

TBX

1401/4102 cooling only

Air/Water chillers for outdoor installation
With two-stage centrifugal compressor shell and tube heat exchangers and axial fans
Cooling capacity 259,3 ÷ 863,3 kW



Aermec participates in the EUROVENT: LCP programme. The products are listed on the site www.eurovent-certification.com



- **HIGH SEASONAL EFFICIENCY**
- **BUILT-IN DEVICE TO REDUCE STARTING CURRENT (ONLY 6 AMPS!)**
- **FAST AND EASY INSTALLATION**

Characteristics

- Available in 12 sizes
- Cooling only version
- New generation two-stage oil-free centrifugal compressor with magnetic levitation bearings
- Refrigerant R134a
- Exceptional high efficiency at part load (up to 30% higher ESEER compared to standard chillers)
- Electronic expansion valve for precise control
- Flooded shell and tube evaporator optimised for refrigerant R134a
- Axial fans for extremely quiet operation
- Compressor features:
 1. Operates without oil as bearings are magnetic levitation type. Vibration free and very quiet
 2. Provided with inverter technology that permits capacity modulation down to 25%
 3. Integrated controller that reduces starting current to 6 A only
- **Standard (°) and Low noise (L) Versions:**
 1. Operating limit up to 42 °C external air temperature
 2. Compressor acoustical enclosure for low noise operation
 3. Fan speed control
- **High efficiency (A) and High efficiency low noise (E) Versions:**
 1. Operating limit up to 42 °C external air temperature
 2. Compressor acoustical enclosure for low noise operation
 3. EC (Electronically Commutated) fan
 - Modulating capacity control microprocessor system
 - Evaporator trace heating.
 - LCD user interface: colour touch-screen with simple and intuitive graphical menu
 - Multilingual display panel
 - Compact sizes
 - Metal control panel with anti-corrosion polyester paint

Accessories

- **AER485P1:** RS-485 interface for supervision systems with MODBUS protocol.
- **AERNET:** In Master operating mode, allows the remote control of up to six Slave units equipped with RS485 serial connections. Remote control is available on via PC, tablet or smartphone thanks to a Cloud Server connection. The chronological recording of the activities of the connected units (log files) is also available for eventual post analysis.
- **MULTICHILLER_EVO:** Control system to switch the individual chillers on and off, and command them, in a system in which several units are installed in parallel, always ensuring a constant delivery to the exchanger.
- **AVX:** Spring anti-vibration mounts. For compatibility of the AVX mounts refer to the technical manual.
- **GP:** Protective grille. Condenser coil external protection against accidental or hail damage.
- **Factory fitted.**
 - **PTW:** Remote control of the chiller operating functions.

Compatibility of accessories

TBX	VERS.	1401	1801	2001	2302	2502	2652	2802	3202	3502	3702	3802	4102
AER485P1	Alls	•	•	•	•	•	•	•	•	•	•	•	•
AERNET	Alls	•	•	•	•	•	•	•	•	•	•	•	•
MULTICHILLER_EVO	Alls	•	•	•	•	•	•	•	•	•	•	•	•
GP300M	L E	•											
GP400M	L E		•										
GP500M	L E			•	•	•							
GP 300M+300M	L E						•						
GP 300M+400M	L E							•	•	•			
GP 400M+400M	L E										•		
GP 400M+500M	L E											•	
GP 500M+500M	L E												•
GP 300M	° A	•											
GP 400M	° A		•										
GP 500M	° A			•	•	•							
GP 300M+300M	° A						•						
GP 300M+400M	° A							•	•				
GP 400M+400M	° A									•			
GP 400M+500M	° A										•		
GP 500M+500M	° A											•	•
AVX	°	570	571	571	572	573	574	575	575	576	576	577	577
	L	570	571	571	572	573	574	575	575	575	576	576	577
	A	570	571	571	572	573	574	575	575	576	576	578	578
	E	570	571	571	572	573	574	575	575	575	576	576	577

Note:

AER485P1 - GP Accessory only factory fitted.

Unit Configurator

By suitably combining the numerous options available it is possible to configure each model in such a way as to meet the most demanding of system requirements.

Code:

TBX

Size:

1401, 1801, 2001, 2302, 2502, 2652, 2802, 3202, 3502, 3702, 3802, 4102

Model:

° - Cooling only

Version:

° - Standard

L - Standard low noise

A - High efficiency

E - High efficiency low noise

Condenser coil:

° - Aluminium

R - Copper

S - Tinned copper

V - Anti-corrosion coated aluminium

Fan:

° - Standard

I - EC (Electronically Commutated)
standard on "A" and "E" Versions

Power supply:

° - 400V 3~ 50Hz with circuit breakers

Note:

– Electronic expansion valve standard

Technical Data

TBX - °			1401	1801	2001	2302	2502	2652	2802	3202	3502	3702	3802	4102
V/ph/Hz			400V/3/50Hz											
12°C / 7°C	Cooling capacity	(1) kW	287,7	368,6	407,6	469,7	509,7	545,7	587,7	669,7	736,7	781,6	816,6	845,6
	Total power input	(1) kW	91,6	117,2	129,3	149,0	161,4	173,0	184,9	212,2	233,3	247,4	258,8	268,2
	EER	(1)	3,14	3,15	3,15	3,15	3,16	3,15	3,18	3,16	3,16	3,16	3,16	3,15
	Water flow rate	(1) l/h	49481	63398	70099	80751	87623	93808	101025	115113	126624	134356	140369	145352
	Pressure drop	(1) kPa	30	17	15	15	15	15	14	15	16	17	15	16
Cooling capacity with low leaving water temp (UE n° 2016/2281)														
ηsc		%	187,6	193,6	195,0	194,7	195,6	195,7	197,8	196,9	197,2	197,3	197,8	197,5
SEER			4,77	4,92	4,95	4,94	4,97	4,97	5,02	5,00	5,01	5,01	5,02	5,01

TBX - L			1401	1801	2001	2302	2502	2652	2802	3202	3502	3702	3802	4102
12°C / 7°C		V/ph/Hz	400V/3/50Hz											
	Cooling capacity	(1) kW	259,3	343,1	392,6	435,9	464,3	518,8	543,7	595,6	636,0	688,5	743,0	785,4
	Total power input	(1) kW	88,9	117,9	134,7	149,6	159,3	177,5	186,2	203,8	217,7	236,3	255,0	269,0
	EER	(1)	2,92	2,91	2,92	2,91	2,91	2,92	2,92	2,92	2,92	2,91	2,91	2,92
	Water flow rate	(1) l/h	44602	59000	67504	74961	79823	89187	93465	102382	109323	118343	127724	135009
	Pressure drop	(1) kPa	30	15	19	13	15	16	15	15	17	16	16	17
	Cooling capacity with low leaving water temp (UE n° 2016/2281)													
ηsc	%	184,9	189,0	189,1	196,9	196,9	198,0	198,2	199,0	198,9	198,9	199,2	199,7	
SEER		4,70	4,80	4,80	5,00	5,00	5,03	5,03	5,05	5,05	5,05	5,06	5,07	

TBX - A			1401	1801	2001	2302	2502	2652	2802	3202	3502	3702	3802	4102
12°C / 7°C		V/ph/Hz	400V/3/50Hz											
	Cooling capacity	(1) kW	287,6	371,6	416,6	461,5	503,5	539,5	595,5	669,4	741,4	795,4	833,4	863,3
	Total power input	(1) kW	86,0	110,9	124,8	138,1	150,4	161,1	177,3	199,7	220,8	237,3	248,4	258,1
	EER	(1)	3,34	3,35	3,34	3,34	3,35	3,35	3,36	3,35	3,36	3,35	3,36	3,34
	Water flow rate	(1) l/h	49481	63913	71645	79376	86592	92778	102399	115113	127484	136761	143290	148445
	Pressure drop	(1) kPa	50	41	43	44	44	44	41	43	45	46	45	48
Cooling capacity with low leaving water temp (UE n° 2016/2281)														
	ηsc	%	192,2	196,0	195,3	200,3	201,3	201,8	203,6	203,4	203,8	203,5	204,2	203,1
	SEER		4,88	4,98	4,96	5,08	5,11	5,12	5,17	5,16	5,17	5,16	5,18	5,15

TBX - E			1401	1801	2001	2302	2502	2652	2802	3202	3502	3702	3802	4102
12°C / 7°C	V/ph/Hz		400V/3/50Hz											
	Cooling capacity	(1) kW	265,9	355,6	407,5	442,3	474,8	534,0	557,5	615,6	652,2	709,3	770,5	815,3
	Total power input	(1) kW	84,8	113,6	130,2	141,2	152,2	170,3	177,0	196,9	207,8	226,5	246,1	260,1
	EER	(1)	3,13	3,13	3,13	3,13	3,12	3,14	3,15	3,13	3,14	3,13	3,13	3,14
	Water flow rate	(1) l/h	45736	61164	70099	76060	81661	91833	95870	105852	112158	121968	132483	140198
	Pressure drop	(1) kPa	44	38	49	40	46	48	46	44	49	47	48	48
	Cooling capacity with low leaving water temp (UE n° 2016/2281)													
ηsc	%	183,1	185,5	183,9	192,8	191,1	192,4	193,9	193,5	193,4	193,8	193,9	194,5	
SEER		4,65	4,71	4,67	4,90	4,85	4,89	4,92	4,91	4,91	4,92	4,92	4,92	4,94

Date (14511:2018)

(1) Water system side 12°C/7°C, External air 35°C

Technical Data

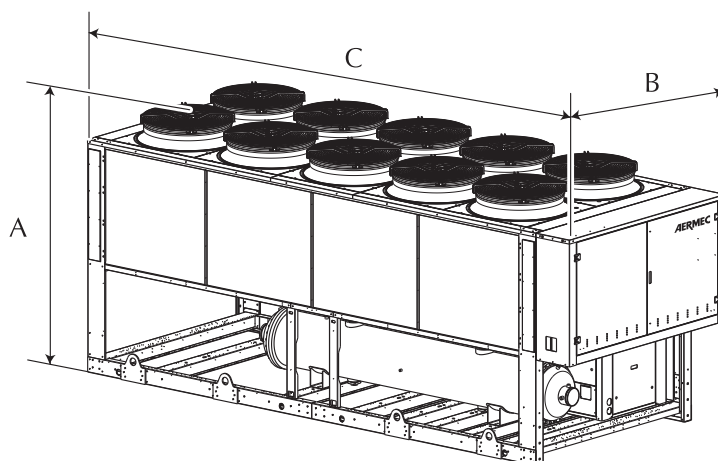
			1401	1801	2001	2302	2502	2652	2802	3202	3502	3702	3802	4102	
Electrical data															
400V	Total input currente (cooling)	°	A	147	195	216	242	260	280	299	355	389	412	431	447
	Maximum current (FLA)		A	153	234	240	300	300	306	312	462	468	474	480	480
	Starting current (LRA)		A	24	30	36	126	126	132	138	188	194	200	206	206
400V	Total input currente (cooling)	L	A	144	198	225	244	258	287	308	345	366	396	426	449
	Maximum current (FLA)		A	153	234	240	300	300	306	312	462	462	468	474	480
	Starting current (LRA)		A	24	30	36	126	126	132	138	188	188	194	200	206
400V	Total input currente (cooling)	A	A	134	179	200	217	235	251	276	322	355	382	399	413
	Maximum current (FLA)		A	159	242	250	310	310	318	326	476	484	492	500	500
	Starting current (LRA)		A	30	38	46	136	136	144	152	202	210	218	226	226
400V	Total input currente (cooling)	E	A	132	176	209	221	238	265	275	320	337	366	396	417
	Maximum current (FLA)		A	159	242	250	310	310	318	326	476	476	484	492	500
	Starting current (LRA)		A	30	38	46	136	136	144	152	202	202	210	218	226
Centrifugal inverter oil-free Compressor															
Compressors / Circuit			n°/n°	1/1	1/1	1/1	2/1	2/1	2/1	2/1	2/1	2/1	2/1	2/1	2/1
Refrigerant			Type	R134a											
Heat exchanger system side															
Exchanger			Type/n°	Flooded shell & tube/1											
Electrical heater			n°/W	1/170	1/250	1/250	1/250	1/250	1/250	1/250	1/250	1/250	1/250	1/250	1/250
Axial fans															
Fan	°	Type/n°	Axial/6	Axial/8	Axial/10	Axial/10	Axial/10	Axial/10	Axial/12	Axial/14	Axial/14	Axial/16	Axial/18	Axial/20	Axial/20
Air flow rate (cooling)		m³/h	94200	132800	166000	166000	157000	199200	232400	232400	265600	298800	332000	314000	314000
Fan	L	Type/n°	Axial/6	Axial/8	Axial/10	Axial/10	Axial/10	Axial/10	Axial/12	Axial/14	Axial/14	Axial/14	Axial/16	Axial/18	Axial/20
Air flow rate (cooling)		m³/h	69720	92960	116200	116200	109900	139440	162680	162680	153860	185920	209160	232400	232400
Fan	A	Type/n°	Ax.EC/6	Ax.EC/8	Ax.EC/10	Ax.EC/10	Ax.EC/10	Ax.EC/10	Ax.EC/12	Ax.EC/14	Ax.EC/14	Ax.EC/16	Ax.EC/18	Ax.EC/20	Ax.EC/20
Air flow rate (cooling)		m³/h	94200	132800	166000	166000	157000	199200	232400	232400	265600	298800	332000	314000	314000
Fan	E	Type/n°	Ax.EC/6	Ax.EC/8	Ax.EC/10	Ax.EC/10	Ax.EC/10	Ax.EC/10	Ax.EC/12	Ax.EC/14	Ax.EC/14	Ax.EC/14	Ax.EC/16	Ax.EC/18	Ax.EC/20
Air flow rate (cooling)		m³/h	69720	92960	116200	116200	109900	139440	162680	162680	153860	185920	209160	232400	232400
Sound data (cooling)															
Sound power level	°	dB(A)	88	89	90	90	90	91	92	92	93	93	93	93	93
Sound pressure level		dB(A)	56	57	58	58	58	58	59	59	60	60	60	60	60
Sound power level	L	dB(A)	83	84	85	85	85	86	87	87	87	88	88	88	88
Sound pressure level		dB(A)	51	52	53	53	53	53	54	54	54	55	55	55	55
Sound power level	A	dB(A)	88	89	90	90	90	91	92	92	93	93	93	93	93
Sound pressure level		dB(A)	56	57	58	58	58	58	59	59	60	60	60	60	60
Sound power level	E	dB(A)	81	82	83	83	83	84	85	85	85	86	86	86	86
Sound pressure level		dB(A)	49	50	51	51	51	51	52	52	52	53	53	53	53

Sound power Aermec determines sound power values on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification.

Sound pressure Sound pressure in free field, at 10 m distance from the external surface of the unit (in accordance with UNI EN ISO 3744).

Note: For more information, refer to the selection program or the technical documentation available on the website www.aermec.com

Dimensions (mm)



Model. TBX			1401	1801	2001	2302	2502	2652	2802	3202	3502	3702	3802	4102
A	All	mm	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450
B	All	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
C	9A	mm	3780	4770	5750	5750	5750	7160	8150	8150	9140	10120	11100	11100
	L/E	mm	3780	4770	5750	5750	5750	7160	8150	8150	8150	9140	10120	11100

Aermec reserves the right to make all modification deemed necessary for improving the product at any time with any modification of technical data.

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