MITSUBISHI ELECTRIC

Water Cooled VRF

CITY MULTI

The Benefits of Water Cooled Systems

Water Cooled VRF (Variable Refrigerant Flow) systems are increasingly popular because of a number of features that make them attractive to today's clients. Recent advances in this technology mean that Water Cooled systems now offer heating and cooling solutions, with double heat recovery.

They can also be linked to one of the most popular forms of 'green' energy – using ground source applications. Water Cooled systems can also utilise heat from areas such as computer rooms, which would otherwise only be wasted.

Contents

The New Water Cooled PQHY/PQRY Series

INCREASED CAPACITIES OF SINGLE-MODULE AND HEAT RECOVERY R2 UNITS

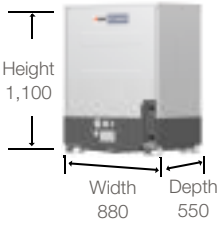
Single or combination-module units are available to meet various installation conditions and capacity requirements.

Conventional Model

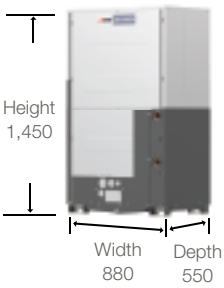
S Module

New Model

S Module



L Module



All values in mm

Heat Pump (WY) Series

New single-module units

		P200	P250	P300	P350	P400	P450	P500	P550	P600	P650	P700	P750	P800	P850	P900
PQHY-P Y(S)LM-A **NEW**	Single	S	S	S	L	L	L	L	L	L						
PQHY-P Y(S)HM-A Conventional	Single	S	S	S												
PQHY-P Y(S)LM-A **NEW**	Combination					S+S	S+S	S+S	S+S	S+S		L+L	L+L	L+L	L+L	L+L
PQHY-P Y(S)HM-A Conventional	Combination					S+S	S+S	S+S	S+S	S+S	S+S+S	S+S+S	S+S+S	S+S+S	S+S+S	S+S+S

Heat Recovery (WR2) Series

New single-module units

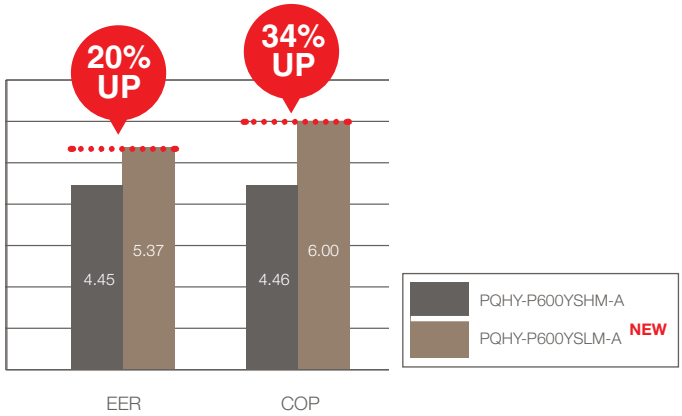
Increased capacities up to P900

		P200	P250	P300	P350	P400	P450	P500	P550	P600	P650	P700	P750	P800	P850	P900
PQRY-P Y(S)LM-A **NEW**	Single	S	S	S	L	L	L	L	L	L						
PQRY-P Y(S)HM-A Conventional	Single	S	S	S												
PQRY-P Y(S)LM-A **NEW**	Combination					S+S	S+S	S+S	S+S	S+S		L+L	L+L	L+L	L+L	L+L
PQRY-P Y(S)HM-A Conventional	Combination					S+S	S+S	S+S	S+S	S+S						

IMPROVED EER AND COP

Comparison of new and old single-module P300 units.

Comparison of new and old combination-module P600 units.

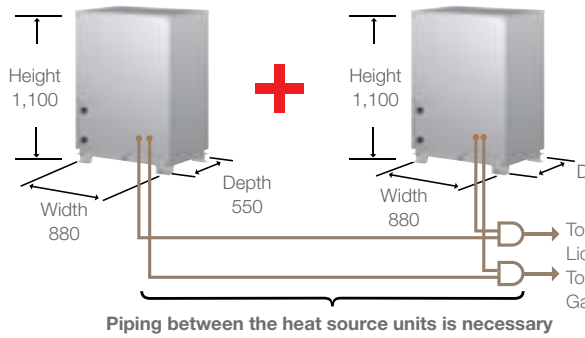


ADVANTAGES OF INCREASED CAPACITY OF SINGLE-MODULE UNITS

Reduced Piping Work

Capable of covering up to P600 (69.0kW) with a single module.

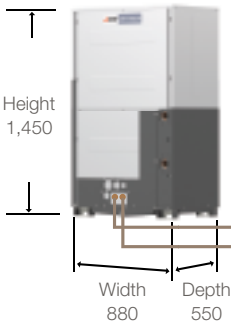
P400YSHM (WY/WR2 Series)



P400YLM (WY/WR2 Series)

NEW

All values in mm

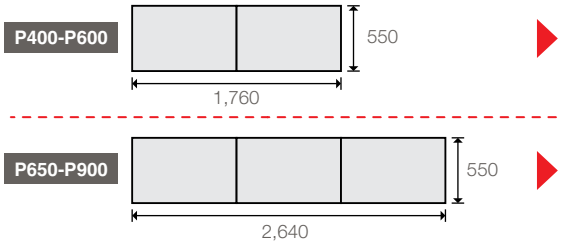


Less Piping Work

Reduced Footprint

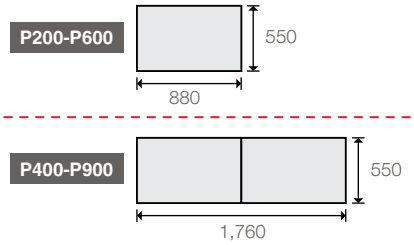
Footprint is reduced for single-module and combination-module units.

PQHY-PY SHM-A



PQHY-P Y(6)LM-A

NEW



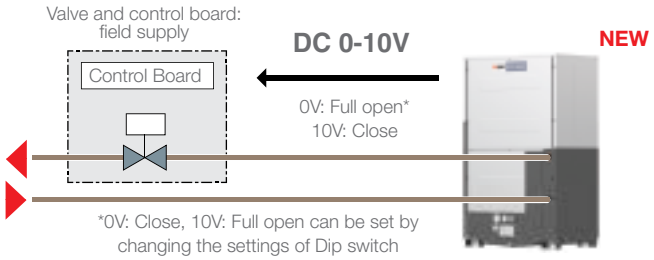
50% Reduction

33% Reduction

OUTPUT SIGNAL (0-10V) FOR WATER FLOW RATE ADJUSTMENT CONTROLLER

System energy consumption has been improved by reducing the water pump consumption by changing water flow volume during partial load.

Control of water flow rate*. Control output voltage (0-10V) for adjustment of valve operating [0V: Full open, 10V:Close] Voltage at 0 volt: Even when power is down, water will continue to circulate.



WEIGHT SAVING

The reduction in weight loads for ease of transportation and installation.

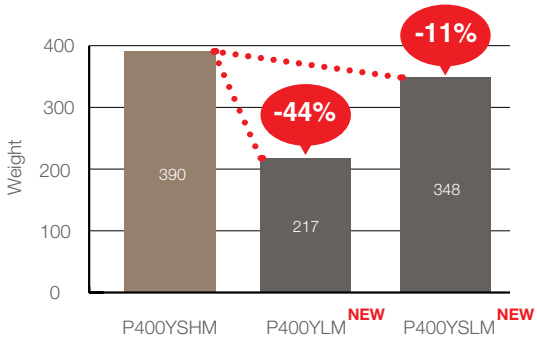
All values in kg

		P200	P250	P300	P350	P400		P450		P500		P550	
PQHY	Y(S)HM	195	195	195	-	390		390		390		390	
	Y(S)LM	174	174	174	217	217 *1	348	217 *1	348 *2	217 *1	348 *2	246 *1	348 *2
PQRY	Y(S)HM	181	181	181	-	362		362		362		362	
	Y(S)LM	172	172	172	216	216 *1	344	216 *1	344 *2	216 *1	344 *2	246 *1	344 *2

All values in kg

		P600		P700	P750	P800	P850	P900
PQHY	Y(S)HM	390		585	585	585	585	585
	Y(S)LM	246 *1	348 *2	434	434	434	434	434
PQRY	Y(S)HM	362		-	-	-	-	-
	Y(S)LM	246 *1	344 *2	432	432	432	432	432

*1: Single module
*2: Combination module



All values in kg

Water Cooled CITY MULTI Benefits

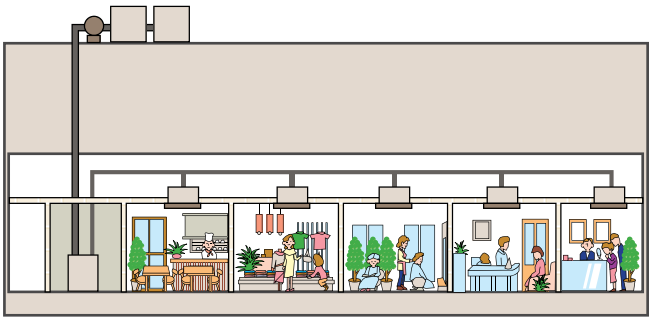
Water Cooled systems are ideally suited for use in temperate and cooler climates since heat exchange with the outside air is not required

Water Cooled systems can be used in buildings that are taller than 50m by running a main water pipe through each floor. Any heat source system that can supply heat source water between 10˚C - 45˚C can be used.

Simultaneous heating and cooling operation is available (WR2 Series).

It is suggested that Water Cooled systems are used in buildings that have the following heating and cooling needs:

- Buildings that require all year cooling. For example tenant buildings in which kitchens and offices exist together and buildings in which equipment rooms and office exist together.
- Buildings in which there are large room temperature differences between sunny and shaded rooms.
- Hotels with a lot of individual operation needs.

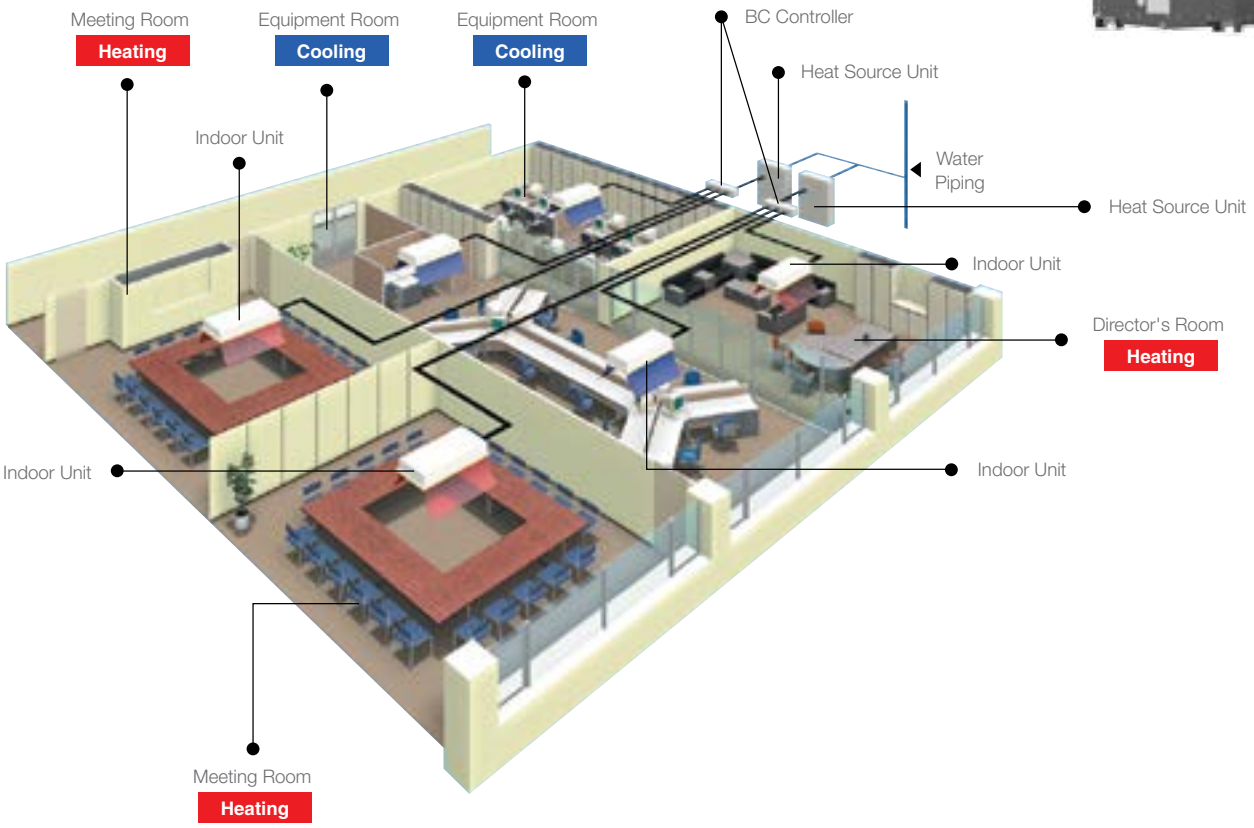


Energy Saving Technology

WHAT IS WATER COOLED?

A unique offering from Mitsubishi Electric

It is now possible to combine the features of VRF with a water circuit using CITY MULTI WR2/WY. In this case the heat is rejected to a water source rather than to the outside air. The advantages of Water Cooled systems are that the water can be delivered at optimised temperatures and volumes, allowing even greater flexibility and increased COP.

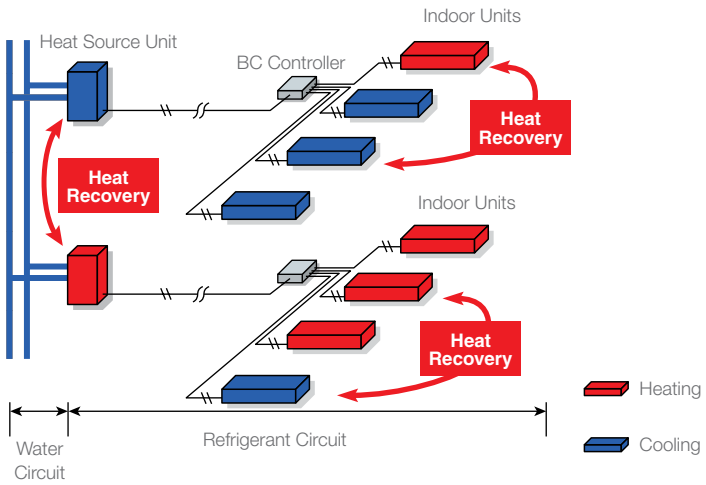


WR2 (Heat Recovery Type)

Mitsubishi Electric now offers double heat recovery operation.

- The first heat recovery is within the refrigerant system. Simultaneous cooling and heating operation is available with heat recovery performed between indoor units.
- The second heat recovery is within the water loop, where heat recovery is performed between the PQRY units. This double heat recovery operation substantially improves energy efficiency and makes the system the ideal solution to the requirements of modern office buildings, where some areas require cooling even in winter.

Double Heat Recovery (WR2)

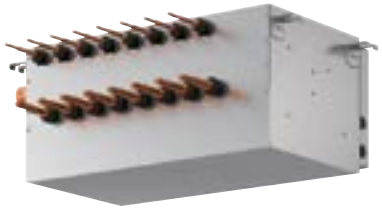


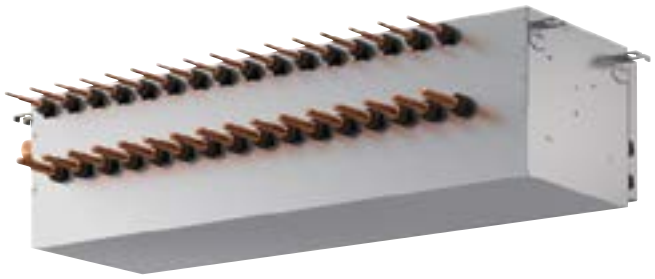
The World's First and Only 2-pipe Heat Recovery System

HOW DOES THE WR2 SYSTEM OPERATE ON 2 PIPE'S?

The secret of CITY MULTI Heat Recovery Systems lies in the BC Controller

The BC Controller houses a liquid/gas separator, allowing the outdoor unit to deliver a mixture (2-phase) of hot gas for heating and liquid for cooling, all through the same pipe. When this mixture arrives at the BC Controller, it is separated and the correct phase delivered to each indoor unit depending on the individual requirement of either heating or cooling.

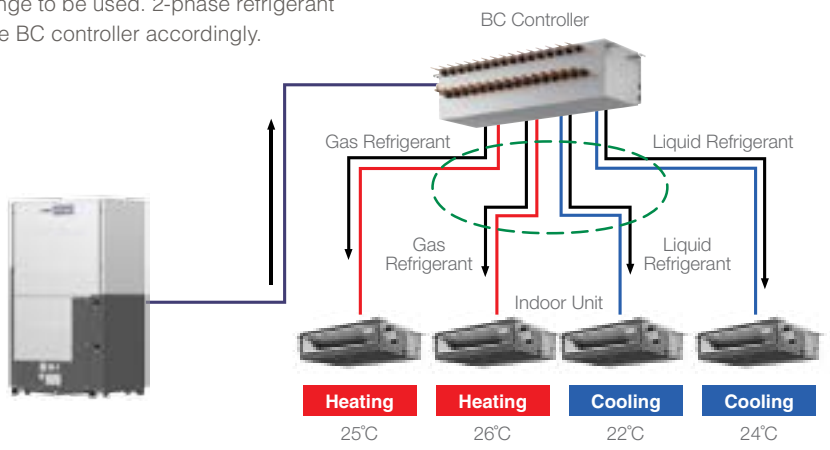




1 The load in the room dictates the mode, compressor frequency and the sections of heat-exchange to be used. 2-phase refrigerant is sent to the BC controller accordingly.

2 Gas-liquid 2-phase refrigerant from outdoor unit is separated by gas-liquid separator in BC Controller.

BC Controller divides refrigerant to each indoor unit properly in compliance with the operation mode of each indoor unit.



3 Adjust the refrigerant flow by temperature difference between inlet and outlet.

Meeting the demand of:

------ Cooling/Heating flexibility

Heating = Gas Refrigerant

Cooling = Liquid Refrigerant

Water Cooled Series

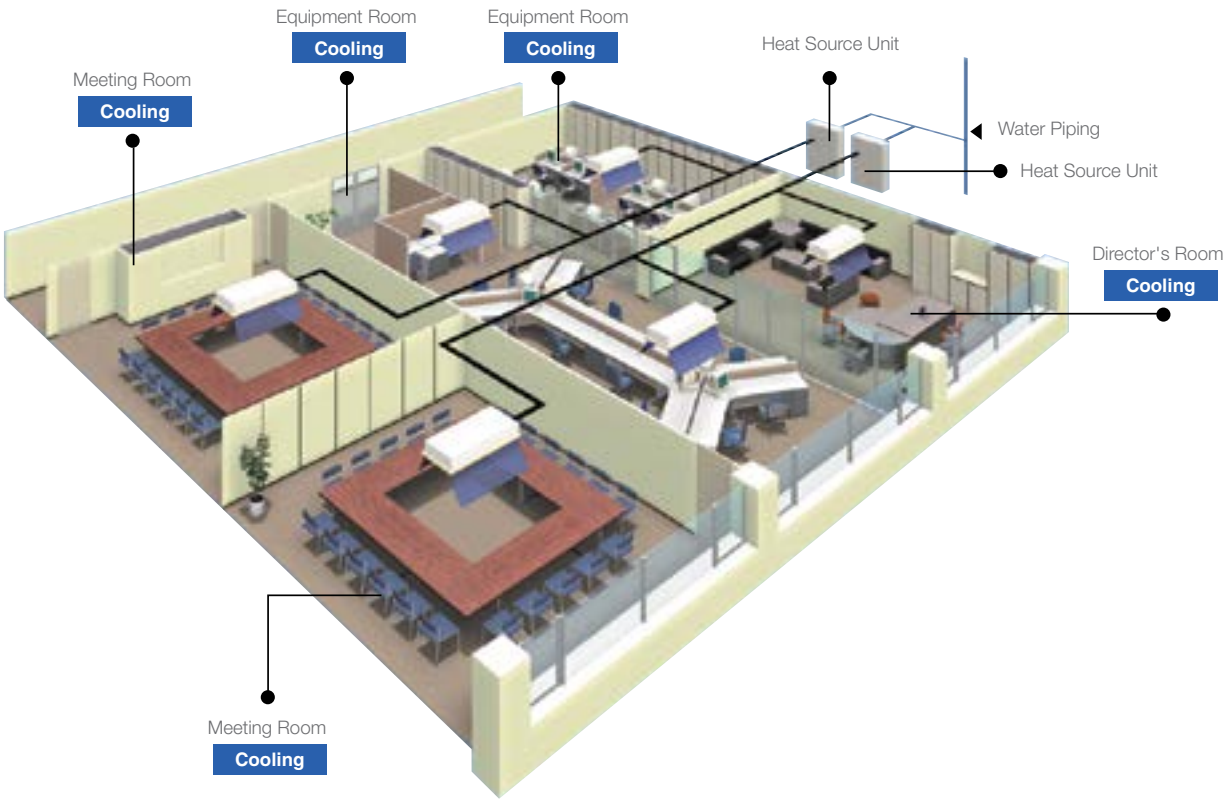
COOLING OR HEATING

WY HEAT PUMP SERIES

Water energy source system allows switching between cooling and heating

The WY-Series has all the benefits of the Y-Series using water source condensing units. Condensing units can be situated indoors allowing greater design flexibility and no limitation on building size. Depending on capacity, up to 15 to 50 indoor units can be connected to a single condensing unit with individualised and/or centralised control. The indoor units can operate in either cooling or heating mode.

Installation image WY Series



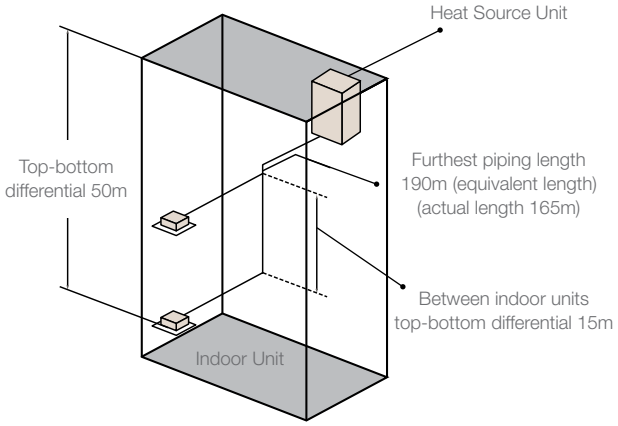
SYSTEM PIPE LENGTHS

P200-P900 WY Series

Refrigerant Piping Lengths	Maximum Units
Total Length	300-500
Maximum Allowable Length	165 (190 equivalent)
Farthest indoor from first branch	40

Vertical Differentials Between Units	Maximum Units
Indoor/Heat source (heat source higher)	50
Indoor/Heat source (heat source lower)	40
Indoor/Indoor	15

All values in meters



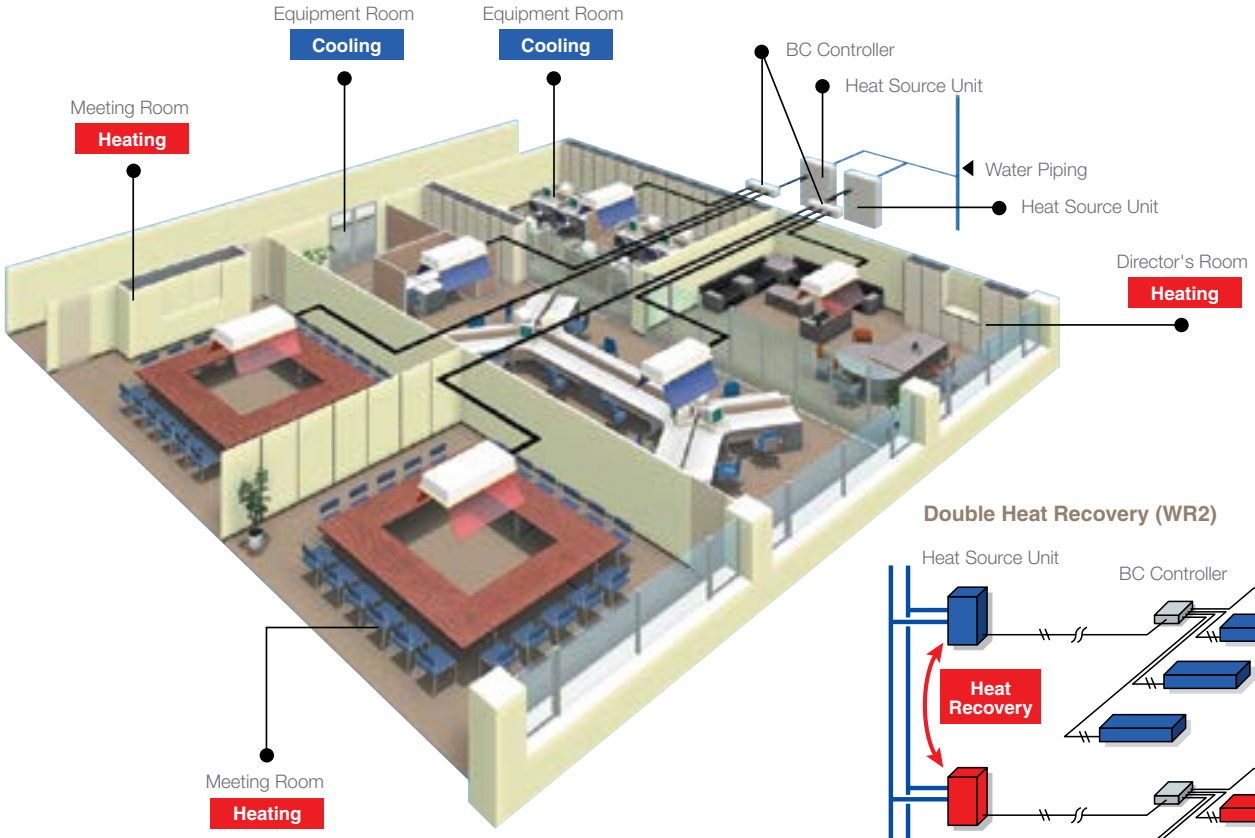
WR2 HEAT RECOVERY SERIES

Advanced water heat source unit enjoying the benefits of WR2 Series

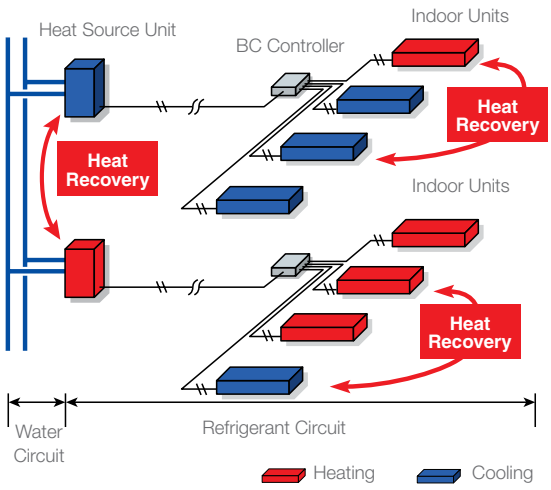
The CITY MULTI WR2 series provides all of the advantages of the R2 series with the added benefits of a water heat source system, making it suitable for wider range of applications in high rises, frigid climates, coastal areas, etc.

Not only does it produce heat recovery from the indoor units on the same 2-pipe refrigerant circuit, it also produces heat recovery via the water circuit between heat source units, making it a very economical system.

Installation image WR2 Series



Double Heat Recovery (WR2)

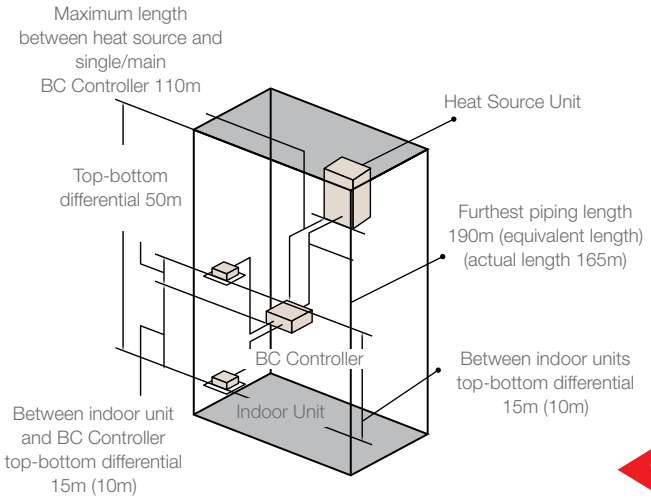


SYSTEM PIPE LENGTHS

P200-P900 (WR2 Series)

Refrigerant Piping Lengths	Maximum Units
Total Length	550-750
Maximum Allowable Length	165 (190 equivalent)
Maximum Length between heat source and single/main BC Controller	110
*Maximum total length is dependent upon the distance between the outdoor unit and the single/main BC Controller	
Maximum Length between single/main BC Controller and indoor	40-60
Vertical Differentials Between Units	**Maximum Units**
Indoor/Heat source (heat source higher)	50
Indoor/Heat source (heat source lower)	40
Indoor/BC controller (single/main)	15 (10)
Indoor/Indoor	15 (10)
Main BC Controller/Sub BC Controller	15 (10)

All values in meters



Wide Selection of Outdoor Units

WATER COOLED									
Type		Heat Pump				Heat Recovery			
Model		PQHY-P YLM-A WY Series		PQHY-P YSLM-A WY Series		PQRY-P YLM-A WR2 Series		PQRY-P YSLM-A WR2 Series	
									
Model Number	kW	*1							
		S	L	S	L	S	L	S	L
P200	22.4	22.4				22.4			
P250	28	28				28			
P300	33.5	33.5				33.5			
P350	40		40				40		
P400	45		45	22.4 22.4			45	22.4 22.4	
P450	50		50	22.4 28			50	22.4 28	
P500	56		56	28 28			56	28 28	
P550	63		63	28 33.5			63	28 33.5	
P600	69		69	33.5 33.5			69	33.5 33.5	
P700	80				40 40				40 40
P750	85				40 45				40 45
P800	90				45 45				45 45
P850	96				45 50				45 50
P900	101				50 50				50 50

*1. Indicates S, L, XL modules.

Specifications

HEAT SOURCE UNIT

WY (HEAT PUMP) Series

PQHY-P YLM-A

Model			PQHY-P200YLM-A	PQHY-P250YLM-A	PQHY-P300YLM-A
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
		kcal / h	20,000	25,000	30,000
	*1	BTU / h	76,400	95,500	114,300
	Power Input	kW	3.71	4.90	6.04
	Current Input	A	6.2-5.9-5.7	8.2-7.8-7.5	10.1-9.6-9.3
	EER	kW / kW	6.03	5.71	5.54
Temp. Range of Cooling	Indoor	W.B.	15.0~24.0°C	15.0~24.0°C	15.0~24.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Heating Capacity (nominal)	*2	kW	25.0	31.5	37.5
		kcal / h	21,500	27,100	32,300
	*2	BTU / h	85,300	107,500	128,000
	Power Input	kW	3.97	5.08	6.25
	Current Input	A	6.7-6.3-6.1	8.5-8.1-7.8	10.5-10.0-9.6
	COP	kW / kW	6.29	6.20	6.00
Temp. Range of Heating	Indoor	D.B.	15.0~27.0°C	15.0~27.0°C	15.0~27.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Indoor Unit Connectable	Total Capacity		50~130% of Heat Source Unit Capacity	50~130% of Heat Source Unit Capacity	50~130% of Heat Source Unit Capacity
	Model / Quantity		P15~P250/1~17	P15~P250/1~21	P15~P250/1~26
Sound Pressure Level (measured in anechoic room)		dB <A>	46	48	54
Refrigerant Piping Diameter	Liquid Pipe	mm (in.)	9.52 (3/8) Brazed	9.52 (3/8) Brazed (12.7 (1/2) Brazed, Farthest Length >= 90 m)	9.52 (3/8) Brazed (12.7 (1/2) Brazed, Farthest Length >= 40 m)
	Gas Pipe	mm (in.)	19.05 (3/4) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed
Circulating Water	Water Flow Rate	m^3 / h	5.76	5.76	5.76
		L/min	96	96	96
		cfm	3.4	3.4	3.4
	Pressure Drop	kPa	24	24	24
	Operating Volume Range	m^3 / h	3.0 ~ 7.2	3.0 ~ 7.2	3.0 ~ 7.2
Compressor	Type		Inverter Scroll Hermetic Compressor	Inverter Scroll Hermetic Compressor	Inverter Scroll Hermetic Compressor
	Starting Method		Inverter	Inverter	Inverter
	Motor Output	kW	4.8	6.2	7.7
	Case Heater	kW	–	–	–
External Finish			Galvanised Steel Sheets	Galvanised Steel Sheets	Galvanised Steel Sheets
External Dimension HxWxD		mm	1,100 x 880 x 550	1,100 x 880 x 550	1,100 x 880 x 550
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.)		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	Type x Original Charge		R410A x 5.0 kg	R410A x 5.0 kg	R410A x 5.0 kg
Net Weight		kg	174	174	174
Heat Exchanger			Plate Type	Plate Type	Plate Type
	Water Volume in Plate	L	5.0	5.0	5.0
	Water Pressure Max.	MPa	2.0	2.0	2.0
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 Nominal conditions

	Indoor	Water Temperature	Pipe Length	Level Difference
Cooling	27°CD.B./19°CW.B.	30°C	7.5m	0m
Heating	20°CD.B.	20°C		

*The ambient temperature of the heat source unit needs to be kept below 40°CD.B.
*The ambient relative humidity of the heat source unit needs to be kept below 80%.
*The heat source unit should not be installed at outdoor.
*Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.
*Be sure to provide interlocking for the unit operation and water circuit.
*Nominal condition *1,*2 are subject to JIS B8615-2.
*Due to continuing improvement, above specification may be subject to change without notice.

Specifications

HEAT SOURCE UNIT

WY (HEAT PUMP) Series

PQHY-P YLM-A

Model			PQHY-P350YLM-A	PQHY-P400YLM-A	PQHY-P450YLM-A
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	40.0	45.0	50.0
		kcal / h	35,000	40,000	45,000
	*1	BTU / h	136,500	153,500	170,600
	Power Input	kW	7.14	8.03	9.29
	Current Input	A	12.0-11.4-11.0	13.5-12.8-12.4	15.6-14.8-14.3
	EER	kW / kW	5.60	5.60	5.38
Temp. Range of Cooling	Indoor	W.B.	15.0~24.0°C	15.0~24.0°C	15.0~24.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Heating Capacity (nominal)	*2	kW	45.0	50.0	56.0
		kcal / h	40,000	45,000	50,000
	*2	BTU / h	153,500	170,600	191,100
	Power Input	kW	7.53	8.37	9.79
	Current Input	A	12.7-12.0-11.6	14.1-13.4-12.9	16.5-15.7-15.1
	COP	kW / kW	5.97	5.97	5.72
Temp. Range of Heating	Indoor	D.B.	15.0~27.0°C	15.0~27.0°C	15.0~27.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Indoor Unit Connectable	Total Capacity		50~130% of Heat Source Unit Capacity	50~130% of Heat Source Unit Capacity	50~130% of Heat Source Unit Capacity
	Model / Quantity		P15~P250/1~30	P15~P250/1~34	P15~P250/1~39
Sound Pressure Level (measured in anechoic room)		dB <A>	52	52	54
Refrigerant Piping Diameter	Liquid Pipe	mm (in.)	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
Circulating Water	Water Flow Rate	m^3 / h	7.20	7.20	7.20
		L/min	120	120	120
		cfm	4.2	4.2	4.2
	Pressure Drop	kPa	44	44	44
	Operating Volume Range	m^3 / h	4.5 ~ 11.6	4.5 ~ 11.6	4.5 ~ 11.6
Compressor	Type		Inverter Scroll Hermetic Compressor	Inverter Scroll Hermetic Compressor	Inverter Scroll Hermetic Compressor
	Starting Method		Inverter	Inverter	Inverter
	Motor Output	kW	9.5	10.7	11.6
	Case Heater	kW	–	–	–
External Finish			Galvanised Steel Sheets	Galvanised Steel Sheets	Galvanised Steel Sheets
External Dimension HxWxD		mm	1,450 x 880 x 550	1,450 x 880 x 550	1,450 x 880 x 550
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.)		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	Type x Original Charge		R410A x 6.0 kg	R410A x 6.0 kg	R410A x 6.0 kg
Net Weight		kg	217	217	217
Heat Exchanger			Plate Type	Plate Type	Plate Type
	Water Volume in Plate	L	5.0	5.0	5.0
	Water Pressure Max.	MPa	2.0	2.0	2.0
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

Notes:

*1,*2 Nominal conditions

	Indoor	Water Temperature	Pipe Length	Level Difference
Cooling	27ºCD.B./19ºCW.B.	30ºC	7.5m	0m
Heating	20ºCD.B.	20ºC		

*The ambient temperature of the heat source unit needs to be kept below 40ºCD.B.
*The ambient relative humidity of the heat source unit needs to be kept below 80%.
*The heat source unit should not be installed at outdoor.
*Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.
*Be sure to provide interlocking for the unit operation and water circuit.
*Nominal condition *1,*2 are subject to JIS B8615-2.
*Due to continuing improvement, above specification may be subject to change without notice.

HEAT SOURCE UNIT

WY (HEAT PUMP) Series
PQHY-P YLM-A

Model			PQHY-P500YLM-A	PQHY-P550YLM-A	PQHY-P600YLM-A
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	56.0	63.0	69.0
		kcal / h	50,000	55,000	60,000
	*1	BTU / h	191,100	215,000	235,400
	Power Input	kW	11.17	12.54	14.49
	Current Input	A	18.8-17.9-17.2	21.1-20.1-19.3	24.4-23.2-22.3
	EER	kW / kW	5.01	5.02	4.76
Temp. Range of Cooling	Indoor	W.B.	15.0~24.0°C	15.0~24.0°C	15.0~24.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Heating Capacity (nominal)	*2	kW	63.0	69.0	76.5
		kcal / h	55,000	60,000	65,800
	*2	BTU / h	215,000	235,400	261,000
	Power Input	kW	11.43	12.27	14.51
	Current Input	A	19.2-18.3-17.6	20.7-19.6-18.9	24.4-23.2-22.4
	COP	kW / kW	5.51	5.62	5.27
Temp. Range of Heating	Indoor	D.B.	15.0~27.0°C	15.0~27.0°C	15.0~27.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Indoor Unit Connectable	Total Capacity		50~130% of Heat Source Unit Capacity	50~130% of Heat Source Unit Capacity	50~130% of Heat Source Unit Capacity
	Model / Quantity		P15~P250/1~43	P15~P250/2~47	P15~P250/2~50
Sound Pressure Level (measured in anechoic room)		dB <A>	54	56.5	56.5
Refrigerant Piping Diameter	Liquid Pipe	mm (in.)	15.88 (5/8) 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
Circulating Water	Water Flow Rate	m^3 / h	7.20	11.52	11.52
		L/min	120	192	192
		cfm	4.2	6.8	6.8
	Pressure Drop	kPa	44	45	45
	Operating Volume Range	m^3 / h	4.5 ~ 11.6	6.0 ~ 14.4	6.0 ~ 14.4
Compressor	Type		Inverter Scroll Hermetic Compressor	Inverter Scroll Hermetic Compressor	Inverter Scroll Hermetic Compressor
	Starting Method		Inverter	Inverter	Inverter
	Motor Output	kW	13.0	15.0	16.1
	Case Heater	kW	–	0.045 (240 V)	0.045 (240 V)
External Finish			Galvanised Steel Sheets	Galvanised Steel Sheets	Galvanised Steel Sheets
External Dimension HxWxD		mm	1,450 x 880 x 550	1,450 x 880 x 550	1,450 x 880 x 550
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.)		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	Type x Original Charge		R410A x 6.0 kg	R410A x 11.7 kg	R410A x 11.7 kg
Net Weight		kg	217	246	246
Heat Exchanger			Plate Type	Plate Type	Plate Type
	Water Volume in Plate	L	5.0	10.0	10.0
	Water Pressure Max.	MPa	2.0	2.0	2.0
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

Notes:

*1,*2 Nominal conditions

	Indoor	Water Temperature	Pipe Length	Level Difference
Cooling	27°CD.B./19°CW.B.	30°C	7.5m	0m
Heating	20°CD.B.	20°C		

*The ambient temperature of the heat source unit needs to be kept below 40°CD.B.
*The ambient relative humidity of the heat source unit needs to be kept below 80%.
*The heat source unit should not be installed at outdoor.
*Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.
*Be sure to provide interlocking for the unit operation and water circuit.
*Nominal condition *1,*2 are subject to JIS B8615-2.
*Due to continuing improvement, above specification may be subject to change without notice.

Specifications

HEAT SOURCE UNIT

WY (HEAT PUMP) Series
PQHY-P YSLM-A

Model			PQHY-P400YSLM-A	PQHY-P450YSLM-A	PQHY-P500YSLM-A
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	45.0	50.0	56.0
		kcal / h	40,000	45,000	50,000
	*1	BTU / h	153,500	170,600	191,100
	Power Input	kW	7.70	8.78	10.12
	Current Input	A	12.9-12.3-11.9	14.8-14.0-13.5	17.0-16.2-15.6
	EER	kW / kW	5.84	5.69	5.53
Temp. Range of Cooling	Indoor	W.B.	15.0~24.0°C	15.0~24.0°C	15.0~24.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Heating Capacity (nominal)	*2	kW	50.0	56.0	63.0
		kcal / h	45,000	50,000	55,000
	*2	BTU / h	170,600	191,100	215,000
	Power Input	kW	7.94	8.97	10.16
	Current Input	A	13.4-12.7-12.2	15.1-14.3-13.8	17.1-16.2-15.7
	COP	kW / kW	6.29	6.24	6.20
Temp. Range of Heating	Indoor	D.B.	15.0~27.0°C	15.0~27.0°C	15.0~27.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Indoor Unit Connectable	Total Capacity		50~130% of Heat Source Unit Capacity	50~130% of Heat Source Unit Capacity	50~130% of Heat Source Unit Capacity
	Model / Quantity		P15~P250/1~34	P15~P250/1~39	P15~P250/1~43
Sound Pressure Level (measured in anechoic room)		dB <A>	49	50	51
Refrigerant Piping Diameter	Liquid Pipe	mm (in.)	15.88 (5/8) 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

Set Model

Model			PQHY-P200YLM-A	PQHY-P200YLM-A	PQHY-P250YLM-A	PQHY-P200YLM-A	PQHY-P250YLM-A	PQHY-P250YLM-A
Circulating Water	Water Flow Rate	m^3 / h	5.76 + 5.76		5.76 + 5.76		5.76 + 5.76	
		L/min	96 + 96		96 + 96		96 + 96	
		cfm	3.4 + 3.4		3.4 + 3.4		3.4 + 3.4	
	Pressure Drop	kPa	24	24	24	24	24	24
	Operating Volume Range	m^3 / h	3.0 + 3.0 ~ 7.2 + 7.2		3.0 + 3.0 ~ 7.2 + 7.2		3.0 + 3.0 ~ 7.2 + 7.2	
Compressor	Type		Inverter Scroll Hermetic Compressor		Inverter Scroll Hermetic Compressor		Inverter Scroll Hermetic Compressor	
	Starting Method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor Output	kW	4.8	4.8	6.2	4.8	6.2	6.2
	Case Heater	kW	–	–	–	–	–	–
External Finish			Galvanised Steel Sheets		Galvanised Steel Sheets		Galvanised Steel Sheets	
External Dimension HxWxD		mm	1,100 x 880 x 550	1,100 x 880 x 550	1,100 x 880 x 550	1,100 x 880 x 550	1,100 x 880 x 550	1,100 x 880 x 550
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.)		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	Over-heat Protection	Over-heat Protection	Over-heat Protection
Refrigerant	Type x Original Charge		R410A x 5.0 kg	R410A x 5.0 kg	R410A x 5.0 kg	R410A x 5.0 kg	R410A x 5.0 kg	R410A x 5.0 kg
Net Weight		kg	174	174	174	174	174	174
Heat Exchanger			Plate Type	Plate Type	Plate Type	Plate Type	Plate Type	Plate Type
	Water Volume in Plate	L	5.0	5.0	5.0	5.0	5.0	5.0
	Water Pressure Max.	MPa	2.0	2.0	2.0	2.0	2.0	2.0
Optional Parts			Heat Source Twinning kit: CMY-Y100VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104, 108, 1010-G		Heat Source Twinning kit: CMY-Y100VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104, 108, 1010-G		Heat Source Twinning kit: CMY-Y100VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104, 108, 1010-G	

Notes:

*1,*2 Nominal conditions

	Indoor	Water Temperature	Pipe Length	Level Difference
Cooling	27°CD.B./19°CW.B.	30°C	7.5m	0m
Heating	20°CD.B.	20°C		

*The ambient temperature of the heat source unit needs to be kept below 40°CD.B.
*The ambient relative humidity of the heat source unit needs to be kept below 80%.
*The heat source unit should not be installed at outdoor.
*Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.
*Be sure to provide interlocking for the unit operation and water circuit.
*Nominal condition *1,*2 are subject to JIS B8615-2.
*Due to continuing improvement, above specification may be subject to change without notice.

HEAT SOURCE UNIT

WY (HEAT PUMP) Series

PQHY-P YSLM-A

Model			PQHY-P550YSLM-A	PQHY-P600YSLM-A	PQHY-P700YSLM-A
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	63.0	69.0	80.0
		kcal / h	55,000	60,000	68,800
	*1	BTU / h	215,000	235,400	273,000
	Power Input	kW	11.55	12.84	14.73
	Current Input	A	19.4-18.5-17.8	21.6-20.5-19.8	24.8-23.6-22.7
	EER	kW / kW	5.45	5.37	5.43
Temp. Range of Cooling	Indoor	W.B.	15.0~24.0°C	15.0~24.0°C	15.0~24.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Heating Capacity (nominal)	*2	kW	69.0	76.5	88.0
		kcal / h	60,000	65,800	75,700
	*2	BTU / h	235,400	261,000	300,300
	Power Input	kW	11.31	12.75	14.73
	Current Input	A	19.0-18.1-17.4	21.5-20.4-19.7	24.8-23.6-22.7
	COP	kW / kW	6.10	6.00	5.97
Temp. Range of Heating	Indoor	D.B.	15.0~27.0°C	15.0~27.0°C	15.0~27.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Indoor Unit Connectable	Total Capacity		50~130% of Heat Source Unit Capacity	50~130% of Heat Source Unit Capacity	50~130% of Heat Source Unit Capacity
	Model / Quantity		P15~P250/2~47	P15~P250/2~50	P15~P250/2~50
Sound Pressure Level (measured in anechoic room)		dB <A>	55	57	55
Refrigerant Piping Diameter	Liquid Pipe	mm (in.)	15.88 (5/8) Brazed	15.88 (5/8) Brazed	19.05 (3/4) Brazed
	Gas Pipe	mm (in.)	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	34.93 (1-3/8) Brazed

Set Model

Model			PQHY-P300YLM-A	PQHY-P250YLM-A	PQHY-P300YLM-A	PQHY-P300YLM-A	PQHY-P350YLM-A	PQHY-P350YLM-A
Circulating Water	Water Flow Rate	m^3 / h	5.76 + 5.76		5.76 + 5.76		7.20 + 7.20	
		L/min	96 + 96		96 + 96		120 + 120	
		cfm	3.4 + 3.4		3.4 + 3.4		4.2 + 4.2	
	Pressure Drop	kPa	24	24	24	24	44	44
	Operating Volume Range	m^3 / h	3.0 + 3.0 ~ 7.2 + 7.2		3.0 + 3.0 ~ 7.2 + 7.2		4.5 + 4.5 ~ 11.6 + 11.6	
Compressor	Type		Inverter Scroll Hermetic Compressor		Inverter Scroll Hermetic Compressor		Inverter Scroll Hermetic Compressor	
	Starting Method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor Output	kW	7.7	6.2	7.7	7.7	9.5	9.5
	Case Heater	kW	–	–	–	–	–	–
External Finish			Galvanised Steel Sheets		Galvanised Steel Sheets		Galvanised Steel Sheets	
External Dimension HxWxD		mm	1,100 x 880 x 550	1,100 x 880 x 550	1,100 x 880 x 550	1,100 x 880 x 550	1,450 x 880 x 550	1,450 x 880 x 550
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.)		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	Over-heat Protection	Over-heat Protection	Over-heat Protection
Refrigerant	Type x Original Charge		R410A x 5.0 kg	R410A x 5.0 kg	R410A x 5.0 kg	R410A x 5.0 kg	R410A x 6.0 kg	R410A x 6.0 kg
Net Weight		kg	174	174	174	174	217	217
Heat Exchanger			Plate Type	Plate Type	Plate Type	Plate Type	Plate Type	Plate Type
	Water Volume in Plate	L	5.0	5.0	5.0	5.0	5.0	5.0
	Water Pressure Max.	MPa	2.0	2.0	2.0	2.0	2.0	2.0
Optional Parts			Heat Source Twinning kit: CMY-Y100VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104, 108, 1010-G		Heat Source Twinning kit: CMY-Y100VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104, 108, 1010-G		Heat Source Twinning kit: CMY-Y200VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202, 302S-G2 Header: CMY-Y104, 108, 1010-G	

Notes:

*1,*2 Nominal conditions

	Indoor	Water Temperature	Pipe Length	Level Difference
Cooling	27ºCD.B./19ºCW.B.	30ºC	7.5m	0m
Heating	20ºCD.B.	20ºC		

*The ambient temperature of the heat source unit needs to be kept below 40ºCD.B.
*The ambient relative humidity of the heat source unit needs to be kept below 80%.
*The heat source unit should not be installed at outdoor.
*Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.
*Be sure to provide interlocking for the unit operation and water circuit.
*Nominal condition *1,*2 are subject to JIS B8615-2.
*Due to continuing improvement, above specification may be subject to change without notice.

Specifications

HEAT SOURCE UNIT

WY (HEAT PUMP) Series
PQHY-P YSLM-A

Model			PQHY-P750YSLM-A	PQHY-P800YSLM-A
Power Source			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	85.0	90.0
		kcal / h	73,100	77,400
	*1	BTU / h	290,000	307,100
	Power Input	kW	15.64	16.57
	Current Input	A	26.4-25.0-24.1	27.9-26.5-25.6
	EER	kW / kW	5.43	5.43
Temp. Range of Cooling	Indoor	W.B.	15.0~24.0°C	15.0~24.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C
Heating Capacity (nominal)	*2	kW	95.0	100.0
		kcal / h	81,700	86,000
	*2	BTU / h	324,100	341,200
	Power Input	kW	15.90	16.75
	Current Input	A	26.8-25.4-24.5	28.2-26.8-25.8
	COP	kW / kW	5.97	5.97
Temp. Range of Heating	Indoor	D.B.	15.0~27.0°C	15.0~27.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C
Indoor Unit Connectable	Total Capacity		50~130% of Heat Source Unit Capacity	50~130% of Heat Source Unit Capacity
	Model / Quantity		P15~P250/2~50	P15~P250/2~50
Sound Pressure Level (measured in anechoic room)		dB <A>	55	55
Refrigerant Piping Diameter	Liquid Pipe	mm (in.)	19.05 (3/4) Brazed	19.05 (3/4) Brazed
	Gas Pipe	mm (in.)	34.93 (1-3/8) Brazed	34.93 (1-3/8) Brazed

Set Model

Model			PQHY-P400YLM-A	PQHY-P350YLM-A	PQHY-P400YLM-A	PQHY-P400YLM-A
Circulating Water	Water Flow Rate	m^3 / h	7.20 + 7.20		7.20 + 7.20	
		L/min	120 + 120		120 + 120	
		cfm	4.2 + 4.2		4.2 + 4.2	
	Pressure Drop	kPa	44	44	44	44
	Operating Volume Range	m^3 / h	4.5 + 4.5 ~ 11.6 + 11.6		4.5 + 4.5 ~ 11.6 + 11.6	
Compressor	Type		Inverter Scroll Hermetic Compressor		Inverter Scroll Hermetic Compressor	
	Starting Method		Inverter	Inverter	Inverter	Inverter
	Motor Output	kW	10.7	9.5	10.7	10.7
	Case Heater	kW	–	–	–	–
External Finish			Galvanised Steel Sheets	Galvanised Steel Sheets	Galvanised Steel Sheets	Galvanised Steel Sheets
External Dimension HxWxD		mm	1,450 x 880 x 550	1,450 x 880 x 550	1,450 x 880 x 550	1,450 x 880 x 550
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)	
	Inverter Circuit (COMP.)		Over-heat Protection, Over-current Protection		Over-heat Protection, Over-current Protection	
	Compressor		Over-heat Protection	Over-heat Protection	Over-heat Protection	Over-heat Protection
Refrigerant	Type x Original Charge		R410A x 6.0 kg	R410A x 6.0 kg	R410A x 6.0 kg	R410A x 6.0 kg
Net Weight		kg	217	217	217	217
Heat Exchanger			Plate Type	Plate Type	Plate Type	Plate Type
	Water Volume in Plate	L	5.0	5.0	5.0	5.0
	Water Pressure Max.	MPa	2.0	2.0	2.0	2.0
Optional Parts			Heat Source Twinning kit: CMY-Y200VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202, 302S-G2 Header: CMY-Y104, 108, 1010-G		Heat Source Twinning kit: CMY-Y200VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202, 302S-G2 Header: CMY-Y104, 108, 1010-G	

Notes:

*1,*2 Nominal conditions

	Indoor	Water Temperature	Pipe Length	Level Difference
Cooling	27°CD.B./19°CW.B.	30°C	7.5m	0m
Heating	20°CD.B.	20°C		

*The ambient temperature of the heat source unit needs to be kept below 40°CD.B.
*The ambient relative humidity of the heat source unit needs to be kept below 80%.
*The heat source unit should not be installed at outdoor.
*Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.
*Be sure to provide interlocking for the unit operation and water circuit.
*Nominal condition *1,*2 are subject to JIS B8615-2.
*Due to continuing improvement, above specification may be subject to change without notice.

HEAT SOURCE UNIT

WY (HEAT PUMP) Series
PQHY-P YSLM-A

Model			PQHY-P850YSLM-A	PQHY-P900YSLM-A
Power Source			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	96.0	101.0
		kcal / h	82,600	86,900
	*1	BTU / h	327,600	344,600
	Power Input	kW	18.03	19.38
	Current Input	A	30.4-28.9-27.8	32.7-31.0-29.9
	EER	kW / kW	5.32	5.21
Temp. Range of Cooling	Indoor	W.B.	15.0~24.0°C	15.0~24.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C
Heating Capacity (nominal)	*2	kW	108.0	113.0
		kcal / h	92,900	97,200
	*2	BTU / h	368,500	385,600
	Power Input	kW	18.49	19.74
	Current Input	A	31.2-29.6-28.5	33.3-31.6-30.5
	COP	kW / kW	5.84	5.72
Temp. Range of Heating	Indoor	D.B.	15.0~27.0°C	15.0~27.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C
Indoor Unit Connectable	Total Capacity		50~130% of Heat Source Unit Capacity	50~130% of Heat Source Unit Capacity
	Model / Quantity		P15~P250/2~50	P15~P250/2~50
Sound Pressure Level (measured in anechoic room)		dB <A>	56	57
Refrigerant Piping Diameter	Liquid Pipe	mm (in.)	19.05 (3/4) Brazed	19.05 (3/4) Brazed
	Gas Pipe	mm (in.)	41.28 (1-5/8) Brazed	41.28 (1-5/8) Brazed

Set Model

Model			PQHY-P450YLM-A	PQHY-P400YLM-A	PQHY-P450YLM-A	PQHY-P450YLM-A
Circulating Water	Water Flow Rate	m^3 / h	7.20 + 7.20		7.20 + 7.20	
		L/min	120 + 120		120 + 120	
		cfm	4.2 + 4.2		4.2 + 4.2	
	Pressure Drop	kPa	44	44	44	44
	Operating Volume Range	m^3 / h	4.5 + 4.5 ~ 11.6 + 11.6		4.5 + 4.5 ~ 11.6 + 11.6	
Compressor	Type		Inverter Scroll Hermetic Compressor		Inverter Scroll Hermetic Compressor	
	Starting Method		Inverter	Inverter	Inverter	Inverter
	Motor Output	kW	11.6	10.7	11.6	11.6
	Case Heater	kW	–	–	–	–
External Finish			Galvanised Steel Sheets	Galvanised Steel Sheets	Galvanised Steel sSheets	Galvanised Steel Sheets
External Dimension HxWxD		mm	1,450 x 880 x 550	1,450 x 880 x 550	1,450 x 880 x 550	1,450 x 880 x 550
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)	
	Inverter Circuit (COMP.)		Over-heat Protection, Over-current Protection		Over-heat Protection, Over-current Protection	
	Compressor		Over-heat Protection	Over-heat Protection	Over-heat Protection	Over-heat Protection
Refrigerant	Type x Original Charge		R410A x 6.0 kg	R410A x 6.0 kg	R410A x 6.0 kg	R410A x 6.0 kg
Net Weight		kg	217	217	217	217
Heat Exchanger			Plate Type	Plate Type	Plate Type	Plate Type
	Water Volume in Plate	L	5.0	5.0	5.0	5.0
	Water Pressure Max.	MPa	2.0	2.0	2.0	2.0
Optional Parts			Heat Source Twinning kit: CMY-Y200VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202, 302S-G2 Header: CMY-Y104, 108, 1010-G		Heat Source Twinning kit: CMY-Y200VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202, 302S-G2 Header: CMY-Y104, 108, 1010-G	

Notes:

*1,*2 Nominal conditions

	Indoor	Water Temperature	Pipe Length	Level Difference
Cooling	27°CD.B./19°CW.B.	30°C	7.5m	0m
Heating	20°CD.B.	20°C		

*The ambient temperature of the heat source unit needs to be kept below 40°CD.B.
*The ambient relative humidity of the heat source unit needs to be kept below 80%.
*The heat source unit should not be installed at outdoor.
*Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.
*Be sure to provide interlocking for the unit operation and water circuit.
*Nominal condition *1,*2 are subject to JIS B8615-2.
*Due to continuing improvement, above specification may be subject to change without notice.

Specifications

HEAT SOURCE UNIT

WR2 (HEAT RECOVERY) Series

PQRY-P YLM-A

Model			PQRY-P200YLM-A	PQRY-P250YLM-A	PQRY-P300YLM-A
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
		kcal / h	20,000	25,000	30,000
	*1	BTU / h	76,400	95,500	114,300
	Power Input	kW	3.71	4.90	6.04
	Current Input	A	6.2-5.9-5.7	8.2-7.8-7.5	10.1-9.6-9.3
	EER	kW / kW	6.03	5.71	5.54
Temp. Range of Cooling	Indoor	W.B.	15.0~24.0°C	15.0~24.0°C	15.0~24.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Heating Capacity (nominal)	*2	kW	25.0	31.5	37.5
		kcal / h	21,500	27,100	32,300
	*2	BTU / h	85,300	107,500	128,000
	Power Input	kW	3.97	5.08	6.25
	Current Input	A	6.7-6.3-6.1	8.5-8.1-7.8	10.5-10.0-9.6
	COP	kW / kW	6.29	6.20	6.00
Temp. Range of Heating	Indoor	D.B.	15.0~27.0°C	15.0~27.0°C	15.0~27.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Indoor Unit connectable	Total Capacity		50~150% of Heat Source Unit Capacity	50~150% of Heat Source Unit Capacity	50~150% of Heat Source Unit Capacity
	Model / Quantity		P15~P250/1~20	P15~P250/1~25	P15~P250/1~30
Sound Pressure Level (measured in anechoic room)		dB <A>	46	48	54
Refrigerant Piping Diameter	High Pressure	mm (in.)	15.88 (5/8) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed
	Low Pressure	mm (in.)	19.05 (3/4) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed
Circulating Water	Water Flow Rate	m^3 / h	5.76	5.76	5.76
		L/min	96	96	96
		cfm	3.4	3.4	3.4
	Pressure Drop	kPa	24	24	24
	Operating Volume Range	m^3 / h	3.0 ~ 7.2	3.0 ~ 7.2	3.0 ~ 7.2
Compressor	Type		Inverter Scroll Hermetic Compressor	Inverter Scroll Hermetic Compressor	Inverter Scroll Hermetic Compressor
	Starting Method		Inverter	Inverter	Inverter
	Motor Output	kW	4.8	6.2	7.7
	Case Heater	kW	–	–	–
External Finish			Galvanised Steel Sheets	Galvanised Steel Sheets	Galvanised Steel Sheets
External Dimension HxWxD		mm	1,100 x 880 x 550	1,100 x 880 x 550	1,100 x 880 x 550
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.)		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	Type x Original Charge		R410A x 5.0 kg	R410A x 5.0 kg	R410A x 5.0 kg
Net Weight		kg	172	172	172
Heat Exchanger			Plate Type	Plate Type	Plate Type
	Water Volume in Plate	L	5.0	5.0	5.0
	Water Pressure Max.	MPa	2.0	2.0	2.0
Optional Parts			Joint: CMY-Y102SS/LS-G2, CMY-R160-J1 BC controller: CMB-P104, 105, 106, 108, 1010, 1013, 1016V-G1 Main BC controller: CMB-P108, 1010, 1013, 1016V-GA1 Sub BC controller: CMB-P104, 108V-GB1, CMB-P1016V-HB1	Joint: CMY-Y102SS/LS-G2, CMY-R160-J1 BC controller: CMB-P104, 105, 106, 108, 1010, 1013, 1016V-G1 Main BC controller: CMB-P108, 1010, 1013, 1016V-GA1 Sub BC controller: CMB-P104, 108V-GB1, CMB-P1016V-HB1	Joint: CMY-Y102SS/LS-G2, CMY-R160-J1 BC controller: CMB-P104, 105, 106, 108, 1010, 1013, 1016V-G1 Main BC controller: CMB-P108, 1010, 1013, 1016V-GA1 Sub BC controller: CMB-P104, 108V-GB1, CMB-P1016V-HB1

Notes:

*1,*2 Nominal conditions

	Indoor	Water Temperature	Pipe Length	Level Difference
Cooling	27ºCD.B./19ºCW.B.	30ºC	7.5m	0m
Heating	20ºCD.B.	20ºC		

*The ambient temperature of the heat source unit needs to be kept below 40ºCD.B.
*The ambient relative humidity of the heat source unit needs to be kept below 80%.
*The heat source unit should not be installed at outdoor.
*Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.
*Be sure to provide interlocking for the unit operation and water circuit.
*Nominal condition *1,*2 are subject to JIS B8615-2.
*Due to continuing improvement, above specification may be subject to change without notice.

HEAT SOURCE UNIT

WR2 (HEAT RECOVERY) Series

PQRY-P YLM-A

Model			PQRY-P350YLM-A	PQRY-P400YLM-A	PQRY-P450YLM-A
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	40.0	45.0	50.0
		kcal / h	35,000	40,000	45,000
	*1	BTU / h	136,500	153,500	170,600
	Power Input	kW	7.14	8.03	9.29
	Current Input	A	12.0-11.4-11.0	13.5-12.8-12.4	15.6-14.8-14.3
	EER	kW / kW	5.60	5.60	5.38
Temp. Range of Cooling	Indoor	W.B.	15.0~24.0°C	15.0~24.0°C	15.0~24.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Heating Capacity (nominal)	*2	kW	45.0	50.0	56.0
		kcal / h	40,000	45,000	50,000
	*2	BTU / h	153,500	170,600	191,100
	Power Input	kW	7.53	8.37	9.79
	Current Input	A	12.7-12.0-11.6	14.1-13.4-12.9	16.5-15.7-15.1
	COP	kW / kW	5.97	5.97	5.72
Temp. Range of Heating	Indoor	D.B.	15.0~27.0°C	15.0~27.0°C	15.0~27.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Indoor Unit Connectable	Total Capacity		50~150% of Heat Source Unit Capacity	50~150% of Heat Source Unit Capacity	50~150% of Heat Source Unit Capacity
	Model / Quantity		P15~P250/1~35	P15~P250/1~40	P15~P250/1~45
Sound Pressure Level (measured in anechoic room)		dB <A>	52	52	54
Refrigerant Piping Diameter	High Pressure	mm (in.)	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed
	Low Pressure	mm (in.)	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed
Circulating Water	Water Flow Rate	m^3 / h	7.20	7.20	7.20
		L/min	120	120	120
		cfm	4.2	4.2	4.2
	Pressure Drop	kPa	44	44	44
	Operating Volume Range	m^3 / h	4.5 ~ 11.6	4.5 ~ 11.6	4.5 ~ 11.6
Compressor	Type		Inverter Scroll Hermetic Compressor	Inverter Scroll Hermetic Compressor	Inverter Scroll Hermetic Compressor
	Starting Method		Inverter	Inverter	Inverter
	Motor Output	kW	9.5	10.7	11.6
	Case Heater	kW	–	–	–
External Finish			Galvanised Steel Sheets	Galvanised Steel Sheets	Galvanised Steel Sheets
External Dimension HxWxD		mm	1,450 x 880 x 550	1,450 x 880 x 550	1,450 x 880 x 550
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.)		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	Type x original charge		R410A x 6.0 kg	R410A x 6.0 kg	R410A x 6.0 kg
Net Weight		kg	216	216	216
Heat Exchanger			Plate Type	Plate Type	Plate Type
	Water Volume in Plate	L	5.0	5.0	5.0
	Water Pressure Max.	MPa	2.0	2.0	2.0
Optional Parts			Joint: CMY-Y102SS/LS-G2, CMY-R160-J1 BC controller: CMB-P104, 105, 106, 108, 1010, 1013, 1016V-G1 Main BC controller: CMB-P108, 1010, 1013, 1016V-GA1 Sub BC controller: CMB-P104, 108V-GB1, CMB-P1016V-HB1	Joint: CMY-Y102SS/LS-G2, CMY-R160-J1 Main BC controller: CMB-P108, 1010, 1013, 1016V-GA1 Sub BC controller: CMB-P104, 108V-GB1, CMB-P1016V-HB1	Joint: CMY-Y102SS/LS-G2, CMY-R160-J1 Main BC controller: CMB-P108, 1010, 1013, 1016V-GA1 Sub BC controller: CMB-P104, 108V-GB1, CMB-P1016V-HB1

Notes:

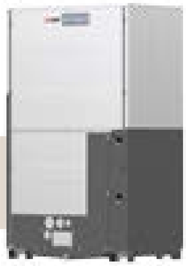
*1,*2 Nominal conditions

	Indoor	Water Temperature	Pipe Length	Level Difference
Cooling	27ºCD.B./19ºCW.B.	30ºC	7.5m	0m
Heating	20ºCD.B.	20ºC		

*The ambient temperature of the heat source unit needs to be kept below 40ºCD.B.
*The ambient relative humidity of the heat source unit needs to be kept below 80%.
*The heat source unit should not be installed at outdoor.
*Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.
*Be sure to provide interlocking for the unit operation and water circuit.
*Nominal condition *1,*2 are subject to JIS B8615-2.
*Due to continuing improvement, above specification may be subject to change without notice.

Specifications

HEAT SOURCE UNIT



WR2 (HEAT RECOVERY) Series
PQRY-P YLM-A

Model			PQRY-P500YLM-A	PQRY-P550YLM-A	PQRY-P600YLM-A
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	56.0	63.0	69.0
		kcal / h	50,000	55,000	60,000
	*1	BTU / h	191,100	215,000	235,400
	Power Input	kW	11.17	12.54	14.49
	Current Input	A	18.8-17.9-17.2	21.1-20.1-19.3	24.4-23.2-22.3
	EER	kW / kW	5.01	5.02	4.76
Temp. Range of Cooling	Indoor	W.B.	15.0~24.0°C	15.0~24.0°C	15.0~24.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Heating Capacity (nominal)	*2	kW	63.0	69.0	76.5
		kcal / h	55,000	60,000	65,800
	*2	BTU / h	215,000	235,400	261,000
	Power Input	kW	11.43	12.27	14.51
	Current Input	A	19.2-18.3-17.6	20.7-19.6-18.9	24.4-23.2-22.4
	COP	kW / kW	5.51	5.62	5.27
Temp. Range of Heating	Indoor	D.B.	15.0~27.0°C	15.0~27.0°C	15.0~27.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Indoor Unit Connectable	Total Capacity		50~150% of Heat Source Unit Capacity	50~150% of Heat Source Unit Capacity	50~150% of Heat Source Unit Capacity
	Model / Quantity		P15~P250/1~50	P15~P250/2~50	P15~P250/2~50
Sound Pressure Level (measured in anechoic room)		dB <A>	54	56.5	56.5
Refrigerant Piping Diameter	High Pressure	mm (in.)	22.2 (7/8) Brazed	22.2 (7/8) Brazed (1-1/8 (28.58) Brazed for the part that exceeds 65 m)	22.2 (7/8) Brazed (1-1/8 (28.58) Brazed for the part that exceeds 65 m)
	Low Pressure	mm (in.)	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	34.93 (1-3/8) Brazed
Circulating Water	Water Flow Rate	m^3 / h	7.20	11.52	11.52
		L/min	120	192	192
		cfm	4.2	6.8	6.8
	Pressure Drop	kPa	44	45	45
	Operating Volume Range	m^3 / h	4.5 ~ 11.6	6.0 ~ 14.4	6.0 ~ 14.4
Compressor	Type		Inverter Scroll Hermetic Compressor	Inverter Scroll Hermetic Compressor	Inverter Scroll Hermetic Compressor
	Starting Method		Inverter	Inverter	Inverter
	Motor Output	kW	13.0	15.0	16.1
	Case Heater	kW	–	0.045 (240 V)	0.045 (240 V)
External Finish			Galvanised Steel Sheets	Galvanised Steel Sheets	Galvanised Steel Sheets
External Dimension HxWxD		mm	1,450 x 880 x 550	1,450 x 880 x 550	1,450 x 880 x 550
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.)		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	Type x Original Charge		R410A x 6.0 kg	R410A x 11.7 kg	R410A x 11.7 kg
Net Weight		kg	216	246	246
Heat Exchanger			Plate Type	Plate Type	Plate Type
	Water Volume in Plate	L	5.0	10.0	10.0
	Water Pressure Max.	MPa	2.0	2.0	2.0
Optional Parts			Joint: CMY-Y102SS/LS-G2, CMY-R160-J1 Main BC controller: CMB-P108, 1010, 1013, 1016V-GA1 Sub BC controller: CMB-P104, 108V-GB1, CMB-P1016V-HB1	Joint: CMY-Y102SS/LS-G2, CMY-R160-J1 Main BC controller: CMB-P108, 1010, 1013, 1016V-GA1 Sub BC controller: CMB-P104, 108V-GB1, CMB-P1016V-HB1	Joint: CMY-Y102SS/LS-G2, CMY-R160-J1 Main BC controller: CMB-P108, 1010, 1013, 1016V-GA1 Sub BC controller: CMB-P104, 108V-GB1, CMB-P1016V-HB1

Notes:

*1,*2 Nominal conditions

	Indoor	Water Temperature	Pipe Length	Level Difference
Cooling	27°CD.B./19°CW.B.	30°C	7.5m	0m
Heating	20°CD.B.	20°C		

*The ambient temperature of the heat source unit needs to be kept below 40°CD.B.
*The ambient relative humidity of the heat source unit needs to be kept below 80%.
*The heat source unit should not be installed at outdoor.
*Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.
*Be sure to provide interlocking for the unit operation and water circuit.
*Nominal condition *1,*2 are subject to JIS B8615-2.
*Due to continuing improvement, above specification may be subject to change without notice.

HEAT SOURCE UNIT

WR2 (HEAT RECOVERY) Series

PQRY-P YSLM-A

Model			PQRY-P400YSLM-A	PQRY-P450YSLM-A	PQRY-P500YSLM-A
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	45.0	50.0	56.0
		kcal / h	40,000	45,000	50,000
	*1	BTU / h	153,500	170,600	191,100
	Power Input	kW	7.70	8.78	10.12
	Current Input	A	12.9-12.3-11.9	14.8-14.0-13.5	17.0-16.2-15.6
	EER	kW / kW	5.84	5.69	5.53
Temp. Range of Cooling	Indoor	W.B.	15.0~24.0°C	15.0~24.0°C	15.0~24.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Heating Capacity (nominal)	*2	kW	50.0	56.0	63.0
		kcal / h	45,000	50,000	55,000
	*2	BTU / h	170,600	191,100	215,000
	Power Input	kW	7.94	8.97	10.16
	Current Input	A	13.4-12.7-12.2	15.1-14.3-13.8	17.1-16.2-15.7
	COP	kW / kW	6.29	6.24	6.20
Temp. Range of Heating	Indoor	D.B.	15.0~27.0°C	15.0~27.0°C	15.0~27.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Indoor Unit Connectable	Total Capacity		50~150% of Heat Source Unit Capacity	50~150% of Heat Source Unit Capacity	50~150% of Heat Source Unit Capacity
	Model / Quantity		P15~P250/1~40	P15~P250/1~45	P15~P250/1~50
Sound Pressure Level (measured in anechoic room)		dB <A>	49	50	51
Refrigerant Piping Diameter	High Pressure	mm (in.)	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed
	Low Pressure	mm (in.)	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed

Set Model

Model			PQRY-P200YLM-A	PQRY-P200YLM-A	PQRY-P250YLM-A	PQRY-P200YLM-A	PQRY-P250YLM-A	PQRY-P250YLM-A
Circulating Water	Water Flow Rate	m^3 / h	5.76 + 5.76		5.76 + 5.76		5.76 + 5.76	
		L/min	96 + 96		96 + 96		96 + 96	
		cfm	3.4 + 3.4		3.4 + 3.4		3.4 + 3.4	
	Pressure Drop	kPa	24	24	24	24	24	24
	Operating Volume Range	m^3 / h	3.0 + 3.0 ~ 7.2 + 7.2		3.0 + 3.0 ~ 7.2 + 7.2		3.0 + 3.0 ~ 7.2 + 7.2	
Compressor	Type		Inverter Scroll Hermetic Compressor		Inverter Scroll Hermetic Compressor		Inverter Scroll Hermetic Compressor	
	Starting Method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor Output	kW	4.8	4.8	6.2	4.8	6.2	6.2
	Case Heater	kW	–	–	–	–	–	–
External Finish			Galvanised Steel Sheets		Galvanised Steel Sheets		Galvanised Steel Sheets	
External Dimension HxWxD		mm	1,100 x 880 x 550	1,100 x 880 x 550	1,100 x 880 x 550	1,100 x 880 x 550	1,100 x 880 x 550	1,100 x 880 x 550
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.)		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	Over-heat Protection	Over-heat Protection	Over-heat Protection
Refrigerant	Type x Original Charge		R410A x 5.0 kg	R410A x 5.0 kg	R410A x 5.0 kg	R410A x 5.0 kg	R410A x 5.0 kg	R410A x 5.0 kg
Net Weight		kg	172	172	172	172	172	172
Heat Exchanger			Plate Type	Plate Type	Plate Type	Plate Type	Plate Type	Plate Type
	Water Volume in Plate	L	5.0	5.0	5.0	5.0	5.0	5.0
	Water Pressure Max.	MPa	2.0	2.0	2.0	2.0	2.0	2.0
Optional Parts			Heat Source Twinning kit: CMY-Q100CBK2 Joint: CMY-Y102SS/LS-G2, CMY-R160-J1 Main BC controller: CMB-P108, 1010, 1013, 1016V-GA1 Sub BC controller: CMB-P104, 108V-GB1, CMB-P1016V-HB1		Heat Source Twinning kit: CMY-Q100CBK2 Joint: CMY-Y102SS/LS-G2, CMY-R160-J1 Main BC controller: CMB-P108, 1010, 1013, 1016V-GA1 Sub BC controller: CMB-P104, 108V-GB1, CMB-P1016V-HB1		Heat Source Twinning kit: CMY-Q100CBK2 Joint: CMY-Y102SS/LS-G2, CMY-R160-J1 Main BC controller: CMB-P108, 1010, 1013, 1016V-GA1 Sub BC controller: CMB-P104, 108V-GB1, CMB-P1016V-HB1	

Notes:

*1,*2 Nominal conditions

	Indoor	Water Temperature	Pipe Length	Level Difference
Cooling	27ºCD.B./19ºCW.B.	30ºC	7.5m	0m
Heating	20ºCD.B.	20ºC		

*The ambient temperature of the heat source unit needs to be kept below 40ºCD.B.
*The ambient relative humidity of the heat source unit needs to be kept below 80%.
*The heat source unit should not be installed at outdoor.
*Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.
*Be sure to provide interlocking for the unit operation and water circuit.
*Nominal condition *1,*2 are subject to JIS B8615-2.
*Due to continuing improvement, above specification may be subject to change without notice.

Specifications

HEAT SOURCE UNIT

WY (HEAT RECOVERY) Series
PQRY-P YSLM-A

Model			PQRY-P550YSLM-A	PQRY-P600YSLM-A	PQRY-P700YSLM-A
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	63.0	69.0	80.0
		kcal / h	55,000	60,000	68,800
	*1	BTU / h	215,000	235,400	273,000
	Power Input	kW	11.55	12.84	14.73
	Current Input	A	19.4-18.5-17.8	21.6-20.5-19.8	24.8-23.6-22.7
	Eer	kW / kW	5.45	5.37	5.43
Temp. Range Of Cooling	Indoor	W.B.	15.0~24.0°C	15.0~24.0°C	15.0~24.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Heating Capacity (nominal)	*2	kW	69.0	76.5	88.0
		kcal / h	60,000	65,800	75,700
	*2	BTU / h	235,400	261,000	300,300
	Power Input	kW	11.31	12.75	14.73
	Current Input	A	19.0-18.1-17.4	21.5-20.4-19.7	24.8-23.6-22.7
	Cop	kW / kW	6.10	6.00	5.97
Temp. Range Of Heating	Indoor	D.B.	15.0~27.0°C	15.0~27.0°C	15.0~27.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C	10.0~45.0°C
Indoor Unit Connectable	Total Capacity		50~150% of Heat Source Unit Capacity	50~150% of Heat Source Unit Capacity	50~150% of Heat Source Unit Capacity
	Model / Quantity		P15~P250/2~50	P15~P250/2~50	P15~P250/2~50
Sound Pressure Level (measured In Anechoic Room)		dB <A>	55	57	55
Refrigerant Piping Diameter	High Pressure	mm (in.)	22.2 (7/8) Brazed (1-1/8 (28.58) Brazed for the part that exceeds 65 m)	22.2 (7/8) Brazed (1-1/8 (28.58) Brazed for the part that exceeds 65 m)	28.58 (1-1/8) Brazed
	Low Pressure	mm (in.)	28.58 (1-1/8) Brazed	34.93 (1-3/8) Brazed	34.93 (1-3/8) Brazed

Set Model

Model			PQRY-P300YLM-A	PQRY-P250YLM-A	PQRY-P300YLM-A	PQRY-P300YLM-A	PQRY-P350YLM-A	PQRY-P350YLM-A
Circulating Water	Water Flow Rate	m^3 / h	5.76 + 5.76		5.76 + 5.76		7.20 + 7.20	
		L/min	96 + 96		96 + 96		120 + 120	
		cfm	3.4 + 3.4		3.4 + 3.4		4.2 + 4.2	
	Pressure Drop	kPa	24	24	24	24	44	44
	Operating Volume Range	m^3 / h	3.0 + 3.0 ~ 7.2 + 7.2		3.0 + 3.0 ~ 7.2 + 7.2		4.5 + 4.5 ~ 11.6 + 11.6	
Compressor	Type		Inverter Scroll Hermetic Compressor		Inverter Scroll Hermetic Compressor		Inverter Scroll Hermetic Compressor	
	Starting Method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor Output	kW	7.7	6.2	7.7	7.7	9.5	9.5
	Case Heater	kW	–	–	–	–	–	–
External Finish			Galvanised Steel Sheets		Galvanised Steel Sheets		Galvanised Steel Sheets	
External Dimension HxWxD		mm	1,100 x 880 x 550	1,100 x 880 x 550	1,100 x 880 x 550	1,100 x 880 x 550	1,450 x 880 x 550	1,450 x 880 x 550
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.)		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	Over-heat Protection	Over-heat Protection	Over-heat Protection
Refrigerant	Type x Original Charge		R410A x 5.0 kg	R410A x 5.0 kg	R410A x 5.0 kg	R410A x 5.0 kg	R410A x 6.0 kg	R410A x 6.0 kg
Net Weight		kg	172	172	172	172	216	216
Heat Exchanger			Plate Type	Plate Type	Plate Type	Plate Type	Plate Type	Plate Type
	Water Volume in Plate	L	5.0	5.0	5.0	5.0	5.0	5.0
	Water Pressure Max.	MPa	2.0	2.0	2.0	2.0	2.0	2.0
Optional Parts			Heat Source Twinning kit: CMY-Q100CBK2 Joint: CMY-Y102SS/LS-G2, CMY-R160-J1 Main BC controller: CMB-P108, 1010, 1013, 1016V-GA1 Sub BC controller: CMB-P104, 108V-GB1, CMB-P1016V-HB1		Heat Source Twinning kit: CMY-Q100CBK2 Joint: CMY-Y102SS/LS-G2, CMY-R160-J1 Main BC controller: CMB-P108, 1010, 1013, 1016V-GA1 Sub BC controller: CMB-P104, 108V-GB1, CMB-P1016V-HB1		Heat Source Twinning kit: CMY-Q200CBK Joint: CMY-Y102SS/LS-G2, CMY-R160-J1 Main BC controller: CMB-P1016V-HA1 Sub BC controller: CMB-P104, 108V-GB1, CMB-P1016V-HB1	

Notes:

*1,*2 Nominal conditions

	Indoor	Water Temperature	Pipe Length	Level Difference
Cooling	27°CD.B./19°CW.B.	30°C (86°F)	7.5m	0m
Heating	20°CD.B.	20°C (68°F)		

*The ambient temperature of the heat source unit needs to be kept below 40°CD.B.
*The ambient relative humidity of the heat source unit needs to be kept below 80%.
*The heat source unit should not be installed at outdoor.
*Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.
*Be sure to provide interlocking for the unit operation and water circuit.
*Nominal condition *1,*2 are subject to JIS B8615-2.
*Due to continuing improvement, above specification may be subject to change without notice.

HEAT SOURCE UNIT

WR2 (HEAT RECOVERY) Series

PQRY-P YSLM-A

Model			PQRY-P750YSLM-A	PQRY-P800YSLM-A
Power Source			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	85.0	90.0
		kcal / h	73,100	77,400
	*1	BTU / h	290,000	307,100
	Power Input	kW	15.64	16.57
	Current Input	A	26.4-25.0-24.1	27.9-26.5-25.6
	EER	kW / kW	5.43	5.43
Temp. Range of Cooling	Indoor	W.B.	15.0~24.0°C	15.0~24.0°
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C
Heating Capacity (nominal)	*2	kW	95.0	100.0
		kcal / h	81,700	86,000
	*2	BTU / h	324,100	341,200
	Power Input	kW	15.90	16.75
	Current Input	A	26.8-25.4-24.5	28.2-26.8-25.8
	COP	kW / kW	5.97	5.97
Temp. Range of Heating	Indoor	D.B.	15.0~27.0°C	15.0~27.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C
Indoor Unit Connectable	Total Capacity		50~150% of Heat Source Unit Capacity	50~150% of Heat Source Unit Capacity
	Model / Quantity		P15~P250/2~50	P15~P250/2~50
Sound Pressure Level (measured in anechoic room)		dB <A>	55	55
Refrigerant Piping Diameter	High Pressure	mm (in.)	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed
	Low Pressure	mm (in.)	34.93 (1-3/8) Brazed	34.93 (1-3/8) Brazed

Set Model

Model			PQRY-P400YLM-A	PQRY-P350YLM-A	PQRY-P400YLM-A	PQRY-P400YLM-A
Circulating Water	Water Flow Rate	m^3 / h	7.20 + 7.20		7.20 + 7.20	
		L/min	120 + 120		120 + 120	
		cfm	4.2 + 4.2		4.2 + 4.2	
	Pressure Drop	kPa	44	44	44	44
	Operating Volume Range	m^3 / h	4.5 + 4.5 ~ 11.6 + 11.6		4.5 + 4.5 ~ 11.6 + 11.6	
Compressor	Type		Inverter Scroll Hermetic Compressor		Inverter Scroll Hermetic Compressor	
	Starting Method		Inverter	Inverter	Inverter	Inverter
	Motor Output	kW	10.7	9.5	10.7	10.7
	Case Heater	kW	–	–	–	–
External Finish			Galvanised Steel Sheets	Galvanised Steel Sheets	Galvanised Steel Sheets	Galvanised Steel Sheets
External Dimension HxWxD		mm	1,450 x 880 x 550	1,450 x 880 x 550	1,450 x 880 x 550	1,450 x 880 x 550
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)	
	Inverter Circuit (COMP.)		Over-heat Protection, Over-current Protection		Over-heat Protection, Over-current Protection	
	Compressor		Over-heat Protection	Over-heat Protection	Over-heat Protection	Over-heat Protection
Refrigerant	Type x Original Charge		R410A x 6.0 kg	R410A x 6.0 kg	R410A x 6.0 kg	R410A x 6.0 kg
Net Weight		kg	216	216	216	216
Heat Exchanger			Plate Type	Plate Type	Plate Type	Plate Type
	Water Volume in Plate	L	5.0	5.0	5.0	5.0
	Water Pressure Max.	MPa	2.0	2.0	2.0	2.0
Optional Parts			Heat Source Twinning kit: CMY-Q200CBK Joint: CMY-Y102SS/LS-G2, CMY-R160-J1 Main BC controller: CMB-P1016V-HA1 Sub BC controller: CMB-P104, 108V-GB1, CMB-P1016V-HB1		Heat Source Twinning kit: CMY-Q200CBK Joint: CMY-Y102SS/LS-G2, CMY-R160-J1 Main BC controller: CMB-P1016V-HA1 Sub BC controller: CMB-P104, 108V-GB1, CMB-P1016V-HB1	

Notes:

*1,*2 Nominal conditions

	Indoor	Water Temperature	Pipe Length	Level Difference
Cooling	27ºCD.B./19ºCW.B.	30ºC	7.5m	0m
Heating	20ºCD.B.	20ºC		

*The ambient temperature of the heat source unit needs to be kept below 40ºCD.B.
*The ambient relative humidity of the heat source unit needs to be kept below 80%.
*The heat source unit should not be installed at outdoor.
*Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.
*Be sure to provide interlocking for the unit operation and water circuit.
*Nominal condition *1,*2 are subject to JIS B8615-2.
*Due to continuing improvement, above specification may be subject to change without notice.

Specifications

HEAT SOURCE UNIT

WR2 (HEAT RECOVERY) Series
PQRY-P YSLM-A

Model			PQRY-P850YSLM-A	PQRY-P900YSLM-A
Power Source			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	96.0	101.0
		kcal / h	82,600	86,900
	*1	BTU / h	327,600	344,600
	Power Input	kW	18.03	19.38
	Current Input	A	30.4-28.9-27.8	32.7-31.0-29.9
	EER	kW / kW	5.32	5.21
Temp. Range of Cooling	Indoor	W.B.	15.0~24.0°C	15.0~24.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C
Heating Capacity (nominal)	*2	kW	108.0	113.0
		kcal / h	92,900	97,200
	*2	BTU / h	368,500	385,600
	Power Input	kW	18.49	19.74
	Current Input	A	31.2-29.6-28.5	33.3-31.6-30.5
	COP	kW / kW	5.84	5.72
Temp. Range of Heating	Indoor	D.B.	15.0~27.0°C	15.0~27.0°C
	Circulating Water	°C	10.0~45.0°C	10.0~45.0°C
Indoor Unit Connectable	Total Capacity		50~150% of Heat Source Unit Capacity	50~150% of Heat Source Unit Capacity
	Model / Quantity		P15~P250/2~50	P15~P250/2~50
Sound Pressure Level (measured in anechoic room)		dB <A>	56	57
Refrigerant Piping Diameter	High Pressure	mm (in.)	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed
	Low Pressure	mm (in.)	41.28 (1-5/8) Brazed	41.28 (1-5/8) Brazed

Set Model

Model			PQRY-P450YLM-A	PQRY-P400YLM-A	PQRY-P450YLM-A	PQRY-P450YLM-A
Circulating Water	Water Flow Rate	m^3 / h	7.20 + 7.20		7.20 + 7.20	
		L/min	120 + 120		120 + 120	
		cfm	4.2 + 4.2		4.2 + 4.2	
	Pressure Drop	kPa	44	44	44	44
	Operating Volume Range	m^3 / h	4.5 + 4.5 ~ 11.6 + 11.6		4.5 + 4.5 ~ 11.6 + 11.6	
Compressor	Type		Inverter Scroll Hermetic Compressor		Inverter Scroll Hermetic Compressor	
	Starting Method		Inverter	Inverter	Inverter	Inverter
	Motor Output	kW	11.6	10.7	11.6	11.6
	Case Heater	kW	–	–	–	–
External Finish			Galvanised Steel Sheets	Galvanised Steel Sheets	Galvanised Steel Sheets	Galvanised Steel Sheets
External Dimension HxWxD		mm	1,450 x 880 x 550	1,450 x 880 x 550	1,450 x 880 x 550	1,450 x 880 x 550
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)	
	Inverter Circuit (COMP.)		Over-heat Protection, Over-current Protection		Over-heat Protection, Over-current Protection	
	Compressor		Over-heat Protection	Over-heat Protection	Over-heat Protection	Over-heat Protection
Refrigerant	Type x Original Charge		R410A x 6.0 kg	R410A x 6.0 kg	R410A x 6.0 kg	R410A x 6.0 kg
Net Weight		kg	216	216	216	216
Heat Exchanger			Plate Type	Plate Type	Plate Type	Plate Type
	Water Volume in Plate	L	5.0	5.0	5.0	5.0
	Water Pressure Max.	MPa	2.0	2.0	2.0	2.0
Optional Parts			Heat Source Twinning kit: CMY-Q200CBK Joint: CMY-Y102SS/LS-G2, CMY-R160-J1 Main BC controller: CMB-P1016V-HA1 Sub BC controller: CMB-P104, 108V-GB1, CMB-P1016V-HB1		Heat Source Twinning kit: CMY-Q200CBK Joint: CMY-Y102SS/LS-G2, CMY-R160-J1 Main BC controller: CMB-P1016V-HA1 Sub BC controller: CMB-P104, 108V-GB1, CMB-P1016V-HB1	

Notes:

*1,*2 Nominal conditions

	Indoor	Water Temperature	Pipe Length	Level Difference
Cooling	27°CD.B./19°CW.B.	30°C	7.5m	0m
Heating	20°CD.B.	20°C		

*The ambient temperature of the heat source unit needs to be kept below 40°CD.B.
*The ambient relative humidity of the heat source unit needs to be kept below 80%.
*The heat source unit should not be installed at outdoor.
*Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.
*Be sure to provide interlocking for the unit operation and water circuit.
*Nominal condition *1,*2 are subject to JIS B8615-2.
*Due to continuing improvement, above specification may be subject to change without notice.

FM33568 / ISO 9001;2008

The Air Conditioning & Refrigeration Systems Works acquired ISO 9001 certification under Series 9000 of the International Standard Organization (ISO) based on a review of Quality management for the production of refrigeration and air conditioning equipment.

ISO Authorization System
The ISO 9000 series is a plant authorization system relating to quality management as stipulated by the ISO. ISO 9001 certifies quality management based on the "design, development, production, installation and auxiliary services" for products built at an authorized plant.

EC97J1227 051

The Air Conditioning & Refrigeration Systems Works acquired environmental management system standard ISO 14001 certification.

The ISO 14000 series is a set of standards applying to environmental protection set by the International Standard Organization (ISO).
Registered on March 10, 1998.

■ Please refer to the installation instructions before installation or servicing of these products.
- Doing so may cause the unit or pipes to burst, or result in explosion or fire during use, during repair, or at the time of disposal of the unit.
- It may also be in violation of applicable laws.
- MITSUBISHI ELECTRIC CORPORATION cannot be held responsible for malfunctions or accidents resulting from the use of the wrong type of refrigerant.

■ Do not use refrigerant other than the type indicated in the manuals provided with the unit and on the nameplate.

■ Under Australian law, only persons suitably licensed are permitted to install, service or repair air conditioning units.

MITSUBISHI ELECTRIC

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