





MARK HEAT PUMPS

Air-Water heat pumps

Wide range of heat pumps with various applications.s

For more information, downloads and videos, visit the Mark Heat Pumps page on our website

High-quality air-water heat pumps from Mark

In addition to our wide range of DX heat pumps, Mark Climate Technology now also has high-quality air-water heat pumps in its range. The air-water heat pumps are very easy to install and extremely suitable in combination with various systems for cooling and heating.

They can of course also be used in combination with the Mark Airstream heat recovery units and the Mark Airstream AHU air handling units. In addition, the heat pumps are easily adjustable, low maintenance and reliable.

Mark's air-water heat pumps are selected customer-specifically for each project.

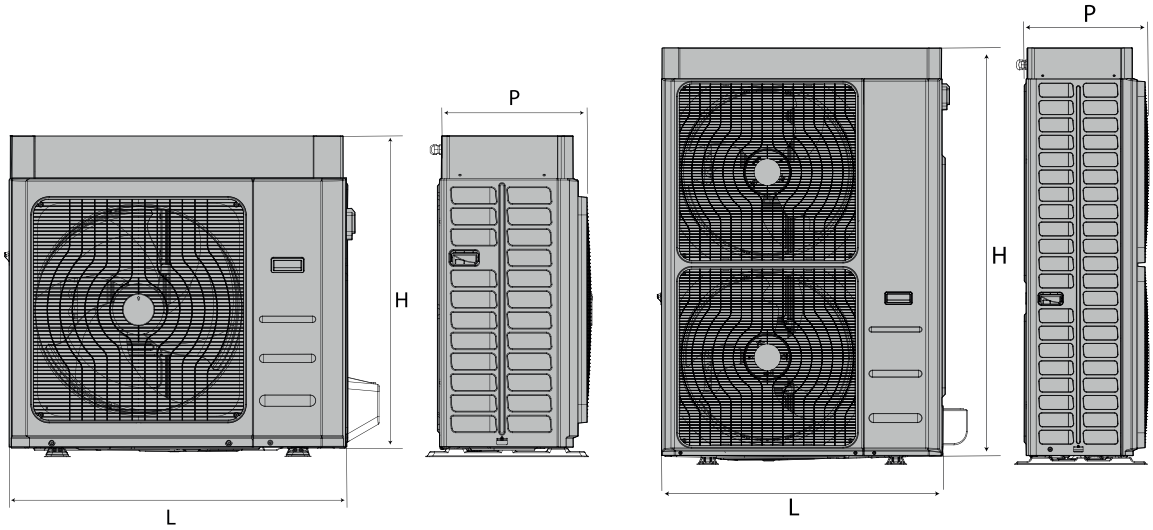
We deliver three types:

- i-MV5: Monoblock air-water heat pump for cooling or heating. Capacities: 4-18 kW
- MWAI-A: cooling only. Capacities: 40-85 kW & 106-349 kW
- MWAI-A/H: air-cooled heat pump for cooling or heating. Capacities: 40-85 kW & 109-345 kW
- iMax: air-cooled heat pump for cooling, heating and hot water. Capacities: 79,6-102,8 kW

Product features

- Frame made of solid galvanized sheet steel
- Scroll 3-phase compressor complete with integrated protection module
- Axial fans type AC, with which condensation control up to 0 °C is possible.
- Evaporator
- Front operation
- Microprocessor with logic program for overheating
- Refrigerant circuit manufactured according to UNI EN 13134 directive
- High and low pressure transducers, with values that can be shown on the display
- Water circuit with copper pipes
- Standard quipped with control and security equipment
- Refrigerant: R410a

Dimensions i-MV5 (4-18 kW)



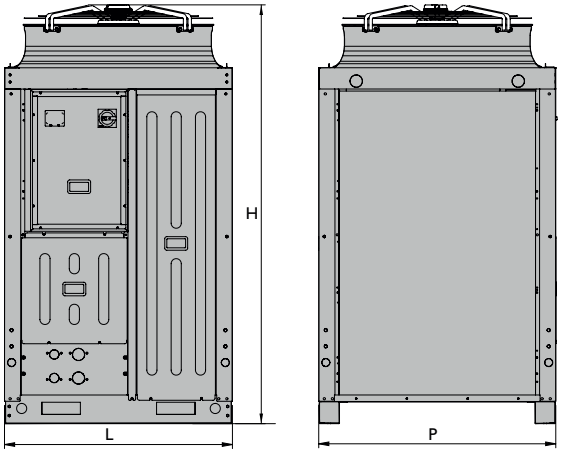
Type		04	06	08	10	10T	12	12T	14	14T	16	16T	18T
L	mm	924	924	924	1047	1047	1047	1047	1044	1044	1044	1044	1044
P	mm	377	377	377	456	456	456	456	455	455	455	455	455
H	mm	828	828	828	936	936	936	936	1409	1409	1409	1409	1409

Technical information i-MV5 (4-18 kW)

	Type		04	06	08	10	10T	12	12T	14	14T	16	16T	18T
cooling	Cooling capacity [1]	kW	4,23	5,02	6,08	7,53	7,53	8,51	8,51	11,48	11,48	13,8	13,8	15,04
cooling	Power input [1]	kW	1,29	1,6	1,99	2,39	2,39	2,79	2,79	3,53	3,53	4,38	4,38	4,88
cooling	EER [1]	W/W	3,28	3,14	3,05	3,15	3,15	3,05	3,05	3,25	3,25	3,15	3,15	3,08
cooling	Cooling capacity [2]	kW	5,51	6,18	7,72	9,5	9,5	11,6	11,6	14,0	14,0	15,8	15,8	17,1
cooling	Power input [2]	kW	1,10	1,28	1,76	2,15	2,15	2,79	2,79	2,59	2,59	3,15	3,15	3,59
cooling	EER [2]	W/W	5,02	4,82	4,38	4,41	4,41	4,16	4,16	5,40	5,40	5,02	5,02	4,76
cooling	SEER [5]	W/W	4,07	4,12	4,25	4,15	4,15	4,25	4,25	4,62	4,62	4,80	4,80	4,91
cooling	Water flow [1]	L/s	0,20	0,24	0,28	0,36	0,36	0,41	0,41	0,55	0,55	0,66	0,66	0,71
cooling	Pressure drop [1]	kPa	80,8	78,8	76,0	68,9	68,9	63,4	63,4	75,0	75,0	62,3	62,3	55,6
heating	Thermal power [3]	kW	4,55	6,08	7,81	10,1	10,1	11,8	11,8	14,1	14,1	16,3	16,3	17,9
heating	Power input [3]	kW	0,95	1,35	1,78	2,28	2,28	2,73	2,73	2,91	2,91	3,49	3,49	4,07
heating	COP [3]	W/W	4,78	4,51	4,38	4,43	4,43	4,32	4,32	4,85	4,85	4,67	4,67	4,40
heating	Thermal power [4]	kW	4,47	5,88	7,58	9,76	9,76	11,47	11,47	13,56	13,56	15,77	15,77	17,32
heating	Power input [4]	kW	1,17	1,66	2,17	2,80	2,80	3,33	3,33	3,55	3,55	4,24	4,24	4,92
heating	COP [4]	W/W	3,82	3,54	3,50	3,48	3,48	3,44	3,44	3,82	3,82	3,72	3,72	3,52
heating	SCOP [6]	W/W	4,52	4,46	4,46	4,53	4,53	4,47	4,47	4,48	4,48	4,49	4,49	4,46
heating	Water flow [4]	l/s	0,22	0,28	0,37	0,47	0,47	0,55	0,55	0,65	0,65	0,76	0,76	0,83
heating	Heat exchanger pressure [4]	kPa	80,0	75,8	66,3	55,2	55,2	43,4	43,4	63,6	63,6	48,5	48,5	37,3
	Energy efficiency (water 35°C)								A+++/A++					
	Compressor type								Twin Rotary DC Inverter					
	Number of compressors	n°	1	1	1	1	1	1	1	1	1	1	1	1
	Refrigerant circuits	n°	1	1	1	1	1	1	1	1	1	1	1	1
	Refrigerant charge 1 [4]	kg	1,5	1,5	1,5	2,5	2,5	2,5	2,5	3,6	3,6	4	4	4
	Water connections	inch	1"	1"	1"									1"
	Minimum water volume [8]	L	35	40	40	50	50	60	60	60	60	70	70	70
	Sound power [9]	dB(A)	64	64	64	64	64	65	65	68	68	68	68	68
	Sound pressure [10]	dB(A)	49,8	49,8	49,8	49,4	49,4	50,4	50,4	52,7	52,7	52,7	52,7	52,7
	Power supply			230V/1 /50Hz			400V/3P+N +T/50Hz	230V/1 /50Hz	400V/3P+N +T/50Hz	230V/1 /50Hz	400V/3P+N +T/50Hz	230V/1 /50Hz	400V/3P+N +T/50Hz	400V/3P+N +T/50Hz
	Maximum power input	kW	2,9	3,5	3,9	4,6	4,6	5,1	5,1	6,6	6,6	7,0	7,0	8,3
	Maximum current input	A	12,6	15,1	17,0	20,2	6,6	22,1	7,3	28,6	9,5	30,4	10,1	12,0
	Gross weight	kg	84	84	84	110	110	110	110	134	148	140	154	154
	Operating weight	kg	72	72	72	96	96	96	96	121	136	126	141	141

Operating conditions:, see page 231

Dimensions MWA1-A en MWA1-A/H (40-85 kW)



Type		0140	0147	0260	027	0285
L	mm	1125	1125	1125	1125	1125
P	mm	1170	1170	1170	1170	1170
H	mm	2040	2040	2070	2070	2070

Technical information MWA1-A (40-85 kW)

Type		0140	0147	0260	0273	0285
Cooling capacity [11]	kW	39,7	46,8	60,8	73,3	86,5
Power input [11]	kW	12,5	15,1	19,3	24,8	29,3
EER [11]	W/W	3,16	3,11	3,16	2,95	2,96
Cooling capacity [12]	kW	54,4	63,5	81,9	99,4	116,3
Power input [12]	kW	14,3	17,0	21,9	28,0	33,3
EER [12]	W/W	3,80	3,74	3,75	3,55	3,50
SEER [5]	W/W	3,80	3,80	4,05	3,98	4,14
Cooling capacity [13]	kW	22,7	27,0	36,2	42,9	51,1
Power input [13]	kW	11,4	13,5	16,9	22,1	25,7
EER [13]	W/W	1,99	2,01	2,14	1,94	1,99
Water flow [11]	L/s	1,90	2,24	2,92	3,51	4,14
Pressure drop [11]	kPa	54,08	51,68	56,79	46,43	50,41
Compressor type		Scroll	Scroll	Scroll	Scroll	Scroll
Number of compressors	n°	1	1	2	2	2
Refrigerant circuits	n°	1	1	1	1	1
Refrigerant charge [7]	kg	7,8	7,8	12,8	13,4	14,6
Nominal air flow	m^3/s	4,04/5,32	3,88/5,23	4,15/5,44	4,86/6,01	7,4
Maximum pressure hydronic kit	bar	6	6	6	6	6
Water connections	inch	2”	2”	2”	2”	2”
Minimum water volume [8]	L	330	380	260	380	490
Sound power [9]	dB(A)	81	81	82	83	84
Sound pressure [10]	dB(A)	49,3	49,3	50,3	51,3	52,3
Power supply				400V/3P+N+T/50Hz		
Maximum power input	kW	17,0	21,5	28,0	35,0	43,0
Maximum current input	A	28,0	38,0	45,0	56,0	71,0
Gross weight	kg	365	375	470	495	510
Operating weight	kg	350	360	455	480	495

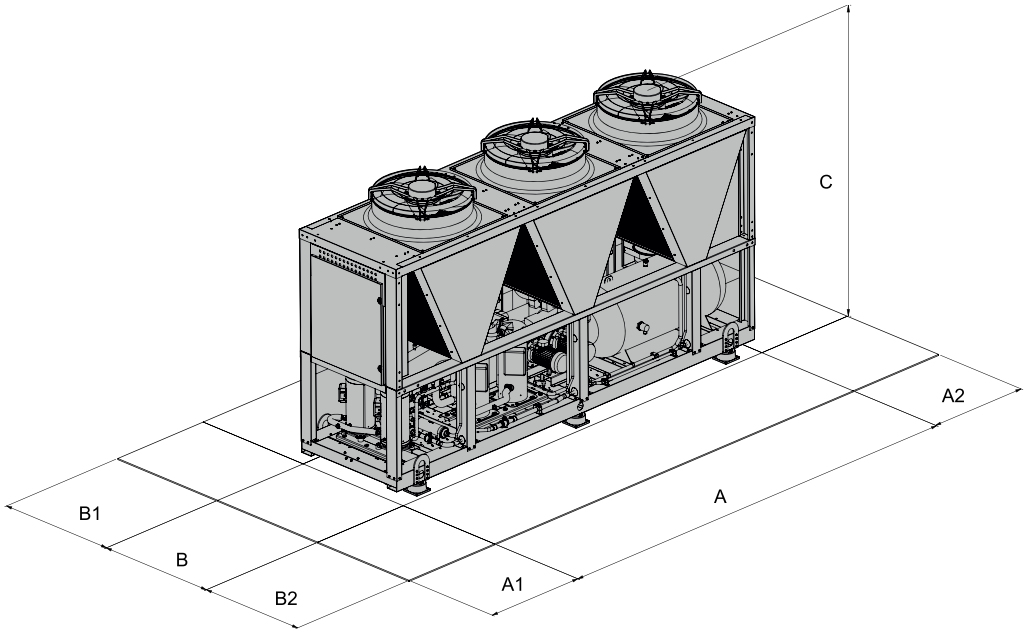
Operating conditions:, see page 231

Technical information MWA1-A/H (40-85 kW)

	Type		0140	0147	0260	0273	0285
cooling	Cooling capacity [1]	kW	38,6	45,6	58,6	71,2	80,2
	Power input [1]	kW	13,0	15,7	19,9	24,6	29,2
	EER [1]	W/W	2,97	2,91	2,94	2,90	2,75
	Cooling capacity [2]	kW	51,8	60,6	77,7	94,1	106,4
	Power input [2]	kW	14,7	17,6	22,6	28,0	33,3
	EER [2]	W/W	3,53	3,43	3,43	3,37	3,20
	SEER [5]	W/W	3,82	3,8	3,94	3,98	4,07
	Water flow [1]	L/s	1,86	2,20	2,83	3,41	3,84
	Pressure drop [1]	kPa	55,8	56,6	61,5	63,7	66,6
heating	Thermal power [3]	kW	43,5	48,2	64,1	80,9	88,7
	Power input [3]	kW	10,7	12,3	15,6	20,0	22,7
	COP [3]	W/W	4,05	3,92	4,10	4,05	3,90
	Thermal power [4]	kW	42,1	47,8	63,0	74,9	84,6
	Power input [4]	kW	12,8	14,8	18,8	23,3	28,5
	COP [4]	W/W	3,28	3,23	3,35	3,22	2,97
	SCOP [6]	W/W	3,49	3,34	3,85	3,84	3,70
	Water flow [4]	l/s	2,02	2,30	3,03	3,60	4,07
	Heat exchanger pressure [4]	kPa	84,4	81,6	84,1	81,5	84,1
	Energy efficiency (water 35°C)		A+	A+	A++	A++	A+
	Compressor type		Scroll	Scroll	Scroll	Scroll	Scroll
	Number of compressors	n°	1	1	2	2	2
	Refrigerant circuits	n°	1	1	1	1	1
	Refrigerant charge [7]	kg	9,98	9,98	14	15,25	15,6
	Nominal air flow	m^3/s	4,3	5,3	6,3	6,9	7,4
	Maximum pressure hydronic kit	bar	6	6	6	6	6
	Water connections	inch	2”	2”	2”	2”	2”
	Minimum water volume [8]	L	330	380	260	380	490
	Sound power [9]	dB(A)	84	85	88	88	88
	Sound pressure [10]	dB(A)	52,3	53,3	56,3	56,3	56,3
	Power supply		400V/3P+N+T/50Hz				
	Maximum power input	kW	17,0	21,5	28,0	35,0	43,0
	Maximum current input	A	28,0	38,0	45,0	56,0	71,0
	Gross weight	kg	400	420	520	545	555
	Operating weight	kg	390	410	505	530	540

Operating conditions:, see page 231

Dimensions MWA1-A (106-349 kW)



Type	Dimensions (mm)			Recommended free space (mm)				Heat exchanger	
	A	B	C	A1	A2	B1	B2	Type	Ø
02106	2860	1100	2350	1000	800	1000	1000	Victaulic	DN65 (2" 1/2)
02120	2860	1100	2350	1000	800	1000	1000	Victaulic	DN65 (2" 1/2)
02128	2860	1100	2350	1000	800	1000	1000	Victaulic	DN65 (2" 1/2)
02140	4060	1100	2350	1000	800	1000	1000	Victaulic	DN65 (2" 1/2)
04155	4060	1100	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04177	4060	1100	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04184	4060	1100	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04209	2860	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04239	2860	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04258	2860	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04305	4060	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04349	4060	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")

Technical information MWA1-A (106-349 kW)

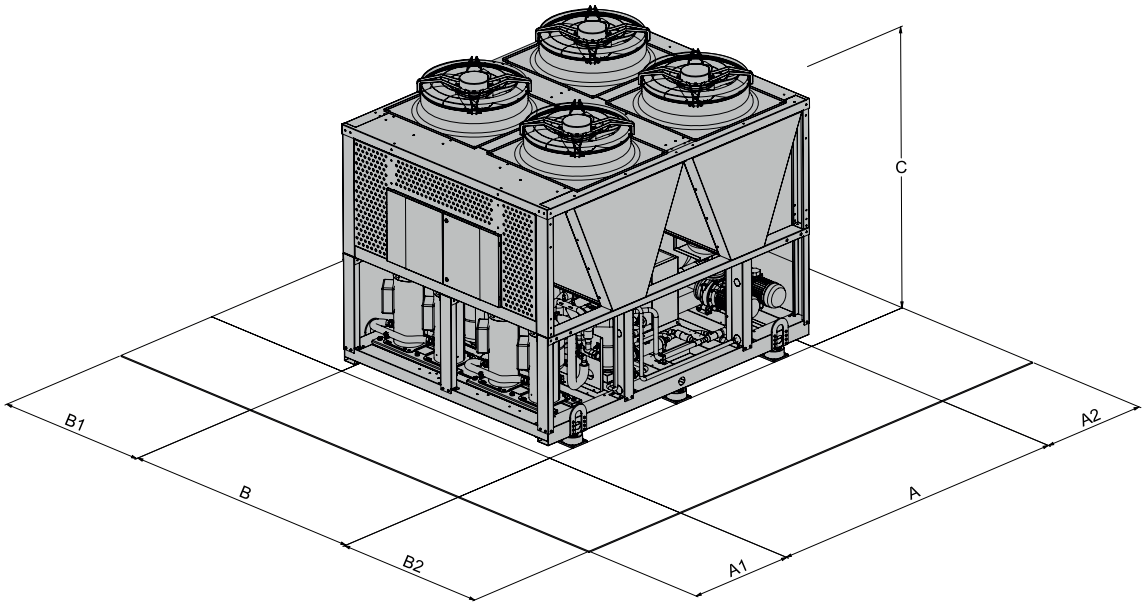
Type		02106	02120	02128	02140	04155	04177
Cooling capacity [1]	kW	105,3	119,2	127,9	139,3	155,0	176,5
Power input [1]	kW	33,6	38,3	44,0	44,3	49,9	56,8
EER [1]	W/W	3,14	3,11	2,91	3,15	3,11	3,11
Cooling capacity [2]	kW	139,4	155,9	164,8	184,9	204,4	231,0
Power input [2]	kW	35,8	40,9	46,9	47,5	52,9	60,9
EER [2]	W/W	3,90	3,81	3,51	3,89	3,87	3,79
SEER [5]	W/W	4,05	4,03	3,80	4,27	4,11	4,00
Cooling capacity [13]	kW	61,9	70,6	76,3	82,0	91,5	103,4
Power input [13]	kW	29,9	34,1	39,1	39,5	45,4	50,8
EER [13]	W/W	2,07	2,07	1,95	2,08	2,02	2,04
Water flow [1]	L/s	5,11	5,82	6,19	6,45	7,19	8,25
Pressure drop [1]	kPa	18,02	21,48	24,50	27,84	21,08	17,27
Compressor type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Number of compressors	n°	2	2	2	2	4	4
Refrigerant circuits	n°	1	1	1	1	2	2
Refrigerant charge 1 [7]	kg	12	12	12	17	11	11
Refrigerant charge 2 [7]	kg	-	-	-	-	9	9
Nominal air flow	l/s	10142	10200	10520	14649	14467	15072
Number of fans	n°	2	2	2	3	3	3
Maximum pressure hydronic kit	bar	6	6	6	6	6	6
Minimum water volume [8]	L	420	530	530	690	400	520
Sound power [9]	dB(A)	86(SL) 85/ (SSL)83	86/(SL) 85/ (SSL)83	87/(SL) 86/ (SSL)84	87/(SL) 86/ (SSL)84	87/(SL) 86/ (SSL)84	88/(SL) 87/ (SSL)85
Sound pressure [10]	dB(A)	54/(SL) 53/ (SSL) 51	54/(SL) 53/ (SSL) 51	55/(SL) 54/ (SSL) 52	54,9/(SL) / 53,9/(SSL) / 51,9	54,9/(SL) / 53,9/(SSL) / 51,9	55,9/(SL) / 54,9/(SSL) / 52,9
Power supply					400V/3P/50Hz		
Maximum power input	kW	48,9	55,0	61,1	66,9	82,4	87,4
Maximum current input	A	83,0	93,4	103,8	113,5	139,9	148,3
Gross weight	kg	1.080	1.080	1.090	1.510	1.620	1.620
Operating weight	kg	1.090	1.090	1.100	1.520	1.630	1.630

Operating conditions:, see page 231

Type		04184	04209	04239	04258	04305	04349
Cooling capacity [1]	kW	183,2	208,4	238,1	257,1	304,8	348,9
Power input [1]	kW	62,9	67,1	76,8	88,6	98,3	112,1
EER [1]	W/W	2,91	3,11	3,10	2,90	3,10	3,11
Cooling capacity [2]	kW	240,4	278,6	314,3	334,8	405,3	460,6
Power input [2]	kW	67,9	71,7	81,9	94,8	105,2	121,2
EER [2]	W/W	3,54	3,89	3,84	3,53	3,85	3,80
SEER [5]	W/W	3,97	4,07	4,24	3,83	4,16	4,03
Cooling capacity [13]	kW	108,9	122,9	144,1	157,1	183,8	210,6
Power input [13]	kW	55,8	59,7	68,8	79,2	88,5	100,5
EER [13]	W/W	1,95	2,06	2,09	1,98	2,08	2,10
Water flow [1]	L/s	8,92	10,10	11,40	12,47	14,69	16,31
Pressure drop [1]	kPa	19,87	25,54	34,23	40,86	31,97	27,47
Compressor type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Number of compressors	n°	4	4	4	4	4	4
Refrigerant circuits	n°	2	2	2	2	2	2
Refrigerant charge 1 [7]	kg	11	11	12	12	18	19
Refrigerant charge 2 [7]	kg	9	11	12	12	19	19
Nominal air flow	l/s	15054	19713	20471	21067	29279	30351
Number of fans	n°	3	4	4	4	6	6
Maximum pressure hydronic kit	bar	6	6	6	6	6	6
Minimum water volume [8]	L	520	520	650	650	850	850
Sound power [9]	dB(A)	88/(SL) 87/ (SSL)85	88/(SL) 87/ (SSL)85	88/(SL) 87/ (SSL)85	88/(SL) 87/ (SSL)85	88/(SL) 87/ (SSL)85	90/(SL) 89/ (SSL)87
Sound pressure [10]	dB(A)	55,9/(SL) / 54,9/(SSL) / 52,9	55,9/(SL) / 54,9/(SSL) / 52,9	55,9/(SL) / 54,9/(SSL) / 52,9	55,9/(SL) / 54,9/(SSL) / 52,9	55,8/(SL) / 54,8/(SSL) / 52,8	57,8/(SL) / 56,8/(SSL) / 54,8
Power supply				400V/3P/50Hz			
Maximum power input	kW	90,9	97,8	110,0	122,3	146,0	165,8
Maximum current input	A	154,3	166,0	186,8	207,6	247,8	281,4
Gross weight	kg	1.620	1.950	1.960	1.960	2.670	2.850
Operating weight	kg	1.630	1.960	1.970	1.980	2.690	2.870

Operating conditions:, see page 231

Dimensions MWA1-A/H (109-345 kW)



Type	Dimensions (mm)			Recommended free space (mm)				Heat exchanger	
	A	B	C	A1	A2	B1	B2	Type	Ø
02109	2860	1100	2350	1000	800	1000	1000	Victaulic	DN65 (2" 1/2)
02121	2860	1100	2350	1000	800	1000	1000	Victaulic	DN65 (2" 1/2)
02142	4060	1100	2350	1000	800	1000	1000	Victaulic	DN65 (2" 1/2)
02148	4060	1100	2350	1000	800	1000	1000	Victaulic	DN65 (2" 1/2)
02160	4060	1100	2350	1000	800	1000	1000	Victaulic	DN65 (2" 1/2)
04176	2860	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04199	2860	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04215	2860	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04237	2860	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04273	4060	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04304	4060	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")
04345	4060	2200	2350	1000	800	1000	1000	Victaulic	DN80 (3")

Technical information MWA1-A/H (109-345 kW)

	Type		02109	02121	02142	02148	02160	04176
cooling	Cooling capacity [1]	kW	102,8	113,1	131,8	137,9	148,1	165,3
	Power input [1]	kW	33,8	38,9	41,3	44,4	49,8	52,6
	EER [1]	W/W	3,05	2,90	3,19	3,11	2,97	3,14
	Cooling capacity [2]	kW	139,0	150,6	177,0	187,8	202,4	223,6
	Power input [2]	kW	36,5	42,7	44,1	47,7	53,0	55,7
	EER [2]	W/W	3,81	3,53	4,01	3,94	3,82	4,01
	SEER [5]	W/W	4,35	4,36	4,38	4,73	4,50	4,61
	Water flow [1]	L/s	4,92	5,41	6,31	6,61	7,09	7,90
	Pressure drop [1]	kPa	21,65	20,13	26,53	24,3	20,21	21,7
heating	Thermal power [3]	kW	112,6	125,1	147,8	154,1	166,2	187,6
	Power input [3]	kW	27,6	30,9	36,6	37,7	41,4	46,0
	COP [3]	W/W	4,09	4,05	4,04	4,08	4,01	4,08
	Thermal power [4]	kW	108,3	120,1	141,5	147,9	159,7	179,1
	Power input [4]	kW	32,9	37,5	43,9	45,3	49,4	55,9
	COP [4]	W/W	3,30	3,20	3,22	3,26	3,23	3,21
	SCOP [6]	W/W	3,72	3,77	3,62	3,69	3,68	3,90
	Water flow [4]	l/s	5,20	5,78	6,80	6,96	7,68	8,62
	Heat exchanger pressure [4]	kPa	24,16	22,92	30,61	28,4	24,03	26,63
	Energy efficiency (water 35°C)		A+/A+	A+/A+	A+/A+	A+/A+	A+/A+	A++/A+
	Compressor type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
	Number of compressors	n°	2	2	2	2	2	4
	Refrigerant circuits	n°	1	1	1	1	1	2
	Refrigerant charge 1 [7]	kg	28	33	33	42	42	23
	Refrigerant charge 2 [7]	kg	-	-	-	-	-	23
	Nominal air flow	l/s	10021	9984	15109	15088	15045	20954
	Number of fans	n°	2	2	3	3	3	4
	Maximum pressure hydronic kit	bar	6	6	6	6	6	6
	Minimum water volume [8]	L	490	630	630	820	820	480
	Sound power [9]	dB(A)	88/(SL) 87/ (SSL) 84	88/(SL) 87/ (SSL) 84	88/(SL) 87/ (SSL) 84	88/(SL) 87/ (SSL) 84	88/(SL) 87/ (SSL) 84	89/(SL) 88/ (SSL) 85
	Sound pressure [10]	dB(A)	56/(SL) 55/ (SSL) 52	56/(SL) 55/ (SSL) 52	55,9/(SL) / 54,9/(SSL) / 51,9	55,9/(SL) / 54,9/(SSL) / 51,9	55,9/(SL) / 54,9/(SSL) / 51,9	56,9/(SL) / 55,9/(SSL) / 52,9
	Power supply		400V/3P/50Hz					
	Maximum power input	kW	48,9	55,0	63,1	66,9	73,0	87,9
	Maximum current input	A	83,0	93,4	107,1	113,5	123,9	149,2
	Gross weight	kg	1.180	1.210	1.470	1.530	1.530	2.030
	Operating weight	kg	1.190	1.220	1.480	1.540	1.540	2.040

Operating conditions:, see page 231

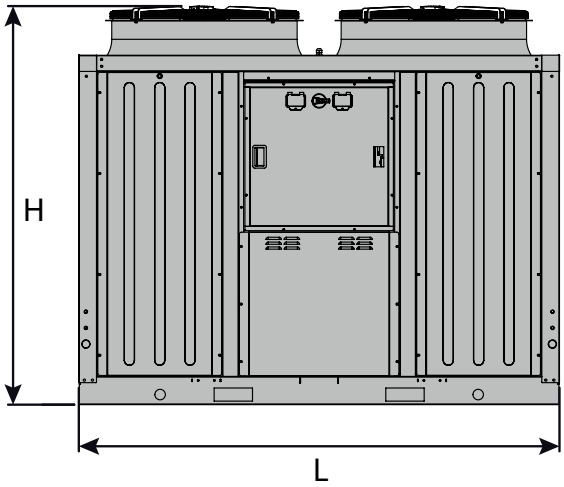
Technical information MWA1-A (106-349 kW)

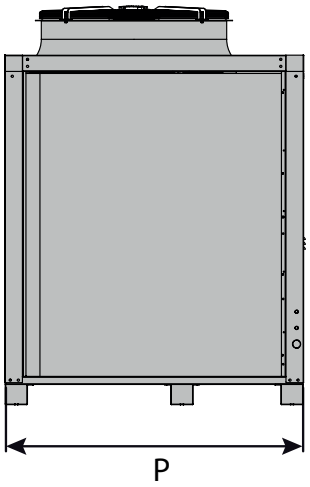
	Type		04199	04215	04237	04273	04304	04345
cooling	Cooling capacity [1]	kW	186,9	208,3	224,8	259,6	289,1	324,6
	Power input [1]	kW	59,4	67,2	77,5	80,6	92,9	111,9
	EER [1]	W/W	3,15	3,10	2,90	3,22	3,10	2,90
	Cooling capacity [2]	kW	252,0	282,0	301,1	351,2	387,5	433,8
	Power input [2]	kW	63,8	71,6	83,2	87,0	100,5	121,8
	EER [2]	W/W	3,95	3,94	3,62	4,04	3,86	3,56
	SEER [3]	W/W	4,64	4,71	4,53	4,65	4,73	4,42
	Water flow [1]	L/s	8,94	9,97	10,76	12,42	13,81	15,53
	Pressure drop [1]	kPa	26,48	24,66	27,21	18,78	24,85	17,91
heating	Thermal power [3]	kW	207,3	223,0	245,9	285,8	316,1	356,1
	Power input [3]	kW	50,7	54,8	61,1	69,2	78,3	88,5
	COP [3]	W/W	4,09	4,07	4,02	4,13	4,04	4,02
	Thermal power [4]	kW	198,1	214,1	236,7	273,0	303,3	344,4
	Power input [4]	kW	61,5	66,0	74,0	83,8	94,7	107,6
	COP [4]	W/W	3,22	3,24	3,20	3,26	3,20	3,20
	SCOP [6]	W/W	3,84	3,96	4,00	3,92	3,95	4,01
	Water flow [4]	l/s	9,54	10,29	11,38	13,13	14,59	16,57
	Heat exchanger pressure [4]	kPa	31,94	27,61	30,53	22,86	29,13	22,26
	Energy efficiency (water 35°C)		A++/A+	A++/A+	A++/A+	A++/A+	A++/A+	A++/A+
	Compressor type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
	Number of compressors	n°	4	4	4	4	4	4
	Refrigerant circuits	n°	2	2	2	2	2	2
	Refrigerant charge 1 [7]	kg	23	30	31	45	59	61
	Refrigerant charge 2 [7]	kg	23	30	31	35	32	32
	Nominal air flow	l/s	20888	20815	20738	31370	31264	31109
	Number of fans	n°	4	4	4	6	6	6
	Maximum pressure hydronic kit	bar	6	6	6	6	6	6
	Minimum water volume [8]	L	610	610	780	1.020	1.020	1.290
	Sound power [9]	dB(A)	89/(SL) 88/ (SSL) 85	89/(SL) 88/ (SSL) 85	90/(SL) 89/ (SSL) 86	90/(SL) 89/ (SSL) 86	91/(SL) 90/ (SSL) 87	92/(SL) 91/ (SSL) 88
	Sound pressure [10]	dB(A)	56,9/(SL) / 55,9/(SSL) / 52,9	56,9/(SL) / 55,9/(SSL) / 52,9	57,9/(SL) / 56,9/(SSL) / 53,9	57,8/(SL) / 56,8/(SSL) / 53,8	58,8/(SL) / 57,8/(SSL) / 54,8	59,8/(SL) / 58,8/(SSL) / 55,8
	Power supply		400V/3P/50Hz					
	Maximum power input	kW	92,8	97,8	110,0	123,8	139,8	160,1
	Maximum current input	A	157,6	166,0	186,8	210,2	237,4	271,8
	Gross weight	kg	2.060	2.100	2.130	2.680	2.880	2.900
	Operating weight	kg	2.070	2.110	2.140	2.700	2.900	2.930

Operating conditions:
(1) Cooling: outdoor air temperature 35 °C; water temperature inlet/outlet 12/7 °C.
(2) Cooling: outdoor air temperature 35 °C; water temperature inlet/outlet 23/18 °C.
(3) Heating: outdoor air temperature 7 °C d.b. 6°C w.b.; water temperature inlet/outlet 30/35 °C.
(4) Heating: outdoor air temperature 7 °C d.b. 6°C w.b.; water temperature inlet/outlet 40/45 °C.
(5) Internal exchanger water reference temperature = 12/7 °C.
(6) Heating: average climatic conditions; Tbiv = -7 °C; water temperature in/out 30/35 °C.
(7) Indicative data and subject to change. For the correct data, always refer to the technical label on the unit.
(8) The calculated value of minimum volume of water at the plant does not consider the volume of water contained in the internal exchanger (evaporator). With low external air temperature applications or low average loads required, the minimum volume of water to the system is obtained by doubling the indicated value.
(9) Condition (3); value determined on the basis of measurements carried out in accordance with the UNI EN ISO 9614-2 standard,
(10) Value calculated from the sound power level using ISO 3744: 2010, referred to 10 m distance from the unit.
(11) Internal exchanger water temperature = 12/7 °C, air entering the external heat exchanger 35 °C.
(12) Internal exchanger water temperature = 23/18 °C, air entering the external heat exchanger 35 °C.
(13) Cooling version BT: outdoor air temperature 35 °C, internal exchanger water temperature = -3 / -8 °C. Fluid treated with 35% ethylene glycol.

N.B. The performance data are indicative and could be subject to change. In addition, the performances declared in apex (1), (2), and (8) refer to the instantaneous power according to EN 14511. The declared data stated in the apex (6) is determined according to the UNI EN 14825.

Dimensions iMax





Type	Dimensions (mm)		
	L	P	H
0466	2250	1170	1985
0475	2250	1170	1985
0485	2250	1170	1985
0695	2250	1170	2250
06105	2250	1450	1450
06115	2250	1450	2010

Technical information iMax

	Type		0466	0475	0485	0695	06105	06115
cooling	Cooling capacity [1]	kW	65,59	74,6	83,9	94,7	105,6	114,3
	Power input [1]	kW	22,62	25,72	28,83	32,66	36,16	39,4
	EER [1]	W/W	2,90	2,90	2,91	2,90	2,92	2,90
	Cooling capacity [2]	kW	79,6	90,16	102,8	113,3	127,3	139,3
	Power input [2]	kW	21,81	24,64	28,16	31,04	34,88	38,16
	EER [2]	W/W	3,65	3,66	3,65	3,65	3,65	3,65
	SEER [5]	W/W	3,82	3,85	3,81	3,8	3,83	3,81
	Water flow [1]	L/s	3,14	3,57	4,01	4,53	5,05	5,47
	Pressure drop [1]	kPa	32	36	37	34	33	38
heating	Thermal power [3]	kW	68,4	74,7	85,6	93,34	102,47	111,47
	Power input [3]	kW	16,85	18,44	21,14	23,87	25,3	28,58
	COP [3]	W/W	4,06	4,05	4,05	3,91	4,05	3,90
	Thermal power [4]	kW	65,86	71,0	82,12	88,57	97,13	108,28
	Power input [4]	kW	20,52	22,19	25,66	27,68	30,35	36,09
	COP [4]	W/W	3,21	3,20	3,20	3,20	3,20	3,00
	SCOP [6]	W/W	3,58	3,55	3,53	3,54	3,57	3,50
	Water flow [4]	l/s	3,15	3,40	3,93	4,24	4,65	5,18
	Heat exchanger pressure [4]	kPa	30	31	31	32	27	27
	Energy efficiency (water 35°C)		A+/A+	A+/A+	A+/A+	A+/A+	A+/A+	A+/A+
	Compressor type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
	Number of compressors	n°	4	4	4	6	6	6
	Refrigerant circuits	n°	2	2	2	2	2	2
	Refrigerant charge [7]	kg	13,4	14,2	14,3	13,4	14,2	14,3
	Nominal air flow	m3/s	6,5x2	7x2	7,5x2	8x2	8,5x2	9x2
	Maximum pressure hydronic kit	bar	6	6	6	6	6	6
	Water connections	inch	2" 1/2	2" 1/2	2" 1/2	2" 1/2	2" 1/2	2" 1/2
	Minimum water volume [8]	L	200	200	200	260	260	260
	Sound power [9]	dB(A)	84 / SL 82,0 / SSL 81,2	84 / SL 82,5 / SSL 81,7	85 / SL 83,0 / SSL 82,2	85 / SL 83,2 / SSL 82,7	85 / SL 83,2/ SSL 82,7	86 / SL 83,7 / SSL 83,2
	Sound pressure [10]	dB(A)	52,2	52,2	53,2	53,2	53,2	54,2
	Power supply		400V/3P+N+T/50Hz					
	Maximum power input	kW	39,9	42,3	46,7	52,3	55,8	63,0
	Maximum current input	A	60,1	63,5	70,3	78,7	83,9	94,7
	Gross weight	kg	943	955	1011	1026	1128	1142
	Operating weight	kg	923	946	996	1011	1105	1120

Operating conditions:

[1] Cooling: outdoor air temperature 35 °C; water temperature inlet/outlet 12/7 °C.
[2] Cooling: outdoor air temperature 35 °C; water temperature inlet/outlet 23/18 °C.
[3] Heating: outdoor air temperature 7 °C d.b. 6°C w.b.; water temperature inlet/outlet 30/35 °C.
[4] Heating: outdoor air temperature 7 °C d.b. 6°C w.b.; water temperature inlet/outlet 40/45 °C.
[5] Cooling: water temperature inlet/outlet = 12/7 °C.
[6] Heating: average climatic conditions; Tbiv = -7 °C; water temperature in/out 30/35 °C.
[7] Indicative data and subject to change. For the correct data, always refer to the technical label on the unit.
[8] Calculated in the case of the plant water temperature decreased by 10°C for 6 minutes of defrosting.
[9] Condition (3); value determined on the basis of measurements carried out in accordance with the UNI EN ISO 9614-2 standard,
[10] Value calculated from the sound power level using ISO 3744: 2010, referred to 10 m distance from the unit.
[*] The prevalence data and characteristics of the pump refer to kit CI1 for all sizes except 0270 for which the data are expressed for kit CI6

NB: The performance data are indicative and could be subject to change. In addition, the performances declared in apex (1), (2), (3) and (4) refer to the instantaneous power according to EN 14511. The declared data stated in the apex (5) and (6) is determined according to the UNI EN 14825.