INTEGRATED HEATING SYSTEMS

CATALOGUE
2016 - 2017

Carrier
United Technologies
turn to the experts

TOSHIBA
Leading Innovation

INDEX

* preliminary data

Built on Willis Carrier's invention of modern air-conditioning in 1902, Carrier is the world leader in heating, air-conditioning and refrigeration solutions. Carrier constantly builds upon its history of proven innovation with new products and services that improve global comfort and efficiency.

The Invention That Changed the World

In 1902, Willis Carrier solved one of mankind's most elusive challenges by controlling the indoor environment through modern air-conditioning. His invention enabled countless industries, promoting global productivity, health and personal comfort.

Today, Carrier innovations are found across the globe and in virtually every facet of daily life. Carrier creates comfortable and productive environments, regardless of the climate, safeguards the global food supply by preserving the quality and freshness of food and beverages, ensures health and well-being by enabling the proper transport and delivery of vital medical supplies under exacting conditions and provides solutions, services and education to lead the green building movement.

These mark just a handful of the ways that Carrier works to make the world a better place to live, work and play.


Carrier
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turn to the experts
WEATHERMAKERS
TO THE WORLD

Carrier

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CARRIER DELIVERS GLOBAL SOLUTIONS ACROSS A BROAD RANGE OF APPLICATIONS IN HEATING, AIR-CONDITIONING, REFRIGERATION AND BEYOND.

Home Comfort

Millions of people trust Carrier's leadership and expertise in delivering efficient solutions for their home heating and cooling needs.

Building Solutions

Setting the standard for performance, energy efficiency and sustainability, Carrier offers solutions in air-conditioning, building controls and energy services for the building lifecycle.

Transport Refrigeration

Carrier transport refrigeration equipment, cold chain monitoring solutions and replacement components ensure the safe, reliable transport of food and beverages, medical supplies and other perishable cargo to people and businesses around the world.

Commercial Refrigeration

Serving the beverage, food service and food retail industries, Carrier's refrigeration solutions are built on next-generation technologies to preserve freshness, ensure safety and enhance appearances of global food and beverage retail.

New Houses

Existing Houses

Appartment Blocks

An ideal solution for each case... The heating and cooling systems of the future!

Toshiba & Carrier heat pumps are specially designed to successfully meet the multivarious needs of the contemporary household. Both in the case of a new building and in a home with an existing heating system (under renovation or not) the heat pumps provide heating, cooling and supply sanitary hot water, guaranteeing great cost savings.

Can be used with different types of radiators such as low temperature radiators (panels), underfloor system and hydronic terminal units.

In existing homes, in which gas or oil boilers have already been installed, Carrier & Toshiba heat pumps can be used in conjunction with the existing heating system, to successfully meet heating and domestic hot water supply requirements all year long.

The boiler can only be used as a support source during times of extreme weather conditions in the winter.

The Carrier & Toshiba heat pumps are managed by high tech electronic control in the most efficient way.

Toshiba Carrier inverter IPDU

Our exclusive hybrid inverter technology, combining PAM + PWM for maximum power at high rpm and unmatched efficiency at low and mid rpm.

Carrier
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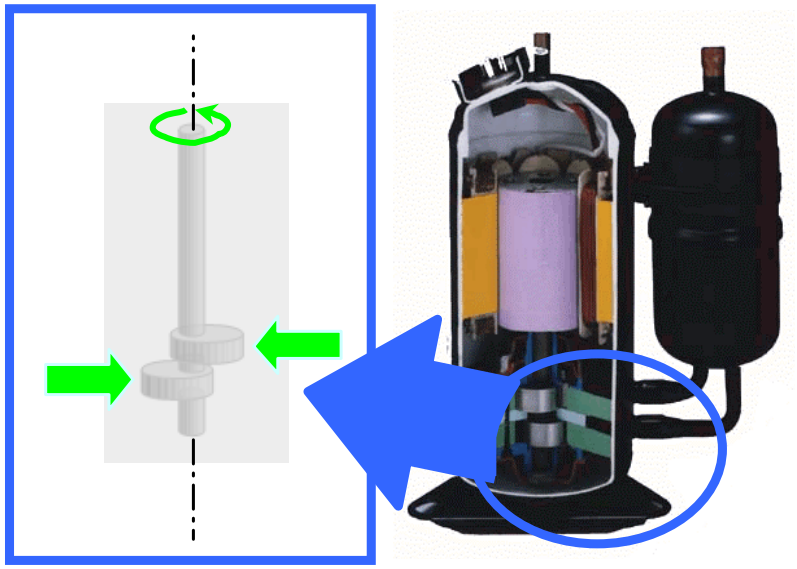
turn to the experts



Toshiba Carrier DC-inverter compressors, Twin-rotary for the larger sizes (all but size 4kW), for improved reliability, smooth and vibrations-free operation, from 20 up to 120% of their nominal capacity.

Reliability

Pressure blows

When the compressor starts or stops rotating, the refrigerant circuit records a sudden change in the refrigerant pressure. This undermines the long term reliability of the key components of the refrigerant circuit.

Thermal shocks

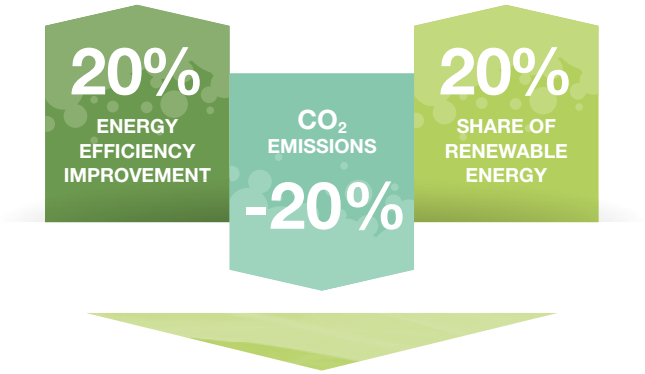
When the compressor starts or stops rotating, the temperature of the refrigerant circuit components changes drastically. This undermines the long term reliability of the key components of the refrigerant circuit.

Noise reduction

The compressor start up is the single noisiest event in the air-conditioning operation. The startup noise is caused by vibration transmitted to the unit chassis by the initial unbalanced compressor and fan-rotation, and by the pressurized flow of the refrigerant in the circuit.

Committed to Environmental Responsibility

Carrier & Tohiba are committed to limiting the environmental impact of their products and solutions and reducing energy consumption. This commitment is in line with the targets of the European climate and energy package for 2020:



The energy efficiency improvement target strongly influences the heating, ventilation and air conditioning (HVAC) market.

Energy Labelling regulation

The aim of the Energy Labelling regulation is to provide end users with easy to understand information on product energy efficiency.

In addition, the European Energy Labelling regulation classifies products from G to A, according to their efficiency. This pulls the market towards more energy-efficient products by improving consumer information. Starting September 26, 2015, heat pumps up to 70 kW will become the first commercial heat pump products to be covered by the Ecodesign and Energy Labelling regulations. Products placed on the market before this date will not be affected. Conformity is mandatory for a product to obtain the CE marking.

Carrier and Toshiba heat pumps are all in the classes A to A ++.

Energy Efficiency Class	Boilers and mid-temperature heat pumps 47/55°	Low temperature heat pumps 30/35°
*A***	$\eta_s \geq 150$	$\eta_s \geq 175$
A**	$125 \leq \eta_s < 150$	$150 \leq \eta_s < 175$
A*	$98 \leq \eta_s < 125$ 100 110	$123 \leq \eta_s < 150$ 125
A	$90 \leq \eta_s < 98$	$115 \leq \eta_s < 123$ 115
B	$82 \leq \eta_s < 90$	$107 \leq \eta_s < 115$
C	$75 \leq \eta_s < 82$	$100 \leq \eta_s < 107$
D	$36 \leq \eta_s < 75$	$61 \leq \eta_s < 100$
E	$34 \leq \eta_s < 36$	$59 \leq \eta_s < 61$
F	$30 \leq \eta_s < 34$	$55 \leq \eta_s < 59$
G	$\eta_s < 30$	$\eta_s < 55$

*A*** energy class will be implemented from September 2019.

Minimum energy efficiency level from September 2017
Minimum energy efficiency level from September 2015

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Ecodesign regulation

Ecodesign is an approach to product design that encourages manufacturers to consider the environmental impact of the product over its entire lifecycle.

In the European Union, the Ecodesign Directive 2009/125/EC establishes a framework for the setting of mandatory energy efficiency requirements for all energy-related products (ERPs), including heat pumps up to 400 kW.

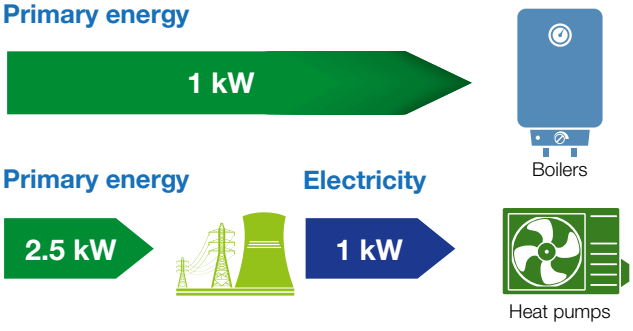
New energy efficiency metric: SCOP

Because buildings have a thermal load depending on outdoor air temperature The Seasonal Coefficient of Performance (SCOP) is a new European parameter to evaluate the energy efficiency of heat pumps. It replaces the Coefficient of Performance (COP), which measured the ratio of power consumed to power produced in the heating mode on a single operating point. Unlike its predecessor, the SCOP is representative of operation during the heating reason as it includes seasonal variations by defining several realistic measurement points.

η_s: seasonal primary energy efficiency metrics:

In order to compare the energy efficiency of products using different sources of energy, such as boilers (gas, fuel) and electric heat pumps, the Ecodesign regulation introduces a new measurement expressed in primary energy: η_s (eta s).

η_s = SCOP/2.5* x 100 - i**



**Air source heat pump i = 3
Water source heat pump: i = 8
***Source: EU Regulation 813/2013

In Europe, on average, 2.5 kW*** of primary energy is required to generate 1 kW of electricity.

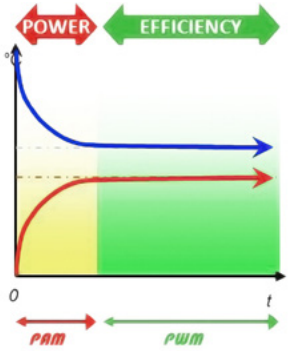
CDU DC Twin rotary inverter technology
Inverter IPDU

PAM (Power Amplitude Modulation)

The PAM ensures maximum power for the prompt achievement of the set temperature.

PWM (Power Width Modulation)

The PWM ensures maximum power efficiency, once the temperature has stabilized.



PWM (Pulse Width Modulation)

The PWM driver generates a pseudo 3-phase alternate current by combining rectangular-shaped current pulses, having a fixed voltage of 325 Volts.

This driver accurately and efficiently controls the compressor revolution (rpm) by adjusting the frequency (Hertz) of the 325V waves and their power factor.

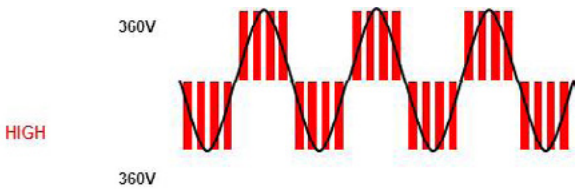
Although the PWM is the most efficient inverter-driver technology, its maximum power output reaches its limit, when the power factor ratio of the rectangular waves comes near to 100%.

PWM is engaged when the unit operates at low and mid capacities. But when maximum capacity is required, Toshiba Carrier inverters have a second card to play.

PAM (Pulse Amplitude Modulation)

To overcome the PWM output limitation, Toshiba Carrier inverter offers the PAM driver, which takes over the control of the compressor revolution when maximum capacity is required.

The PAM driver adjusts the compressor revolution by varying the voltage of the rectangular-shaped electric pulses, their frequency and power factor.



HEAT PUMP SYSTEMS

AIR-TO-WATER
HEAT PUMP
SPLIT SYSTEM

HWS -

55°C • Made in Japan

ESTIA

The heating and cooling systems of the future!

Toshiba Estia air-to-water heat pumps, are the ideal solution to increase energy efficiency (COP), using air as a main source of energy. This is an all-in-one system designed to deliver the right temperature for space heating, for domestic sanitary hot water and with the additional advantage of offering air-conditioning in the warmer seasons.

Toshiba air-to-water heat pump systems can manage two independent zones. This solution enables the delivery of water to diverse emitters at different temperature levels up to 55°C.

Features

World-leading energy efficiency

Easy to install.

Environment conscious.

One system, multiple solutions.

The right temperature at the right time.

A class pump included.

Outdoor unit

Inverter technology and the DC twin rotary compressor. Estia heat pumps operate with the reliable and safe R-410A refrigerant.

Hydro unit

The high efficiency plate heat exchanger receives the optimum quantity of refrigerant to produce hot water at low or medium temperature (20-55°C), or cold water (7°C - 25°C). A back-up heater (3, 6 or 9 kW options) further supports the operation for extreme conditions.

Domestic hot water tank

The Estia tank is a compact stainless steel insulated tank producing domestic hot water for sanitary use. The performance of the overall system is also maximized thanks to the integrated coaxial heat exchanger which uses hot water produced by the heat pump (whenever energy efficient and possible).

SYSTEM CAPACITIES

HWS_XWH / HWS_H

		Single Phase Units			Three Phase Units		
Outdoor Unit	**HWS-**	804H-E1	1104H-E1	1404-E1	1104H8-E1	1404H8-E1	1604H8-E1
Hydre unit combination	**HWS-**	804XWH__E1	1404XWH__E1	1404XWH__E1	1404XWH__E1	1404XWH__E1	1404XWH__E1
Heating Power* - (Nominal / Maximum)		8.00 / 8.52	11.20 / 14.63	14.00 / 16.74	11.20 / 14.73	14.00 / 15.77	16.00 / 16.76
Power Input - (Nominal / Maximum)		1.79 / 2.01	2.30 / 3.24	3.11 / 3.95	2.34 / 3.14	3.16 /3.55	3.72 / 3.89
Cooling Power* - (Nominal / Maximum)		9.19	13.82	15.00	13.15	15.44	16.39
Power Input - (Nominal / Maximum)		2.59	3.49	4.07	3.34	4.39	4.98
Heating Power** - (Maximum)	kW	8.13	13.62	14.26	13.93	15.07	15.77
Cooling Power** - (Nominal / Maximum)	kW	6.00 / 7.00	10.00 / 10.24	11.00 / 11.78	10.00 / 10.16	11.00 / 12.02	13.00 / 12.84
ns/SCOP/ENERGY CLASS (Average) - 30°/35° C ***	% / - / -	161/4,10/A++	163/4,15/A++	159/4,05/A++	161/4,10/A++	157/4,00/A++	159/4,05/A++
ns/SCOP/ENERGY CLASS (Average) - 47°/55° C ***	% / - / -	127/3,25/A++	130/3,33/A++	129/3,30/A++	130/3,33/A++	129/3,30/A++	130/3,33/A++
ns/SCOP/ENERGY CLASS (Warm) - 30°/35° C ***	% / - / -	196/4,98/A+++	202/5,13/A+++	201/5,10/A+++	207/5,25/A+++	199/5,05/A+++	188/4,65/A+++
ns/SCOP/ENERGY CLASS (Warm) - 47°/55° C ***	% / - / -	171/4,35/A+++	164/4,18/A+++	169/4,30/A+++	176/4,48/A+++	176/4,48/A+++	167/4,25/A+++

OUTDOOR UNITS DATA

HWS_H

		Single Phase Units			Three Phase Units		
Outdoor Unit	**HWS-**	804H-E1	1104H-E1	1404-E1	1104H8-E1	1404H8-E1	1604H8-E1
Dimensions (HxWxD)	mm	890x900x320	1340x900x320	1340x900x320	1340x900x320	1340x900x320	1340x900x320
Weight	Kg	63	92	92	93	93	93
Sound pressure Level	dB(A)	49	49	51	50	51	52
Power supply	V-ph-Hz	220/230-1-50			380/400-3N-50		
Operating Range	°C	-20 + 43					
Minimum pipe length	m	5					
Maximum pipe length	m	30					
Maximum height difference	m	± 30					
Chargeless pipe lenght	m	30					
Compressor Type		DC Twin rotary					
Refrigerant		R410A					
Flare connections (gas-liquid)		5/8" - 3/8"					

HYDRO UNITS DATA

HWS_XWH

Domestic hot water tank	**HWS-**		804xWHM3-E1	804xWHT6-E1	804xWHT9-E1	1404xWHM3-E1	1404xWHT6-E1	1404xWHT9-E1
To be used with size			80	80	80	110-140-160	110-140-160	110-140-160
Leaving water temperature	°C	H	20 ~ 55°C	20 ~ 55°C	20 ~ 55°C	20 ~ 55°C	20 ~ 55°C	20 ~ 55°C
	°C	C	7 ~ 25°C	7 ~ 25°C	7 ~ 25°C	7 ~ 25°C	7 ~ 25°C	7 ~ 25°C
Dimensions (HxWxD)	mm		925x525x355	925x525x355	925x525x355	925x525x355	925x525x355	925x525x355
Weight	Kg		50	50	50	54	54	54
Sound pressure level	dB(A)		27	27	27	29	29	29
Electric back up heater capacity	kW		3	6	9	3	6	9
Electric back up heater supply	V-ph-Hz		220/230-1-50	380/400-3N-50	380/400/3N-50	220-230-1-50	380/400-3N-50	380/400/3N-50
Maximum current	A		13	13(13Ax2P)	13(13Ax3P)	13	13(13Ax2P)	13(13Ax3P)

DOMESTIC HOT WATER TANKS DATA

HWS_CSHM

	HWS-	1501CSHM3-E	2101CSHM3-E	3001CSHM3-E
Water volume	litres	150	210	300
Max water temperature	°C	75	75	75
Electric heater	kW	2.75	2.75	2.75
Power supply	V-ph-Hz	220/230-1-50	220/230-1-50	220/230-1-50
Height	mm	1090	1474	2040
Diameter	mm	550	550	550
60Weight (empty)	kg	31	41	60
Material		Stainless steel	Stainless steel	Stainless steel

ACCESSORIES

Model Name	**Description**	**Functions**
TCB-PCIN3E	Output signal PCB	Boiler operation output signal, Alarm output signal, Defrost output signal, Compressor operation output signal
TCB-PCM03E	Input signal PCB	Room thermostat input, Emergency stop input
HWS-AMS11E	Wired RC	Wired Remote controller for Room air temperature control

The capacities in this catalogue are calculated based on following conditions:

* Heating Leaving hot water temperature: 35°C (ΔT 5°C). Outdoor air temperature: 7°C DB / 6°C WB.
Cooling Leaving cold water temperature: 18°C (ΔT 5°C). Outdoor air temperature: 35°C DB

** Heating Leaving hot water temperature: 45°C (ΔT 5°C). Outdoor air temperature: 7°C DB / 6°C WB.
Cooling Leaving cold water temperature: 7°C (ΔT 5°C). Outdoor air temperature: 35°C DB

*** In accordance with standard EN14825

The sound pressure level is given at 1m distance from outdoor units, and 1,5m distance from hydro units.
C = Cooling mode H = Heating mode

TOSHIBA
Leading Innovation

AIR-TO-WATER
HEAT PUMP
SPLIT SYSTEM

HWS -

60°C • Made in Japan

ESTIA POWERFUL

For low ambient area and / or for areas where require high water temperature!

The development of new powerful type of ESTIA series 4 to operate it in cold region, especially North Europe, East Europe and etc.

Features

Operation range down to -25°C.
Maintain the rated capacity down to -15°C.
Leaving water temperature up to 60°C.

Outdoor unit

Inverter technology and the DC twin rotary compressor. Estia heat pumps operate with the reliable and safe R-410A refrigerant.

Hydro unit

The high efficiency plate heat exchanger receives the optimum quantity of refrigerant to produce hot water at low or medium temperature (20-60°C), or cold water (7°C - 25°C). A back-up heater (3, 6 or 9 kW options) further supports the operation for extreme conditions.

Domestic hot water tank

The Estia tank is a compact stainless steel insulated tank producing domestic hot water for sanitary use. The performance of the overall system is also maximized thanks to the integrated coaxial heat exchanger which uses hot water produced by the heat pump (whenever energy efficient and possible).

SYSTEM CAPACITIES

HWS_XWH / HWS_H

		Single Phase Units	
Outdoor unit	**HWS-**	P804HR-E1	P1104HR-E1
Hydro unit combination	**HWS-**	P804XWH__-E1	P1104XWH__-E1
Heating Capacity - (LWT 35°C @ OAT 7°C / -2°C / -15°C)	KW	15,23 / 12,36 / 8,43	18,05 / 14,39 / 11,23
Cooling Capacity - (LWT 18°C @ OAT 35°C)	KW	9.65	12.49
Heating Capacity - (LWT 45°C @ OAT 7°C / -2°C / -15°C)	KW	12,60 / 10,41 / 7,24	14,74 / 11,95 / 8,13
Cooling Capacity - (LWT 7°C @ OAT 35°C)	KW	7.20	9.66
ns/SCOP/ENERGY CLASS (Average) - 30°/35° C **	% / - / -	157 / 4,00 / A++	175 / 4,45 / A++
ns/SCOP/ENERGY CLASS (Average) - 47°/55° C **	% / - / -	125/3,20/A++	131/3,35/A++
ns/SCOP/ENERGY CLASS (Warm) - 30°/35° C **	% / - / -	185 / 4,70 / A+++	187 / 4,75 / A+++
ns/SCOP/ENERGY CLASS (Warm) - 47°/55° C **	% / - / -	158/4,03/A+++	150/3,83/A+++

OUTDOOR UNITS SPECIFICATIONS

HWS_H

		Single Phase Units	
Outdoor unit	**HWS-**	P804HR-E1	P1104HR-E1
Dimensions (HxWxD)	**mm**	1340x900x320	1340x900x320
Net Weight	Kg	92	92
Sound pressure Level *	dB(A)	49	49
Power supply	V-ph-Hz	220/230-1-50	
Operating range	°C	-25 ÷ 43	
Minimum pipe length	m	5	
Maximum pipe length	m	30	
Maximum height difference	m	± 30	
Chargeless pipe length	m	30	
Compressor type		DC Twin rotary	
Refrigerant		R410A	
Flare connections (gas-liquid)		5/8" - 3/8"	

HYDRO UNIT SPECIFICATIONS

HWS_XWH

Hydro unit	**HWS-**	**P804XWHM3-E1**	**P804XWHT6-E1**	**P804XWHT9-E1**	**P1104XWHM3-E1**	**P1104XWHT6-E1**	**P1104XWHT9-E1**
To be used with size		80	80	80	110	110	110
Electric back up heater capacity	kW	3	6	9	3	6	9
Leaving water temperature (heating)	°C	20 ~ 60°C	20 ~ 60°C	20 ~ 60°C	20 ~ 60°C	20 ~ 60°C	20 ~ 60°C
Leaving water temperature (cooling)	°C	7 ~ 25°C	7 ~ 25°C	7 ~ 25°C	7 ~ 25°C	7 ~ 25°C	7 ~ 25°C
Dimensions (HxWxD)	mm	925x525x355	925x525x355	925x525x355	925x525x355	925x525x355	925x525x355
Weight	Kg	49	49	49	52	52	52
Sound pressure level *	dB(A)	27	27	27	29	29	29
Electric back up heater supply	V-ph-Hz	220/230-1-50	380/400-3N-50	380/400-3N-50	220/230-1-50	380/400-3N-50	380/400-3N-50
Maximum current	A	13	13 (13A*2P)	13 (13A*3P)	13	13 (13A*2P)	13 (13A*3P)

DOMESTIC HOT WATER TANKS DATA

HWS_CSHM

	HWS-	**1501CSHM3-E**	**2101CSHM3-E**	**3001CSHM3-E**
Water volume	litres	150	210	300
Max water temperature	°C	75	75	75
Electric heater	kW	2.75	2.75	2.75
Power supply	V-ph-Hz	220/230-1-50	220/230-1-50	220/230-1-50
Height	mm	1090	1474	2040
Diameter	mm	550	550	550
Net weight	Kg	31	41	59
Material	Kg	Stainless steel	Stainless steel	Stainless steel

ACCESSORIES

Model Name	**Description**	**Functions**
TCB-PCIN3E	Output signal PCB	Boiler operation output signal, Alarm output signal, Defrost output signal, Compressor operation output signal
TCB-PCMO3E	Input signal PCB	Room thermostat input, Emergency stop input
HWS-AMS11E	Wired RC	Wired Remote controller for Room air temperature control

* The outdoor unit operating noise is measured at the point of 1 m away from the unit back surface centre and 1.5 m high from the ground. The hydro unit operating noise is measured at the point of 1 m away from the unit front surface centre. The value of the operating noise varies depending on room structure where the unit is installed.

** In accordance with standard EN14825

TOSHIBA
Leading Innovation

AIR-TO-WATER
HEAT PUMP
SPLIT SYSTEM

38AW/80AW

XP ENERGY INVERTER — AIR TO WATER split

60°C

Hot water and comfortable ambient temperature all year round

The reversible XP Energy air-to-water split system heat pumps with built-in inverter technology were designed for residential and light commercial applications. They offer excellent energy efficiency rates, exceptionally quiet operation and meet the most stringent operating temperature demands.

The units integrate the latest technological innovations: ozone-friendly refrigerant R-410A, DC inverter win-rotary compressors, low-noise fan and microprocessor control.

The 80AW/38AW systems were specifically designed for ease-of-installation and service and underline Carrier's reputation for highest product quality and reliability.

Features

DC inverter twin-rotary compressors with Pulse Amplitude Modulation (PAM) and Pulse Width Modulation (PWM) for enhanced reliability, low energy consumption and smooth vibration-free operation under all operating conditions.

Variable-speed fans with an innovative patented fan blade shape ensure improved air distribution at exceptionally low noise levels.

Able to control two independent comfort zones with a two-zone kit added to the main comfort module.

Leaving water temperature up to 60°C.

Temperature and humidity control.

Carrier
United Technologies
turn to the experts

PHYSICAL DATA

Outdoor unit (heat pump)				38AW 050H7	38AW 065H7	38AW 090H7	38AW 115H7	38AW 120H9	38AW 150H9
Indoor unit (comfort module)				80AWX 065	80AWX 065	80AWX 115	80AWX 115	80AWX 150	80AWX 150
Cooling									
Full load performances*	C1	Nominal capacity	kW	3.57	4.73	5.95	6.80	10.30	12.60
	C2	Nominal capacity	kW	5.10	6.55	7.88	9.00	13.50	15.79
Seasonal Efficiency*		ESEER	kW/kW	3.71	3.71	4.45	4.37	4.56	4.79
Heating									
Full load performances*	H1	Capacity (nom/max)	kW	5.01/6.30	6.55/8.00	9.27/11.73	11.50/13.40	12.00/15.02	15.01/16.05
	H2	Capacity (nom/max)	kW	4.37/5.92	5.70/7.20	8.70/11.53	11.30/13.52	11.20/13.90	14.02/15.76
	H3	Nominal capacity	kW	4.25	5.52	7.88	10.95	11.48	11.91
Seasonal Efficiency**		ns/SCOP/ENERGY CLASS (Average) - 30°/35° C	% / - / -	121/3,10/A	117/3,00/A	125/3,20/A+	125/3,19/A+	150/3,82/A++	144/3,67/A+
		ns/SCOP/ENERGY CLASS (Average) - 47°/55° C	% / - / -	117/3,00/A+	116/2,98/A+	117/2,99/A+	115/2,94/A+	135/3,45/A++	128/3,29/A++
		ns/SCOP/ENERGY CLASS(Warm) - 30°/35° C	% / - / -	167/4,25/A++	162/4,14/A++	176/4,47/A+++	174/4,41/A++	208/5,28/A+++	199/5,06/A+++
		ns/SCOP/ENERGY CLASS (Warm) - 47°/55° C	% / - / -	163/4,15/A+++	163/4,16/A+++	164/4,17/A+++	160/4,08/A+++	181/4,59/A+++	179/4,55/A+++
Sound Pressure Level at 4m (in accordance with ISO 4371)			dB(A)	44	45	49	50	48	48
Max. leaving water temperature			°C	60	60	60	60	60	60

Indoor unit (comfort module)		80AW 065	80AW 065	80AW 115	80AW 115	80AW 150	80AW 150
Sound power level, cooling	dB(A)	40.9	40.9	40.9	40.9	40.9	40.9
Sound power level, heating	dB(A)	40.9	40.9	40.9	40.9	40.9	40.9
Dimensions							
Height	mm	800	800	800	800	800	800
Lenght	mm	450	450	450	450	450	450
Depth	mm	320	320	320	320	320	320
Operating weight	kg	48	48	50	50	52	52
Outdoor unit		**38AW 050H7**	**38AW 065H7**	**38AW 090H7**	**38AW 115H7**	**38AW 120H9**	**38AW 150H9**
Compressor type		DC twin-rotary					
Inverter type		PAM + PWM					
Refrigerant		R-410A					
Maximum pipe length	m	50	30	70	70	70	70
Maximum height difference	m	30	30	30	30	30	30
Pre-charged length	m	20	20	20	30	30	30
Air flow	m^3/h	2620	2820	5970	6360	5770	5770
Dimensions							
Height	mm	690	820	1360	1360	1360	1360
Lenght	mm	900	900	900	900	900	900
Depth	mm	320	320	320	320	320	320
Operating weight	kg	49	51	88	88	100	100
Pipe connections	in	1/4 - 1/2	3/8 - 5/8	3/8 - 5/8	3/8 - 5/8	3/8 - 5/8	3/8 - 5/8
Power supply	V-ph-Hz	230-1-50	230-1-50	230-1-50	230-1-50	400-3-50	400-3-50

ELECTRICAL DATA

Outdoor unit		38AW 050	38AW 065	38AW 090	38AW 115	38AW 120	38AW 150
Power supply/voltage range	V-ph-Hz/V	230-1-50/198-264				400-3-50/376-424	
Full load current/operating current	A	12.0/5.3	12.0/6.91	23.0/9.43	23.0/12.22	15.4/6.45	15.4/8.72
Fuse rating*	A	16	16	25	25	6.45	8.72
Power consumption	W	1220	1590	2170	2810	2580	3490
Power factor	%	0.95	0.95	0.95	0.95	0.95	0.95

Indoor unit (Comfort module)		80AW 065				80AW 115					80AW 150		
		M0	M3	M6	T6	M0	M3	M6	T6	T9	M0	T6	T9
Outdoor units		38AW 050H7/38AW 065H7				38AW 090H7/38AW 115H7					38AW 120H9/38AW 150H9		
Power supply	V-ph-Hz	230-1-50	230-1-50	230-1-50	400-3N-50	230-1-50	230-1-50	230-1-50	400-3N-50	400-3N-50	230-1-50	400-3N-50	400-3N-50
Electric Heater	kW	-	3	6	6	-	3	6	6	9	-	6	9
Operating current													
L1	A	-	13.0	26	8.7	-	13.0	26	8.7	13.0	-	8.7	13.0
L2	A	-	-	-	8.7	-	-	-	8.7	13.0	-	8.7	13.0
L3	A	-	-	-	8.7	-	-	-	8.7	13.0	-	8.7	13.0
N	A	-	13.0	26	-	-	13.0	26	-	-	-	-	-

C1 Cooling mode conditions: Evaporator water entering/leaving temperature 12°C/7°C, outside air temperature 35°C, evaporator fouling factor 0 m2 K/W
C2 Cooling mode conditions: Evaporator water entering/leaving temperature 23°C/18°C, outside air temperature 35°C, evaporator fouling factor 0 m2 K/W
H1 Heating mode conditions: Water heat exchanger water entering/leaving temperature 30°C/35°C, outside air temperature 7°C db/6°C wb, evaporator fouling factor 0 m2 K/W.
H2 Heating mode conditions: Water heat exchanger water entering/leaving temperature 40°C/45°C, outside air temperature 7°C db/6°C wb, evaporator fouling factor 0 m2 K/W.
H3 Heating mode conditions: Water heat exchanger water entering/leaving temperature 47°C/55°C, outside air temperature 7°C db/6°C wb, evaporator fouling factor 0 m2 K/W.
* In accordance with standard EN14511-3:2013
** In accordance with standard EN14825:2013

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Eurovent certified data

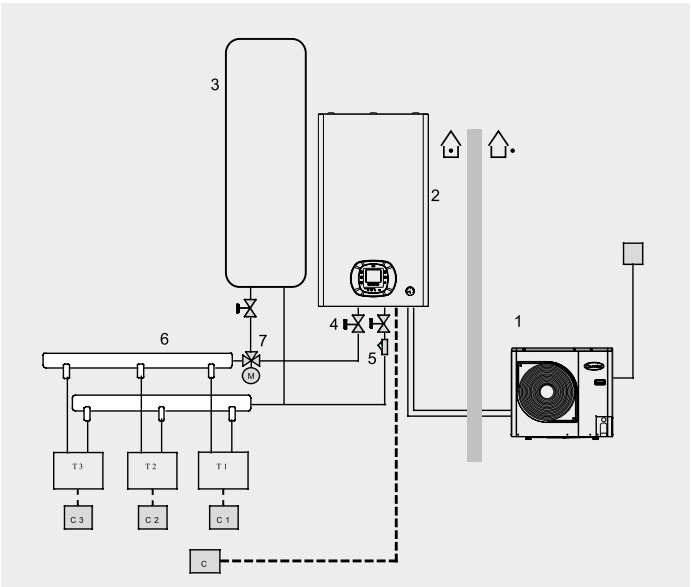
Eurovent certified data

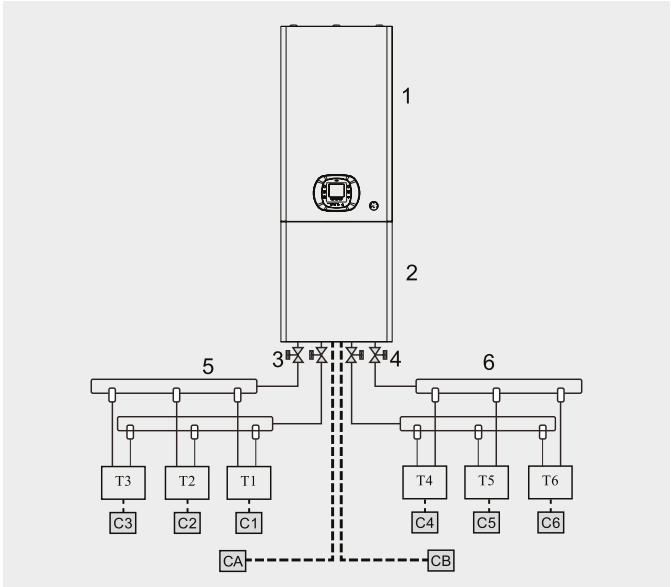
38AW/80AW

60°C

Two-zone kit

The design faciltates the installation process and makes two independent comfort zones easy to control. This kit includes a hydronic disconnection collector, the necessary circulating pumps and modulating valves. Installed together with the domestic hot water tank, the two-zone kit can integrate all accessories, such as the diverting valve and T-connection.





DOMESTIC HOT WATER TANK

		60STS 020E03	60STD 020E03	60STS 030E03	60STD 030E03
Water tank size	l	212	212	212	212
Number of coils		1	2	1	2
Electric heater back-up	kW	3, 3, single phase	3, 3, single phase	3, 3, single phase	3, 3, single phase
Voltage	V	230 ± 10%	230 ± 10%	230 ± 10%	230 ± 10%
Operating temperature range	°C	5 to 95	5 to 95	5 to 95	5 to 95
Operating pressure DHW module	bar	0 to 10	0 to 10	0 to 10	0 to 10
Operating pressure heat exchangers	bar	0 to 6	0 to 6	0 to 6	0 to 6
Ambient operating temperature range	°C	5 to 45 °C	5 to 45 °C	5 to 45 °C	5 to 45 °C
Storage temperature range	°C	-20 to +75 °C	-20 to +75 °C	-20 to +75 °C	-20 to +75 °C
Lower heat exchanger	m^2	1,2	1,2	1,5	1,5
Upper heat exchanger	m^2		0,5		1,1
Diameter	mm	600	600	600	600
Height	mm	1215	1215	1615	1615

REVERSIBLE AIR-TO-WATER HEAT PUMPS • 30AWH

AQUASNAP PLUS Reversible

60°C

More than a heat pump. Compact, reliable and efficient

The reversible AquaSnap PLUS air-to-water heat pumps with built-in inverter technology were designed for residential and light commercial applications. They offer excellent energy efficiency values, exceptionally quiet operation and meet the most stringent operating temperature demands.

The units integrate the latest technological innovations: ozone-friendly refrigerant R410A, DC inverter twin-rotary compressors, low-noise fan and microprocessor control.

Features

Two versions with or without hydronic module in five sizes with nominal cooling capacitie from 3 to 13 kW and nominal heating capacities from 4 to 15 kW.

AquaSnap PLUS air-to-water heat pumps with built-in inverter technology were designed for residential and light commercial applications. They offer excellent energy efficiency values, exceptionally quiet operation and meet the most stringent operating temperature demands.

Leaving water temperature up to 60°C for domestic hot water applications, making hot water readily available emperature & humidity control.

Time scheduling.

Carrier
United Technologies
turn to the experts

PHYSICAL DATA

30AWH				004	006	008	012	015	012-3Ph	015-3Ph
Cooling										
Full load performances*	C1	Nominal capacity	kW	3.33	4.73	5.84	10.24	13.04	10.20	13.00
	C2	Nominal capacity	kW	4.93	7.04	7.84	13.54	16.04	13.50	16.00
Seasonal Efficiency*		ESEER	kW/kW	4.36	4.51	4.15	4.22	4.31	4.40	4.31
Heating										
Full load performances*	H1	Capacity (nom/max)	kW	4.07/4.73	5.76/6.14	7.16/8.00	11.86/13.45	14.46/16.25	12.0/15.0	15.0/17.41
	H2	Capacity (nom/max)	kW	3.87/4.50	5.76/6.04	7.36/7.92	12.91/12.95	13.96/15.92	11.2/14.5	14.5/16.52
	H3	Capacity (nom)	kW	4.27	5.43	7.25	10.89	12.36	11.43	12.17
Seasonal Efficiency**		ns/SCOP/ENERGY CLASS (Average) - 30°/35° C	% / - / -	146/3,73/A+	141/3,60/A+	118/3,03/A	125/3,19/A+	141/3,61/A+	148/3,78/A+	144/3,68/A+
		ns/SCOP/ENERGY CLASS (Average) - 47°/55° C	% / - / -	138/3,53/A++	132/3,37/A++	111/2,84/A+	115/2,95/A+	127/3,25/A++	136/3,47/A++	130/3,33/A++
		ns/SCOP/ENERGY CLASS (Warm) - 30°/35° C	% / - / -	201/5,09/A+++	194/4,92/A+++	163/4,14/A++	171/4,36/A++	194/4,93/A+++	203/5,16/A+++	198/5,03/A+++
		ns/SCOP/ENERGY CLASS (Warm) - 47°/55° C	% / - / -	190/4,82/A+++	181/4,60/A+++	152/3,88/A+++	158/4,03/A+++	175/4,44/A+++	187/4,74/A+++	179/4,55/A+++
Sound Pressure Level at 4m (H3)(1)			dB(A)	42	42	44	47	48	48	48
Operating weight†										
Operating weight, unit with/without hydronic module			kg	57/54	61/58	69/66	104/101	112/109	116/113	116/113
Refrigerant				R-410A						
Compressor				DC twin-rotary with PMV expansion valve						
Fans				Propeller fans						
Quantity/diameter			mm	1/495	1/495	1/495	2/495	2/495	2/495	2/495
Dimensions										
Length			mm	908	908	908	908	908	908	908
Depth			mm	350	350	350	350	350	350	350
Height			mm	821	821	821	1363	1363	1363	1363

30AW		004	006	008	012	015	012-3Ph	015-3Ph
Power supply	V-ph-Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	400-3-50	400-3-50
Voltage range	V	198-264	198-264	198-264	198-264	198-264	376-424	376-424
Full load current	A	7.2	11	14	23	20	16	16
Fuse rating	A	10	16	16	25	25	20	20

C1 Cooling mode conditions: Evaporator water entering/leaving temperature 12°C/7°C, outside air temperature 35°C, evaporator fouling factor 0 m² K/W
C2 Cooling mode conditions: Evaporator water entering/leaving temperature 23°C/18°C, outside air temperature 35°C, evaporator fouling factor 0 m² K/W
H1 Heating mode conditions: Water heat exchanger water entering/leaving temperature 30°C/35°C, outside air temperature 7°C db/6°C wb, evaporator fouling factor 0 m² K/W.
H2 Heating mode conditions: Water heat exchanger water entering/leaving temperature 40°C/45°C, outside air temperature 7°C db/6°C wb, evaporator fouling factor 0 m² K/W.
H3 Heating mode conditions: Water heat exchanger water entering/leaving temperature 47°C/55°C, outside air temperature 7°C db/6°C wb, evaporator fouling factor 0 m² K/W.
* In accordance with standard EN14511-3:2013
** In accordance with standard EN14825:2013
† Weight shown is a guideline only.
(1) In dB ref 20µPa, (A) weighting. Declared dualnumber noise emission values in accordance with ISO 4871 (with an associated uncertainty of +/-3dB(A)). For information, calculated from the sound power level Lw(A).

Eurovent certified data

Eurovent certified data

INVERTER HYBRID BOILER SYSTEM

30AWH - High Temperature

80°C

Eco Friendly & High Efficiency Inverter Hybrid Boiler Sytem

The Inverter Hybrid Boiler System is suitable for sanitary hot water production and space heating, where up to 80°C water temperature is required, with the unique technologies of a dual cascade compression and of optimal plate heat transfer. Since it consumes lower electricity consumption and minimizes carbon dioxide emission, compared with a conventional fossil fuel boiler, it is an ultra-energy saving, eco-friendly, high efficiency solution for space heating and sanitary hot water production.

The unique inverter technology provides highly pleasant atmosphere to a building with lower energy consumption.

Features

- High efficiency provides up to 65% saving versus a conventional boiler.
- Smart remote control and monitoring system (optional).
- Low noise level.
- Compact split system for easy installation and maintenance.
- Eco-Friendly & high efficiency Inverter Hybrid Boiler System.

Carrier
United Technologies
turn to the experts

SPECIFICATIONS

Inverter Hybrid Boiler System (30AWH-025Q)				
Heating Capacity (nominal/maximum)			KW	16.7/24.5
Electricity	Integrated Efficiency	COP	W/W	3.31(1)
	Max power consumption	(System required)	KW	11.86
Hot Water	Inlet Temp.	Usage range	°C	15 ~ 80
	Outlet Temp.	Max.	°C	80
	Flow rate	Usage range	LPM	20 ~ 60

(1) Outdoor temperature 7/6°C DB/WB, EWT/LWT 40/45°C, Heating Capacity 16,7 KW.

Outdoor unit specification (30AWH-025QO)			
Power input		-	3Ph. with NEUTRAL, 400VAC/50Hz
Compressor	Spec Refrigerant (charging)	-	DC Inverter Twin Rotary R410A (2,540g)
Size & weight	Dimensions Weight	[mm]	W900 x H1360 x D320
		[kg]	95
Refrigerant piping	Liquid pipe (φ) Gas pipe (φ)	[inn]	3/8
		[inn]	5/8
Ambient temp Range		[°C]	-20 ~ 40

Indoor unit specification (30AWH-025QI)			
Power input		-	3Ph. with NEUTRAL, 400VAC/50Hz
Compressor	Spec Refrigerant (charging)	-	DC Inverter Twin Rotary R134a (1,800g)
Heat exchanger 1 (refrigerant - refrigerant)	Spec	-	BPHE (Brazed Plate Heat Exchanger)
Heat exchange 2 (refrigerant - water)	Spec Pressure loss	[kPA]	BPHE (Brazed Plate Heat Exchanger)
Size & Weight	Dimension Weight	[mm]	W570 x H1030 x D330
		[kg]	93
Outdoor unit connection piping (R410a)	Liquid pipe (φ) Gas pipe (φ)	[inn]	3/8
		[inn]	5/8
Water pipe size (hot water)	Inlet pipe (φ)	[mm]	25
	Outlet pipe (φ)	[mm]	25
Ambient temp range		[°C]	5 ~ 40

AIR-TO-WATER HEAT PUMP 30RQV

AQUASNAP greenspeed

60°C

The AquaSnap Greenspeed liquid chiller/heat pump range was designed for commercial applications such as the air conditioning of offices, hotels and large residential houses.

Features

The units integrate the latest technological innovations:
Non-ozone depleting refrigerant R410A, DC inverter twin-rotary compressors, low-noise variable speed fans and microprocessor control.

With exceptional energy efficiency values the inverter chillers qualify for local tax reductions and incentive plans in all EU countries.

For added flexibility the AquaSnap Greenspeed units are available with or without hydraulic module integrated into the unit chassis.

Easy and fast installation.

Carrier
United Technologies
turn to the experts

PHYSICAL DATA

30RQV				17	21
Cooling					
Full load performances*	C1	Nominal capacity	kW	14,9	18,6
	C2	Nominal capacity	kW	19,8	25,8
Seasonal Efficiency*		ESEER	kW/kW	4,01	3,85
Heating					
Full load performances*	H1	Capacity (nominal/maximum)	kW	17,1/24,6	21,1/30,4
	H2	Capacity (nominal/maximum)	kW	16,2/23,1	20,0/29,6
	H3	Nominal capacity	kW	15,3	19,1
Seasonal Efficiency**	H3	SCOP (average climate)	kW/kW	3,1	2,9
	H3	ɳs heat (average climate)	%	121	113
	H3	Energy class (average climate)		A+	A+
Sound pressure level at 10m (3)			dB(A)	40	43
Dimensions - Standard unit					
Length (5)			mm	1109	1109
Width			mm	584	584
Height			mm	1579	1579
Operating Weight (1)					
Standard unit			kg	190,9	199,4
Compressors			Rotary compressor	1	1
Refrigerant				R410A	
Charge (1)			kg	8	8
Fans - Standard unit				Axial type fan	
Quantity				2	2

* In accordance with standard EN 14511-3:2013
** In accordance with standard EN 14825:2013, Average climate
C1 Cooling mode conditions : evaporator water entering/leaving temperature 12°C/7°C, outside air temperature 35°C, evaporator fooling factor 0mÇ K/W
C2 Cooling mode conditions : evaporator water entering/leaving temperature 23°C/18°C, outside air temperature 35°C, evaporator fooling factor 0mÇ K/W
H1 Heating mode conditions : Water heat exchanger water entering/leaving temperature 30°C/35°C, fooling factor 0mÇ K/W. Outside air temperature 7°C db / 6°C wb
H2 Heating mode conditions : Water heat exchanger water entering/leaving temperature 40°C/45°C, fooling factor 0mÇ K/W. Outside air temperature 7°C db / 6°C wb
H3 Heating mode conditions : Water heat exchanger water entering/leaving temperature 47°C/55°C, fooling factor 0mÇ K/W. Outside air temperature 7°C db / 6°C wb
(1) Values are guidelines only. Refer to the unit nameplate.
(2 In dB ref=10-12 W, (A) weighting. Declared dualnumber 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.
(3) In dB ref 20 µPa, (A) weighting. Declared dualnumber noise emission values in accordance with ISO 4871 (with an associated uncertainty of +/-3dB(A)). For information, calculated from the sound power level Lw(A).
(4) Min. water-side operating pressure with fixed speed hydronic module is 50 kPa and with variable speed hydronic module is 40 kPa.
(5) Length = 1141 mm if main disconnect switch

ELECTRICAL DATA

30RQV			17	21
Power circuit				
Nominal power supply	V-ph-Hz		400-3+N-50	400-3+N-50
Voltage range	V		360-440	360-440
Nominall unit current drawn (Un) *	A		12,5	14,3
Maximum unit current drawn (Un-10%) ***	A		18,5	21,2

* Conditions equivalent to the standardised Eurovent conditions (evaporator water entering-leaving temperature =12 °C/7 °C, outside air temperature = 35 °C).
*** Maximum unit operating current at maximum unit power input and at 360 V.

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Eurovent certified data

Eurovent certified data

HYDRIA 190L • 30CWH200
HYDRIA 300 LT • 30CWH300
HYDRIA 300 LT (with solar coil) • 30CWH300SI

HYDRIA

DISINFECT

For Domestic Hot Water Production

Features

Water output temperature: 38°C~70°C.

No contamination potential, the condenser coil is wrapped around outside the tank.

Multi protection: PTR valve, double high water temperature protection switches (Manual and Automatic).

15 Pa air outlet pressure enables a duct length up to 5 meters. (30CWH200)

25 Pa external static pressure enables air duct up to 10m. (30CWH300)

25 Pa air outlet pressure enables a duct length up to 10 meters. (30CWH300SI)

Automatic defrosting.

Automatic weekly disinfect function.

Auto mode selection & Vacation mode.

R134A gas, environmentally friendly.

Close refrigerant circuit, easy for plumber installation.

Carrier
United Technologies
turn to the experts

SPECIFICATIONS

		30CWH200	30CWH300	30CWH300SI
Storage size	lt	190	300	300
Solar Coil		NO	NO	YES
Running ambient temperature	°C	-20°C ~ 45°C	-20°C ~ 43°C	-20°C ~ 43°C
Storage water temperature	°C	38°C ~ 70°C	38°C ~ 65°C	38°C ~ 60°C
Heat pump heating capacity	KW	1.45	3.0	3.0
COP		3.50	3.76	3.60
Refrigerant		R134a		
Power supply		220-240V / 1ph		
Max. current	Amps	17.0	18.7	18.7
E-heater	KW	3.0	3.0	3.0
Dimensions (DxH)	mm	Φ560 x 1680	Φ650 x 1920	Φ650 x 1920
Net weight	Kg	94	146	123
Sound pressure level	dB(A)	41	45	48
Water Inlet pipe	mm	DN20		
Water Outlet pipe	mm	DN20		
Drainage	mm	DN20		
Max. operating pressure	Mpa	1.0		
Solar Coil Water Inlet pipe	mm	-	-	DN20
Solar Coil Water Outlet pipe	mm	-	-	DN20
Solar Coil (material / dimensions)		-	-	316L / Φ22mm x 10,0m
Solar Coil max. pressure	Mpa	-	-	0.7
Hot Water Yield	m^3/h	0.086	0.086	0.086
Applicable people		3 ~ 4	5 ~ 6	5 ~ 6
Energy Class (Average)		A	A	A

* Test conditions: Ambient temperature 15/12 °C (DB/WB), initial water temperature 15 °C - terminate water temperature 45 °C.
* Sound pressure level test conditions: Distance is 1m from the unit and height is 1m and half of the unit's height.

AQUASNAP Reversible

50°C

Fast installation enhanced performance

The AquaSnap heat pump was designed for commercial applications such as the air coditioning of officces, hotels etc.

Features

The units are equipped with a hydronic module integrated into the unit chassis, limiting the installation to straight-forward operations like connection of the power supply and the return piping.

Non-ozone depleting refrigerants R410A.

Scroll compressors.

Low noise fans.

Auto-adaptive microprocessors control.

Superior reliability.

Carrier
United Technologies
turn to the experts

PHYSICAL DATA

30RQ				017	021	026	033	040
Cooling								
Full load performances*	C1	Nominal capacity	kW	16.0	20.2	26.7	32.7	39.8
	C2	Nominal capacity	kW	22.2	27.4	34.3	43.6	55.0
Seasonal Efficiency*		ESEER	kW/kW	3.61	3.44	3.36	3.58	3.25
Heating								
Full load performances*	H1	Nominal capacity	kW	17.6	22.2	31.0	34.7	38.9
	H2	Nominal capacity	kW	17.0	21.6	29.9	33.3	41.0
Seasonal Efficiency**		ηs/SCOP/ENERGY CLASS (Average) - 30°/35° C	% / - / -	118/3,03/A	119/3,05/A	122/3,11/A	122/3,13/A	122/3,13/A
Sound Pressure level at 10m(1)**			dB(A)	40	42	46	46	48
Operating weight†								
Standard unit with/without hydronic module			kg	206/191	223/208	280/262	295/277	304/287
Refrigerant				R-410A				
Compressor				One hermetic scroll compressor				
Control				Pro-Dialog+				
Fans				Two twin-speed axial fans 3 blades		One twin-speed axial fan 7 blades		
Air flow			l/s	2217	1978	3530	3530	3530
Water heat exchanger				Plate heat exchanger				
Air heat exchanger				Copper tubes and aluminium fins				
Unit with hydronic module pump				Pump, screen filter, expansion tank, flow switch, pressure gauge, automatic air purge valve, safety valve				
Entering water connection			in	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
Leaving water connection			in	1	1	1-1/4	1-1/4	1-1/4
Nominal operating current			A	1.30	1.40	2.40	2.60	2.80
Dimensions								
Length			mm	1136	1136	1002	1002	1002
Depth			mm	584	584	824	824	824
Height			mm	1579	1579	1790	1790	1790

C1 Cooling mode conditions: Water heat exchanger, entering/leaving temperature 12°C/7°C, fouling factor 0 m2 K/W. Outside air temperature 35°C
C2 Cooling mode conditions::Water heat exchanger, entering/leaving temperature 23°C/18°C, fouling factor 0 m2 K/W. Outside air temperature 35°C
H1 Heating mode conditions: Water heat exchanger water entering/leaving temperature 30°C/35°C, fouling factor 0 m2 K/W. Outside air temperature 7°C db/6°C wb,
H2 Heating mode conditions: Water heat exchanger water entering/leaving temperature 40°C/45°C, fouling factor 0 m2 K/W. Outside air temperature 7°C db/6°C wb,
* In accordance with standard EN14511-3:2013
** In accordance with standard EN14825:2013
† Weight shown is a guideline only.
(1) In dB ref 20µPa, (A) weighting. Declared dualnumber noise emission values in accordance with ISO 4871 (with an associated uncertainty of +/-3dB(A)). For information, calculated from the sound power level Lw(A).

ELECTRICAL DATA

30RQ			017	021	026	033	040
Power circuit							
Nominal power supply	V-ph-Hz		400-3-50 ± 10%				
Control circuit supply			24 V via internal transformer				
Maximum start-up current (Un)*	A		75	95	118	118	176
Maximum operating power input**	kW		7.8	9.1	11	13.8	17.5
Nominal unit operating current draw***	A		8	12	16	17	25
Maximum operating current draw****	A		15	18	23	27	36

* Maximum instantaneous start-up current (locked rotor current of the compressor).
** Power input, compressors and fans, at the unit operating limits (saturated suction temperature 10°C, saturated condensing temperature 65°C) and nominal voltage of 400 V (data given on the unit nameplate).
*** Standardised Eurovent conditions: water heat exchanger entering/leaving water temperature 12°C/7°C, outside air temperature 35°C.
**** Maximum unit operating current at unit power input and 340-460 for sizes 017 to 033 or 360-440 for size 040.

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Eurovent certified data

Eurovent certified data

REVERSIBLE AIR-TO-WATER HEAT PUMPS • 30RQS

AQUASNAP Reversible

Commercial and industrial applications

The AquaSnap range of liquid chillers/air-to-water heat pumps was designed for commercial (air conditioning of offices, hotels etc.) or industrial (low-temperature process units etc.) applications

Features

The AquaSnap integrates the latest technological innovations:

Non-ozone depleting refrigerant R410A

Scroll compressors

Low-noise fans made of a composite material

Auto-adaptive microprocessor control

Electronic expansion valve

Variable-speed pump (option)

The AquaSnap can be equipped with a hydronic module integrated into the unit chassis, limiting the installation to straightforward operations like connection of the power supply and the chilled water supply and return piping.

Carrier
United Technologies
turn to the experts

PHYSICAL DATA

30RQS				39	45	50	60	70	78	80	90	100	120	140	160
Cooling															
Full load performances*	C1	Nominal capacity	kW	38	43	50	59	64	74	78	86	96	113	132	149
	C2	Nominal capacity	kW	48	54	63	71	79	93	97	108	118	143	163	187
Seasonal Efficiency*	C1	ESEER	kW/kW	3.80	3.77	3.81	3.61	3.61	3.57	3.84	3.77	3.88	4.04	3.75	3.67
Heating															
Full load performances*	H1	Nominal capacity	kW	42	47	53	61	70	78	80	93	101	117	138	158
	H2	Nominal capacity	kW	43	47	55	63	71	80	83	95	103	121	141	162
Seasonal efficiency***	ns/ SCOP/ Energy class		%/-/-	120/ 3.07/ A	121/ 3.10/ A	125/ 3.21/ A+	120/ 3.07/ A	121/ 3.10/ A	115/ 2.96/ A	123/ 3.14/ A	124/ 3.17/ -	126/ 3.23/ -	126/ 3.23/ -	123/ 3.14/ -	122/ 3.13/ -
Sound levels															
Standard unit															
Sound pressure level at 10m (1)			dB(A)	49	49	49	55	55	55	52	52	52	52	58	58
Unit with option 15LS															
Sound pressure level at 10m (1)			dB(A)	48	48	48	48	48	48	51	51	51	51	51	51
Operating weight (2)															
Standard unit with hydronic module															
Single high-pressure pump			kg	529	537	563	576	576	584	769	918	926	989	1093	1111
Dual high-pressure pump			kg	555	563	588	602	602	610	795	963	971	1037	1130	1148
Compressors				Hermetic scroll compressors, 48.3 r/s											
Circuit A				2	2	2	2	2	2	2	3	3	3	2	2
Circuit B				-	-	-	-	-	-	-	-	-	-	2	2
No of control stages				2	2	2	2	2	2	2	3	3	3	4	4
Refrigerant charge (2)				R-410A											

* In accordance with standard EN14511-3:2013
*** In accordance with standard EN14825:2013, average climate
(1) In dB ref 20µPa, (A) weighting. Declared dualnumber noise emission values in accordance with ISO 4871 (with an associated uncertainty of +/-3dB(A)). For information, calculated from the sound power level Lw(A).
(2) Values shown are a guideline only. Please refer to the unit nameplate

ELECTRICAL DATA

30RQS		039	045	050	060	070	078	080	090	100	120	140	160
Power circuit													
Nominal power supply	V-ph-Hz	400-3-50 ± 10%											
Control circuit supply		24 V via internal transformer											
Maximum start-up current (Un)*													
Standard unit	A	113.8	134.8	142.8	145.8	176.0	213.0	213.6	173.6	207.6	247.6	243.0	286.0
Unit with electronic starter option	A	74.7	86.5	93.8	96.2	114.4	139.8	139.8	-	-	-	-	-
Maximum operating power input**	kW	19.5	22.3	24.5	27.9	31.2	35.8	35.6	42.3	45.6	52.5	62.4	71.6
Nominal unit operating current draw***	A	25.6	29.0	33.0	36.0	42.4	52.8	53.4	55.4	61.7	77.3	84.8	105.6

* Maximum instantaneous start-up current at operating limit values (maximum operating current of the smallest compressor(s) + fan current + locked rotor current of the largest compressor).
** Power input, compressors and fans, at the unit operating limits (saturated suction temp. 10°C, saturated condensing temp. 65°C) and nominal voltage of 400 V (data given on the unit name plate).
*** Standardised Eurovent conditions: evaporator entering/leaving water temperature 12°C/7°C, outside air temperature 35°C.

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Eurovent certified data

Eurovent certified data

AIR-TO-WATER HEAT PUMP WITH INTEGRATED HYDRONIC MODULE

30RQM / 30RQP

The AquaSnap heat pumps are the best value solution for commercial and industrial applications where installers, consultants and building owners require reduced installed costs, optimal performances and maximum quality.

The new heat pump generation AquaSnap features two new versions:

The AquaSnap (30RQM) version features a compact all-in-one package where reduced investment cost (low Capex) is required.

The AquaSnap Greenspeed® (30RQP) version features a compact all-in-one package optimized for part-load applications where high SCOP and SEER are required.

Features

The AquaSnap heat pumps are designed to meet current and future Ecodesign and F-Gas requirements in terms of energy efficiency and reduced CO^2 emissions. They use the best technologies available today:

- Reduced refrigerant charge of non-ozone depleting R410A refrigerant
- Scroll compressors
- Greenspeed® variable-speed driven fans (30RQP models)
- Brazed plate heat exchangers with reduced water pressure drops
- Auto-adaptive microprocessor control with Greenspeed® intelligence
- Innovative Carrier "Free defrost" algorithm (pending patent)
- Touch pilot control with advanced IP connectivity and color touch screen user interface

PHYSICAL DATA

30RQM				160	180	210	230	240	270	310	330	380	430	470	520
Cooling															
Standard unit	C1	Nominal capacity	kW	156	170	203	228	236	268	301	326	376	424	459	511
Seasonal efficiency*		ESEER	kW/kW	3.85	3.87	3.90	3.96	3.89	3.96	4.01	4.02	4.05	4.06	4.05	4.02
Heating															
Standard unit	H1	Nominal capacity	kW	179	196	238	213	270	290	339	355	411	473	456	434
Full load performances*	H2	Nominal capacity	kW	173	189	230	242	259	279	326	342	396	456	498	537
Seasonal efficiency** (average climate)	H1	SCOP	kW/kW	3.07	3.12	3.11	3.13	3.14	3.13	3.09	3.13	3.20	3.21	3.32	3.29
	H1	ñs heat	%	120	122	121	122	123	122	120	122	125	129	130	129
Sound pressure level at 10m(1)			dB(A)	58	59	59	59	60	60	61	61	62	62	62	62
Sound pressure level (opt. 15)at 10m(1)				57	58	58	58	59	59	59	60	60	61	61	61
Dimensions															
Length			mm	2410	2410	2410	2410	3604	3604	3604	3604	4797	4797	4797	4797
Width			mm	2253	2253	2253	2253	2253	2253	2253	2253	2253	2253	2253	2253
Height			mm	2297	2297	2297	2297	2297	2297	2297	2297	2297	2297	2297	2297
Operating Weight															
Standard unit			kg	1426	1505	1633	1656	2068	2216	2341	2572	3040	3289	3302	3342
Compressors				Hermetic scroll 48.3 tr/s											
Circuit A				1	1	2	2	2	2	2	2	3	4	4	4
Circuit B				2	2	2	2	2	3	3	4	4	4	4	4
No. of control stages				3	3	4	4	4	5	5	6	7	8	8	8
Minimum capacity			%	33	33	25	25	25	20	20	17	14	13	13	13
Refrigerant				R410A											
Air heat exchangers				Grooved copper tubes and aluminum fins											

30RQP				160	180	210	230	240	270	310	330	380	430	470	520
Cooling															
Standard unit	C1	Nominal capacity	kW	156	170	203	228	236	268	301	326	376	424	459	511
Seasonal efficiency*		ESEER	kW/kW	4.05	4.09	4.10	4.14	4.14	4.14	4.19	4.19	4.27	4.28	4.26	4.20
Heating															
Standard unit	H1	Nominal capacity	kW	179	196	238	213	270	290	339	355	411	473	456	434
Full load performances*	H2	Nominal capacity	kW	173	189	230	242	259	279	326	342	396	456	498	537
Seasonal efficiency**	H1	SCOP	kW/kW	3.24	3.26	3.26	3.31	3.31	3.29	3.27	3.33	3.33	3.42	3.43	3.38
	H1	ñs heat	%	127	127	128	129	129	129	128	129	130	134	134	132
Standard unit															
Sound pressure level at 10m(1)			dB(A)	58	59	59	59	60	60	61	61	62	62	62	62
Sound pressure level (opt. 15)at 10m(1)				57	58	58	58	59	59	59	60	60	61	61	61
Dimensions															
Length			mm	2410	2410	2410	2410	3604	3604	3604	3604	4797	4797	4797	4797
Width			mm	2253	2253	2253	2253	2253	2253	2253	2253	2253	2253	2253	2253
Height			mm	2297	2297	2297	2297	2297	2297	2297	2297	2297	2297	2297	2297
Operating Weight															
Standard unit			kg	1462	1542	1670	1693	2105	2252	2378	2608	3076	3347	3359	3408
Compressors				Hermetic scroll 48.3 tr/s											
Circuit A				1	1	2	2	2	2	2	2	3	4	4	4
Circuit B				2	2	2	2	2	3	3	4	4	4	4	4
No. of control stages				3	3	4	4	4	5	5	6	7	8	8	8
Minimum capacity			%	33	33	25	25	25	20	20	17	14	13	13	13
Refrigerant				R410A											
Air heat exchangers				Grooved copper tubes and aluminum fins											

ELECTRICAL DATA

30RQM		160	180	210	230	240	270	310	330	380	430	470	520
Nominal power supply	V-ph-Hz	400 - 3 - 50											
Voltage range	V	360 - 440											
30RQP		**160**	**180**	**210**	**230**	**240**	**270**	**310**	**330**	**380**	**430**	**470**	**520**
Nominal power supply	V-ph-Hz	400 - 3 - 50											
Voltage range	V	360 - 440											

* In accordance with standard EN14511-3:2013.
** In accordance with standard EN14825:2013, average climate
C1 Cooling mode conditions: Evaporator water entering/leaving temperature 12°C/7°C, outside air temperature 35°C, evaporator fooling factor 0 mÇ K/W
H1 Heating mode conditions: Water heat exchanger water entering/leaving temperature 30°C/35°C, fouling factor 0 m2 K/W. Outside air temperature 7°C db/6°C wb
H2 Heating mode conditions: Water heat exchanger water entering/leaving temperature 40°C/45°C, fouling factor 0 m2 K/W. Outside air temperature 7°C db/6°C wb
(1) In dB ref 20µPa, (A) weighting. Declared dualnumber noise emission values in accordance with ISO 4871 (with an associated uncertainty of +/-3dB(A))
For information, calculated from the sound power level Lw(A).

DUCTABLE AIR COLLED SCROLL HEAT PUMPS

30PHC

55°C

Heating and cooling solutions you can count on

The 30PH reversible heat pumps are compact outdoor air/water units. Available in two versions: STD (Standard) and HEE (High Energy Efficiency).
These units have been made for operation indoors in the production of hot and/or cold water, applicable to heating, cooling, and industry.

Features

Operation in negative outdoor temperatures (greater than -15°C WB) for water heating and cooling. Defrosting by reversing the cycle.

Packaged unit all in one.

Silent operation.

Configuration flexibility.

Ductable feature for indoor installation.

Equipped with centrifugal fan (STD version) or electronic plugfan (HEE version), plate exchanger, hermetic scroll compressor, and electronic control with microprocessor, components optimised for the R-410A refrigerant.

Electronic control.

Carrier
United Technologies
turn to the experts

PHYSICAL DATA

30PHC				90STD	100STD	120STD	160STD	180STD
Cooling								
Cooling capacities	Net cooling capacity *		kW	17,70	21,10	25,20	32.7	36.0
	Seasonal efficiency	**ESEER******		2,61	2,59	2,81	2,94	2,85
Heating								
Heating capacities	Net heating capacity **		kW	21,80	26,10	29,70	38.3	42.6
	Seasonal efficiency****	**SCOP**		3,11	3,12	3,07	2,95	2,95
	Average climate	**ns Heat**	%	121	122	120	115	115
		Prated		18,80	21,50	24,43	29,49	34,68
Seasonal efficiency****		**SCOP**		3,59	3,63	3,57	3,42	3,35
Warmer climate		**ns Heat**	%	140	142	140	134	131
Operating weight								
Unit with hydronic module (empty)			kg	310	370	386	469	476
Unit with hydronic module (in operation)			kg	327	390	408	497	503
Refrigerant				R-410A				
Compressor				One scroll compressor				
Fans				One centrifugal fan				
Nominal air flow			m3/h	6.500	7.000	10.000	12,200	12,200
Available static pressure			mm.w.c.	20	20	20	20	20
Dimensions								
Length x depth x height			mm	1117x860x1447	1117x860x1447	1398x860 x1727	1398x860x1727	1398x860x1727

* Cooling capacity calculated in accordance with the EN-14511-2013 standard given for outlet temperature conditions of 7ºC and 35ºC outdoor temperature
** Heating capacity calculated in accordance with the EN-14511-2013 standard given for outlet temperature conditions of 45ºC and 60ºC WB outdoor temperature
*** Total power input by compressor, motorised fan and electronic control under nominal conditions, calculated in accordance with the EN-14511-2013 standard. Options are not included.
**** Values calculated in accordance with the EN-14825-2013 standard given for bivalente temperature of -5ºC in average climate and 2ºC in warmer climate.

ELECTRICAL DATA

30PHC		90STD	100STD	120STD	160STD	180STD
Electrical power supply	V-ph-Hz	400-3-50 (+-10%)	400-3-50 (+-10%)	400-3-50 (+-10%)	400-3-50 (+-10%)	400-3-50 (+-10%)
Power supply		3 Wires + Ground + Neutral				
Maximum absorbed current	A	21.1	23.2	28.3	35.2	40.3

HIGH TEMPERATURE AIR-TO-WATER HEAT PUMPS

61AF

AQUASNAP Heating

65°C

Exceptional energy efficiency level

High temperature air to water heat pumps with integrated hydronic module for leaving water temperature up to 65°C.

Features

Scroll compressors with vapour injection.

Low-noise fans made of a composite material.

Auto-adaptive microprocessor control.

Electronic expansion valve.

Inverter water pump.

Carrier
United Technologies
turn to the experts

PHYSICAL DATA

61AF				014-7	014-9	019-9
Heating						
Full load performances*	H1	Nominal capacity	kW	14.1	13.7	19.8
	H2	Nominal capacity	kW	13,9	13,5	20,2
	H3	Nominal capacity	kW	14.2	13.8	19.8
	H4	Nominal capacity	kW	14.0	13.7	20.1
Seasonal Efficiency**	H3	SCOP	kW/kW	2,72	2,84	2,84
(Average climate)	H3	ηs heat	%	106	111	111
	H3	Energy Class		A+	A+	A+
	H2	SCOP	kW/kW	3,13	3,32	3,22
	H2	ηs heat	%	122	130	126
	H2	Energy Class		A	A+	A+
Sound Pressure Level Standard Unit at 10m (1)			dB(A)	40	40	41
Max. leaving water temperature			°C	65	65	65
Operating weight†						
Standard unit without hydronic module			kg	159	159	206
Standard unit with hydronic module option			kg	169	169	216
Compressor				One, hermetic scroll, 48.3 r/s		
Refrigerant				R-407C		
Condenser				Direct-expansion plate heat exchanger		
Fan				Axial twin speed fans		
Quantity				2	2	2
Air flow (high speed)			l/s	2050	2050	2000
Evaporator				Grooved copper tubes and aluminium fins		
Dimensions						
Length			mm	1103	1103	1135
Depth			mm	333	333	559
Height			mm	1278	1278	1579

H1 Heating mode conditions: water heat exchanger water entering/leaving temperature 40°C/45°C, outside air temperature 7°C db/6°C wb, evaporator fooling factor 0 mÇ.K/W
H2 Heating mode conditions: water heat exchanger water entering/leaving temperature 30°C/35°C, outside air temperature 7°C db/6°C wb, evaporator fooling factor 0 mÇ.K/W
H3 Heating mode conditions: water heat exchanger water entering/leaving temperature 47°C/55°C, outside air temperature 7°C db/6°C wb, evaporator fooling factor 0 mÇ.K/W
H4 Heating mode conditions: water heat exchanger water entering/leaving temperature 55°C/65°C, outside air temperature 7°C db/6°C wb, evaporator fooling factor 0 mÇ.K/W
* In accordance with standard EN14511-3:2013
** In accordance with standard EN14825:2013
† Weight shown is a guideline only.

ELECTRICAL DATA

61AF - Standard unit		Without pump			With pump		
		014-7	014-9	019	014-7	014-9	019
Power circuit							
Nominal power supply	V-ph-Hz	230-1-50 ± 10%	400-3-50 ± 10%	400-3-50 ± 10%	230-1-50 ± 10%	400-3-50 ± 10%	400-3-50 ± 10%
Control circuit supply		24 V, via internal transformer					
Maximum start-up current (Un)*							
Standard unit	A	-	66	102	-	67	103
Unit with electronic starter option	A	47	-	-	48	-	-
Maximum unit current draw †	A	36.4	11.9	16.6	37.5	13.0	17.7
Nominal unit current draw***	A	22.9	7.9	12.4	24.0	9.0	13.5
Maximum unit current draw (Un)******	A	30.7	10.8	16.0	31.8	11.9	17.1

* Maximum instantaneous start-up current at operating limit values (maximum operating current of the pump + fan current + locked rotor current of the compressor).
** Power input, compressors and fan, at the unit operating limits (saturated suction temperature 10°C, saturated condensing temperature 65°C) and nominal voltage of 400 V (data given on the unit nameplate).
*** Standardised Eurovent conditions: condenser entering/leaving water temperature 40°C/45°C, outside air temperature 7°C.
**** Maximum unit operating current at maximum unit power input and 400 V (values given on the unit nameplate).
(1) In dB ref 20µPa, (A) weighting. Declared dualnumber noise emission values in accordance with ISO 4871 (with an associated uncertainty of +/-3dB(A)). For information, calculated from the sound power level Lw(A).
† Maximum unit operating current at maximum unit power input and 360 V.

HIGH TEMPERATURE AIR-TO-WATER HEAT PUMPS • 61AF

AQUASNAP Heating

65°C

Application flexibility

High temperature heat pump range was designed for commercial applications, such as the heating of offices, apartments and hotels as well as domestic hot water production.

Features

The operating range allows outside temperatures down to -20°C and leaving water temperatures up to 65°C. Intelligent unit control permits unit operation in extreme conditions, minimising unit shut-down times.

Scroll compressors with vapour injection.

Low-noise fans made of a composite material.

Auto-adaptative microprocessor control.

Electronic expansion valve.

Inverter water pump.

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PHYSICAL DATA

61AF				022	030	035	045	055	075	105
Heating										
Full load performances*	H1	Nominal capacity	kW	20.8	25.8	32.4	43.9	52.4	66.8	102.0
	H2	Nominal capacity	kW	20.9	26.3	32.6	44.3	52.2	64.9	101.9
	H3	Nominal capacity	kW	20.9	25.3	32	43.5	52.8	68	102
	H4	Nominal capacity	kW	21.2	24.8	31.7	43.4	54	68.1	103.4
Seasonal Efficiency**	H1	ns/SCOP/ ENERGY CLASS (Average) -30°/35° C	% / - / -	119/3,05/A	119/3,04/A	126/3,22/A+	134/3,42/A+	136/3,47/A+	130/3,32/A+	133/3,39/A+
	H3	ns/SCOP/ ENERGY CLASS (Average) - 47°/55° C	% / - / -	104/2,68/A+	105/2,70/A+	108/2,77/A+	116/2,98/A+	117/3,01/A+	109/2,80/A+	115/2,96/A+
Sound Power Level Standard Unit			dB(A)	77	78	83	82	84	84	85
Sound Pressure Level at 10 m (1)			dB(A)	46	46	51	51	53	52	53
Operating weight†										
Standard unit without hydronic module			kg	340	396	411	500	523	900	1020
Standard unit with hydronic module option			kg	352	408	425	564	588	950	1076
Compressor				Hermetic scroll 48.3 r/s						
Quantity				1	1	1	1	1	2	2
Refrigerant				R-407C						
Condenser				Direct-expansion plate heat exchanger						
Fan				Axial with rotating shroud, Flying Bird IV						
Quantity				1	1	1	1	1	2	2
Total air flow at high speed			l/s	3770	3748	3736	4035	4036	7479	8072
Evaporator				Grooved copper tubes and aluminium fins						
Refrigerant				R-407C						
Dimensions										
Length			mm	1110			1114		2273	
Depth			mm	1327			2100		2100	
Height			mm	1330			1330		1330	

H1 Heating mode conditions: Water heat exchanger water entering/leaving temperature 30°C/35°C, fouling factor 0 m2 K/W. Outside air temperature 7°C db/6°C wb,
H2 Heating mode conditions: Water heat exchanger water entering/leaving temperature 40°C/45°C, fouling factor 0 m2 K/W. Outside air temperature 7°C db/6°C wb,
H3 Heating mode conditions: Water heat exchanger water entering/leaving temperature 47°C/55°C, fouling factor 0 m2 K/W. Outside air temperature 7°C db/6°C wb,
H4 Heating mode conditions: Water heat exchanger water entering/leaving temperature 55°C/65°C, fouling factor 0 m2 K/W. Outside air temperature 7°C db/6°C wb,
* In accordance with standard EN14511-3:2013
** In accordance with standard EN14825:2013
† Weight shown is a guideline only.

ELECTRICAL DATA

61AF - Standard unit (without hydronic module)			022	030	035	045	055	075	105
Power circuit									
Nominal power supply	V-ph-Hz		400-3-50 ± 10%						
Control circuit supply			24 V, via internal transformer						
Maximum start-up current (Un)*									
Standard unit	A		104	102	130	170	190	157	229
Unit with electronic starter option	A		56	55	70	91	101	101	142
Maximum unit current draw (†)	A		18.0	22.0	29.0	35.0	41.0	57.0	83.0
Nominal unit current draw***	A		14.0	16.0	20.0	23.0	28.0	40.0	55.0
Maximum unit current draw (Un)******	A		16.0	20.0	26.0	32.0	38.0	53.0	76.0

* Maximum instantaneous start-up current at operating limit values (maximum operating current of the compressor + fan current + locked rotor current of the compressor).
** Power input, compressors and fan, at the unit operating limits (saturated suction temperature 10°C, saturated condensing temperature 65°C) and nominal voltage of 400 V (data given on the unit nameplate).
*** Standardised Eurovent conditions: condenser entering/leaving water temperature 40°C/45°C, outside air temperature 7°C/6°C.
**** Maximum unit operating current at maximum unit power input and 400 V (values given on the unit nameplate).
(1) In dB ref 20µPa, (A) weighting. Declared dualnumber noise emission values in accordance with ISO 4871 (with an associated uncertainty of +/-3dB(A)). For information, calculated from the sound power level Lw(A).
(†) Maximum unit operating current at maximum unit power input and 360 V.

61WG

AQUASNAP Heating

65°C

Optimized for heating

The 61WG units designed for commercial, residential and industrial applications. All units offer a unique combination of high performance and functionality in an exceptionally compact chassis.

Features

Optimized for heating applications, leaving water temperature up to 65°C, evaporator temperature down to -5°C and a COP of above 5.

Latest generation R-410A scroll compressors, optimized for high performance.

Plug and play approach.

Weather compensation control and control for supplementary electric heating stages or a relief boiler.

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United Technologies
turn to the experts

PHYSICAL DATA

Heating

61WG				020	025	030	035	040	045	050	060	070	080	090
Full load performances*	H1	Nominal capacity	kW	29.0	34.4	38.3	44.2	50.2	57.2	68.6	78.2	88.4	100.0	117.0
	H2	Nominal capacity	kW	27.7	33.0	36.7	42.7	48.7	54.8	66.4	75.7	84.2	95.3	109.0
	H3	Nominal capacity	kW	26.9	32.0	35.4	41.3	46.5	52.3	63.6	74.0	80.4	90.3	103.0
	H4	Nominal capacity	kW	25.7	30.7	33.7	39.6	42.9	49.1	60.6	70.7	76.3	85.0	97.4
Seasonal Efficiency (average climate)	H1	Energy Class		A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
	H1	SCOP	kW/kW	5,36	5,2	5,11	5,19	5,23	5,19	5,84	5,93	5,93	5,83	5,82
		ns heat		206	200	197	200	201	200	220	229	229	225	225
Seasonal Efficiency (average climate)**	H3	Energy Class		A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
	H3	SCOP	kW/kW	4.37	4.32	4.20	4.28	4.32	4.35	4.86	4.88	4.80	4.89	4.80
		ns heat	%	167	165	160	163	165	166	186	187	184	188	184
Sound Power Level Standard Unit			dB(A)	67	68	69	69	70	70	72	72	72	73	73
Sound Power Level with opt 285			dB(A)	61	62,6	63	63	64	64,1	65,5	66	66	67	67,4
Operating weight†			kg	191	200	200	207	212	220	386	392	403	413	441
Compressors				Hermetic scroll 48.3 r/s										
Quantity				1	1	1	1	1	1	2	2	2	2	2
Number of capacity stages				1	1	1	1	1	1	2	2	2	2	2
Minimum capacity			%	100	100	100	100	100	100	50	50	50	50	50
Dimensions, standard unit††														
Width			mm	600	600	600	600	600	600	880	880	880	880	880
Depth			mm	1044	1044	1044	1044	1044	1044	1474	1474	1474	1474	1474
Height			mm	901	901	901	901	901	901	901	901	901	901	901
Refrigerant				R-410A										
Control				Pro-Dialog+										
Evaporator				Direct-expansion plate heat exchanger										
Condenser				Plate heat exchanger										

H1 Heating mode conditions: Condenser Water heat exchanger, entering/leaving temperature 30°C/35°C, fouling factor 0 m² K/W. Evaporator Water heat exchanger, entering/leaving temperature 10°C/7°C, fouling factor 0 m² K/W.
H2 Heating mode conditions: Condenser Water heat exchanger, entering/leaving temperature 40°C/45°C, fouling factor 0 m² K/W. Evaporator Water heat exchanger, entering/leaving temperature 10°C/7°C, fouling factor 0 m² K/W.
H3 Heating mode conditions: Condenser Water heat exchanger, entering/leaving temperature 47°C/55°C, fouling factor 0 m² K/W. Evaporator Water heat exchanger, entering/leaving temperature 10°C/7°C, fouling factor 0 m² K/W.
H4 Heating mode conditions: Condenser Water heat exchanger, entering/leaving temperature 55°C/65°C, fouling factor 0 m² K/W. Evaporator Water heat exchanger, entering/leaving temperature 10°C/7°C, fouling factor 0 m² K/W.
* In accordance with standard EN14511-3:2013.
** In accordance with standard EN14825:2013, average climate.
† Weight shown is a guideline only.
† † The dimensions shown are for the standard unit. For other unit types please refer to the dimensional drawings.

ELECTRICAL DATA

61WG		020	025	030	035	040	045	050	060	070	080	090
Power circuit												
Nominal power supply	V-ph-Hz	400-3-50 ± 10%										
Control circuit supply		24 V, via internal transformer										
Maximum start-up current draw (Un)*												
Standard unit	A	98	142	142	147	158	197	161	163	172	185	226
Unit with electronic starter option	A	53.9	78.1	78.1	80.9	86.9	108.4	98	99	105	114	139
Nominal unit operating current draw***	A	12,9	15,8	16,8	19,2	20,7	24,6	31,6	33,6	38,4	41,4	49,2
Maximum operating current draw***	kW	9.7	11.4	12.7	14.6	16.5	18.6	22.8	25.4	29.2	33	37.2
Maximum operating current draw (Un)***	A	16.1	19.6	21.1	24.4	26.7	30.9	39.2	42.2	48.8	53.4	61.8
Maximum operating current draw †	A	17,8	21,6	23,2	26,9	29,4	34,0	43,2	46,4	53,8	58,8	68,0

* Maximum instantaneous start-up current at operating limit values (maximum operating current of the smallest compressor(s) + fan current + locked rotor current of the largest compressor).
** Maximum power input at the unit operating limits.
*** Values obtained at standardized Eurovent conditions : evaporator EWT/LWT 10/7°C, condenser EWT/LWT 30/35°C.
**** Maximum unit operating current at maximum unit power input and 400 V.
† Maximum unit operating current at maximum unit power input and 360 V.

HIGH TEMPERATURE WATER-TO-WATER HEAT PUMPS

61XWH-ZE

AQUAFORCE PUREtec

85°C

Carrier at the forefront of innovative technology.

Carrier has been working over the past years on selecting the right refrigerant for the future and has now taken the lead in introducing the next generation of refrigerants on screw units : PUREtec™. With PUREtec, Carrier offers a range of new customized solutions using a refrigerant with zero impact on the ozone layer and nearly zero global warming potential: HFO R-1234ze.

All the reliability, efficiency, adaptability of the AquaForce range combined with PUREtec refrigerant: HFO R-1234ze.

Features

- Long-term refrigerant choice
- Nearly zero global warming potential
- Zero impact on the ozone layer
- Support HFC phase-down plan in Europe

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PHYSICAL DATA

Heating

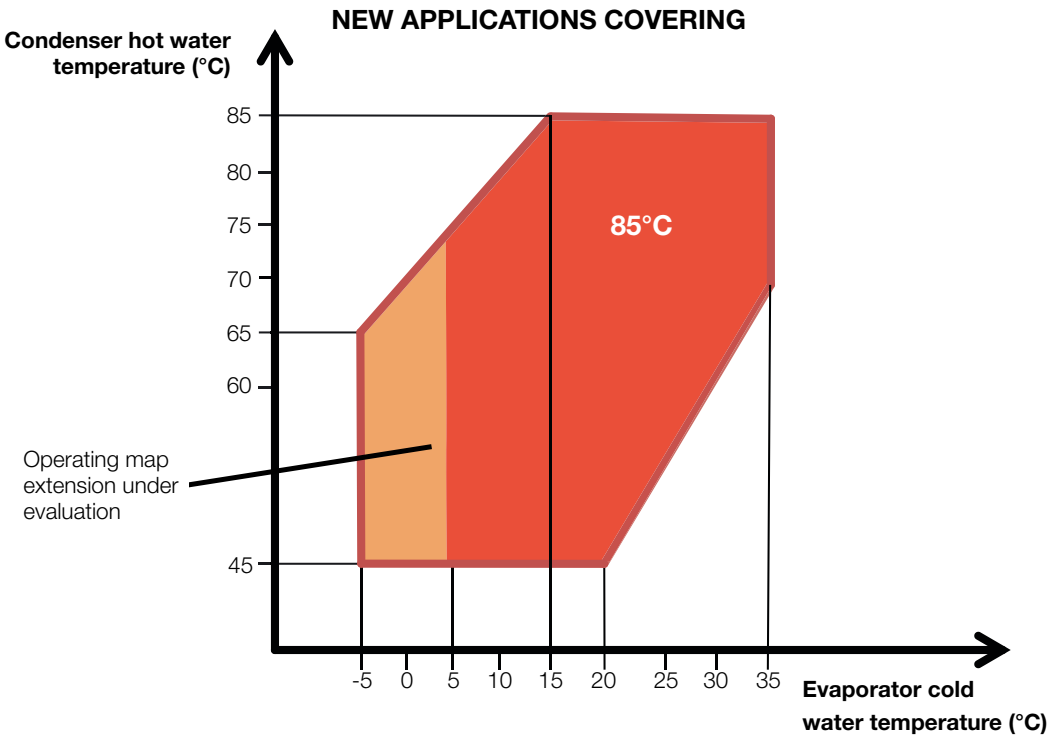
61XWH-ZE		61XWH-ZE0301	61XWH-ZE0501	61XWH-ZE0751	61XWH-ZE1001	61XWH-ZE1501
Heating Capacity (10°C / 75°C)	kW	222	362	532	723	1064
Heating Capacity (30°C / 75°C)	kW	410	655	974	1310	1948
Heating Capacity (20°C / 85°C)	kW	271	439	645	879	1290
Heating Capacity (35°C / 85°C)	kW	419	671	996	1342	1992
Maximum hot water temperature	°C	85	85	85	85	85
Nb of Refrigerant Circuit		1	1	1	2	2
Operating Weight	Kg	2230	3250	4500	7500	8800
Length	mm	2750	3100	3300	4800	4850
Width	mm	950	950	1150	1050	1350
Height	mm	1600	1750	2000	2000	2000

All performances are not compliant with EN14511-3 : 2013.
Custom units which are not certified in accordance with AHRI Water-Cooled Water-Chilling and Heat Pump Water-Heating Packages Using Vapor Compression Cycle Certification Program.
Preliminary product data for information only. Final product data will be submitted by Carrier to Eurovent company during 2016.

OPERATING RANGE

61XWH-ZE	Minimum	Maximum
Evaporator		
Entering temperature at start-up	-	50°C
Leaving temperature during operation	0 to 15°C	35°C
Entering/leaving temperature difference at full load	2K	Up to 20K*
Condenser		
Entering temperature at start-up	20°C	-
Leaving temperature during operation	45°C	70 to 85°C
Entering/leaving temperature difference at full load	2K	Up to 20K*

* Water box configurations 1, 2 or 3 passes



HPC

Models

HPC-1 | HPC-2 | HPCmax | HPCsolmax | HPCmini (buffer)

Features

HPC-1 & 2
(Enameled for DHW)

Available from 200L to 500L.

Anticorrosive protection by liquid enamel applicable to 850°C according to DIN 4573. Anodic protection by magnesium anode according to DIN 1243-2.

Capability for simultaneous connection of 3 different energy sources (solar panels, heat pump, electricity - optional).

Large heat exchanger (HP) from the top to the bottom and an inside coaxial exchanger for solar.

Upper coil of big capacity and cross -section suitable for H/P flows.

Eco friendly polyurethane foam of 52kg/m• density, 55mm thickness, according to DIN EN ISO 845:2009-10.

External cover of PVC fabric for in door storage.

Features

HPCmax & solmax
(AISI 316L for DHW)

Available from 200L to 500L.

Manufactured completely from Stainless Steel AISI 316L. Anodic protection by magnesium anode according to DIN 1243-2.

Capability for simultaneous connection of 3 different energy sources (solar panels, heat pump, electricity - optional).

Optimal design with upper heat exchanger (HP) and bottom heat exchanger for solar.

Upper coil of big exchange surface suitable for H/P.

Eco friendly soft polyurethane jacket of 17,2kg/m• density, 100mm thickness, according to DIN EN ISO 845:2009-10.

External cover of PVC fabric for in door storage.

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Features

HPCmini
(small buffer tank)

2 models 60 litres & 80 litres of small dimensions.

Manufactured completely from Steel ST37-2 and can be Installed in series or create primary / secondary circuits.

2 holes on the front - 2 on the side (female thread 1 1/4"), 2 holes on the upper (female thread 1/2" airvent and sensor), 1 hole on the bottom (female thread 1 1/4" for heat element [optional] or drain).

Capability of horizontal or vertical installation on the wall or on the ground.

Increase of water volume in the installation, protection of evaporator during cooling period.

Optional 4 kW electrical resistanse for back up of heating during low winter temperatures.

Eco friendly polyurethane foam of 50kg/m• density and external cover of Prepainted Steel ST37-2, 0.50mm thickness for indoor storage.

SPECIFICATIONS

		HPC - 1 & 2 (Enameled for DHW)			HPCmax & solmax (AISI 316L for DHW)			HPCmini (small buffer tank)	
Usage		DHM	DHM	DHM	DHM	DHM	DHM	BUFFER	BUFFER
Tank Capacity	lt	200	300	500	200	300	500	60	80
Total Height	mm	1400	1650	1850	1310	1800	1800	840	1050
Tank Diameter with ins.	mm	600	630	750	585	600	800	400	400
Max. Working Pressure	bar	10	10	10	8	8	8	6	6
Hot Water Outlet		1"	1"	1"	3/4"	1"	1 1/4"	-	-
Cold Water Inlet		1"	1"	1"	3/4"	1"	1 1/4"	-	-
Recirculation		YES (3/4")	YES (3/4")	YES (3/4")	YES (3/4")	YES (3/4")	YES (3/4")	-	-
Resistanse		YES (OPT.)	YES (OPT.)	YES (OPT.)	YES (OPT.)	YES (OPT.)	YES (OPT.)	YES (OPT.)	YES (OPT.)
Length of Resistanse	mm	1160	1160	1160	430	430	430	430	430
Installation of Resistanse		ON TOP	ON TOP	ON TOP	SIDE	SIDE	SIDE	BOTTOM	BOTTOM
Solar Coil Input/Output	in	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	-	-
Solar Coil Cross Section	in	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	-	-
Solar Coil Surface	m^2	1.2	2.2	2.6	1.5	1.5	2.1	-	-
HP Coil Input/Output	in	1 1/2"	1 1/2"	1 1/2"	1"	1"	1"	-	-
HP Coil Cross Section	in	1/ 1/4"	1/ 1/4"	1/ 1/4"	1"	1"	1"	-	-
HP Coil Surface	m^2	2.4	4.0	5.0	3.2	4.0	5.2	-	-
Input/Output	in	-	-	-	-	-	-	1 1/4"	1 1/4"
Input/Output Cross Section	in	-	-	-	-	-	-	1 1/4"	1 1/4"
Type of Insulation		POL. FOAM	POL. FOAM	POL. FOAM	JACKET	JACKET	JACKET	POL. FOAM	POL. FOAM
Insulation Density	kg/m^3	52	52	52	17.3	17.3	17.3	40	40
Insulation Thickness	mm	55	55	55	100	100	100	30	30

* For external storage: HPC 1 & 2 with external cooling of pre-painted steel, the HPC max & solmax & mini with hard polyurethane foam and inox AISI 304.

AIR TREATMENT

A solution designed for optimized performance

An important aspect of any HVAC system is the correct supply of treated freash air to the building occuponts, improve indoor air quality (IAQ) levels.
Carrier offers a vast range of standard and customised air handling solutions to ensure the best match to the requirements.
Carrier also proposes a range of hybrid terminal cassette, cabines, concealed, ducted to match any application requirements and installation criteria: in the room, in the ceiling, above a false ceiling and any more.

RESIDENTIAL APPLICATIONS

Heat pump systems are often considered as the most suitable solution, offering both air conditioning and heating. At European level, permanent research for economic and ecological comfort has already resulted in new hydronic solutions with under-floor heating and cooling.
In the most demanding applications fan coils complete the system to offer a true air-conditioning solution.
Today the most frequent solutions are:

- floor-mounted solutions for individual houses –easy to install in refurbishment projects, using existing central heating pipes. Enhanced comfort without a lot of work.
- ductable solutions for apartments, utilising false ceilings in the entrance hall.
- high-wall solutions, using the space above doors that is otherwise lost.

The ductable unit may well become the solution of the future, if the building concept takes the application limits of this solution into consideration.

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LODGING (HOTELS, HOSPITALS)

In hotels, customer comfort is increasingly important and air-conditioning is essential.
At the same time construction cost must be minimized to offer customers a favourable quality/price ratio.
The trend is towards modularity of the rooms, as well as the air-conditioning system installed.
The most frequent choices for this approach:

- ductable solutions, using false ceilings in entrance halls and room corridors for new buildings.
- floor-mounted solutions for refurbishment projects.

For either of these two systems, areas such as large open spaces, dining rooms, receptions and conference halls that have other requirements, often use the cassette solution.

The choice depends on many different criteria, and therefore Carrier has a variety of products in order to choose the best fan coil solution for your application.

Office

Load variation adaptability

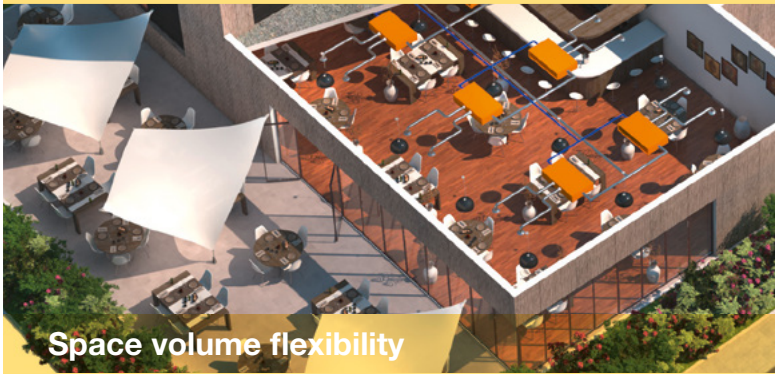
Hotel

Low noise features (night mode)

Hospital

Air quality

Shops and restaurants



Space volume flexibility

IDROFAN

Elegance, Performance and Comfort

The 42N_S and 42N_E product ranges combine aesthetic and attractive design with versatility to satisfy any application need, from large office buildings or hotels to shops and residential applications.

Variable-speed LEC motors reduce the fan coil unit power consumption by 50% to 70%. This option meets the building energy regulation objectives. LEC motors include autoadaptive control of the air flow from 0 to 100% to match individual comfort levels in both cooling and heating mode.

Features

The range includes eleven sizes, with air flows from 35 to 422 l/s (126 to 1520 m3/h).

The Idrofan offers an ultra-lownoise option for applications where a low noise level is the most important selection parameter.

The Idrofan is available with two types of fans, a tangential fan for the smallest sizes and a centrifugal fan for all other sizes.

The 42N_S is available with a new-generation three- or five-speed AC motor.

The 42N_E is available with a variable speed low energy consumption EC motor.

The flexibility of the plastic-moulded unit drain pan allows the same unit to be installed in a vertical or horizontal position without the need for a dedicated accessory.

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PHYSICAL & ELECTRICAL DATA

42N_ with AC motors		S15					S20					S26			S30					S42			S45				
Fan speed		R1	R2	R3	R4	R5	R1	R2	R3	R4	R5	R1	R2	R3	R1	R2	R3	R4	R5	R1	R2	R3	R1	R2	R3	R4	R5
Fan type		One, tangential					One, centrifugal					One, centrifugal			Two, centrifugal					Two, centrifugal			Two, centrifugal				
Air Flow	l/s	96	82	69	55	34	126	106	91	79	59	189	148	93	205	181	152	126	97	267	221	147	332	275	224	184	146
	m³/h	345	296	247	198	123	453	382	327	283	214	681	534	334	739	651	547	454	349	960	795	530	1195	991	805	663	524
Cooling mode*																											
Total cooling capacity	kW	1,20	1,09	0,97	0,83	0,58	2,13	2,01	1,78	1,54	1,15	3,52	2,98	2,09	3,68	3,34	2,91	2,45	1,92	4,44	3,93	3,00	5,32	4,76	3,94	3,25	2,58
Sensible cooling capacity	kW	1,10	1,01	0,89	0,74	0,50	1,77	1,62	1,42	1,23	0,93	2,84	2,35	1,60	3,04	2,73	2,35	1,97	1,40	3,64	3,17	2,33	4,58	4,00	3,30	2,73	2,10
Heating mode**																											
Heating capacity	kW	1,87	1,74	1,48	1,29	0,88	3,01	2,72	2,36	2,05	1,59	4,28	3,68	2,56	4,77	4,33	3,78	3,25	2,62	6,40	5,57	4,07	8,04	7,00	5,84	4,90	3,96
Sound levels																											
Sound power level	dB(A)	52	47	43	37	29	52	46	43	37	32	61	54	44	56	51	47	42	36	62	57	47	62	57	55	47	41
Sound pressure level***	dB(A)	43	38	34	28	20	43	37	34	28	23	52	45	35	47	42	38	33	27	53	48	38	53	48	46	38	32
NR Value		39	34	29	23	16	36	32	29	22	15	47	40	31	41	37	33	28	22	48	43	34	48	43	41	34	28

* Eurovent conditions: Entering air temperature = 27°C db/19°C wb – entering/leaving water temperature = 7°C/12°C, high fan speed.
** Eurovent conditions: Entering air temperature = 20°C, entering water temperature = 50°C, same water flow rate as in cooling mode.
*** Based on a hypothetical acoustic attenuation for the room and the air distribution system of -9 dB(A).

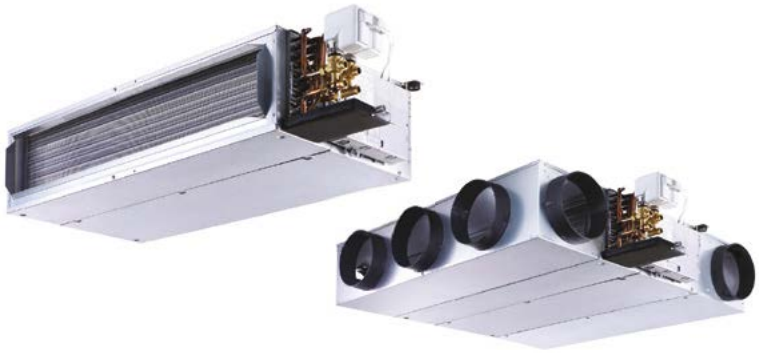
42N_ with LEC motors		E19					E29					E39					E49					E69				
Fan speed		100	80	60	40	20	100	80	60	40	20	100	80	60	40	20	100	80	60	40	20	100	80	60	40	20
Fan type		One, tangential					One, centrifugal					Two, centrifugal					Two, centrifugal					Two, centrifugal				
Air Flow	l/s	96	82	69	55	34	126	106	91	79	59	205	181	152	126	97	332	323	314	306	385	410	399	388	378	476
	m³/h	345	296	247	198	123	453	382	327	283	214	739	651	547	454	349	1195	991	805	663	524	1476	1314	1134	954	792
Cooling mode*																										
Total cooling capacity	kW	1,20	1,09	0,97	0,83	0,58	2,13	2,01	1,78	1,54	1,15	3,68	3,34	2,91	2,45	1,92	5,32	4,76	3,94	3,25	2,58	6,00	5,52	4,85	4,26	3,57
Sensible cooling capacity	kW	1,10	1,01	0,89	0,74	0,50	1,77	1,62	1,42	1,23	0,93	3,04	2,73	2,35	1,97	1,40	4,58	4,00	3,30	2,73	2,10	5,10	4,70	4,10	3,57	2,97
Heating mode**																										
Heating capacity	kW	1,87	1,74	1,48	1,29	0,88	3,01	2,72	2,36	2,05	1,59	4,77	4,33	3,78	3,25	2,62	8,04	7,00	5,84	4,90	3,96	9,30	8,56	7,55	6,67	5,65
Sound levels																										
Sound power level	dB(A)	52	47	43	37	29	52	46	43	37	32	56	51	47	42	36	62	57	55	47	41	68	65	62	57	53
Sound pressure level***	dB(A)	43	38	34	28	20	43	37	34	28	23	47	42	38	33	27	53	48	46	38	32	59	56	53	48	44
NR Value		39	34	29	23	16	36	32	29	22	15	41	37	33	28	22	48	43	41	34	28	54	51	48	43	40

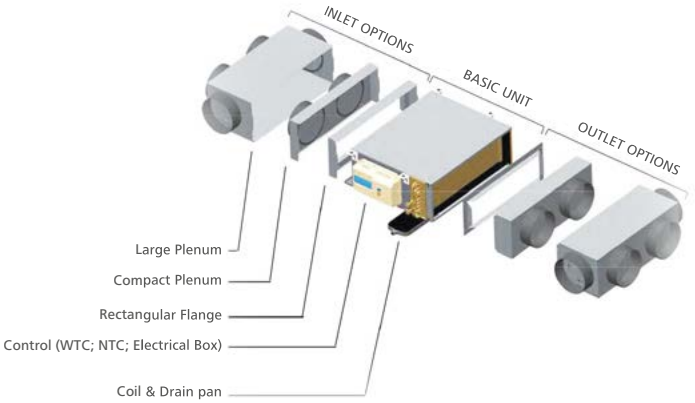
Based on Eurovent conditions:
* Cooling mode (2-pipe and 4-pipe coil): entering air temperature 27°C db/19°C wb, entering/leaving water temperature 7°C/12°C, high fan speed.
** Heating mode (2-pipe coil): entering air temperature 20°C, entering water temperature 50°C, high fan speed, same water flow rate as in cooling mode.
Heating mode (4-pipe coil): entering air temperature 20°C, entering water temperature 70°C, high fan speed, water temperature difference = 10 K.
*** Based on a hypothetical acoustic attenuation for the room and the air distribution system of -9 dB(A).

DIMENSIONS & WEIGHT

		Vertical units with cabinet				Horizontial units with cabinet				Horizontial units with cabinet			
Fan type		S15	S20-26	S30-42	S45	S15	S20-26	S30-42	S45	S15	S20-26	S30-42	S45
		E19	E29	E39	E49-69	E19	E29	E39	E49-69	E19	E29	E39	E49-69
Length	mm	830	1030	1230	1430	830	1030	1230	1430	606	806	1006	1206
Width	mm	220	220	220	220	557	557	557	557	220	220	220	220
Height	mm	657	657	657	657	220	220	220	220	640	640	640	640
Weight	kg	17	19	22	35	17	19	22	35	13	15	16	28

IDROFAN





Elegance, Performance and Comfort

The Carrier 42NL/NH are available in different sizes with 2-pipe, 2-pipe plus electric heater or 4-pipe coils, with an air flow range from 100 to 2300 m^3/h, a total nominal cooling capacity range from 0.6 kW to 12.0 kW and a nominal heating capacity range from 0.8 kW to 17.0 kW.

Reliable and economical for light commercial and office applications.

Features

Compact ducted unit, designed for false ceiling installation.

Low height of 235 mm (sizes 2/3/4/5) and 285 mm (sizes 6/7).

Extremely quiet operation.

Modular Horizontal ducted unit.

Low energy consumption.

Efficient indoor air quility.

Improved comfort

Carrier
United Technologies
turn to the experts

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

PHYSICAL & ELECTRICAL DATA

42NL		225						235						229				239			
Fan speed		R6	R5	R4	R3	R2	R1	R6	R5	R4	R3	R2	R1	2V	4V	6V	10V	2V	5V	7V	10V
Motor		AC						AC						LEC				LEC			
(Eurovent certification speeds)		(L)	(M)	(H)			(Max)	(L)	(M)	(H)			(Max)	(L)	(M)	(H)	(Max)	(L)	(M)	(H)	(Max)
Air flow	l/s	59	69	96	109	125	138	59	69	96	109	125	138	43	58	73	102	43	65	81	102
	m³/h	214	248	346	393	449	497	214	248	346	393	449	497	153	210	261	368	153	234	292	368
Cooling mode, two pipes*																					
Total cooling capacity	kW	1.20	1.36	1.77	1.93	2.1	2.22	1.39	1.58	2.09	2.31	2.53	2.71	0.89	1.18	1.42	1.85	1.02	1.50	1.82	2.19
Sensible cooling capacity	kW	0.96	1.10	1.45	1.60	1.76	1.88	1.06	1.22	1.64	1.82	2.03	2.19	0.71	0.95	1.15	1.52	0.77	1.15	1.41	1.73
Heating mode,two pipes**																					
Heating capacity	kW	1.69	1.92	2.51	2.76	3.03	3.23	1.86	2.13	2.85	3.16	3.51	3.78	1.25	1.66	2.01	2.64	1.36	2.02	2.46	3.00
Sound levels																					
Sound power level (global)	dB(A)	38	41	48	51	54	57	38	41	48	51	54	57	32	37	39	48	32	38	41	48
Electrical data, motor																					
Power input	W	28	31	45	54	65	80	28	31	45	54	65	80	3	5	7	13	3	5	9	13
Current drawn	A	0.14	0.17	0.20	0.23	0.28	0.35	0.14	0.17	0.20	0.23	0.28	0.35	0.05	0.06	0.08	0.14	0.05	0.06	0.10	0.14

42NL		325						335						329				339			
Fan speed		R6	R5	R4	R3	R2	R1	R6	R5	R4	R3	R2	R1	2V	4V	6V	10V	2V	4V	6V	10V
Motor		AC						AC						LEC				LEC			
(Eurovent certification speeds)		(L)	(M)	(H)			(Max)	(L)	(M)	(H)			(Max)	(L)	(M)	(H)	(Max)	(L)	(M)	(H)	(Max)
Air flow	l/s	84	94	124	144	154	168	84	94	124	144	154	168	55	88	120	165	55	88	120	165
	m³/h	302	338	447	517	555	606	302	338	447	517	555	606	196	318	431	594	198	318	431	594
Cooling mode, two pipes*																					
Total cooling capacity	kW	1.47	1.60	1.97	2.19	2.29	2.43	1.80	1.99	2.54	2.88	3.04	3.26	1.06	1.53	1.92	2.40	1.22	1.89	2.46	3.22
Sensible cooling capacity	kW	1.25	1.37	1.71	1.92	2.03	2.16	1.42	1.58	2.04	2.32	2.47	2.66	0.88	1.31	1.67	2.13	0.96	1.50	1.97	2.62
Heating mode,two pipes**																					
Heating capacity	kW	2.25	2.46	3.04	3.36	3.51	3.71	2.60	2.89	3.68	4.14	4.37	4.67	1.58	2.35	2.95	3.67	1.76	2.73	3.56	4.61
Sound levels																					
Sound power level (global)	dB(A)	43	46	54	57	59	61	43	46	54	57	59	61	37	46	53	61	37	46	53	61
Electrical data, motor																					
Power input	W	38	45	62	74	86	99	38	45	62	74	86	99	4	10	20	40	4	10	20	40
Current drawn	A	0.16	0.20	0.27	0.32	0.37	0.44	0.16	0.20	0.27	0.32	0.37	0.44	0.06	0.1	0.17	0.39	0.06	0.10	0.17	0.39

42NL		425						435						429						439					
Fan speed		R6	R5	R4	R3	R2	R1	R6	R5	R4	R3	R2	R1	2V	3.5V	4V	6V	8V	10V	2V	3.5V	4V	6V	8V	10V
Motor		AC						AC						LEC						LEC					
(Eurovent certification speeds)		(L)	(M)	(H)			(Max)	(L)	(M)	(H)			(Max)	(L)	(M)	(H)			(Max)	(L)	(M)	(H)			(Max)
Air flow	l/s	129	149	209	234	267	301	129	149	209	234	267	301	67	110	123	169	206	226	67	111	123	169	206	226
	m³/h	464	537	751	842	960	1085	464	537	751	842	960	1085	240	397	444	610	743	814	240	398	444	610	743	814
Cooling mode, two pipes*																									
Total cooling capacity	kW	2.43	2.75	3.54	3.83	4.14	4.43	2.76	3.20	4.36	4.79	5.29	5.76	1.34	2.12	2.34	3.04	3.52	3.74	1.37	2.37	2.65	3.62	4.32	4.66
Sensible cooling capacity	kW	1.99	2.27	2.98	3.25	3.57	3.86	2.18	2.52	3.46	3.83	4.27	4.70	1.09	1.73	1.91	2.52	2.96	3.17	1.10	1.87	2.08	2.86	3.43	3.71
Heating mode,two pipes**																									
Heating capacity	kW	3.44	3.95	5.30	5.81	6.38	6.91	3.96	4.58	6.34	7.06	7.93	8.80	1.76	3.05	3.29	4.43	5.26	5.65	2.00	3.51	3.78	5.20	6.28	6.84
Sound levels																									
Sound power level (global)	dB(A)	45	48	55	58	60	63	45	48	55	58	60	63	38	49	52	60	65	67	38	49	52	60	65	67
Electrical data, motor																									
Power input	W	57	69	98	113	129	157	57	69	98	113	129	157	6	15	18	42	78	99	6	15	18	42	78	99
Current drawn	A	0.25	0.30	0.43	0.49	0.57	0.69	0.25	0.30	0.43	0.49	0.57	0.69	0.07	0.15	0.18	0.38	0.65	0.80	0.07	0.15	0.18	0.38	0.65	0.80

Fan speed: L = Low, M = Medium, H = High

* Eurovent condition Entering air temperature = 27°C db/47% rh - entering water temperature = 7°C, water temperature difference = 5K

** Eurovent condition Entering air temperature = 20°C, entering water temperature = 50°C, same water flow rate as in cooling

PHYSICAL & ELECTRICAL DATA

42NL		525						535					
Fan speed		R6	R5	R4	R3	R2	R1	R6	R5	R4	R3	R2	R1
Motor		AC						AC					
(Eurovent certification speeds)		(L)	(M)	(H)			(Max)	(L)		(M)	(H)		(Max)
Air flow	l/s	150	170	233	275	313	359	150	170	233	275	313	359
	m^3/h	540	612	840	991	1127	1291	540	612	840	991	1127	1291
Cooling mode, two pipes*													
Total cooling capacity	kW	2.76	3.05	3.89	4.36	4.75	5.18	3.21	3.62	4.79	5.45	5.96	6.49
Sensible cooling capacity	kW	2.28	2.53	3.28	3.72	4.10	4.52	2.53	2.86	3.82	4.39	4.86	5.37
Heating mode,two pipes**													
Heating capacity	kW	4.01	4.48	5.84	6.6	7.19	7.80	4.6	5.21	7.01	8.02	8.81	9.61
Sound levels													
Sound power level (global)	dB(A)	42	46	53	57	59	62	42	46	53	57	59	62
Electrical data, motor													
Power input	W	58	67	99	118	137	170	58	67	99	118	137	170
Current drawn	A	0.26	0.30	0.43	0.52	0.60	0.74	0.26	0.30	0.43	0.52	0.60	0.74

42NL		529						539					
Fan speed		2V	4V	5V	6V	8V	10V	2V	4V	5.5V	6V	8V	10V
Motor		LEC						LEC					
(Eurovent certification speeds)		(L)		(M)	(H)		(Max)	(L)		(M)	(H)		(Max)
Air flow	l/s	82	141	172	188	231	255	82	141	180	188	231	255
	m^3/h	295	508	618	675	831	918	295	508	646.5	675	831	918
Cooling mode, two pipes*													
Total cooling capacity	kW	1.66	2.62	3.07	3.29	3.85	4.13	1.71	3.02	3.81	3.97	4.75	5.14
Sensible cooling capacity	kW	1.34	2.16	2.55	2.75	3.25	3.51	1.37	2.38	3.01	3.14	3.78	4.12
Heating mode,two pipes**													
Heating capacity	kW	2.24	3.79	4.52	4.88	5.79	6.25	2.32	4.31	5.5	5.74	6.94	7.55
Sound levels													
Sound power level (global)	dB(A)	32	43	47	51	55	58	32	43	49	51	55	58
Electrical data, motor													
Power input	W	4	11	18	24	43	58	4	11	21	24	43	58
Current drawn	A	0.04	0.09	0.13	0.17	0.28	0.39	0.04	0.09	0.15	0.17	0.28	0.39

Fan speed: L = Low, M = Medium, H = High

* Eurovent condition Entering air temperature = 27°C db/47% rh - entering water temperature = 7°C, water temperature difference = 5K

** Eurovent condition Entering air temperature = 20°C, entering water temperature = 50°C, same water flow rate as in cooling

PHYSICAL & ELECTRICAL DATA

42NH		225			235			229				239				279			
Fan speed		R5	R2	R1	R5	R2	R1	2V	7V	8V	10V	2V	7V	8V	10V	2V	7V	8V	10V
Motor		AC			AC			LEC				LEC				LEC			
(Eurovent certification speeds)		(L)	(M)	(H)	(L)	(M)	(H)	(L)	(M)	(H)	(Max)	(L)	(M)	(H)	(Max)	(L)	(M)	(H)	(Max)
Air flow	l/s	31	63	76	31	63	76	26	64	70	81	26	64	70	81	33	85	97	124
	m³/h	111	228	272	111	228	272	95	229	253	292	95	229	253	292	118	305	349	446
Cooling mode, two pipes*																			
Total cooling capacity	kW	0.66	1.27	1.47	0.75	1.47	1.71	0.58	1.28	1.39	1.56	0.65	1.48	1.61	1.82	0.80	1.89	2.11	2.52
Sensible cooling capacity	kW	0.52	1.02	1.19	0.57	1.13	1.32	0.45	1.02	1.12	1.26	0.49	1.13	1.24	1.41	0.60	1.47	1.65	2.02
Heating mode,two pipes**																			
Heating capacity	kW	0.93	1.78	2.07	1.00	1.97	2.31	0.80	1.79	1.95	2.20	0.87	1.98	2.17	2.46	1.06	2.56	2.87	3.49
Sound levels																			
Sound power level (return and radiated)	dB(A)	33	45	48	33	45	48	36	49	52	56	36	49	52	56	32	52	55	61
Sound power level (supply!)	dB(A)	31	47	50	31	47	50	37	51	53	58	37	51	53	58	32	55	58	64
Electrical data, motor																			
Power input	W	13	39	44	13	39	44	3	18	22	33	3	18	22	33	4	25	36	70
Current drawn	A	0.13	0.23	0.24	0.13	0.23	0.24	0.05	0.22	0.28	0.39	0.05	0.22	0.28	0.39	0.06	0.29	0.40	0.75

42NH		325					335					329				339			
Fan speed		R5	R4	R3	R2	R1	R5	R4	R3	R2	R1	2V	4.3V	6V	10V	2V	4.3V	6V	10V
Motor		AC					AC					LEC				LEC			
(Eurovent certification speeds)			(L)	(M)	(H)	(Max)		(L)	(M)	(H)	(Max)	(L)	(M)	(H)	(Max)	(L)	(M)	(H)	(Max)
Air flow	l/s	55	79	102	131	160	55	79	102	131	160	69	123	154	198	68	121	153	197
	m³/h	197	284	366	471	577	197	284	366	471	577	247	443	556	714	245	437	552	709
Cooling mode, two pipes*																			
Total cooling capacity	kW	1.05	1.40	1.70	2.04	2.35	1.22	1.70	2.14	2.66	3.14	1.26	1.96	2.30	2.70	1.49	2.50	3.03	3.68
Sensible cooling capacity	kW	0.87	1.19	1.46	1.78	2.09	0.95	1.34	1.70	2.14	2.56	1.06	1.70	2.03	2.44	1.17	2.00	2.46	3.03
Heating mode,two pipes**																			
Heating capacity	kW	1.57	2.14	2.62	3.15	3.61	1.75	2.46	3.1	3.84	4.51	1.91	3.1	3.52	4.09	2.15	3.69	4.36	5.21
Sound levels																			
Sound power level (return and radiated)	dB(A)	42	45	49	55	60	42	45	49	55	60	43	57	61	65	43	57	61	65
Sound power level (supply!)	dB(A)	46	48	54	60	66	46	48	54	60	66	44	59	65	70	44	59	65	70
Electrical data, motor																			
Power input	W	109	126	146	168	190	109	126	146	168	190	10	46	89	172	10	46	89	172
Current drawn	A	0.50	0.57	0.65	0.75	0.88	0.50	0.57	0.65	0.75	0.88	0.11	0.57	0.79	1.35	0.11	0.57	0.79	1.35

42NH		425					435					429					439				
Fan speed		R5	R4	R3	R2	R1	R5	R4	R3	R2	R1	2V	4V	6V	7V	10V	2V	4V	6V	7V	10V
Motor		AC					AC					LEC					LEC				
(Eurovent certification speeds)		(L)	(M)	(H)		(Max)	(L)	(M)	(H)		(Max)	(L)	(M)	(H)	(Max)		(L)	(M)	(H)	(Max)	
Air flow	l/s	104	149	181	196	205	104	149	181	196	205	81	148	197	218	231	81	148	197	218	231
	m³/h	375	537	650	706	739	375	537	650	706	739	293	533	709	786	832	293	533	709	786	832
Cooling mode, two pipes*																					
Total cooling capacity	kW	2.02	2.75	3.19	3.39	350	2.21	3.20	3.84	4.13	4.30	1.61	2.73	3.40	3.65	3.79	1.69	3.17	2.15	4.53	4.74
Sensible cooling capacity	kW	1.65	2.26	2.66	2.84	2.94	1.76	2.52	3.03	3.27	3.41	1.31	2.25	2.85	3.09	3.22	1.36	2.50	3.28	3.60	3.78
Heating mode,two pipes**																					
Heating capacity	kW	2.79	3.95	4.69	5.04	5.23	3.19	4.58	5.53	5.98	6.25	2.17	3.92	5.05	5.50	5.75	2.47	4.55	6.01	6.62	6.97
Sound levels																					
Sound power level (return and radiated)	dB(A)	44	51	55	58	59	44	51	55	58	59	43	55	61	63	65	43	55	61	63	65
Sound power level (supply!)	dB(A)	47	54	58	60	61	47	54	58	60	61	44	57	65	67	70	44	57	65	67	70
Electrical data, motor																					
Power input	W	83	91	97	104	119	83	91	97	104	119	10.5	43	99	140	172	10.5	43	99	140	172
Current drawn	A	0.43	0.51	0.62	0.67	0.72	0.43	0.51	0.62	0.67	0.72	0.12	0.43	0.98	1.26	1.31	0.12	0.43	0.98	1.26	1.31

Fan speed: L = Low, M = Medium, H = High

* Eurovent condition Entering air temperature = 27°C db/47% rh - entering water temperature = 7°C, water temperature difference = 5K

** Eurovent condition Entering air temperature = 20°C, entering water temperature = 50°C, same water flow rate as in cooling

PHYSICAL & ELECTRICAL DATA

42NH		525					535				
Fan speed		R5	R4	R3	R2	R1	R5	R4	R3	R2	R1
Motor		AC					AC				
(Eurovent certification speeds)		(L)	(M)	(H)		(Max)	(L)	(M)	(H)		(Max)
Air flow	l/s	213	240	257	268	279	213	240	257	268	279
	m^3/h	767	863	924	964	1004	767	863	924	964	1004
Cooling mode, two pipes*											
Total cooling capacity	kW	3.63	3.96	4.16	4.28	4.40	4.44	4.90	5.17	5.34	5.50
Sensible cooling capacity	kW	3.05	3.35	3.53	3.64	3.76	3.52	3.91	4.15	4.29	4.44
Heating mode,two pipes**											
Heating capacity	kW	5.43	5.96	6.28	6.47	6.66	6.46	7.17	7.60	7.86	8.11
Sound levels											
Sound power level (return and radiated)	dB(A)	53	55	57	58	58	53	55	57	58	58
Sound power level (global)	dB(A)	55	57	59	60	61	55	57	59	60	61
Electrical data, motor											
Power input	W	105	113	117	124	134	105	113	117	124	134
Current drawn	A	0.59	0.64	0.67	0.71	0.76	0.59	0.64	0.67	0.71	0.76

42NH		529					539				
Fan speed		2V	5V	6V	8V	10V	2V	5V	6V	8V	10V
Motor		LEC					LEC				
(Eurovent certification speeds)		(L)	(M)	(H)		(Max)	(L)	(M)	(H)		(Max)
Air flow	l/s	96	213	244	307	347	96	213	244	307	347
	m^3/h	346	765	878	1105	1249	346	765	878	1105	1249
Cooling mode, two pipes*											
Total cooling capacity	kW	1.90	3.63	4.01	4.69	5.08	2.03	4.43	4.97	5.88	6.35
Sensible cooling capacity	kW	1.55	3.04	3.39	4.04	4.42	1.62	3.52	3.97	4.79	5.24
Heating mode,two pipes**											
Heating capacity	kW	2.62	5.42	6.05	7.10	7.65	2.81	6.45	7.28	8.70	9.42
Sound levels											
Sound power level (return and radiated)	dB(A)	35	53	58	63	67	35	53	58	63	67
Sound power level (global)	dB(A)	36	57	61	66	70	36	57	61	66	70
Electrical data, motor											
Power input	W	9	52	78	146	212	9	52	78	146	212
Current drawn	A	0.12	0.67	0.95	1.58	1.88	0.12	0.67	0.95	1.58	1.88

Fan speed: L = Low, M = Medium, H = High

* Eurovent condition Entering air temperature = 27°C db/47% rh - entering water temperature = 7°C, water temperature difference = 5K

** Eurovent condition Entering air temperature = 20°C, entering water temperature = 50°C, same water flow rate as in cooling

PHYSICAL & ELECTRICAL DATA

42NH		635					645					639				649			
Fan speed		R5	R4	R3	R2	R1	R5	R4	R3	R2	R1	2V	6V	7V	10V	2V	7V	8V	10V
Motor		AC					AC					LEC				LEC			
(Eurovent certification speeds)			(L)	(M)	(H)	(Max)		(L)	(M)	(H)	(Max)	(L)	(M)	(H)	(Max)	(L)	(M)	(H)	(Max)
Air flow	l/s	200	298	397	460	499	200	298	397	460	499	102	269	303	389	111	327	364	425
	m³/h	720	1072	1428	1657	1796	720	1072	1428	1657	1796	368	967	1089	1400	399	1176	1310	1531
Cooling mode, two pipes*																			
Total cooling capacity	kW	4.22	6.04	7.55	8.33	8.77	4.77	7.03	8.86	9.79	10.28	2.18	5.52	6.11	7.45	2.45	7.62	8.31	9.29
Sensible cooling capacity	kW	3.36	4.85	6.18	6.92	7.36	3.63	5.37	6.90	7.75	8.23	1.74	4.42	4.91	6.08	1.93	5.84	6.42	7.29
Heating mode,two pipes**																			
Heating capacity	kW	6.09	8.83	11.29	12.66	13.4	6.57	9.69	12.45	13.95	14.75	3.14	8.04	8.95	11.11	3.47	10.55	11.59	13.15
Sound levels																			
Sound power level (return and radiated)	dB(A)	50	56	58	61	62	50	56	58	61	62	39	62	64	70	39	64	67	70
Sound power level (supplyl)	dB(A)	50	59	62	65	66	50	59	62	65	66	45	58	61	68	45	61	64	68
Electrical data, motor																			
Power input	W	185	217	225	242	286	185	217	225	242	286	9	76	106	222	9	111	153	233
Current drawn	A	0.96	1.11	1.28	1.38	1.55	0.96	1.11	1.28	1.38	1.55	0.09	0.71	1.02	2.01	0.09	0.71	1.02	2.01

42NH		735					745					739				749			
Fan speed		R5	R4	R3	R2	R1	R5	R4	R3	R2	R1	2V	7V	8V	10V	2V	7V	8V	10V
Motor		AC					AC					LEC				LEC			
(Eurovent certification speeds)				(L)	(M)	(H)			(L)	(M)	(H)	(L)	(M)	(H)	(Max)	(L)	(M)	(H)	(Max)
Air flow	l/s	148	218	374	533	600	148	218	374	533	600	147	441	477	529	147	441	477	529
	m³/h	534	785	1246	1918	2161	534	785	1346	1918	2161	530	1586	1717	1906	530	1586	1717	1906
Cooling mode, two pipes*																			
Total cooling capacity	kW	3.37	4.90	7.92	10.3	11.14	3.61	5.33	8.84	11.68	12.65	3.34	9.00	9.54	10.26	3.58	10.10	10.76	11.61
Sensible cooling capacity	kW	2.6	3.79	6.22	8.31	9.09	2.73	4.01	6.71	9.09	9.97	2.59	7.14	7.62	8.27	2.71	7.75	8.31	9.04
Heating mode,two pipes**																			
Heating capacity	kW	4.52	6.48	10.68	14.63	16.15	4.59	6.72	11.38	15.82	17.52	4.48	12.38	13.29	14.54	4.56	13.29	14.32	15.72
Sound levels																			
Sound power level (return and radiated)	dB(A)	41	48	57	63	64	41	48	57	63	64	46	60	62	64	46	60	62	64
Sound power level (supplyl)	dB(A)	42	48	58	66	68	42	48	58	66	68	45	61	63	66	45	61	63	66
Electrical data, motor																			
Power input	W	174	227	282	316	321	174	227	282	316	321	10	137	177	240	10	137	177	240
Current drawn	A	0.84	1.08	1.40	1.74	1.86	0.84	1.08	1.40	1.74	1.86	0.11	1.11	1.38	1.85	0.11	1.11	1.38	1.85

Fan speed: L = Low, M = Medium, H = High

* Eurovent condition Entering air temperature = 27°C db/47% rh - entering water temperature = 7°C, water temperature difference = 5K

** Eurovent condition Entering air temperature = 20°C, entering water temperature = 50°C, same water flow rate as in cooling

IDROFAN

Air Treatment Solution

The Idrofan 42GW offers a wide range of options dedicated to performance and to providing solutions finely adapted to your needs. Energy consumption is reduced by 50 to 70 percent through variable speed LEC motors which continuously adjust the power providing an airflow adapted to the space. The switch to lower power modes results in a reduction in energy consumption.

Features

The Carrier hydronic cassette is available in six sizes suitable for a wide range of applications, with air flows from 100 to 400 l/s. The Idrofan cassette offers an ultra-low-noise solution for applications where a low noise level is the most important selection parameter.

The low-profile 42GW is light and easy to install. The small chassis fits neatly with standard ceiling tiles and is simple to install wherever it is needed.

Four-way air distribution for individual comfort or localised control.

Integrated, factory-mounted cooling and heating coils, two-pipe or two-pipe with electric heater,and four-pipe applications.

The elegant air inlet grille blends aesthetically with any room decor.

The 42GW_AC is available with a new-generation threespeed AC motor. The 42GW_LEC is available with avariable-speed Low Energy Consumption EC motor.

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PHYSICAL & ELECTRICAL DATA of AC motor units

42GW		200			300			400			500			600			701		
Coil type		2 pipes			2 pipes			2 pipes			2 pipes			2 pipes			2 pipes		
Fan speed		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Air Flow	l/s	183	125	100	204	140	89	249	173	134	272	199	147	321	229	139	402	299	166
Cooling mode*																			
Total cooling capacity	kW	2,39	1,78	1,55	4,02	2,89	1,88	4,74	3,52	2,80	6,10	4,45	3,36	7,22	5,49	3,71	8,67	6,53	4,06
Sensible cooling capacity	kW	2,01	1,50	1,30	3,07	2,19	1,42	3,67	2,70	2,10	4,50	3,37	2,53	5,46	4,09	2,69	6,40	4,90	2,99
Heating mode**																			
Heating capacity	kW	3,20	2,50	2,20	4,53	3,72	2,32	6,20	4,61	3,70	8,07	5,97	4,48	9,99	7,40	4,61	11,70	9,30	5,21
Sound power level	dB(A)	49	40	36	53	44	35	57	48	42	49	40	35	54	46	38	59	52	40
Sound pressure level***	dB(A)	40	31	27	44	35	26	48	39	33	40	31	26	45	37	29	50	43	31
NR level**		35	27	23	39	30	20	43	34	28	35	26	21	40	32	22	45	38	25
Power Input	W	58	35	25	58	34	17	99	58	38	66	41	28	88	61	34	125	92	44
Current Input	A	0,27	0,17	0,12	0,24	0,14	0,07	0,41	0,24	0,16	0,30	0,17	0,12	0,46	0,27	0,14	0,63	0,41	0,19

Based on Eurovent conditions:
Cooling mode (2 and 4-pipe coil): entering air temperature 27°C db/1 9°C wb, entering/leaving water temperature 7/12°C, high fan speed.
Heating mode (2-pipe coil): entering air temperature 20°C, entering water temperature 50°C, high fan speed, water flow rate as cooling mode.
* Fan speeds: 1 = high, 2 = medium, 3 = low
** Sound pressure level and NR values are based on a hypothetical sound attenuation for the room of -9 dB(A).

PHYSICAL & ELECTRICAL DATA of LEC motor units

42GW		209			309			409			509			609			709		
Coil type		2 pipes			2 pipes			2 pipes			2 pipes			2 pipes			2 pipes		
Fan speed		10	6	2	10	6	2	10	6	2	10	6	2	10	6	2	10	6	2
Air Flow	l/s	183	125	100	204	140	89	249	173	134	272	199	147	321	229	139	443	299	166
Cooling mode*																			
Total cooling capacity	kW	2,39	1,78	1,55	4,02	2,89	1,88	4,74	3,52	2,80	6,10	4,45	3,36	7,22	5,49	3,71	9,67	6,53	4,06
Sensible cooling capacity	kW	2,01	1,50	1,30	3,07	2,19	1,42	3,67	2,70	2,10	4,50	3,37	2,53	5,46	4,09	2,69	7,27	4,90	2,99
Heating mode**																			
Heating capacity	kW	3,20	2,50	2,20	4,53	3,72	2,32	6,20	4,61	3,70	8,07	5,97	4,48	9,99	7,40	4,61	12,99	9,30	5,21
Sound power level	dB(A)	49	40	36	53	44	35	57	48	42	49	40	35	54	46	38	61	52	40
Sound pressure level***	dB(A)	40	31	27	44	35	26	48	39	33	40	31	26	45	37	29	52	43	31
NR level**		35	27	23	39	30	20	43	34	28	35	26	21	40	32	22	47	38	25
Power Input	W	29	13	9	33	14	7	57	23	13	25	12	7	45	23	9	115	40	11
Current Input	A	0,19	0,10	0,08	0,27	0,13	0,08	0,46	0,20	0,12	0,23	0,12	0,08	0,40	0,22	0,10	0,89	0,35	0,12

Based on Eurovent conditions:
Cooling mode (2 and 4-pipe coil): entering air temperature 27°C db/1 9°C wb, entering/leaving water temperature 7/12°C, high fan speed.
Heating mode (2-pipe coil): entering air temperature 20°C, entering water temperature 50°C, high fan speed, water flow rate as cooling mode.
** Sound pressure level and NR values are based on a hypothetical sound attenuation for the room of -9 dB(A).

DIMENSIONS AND WEIGHTS

All Units		42GW 200/209	42GW 300/309	42GW 400/409	42GW 500/509	42GW 600/609	42GW 700/709
Dimensions (H x L x D)	mm	298 x 569/627 x 569	298 x 569/627 x 569	298 x 569/627 x 569	302 x 822/879 x 822	302 x 822/879 x 822	302 x 822/879 x 822
Grille dimensions (H x L x D)	mm	36 x 720 x 720	36 x 720 x 720	36 x 720 x 720	37 x 960 x 960	37 x 960 x 960	37 x 960 x 960
Weight unit/weight grille	kg	14.8/3	16.5/3	16.5/3	37/5	39.6/5	39.6/5

ONE-WAY COANDA EFFECT CASSETTE • 42KY

NEW

Air Treatment Solution

Energy performance, comfort and indoor air quality: Carrier's new 42KY cassette is the all-in-one solution to meet heating and cooling requirements for commercial buildings and provide optimum comfort for users.

The 42KY one-way cassette range includes 3 models that cover a flow rate of 250 to 770 m^3/h which meet the most stringent of noise level requirements. The 42KY is available as:

- 2 tube system, hot or cold operation.

- 2 tube + 2 wire system, cold + hot / cold + electrical operation. 4 tube system, cold and hot operation.

Features

Low energy consumption

Acoustic comfort

Responsiveness of the system and individual adjustment

Ease of maintenance

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EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

PHYSICAL DATA

42KY Unit performance / 2Tubes

42KY		10C			19C			20C		
Speed		HS	MS	LS	HS	MS	LS	HS	MS	LS
Motor		AC			LEC			AC		
Voltage	V	-	-	-	4.9	3.9	2.5	-	-	-
Input Power	W	45	41	34	17	8	5	45	41	34
Air Flow Rate	m³/h	440	375	230	440	305	230	420	355	215
Heating Capacity										
	W	2410	2180	1640	2420	1930	1650	3270	2860	1930
Pressure drop	kPa	9	8	5	9	6	5	16	13	7
Cooling Capacity										
Total	W	1740	1570	1220	1720	1380	1190	2640	2320	1610
Sensible	W	1590	1430	1060	1570	1230	1040	2070	1790	1180
Pressure drop	kPa	11	9	6	11	7	5	19	15	8
Lw	dB(A)	49	46	37	49	42	37	51	47	35
LP	dB(A)	37	34	25	37	30	25	39	35	23
NR		32	29	19	32	25	19	34	30	18

42KY		29C			30C			39C		
Speed		HS	MS	LS	HS	MS	LS	HS	MS	LS
Motor		LEC			AC			LEC		
Voltage	V	4.9	4.2	2.5	-	-	-	6.7	5.3	3
Input Power	W	17	12	5	77	56	40	38	21	6
Air Flow Rate	m³/h	420	355	215	655	520	405	655	520	290
Heating Capacity										
	W	3290	2880	1960	5070	4090	3240	5100	4120	2500
Pressure drop	kPa	16	13	6	25	17	12	25	17	7
Cooling Capacity										
Total	W	2610	2290	1580	4420	3600	2880	4390	3560	2220
Sensible	W	2040	1770	1150	3340	2680	2110	3310	2650	1580
Pressure drop	kPa	18	15	7	30	20	13	29	20	9
Lw	dB(A)	51	47	35	58	51	45	58	51	40
LP	dB(A)	39	35	23	46	39	33	46	39	28
NR		34	30	18	40	34	27	40	34	21

EUROVENT conditions
Cooling mode: (2 tubes): Air inlet temperature: 27°C/19°CBH, Water inlet/outlet temperature: 7°C/12°C
Heating mode: (2 tubes): Air inlet Temperature: 20°C, water inlet temperature: 50°C, water flow rate identical to cold mode
The sound pressure levels and NR levels are based on hypothetical attenuation of the room of -12dB(A).

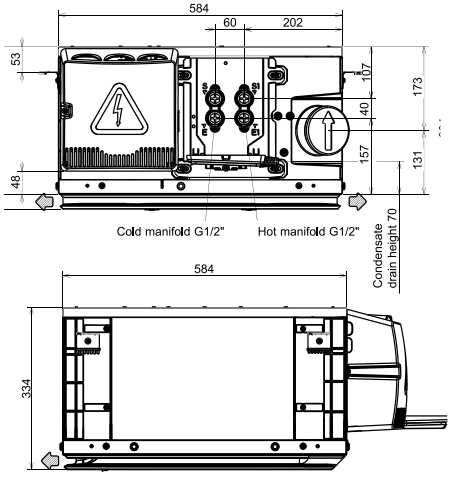
4Tubes

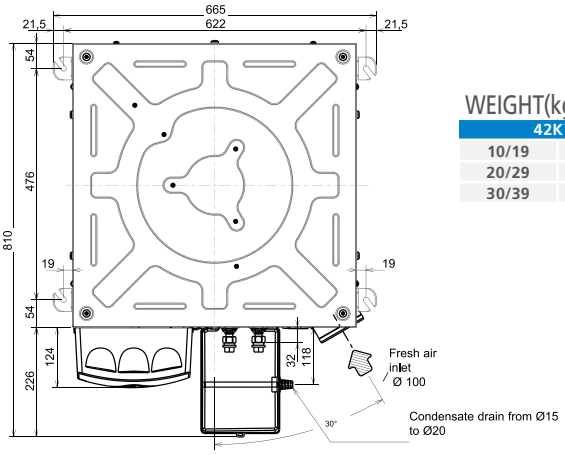
42KY		20D			29D			30D			39D		
Speed		HS	MS	LS	HS	MS	LS	HS	MS	LS	HS	MS	LS
Motor		AC			LEC			AC			LEC		
Voltage	V	-	-	-	4.9	4.2	2.5	-	-	-	5.3	4.6	3
Input Power	W	45	41	34	17	12	5	77	56	40	21	15	6
Air Flow Rate	m³/h	420	355	215	420	355	215	655	520	405	520	455	290
Heating Capacity													
	W	2820	2580	2020	2830	2600	2040	3460	3000	2600	2820	2610	2110
Pressure drop	kPa	21	18	12	21	18	12	28	22	17	25	22	15
Cooling Capacity													
Total	W	2090	1910	1450	2060	1880	1420	3790	3140	2570	2910	2620	1920
Sensible	W	1840	1620	1120	1810	1600	1090	3040	2470	1980	2280	2020	1410
Pressure drop	kPa	10	8	5	10	8	5	19	13	9	13	11	6
Lw	dB(A)	51	47	35	51	47	35	58	51	45	51	48	40
LP	dB(A)	39	35	23	39	35	23	46	39	33	39	36	28
NR		34	30	18	34	30	18	40	34	27	34	30	21

Electrical heater specifications - Input voltage 230V - 1 ph - 50Hz

42KY cassette		10/10	20/29	30/39
Electrical power	W	-	900	1200
Input amps	A	-	3.6	4.8

DIMENSIONS





WEIGHT(kg)

42KY		Diffuser	Total
10/19	15	3,5	18,5
20/29	16,5		20
30/39	18		21,5

COMPACT AIR HANDLING UNIT • 39CQ

NEW

Air Treatment Solution

The 39CQ air handling unit (AHU) is a modular ventilation unit, which can be configured to meet all your requirements whilst complying with current standards.

It is available in several versions: single-flow, aligned dual-flow, adjacent dual-flow.

There are three different installations in the range, so it can be adapted to meet your needs:

- horizontal ceiling-mounted version, accessed from underneath,
- horizontal floor-mounted version, accessed from the top,
- vertical wall-mounted version, accessed via the front.

It is available in three sizes to meet all your needs, able to handle air flows from 1000 to 6000 m^3/h.

At 400 mm thick, it is ultra compact and can be fitted into the tightest of spaces.

This range is particularly well-suited to tertiary buildings:

- administration, offices,
- education facilities, libraries, community centres,
- cafés, hotels, restaurants,
- shopping centres, nursing homes, healthcare facilities,
- collective housing.

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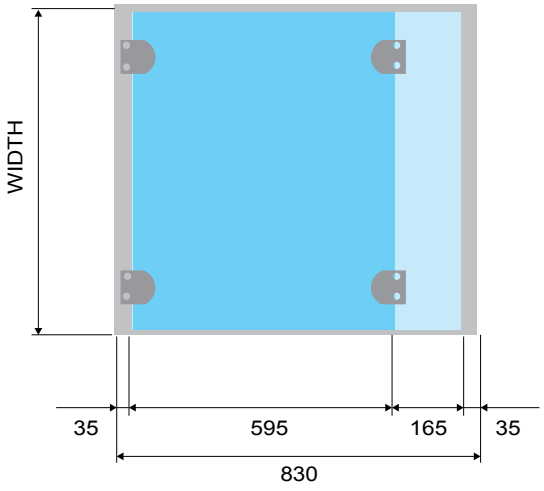
RANGE

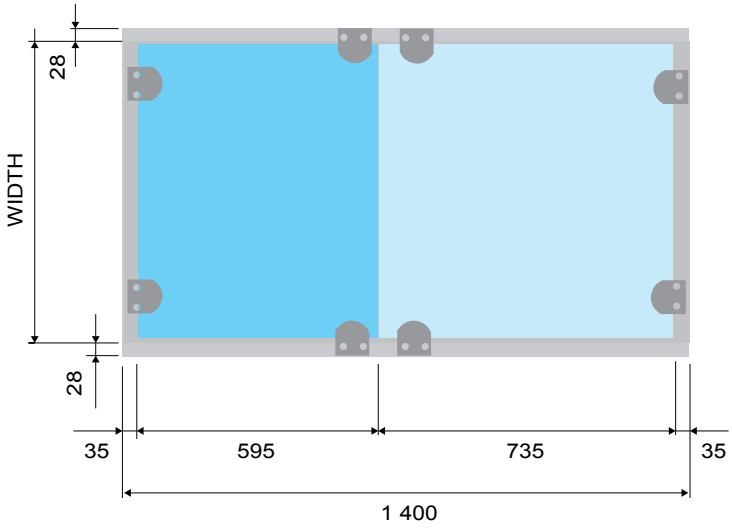
39CQ		025	040		060
Assembly		Ceiling-mounted (C), Floor-mounted (F), Vertical (V)			
Width/Height		750*400	1310*400		1880*400
Nominal air flow (m3/h) (Speed: 3.1 m/s across finned layer)		2000	4000		6000
"Asynchronous motor NPL technology"	Plug fan	1	1	2	2
	Electric motor	1	1	2	2
	Available power	0.55 kW - 4-pole/1.1 kW - 2-pole/1.4 kW - 2 pole			
	Number of inverters	1	1	1	1
"EC motor EBM technology"	Plug fan	1	1	2	2
	Electric motor	1	1	2	2
	Available power	1 kW			
Pleated filters		G4 / M5 / F7 HEE / F9 HEE			
Opacimetric filters (Short flexible pockets)		M6 / F7			
Opacimetric filters (Rigid pockets)		M6 / F7 / F8 / F9			
Hydraulic heating coil		1/2/3 rows	1/2/4 rows		1/2/4 rows
Hydraulic cooling coil		3/4/6 rows			
Direct expansion cooling oil		3/6 rows			
Electric heating coil		15 kW	24 kW		39 kW
Adjacent plate heat exchanger		Yes	Yes		No

SPACE REQUIREMENTS AND DIMENSIONS

DIMENSIONAL SPECIFICATIONS			
AHU size	25	40	60
External dimensions (in mm)	750 * 400	1310 * 400	1880 * 400
Casing length (in mm)	610 – 830 – 1100 – 1400: Four standardised lengths of casing, automatically adapted to the components and options selected		

610 mm module ➤ 1 x 540 mm door
830 mm module ➤ 1 x 595 mm door
1100 mm module ➤ 1 x 595 mm door + 1 x 435 mm door
1400 mm module ➤ 1 x 595 mm door + 1 x 735 mm door





10TE

NEW

Air Treatment Solution

10TE gasketed plate heat exchangers are particularly well-suited to exchanges between two fluids, and therefore to a wide range of applications:

Heating sub-stations

Heating of domestic water

Swimming pool heating

Buffer on heat pump

Recovery on corrosive waste

Geothermal energy

Oil refrigeration

Industrial processes

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RANGE

			10TE020+	10TE040+	10TE080+	10TE070+	10TE160+	10TE260+	10TE125+	10TE180+
Surface area		m^2	0.021	0.041	0.081	0.078	0.164	0.254	0.125	0.18
Maximum flow rate		m^3/h	19	19	19	63	63	63	80	83
Connection			DN 32	DN 32	DN 32	DN 50	DN 50	DN 50	DN 65	DN 65
Standard pressure (stainless)			6	6	6	6	6	6	10	10
Maximum pressure	Stainless steel		25	25	25	25	25	25	16	10
	254 SMO		10	10	10	16	16	16	16	-
	Titanium		10	10	10	16	16	16	16	10
Max. number of plates			75	75	101	151	251	251	151	151
Plate thickness	304 stainless steel		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	316L stainless steel		0.4/0.5/0.6	0.4/0.5/0.6	0.4/0.5/0.6	0.4/0.5/0.6	0.4/0.5/0.6	0.4/0.5/0.6	0.4/0.5/0.6	0.4/0.5
	254 SMO		0.6	0.6	0.6	0.6	0.6	0.6	0.6	-
	Titanium		0.5	0.5	0.5	0.5/0.6	0.5/0.6	0.5/0.6	0.5	0.5
Plate patterns			H	H	H	H/L	H/L	H/L	H/L	H/L
Gasket material (max. T°)	NBR (NITRYL (110°C)		YES	YES	YES	YES	YES	YES	YES	YES
	EPDM prx (160°C)		YES	YES	YES	YES	YES	YES	YES	YES
	VITON (200°C)		YES	YES	YES	YES	YES	YES	YES	-
Capacity between plates		l	0.063	0.103	0.181	0.217	0.383	0.555	0.366	0.50
Max. transfer area		m^2	1.6	3.1	8.2	11.6	40.8	63.3	19	27

RANGE

			10TE300+	10TE450+	10TE700+	10TE400+	10TE600+	10TE900+	10TE650+	10TE990+
Surface area		m^2	0.268	0.482	0.697	0.390	0.645	0.900	0.606	0.972
Maximum flow rate		m^3/h	240	240	240	380	380	380	800	730
Connection			DN 100	DN 100	DN 100	DN 150	DN 150	DN 150	DN 200	DN 200
Standard pressure (stainless)			10	10	10	10	10	10	10	10
Maximum pressure	Stainless steel		25	25	25	16	16	16	16	16
	254 SMO		16	16	16	16	16	16	10	-
	Titanium		16	16	16	16	16	-	10	10
Max. number of plates			401	401	401	551	551	701	551	551
Plate thickness	304 stainless steel		0.4/0.5/0.6	0.4/0.5/0.6	0.4/0.5/0.6	0.5/0.6	0.5/0.6	0.5/0.6	0.5/0.6	0.5/0.6
	316L stainless steel		0.5/0.6/0.7	0.5/0.6/0.7	0.5/0.6/0.7	0.5/0.6	0.5/0.6	0.5/0.6	0.5/0.6	0.5/0.6
	254 SMO		0.6	0.6	0.6	0.6*	0.6*	0.6*	0.6*	-
	Titanium		0.6	0.6	0.6	0.6*	0.6*	-	0.7*	0.6*
Plate patterns			H/L	H/L	H/L	H/L	H/L	H/L	H/L	H/L
Gasket material (max. T°)	NBR (NITRYL (110°C)		YES	YES	YES	YES	YES	YES	YES	YES
	EPDM prx (160°C)		YES	YES	YES	YES	YES	YES	YES	YES
	VITON (200°C)		YES	YES	YES	YES	YES	YES	YES	-
Capacity between plates		l	0.766	1.217	1.669	1.122	1.659	2.197	2.109	2.339
Max. transfer area		m^2	107.5	193	279.5	215	355	631	334	534

The 10TE range is built with plug-in gaskets and lateral circulation.

* Please consult us.

OPEN PLANT MANAGEMENT OR ADVANCED OPTIMIZATION?

CARRIER® PLANTCTRL™

BEACAUSE YOU SHOULD NOT HAVE TO CHOOSE

The Carrier PlantCTRL solutions works with most standard plant configurations and integrates into all major Building Automation Systems.

The solution brings you the benefits of increased plant room efficiency and improved energy performance.

- Improved reliability
- Single accountability
- Easy operation
- Operation savings
- Performance & compliance
- Easy set-up

WTC controllers

NEW

With Carrier's specific control algorithms, the Water Terminal Controller (WTC) combines best-in-class comfort solutions together with high energy efficiency management.

Designed for a variety of configurations and offered in a wide range of user interfaces, the WTC can fit every application and every need.

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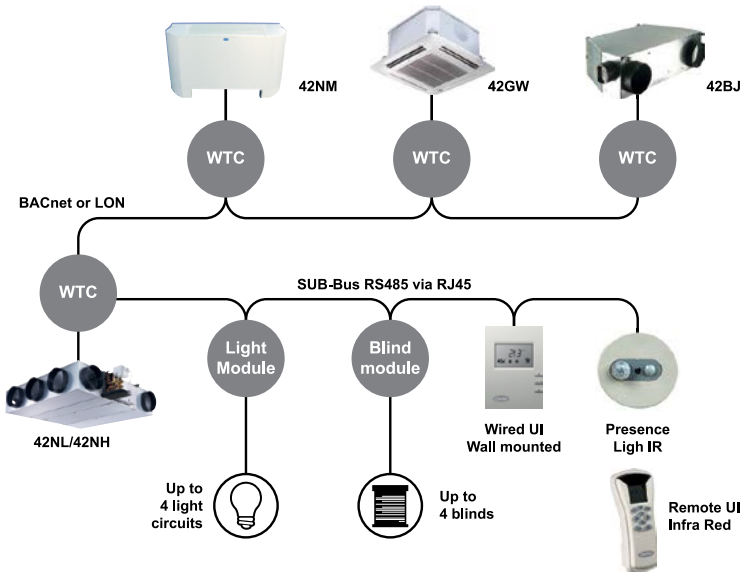
Control architecture

A variety of configurations for every application



Features

- High efficiency
- Variety of configurations
- Easy installation
- User friendly user interface

Advanced functions

- Low Energy Consumption (LEC) variable speed control
- Demand controller ventilation (DCV) & IAQ management
- Modulating hydronic control
- Lights and blind management modules

A range of user interfaces to meet all needs

	Room Control Interface			Infrared Remote Interface	
					
	WTC-RCI-S	**WTC-RCI-SF/ SQF**	**WTC-RCI-D/ DC/DM/DCM**	**WTC-IR**	**TC-IR-LB**
Temperature sensor	✓	✓	✓		
Setpoint offset		✓	✓	✓	✓
Fan speed	✓	✓	✓	✓	✓
With or without occupancy function		✓	✓	✓	✓
Operating mode		✓	✓	✓	✓
Light & blind control			✓		✓
Power supply from WTC	✓	✓	✓		
Quick connection	RJ45	RJ45	RJ45		
Local service tool			✓		
With or without motion sensor			✓		
LCS display			✓	✓	✓
Infrared receiver with status (LED & BUZZER)				✓	
Infrared receiver					✓

NOTES

NOTES

NOTES

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