

**TECHNICAL DATA SHEET**



# TMA

**AIR COOLED CHILLER WITH  
CENTRIFUGAL COMPRESSORS  
AND AXIAL FANS FOR  
OUTDOOR INSTALLATION**



**TMA Range 200 - 2.400 kW**

## TMA Range

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation



Centrifugal compressors  
Flooded evaporator (R134a)  
Dry expansion evaporator (HFO-1234ze)  
AC or EC axial fans both 800 and 910 mm



R134a

HFO  
1234ze

## General Description

Available on several models equipped with one or more centrifugal compressors, dimensioned to be used with refrigerant type R134a or with the new HFO-1234ze low GWP refrigerant. The units of the TMA series are assembled on a strong self-supporting metal screwed and welded structure, painted with epoxy powder with anti-rust coating for outdoor installation. All units are supplied completely wired and ready to be connected to the user's plant. Prior to delivery every machine is submitted to a performance test, with intervention tests of all the safety systems and components installed. Each unit is available with low-speed fans and compressor sound insulation kit (Low Noise LN version or Super Low Noise LLN) for installation in areas where sound levels must be kept to a minimum.

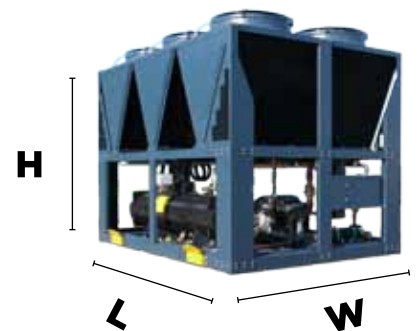
## Typical units dimensions

Length (L): from 2.410 to 25.530 mm

Width (W): 2.250 mm

Height (H): 2.540 mm

Operating Weight: from 1.626 kg to 14.453 kg



Length from 2.410 mm to 25.530 mm. The bigger sizes are delivered in two sections.

# TMA with EC fans 800 mm

R134a

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA with EC fans 800 mm		TMA 1A 190A EC	TMA 1A 220A EC	TMA 1A 260A EC	TMA 1A 300A EC	TMA 1A 320A EC	TMA 1B 350A EC
<b>CHILLER PERFORMANCE</b>							
Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a
Total cooling capacity	kW	190	220	260	300	320	350
Nominal power input	kW	57,0	63,8	78,3	91,8	91,3	103,5
E.E.R.	Coef.	3,33	3,33	3,32	3,27	3,50	3,38
Energy class		A	A	A	A	A	A
E.S.E.E.R.	Coef.	4,88	4,99	4,83	5,05	5,19	4,78
Noise Pressure Level	dB(A)	58,00	58,00	59,00	59,00	59,00	61,00
Distance	m	10,00	10,00	10,00	10,00	10,00	10,00
<b>WORKING CONDITIONS</b>							
Compressors type (*1)	Type	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free
Compressors number	n°	1	1	1	1	1	1
Inlet water temperature	°C	12,0	12,0	12,0	12,0	12,0	12,0
Outlet water temperature	°C	6,0	6,0	6,0	6,0	6,0	6,0
Condenser coil type (*2)	Type	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL
Evaporator type (*3)	Type	FL	FL	FL	FL	FL	FL
Power circuit voltage	V/Ph/Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
Control circuit voltage	V/Ph/Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
Total power input	kW	57	63,8	78,3	91,8	91,3	103,5
Total running current	A	91,6	101,8	124,1	144,6	143,9	169,8
Total max current	A	151,2	151,2	156,8	156,8	156,8	226,8
Total starting current	A	16,2	16,2	21,8	21,8	21,8	21,8
<b>DIMENSIONS</b>							
Length with cabinet	mm	2410	2410	3460	3460	4510	4510
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2525	2525	2525	2525	2525	2525
Shipping weight	kg	1600	1610	2180	2220	2570	2600
Operating weight	kg	1626	1636	2212	2259	2609	2647
(*1) Oil Free: Centrifugal Oil Free Compressor (*2) AL / AL: Aluminium (*3) FL: Flooded (*4) Delivered in 2 sections							

# TMA with EC fans 800 mm

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA 1B 400A EC	TMA 2A 450A EC	TMA 2A 500A EC	TMA 2A 550A EC	TMA 2A 600A EC	TMA 2A 640A EC	TMA 2B 700A EC	TMA 2B 800A EC	TMA 3A 900A EC	TMA 3A 960A EC	TMA 3B 1000A EC
<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>
<b>400</b>	<b>450</b>	<b>500</b>	<b>550</b>	<b>600</b>	<b>640</b>	<b>700</b>	<b>800</b>	<b>900</b>	<b>960</b>	<b>1000</b>
124,1	130,2	147,3	162,5	183,6	182,6	207,0	244,7	271,9	273,9	297,3
3,22	3,46	3,39	3,38	3,27	3,50	3,38	3,27	3,31	3,50	3,36
A	A	A	A	A	A	A	A	A	A	A
4,9	5,2	5,22	5,31	5,05	5,19	5,17	5,26	5,28	5,33	5,1
62,00	61,00	62,00	62,00	62,00	62,00	64,00	64,00	63,00	64,00	66,00
10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00
Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free
1	2	2	2	2	2	2	2	3	3	3
12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL
FL	FL	FL	FL	FL	FL	FL	FL	FL	FL	FL
400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
124,1	130,2	147,3	162,5	183,6	182,6	207,0	244,7	271,9	273,9	297,3
202,1	207,4	233,6	256,8	289,2	287,8	339,6	398,6	428,2	431,7	489,0
232,4	302,4	308,0	308,0	313,6	313,6	453,6	459,2	464,8	470,4	680,4
27,4	119,9	135,8	147,4	166,4	165,7	191,6	223,9	305,4	309,6	347,8
4510	4510	5560	5560	6610	6610	6610	7660	8710	9760	9760
2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
2525	2525	2525	2525	2525	2525	2525	2525	2525	2525	2525
2830	2970	3420	3740	4180	4180	4260	4920	5510	5950	6340
2886	3026	3484	3818	4258	4258	4354	5030	5632	6072	6477

# TMA with EC fans 800 mm

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA with EC fans 800 mm		TMA 3B 1100A EC	TMA 3B 1200A EC	TMA 4A 1280A EC	TMA 4B 1350A EC	TMA 4B 1500A EC	TMA 4B 1600A EC
<b>CHILLER PERFORMANCE</b>							
Refrigerant		<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>
Total cooling capacity	kW	<b>1100</b>	<b>1200</b>	<b>1280</b>	<b>1350</b>	<b>1500</b>	<b>1600</b>
Nominal power input	kW	329,0	372,3	365,2	400,8	451,8	489,4
E.E.R.	Coef.	3,34	3,22	3,50	3,37	3,32	3,27
Energy class		A	A	A	A	A	A
E.S.E.E.R.	Coef.	5,09	5,11	5,3	5,22	5,25	5,26
Noise Pressure Level	dB(A)	66,00	66,00	65,00	67,00	67,00	67,00
Distance	m	10,00	10,00	10,00	10,00	10,00	10,00
<b>WORKING CONDITIONS</b>							
Compressors type (*1)	Type	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free
Compressors number	n°	3	3	4	4	4	4
Inlet water temperature	°C	12,0	12,0	12,0	12,0	12,0	12,0
Outlet water temperature	°C	6,0	6,0	6,0	6,0	6,0	6,0
Condenser coil type (*2)	Type	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL
Evaporator type (*3)	Type	FL	FL	FL	FL	FL	FL
Power circuit voltage	V/Ph/Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
Control circuit voltage	V/Ph/Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
Total power input	kW	329,0	372,3	365,2	400,8	451,8	489,4
Total running current	A	538,1	606,3	575,6	658,4	738,0	797,2
Total max current	A	686,0	697,2	627,2	907,2	918,4	918,4
Total starting current	A	382,4	431,6	453,5	515,6	578,1	622,5
<b>DIMENSIONS</b>							
Length with cabinet	mm	10810	12910	12910	12910	15030 (*4)	15030 (*4)
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2525	2525	2525	2525	2525	2525
Shipping weight	kg	6830	7720	8060	8210	9090	9540
Operating weight	kg	6983	7881	8217	8399	9279	9761
(*1) Oil Free: Centrifugal Oil Free Compressor (*2) AL / AL: Aluminium (*3) FL: Flooded (*4) Delivered in 2 sections							

# TMA with EC fans 800 mm

R134a

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA 6A 1800A EC	TMA 6A 1920A EC	TMA 6B 2000A EC	TMA 6B 2200A EC	TMA 6B 2400A EC						
<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>						
<b>1800</b>	<b>1920</b>	<b>2000</b>	<b>2200</b>	<b>2400</b>						
543,8	547,8	594,6	658,0	730,6						
3,31	3,50	3,36	3,34	3,28						
A	A	A	A	A						
5,3	5,29	5,24	5,24	5,31						
66,00	67,00	69,00	69,00	69,00						
10,00	10,00	10,00	10,00	10,00						
Oil Free	Oil Free	Oil Free	Oil Free	Oil Free						
6	6	6	6	6						
12,0	12,0	12,0	12,0	12,0						
6,0	6,0	6,0	6,0	6,0						
AL / AL	AL / AL	AL / AL	AL / AL	AL / AL						
FL	FL	FL	FL	FL						
400-3-50	400-3-50	400-3-50	400-3-50	400-3-50						
230-1-50	230-1-50	230-1-50	230-1-50	230-1-50						
543,8	547,8	594,6	658,0	730,6						
856,4	863,4	978,0	1076,2	1190,2						
929,6	940,8	1360,8	1372,0	1372,0						
733,6	741,3	836,8	920,5	1015,5						
17130 (*4)	19230 (*4)	19230 (*4)	21330 (*4)	21330 (*4)						
2250	2250	2250	2250	2250						
2525	2525	2525	2525	2525						
10710	11590	12390	13390	13360						
10955	11835	12665	13697	13683						

# TMA with EC fans 800 mm



Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA with EC fans 800 mm		TMA 1Z 200A EC	TMA 1Z 250A EC	TMA 1Z 350A EC	TMA 2Z 400A EC	TMA 2Z 450A EC	TMA 2Z 500A EC
<b>CHILLER PERFORMANCE</b>							
Refrigerant		HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze
Total cooling capacity	kW	200	250	350	400	450	500
Nominal power input	kW	57,6	66,5	103,3	112,8	122,9	132,9
E.E.R.	Coef.	3,47	3,76	3,39	3,55	3,66	3,76
Energy class		A	A	A	A	A	A
E.S.E.E.R.	Coef.	4,98	5,14	5,33	5,34	5,46	5,42
Noise Pressure Level	dB(A)	60,00	61,00	61,00	63,00	63,00	63,00
Distance	m	10,00	10,00	10,00	10,00	10,00	10,00
<b>WORKING CONDITIONS</b>							
Compressors type (*1)	Type	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free
Compressors number	n°	1	1	1	2	2	2
Inlet water temperature	°C	12,0	12,0	12,0	12,0	12,0	12,0
Outlet water temperature	°C	6,0	6,0	6,0	6,0	6,0	6,0
Condenser coil type (*2)	Type	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL
Evaporator type (*3)	Type	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE
Power circuit voltage	V/Ph/Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
Control circuit voltage	V/Ph/Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
Total power input	kW	57,6	82,0	103,3	112,8	122,9	132,9
Total running current	A	96,5	134,4	167,9	189,2	204,8	220,4
Total max current	A	221,2	226,8	232,4	445,2	448,0	448,0
Total starting current	A	16,2	21,8	27,4	112,2	121,4	129,2
<b>DIMENSIONS</b>							
Length with cabinet	mm	2410	4510	4510	5560	5560	6610
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2525	2525	2525	2525	2525	2525
Shipping weight	kg	1640	2430	2610	3190	3410	3790
Operating weight	kg	1687	2531	2762	3330	3671	4045
(*1) Oil Free: Centrifugal Oil Free Compressor (*2) AL / AL: Aluminium (*3) S&T or BPHE: Shell&Tube or Brazed Plate Heat Exchanger (*4) Delivered in 2 sections							



# TMA with EC fans 800 mm

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA 2Z 550A EC	TMA 2Z 600A EC	TMA 2Z 650A EC	TMA 2Z 700A EC	TMA 3Z 800A EC	TMA 3Z 900A EC	TMA 3Z 1000A EC	TMA 3Z 1050A EC	TMA 4Z 1100A EC	TMA 4Z 1200A EC	TMA 4Z 1300A EC
<b>HFO-1234ze</b>	<b>HFO-1234ze</b>	<b>HFO-1234ze</b>	<b>HFO-1234ze</b>	<b>HFO-1234ze</b>	<b>HFO-1234ze</b>	<b>HFO-1234ze</b>	<b>HFO-1234ze</b>	<b>HFO-1234ze</b>	<b>HFO-1234ze</b>	<b>HFO-1234ze</b>
<b>550</b>	<b>600</b>	<b>650</b>	<b>700</b>	<b>800</b>	<b>900</b>	<b>1000</b>	<b>1050</b>	<b>1100</b>	<b>1200</b>	<b>1300</b>
148,6	165,8	188,1	206,6	216,3	249,5	296,8	309,9	300,7	335,0	376,2
3,70	3,62	3,46	3,39	3,70	3,61	3,37	3,39	3,66	3,58	3,46
A	A	A	A	A	A	A	A	A	A	A
5,47	5,53	5,58	5,54	5,58	5,52	5,52	5,50	5,52	5,56	5,63
64,00	64,00	64,00	64,00	65,00	65,00	66,00	66,00	67,00	67,00	67,00
10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00
Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free
2	2	2	2	3	3	3	3	4	4	4
12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0
6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL
S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE
400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
148,6	165,8	188,1	206,6	216,3	249,5	296,8	309,9	300,7	335,0	376,2
244,8	271,6	306,6	335,8	357,3	408,8	482,8	503,7	495,2	548,8	613,2
453,6	456,4	459,2	464,8	680,4	686,0	691,6	697,2	912,8	918,4	918,4
144,2	159,0	177,9	195,3	260,0	296,2	347,4	363,2	394,6	436,2	484,5
6610	7660	7660	8710	9760	10810	11860	12910	15030	15030 (*4)	15030 (*4)
2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
2525	2525	2525	2525	2525	2525	2525	2525	2525	2525	2525
3890	4310	4350	4800	5630	6080	6530	7100	8320	8390	8410
4137	4550	4590	5034	6042	6485	6927	7642	8815	8871	8879

# TMA with EC fans 800 mm



**HFO**  
1234ze

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA with EC fans 800 mm		TMA 4Z 1400A EC	TMA 6Z 1500A EC	TMA 6Z 1600A EC	TMA 6Z 1800A EC	TMA 6Z 2000A EC	TMA 6Z 2100A EC
<b>CHILLER PERFORMANCE</b>							
Refrigerant		HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze
Total cooling capacity	kW	1400	1500	1600	1800	2000	2100
Nominal power input	kW	413,2	402,2	432,6	499,0	593,6	619,8
E.E.R.	Coef.	3,39	3,73	3,70	3,61	3,37	3,39
Energy class		A	A	A	A	A	A
E.S.E.E.R.	Coef.	5,54	5,64	5,58	5,61	5,61	5,57
Noise Pressure Level	dB(A)	67,00	68,00	68,00	68,00	69,00	69,00
Distance	m	10,00	10,00	10,00	10,00	10,00	10,00
<b>WORKING CONDITIONS</b>							
Compressors type (*1)	Type	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free
Compressors number	n°	4	6	6	6	6	6
Inlet water temperature	°C	12,0	12,0	12,0	12,0	12,0	12,0
Outlet water temperature	°C	6,0	6,0	6,0	6,0	6,0	6,0
Condenser coil type (*2)	Type	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL
Evaporator type (*3)	Type	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE
Power circuit voltage	V/Ph/Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
Control circuit voltage	V/Ph/Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
Total power input	kW	413,2	402,2	432,6	499,0	593,6	619,8
Total running current	A	671,6	666,8	714,6	817,6	965,6	1007,4
Total max current	A	929,6	1349,6	1360,8	1372,0	1383,2	1394,4
Total starting current	A	531,1	575,6	617,3	705,0	830,2	866,9
<b>DIMENSIONS</b>							
Length with cabinet	mm	17130 (*4)	17130 (*4)	19230 (*4)	21330 (*4)	23430 (*4)	25530 (*4)
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2525	2525	2525	2525	2525	2525
Shipping weight	kg	9740	10070	10970	11890	12800	13680
Operating weight	kg	10565	10895	11781	12685	13573	14453
(*1) Oil Free: Centrifugal Oil Free Compressor (*2) AL / AL: Aluminium (*3) S&T or BPHE: Shell&Tube or Brazed Plate Heat Exchanger (*4) Delivered in 2 sections							



# TMA with AC fans 800 mm

R134a

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA with AC fans 800 mm		TMA 1A 190A AC	TMA 1A 220A AC	TMA 1A 260A AC	TMA 1A 300A AC	TMA 1A 320A AC	TMA 1B 350A AC
<b>CHILLER PERFORMANCE</b>							
Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a
Total cooling capacity	kW	190	220	260	300	320	350
Nominal power input	kW	57,0	63,8	78,3	91,8	91,3	103,5
E.E.R.	Coef.	3,33	3,45	3,32	3,27	3,50	3,38
Energy class		A	A	A	A	A	A
E.S.E.E.R.	Coef.	4,23	4,53	4,2	4,4	4,53	4,44
Noise Pressure Level	dB(A)	58,00	58,00	59,00	59,00	59,00	61,00
Distance	m	10,00	10,00	10,00	10,00	10,00	10,00
<b>WORKING CONDITIONS</b>							
Compressors type (*1)	Type	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free
Compressors number	n°	1	1	1	1	1	1
Inlet water temperature	°C	12,0	12,0	12,0	12,0	12,0	12,0
Outlet water temperature	°C	6,0	6,0	6,0	6,0	6,0	6,0
Condenser coil type (*2)	Type	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL
Evaporator type (*3)	Type	FL	FL	FL	FL	FL	FL
Power circuit voltage	V/Ph/Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
Control circuit voltage	V/Ph/Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
Total power input	kW	57,0	63,8	78,3	91,8	91,3	103,5
Total running current	A	95,2	105,4	129,5	150,0	149,3	175,2
Total max current	A	154,8	154,8	162,2	162,2	162,2	232,2
Total starting current	A	19,8	19,8	27,2	27,2	27,2	27,2
<b>DIMENSIONS</b>							
Length with cabinet	mm	2410	2410	3460	3460	4510	4510
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2525	2525	2525	2525	2525	2525
Shipping weight	kg	1600	1610	2180	2220	2570	2600
Operating weight	kg	1626	1636	2212	2259	2609	2647
(*1) Oil Free: Centrifugal Oil Free Compressor (*2) AL / AL: Aluminium (*3) FL: Flooded (*4) Delivered in 2 sections							

# TMA with AC fans 800 mm

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA 1B 400A AC	TMA 2A 450A AC	TMA 2A 500A AC	TMA 2A 550A AC	TMA 2A 600A AC	TMA 2A 640A AC	TMA 2B 700A AC	TMA 2B 800A AC	TMA 3A 900A AC	TMA 3A 960A AC	TMA 3B 1000A AC
<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>
<b>400</b>	<b>450</b>	<b>500</b>	<b>550</b>	<b>600</b>	<b>640</b>	<b>700</b>	<b>800</b>	<b>900</b>	<b>960</b>	<b>1000</b>
124,1	130,2	147,3	162,5	183,6	182,6	207,0	244,7	271,9	273,9	297,3
3,22	3,46	3,39	3,38	3,27	3,50	3,38	3,27	3,31	3,50	3,36
A	A	A	A	A	A	A	A	A	A	A
4,35	4,58	4,47	4,62	4,47	4,53	4,59	4,62	4,61	4,58	4,46
62,00	61,00	62,00	62,00	62,00	62,00	64,00	64,00	63,00	64,00	66,00
10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00
Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free
1	2	2	2	2	2	2	2	3	3	3
12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0
6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL
FL	FL	FL	FL	FL	FL	FL	FL	FL	FL	FL
400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
124,1	130,2	147,3	162,5	183,6	182,6	207,0	244,7	271,9	273,9	297,3
209,3	214,6	242,6	265,8	300,0	298,6	350,4	411,2	442,6	447,9	505,2
239,6	309,6	317,0	317,0	324,4	324,4	464,4	471,8	479,2	486,6	696,6
34,6	127,1	144,8	156,4	177,2	176,5	202,4	236,5	319,8	325,8	364,0
4510	4510	5560	5560	6610	6610	6610	7660	8710	9760	9760
2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
2525	2525	2525	2525	2525	2525	2525	2525	2525	2525	2525
2830	2970	3420	3740	4180	4180	4260	4920	5510	5950	6340
2886	3026	3484	3818	4258	4258	4354	5030	5632	6072	6477



# TMA with AC fans 800 mm

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA with AC fans 800 mm		TMA 3B 1100A AC	TMA 3B 1200A AC	TMA 4A 1280A AC	TMA 4B 1350A AC	TMA 4B 1500A AC	TMA 4B 1600A AC
<b>CHILLER PERFORMANCE</b>							
Refrigerant		<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>
Total cooling capacity	kW	<b>1100</b>	<b>1200</b>	<b>1280</b>	<b>1350</b>	<b>1500</b>	<b>1600</b>
Nominal power input	kW	329,0	372,3	365,2	400,8	451,8	489,4
E.E.R.	Coef.	3,34	3,22	3,50	3,37	3,32	3,27
Energy class		A	A	A	A	A	A
E.S.E.E.R.	Coef.	4,51	4,42	4,57	4,59	4,52	4,62
Noise Pressure Level	dB(A)	66,00	66,00	65,00	67,00	67,00	67,00
Distance	m	10,00	10,00	10,00	10,00	10,00	10,00
<b>WORKING CONDITIONS</b>							
Compressors type (*1)	Type	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free
Compressors number	n°	3	3	4	4	4	4
Inlet water temperature	°C	12,0	12,0	12,0	12,0	12,0	12,0
Outlet water temperature	°C	6,0	6,0	6,0	6,0	6,0	6,0
Condenser coil type (*2)	Type	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL
Evaporator type (*3)	Type	FL	FL	FL	FL	FL	FL
Power circuit voltage	V/Ph/Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
Control circuit voltage	V/Ph/Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
Total power input	kW	329,0	372,3	365,2	400,8	451,8	489,4
Total running current	A	556,1	627,9	597,2	680,0	763,2	822,4
Total max current	A	704,0	718,8	648,8	928,8	943,6	943,6
Total starting current	A	400,4	453,2	475,1	537,2	603,3	647,7
<b>DIMENSIONS</b>							
Length with cabinet	mm	10810	12910	12910	12910	15030 (*4)	15030 (*4)
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2525	2525	2525	2525	2525	2525
Shipping weight	kg	6830	7720	8060	8210	9090	9540
Operating weight	kg	6983	7881	8217	8399	9279	9761
(*1) Oil Free: Centrifugal Oil Free Compressor (*2) AL / AL: Aluminium (*3) FL: Flooded (*4) Delivered in 2 sections							

# TMA with AC fans 800 mm

R134a

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA 6A 1800A AC	TMA 6A 1920A AC	TMA 6B 2000A AC	TMA 6B 2200A AC	TMA 6B 2400A AC						
<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>						
<b>1800</b>	<b>1920</b>	<b>2000</b>	<b>2200</b>	<b>2400</b>						
543,8	547,8	594,6	658,0	730,6						
3,31	3,50	3,36	3,34	3,28						
A	A	A	A	A						
4,63	4,56	4,57	4,57	4,68						
66,00	67,00	69,00	69,00	69,00						
10,00	10,00	10,00	10,00	10,00						
Oil Free	Oil Free	Oil Free	Oil Free	Oil Free						
6	6	6	6	6						
12,0	12,0	12,0	12,0	12,0						
6,0	6,0	6,0	6,0	6,0						
AL / AL	AL / AL	AL / AL	AL / AL	AL / AL						
FL	FL	FL	FL	FL						
400-3-50	400-3-50	400-3-50	400-3-50	400-3-50						
230-1-50	230-1-50	230-1-50	230-1-50	230-1-50						
543,8	547,8	594,6	658,0	730,6						
885,2	895,8	1010,4	1112,2	1226,2						
958,4	973,2	1393,2	1408,0	1408,0						
762,4	773,7	869,2	956,5	1051,5						
17130 (*4)	19230 (*4)	19230 (*4)	21330 (*4)	21330 (*4)						
2250	2250	2250	2250	2250						
2525	2525	2525	2525	2525						
10710	11590	12390	13390	13360						
10955	11835	12665	13697	13683						

# TMA with EC fans 910 mm

R134a

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA with EC fans 910 mm		TMA 1A 190B EC	TMA 1A 220B EC	TMA 1A 260B EC	TMA 1A 300B EC	TMA 1A 320B EC	TMA 1B 350B EC
<b>CHILLER PERFORMANCE</b>							
Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a
Total cooling capacity	kW	190	220	260	300	320	350
Nominal power input	kW	58,4	65,2	79,0	92,5	94,8	107,0
E.E.R.	Coef.	3,25	3,37	3,29	3,24	3,38	3,27
Energy class		A	A	A	A	A	A
E.S.E.E.R.	Coef.	4,8	4,86	4,78	5,01	5,01	4,65
Noise Pressure Level	dB(A)	60,00	60,00	61,00	61,00	62,00	63,00
Distance	m	10,00	10,00	10,00	10,00	10,00	10,00
<b>WORKING CONDITIONS</b>							
Compressors type (*1)	Type	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free
Compressors number	n°	1	1	1	1	1	1
Inlet water temperature	°C	12,0	12,0	12,0	12,0	12,0	12,0
Outlet water temperature	°C	6,0	6,0	6,0	6,0	6,0	6,0
Condenser coil type (*2)	Type	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL
Evaporator type (*3)	Type	FL	FL	FL	FL	FL	FL
Power circuit voltage	V/Ph/Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
Control circuit voltage	V/Ph/Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
Total power input	kW	58,4	65,2	79,0	92,5	94,8	107,0
Total running current	A	93,6	103,8	124,9	145,4	149,1	175,0
Total max current	A	153,2	153,2	157,6	157,6	162,0	232,0
Total starting current	A	18,2	18,2	22,6	22,6	27,0	27,0
<b>DIMENSIONS</b>							
Length with cabinet	mm	2410	2410	2410	3460	3460	3460
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2540	2540	2540	2540	2540	2540
Shipping weight	kg	1560	1560	1760	2130	2170	2190
Operating weight	kg	1586	1586	1792	2169	2209	2237
(*1) Oil Free: Centrifugal Oil Free Compressor (*2) AL / AL: Aluminium (*3) FL: Flooded (*4) Delivered in 2 sections							



# TMA with EC fans 910 mm

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA 1B 400B EC	TMA 2A 450B EC	TMA 2A 500B EC	TMA 2A 550B EC	TMA 2A 600B EC	TMA 2A 640B EC	TMA 2B 700B EC	TMA 2B 800B EC	TMA 3A 900B EC	TMA 3A 960B EC	TMA 3B 1000B EC
<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>
<b>400</b>	<b>450</b>	<b>500</b>	<b>550</b>	<b>600</b>	<b>640</b>	<b>700</b>	<b>800</b>	<b>900</b>	<b>960</b>	<b>1000</b>
126,9	133,0	149,4	167,4	185,0	189,6	214,0	251,0	280,3	281,6	305,0
3,15	3,38	3,35	3,29	3,24	3,38	3,27	3,19	3,21	3,41	3,28
A	A	A	A	A	A	A	A	A	A	A
4,8	5,1	5,15	5,16	5,01	5,01	5,02	5,12	5,12	5,19	4,98
63,00	63,00	64,00	64,00	64,00	65,00	66,00	66,00	66,00	66,00	68,00
10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00
Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free
1	2	2	2	2	2	2	2	3	3	3
12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0
6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL
FL	FL	FL	FL	FL	FL	FL	FL	FL	FL	FL
400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
126,9	133,0	149,4	167,4	185,0	189,6	214,0	251,0	280,3	281,6	305,0
206,1	211,4	236,4	264,0	290,8	298,2	350,0	407,8	440,6	442,9	500,2
236,4	306,4	310,8	315,2	315,2	324,0	464,0	468,4	477,2	481,6	691,6
31,4	123,9	138,6	154,6	168,0	176,1	202,0	233,1	317,8	320,8	359,0
3460	4510	4510	4510	5560	5560	5560	6610	7660	7660	7660
2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
2540	2540	2540	2540	2540	2540	2540	2540	2540	2540	2540
2400	2880	2950	3300	3660	3740	3820	4440	5030	5070	5470
2456	2936	3014	3378	3738	3818	3914	4550	5152	5192	5607

# TMA with EC fans 910 mm

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA with EC fans 910 mm		TMA 3B 1100B EC	TMA 3B 1200B EC	TMA 4A 1280B EC	TMA 4B 1350B EC	TMA 4B 1500B EC	TMA 4B 1600B EC
<b>CHILLER PERFORMANCE</b>							
Refrigerant		<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>
Total cooling capacity	kW	<b>1100</b>	<b>1200</b>	<b>1280</b>	<b>1350</b>	<b>1500</b>	<b>1600</b>
Nominal power input	kW	338,8	377,9	379,2	414,8	464,4	502,0
E.E.R.	Coef.	3,25	3,18	3,38	3,25	3,23	3,19
Energy class		A	A	A	A	A	A
E.S.E.E.R.	Coef.	4,95	5,04	5,12	5,06	5,11	5,12
Noise Pressure Level	dB(A)	68,00	68,00	68,00	69,00	69,00	69,00
Distance	m	10,00	10,00	10,00	10,00	10,00	10,00
<b>WORKING CONDITIONS</b>							
Compressors type (*1)	Type	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free
Compressors number	n°	3	3	4	4	4	4
Inlet water temperature	°C	12,0	12,0	12,0	12,0	12,0	12,0
Outlet water temperature	°C	6,0	6,0	6,0	6,0	6,0	6,0
Condenser coil type (*2)	Type	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL
Evaporator type (*3)	Type	FL	FL	FL	FL	FL	FL
Power circuit voltage	V/Ph/Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
Control circuit voltage	V/Ph/Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
Total power input	kW	338,8	377,9	379,2	414,8	464,4	502,0
Total running current	A	552,5	613,9	596,4	679,2	756,4	815,6
Total max current	A	700,4	704,8	648,0	928,0	936,8	936,8
Total starting current	A	396,8	439,2	474,3	536,4	596,5	640,9
<b>DIMENSIONS</b>							
Length with cabinet	mm	8710	9760	10810	10810	12910	12910
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2540	2540	2540	2540	2540	2540
Shipping weight	kg	5950	6360	7180	7340	8130	8610
Operating weight	kg	6103	6521	7337	7529	8319	8831
(*1) Oil Free: Centrifugal Oil Free Compressor (*2) AL / AL: Aluminium (*3) FL: Flooded (*4) Delivered in 2 sections							

# TMA with EC fans 910 mm

R134a

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA 6A 1800B EC	TMA 6A 1920B EC	TMA 6B 2000B EC	TMA 6B 2200B EC	TMA 6B 2400B EC						
<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>						
<b>1800</b>	<b>1920</b>	<b>2000</b>	<b>2200</b>	<b>2400</b>						
560,6	563,2	610,0	677,6	755,8						
3,21	3,41	3,28	3,25	3,18						
A	A	A	A	A						
5,14	5,15	5,11	5,1	5,14						
69,00	69,00	71,00	71,00	71,00						
10,00	10,00	10,00	10,00	10,00						
Oil Free	Oil Free	Oil Free	Oil Free	Oil Free						
6	6	6	6	6						
12,0	12,0	12,0	12,0	12,0						
6,0	6,0	6,0	6,0	6,0						
AL / AL	AL / AL	AL / AL	AL / AL	AL / AL						
FL	FL	FL	FL	FL						
400-3-50	400-3-50	400-3-50	400-3-50	400-3-50						
230-1-50	230-1-50	230-1-50	230-1-50	230-1-50						
560,6	563,2	610,0	677,6	755,8						
881,2	885,8	1000,4	1105,0	1227,8						
954,4	963,2	1383,2	1400,8	1409,6						
758,4	763,7	859,2	949,3	1053,1						
15030 (*4)	15030 (*4)	15030 (*4)	17130 (*4)	19230 (*4)						
2250	2250	2250	2250	2250						
2540	2540	2540	2540	2540						
9750	9830	10630	11620	12410						
9995	10075	10905	11927	12733						

# TMA with EC fans 910 mm



**HFO**  
1234ze

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA with EC fans 910 mm		TMA 1Z 200B EC	TMA 1Z 250B EC	TMA 1Z 300B EC	TMA 1Z 350B EC	TMA 2Z 400B EC	TMA 2Z 450B EC
<b>CHILLER PERFORMANCE</b>							
Refrigerant		HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze
Total cooling capacity	kW	200	250	300	350	400	450
Nominal power input	kW	59,0	68,9	85,5	106,1	116,6	127,8
E.E.R.	Coef.	3,39	3,63	3,51	3,30	3,43	3,52
Energy class		A	A	A	A	A	A
E.S.E.E.R.	Coef.	4,86	4,96	5,11	5,19	5,18	5,26
Noise Pressure Level	dB(A)	61,00	62,00	63,00	63,00	65,00	65,00
Distance	m	10,00	10,00	10,00	10,00	10,00	10,00
<b>WORKING CONDITIONS</b>							
Compressors type (*1)	Type	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free
Compressors number	n°	1	1	1	1	2	2
Inlet water temperature	°C	12,0	12,0	12,0	12,0	12,0	12,0
Outlet water temperature	°C	6,0	6,0	6,0	6,0	6,0	6,0
Condenser coil type (*2)	Type	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL
Evaporator type (*3)	Type	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE
Power circuit voltage	V/Ph/Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
Control circuit voltage	V/Ph/Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
Total power input	kW	59,0	68,9	85,5	106,1	116,6	127,8
Total running current	A	98,5	113,8	139,6	171,9	194,8	212,0
Total max current	A	223,2	227,6	232,0	236,4	450,8	455,2
Total starting current	A	18,2	22,6	27,0	31,4	117,8	128,6
<b>DIMENSIONS</b>							
Length with cabinet	mm	2410	3460	3460	3460	4510	4510
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2540	2540	2540	2540	2540	2540
Shipping weight	kg	1590	1980	2040	2170	2750	2980
Operating weight	kg	1637	2085	2141	2322	2890	3241
(*1) Oil Free: Centrifugal Oil Free Compressor (*2) AL / AL: Aluminium (*3) S&T or BPHE: Shell&Tube or Brazed Plate Heat Exchanger (*4) Delivered in 2 sections							

# TMA with EC fans 910 mm

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA 2Z 500B EC	TMA 2Z 550B EC	TMA 2Z 600B EC	TMA 2Z 650B EC	TMA 2Z 700B EC	TMA 3Z 800B EC	TMA 3Z 900B EC	TMA 3Z 1000B EC	TMA 3Z 1050B EC	TMA 4Z 1100B EC	TMA 4Z 1200B EC
HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze
500	550	600	650	700	800	900	1000	1050	1100	1200
140,6	155,6	173,8	197,2	215,0	224,0	259,3	308,7	323,9	311,2	347,6
3,56	3,53	3,45	3,30	3,26	3,57	3,47	3,24	3,24	3,53	3,45
A	A	A	A	A	A	A	A	A	A	A
5,16	5,25	5,30	5,33	5,33	5,41	5,33	5,31	5,26	5,35	5,37
65,00	66,00	66,00	66,00	66,00	67,00	68,00	68,00	68,00	69,00	69,00
10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00
Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free
2	2	2	2	2	3	3	3	3	4	4
12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0
6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL
S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE
400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
140,6	155,6	173,8	197,2	215,0	224,0	259,3	308,7	323,9	311,2	347,6
232,0	255,2	283,6	320,2	348,2	368,5	423,2	500,4	524,5	510,4	567,2
459,6	464,0	468,4	472,8	477,2	691,6	700,4	709,2	718,0	928,0	936,8
140,8	154,6	171,0	191,5	207,7	271,2	310,6	365,0	384,0	409,8	454,6
5560	5560	6610	6610	7660	7660	8710	9760	10810	10810	12910
2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
2540	2540	2540	2540	2540	2540	2540	2540	2540	2540	2540
3390	3450	3870	3910	4330	4750	5200	5660	6230	6600	7460
3645	3697	4110	4150	4564	5162	5605	6057	6772	7095	7941

# TMA with EC fans 910 mm

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA with EC fans 910 mm		TMA 4Z 1300B EC	TMA 4Z 1400B EC	TMA 6Z 1500B EC	TMA 6Z 1600B EC	TMA 6Z 1800B EC	TMA 6Z 2000B EC
<b>CHILLER PERFORMANCE</b>							
Refrigerant		HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze	HFO-1234ze
Total cooling capacity	kW	1300	1400	1500	1600	1800	2000
Nominal power input	kW	394,4	430,0	424,6	453,6	518,6	617,4
E.E.R.	Coef.	3,30	3,26	3,53	3,53	3,47	3,24
Energy class		A	A	A	A	A	A
E.S.E.E.R.	Coef.	5,38	5,33	5,36	5,35	5,41	5,39
Noise Pressure Level	dB(A)	69,00	69,00	70,00	70,00	71,00	71,00
Distance	m	10,00	10,00	10,00	10,00	10,00	10,00
<b>WORKING CONDITIONS</b>							
Compressors type (*1)	Type	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free
Compressors number	n°	4	4	6	6	6	6
Inlet water temperature	°C	12,0	12,0	12,0	12,0	12,0	12,0
Outlet water temperature	°C	6,0	6,0	6,0	6,0	6,0	6,0
Condenser coil type (*2)	Type	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL
Evaporator type (*3)	Type	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE	S&T or BPHE
Power circuit voltage	V/Ph/Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
Control circuit voltage	V/Ph/Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
Total power input	kW	394,4	430,0	424,6	453,6	518,6	617,4
Total running current	A	640,4	696,4	700,4	745,8	846,4	1000,8
Total max current	A	945,6	954,4	1383,2	1392,0	1400,8	1418,4
Total starting current	A	511,7	555,9	609,2	648,5	733,8	865,4
<b>DIMENSIONS</b>							
Length with cabinet	mm	12910	15030 (*4)	15030 (*4)	17130 (*4)	17130 (*4)	19230 (*4)
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2540	2540	2540	2540	2540	2540
Shipping weight	kg	7540	8820	9190	10070	10130	11040
Operating weight	kg	8009	9645	10015	10881	10925	11813
(*1) Oil Free: Centrifugal Oil Free Compressor (*2) AL / AL: Aluminium (*3) S&T or BPHE: Shell&Tube or Brazed Plate Heat Exchanger (*4) Delivered in 2 sections							

# TMA with EC fans 910 mm



Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA 6Z 2100B EC										
<b>HFO-1234ze</b>										
<b>2100</b>										
647,8										
3,24										
A										
5,33										
71,00										
10,00										
Oil Free										
6										
12,0										
6,0										
AL / AL										
S&T or BPHE										
400-3-50										
230-1-50										
647,8										
1049,0										
1436,0										
908,5										
21330 (*4)										
2250										
2540										
11920										
12693										

# TMA with AC fans 910 mm

R134a

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA with AC fans 910 mm		TMA 1A 190B AC	TMA 1A 220B AC	TMA 1A 260B AC	TMA 1A 300B AC	TMA 1A 320B AC	TMA 1B 350B AC
<b>CHILLER PERFORMANCE</b>							
Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a
Total cooling capacity	kW	190	220	260	300	320	350
Nominal power input	kW	58,3	65,1	78,7	89,3	93,1	106,9
E.E.R.	Coef.	3,26	3,38	3,30	3,36	3,44	3,28
Energy class		A	A	A	A	A	A
E.S.E.E.R.	Coef.	4,28	4,53	4,34	4,55	4,39	4,32
Noise Pressure Level	dB(A)	59,00	59,00	60,00	60,00	61,00	63,00
Distance	m	10,00	10,00	10,00	10,00	10,00	10,00
<b>WORKING CONDITIONS</b>							
Compressors type (*1)	Type	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free
Compressors number	n°	1	1	1	1	1	1
Inlet water temperature	°C	12,0	12,0	12,0	12,0	12,0	12,0
Outlet water temperature	°C	6,0	6,0	6,0	6,0	6,0	6,0
Condenser coil type (*2)	Type	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL
Evaporator type (*3)	Type	FL	FL	FL	FL	FL	FL
Power circuit voltage	V/Ph/Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
Control circuit voltage	V/Ph/Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
Total power input	kW	58,3	65,1	78,7	89,3	93,1	106,9
Total running current	A	97,3	107,6	129,7	145,9	153,1	181,4
Total max current	A	155,6	155,6	160,8	160,8	166,0	236,0
Total starting current	A	20,6	20,6	25,8	25,8	31,0	31,0
<b>DIMENSIONS</b>							
Length with cabinet	mm	2410	2410	2410	3460	3460	3460
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2540	2540	2540	2540	2540	2540
Shipping weight	kg	1560	1560	1760	2130	2170	2190
Operating weight	kg	1586	1586	1792	2169	2209	2237
(*1) Oil Free: Centrifugal Oil Free Compressor (*2) AL / AL: Aluminium (*3) FL: Flooded (*4) Delivered in 2 sections							



# TMA with AC fans 910 mm

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA 1B 400B AC	TMA 2A 450B AC	TMA 2A 500B AC	TMA 2A 550B AC	TMA 2A 600B AC	TMA 2A 640B AC	TMA 2B 700B AC	TMA 2B 800B AC	TMA 3A 900B AC	TMA 3A 960B AC	TMA 3B 1000B AC
<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>
<b>400</b>	<b>450</b>	<b>500</b>	<b>550</b>	<b>600</b>	<b>640</b>	<b>700</b>	<b>800</b>	<b>900</b>	<b>960</b>	<b>1000</b>
126,8	132,7	149,0	167,0	178,6	186,1	213,7	251,2	270,4	276,7	304,6
3,15	3,39	3,36	3,29	3,36	3,44	3,28	3,19	3,33	3,47	3,28
A	A	A	A	A	A	A	A	A	A	A
4,34	4,58	4,57	4,53	4,63	4,39	4,46	4,56	4,52	4,54	4,42
63,00	62,00	62,00	63,00	63,00	64,00	66,00	66,00	65,00	66,00	67,00
10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00
Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free
1	2	2	2	2	2	2	2	3	3	3
12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0
6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL
FL	FL	FL	FL	FL	FL	FL	FL	FL	FL	FL
400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
126,8	132,7	149,0	167,0	178,6	186,1	213,7	251,2	270,4	276,7	304,6
214,0	219,0	245,2	274,0	291,8	306,2	362,8	422,8	442,9	454,1	518,0
241,2	311,2	316,4	321,6	321,6	332,0	472,0	477,2	487,6	492,8	702,8
36,2	130,1	145,8	162,8	171,7	184,1	212,4	245,0	322,8	332,0	374,6
3460	4510	4510	4510	5560	5560	5560	6610	7660	7660	7660
2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
2540	2540	2540	2540	2540	2540	2540	2540	2540	2540	2540
2400	2880	2950	3300	3660	3740	3820	4440	5030	5070	5470
2456	2936	3014	3378	3738	3818	3914	4550	5152	5192	5607

# TMA with AC fans 910 mm

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA with AC fans 910 mm		TMA 3B 1100B AC	TMA 3B 1200B AC	TMA 4A 1280B AC	TMA 4B 1350B AC	TMA 4B 1500B AC	TMA 4B 1600B AC
<b>CHILLER PERFORMANCE</b>							
Refrigerant		<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>
Total cooling capacity	kW	<b>1100</b>	<b>1200</b>	<b>1280</b>	<b>1350</b>	<b>1500</b>	<b>1600</b>
Nominal power input	kW	338,0	378,0	372,2	413,8	463,5	502,3
E.E.R.	Coef.	3,25	3,18	3,44	3,26	3,24	3,19
Energy class		A	A	A	A	A	A
E.S.E.E.R.	Coef.	4,43	4,49	4,43	4,45	4,46	4,56
Noise Pressure Level	dB(A)	67,00	68,00	67,00	69,00	69,00	69,00
Distance	m	10,00	10,00	10,00	10,00	10,00	10,00
<b>WORKING CONDITIONS</b>							
Compressors type (*1)	Type	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free	Oil Free
Compressors number	n°	3	3	3	4	4	4
Inlet water temperature	°C	12,0	12,0	12,0	12,0	12,0	12,0
Outlet water temperature	°C	6,0	6,0	6,0	6,0	6,0	6,0
Condenser coil type (*2)	Type	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL	AL / AL
Evaporator type (*3)	Type	FL	FL	FL	FL	FL	FL
Power circuit voltage	V/Ph/Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
Control circuit voltage	V/Ph/Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
Total power input	kW	338,0	378,0	372,2	413,8	463,5	502,3
Total running current	A	572,8	636,8	612,4	704,4	784,4	845,6
Total max current	A	713,2	718,4	664,0	944,0	954,4	954,4
Total starting current	A	414,6	459,0	490,3	559,3	621,9	667,8
<b>DIMENSIONS</b>							
Length with cabinet	mm	8710	9760	10810	10810	12910	12910
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2540	2540	2540	2540	2540	2540
Shipping weight	kg	5950	6360	7180	7340	8130	8610
Operating weight	kg	6103	6521	7337	7529	8319	8831
(*1) Oil Free: Centrifugal Oil Free Compressor (*2) AL / AL: Aluminium (*3) FL: Flooded (*4) Delivered in 2 sections							

# TMA with AC fans 910 mm

R134a

Air cooled chiller with centrifugal compressors and axial fans for outdoor installation

TMA 6A 1800B AC	TMA 6A 1920B AC	TMA 6B 2000B AC	TMA 6B 2200B AC	TMA 6B 2400B AC						
<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>	<b>R134a</b>						
<b>1800</b>	<b>1920</b>	<b>2000</b>	<b>2200</b>	<b>2400</b>						
540,7	553,4	609,2	676,0	755,9						
3,33	3,47	3,28	3,25	3,18						
A	A	A	A	A						
4,52	4,52	4,52	4,49	4,54						
68,00	69,00	70,00	70,00	71,00						
10,00	10,00	10,00	10,00	10,00						
Oil Free	Oil Free	Oil Free	Oil Free	Oil Free						
4	4	4	4	4						
12,0	12,0	12,0	12,0	12,0						
6,0	6,0	6,0	6,0	6,0						
AL / AL	AL / AL	AL / AL	AL / AL	AL / AL						
FL	FL	FL	FL	FL						
400-3-50	400-3-50	400-3-50	400-3-50	400-3-50						
230-1-50	230-1-50	230-1-50	230-1-50	230-1-50						
540,7	553,4	609,2	676,0	755,9						
885,8	908,2	1036,0	1145,6	1273,6						
975,2	985,6	1405,6	1426,4	1436,8						
765,7	786,1	892,6	987,4	1095,8						
15030 (*4)	15030 (*4)	15030 (*4)	17130 (*4)	19230 (*4)						
2250	2250	2250	2250	2250						
2540	2540	2540	2540	2540						
9750	9830	10630	11620	12410						
9995	10075	10905	11927	12733						

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