

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
- Quick & easy installation



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 louvers, a plate heat exchanger on the side. The base, the structure and the panels are made of galvanized 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 MPC

Microprocessor control, with keyboard and LCD display, for easy access on the unit with 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

AERBAC-ONE: Ethernet communication interface for Bacnet/IP and Modbus TCP/IP protocols, HTTPS protocol for web interface, encrypted commu-

nication protocols and access credential management in accordance with the latest standards. One accessory is provided for each unit control board.

AERBACP: Ethernet communication interface for Bacnet/IP and Modbus TCP/IP protocols. 1 accessory is provided for each unit control board.

AERLINK: Aerlink is a WiFi gateway with an RS485 serial port that allows a wide range of Aermec products (heat pumps/chillers/system controllers) equipped with this interface to connect easily and securely to a Wi-Fi network. It works both as an access point (AP access point) and as a client (WiFi Station), it can be connected to a single generator or system centraliser, allowing anyone to easily integrate them into any network. Thanks to the AerApp and AerPlants apps, which can be used on Android and iOS platforms, the remote management of the air conditioning systems developed by Aermec becomes intuitive and simple.

MOD485K: RS-485 simplified interface for supervision systems with MODBUS protocol.

MULTICONTROL: Allows the simultaneous control of several units (up to 4), 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. For more information about SAF refer to the dedicated documentation.

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

SGD: Electronic expansion that enables connecting to the photovoltaic system and heat pumps to accumulate heat in the DHW tank or in the heating system during the photovoltaic production phase and release it at times when heating demand is highest.

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

PR4: Remote panel with LCD display and touch keyboard that allows carrying out the basic controls, the programming of time ranges and the signalling of the alarms of a single unit.

■ For the installation of the PR4 remote panel, the MOD485K communication interface is indispensable.

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

VT: Anti-vibration supports.

BDX: Condensate drip.

ACCESSORIES COMPATIBILITY

Model	Ver	020	025	040	045	070	075	080
AERBAC-ONE	°X	*	*	*	*	*	*	*
AERBACP	°X	*	*	*	*	*	*	*
AERLINK	°X	*	*	*	*	*	*	*
MOD485K	°X	*	*	*	*	*	*	*
MULTICONTROL	°X	*	*	*	*	*	*	*
PGD1	°X	*	*	*	*	*	*	*
PR3	°X	*	*	*	*	*	*	*
SAF (1)	°X	*	*	*	*	*	*	*
SDHW (2)	°X	*	*	*	*	*	*	*
SGD	°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.

Remote panel

Model	Ver	020	025	040	045	070	075	080
PR4	°X	*	*	*	*	*	*	*

For the installation of the PR4 remote panel, the MOD485K communication interface is indispensable.

Condensation control temperature

Ver	020	025	040	045	070	075	080
°X	DCPX71	DCPX71	DCPX71	DCPX71	DCPX71	DCPX71	DCPX71

Antivibration

Ver	020	025	040	045	070	075	080
°X	VT9	VT9	VT9	VT9	VT9	VT9	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	KR2	KR2	KR2	KR2	KR2	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	KRB1	KRB1	KRB1	KRB2	KRB2	KRB2

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
V	Copper pieps-Coated aluminium fins
°	Copper-aluminium
12	Fans

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.

Field	Description
F	Phase cut
J	Inverter
°	Standard
13	Operating field
°	Electronic thermostatic expansion valve
14	Evaporator
°	Standard - PED
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

Version without pump

ANKI - 230V-1-50Hz

Size		020	025	040	045
Power supply: M					
Cooling performance 12 °C / 7 °C (1)					
Cooling capacity	kW	5,8	7,3	9,4	11,7
Input power	kW	2,0	2,6	3,2	4,3
Cooling total input current	A	8,30	11,10	13,50	18,10
EER	W/W	2,93	2,75	2,94	2,75
Water flow rate system side	l/h	1.005	1.256	1.613	2.024
Pressure drop system side	kPa	16	22	13	19
Heating performance 40 °C / 45 °C (2)					
Heating capacity	kW	6,2	7,8	9,3	12,3
Input power	kW	1,9	2,4	3,0	4,1
Heating total input current	A	8,20	10,40	13,20	17,60
COP	W/W	3,23	3,18	3,06	3,01
Water flow rate system side	l/h	1.077	1.345	1.619	2.131
Pressure drop system side	kPa	14	21	10	17

(1) Data EN 14511:2022; Heat exchanger water (services side) 12°C / 7°C; outside air 35°C

(2) Data EN 14511:2022; System side water heat exchanger 40 °C / 45 °C; Outside air 7 °C d.b. / 6 °C w.b.

ANKI - 400V-3N-50Hz

Size		070	075	080
Power supply: T				
Cooling performance 12 °C / 7 °C (1)				
Cooling capacity	kW	13,7	16,4	18,5
Input power	kW	4,8	6,2	7,7
Cooling total input current	A	7,30	9,40	11,40
EER	W/W	2,82	2,63	2,41
Water flow rate system side	l/h	2.354	2.818	3.196
Pressure drop system side	kPa	17	25	31
Heating performance 40 °C / 45 °C (2)				
Heating capacity	kW	15,3	17,7	20,2
Input power	kW	4,8	6,0	7,2
Heating total input current	A	7,30	9,10	10,80
COP	W/W	3,18	2,94	2,80
Water flow rate system side	l/h	2.660	3.072	3.507
Pressure drop system side	kPa	17	23	30

(1) Data EN 14511:2022; Heat exchanger water (services side) 12°C / 7°C; outside air 35°C

(2) Data EN 14511:2022; System side water heat exchanger 40 °C / 45 °C; Outside air 7 °C d.b. / 6 °C w.b.

Version with pump

ANKI - 230V-1-50Hz

Size		020	025	040	045
Power supply: M					
Cooling performance 12 °C / 7 °C (1)					
Cooling capacity	kW	5,9	7,4	9,5	11,8
Input power	kW	2,0	2,6	3,1	4,2
Cooling total input current	A	8,90	11,70	14,20	18,70
EER	W/W	3,00	2,82	3,01	2,81
Water flow rate system side	l/h	1.005	1.256	1.613	2.024
Useful head system side	kPa	75	68	73	60
Heating performance 40 °C / 45 °C (2)					
Heating capacity	kW	6,1	7,7	9,2	12,2
Input power	kW	1,9	2,4	3,0	4,0
Heating total input current	A	8,70	11,00	13,80	18,30
COP	W/W	3,23	3,19	3,07	3,02
Water flow rate system side	l/h	1.077	1.345	1.619	2.131
Useful head system side	kPa	76	67	74	59

(1) Data EN 14511:2022; Heat exchanger water (services side) 12°C / 7°C; outside air 35°C

(2) Data EN 14511:2022; System side water heat exchanger 40 °C / 45 °C; Outside air 7 °C d.b. / 6 °C w.b.

ANKI - 400V-3N-50Hz

Size		070	075	080
Power supply: T				
Cooling performance 12 °C / 7 °C (1)				
Cooling capacity	kW	13,8	16,5	18,7
Input power	kW	4,8	6,2	7,7
Cooling total input current	A	8,30	10,40	12,50
EER	W/W	2,88	2,68	2,44
Water flow rate system side	l/h	2.354	2.818	3.196
Useful head system side	kPa	82	62	43
Heating performance 40 °C / 45 °C (2)				
Heating capacity	kW	15,2	17,6	20,1
Input power	kW	4,8	6,0	7,2
Heating total input current	A	8,30	10,20	11,90
COP	W/W	3,19	2,95	2,80
Water flow rate system side	l/h	2.660	3.072	3.507
Useful head system side	kPa	73	55	33

(1) Data EN 14511:2022; Heat exchanger water (services side) 12°C / 7°C; outside air 35°C

(2) Data EN 14511:2022; 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
Power supply: M						
SEER - 12/7 (EN14825:2018)						
SEER	°	W/W	3,50	3,54	3,76	3,77
	X	W/W	4,12	4,25	4,38	4,37
Seasonal efficiency	°	%	137,10	138,40	147,30	147,70
	X	%	161,70	167,00	172,30	171,90
Water Regulation (1)	°X	type	FW/VO	FW/VO	FW/VO	FW/VO
Performance in average ambient conditions (average) - 35 °C (2)						
Efficiency energy class	°		A+	A+	A+	A+
	X		A++	A++	A+	A+
Pdesignh	°X	kW	6,00	7,00	9,00	12,00
SCOP	°	W/W	3,58	3,55	3,40	3,20
	X	W/W	3,83	3,83	3,60	3,35
ηsh	°	%	140,00	139,00	133,00	125,00
	X	%	150,00	150,00	141,00	131,00
Water Regulation (1)	°X	type	FW/VO	FW/VO	FW/VO	FW/VO
Performance in average ambient conditions (average) - 55 °C (3)						
Efficiency energy class	°X		A+	A+	-	-
	°	kW	6,00	7,00	-	-
Pdesignh	X	kW	5,00	7,00	-	-
	°	W/W	2,88	2,90	-	-
SCOP	X	W/W	2,90	2,95	-	-
	°	%	112,00	113,00	-	-
ηsh	X	%	113,00	115,00	-	-
Water Regulation (1)	°X	type	FW/VO	FW/VO	-	-

(1) VW/VO - variable water flow rate/variable outlet temperature; FW/VO - fixed water flow rate/variable outlet temperature; VW/FO - variable water flow rate/fixed outlet temperature; FW/FO - fixed water flow rate/fixed outlet temperature.

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

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

Size			070	075	080
Power supply: T					
SEER - 12/7 (EN14825: 2018)					
SEER	°	W/W	3,49	3,47	3,44
	X	W/W	3,78	3,81	3,77
Seasonal efficiency	°	%	136,70	135,60	134,40
	X	%	148,00	149,40	147,80
Water Regulation (1)	°X	type	FW/VO	FW/VO	FW/VO
Performance in average ambient conditions (average) - 35 °C (2)					
Efficiency energy class	°X		A+	A+	A+
Pdesignh	°	kW	14,00	17,00	19,00
	X	kW	14,00	16,00	19,00
SCOP	°	W/W	3,50	3,33	3,30
	X	W/W	3,60	3,43	3,40
ηsh	°	%	137,00	130,00	129,00
	X	%	141,00	134,00	133,00
Water Regulation (1)	°X	type	FW/VO	FW/VO	FW/VO
Performance in average ambient conditions (average) - 55 °C (3)					
Efficiency energy class	°X		A+	A+	A+
Pdesignh	°	kW	14,00	16,00	19,00
	X	kW	13,00	16,00	18,00
SCOP	°	W/W	2,90	2,88	2,83
	X	W/W	2,88	2,88	2,83
ηsh	°	%	113,00	112,00	110,00
	X	%	112,00	112,00	110,00
Water Regulation (1)	°X	type	FW/VO	FW/VO	FW/VO

(1) VW/VO - variable water flow rate/variable outlet temperature; FW/VO - fixed water flow rate/variable outlet temperature; VW/FO - variable water flow rate/fixed outlet temperature; FW/FO - fixed water flow rate/fixed outlet temperature.
(2) Efficiencies for low temperature applications (35 °C)
(3) 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	V/Ph/Hz	230V ~ 50Hz	230V ~ 50Hz	230V ~ 50Hz	230V ~ 50Hz	400V ~ 3N 50Hz	400V ~ 3N 50Hz	400V ~ 3N 50Hz

GENERAL TECHNICAL DATA

Refrigerant circuit

Size			020	025	040	045	070	075	080
Power supply: M									
Compressor									
Type	°X	type	Rotary	Rotary	Rotary	Rotary	-	-	-
Compressor regulation	°X	Type	Inverter	Inverter	Inverter	Inverter	-	-	-
Number	°X	no.	1	1	1	1	-	-	-
Circuits	°X	no.	1	1	1	1	-	-	-
Refrigerant	°X	type	R410A	R410A	R410A	R410A	-	-	-
Total refrigerant charge (1)	°X	kg	1,40	1,40	2,30	2,30	-	-	-
Potential global heating (GWP)	°X		2088	2088	2088	2088	-	-	-
Equivalent CO ₂	°X	tCO ₂ eq	2,92	2,92	4,80	4,80	-	-	-

(1) The load indicated in the table is an estimated and preliminary value. The final value of the refrigerant load is indicated on the unit's technical label. For further information contact the office.

Size			020	025	040	045	070	075	080
Power supply: T									
Compressor									
Type	°X	type	-	-	-	-	Scroll	Scroll	Scroll
Compressor regulation	°X	Type	-	-	-	-	Inverter	Inverter	Inverter
Number	°X	no.	-	-	-	-	1	1	1
Circuits	°X	no.	-	-	-	-	1	1	1
Refrigerant	°X	type	-	-	-	-	R410A	R410A	R410A
Total refrigerant charge (1)	°X	kg	-	-	-	-	3,50	3,50	3,50
Potential global heating (GWP)	°X		-	-	-	-	2088	2088	2088
Equivalent CO ₂	°X	tCO ₂ eq	-	-	-	-	7,31	7,31	7,31

(1) The load indicated in the table is an estimated and preliminary value. The final value of the refrigerant load is indicated on the unit's technical label. For further information contact the office.

System side heat exchanger

Size			020	025	040	045	070	075	080
System side heat exchanger									
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"			

Fans

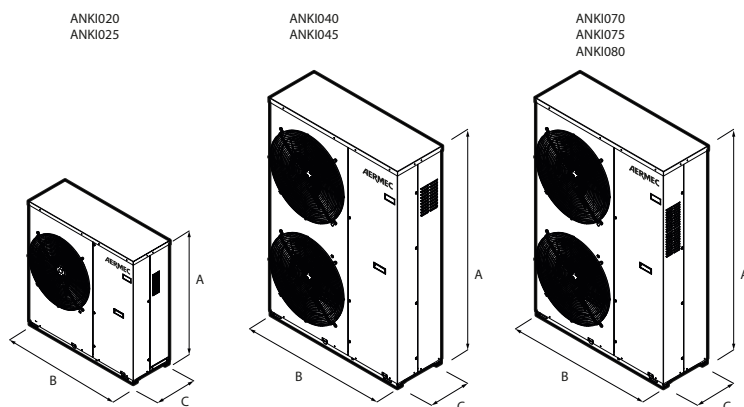
Size			020	025	040	045	070	075	080
Fan									
Type	°X	type				Axial			
Fan motor	°X	type				Asynchronous			
Number	°X	no.	1	1	2	2	2	2	2
Air flow rate	°X	m³/h	3.590	3.590	7.480	7.480	7.400	7.400	7.400

Sound data

Size			020	025	040	045	070	075	080
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	1.028	1.028	1.481	1.481	1.481	1.481	1.481
B	°X	mm	1.000	1.000	1.000	1.000	1.000	1.000	1.000
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.

Aermec S.p.A.
Via Roma, 996 - 37040 Bevilacqua (VR) - Italia
Tel. 0442633111 - Telefax 044293577
www.aermec.com