Carrier

Cool Solutions Distribution ltd

AquaSnap® 61AQ

75°C air-source heat pump with natural refrigerant

Heating & Cooling capacity: 40-560 kW

AQUASNAP.

Empower The Future

Decarbonise with Natural Refrigerant

Since Willis Carrier designed the world's first modern air conditioning system in 1902, Carrier has been setting the standard in environmental responsibility.

Today, Carrier develops innovative products supporting customers in their decarbonisation efforts.

We understand the challenges of climate change and are committed to providing increasingly more holistic sustainability solutions. **Our innovative products help customers meet their energy and carbon reduction goals, while we shift to more renewable energy sources through electrification and new refrigerants with lower global warming potential.**

Carrier was the first to introduce the HFO with ultra-low GWP in screw chillers in 2016. Today, having examined its main properties, Carrier has chosen R-290 refrigerant to replace higher GWP refrigerant in its scroll heat pumps.

By providing sustainable solutions, we are advancing toward our goal of reducing our customers' carbon footprint by more than 1 gigaton by 2030.

Our commitment is in line with the EU 2030 target of a 55% reduction in greenhouse gas emissions and the EU 2050 carbon neutral target.

Join us in taking a bold step toward decarbonisation.

#EmpowerTheFuture

AquaSnap® 61AQ
75°C air-source heat pump with natural refrigerant

Designed for sustainability and built for performance, it reduces your carbon footprint while maximizing comfort.

Outstanding performance

The AquaSnap 61AQ range with Greenspeed intelligence features variable-speed compressors, EC fans, and optional variable-speed pumps for maximum efficiency, automatically adjusting capacity and water flow to meet building needs. It offers up to 10% better performance than previous models and exceeds Ecodesign standards by 30%.

Designed for decarbonisation

The AquaSnap 61AQ simplifies boiler replacement thanks to external heater management, DHW control, Legionella prevention, and two heating zone management. Compact and acoustically optimised, it delivers hot water up to 75°C at -7°C operating down to -25°C.

Quick and easy installation

The AquaSnap 61AQ offers a compact design compatible with complete building systems like boilers and smart grids. Its optional hydraulic module includes a variable-speed pump, high-pressure pump, and electronic flow controls. Features like frost protection down to -25°C and an 8-liter expansion tank ensure reliability and durability.

Environmentally responsible

The AquaSnap 61AQ supports green cities and contributes to a sustainable future. It uses R-290 refrigerant with a GWP 99% lower the than previous version, and exceptional energy efficiency. It reduces energy use and carbon emissions with Greenspeed variable-speed pumps, cutting pumping energy consumption by up to 2/3.

Modular approach

The modular system delivers customisable capacities from 40–560 kW, supporting monobloc heat pumps or modular setups of up to four units. It optimises energy use by matching output to demand and ensures reliability through redundancy. Its modular design simplifies installation, maintenance, and space use, making it adaptable to a variety of configurations.

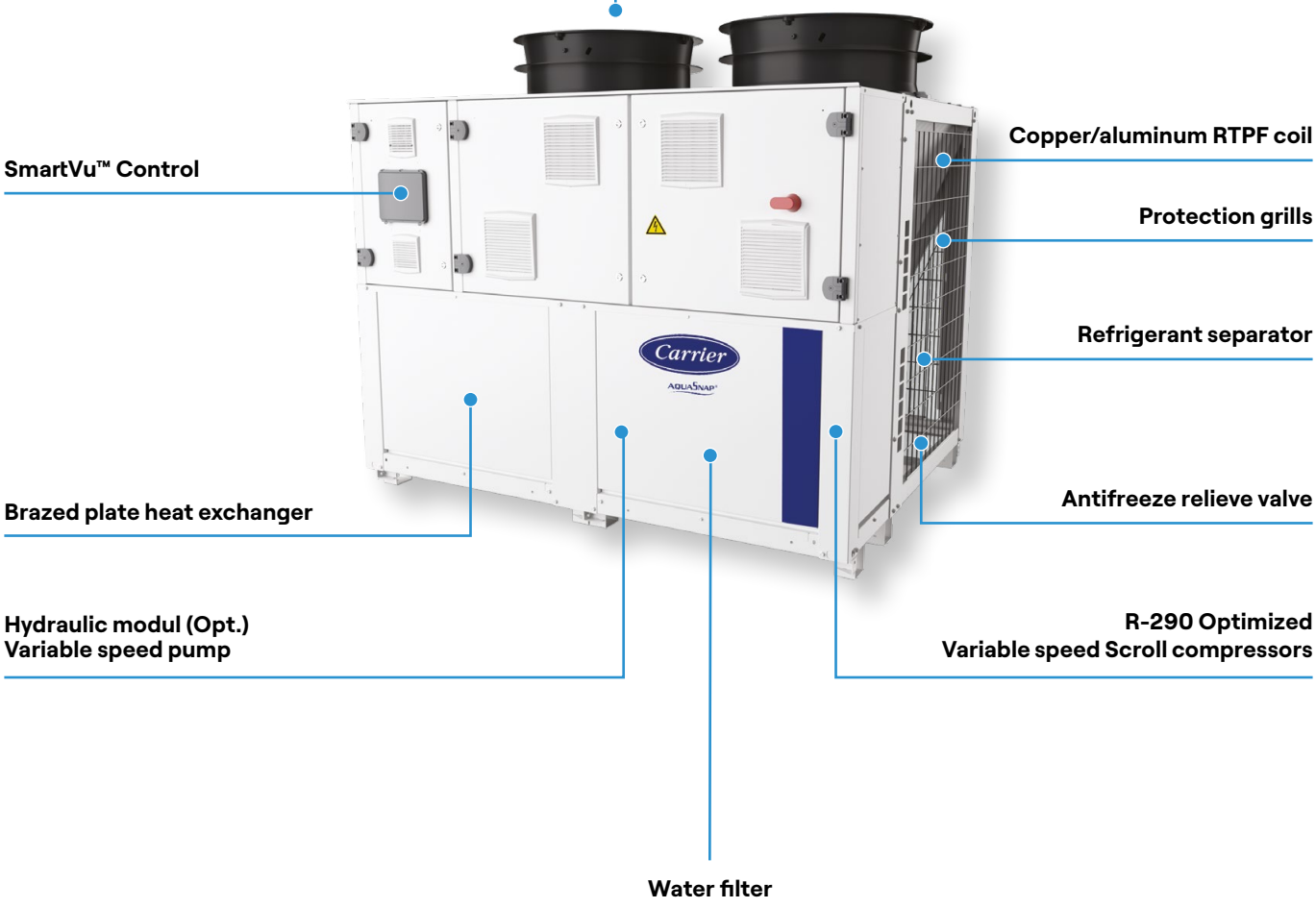
Energy efficiency up to 30% above Ecodesign requirements

Nearly-zero GWP natural refrigerant

Acoustic level divided by 4

Up to 75°C

Industry-leading Carrier technologies



Standard features

R-290 natural refrigerant:
- GWP = 0,02 (following AR6)
- ODP = 0
- Good availability
- Excellent energy efficiency
- Compliance with environmental regulations

Built-in hydraulic module with Greenspeed variable-speed pump:
- Quick electronic setup of nominal water flow during commissioning eliminates valve adjustments, while automatic pump control adapts to constant speed, pressure, or temperature differences.

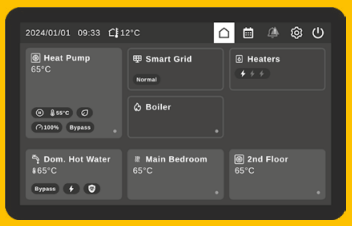
Built-in Legionella prevention management:
- To ensure health and safety compliance.

Domestic Hot Water management:
- DHW set point & schedule
- 3WV furniture (accessory)
- Easily manages Domestic Hot Water, directing it to the heating circuit or tank with set points and schedules.

2 heating zone management:
- Set point & schedule per zone.
- The system can efficiently manage up to two heating zones, offering precise control over temperature distribution across the property.

Smart Grid Ready:
- 61AQ units are SGR ready certified, standardized and secured label for integration on the smart electrical networks.

SmartVu™ Control, intelligent and user-friendly:
- **SmartVu™ Control:** Real-time monitoring with a 7-inch touchscreen.
- **Heating Management:** Integrates boilers, DHW, and heating zones with customizable schedules and Legionella prevention.
- **Energy Management:** Timers, temperature adjustments, and lead/lag control for up to four units.
- **Integrated Functions:** Night mode, pressure/flow displays, leak alerts, and fault logs.
- **Advanced Connectivity:** Ethernet, Modbus, and Bacnet for system integration and diagnostics.



Remote management:
- The AquaSnap unit offers wired control with features like start/stop, dual setpoint activation, and demand limit control. It includes status indicators, defrost mode, and major alarms.
- Advanced controls allow setpoint adjustment, variable speed pump management, boiler integration, and support for up to three external heaters, DHW management, and two heating zones.

Technical characteristics

Performance data, sizes 040P to 140P

AquaSnap® 61AQ				MONOBLOC UNIT							
				040P	050P	060P	070P③	080P	100P	120P	140P③
Heating											
Standard unit Full load performances*	HA1	Nominal capacity	kW	38,0	48,0	57,5	NA	76,0	96,0	115,0	NA
		COP	kW/kW	3,84	3,60	4,04	NA	3,88	3,62	4,08	NA
	HA3	Nominal capacity	kW	38,0	48,0	57,5	NA	76,0	96,0	115,0	NA
		COP	kW/kW	2,81	2,66	2,78	NA	2,83	2,68	2,80	NA
Seasonal energy efficiency**	HA1	**$SCOP_{30/35°C}$**	**kWh/kWh**	**4,06**	**4,10**	**4,32**	**NA**	**4,18**	**4,17**	**4,28**	**NA**
		$\eta s\ heat_{30/35°C}$	**%**	**159**	**161**	**170**	**NA**	**164**	**164**	**168**	**NA**
		P_{rated}	kW	38,0	48,0	57,5	NA	76,0	96,0	115,0	NA
		Energy label		A++	A++	A++	NA	-	-	-	NA
	HA3	**$SCOP_{47/55°C}$**	**kWh/kWh**	**3,31**	**3,34**	**3,41**	**NA**	**3,41**	**3,41**	**3,37**	**NA**
		$\eta s\ heat_{47/55°C}$	**%**	**129**	**131**	**133**	**NA**	**133**	**134**	**132**	**NA**
		P_{rated}	kW	38,0	48,0	57,5	NA	76,0	96,0	115,0	NA
		Energy label		A++	A++	A++	NA	-	-	-	NA
Cooling											
Standard unit Full load performances*	CA1	Nominal capacity	kW	32,0	38,3	52,5	NA	64,0	76,6	105,0	NA
		EER	kW/kW	2,38	2,21	2,25	NA	2,40	2,22	2,27	NA
Standard unit Full load performances*	CA1	Nominal capacity	kW	32,0	41,0	52,5	NA	64,0	41,0	105,0	NA
		EER	kW/kW	3,66	3,30	3,34	NA	3,70	3,32	3,37	NA
Seasonal energy efficiency**		**$SEER_{12/7°C}$ Comfort low temp.**	**kWh/kWh**	**4,29**	**4,13**	**4,18**	**NA**	**4,47**	**4,28**	**4,29**	**NA**
		$SEER_{23/18°C}$ Comfort medium temp.	**kWh/kWh**	**5,41**	**5,15**	**5,15**	**NA**	**5,7**	**5,36**	**5,32**	**NA**
		$SEPR_{12/7°C}$ Process high temp.	**kWh/kWh**	**5,90**	**5,80**	**5,75**	**NA**	**6,18**	**6,02**	**5,92**	**NA**
Integrated Part Load Value		IPLV.SI	kW/kW	4,673	4,592	4,534	NA	4,805	4,708	4,604	NA
Sound levels - Standard unit											
Sound power in heating mode①			dB(A)	74,5	77,0	78,0	NA	77,5	80,0	81,0	NA
Sound pressure in heating mode at 10 m②			dB(A)	43,0	45,5	46,5	NA	46,0	48,5	49,5	NA
Ecodesign Sound power SCOP C conditions			dB(A)	60,5	61,5	62,5	NA	63,5	64,5	65,5	NA
Dimensions - Standard unit											
Length			mm	1815	1815	1815	1815	1815	1815	1815	1815
Width			mm	1145	1145	1145	1145	1145	1145	1145	1145
Height			mm	2045	2045	2045	2045	2045	2045	2045	2045

* In accordance with standard EN14511-3:2022.

** In accordance with standard EN14825:2022, average climate

HA1 Heating mode conditions: Water heat exchanger water entering/leaving temperature 30°C/35°C, outside air temperature tdb/twb = 7°C db/6°C wb, evaporator fooling factor 0 m².K/W

HA3 Heating mode conditions: Water heat exchanger water entering/leaving temperature 47°C/55°C, outside air temperature tdb/twb = 7°C db/6°C wb, evaporator fooling factor 0 m².K/W

CA1 Cooling mode conditions: Evaporator water entering/leaving temperature 12°C/7°C, outside air temperature 35°C, evaporator fooling factor 0 m².K/W

CA2 Cooling mode conditions: Evaporator water entering/leaving temperature 23°C/18°C, outside air temperature 35°C, evaporator fooling factor 0 m².K/W

$\eta s\ heat_{30/35°C}$ & $SCOP_{30/35°C}$ **Bold values compliant to Ecodesign regulation: (EU) No 813/2013 for Heat Pump application**

$\eta s\ heat_{47/55°C}$ & $SCOP_{47/55°C}$ **Bold values compliant to Ecodesign regulation: (EU) No 813/2013 for Heat Pump application**

$SEER_{12/7°C}$ & $SEPR_{12/7°C}$ **Bold values compliant to Ecodesign regulation: (EU) No 2016/2281 for COMFORT application**

$SEER_{23/18°C}$ **Bold values compliant to Ecodesign regulation: (EU) No 2016/2281 for COMFORT application**

IPLV.SI Calculations according to standard performances AHRI 551-591.

① In dB ref=10^{-12} W, 'A' weighted. Declared dual-number noise emission values in accordance with ISO 4871 with an associated uncertainty of +/-3dB(A). Measured in accordance with ISO 9614-1 and certified by Eurovent.

② In dB ref 20µPa, 'A' weighted. Declared dual-number noise emission values in accordance with ISO 4871 with an associated uncertainty of +/-3dB(A). For information, calculated from the sound power Lw(A).

③ Sizes 070 and 140 will be available from April 2025.

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Eurovent certified values

CARRIER participates in the ECP programme for LCP-HP. Check ongoing validity of certificate: www.eurovent-certification.com

61AQ 040P to 070P

61AQ 080P to 140P

Modular offering

Modular system		Modular / 2 units						Modular / 3 units					Modular / 4 units				
AquaSnap® 61AQ Base unit	Sizes	160P	180P	200P	240P	260P	280P	300P	320P	350P	380P	420P	440P	470P	490P	520P	560P
060P		1	1	1				1	1				1				
070P										1				1	1		
100P		1															
120P			1		2	1		2	1		2		2	1		2	
140P				1		1	2		1	2	1	3	1	2	3	2	4

61AQ 160P to 280P

61AQ 300P to 420P

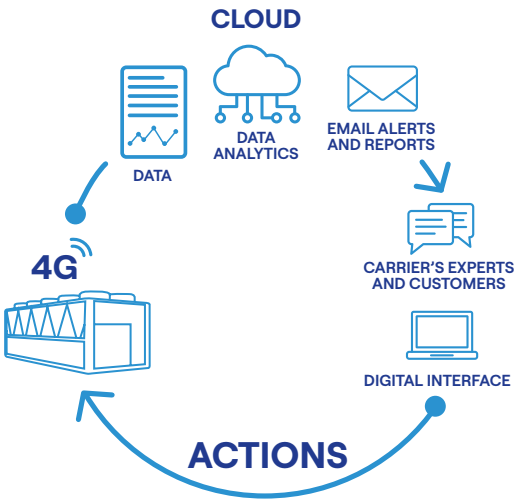
61AQ 440P to 560P

Options & accessories

Options	No.
Corrosion protection, traditional coils	3A
Sensor for Lead / Lag operation (Accessory)	58
Remote electrical connection (Accessory)	81B
HP VSD single-pump (variable speed)	116V
System Management Module (SMM) (Accessory)	156D
Refrigerant leak detector (Accessory)	159C
System Management Sequencer 4 units (SMS) (Accessory)	275ABC
EMC class. C1, as per EN 61000-6-3 (Accessory)	282C
EMC class. C1, as per EN 61600-6-3 + Energy meter (Accessory)	282D
Electric energy meter (Accessory)	294
Connected Service Box (ABOUND HVAC Performance)	298C
Water buffer tank module (Accessory)	307
Water buffer tank module with heaters (Accessory)	307D/E
Anti-vibration mounts (Accessory)	308
Anti-vibration mounts (Accessory)	308
Exchangers flexibles connection (Accessory)	309A
Exchangers water filter (Accessory)	310A
External temperature sensor (Accessory)	312
Domestic Hot Water sensor (Accessory)	312A
Domestic Hot Water 3WV & Management (Accessory)	347A

Refer to the selection tool to find out which options are not compatible.

BluEdge service plans with digital connectivity for your new advanced high-temperature heat pump



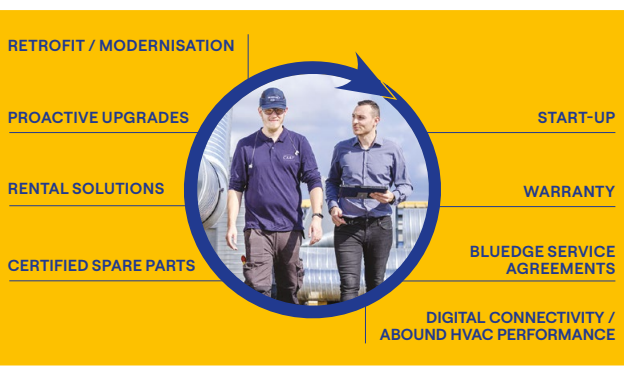
The Carrier BluEdge service plans are backed by the human touch of our unmatched expert technicians and the latest industry-leading technology.
With BluEdge service agreements enabled by Abound HVAC Performance, you'll receive the benefits of continuous digital monitoring.
Our Command Center Experts supported by the latest intelligent algorithms can manage alarms and provide proactive repair and upgrade insights to detect issues before they arise so you can protect your investment.

Benefit from our next-generation insights to improve your uptime, predict potential failures, and reduce operating costs:

- **Peace of mind:** Faster, safer, and more accurate diagnosis & repair to secure equipment availability and reduce disruptions.
- **Maximize performance and equipment life:** Expert personalized Proactive and Preventive insights.
- **Reduce unplanned expenses:** Right service, right time & better cost avoidance.
- **Improve HVAC equipment health:** Visualization and cutting-edge data and insights.
- **Save on energy costs:** Optimize Equipment performance with proactive upgrades.

At Carrier, we believe long-term partnerships are the basis of exceptional service.

We will work with you to fully understand the needs of your business, and to propose adapted solutions through your product lifecycle.



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