

# 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 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

**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 net-

work. 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 MOD-BUS 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.

**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.

**ACCESSORIES COMPATIBILITY**

Model	Ver	020	025	040	045	070	075	080
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
<b>1,2,3,4</b>	<b>ANKI</b>
<b>5,6,7</b>	<b>Size</b> 020, 025, 040, 045, 070, 075, 080
<b>8</b>	<b>Model</b> H Heat pump
<b>9</b>	<b>Version</b> ° Standard X With inverter pump
<b>10</b>	<b>Heat recovery</b> ° Without heat recovery
<b>11</b>	<b>Coils</b> V Copper pieps-Coated aluminium fins ° Copper-aluminium
<b>12</b>	<b>Fans</b> F Phase cut J Inverter ° Standard
<b>13</b>	<b>Operating field</b> ° Electronic thermostatic expansion valve
<b>14</b>	<b>Evaporator</b> ° Standard - PED
<b>15</b>	<b>Power supply</b> M 230V ~ 50Hz (1) T 400V ~ 3N 50Hz (2)
<b>16</b>	<b>Field for future development</b> ° 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
<b>Power supply: M</b>					
<b>Cooling performance 12 °C / 7 °C (1)</b>					
Cooling capacity	kW	5,8	7,3	9,4	11,8
Input power	kW	2,0	2,6	3,2	4,2
Cooling total input current	A	8,3	11,0	14,0	18,0
EER	W/W	2,98	2,80	2,98	2,79
Water flow rate system side	l/h	1005	1256	1613	2024
Pressure drop system side	kPa	16	22	13	19
<b>Heating performance 40 °C / 45 °C (2)</b>					
Heating capacity	kW	6,2	7,7	9,3	12,3
Input power	kW	1,9	2,4	3,0	4,0
Heating total input current	A	8,2	10,0	13,0	18,0
COP	W/W	3,26	3,22	3,08	3,03
Water flow rate system side	l/h	1077	1345	1619	2131
Pressure drop system side	kPa	14	21	10	17
<b>Power supply</b>					
Power supply		230-1-50	230-1-50	230-1-50	230-1-50

(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
<b>Power supply: T</b>				
<b>Cooling performance 12 °C / 7 °C (1)</b>				
Cooling capacity	kW	13,7	16,4	18,6
Input power	kW	4,8	6,2	7,6
Cooling total input current	A	7,3	9,4	11,0
EER	W/W	2,85	2,67	2,44
Water flow rate system side	l/h	2354	2818	3196
Pressure drop system side	kPa	17	25	31
<b>Heating performance 40 °C / 45 °C (2)</b>				
Heating capacity	kW	15,3	17,7	20,2
Input power	kW	4,8	6,0	7,1
Heating total input current	A	7,3	9,1	11,0
COP	W/W	3,21	2,97	2,83
Water flow rate system side	l/h	2660	3072	3507
Pressure drop system side	kPa	17	23	30
<b>Power supply</b>				
Power supply		400-3N-50	400-3N-50	400-3N-50

(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
<b>Power supply: M</b>					
<b>Cooling performance 12 °C / 7 °C (1)</b>					
Cooling capacity	kW	5,8	7,3	9,4	11,8
Input power	kW	2,0	2,7	3,2	4,3
Cooling total input current	A	8,9	12,0	14,0	19,0
EER	W/W	2,88	2,72	2,90	2,73
Water flow rate system side	l/h	1005	1256	1613	2024
Useful head system side	kPa	75	68	73	60
<b>Heating performance 40 °C / 45 °C (2)</b>					
Heating capacity	kW	6,2	7,7	9,3	12,3
Input power	kW	2,0	2,5	3,1	4,1
Heating total input current	A	8,7	11,0	14,0	18,0
COP	W/W	3,14	3,11	3,00	2,96
Water flow rate system side	l/h	1077	1345	1619	2131
Useful head system side	kPa	76	67	74	59
<b>Power supply</b>					
Power supply		230-1-50	230-1-50	230-1-50	230-1-50

(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
<b>Power supply: T</b>				
<b>Cooling performance 12 °C / 7 °C (1)</b>				
Cooling capacity	kW	13,8	16,5	18,7
Input power	kW	4,8	6,2	7,7
Cooling total input current	A	8,3	10,0	12,0
EER	W/W	2,88	2,68	2,44
Water flow rate system side	l/h	2354	2818	3196
Useful head system side	kPa	82	62	43
<b>Heating performance 40 °C / 45 °C (2)</b>				
Heating capacity	kW	15,2	17,6	20,1
Input power	kW	4,8	6,0	7,2
Heating total input current	A	8,3	10,0	12,0
COP	W/W	3,19	2,95	2,80
Water flow rate system side	l/h	2660	3072	3507
Useful head system side	kPa	73	55	33
<b>Power supply</b>				
Power supply		400-3N-50	400-3N-50	400-3N-50

(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
<b>Power supply: M</b>						
<b>UE 811/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ≤ 70 kW (1)</b>						
Efficiency energy class	°		A+	A+	A+	A+
	X		A++	A++	A+	A+
Pdesignh	°	kW	6,00	7,00	9,00	12,00
	X		140,00	139,00	133,00	125,00
ηsh	°	%	150,00	150,00	141,00	131,00
	X		3,58	3,55	3,40	3,20
SCOP	°	W/W	3,83	3,83	3,60	3,35
	X	W/W				
<b>UE 811/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ≤ 70 kW (2)</b>						
Efficiency energy class	°		A+	A+	-	-
	X		6,00	7,00	-	-
Pdesignh	°	kW	5,00	7,00	-	-
	X		112,00	113,00	-	-
ηsh	°	%	113,00	115,00	-	-
	X		2,88	2,90	-	-
SCOP	°	W/W	2,90	2,95	-	-
	X	W/W				
<b>SEER - 12/7 (EN14825: 2018) (3)</b>						
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

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

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

(3) Calculation performed with FIXED water flow rate and VARIABLE outlet temperature.

Size			070	075	080
<b>Power supply: T</b>					
<b>UE 811/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ≤ 70 kW (1)</b>					
Efficiency energy class	°		A+	A+	A+
	X		14,00	17,00	19,00
Pdesignh	°	kW	14,00	16,00	19,00
	X		137,00	130,00	129,00
ηsh	°	%	141,00	134,00	133,00
	X		3,50	3,33	3,30
SCOP	°	W/W	3,50	3,43	3,40
	X	W/W			
<b>UE 811/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ≤ 70 kW (2)</b>					
Efficiency energy class	°		A+	A+	A+
	X		14,00	16,00	19,00
Pdesignh	°	kW	13,00	16,00	18,00
	X		113,00	112,00	110,00
ηsh	°	%	112,00	112,00	110,00
	X		2,90	2,88	2,83
SCOP	°	W/W	2,88	2,88	2,83
	X	W/W			
<b>SEER - 12/7 (EN14825: 2018) (3)</b>					
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

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

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

(3) Calculation performed with FIXED water flow rate and VARIABLE outlet temperature.

## ELECTRIC DATA

Size			020	025	040	045	070	075	080
<b>Electric data</b>									
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
<b>Power supply</b>									
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
<b>Compressor</b>									
Type	°	X	type	Rotary	Rotary	Rotary	Rotary	Scroll	Scroll
Compressor regulation	°	X	Type			Inverter			
Number	°	X	no.	1	1	1	1	1	1

(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.

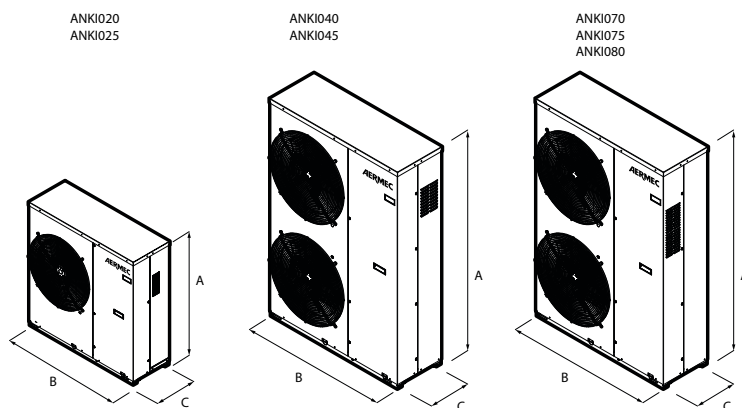
(2) Sound power calculated on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification. Sound pressure (cold functioning) measured in free field, 10m away from the unit external surface (in compliance with UNI EN ISO 3744).

Size			020	025	040	045	070	075	080
Circuits	°X	no.	1	1	1	1	1	1	1
Refrigerant	°X	type				R410A			
Refrigerant charge (1)	°X	kg	1,4	1,4	2,3	2,3	3,5	3,5	3,5
<b>System side heat exchanger</b>									
Type	°X	type				Brazed plate			
Number	°X	no.	1	1	1	1	1	1	1
<b>Hydraulic connections</b>									
Connections (in/out)	°X	Type				Gas-M			
Size (in)	°X	∅				1"			
Size (out)	°X	∅				1"			
<b>Fan</b>									
Type	°X	type				Axial			
Fan motor	°X	type				Asynchronous			
Number	°X	no.	1	1	2	2	2	2	2
Air flow rate	°X	m <sup>3</sup> /h	3590	3590	7480	7480	7400	7400	7400
<b>Sound data calculated in cooling mode (2)</b>									
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) 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.

(2) 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
<b>Dimensions and weights</b>									
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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