


HYDRONIC RESIDENTIAL



Chillers, reversible heat pumps and modular units for small and medium applications.

Climaveneta presents the mini chiller range: cooling only and reversible units, air cooled and water cooled type, designed to provide customers with a top efficiency answer to any requirement of small and medium installations.



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BRAT2 0021÷0121

Air source chillers for outdoor installation 5,74-31,7 kW

BRAT2 is an outdoor unit equipped with axial fans and hermetic scroll compressors. Thanks to the Full Floating technology, the unit provides the perfect answer to residential or commercial market requirements: compactness, ease of installation and silent operation. The unit is available in different versions in order to satisfy a wide range of system requirements: standard or with integrated EC inverter pump, ErP2015 complied.



Control

Full Floating technology

The new generation electronic controller allows to manage the chiller by using the Full Floating technology, designed by Climaveneta for controlling the efficiency of the fans (floating fans), the circulating pump (floating flow) and the working temperature (floating set point).

This also allows to achieve all the following benefits: improvement of efficiency in both standard and extreme conditions, much lower operating noise in part load conditions, lower installation time, lower time for system set-up, broader operating limits, faster transient after defrosts.

Version

B Standard

Features

- Structure and base in hot-dip galvanised steel with epoxy powder paint finish.
- Hermetic scroll type compressors, equipped with the crankcase heater and thermal protection.
- Low pressure drop AISI 316 stainless steel plate heat exchangers, fitted with heating element to provide frost protection.
- Finned coils made with copper pipes and aluminium fins with large exchange surface area, tested for leaks with dried air at 30 bar.
- Coil protection grid for models 0011÷0061.
- Axial electric fans, external rotor, 6-pole electric motor fitted with thermal protection, housed in aerodynamic conveyor profile with safety grill.
- Continuous fan speed regulation with pressure switch.
- On board user interface, accessible from the outside through anti-tamper device.
- Phase sequence controller for models 0071÷0121.
- Differential pressure switch.
- Extensive operating limits in cooling mode, leaving water temperature up to -10°C and max external air temperature +46°C.

Accessories

- Integrated hydronic module with high efficiency inverter pump, safety valve, expansion tank, manual air vent
- Soft starters
- HSW15 remote keyboard
- Outside air temperature probe for plant water set point compensation.
- Serial card BUS ADAPTER for ModBus
- Copper-Aluminum heat exchanger coils with epoxy treatment
- Coil protection grid for models 0071÷0121
- External buffer tank and hydronic connecting kit
- External main switch kit
- Removable metal mesh water filter kit
- Rubber anti-vibration mounting kit

Technical data

BRAT2		0021	0025	0031	0041	0021	0025	0031
Power supply	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50	400/3/50
PERFORMANCE								
COOLING ONLY (GROSS VALUE)								
Cooling capacity	(1) kW	5,76	7,06	8,71	11,5	5,74	7,13	8,79
Total power input	(1) kW	2,08	2,58	3,49	4,10	2,04	2,43	3,21
EER	(1) kW/kW	2,77	2,74	2,50	2,80	2,81	2,93	2,74
ESEER	(1) kW/kW	3,36	3,38	3,11	3,30	3,49	3,63	3,30
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2) kW	5,74	7,03	8,68	11,4	5,72	7,10	8,76
EER	(1)(2) kW/kW	2,73	2,70	2,46	2,74	2,77	2,89	2,70
ESEER	(1)(2) kW/kW	3,31	3,32	3,06	3,21	3,43	3,57	3,26
Cooling energy class		C	C	E	C	C	C	C
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1) m ³ /h	0,99	1,22	1,50	1,97	0,99	1,23	1,51
Pressure drop	(1) kPa	6,87	8,27	9,00	17,9	6,84	8,44	9,16
REFRIGERANT CIRCUIT								
No. Compressors	N°	1	1	1	1	1	1	1
No. Circuits	N°	1	1	1	1	1	1	1
NOISE LEVEL								
Sound pressure	(3) dB(A)	52	52	52	54	52	52	52
Sound power level in cooling	(4)(5) dB(A)	66	66	66	69	66	66	66
SIZE AND WEIGHT								
A	(6) mm	900	900	900	900	900	900	900
B	(6) mm	370	370	370	370	370	370	370
H	(6) mm	640	940	940	1240	640	940	940
Operating weight	(6) kg	85	100	105	126	85	100	105

BRAT2		0041	0051	0061	0071	0091	0101	0121
Power supply	V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE								
COOLING ONLY (GROSS VALUE)								
Cooling capacity	(1) kW	11,9	13,4	15,7	19,1	21,7	26,7	31,7
Total power input	(1) kW	4,24	4,70	5,31	6,69	8,13	8,91	11,8
EER	(1) kW/kW	2,81	2,85	2,96	2,86	2,67	3,00	2,69
ESEER	(1) kW/kW	3,40	3,26	3,48	3,33	3,14	3,50	3,18
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2) kW	11,8	13,3	15,6	19,0	21,6	26,6	31,5
EER	(1)(2) kW/kW	2,74	2,79	2,89	2,79	2,62	2,93	2,64
ESEER	(1)(2) kW/kW	3,30	3,18	3,39	3,25	3,08	3,42	3,11
Cooling energy class		C	C	C	C	D	B	D
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1) m ³ /h	2,06	2,31	2,69	3,29	3,74	4,60	5,46
Pressure drop	(1) kPa	19,4	20,0	19,6	22,2	22,3	23,3	25,3
REFRIGERANT CIRCUIT								
No. Compressors	N°	1	1	1	1	1	1	1
No. Circuits	N°	1	1	1	1	1	1	1
NOISE LEVEL								
Sound pressure	(3) dB(A)	54	54	54	59	59	60	60
Sound power level in cooling	(4)(5) dB(A)	69	69	69	74	74	76	76
SIZE AND WEIGHT								
A	(6) mm	900	900	900	1450	1450	1450	1450
B	(6) mm	370	370	370	550	550	550	550
H	(6) mm	1240	1240	1390	1200	1200	1700	1700
Operating weight	(6) kg	126	145	155	245	249	320	325

Notes:

- 1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
- 2 Values in compliance with EN14511-3:2013.
- 3 Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
- 4 Sound power on the basis of measurements made in compliance with ISO 9614.
- 5 Sound power level in cooling, outdoors.
- 6 Unit in standard configuration/execution, without optional accessories.

Certified data in EUROVENT



MICS 0072÷0182

Modular air source chillers for outdoor installation 18,2-44,7 kW

MICS is the air cooled range of outdoor units with axial fans, hermetic scroll compressors and Full Floating technology. MICS units provide the perfect answer to the most common residential market requirements: compactness, ease of installation and silent operation.



Control

Modular design

MICS features an innovative design that optimises the possibilities of connecting up several units, reducing the overall footprint of the units.

Better capacity control

The possibility of controlling up to six units as a single product means that MICS can increase the number of available control steps, thereby ensuring practically perfect adaptation to the real heat load trend.

Keyboard Master Control

KMC is the central control of the cascade modules. Its main function is to supervise operation of all the modules, making them operate synergically. As a user interface it has a graphic display and a keypad for navigating all the pages.

Full Floating technology

The full floating technology with automatic control of the airflow rate, water flow rate and water temperature gains a new function: Flex Energy, used to manage the capacity control steps in linear or alternating sequence in installations with several modules.

Version

FF	Standard version, with built-in hydronic kit
FFT	Standard version without hydronic kit

Features

- Structure and base in hot-dip galvanised steel with epoxy powder paint finish.
- Low pressure drop AISI 316 stainless steel plate heat exchangers, fitted with heating element to provide frost protection.
- External access to the controller through anti-tamper device.
- Finned coils made with copper pipes and aluminium fins with large exchange surface area, tested for leaks with dried air at 30 bar.
- User interface with display.
- Electronic expansion valve.
- Available water pipe fittings in case of installation under appliance.
- Differential pressure switch.
- Drain valve.
- The hydronic circuit on the FF models includes:
 - Multistage centrifugal pump
 - Air vent valve
 - Expansion tank
 - Safety valve
 - Pressure gauge

Accessories

- Rubber anti-vibration mounting kit
- Removable metal mesh water filter kit
- Kit for connecting the KMC keyboard
- Coil protection grids
- KMC keyboard for modular system
- Remote control kit

Technical data

MICS/FF		0072	0092	0122	0152	0182
Power supply	V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE						
COOLING ONLY (GROSS VALUE)						
Cooling capacity	(1) kW	18,2	23,0	31,9	39,4	44,7
Total power input	(1) kW	6,50	9,30	10,7	13,4	15,5
EER	(1) kW/kW	2,80	2,47	2,98	2,94	2,88
ESEER	(1) kW/kW	4,05	3,93	3,98	4,12	4,17
COOLING ONLY (EN14511 VALUE)						
Cooling capacity	(1)(2) kW	18,3	23,1	32,0	39,6	44,9
EER	(1)(2) kW/kW	2,61	2,38	2,88	2,89	2,82
ESEER	(1)(2) kW/kW	3,44	3,56	3,69	3,94	3,94
Cooling energy class		D	E	C	C	C
EXCHANGERS						
HEAT EXCHANGER USER SIDE IN REFRIGERATION						
Water flow	(1) m ³ /h	3,13	3,96	5,49	6,78	7,70
Available unit's head	(1) kPa	124,8	143,1	101,5	113,8	133,8
REFRIGERANT CIRCUIT						
No. Compressors	N°	2	2	2	2	2
No. Circuits	N°	1	1	1	1	1
NOISE LEVEL						
Sound pressure	(3) dB(A)	64	64	66	66	66
Sound power level in cooling	(4)(5) dB(A)	80	80	83	83	83
SIZE AND WEIGHT						
A	(6) mm	1040	1040	1630	1630	1630
B	(6) mm	790	790	790	790	790
H	(6) mm	1725	1725	1725	1725	1725
Operating weight	(6) kg	310	330	410	450	480

MICS/FFT		0072	0092	0122	0152	0182
Power supply	V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE						
COOLING ONLY (GROSS VALUE)						
Cooling capacity	(1) kW	18,2	23,0	31,9	39,4	44,7
Total power input	(1) kW	6,50	9,30	10,7	13,4	15,5
EER	(1) kW/kW	2,80	2,47	2,98	2,94	2,88
ESEER	(1) kW/kW	4,05	3,93	3,98	4,12	4,17
COOLING ONLY (EN14511 VALUE)						
Cooling capacity	(1)(2) kW	18,1	22,9	31,7	39,2	44,4
EER	(1)(2) kW/kW	2,73	2,42	2,90	2,87	2,81
ESEER	(1)(2) kW/kW	3,83	3,74	3,78	3,92	3,93
EXCHANGERS						
HEAT EXCHANGER USER SIDE IN REFRIGERATION						
Water flow	(1) m ³ /h	3,13	3,96	5,49	6,78	7,70
Pressure drop	(1) kPa	29,3	28,2	36,2	35,9	45,0
REFRIGERANT CIRCUIT						
No. Compressors	N°	2	2	2	2	2
No. Circuits	N°	1	1	1	1	1
NOISE LEVEL						
Sound pressure	(3) dB(A)	64	64	66	66	66
Sound power level in cooling	(4)(5) dB(A)	80	80	83	83	83
SIZE AND WEIGHT						
A	(6) mm	1040	1040	1630	1630	1630
B	(6) mm	790	790	790	790	790
H	(6) mm	1725	1725	1725	1725	1725
Operating weight	(6) kg	310	330	410	450	480

Notes:

- Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
- Values in compliance with EN14511-3:2013.
- Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
- Sound power on the basis of measurements made in compliance with ISO 9614.
- Sound power level in cooling, outdoors.
- Unit in standard configuration/execution, without optional accessories.

Certified data in EUROVENT



BRA2 0021÷0061

Air source chillers for indoor installation 5,74-15,7 kW

BRA2 are air-cooled liquid chillers with hermetic scroll compressors and Full Floating technology. Thanks to an advanced electronic control, BRA2 units represent the perfect answer to residential market requirements: compactness, ease of installation and silent operation. BRA2 can be installed indoor thanks to the radial plug fans provided as standard and the possibility of ducting the air flow either vertically or horizontally. Two configurations are available to satisfy a wide range of system requirements: standard version, or with integrated EC inverter pump, ErP2015 complied.



Control

Full Floating technology

The new generation electronic controller allows to manage the chiller by using the Full Floating technology, designed by Climaveneta for controlling the efficiency of the fans (floating fans), the circulating pump (floating flow) and the working temperature (floating set point).

This also allows to achieve all the following benefits: improvement of efficiency in both standard and extreme conditions, much lower operating noise in part load conditions, lower installation time, lower time for system set-up, broader operating limits, faster transient after defrosts.

Version

B Standard

Features

- Structure and base in hot-dip galvanised steel with epoxy powder paint finish.
- Hermetic scroll type compressors, equipped with the crankcase heater and thermal protection.
- Low pressure drop AISI 316 stainless steel plate heat exchangers, fitted with heating element to provide frost protection.
- Finned coils made with copper pipes and aluminium fins with large exchange surface area, tested for leaks with dried air at 30 bar.
- Coil protection grid for models 0011÷0061.
- Radial plug fan.
- Continuous fan speed regulation with pressure switch.
- On board user interface, accessible from the outside through anti-tamper device.
- Differential pressure switch.
- Extensive operating limits in cooling mode, leaving water temperature up to -10°C and max external air temperature +46°C.

Accessories

- Integrated hydronic module with high efficiency inverter pump, safety valve, expansion tank, manual air vent
- Soft starters
- HSW15 remote keyboard
- Outside air temperature probe for plant water set point compensation.
- Serial card BUS ADAPTER for ModBus
- Copper-Copper heat exchanger coils
- Copper-Aluminum heat exchanger coils with epoxy treatment
- External buffer tank and hydronic connecting kit
- External main switch kit
- Removable metal mesh water filter kit
- Rubber anti-vibration mounting kit

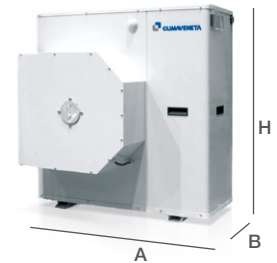
Technical data

BRA2		0021	0025	0031	0041	0021	0025	0031	0041	0051	0061
Power supply	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE											
COOLING ONLY (GROSS VALUE)											
Cooling capacity	(1) kW	5,76	7,06	8,71	11,5	5,74	7,13	8,79	11,9	13,4	15,7
Total power input	(1) kW	2,43	2,93	3,84	4,80	2,39	2,78	3,56	4,94	5,40	6,01
EER	(1) kW/kW	2,37	2,41	2,27	2,40	2,40	2,56	2,47	2,41	2,48	2,61
ESEER	(1) kW/kW	2,77	2,88	2,76	2,73	2,86	3,08	2,91	2,81	2,77	3,00
COOLING ONLY (EN14511 VALUE)											
Cooling capacity	(1)(2) kW	5,74	7,03	8,68	11,4	5,72	7,10	8,76	11,8	13,3	15,6
EER	(1)(2) kW/kW	2,59	2,62	2,41	2,63	2,63	2,80	2,64	2,64	2,66	2,80
ESEER	(1)(2) kW/kW	3,11	3,22	2,98	3,06	3,21	3,45	3,16	3,13	3,02	3,26
Cooling energy class		B	B	C	B	B	A	B	B	B	A
EXCHANGERS											
HEAT EXCHANGER USER SIDE IN REFRIGERATION											
Water flow	(1) m ³ /h	0,99	1,22	1,50	1,97	0,99	1,23	1,51	2,06	2,31	2,69
Pressure drop	(1) kPa	6,87	8,27	9,00	17,9	6,84	8,44	9,16	19,4	20,0	19,6
REFRIGERANT CIRCUIT											
No. Compressors	N°	1	1	1	1	1	1	1	1	1	1
No. Circuits	N°	1	1	1	1	1	1	1	1	1	1
FANS											
Air flow	m ³ /s	0,81	0,93	0,93	1,77	0,81	0,93	0,93	1,77	1,61	1,74
Available static pressure	Pa	120	120	120	120	120	120	120	120	120	120
NOISE LEVEL											
Sound power level in cooling	(3)(4) dB(A)	75	75	75	77	75	75	75	77	77	77
SIZE AND WEIGHT											
A	(5) mm	900	900	900	900	900	900	900	900	900	900
B	(5) mm	580	580	580	0580	580	580	580	580	580	630
H	(5) mm	640	940	940	1240	640	940	940	1240	1240	1390
Operating weight	(5) kg	105	120	125	165	105	120	125	165	185	195

Notes:

- Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
- Values in compliance with EN14511-3:2013.
- Total sound power of fans, as declared by the maker, at the rated speed of rotation and a useful static head of 120 Pa on the delivery side.
- Sound power level in cooling, outdoors.
- Unit in standard configuration/execution, without optional accessories.

Certified data in EUROVENT



MICS-C 0072÷0122

Air source chillers for indoor installation 18,2-31,9 kW

MICS-C are indoor air-cooled chillers with hermetic scroll compressors and Full Floating technology. Thanks to an advanced electronic control, these units represent the perfect answer to residential market requirements: compactness, ease of installation and silent operation.



Control

Full Floating technology

The new generation electronic controller allows to manage the chiller by using the Full Floating technology, designed by Climaveneta for controlling the efficiency of the fans (floating fans), the circulating pump (floating flow) and the working temperature (floating set point).

This also allows to achieve all the following benefits: improvement of efficiency in both standard and extreme conditions, much lower operating noise in part load conditions, lower installation time, lower time for system set-up, broader operating limits, faster transient after defrosts.

Version

FF Standard version, with built-in hydronic kit

Features

- Structure and base in hot-dip galvanised steel with epoxy powder paint finish.
- Low pressure drop AISI 316 stainless steel plate heat exchangers, fitted with heating element to provide frost protection.
- Control with anti-tamper device accessible from the outside.
- Finned coils made with copper pipes and aluminium fins with large exchange surface area, tested for leaks with dried air at 30 bar.
- User interface with display.
- Electronic expansion valve.
- Available water pipe fittings.
- The circuit includes:
 - Multistage centrifugal pump
 - Air vent valve
 - Differential pressure switch.
 - Expansion tank
 - Safety valve
 - Pressure gauge
 - Drain valve.

Accessories

- Rubber anti-vibration mounting kit
- Removable metal mesh water filter kit
- Coil protection grids
- Remote control kit

Technical data

MICS-C/FF		0072	0092	0122
Power supply	V/ph/Hz	400/3/50	400/3/50	400/3/50
PERFORMANCE				
COOLING ONLY (GROSS VALUE)				
Cooling capacity	(1) kW	18,2	23,0	31,9
Total power input	(1) kW	6,50	9,30	10,7
EER	(1) kW/kW	2,80	2,47	2,98
ESEER	(1) kW/kW	4,05	3,93	3,98
COOLING ONLY (EN14511 VALUE)				
Cooling capacity	(1)(2) kW	18,3	23,1	32,0
EER	(1)(2) kW/kW	3,05	2,66	3,51
ESEER	(1)(2) kW/kW	4,48	4,29	5,04
Cooling energy class		A	B	A
EXCHANGERS				
HEAT EXCHANGER USER SIDE IN REFRIGERATION				
Water flow	(1) m³/h	3,13	3,96	5,49
Available unit's head	(1) kPa	124,8	143,1	101,5
REFRIGERANT CIRCUIT				
No. Compressors	N°	2	2	2
No. Circuits	N°	1	1	1
FANS				
Air flow	m³/s	2,50	2,50	5,00
Available static pressure	Pa	120	120	120
NOISE LEVEL				
Sound power level in cooling	(3)(4) dB(A)	86	86	89
SIZE AND WEIGHT				
A	(5) mm	1040	1040	1630
B	(5) mm	790	790	790
H	(5) mm	2000	2000	2000
Operating weight	(5) kg	330	350	450

Notes:

- 1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
- 2 Values in compliance with EN14511-3:2013.
- 3 Total sound power of fans, as declared by the maker, at the rated speed of rotation and a useful static head of 120 Pa on the delivery side.
- 4 Sound power level in cooling, indoors.
- 5 Unit in standard configuration/execution, without optional accessories.

Certified data in EUROVENT



BRH 0011÷0121

Water cooled chillers

5,50-35,1 kW

BRH is a range of water-source liquid chillers operating with R410A refrigerant and featuring hermetic scroll compressors and Full Floating technology.



Control

Floating Set

Every 3 minutes an algorithm automatically optimises the water set point in relation to the compressor operating time and the temperatures of the water. The water storage tank is no longer necessary because it is compensated by the Floating set function, with resulting reduction in:

- size;
- weight;
- installation times;
- system setting-up times.

Floating Flow

The controller manages the modulation of the active components (pump and electronic flow valve) through pressure transducers and temperature sensors.

The performance of the unit may thus be optimised for different operating conditions, such as traditional fan coil system and panel heating system, ensuring:

- broader operating limits;
- easier start-up of installations with both high and low water temperatures;
- faster system setup.

Version

- FF** Standard version, with built-in hydronic kit
- FFT** Standard version without hydronic kit

Features

- Structure and base in hot-dip galvanised steel with epoxy powder paint finish.
- High-efficiency plate exchangers in AISI 316 stainless steel with low pressure drops (exchanger on plant side fitted with heating element for frost protection).
- External access the controller through anti-tamper device.
- The safety is guaranteed by a door lock isolator on the electrical power switchboard and by active protection devices on the main components.
- The circuit includes:
 - Modulating valve to reduce water consumptions (source side, FF versions only).
 - Circulating pump (plant side, FF versions only).
 - Air vent valve (plant side).
 - Expansion vessel (plant side).
 - Safety valve (plant side).
 - Differential pressure switch on plant circuit only.
 - Drain valve on both the plant and the source circuits.

Accessories

- Removable metal mesh water filter kit
- HSW10 remote keyboard

Technical data

BRH/FF			0011	0021	0025	0031	0041	0021	0025	0031
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	400/3/50
PERFORMANCE										
COOLING ONLY (GROSS VALUE)										
Cooling capacity	(1) kW		5,50	5,90	7,60	9,20	11,9	5,90	7,70	9,30
Total power input	(1) kW		1,50	1,70	2,00	2,60	3,20	1,60	1,90	2,40
EER	(1) kW/kW		3,67	3,47	3,80	3,54	3,72	3,69	4,05	3,88
ESEER	(1) kW/kW		4,23	3,92	4,47	4,15	4,10	4,00	4,61	4,38
COOLING ONLY (EN14511 VALUE)										
Cooling capacity	(1)(2) kW		5,51	5,91	7,61	9,21	11,9	5,91	7,71	9,31
EER	(1)(2) kW/kW		3,34	3,19	3,54	3,32	3,38	3,38	3,76	3,61
ESEER	(1)(2) kW/kW		3,77	3,54	4,09	3,83	3,67	3,69	4,21	4,03
Cooling energy class			F	F	E	F	F	F	E	E
EXCHANGERS										
HEAT EXCHANGER USER SIDE IN REFRIGERATION										
Water flow	(1) m³/h		0,95	1,02	1,31	1,58	2,05	1,02	1,33	1,60
Available unit's head	(1) kPa		60,3	58,8	65,5	58,5	89,2	58,8	65,1	58,0
Water flow	(1) m³/h		1,20	1,30	1,64	2,02	2,58	1,28	1,64	2,00
Pressure drop	(1) kPa		13,4	15,6	20,0	29,5	33,4	15,2	20,0	29,0
REFRIGERANT CIRCUIT										
No. Compressors	N°		1	1	1	1	1	1	1	1
No. Circuits	N°		1	1	1	1	1	1	1	1
NOISE LEVEL										
Sound pressure	(3) dB(A)		38	38	39	39	44	38	39	39
Sound power level in cooling	(4)(5) dB(A)		52	52	53	53	58	52	53	53
SIZE AND WEIGHT										
A	(6) mm		575	575	575	575	575	575	575	575
B	(6) mm		560	560	560	560	560	560	560	560
H	(6) mm		980	980	980	980	980	980	980	980
Operating weight	(6) kg		148	148	150	155	170	148	150	152

BRH/FF			0041	0051	0061	0071	0091	0101	0121	
Power supply	V/ph/Hz		400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	
PERFORMANCE										
COOLING ONLY (GROSS VALUE)										
Cooling capacity	(1) kW		12,4	13,9	16,5	20,8	24,0	27,3	35,1	
Total power input	(1) kW		3,20	3,80	4,00	5,10	5,80	6,80	8,40	
EER	(1) kW/kW		3,88	3,66	4,13	4,08	4,14	4,01	4,18	
ESEER	(1) kW/kW		4,28	4,22	4,74	4,62	4,84	4,55	4,59	
COOLING ONLY (EN14511 VALUE)										
Cooling capacity	(1)(2) kW		12,4	13,9	16,5	20,8	24,1	27,4	35,4	
EER	(1)(2) kW/kW		3,52	3,38	3,82	3,83	3,93	3,68	3,86	
ESEER	(1)(2) kW/kW		3,82	3,83	4,31	4,28	4,54	4,03	4,17	
Cooling energy class			E	F	E	E	D	E	D	
EXCHANGERS										
HEAT EXCHANGER USER SIDE IN REFRIGERATION										
Water flow	(1) m³/h		2,13	2,39	2,84	3,58	4,13	4,70	6,04	
Available unit's head	(1) kPa		87,0	87,1	81,9	74,4	73,6	125,3	166	
Water flow	(1) m³/h		2,67	3,03	3,51	4,43	5,10	5,84	7,45	
Pressure drop	(1) kPa		35,7	34,0	36,3	40,0	34,2	46,8	47,7	
REFRIGERANT CIRCUIT										
No. Compressors	N°		1	1	1	1	1	1	1	
No. Circuits	N°		1	1	1	1	1	1	1	
NOISE LEVEL										
Sound pressure	(3) dB(A)		44	44	45	51	51	55	55	
Sound power level in cooling	(4)(5) dB(A)		58	58	59	66	66	70	70	
SIZE AND WEIGHT										
A	(6) mm		575	575	575	780	780	780	780	
B	(6) mm		560	560	560	680	680	680	680	
H	(6) mm		980	980	980	1150	1150	1150	1150	
Operating weight	(6) kg		160	170	175	220	230	235	250	

- Notes:
- Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger water (in/out) 30°C/35°C.
 - Values in compliance with EN14511-3:2013.
 - Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
 - Sound power on the basis of measurements made in compliance with ISO 9614.
 - Sound power level in cooling, indoors.
 - Unit in standard configuration/execution, without optional accessories.

Certified data in EUROVENT



BRH 0011÷0121

Technical data

BRH/FFT		0011	0021	0025	0031	0041	0021	0025	0031
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	400/3/50
PERFORMANCE									
COOLING ONLY (GROSS VALUE)									
Cooling capacity	(1) kW	5,50	5,90	7,60	9,20	11,9	5,90	7,70	9,30
Total power input	(1) kW	1,50	1,70	2,00	2,60	3,20	1,60	1,90	2,40
EER	(1) kW/kW	3,67	3,47	3,80	3,54	3,72	3,69	4,05	3,88
ESEER	(1) kW/kW	4,23	3,92	4,47	4,15	4,10	4,00	4,61	4,38
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2) kW	5,48	5,87	7,56	9,14	11,8	5,87	7,66	9,24
EER	(1)(2) kW/kW	3,51	3,31	3,60	3,32	3,48	3,51	3,82	3,62
ESEER	(1)(2) kW/kW	4,01	3,71	4,18	3,85	3,80	3,87	4,31	4,05
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1) m ³ /h	0,95	1,02	1,31	1,58	2,05	1,02	1,33	1,60
Pressure drop	(1) kPa	8,41	9,54	12,7	18,2	21,0	9,54	13,0	18,6
Water flow	(1) m ³ /h	1,20	1,30	1,64	2,02	2,58	1,28	1,64	2,00
Pressure drop	(1) kPa	13,4	15,6	20,0	29,5	33,4	15,2	20,0	29,0
REFRIGERANT CIRCUIT									
No. Compressors	N°	1	1	1	1	1	1	1	1
No. Circuits	N°	1	1	1	1	1	1	1	1
NOISE LEVEL									
Sound pressure	(3) dB(A)	38	38	39	39	44	38	39	39
Sound power level in cooling	(4)(5) dB(A)	52	52	53	53	58	52	53	53
SIZE AND WEIGHT									
A	(6) mm	575	575	575	575	575	575	575	575
B	(6) mm	560	560	560	560	560	560	560	560
H	(6) mm	980	980	980	980	980	980	980	980
Operating weight	(6) kg	148	148	150	155	170	148	150	152

BRH/FFT		0041	0051	0061	0071	0091	0101	0121
Power supply	V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE								
COOLING ONLY (GROSS VALUE)								
Cooling capacity	(1) kW	12,4	13,9	16,5	20,8	24,0	27,3	35,1
Total power input	(1) kW	3,20	3,80	4,00	5,10	5,80	6,80	8,40
EER	(1) kW/kW	3,88	3,66	4,13	4,08	4,14	4,01	4,18
ESEER	(1) kW/kW	4,28	4,22	4,74	4,62	4,84	4,55	4,59
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2) kW	12,3	13,8	16,4	20,7	23,9	27,1	34,9
EER	(1)(2) kW/kW	3,61	3,44	3,85	3,81	3,90	3,75	3,91
ESEER	(1)(2) kW/kW	3,95	3,92	4,37	4,26	4,50	4,13	4,25
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1) m ³ /h	2,13	2,39	2,84	3,58	4,13	4,70	6,04
Pressure drop	(1) kPa	22,8	21,3	23,8	26,1	22,5	30,3	31,4
Water flow	(1) m ³ /h	2,67	3,03	3,51	4,43	5,10	5,84	7,45
Pressure drop	(1) kPa	35,7	34,0	36,3	40,0	34,2	46,8	47,7
REFRIGERANT CIRCUIT								
No. Compressors	N°	1	1	1	1	1	1	1
No. Circuits	N°	1	1	1	1	1	1	1
NOISE LEVEL								
Sound pressure	(3) dB(A)	44	44	45	51	51	55	55
Sound power level in cooling	(4)(5) dB(A)	58	58	59	66	66	70	70
SIZE AND WEIGHT								
A	(6) mm	575	575	575	780	780	780	780
B	(6) mm	560	560	560	680	680	680	680
H	(6) mm	980	980	980	1150	1150	1150	1150
Operating weight	(6) kg	160	170	175	220	230	235	250

Notes:

- Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger water (in/out) 30°C/35°C.
- Values in compliance with EN14511-3:2013.
- Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
- Sound power on the basis of measurements made in compliance with ISO 9614.
- Sound power level in cooling, indoors.
- Unit in standard configuration/execution, without optional accessories.





FULL
FLOATING



HE + NHCR 0011÷0121

Condenserless units coupled with remote condenser 4,70-32,4 kW

HE FF is the new range of condenserless units to be coupled with outdoor remote condensers NHCR.

Equipped with hermetic scroll compressors and Full Floating technology, these units are the best solution for residential requirements such as reduced footprint, ease of installation and silent operation.



Control

Full Floating

Every 3 minutes an algorithm automatically adjusts the water set point accordingly to the compressor operating time and the water temperature.

The water storage tank is no longer necessary because it is compensated by the Floating Set function, with resulting reductions in:

- size;
- weight;
- installation timing;
- system setting-up timing

Version

- FF Standard, with integrated hydronic group

Features

- Structure and base in hot-dip galvanised steel with epoxy powder paint finish.
- Low pressure drop AISI 316 stainless steel plate heat exchangers, fitted with heating element to provide frost protection.
- Control with anti-tamper device accessible from the outside.
- Differential pressure switch.
- The remote condenser may be installed up to a distance of 50 metres from the cooling unit.
- The safety is guaranteed by a door lock isolator on the electrical power switchboard and by active protection devices on the main components.



Accessories

- Buffer tank plus pump
- Hydronic kit plus pump
- Removable metal mesh water filter kit
- Modulating pump kit
- Control board for the modulating pump kit

Technical data

HE/FF			0011	0021	0025	0031	0021	0025	0031
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50	400/3/50
PERFORMANCE									
COOLING									
Cooling capacity	(1)	kW	4,70	6,10	7,00	8,20	6,10	7,00	8,20
Total power input	(1)	kW	1,60	2,10	2,50	2,90	2,10	2,40	2,90
EER	(1)	kW/kW	2,84	2,89	2,80	2,79	2,94	2,86	2,86
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	m ³ /h	0,90	1,10	1,30	1,50	1,10	1,30	1,50
Available unit's head	(1)	kPa	22,0	24,0	26,0	27,0	24,0	26,0	27,0
REFRIGERANT CIRCUIT									
No. Compressors		N°	1	1	1	1	1	1	1
No. Circuits		N°	1	1	1	1	1	1	1
NOISE LEVEL									
Sound pressure	(2)	dB(A)	43	43	48	48	43	48	48
Sound power level in cooling	(3)	dB(A)							
SIZE AND WEIGHT									
A	(4)	mm	450	450	450	450	450	450	450
B	(4)	mm	400	400	400	400	400	400	400
H	(4)	mm	960	960	960	960	960	960	960
Operating weight	(4)	kg	68	70	71	74	70	71	74

HE/FF			0041	0051	0061	0071	0091	0101	0121
Power supply	V/ph/Hz		400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE									
COOLING									
Cooling capacity	(1)	kW	10,5	12,5	15,0	19,1	22,2	26,8	32,4
Total power input	(1)	kW	3,40	4,20	4,90	6,30	7,80	8,90	10,9
EER	(1)	kW/kW	3,06	2,97	3,07	3,03	2,86	3,00	2,96
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	m ³ /h	1,90	2,30	2,80	3,40	4,10	4,80	5,90
Available unit's head	(1)	kPa	19,0	20,0	20,0	23,0	22,0	23,0	23,0
REFRIGERANT CIRCUIT									
No. Compressors		N°	1	1	1	1	1	1	1
No. Circuits		N°	1	1	1	1	1	1	1
NOISE LEVEL									
Sound pressure	(2)	dB(A)	52	52	52	52	52	53	53
Sound power level in cooling	(3)	dB(A)							
SIZE AND WEIGHT									
A	(4)	mm	450	450	450	600	600	600	600
B	(4)	mm	400	400	400	600	600	600	600
H	(4)	mm	960	960	960	960	960	960	960
Operating weight	(4)	kg	85	87	90	177	180	187	190

Notes:

- 1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Condensation temperature 47°C.
- 2 Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
- 3 Sound power on the basis of measurements made in compliance with ISO 9614.
- 4 Unit in standard configuration/execution, without optional accessories.

NHCR			0011-21	0025-31-41	0051	0061	0071-91	0101	0121
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
PERFORMANCE									
NOMINAL SPECIFICATIONS									
Rated capacity	(1)	kW	7,90	15,9	16,3	24,0	25,5	32,7	40,1
No. Circuits		N°	1	1	1	1	1	1	1
Total power input	(1)	kW	0,16	0,32	0,27	0,48	0,54	0,54	0,81
FANS									
Air flow		m ³ /h	2267	4535	4899	6802	10330	9798	15500
NOISE LEVEL									
Sound pressure	(2)	dB(A)	33	36	35	38	38	38	40
SIZE AND WEIGHT									
A	(3)	mm	780	1380	1105	1980	2005	2005	2905
H	(3)	mm	555	555	828	555	828	828	828
B	(3)	mm	362	362	428	362	428	428	428
Operating weight	(3)	kg	20	38	43	51	76	84	111

Notes:

- 1 Exchanger air (in) 35 °C; ΔT = 17 K.
- 2 Average sound pressure level, at a distance of 10 m, for units in a free field on a reflecting surface. The average sound pressure level is calculated based on the sound power level measured in accordance with ISO 3744.
- 3 Unit in standard configuration/execution, without optional accessories.

BRAN2 0021÷0121

Air source reversible units for outdoor installation 4,81-27,2 kW

BRAN is the Climaveneta range of air-cooled reversible heat pumps equipped with axial fans, hermetic scroll compressors and Full Floating technology. Thanks to the smart electronic control, BRAN units provide the perfect answer to residential or commercial market requirements: compactness, ease of installation and silent operation.

The units are available in different versions in order to meet a wide range of system requirements: standard version or with integrated EC inverter pump, ErP2015 complied.



Control

Full Floating technology

The new generation electronic controller allows to manage the chiller by using the Full Floating technology, designed by Climaveneta for controlling the efficiency of the fans (floating fans), the circulating pump (floating flow) and the working temperature (floating set point).

This also allows to achieve all the following benefits: improvement of efficiency in both standard and extreme conditions, much lower operating noise in part load conditions, lower installation time, lower time for system set-up, broader operating limits, faster transient after defrosts.

Version

B Standard

Features

- Structure and base in hot-dip galvanised steel with epoxy powder paint finish.
- Condensate collecting tray for models 0011÷0061.
- Hermetic scroll type compressors, equipped with the crankcase heater and thermal protection.
- Low pressure drop AISI 316 stainless steel plate heat exchangers, fitted with heating element to provide frost protection.
- Finned coils made with copper pipes and aluminium fins with large exchange surface area, tested for leaks with dried air at 30 bar.
- Coil protection grid for models 0011÷0061.
- Axial electric fans, external rotor, 6-pole electric motor fitted with thermal protection, housed in aerodynamic conveyor profile with safety grill.
- Continuous fan speed regulation with pressure switch.
- On board user interface, accessible from the outside through anti-tamper device.
- Phase sequence controller for models 0071÷0121.
- Differential pressure switch.
- Extensive operating limits in heating mode, leaving water temperature up to 55°C and down to -10°C, in cooling mode as well, leaving water temperature up to -10°C and max external air temperature 46°C.

Accessories

- Integrated hydronic module with high efficiency inverter pump, safety valve, expansion tank, manual air vent
- Soft starters
- HSW15 remote keyboard
- Outside air temperature probe for plant water set point compensation.
- Serial card BUS ADAPTER for ModBus
- Copper-Copper heat exchanger coils
- Copper-Aluminum heat exchanger coils with epoxy treatment
- Condensate collecting tray for models 0071÷0121
- Electric heater for condensate collecting tray to avoid freezing
- Coil protection grid for models 0071÷0121
- External buffer tank and hydronic connecting kit
- External main switch kit
- Removable metal mesh water filter kit
- Rubber anti-vibration mounting kit

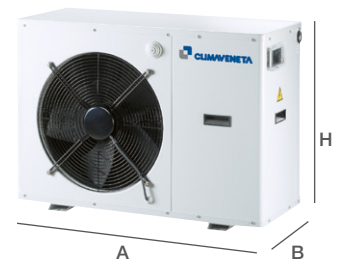
Technical data

BRAN2			0021	0025	0031	0041	0021	0025	0031
Power supply		V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50	400/3/50
COOLING ONLY (GROSS VALUE)									
Cooling capacity	(1)	kW	4,82	5,91	7,31	9,61	4,81	6,01	7,37
Total power input	(1)	kW	2,00	2,47	3,33	3,91	1,96	2,34	3,04
EER	(1)	kW/kW	2,41	2,39	2,20	2,46	2,45	2,57	2,42
ESEER	(1)	kW/kW	2,92	2,96	2,73	2,90	3,02	3,18	2,91
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	4,81	5,89	7,29	9,56	4,80	5,99	7,35
EER	(1)(2)	kW/kW	2,38	2,37	2,17	2,42	2,43	2,54	2,40
ESEER	(1)(2)	kW/kW	2,89	2,92	2,70	2,86	3,00	3,14	2,88
Cooling energy class			E	E	F	E	E	D	E
HEATING ONLY (GROSS VALUE)									
Total heating capacity	(3)	kW	6,73	8,33	10,4	12,8	6,70	8,25	10,0
Total power input	(3)	kW	2,28	2,89	3,52	4,41	2,27	2,74	3,28
COP	(3)	kW/kW	2,95	2,88	2,95	2,90	2,95	3,01	3,05
HEATING ONLY (EN14511 VALUE)									
Total heating capacity	(3)(2)	kW	6,76	8,37	10,5	12,9	6,73	8,29	10,0
COP	(3)(2)	kW/kW	2,93	2,86	2,93	2,86	2,93	2,98	3,02
Cooling energy class			C	C	C	C	C	C	B
SEASONAL EFFICIENCY IN HEATING (EN14825 VALUE)									
PDesign	(4)	kW	4,88	6,30	7,47	9,84	4,88	6,02	7,14
SCOP	(4)		2,98	3,02	3,01	2,95	3,04	3,14	3,05
Performance η_{s} (Reg. 811/2013 UE)	(4)	%	116	118	118	115	119	123	119
Seasonal efficiency class (Regulation (UE) 811/2013)	(4)		A	A	A	A	A	A	A
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	m ³ /h	0,83	1,02	1,26	1,65	0,83	1,03	1,27
Pressure drop	(1)	kPa	4,82	5,8	6,34	12,6	4,81	5,99	6,44
HEAT EXCHANGER USER SIDE IN HEATING									
Water flow	(3)	m ³ /h	1,17	1,45	1,81	2,23	1,16	1,43	1,74
Pressure drop	(3)	kPa	9,58	11,7	13,1	22,9	9,48	11,5	12,1
REFRIGERANT CIRCUIT									
No. Compressors		N°	1	1	1	1	1	1	1
No. Circuits		N°	1	1	1	1	1	1	1
NOISE LEVEL									
Sound power level in cooling	(5)(6)	dB(A)	66	66	66	69	66	66	66
Sound power level in heating	(5)(7)	dB(A)	65	67	67	70	65	67	67
Sound pressure	(8)	dB(A)	52	52	52	54	52	52	52
SIZE AND WEIGHT									
A	(9)	mm	900	900	900	900	900	900	900
B	(9)	mm	370	370	370	370	370	370	370
H	(9)	mm	640	940	940	1240	640	940	940
Operating weight	(9)	kg	95	110	115	140	95	110	115

Notes:

- Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
- Values in compliance with EN14511-3:2013.
- Plant (side) heat exchanger water (in/out) 40°C/45°C; Source (side) heat exchanger air (in) 7°C - 87% R.H.
- Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (UE) N. 811/2013]
- Sound power on the basis of measurements made in compliance with ISO 9614.
- Sound power level in cooling, outdoors.
- Sound power level in heating, outdoors.
- Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
- Unit in standard configuration/execution, without optional accessories.

Certified data in EUROVENT



BRAN2 0021÷0121

Technical data

BRAN2			0041	0051	0061	0071	0091	0101	0121
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
COOLING ONLY (GROSS VALUE)									
Cooling capacity	(1)	kW	10,0	11,2	13,1	16,0	18,5	22,4	27,2
Total power input	(1)	kW	4,04	4,49	5,03	6,33	7,71	8,43	11,2
EER	(1)	kW/kW	2,48	2,49	2,60	2,53	2,40	2,66	2,43
ESEER	(1)	kW/kW	2,99	2,84	3,07	2,95	2,82	3,10	2,88
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	9,95	11,1	13,0	15,9	18,4	22,3	27,1
EER	(1)(2)	kW/kW	2,43	2,45	2,56	2,49	2,36	2,62	2,39
ESEER	(1)(2)	kW/kW	2,94	2,78	3,00	2,89	2,77	3,05	2,83
Cooling energy class			E	E	D	E	E	D	E
HEATING ONLY (GROSS VALUE)									
Total heating capacity	(3)	kW	13,3	14,7	17,2	21,4	24,5	29,5	35,7
Total power input	(3)	kW	4,55	4,69	5,63	6,67	7,66	9,31	11,1
COP	(3)	kW/kW	2,92	3,13	3,06	3,21	3,20	3,17	3,22
HEATING ONLY (EN14511 VALUE)									
Total heating capacity	(3)(2)	kW	13,4	14,8	17,3	21,5	24,7	29,7	35,9
COP	(3)(2)	kW/kW	2,89	3,08	3,02	3,16	3,15	3,13	3,17
Cooling energy class			C	B	B	B	B	B	B
SEASONAL EFFICIENCY IN HEATING (EN14825 VALUE)									
PDesign	(4)	kW	10,1	10,9	12,6	15,0	15,9	21,3	24,0
SCOP	(4)		3,03	2,96	3,02	3,09	2,97	3,08	2,99
Performance η_s (Reg. 811/2013 UE)	(4)	%	118	115	118	121	116	120	117
Seasonal efficiency class (Regulation (UE) 811/2013)	(4)		A	A	A	A	A	A	A
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	m ³ /h	1,72	1,93	2,25	2,76	3,18	3,86	4,68
Pressure drop	(1)	kPa	13,6	14,0	13,7	15,6	16,2	16,3	18,6
HEAT EXCHANGER USER SIDE IN HEATING									
Water flow	(3)	m ³ /h	2,31	2,56	2,99	3,72	4,27	5,12	6,21
Pressure drop	(3)	kPa	24,6	24,6	24,1	28,4	29,1	28,8	32,8
REFRIGERANT CIRCUIT									
No. Compressors		N°	1	1	1	1	1	1	1
No. Circuits		N°	1	1	1	1	1	1	1
NOISE LEVEL									
Sound power level in cooling	(5)(6)	dB(A)	69	69	69	74	74	76	76
Sound power level in heating	(5)(7)	dB(A)	70	70	70	75	75	77	77
Sound pressure	(8)	dB(A)	54	54	54	59	59	60	60
SIZE AND WEIGHT									
A	(9)	mm	900	900	900	1450	1450	1450	1450
B	(9)	mm	370	370	420	550	550	550	550
H	(9)	mm	1240	1240	1390	1200	1200	1700	1700
Operating weight	(9)	kg	140	160	170	265	270	340	345

Notes:

- 1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
- 2 Values in compliance with EN14511-3:2013.
- 3 Plant (side) heat exchanger water (in/out) 40°C/45°C; Source (side) heat exchanger air (in) 7°C - 87% R.H.
- 4 Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (UE) N. 811/2013]
- 5 Sound power on the basis of measurements made in compliance with ISO 9614.
- 6 Sound power level in cooling, outdoors.
- 7 Sound power level in heating, outdoors.
- 8 Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
- 9 Unit in standard configuration/execution, without optional accessories.

Certified data in EUROVENT





FULL
FLOATING



MICS-N 0072÷0182

Modular reversible units, air source for outdoor installation 17,3-42,5 kW

MICS-N is the Climaveneta range of reversible air-cooled heat pumps featuring axial fans, hermetic scroll compressors and Full Floating technology.



Control

Keyboard Master Control

MICS features an innovative design that optimises the possibilities of connecting up several units, reducing the necessary access space to a minimum and thereby the overall size of the units.

Increasingly better capacity control

The possibility of controlling up to six units as a single product means that MICS can increase the number of available control steps, thereby ensuring practically perfect adaptation to the real heat load trend.

Modular design

KMC is the central control of the cascade modules. Its main function is to supervise operation of all the modules, making them operate synergically. As a user interface it has a graphic display and a keypad for navigating in the pull-down menus.

Full Floating technology

The full floating technology with automatic control of the airflow rate, water flow rate and water temperature gains a new function: Flex Energy, used to manage the capacity control steps in linear or alternating sequence in installations with several modules.

Version

FF	Standard version, with built-in hydronic kit
FFT	Standard version without hydronic kit

Features

- Structure and base in hot-dip galvanised steel with epoxy powder paint finish.
- Low pressure drop AISI 316 stainless steel plate heat exchangers, fitted with heating element to provide frost protection.
- External access to the controller through anti-tamper device.
- Finned coils made with copper pipes and aluminium fins with large exchange surface area, tested for leaks with dried air at 30 bar.
- User interface with display.
- Electronic expansion valve.
- Available water pipe fittings.
- Differential pressure switch.
- Air vent valve.
- The hydronic circuit on the FF models includes:
 - Multistage centrifugal pump
 - Expansion tank
 - Safety valve
 - Pressure gauge
 - Drain valve.

Accessories

- Remote control kit
- Kit for connecting the KMC keyboard
- KMC keyboard for modular system
- Coil protection grids
- Removable metal mesh water filter kit
- Rubber anti-vibration mounting kit

Technical data

MICS-N / FF			0072	0092	0122	0152	0182
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
COOLING ONLY (GROSS VALUE)							
Cooling capacity	(1)	kW	17,30	21,80	30,3	37,4	42,5
Total power input	(1)	kW	6,50	9,30	10,7	13,4	15,5
EER	(1)	kW/kW	2,66	2,34	2,83	2,79	2,74
ESEER	(1)	kW/kW	3,86	3,75	3,78	3,92	3,96
COOLING ONLY (EN14511 VALUE)							
Cooling capacity	(1)(2)	kW	17,4	21,9	30,4	37,6	42,7
EER	(1)(2)	kW/kW	2,48	2,26	2,74	2,75	2,68
ESEER	(1)(2)	kW/kW	3,29	3,40	3,52	3,77	3,75
Cooling energy class			E	F	C	C	D
HEATING ONLY (GROSS VALUE)							
Total heating capacity	(3)	kW	20,2	26,1	33,9	42,6	47,9
Total power input	(3)	kW	6,50	8,60	11,2	14,0	15,4
COP	(3)	kW/kW	3,11	3,03	3,03	3,04	3,11
HEATING ONLY (EN14511 VALUE)							
Total heating capacity	(3)(2)	kW	20,1	26,0	33,8	42,5	47,7
COP	(3)(2)	kW/kW	2,87	2,88	2,91	2,95	3,01
Cooling energy class			C	C	C	C	B
SEASONAL EFFICIENCY IN HEATING (EN14825 VALUE)							
PDesign	(4)	kW	16,6	18,0	30,2	30,7	33,3
SCOP	(4)		2,95	3,15	3,09	3,27	3,30
Performance η_{s} (Reg. 811/2013 UE)	(4)	%	115	123	120	128	129
Seasonal efficiency class (Regulation (UE) 811/2013)	(4)		A	A	A	A+	A+
EXCHANGERS							
HEAT EXCHANGER USER SIDE IN REFRIGERATION							
Water flow	(1)	m ³ /h	2,98	3,75	5,22	6,44	7,32
Available unit's head	(1)	kPa	133,5	150,2	111,4	132,2	142,7
HEAT EXCHANGER USER SIDE IN HEATING							
Water flow	(3)	m ³ /h	3,51	4,54	5,89	7,40	8,32
Available unit's head	(3)	kPa	102,2	122,2	86,7	78,4	118,2
REFRIGERANT CIRCUIT							
No. Compressors		N°	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1
NOISE LEVEL							
Sound power level in cooling	(5)(6)	dB(A)	80	80	83	83	83
Sound power level in heating	(5)(7)	dB(A)	78	78	83	83	83
Sound pressure	(8)	dB(A)	64	64	66	66	66
SIZE AND WEIGHT							
A	(9)	mm	1040	1040	1630	1630	1630
B	(9)	mm	790	790	790	790	790
H	(9)	mm	1725	1725	1725	1725	1725
Operating weight	(9)	kg	330	350	440	480	510

Notes:

- Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
- Values in compliance with EN14511-3:2013.
- Plant (side) heat exchanger water (in/out) 40°C/45°C; Source (side) heat exchanger air (in) 7°C - 87% R.H.
- Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (UE) N. 811/2013]
- Sound power on the basis of measurements made in compliance with ISO 9614.
- Sound power level in cooling, outdoors.
- Sound power level in heating, outdoors.
- Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
- Unit in standard configuration/execution, without optional accessories.

Certified data in EUROVENT



MICS-N 0072÷0182

Technical data

MICS-N / FFT			0072	0092	0122	0152	0182
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
COOLING ONLY (GROSS VALUE)							
Cooling capacity	(1)	kW	17,3	21,8	30,3	37,4	42,5
Total power input	(1)	kW	6,50	9,30	10,7	13,4	15,5
EER	(1)	kW/kW	2,66	2,34	2,83	2,79	2,74
ESEER	(1)	kW/kW	3,86	3,75	3,78	3,92	3,96
COOLING ONLY (EN14511 VALUE)							
Cooling capacity	(1)(2)	kW	17,2	21,7	30,1	37,2	42,2
EER	(1)(2)	kW/kW	2,60	2,30	2,76	2,73	2,68
ESEER	(1)(2)	kW/kW	3,67	3,58	3,60	3,74	3,76
HEATING ONLY (GROSS VALUE)							
Total heating capacity	(3)	kW	20,2	26,1	33,9	42,6	47,9
Total power input	(3)	kW	6,50	8,60	11,2	14,0	15,4
COP	(3)	kW/kW	3,11	3,03	3,03	3,04	3,11
HEATING ONLY (EN14511 VALUE)							
Total heating capacity	(2)(3)	kW	20,4	26,3	34,1	42,9	48,3
COP	(2)(3)	kW/kW	3,06	2,99	2,98	3,00	3,06
SEASONAL EFFICIENCY IN HEATING (EN14825 VALUE)							
PDesign	(4)	kW	14,9	18,3	30,6	31,2	34,0
SCOP	(4)		3,38	3,45	3,26	3,39	3,43
Performance η_s (Reg. 811/2013 UE)	(4)	%	132	135	127	133	134
Seasonal efficiency class (Regulation (UE) 811/2013)	(4)		A+	A+	A+	A+	A+
EXCHANGERS							
HEAT EXCHANGER USER SIDE IN REFRIGERATION							
Water flow	(1)	m ³ /h	2,98	3,75	5,22	6,44	7,32
Pressure drop	(1)	kPa	26,4	25,4	32,7	32,3	40,7
HEAT EXCHANGER USER SIDE IN HEATING							
Water flow	(3)	m ³ /h	3,51	4,54	5,89	7,40	8,32
Pressure drop	(3)	kPa	36,7	37,0	41,6	42,7	52,7
REFRIGERANT CIRCUIT							
No. Compressors		N°	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1
NOISE LEVEL							
Sound power level in cooling	(5)(6)	dB(A)	80	80	83	83	83
Sound power level in heating	(5)(7)	dB(A)	78	78	83	83	83
Sound pressure	(8)	dB(A)	64	64	66	66	66
SIZE AND WEIGHT							
A	(9)	mm	1040	1040	1630	1630	1630
B	(9)	mm	790	790	790	790	790
H	(9)	mm	1725	1725	1725	1725	1725
Operating weight	(9)	kg	330	350	440	480	510

Notes:

- 1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
- 2 Values in compliance with EN14511-3:2013.
- 3 Plant (side) heat exchanger water (in/out) 40°C/45°C; Source (side) heat exchanger air (in) 7°C - 87% R.H.
- 4 Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (UE) N. 811/2013]
- 5 Sound power on the basis of measurements made in compliance with ISO 9614.
- 6 Sound power level in cooling, outdoors.
- 7 Sound power level in heating, outdoors.
- 8 Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
- 9 Unit in standard configuration/execution, without optional accessories.



**FULL
FLOATING**



BRN2 0021÷0061

Reversible units, air source for indoor installation 4,81-13,1 kW

BRN2 is the Climaveneta range air-cooled heat pumps fitted with hermetic scroll compressors and Full Floating technology. The units are designed for indoor installation with radial plug-fan as standard equipment. The air outflow can be ducted in vertical or horizontal. The units can be arranged to satisfy a wide range of system requirements: with base or with integrated EC inverter pump low consumption, ErP2015 complied.



Control

Full Floating technology

The new generation electronic controller allows to manage the chiller by using the Full Floating technology, designed by Climaveneta for controlling the efficiency of the fans (floating fans), the circulating pump (floating flow) and the working temperature (floating set point).

This also allows to achieve all the following benefits: improvement of efficiency in both standard and extreme conditions, much lower operating noise in part load conditions, lower installation time, lower time for system set-up, broader operating limits, faster transient after defrosts.

Version

B Standard

Features

- Structure and base in hot-dip galvanised steel with epoxy powder paint finish.
- Condensate collecting tray for models 0011÷0061.
- Hermetic scroll type compressors, equipped with the crankcase heater and thermal protection.
- Low pressure drop AISI 316 stainless steel plate heat exchangers, fitted with heating element to provide frost protection.
- Finned coils made with copper pipes and aluminium fins with large exchange surface area, tested for leaks with dried air at 30 bar.
- Coil protection grid for models 0011÷0061.
- Radial fan, plug-fan type.
- Continuous fan speed regulation with pressure switch.
- On board user interface, accessible from the outside through anti-tamper device.
- Differential pressure switch.
- Extensive operating limits in heating mode, leaving water temperature up to 55°C and down to -10°C, in cooling mode as well, leaving water temperature up to -10°C and max external air temperature 46°C.

Accessories

- Integrated hydronic module with high efficiency inverter pump, safety valve, expansion tank, manual air vent
- Soft starters
- HSW15 remote keyboard
- Outside air temperature probe for plant water set point compensation.
- Serial card BUS ADAPTER for ModBus
- Copper-Copper heat exchanger coils
- Copper-Aluminum heat exchanger coils with epoxy treatment
- External buffer tank and hydronic connecting kit
- External main switch kit
- Removable metal mesh water filter kit
- Rubber anti-vibration mounting kit

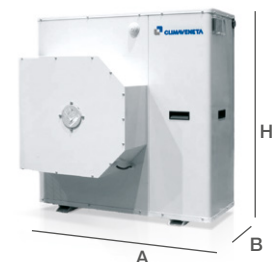
Technical data

BRN2			0021	0025	0031	0041	0021	0025	0031	0041	0051	0061
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE												
COOLING ONLY (GROSS VALUE)												
Cooling capacity	(1)	kW	4,82	5,91	7,31	9,61	4,81	6,01	7,37	10,0	11,2	13,1
Total power input	(1)	kW	2,19	2,66	3,52	4,3	2,15	2,53	3,24	4,43	4,88	5,42
EER	(1)	kW/kW	2,20	2,22	2,08	2,23	2,24	2,38	2,27	2,26	2,3	2,42
ESEER	(1)	kW/kW	2,68	2,69	2,62	2,62	2,68	2,88	2,69	2,67	2,58	2,80
COOLING ONLY (EN14511 VALUE)												
Cooling capacity	(1)(2)	kW	4,81	5,89	7,29	9,56	4,80	5,99	7,35	9,95	11,1	13,0
EER	(1)(2)	kW/kW	2,45	2,46	2,23	2,51	2,50	2,64	2,46	2,52	2,51	2,63
ESEER	(1)(2)	kW/kW	3,07	3,05	2,87	3,03	3,09	3,29	2,99	3,09	2,85	3,11
Cooling energy class			E	E	F	D	D	D	E	D	D	D
HEATING ONLY (GROSS VALUE)												
Total heating capacity	(3)	kW	6,73	8,33	10,4	12,8	6,70	8,25	10,0	13,3	14,7	17,2
Total power input	(3)	kW	2,47	3,09	3,71	4,80	2,46	2,94	3,48	4,94	5,08	6,02
COP	(3)	kW/kW	2,72	2,70	2,80	2,67	2,72	2,81	2,87	2,69	2,89	2,86
HEATING ONLY (EN14511 VALUE)												
Total heating capacity	(3)(2)	kW	6,76	8,37	10,5	12,9	6,73	8,29	10,0	13,4	14,8	17,3
COP	(3)(2)	kW/kW	3,01	2,95	3,01	2,96	3,01	3,08	3,10	2,99	3,15	3,10
Cooling energy class			B	C	B	C	B	B	B	C	B	B
SEASONAL EFFICIENCY IN HEATING (EN14825 VALUE)												
PDesign	(4)	kW	4,88	6,30	7,47	9,84	4,88	6,02	7,14	10,1	10,90	12,6
SCOP	(4)		3,09	3,18	3,14	3,10	3,18	3,32	3,17	3,21	3,06	3,14
Performance η_{sj} (Reg. 811/2013 UE)	(4)	%	120	124	123	121	124	130	124	125	119	123
Seasonal efficiency class (Regulation (UE) 811/2013)	(4)		A	A+	A	A	A+	A+	A+	A+	A	A
EXCHANGERS												
HEAT EXCHANGER USER SIDE IN REFRIGERATION												
Water flow	(1)	m ³ /h	0,83	1,02	1,26	1,65	0,83	1,03	1,27	1,72	1,93	2,25
Pressure drop	(1)	kPa	4,82	5,80	6,34	12,6	4,81	5,99	6,44	13,6	14,00	13,7
HEAT EXCHANGER USER SIDE IN HEATING												
Water flow	(3)	m ³ /h	1,17	1,45	1,81	2,23	1,16	1,43	1,74	2,31	2,56	2,99
Pressure drop	(3)	kPa	9,58	11,7	13,1	22,9	9,48	11,5	12,1	24,6	24,6	24,1
REFRIGERANT CIRCUIT												
No. Compressors		N°	1	1	1	1	1	1	1	1	1	1
No. Circuits		N°	1	1	1	1	1	1	1	1	1	1
FANS												
Air flow		m ³ /s	0,81	0,93	0,93	1,77	0,81	0,93	0,93	1,77	1,61	1,74
Available static pressure		Pa	120	120	120	120	120	120	120	120	120	120
NOISE LEVEL												
Sound power level in cooling	(5)(6)	dB(A)	75	75	75	77	65	70	70	70	70	78
Sound power level in heating	(5)(7)	dB(A)	75	75	75	77	75	75	75	77	77	77
Sound power level in heating	(5)(8)	dB(A)	65	70	70	70	75	75	75	77	77	77
SIZE AND WEIGHT												
A	(9)	mm	900	900	900	900	900	900	900	900	900	900
B	(9)	mm	580	580	580	580	580	580	580	580	580	630
H	(9)	mm	640	940	940	1240	640	940	940	1240	1240	1390
Operating weight	(9)	kg	115	130	135	180	115	130	135	180	200	210

Notes:

- 1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
- 2 Values in compliance with EN14511-3:2013.
- 3 Plant (side) heat exchanger water (in/out) 40°C/45°C; Source (side) heat exchanger air (in) 7°C - 87% R.H.
- 4 Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (UE) N. 811/2013]
- 5 Total sound power of fans, as declared by the maker, at the rated speed of rotation and a useful static head of 120 Pa on the delivery side.
- 6 Sound power level in cooling, indoors.
- 7 Sound power level in heating, indoors.
- 8 Sound power level in cooling, outdoors.
- 9 Unit in standard configuration/execution, without optional accessories.

Certified data in EUROVENT



MICS-CN 0072÷0122

Reversible units, air source for indoor installation 17,3-30,3 kW

MICS-CN is the Climaveneta range air-cooled heat pumps featuring hermetic scroll compressors and full floating technology. Thanks to the ducted centrifugal fans, these units can also be installed outdoor.



Control

Full Floating technology

The new generation electronic controller allows to manage the chiller by using the Full Floating technology, designed by Climaveneta for controlling the efficiency of the fans (floating fans), the circulating pump (floating flow) and the working temperature (floating set point).

This also allows to achieve all the following benefits: improvement of efficiency in both standard and extreme conditions, much lower operating noise in part load conditions, lower installation time, lower time for system set-up, broader operating limits, faster transient after defrosts.

Version

FF Standard version, with built-in hydronic kit

Features

- Structure and base in hot-dip galvanised steel with epoxy powder paint finish.
- Low pressure drop AISI 316 stainless steel plate heat exchangers, fitted with heating element to provide frost protection.
- Control with anti-tamper device accessible from the outside.
- Finned coils made with copper pipes and aluminium fins with large exchange surface area, tested for leaks with dried air at 30 bar.
- User interface with display.
- Electronic expansion valve.
- Available water pipe fittings.
- The circuit includes:
 - Multistage centrifugal pump
 - Air vent valve
 - Differential pressure switch.
 - Expansion tank
 - Safety valve
 - Pressure gauge
 - Drain valve.
- The full range is also available with the Class A efficiency rating (in heating).

Accessories

- Rubber anti-vibration mounting kit
- Removable metal mesh water filter kit
- Coil protection grids
- Remote control kit

Technical data

MICS-CN / FF			0072	0092	0122
Power supply	V/ph/Hz		400/3/50	400/3/50	400/3/50
PERFORMANCE					
COOLING ONLY (GROSS VALUE)					
Cooling capacity	(1)	kW	17,3	21,8	30,3
Total power input	(1)	kW	6,50	9,30	10,7
EER	(1)	kW/kW	2,66	2,34	2,83
ESEER	(1)	kW/kW	3,86	3,75	3,78
COOLING ONLY (EN14511 VALUE)					
Cooling capacity	(1)(2)	kW	17,4	21,9	30,4
EER	(1)(2)	kW/kW	2,77	2,44	3,16
ESEER	(1)(2)	kW/kW	4,27	4,09	4,80
Cooling energy class			A	C	A
HEATING ONLY (GROSS VALUE)					
Total heating capacity	(3)	kW	20,2	26,1	33,9
Total power input	(3)	kW	6,50	8,60	11,2
COP	(3)	kW/kW	3,11	3,03	3,03
HEATING ONLY (EN14511 VALUE)					
Total heating capacity	(3)(2)	kW	20,1	26,0	33,8
COP	(3)(2)	kW/kW	3,20	3,14	3,32
Cooling energy class			A	A	A
SEASONAL EFFICIENCY IN HEATING (EN14825 VALUE)					
PDesign	(4)	kW	14,6	18,0	24,8
SCOP	(4)		3,27	3,36	3,60
Performance η_{js} (Reg. 811/2013 UE)	(4)	%	128	132	141
Seasonal efficiency class (Regulation (UE) 811/2013)	(4)		A+	A+	A+
EXCHANGERS					
HEAT EXCHANGER USER SIDE IN REFRIGERATION					
Water flow	(1)	m ³ /h	2,98	3,75	5,22
Available unit's head	(1)	kPa	133,5	150,2	111,4
HEAT EXCHANGER USER SIDE IN HEATING					
Water flow	(3)	m ³ /h	3,51	4,54	5,89
Available unit's head	(3)	kPa	102,2	122,2	86,7
REFRIGERANT CIRCUIT					
No. Compressors		N°	2	2	2
No. Circuits		N°	1	1	1
FANS					
Air flow		m ³ /s	2,50	2,50	5,00
Available static pressure		Pa	120	120	120
NOISE LEVEL					
Sound power level in cooling	(5)(6)	dB(A)	86	86	89
Sound power level in heating	(5)(7)	dB(A)	86	86	89
Sound power level in heating	(5)(8)	dB(A)	78	78	78
SIZE AND WEIGHT					
A	(9)	mm	1040	1040	1630
B	(9)	mm	790	790	790
H	(9)	mm	2000	2000	2000
Operating weight	(9)	kg	350	370	480

Notes:

- Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
- Values in compliance with EN14511-3:2013.
- Plant (side) heat exchanger water (in/out) 40°C/45°C; Source (side) heat exchanger air (in) 7°C - 87% R.H.
- Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (UE) N. 811/2013]
- Total sound power of fans, as declared by the maker, at the rated speed of rotation and a useful static head of 120 Pa on the delivery side.
- Sound power level in cooling, indoors.
- Sound power level in heating, indoors.
- Sound power level in heating, outdoors.
- Unit in standard configuration/execution, without optional accessories.

Certified data in EUROVENT



BRAT-MC 0011÷0121

Condensing units 5,61-33,4 kW

Outdoor split-system units to be connected with direct expansion coils or remote exchangers. BRAT-MC units are equipped with hermetic rotary scroll compressor and axial-flow fans. External panels and basement are in galvanised sheet steel with paint finish.



Control

HSW15 Electronic Controller

The HSW15 device is the new Climaveneta controller for the management of condensing units.

The new 4-digit display offers clear reading of the variables, while the 14 symbols give an immediate view of machine status for system diagnostics. The 4 keys can be used to navigate the tree menu, password-protected for maximum security.

The electronic controller incorporates a series of protection algorithms in order to prevent damage being done to the main system components.

The most important algorithm includes parameters concerning compressor start-up times in order to prevent over-frequent starting times (minimum delay after last stop and minimum delay after last start). Condensation control is managed by modulating the air flow through the condensation coils, thus by varying the ventilation speed. This system rapidly increases the unit's efficiency and the environmental comfort.

Version

- B** Standard
- SL** Super-low noise version

Features

- Coil protection grid for models 0011÷0061.
- Structure and base in hot-dip galvanised steel with epoxy powder paint finish.
- Control with anti-tamper device accessible from the outside.
- Finned coils made with copper pipes and aluminium fins with large exchange surface area, tested for leaks with dried air at 30 bar.
- User interface with display.
- Phase sequence controller for models 0071÷0121.

Accessories

- Rubber anti-vibration mounting kit
- Coil protection grid for models 0071÷0121
- External main switch kit
- HSW10 remote keyboard

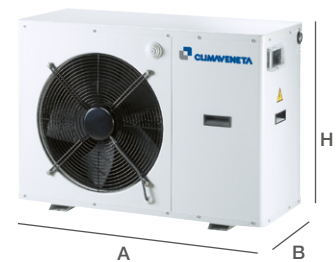


Technical data

BRAT-MC / B			0011	0021	0025	0031	0041	0021	0025	0031
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	400/3/50
PERFORMANCE										
COOLING										
Cooling capacity	(1)	kW	5,61	6,69	7,51	9,60	12,70	6,09	7,49	9,30
Total power input	(1)	kW	1,87	2,18	2,48	3,34	4,15	2,09	2,39	3,25
EER	(1)	kW/kW	3,00	3,07	3,03	2,87	3,06	2,91	3,13	2,86
REFRIGERANT CIRCUIT										
No. Compressors		N°	1	1	1	1	1	1	1	1
No. Circuits		N°	1	1	1	1	1	1	1	1
NOISE LEVEL										
Sound pressure	(2)	dB(A)	34	35	35	35	38	35	35	35
Sound power level in cooling	(3)(4)	dB(A)	65	66	66	66	69	66	66	66
SIZE AND WEIGHT										
A		mm	900	900	900	900	900	900	900	900
B	(5)	mm	370	370	370	370	370	370	370	370
H	(5)	mm	640	640	940	940	1240	640	940	940
Operating weight	(5)	kg	80	85	100	105	125	85	100	105

BRAT-MC / B			0041	0051	0061	0071	0091	0101	0121	
Power supply	V/ph/Hz		400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	
PERFORMANCE										
COOLING										
Cooling capacity	(1)	kW	12,7	14,3	16,6	20,1	22,7	27,8	33,4	
Total power input	(1)	kW	4,25	4,67	5,32	6,90	8,02	8,86	11,8	
EER	(1)	kW/kW	2,99	3,06	3,12	2,91	2,83	3,14	2,83	
REFRIGERANT CIRCUIT										
No. Compressors		N°	1	1	1	1	1	1	1	
No. Circuits		N°	1	1	1	1	1	1	1	
NOISE LEVEL										
Sound pressure	(2)	dB(A)	38	38	38	43	43	44	44	
Sound power level in cooling	(3)(4)	dB(A)	69	69	69	74	74	76	76	
SIZE AND WEIGHT										
A		mm	900	900	900	1450	1450	1450	1450	
B	(5)	mm	370	370	420	550	550	550	550	
H	(5)	mm	1240	1240	1390	1200	1200	1700	1700	
Operating weight	(5)	kg	125	145	155	245	250	320	325	

- Notes:
- 1 Saturated intake temperature (dew) 5 °C; Source (side) heat exchanger air (in) 35 °C.
 - 2 Average sound pressure level at 10 (m.) distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
 - 3 Sound power on the basis of measurements made in compliance with ISO 9614.
 - 4 Sound power level in cooling, outdoors.
 - 5 Unit in standard configuration/execution, without optional accessories.





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