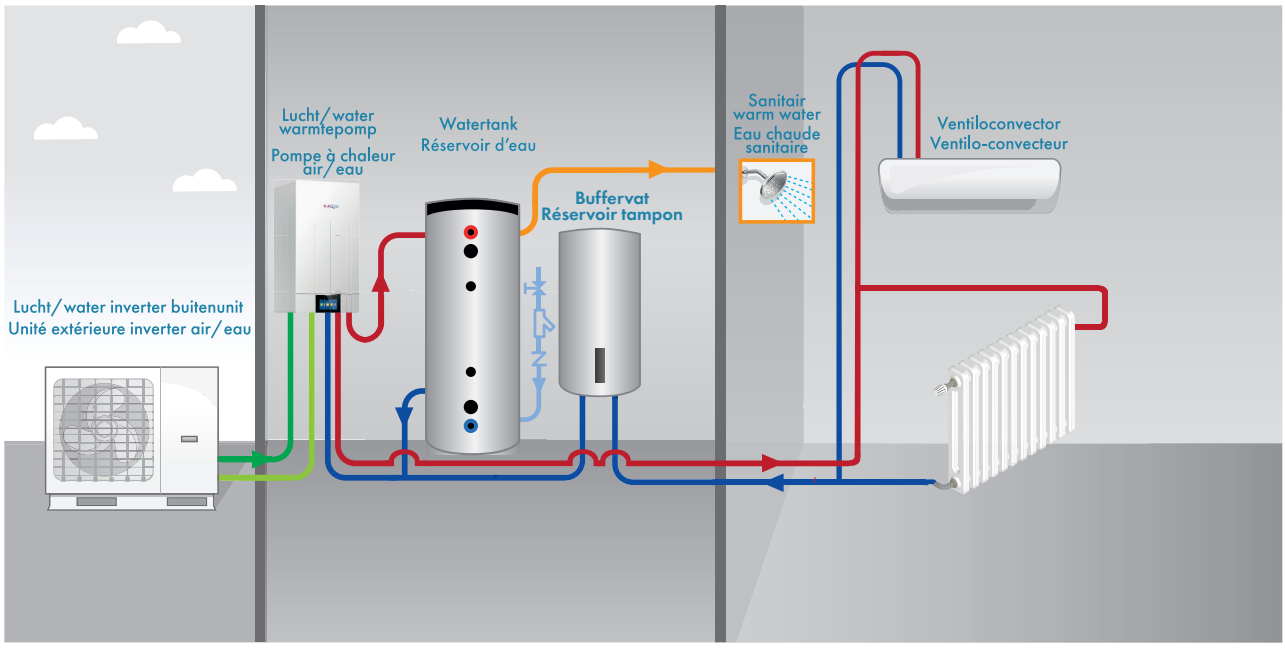
- Outdoor unit, Type **CGW-OU A1**

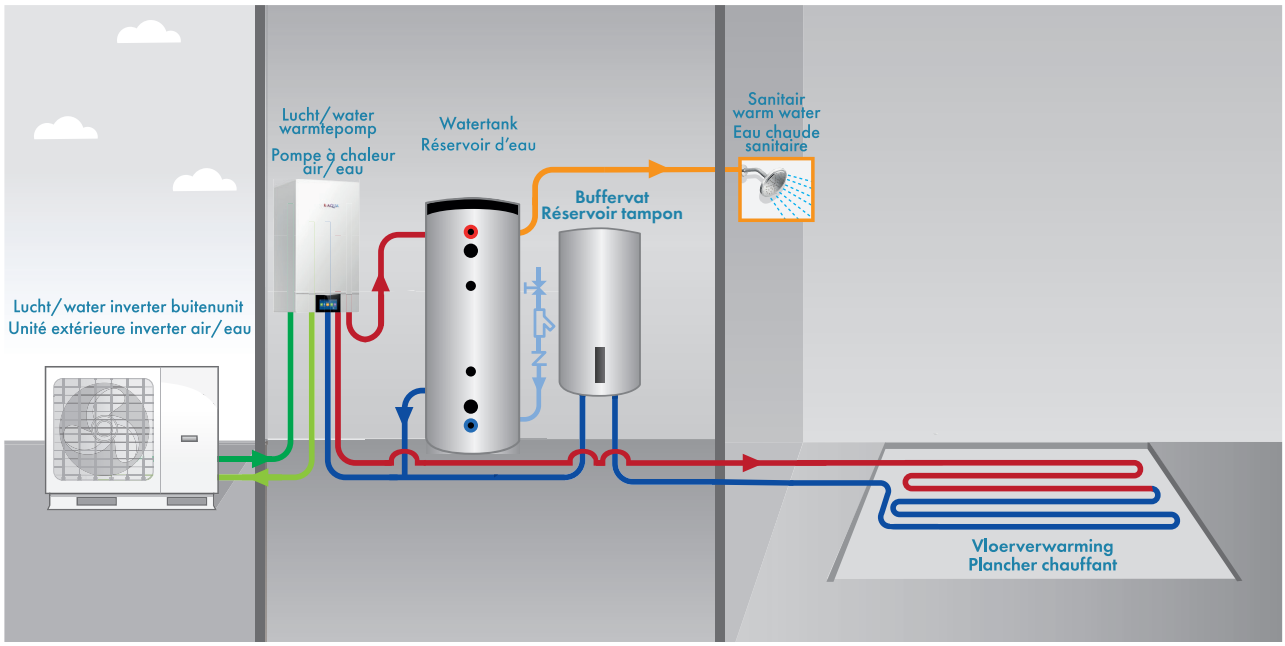
## Applicable boiler

- Domestic hot water heater 200 liters, type **SANI-EM 200**
- Domestic hot water heater 300 liters, type **SANI-EM 300, SANI 300+**
- Domestic hot water heater 500 liters, type **SANI-EM 500, SANI 500+**

## Startup

- **Start-up by CAIROX BELGIUM strongly recommended**






## Notes

The 3 way valve is integrated to the indoor unit **CGW-IU**.

| Technical data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Indoor unit** | | | | **CGW-IU 06 A1** | **CGW-IU 08 A1** | **CGW-IU 10 A1** | **CGW-IU 12 A1** | **CGW-IU 14 A1** | **CGW-IU 16 A1** |
| **Corresponding outdoor unit** | | | | **CGW-OU 06 A1** | **CGW-OU 08 A1** | **CGW-OU 10 A1** | **CGW-OU 12 A1** | **CGW-OU 14 A1** | **CGW-OU 16 A1** |
| **Heating capacity A7/W35** | | | **kW** | 6,00 | 8,00 | 10,00 | 12,00 | 14,00 | 15,5 |
| **COP A7/W35** | | | | 5,00 | 4,97 | 4,76 | 5,00 | 4,70 | 4,50 |
| **Heating capacity A7/W45** | | | **kW** | 5,80 | 8,00 | 9,85 | 12,40 | 14,48 | 16,09 |
| **COP A7/W45** | | | | 3,82 | 3,86 | 3,67 | 3,77 | 3,68 | 3,62 |
| **Heating capacity A2/W35** | | | **kW** | 5,19 | 6,56 | 7,67 | 9,60 | 11,20 | 13,13 |
| **COP A2/W35** | | | | 3,71 | 3,69 | 3,53 | 3,42 | 3,34 | 3,74 |
| **Heating capacity A2/W45** | | | **kW** | 5,06 | 6,40 | 7,48 | 9,36 | 10,92 | 13,13 |
| **COP A2/W45** | | | | 2,97 | 2,95 | 2,83 | 2,74 | 2,67 | 3,13 |
| **Heating capacity A-7/W35** | | | **kW** | 4,28 | 5,41 | 6,33 | 7,68 | 8,96 | 10,81 |
| **COP A-7/W35** | | | | 2,93 | 2,92 | 2,79 | 2,70 | 2,63 | 2,74 |
| **Heating capacity A-7/W45** | | | **kW** | 4,15 | 5,25 | 6,14 | 7,44 | 8,68 | 10,81 |
| **COP A-7/W45** | | | | 2,34 | 2,33 | 2,23 | 2,16 | 2,11 | 2,21 |
| **Heating capacity A-10/W35** | | | **kW** | 3,89 | 4,92 | 5,75 | 6,72 | 7,84 | 10,04 |
| **Heating capacity A-10/W45** | | | **kW** | 3,76 | 4,76 | 5,56 | 6,48 | 7,56 | 10,04 |
| **SCOP W35/W55** | | | | 4,53/3,25 | 4,60/3,30 | 4,60/3,25 | 4,63/3,23 | 4,65/3,50 | 4,60/3,50 |
| **Seasonal efficiency ηs heat pump W35/W55** | | | **%** | 179/127 | 181/129 | 181/127 | 182/126 | 183/137 | 181/137 |
| **Annual consumption heat pump W35/W55** | | | **kWh** | 2729/3169 | 3149/4371 | 4038/5091 | 4967/6985 | 5535/8045 | 5886/8045 |
| **Energy class W35/W55** | | | | A+++/A++ | | | | | |
| **Power supply** | | | **V / Ph / Hz** | 230/1/50 | | | | | |
| **Refrigerant (GWP)** | | | | R32 (675) | | | | | |
| **Refrigerant pipes (liquid - gas)** | | | **inch** | 1/4 - 1/2 | | | 1/4 - 5/8 | | |
| **Hydraulic connections (supply - return)** | | | **inch** | 1 | | | | | |
| **Outgoing water temperatures** | | **Heating** | **°C** | 20 ~ 60 | | | | | |
| | | **Cooling** | **°C** | 7 ~ 25 | | | | | |
| | | **DHW** | **°C** | 40 ~ 80 | | | | | |
| **Components** | **Pump** | **Type** | **-** | High-efficiency pump | | | | | |
| | | **Regulation** | **-** | Electronic - continuous control | | | | | |
| | | **Capacity (min-max)** | **W** | 3 ~ 95 | | | | | |
| | | **Flow rate (min)** | **l/h** | 650 | 870 | 870 | 1150 | 1150 | 1150 |
| | | **Flow rate (nom)** | **l/h** | 1030 | 1380 | 1710 | 2060 | 2410 | 2660 |
| | **Expansion vessel** | **Volume*** | **l** | 10 | | | | | |
| | | **Pressure (max)** | **bar** | 3 | | | | | |
| | | **Pre-pressure** | **bar** | 1 | | | | | |
| | **Backup electric heating** | **Type** | **-** | Wet | | | | | |
| | | **Material** | **-** | Incoloy825 | | | | | |
| | | **Regulation** | **-** | Automatic | | | | | |
| | | **Number of steps** | **-** | 2 | | | | | |
| | | **Capacity** | **kW** | 3 | 6 | | | | |
| | | **Combination** | **kW** | 1,5 + 1,5 | 3 + 3 | | | | |
| | **Heat exchanger** | **Type** | **-** | Plate heat exchanger | | | | | |
| | | **Number** | **-** | 1 | | | | | |
| **Sound pressure**** | | | **dB (A)** | 29 | | | | | |
| **Power cable section indoor unit** | | | **mm²** | 3G2,5 | 3G6 | | | | |
| **Automatic fuse (slow)** | | | **A** | 20 | 32 | | | | |
| **Dimensions** | **Unit (LxDxH)** | | **mm** | 460x320x860 | | | | | |
| | **Weight** | | **kg** | 62 | | | | | |

Specifications and design can change without notice for further improvements
Capacities measured according to EN14511
* The size of the expansion vessel should be determined in accordance with the total water volume of the system
** Measured at 1m distance in a semi-anechoic chamber