

Inverter heat pump type air-water 2022 Technical Specification



Outdoor unit

Table: Outdoor unit

Capacity	4kW	6kW
Model EMHP-	EMHP-4V/N8 EEC	EMHP-6V/N8 EEC
Power Supply (V/Ph/Hz)	220-240/1 /50	220-240/1 /50
Appearance		

Capacity	8kW	10kW	12kW		14kW		16kW	
Model EMHP-	EMHP-8V/N8 EEC	EMHP-10V/N8 EEC	EMHP-12V/N8 EEC	EMHP-12Y/N8 EEC	EMHP-14V/N8 EEC	EMHP-14Y/N8 EEC	EMHP-16V/N8 EEC	EMHP-16Y/N8 EEC
Power Supply (V/Ph/Hz)	220-240/1/50	220-240/1/50	220-240/1/50	380-415/3/50	220-240/1/50	380-415/3/50	220-240/1/50	380-415/3/50
Appearance								

Hydronic box

Table: Hydronic box

Model EHB-	EHB-60/N8 EEC	EHB-100/N8 EEC	EHB-160/N8 EEC
Power Supply (V/Ph/Hz)	220-240/1 /50	220-240/1 /50	220-240/1 /50
Compatible outdoor unit model EMHP-	EMHP-4V/N8 EEC	EMHP-8V/N8 EEC	EMHP-12V/N8 EEC
			EMHP-14V/N8 EEC
			EMHP-16V/N8 EEC
	EMHP-6V/N8 EEC	EMHP-10V/N8 EEC	EMHP-12Y/N8 EEC
			EMHP-14Y/N8 EEC
			EMHP-16Y/N8 EEC
Appearance			

Leaving Water Temperature (LWT) Selection

The recommended design LTW ranges for different types of heat emitter are:

- For floor heating: to 35°C
- For fan coil units: to 45°C
- For low temperature radiators: 40 to 50 °C

Optimizing System Design

To get the most comfort with the lowest energy consumption with M thermal, it is important to take account of the following considerations:

- Choose heat emitters that allow the heat pump system to operate at as low a hot water temperature as possible whilst still providing sufficient heating.
- Make sure the correct weather dependency curve is selected to match the installation environment (building structure, climate) as well as ender user's demands.
- Connecting room thermostats (field supplied) to the hydronic system helps prevent excessive space heating by stopping the outdoor unit and circulator pump when the room temperature is above the thermostat set.



Specifications

Outdoor Unit

Model name EMHP-			EMHP-4V/N8 EEC	EMHP-6V/N8 EEC	EMHP-8V/N8 EEC	EMHP-10V/N8 EEC
Compatible hydronic box EHB-			EHB-60/N8 EEC		EHB-100/N8 EEC	
Power supply		V/Ph/Hz	220-240/1/50			
Heating(A7W35)	Capacity	kW	4.25	6.20	8.30	10.0
	Rated input	kW	0.82	1.24	1.60	2.00
	COP		5.20	5.00	5.20	5.00
Heating(A7W45)	Capacity	kW	4.35	6.35	8.20	10.0
	Rated input	kW	1.14	1.69	2.08	2.63
	COP		3.80	3.75	3.95	3.80
Heating(A7W55)	Capacity	kW	4.40	6.00	7.50	9.50
	Rated input	kW	1.49	2.00	2.36	3.06
	COP		2.95	3.00	3.18	3.10
Heating(A-7W35)	Capacity	kW	4.8	6.1	7.1	8.25
	Rated input	kW	1.52	2	2.18	2.62
	COP		3.15	3.05	3.25	3.15
Heating(A-7W55)	Capacity	kW	4	5.15	6.15	6.85
	Rated input	kW	2.05	2.58	3	3.43
	COP		1.95	2	2.05	2
Cooling(A35W18)	Capacity	kW	4.50	6.55	8.40	10.00
	Rated input	kW	0.81	1.34	1.66	2.08
	EER		5.55	4.90	5.05	4.80
Cooling(A35W7)	Capacity	kW	4.70	7.00	7.40	8.20
	Rated input	kW	1.36	2.33	2.19	2.48
	EER		3.45	3.00	3.38	3.30
Seasonal space heating energy efficiency class ⁷	LWT at 35°C		A+++	A+++	A+++	A+++
	LWT at 55°C		A++	A++	A++	A++
SCOP ⁷	Warmer climate	35°C	6.46	6.57	6.99	7.09
		55°C	4.15	4.21	4.51	4.62
	Average climate	35°C	4.85	4.95	5.22	5.20
		55°C	3.31	3.52	3.37	3.47
	Colder climate	35°C	4.06	4.21	4.33	4.32
		55°C	2.63	2.85	2.88	2.99
SEER	LWT at 7°C		4.99	5.34	5.83	5.98
	LWT at 18°C		7.77	8.21	8.95	8.78
Rated water flow		m³/h	0.73	1.07	1.43	1.72
Compressor	Type		Twin rotary DC inverter		Twin rotary DC inverter	
Outdoor fan	Motor type		Brushless DC motor		Brushless DC motor	
	Number of fans		1	1	1	1
Air side heat exchanger	Type		Finned tube		Finned tube	
Refrigerant(R32)	Factory charge	kg	1.50	1.50	1.65	1.65
Throttle type			Electronic expansion valve		Electronic expansion valve	
Piping connections	Type		Flare	Flare	Flare	Flare
	Liquid Dia.{OD}	mm	Φ6.35	Φ6.35	Φ9.52	Φ9.52
	Gas Dia.{OD}	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Min. pipe length	m	2	2	2	2
	Max. pipe length	m	30	30	30	30



Installation height difference	Outdoor unit above	m	20	20	20	20
	Outdoor unit below	m	20	20	20	20

Sound power level ⁸	dB	56	58	59	60
Sound pressure level ⁹	dB	44	45	46	49
Net dimensions {W×H×D}	mm	1008×712×426	1008×712×426	1118×865×523	1118×865×523
Packed dimensions {W×H×D}	mm	1065×810×485	1065×810×485	1190×970×560	1190×970×560
Net/Gross weight	kg	58/63.5	58/63.5	75/89	75/89
Operating temperature range	Cooling	°C	-5 to 43		
	Heating	°C	-25 to 35		
	DHW	°C	-25 to 43		

Note:

1. Relevant EU standards and legislation: EN14511; EN14825; EN50564; EN12102; {EU} No 811:2013; {EU} No 813:2013; OJ 2014/C 207/02:2014.
2. Test standard: EN12102-1
3. Sound pressure level is the maximum value tested under the two conditions of Heating: A7W35 and Cooling: A35W18.



Electrolux

Model name EMHP-			EMHP-12V/N8 EEC	EMHP-14V/N8 EEC	EMHP-16V/N8 EEC
Compatible hydronic box EHB-			EHB-160/N8 EEC		
Power supply		V/Ph/Hz	220-240/1/50		
Heating(A7W35)	Capacity	kW	12.1	14.5	16.0
	Rated input	kW	2.44	3.09	3.56
	COP		4.95	4.70	4.50
Heating(A7W45)	Capacity	kW	12.3	14.2	16.0
	Rated input	kW	3.24	3.89	4.44
	COP		3.80	3.65	3.60
Heating(A7W55)	Capacity	kW	12.0	13.8	16.0
	Rated input	kW	3.87	4.60	5.52
	COP		3.10	3.00	2.90
Heating(A-7W35)	Capacity	kW	10	12	13.3
	Rated input	kW	3.33	4.29	4.93
	COP		3	2.8	2.7
Heating(A-7W55)	Capacity	kW	10	11	12.5
	Rated input	kW	4.88	5.37	6.19
	COP		2.05	2.05	2.02
Cooling(A35W18)	Capacity	kW	12.00	13.50	14.2
	Rated input	kW	3.00	3.74	3.94
	EER		4.00	3.61	3.61
Cooling(A35W7)	Capacity	kW	11.6	12.7	14.0
	Rated input	kW	4.22	4.98	5.71
	EER		2.75	2.55	2.45
Seasonal space heating energy efficiency class ⁷	LWT at 35°C		A+++	A+++	A+++
	LWT at 55°C		A++	A++	A++
SCOP ⁷	Warmer climate	35°C	6.48	6.58	6.29
		55°C	4.43	4.49	4.48
	Average climate	35°C	4.81	4.72	4.62
		55°C	3.45	3.47	3.41
	Colder climate	35°C	4.08	4.07	4.02
		55°C	3.02	3.05	3.12
SEER	LWT at 7°C		4.89	4.86	4.69
	LWT at 18°C		7.1	6.9	6.75
Rated water flow		m³/h	2.08	2.49	2.75
Compressor	Type		Twin rotary DC inverter		
Outdoor fan	Motor type		Brushless DC motor		
	Number of fans		1	1	1
Air side heat exchanger	Type		Finned tube		
Refrigerant(R32)	Factory charge	kg	1.84	1.84	1.84
Throttle type			Electronic expansion valve		
Piping connections	Type		Flare	Flare	Flare
	Liquid Dia.{OD}	mm	Ø9.52	Ø9.52	Ø9.52
	Gas Dia.{OD}	mm	Ø15.9	Ø15.9	Ø15.9
	Min. / Max. pipe length	m	2/30	2/30	2/30
Installation height difference	Outdoor unit above	m	20	20	20
	Outdoor unit below	m	20	20	20
Sound power level ⁸		dB	64	65	68
Sound pressure level ⁹		dB	50	51	54
Net dimensions {W×H×D}		mm	1118×865×523	1118×865×523	1118×865×523



Packed dimensions {W×H×D}	mm	1190×970×560	1190×970×560	1190×970×560
Net/Gross weight	kg	97/110.5	97/110.5	97/110.5

Operating temperature range	Cooling	°C	-5 to 43
	Heating	°C	-25 to 35
	DHW	°C	-25 to 43

Note:

- 1. Relevant EU standards and legislation: EN14511; EN14825; EN50564; EN12102; {EU} No 811:2013; {EU} No 813:2013; OJ 2014/C 207/02:2014.
- 2. Test standard: EN12102-1
- 3. Sound pressure level is the maximum value tested under the two conditions of Heating: A7W35 and Cooling: A35W18.



Electrolux

Model name EMHP-			EMHP-12Y/N8 EEC	EMHP-14Y/N8 EEC	EMHP-16Y/N8 EEC
Compatible hydronic box EHB-			EHB-160/N8 EEC		
Power supply		V/Ph/H	380-415/3/50		
Heating(A7W35)	Capacity	kW	12.1	14.5	16.0
	Rated input	kW	2.44	3.09	3.56
	COP		4.95	4.70	4.50
Heating(A7W45)	Capacity	kW	12.3	14.2	16.0
	Rated input	kW	3.24	3.89	4.44
	COP		3.80	3.65	3.60
Heating(A7W55)	Capacity	kW	12.0	13.8	16.0
	Rated input	kW	3.87	4.60	5.52
	COP		3.10	3.00	2.90
Heating(A-7W35)	Capacity	kW	10	12	13.3
	Rated input	kW	3.33	4.29	4.93
	COP		3	2.8	2.7
Heating(A-7W55)	Capacity	kW	10	11	12.5
	Rated input	kW	4.88	5.37	6.19
	COP		2.05	2.05	2.02
Cooling(A35W18)	Capacity	kW	12.00	13.50	14.2
	Rated input	kW	3.00	3.74	3.94
	EER		4.00	3.61	3.61
Cooling(A35W7)	Capacity	kW	11.6	12.7	14.0
	Rated input	kW	4.22	4.98	5.71
	EER		2.75	2.55	2.45
Seasonal space heating energy efficiency class	LWT at 35°C		A+++	A+++	A+++
	LWT at 55°C		A++	A++	A++
SCOP	Warmer climate	35°C	6.47	6.57	6.28
		55°C	4.42	4.49	4.47
	Average climate	35°C	4.81	4.72	4.62
		55°C	3.45	3.47	3.41
	Colder climate	35°C	4.08	4.07	4.02
		55°C	3.02	3.05	3.12
SEER	LWT at 7°C		4.86	4.83	4.67
	LWT at 18°C		7.04	6.85	6.71
Rated water flow		m³/h	2.08	2.49	2.75
Compressor	Type		Twin rotary DC inverter		
Outdoor fan	Motor type		Brushless DC motor		
	Number of fans		1	1	1
Air side heat exchanger	Type		Finned tube		
Refrigerant(R32)	Factory charge	kg	1.84	1.84	1.84
Throttle type			Electronic expansion valve		
Piping connections	Type		Flare	Flare	Flare
	Liquid/ Gas Dia.(OD)	mm	Φ9.52/15.9	Φ9.52/15.9	Φ9.52/15.9
	Min. /Max. pipe length	m	2/30	2/30	2/30
Installation height	Outdoor unit above/below	m	20	20	20
Sound power level ²		dB	64	65	68
Sound pressure level(1m) ³		dB	50	51	55
Net dimensions {W×H×D}		mm	1118×865×523	1118×865×523	1118×865×523
Packed dimensions {W×H×D}		mm	1190×970×560	1190×970×560	1190×970×560
Net/Gross weight		kg	112/125.5	112/125.5	112/125.5

Operating temperature range	Cooling	°C	-5 to 43
	Heating	°C	-25 to 35
	DHW	°C	-25 to 43

Note:

1. Relevant EU standards and legislation: EN14511; EN14825; EN50564; EN12102; {EU} No 811:2013; {EU} No 813:2013; OJ 2014/C 207/02:2014.
2. Test standard: EN12102-1
3. Sound pressure level is the maximum value tested under the two conditions of Heating: A7W35 and Cooling: A35W18.

Hydronic Box

Model name EHB-			EHB-60/N8 EEC	EHB-100/N8 EEC	EHB-160/N8 EEC
Function			Heating and cooling		
Setting water temperature range	Cooling	°C	5~25		
	Heating	°C	25~65		
	DHW ³	°C	20~60		
Power supply		V/Ph/Hz	220-240/1/50	220-240/1/50	220-240/1/50
Sound power level ¹		dB	38	42	43
Sound pressure level(1m) ²		dB	28	30	32
Dimension (W×H×D)		mm	420×790×270	420×790×270	420×790×270
Packing (W×H×D)		mm	525×1050×360	525×1050×360	525×1050×360
Net/grossweight		kg	37/43	37/43	39/45
Water circuit	Piping connections		inch	R1"	R1"
	Safety valve set pressure		MPa	0.3	0.3
	Drainage pipe connection		mm	Φ25	Φ25
	Expansion tank	Volume	L	8.0	8.0
		Max. water pressure	MPa	0.3	0.3
		Pre-pressure	MPa	0.1	0.1
	Water side	Type	Plate type	Plate type	Plate type
	Water pump head		m	9	9
	Water flow range		m ³ /h	0.4~1.25	0.70~3.00
Refrigerant circuit	Internal water volume		L	5.0	5.0
	Liquid Dia. (OD)		mm	Φ6.35	Φ9.52
	Gas Dia. (OD)		mm	Φ15.9	Φ15.9

- Note: 1. Test standard: EN12102-1
2. Sound pressure level is the maximum value tested under the two conditions of Heating: A7W35 and Cooling: A35W18 for different combination between outdoor unit and hydronic box.
3. Maximum domestic hot water temperature 60°C is only available with TBH support.



Electrical characteristics

System	Outdoor unit				Power current			Compressor		Fan	
	Voltage (V)	Hz	Min. (V)	Max. (V)	MCA (A)	TOCA (A)	MFA (A)	MSC (A)	RLA (A)	kW	FLA (A)
EMHP-4V/N8 EEC	220~240	50	198	264	12	18	25	-	11.5	0.10	0.5
EMHP-6V/N8 EEC	220~240	50	198	264	14	18	25	-	13.5	0.10	0.5
EMHP-8V/N8 EEC	220~240	50	198	264	16	19	25	-	14.5	0.17	1.5
EMHP-10V/N8 EEC	220~240	50	198	264	17	19	25	-	15.5	0.17	1.5
EMHP-12V/N8 EEC	220~240	50	198	264	25	30	35	-	23.5	0.17	1.5
EMHP-14V/N8 EEC	220~240	50	198	264	26	30	35	-	24.5	0.17	1.5
EMHP-16V/N8 EEC	220~240	50	198	264	27	30	35	-	25.5	0.17	1.5
EMHP-12Y/N8 EEC	380~415	50	342	456	10	14	16		9.15	0.17	1.5
EMHP-14Y/N8 EEC	380~415	50	342	456	11	14	16	-	10.15	0.17	1.5
EMHP-16Y/N8 EEC	380~415	50	342	456	12	14	16	-	11.15	0.17	1.5

Note:

MCA: Min. Circuit Amps. {A}

TOCA: Total Over-current Amps. {A}

MFA: Max. Fuse Amps. {A}

MSC: Max. Starting Amps. {A}

RLA: Rated Load Amps. {A}

The input Amps of compressor where MAX. Hz can operate for nominal cooling or heating test condition

kW: Rated Motor Output

FLA: Full Load Amps. {A}