Chillers

Product Information

e-Series Modular Chiller (90-1,080kW)
Cooling Only or Heat Pump

Making a World of Difference

The **e-series chiller** allows for up to six individual units to be connected together to provide a system capacity from 90kW to 1,080kW. Using this modular approach reduces space requirements and simplifies lifting and installation. The e-series chiller is available as a cooling only or heat pump version, suitable for both comfort and process cooling applications.

Key Features

- Two high efficiency advanced DC inverter-driven scroll compressors are incorporated within each 90kW module and four within the 150/180kW modules. This allows the unit to operate between 8% ~ 100% of capacity, producing exceptional part load efficiencies
- Two-stage cooling circuit - both compressors (or pair of compressors) serve separate plate heat exchangers located in the centre of the unit
- Reduced plant space - each size module can be positioned in a row of up to six connected units using the same internal header
- Internal header pipe - the in-built internal header pipes simplify design, installation and maintenance and also reduces space requirements, making the e-series range modular and suitable for almost any situation
- High performance compact air heat exchanger - the use of U-shaped or Y-shaped heat exchangers allows for a greater surface area, maximising efficiency whilst also keeping the units much narrower than conventional chillers. Blue Fin anti-corrosion coating on the heat exchanger is also provided as standard on the 90kW module

MITSUBISHI ELECTRIC

Cooling | Heating | Ventilation | Controls

e-series

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Making a World of Difference

MODEL				**EACV-P900YA-N** Cooling Only	**EACV-P1500YBL-N** Cooling Only	**EACV-P1800YBL-N** Cooling Only
POWER SOURCE				3-phase 4-wire 380-400-415v, 50/60Hz	3-phase 4-wire 380-400-415v, 50/60Hz	3-phase 4-wire 380-400-415v, 50/60Hz
COOLING CAPACITY *1 WATER			kW	90.0	150.0	180.0
			kcal/h	77,400	129,000	154,800
			BTU/h	307,080	511,800	614,160
	Power Input		kW	27.27	45.1	59.01
	EER (Pump input is not included)			3.30	3.33	3.05
	IPLV *3			6.34	6.55	6.33
	Water Flow Rate		m^3/h	15.5	25.8	31
COOLING CAPACITY (EN14511)*2 WATER			kW	90	148.6	177.8
			kcal/h	77,400	127,779	152,874
			BTU/h	307,080	506,955	606,517
	Power Input		kW	29.2	46.52	61.25
	EER			3.08	3.19	2.90
	Eurovent Efficiency Class			B	A	B
	ESEER *4			4.71	4.74	4.45
	SEER (ηsc) (BS EN14825)			4.88 (192%)	4.62 (181%)	4.58 (180%)
	Water Flow Rate		m^3/h	15.5	25.8	31.0
	Minimum Water Circuit Volume		L	420	800	800
COOLING CAPACITY BRINE (ethylene glycol 35WT%)*5 *6			kW	56.73	N/A	N/A
			kcal/h	48,788	N/A	N/A
			BTU/h	193,563	N/A	N/A
	Power Input		kW	25.98	N/A	N/A
	Current Input 380 - 400 - 415V		A	43.9 - 41.7 - 40.2	N/A	N/A
	EER (Pump input is not included)			2.18	N/A	N/A
	EER (Includes pump input based on EN14511)			2.10	N/A	N/A
	SEPR (ηsc) (BS EN14825)			6.11 (241%)	N/A	N/A
	Brine (ethylenegylcol 35WT%) Flow Rate		m^3/h	11.5	N/A	N/A
CURRENT INPUT	Cooling Current 380 - 400 - 415V *1		A	46.0 - 43.7 - 42.2	77 - 73 - 70	77 - 73 - 70
	Maximum Current Input		A	61	111	111
WATER PRESSURE DROP *1	Water		kPa	135	114	164
	Brine (ethylene glycol 35WT%)*5		kPa	106	N/A	N/A
TEMP RANGE	Cooling Water		℃	Outlet water 5 ~ 25	Outlet water 5 ~ 30	Outlet water 5 ~ 30
	Cooling Brine (ethylene glycol 35WT%)*5		℃	Outlet brine -10 ~ 25	N/A	N/A
	Heating		℃	N/A	N/A	N/A
	Outdoor		℃	-15 ~ 43 *6	-15 ~ 43	-15 ~ 43
CIRCULATING WATER VOLUME			m^3/h	15.5	25.8	31
SOUND PRESSURE LEVEL (measured in anechoic room) at 1m *1			dB(A)	65	66	68
SOUND POWER LEVEL (measured in anechoic room) *1			dB(A)	77	84	86
DIAMETER OF WATER PIPE (Standard piping)	Inlet		mm	100A housing type joint	150A housing joint type	150A housing joint type
	Outlet		mm	100A housing type joint	150A housing joint type	150A housing joint type
EXTERNAL FINISH				Polyester powder coated steel plate	Polyester powder coated steel plate	Polyester powder coated steel plate
EXTERNAL DIMENSION	Width x Depth x Height		mm	2250 x 900 x 2450	3400 x 1080 x 2350	3400 x 1080 x 2350
WEIGHT	Inside Header Piping "-N" Model		kg	1022	1256	1256
DESIGN PRESSURE	R410A		MPa	4.15	4.15	4.15
	Water		MPa	1	1	1
HEAT EXCHANGER	Water Side			Stainless steel plate and copper brazing	Stainless steel plate and copper brazing	Stainless steel plate and copper brazing
	Air Side			Plate fin and copper tube	Plate fin and copper tube	Plate fin and copper tube
COMPRESSOR	Type			Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor
	Maker			Mitsubishi Electric Corporation	Mitsubishi Electric Corporation	Mitsubishi Electric Corporation
	Starting Method			Inverter	Inverter	Inverter
	Quantity			2	4	4
	Motor Output		kW	11.7 x 2	11.7 x 4	11.7 x 4
	Case Heater		kW	0.045 x 2	N/A	N/A
	Lubricant			MEL32	MEL32	MEL32
	Starting Current		A	8.5	19.1	19.1
	Max Running Current		A	61	111	111
FAN	Air Flow Rate		m^3/min	77 x 6	265 x 4	265 x 4
			L/s	1,283 x 6	4,417 x 4	4,417 x 4
			cfm	2,719 x 6	9,357 x 4	9,357 x 4
	Type, Quantity			Propeller fan x 6	Propeller fan x 4	Propeller fan x 4
	Starting Method			Inverter	Inverter	Inverter
	Motor Output		kW	0.19 x 6	0.94 x 4	0.94 x 4
PROTECTION	High Pressure Protection			High pres. sensor & High pres. switch at 4.15MPa (601psi)	High pres. sensor & High pres. switch at 4.15MPa (601psi)	High pres. sensor & High pres. switch at 4.15MPa (601psi)
	Inverter Circuit			Over-heat protection, Over-current protection	Over-heat protection, Over-current protection	Over-heat protection, Over-current protection
	Compressor			Over-heat protection	Over-heat protection	Over-heat protection
REFRIGERANT	Charge (kg)	R410A (GWP 2088)		19 x 2	15 x 4	15 x 4
	CO_2 Equivalent (t)			79.3	125.3	125.3
	Control			LEV	LEV	LEV

*1 Under normal cooling conditions at outdoor temp 35ºCDB/24ºCWB outlet water temp 7ºC inlet water temp 12ºC. Outlet brine temp -5ºC inlet brine temp 0ºC. Pump input not included.
*2 Under normal cooling conditions at outdoor temp 35ºCDB/24ºCWB outlet water temp 7ºC inlet water temp 12ºC. Pump input is included based on EN14511.
*3 IPLV IS is calcuated in accordance with AHRI 550 - 590.
*4 ESEER is calculated in accordance with EUROVENT conditions.
*5 Under normal cooling conditions at outdoor temp 35ºCDB/24ºCWB outlet brine temp -5ºC inlet water temp 0ºC.
*6 Only EACV-P900YA-N capable of water flow temps to -10ºC.

* Please always make water circulate, or take the circulation water out completely when not in use for long periods.
* The water circuit must be closed circuit.
* Due to continuous improvement, the above specifications may be subject to change without notice.

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e-Series Modular Chiller (90-1,080kW)
Cooling Only or Heat Pump

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MODEL			**EAHV-P900YA-N** Heating/Cooling	**EAHV-P1500YBL-N** Heating/Cooling	**EAHV-P1800YBL-N** Heating/Cooling
POWER SOURCE			3-phase 4-wire 380-400-415v, 50/60Hz	3-phase 4-wire 380-400-415v, 50/60Hz	3-phase 4-wire 380-400-415v, 50/60Hz
COOLING CAPACITY *1 WATER		kW	90.0	150.0	180.0
		kcal/h	77,400	129,000	154,800
		BTU/h	307,080	511,800	614,160
	Power Input	kW	30.6	45.1	59.01
	EER (Pump input is not included)		3.30	3.33	3.05
	IPLV *5		6.34	6.55	6.33
	Water Flow Rate	m^3/h	15.5	25.8	31
COOLING CAPACITY (EN14511)*2 WATER		kW	90	148.6	177.8
		kcal/h	77,400	127,779	152,874
		BTU/h	307,080	506,955	606,517
	Power Input	kW	29.2	46.52	61.25
	EER		2.94	3.19	2.90
	Eurovent Efficiency Class		B	A	B
	ESEER *6		4.71	4.74	4.45
	SEER (ηsc) (BS EN14825)		4.88 (192%)	4.62 (181%)	4.58 (180%)
	Water Flow Rate	m^3/h	15.5	25.8	31.0
	Minimum Water Circuit Volume	L	780	1450	1450
HEATING CAPACITY *3		kW	90.0	150	180
		kcal/h	77,400	129,000	154,800
		BTU/h	307,080	511,800	614,160
	Power Input *3	kW	25.71	44.59	55.68
	COP		3.50	3.36	3.23
	Water Flow Rate	m^3/h	15.5	25.8	31.0
HEATING CAPACITY (EN14511)*4		kW	90.0	151.42	182.24
		kcal/h	77,400	130,221	156,726
		BTU/h	307,080	516,645	621,803
	Power Input *3	kW	27.6	46.01	57.92
	COP		3.25	3.29	3.15
	Eurovent Efficiency Class		A+	A	B
	SCOP Low/Medium		3.66 (143%) / 2.89 (113%)	3.24 (127%) / 2.85 (112%)	3.24 (127%) / 2.85 (112%)
	Water Flow Rate	m^3/h	15.5	25.8	31.0
CURRENT INPUT	Cooling Current 380 - 400 - 415V *1	A	46.0 - 43.7 - 42.3	77 - 73 - 70	77 - 73 - 70
	Heating Current 380 - 400 - 415V *3	A	43.4 - 41.2 - 39.7	76 - 72 - 69	76 - 72 - 69
	Maximum Current Input	A	61	111	111
WATER PRESSURE DROP *1	Water	kPa	135	114	164
TEMP RANGE	Cooling Water	℃	Outlet water 5 ~ 25	Outlet water 5 ~ 30	Outlet water 5 ~ 30
	Heating	℃	Outlet water 30 ~ 55	Outlet water 30 ~ 55	Outlet water 30 ~ 55
	Outdoor	℃	-15 ~ 43	-15 ~ 43	-15 ~ 43
CIRCULATING WATER VOLUME		m^3/h	15.5	25.8	31
SOUND PRESSURE LEVEL (measured in anechoic room) at 1m *1		dB(A)	65	66	68
SOUND POWER LEVEL (measured in anechoic room) *1		dB(A)	77	84	86
DIAMETER OF WATER PIPE (Standard piping)	Inlet	mm	100A housing type joint	150A housing joint type	150A housing joint type
	Outlet	mm	100A housing type joint	150A housing joint type	150A housing joint type
EXTERNAL FINISH			Polyester powder coated steel plate	Polyester powder coated steel plate	Polyester powder coated steel plate
EXTERNAL DIMENSION	Width x Depth x Height	mm	2250 x 900 x 2450	3400 x 1080 x 2350	3400 x 1080 x 2350
WEIGHT	Inside Header Piping "-N" Model	kg	1022	1326	1326
DESIGN PRESSURE	R410A	MPa	4.15	4.15	4.15
	Water	MPa	1	1	1
HEAT EXCHANGER	Water Side		Stainless steel plate and copper brazing	Stainless steel plate and copper brazing	Stainless steel plate and copper brazing
	Air Side		Plate fin and copper tube	Plate fin and copper tube	Plate fin and copper tube
COMPRESSOR	Type		Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor
	Maker		Mitsubishi Electric Corporation	Mitsubishi Electric Corporation	Mitsubishi Electric Corporation
	Starting Method		Inverter	Inverter	Inverter
	Quantity		2	4	4
	Motor Output	kW	11.7 x 2	11.7 x 4	11.7 x 4
	Case Heater	kW	0.045 x 2	N/A	N/A
	Lubricant		MEL32	MEL32	MEL32
	Starting Current	A	8.5	19.1	19.1
	Max Running Current	A	61	111	111
FAN	Air Flow Rate	m^3/min	77 x 6	265 x 4	265 x 4
		L/s	1,283 x 6	4,417 x 4	4,417 x 4
		cfm	2,719 x 6	9,357 x 4	9,357 x 4
	Type, Quantity		Propeller fan x 6	Propeller fan x 4	Propeller fan x 4
	Starting Method		Inverter	Inverter	Inverter
	Motor Output	kW	0.19 x 6	0.94 x 4	0.94 x 4
PROTECTION	High Pressure Protection		High pres. sensor & High pres. switch at 4.15MPa (601psi)	High pres. sensor & High pres. switch at 4.15MPa (601psi)	High pres. sensor & High pres. switch at 4.15MPa (601psi)
	Inverter Circuit		Over-heat protection, Over-current protection	Over-heat protection, Over-current protection	Over-heat protection, Over-current protection
	Compressor		Over-heat protection	Over-heat protection	Over-heat protection
REFRIGERANT	Charge (kg) R410A (GWP 2088)		19 x 2	15 x 4	15 x 4
	CO_2 Equivalent (t)		79.3	125.3	125.3
	Control		LEV	LEV	LEV

*1 Under normal cooling conditions at outdoor temp 35ºCDB/24ºCWB outlet water temp 7ºC inlet water temp 12ºC. Pump input not included.
*2 Under normal cooling conditions at outdoor temp 35ºCDB/24ºCWB outlet water temp 7ºC inlet water temp 12ºC. Pump input is included based on EN14511.
*3 Under normal heating conditions at outdoor temp 7ºCDB/6ºCWB outlet water temp 45ºC inlet 40ºC. Pump input not included.
*4 Under normal heating conditions at outdoor temp 7ºCDB/6ºCWB outlet water temp 45ºC inlet 40ºC. Pump input power is included, based on EN14511.
*5 IPLV IS is calcuated in accordance with AHRI 550 - 590.
*6 ESEER is calculated in accordance with EUROVENT conditions.

* Please always make water circulate, or take the circulation water out completely when not in use for long periods.
* The water circuit must be closed circuit.
* Due to continuous improvement, the above specifications may be subject to change without notice.

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Cooling Only or Heat Pump

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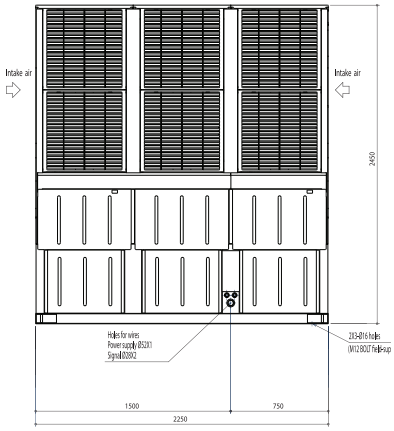
SYSTEM CONFIGURATIONS

MAXIMUM CAPACITY	90kW	150kW	180kW	270kW	300kW	360kW	450kW
COOLING ONLY	EACV-P900YA-N	EACV-P1500YBL-N	EACV-P900YA-N x2	EACV-P900YA-N x3	EACV-P1500YBL-N x2	EACV-P900YA-N x4	EACV-P900YA-N x5
			EACV-P1800YBL-N			EACV-P1800YBL-N x2	EACV-P1500YBL-N x3
HEATING / COOLING	EAHV-P900YA-N	EAHV-P1500YBL-N	EAHV-P900YA-N x2	EAHV-P900YA-N x3	EAHV-P1500YBL-N x2	EAHV-P900YA-N x4	EAHV-P900YA-N x5
			EAHV-P1800YBL-N			EAHV-P1800YBL-N x2	EAHV-P1500YBL-N x3

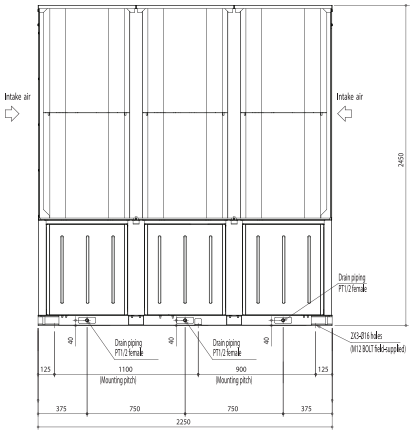
MAXIMUM CAPACITY	540kW	600kW	720kW	750kW	900kW	1,080kW
COOLING ONLY	EACV-P900YA-N x6	EACV-P1500YBL-N x4	EACV-P1800YBL-N x4	EACV-P1500YBL-N x5	EACV-P1500YBL-N x6	EACV-P1800YBL-N x6
	EACV-P1800YBL-N x3				EACV-P1800YBL-N x5	
HEATING / COOLING	EAHV-P900YA-N x6	EAHV-P1500YBL-N x4	EAHV-P1800YBL-N x4	EAHV-P1500YBL-N x5	EAHV-P1500YBL-N x6	EAHV-P1800YBL-N x6
	EAHV-P1800YBL-N x3				EAHV-P1800YBL-N x5	

EA(C)(H)V-P900YA-N DIMENSIONS

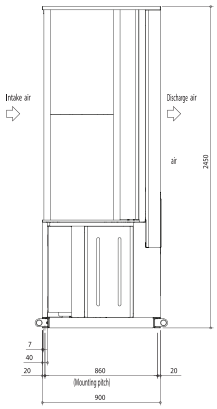
Front View



Rear View

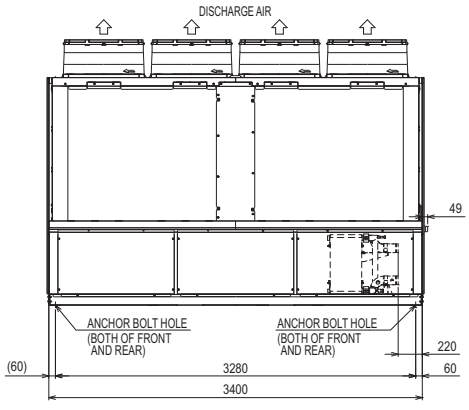


Side View

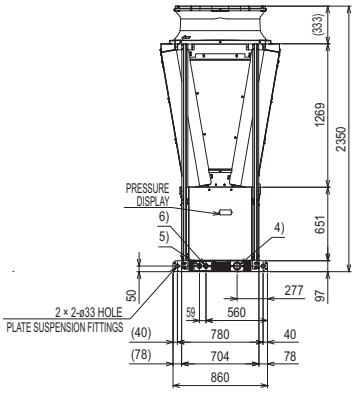


EA(C)(H)V-P1500/1800YBL-N DIMENSIONS

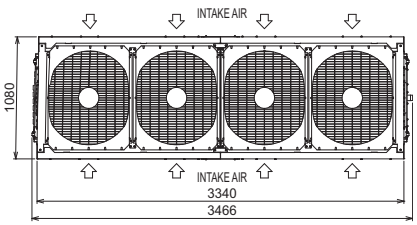
Front View



Side View



Upper View



MITSUBISHI ELECTRIC
Changes for the Better

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Telephone: Dublin (01) 419 8800 Fax: Dublin (01) 419 8890 International code: (003531)

Note: The fuse rating is for guidance only. Please refer to the relevant databook for detailed specification. It is the responsibility of a qualified electrician/electrical engineer to select the correct cable size and fuse rating based on current regulation and site specific conditions. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a fluorinated greenhouse gas, R410A (GWP:2088), R32 (GWP:675), R407C (GWP:1774) or R134a (GWP:1430). *These GWP values are based on Regulation (EU) No 517/2014 from IPCC 4th edition. In case of Regulation (EU) No.626/2011 from IPCC 3rd edition, these are as follows. R410A (GWP:1975), R32 (GWP: 550), R407C (GWP:1650) or R134a (GWP:1300).

Green Gateway
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Effective as of November 2018