Carrier

Turn to the experts

AQUASNAP® 30AWH-R

For residential and light commercial applications

MONOBLOC AIR-TO-WATER HEAT PUMP

WITH R32 REFRIGERANT

MONOBLOC AIR-TO-WATER HEAT PUMP - R32 - 30AWH-R

AQUASNAP 30AWH-R

THE 30AWH-R MONOBLOC AIR-TO-WATER HEAT PUMP IS DESIGNED FOR HEATING AND COOLING APPLICATIONS IN NEW AND EXISTING INDIVIDUAL HOMES AND SMALL BUSINESSES.

The range is compatible with low to medium temperature emitters (underfloor heating, fan coil units, water cassettes, radiators, mixed installations, etc.).

The 30AWH-R heat pump is also compatible with medium to high temperature emitters for boiler back-up operation. The 30AWH-R heat pump is installed outdoors in an open area, ideally as close as possible to the boiler room.

AQUASNAP®

R32

Wide range offer
The 30AWH-R range of reversible heat pumps comprises 7 single-phase models and 3 three-phase models, from 4 kW to 16 kW.

Low carbon footprint
Refrigerant R32 (GWP=675) helps protect the environment and achieve greenhouse emissions phase-down requirements.

Year-round comfort
Operating in wide temperature range (up to 50°C in cooling mode and -25°C in heating mode) and is able to produce hot water ~60°C at an outdoor temperature of up to 35°C for domestic hot water applications.

High energy efficiency
SCOP up to 4.98
SEER up to 5.06
Energy class A+++ (35°C) or A++ (55°C) offering high heating power at less energy consumption.

Plug & Play
- Integrated hydraulic module
- 3 kW electric heater
- Touch-screen wired controller for easy & fast installation, start-up and operation of the unit.

Certified performance
New 30AWH-R can satisfy limitation for local incentive*, such as NFPAC certified performance.

ONE RANGE, MANY APPLICATIONS

Individual Housing | Collective Housing | Light Commercial

*depends on local market regulation

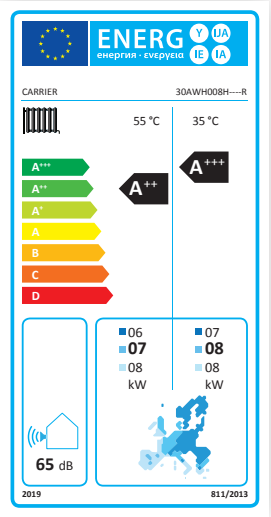
MONOBLOC AIR-TO-WATER HEAT PUMP - R32 - 30AWH-R

WHY CHOOSE CARRIER HEAT PUMPS?

Combined with low temperature systems, the unit can reach class A+++ by taking full advantage of renewable energy sources, which makes it a energy-valuable choice.

Choosing 30AWH-R is also a flexible choice, because the unit can adapt to a variety of application contexts, whether residential or light commercial.

Finally, if you are looking for a comfort solution all year round, 30AWH-R will supply water outlet temperature of up to 62°C, with wide operating conditions up to -25°C in winter and +50°C in summer.

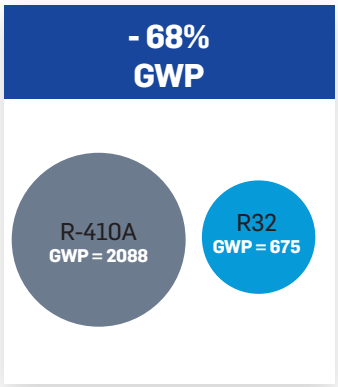


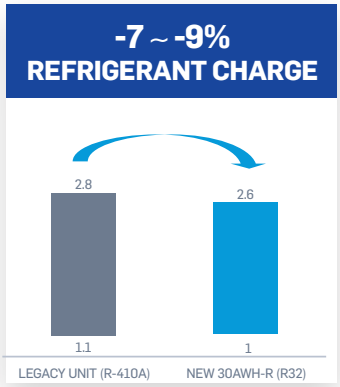
AND CHOOSING R32 MEANS:

HELPING PROTECT THE ENVIRONMENT

Carrier has selected R32 refrigerant to replace R-410A refrigerant, in commercial chillers and heat pumps using scroll technology. And now, this choice has been extended to air-to-water heat pumps using twin rotary compressors.
In both cases, R32 was chosen for its lower environmental impact, high energy efficiency, wide availability and ease of use.

The new 30AWH-R supplied with R32 refrigerant helps the unit operate more sustainably thanks to lower Global Warming Potential (GWP) plus less charge volume representing less CO_2 emissions. With a zero ozone depletion potential (ODP), R32 provides the perfect solution for heat pumps.





-70% LESS CO_2 EQUIVALENT
COMPARED WITH R-410A

All parts containing fluorinated greenhouse gas have been hermetically sealed, which helps to minimize the potential for leaks and does not require to be opened for placing the system into operation.

BENEFITING FROM A HIGHER ENERGY EFFICIENCY

SCOP up to **4.98**

SEER up to **5.06**

30AWH-R units improves energy efficiency in comparison with standard refrigerant such as R-410A. Thanks this increased efficiency, the heat pump reduces the amount of energy needed for cooling and heating requirements.

KEY FEATURES

SILENT OPERATION

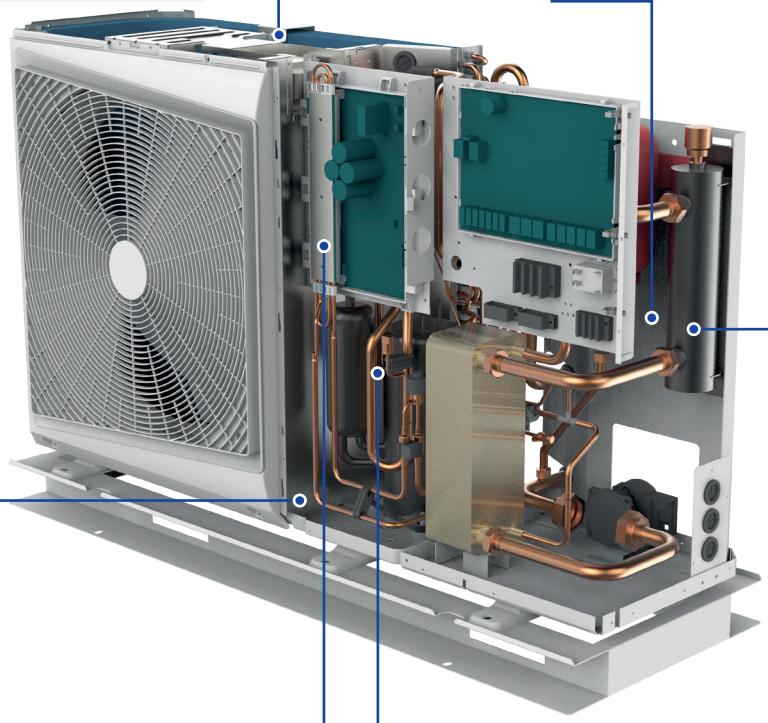
Ample structure reduces the noise level during operation.

In addition, when needed, the customer can program the unit to run in night mode, reducing the maximum frequency of the compressor offering low noise level (-3 dB(A)).

INTEGRATED HYDRAULIC MODULE

The hydraulic module enables the installation time to be reduced.

The unit is factory-equipped with the main hydraulic components needed for installation:
- variable speed circulation pump
- expansion vessel
- safety valve



ANTI-FREEZE HEATER

Protects the hydronic circuit in low ambient temperature.

BACK-UP HEATER

Integrated 3kW back-up heater provides stable working performance even under low outdoor air temperature.

INTELLIGENT REFRIGERANT COOLING TECHNOLOGY TO PROTECT PCB

It enables PCB and refrigerant system to work efficiently, at suitable temperature range even at high ambient temperature of up to 50°C.

Space-saving solution and excellent air path design.

TWIN ROTARY DC INVERTER COMPRESSOR

All the units are equipped with Twin Rotary DC inverter compressor, which modulates the power necessary to match the real needed load.

Good performance in low ambient environment.

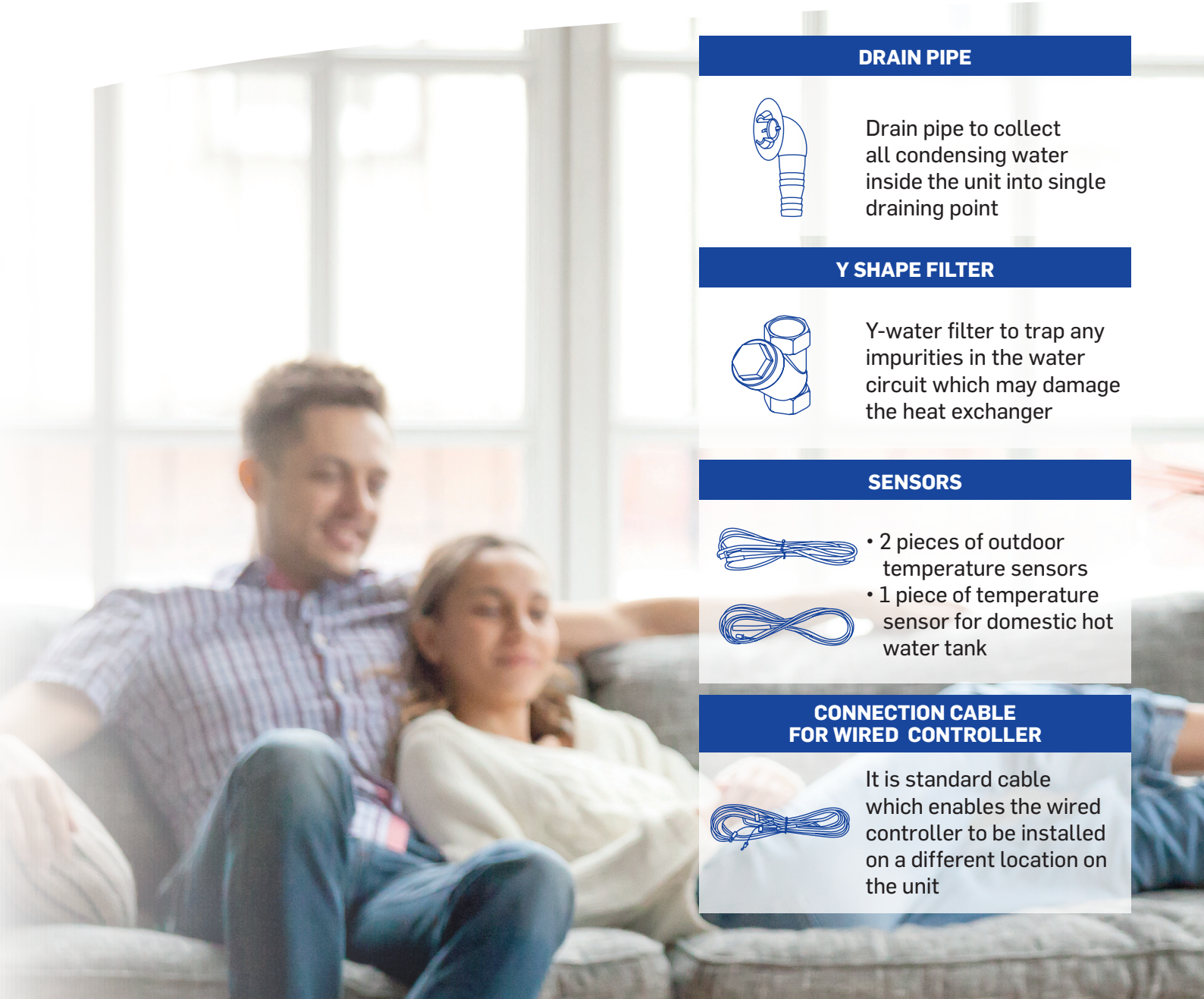
Carrier
Turn to the experts

CONTROL

MULTI-FUNCTION WIRED CONTROLLER

- Included for immediate start-up and use the unit
- Touchscreen with intuitive icons to help to avoid language barrier
- Modbus protocol and network flexibility
- Occupancy mode (Home, Away, Eco) and Night mode
- Weekly timer function
- Defrost, Anti-Legionella, Anti-freeze protection
- Two levels of access: end-user and technician

ACCESSORIES TO MEET YOUR NEEDS



DRAIN PIPE

Drain pipe to collect all condensing water inside the unit into single draining point

Y SHAPE FILTER

Y-water filter to trap any impurities in the water circuit which may damage the heat exchanger

SENSORS

- 2 pieces of outdoor temperature sensors
- 1 piece of temperature sensor for domestic hot water tank

CONNECTION CABLE FOR WIRED CONTROLLER

It is standard cable which enables the wired controller to be installed on a different location on the unit

AQUASNAP 30AWH-R

TECHNICAL DATAS

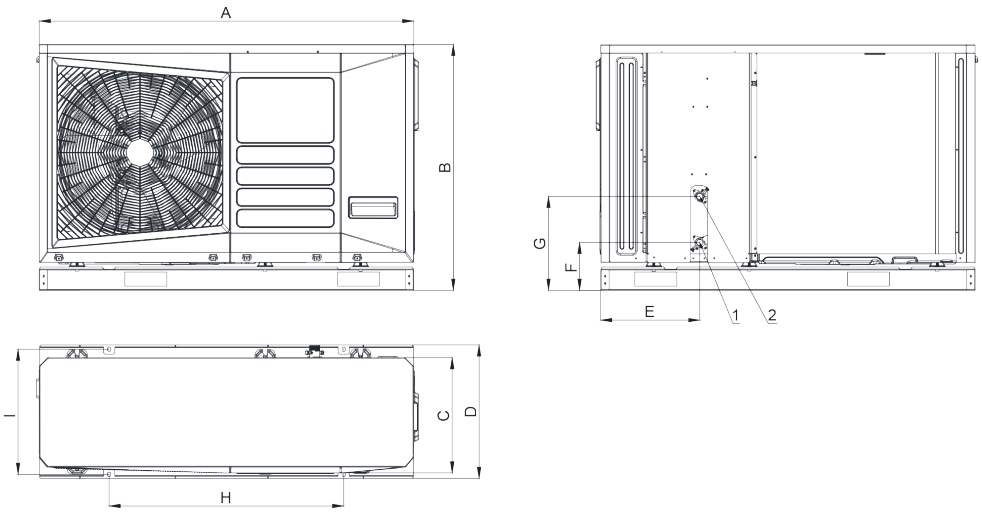
30AWH 04R-16R				4R	6R	8R	10R	12R	14R	16R	12R (3ph)	14R (3ph)	16R (3ph)
Heating													
Standard unit Full load performances*	HA1	Nominal capacity	kW	4,00	6,00	8,00	10,00	12,00	14,00	16,00	12,00	14,00	16,00
		COP	kW/kW	4,80	4,50	4,75	4,50	4,80	4,70	4,65	4,80	4,70	4,65
	HA2	Nominal capacity	kW	4,00	6,00	8,00	10,00	12,00	14,00	16,00	12,00	14,00	16,00
		COP	kW/kW	3,50	3,45	3,60	3,50	3,55	3,55	3,50	3,55	3,55	3,50
	HA3	Nominal capacity	kW	4,00	5,80	7,70	9,50	11,50	12,00	13,50	11,50	12,00	13,50
		COP	kW/kW	2,59	2,70	2,85	2,68	2,85	2,75	2,70	2,85	2,75	2,70
Standard unit Seasonal energy efficiency **	HA1	$SCOP_{30/35\ °C}$	kWh/kWh	4,73	4,75	4,90	4,98	4,91	4,94	4,78	4,91	4,94	4,78
		$\eta s\ heat_{30/35\ °C}$	%	186%	187%	193%	196%	193%	195%	188%	193%	195%	188%
		P_{rated}	kW	4,00	6,05	8,09	9,73	11,94	14,03	14,79	11,94	14,03	14,79
		Energy labelling		A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
	HA3	**$SCOP_{47/55\ °C}$**	**kWh/kWh**	**3,22**	**3,25**	**3,36**	**3,41**	**3,39**	**3,42**	**3,36**	**3,39**	**3,42**	**3,36**
		$\eta s\ heat_{47/55\ °C}$	**%**	**126%**	**127%**	**131%**	**134%**	**133%**	**134%**	**131%**	**133%**	**134%**	**131%**
		P_{rated}	kW	4,01	5,59	7,61	9,09	11,96	11,99	13,06	11,96	11,99	13,06
		Energy labelling		A++	A++	A++	A++	A++	A++	A++	A++	A++	A++
Cooling													
Standard unit Full load performances (*)	CA1	Nominal capacity	kW	4,00	5,00	6,50	8,00	10,50	12,00	14,00	10,50	12,00	14,00
		EER	kW/kW	2,85	2,75	2,90	3,00	2,75	2,70	2,65	2,75	2,70	2,65
	CA2	Nominal capacity	kW	4,00	5,50	7,00	9,00	11,00	13,50	14,50	11,00	13,50	14,50
		EER	kW/kW	3,85	4,00	4,40	4,00	4,00	3,90	3,80	4,00	3,90	3,80
Standard unit Seasonal energy efficiency**		$SEER_{12/7\ °C}$ Comfort low temp.	kWh/kWh	4,52	4,51	4,79	4,89	5,04	5,05	5,06	5,04	5,05	5,06
		$\eta s\ cool_{12/7\ °C}$	%	178%	177%	189%	193%	199%	199%	199%	199%	199%	199%
Sound levels													
Standard unit													
Sound power level (2)			dB(A)	61	64	65	66	69	69	70	69	69	70
Sound pressure level at 10 m (3)			dB(A)	50	53	54	55	56	56	58	56	56	58
Dimensions													
Length			mm	1335	1335	1335	1335	1302	1302	1302	1302	1302	1302
Width			mm	475	475	475	475	465	465	465	465	465	465
Height			mm	875	875	875	875	1517	1517	1517	1517	1517	1517
Operating weight (1)													
Standard unit			kg	109	109	120	126	165,5	167,7	167,7	180,9	182,9	182,9
Compressors			DC Twin-rotary	1	1	1	1	1	1	1	1	1	1
Refrigerant								R32					
Charge (1)			kg	1	1,1	1,6	1,8	2,2	2,6	2,6	2,2	2,6	2,6
Condenser													
Copper								Grooved copper tubes					
Fin type								Hydrophilic aluminum foil					

* 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 fouling factor 0 m^2. k/W
HA2 Heating mode conditions: Water heat exchanger water entering/leaving temperature 40°C/45°C, outside air temperature tdb/twb = 7°C db/6°C wb, evaporator fouling factor 0 m^2. 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 fouling factor 0 m^2. k/W
CA1 Cooling mode conditions: evaporator water inlet/outlet temperature 12°C/7°C, outdoor air temperature 35°C, evaporator fouling factor 0 m^2. k/W
CA2 Cooling mode conditions: evaporator water inlet/outlet temperature 23°C/18°C, outdoor air temperature 35°C, evaporator fouling factor 0 m^2. k/W
$\eta s\ heat_{30/35\ °C}$ & $SCOP_{30/35\ °C}$ Values calculated in accordance with standard EN14825:2022
$\eta s\ heat_{47/55\ °C}$ & $SCOP_{47/55\ °C}$ Values in bold comply with Ecodesign Regulation (EU) No. 813/2013 for heating application
$\eta s\ cool_{12/7\ °C}$ & $SEER_{12/7\ °C}$ Values calculated in accordance with standard EN14825:2022
(1) Values are guidelines only. Refer to the unit nameplate
(2) In dB re.f=10^{-12} W, (A) weighting. Declared dual number noise emission value in accordance with ISO 4871 (with an associated uncertainty of +/-2dB(A)). Measured in accordance with ISO 9614-1
(3) In dB ref 20 µPa, (A) weighting. Declared dual number noise emission value in accordance with ISO 4871 (with an associated uncertainty of +/-2dB(A)). For information, calculated from the sound power level Lw(A)
(4) Min. water-side operating pressure with variable speed hydraulic module is 40 kPa

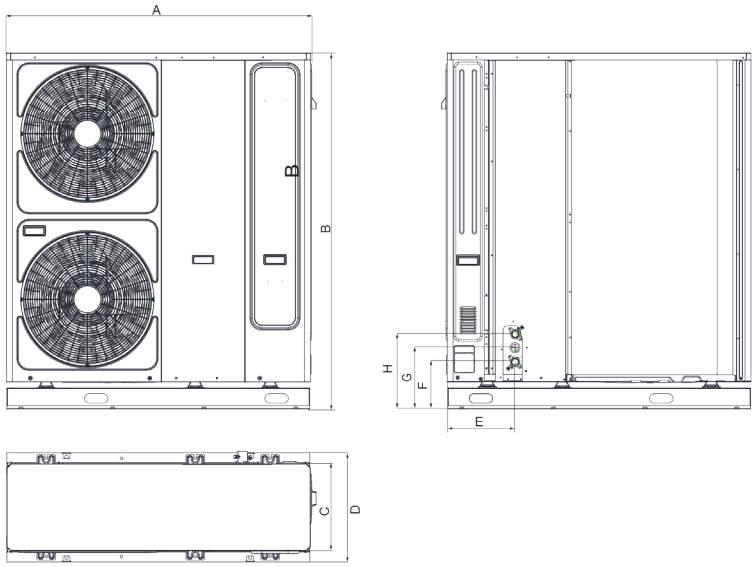
AQUASNAP 30AWH-R

DIMENSIONS (MM)

4-10R



12-16R



1 Water inlet
2 Water outlet

30AWH R	A	B	C	D	E	F	G	H	I	Weight(kg)
4-6_1Ph	1335	875	410	475	353	170	334	836	445	109
8_1Ph	1335	875	410	475	353	170	334	836	445	120
10_1Ph	1335	875	410	475	353	170	334	836	445	126
12_1Ph	1302	1517	370	465	289	201	332	784	428	165,5
14-16_1Ph	1302	1517	370	465	289	201	332	784	428	167,7
12_3Ph	1302	1517	370	465	289	201	332	784	428	180,9
14-16_3Ph	1302	1517	370	465	289	201	332	784	428	182,9

NOTE: Dimensions are given in mm

Turn to the experts

www.carrier.com

01/2023
B-RLC-025-BROCHURE 30AWHR R32