Y-Series R32 R410A

Cooling or Heating Heat pump

*This image shows the R410A standard type.

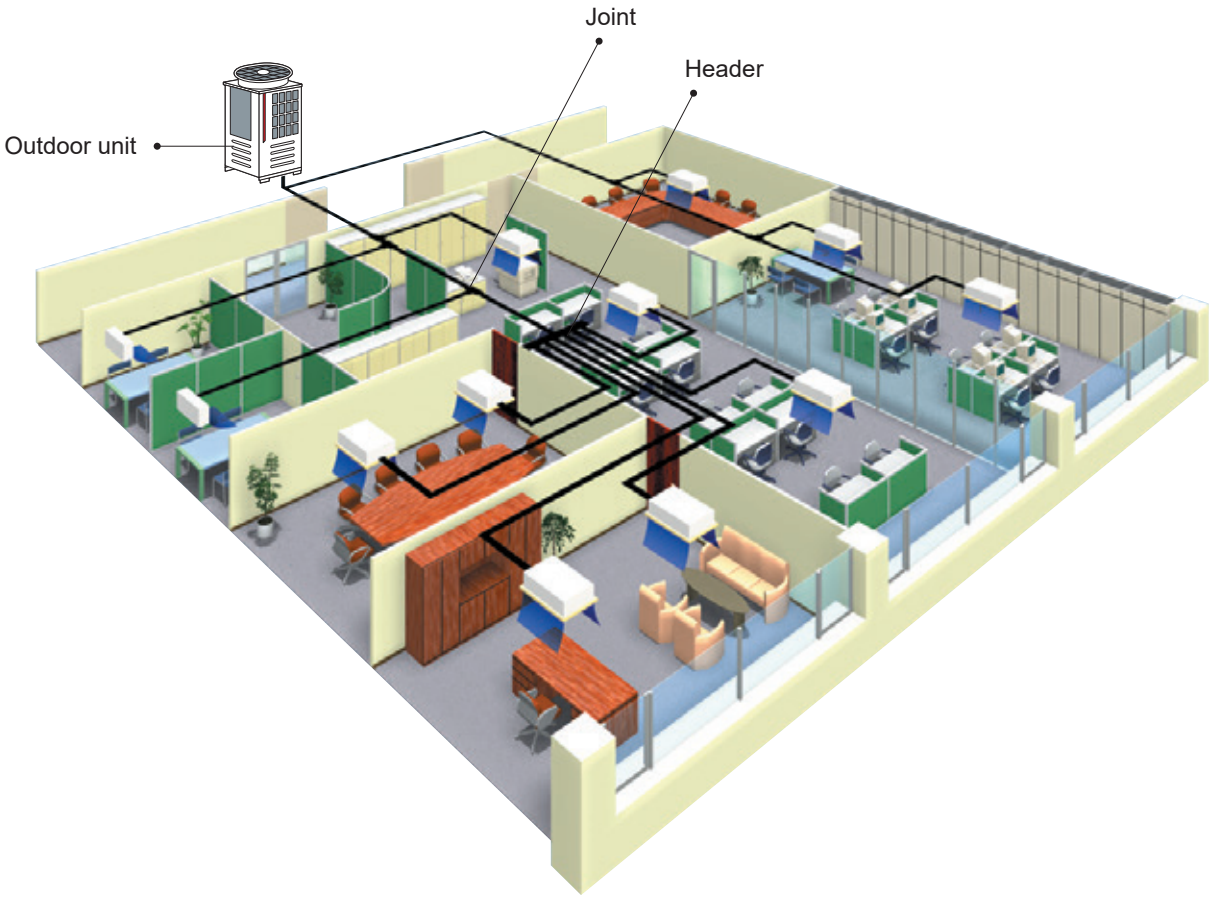
(E)P: Inverter, IPM, PWM, High SHF, Demand control, Cont. heating, ESP, (E)P

EM/EP: Flat tube, HIC, IH warmer, COMP enclosure, Adaptive flow, COP priority, Low noise, Auto-shift startup, Preheat, SCO, Dual, ET control, Pump down, Individual LEV, Snow sensor

A two-pipe zoned system designed for heat pump operation

The CITY MULTI Y-Series (for large applications) makes use of a two-pipe refrigerant system, which allows for system changeover from cooling to heating, ensuring that a constant indoor climate is maintained in all zones. The compact outdoor unit utilizes an inverter-driven compressor for effective energy use.
With a wide lineup of indoor units connected to a flexible piping system, the CITY MULTI Series can be configured to suit diverse applications. Up to 50 (Y-Series) indoor units can be connected with up to 130% connected capacity to maximize engineering design options. This feature allows easy air conditioning in each area with convenient individual controllers.

• Installation image (R410A Y-Series)



*For details of the installation restrictions, refer to the DATABOOK.

R32 CITY MULTI-Series R32

CITY MULTI series utilizing R32 refrigerant. The lower GWP R32 model is a solution to reduce fluorocarbon emissions.

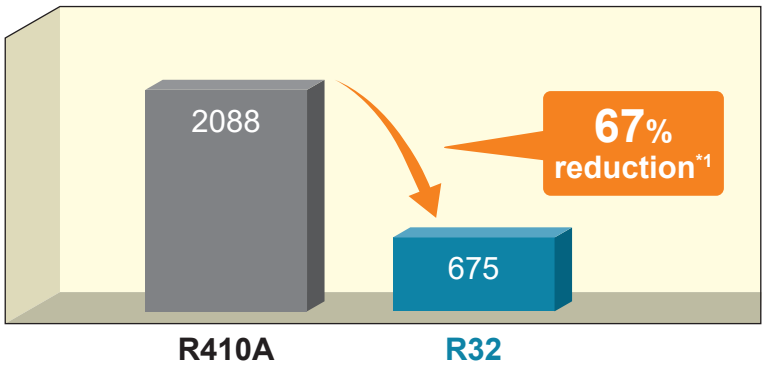
Low-GWP refrigerant

Adoption of R32 refrigerant

CITY MULTI series uses R32 with a 67% lower GWP than R410A to be more environmentally friendly.*1

*1. Source: IPCC 4th Assessment Report, global warming potential (GWP) 100-year value. Comparison of 2088 (R410A) and 675 (R32).

• Comparison of global warming potential



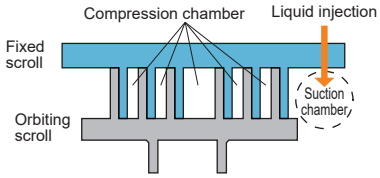
Development of compressor for adopting R32 refrigerant

Stable operation with suction chamber injection mechanism

To suppress rises in discharge temperature, Mitsubishi Electric has developed a compressor that adopts a suction chamber injection mechanism. This solves the problem that R32 has a higher discharge temperature than R410A.

• A mechanism for injecting

This mechanism suppresses the temperature rise of the discharge gas and supports operation in a wide temperature range.

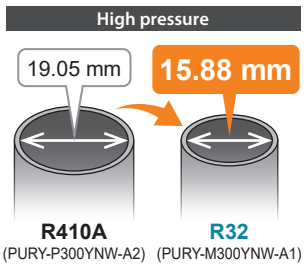


Reduced the amount of refrigerant

Reduced piping diameter

Compared to R410A, R32 is less susceptible to pressure-loss. This characteristics helps to reduce the refrigerant pipe size, reducing the refrigerant amount and the installation cost.

• Comparison of refrigerant piping diameter



Y-Series Standard R32

PUHY-M YNW-A1(-BS)

Model				PUHY-M200YNW-A1 (-BS)	PUHY-M250YNW-A1 (-BS)	PUHY-M300YNW-A1 (-BS)
Power source				3-phase 4-wire 380-400-415 V 50/60 Hz	3-phase 4-wire 380-400-415 V 50/60 Hz	3-phase 4-wire 380-400-415 V 50/60 Hz
Cooling capacity (Nominal)		*1	kW	22.4	28.0	33.5
			BTU/h	76,400	95,500	114,300
	Power input		kW	6.03	9.62	11.31
	Current input		A	7.9-7.5-7.2	11.7-11.1-10.7	14.4-13.6-13.2
	EER		kW/kW	3.71	2.91	2.96
	SEER		kW/kW	7.65	6.90	6.70
Temp. range of cooling	Indoor		W.B.	15.0~24.0 °C (59~75 °F)	15.0~24.0 °C (59~75 °F)	15.0~24.0 °C (59~75 °F)
	Outdoor		D.B.	-5.0~52.0 °C (23~126 °F)	-5.0~52.0 °C (23~126 °F)	-5.0~52.0 °C (23~126 °F)
Heating capacity (Max)		*2	kW	25.0	31.5	37.5
			BTU/h	85,300	107,500	128,000
	Power input		kW	5.08	7.14	8.33
	Current input		A	8.5-8.1-7.8	12.0-11.4-11.0	14.0-13.3-12.8
	COP		kW/kW	4.11	3.71	3.64
(Nominal)		*3	kW	22.4	28.0	33.5
			BTU/h	76,400	95,500	114,300
	Power input		kW	5.18	7.01	8.74
	Current input		A	7.3-6.9-6.6	10.0-9.5-9.1	11.8-11.2-10.8
	COP		kW/kW	4.32	3.99	3.83
	SCOP		kW/kW	4.35	4.39	4.12
Temp. range of heating	Indoor		D.B.	15.0~27.0 °C (59~81 °F)	15.0~27.0 °C (59~81 °F)	15.0~27.0 °C (59~81 °F)
	Outdoor		W.B.	-20.0~15.5 °C (-4~60 °F)	-20.0~15.5 °C (-4~60 °F)	-20.0~15.5 °C (-4~60 °F)
Indoor unit connectable	Total capacity			50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity
	Model / Quantity			M20~M140/1~8	M20~M140/1~10	M20~M140/2~12
Sound pressure level (measured in anechoic room)		*4, 5	dB <A>	58.0 / 59.0	60.0 / 61.0	61.0 / 64.5
Sound power level (measured in anechoic room)		*4	dB <A>	75.0 / 78.0	78.0 / 80.0	80.0 / 83.5
Refrigerant piping diameter	Liquid pipe		mm (in.)	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed
	Gas pipe		mm (in.)	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed
FAN	Type x Quantity			Propeller fan x 1	Propeller fan x 1	Propeller fan x 1
	Air flow rate		m^3/min	170	185	240
			L/s	2,833	3,083	4,000
			cfm	6,003	6,532	8,474
	Control, Driving mechanism			Inverter-control, Direct-driven by motor	Inverter-control, Direct-driven by motor	Inverter-control, Direct-driven by motor
	Motor output		kW	0.92 x 1	0.92 x 1	0.92 x 1
	External static press.	*6		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type			Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor
	Starting method			Inverter	Inverter	Inverter
	Motor output		kW	3.5	5.3	6.5
	Case heater		kW	-	-	-
External finish				Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>
External dimension HxWxD			mm	1,858 (1,798 without legs) x 920 x 740	1,858 (1,798 without legs) x 920 x 740	1,858 (1,798 without legs) x 920 x 740
			in.	73-3/16 (70-13/16 without legs) x 36-1/4 x 29-3/16	73-3/16 (70-13/16 without legs) x 36-1/4 x 29-3/16	73-3/16 (70-13/16 without legs) x 36-1/4 x 29-3/16
Protection devices	High pressure protection			High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter circuit (COMP./FAN)			Over-heat protection, Over-current protection	Over-heat protection, Over-current protection	Over-heat protection, Over-current protection
	Compressor			-	-	-
	Fan motor			-	-	-
Refrigerant	Type x original charge			R32 x 6.5 kg (15 lbs)	R32 x 6.5 kg (15 lbs)	R32 x 6.5 kg (15 lbs)
	Control			LEV and HIC circuit	LEV and HIC circuit	LEV and HIC circuit
Net weight			kg (lbs)	222 (490)	222 (490)	223 (492)
Heat exchanger				Salt-resistant cross fin & copper tube	Salt-resistant cross fin & copper tube	Salt-resistant cross fin & copper tube
Optional parts				Joint: CMY-Y102SS/LS-G2 Header: CMY-Y104/108/1010-G	Joint: CMY-Y102SS/LS-G2 Header: CMY-Y104/108/1010-G	Joint: CMY-Y102SS/LS-G2 Header: CMY-Y104/108/1010-G

Notes:

*1, *2, *3 Nominal conditions (subject to JIS B8615-2)

	Indoor	Outdoor	Pipe length	Level difference
Cooling	27°C DB/19°C WB (81°F DB/66°F WB)	35°C DB/24°C WB (95°F DB/75°F WB)	7.5m (24-9/16ft.)	0m (0ft.)
Heating	20°C DB(68°F DB)	7°C DB/6°C WB(45°F DB/43°F WB)	7.5m (24-9/16ft.)	0m (0ft.)

*4 Cooling mode/Heating mode

*5 The sound pressure level measured by the conventional method in JIS for reference purpose.

*6 External static pressure option is available (30 Pa, 60 Pa, 80 Pa/3.1 mmH_2O, 6.1 mmH_2O, 8.2 mmH_2O).
Consult your dealer about the specification when setting External static pressure option.

*7 R32 is flammable, and certain restrictions apply to the installation of units.
When installing new units, moving the existing units, or changing the layout of the room, ensure that installation restrictions are observed.
For detail, refer to the section in the Databook on installation restrictions.

Y-Series Standard R410A

PUHY-P YNW-A2(-BS)

Model				PUHY-P200YNW-A2(-BS)	PUHY-P250YNW-A2 (-BS)	PUHY-P300YNW-A2 (-BS)
Power source				3-phase 4-wire 380-400-415 V 50/60 Hz	3-phase 4-wire 380-400-415 V 50/60 Hz	3-phase 4-wire 380-400-415 V 50/60 Hz
Cooling capacity (Nominal)		*1	kW	22.4	28.0	33.5
			BTU / h	76,400	95,500	114,300
	Power input		kW	6.03	9.62	11.31
	Current input		A	10.1-9.6-9.3	16.2-15.4-14.8	19.0-18.1-17.4
	EER		kW / kW	3.71	2.91	2.96
	SEER		kW / kW	7.65	6.90	6.70
Temp. range of cooling	Indoor		W.B.	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)
	Outdoor		D.B.	-5.0~52.0°C (23~126°F)	-5.0~52.0°C (23~126°F)	-5.0~52.0°C (23~126°F)
Heating capacity (Max)		*2	kW	25.0	31.5	37.5
			BTU / h	85,300	107,500	128,000
	Power input		kW	6.08	8.49	10.30
	Current input		A	10.2-9.7-9.3	14.3-13.6-13.1	17.3-16.5-15.9
	COP		kW / kW	4.11	3.71	3.64
(Nominal)		*3	kW	22.4	28.0	33.5
			BTU / h	76,400	95,500	114,300
	Power input		kW	5.18	7.01	8.74
	Current input		A	8.7-8.3-8.0	11.8-11.2-10.8	14.7-14.0-13.5
	COP		kW / kW	4.32	3.99	3.83
	SCOP		kW / kW	4.35	4.39	4.12
Temp. range of heating	Indoor		D.B.	15.0~27.0°C (59~81°F)	15.0~27.0°C (59~81°F)	15.0~27.0°C (59~81°F)
	Outdoor		W.B.	-20.0~15.5°C (-4~60°F)	-20.0~15.5°C (-4~60°F)	-20.0~15.5°C (-4~60°F)
Indoor unit connectable	Total capacity			50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity
	Model / Quantity			P10~P250, M20~M140/1~20	P10~P250, M20~M140/1~25	P10~P250, M20~M140/1~30
Sound pressure level (measured in anechoic room)		*4, 5	dB <A>	58.0/59.0	60.0/61.0	61.0/64.5
Sound power level (measured in anechoic room)		*4	dB <A>	75/77	78/80	80/84
Refrigerant piping diameter	Liquid pipe		mm (in.)	9.52 (3/8) Brazed	9.52 (3/8) Brazed (12.7 (1/2) Brazed, total length >= 90 m)	9.52 (3/8) Brazed (12.7 (1/2) Brazed, total length >= 40 m)
	Gas pipe		mm (in.)	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed
FAN	Type x Quantity			Propeller fan x 1	Propeller fan x 1	Propeller fan x 1
	Air flow rate		m^3/min	170	185	240
			L/s	2,833	3,083	4,000
			cfm	6,003	6,532	8,474
	Control, Driving mechanism			Inverter-control, Direct-driven by motor	Inverter-control, Direct-driven by motor	Inverter-control, Direct-driven by motor
	Motor output		kW	0.92 x 1	0.92 x 1	0.92 x 1
	External static press.	*6		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type			Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor
	Starting method			Inverter	Inverter	Inverter
	Motor output		kW	3.5	5.3	6.7
	Case heater		kW	–	–	–
External finish				Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>
External dimension HxWxD			mm	1,858 (1,798 without legs) x 920 x 740	1,858 (1,798 without legs) x 920 x 740	1,858 (1,798 without legs) x 920 x 740
			in.	73-3/16 (70-13/16 without legs) x 36-1/4 x 29-3/16	73-3/16 (70-13/16 without legs) x 36-1/4 x 29-3/16	73-3/16 (70-13/16 without legs) x 36-1/4 x 29-3/16
Protection devices	High pressure protection			High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter circuit (COMP./FAN)			Over-heat protection, Over-current protection	Over-heat protection, Over-current protection	Over-heat protection, Over-current protection
	Compressor			–	–	–
	Fan motor			–	–	–
Refrigerant	Type x original charge			R410A x 6.5 kg (15 lbs)	R410A x 6.5 kg (15 lbs)	R410A x 6.5 kg (15 lbs)
Net weight			kg (lbs)	213 (470)	213 (470)	226 (499)
Heat exchanger				Salt-resistant cross fin & copper tube	Salt-resistant cross fin & copper tube	Salt-resistant cross fin & copper tube
Optional parts				Joint: CMY-Y102SS/LS-G2 Header: CMY-Y104/108/1010-G	Joint: CMY-Y102SS/LS-G2 Header: CMY-Y104/108/1010-G	Joint: CMY-Y102SS/LS-G2 Header: CMY-Y104/108/1010-G

Notes:

*1,*2,*3 Nominal conditions (subject to JIS B8615-2)

	Indoor	Outdoor	Pipe length	Level difference
Cooling	27ºC DB/19ºC WB (81ºF DB/66ºF WB)	35ºC DB (95ºF DB)	7.5m (24-9/16ft.)	0m (0ft.)
Heating	20ºC DB(68ºF DB)	7ºC DB/6ºC WB(45ºF DB/43ºF WB)	7.5m (24-9/16ft.)	0m (0ft.)

*3 Eurovent registered
*4 Cooling mode / Heating mode
*5 The sound pressure level measured by the conventional method in JIS for reference purpose.
*6 External static pressure option is available (30 Pa, 60 Pa, 80 Pa/3.1 mmH_2O, 6.1 mmH_2O, 8.2 mmH_2O).
Consult your dealer about the specification when setting External static pressure option.
*Due to continuing improvement, above specifications may be subject to change without notice.

Y-Series Standard R410A

PUHY-P YNW-A2(-BS)

Model				PUHY-P350YNW-A2 (-BS)	PUHY-P400YNW-A2 (-BS)	PUHY-P450YNW-A2 (-BS)	PUHY-P500YNW-A2 (-BS)
Power source				3-phase 4-wire 380-400-415 V 50/60 Hz	3-phase 4-wire 380-400-415 V 50/60 Hz	3-phase 4-wire 380-400-415 V 50/60 Hz	3-phase 4-wire 380-400-415 V 50/60 Hz
Cooling capacity (Nominal)	*1		kW	40.0	45.0	50.0	56.0
			BTU / h	136,500	153,500	170,600	191,100
	Power input		kW	13.98	17.57	18.86	21.05
	Current input		A	23.6-22.4-21.6	29.6-28.1-27.1	31.8-30.2-29.1	35.5-33.7-32.5
	EER		kW / kW	2.86	2.56	2.65	2.66
	SEER		kW / kW	6.35	5.85	6.48	6.32
Temp. range of cooling	Indoor		W.B.	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)
	Outdoor		D.B.	-5.0~52.0°C (23~126°F)	-5.0~52.0°C (23~126°F)	-5.0~52.0°C (23~126°F)	-5.0~52.0°C (23~126°F)
Heating capacity (Max)	*2		kW	45.0	50.0	56.0	63.0
			BTU / h	153,500	170,600	191,100	215,000
	Power input		kW	12.32	14.20	16.51	17.89
	Current input		A	20.7-19.7-19.0	23.9-22.7-21.9	27.8-26.4-25.5	30.2-28.6-27.6
	COP		kW / kW	3.65	3.52	3.39	3.52
(Nominal)	*3		kW	40.0	45.0	50.0	56.0
			BTU / h	136,500	153,500	170,600	191,100
	Power input		kW	10.20	12.00	13.77	14.85
	Current input		A	17.2-16.3-15.7	20.2-19.2-18.5	23.2-22.0-21.2	25.0-23.8-22.9
	COP		kW / kW	3.92	3.75	3.63	3.77
	SCOP		kW / kW	4.33	4.00	4.31	4.04
Temp. range of heating	Indoor		D.B.	15.0~27.0°C (59~81°F)	15.0~27.0°C (59~81°F)	15.0~27.0°C (59~81°F)	15.0~27.0°C (59~81°F)
	Outdoor		W.B.	-20.0~15.5°C (-4~60°F)	-20.0~15.5°C (-4~60°F)	-20.0~15.5°C (-4~60°F)	-20.0~15.5°C (-4~60°F)
Indoor unit connectable	Total capacity			50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity
	Model / Quantity			P10~P250, M20~M140/1~35	P10~P250, M20~M140/1~40	P10~P250, M20~M140/1~45	P10~P250, M20~M140/1~50
Sound pressure level (measured in anechoic room)	*4, 5		dB <A>	62.0/64.5	65.0/67.0	65.5/71.0	63.5/66.5
Sound power level (measured in anechoic room)	*4		dB <A>	80/84	82/86	84/90	82/85
Refrigerant piping diameter	Liquid pipe		mm (in.)	12.7 (1/2) Brazed	12.7 (1/2) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed
	Gas pipe		mm (in.)	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed
FAN	Type x Quantity			Propeller fan x 2	Propeller fan x 2	Propeller fan x 2	Propeller fan x 2
	Air flow rate		m^3/min	270	300	305	365
			L/s	4,500	5,000	5,083	6,083
			cfm	9,534	10,593	10,770	12,888
	Control, Driving mechanism			Inverter-control, Direct-driven by motor	Inverter-control, Direct-driven by motor	Inverter-control, Direct-driven by motor	Inverter-control, Direct-driven by motor
	Motor output		kW	0.46 x 2	0.46 x 2	0.46 x 2	0.92 x 2
	*6 External static press.			0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type			Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor
	Starting method			Inverter	Inverter	Inverter	Inverter
	Motor output		kW	8.6	11.4	11.7	13.3
	Case heater		kW	–	–	–	–
External finish				Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>
External dimension HxWxD			mm	1,858 (1,798 without legs) x 1,240 x 740	1,858 (1,798 without legs) x 1,240 x 740	1,858 (1,798 without legs) x 1,240 x 740	1,858 (1,798 without legs) x 1,750 x 740
			in.	73-3/16 (70-13/16 without legs) x 48-7/8 x 29-3/16	73-3/16 (70-13/16 without legs) x 48-7/8 x 29-3/16	73-3/16 (70-13/16 without legs) x 48-7/8 x 29-3/16	73-3/16 (70-13/16 without legs) x 68-15/16 x 29-3/16
Protection devices	High pressure protection			High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter circuit (COMP./FAN)			Over-heat protection, Over-current protection	Over-heat protection, Over-current protection	Over-heat protection, Over-current protection	Over-heat protection, Over-current protection
	Compressor			–	–	–	–
	Fan motor			–	–	–	–
Refrigerant	Type x original charge			R410A x 9.8 kg (22 lbs)	R410A x 9.8 kg (22 lbs)	R410A x 10.8 kg (24 lbs)	R410A x 10.8 kg (24 lbs)
Net weight			kg (lbs)	277 (611)	277 (611)	293 (646)	334 (737)
Heat exchanger				Salt-resistant cross fin & copper tube	Salt-resistant cross fin & copper tube	Salt-resistant cross fin & copper tube	Salt-resistant cross fin & copper tube
Optional parts				Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010-G	Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010-G	Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010-G	Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010-G

Notes:

*1,*2,*3 Nominal conditions (subject to JIS B8615-2)

	Indoor	Outdoor	Pipe length	Level difference
Cooling	27ºC DB/19ºC WB (81ºF DB/66ºF WB)	35ºC DB (95ºF DB)	7.5m (24-9/16ft.)	0m (0ft.)
Heating	20ºC DB(68ºF DB)	7ºC DB/6ºC WB(45ºF DB/43ºF WB)	7.5m (24-9/16ft.)	0m (0ft.)

*3 Eurovent registered
*4 Cooling mode / Heating mode
*5 The sound pressure level measured by the conventional method in JIS for reference purpose.
*6 External static pressure option is available (30 Pa, 60 Pa, 80 Pa/3.1 mmH_2O, 6.1 mmH_2O, 8.2 mmH_2O).
Consult your dealer about the specification when setting External static pressure option.
*Due to continuing improvement, above specifications may be subject to change without notice.