

# 1. Product Specifications

## 1-1. Specifications

Model		ERCV-M900YA	
Capacity change mode		Capacity priority	Efficiency priority
Power source		3-phase 4-wire 380-400-415V 50/60Hz	
Cooling capacity *1		kW	90.00
		kcal/h	77,400
		BTU/h	307,080
	Power input	kW	17.47
	EER		5.15
	IPLV *5		8.18
	Evaporation side water flow rate	m <sup>3</sup> /h	15.5
	Condensation side water flow rate	m <sup>3</sup> /h	17.9
		kW	89.83
		kcal/h	77,254
Cooling capacity (EN14511) *2		BTU/h	306,500
	Power input	kW	17.80
	EER		5.05
	SEER		7.66
	ηsc	%	303.4
	Evaporation side water flow rate	m <sup>3</sup> /h	15.5
	Condensation side water flow rate	m <sup>3</sup> /h	17.9
		kW	90.00
		kcal/h	77,400
		BTU/h	307,080
Heating capacity *3	Power input	kW	19.07
	COP		4.72
	Condensation side water flow rate	m <sup>3</sup> /h	15.5
	Evaporation side water flow rate	m <sup>3</sup> /h	21.5
		kW	90.12
		kcal/h	77,503
		BTU/h	307,489
	Power input	kW	19.53
	COP		4.61
	SCOP Low/Medium		7.10/4.86
Heating capacity (EN14511) *4	ηsh Low/Medium	%	281.0/191.0
	Condensation side water flow rate	m <sup>3</sup> /h	15.5
	Evaporation side water flow rate	m <sup>3</sup> /h	21.5
		kW	90.12
		kcal/h	77,503
		BTU/h	307,489
	Power input	kW	19.53
	COP		4.61
	SCOP Low/Medium		7.10/4.86
	ηsh Low/Medium	%	281.0/191.0
Current input	Cooling current 380-400-415V *1	A	29 - 27 - 26
	Heating current 380-400-415V *3	A	31 - 30 - 29
	Maximum current	A	60
Water pressure drop *1	Evaporation side	kPa	10
	Condensation side	kPa	7
Temperature range (Cooling) *7	Evaporation side water outlet	°C	4~30
		°F	39~86
	Condensation side water inlet	°C	9~50
		°F	48~122
Temperature range (Heating) *7	Condensation side water outlet	°C	20~60 *6
		°F	68~140
	Evaporation side water inlet	°C	9~35
		°F	48~95
Circulating water volume range	Evaporation side	m <sup>3</sup> /h	7.7~25.8
	Condensation side *8	m <sup>3</sup> /h	4.5~30.0
Sound pressure level (measured in anechoic room) at 1m *1		dB (A)	53
Sound power level (measured in anechoic room) *1		dB (A)	72
Diameter of water pipe (Cooling exchanger side)	Inlet	mm (in)	65A (2 1/2B) housing type joint
	Outlet	mm (in)	65A (2 1/2B) housing type joint
Diameter of water pipe (Heating exchanger side)	Inlet	mm (in)	65A (2 1/2B) housing type joint
	Outlet	mm (in)	65A (2 1/2B) housing type joint
External finish		Polyester powder coating steel plate	
External dimension H × W × D		918 × 780 × 1350	
Net weight		430 (948)	
Design pressure	R32	MPa	4.15
	Water	MPa	1.0
Heat exchanger	Evaporation side	Stainless steel plate and copper brazing	
	Condensation side	Stainless steel plate and copper brazing	
Compressor	Type	Inverter scroll hermetic compressor	
	Maker	MITSUBISHI ELECTRIC CORPORATION	
	Starting method	Inverter	
	Quantity	2	
	Motor output	kW	8.3 × 2
	Lubricant	MEL46EH	
Protection	High pressure protection	High pressure Switch at 4.15MPa (601psi)	
	Inverter circuit	Over-heat protection, Over current protection	
	Compressor	Over-heat protection	
Refrigerant	Type × charge	R32 × 5.2(kg) × 2	
	Control	LEV	

### Notes:

- \*1 Under normal cooling conditions at evaporation side water inlet temp 12°C (53.6°F) outlet temp 7°C (44.6°F) condensation side water inlet temp 30°C (86°F) outlet temp 35°C (95°F).  
Pump input is not included in cooling capacity and power input.
- \*2 Under normal cooling conditions at evaporation side water inlet temp 12°C (53.6°F) outlet temp 7°C (44.6°F) condensation side water inlet temp 30°C (86°F) outlet temp 35°C (95°F).  
Pump input is included in cooling capacity and power input based on EN14511.
- \*3 Under normal heating conditions at condensation side water inlet temp 40°C (104°F) outlet temp 45°C (113°F) evaporation side water inlet temp 10°C (50°F) outlet temp 7°C (44.6°F).  
Pump input is not included in cooling capacity and power input.
- \*4 Under normal heating conditions at condensation side water inlet temp 40°C (104°F) outlet temp 45°C (113°F) evaporation side water inlet temp 10°C (50°F) outlet temp 7°C (44.6°F).  
Pump input is included in cooling capacity and power input based on EN14511.
- \*5 IPLV is calculated in accordance with AHRI 551-591.
- \*6 When using in condensation side water outlet is more than 55°C (131°F), please adjust the condensation inlet water temperature to 50°C (122°F) or less.
- \*7 Please refer to 2-1-5 Operation temperature range.
- \*Please don't use the steel material for the water piping.
- \*Please always make water circulate, or pull the circulation water out completely when not in use.
- \*Please do not use groundwater or well water in direct.
- \*The water circuit must be closed circuit.
- \*Due to continuous improvement, the above specifications may be subject to change without notice.
- \*This model doesn't equip with a pump
- \*8 Set the minimum water flow rate on the condensation side water to 8.0m<sup>3</sup>/h when the evaporation side water inlet temperature during operation is 15°C (59°F) or higher.

# 1. Product Specifications

Model			ERCV-M900YA × 2	
Capacity change mode			Capacity priority	Efficiency priority
Power source			3-phase 4-wire 380-400-415V 50/60Hz	
Cooling capacity *1		kW	180.00	90.00
		kcal/h	154,800	77,400
		BTU/h	614,160	307,080
	Power input	kW	33.07	15.24
	EER		5.44	5.91
	Evaporation side water flow rate	m <sup>3</sup> /h	31.0	15.5
Cooling capacity (EN14511) *2	Condensation side water flow rate	m <sup>3</sup> /h	35.9	17.5
		kW	178.71	89.66
		kcal/h	153,691	77,108
		BTU/h	609,759	305,920
	Power input	kW	35.54	15.87
	EER		5.03	5.65
Heating capacity *3	Evaporation side water flow rate	m <sup>3</sup> /h	31.0	15.5
	Condensation side water flow rate	m <sup>3</sup> /h	35.9	17.5
		kW	180.00	90.00
		kcal/h	154,800	77,400
		BTU/h	614,160	307,080
	Power input	kW	37.22	18.39
Heating capacity (EN14511) *4	COP		4.84	4.89
	Condensation side water flow rate	m <sup>3</sup> /h	31.0	15.5
	Evaporation side water flow rate	m <sup>3</sup> /h	42.7	21.7
		kW	180.87	90.23
		kcal/h	155,548	77,598
		BTU/h	617,128	307,865
Current input	Power input	kW	40.90	19.26
	COP		4.42	4.68
	Condensation side water flow rate	m <sup>3</sup> /h	31.0	15.5
	Evaporation side water flow rate	m <sup>3</sup> /h	42.7	21.7
Water pressure drop *1	Cooling current 380-400-415V *1	A	54 - 51 - 49	25 - 24 - 23
	Heating current 380-400-415V *3	A	61 - 58 - 56	30 - 29 - 28
	Maximum current	A	120	
Temperature range (Cooling) *5	Evaporation side	kPa	85	25
	Condensation side	kPa	66	18
Temperature range (Heating) *5	Evaporation side water outlet	°C	40~30	
		°F	39~86	
	Condensation side water inlet	°C	9~50	
		°F	48~122	
Circulating water volume range	Condensation side water outlet	°C	20~55	
		°F	68~131	
	Evaporation side water inlet	°C	9~35	
		°F	48~95	
Sound pressure level (measured in anechoic room) at 1m *1	Evaporation side	m <sup>3</sup> /h	15.4~50.0	
	Condensation side *6	m <sup>3</sup> /h	9.0~50.0	
Sound power level (measured in anechoic room) *1		dB (A)	56	51
Diameter of water pipe (Cooling exchanger side)		mm (in)	65A (2 1/2B) housing type joint	
Diameter of water pipe (Heating exchanger side)	Inlet	mm (in)	65A (2 1/2B) housing type joint	
	Outlet	mm (in)	65A (2 1/2B) housing type joint	
External finish			65A (2 1/2B) housing type joint	
External dimension H × W × D		mm	1836 × 780 × 1350	
Net weight		kg (lbs)	863 (1903)	
Design pressure	R32	MPa	4.15	
	Water	MPa	1.0	
Heat exchanger	Evaporation side		Stainless steel plate and copper brazing	
	Condensation side		Stainless steel plate and copper brazing	
Compressor	Type		Inverter scroll hermetic compressor	
	Maker		MITSUBISHI ELECTRIC CORPORATION	
	Starting method		Inverter	
	Quantity		4	
	Motor output	kW	8.3 × 4	
	Lubricant		MEL46EH	
Protection	High pressure protection		High pressure Switch at 4.15MPa (601psi)	
	Inverter circuit		Over-heat protection, Over current protection	
	Compressor		Over-heat protection	
Refrigerant	Type × charge		R32 × 5.2(kg) × 4	
	Control		LEV	

Notes:				
*1 Under normal cooling conditions at evaporation side water inlet temp 12°C (53.6°F) outlet temp 7°C (44.6°F) condensation side water inlet temp 30°C (86°F) outlet temp 35°C (95°F). Pump input is not included in cooling capacity and power input.				
*2 Under normal cooling conditions at evaporation side water inlet temp 12°C (53.6°F) outlet temp 7°C (44.6°F) condensation side water inlet temp 30°C (86°F) outlet temp 35°C (95°F). Pump input is included in cooling capacity and power input based on EN14511.				
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*Please don't use the steel material for the water piping.				
*Please always make water circulate, or pull the circulation water out completely when not in use.				
*Please do not use groundwater or well water in direct.				
*The water circuit must be closed circuit.				
*Due to continuous improvement, the above specifications may be subject to change without notice.				
*This model doesn't equip with a pump				
*6 Set the minimum water flow rate on the condensation side water to 16.0m <sup>3</sup> /h when the evaporation side water inlet temperature during operation is 15°C (59°F) or higher.				

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