

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

**Version**

FFT Basic version without hydronic kit

**Features**

Structure and base in hot-dip galvanised steel with epoxy powder paint finish.  
 High efficiency, low pressure drop AISI 316 stainless steel plate heat exchangers, fitted with heating element to provide frost protection.  
 External access to control with 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.  
 Air vent valve  
 The hydronic circuit on the FF models includes:  
 Multistage centrifugal pump  
 Expansion tank  
 Safety valve  
 Pressure gauge  
 Drain valve.

**Accessory**

- 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

MICS-N is the Climaveneta range of reversible air-cooled heat pumps. They are outdoor units with axial fans, hermetic Scroll compressors and Full Floating technology. The latter is an intelligent electronic unit providing the perfect answer to residential market requirements: compactness, ease of installation and quietness.

**Controls****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.

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
<b>COOLING ONLY (GROSS VALUE)</b>							
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
<b>COOLING ONLY (EN14511 VALUE)</b>							
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
<b>HEATING ONLY (GROSS VALUE)</b>							
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
<b>HEATING ONLY (EN14511 VALUE)</b>							
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
<b>ENERGY EFFICIENCY</b>							
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>							
<b>Ambient refrigeration</b>							
Prated,c	(10)	kW	-	-	-	-	-
SEER	(10)(11)		-	-	-	-	-
Performance ηs	(10)(12)	%	-	-	-	-	-
<b>SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)</b>							
PDesign	(4)	kW	14,9	18,3	30,6	31,2	34,0
SCOP	(4)(13)		3,38	3,45	3,26	3,39	3,43
Performance ηs	(4)(14)	%	132	135	127	133	134
Seasonal efficiency class	(4)		A+	A+	A+	A+	A+
<b>EXCHANGERS</b>							
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>							
Water flow	(1)	l/s	0,83	1,04	1,45	1,79	2,03
Pressure drop	(1)	kPa	26,4	25,4	32,7	32,3	40,7
<b>HEAT EXCHANGER USER SIDE IN HEATING</b>							
Water flow	(3)	l/s	0,98	1,26	1,64	2,06	2,31
Pressure drop	(3)	kPa	36,7	37,0	41,6	42,7	52,7
<b>REFRIGERANT CIRCUIT</b>							
Compressors nr.		N°	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1
Refrigerant charge		kg	6,60	6,90	11,0	13,3	14,5
<b>NOISE LEVEL</b>							
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
<b>SIZE AND WEIGHT</b>							
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 (EU) N. 813/2013]
  - 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.
  - 10 Seasonal energy efficiency of the cooling environment [REGULATION (EU) N. 2016/2281]
  - 11 Seasonal space heating energy index
  - 12 Seasonal energy efficiency of the space cooling
  - 13 Seasonal performance coefficient
  - 14 Seasonal space heating energy efficiency
- The units highlighted in this publication contain HFC R410A [GWP<sub>100</sub> 2088] fluorinated greenhouse gases.

