

# TBA 1300-4325

## Air-water chiller

Cooling capacity 328 ÷ 1404 kW



- High efficiency also at partial loads
- Microchannel coil
- Low peak current (only 6 Amps!)
- Evaporator with low refrigerant charge
- Available also with R513A (XP10) refrigerant



### DESCRIPTION

Air-cooled chiller designed to meet air conditioning needs in residential / commercial complexes or industrial applications. These are outdoor units with oil free centrifugal compressor, axial fans, micro-channel coils, and shell and tube heat exchangers. The base, the structure and the panels are made of steel treated with polyester paint RAL 9003.

### VERSIONS

- A** High efficiency
- E** Silenced high efficiency
- N** Silenced very high efficiency
- U** Very high efficiency

### FEATURES

#### Operating field

Operation at full load up to 43°C external air temperature depending on size and version. For further details refer to the selection software/technical documentation.

#### Units mono or dual-circuit

The units according to the size are mono or dual-circuit, to ensure maximum efficiency both at full load and at partial load.

#### Oil free centrifugal compressor

Two-stage oil-free centrifugal compressor with magnetic levitation and inverter.

#### Compressor features:

- Operates without oil as bearings are magnetic levitation type
- Continuous load modulation by varying rpm (from 30% to 100%)
- Low peak currents (only 6 Amps!)

#### Aluminium microchannel coils

The whole range uses microchannel condenser coils allowing reduction of refrigerant charge but keeping the same high efficiency.

#### Integrated hydronic kit

Integrated hydronic kit containing the main hydraulic components; available with various configurations, to obtain a solution that allows you to save money and to facilitate installation.

#### CONTROL PCO<sup>5</sup>

##### Units include 1 control board for each circuit.

Microprocessor adjustment, with 7", touch screen keyboard, which allows to navigate intuitively among the various screens, allowing to modify the operating parameters and graphically view the progress of some variables in real time and the adjustment includes complete management of the alarms and their log.

Further features:

- Possibility to control two units in a Master-Slave configuration
- The presence of a programmable timer allows functioning time periods and a possible second set-point to be set.
- The temperature control takes place with the integral proportional logic, based on the water output temperature.

## ACCESSORIES

**AER485P1:** RS-485 interface for supervising systems with MODBUS protocol. 1 accessory is provided for each unit control board.

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

**AERNET:** The device allows the control, the management and the remote monitoring of a Chiller with a PC, smartphone or tablet using Cloud connection. AERNET works as Master while every unit connected is configured as Slave (max. 6 control boards). Also, with a simple click is possible to save a log file with all the connected unit datas in the personal terminal for post analysis.

**MULTICHILLER-EVO:** Control, switch-on and switch-off system of the single chillers where multiple units are installed in parallel (max. no. 9), always ensuring constant flow rate to the evaporators.

**AVX:** Spring anti-vibration supports.

## FACTORY FITTED ACCESSORIES

**XLATB:** This kit allows to extend the working range of the unit from 0 °C to -10 °C ambient temperature, thanks to an additional electric heater and a special insulating material for the heat exchanger.

**GP\_T:** Anti-intrusion grid kit

## ACCESSORIES COMPATIBILITY

Model	Ver	1300	1350	2300	2325	2350	3300	3320	3340	3350	4325
AER485P1	A,E,N,U	*	*	*		*	*		*	*	
AER485P1 x no. 2	A,E,N,U				*			*			*
AERBACP	A,E,N,U	*	*	*		*	*		*	*	
AERBACP x no. 2	A,E,N,U				*			*			*
AERNET	A,E,N,U	*	*	*	*	*	*	*	*	*	*
MULTICHILLER-EVO	A,E,N,U	*	*	*	*	*	*	*	*	*	*

## Antivibration

Ver	1300	1350	2300	2325	2350	3300	3320	3340	3350	4325
<b>Integrated hydronic kit: 00, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, KF, KG, KH, KI, KJ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, TF, TG, TH, TI, TJ</b>										
A, E	AVX. (1)	AVX500	AVX588	AVX592	AVX589	AVX. (1)	AVX593	AVX. (1)	AVX. (1)	AVX. (1)
N, U	AVX. (1)	AVX500	AVX592	AVX589	AVX. (1)	AVX593	AVX. (1)	AVX. (1)	AVX. (1)	AVX. (1)

(1) Contact us.

## Kit low temperature

Ver	1300	1350	2300	2325	2350	3300	3320	3340	3350	4325
A, E	XLATB1	XLATB3	XLATB5	XLATB6	XLATB7	XLATB6	XLATB7	XLATB7	XLATB8	XLATB8
N, U	XLATB2	XLATB5	XLATB5	XLATB5	XLATB7	XLATB6	XLATB6	XLATB7	XLATB8	XLATB8

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

## Anti-intrusion grid

Ver	1300	1350	2300	2325	2350	3300	3320	3340	3350	4325
A, E	GP3T	GP4T	GP5T	GP6T	GP7T	GP8T	GP9T	GP10T	GP10T	GP11T
N, U	GP3T	GP4T	GP6T	GP7T	GP8T	GP9T	GP10T	GP11T	GP11T	GP11T

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

## CONFIGURATOR

Field	Description
1,2,3	<b>TBA</b>
4,5,6,7	<b>Size</b> 1300, 1350, 2300, 2325, 2350, 3300, 3320, 3340, 3350, 4325
8	<b>Model</b>
	° Cooling only
9	<b>Heat recovery</b>
	° Without heat recovery
10	<b>Version</b>
	A High efficiency
	E Silenced high efficiency
	N Silenced very high efficiency
	U Very high efficiency
11	<b>Coils</b>
	I Copper-aluminium
	O Coated aluminium microchannel
	R Copper pipes-copper fins
	S Copper pipes-Tinned copper fins
	V Copper pipes-Coated aluminium fins
	° Aluminium microchannel
12	<b>Fans</b>
	J Inverter
13	<b>Power supply</b>
	° 400V ~ 3 50Hz with magnet circuit breakers
14,15	<b>Integrated hydronic kit</b>
	00 Without hydronic kit
	PA Pump A
	PB Pump B
	PC Pump C
	PD Pump D
	PE Pump E
	PF Pump F
	PG Pump G
	PH Pump H
	PI Pump I
	PJ Pump J (1)
	DA Pump A + stand-by pump
	DB Pump B + stand-by pump
	DC Pump C + stand-by pump
	DD Pump D + stand-by pump
	DE Pump E + stand-by pump

Field	Description
DF	Pump F + stand-by pump
DG	Pump G + stand-by pump
DH	Pump H + stand-by pump
DI	Pump I + stand-by pump
DJ	Pump J + stand-by pump (1)
IA	Pump A equipped with inverter device to work at fixed speed
IB	Pump B equipped with inverter device to work at fixed speed
IC	Pump C equipped with inverter device to work at fixed speed
ID	Pump D equipped with inverter device to work at fixed speed
IE	Pump E equipped with inverter device to work at fixed speed
IF	Pump F equipped with inverter device to work at fixed speed
IG	Pump G equipped with inverter device to work at fixed speed
IH	Pump H equipped with inverter device to work at fixed speed
II	Pump I equipped with inverter device to work at fixed speed
IJ	Pump J equipped with inverter device to work at fixed speed (1)
JA	Pump A+stand-by pump, both equipped with inverter to work at fixed speed
JB	Pump B+stand-by pump, both equipped with inverter to work at fixed speed
JC	Pump C+stand-by pump, both equipped with inverter to work at fixed speed
JD	Pump D+stand-by pump, both equipped with inverter to work at fixed speed
JE	Pump E+stand-by pump, both equipped with inverter to work at fixed speed
JF	Pump F+stand-by pump, both equipped with inverter to work at fixed speed
JG	Pump G+stand-by pump, both equipped with inverter to work at fixed speed
JH	Pump H+stand-by pump, both equipped with inverter to work at fixed speed
JI	Pump I+stand-by pump, both equipped with inverter to work at fixed speed
JJ	Pump J+stand-by pump, both equipped with inverter to work at fixed speed (1)
KF	Doble pump F with inverter device to work at fixed speed
KG	Doble pump G with inverter device to work at fixed speed
KH	Doble pump H with inverter device to work at fixed speed
KI	Doble pump I with inverter device to work at fixed speed
KJ	Doble pump J with inverter device to work at fixed speed (1)
TF	Double pump F
TG	Double pump G
TH	Double pump H
TI	Double pump I
TJ	Double pump J (1)
16	<b>Refrigerant gas</b>
	G R513A (XP10)
	° R134a

(1) For all configurations including pump J please contact the factory

## PERFORMANCE SPECIFICATIONS

### TBA - (A)

Size		1300	1350	2300	2325	2350	3300	3320	3340	3350	4325
<b>Cooling performance 12 °C / 7 °C (1)</b>											
Cooling capacity	kW	330,7	437,3	633,9	741,5	871,9	974,8	1087,0	1155,9	1256,9	1404,1
Input power	kW	95,3	125,9	183,0	214,9	254,8	279,5	314,9	334,9	369,1	413,3
Cooling total input current	A	150,7	200,9	286,2	346,4	416,6	446,9	502,1	547,3	592,3	667,6
EER	W/W	3,47	3,47	3,46	3,45	3,42	3,49	3,45	3,45	3,41	3,40
Water flow rate system side	l/h	56903	75228	109011	127504	149890	167604	186876	198728	216075	241381
Pressure drop system side	kPa	60	55	48	42	30	52	45	54	36	42

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

### TBA - (E)

Size		1300	1350	2300	2325	2350	3300	3320	3340	3350	4325
<b>Cooling performance 12 °C / 7 °C (1)</b>											
Cooling capacity	kW	330,7	437,3	633,9	741,5	871,9	974,8	1087,0	1155,9	1256,9	1404,1
Input power	kW	95,3	125,9	183,0	214,9	254,8	279,5	314,9	334,9	369,1	413,3
Cooling total input current	A	150,7	200,9	286,2	346,4	416,6	446,9	502,1	547,3	592,3	667,6
EER	W/W	3,47	3,47	3,46	3,45	3,42	3,49	3,45	3,45	3,41	3,40
Water flow rate system side	l/h	56903	75228	109011	127504	149890	167604	186876	198728	216075	241381
Pressure drop system side	kPa	60	55	48	42	30	52	45	54	36	42

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

## TBA - (U)

Size		1300	1350	2300	2325	2350	3300	3320	3340	3350	4325
<b>Cooling performance 12 °C / 7 °C (1)</b>											
Cooling capacity	kW	328,1	443,8	633,5	758,5	876,4	985,0	1088,0	1154,9	1256,9	1342,4
Input power	kW	92,3	124,4	178,8	213,2	245,5	275,4	306,8	326,3	358,1	386,6
Cooling total input current	A	145,7	200,9	281,4	341,6	401,9	437,1	487,3	522,6	582,6	627,6
EER	W/W	3,56	3,57	3,54	3,56	3,57	3,58	3,55	3,54	3,51	3,47
Water flow rate system side	l/h	56452	76308	108940	130424	150669	169356	187070	198556	216075	230760
Pressure drop system side	kPa	51	25	49	50	30	53	56	53	36	38

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

## TBA - (N)

Size		1300	1350	2300	2325	2350	3300	3320	3340	3350	4325
<b>Cooling performance 12 °C / 7 °C (1)</b>											
Cooling capacity	kW	328,1	443,8	633,5	758,5	876,4	985,0	1088,0	1154,9	1256,9	1342,4
Input power	kW	92,3	124,4	178,8	213,2	245,5	275,4	306,8	326,3	358,1	386,6
Cooling total input current	A	145,7	200,9	281,4	341,6	401,9	437,1	487,3	522,6	582,6	627,6
EER	W/W	3,56	3,57	3,54	3,56	3,57	3,58	3,55	3,54	3,51	3,47
Water flow rate system side	l/h	56452	76308	108940	130424	150669	169356	187070	198556	216075	230760
Pressure drop system side	kPa	51	25	49	50	30	53	56	53	36	38

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

## ENERGY INDICES (REG. 2016/2281 EU)

Size		1300	1350	2300	2325	2350	3300	3320	3340	3350	4325	
<b>SEER - (EN14825:2018) 12/7 with inverter fans (1)</b>												
SEER	A,E	W/W	5,15	5,23	5,48	5,25	5,54	5,54	5,51	5,49	5,57	5,35
	N,U	W/W	5,35	5,41	5,60	5,48	5,76	5,80	5,62	5,71	5,73	5,62
Seasonal efficiency	A,E	%	203,1%	206,0%	216,0%	206,8%	218,4%	218,4%	217,5%	216,5%	219,8%	211,0%
	N,U	%	211,0%	213,5%	221,0%	216,1%	227,3%	229,1%	221,9%	225,4%	226,3%	221,6%
<b>SEPR - (EN14825: 2018) High temperature with inverter fans (2)</b>												
SEPR	A,E	W/W	6,31	6,65	6,11	6,32	6,41	6,13	6,26	6,33	6,28	6,12
	N,U	W/W	6,47	6,61	6,52	6,80	6,49	6,62	6,57	6,50	6,47	6,40

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

(2) Calculation performed with FIXED water flow rate.

## ELECTRIC DATA

Size		1300	1350	2300	2325	2350	3300	3320	3340	3350	4325	
<b>Electric data</b>												
Maximum current (FLA)	A,E	A	165,0	249,0	319,0	404,0	488,0	483,0	568,0	727,0	727,0	797,0
	N,U	A	165,0	249,0	329,0	413,0	498,0	493,0	577,0	737,0	737,0	797,0
Peak current (LRA)	A,E	A	36,0	45,0	200,0	210,0	305,0	374,0	470,0	565,0	565,0	720,0
	N,U	A	36,0	45,0	210,0	305,0	315,0	384,0	479,0	575,0	575,0	720,0

## GENERAL TECHNICAL DATA

Size		1300	1350	2300	2325	2350	3300	3320	3340	3350	4325	
<b>Compressor</b>												
Type	A,E,N,U	type	Centrifugal									
Compressor regulation	A,E,N,U	Type	Inverter									
Number	A,E,N,U	no.	1	1	2	2	2	3	3	3	4	
Circuits	A,E,N,U	no.	1	1	1	2	1	1	2	1	2	
Refrigerant	A,E,N,U	type	R134a									
Refrigerant charge (1)	A,E	kg	81,0	166,0	152,0	243,0	285,0	264,0	306,0	317,0	387,0	398,0
	N,U	kg	81,0	166,0	163,0	254,0	296,0	275,0	317,0	328,0	398,0	398,0
<b>System side heat exchanger</b>												
Type	A,E,N,U	type	Shell and tube									
Number	A,E,N,U	no.	1	1	1	1	1	1	1	1	1	
<b>Hydraulic connections</b>												
Connections (in/out)	A,E,N,U	Type	Grooved joints									
Sizes (in/out)	A,E	Ø	3"	4"	6"	6"	6"	6"	6"	6"	8"	8"
	N,U	Ø	6"	6"	6"	6"	6"	6"	6"	6"	8"	8"
<b>Fan</b>												
Type	A,E,N,U	type	axials									
Fan motor	A,E,N,U	type	Inverter									
Number	A,E	no.	6	8	10	12	14	16	18	20	20	22
	N,U	no.	6	8	12	14	16	18	20	22	22	22
Air flow rate	A,E	m³/h	112920	150560	188200	225840	263480	301120	338760	376400	376400	414040
	N,U	m³/h	112920	150560	225840	263480	301120	338760	376400	414040	414040	414040

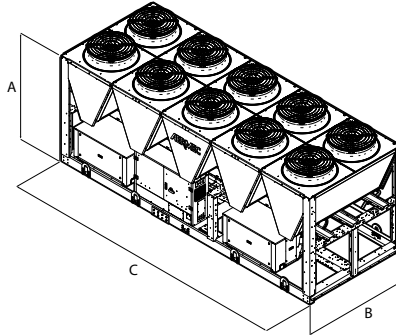
(1) The load indicated in the table is an estimated and preliminary value. The final value of the refrigerant load is indicated on the unit's technical label. For further information contact the office.

## SOUND DATA

Size		1300	1350	2300	2325	2350	3300	3320	3340	3350	4325
<b>Sound data calculated in cooling mode (1)</b>											
Sound power level	A	dB(A)	88,3	89,9	90,8	92,5	93,0	92,8	93,9	95,3	95,3
	E	dB(A)	82,3	83,9	84,8	86,5	87,0	86,8	87,9	89,3	89,3
	N	dB(A)	82,3	84,0	85,3	86,8	87,1	87,1	88,1	89,5	89,5
	U	dB(A)	88,3	90,0	91,3	92,8	93,1	93,1	94,1	95,5	95,5
Sound pressure level (10 m)	A	dB(A)	56,1	57,5	58,3	59,9	60,2	59,9	60,9	62,2	62,1
	E	dB(A)	50,1	51,5	52,3	53,9	54,2	53,9	54,9	56,2	56,1
	N	dB(A)	50,1	51,6	52,7	54,0	54,2	54,1	55,0	56,3	56,1
	U	dB(A)	56,1	57,6	58,7	60,0	60,2	60,1	61,0	62,3	62,1

(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		1300	1350	2300	2325	2350	3300	3320	3340	3350	4325
<b>Integrated hydronic kit: 00, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, KF, KG, KH, KI, KJ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, TF, TG, TH, TI, TJ</b>											
<b>Dimensions and weights</b>											
A	A,E,N,U	mm	2450	2450	2450	2450	2450	2450	2450	2450	2450
B	A,E,N,U	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200
C	A,E	mm	3570	4760	5950	7140	8330	9520	10710	11900	13090
	N,U	mm	3570	4760	7140	8330	9520	10710	11900	13090	13090
<b>Weights</b>											
Empty weight	A	kg	2770	3480	4500	5550	6390	6760	7950	8240	8600
	E	kg	2850	3590	4630	5720	6580	6980	8190	8510	8870
	N	kg	2880	3810	5120	5950	7060	7430	8200	8950	9320
	U	kg	2800	3700	4950	5760	6840	7180	7920	8650	9010
Weight functioning	A	kg	2840	3560	4630	5730	6650	6960	8210	8500	8940
	E	kg	2920	3670	4760	5900	6840	7180	8450	8770	9210
	N	kg	2960	3940	5250	6100	7320	7630	8410	9210	9660
	U	kg	2880	3830	5080	5910	7100	7380	8130	8910	9350

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