MITSUBISHI ELECTRIC

Changes for the Better

AIR CONDITIONING SYSTEMS

HYBRID CITY MULTI

DATA BOOK

MODEL

PURY-P200-500YNW-A2/TR2(-BS)

PURY-EP200-500YNW-A2/TR2(-BS)

GENERAL LINE-UP

Heat Recovery R2-Series

PURY-P200YNW-A2/TR2(-BS) PURY-P250YNW-A2/TR2(-BS)
PURY-P300YNW-A2/TR2(-BS)

8, 10, 12HP

PURY-P350YNW-A2/TR2(-BS) PURY-P400YNW-A2/TR2(-BS)
PURY-P450YNW-A2/TR2(-BS)

14, 16, 18HP

PURY-P500YNW-A2/TR2(-BS)

20HP

Heat Recovery High efficiency R2-Series

PURY-EP200YNW-A2/TR2(-BS) PURY-EP250YNW-A2/TR2(-BS)
PURY-EP300YNW-A2/TR2(-BS)

8, 10, 12HP

PURY-EP350YNW-A2/TR2(-BS) PURY-EP400YNW-A2/TR2(-BS)
PURY-EP450YNW-A2/TR2(-BS)

14, 16, 18HP

PURY-EP500YNW-A2/TR2(-BS)

20HP

PURY-P-YNW-A2/TR2, PURY-EP-YNW-A2/TR2

1. SPECIFICATIONS 2
2. OPERATION TEMPERATURE RANGE 16
3. CAPACITY TABLES 17
3-1. Correction by temperature 18
3-2. Correction by total indoor 30
3-3. Correction by piping length 34
3-4. Correction at frost and defrost 37
3-5. Correction by antifreeze solution concentration 38
4. ELECTRICAL WORK 39
4-1. Power supply for Outdoor unit 39
5. M-NET CONTROL 40
5-1. Address setting 40
6. PIPING DESIGN 41
6-1. R410A Piping material 41
6-2. Piping Design 42
6-3. Refrigerant charging calculation 50
6-4. Water piping 51
6-5. Compatibility 53

Model			PURY-P200YNW-A2/TR2 (-BS)
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz
Cooling capacity *1		kW	22.4
		BTU/h	76,400
	Power input	kW	6.54
	Current input	A	11.0-10.4-10.1
	EER	kW/kW	3.42
Temp. range of cooling *3	Indoor	W.B.	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	-5.0~52.0°C (23~126°F)
Heating capacity *2		kW	25.0
		BTU/h	85,300
	Power input	kW	6.49
	Current input	A	10.9-10.4-10.0
	COP	kW/kW	3.85
Temp. range of heating *3	Indoor	D.B.	15.0~27.0°C (59~81°F)
	Outdoor	W.B.	-20.0~15.5°C (-4~60°F)
Indoor unit connectable	Total capacity		50~150% of outdoor unit capacity
	Model/Quantity		W/WP/WL10~125/1~30
Sound pressure level (measured in anechoic room) *4, 5		dB <A>	59.0/59.0
Sound power level (measured in anechoic room) *4		dB <A>	76/76
Refrigerant piping diameter	High pressure	mm (in.)	15.88 (5/8) Brazed
	Low pressure	mm (in.)	19.05 (3/4) Brazed
FAN	Type x Quantity		Propeller fan x 1
	Air flow rate	m^3/min	170
		L/s	2,833
		cfm	6,003
	Control, Driving mechanism		Inverter-control, Direct-driven by motor
	Motor output	kW	0.92 x 1
*6	External static press.		0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1
	Starting method		Inverter
	Motor output	kW	5.0
	Case heater	kW	-
	Lubricant		MEL32
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>
External dimension H x W x D		mm	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
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection
	Compressor		-
	Fan motor		-
Refrigerant	Type x original charge		R410A x 5.2 kg (12 lbs)
	Control		HBC
Net weight		kg (lbs)	214 (472)
Heat exchanger			Salt-resistant cross fin & copper tube
HIC circuit (HIC: Heat Inter-Changer)			-
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)
Drawing	External		WKB94C4WD
	Wiring		WKE94L190
Standard attachment	Document		Installation Manual
	Accessory		-
Optional parts			Main HBC: CMB-WM108,1016V-AA Sub HBC: CMB-WM108,1016V-BB
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice.

Notes:

1. Nominal cooling conditions (subject to JIS B8615-2)
   Indoor: 27°CD.B./19°CW.B. (81°FD.B./66°FW.B.), Outdoor: 35°CD.B./24°CW.B. (95°FD.B./75°FW.B.)
   Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
2. Nominal heating conditions (subject to JIS B8615-2)
   Indoor: 20°C D.B. (68°F D.B.), Outdoor: 7°C D.B./6°C W.B. (45°F D.B./43°F W.B.)
   Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
3. -10 °CD.B.(14 °FD.B.)/-11 °CW.B.(12 °FW.B.) to 21 °CD.B.(70 °FD.B.)/15.5 °CW.B.(60 °FW.B.)
   with cooling/heating mixed operation.
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.

Unit converter

BTU/h	=kW x 3,412
cfm	=m^3/min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Model			PURY-P250YNW-A2/TR2 (-BS)
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz
Cooling capacity *1		kW	28.0
		BTU/h	95,500
	Power input	kW	9.92
	Current input	A	16.7-15.9-15.3
	EER	kW/kW	2.82
Temp. range of cooling *3	Indoor	W.B.	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	-5.0~52.0°C (23~126°F)
Heating capacity *2		kW	31.5
		BTU/h	107,500
	Power input	kW	10.06
	Current input	A	16.9-16.1-15.5
	COP	kW/kW	3.13
Temp. range of heating *3	Indoor	D.B.	15.0~27.0°C (59~81°F)
	Outdoor	W.B.	-20.0~15.5°C (-4~60°F)
Indoor unit connectable	Total capacity		50~150% of outdoor unit capacity
	Model/Quantity		W/WP/WL10~125/1~37
Sound pressure level (measured in anechoic room) *4, 5		dB <A>	60.5/64.0
Sound power level (measured in anechoic room) *4		dB <A>	78/83
Refrigerant piping diameter	High pressure	mm (in.)	19.05 (3/4) Brazed
	Low pressure	mm (in.)	22.2 (7/8) Brazed
FAN	Type x Quantity		Propeller fan x 1
	Air flow rate	m^3/min	220
		L/s	3,667
		cfm	7,768
	Control, Driving mechanism		Inverter-control, Direct-driven by motor
	Motor output	kW	0.92 x 1
*6	External static press.		0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1
	Starting method		Inverter
	Motor output	kW	8.0
	Case heater	kW	-
	Lubricant		MEL32
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>
External dimension H x W x D		mm	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
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection
	Compressor		-
	Fan motor		-
Refrigerant	Type x original charge		R410A x 5.2 kg (12 lbs)
	Control		HBC
Net weight		kg (lbs)	223 (492)
Heat exchanger			Salt-resistant cross fin & copper tube
HIC circuit (HIC: Heat Inter-Changer)			-
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)
Drawing	External		WKB94C4WD
	Wiring		WKE94L190
Standard attachment	Document		Installation Manual
	Accessory		-
Optional parts			Main HBC: CMB-WM108,1016V-AA Sub HBC: CMB-WM108,1016V-BB
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice.

Notes:

1.Nominal cooling conditions (subject to JIS B8615-2)
Indoor: 27°CD.B./19°CW.B. (81°FD.B./66°FW.B.), Outdoor: 35°CD.B./24°CW.B. (95°FD.B./75°FW.B.)
Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
2.Nominal heating conditions (subject to JIS B8615-2)
Indoor: 20°C D.B. (68°F D.B.), Outdoor: 7°C D.B./6°C W.B. (45°F D.B./43°F W.B.)
Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
3.-10 °CD.B.(14 °FD.B.)/-11 °CW.B.(12 °FW.B.) to 21 °CD.B.(70 °FD.B.)/15.5 °CW.B.(60 °FW.B.)
with cooling/heating mixed operation.
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.

Unit converter

BTU/h =kW x 3,412
cfm =m^3/min x 35.31
lbs =kg/0.4536

*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Model			PURY-P300YNW-A2/TR2 (-BS)	
Number of HBC			**Single HBC**	**Double HBC**
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz	
Cooling capacity *1		kW	33.5	
		BTU/h	114,300	
	Power input	kW	13.13	11.12
	Current input	A	22.1-21.0-20.2	18.7-17.8-17.1
	EER	kW/kW	2.55	3.01
Temp. range of cooling *3	Indoor	W.B.	15.0~24.0°C (59~75°F)	
	Outdoor	D.B.	-5.0~52.0°C (23~126°F)	
Heating capacity *2		kW	33.5	
		BTU/h	114,300	
	Power input	kW	11.35	10.66
	Current input	A	19.1-18.2-17.5	17.9-17.0-16.4
	COP	kW/kW	2.95	3.14
Temp. range of heating *3	Indoor	D.B.	15.0~27.0°C (59~81°F)	
	Outdoor	W.B.	-20.0~15.5°C (-4~60°F)	
Indoor unit connectable	Total capacity		50~150% of outdoor unit capacity	
	Model/Quantity		W/WP/WL10~125/2~45	
Sound pressure level (measured in anechoic room) *4, 5		dB <A>	61.0/67.0	
Sound power level (measured in anechoic room) *4		dB <A>	80/86	
Refrigerant piping diameter	High pressure	mm (in.)	19.05 (3/4) Brazed	
	Low pressure	mm (in.)	22.2 (7/8) Brazed	
FAN	Type x Quantity		Propeller fan x 1	
	Air flow rate	m^3/min	240	
		L/s	4,000	
		cfm	8,474	
	Control, Driving mechanism		Inverter-control, Direct-driven by motor	
	Motor output	kW	0.92 x 1	
*6	External static press.		0 Pa (0 mmH_2O)	
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1	
	Starting method		Inverter	
	Motor output	kW	9.2	
	Case heater	kW	-	
	Lubricant		MEL32	
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>	
External dimension H x W x D		mm	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	
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection	
	Compressor		-	
	Fan motor		-	
Refrigerant	Type x original charge		R410A x 5.2 kg (12 lbs)	
	Control		HBC	
Net weight		kg (lbs)	225 (497)	
Heat exchanger			Salt-resistant cross fin & copper tube	
HIC circuit (HIC: Heat Inter-Changer)			-	
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)	
Drawing	External		WKB94C4WD	
	Wiring		WKE94L190	
Standard attachment	Document		Installation Manual	
	Accessory		-	
Optional parts			Main HBC: CMB-WM108,1016V-AA Sub HBC: CMB-WM108,1016V-BB	
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice.	

Notes:

1. Nominal cooling conditions (subject to JIS B8615-2)
   Indoor: 27°CD.B./19°CW.B. (81°FD.B./66°FW.B.), Outdoor: 35°CD.B./24°CW.B. (95°FD.B./75°FW.B.)
   Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
2. Nominal heating conditions (subject to JIS B8615-2)
   Indoor: 20°C D.B. (68°F D.B.), Outdoor: 7°C D.B./6°C W.B. (45°F D.B./43°F W.B.)
   Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
3. -10 °CD.B.(14 °FD.B.)/-11 °CW.B.(12 °FW.B.) to 21 °CD.B.(70 °FD.B.)/15.5 °CW.B.(60 °FW.B.) with cooling/heating mixed operation.
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.

Unit converter

BTU/h =kW x 3,412
cfm =m^3/min x 35.31
lbs =kg/0.4536

*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Model			PURY-P350YNW-A2/TR2 (-BS)	
Number of HBC			**Single HBC**	**Double HBC**
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz	
Cooling capacity *1		kW	40.0	
		BTU/h	136,500	
	Power input	kW	16.26	13.24
	Current input	A	27.4-26.0-25.1	22.3-21.2-20.4
	EER	kW/kW	2.46	3.02
Temp. range of cooling *3	Indoor	W.B.	15.0~24.0°C (59~75°F)	
	Outdoor	D.B.	-5.0~52.0°C (23~126°F)	
Heating capacity *2		kW	45.0	
		BTU/h	153,500	
	Power input	kW	13.88	12.85
	Current input	A	23.4-22.2-21.4	21.6-20.6-19.8
	COP	kW/kW	3.24	3.50
Temp. range of heating *3	Indoor	D.B.	15.0~27.0°C (59~81°F)	
	Outdoor	W.B.	-20.0~15.5°C (-4~60°F)	
Indoor unit connectable	Total capacity		50~150% of outdoor unit capacity	
	Model/Quantity		W/WP/WL10~125/2~50	
Sound pressure level (measured in anechoic room) *4, 5		dB <A>	62.5/64.0	
Sound power level (measured in anechoic room) *4		dB <A>	81/83	
Refrigerant piping diameter	High pressure	mm (in.)	19.05 (3/4) Brazed	
	Low pressure	mm (in.)	28.58 (1-1/8) Brazed	
FAN	Type x Quantity		Propeller fan x 2	
	Air flow rate	m^3/min	250	
		L/s	4,167	
		cfm	8,828	
	Control, Driving mechanism		Inverter-control, Direct-driven by motor	
	Motor output	kW	0.46 x 2	
*6	External static press.		0 Pa (0 mmH_2O)	
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1	
	Starting method		Inverter	
	Motor output	kW	12.0	
	Case heater	kW	-	
	Lubricant		MEL32	
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>	
External dimension H x W x D		mm	1,858 (1,798 without legs) x 1,240 x 740	
		in.	73-3/16 (70-13/16 without legs) x 48-7/8 x 29-3/16	
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection	
	Compressor		-	
	Fan motor		-	
Refrigerant	Type x original charge		R410A x 8.0 kg (18 lbs)	
	Control		HBC	
Net weight		kg (lbs)	269 (594)	
Heat exchanger			Salt-resistant cross fin & copper tube	
HIC circuit (HIC: Heat Inter-Changer)			-	
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)	
Drawing	External		WKB94C4WE	
	Wiring		WKE94L191	
Standard attachment	Document		Installation Manual	
	Accessory		-	
Optional parts			Main HBC: CMB-WM108,1016V-AA Sub HBC: CMB-WM108,1016V-BB	
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice.	

Notes:

1.Nominal cooling conditions (subject to JIS B8615-2)
Indoor: 27°CD.B./19°CW.B. (81°FD.B./66°FW.B.), Outdoor: 35°CD.B./24°CW.B. (95°FD.B./75°FW.B.)
Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)

2.Nominal heating conditions (subject to JIS B8615-2)
Indoor: 20°C D.B. (68°F D.B.), Outdoor: 7°C D.B./6°C W.B. (45°F D.B./43°F W.B.)
Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)

3.-10 °CD.B.(14 °FD.B.)/-11 °CW.B.(12 °FW.B.) to 21 °CD.B.(70 °FD.B.)/15.5 °CW.B.(60 °FW.B.)
with cooling/heating mixed operation.

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.

Unit converter

BTU/h =kW x 3,412
cfm =m^3/min x 35.31
lbs =kg/0.4536

*Above specification data is subject to rounding variation.

Model			PURY-P400YNW-A2/TR2 (-BS)
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz
Cooling capacity *1		kW	45.0
		BTU/h	153,500
	Power input	kW	16.65
	Current input	A	28.1-26.7-25.7
	EER	kW/kW	2.70
Temp. range of cooling *3	Indoor	W.B.	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	-5.0~52.0°C (23~126°F)
Heating capacity *2		kW	50.0
		BTU/h	170,600
	Power input	kW	14.88
	Current input	A	25.1-23.8-23.0
	COP	kW/kW	3.36
Temp. range of heating *3	Indoor	D.B.	15.0~27.0°C (59~81°F)
	Outdoor	W.B.	-20.0~15.5°C (-4~60°F)
Indoor unit connectable	Total capacity		50~150% of outdoor unit capacity
	Model/Quantity		W/WP/WL10~125/2~50
Sound pressure level (measured in anechoic room) *4, 5		dB <A>	65.0/69.0
Sound power level (measured in anechoic room) *4		dB <A>	83/88
Refrigerant piping diameter	High pressure	mm (in.)	22.2 (7/8) Brazed
	Low pressure	mm (in.)	28.58 (1-1/8) Brazed
FAN	Type x Quantity		Propeller fan x 2
	Air flow rate	m^3/min	315
		L/s	5,250
		cfm	11,123
	Control, Driving mechanism		Inverter-control, Direct-driven by motor
	Motor output	kW	0.46 x 2
*6	External static press.		0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1
	Starting method		Inverter
	Motor output	kW	16.1
	Case heater	kW	-
	Lubricant		MEL32
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>
External dimension H x W x D		mm	1,858 (1,798 without legs) x 1,240 x 740
		in.	73-3/16 (70-13/16 without legs) x 48-7/8 x 29-3/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection
	Compressor		-
	Fan motor		-
Refrigerant	Type x original charge		R410A x 8.0 kg (18 lbs)
	Control		HBC
Net weight		kg (lbs)	269 (594)
Heat exchanger			Salt-resistant cross fin & copper tube
HIC circuit (HIC: Heat Inter-Changer)			-
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)
Drawing	External		WKB94C4WE
	Wiring		WKE94L191
Standard attachment	Document		Installation Manual
	Accessory		-
Optional parts			Main HBC: CMB-WM108,1016V-AA Sub HBC: CMB-WM108,1016V-BB
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice.

Notes:

1. Nominal cooling conditions (subject to JIS B8615-2)
   Indoor: 27°CD.B./19°CW.B. (81°FD.B./66°FW.B.), Outdoor: 35°CD.B./24°CW.B. (95°FD.B./75°FW.B.)
   Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
2. Nominal heating conditions (subject to JIS B8615-2)
   Indoor: 20°C D.B. (68°F D.B.), Outdoor: 7°C D.B./6°C W.B. (45°F D.B./43°F W.B.)
   Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
3. -10 °CD.B.(14 °FD.B.)/-11 °CW.B.(12 °FW.B.) to 21 °CD.B.(70 °FD.B.)/15.5 °CW.B.(60 °FW.B.)
   with cooling/heating mixed operation.
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.

Unit converter

BTU/h	=kW x 3,412
cfm	=m^3/min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

Model			PURY-P450YNW-A2/TR2 (-BS)
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz
Cooling capacity *1		kW	50.0
		BTU/h	170,600
	Power input	kW	17.92
	Current input	A	30.2-28.7-27.7
	EER	kW/kW	2.79
Temp. range of cooling *3	Indoor	W.B.	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	-5.0~52.0°C (23~126°F)
Heating capacity *2		kW	56.0
		BTU/h	191,100
	Power input	kW	17.39
	Current input	A	29.3-27.8-26.8
	COP	kW/kW	3.22
Temp. range of heating *3	Indoor	D.B.	15.0~27.0°C (59~81°F)
	Outdoor	W.B.	-20.0~15.5°C (-4~60°F)
Indoor unit connectable	Total capacity		50~150% of outdoor unit capacity
	Model/Quantity		W/WP/WL10~125/2~50
Sound pressure level (measured in anechoic room) *4, 5		dB <A>	65.5/70.0
Sound power level (measured in anechoic room) *4		dB <A>	83/89
Refrigerant piping diameter	High pressure	mm (in.)	22.2 (7/8) Brazed
	Low pressure	mm (in.)	28.58 (1-1/8) Brazed
FAN	Type x Quantity		Propeller fan x 2
	Air flow rate	m^3/min	315
		L/s	5,250
		cfm	11,123
	Control, Driving mechanism		Inverter-control, Direct-driven by motor
	Motor output	kW	0.46 x 2
*6	External static press.		0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1
	Starting method		Inverter
	Motor output	kW	16.2
	Case heater	kW	-
	Lubricant		MEL32
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>
External dimension H x W x D		mm	1,858 (1,798 without legs) x 1,240 x 740
		in.	73-3/16 (70-13/16 without legs) x 48-7/8 x 29-3/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection
	Compressor		-
	Fan motor		-
Refrigerant	Type x original charge		R410A x 10.8 kg (24 lbs)
	Control		HBC
Net weight		kg (lbs)	289 (638)
Heat exchanger			Salt-resistant cross fin & copper tube
HIC circuit (HIC: Heat Inter-Changer)			-
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)
Drawing	External		WKB94C4WE
	Wiring		WKE94L191
Standard attachment	Document		Installation Manual
	Accessory		-
Optional parts			Main HBC: CMB-WM108,1016V-AA Sub HBC: CMB-WM108,1016V-BB
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice.

Notes:

1.Nominal cooling conditions (subject to JIS B8615-2)
Indoor: 27°CD.B./19°CW.B. (81°FD.B./66°FW.B.), Outdoor: 35°CD.B./24°CW.B. (95°FD.B./75°FW.B.)
Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
2.Nominal heating conditions (subject to JIS B8615-2)
Indoor: 20°C D.B. (68°F D.B.), Outdoor: 7°C D.B./6°C W.B. (45°F D.B./43°F W.B.)
Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
3.-10 °CD.B.(14 °FD.B.)/-11 °CW.B.(12 °FW.B.) to 21 °CD.B.(70 °FD.B.)/15.5 °CW.B.(60 °FW.B.)
with cooling/heating mixed operation.
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.

Unit converter

BTU/h =kW x 3,412
cfm =m^3/min x 35.31
lbs =kg/0.4536

*Above specification data is subject to rounding variation.

Model			PURY-P500YNW-A2/TR2 (-BS)
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz
Cooling capacity *1		kW	56.0
		BTU/h	191,100
	Power input	kW	24.03
	Current input	A	40.5-38.5-37.1
	EER	kW/kW	2.33
Temp. range of cooling *3	Indoor	W.B.	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	-5.0~52.0°C (23~126°F)
Heating capacity *2		kW	63.0
		BTU/h	215,000
	Power input	kW	19.09
	Current input	A	32.2-30.6-29.5
	COP	kW/kW	3.30
Temp. range of heating *3	Indoor	D.B.	15.0~27.0°C (59~81°F)
	Outdoor	W.B.	-20.0~15.5°C (-4~60°F)
Indoor unit connectable	Total capacity		50~150% of outdoor unit capacity
	Model/Quantity		W/WP/WL10~125/2~50
Sound pressure level (measured in anechoic room) *4, 5		dB <A>	63.5/64.5
Sound power level (measured in anechoic room) *4		dB <A>	82/84
Refrigerant piping diameter	High pressure	mm (in.)	22.2 (7/8) Brazed
	Low pressure	mm (in.)	28.58 (1-1/8) Brazed
FAN	Type x Quantity		Propeller fan x 2
	Air flow rate	m^3/min	295
		L/s	4,917
		cfm	10,416
	Control, Driving mechanism		Inverter-control, Direct-driven by motor
	Motor output	kW	0.92 x 2
*6	External static press.		0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1
	Starting method		Inverter
	Motor output	kW	17.4
	Case heater	kW	-
	Lubricant		MEL32
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>
External dimension H x W x D		mm	1,858 (1,798 without legs) x 1,750 x 740
		in.	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)
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection
	Compressor		-
	Fan motor		-
Refrigerant	Type x original charge		R410A x 10.8 kg (24 lbs)
	Control		HBC
Net weight		kg (lbs)	335 (739)
Heat exchanger			Salt-resistant cross fin & copper tube
HIC circuit (HIC: Heat Inter-Changer)			-
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)
Drawing	External		WKB94C4WF
	Wiring		WKE94L192
Standard attachment	Document		Installation Manual
	Accessory		-
Optional parts			Main HBC: CMB-WM108,1016V-AA Sub HBC: CMB-WM108,1016V-BB
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice.

Notes:

1. Nominal cooling conditions (subject to JIS B8615-2)
   Indoor: 27°CD.B./19°CW.B. (81°FD.B./66°FW.B.), Outdoor: 35°CD.B./24°CW.B. (95°FD.B./75°FW.B.)
   Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
2. Nominal heating conditions (subject to JIS B8615-2)
   Indoor: 20°C D.B. (68°F D.B.), Outdoor: 7°C D.B./6°C W.B. (45°F D.B./43°F W.B.)
   Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
3. -10 °CD.B.(14 °FD.B.)/-11 °CW.B.(12 °FW.B.) to 21 °CD.B.(70 °FD.B.)/15.5 °CW.B.(60 °FW.B.) with cooling/heating mixed operation.
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.

Unit converter

BTU/h	=kW x 3,412
cfm	=m^3/min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Model			PURY-EP200YNW-A2/TR2 (-BS)
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz
Cooling capacity *1		kW	22.4
		BTU/h	76,400
	Power input	kW	5.84
	Current input	A	9.8-9.3-9.0
	EER	kW/kW	3.83
Temp. range of cooling *3	Indoor	W.B.	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	-5.0~52.0°C (23~126°F)
Heating capacity *2		kW	25.0
		BTU/h	85,300
	Power input	kW	6.49
	Current input	A	10.9-10.4-10.0
	COP	kW/kW	3.85
Temp. range of heating *3	Indoor	D.B.	15.0~27.0°C (59~81°F)
	Outdoor	W.B.	-20.0~15.5°C (-4~60°F)
Indoor unit connectable	Total capacity		50~150% of outdoor unit capacity
	Model/Quantity		W/WP/WL10~125/1~30
Sound pressure level (measured in anechoic room) *4, 5		dB <A>	59.0/59.0
Sound power level (measured in anechoic room) *4		dB <A>	76/76
Refrigerant piping diameter	High pressure	mm (in.)	15.88 (5/8) Brazed
	Low pressure	mm (in.)	19.05 (3/4) Brazed
FAN	Type x Quantity		Propeller fan x 1
	Air flow rate	m^3/min	170
		L/s	2,833
		cfm	6,003
	Control, Driving mechanism		Inverter-control, Direct-driven by motor
	Motor output	kW	0.92 x 1
*6	External static press.		0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1
	Starting method		Inverter
	Motor output	kW	4.9
	Case heater	kW	-
	Lubricant		MEL32
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>
External dimension H x W x D		mm	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
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection
	Compressor		-
	Fan motor		-
Refrigerant	Type x original charge		R410A x 5.2 kg (12 lbs)
	Control		HBC
Net weight		kg (lbs)	219 (483)
Heat exchanger			Salt-resistant cross fin & aluminium tube
HIC circuit (HIC: Heat Inter-Changer)			-
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)
Drawing	External		WKB94C4WG
	Wiring		WKE94L190
Standard attachment	Document		Installation Manual
	Accessory		-
Optional parts			Main HBC: CMB-WM108,1016V-AA Sub HBC: CMB-WM108,1016V-BB
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice.

Notes:

1.Nominal cooling conditions (subject to JIS B8615-2)
Indoor: 27°CD.B./19°CW.B. (81°FD.B./66°FW.B.), Outdoor: 35°CD.B./24°CW.B. (95°FD.B./75°FW.B.)
Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
2.Nominal heating conditions (subject to JIS B8615-2)
Indoor: 20°C D.B. (68°F D.B.), Outdoor: 7°C D.B./6°C W.B. (45°F D.B./43°F W.B.)
Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
3.-10 °CD.B.(14 °FD.B.)/-11 °CW.B.(12 °FW.B.) to 21 °CD.B.(70 °FD.B.)/15.5 °CW.B.(60 °FW.B.)
with cooling/heating mixed operation.
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.

Unit converter

BTU/h	=kW x 3,412
cfm	=m^3/min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

Model			PURY-EP250YNW-A2/TR2 (-BS)
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz
Cooling capacity *1		kW	28.0
		BTU/h	95,500
	Power input	kW	8.77
	Current input	A	14.8-14.0-13.5
	EER	kW/kW	3.19
Temp. range of cooling *3	Indoor	W.B.	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	-5.0~52.0°C (23~126°F)
Heating capacity *2		kW	31.5
		BTU/h	107,500
	Power input	kW	9.84
	Current input	A	16.6-15.7-15.2
	COP	kW/kW	3.20
Temp. range of heating *3	Indoor	D.B.	15.0~27.0°C (59~81°F)
	Outdoor	W.B.	-20.0~15.5°C (-4~60°F)
Indoor unit connectable	Total capacity		50~150% of outdoor unit capacity
	Model/Quantity		W/WP/WL10~125/1~37
Sound pressure level (measured in anechoic room) *4, 5		dB <A>	60.5/61.0
Sound power level (measured in anechoic room) *4		dB <A>	78/80
Refrigerant piping diameter	High pressure	mm (in.)	19.05 (3/4) Brazed
	Low pressure	mm (in.)	22.2 (7/8) Brazed
FAN	Type x Quantity		Propeller fan x 1
	Air flow rate	m^3/min	185
		L/s	3,083
		cfm	6,532
	Control, Driving mechanism		Inverter-control, Direct-driven by motor
	Motor output	kW	0.92 x 1
*6	External static press.		0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1
	Starting method		Inverter
	Motor output	kW	7.5
	Case heater	kW	-
	Lubricant		MEL32
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>
External dimension H x W x D		mm	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
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection
	Compressor		-
	Fan motor		-
Refrigerant	Type x original charge		R410A x 5.2 kg (12 lbs)
	Control		HBC
Net weight		kg (lbs)	228 (503)
Heat exchanger			Salt-resistant cross fin & aluminium tube
HIC circuit (HIC: Heat Inter-Changer)			-
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)
Drawing	External		WKB94C4WG
	Wiring		WKE94L190
Standard attachment	Document		Installation Manual
	Accessory		-
Optional parts			Main HBC: CMB-WM108,1016V-AA Sub HBC: CMB-WM108,1016V-BB
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice.

Notes:

1. Nominal cooling conditions (subject to JIS B8615-2)
   Indoor: 27°CD.B./19°CW.B. (81°FD.B./66°FW.B.), Outdoor: 35°CD.B./24°CW.B. (95°FD.B./75°FW.B.)
   Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
2. Nominal heating conditions (subject to JIS B8615-2)
   Indoor: 20°C D.B. (68°F D.B.), Outdoor: 7°C D.B./6°C W.B. (45°F D.B./43°F W.B.)
   Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
3. -10 °CD.B.(14 °FD.B.)/-11 °CW.B.(12 °FW.B.) to 21 °CD.B.(70 °FD.B.)/15.5 °CW.B.(60 °FW.B.)
   with cooling/heating mixed operation.
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.

Unit converter

BTU/h =kW x 3,412
cfm =m^3/min x 35.31
lbs =kg/0.4536

*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Model			PURY-EP300YNW-A2/TR2 (-BS)	
Number of HBC			**Single HBC**	**Double HBC**
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz	
Cooling capacity *1		kW	33.5	
		BTU/h	114,300	
	Power input	kW	12.05	10.24
	Current input	A	20.3-19.3-18.6	17.2-16.4-15.8
	EER	kW/kW	2.78	3.27
Temp. range of cooling *3	Indoor	W.B.	15.0~24.0°C (59~75°F)	
	Outdoor	D.B.	-5.0~52.0°C (23~126°F)	
Heating capacity *2		kW	37.5	
		BTU/h	128,000	
	Power input	kW	11.71	11.12
	Current input	A	19.7-18.7-18.1	18.7-17.8-17.1
	COP	kW/kW	3.20	3.37
Temp. range of heating *3	Indoor	D.B.	15.0~27.0°C (59~81°F)	
	Outdoor	W.B.	-20.0~15.5°C (-4~60°F)	
Indoor unit connectable	Total capacity		50~150% of outdoor unit capacity	
	Model/Quantity		W/WP/WL10~125/2~45	
Sound pressure level (measured in anechoic room) *4, 5		dB <A>	61.0/67.0	
Sound power level (measured in anechoic room) *4		dB <A>	80/86	
Refrigerant piping diameter	High pressure	mm (in.)	19.05 (3/4) Brazed	
	Low pressure	mm (in.)	22.2 (7/8) Brazed	
FAN	Type x Quantity		Propeller fan x 1	
	Air flow rate	m^3/min	240	
		L/s	4,000	
		cfm	8,474	
	Control, Driving mechanism		Inverter-control, Direct-driven by motor	
	Motor output	kW	0.92 x 1	
*6	External static press.		0 Pa (0 mmH_2O)	
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1	
	Starting method		Inverter	
	Motor output	kW	8.8	
	Case heater	kW	-	
	Lubricant		MEL32	
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>	
External dimension H x W x D		mm	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	
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection	
	Compressor		-	
	Fan motor		-	
Refrigerant	Type x original charge		R410A x 5.2 kg (12 lbs)	
	Control		HBC	
Net weight		kg (lbs)	230 (508)	
Heat exchanger			Salt-resistant cross fin & aluminium tube	
HIC circuit (HIC: Heat Inter-Changer)			-	
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)	
Drawing	External		WKB94C4WG	
	Wiring		WKE94L190	
Standard attachment	Document		Installation Manual	
	Accessory		-	
Optional parts			Main HBC: CMB-WM108,1016V-AA Sub HBC: CMB-WM108,1016V-BB	
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice.	

Notes:

1.Nominal cooling conditions (subject to JIS B8615-2)
Indoor: 27°CD.B./19°CW.B. (81°FD.B./66°FW.B.), Outdoor: 35°CD.B./24°CW.B. (95°FD.B./75°FW.B.)
Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)

2.Nominal heating conditions (subject to JIS B8615-2)
Indoor: 20°C D.B. (68°F D.B.), Outdoor: 7°C D.B./6°C W.B. (45°F D.B./43°F W.B.)
Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)

3.-10 °CD.B.(14 °FD.B.)/-11 °CW.B.(12 °FW.B.) to 21 °CD.B.(70 °FD.B.)/15.5 °CW.B.(60 °FW.B.)
with cooling/heating mixed operation.

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.

Unit converter

BTU/h =kW x 3,412
cfm =m^3/min x 35.31
lbs =kg/0.4536

*Above specification data is subject to rounding variation.

Model			PURY-EP350YNW-A2/TR2 (-BS)	
Number of HBC			**Single HBC**	**Double HBC**
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz	
Cooling capacity *1		kW	40.0	
		BTU/h	136,500	
	Power input	kW	14.76	12.01
	Current input	A	24.9-23.6-22.8	20.2-19.2-18.5
	EER	kW/kW	2.71	3.33
Temp. range of cooling *3	Indoor	W.B.	15.0~24.0°C (59~75°F)	
	Outdoor	D.B.	-5.0~52.0°C (23~126°F)	
Heating capacity *2		kW	45.0	
		BTU/h	153,500	
	Power input	kW	13.88	12.85
	Current input	A	23.4-22.2-21.4	21.6-20.6-19.8
	COP	kW/kW	3.24	3.50
Temp. range of heating *3	Indoor	D.B.	15.0~27.0°C (59~81°F)	
	Outdoor	W.B.	-20.0~15.5°C (-4~60°F)	
Indoor unit connectable	Total capacity		50~150% of outdoor unit capacity	
	Model/Quantity		W/WP/WL10~125/2~50	
Sound pressure level (measured in anechoic room) *4, 5		dB <A>	62.5/64.0	
Sound power level (measured in anechoic room) *4		dB <A>	81/83	
Refrigerant piping diameter	High pressure	mm (in.)	19.05 (3/4) Brazed	
	Low pressure	mm (in.)	28.58 (1-1/8) Brazed	
FAN	Type x Quantity		Propeller fan x 2	
	Air flow rate	m^3/min	250	
		L/s	4,167	
		cfm	8,828	
	Control, Driving mechanism		Inverter-control, Direct-driven by motor	
	Motor output	kW	0.46 x 2	
*6	External static press.		0 Pa (0 mmH_2O)	
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1	
	Starting method		Inverter	
	Motor output	kW	11.4	
	Case heater	kW	-	
	Lubricant		MEL32	
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>	
External dimension H x W x D		mm	1,858 (1,798 without legs) x 1,240 x 740	
		in.	73-3/16 (70-13/16 without legs) x 48-7/8 x 29-3/16	
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection	
	Compressor		-	
	Fan motor		-	
Refrigerant	Type x original charge		R410A x 8.0 kg (18 lbs)	
	Control		HBC	
Net weight		kg (lbs)	275 (607)	
Heat exchanger			Salt-resistant cross fin & aluminium tube	
HIC circuit (HIC: Heat Inter-Changer)			-	
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)	
Drawing	External		WKB94C4WH	
	Wiring		WKE94L191	
Standard attachment	Document		Installation Manual	
	Accessory		-	
Optional parts			Main HBC: CMB-WM108,1016V-AA Sub HBC: CMB-WM108,1016V-BB	
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice.	

Notes:

1. Nominal cooling conditions (subject to JIS B8615-2)
   Indoor: 27°CD.B./19°CW.B. (81°FD.B./66°FW.B.), Outdoor: 35°CD.B./24°CW.B. (95°FD.B./75°FW.B.)
   Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
2. Nominal heating conditions (subject to JIS B8615-2)
   Indoor: 20°C D.B. (68°F D.B.), Outdoor: 7°C D.B./6°C W.B. (45°F D.B./43°F W.B.)
   Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
3. -10 °CD.B.(14 °FD.B.)/-11 °CW.B.(12 °FW.B.) to 21 °CD.B.(70 °FD.B.)/15.5 °CW.B.(60 °FW.B.) with cooling/heating mixed operation.
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.

Unit converter	
BTU/h	=kW x 3,412
cfm	=m^3/min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

Model			PURY-EP400YNW-A2/TR2 (-BS)
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz
Cooling capacity *1		kW	45.0
		BTU/h	153,500
	Power input	kW	14.28
	Current input	A	24.1-22.9-22.0
	EER	kW/kW	3.15
Temp. range of cooling *3	Indoor	W.B.	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	-5.0~52.0°C (23~126°F)
Heating capacity *2		kW	50.0
		BTU/h	170,600
	Power input	kW	14.12
	Current input	A	23.8-22.6-21.8
	COP	kW/kW	3.54
Temp. range of heating *3	Indoor	D.B.	15.0~27.0°C (59~81°F)
	Outdoor	W.B.	-20.0~15.5°C (-4~60°F)
Indoor unit connectable	Total capacity		50~150% of outdoor unit capacity
	Model/Quantity		W/WP/WL10~125/2~50
Sound pressure level (measured in anechoic room) *4, 5		dB <A>	65.0/69.0
Sound power level (measured in anechoic room) *4		dB <A>	83/88
Refrigerant piping diameter	High pressure	mm (in.)	22.2 (7/8) Brazed
	Low pressure	mm (in.)	28.58 (1-1/8) Brazed
FAN	Type x Quantity		Propeller fan x 2
	Air flow rate	m^3/min	315
		L/s	5,250
		cfm	11,123
	Control, Driving mechanism		Inverter-control, Direct-driven by motor
	Motor output	kW	0.46 x 2
*6	External static press.		0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1
	Starting method		Inverter
	Motor output	kW	15.3
	Case heater	kW	-
	Lubricant		MEL32
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>
External dimension H x W x D		mm	1,858 (1,798 without legs) x 1,240 x 740
		in.	73-3/16 (70-13/16 without legs) x 48-7/8 x 29-3/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection
	Compressor		-
	Fan motor		-
Refrigerant	Type x original charge		R410A x 8.0 kg (18 lbs)
	Control		HBC
Net weight		kg (lbs)	276 (609)
Heat exchanger			Salt-resistant cross fin & aluminium tube
HIC circuit (HIC: Heat Inter-Changer)			-
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)
Drawing	External		WKB94C4WH
	Wiring		WKE94L191
Standard attachment	Document		Installation Manual
	Accessory		-
Optional parts			Main HBC: CMB-WM108,1016V-AA Sub HBC: CMB-WM108,1016V-BB
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice.

Notes:

1.Nominal cooling conditions (subject to JIS B8615-2)
Indoor: 27°CD.B./19°CW.B. (81°FD.B./66°FW.B.), Outdoor: 35°CD.B./24°CW.B. (95°FD.B./75°FW.B.)
Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
2.Nominal heating conditions (subject to JIS B8615-2)
Indoor: 20°C D.B. (68°F D.B.), Outdoor: 7°C D.B./6°C W.B. (45°F D.B./43°F W.B.)
Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
3.-10 °CD.B.(14 °FD.B.)/-11 °CW.B.(12 °FW.B.) to 21 °CD.B.(70 °FD.B.)/15.5 °CW.B.(60 °FW.B.)
with cooling/heating mixed operation.
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.

Unit converter

BTU/h =kW x 3,412
cfm =m^3/min x 35.31
lbs =kg/0.4536

*Above specification data is subject to rounding variation.

Model			PURY-EP450YNW-A2/TR2 (-BS)
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz
Cooling capacity *1		kW	50.0
		BTU/h	170,600
	Power input	kW	16.83
	Current input	A	28.4-26.9-26.0
	EER	kW/kW	2.97
Temp. range of cooling *3	Indoor	W.B.	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	-5.0~52.0°C (23~126°F)
Heating capacity *2		kW	56.0
		BTU/h	191,100
	Power input	kW	16.86
	Current input	A	28.4-27.0-26.0
	COP	kW/kW	3.32
Temp. range of heating *3	Indoor	D.B.	15.0~27.0°C (59~81°F)
	Outdoor	W.B.	-20.0~15.5°C (-4~60°F)
Indoor unit connectable	Total capacity		50~150% of outdoor unit capacity
	Model/Quantity		W/WP/WL10~125/2~50
Sound pressure level (measured in anechoic room) *4, 5		dB <A>	65.5/70.0
Sound power level (measured in anechoic room) *4		dB <A>	83/89
Refrigerant piping diameter	High pressure	mm (in.)	22.2 (7/8) Brazed
	Low pressure	mm (in.)	28.58 (1-1/8) Brazed
FAN	Type x Quantity		Propeller fan x 2
	Air flow rate	m^3/min	315
		L/s	5,250
		cfm	11,123
	Control, Driving mechanism		Inverter-control, Direct-driven by motor
	Motor output	kW	0.46 x 2
*6	External static press.		0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1
	Starting method		Inverter
	Motor output	kW	15.5
	Case heater	kW	-
	Lubricant		MEL32
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>
External dimension H x W x D		mm	1,858 (1,798 without legs) x 1,240 x 740
		in.	73-3/16 (70-13/16 without legs) x 48-7/8 x 29-3/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection
	Compressor		-
	Fan motor		-
Refrigerant	Type x original charge		R410A x 10.8 kg (24 lbs)
	Control		HBC
Net weight		kg (lbs)	301 (664)
Heat exchanger			Salt-resistant cross fin & aluminium tube
HIC circuit (HIC: Heat Inter-Changer)			-
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)
Drawing	External		WKB94C4WH
	Wiring		WKE94L191
Standard attachment	Document		Installation Manual
	Accessory		-
Optional parts			Main HBC: CMB-WM108,1016V-AA Sub HBC: CMB-WM108,1016V-BB
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice.

Notes:

1. Nominal cooling conditions (subject to JIS B8615-2)
   Indoor: 27°CD.B./19°CW.B. (81°FD.B./66°FW.B.), Outdoor: 35°CD.B./24°CW.B. (95°FD.B./75°FW.B.)
   Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
2. Nominal heating conditions (subject to JIS B8615-2)
   Indoor: 20°C D.B. (68°F D.B.), Outdoor: 7°C D.B./6°C W.B. (45°F D.B./43°F W.B.)
   Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
3. -10 °CD.B.(14 °FD.B.)/-11 °CW.B.(12 °FW.B.) to 21 °CD.B.(70 °FD.B.)/15.5 °CW.B.(60 °FW.B.)
   with cooling/heating mixed operation.
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.

Unit converter	
BTU/h	=kW x 3,412
cfm	=m^3/min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

Model			PURY-EP500YNW-A2/TR2 (-BS)
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz
Cooling capacity *1		kW	56.0
		BTU/h	191,100
	Power input	kW	21.22
	Current input	A	35.8-34.0-32.8
	EER	kW/kW	2.63
Temp. range of cooling *3	Indoor	W.B.	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	-5.0~52.0°C (23~126°F)
Heating capacity *2		kW	63.0
		BTU/h	215,000
	Power input	kW	19.74
	Current input	A	33.3-31.6-30.5
	COP	kW/kW	3.19
Temp. range of heating *3	Indoor	D.B.	15.0~27.0°C (59~81°F)
	Outdoor	W.B.	-20.0~15.5°C (-4~60°F)
Indoor unit connectable	Total capacity		50~150% of outdoor unit capacity
	Model/Quantity		W/WP/WL10~125/2~50
Sound pressure level (measured in anechoic room) *4, 5		dB <A>	63.5/64.5
Sound power level (measured in anechoic room) *4		dB <A>	82/84
Refrigerant piping diameter	High pressure	mm (in.)	22.2 (7/8) Brazed
	Low pressure	mm (in.)	28.58 (1-1/8) Brazed
FAN	Type x Quantity		Propeller fan x 2
	Air flow rate	m^3/min	295
		L/s	4,917
		cfm	10,416
	Control, Driving mechanism		Inverter-control, Direct-driven by motor
	Motor output	kW	0.92 x 2
*6	External static press.		0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1
	Starting method		Inverter
	Motor output	kW	17.0
	Case heater	kW	-
	Lubricant		MEL32
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>
External dimension H x W x D		mm	1,858 (1,798 without legs) x 1,750 x 740
		in.	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)
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection
	Compressor		-
	Fan motor		-
Refrigerant	Type x original charge		R410A x 10.8 kg (24 lbs)
	Control		HBC
Net weight		kg (lbs)	346 (763)
Heat exchanger			Salt-resistant cross fin & aluminium tube
HIC circuit (HIC: Heat Inter-Changer)			-
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)
Drawing	External		WKB94C4WJ
	Wiring		WKE94L192
Standard attachment	Document		Installation Manual
	Accessory		-
Optional parts			Main HBC: CMB-WM108,1016V-AA Sub HBC: CMB-WM108,1016V-BB
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice.

Notes:

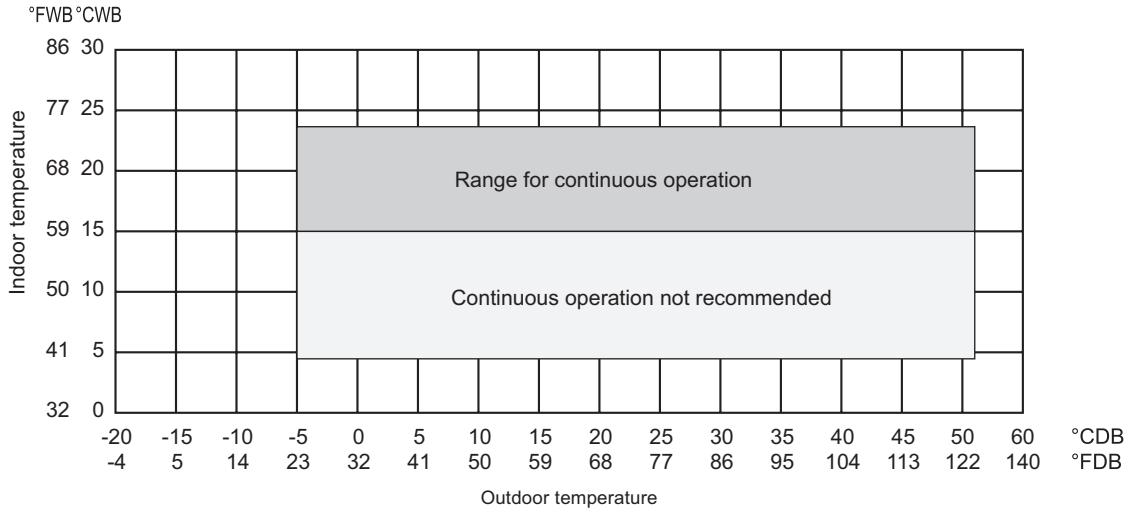
1.Nominal cooling conditions (subject to JIS B8615-2)
Indoor: 27°CD.B./19°CW.B. (81°FD.B./66°FW.B.), Outdoor: 35°CD.B./24°CW.B. (95°FD.B./75°FW.B.)
Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
2.Nominal heating conditions (subject to JIS B8615-2)
Indoor: 20°C D.B. (68°F D.B.), Outdoor: 7°C D.B./6°C W.B. (45°F D.B./43°F W.B.)
Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
3.-10 °CD.B.(14 °FD.B.)/-11 °CW.B.(12 °FW.B.) to 21 °CD.B.(70 °FD.B.)/15.5 °CW.B.(60 °FW.B.)
with cooling/heating mixed operation.
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.

Unit converter

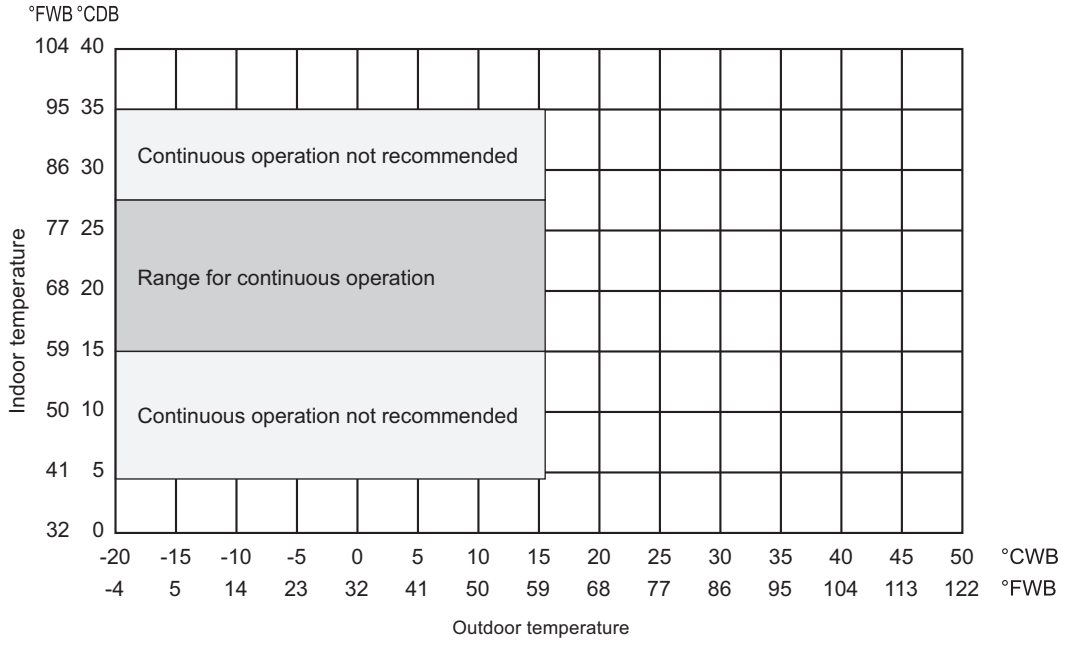
BTU/h =kW x 3,412
cfm =m^3/min x 35.31
lbs =kg/0.4536

*Above specification data is subject to rounding variation.

• **Cooling only**



• **Heating only**



• **Combination of cooling/heating operation (Cooling main or Heating main)**

Outdoor temperature	Indoor temperature	
	Cooling	Heating
-10 to 21°CDB (14 to 70°FDB)	——	15 to 27°CDB (59 to 81°FDB)
-11 to 15.5°CWB (12 to 60°FWB)	15 to 24°CWB (59 to 75°FWB)	——

Section 3-1.
Shows an example of how to select the indoor and outdoor units according to the required heating/cooling load.

Section 3-2. through 3-5.
Show the actual correction data of indoor and outdoor units.

3-1. Correction by temperature

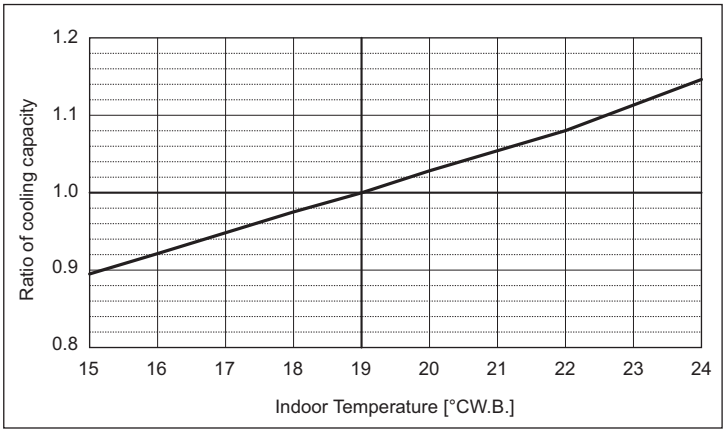
HYBRID CITY MULTI could have varied capacity at different designing temperature. Using the nominal cooling/heating capacity value and the ratio below, the capacity can be observed at various temperature.

PURY-		P200YNW-A2/TR2	P250YNW-A2/TR2
Nominal Cooling Capacity	kW	22.4	28.0
	BTU/h	76,400	95,500
Input	kW	6.54	9.92

PURY-		EP200YNW-A2/TR2	EP250YNW-A2/TR2
Nominal Cooling Capacity	kW	22.4	28.0
	BTU/h	76,400	95,500
Input	kW	5.84	8.77

Indoor unit temperature correction

To be used to correct indoor unit capacity only

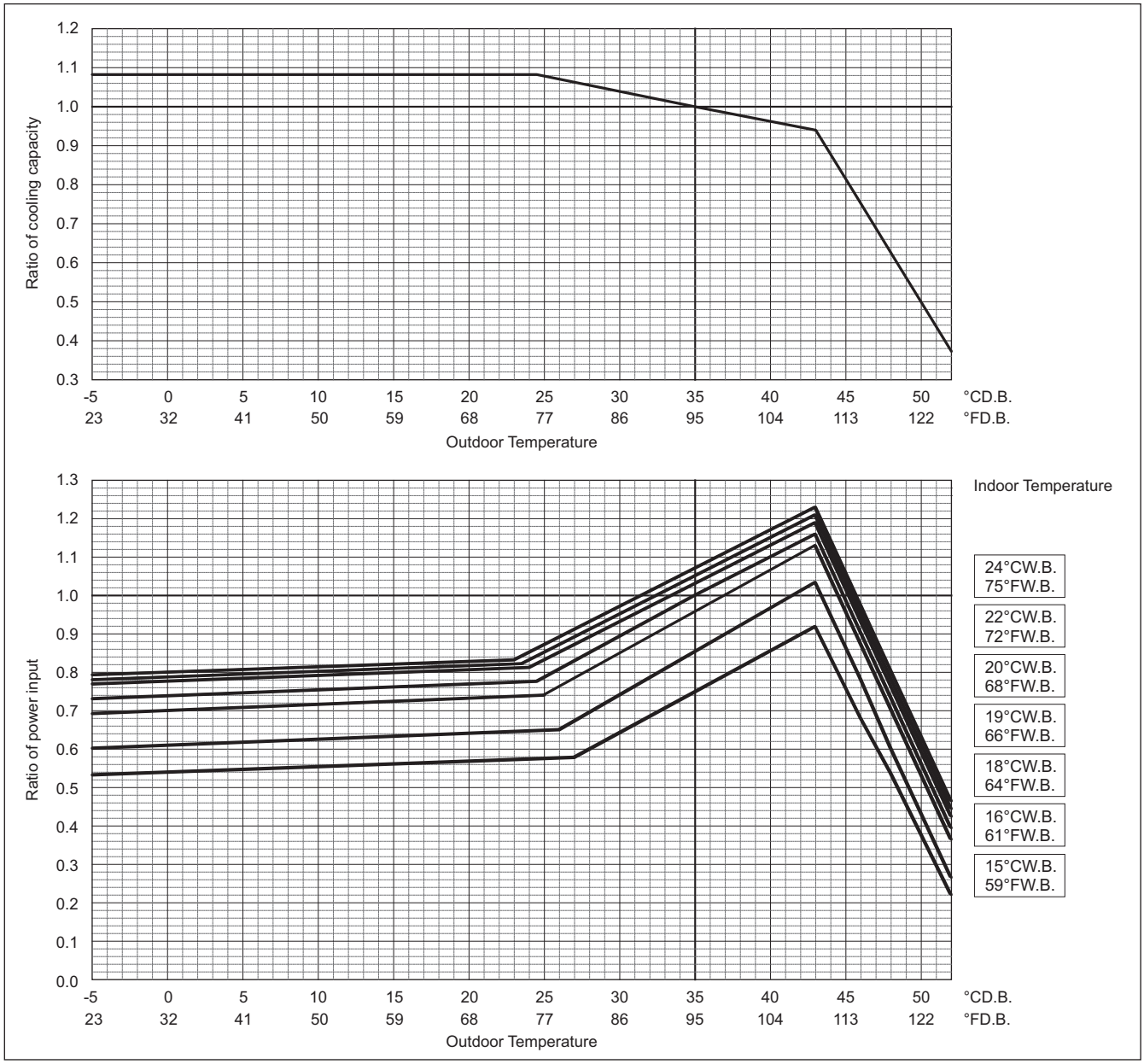


Outdoor unit temperature correction

To be used to correct outdoor unit only

Outdoor unit capacity is NOT affected by the indoor temperature.

Outdoor unit power input is affected by the indoor and outdoor temperatures. Please consult the sales office for details.

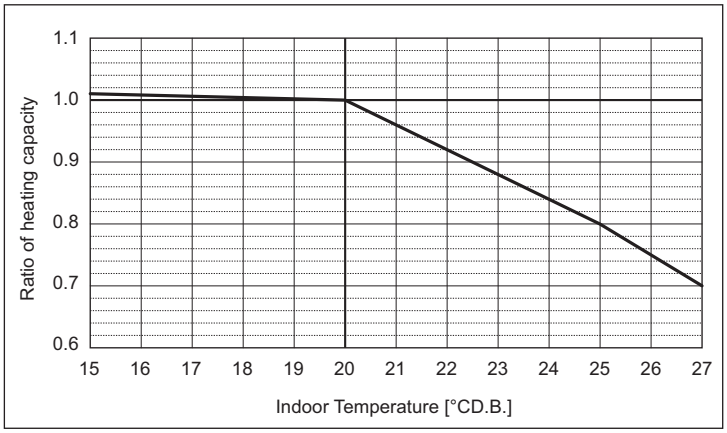


PURY-		P200YNW-A2/TR2	P250YNW-A2/TR2
Nominal Heating Capacity	kW	25.0	31.5
	BTU/h	85,300	107,500
Input	kW	6.49	10.06

PURY-		EP200YNW-A2/TR2	EP250YNW-A2/TR2
Nominal Heating Capacity	kW	25.0	31.5
	BTU/h	85,300	107,500
Input	kW	6.49	9.84

Indoor unit temperature correction

To be used to correct indoor unit capacity only

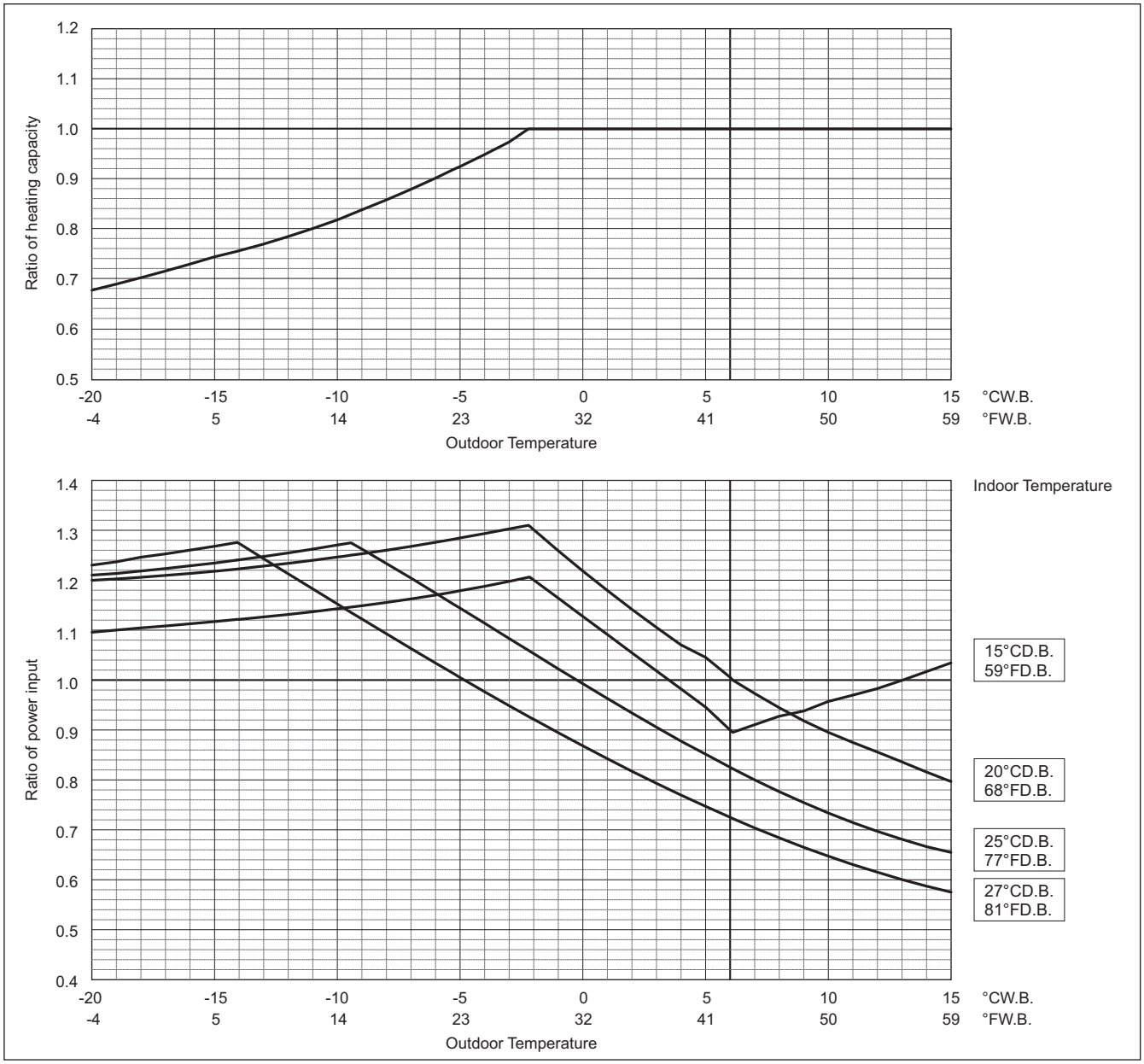


Outdoor unit temperature correction

To be used to correct outdoor unit only

Outdoor unit capacity is NOT affected by the indoor temperature.

Outdoor unit power input is affected by the indoor and outdoor temperatures. Please consult the sales office for details.

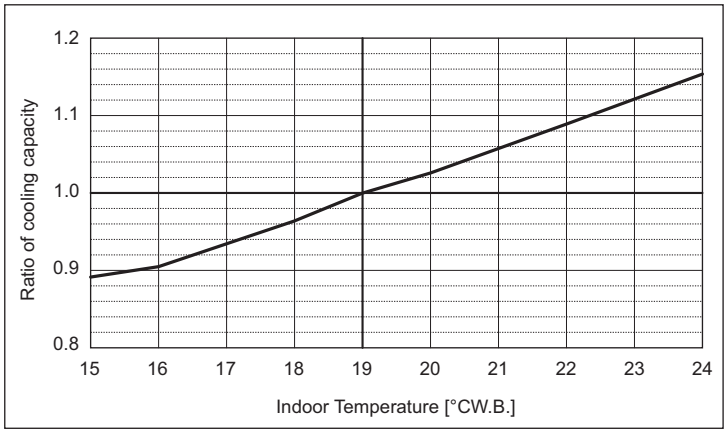


PURY-		P300YNW-A2/TR2	P350YNW-A2/TR2	P400YNW-A2/TR2
Nominal Cooling Capacity	kW	33.5	40.0	45.0
	BTU/h	114,300	136,500	153,500
Input	kW	13.13	16.26	16.65

PURY-		EP300YNW-A2/TR2	EP350YNW-A2/TR2	EP400YNW-A2/TR2
Nominal Cooling Capacity	kW	33.5	40.0	45.0
	BTU/h	114,300	136,500	153,500
Input	kW	12.05	14.76	14.28

Indoor unit temperature correction

To be used to correct indoor unit capacity only

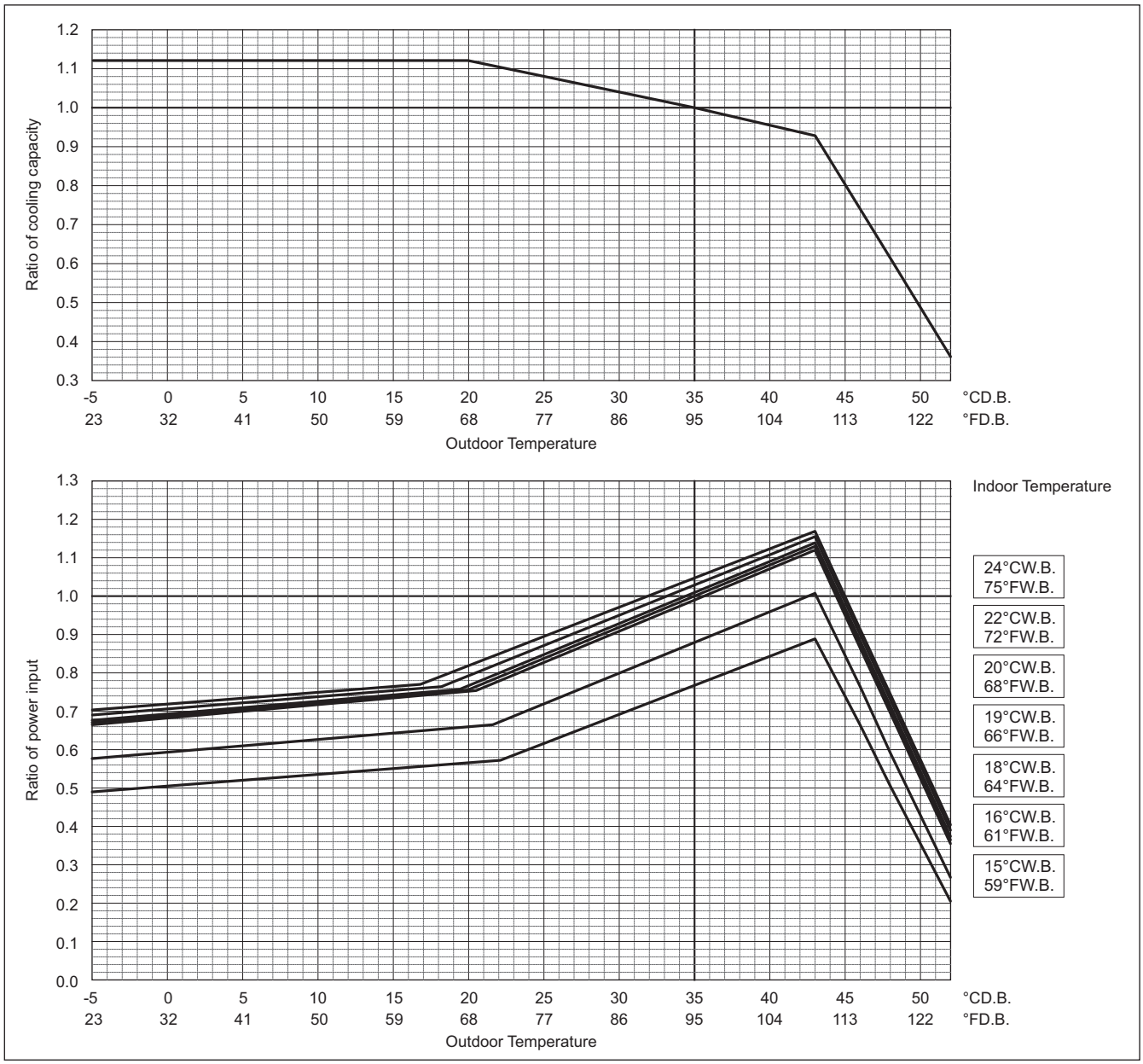


Outdoor unit temperature correction

To be used to correct outdoor unit only

Outdoor unit capacity is NOT affected by the indoor temperature.

Outdoor unit power input is affected by the indoor and outdoor temperatures. Please consult the sales office for details.

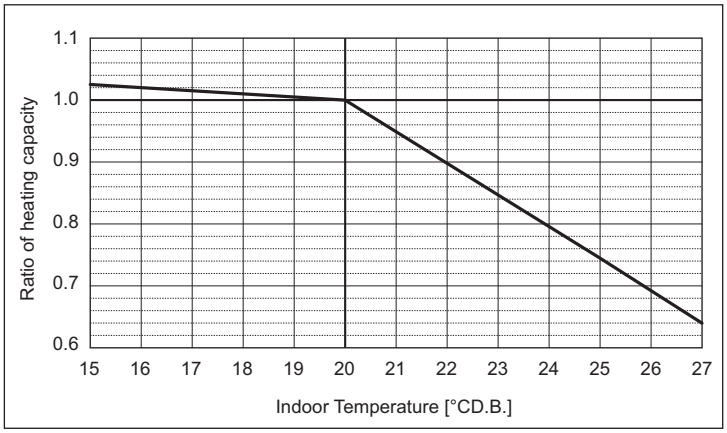


PURY-		P300YNW-A2/TR2	P350YNW-A2/TR2	P400YNW-A2/TR2
Nominal Heating Capacity	kW	33.5	45.0	50.0
	BTU/h	114,300	153,500	170,600
Input	kW	11.35	13.88	14.88

PURY-		EP300YNW-A2/TR2	EP350YNW-A2/TR2	EP400YNW-A2/TR2
Nominal Heating Capacity	kW	37.5	45.0	50.0
	BTU/h	128,000	153,500	170,600
Input	kW	11.71	13.88	14.12

Indoor unit temperature correction

To be used to correct indoor unit capacity only

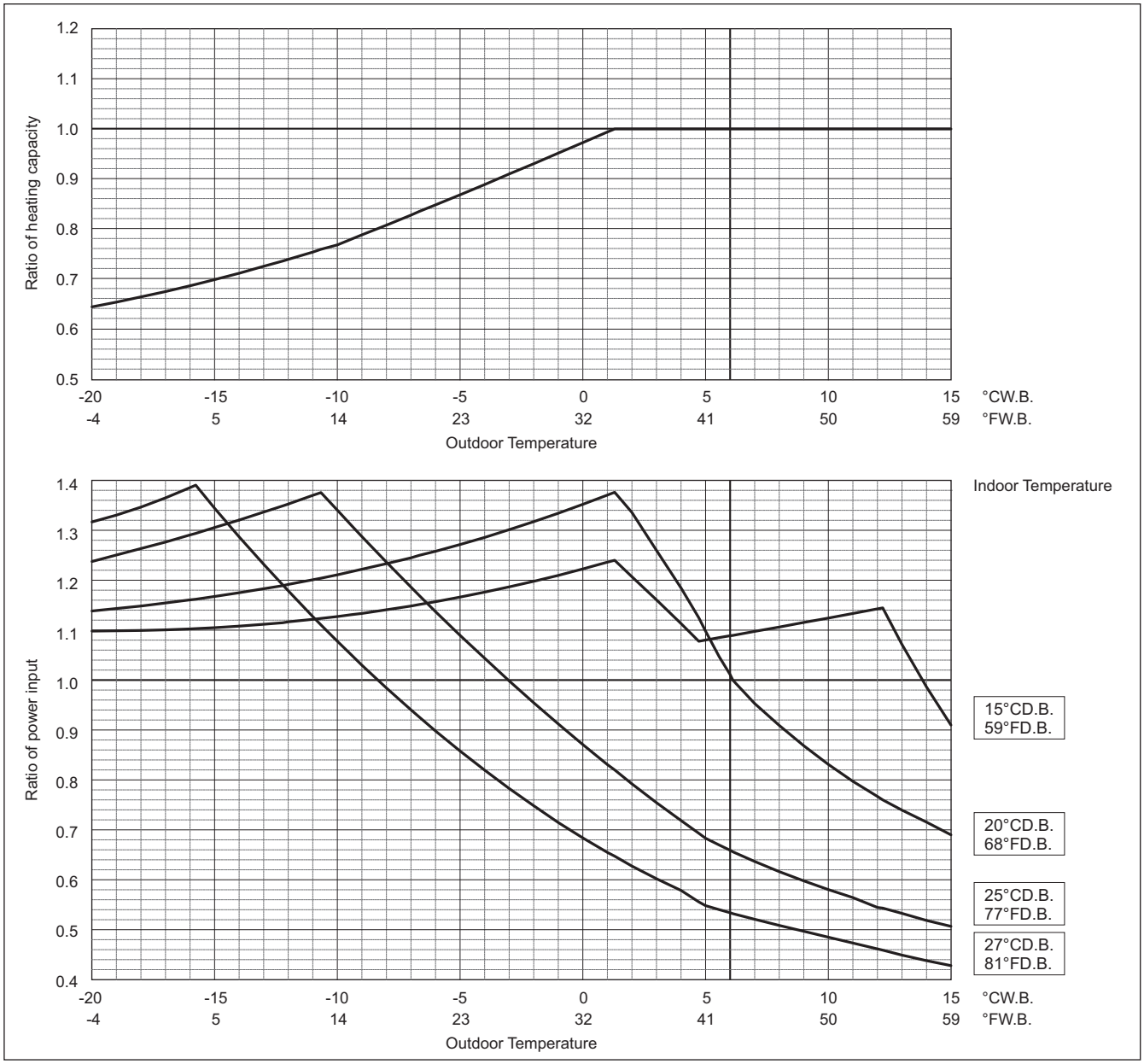


Outdoor unit temperature correction

To be used to correct outdoor unit only

Outdoor unit capacity is NOT affected by the indoor temperature.

Outdoor unit power input is affected by the indoor and outdoor temperatures. Please consult the sales office for details.

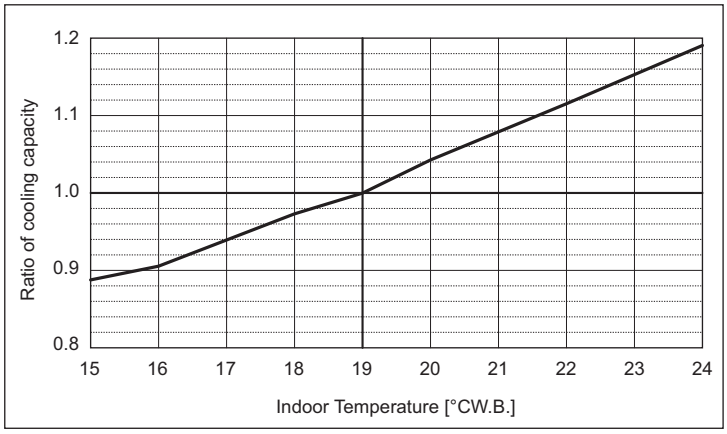


PURY-		P450YNW-A2/TR2	P500YNW-A2/TR2
Nominal Cooling Capacity	kW	50.0	56.0
	BTU/h	170,600	191,100
Input	kW	17.92	24.03

PURY-		EP450YNW-A2/TR2	EP500YNW-A2/TR2
Nominal Cooling Capacity	kW	50.0	56.0
	BTU/h	170,600	191,100
Input	kW	16.83	21.22

Indoor unit temperature correction

To be used to correct indoor unit capacity only

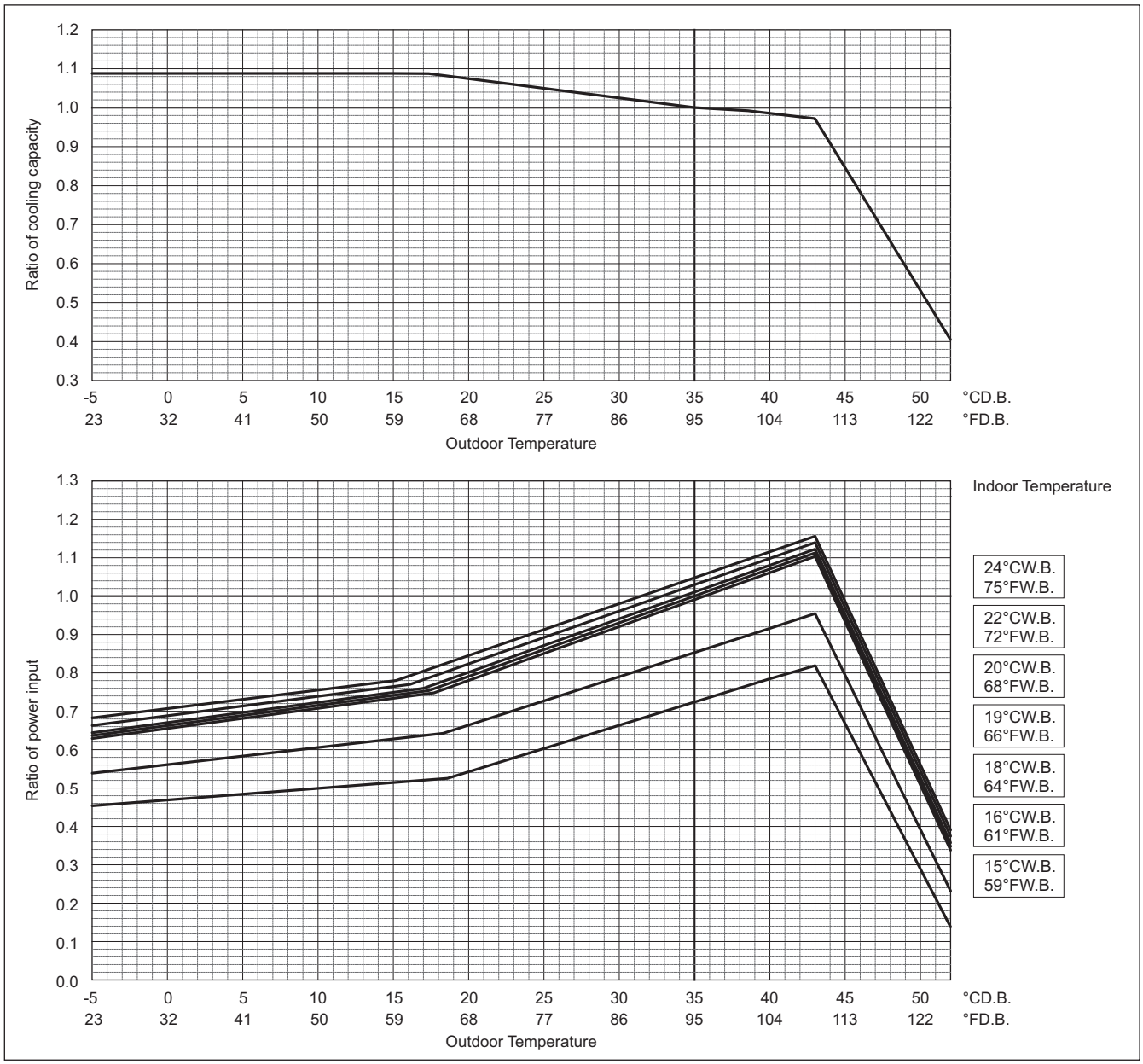


Outdoor unit temperature correction

To be used to correct outdoor unit only

Outdoor unit capacity is NOT affected by the indoor temperature.

Outdoor unit power input is affected by the indoor and outdoor temperatures. Please consult the sales office for details.

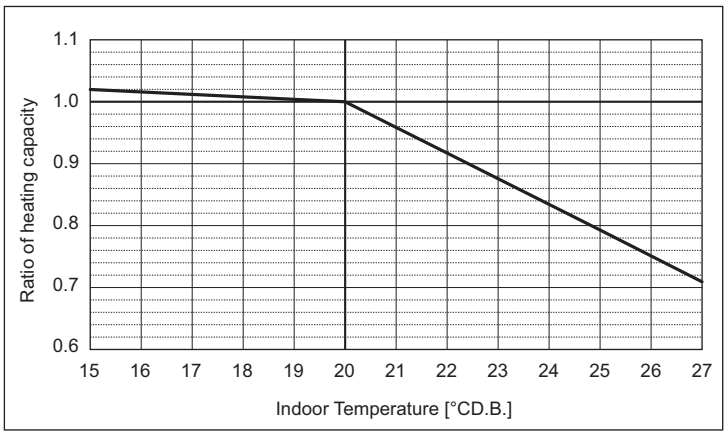


PURY-		P450YNW-A2/TR2	P500YNW-A2/TR2
Nominal Heating Capacity	kW	56.0	63.0
	BTU/h	191,100	215,000
Input	kW	17.39	19.09

PURY-		EP450YNW-A2/TR2	EP500YNW-A2/TR2
Nominal Heating Capacity	kW	56.0	63.0
	BTU/h	191,100	215,000
Input	kW	16.86	19.74

Indoor unit temperature correction

To be used to correct indoor unit capacity only

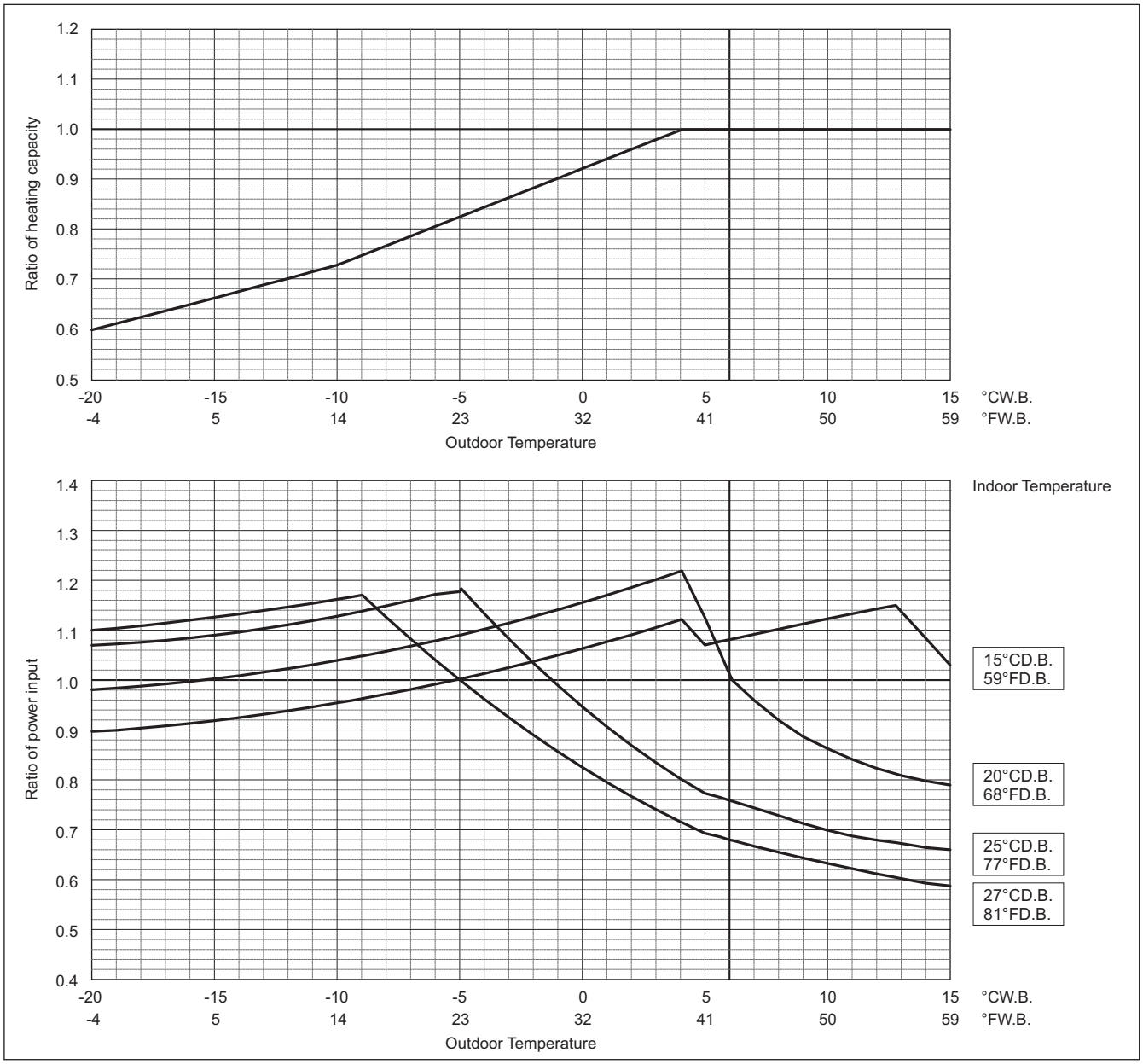


Outdoor unit temperature correction

To be used to correct outdoor unit only

Outdoor unit capacity is NOT affected by the indoor temperature.

Outdoor unit power input is affected by the indoor and outdoor temperatures. Please consult the sales office for details.



Correction by temperature (COP Priority Mode)

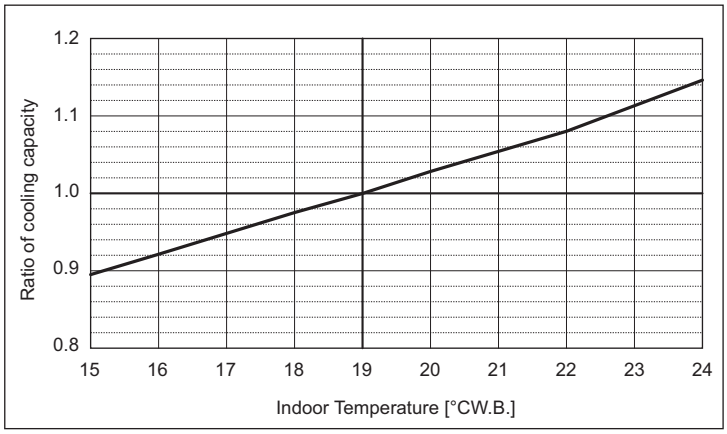
HYBRID CITY MULTI could have various capacities at different designing temperatures. Using the nominal cooling/heating capacity values and the ratios below, the capacity can be found for various temperatures.
To select COP priority mode, SW4 (935) must be set to ON.

PURY-		P200YNW-A2/TR2	P250YNW-A2/TR2
Nominal Cooling Capacity	kW	22.4	28.0
	BTU/h	76,400	95,500
Input	kW	6.54	9.92

PURY-		EP200YNW-A2/TR2	EP250YNW-A2/TR2
Nominal Cooling Capacity	kW	22.4	28.0
	BTU/h	76,400	95,500
Input	kW	5.84	8.77

Indoor unit temperature correction

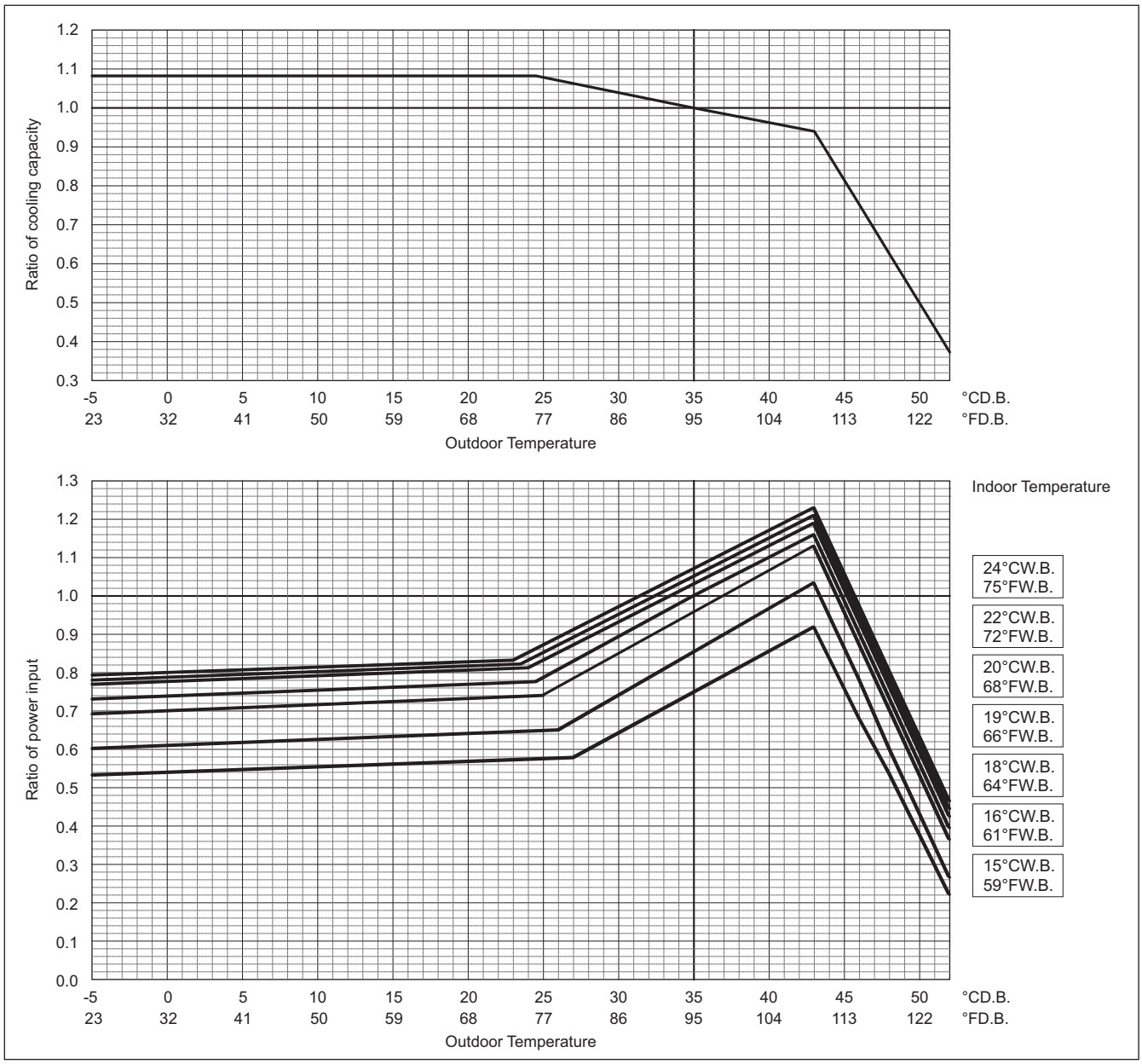
To be used to correct indoor unit capacity only



Outdoor unit temperature correction

To be used to correct outdoor unit only

Outdoor unit capacity is NOT affected by the indoor temperature.
Outdoor unit power input is affected by the indoor and outdoor temperatures. Please consult the sales office for details.



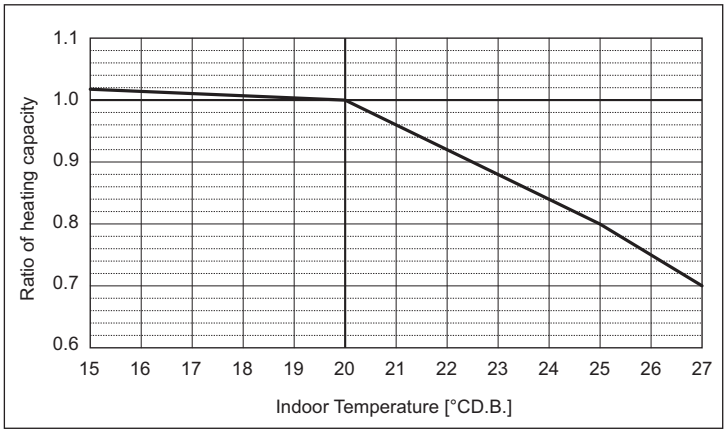
COP Priority Mode

PURY-		P200YNW-A2/TR2	P250YNW-A2/TR2
Nominal Heating Capacity	kW	25.0	31.5
	BTU/h	85,300	107,500
Input	kW	6.49	10.06

PURY-		EP200YNW-A2/TR2	EP250YNW-A2/TR2
Nominal Heating Capacity	kW	25.0	31.5
	BTU/h	85,300	107,500
Input	kW	6.49	9.84

Indoor unit temperature correction

To be used to correct indoor unit capacity only

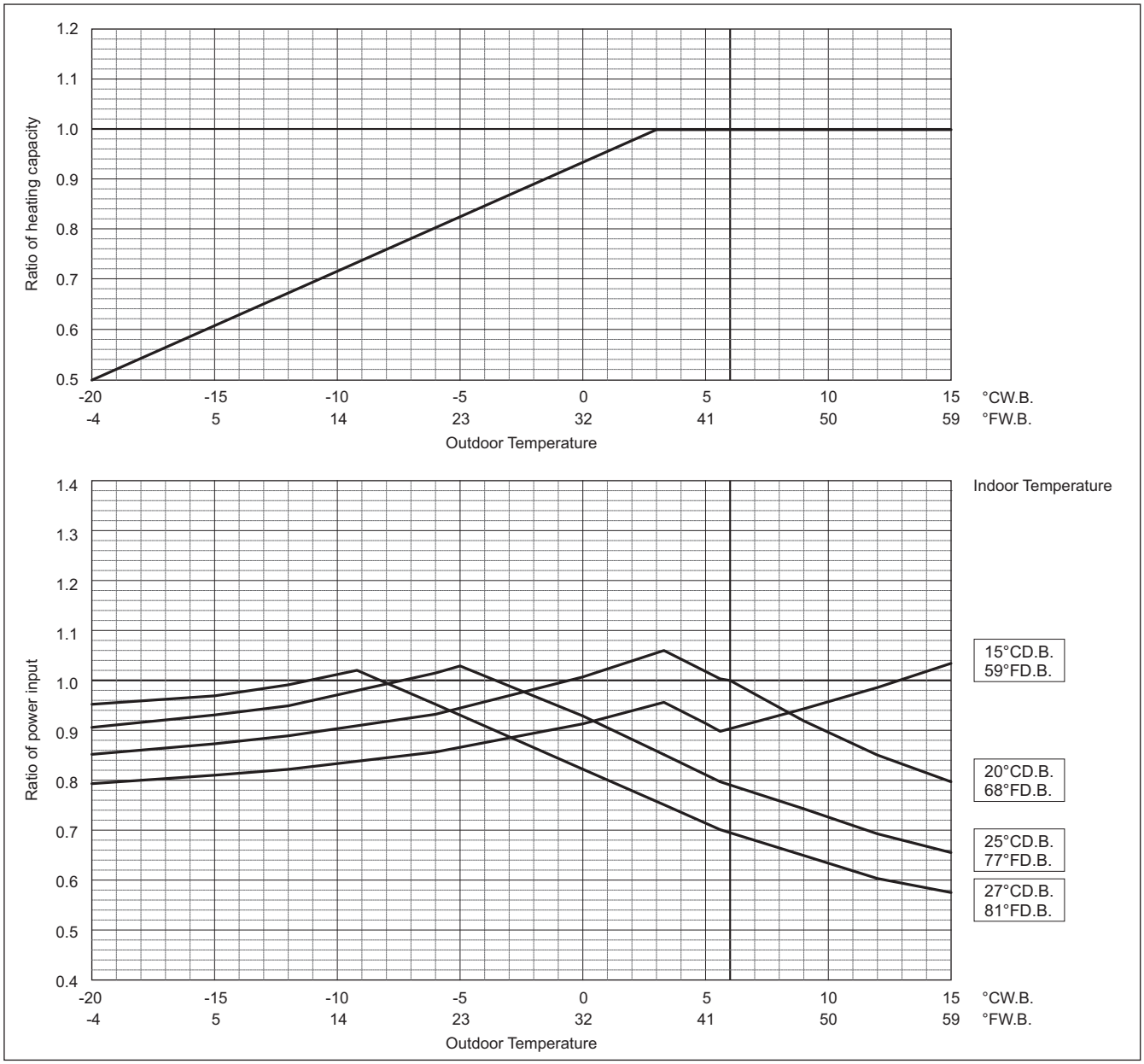


Outdoor unit temperature correction

To be used to correct outdoor unit only

Outdoor unit capacity is NOT affected by the indoor temperature.

Outdoor unit power input is affected by the indoor and outdoor temperatures. Please consult the sales office for details.

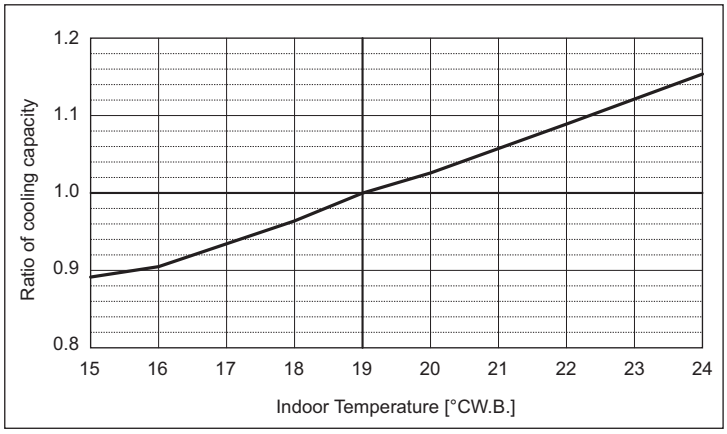


PURY-		P300YNW-A2/TR2	P350YNW-A2/TR2	P400YNW-A2/TR2
Nominal Cooling Capacity	kW	33.5	40.0	45.0
	BTU/h	114,300	136,500	153,500
Input	kW	13.13	16.26	16.65

PURY-		EP300YNW-A2/TR2	EP350YNW-A2/TR2	EP400YNW-A2/TR2
Nominal Cooling Capacity	kW	33.5	40.0	45.0
	BTU/h	114,300	136,500	153,500
Input	kW	12.05	14.76	14.28

Indoor unit temperature correction

To be used to correct indoor unit capacity only

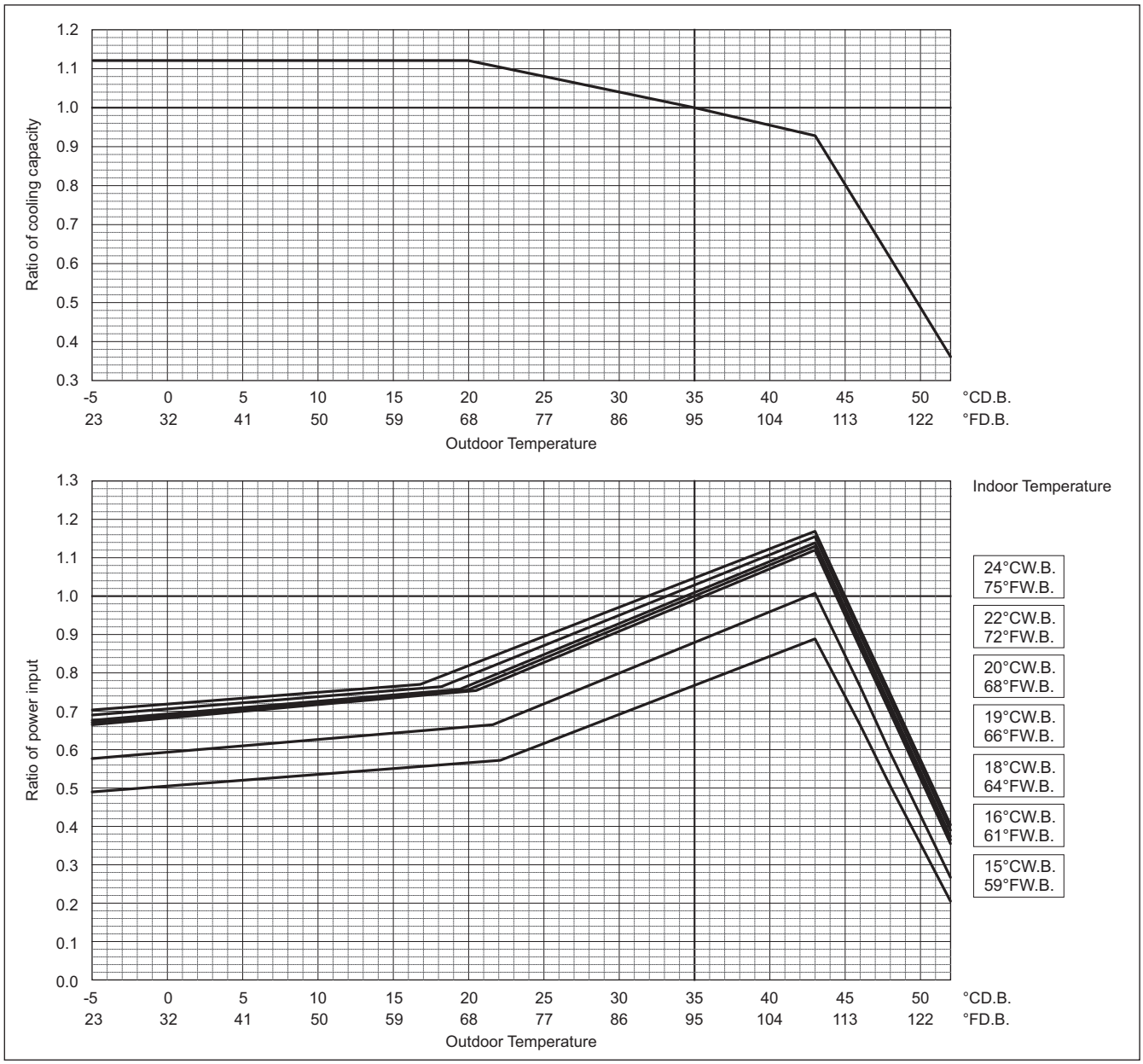


Outdoor unit temperature correction

To be used to correct outdoor unit only

Outdoor unit capacity is NOT affected by the indoor temperature.

Outdoor unit power input is affected by the indoor and outdoor temperatures. Please consult the sales office for details.



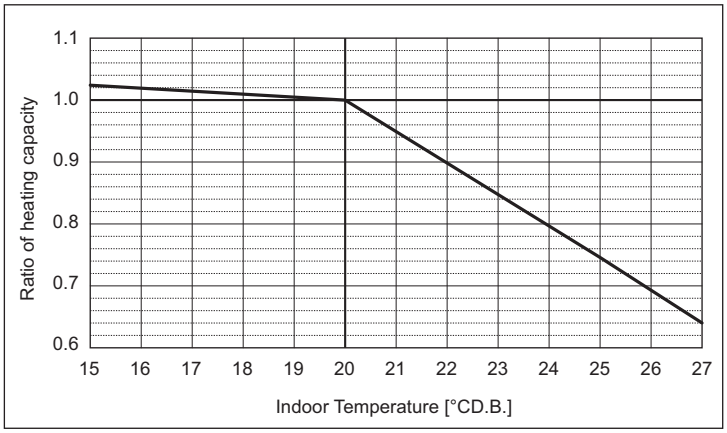
COP Priority Mode

PURY-		P300YNW-A2/TR2	P350YNW-A2/TR2	P400YNW-A2/TR2
Nominal Heating Capacity	kW	33.5	45.0	50.0
	BTU/h	114,300	153,500	170,600
Input	kW	11.35	13.88	14.88

PURY-		EP300YNW-A2/TR2	EP350YNW-A2/TR2	EP400YNW-A2/TR2
Nominal Heating Capacity	kW	37.5	45.0	50.0
	BTU/h	128,000	153,500	170,600
Input	kW	11.71	13.88	14.12

Indoor unit temperature correction

To be used to correct indoor unit capacity only

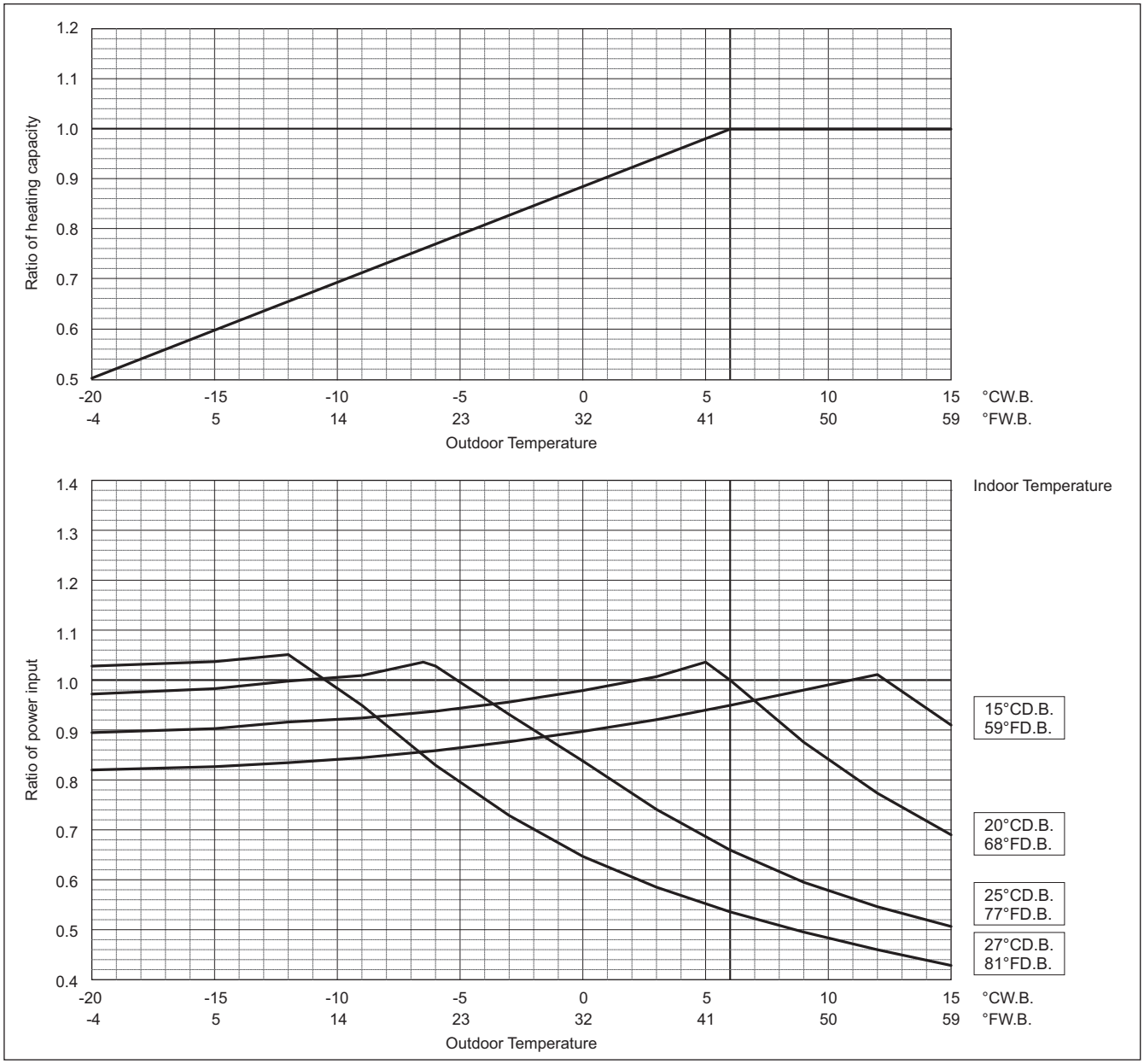


Outdoor unit temperature correction

To be used to correct outdoor unit only

Outdoor unit capacity is NOT affected by the indoor temperature.

Outdoor unit power input is affected by the indoor and outdoor temperatures. Please consult the sales office for details.

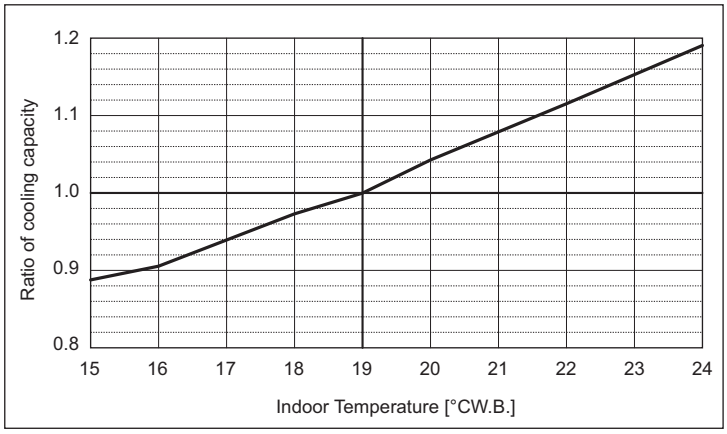


PURY-		P450YNW-A2/TR2	P500YNW-A2/TR2
Nominal Cooling Capacity	kW	50.0	56.0
	BTU/h	170,600	191,100
Input	kW	17.92	24.03

PURY-		EP450YNW-A2/TR2	EP500YNW-A2/TR2
Nominal Cooling Capacity	kW	50.0	56.0
	BTU/h	170,600	191,100
Input	kW	16.83	21.22

Indoor unit temperature correction

To be used to correct indoor unit capacity only

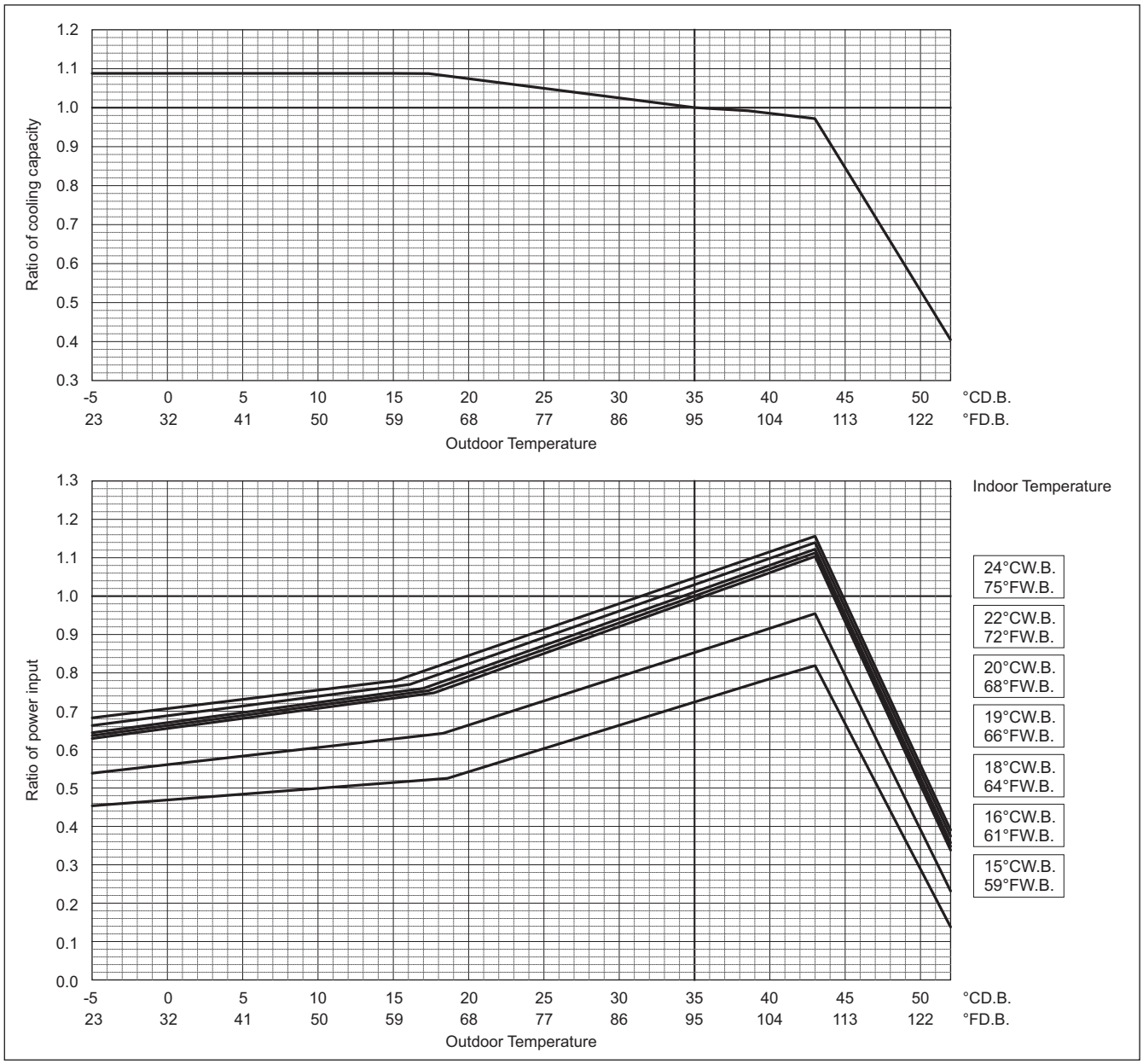


Outdoor unit temperature correction

To be used to correct outdoor unit only

Outdoor unit capacity is NOT affected by the indoor temperature.

Outdoor unit power input is affected by the indoor and outdoor temperatures. Please consult the sales office for details.



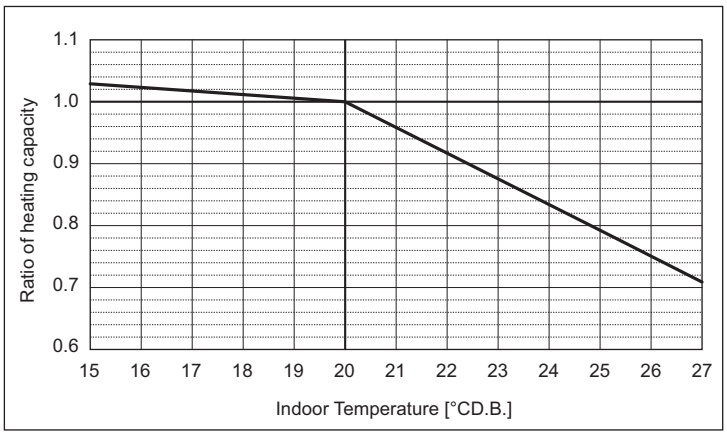
COP Priority Mode

PURY-		P450YNW-A2/TR2	P500YNW-A2/TR2
Nominal Heating Capacity	kW	56.0	63.0
	BTU/h	191,100	215,000
Input	kW	17.39	19.09

PURY-		EP450YNW-A2/TR2	EP500YNW-A2/TR2
Nominal Heating Capacity	kW	56.0	63.0
	BTU/h	191,100	215,000
Input	kW	16.86	19.74

Indoor unit temperature correction

To be used to correct indoor unit capacity only

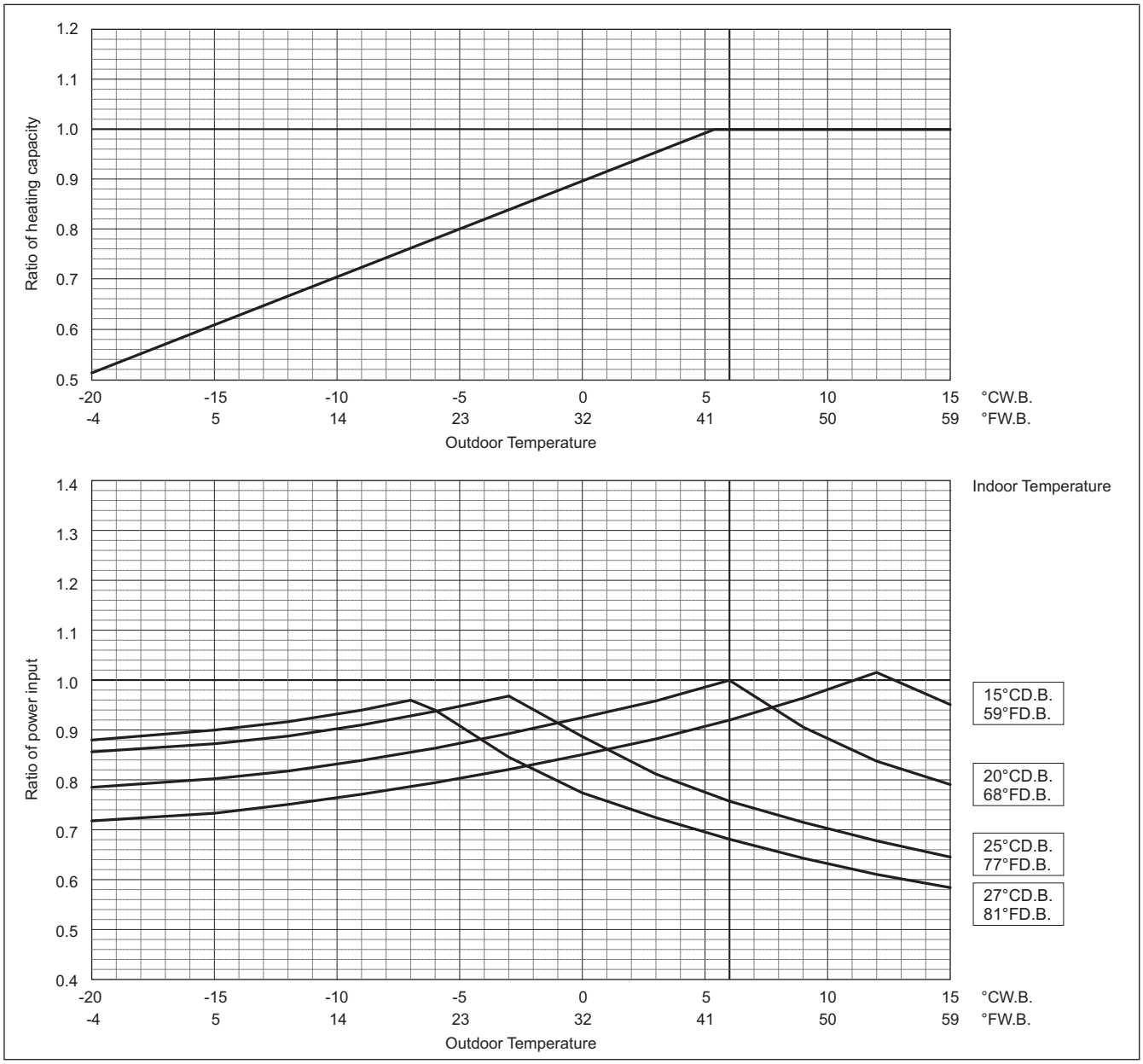


Outdoor unit temperature correction

To be used to correct outdoor unit only

Outdoor unit capacity is NOT affected by the indoor temperature.

Outdoor unit power input is affected by the indoor and outdoor temperatures. Please consult the sales office for details.



3-2. Correction by total indoor

HYBRID CITY MULTI system has different capacities and inputs when many combinations of indoor units with different total capacities are connected. Using following tables, the maximum capacity can be found to ensure the system is installed with enough capacity for a particular application.

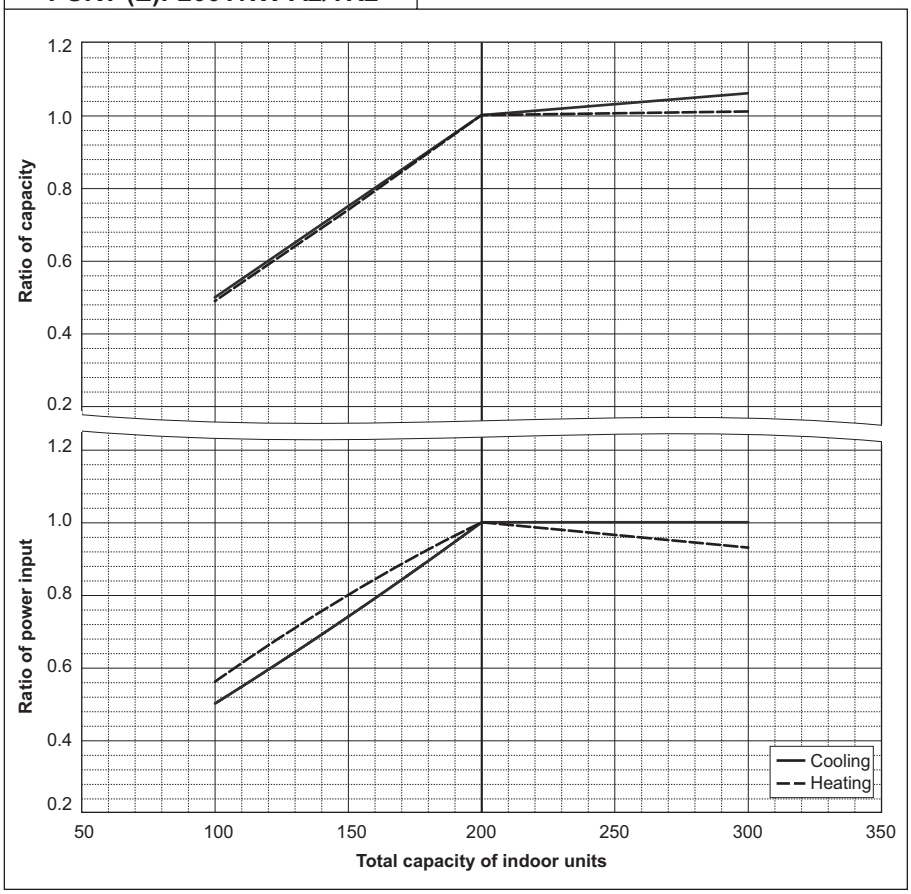
PURY-P200YNW-A2/TR2		
Nominal Cooling Capacity	kW	22.4
	BTU/h	76,400
Input	kW	6.54

PURY-P200YNW-A2/TR2		
Nominal Heating Capacity	kW	25.0
	BTU/h	85,300
Input	kW	6.49

PURY-EP200YNW-A2/TR2		
Nominal Cooling Capacity	kW	22.4
	BTU/h	76,400
Input	kW	5.84

PURY-EP200YNW-A2/TR2		
Nominal Heating Capacity	kW	25.0
	BTU/h	85,300
Input	kW	6.49

PURY-(E)P200YNW-A2/TR2



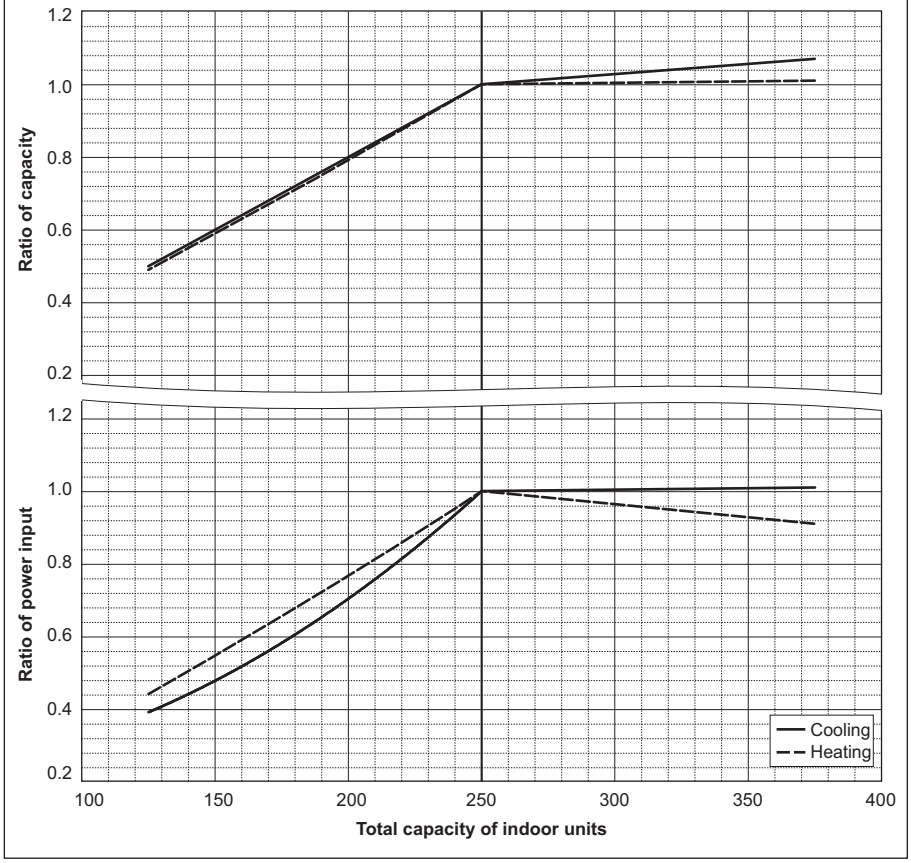
PURY-P250YNW-A2/TR2		
Nominal Cooling Capacity	kW	28.0
	BTU/h	95,500
Input	kW	9.92

PURY-P250YNW-A2/TR2		
Nominal Heating Capacity	kW	31.5
	BTU/h	107,500
Input	kW	10.06

PURY-EP250YNW-A2/TR2		
Nominal Cooling Capacity	kW	28.0
	BTU/h	95,500
Input	kW	8.77

PURY-EP250YNW-A2/TR2		
Nominal Heating Capacity	kW	31.5
	BTU/h	107,500
Input	kW	9.84

PURY-(E)P250YNW-A2/TR2



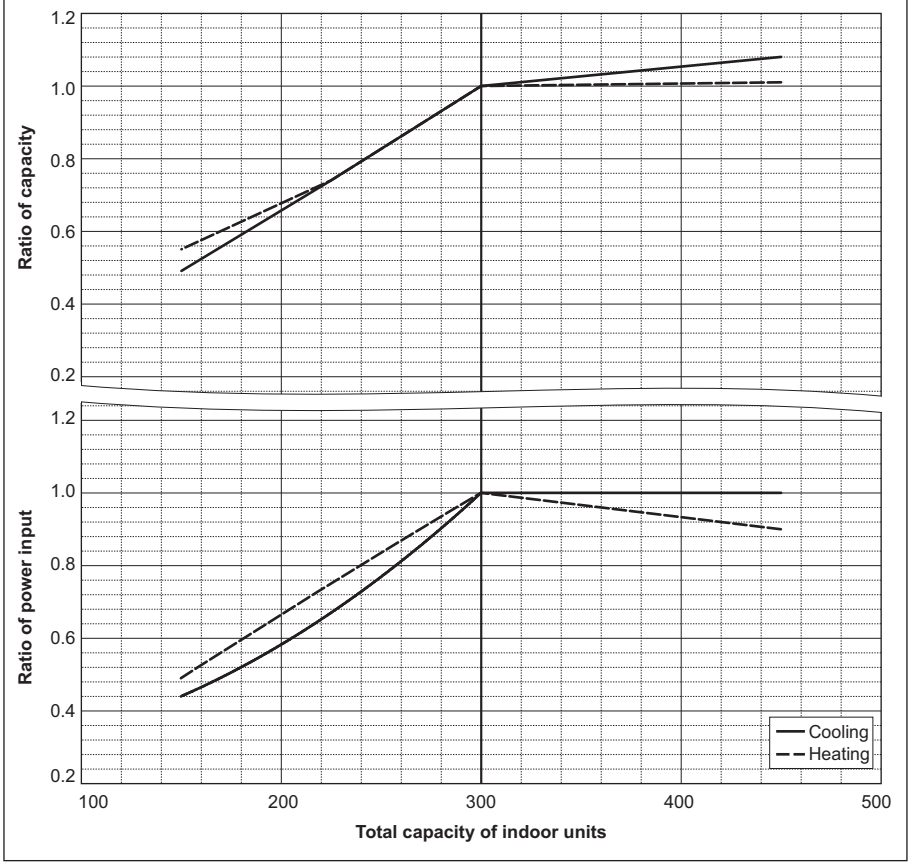
PURY-P300YNW-A2/TR2		
Nominal Cooling Capacity	kW	33.5
	BTU/h	114,300
Input	kW	13.13

PURY-P300YNW-A2/TR2		
Nominal Heating Capacity	kW	33.5
	BTU/h	114,300
Input	kW	11.35

PURY-EP300YNW-A2/TR2		
Nominal Cooling Capacity	kW	33.5
	BTU/h	114,300
Input	kW	12.05

PURY-EP300YNW-A2/TR2		
Nominal Heating Capacity	kW	37.5
	BTU/h	128,000
Input	kW	11.71

PURY-(E)P300YNW-A2/TR2



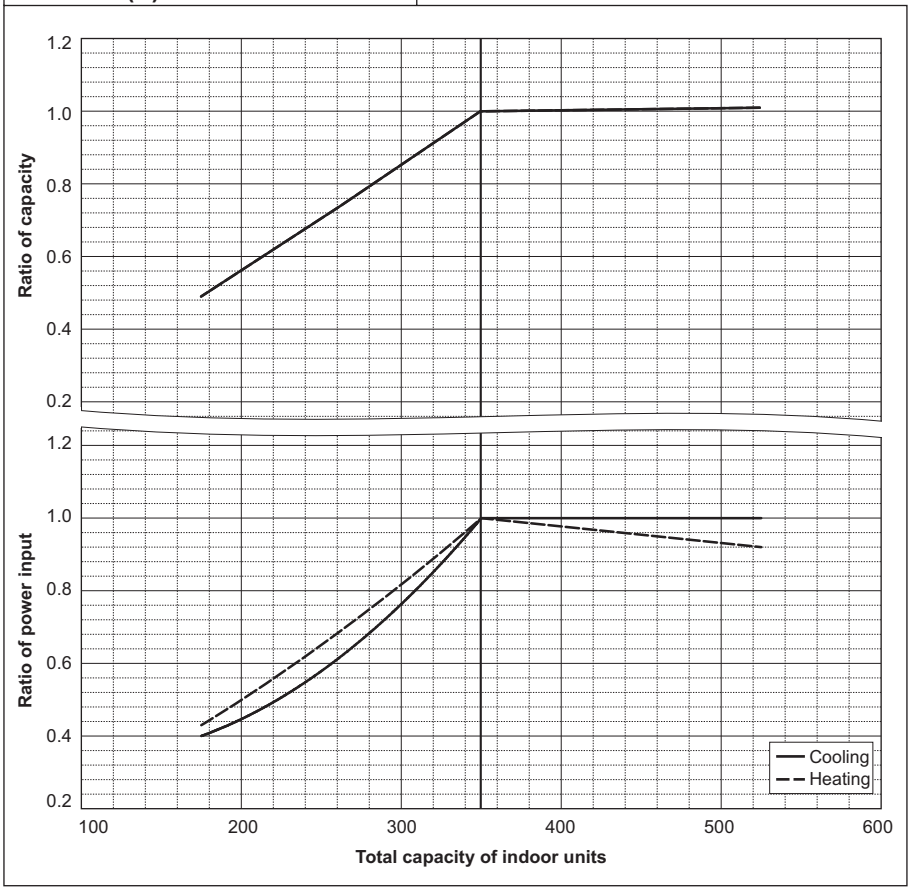
PURY-P350YNW-A2/TR2		
Nominal Cooling Capacity	kW	40.0
	BTU/h	136,500
Input	kW	16.26

PURY-P350YNW-A2/TR2		
Nominal Heating Capacity	kW	45.0
	BTU/h	153,500
Input	kW	13.88

PURY-EP350YNW-A2/TR2		
Nominal Cooling Capacity	kW	40.0
	BTU/h	136,500
Input	kW	14.76

PURY-EP350YNW-A2/TR2		
Nominal Heating Capacity	kW	45.0
	BTU/h	153,500
Input	kW	13.88

PURY-(E)P350YNW-A2/TR2



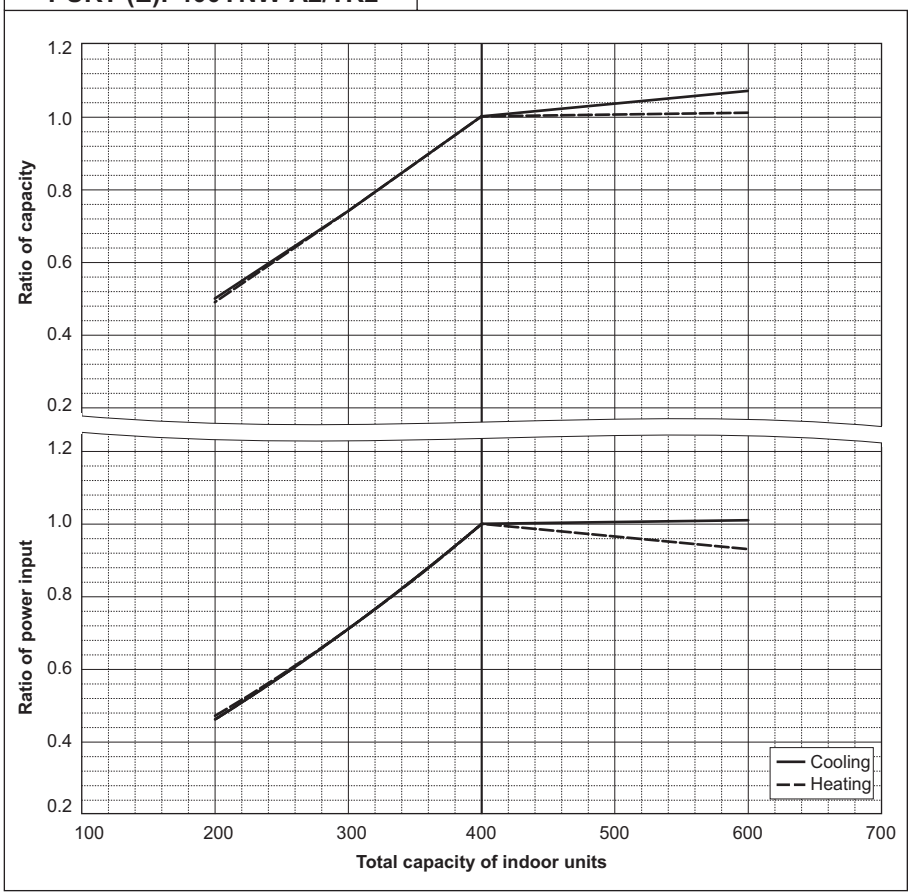
PURY-P400YNW-A2/TR2		
Nominal Cooling Capacity	kW	45.0
	BTU/h	153,500
Input	kW	16.65

PURY-P400YNW-A2/TR2		
Nominal Heating Capacity	kW	50.0
	BTU/h	170,600
Input	kW	14.88

PURY-EP400YNW-A2/TR2		
Nominal Cooling Capacity	kW	45.0
	BTU/h	153,500
Input	kW	14.28

PURY-EP400YNW-A2/TR2		
Nominal Heating Capacity	kW	50.0
	BTU/h	170,600
Input	kW	14.12

PURY-(E)P400YNW-A2/TR2



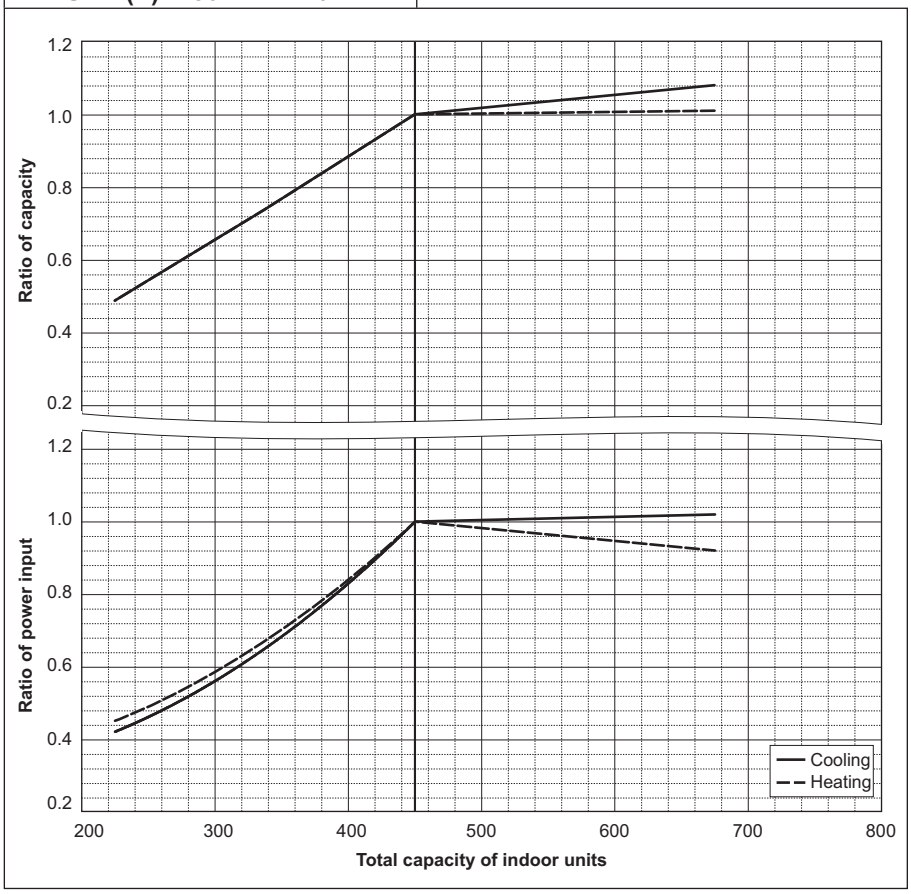
PURY-P450YNW-A2/TR2		
Nominal Cooling Capacity	kW	50.0
	BTU/h	170,600
Input	kW	17.92

PURY-P450YNW-A2/TR2		
Nominal Heating Capacity	kW	56.0
	BTU/h	191,100
Input	kW	17.39

PURY-EP450YNW-A2/TR2		
Nominal Cooling Capacity	kW	50.0
	BTU/h	170,600
Input	kW	16.83

PURY-EP450YNW-A2/TR2		
Nominal Heating Capacity	kW	56.0
	BTU/h	191,100
Input	kW	16.86

PURY-(E)P450YNW-A2/TR2



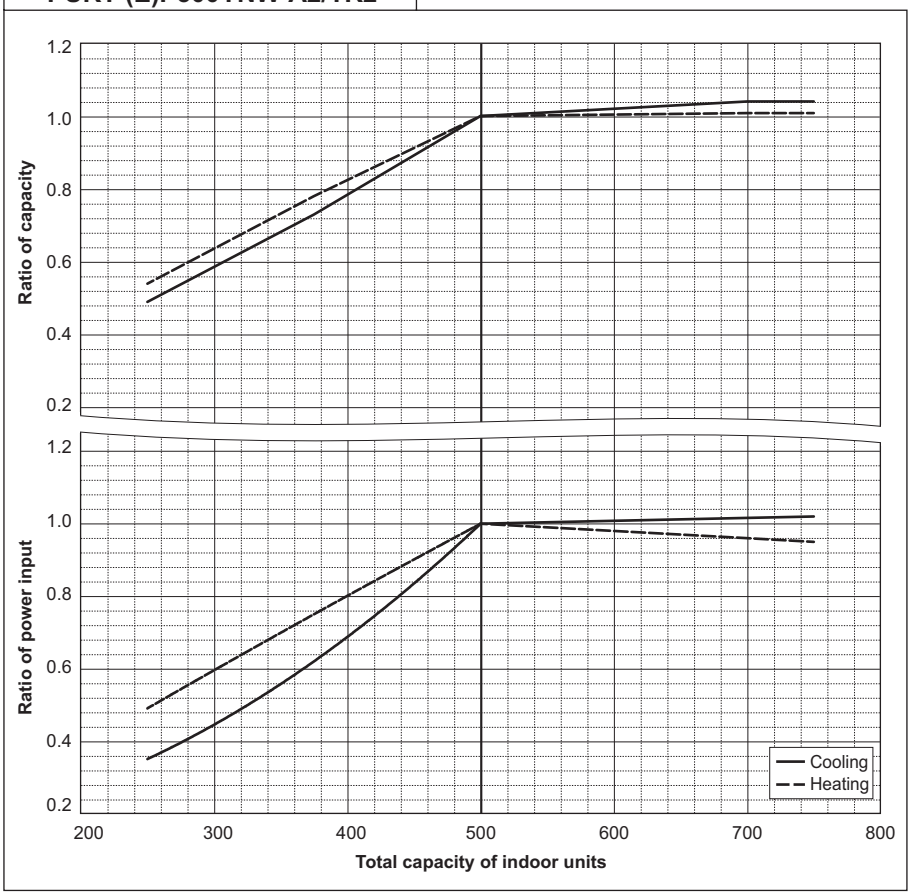
PURY-P500YNW-A2/TR2		
Nominal Cooling Capacity	kW	56.0
	BTU/h	191,100
Input	kW	24.03

PURY-P500YNW-A2/TR2		
Nominal Heating Capacity	kW	63.0
	BTU/h	215,000
Input	kW	19.09

PURY-EP500YNW-A2/TR2		
Nominal Cooling Capacity	kW	56.0
	BTU/h	191,100
Input	kW	21.22

PURY-EP500YNW-A2/TR2		
Nominal Heating Capacity	kW	63.0
	BTU/h	215,000
Input	kW	19.74

PURY-(E)P500YNW-A2/TR2

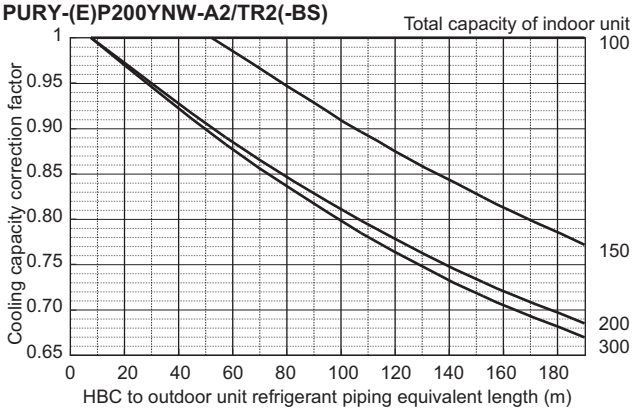


3-3. Correction by piping length

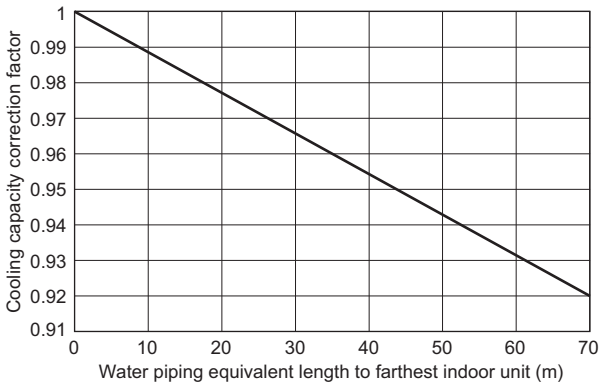
A decrease in cooling/heating capacity will occur due to piping length increase. Using the following correction factors according to the equivalent length of the piping shown at 3-3-1 and 3-3-2 the capacity can be calculated. 3-3-3 shows how to obtain the equivalent length of piping. Refrigerant piping and water piping have separate correction factors.

3-3-1. Cooling capacity correction

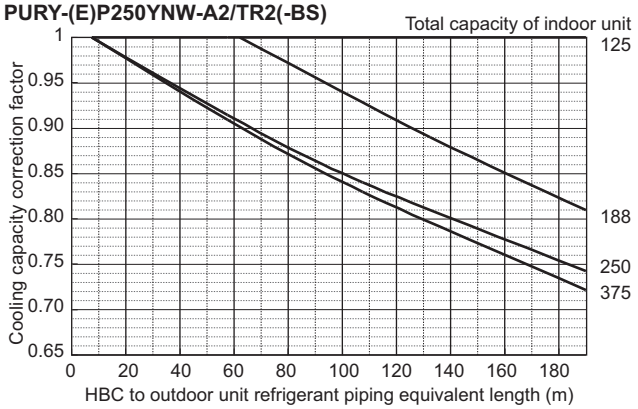
PURY-(E)P200YNW-A2/TR2(-BS)



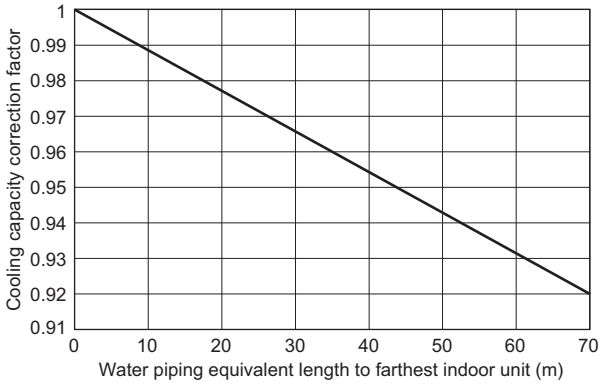
PURY-(E)P200YNW-A2/TR2(-BS)



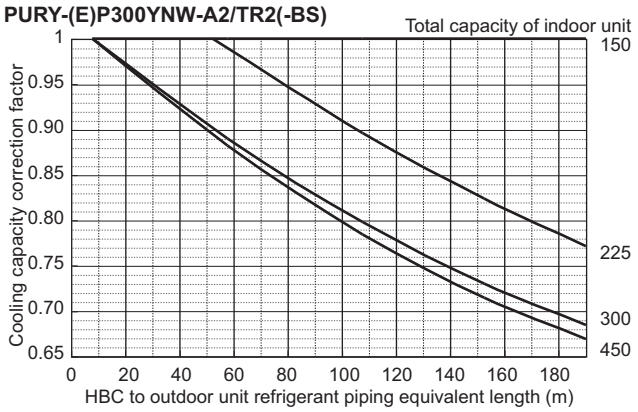
PURY-(E)P250YNW-A2/TR2(-BS)



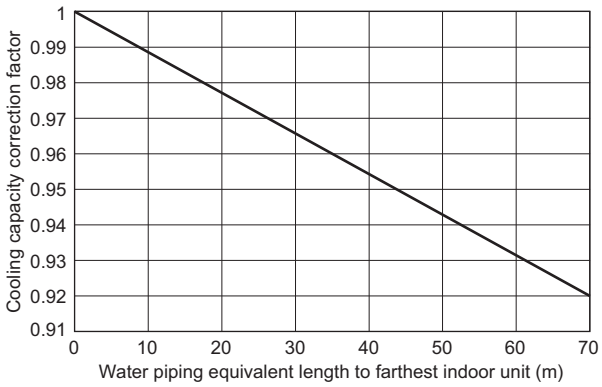
PURY-(E)P250YNW-A2/TR2(-BS)



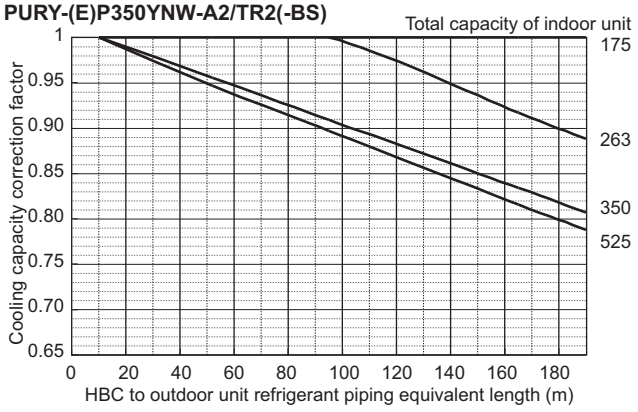
PURY-(E)P300YNW-A2/TR2(-BS)



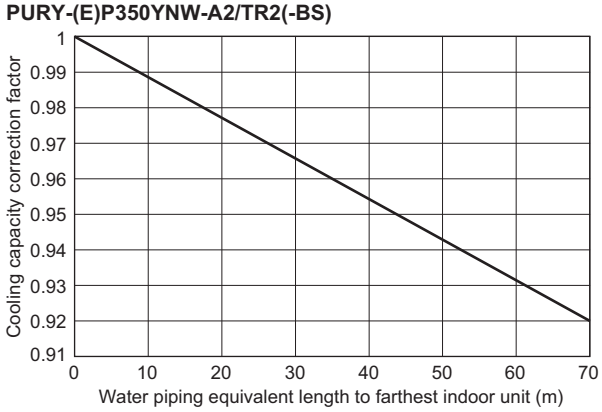
PURY-(E)P300YNW-A2/TR2(-BS)



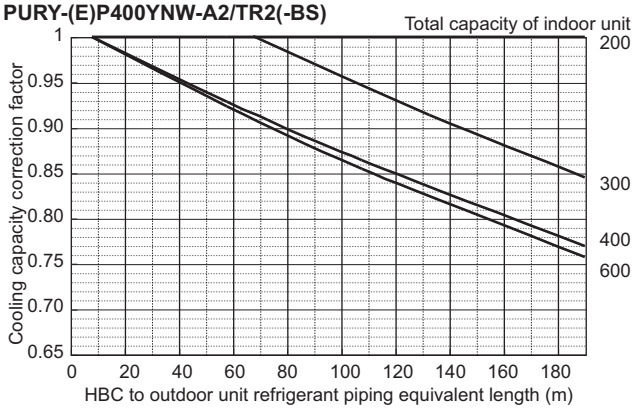
PURY-(E)P350YNW-A2/TR2(-BS)



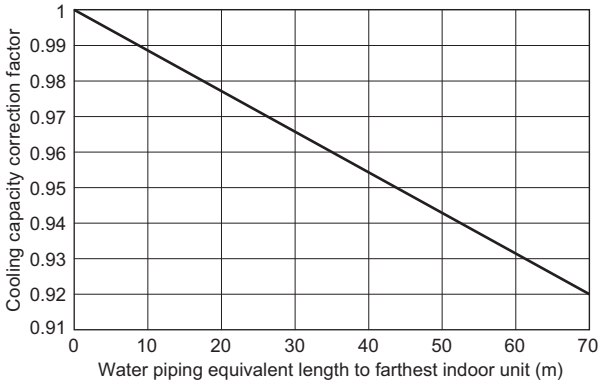
PURY-(E)P350YNW-A2/TR2(-BS)



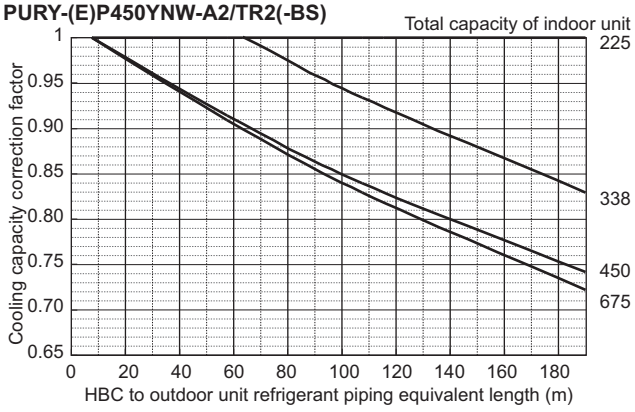
PURY-(E)P400YNW-A2/TR2(-BS)



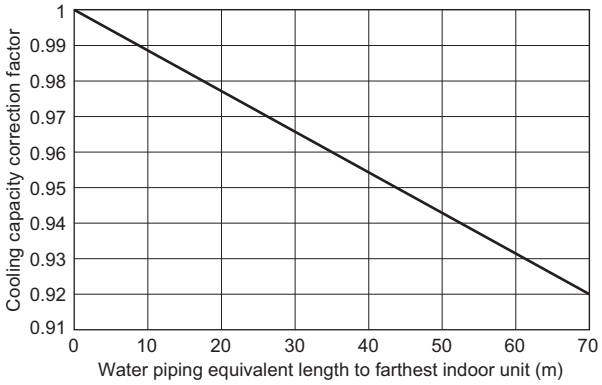
PURY-(E)P400YNW-A2/TR2(-BS)



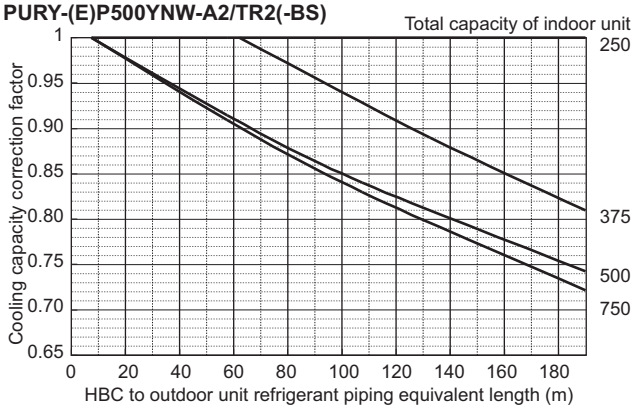
PURY-(E)P450YNW-A2/TR2(-BS)



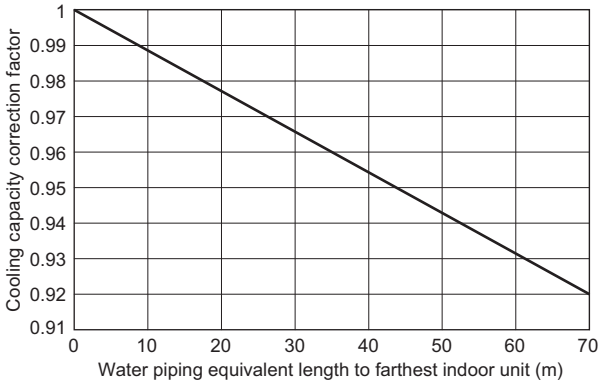
PURY-(E)P450YNW-A2/TR2(-BS)



PURY-(E)P500YNW-A2/TR2(-BS)

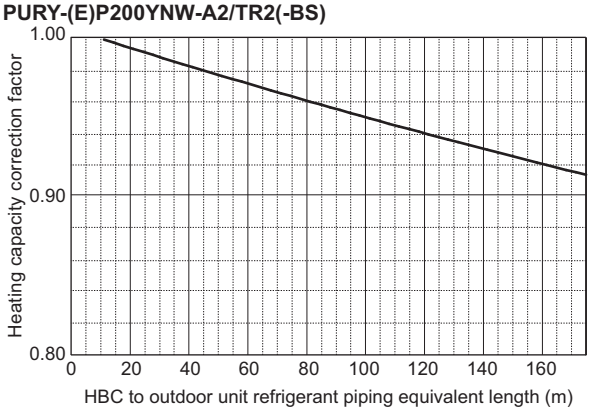


PURY-(E)P500YNW-A2/TR2(-BS)

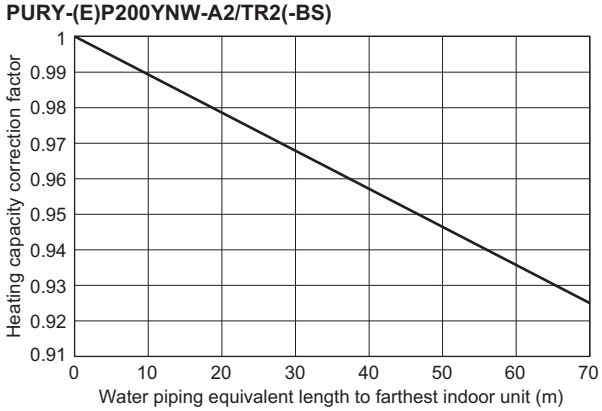


3-3-2. Heating capacity correction

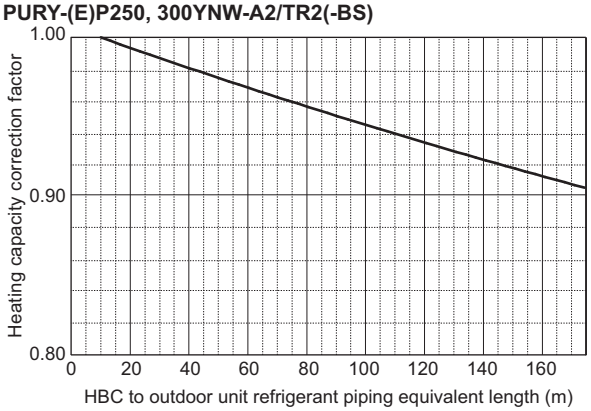
PURY-(E)P200YNW-A2/TR2(-BS)



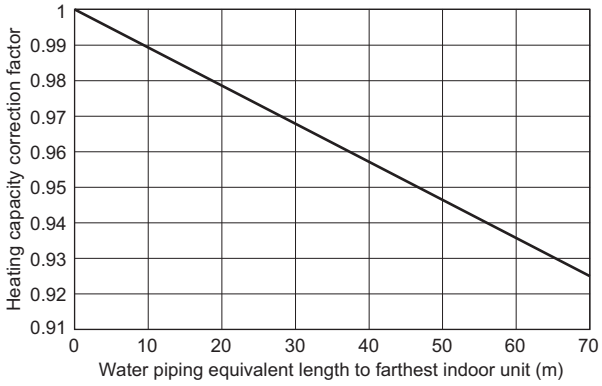
PURY-(E)P200YNW-A2/TR2(-BS)



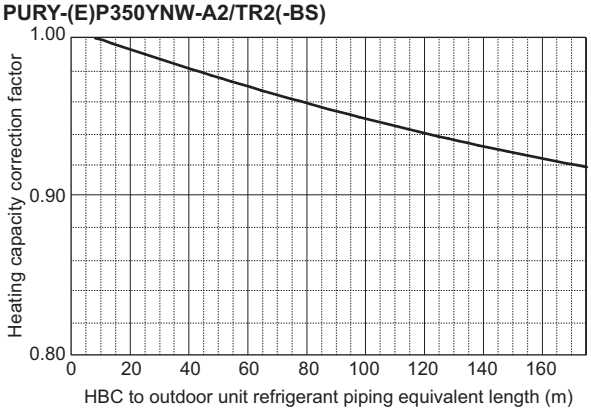
PURY-(E)P250, 300YNW-A2/TR2(-BS)



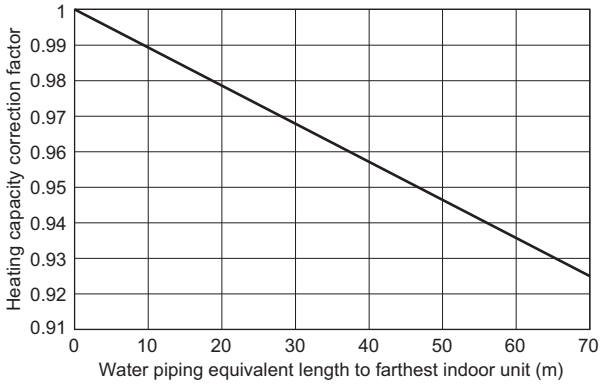
PURY-(E)P250, 300YNW-A2/TR2(-BS)



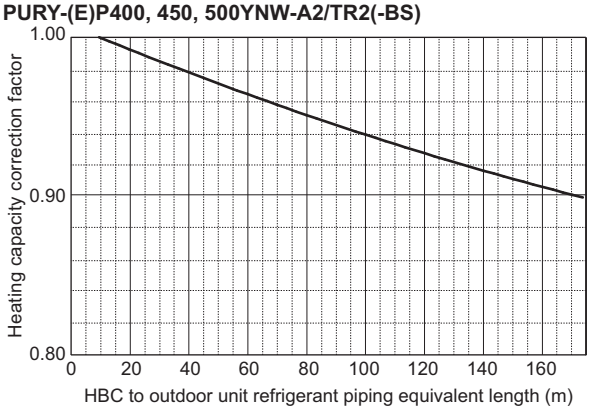
PURY-(E)P350YNW-A2/TR2(-BS)



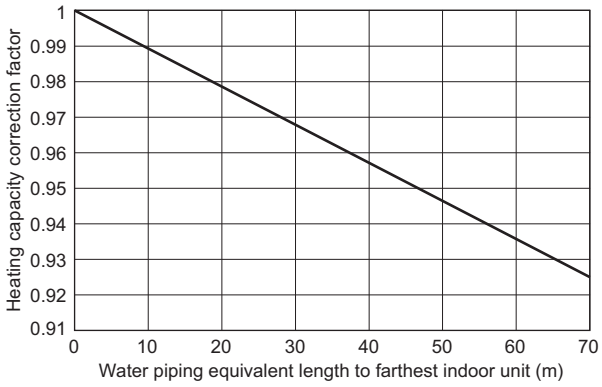
PURY-(E)P350YNW-A2/TR2(-BS)



PURY-(E)P400, 450, 500YNW-A2/TR2(-BS)



PURY-(E)P400, 450, 500YNW-A2/TR2(-BS)



3-3-3. How to obtain the equivalent piping length

Refrigerant pipe

1. PURY-(E)P200YNW(-BS)

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.35 × number of bends in the piping) [m]

2. PURY-(E)P250, 300YNW(-BS)

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.42 × number of bends in the piping) [m]

3. PURY-(E)P350YNW(-BS)

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.47 × number of bends in the piping) [m]

4. PURY-(E)P400, 450, 500YNW(-BS)

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.50 × number of bends in the piping) [m]

Water pipe

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.55 × number of bends in the piping) [m]

3-4. Correction at frost and defrost

Due to frost at the outdoor heat exchanger and the automatic defrost operation, the heating capacity of the outdoor unit can be calculated by multiplying the correction factor shown in the table below.

Table of correction factor at frost and defrost

Outdoor inlet air temp. °CWB	6	4	2	1	0	-2	-4	-6	-8	-10	-20
Outdoor inlet air temp. °FWB	43	39	36	34	32	28	25	21	18	14	-4
PURY-(E)P200YNW-A2/TR2(-BS)	1.00	0.95	0.84	0.83	0.83	0.87	0.90	0.95	0.95	0.95	0.95
PURY-(E)P250YNW-A2/TR2(-BS)	1.00	0.95	0.84	0.83	0.83	0.87	0.90	0.95	0.95	0.95	0.95
PURY-(E)P300YNW-A2/TR2(-BS)	1.00	0.93	0.82	0.80	0.82	0.86	0.90	0.90	0.95	0.95	0.95
PURY-(E)P350YNW-A2/TR2(-BS)	1.00	0.93	0.85	0.83	0.84	0.86	0.90	0.90	0.95	0.95	0.95
PURY-(E)P400YNW-A2/TR2(-BS)	1.00	0.95	0.90	0.87	0.88	0.89	0.90	0.95	0.95	0.95	0.95
PURY-(E)P450YNW-A2/TR2(-BS)	1.00	0.98	0.89	0.87	0.89	0.90	0.92	0.95	0.95	0.95	0.95
PURY-(E)P500YNW-A2/TR2(-BS)	1.00	0.98	0.89	0.86	0.89	0.90	0.92	0.95	0.95	0.95	0.95

Note

- The high humidity condition (e.g., a foggy atmosphere) which causes frost forming on the heat exchanger will worsen the heating performance of the unit.
- The snow blowing to the heat exchanger will worsen the heating performance of the unit. Install a snow hood as a preventive measure.

3-5. Correction by antifreeze solution concentration

In HYBRID CITY MULTI system, antifreeze solution should be used to prevent the system from freezing. Refer to the following graphs for the capacity correction by antifreeze solution. Refer to 3-5-1 for antifreeze solution concentration, 3-5-2 and 3-5-3 for capacity correction by antifreeze solution concentration.

3-5-1. Antifreeze solution concentration

Use propylene glycol solution for antifreeze.
Refer to the following graph to estimate the antifreeze solution concentration required for freeze protection.
DipSW setting (SW5-4 and 5-5) is required in HBC unit depending on the antifreeze solution concentration.
Refer the table A for the setting.

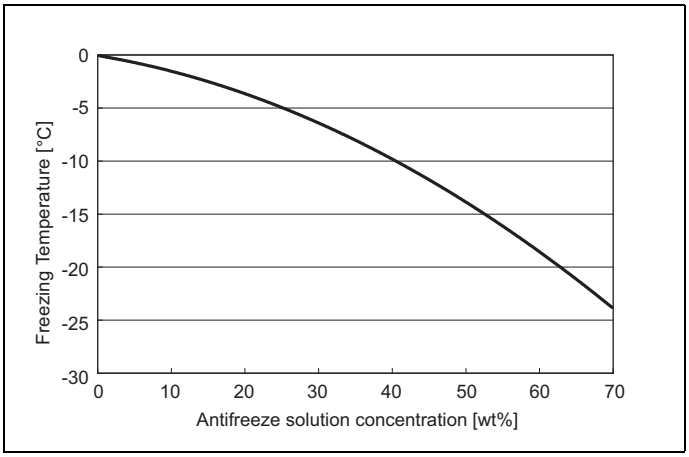
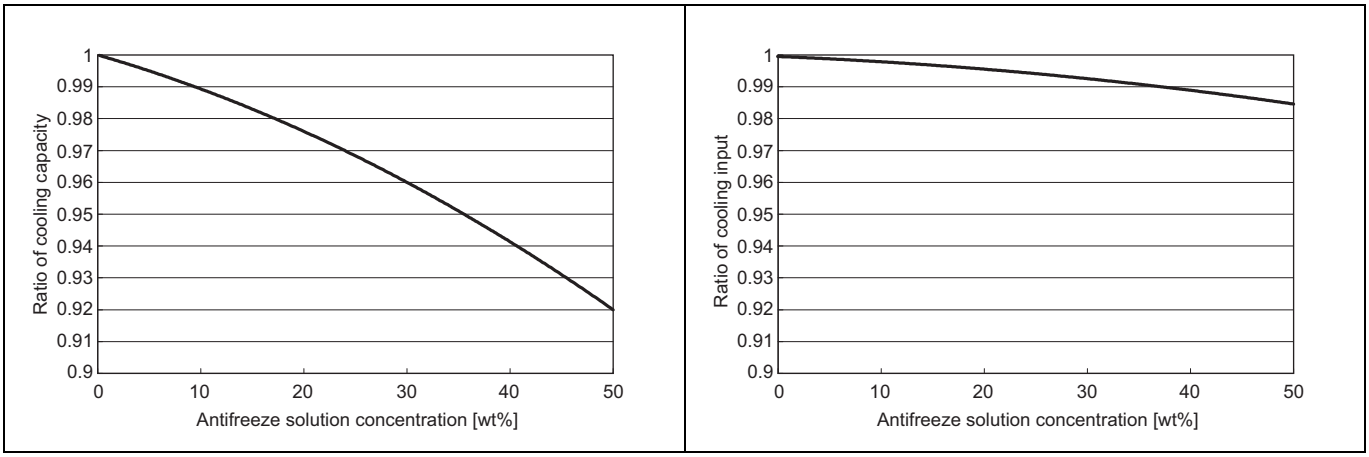


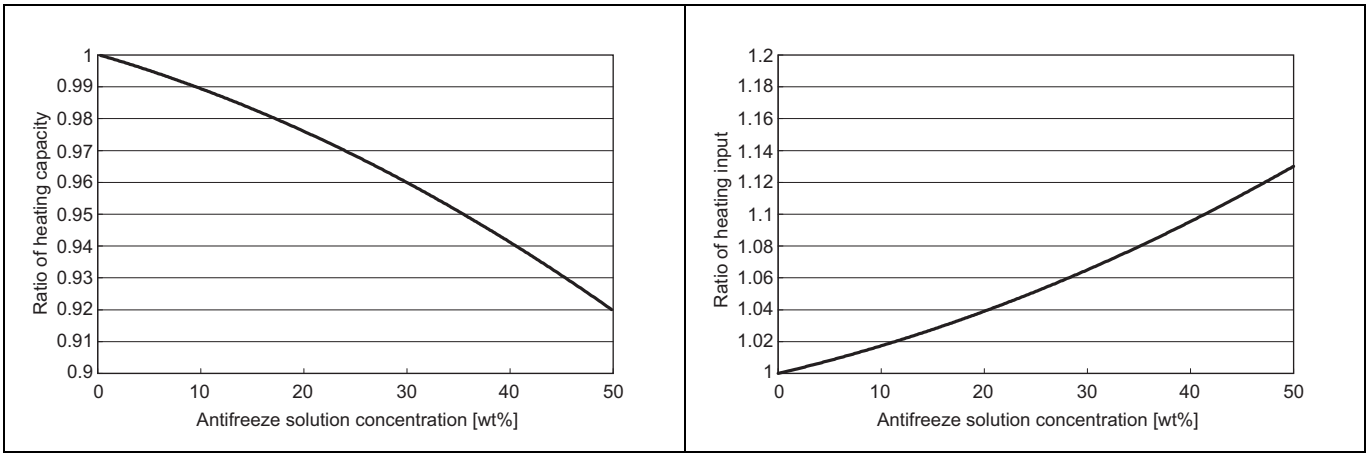
Table A

Brine concentration [%]		0 to 29%	30 to 49%	50 to 59%	60 to 70%
DipSW5-4		OFF	OFF	ON	ON
DipSW5-5		OFF	ON	OFF	ON
7seg LED	LD2	OFF	OFF	1	1
	LD3	OFF	1	OFF	1

3-5-2. Capacity correction by antifreeze solution concentration (cooling)



3-5-3. Capacity correction by antifreeze solution concentration (heating)



4-1. Power supply for Outdoor unit

4-1-1. Electrical characteristics of the outdoor unit in cooling mode

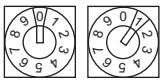
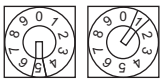
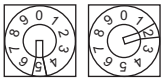
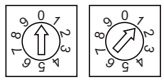
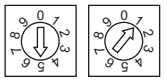
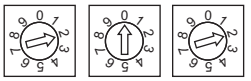
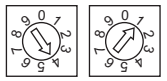
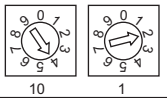
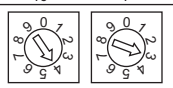
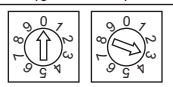
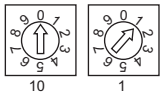
Symbols: MCA: Max Circuit Amps
RLA: Rated Load Amps SC: Starting Current

PURY-P-YNW-A2/TR2	Unit Combination	Units			Power supply	Compressor		FAN	RLA(A)(50/60Hz)	
		Hz	Volts	Voltage range	MCA(A)	Output (kW)	SC(A)	Output(kW)	Cooling	Heating
PURY-P200YNW-A2/TR2(-BS)	-	50/60	380 400 415	Max:456V Min:342V	16.1	3.7	8	0.92	11.0/10.4/10.1	10.9/10.4/10.0
PURY-P250YNW-A2/TR2(-BS)	-				21.4	5.5	8	0.92	16.7/15.9/15.3	16.9/16.1/15.5
PURY-P300YNW-A2/TR2(-BS)	-				23.4	7.3	8	0.92	22.1/21.0/20.2	19.1/18.2/17.5
PURY-P350YNW-A2/TR2(-BS)	-				27.6	8.7	8	0.46+0.46	27.4/26.0/25.1	23.4/22.2/21.4
PURY-P400YNW-A2/TR2(-BS)	-				35.1	11.7	8	0.46+0.46	28.1/26.7/25.7	25.1/23.8/23.0
PURY-P450YNW-A2/TR2(-BS)	-				39.0	12.4	8	0.46+0.46	30.2/28.7/27.7	29.3/27.8/26.8
PURY-P500YNW-A2/TR2(-BS)	-				43.2	14.2	8	0.92+0.92	40.5/38.5/37.1	32.2/30.6/29.5

PURY-EP-YNW-A2/TR2	Unit Combination	Units			Power supply	Compressor		FAN	RLA(A)(50/60Hz)	
		Hz	Volts	Voltage range	MCA(A)	Output (kW)	SC(A)	Output(kW)	Cooling	Heating
PURY-EP200YNW-A2/TR2(-BS)	-	50/60	380 400 415	Max:456V Min:342V	16.1	3.6	8	0.92	9.8/9.3/9.0	10.9/10.4/10.0
PURY-EP250YNW-A2/TR2(-BS)	-				20.3	5.5	8	0.92	14.8/14.0/13.5	16.6/15.7/15.2
PURY-EP300YNW-A2/TR2(-BS)	-				22.3	7.3	8	0.92	20.3/19.3/18.6	19.7/18.7/18.1
PURY-EP350YNW-A2/TR2(-BS)	-				24.8	8.7	8	0.46+0.46	24.9/23.6/22.8	23.4/22.2/21.4
PURY-EP400YNW-A2/TR2(-BS)	-				33.3	10.8	8	0.46+0.46	24.1/22.9/22.0	23.8/22.6/21.8
PURY-EP450YNW-A2/TR2(-BS)	-				37.3	11.7	8	0.46+0.46	28.4/26.9/26.0	28.4/27.0/26.0
PURY-EP500YNW-A2/TR2(-BS)	-				40.3	13.8	8	0.92+0.92	35.8/34.0/32.8	33.3/31.6/30.5

5-1. Address setting

5-1-1. Rule of setting address

Unit		Address setting	Example	Note
Indoor unit		01 ~ 50	 10 1	Use the most recent address within the same group of indoor units.
Outdoor unit		51 ~ 99, 100 (Note1)	 10 1	The smallest address of indoor unit in same refrigerant system + 50 Assign sequential address numbers to the outdoor units in one refrigerant circuit system. OC, OS1 and OS2 are automatically detected. (Note 2) * Please reset one of them to an address between 51 and 99 when two addresses overlap. * The address automatically becomes "100" if it is set as "01~ 50"
HBC controller		52 ~ 99, 100	 10 1	The address of the smallest address of indoor unit connected to the HBC controller + 50 * Please reset one of them to an address between 51 and 99 when two addresses overlap. * The address automatically becomes "100" if it is set as "01~ 50"
Local remote controller	ME Remote controller (Main)	101 ~ 150	1 Fixed  10 1	The smallest address of indoor unit in the group + 100 * The place of "100" is fixed to "1"
	ME Remote controller (Sub)	151 ~ 199, 200	1 Fixed  10 1	The address of main remote controller + 50 * The address automatically becomes "200" if it is set as "00"
System controller	ON/OFF remote controller	201 ~ 250	 100 10 1	The smallest group No. to be managed + 200 * The smallest group No. to be managed is changeable.
	AE-C400E/EW-C50E AE-200E/AE-50E EW-50E AG-150A AT-50B	000, 201 ~ 250	0,2 0~5 0~9 100 10 1	* AT-50B cannot be set to "000".
	PAC-YG50ECA	000, 201 ~ 250	0,2 0~5 0~9 100 10 1	* Settings are made on the initial screen of AG-150A.
	BAC-HD150	000, 201 ~ 250	0,2 0~5 0~9 100 10 1	* Settings are made with setting tool of BM ADAPTER.
PI, AI, DIDO	PAC-YG60MCA	01 ~ 50	 10 1	
	PAC-YG63MCA	01 ~ 50	 10 1	
	PAC-YG66DCA	01 ~ 50	 10 1	
LOSSNAY, OA processing unit		01 ~ 50	 10 1	After setting the addresses of all the indoor units, assign an arbitrary address.
PAC-IF01AHC		201 ~ 250	2 Fixed  10 1	

Note1: To set the address to "100", set it to "50"

Note2: Outdoor units OC, OS1 and OS2 in one refrigerant circuit system are automatically detected. OC, OS1 and OS2 are ranked in descending order of capacity. If units are the same capacity, they are ranked in ascending order of their address.

6-1. R410A Piping material

Refrigerant pipe for HYBRID CITY MULTI shall be made of phosphorus deoxidized copper, and has two types.
A. Type-O: Soft copper pipe (annealed copper pipe), can be easily bent with human's hand.
B. Type-1/2H pipe: Hard copper pipe (Straight pipe), being stronger than Type-O pipe of the same radical thickness.

The maximum operation pressure of R410A air conditioner is 4.30 MPa [623psi]. The refrigerant piping should ensure the safety under the maximum operation pressure. MITSUBISHI ELECTRIC recommends pipe size as Table 1, or You shall follow the local industrial standard. Pipes of radical thickness 0.7mm or less shall not be used.

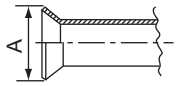
Table 1. Copper pipe size and radial thickness for R410A HYBRID CITY MULTI.

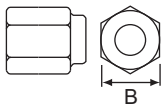
Size (mm)	Size (in.)	Radial thickness (mm)	Radial thickness (mil)	Pipe type
ø6.35	ø1/4"	0.8	[32]	Type-O
ø9.52	ø3/8"	0.8	[32]	Type-O
ø12.7	ø1/2"	0.8	[32]	Type-O
ø15.88	ø5/8"	1.0	[40]	Type-O
ø19.05	ø3/4"	1.2	[48]	Type-O
ø19.05	ø3/4"	1.0	[40]	Type-1/2H or H
ø22.2	ø7/8"	1.0	[40]	Type-1/2H or H
ø25.4	ø1"	1.0	[40]	Type-1/2H or H
ø28.58	ø1-1/8"	1.0	[40]	Type-1/2H or H
ø31.75	ø1-1/4"	1.1	[44]	Type-1/2H or H
ø34.93	ø1-3/8"	1.2	[48]	Type-1/2H or H
ø41.28	ø1-5/8"	1.4	[56]	Type-1/2H or H

* For pipe sized ø19.05 (3/4") for R410A air conditioner, choice of pipe type is up to you.
* The figures in the radial thickness column are based on the Japanese standards and provided only as a reference. Use pipes that meet the local standards.

Flare

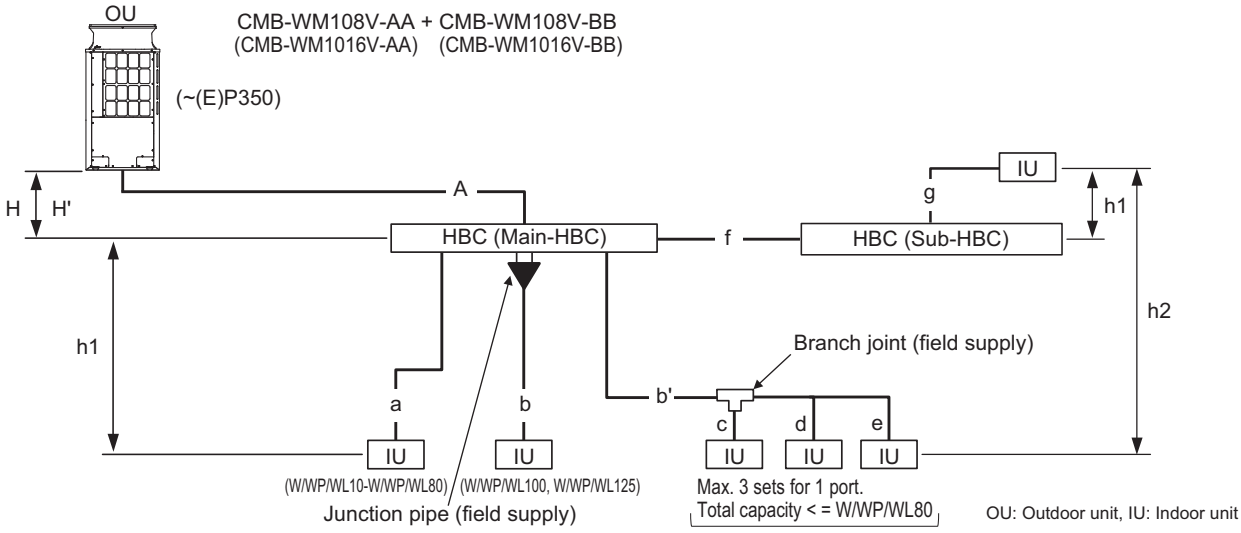
Due to the relative higher operation pressure of R410A compared to R22, the flare connection should follow dimensions mentioned below so as to achieve enough the air-tightness.

Flare pipe	Pipe size	A (For R410A) (mm[in.])
	ø6.35 [1/4"]	9.1
	ø9.52 [3/8"]	13.2
	ø12.70 [1/2"]	16.6
	ø15.88 [5/8"]	19.7
	ø19.05 [3/4"]	24.0

Flare nut	Pipe size	B (For R410A) (mm[in.])
	ø6.35 [1/4"]	17.0
	ø9.52 [3/8"]	22.0
	ø12.70 [1/2"]	26.0
	ø15.88 [5/8"]	29.0
	ø19.05 [3/4"]	36.0

6-2. Piping Design

6-2-1. Restrictions on pipe length



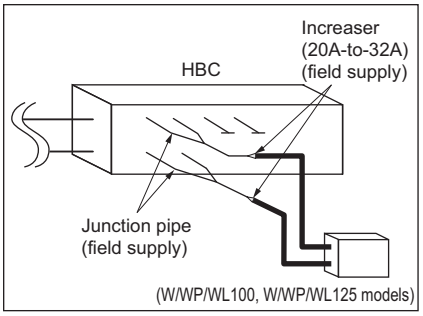
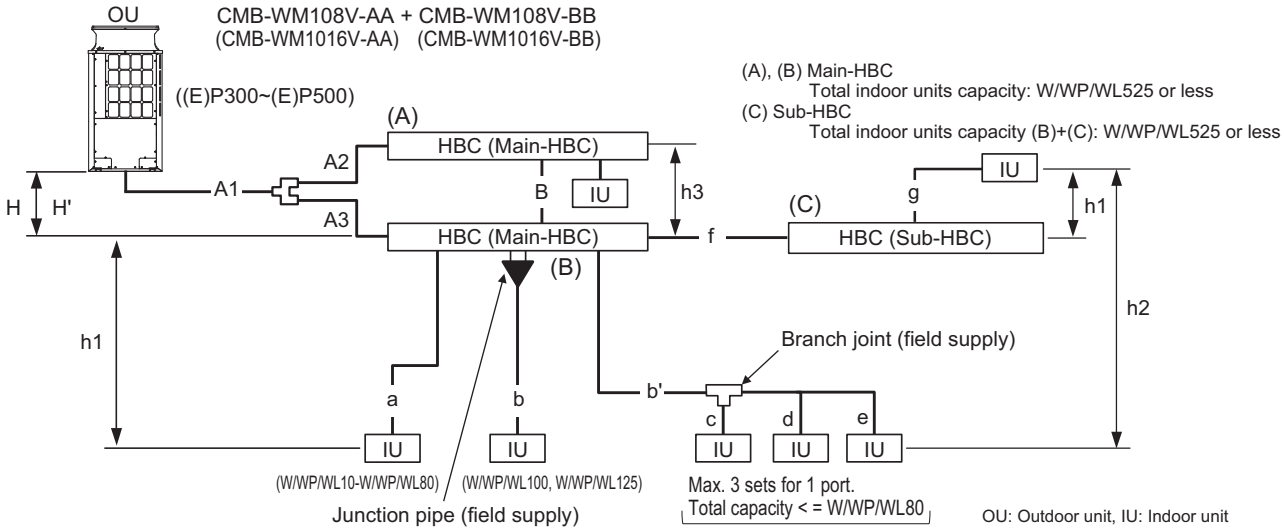


Fig. A

(Unit: m)

	Item		Piping portion	Allowable value
Pipe Lengths	Between outdoor unit and HBC (refrigerant pipework)		A	110 or less
	Water pipework between indoor units and HBC		f + g	60 or less
Difference of elevation	Between HBC and outdoor units	Outdoor unit above HBC	H	50 or less*1
		Outdoor unit below HBC	H'	40 or less*2
	Between indoor units and HBC		h1	15(10) or less*3
	Between indoor units		h2	15(10) or less*3

*1. 90 m is available depending on the model and installation conditions. For more detailed information, contact your local distributor.
*2. 60 m is available depending on the model and installation conditions. For more detailed information, contact your local distributor.
*3. Values in ( ) are applied when indoor total capacity exceeds 130% of outdoor unit capacity



(Unit: m)

	Item		Piping portion	Allowable value
Pipe Lengths	Between outdoor unit and HBC (refrigerant pipework)		A1 + A2 + A3	110 or less
	Water pipework between indoor units and HBC		f + g	60 or less
	Between HBC		B	40 or less
Difference of elevation	Between HBC and outdoor units	Outdoor unit above HBC	H	50 or less*1
		Outdoor unit below HBC	H'	40 or less*2
	Between indoor units and HBC		h1	15(10) or less*3
	Between indoor units		h2	15(10) or less*3
	Between HBC		h3	15(10) or less*3

*1. 90 m is available depending on the model and installation conditions. For more detailed information, contact your local distributor.
*2. 60 m is available depending on the model and installation conditions. For more detailed information, contact your local distributor.
*3. Values in ( ) are applied when indoor total capacity exceeds 130% of outdoor unit capacity

1. Refrigerant and water pipe size

(1) Refrigerant pipe between outdoor unit and HBC controller (Part A, A1, A2, and A3)

Use of one HBC controller

Unit model		HBC controller		
		Model name	High pressure side	Low pressure side
Outdoor unit side	PURY-(E)P200	(HBC controller) CMB-WM108V-AA CMB-WM1016V-AA *1	ø15.88 (Brazing)	ø19.05 (Brazing)
	PURY-(E)P250		ø19.05 (Brazing)	ø22.2 (Brazing)
	PURY-(E)P300		ø19.05 (Brazing)	ø22.2 (Brazing)
	PURY-(E)P350		ø19.05 (Brazing)	ø28.58 (Brazing)

Use of two HBC controllers

Unit model		HBC controller				
		Model name	Between outdoor unit and twining pipe		Between twining pipe and HBC controller	
			High pressure side	Low pressure side	High pressure side	Low pressure side
Outdoor unit side	PURY-(E)P300	(HBC controller) CMB-WM108V-AA CMB-WM1016V-AA *1	ø19.05 (Brazing)	ø22.2 (Brazing)	ø15.88 (Brazing) for each HBC controller	ø19.05 (Brazing) for each HBC controller
	PURY-(E)P350		ø19.05 (Brazing)	ø28.58 (Brazing)	ø15.88 (Brazing) for each HBC controller	ø19.05 (Brazing) for each HBC controller
	PURY-(E)P400		ø22.2 (Brazing)	ø28.58 (Brazing)	ø15.88 (Brazing) for each HBC controller	ø19.05 (Brazing) for each HBC controller
	PURY-(E)P450		ø22.2 (Brazing)	ø28.58 (Brazing)	ø19.05 (Brazing) for each HBC controller	ø22.2 (Brazing) for each HBC controller
	PURY-(E)P500		ø22.2 (Brazing)	ø28.58 (Brazing)	ø19.05 (Brazing) for each HBC controller	ø22.2 (Brazing) for each HBC controller

***1. PURY-(E)P400YNW model or larger requires a connection of two Main-HBC controller in parallel.**

(2) Water pipe between HBC controller and indoor units (Sections a, b, c, d, e, and g)

Total down-stream indoor unit capacity	Connection size		Pipe size	
	Water inlet	Water outlet	Water out	Water return
W/WP/WL10–50	O.D. 22 mm	O.D. 22 mm	I.D. ≥ 20 mm	I.D. ≥ 20 mm
W/WP/WL51–125			I.D. ≥ 30 mm	I.D. ≥ 30 mm

* For other indoor units, refer to the indoor unit's DATA BOOK.
* The pipe diameter depends on the capacity of indoor units.
Refer to the indoor unit's DATA BOOK for details.

(3) Water pipe between Main-HBC and Sub-HBC controller (Section f)

Total down-stream indoor unit capacity	Pipe size between Main-HBC and Sub-HBC controller
W/WP/WL10–100	I.D. ≥ 20.0 mm
W/WP/WL101–200	I.D. ≥ 25.8 mm
W/WP/WL201–300	I.D. ≥ 30.0 mm
W/WP/WL301–400	I.D. ≥ 33.3 mm
W/WP/WL401–500	I.D. ≥ 36.2 mm
W/WP/WL501–525	I.D. ≥ 36.8 mm

* The diameter of Main-HBC ports is O.D. 22.0 mm.
* The diameter of Sub-HBC ports is O.D. 28.0 mm.

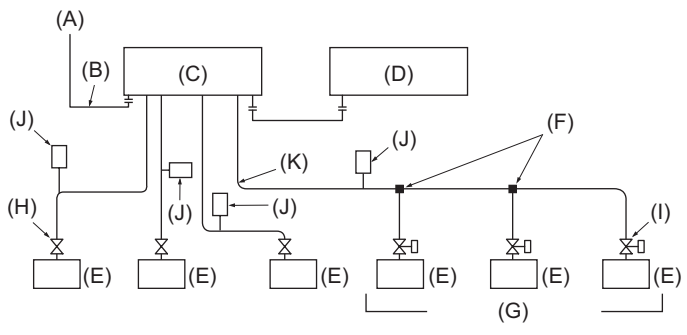
(4) Refrigerant pipe between HBC controller and HBC controller (Section B)

Unit: mm [inch]

ø15.88 [5/8"] (Brazed connection)

2. Connecting the HBC controller

(1) Size of the pipe that fits the standard HBC controller ports



(A) To outdoor unit
(B) End connection (brazing)
(C) Main-HBC controller
(D) Sub-HBC controller
(E) Indoor unit
(F) Branch joint (field supply)
(G) Up to three units for 1 branch hole; total capacity: below 80 (but in same mode, cooling/heating)
(H) Shutoff valve (field supply)
(I) Pressure control valve (field supply)
(J) Auto air vent valve (Highest point on the water pipe for each branch) (field supply)
(K) Water pipework

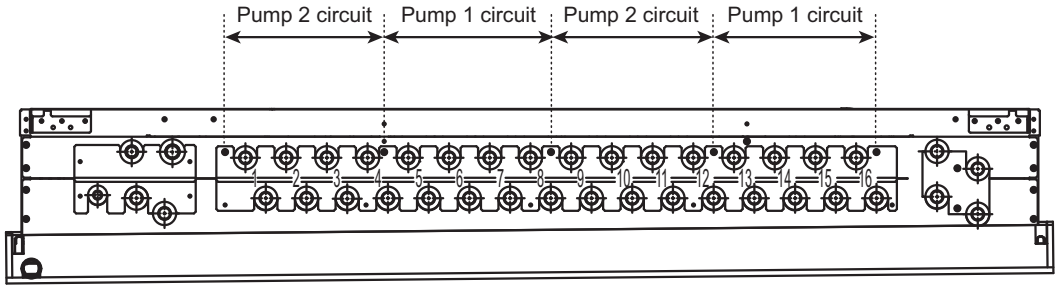


Fig. B

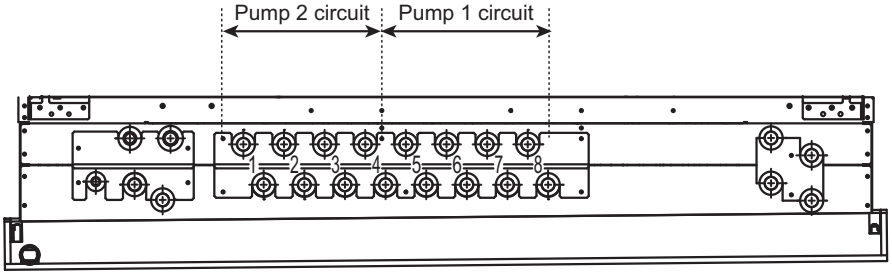


Fig. C

Note: 1

To connect multiple indoor units to a port

- Maximum total capacity of connected indoor units: W/WP/WL80
- Maximum number of connectable indoor units: 3 units
- Branch joints are field-supplied.
- All the indoor units that are connected to the same port must be in the same group and perform the Thermo-ON/OFF operation simultaneously.
- The room temperatures of all the indoor units in the group need to be monitored via the connected remote controller.
- When connecting a W/WP/WL71 through 125 model indoor unit to an HBC controller, the pipes that connect the unit to the same set of HBC controller ports cannot be branched out to connect additional units.
- Selection of water piping
  Select the size according to the total capacity of indoor units to be installed downstream.
- Do not connect multiple indoor units to the same port when operating each of them in different modes (cooling, heating, stop, and thermo-OFF). The indoor units connected to the same port must be set to operate in the same mode. Set them to the same group to make them run/stop in the same mode all together. Alternatively, enable the thermo setting on the remote controller, or set the common thermostat (optional) to run/stop the units in the same mode based on the representative temperature.
- When multiple indoor units are connected to a single port, install a pressure control valve in the pipe to equalize the pressure of all indoor units.
- Pressure control valves are required for the “WP-type” and “WL-type without the optional valve kit” indoor units only, and not for the “W-type” and “WL-type with the optional valve kit” indoor units.

Note: 2

Connecting W/WP/WL100 or 125 indoor units to an HBC controller

- When connecting W/WP/WL100 or 125 indoor units to an HBC controller, connect each unit to two sets of two ports on the HBC controller, using two junction pipes (Y-joints). (See Fig. A.)
- Connect an increaser (20A-to-32A) to the merged side of each junction pipe. (See Fig. A.)
- When the junction pipes are connected to 16 HBC ports, the branched sides of the junction pipes cannot be connected to the ports "4 and 5," "8 and 9," or "12 and 13" at the same time. (See Fig. B.)
- When the junction pipes are connected to 8 HBC ports, the branched sides of the junction pipes cannot be connected to the ports "4 and 5" at the same time. (See Fig. C.)
- When a W/WP/WL100 or a 125 model indoor unit is connected to an HBC controller, the pipes that connect the unit to the same set of HBC ports cannot be branched out to connect additional units.

Note: 3

Maximum capacity of indoor units connectable to an HBC controller for obtaining the rated performance

- An HBC controller has two pumps. Each pump can accommodate the capacity equivalent to W/WP/WL175 indoor units.
- When connecting the pipe to 16 HBC ports, make sure that the total capacity of the indoor units connected to ports "1 through 4 and 9 through 12" or "5 through 8 and 13 through 16" will not exceed W/WP/WL175 and will be equal as much as possible. (See Fig. B.)
  When connecting the pipe to 8 HBC ports, make sure that the total capacity of the indoor units connected to ports "1 through 4" or "5 through 8" will not exceed W/WP/WL175 and will be equal as much as possible. (See Fig. C.)
  If the total capacity exceeds W/WP/WL175, the performance will be degraded.

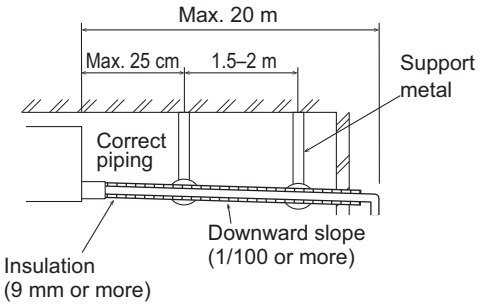
6-2-2. Drain piping work

1. Drain piping work

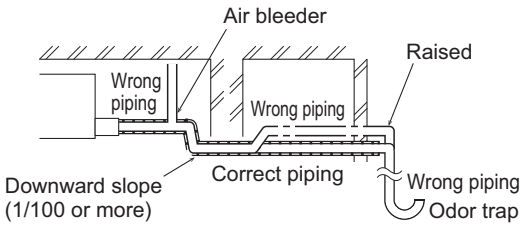
For Main-HBC and Sub-HBC controller

- Ensure that the drain piping is sloped downward (sloped gradient of more than 1/100) toward the discharge side. If it is impossible to take any downward pitch, use an optionally available drain pump to obtain a downward pitch of more than 1/100.
- Ensure that any horizontal drain piping sections that are longer than 20 m are supported with metal brackets to prevent it from bending, warping, or vibrating.
- Do not use any odor trap around the discharge port.
- As shown in (3), install a collecting pipe about 10 cm below the drain ports and give it a downward pitch of more than 1/100. This collecting pipe should be of VP-30.
- Set the end of drain piping in a place without any risk of odor generation.
- Do not put the end of the drain piping into any drain where ionic gases are generated.
- Drain piping may be installed in any direction. However, please be sure to observe the above instructions.

(1)

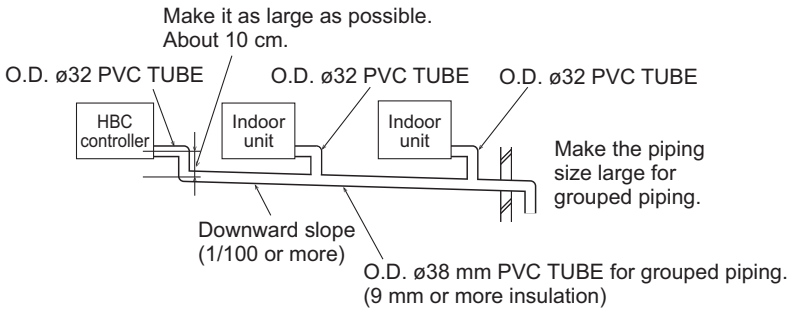


(2)



(3)

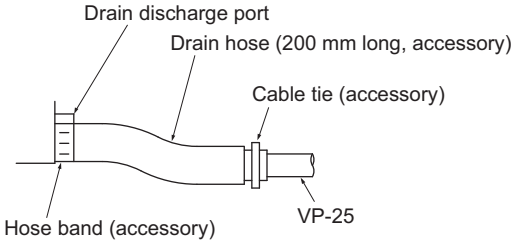
[Grouped piping]



For Main-HBC controller

- Connect the supplied drain hose to the discharge port on the unit. Use hardvinyl chloride pipes VP-25 (ø32). Tighten the supplied drain hose onto the discharge port using the supplied hose band. (For this, do not use any adhesive because the drain hose will need to be removed for servicing at a later date.)

(4)

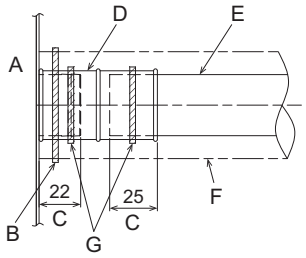


For Sub-HBC controller

♦For Sub-HBC controller, connect the drain pipe by following the steps described below.

1. Insert the drain hose (accessory) into the drain port (insertion margin: 32 mm).
   (The drain hose must not be bent more than 45° to prevent the hose from breaking or clogging.)
   (Attach the hose with glue, and fix it with the band (small, accessory).)
2. Attach the drain pipe (O.D. ø32 PVC TUBE PV-25, field supply).
   (Attach the pipe with glue, and fix it with the band (small, accessory).)
3. Perform insulation work on the drain pipe (O.D. ø32 PVC TUBE PV-25) and on the socket (including elbow).
4. Check the drainage.
5. Attach the insulating material, and fix it with the band (large, accessory) to insulate the drain port.

(5)



A: Sub-HBC controller
B: Tie band (accessory)
C: Insertion margin
D: Drain hose (accessory)
E: Drain pipe (O.D. ø32 PVC TUBE, field supply)
F: Insulating material (field supply)
G: Tie band (accessory)

2. Discharge test

After completing drain piping work, open the HBC controller panel, and test drain discharge using a small amount of water. Also, check to see that there is no water leakage from the connections.

3. Insulating drain pipes

Provide sufficient insulation to the drain pipes just as for refrigerant pipes.

⚠CAUTION

Be sure to provide drain piping with heat insulation in order to prevent excess condensation. Without drain piping, water may leak from the unit causing damage to your property.

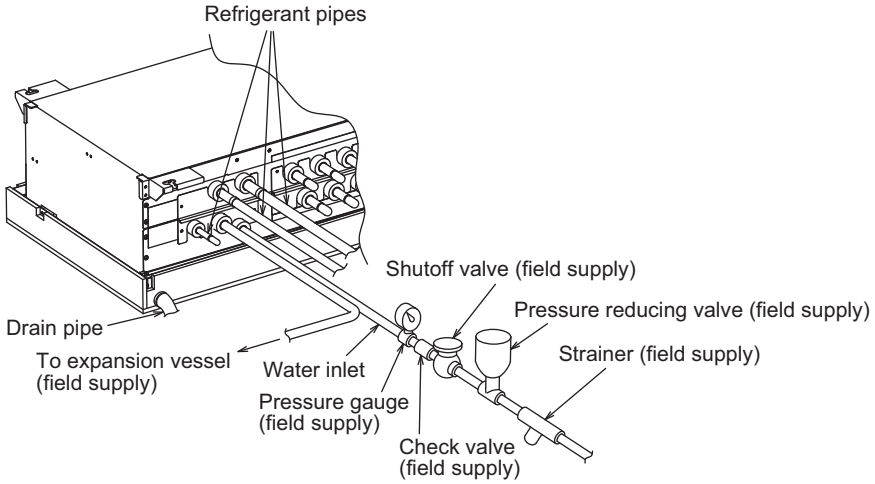
6-2-3. Connecting water pipe work

Please observe the following precautions during installation.

1. Important notes on water pipework installation

- The design pressure of the HBC controller water system is 0.6MPa.
- Use water pipe-work with a design pressure of at least 1.0MPa.
- When performing a water leak check, please do not allow the water pressure to go above 0.3MPa.
- Please connect the water pipework of each indoor unit to the correct port on the HBC controller. Failure to do so will result in incorrect running.
- Please list the indoor units on the naming plate in the HBC controller with addresses and end connection numbers.
- If the number of indoor units are less than the number of ports on the HBC controller, the unused ports must be capped. Without a cap, water will leak.
- Use the reverse-return method to insure proper pipe resistance to each unit.
- Provide some joints and valves around inlet/outlet of each unit for easy maintenance, checkup, and replacement.
- Install a suitable air vent on the water pipe. After flowing water through the pipe, vent any excess air.
- Secure the pipes with metal fittings, positioning them in locations to protect pipes against breakage and bending.
- Do not confuse the water intake and outlet piping. (Error code 5102 will appear on the remote controller if a test run is performed with the pipe-work installed incorrectly (inlet connected to outlet and vice versa).)
- This unit doesn't include a heater to prevent freezing within the pipe work. If the system is stopped for an extended period during low ambient conditions, drain the water out.
- The unused knockout holes should be closed and the refrigerant pipes, water pipes, power source and transmission wires access holes should be filled with putty.
- Install water pipe so that the water flow rate will be maintained.
- Wrap sealing tape as follows.
  1. Wrap the joint with sealing tape following the direction of the threads (clockwise), do not wrap the tape over the edge.
  2. Overlap the sealing tape by two-thirds to three-fourths of its width on each turn. Press the tape with your fingers so that it is tight against each thread.
  3. Do not wrap the 1.5th through 2nd farthest threads away from the pipe end.
- Hold the pipe on the unit side in place with a spanner when installing the pipes or strainer. Tighten screws to a torque of 40 N·m.
- If there is a risk of freezing, take precautions to prevent this happening.
- When connecting the HBC controller water piping and on site water piping, apply liquid sealing material for water piping over the sealing tape before connection.
- Please use copper or plastic pipes for the water circuit. Do not use steel or stainless steel pipework. Furthermore, when using copper pipe-work, use a non-oxidative brazing method. Oxidation of the pipe-work will reduce the pump life.
- Remove burr after cutting the piping to prevent entering the pipe connection. Prevent the particles that are generated during pipe cutting or cut edge treatment from entering the pipes. Check that there is no crack at the edge of the piping.
- Be sure to braze the water pipes after covering a wet cloth to the insulation pipes of the units in order to prevent them from burning and shrinking by heat. (There are some plastic parts in HBC controller.)
- Install the unit so that external force is not applied to the water pipes.
- After filling the pipes with water, immediately perform debris removal operation and air vent operation.

Example of heat source unit installation (using left piping)



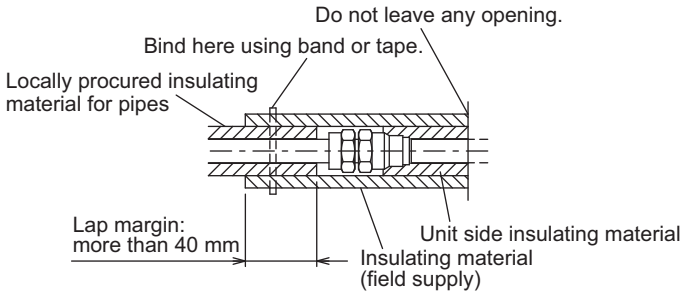
HBC controller sample installation (*1)

*1. Connect the pipes to the water pipes according to the local regulations.

- The HBC controller system must be serviced at least once a year.

2. Water pipe insulation

1. Connect the water pipes of each indoor unit to the same (correct) end connection numbers as indicated on the indoor unit connection section of each HBC controller. If connected to wrong end connection numbers, there will be no normal operation.
2. List indoor unit model names in the name plate on the HBC controller control box (for identification purposes), and HBC controller end connection numbers and address numbers in the name plate on the indoor unit side.
   Seal unused end connections using cover caps (field supply, dezincification resistant brass (DZR) or bronze only). Not replacing the rubber end caps will lead to water leakage.
3. Be sure to add insulation work to water piping by covering water pipework separately with enough thickness heat-resistant polyethylene, so that no gap is observed in the joint between indoor unit and insulating material, and insulating materials themselves. When insulation work is insufficient, there is a possibility of condensation, etc. Pay special attention to insulation work in the ceiling plenum.



♦Insulation materials for the pipes to be added on site must meet the following specifications:

HBC – indoor unit	20 mm or more
Main-HBC – Sub-HBC	20 mm or more

♦This specification is based on copper for water piping. When using plastic pipework, choose a thickness based on the plastic pipe performance.
♦Installation of pipes in a high-temperature high-humidity environment, such as the top floor of a building, may require the use of insulation materials thicker than the ones specified in the chart above.
♦When certain specifications presented by the client must be met, ensure that they also meet the specifications on the chart above.

4. Expansion vessel

♦Install an expansion tank to accommodate expanded water.
Expansion vessel selection criteria:
Water containment volume of the HBC controller
♦Refer to the relevant indoor unit specifications for information on the water volume.

(Unit: L)

Unit model	Water volume
CMB-WM108V-AA	10
CMB-WM1016V-AA	13
CMB-WM108V-BB	5
CMB-WM1016V-BB	9

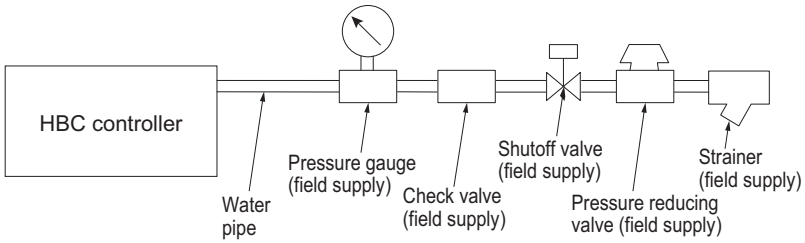
- The maximum water temperature is 60°C.
- The minimum water temperature is 5°C.
- The circuit protection valve set pressure is 370-490 kPa.
- The circulation pump head pressure is 0.24 MPa.

5. Leakproof the water pipework, valves and drain pipework. Leakproof all the way to, and include pipe ends so that condensation cannot enter the insulated pipework.
6. Apply caulking around the ends of the insulation to prevent condensation getting between the pipework and insulation.
7. Add a drain valve so that the unit and pipework can be drained.
8. Ensure there are no gaps in the pipework insulation. Insulate the pipework right up to the unit.
9. Ensure that the gradient of the drain pan pipework is such that discharge can only flow out.
10. HBC controller water pipe connection sizes and pipe sizes.

Total down-stream indoor unit capacity	Connection size		Pipe size	
	Water inlet	Water outlet	Water out	Water return
W/WP/WL10–50	O.D. 22 mm	O.D. 22 mm	I.D. ≥ 20 mm	I.D. ≥ 20 mm
W/WP/WL51–125			I.D. ≥ 30 mm	I.D. ≥ 30 mm

* For other indoor units, refer to the indoor unit's DATA BOOK.
* The pipe diameter depends on the capacity of indoor units.
Refer to the indoor unit's DATA BOOK for details.

11. Please refer to the figure below when connecting the water supply.



12. Use formula 0.1 ≤ 0.01 + 0.01 × A ≤ 0.16 for the supply pressure range to be used.
(A: Height difference (m) between the HBC controller and the highest indoor unit)
If the supply pressure is greater than 0.16 MPa, use a pressure reducing valve to keep the pressure within the range.
If the head pressure is unknown, set it to 0.16 MPa.
13. Install a shut off valve and strainer in a place that is easy to operate and makes maintenance work easy.
14. Apply insulation to the indoor unit pipework, strainer, shut off valve, and pressure reducing valve.
15. Please do not use a corrosion inhibitor in the water system.
16. When installing the HBC controller in an environment which may drop below 0°C, please add antifreeze (Propylene Glycol only) to the circulating water. For the brine selection, refer to 3-5. Correction by antifreeze solution concentration.

3. Water treatment and quality control

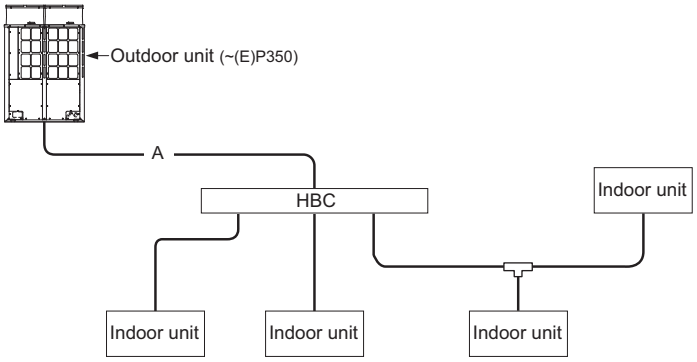
To preserve water quality, use the closed type of water circuit. When the circulating water quality is poor, the water heat exchanger can develop scale, leading to a reduction in heat-exchange power and possible corrosion. Pay careful attention to water processing and water quality control when installing the water circulation system.

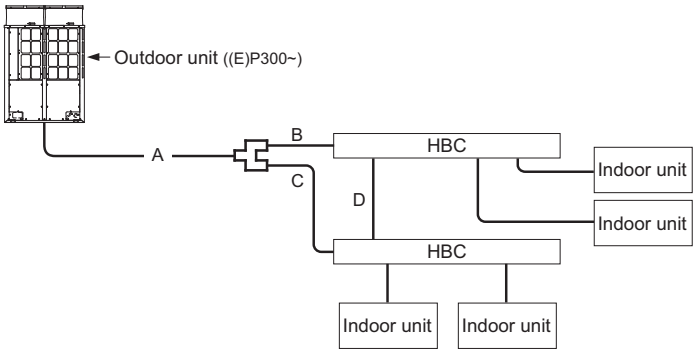
♦Removing of foreign objects or impurities within the pipes.
During installation, make sure that foreign objects, such as welding fragments, sealant particles, or rust, do not enter the pipes.

♦Water Quality Processing
Depending on the quality of the cold-temperature water used in the air-conditioner, the copper piping of the heat exchanger may corrode. Regular water quality processing is recommended. If a water supply tank is installed, keep air contact to a minimum, and keep the level of dissolved oxygen in the water no higher than 1 mg/ℓ.

6-3. Refrigerant charging calculation

Example





■ Sample calculation

Indoor 1: 50 A: ø19.05 42 m
2: 50
3: 50
4: 40
Outdoor P250

The total length of each liquid line is as follows:
ø19.05: A = 42 m, α_1 = 3.0

Therefore,
Additional refrigerant charge
= 42 × 0.14 + 3.0
= 8.88 kg
≒ 8.9 kg
* All pipe work except A is water pipe work.

Indoor 1: 50 A:ø22.20 18 m
2: 50 B:ø15.88 5 m
3: 50 C:ø15.88 10 m
4: 50 D:ø15.88 8 m
Outdoor P400

The total length of each liquid line is as follows:
ø22.20: A = 18 m, ø15.88: B + C = 15 m, α_1 = 3.0 × 2
Pipe between HBC controller and HBC controller: D = 8 m

Therefore,
Additional refrigerant charge
= 18 × 0.23 + (5 + 10) × 0.11 + 3.0 × 2 + 8 × 0.2
= 13.39 kg
≒ 13.4 kg
* All pipe work except A, B, C, D is water pipe work.

<Amount of refrigerant to be added>

The amount of refrigerant that is shown in the table below is factory-charged to the outdoor units.
The amount necessary for extended pipe (field piping) is not included and must be added on site.

Outdoor unit model	Amount of pre-charged refrigerant in the outdoor unit (kg)	Outdoor unit model	Amount of pre-charged refrigerant in the outdoor unit (kg)
P200YNW	5.2	P400YNW	8.0
P250YNW	5.2	P450YNW	10.8
P300YNW	5.2	P500YNW	10.8
P350YNW	8.0		

Outdoor unit model	Amount of pre-charged refrigerant in the outdoor unit (kg)
EP200YNW	5.2
EP250YNW	5.2
EP300YNW	5.2
EP350YNW	8.0
EP400YNW	8.0
EP450YNW	10.8
EP500YNW	10.8

■ Calculation formula

The amount of refrigerant to be added depends on the size and the length of field piping. (unit in m [ft])

1) When the distance between HBC controller and outdoor unit is longer than 30.5m:
Amount of added refrigerant (kg) = $(0.21 \times L_1) + (0.14 \times L_2) + (0.1 \times L_3) + \alpha_1 (+ 0.18 \times L_4)$ *1
2) When the distance between HBC controller and outdoor unit is 30.5 m or shorter:
Amount of added refrigerant (kg) = $(0.23 \times L_1) + (0.16 \times L_2) + (0.11 \times L_3) + \alpha_1 (+ 0.2 \times L_4)$ *1

L_1 : Length of ø22.20 [7/8"] high pressure pipe (m)
L_2 : Length of ø19.05 [3/4"] high pressure pipe (m)
L_3 : Length of ø15.88 [5/8"] high pressure pipe (m)
L_4 : Length of ø15.88 [5/8"] pipe between HBC controller and HBC controller (m)
α_1: Refer to the table below.
*1 Only when two main HBC controllers are used

Use of one HBC controller

Outdoor unit index	Diameter of high-pressure pipe
(E)P200	ø15.88
(E)P250	ø19.05
(E)P300	ø19.05
(E)P350	ø19.05

Amount for the HBC controller
α_1 (kg)
3.0

Round up the calculation result to the nearest 0.1 kg. (Example: 18.04 kg to 18.1 kg)

Use of two HBC controllers

Outdoor unit index	Diameter of high-pressure pipe
(E)P300	ø19.05
(E)P350	ø19.05
(E)P400	ø22.20
(E)P450	ø22.20
(E)P500	ø22.20

Amount for the HBC controller
α_1 (kg)
3.0

× 2

Refrigerant pipe between main HBC controller and main HBC controller
ø15.88 [5/8]

* When connecting PEFY-W50/63/71/80/100/125VMA2-A units, add 0.25 kg of refrigerant for each of these units.

6-4. Water piping

6-4-1. Precautions for water piping

Consider the following when installing a water piping system.

1. Design pressure of the water piping
   Use a water pipe that is strong enough to withstand the design pressure (1.0 MPa).
2. Water pipe type
   Use of plastic pipe is recommended.
   When using copper pipes, be sure to braze the pipes under a nitrogen purge. (Oxidation during may shorten the life of the pump.)
3. Expansion vessel
   Install an expansion vessel to accommodate expanded water.
4. Drain piping
   Install the drain pipe with a downward inclination of between 1/100 and 1/200. To prevent drain water from freezing in winter, install the drain pipe as steep an angle as practically possible and minimize the straight line. For cold climate installation, take an appropriate measure (e.g., drain heater) to prevent the drain water from freezing.
5. Insulation
   Cover the water pipe with insulating materials with the specified thickness or more to prevent thermal loss or condensation from collecting.
6. Air vent valve
   Install air vent valves to the highest places where air can accumulate.
7. Maintenance valve
   It is recommended to install valves on the inlet/outlet for each HBC controller branch for maintenance.
8. Water pressure gauge
   Install a water pressure gauge to check the charged pressure.

6-4-2. Notes on corrosion

1. Water quality
   It is important to check the water quality beforehand. See table below (Circulating water/Makeup Water Quality Standards).

Items		Lower mid-range temperature water system		Tendency	
		Recirculating water [20<T<60°C] [68<T<140°F]	Make-up water	Corrosive	Scale-forming
Standard items	pH (25°C[77°F])	7.0 ~ 8.0	7.0 ~ 8.0	○	○
	Electric conductivity (mS/m) (25°C[77°F]) (μS/cm) (25°C[77°F])	30 or less [300 or less]	30 or less [300 or less]	○	○
	Chloride ion (mg Cl^-/ ℓ)	50 or less	50 or less	○	
	Sulfate ion (mg SO_4^{2-}/ ℓ)	50 or less	50 or less	○	
	Acid consumption (pH4.8) (mg $CaCO_3$/ ℓ)	50 or less	50 or less		○
	Total hardness (mg $CaCO_3$/ ℓ)	70 or less	70 or less		○
	Calcium hardness (mg $CaCO_3$/ ℓ)	50 or less	50 or less		○
	Ionic silica (mg SiO_2/ ℓ)	30 or less	30 or less		○
Reference items	Iron (mg Fe/ ℓ)	1.0 or less	0.3 or less	○	○
	Copper (mg Cu/ ℓ)	1.0 or less	0.1 or less	○	
	Sulfide ion (mg S^{2-}/ ℓ)	not to be detected	not to be detected	○	
	Ammonium ion (mg NH_4^+/ ℓ)	0.3 or less	0.1 or less	○	
	Residual chlorine (mg Cl/ ℓ)	0.25 or less	0.3 or less	○	
	Free carbon dioxide (mg CO_2/ ℓ)	0.4 or less	4.0 or less	○	
	Ryzner stability index	–	–	○	○

Reference : Guideline of Water Quality for Refrigeration and Air Conditioning Equipment. (JRA GL02E-1994)

2. Debris in the water
   Sand, pebbles, suspended solids, and corrosion products in water can damage the metal pipe and heat exchanger on the HBC controller and may cause corrosion. When installing, prevent debris from entering the water. If there is debris in the water, perform debris removal operation after test run by cleaning the strainers inside the HBC controller.
3. Connecting pipes made of different materials
   Connecting pipes used for HBC controller and indoor unit are copper alloy pipes. If steel pipes are connected to the pipes, the contact surface will corrode. Do not use steel pipes to avoid corrosion.
4. Residual air
   Residual air in the pipe results in water pump malfunction, noise, or water pipe corrosion in the water circuit. Ensure air is purged before use.

6-5. Compatibility

<Horizontal type Main HBC connection>

Outdoor/Heat source unit	Main 1	Sub 1	Main 2	Sub 2	Compatibility
PURY(E)P-YNW PQRY-P-YLM	WM-V-AA type	–	–	–	Compatible
	WP type	–	–	–	Compatible
	WM-V-AA type	WM-V-BB type	–	–	Compatible
	WM-V-AA type	WM-V-AB type	–	–	Compatible
	WM-V-AA type	WP type	–	–	Compatible
	WP type	WM-V-BB type	–	–	Compatible
	WP type	WM-V-AB type	–	–	Compatible
	WP type	WP type	–	–	Compatible
	WM-V-AA type	–	WM-V-AA type	–	Compatible
	WM-V-AA type	–	WP type	–	Compatible
	WP type	–	WM-V-AA type	–	Compatible
	WP type	–	WP type	–	Compatible
	WM-V-AA type	WM-V-BB type	WM-V-AA type	–	Compatible
	WM-V-AA type	WM-V-BB type	WP type		Compatible
	WM-V-AA type	WM-V-AB type	WM-V-AA type		Compatible
	WM-V-AA type	WM-V-AB type	WP type		Compatible
	WM-V-AA type	WP type	WM-V-AA type		Compatible
	WM-V-AA type	WP type	WP type		Compatible
	WP type	WM-V-BB type	WM-V-AA type		Compatible
	WP type	WM-V-BB type	WP type		Compatible
	WP type	WM-V-AB type	WM-V-AA type		Compatible
	WP type	WM-V-AB type	WP type		Compatible
	WP type	WP type	WM-V-AA type		Compatible
	WP type	WP type	WP type		Compatible
	WM-V-AA type	–	WM-V-AA type	WM-V-BB type	Compatible
	WM-V-AA type	–	WM-V-AA type	WM-V-AB type	Compatible
	WM-V-AA type	–	WM-V-AA type	WP type	Compatible
	WM-V-AA type	–	WP type	WM-V-BB type	Compatible
	WM-V-AA type	–	WP type	WM-V-AB type	Compatible
	WM-V-AA type	–	WP type	WP type	Compatible
	WP type	–	WM-V-AA type	WM-V-BB type	Compatible
	WP type	–	WM-V-AA type	WM-V-AB type	Compatible
	WP type	–	WM-V-AA type	WP type	Compatible
	WP type	–	WP type	WM-V-BB type	Compatible
	WP type	–	WP type	WM-V-AB type	Compatible
	WP type	–	WP type	WP type	Compatible
	WM-V-AA type	WM-V-BB type	WM-V-AA type	WM-V-BB type	Compatible
	WM-V-AA type	WM-V-BB type	WM-V-AA type	WM-V-AB type	Compatible
	WM-V-AA type	WM-V-BB type	WM-V-AA type	WP type	Compatible
	WM-V-AA type	WM-V-BB type	WP type	WM-V-BB type	Compatible
	WM-V-AA type	WM-V-BB type	WP type	WM-V-AB type	Compatible
	WM-V-AA type	WM-V-BB type	WP type	WP type	Compatible
	WM-V-AA type	WM-V-AB type	WM-V-AA type	WM-V-BB type	Compatible
	WM-V-AA type	WM-V-AB type	WM-V-AA type	WM-V-AB type	Compatible
	WM-V-AA type	WM-V-AB type	WM-V-AA type	WP type	Compatible
	WM-V-AA type	WM-V-AB type	WP type	WM-V-BB type	Compatible
	WM-V-AA type	WM-V-AB type	WP type	WM-V-AB type	Compatible
	WM-V-AA type	WM-V-AB type	WP type	WP type	Compatible
	WM-V-AA type	WP type	WM-V-AA type	WM-V-BB type	Compatible
	WM-V-AA type	WP type	WM-V-AA type	WM-V-AB type	Compatible
	WM-V-AA type	WP type	WM-V-AA type	WP type	Compatible
	WM-V-AA type	WP type	WP type	WM-V-BB type	Compatible
	WM-V-AA type	WP type	WP type	WM-V-AB type	Compatible
	WM-V-AA type	WP type	WP type	WP type	Compatible
	WP type	WM-V-BB type	WM-V-AA type	WM-V-BB type	Compatible
	WP type	WM-V-BB type	WM-V-AA type	WM-V-AB type	Compatible
	WP type	WM-V-BB type	WM-V-AA type	WP type	Compatible
	WP type	WM-V-BB type	WP type	WM-V-BB type	Compatible
	WP type	WM-V-BB type	WP type	WM-V-AB type	Compatible
	WP type	WM-V-BB type	WP type	WP type	Compatible
	WP type	WM-V-AB type	WM-V-AA type	WM-V-BB type	Compatible
	WP type	WM-V-AB type	WM-V-AA type	WM-V-AB type	Compatible
	WP type	WM-V-AB type	WM-V-AA type	WP type	Compatible
	WP type	WM-V-AB type	WP type	WM-V-BB type	Compatible
	WP type	WM-V-AB type	WP type	WM-V-AB type	Compatible
	WP type	WM-V-AB type	WP type	WP type	Compatible
	WP type	WP type	WM-V-AA type	WM-V-BB type	Compatible
	WP type	WP type	WM-V-AA type	WM-V-AB type	Compatible
	WP type	WP type	WM-V-AA type	WP type	Compatible
	WP type	WP type	WP type	WM-V-BB type	Compatible
	WP type	WP type	WP type	WM-V-AB type	Compatible
	WP type	WP type	WP type	WP type	Compatible

<Vertical type Main HBC connection>

Outdoor/Heat source unit	Main 1	Sub 1	Sub 2	Sub 3	Compatibility
PURY(E)P-YNW PQRY-P-YLM	WM-F-AA type	–	–	–	Not compatible
	WM-F-AA type	WM-V-BB type	–	–	Not compatible
	WM-F-AA type	WM-V-AB type	–	–	Not compatible
	WM-F-AA type	WP type	–	–	Not compatible
	WM-F-AA type	WM-V-BB type	WM-V-BB type	–	Not compatible
	WM-F-AA type	WM-V-BB type	WM-V-AB type	–	Not compatible
	WM-F-AA type	WM-V-BB type	WP type	–	Not compatible
	WM-F-AA type	WM-V-AB type	WM-V-BB type	–	Not compatible
	WM-F-AA type	WM-V-AB type	WM-V-AB type	–	Not compatible
	WM-F-AA type	WM-V-AB type	WP type	–	Not compatible
	WM-F-AA type	WP type	WM-V-BB type	–	Not compatible
	WM-F-AA type	WP type	WM-V-AB type	–	Not compatible
	WM-F-AA type	WP type	WP type	–	Not compatible
	WM-F-AA type	WM-V-BB type	WM-V-BB type	WM-V-BB type	Not compatible
	WM-F-AA type	WM-V-BB type	WM-V-BB type	WM-V-AB type	Not compatible
	WM-F-AA type	WM-V-BB type	WM-V-BB type	WP type	Not compatible
	WM-F-AA type	WM-V-BB type	WM-V-AB type	WM-V-BB type	Not compatible
	WM-F-AA type	WM-V-BB type	WM-V-AB type	WM-V-AB type	Not compatible
	WM-F-AA type	WM-V-BB type	WM-V-AB type	WP type	Not compatible
	WM-F-AA type	WM-V-BB type	WP type	WM-V-BB type	Not compatible
	WM-F-AA type	WM-V-BB type	WP type	WM-V-AB type	Not compatible
	WM-F-AA type	WM-V-BB type	WP type	WP type	Not compatible
	WM-F-AA type	WM-V-AB type	WM-V-BB type	WM-V-BB type	Not compatible
	WM-F-AA type	WM-V-AB type	WM-V-BB type	WM-V-AB type	Not compatible
	WM-F-AA type	WM-V-AB type	WM-V-BB type	WP type	Not compatible
	WM-F-AA type	WM-V-AB type	WM-V-AB type	WM-V-BB type	Not compatible
	WM-F-AA type	WM-V-AB type	WM-V-AB type	WM-V-AB type	Not compatible
	WM-F-AA type	WM-V-AB type	WM-V-AB type	WP type	Not compatible
	WM-F-AA type	WM-V-AB type	WP type	WM-V-BB type	Not compatible
	WM-F-AA type	WM-V-AB type	WP type	WM-V-AB type	Not compatible
	WM-F-AA type	WM-V-AB type	WP type	WP type	Not compatible
	WM-F-AA type	WP type	WM-V-BB type	WM-V-BB type	Not compatible
	WM-F-AA type	WP type	WM-V-BB type	WM-V-AB type	Not compatible
	WM-F-AA type	WP type	WM-V-BB type	WP type	Not compatible
	WM-F-AA type	WP type	WM-V-AB type	WM-V-BB type	Not compatible
	WM-F-AA type	WP type	WM-V-AB type	WM-V-AB type	Not compatible
	WM-F-AA type	WP type	WM-V-AB type	WP type	Not compatible
	WM-F-AA type	WP type	WP type	WM-V-BB type	Not compatible
	WM-F-AA type	WP type	WP type	WM-V-AB type	Not compatible
	WM-F-AA type	WP type	WP type	WP type	Not compatible

Installation information

1. Installation information 2
1-1. General precautions 2
1-2. Precautions for Indoor unit, Hydro unit, and HBC controller 4
1-3. Precautions for outdoor unit/heat source unit 5
1-4. Precautions for control-related items 6

* Refer to the enclosed Installation Manual for details on installation. Arrange to have an expert install the system correctly.

1-1. General precautions

1-1-1. Usage

- The air-conditioning system described in this DATA BOOK is designed for human comfort.
- This product is not designed to assist in the preservation of food, provide conditions to maintain plants or animals, or stabilize environments for the preservation of precision equipment or art objects. To prevent loss of quality, do not use the product for purposes other than those it is designed for.
- To reduce the risk of water leakage and electric shock, do not use the product for air-conditioning vehicles or vessels.

1-1-2. Installation environment

- Do not install any unit other than the dedicated unit in an area where the voltage changes significantly, large amounts of mineral oil (e.g., cutting oil) are present, cooking oil may splash, or a large quantity of steam can be generated, such as a kitchen.
- Do not install the unit in acidic or alkaline environments.
- Installation should not be performed in locations exposed to chlorine or other corrosive gases. Avoid installation near sewers.
- To reduce the risk of fire, do not install the unit in an area where flammable gas may leak or flammable material is present.
- This air-conditioning unit has a built-in microcomputer. The effects of noise should be taken into consideration when deciding on the installation position. It is recommended that the air-conditioning unit be installed in a position away from antennas or electronic devices.
- Install the unit on a solid foundation in accordance with local safety measures against typhoons, wind gusts, and earthquakes to prevent the unit from being damaged, toppling over, or falling.

1-1-3. Backup system

- In regions in which the malfunctioning of the air conditioner may have a critical effect, it is recommended to have two or more systems made up of single outdoor/heat source units and multiple indoor units.

1-1-4. Unit characteristics

- The heat pump efficiency of the outdoor unit depends on the outdoor temperature. In heating mode, performance drops as the outside air temperature drops. In cold climates, performance can be poor. Warm air will continue to be trapped near the ceiling and the floor level will remain cold. In such cases, heat pumps require a supplemental heating system or air circulator. Before purchasing, consult your local distributor for assistance in selecting the unit and system.
- When the outdoor temperature is low and the humidity is high, the heat exchanger on the outdoor/heat source unit side tends to collect frost, which reduces its heating performance. The Auto-defrost function will be activated in order to remove the frost, and the heating mode will temporarily stop for 3-10 minutes. Heating mode will automatically resume upon completion of the defrost process.
- An air conditioner with a heat pump requires time to warm up the whole room after the heating operation begins, because the system circulates warm air in order to warm up the whole room.
- Sound levels were obtained in an anechoic room. Sound levels during actual operation are usually higher than the simulated values due to ambient noise and echoes. Refer to the section on "SOUND LEVELS" in the DATA BOOK for the measurement location.
- Depending on the operating conditions, the unit generates noise caused by valve actuation, refrigerant flow, and pressure changes even when operating normally. Try to avoid positioning the air conditioner in locations where quietness is required. With regard to the BC/HBC controller, it is recommended that the unit be installed in areas such as corridor ceilings, restrooms and plant rooms.
- The total capacity of the connected indoor units can be greater than the capacity of the outdoor/heat source unit. However, when the connected indoor units operate simultaneously, each unit's capacity may become smaller than the rated capacity.
- When the unit is started up for the first time within 12 hours after the power comes on, i.e. after a power failure, it performs initial startup operation (capacity control operation) to prevent damage to the compressor. The initial startup operation requires a maximum of 90 minutes to complete, depending on the operating load.

1-1-5. Related equipment

- Use an earth leakage breaker (ELB) with medium sensitivity, and an activation speed of 0.1 second or less.
- Consult your local distributor or a qualified technician when installing an earth leakage breaker.
- If the unit is an inverter type, select an earth leakage breaker able to respond to high harmonic waves and surges.
- Leakage current is generated not only through the air-conditioning unit but also through the power wires. The leakage current of the main power supply is therefore greater than the total leakage current of each unit. Take the capacity of the earth leakage breaker or leakage alarm into consideration when installing one at the main power supply. To measure the leakage current simply on site, use a measurement tool equipped with a filter, and clamp all the four power wires together. The leakage current measured on the ground wire may not be accurate because the leakage current from other systems may be included in the measurement value.
- Do not install a phase-advancing capacitor on a unit connected to the same power system as an inverter-type unit and its related equipment.
- If a large current flows due to the malfunctioning of the product or faulty wiring, both the earth leakage breaker on the product side and the upstream overcurrent breaker may trip almost at the same time. Separate the power system or coordinate all the breakers depending on the system's priority level.

1-1-6. Unit installation

- Your local distributor or a qualified technician must read the Installation Manual that is provided with each unit carefully before performing installation work.
- Consult your local distributor or a qualified technician when installing the unit. Improper installation by an unqualified person may result in water leakage, electric shock, or fire.
- Ensure that there is enough space around each unit.

1-1-7. Optional accessories

- Only use accessories recommended by Mitsubishi Electric. Consult your local distributor or a qualified technician when installing them. Improper installation by an unqualified person may result in water leakage, power leakage, system breakdown, or fire.
- Some optional accessories may not be compatible for use with the air-conditioning unit or may not be suitable for the installation conditions. Check the compatibility when considering any accessories.
- Note that some optional accessories may affect the air conditioner's external form, appearance, weight, operating sound, and other characteristics.

1-1-8. Operation/Maintenance

- Read the Instruction Book that is provided with each unit carefully prior to use.
- Maintenance or cleaning of each unit may be risky and require expertise. Read the Instruction Book to ensure safety. Consult your local distributor or a qualified technician when special expertise is required, such as when the indoor unit needs to be cleaned.

1-2. Precautions for Indoor unit, Hydro unit, and HBC controller

1-2-1. Operating environment

- If the refrigerant leaks, the oxygen level may drop to harmful levels. If the air conditioner is installed in a small room, measures must be taken to prevent the refrigerant concentration from exceeding the safety limit even if the refrigerant leaks.
- If the units operate in cooling mode at a humidity above 80%, condensation may collect and drip from the indoor units.
- Regular checking and cleaning of the drain drainage paths, such as the drain pan or the drain pump, is recommended to prevent clogging. The neglect of a clogged drain pump may trigger the water-leakage protection function which stops operation of the entire system.

1-2-2. Unit characteristics

- The return air temperature display on the remote controller may differ from the displays on the other thermometers.
- The clock on the remote controller may be displayed with a time lag of approximately one minute every month.
- The temperature measured by the built-in temperature sensor on the remote controller may differ from the actual room temperature due to the effect of the wall temperature.
- Use the built-in thermostat on the remote controller or a separately-sold thermostat when indoor units installed on or in the ceiling operate the automatic cooling/heating switchover.
- The room temperature may rise drastically due to Thermo OFF in areas where the air-conditioning load is large, such as computer rooms.
- Be sure to use a regular filter. If an irregular filter is installed, the unit may not operate properly, and operating noise may increase.
- The room temperature may increase above the preset temperature in environments in which the heating or airconditioning load is small.

1-2-3. Unit installation

- The insulation for the gas pipe between the hydro unit and the outdoor unit or the insulation for the low-pressure pipe between the HBC controller and the outdoor/heat source unit must be at least 20 mm thick. If the unit is installed on the top floor or in a high-temperature, high-humidity environment, thicker insulation may be necessary.
- Do not have any branching points on the downstream of the refrigerant pipe header.
- When a field-supplied external thermistor is installed or when a device for demand control is used, the unit may stop abnormally or damage may occur to the electromagnetic contactor. Consult your local distributor for details.
- Do not install the unit above the cooking or food processing area.

1-2-4. Noise level (Sound pressure level)

- The sound pressure level is a value measured in an anechoic room in accordance with the conventional method in JIS standard. The sound pressure level actually measured at the installation site is usually higher than the value indicated in this DATA BOOK due to the influence of ambient noise and echoes.

1-3. Precautions for outdoor unit/heat source unit

1-3-1. Installation environment

- The outdoor unit with the salt-resistant specification is recommended for use in an area in which it will be exposed to salt air.
- Even when the unit with the salt-resistant specification is used, it is not completely protected against corrosion. Be sure to follow the directions or precautions described in the Instruction Book and Installation Manual for installation and maintenance. The salt-resistant specification is referred to in the guidelines published by JRAIA (JRA9002).
- Install the unit in an area where the flow of discharge air is not obstructed. If the flow of discharge air is obstructed, short-cycling of discharge air may occur.
- Provide proper drainage around the base of the units; condensation may collect and drip from outdoor units. Provide water-proofing protection to the floor when installing the unit on the rooftop.
- In regions where snowfall can be expected, install the unit so that the outlet faces away from the direction of the wind, and install a snow guard to protect the unit from snow. Install the unit on a base approximately 50 cm higher than the expected snowfall. Close the openings for pipes and wiring, because the ingress of water and small animals may cause equipment damage. If a SUS snow guard is used, refer to the Installation Manual that comes with the snow guard and be careful with the installation to avoid the risk of corrosion.
- When the unit is expected to operate continuously for a long period of time at outside air temperatures of below 0ºC, take appropriate measures, such as the use of a unit base heater, to prevent ice forming on the unit base.
- Install the snow guard so that the outlet/inlet faces away from the direction of the wind.
- When approximately 50 cm or more of snow accumulates on the snow guard, remove the snow from the guard. Install a roof that is strong enough to withstand loads caused by snow in areas where snow accumulates.
- Provide proper protection around the outdoor units in places such as schools to avoid the risk of injury.
- A cooling tower and heat source water circuit should be a closed circuit so that water is not exposed to the atmosphere. When a tank is installed to ensure that the circuit has enough water, minimize the contact with outside air to ensure that the oxygen dissolved in the water is 1 mg/L or less.
- Install a strainer (50 mesh or more recommended) on the water pipe inlet on the heat source unit.
- Interlock the heat source unit and water circuit pump.
- Note the following to prevent the freezing and bursting of pipes when the heat source unit is installed in an area where the ambient temperature can be 0ºC or below.
  - Keep the water circulating to prevent it from freezing when the ambient temperature is 0ºC or below.
  - Before a long period of non-use, be sure to purge the water from the unit.
- The salt-resistant unit is resistant to salt corrosion, but not salt-proof.

Please note the following when installing and maintaining outdoor units in a marine environment.

1. Install the salt-resistant unit in an area in which it is not directly exposed to sea breezes, and minimize exposure to salt water mist.
2. Avoid installing a sun shade over the outdoor unit, so that rain will wash away salt deposits off the unit.
3. Install the unit horizontally to ensure proper water drainage from the base of the unit. Accumulation of water in the base of the outdoor unit will significantly accelerate corrosion.
4. Periodically wash salt deposits off the unit, especially when the unit is installed in a coastal area.
5. Repair all noticeable scratches after installation and during maintenance.
6. Periodically check the unit, and apply an anti-rust agent and replace corroded parts as necessary.

1-3-2. Circulating water

- Regularly check the quality of the water in the heat source unit, following the guidelines published by JRAIA (JRA-GL02-1994).
- A cooling tower and heat source water circuit should be a closed circuit so that water is not exposed to the atmosphere. When a tank is installed to ensure that the circuit has enough water, minimize the contact with outside air to ensure that the oxygen dissolved in the water is 1 mg/L or less.

1-3-3. Unit characteristics

- When the Thermo ON and OFF is frequently repeated on the indoor unit, the operating status of outdoor/heat source units may become unstable.

1-3-4. Related equipment

- Provide grounding in accordance with the local regulations.

1-3-5. Noise level (Sound pressure level)

- The sound pressure level is a value measured in an anechoic room in accordance with the conventional method in JIS standard. The sound pressure level actually measured at the installation site is usually higher than the value indicated in this DATA BOOK due to the influence of ambient noise and echoes.
  Valve operation noise and refrigerant flow noise may occur from inside the outdoor unit/heat-source unit.

1-4. Precautions for control-related items

1-4-1. Product specification

- To introduce the MELANS system, a consultation with us is required in advance. Especially to introduce the electricity charge-apportioning function or energy save function, further detailed consultation is required. Consult your local distributor for details.
- Billing calculation for AE-200E/AE-50E/EW-50E, or the billing calculation unit is unique and based on our original method. (Backup operation is included.) It is not based on the metering method, and do not use it for official business purposes. It is not the method that the amount of electric power consumption (input) by air conditioner is calculated. Note that the electric power consumption by air conditioner is apportioned by using the ratio corresponding to the operation status (output) for each air conditioner (indoor unit) in this method.
- In the apportioned billing function for AE-200E/AE-50E and EW-50E, separate watt-hour meters should be used for A-control units, K-control units, and CITY MULTI packaged air conditioners. It is recommended that an individual watt-hour meter should be used for large-capacity indoor units (with two or more addresses).
- When using the peak cut function on the AE-200E/AE-50E or EW-50E, note that the control is performed once every minute and it takes time to obtain the effect of the control. Take appropriate measures such as lowering the criterion value. Power consumption may exceed the limits if the AE-200E/AE-50E or EW-50E malfunctions or stops. Provide a back-up remedy as necessary.
- The controllers cannot operate while the indoor unit is OFF. (No error)
  Turn ON the power to the indoor unit when operating the controllers.
- When using the interlocked control function on the AE-200E/AE-50E/EW-50E/PAC-YG66DCA or PAC-YG63MCA, do not use the control for fire prevention or security. (This function should never be used in a way that would put people's lives at risk.) Employ any methods or circuits that allow ON/OFF operation using an external switch in case of failure.

1-4-2. Installation environment

- Surge protection may be required for the transmission line in areas where lightning strikes occur frequently.
- The receiver for a wireless remote controller may not work properly due to the effect of general lighting. Leave a space of at least 1 m between the general lighting and the receiver.
- When the auto-elevating panel is used and the system is operated using a wired remote controller, install the wired remote controller in a place where all the air conditioners being controlled (at least the bottom part of them) can be seen from the wired remote controller. If not, the descending panel may cause damage or injury; be sure to use a wireless remote controller designed for use with the elevating panel (sold separately).
- Install the wired remote controller (switch box) in a place where the following conditions are met.
  - Where the installation surface is flat
  - Where the remote controller can detect an accurate room temperature
    The temperature sensors that detect the room temperature are installed both in the remote controller and in the indoor unit.
    When the room temperature is detected using the sensor in the remote controller, the main remote controller is used to detect the room temperature. In this case, follow the instructions below.
    - Install the controller in a place where it is not affected by a heat source.
      (If the remote controller faces direct sunlight or the direction of the supply air flow, the remote controller cannot detect the accurate room temperature.)
    - Install the controller in a place where the average room temperature can be detected.
    - Install the controller in a place where no other wires are present around the temperature sensor.
      (If other wires are present, the remote controller cannot detect an accurate room temperature.)
- To prevent unauthorized access, always use a security device such as a VPN router when connecting the AE-200E/AE-50E or EW-50E to the Internet.

Caution for refrigerant leakage for R410A

1. Caution for refrigerant leakage for R410A 2
1-1. Refrigerant property 2
1-2. Confirm the Critical concentration and take countermeasure 2

The installer and/or air conditioning system specialist shall secure safety against refrigerant leakage according to local regulations or standards.
The following standard may be applicable if no local regulation or standard is available.

1-1. Refrigerant property

R410A refrigerant is harmless and incombustible. The R410A is heavier than the indoor air in density. Leakage of the refrigerant in a room has possibility to lead to a hypoxia situation. Therefore, the critical concentration specified below shall not be exceeded even if the leakage happens.

- **Critical concentration**

Critical concentration hereby is the refrigerant concentration in which no human body would be hurt if immediate measures can be taken when refrigerant leakage happens.

Critical concentration of R410A: 0.44kg/m^3
(The weight of refrigeration gas per 1 m^3 air conditioning space.);
* The Critical concentration is subject to ISO5149, EN378-1.

For the CITY MULTI system, the concentration of refrigerant leaked should not have a chance to exceed the critical concentration in any situation.

1-2. Confirm the Critical concentration and take countermeasure

The maximum refrigerant leakage concentration (Rmax) is defined as the result of the possible maximum refrigerant weight (Wmax) leaked into a room divided by its room capacity (V). It is referable to Fig.1-1. The refrigerant of Outdoor/Heat source unit here includes its original charge and additional charge at the site.
The additional charge is calculated according to the refrigerant charging calculation of each kind of Outdoor/Heat source unit, and shall not be over charged at the site. Procedure 1-2-1~3 tells how to confirm maximum refrigerant leakage concentration (Rmax) and how to take countermeasures against a possible leakage.

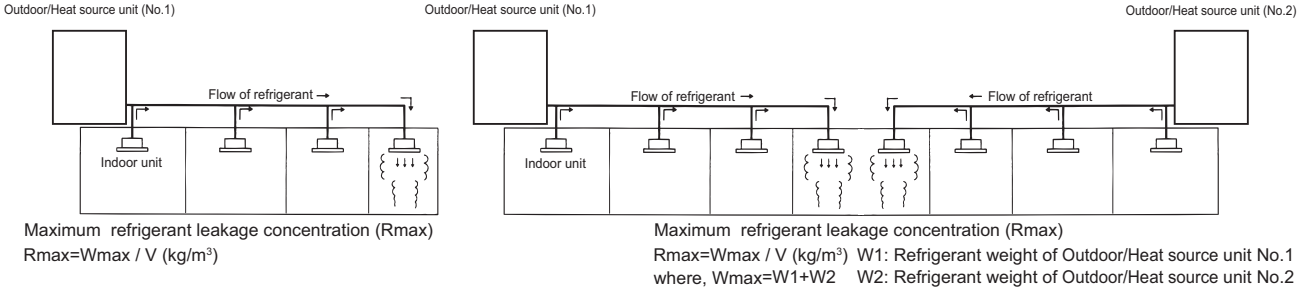


Fig. 1-1 The maximum refrigerant leakage concentration

1-2-1.Find the room capacity (V),
If a room having total opening area more than 0.15% of the floor area at a low position with another room/space, the two rooms/space are considered as one.The total space shall be added up.
1-2-2.Find the possible maximum leakage (Wmax) in the room.If a room has Indoor unit(s) from more than 1 Outdoor/Heat source unit, add up the refrigerant of the Outdoor/Heat source units.
1-2-3.Divide (Wmax) by (V) to get the maximum refrigerant leakage concentration (Rmax).
1-2-4.Find if there is any room in which the maximum refrigerant leakage concentration (Rmax) is over 0.44kg/m^3.
If no, then the CITY MULTI is safe against refrigerant leakage.
If yes, following countermeasure is recommended to do at site.
Countermeasure 1: Let-out (making V bigger)
Design an opening of more than 0.15% of the floor area at a low position of the wall to let out the refrigerant whenever leaked.
e.g.make the upper and lower seams of door big enough.
Countermeasure 2: Smaller total charge (making Wmax smaller)
e.g.Avoid connecting more than 1 Outdoor/Heat source unit to one room.
e.g.Using smaller model size but more Outdoor/Heat source units.
e.g.Shorten the refrigerant piping as much as possible.
Countermeasure 3: Fresh air in from the ceiling (Ventilation)
As the density of the refrigerant is bigger than that of the air. Fresh air supply from the ceiling is better than air exhausting from the ceiling.
Fresh air supply solution refers to Fig.1-2~4.

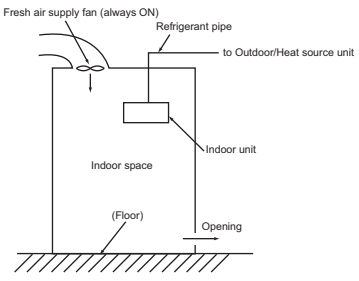


Fig.1-2.Fresh air supply always ON

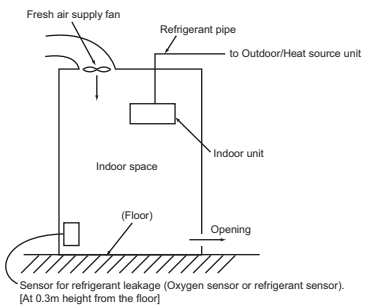


Fig.1-3.Fresh air supply upon sensor action

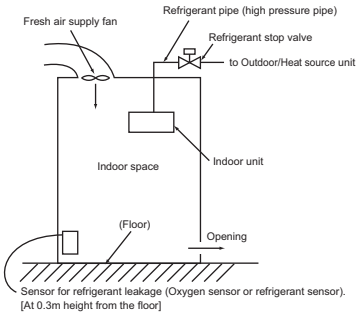


Fig.1-4.Fresh air supply and refrigerant shut-off upon sensor action

Note 1. Countermeasure 3 should be done in a proper way in which the fresh air supply shall be on whenever the leakage happens.
Note 2. In principle, MITSUBISHI ELECTRIC requires proper piping design, installation and air-tight testing after installation to avoid leakage happening.
In the area should earthquake happen, anti-vibration measures should be fully considered.
The piping should consider the extension due to the temperature variation.

⚠Warning

■ Do not use refrigerant other than the type indicated in the manuals provided with the unit and on the nameplate.
- Doing so may cause the unit or pipes to burst, or result in explosion or fire during use, 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.

■ Our air conditioning equipment and heat pumps contain a fluorinated greenhouse gas, R410A.

MITSUBISHI ELECTRIC CORPORATION

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