

ANKI 020-080

Reversible air/water heat pump

Cooling capacity 5,8 ÷ 24,8 kW
Heating capacity 6,1 ÷ 20,8 kW

- Production of hot water up to 60 °C
- Production of hot domestic water with outside temperatures from -20 °C up to 42 °C



DESCRIPTION

Reversible air/water heat pump for air conditioning systems with cold water production for cooling rooms and hot water for heating and/or domestic hot water services, suitable for connection with small or medium users.

It's optimised for use in heating mode, and can be combined not only with low-temperature emission systems such as floor heating or fan coils, but also conventional radiators.

All the units are equipped with inverter scroll compressors, axial fans, external coils with aluminium fins, a plate heat exchanger on the side. The base the structure and the panels are made of steel treated with polyester paint RAL 9003.

VERSIONS

° Standard

X With inverter pump

FEATURES

Operating field

Working at full load up to -20°C outside air temperature in winter, and up to 46°C in summer. Possibility production technical hot water production up to 60°C (for more information see the technical documentation).

Version with Integrated hydronic kit

If a plug&play solution is required, there's also a version with an integrated hydronic unit containing the main hydraulic components including the water filter (supplied).

■ *The water filter must be installed to validate the warranty.*

CONTROL PCO

Microprocessor adjustment, with keyboard and LCD display, for easy access on the unit is a menu available in several languages.

Adjustment includes complete management of the alarms and their log.

The presence of a programmable timer allows functioning time periods and a possible second set-point to be set.

ACCESSORIES

MODU485K: RS-485 simplified interface for supervision systems with MODBUS protocol.

MULTICONTROL: Allows the simultaneous control of several units (up to 4), fitted with our MODUCONTROL controller, installed in the same hydraulic system.

PGD1: Allows you to control the unit at a distance.

PR3: Simplified remote panel. This makes it possible to carry out the unit's basic controls with the signalling of alarms. Can be made remote with shielded cable up to 150 m.

SAF: Thermal buffer tank kit with instantaneous Domestic Hot Water production.

SDHW: Domestic hot water sensor. To be used with a storage tank for the control of water temperature produced.

SPLW: System water temperature sensor. In most cases the loose supplied sensors for each chiller/heat pump are sufficient. In cases of a common flow/return header this sensor can be used to control the common system supply water temperature for the chillers connected to the header, or it can be used for temperature monitoring

DCPX: Device for condensation temperature control, with continuous speed modulation of fans by using a pressure transducer.

VT: Anti-vibration supports.

BDX: Condensate drip.

BSKW: Electric heaters kit with IP44 panel for remote mounting in a sheltered area.

FACTORY FITTED ACCESSORIES

KR: Anti-freeze electric heater for the plate heat exchanger.

KRB: Electric anti-freeze resistance kit for base.

COMPATIBILITY WITH VMF SYSTEM

For more information about VMF system, refer to the dedicated documentation.

ACCESSORIES COMPATIBILITY

Accessories

Model	Ver	020	025	040	045	070	075	080
MOD485K	°X	•	•	•	•	•	•	•
MULTICONTROL	°X	•	•	•	•	•	•	•
PGD1	°X	•	•	•	•	•	•	•
PR3	°X	•	•	•	•	•	•	•
SAF (1)	°X	•	•	•	•	•	•	•
SDHW (2)	°X	•	•	•	•	•	•	•
SPLW (3)	°X	•	•	•	•	•	•	•

(1) For more information about SAF refer to the dedicated documentation.

(2) Probe required for MULTICONTROL for managing the domestic hot water system.

(3) Probe required for MULTICONTROL to manage the secondary circuit system.

Condensation control temperature

Ver	020	025	040	045	070	075	080
°X	DCPX71						

Antivibration

Ver	020	025	040	045	070	075	080
°X	VT9						

Condensate drip

Ver	020	025	040	045	070	075	080
°X	BDX30	BDX30	BDX30	BDX30	BDX50	BDX50	BDX50

Heater exchanger

Ver	020	025	040	045	070	075	080
°X	KR2						

A grey background indicates the accessory must be assembled in the factory

Electric heater kit for the base

Ver	020	025	040	045	070	075	080
°X	KRB1 (1)	KRB1 (1)	KRB1 (1)	KRB1 (1)	KRB2 (1)	KRB2 (1)	KRB2 (1)

(1) Incompatible with the condensate collection basin accessory with integrated resistance.

A grey background indicates the accessory must be assembled in the factory

CONFIGURATOR

Field	Description
1,2,3,4	ANKI
5,6,7	Size 020, 025, 040, 045, 070, 075, 080
8	Model
H	Heat pump
9	Version
°	Standard
X	With inverter pump
10	Heat recovery
°	Without heat recovery
11	Coils
°	Copper-aluminium
V	Copper-painted aluminium
12	Fans
°	Standard
F	Phase cut
J	Inverter
13	Operating field
°	Electronic thermostatic expansion valve
14	Evaporator
°	Standard
15	Power supply
M	230V ~ 50Hz (1)
T	400V ~ 3N 50Hz (2)
16	Field for future development
°	Future developments

(1) For sizes from 020 → 045

(2) For sizes from 070 → 080

PERFORMANCE SPECIFICATIONS

ANKI - (°) - (230V ~ 50Hz / 400V 3N ~ 50Hz)

Size		020	025	040	045	070	075	080
Cooling performance 12 °C / 7 °C (1)								
Cooling capacity	kW	5,8	7,3	9,4	11,7	13,7	16,4	18,5
Input power	kW	2,0	2,6	3,2	4,3	4,8	6,2	7,7
Cooling total input current - 230V	A	8,3	11,0	14,0	18,0	-	-	-
Cooling total input current - 400V	A	-	-	-	-	7,3	9,4	11,0
EER	W/W	2,93	2,75	2,94	2,75	2,82	2,63	2,41
Water flow rate system side	l/h	1005	1256	1613	2024	2354	2818	3196
Pressure drop system side	kPa	16	22	13	19	17	25	31
Heating performance 40 °C / 45 °C (2)								
Heating capacity	kW	6,2	7,8	9,3	12,3	15,3	17,7	20,2
Input power	kW	1,9	2,4	3,0	4,1	4,8	6,0	7,2
Heating total input current - 230V	A	8,2	10,0	13,0	18,0	-	-	-
Heating total input current - 400V	A	-	-	-	-	7,3	9,1	11,0
COP	W/W	3,23	3,18	3,06	3,01	3,18	2,94	2,80
Water flow rate system side	l/h	1077	1345	1619	2131	2660	3072	3507
Pressure drop system side	kPa	14	21	10	17	17	23	30

(1) Data 14511:2018; System side water heat exchanger 12 °C/7 °C; External air 35 °C

(2) Data 14511:2018; System side water heat exchanger 40 °C/45 °C; Outside air 7 °C d.b. / 6 °C w.b.

ANKI - (X) - (230V ~ 50Hz / 400V 3N ~ 50Hz)

Size		020	025	040	045	070	075	080
Cooling performance 12 °C / 7 °C (1)								
Cooling capacity	kW	5,9	7,4	9,5	11,8	13,8	16,5	18,7
Input power	kW	2,0	2,6	3,1	4,2	4,8	6,2	7,7
Cooling total input current - 230V	A	8,9	12,0	14,0	19,0	-	-	-
Cooling total input current - 400V	A	-	-	-	-	8,3	10,0	12,0
EER	W/W	3,00	2,82	3,01	2,81	2,88	2,68	2,44
Water flow rate system side	l/h	1005	1256	1613	2024	2354	2818	3196
Useful head system side	kPa	75	68	73	60	82	62	43
Heating performance 40 °C / 45 °C (2)								
Heating capacity	kW	6,1	7,7	9,2	12,2	15,2	17,6	20,1
Input power	kW	1,9	2,4	3,0	4,0	4,8	6,0	7,2
Heating total input current - 230V	A	8,7	11,0	14,0	18,0	-	-	-
Heating total input current - 400V	A	-	-	-	-	8,2	10,0	12,0
COP	W/W	3,23	3,19	3,07	3,02	3,19	2,95	2,80
Water flow rate system side	l/h	1077	1345	1619	2131	2660	3072	3507
Useful head system side	kPa	76	67	74	59	73	55	33

(1) Data 14511:2018; System side water heat exchanger 12 °C/7 °C; External air 35 °C

(2) Data 14511:2018; System side water heat exchanger 40 °C/45 °C; Outside air 7 °C d.b. / 6 °C w.b.

ENERGY DATA

Size		020	025	040	045	070	075	080	
Cooling capacity with low leaving water temp (UE n° 2016/2281)									
SEER	°	W/W	3,50	3,54	3,76	3,77	3,49	3,47	3,44
	X	W/W	4,12	4,25	4,38	4,37	3,78	3,81	3,77
η _{sc}	°	%	137,10	138,40	147,30	147,70	136,70	135,60	134,40
	X	%	161,70	167,00	172,30	171,90	148,00	149,40	147,80

Size		020	025	040	045	070	075	080	
UE 811/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ≤ 70 kW (1)									
Pdesignh	°X	kW	-	-	9	12	-	-	-
	°	kW	-	-	3,40	3,20	-	-	-
SCOP	°		-	-	3,60	3,35	-	-	-
	X		-	-	3,60	3,35	-	-	-
η _{sh}	°	%	-	-	133,00	125,00	-	-	-
	X	%	-	-	141,00	131,00	-	-	-
Efficiency energy class	°X		-	-	A+	A+	-	-	-

(1) Efficiencies for low temperature applications (35 °C)

Size		020	025	040	045	070	075	080	
UE 811/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ≤ 70 kW (1)									
Pdesignh	°	kW	6	7	-	-	14	16	19
	X	kW	5	7	-	-	13	16	18
SCOP	°		2,88	2,90	-	-	2,90	2,88	2,83
	X		2,90	2,95	-	-	2,88	2,88	2,83
η _{sh}	°	%	112,00	113,00	-	-	113,00	112,00	110,00
	X	%	113,00	115,00	-	-	112,00	112,00	110,00
Efficiency energy class	°X		A+	A+	-	-	A+	A+	A+

(1) Efficiencies for average temperature applications (55 °C)

ELECTRIC DATA

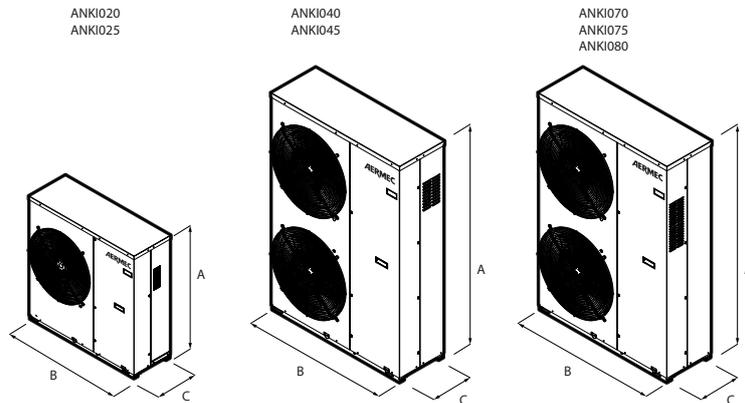
Size			020	025	040	045	070	075	080
Electric data									
Maximum current (FLA)	°	A	12,1	14,1	20,0	23,6	12,5	13,5	15,0
	X	A	12,9	14,9	20,8	24,4	13,6	14,6	16,1
Peak current (LRA)	°	A	8,0	8,0	10,0	10,0	15,0	15,0	15,0
	X	A	8,8	8,8	10,8	10,8	16,1	16,1	16,1
Power supply									
Power supply	°X		230V ~ 50Hz	230V ~ 50Hz	230V ~ 50Hz	230V ~ 50Hz	400V ~ 3N 50Hz	400V ~ 3N 50Hz	400V ~ 3N 50Hz

GENERAL TECHNICAL DATA

Size			020	025	040	045	070	075	080
Compressor									
Type	°X	type	Rotary	Rotary	Rotary	Rotary	Scroll	Scroll	Scroll
Compressor regulation	°X	Type				Inverter			
Number	°X	no.	1	1	1	1	1	1	1
Circuits	°X	no.	1	1	1	1	1	1	1
Refrigerant	°X	type				R410A			
Refrigerant charge	°X	kg	1,4	1,4	2,3	2,3	3,5	3,5	3,5
System side heat exchanger									
Type	°X	type				Brazed plate			
Number	°X	no.	1	1	1	1	1	1	1
Hydraulic connections									
Connections (in/out)	°X	Type				Gas-M			
Size (in)	°X	Ø				1"			
Size (out)	°X	Ø				1"			
Fan									
Type	°X	type				Axial			
Fan motor	°X	type				Asynchronous			
Number	°X	no.	1	1	2	2	2	2	2
Air flow rate	°X	m ³ /h	3590	3590	7480	7480	7400	7400	7400
Sound data calculated in cooling mode (1)									
Sound power level	°X	dB(A)	64,0	65,4	66,7	67,7	67,7	69,0	69,0
Sound pressure level (10 m)	°X	dB(A)	32,7	34,1	35,4	36,3	36,3	37,6	37,6

(1) Sound power calculated on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification. Sound pressure (cold functioning) measured in free field, 10m away from the unit external surface (in compliance with UNI EN ISO 3744).

DIMENSIONS



Size			020	025	040	045	070	075	080
Dimensions and weights									
A	°X	mm	1028	1028	1481	1481	1481	1481	1481
B	°X	mm	1000	1000	1000	1000	1000	1000	1000
C	°X	mm	346	346	346	346	450	450	450
Empty weight	°	kg	80	80	113	113	174	174	174
	X	kg	82	82	115	115	178	178	178

Aermec reserves the right to make any modifications deemed necessary. All data is subject to change without notice. Aermec does not assume responsibility or liability for errors or omissions.

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