

Engineering Data

Design Manual

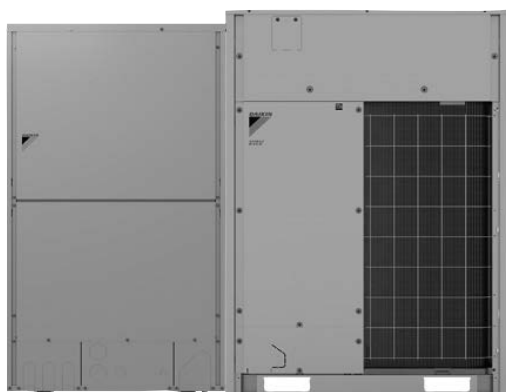
RXHWQ120MQTJA

BWLP120TJU

BRP26B2VJU

All-Electric Commercial Hot Water Generation System 60 Hz

R-134a **R-410A**



Mega-Q

1. Basic Information	4
1. Features and Benefits.....	4
2. System Overview.....	5
3. Nomenclature.....	6
2. Selection Procedure	7
1. Model Selection Table	7
2. Hot Water Generation System Load Calculation and Model Selection Procedure	8
2.1 Hot Water Generation System Load Calculation and Model Selection Procedure	8
2.2 Model Selection Flow for Hot Water Generation System for Large Commercial	9
2.3 Piping Heat Loss	10
2.4 Model Selection Procedure	11
3. Specification	13
1. External Appearance	13
2. Specifications.....	14
3. Dimensions	16
4. Service Space.....	19
5. Center of Gravity.....	20
6. Foundation Drawing.....	22
7. Piping Diagrams.....	23
8. Wiring Diagrams	25
9. Field Wiring.....	28
10. Electrical Characteristics.....	29
11. Capacity Tables	30
12. Head Pressure Curve (Integrated Water Pump) (Reference Data).....	31
13. Operation Limits.....	32
14. Sound Levels (Reference Data).....	33

1. Basic Information

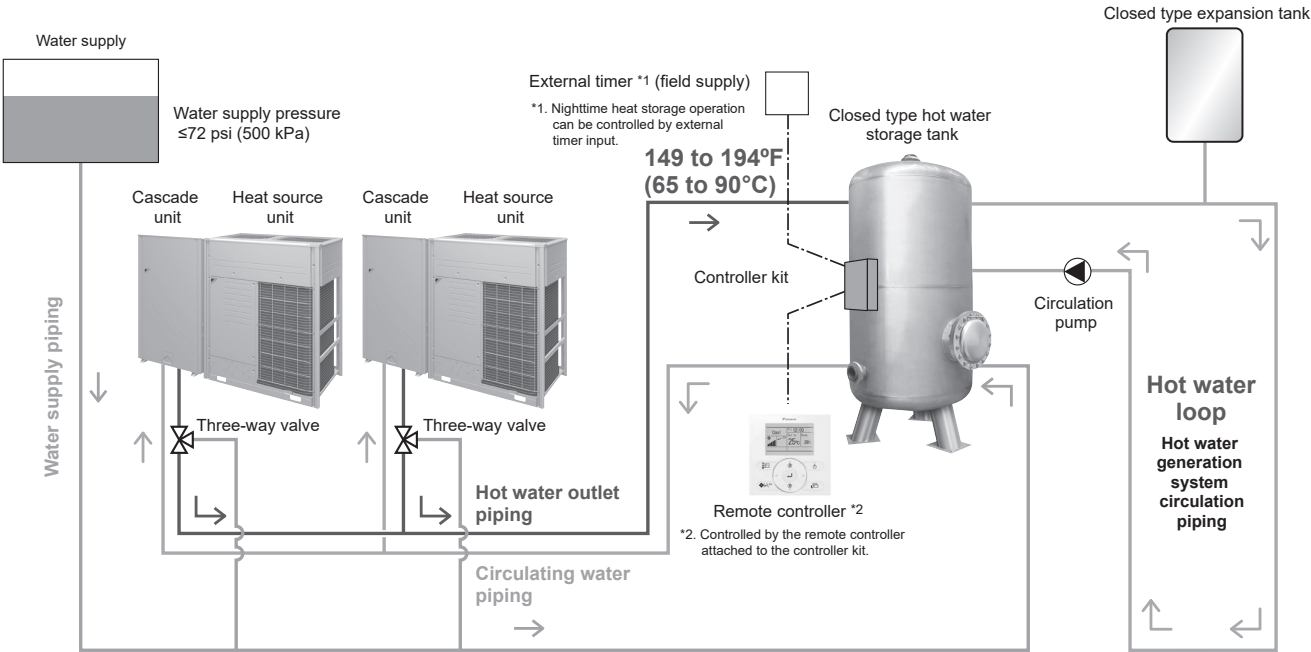
1. Features and Benefits

- All-electric heat pump technology for non-potable hot water generation in commercial applications.
- Dependable hot water generation in outdoor ambient from -4°F DB to 109°F DB (-20°C DB to 43°C DB).
- Customizable high leaving water temperatures from 140°F to 194°F (60°C to 90°C) with inlet water temperatures from 41°F to 176°F (5 °C to 80°C).
- Year-round high efficiencies with up to 4.6 COP* thanks to Daikin's inverter heat pump and cascade technologies.
- Scalable and modular system design allows for up to 6 Daikin Mega-Q systems to connect to the same hydronic loop, achieving total nominal capacity of 720 MBH*.
- Flexible application design with a vertical separation of up to 65 feet between the heat source unit and the cascade unit.
- Modular and compact system design enables installation indoors or outdoors.
- Built- in variable-speed water pump increases waterside system efficiencies compared to single-speed pumps and can handle water flow rates of up to 3.8 gallons per minute (GPM).

*Based on heating conditions at the outdoor temperature of 77°F DB/69.8°F WB (25°C DB/21°C WB), the outlet water temperature of 149°F (65°C), and the inlet water temperature of 75.2°F (24°C).

2. System Overview

Connecting to Closed Type Water System



System configuration (basic system)

Equipment name		Model	Remarks
Equipment	Heat source unit + cascade unit	RXHWQ120MQTJA + BWLP120TJU	• Up to 6 Mega-Q systems can be connected on the same water loop depending on load required.
Water Temperature Sensors	Controller kit <required sold separately>	BRP26B2VJU	• At least one tank controller kit is required per tank. • To be installed on-site. • For proper system operation, it is necessary to use all three water temperature sensors along with the remote controller on the tank.
Control	Remote controller (Controller kit accessory)	BRP26B2VJU	• Can control up to 8 Mega-Q systems.
Tank	Closed type hot water storage tank (field supply)	—	• Select according to the amount of hot water stored.

Note:

The heat source component of Mega-Q should be used for heating water for non-potable use only, not for other applications such as but not limited to space heating or cooling.

Remote controller

(included in the tank controller kit - BRP26B2VJU)

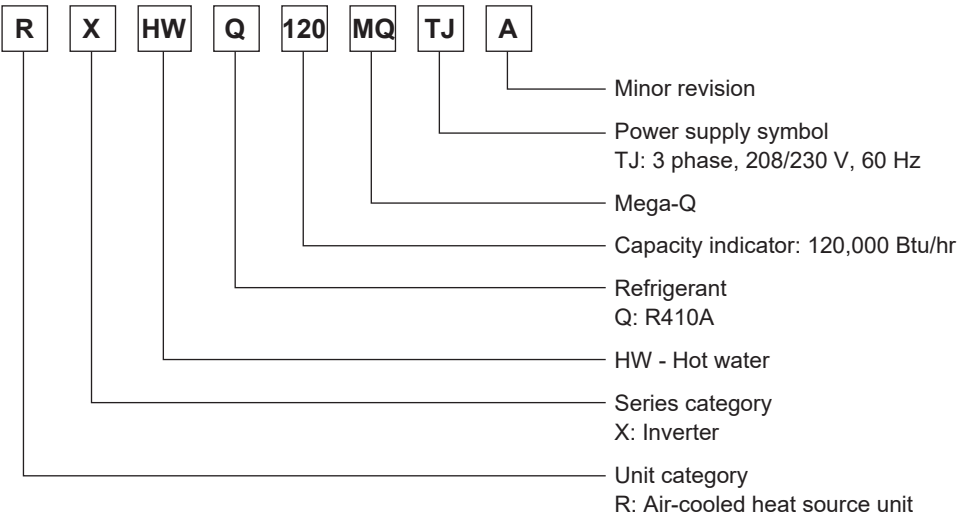


Controller kit (Required and ordered separately)

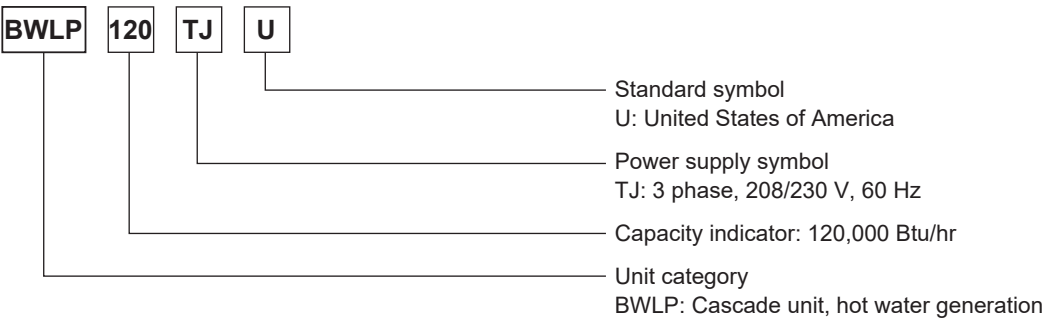
Model name		BRP26B2VJU
Power supply		208/230 V, 60 Hz
Dimensions	Height × Width × Depth	20-19/32 inch × 16-11/32 inch × 5-5/8 inch (523 mm × 415 mm × 143 mm)
Exterior color		Ivory white (5Y7.5/1)
Accessories (harness length)		• Temperature sensor 1 (9.8 ft (3 m)) • Temperature sensor 2 (14.1 ft (4.3 m)) • Temperature sensor 3 (18.4 ft (5.6 m)) • Remote controller

3. Nomenclature

Heat source unit



Cascade unit



2. Selection Procedure

1. Model Selection Table

Note:

1. The selection table below is only a guide. Please contact our sales representative for details.
2. For a scale larger than those listed in the table, please contact our sales representative.

'Mega-Q hot water generation system' refers to a set of heat source unit + cascade unit.

Hot water amount per day (gallon)		1.1 k	1.6 k	2.1 k	2.6 k	3.2 k	3.7 k	4.2 k	4.8 k	5.3 k	5.8 k	6.3 k	6.9 k	7.4 k
At ambient temperature (32°F (0°C)), inlet water temperature (41°F (5°C)), outlet water temperature (140°F (60°C))	# of Mega-Q systems	1			2				3				4	
At ambient temperature (23°F (−5°C)), inlet water temperature (41°F (5°C)), outlet water temperature (140°F (60°C))	# of Mega-Q systems	1			2				3				4	
At ambient temperature (14°F (−10°C)), inlet water temperature (41°F (5°C)), outlet water temperature (140°F (60°C))	# of Mega-Q systems	1		2				3			4			

Hot water amount per day (gallon)		7.9 k	8.5 k	9.0 k	9.5 k	10.0 k	10.6 k	11.1 k	11.6 k	12.2 k	12.7 k	13.2 k	13.7 k	14.3 k
At ambient temperature (32°F (0°C)), inlet water temperature (41°F (5°C)), outlet water temperature (140°F (60°C))	# of Mega-Q systems	4			5				6				7	
At ambient temperature (23°F (−5°C)), inlet water temperature (41°F (5°C)), outlet water temperature (140°F (60°C))	# of Mega-Q systems	4			5				6				7	
At ambient temperature (14°F (−10°C)), inlet water temperature (41°F (5°C)), outlet water temperature (140°F (60°C))	# of Mega-Q systems	4	5			6				7				

Hot water amount per day (gallon)		14.8 k	15.3 k	15.9 k	16.4 k	16.9 k	17.4 k	18.0 k	18.5 k	19.0 k	19.5 k	20.1 k	20.6 k	21.1 k
At ambient temperature (32°F (0°C)), inlet water temperature (41°F (5°C)), outlet water temperature (140°F (60°C))	# of Mega-Q systems	7			8				9				10	
At ambient temperature (23°F (−5°C)), inlet water temperature (41°F (5°C)), outlet water temperature (140°F (60°C))	# of Mega-Q systems	7			8				9				10	
At ambient temperature (14°F (−10°C)), inlet water temperature (41°F (5°C)), outlet water temperature (140°F (60°C))	# of Mega-Q systems	8			9				10				11	

Hot water amount per day (gallon)		21.7 k	22.2 k	22.7 k	23.2 k	23.8 k	24.3 k	24.8 k
At ambient temperature (32°F (0°C)), inlet water temperature (41°F (5°C)), outlet water temperature (140°F (60°C))	# of Mega-Q systems	10			11			
At ambient temperature (23°F (−5°C)), inlet water temperature (41°F (5°C)), outlet water temperature (140°F (60°C))	# of Mega-Q systems	10			11			
At ambient temperature (14°F (−10°C)), inlet water temperature (41°F (5°C)), outlet water temperature (140°F (60°C))	# of Mega-Q systems	11		12				

Note: Estimate based on an outlet water temperature of 140°F (60°C). This serves as a general guideline and may vary depending on the specific application.

2. Hot Water Generation System Load Calculation and Model Selection Procedure

2.1 Hot Water Generation System Load Calculation and Model Selection Procedure

This section explains load calculation and model selection for Mega-Q.

2.1.1 Hot Water Generation System Load Calculation and Model Selection

To estimate hot water generation system load requires broadly separated into 3 calculations as follows.

(1) Daily hot water generation system load

- Hot water generation system load used in application.

(2) Piping circulation load

- Heat radiation load associated with piping circulation when supplying instant hot water

(3) Tank heat radiation load

- Heat radiation load from the hot water storage tank

2.2 Model Selection Flow for Hot Water Generation System for Large Commercial

Calculate the hot water generation system load (required hot water amount) and piping circulation load.



Determine the hot water storage tank capacity that satisfies the required hot water amount.



Calculate tank heat radiation load.



Determine the required heating capacity by deciding the heat storage operation time. ^(*1)



(*1) The basic heat storage time is 10 hours, and the number of heat source units can be adjusted depending on the operation time.

Check the heat source capacity under design conditions (ambient temperature, water supply temperature). ^(*2)



(*2) The capacity shall be determined from the performance characteristics.

Determine the number of heat source units that will satisfy the hot water generation system load (required hot water amount), piping circulation load, and tank heat radiation load.

2.3 Piping Heat Loss

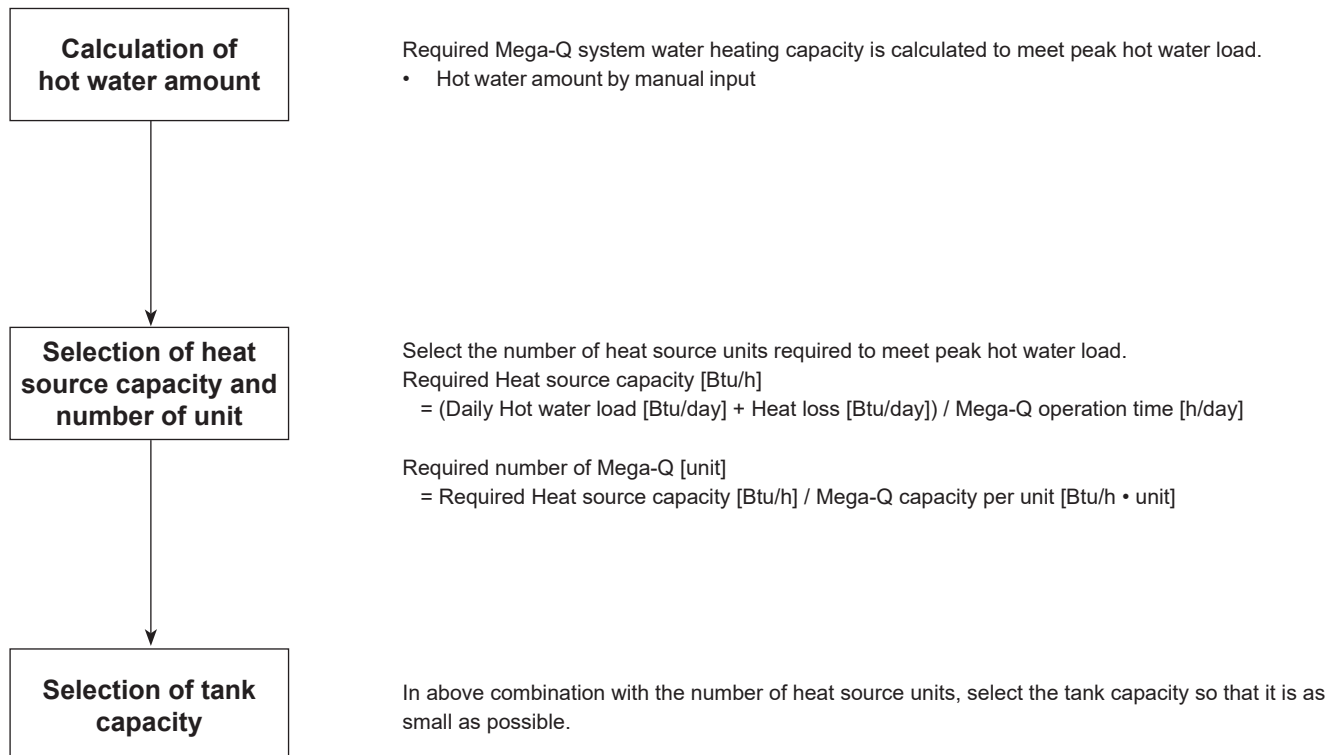
Table 1-1: [Piping heat loss] (example)

	[W/(m·°C)]														
Pipe diameter mm	15	20	25	30	32	40	50	60	65	75	80	100	125	150	
Copper pipe with heat insulation	0.20	0.24	0.28	—	0.32	—	0.36	0.43	—	0.44	—	0.51	0.63	0.75	0.77
Stainless steel pipe with heat insulation	0.20	0.24	0.28	0.31	1.10	—	0.37	0.40	0.41	—	0.49	0.55	0.68	0.80	0.81
Bare copper pipe	0.50	0.70	0.90	—		1.30	1.70	—	2.09	—	2.49	3.29	4.09	4.89	
Bare stainless steel pipe	0.50	0.70	0.90	1.07		1.34	1.53	1.90	—	2.40	2.80	3.59	4.39	5.19	

2.4 Model Selection Procedure

2.4.1 Selection Procedure

Create a proposal on the following flow.



2.4.2 Logic of Model Selection

<Calculation of daily hot water amount>

Calculate the daily hot water amount for the application.

Daily hot water amount [gal(L)/day]

<Calculation of hot water amount by time>

Allow data point entry by user for daily hot water generation system at the hour points for calculation.

(a) Margin of safety

Hot water generation system load for a day is then multiplied by a flat margin of safety to calculate the final time-based hot water generation system load. This final time-based hot water generation system load is used to model selection.

Selection number of heat source units

The capacity of heat source unit is calculated by the formula below.

Required heat source capacity [kW] = daily hot water generation system load [kWh/day] / heat source operating time [h/day]

In addition, the required number of heat source units is calculated by the formula below (round up the decimal places).

Required heat source unit [qty] = required heat source capacity [kW] / heat source capacity per unit

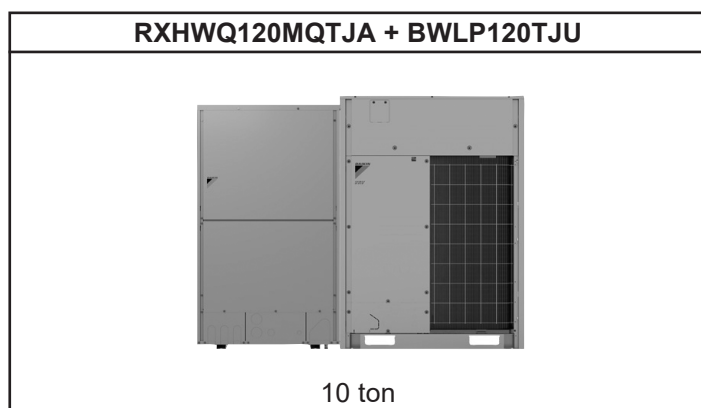
Where the heat source capacity per unit uses the heat source capacity that takes into account the lowest outside temperature in the weather data for the location and the influence of the water supply temperature at that time.

Selection of tank capacity

Select a tank with the smallest possible capacity from among the tanks that can process when using the required number of heat source units.

3. Specification

1. External Appearance



2. Specifications

RXHWQ120MQTJA + BWLP120TJU

Hot water storage heating performance	Intermediate hot water storage heating capacity ★1 ★9		Btu/h (kW)	119000 (35.0)	
	Intermediate hot water storage heating power consumption ★1 ★9		Btu/h (kW)	30000 (8.75)	
	Intermediate hot water storage heating COP			4	
	Winter hot water storage heating capacity ★2 ★9		Btu/h (kW)	119000 (35.0)	
	Winter hot water storage heating power consumption ★2 ★9		Btu/h (kW)	34000 (10.1)	
	Hot water storage heating in winter COP			3.5	
	Summer hot water storage heating capacity ★3 ★9		Btu/h (kW)	119000 (35.0)	
	Summer hot water storage heating power consumption ★3 ★9		Btu/h (kW)	26000 (7.61)	
	Summer hot water storage heating COP			4.6	
	Hot water storage heating capacity during frost formation ★4 ★9		Btu/h (kW)	119000 (35.0)	
	Hot water storage heating power consumption during frost formation ★4 ★9		Btu/h (kW)	48000 (14.0)	
	Hot water storage heating during frost formation COP			2.5	
Heat retention and heating performance	Intermediate heat retention heating capacity ★5 ★9		Btu/h (kW)	44000 (13.0)	
	Intermediate heat retention heating power consumption ★5 ★9		Btu/h (kW)	15000 (4.33)	
	Intermediate heat retention heating COP			3	
	Winter heat retention heating capacity ★6 ★9		Btu/h (kW)	44000 (13.0)	
	Winter heat insulation heating power consumption ★6 ★9		Btu/h (kW)	17000 (5.00)	
	Winter heat insulation COP			2.6	
	Summer heat retention heating capacity ★7 ★9		Btu/h (kW)	44000 (13.0)	
	Summer heat insulation heating power consumption ★7 ★9		Btu/h (kW)	13000 (3.94)	
	Summer heat insulation COP			3.3	
	Defrosting period heat retention heating capacity ★8 ★9		Btu/h (kW)	44000 (13.0)	
	Frosting period Heat retention Heating power consumption ★8 ★9		Btu/h (kW)	21000 (6.20)	
	Heat retention during frost formation COP			2.1	
	Sound (A scale) ★1 ★9 ★10		dB	55 (Winter 59)	
	Unit model name			HEAT SOURCE UNIT	CASCADE UNIT
	Model name			RXHWQ120MQTJ*	BWLP120TJU
	Power supply			3 Phase 208/230 V 60 Hz	
	Casing color			Ivory white (5Y7.5/1)	
	External dimension	Height × Width × Depth	in. (mm)	66-11/16 (1694) × 48-7/8 (1242) × 30-3/16 (767)	60-1/16 (1525) × 35-3/16 (893) × 30 (762)
Heat exchanger	Evaporator		Cross fin coil	Plate heating exchanger	
	Condenser		—	Winding spiral tube heat exchanger	
Compressor	Model		Hermetically sealed scroll type		
	Starting system		Soft start (Inverter)		
	Motor output	kW	(4.4 + 4.4)	(4.5 + 4.5)	
Fan	Model		Propeller fan	—	
	Motor output × Number	kW	0.75 × 2	—	
	Air flow	cfm (m³/min)	8228 (233)	—	
	Drive system		Direct drive	—	
Water pump			—	Non-self-priming canned pump	
Connecting pipe	Heat source unit	Liquid side pipe	in. (mm)	φ1/2 (12.7) C1220T (Brazed connection)	—
		Gas side pipe	in. (mm)	φ1-1/8 (28.6) C1220T (Brazed connection)	—
	Heat source unit ~Cascade unit	Liquid side pipe	in. (mm)	φ1/2 (12.7) C1220T (Brazed connection)	
		Gas side pipe	in. (mm)	φ7/8 (22.2) C1220T (Brazed connection) ★11	
	Cascade unit	Liquid side pipe	in. (mm)	—	φ1/2 (12.7) C1220T (Brazed connection)
		Gas side pipe	in. (mm)	—	φ7/8 (22.2) C1220T (Brazed connection)
		Inlet (water) pipe		—	N/A
		Circulation (water) pipe		—	R3/4 Male Thread (NPT3/4 Male Thread after the installation of piping adaptor)
		Outlet (hot water) pipe		—	R3/4 Male Thread (NPT3/4 Male Thread after the installation of piping adaptor)
Weight		lb (kg)	695 (315)	639 (290)	
Safety device			High pressure switch, Fan driver overload protector, Overcurrent relay, Inverter overload protector	High pressure switch, Inverter overload protector	
Defrost method			Deicer	—	
Refrigerant	Refrigerant name		R410A	High side R134a Low side R410A	
	Filling amount	lb (kg)	18.1 (8.2)	13.2 (6.0)	
Design pressure	Control		Electronic expansion valve		
	High pressure	psig (MPa)	478 (3.30)	High side 550 (3.80) Low side 580 (4.00)	
	Low pressure	psig (MPa)	320 (2.21)	High side 248 (1.71)	
Standard accessories			Installation manual, Operation manual, ★12 Attached pipe, Clamps, Vinyl tube	Attached pipe, Pipe adaptor, Conduit plate, Vinyl tube	

Notes:

- ★1 Operating conditions: Outside air temperature: 60.8 °FDB, 53.6 °FWB Entering water temperature 62.6 °F Leaving water temperature 149.0 °F Water volume 2.8 gal/min
- ★2 Operating conditions: Outside air temperature: 44.6 °FDB, 42.8 °FWB Entering water temperature 48.2 °F Leaving water temperature 149.0 °F Water volume 2.4 gal/min
- ★3 Operating conditions: Outside air temperature: 77.0 °FDB, 69.8 °FWB Entering water temperature 75.2 °F Leaving water temperature 149.0 °F Water volume 3.2 gal/min
- ★4 Operating conditions: Outside air temperature: 35.6 °FDB, 33.8 °FWB Entering water temperature 41.0 °F Leaving water temperature 149.0 °F Water volume 2.2 gal/min (including capacity reduction due to defrosting)
- ★5 Operating conditions: Outside air temperature: 60.8 °FDB, 53.6 °FWB Entering water temperature 140.0 °F Leaving water temperature 163.4 °F Water volume 3.8 gal/min
- ★6 Operating conditions: Outside air temperature: 44.6 °FDB, 42.8 °FWB Entering water temperature 140.0 °F Leaving water temperature 163.4 °F Water volume 3.8 gal/min
- ★7 Operating conditions: Outside air temperature: 77.0 °FDB, 69.8 °FWB Entering water temperature 140.0 °F Leaving water temperature 163.4 °F Water volume 3.8 gal/min
- ★8 Operating conditions: Outside air temperature: 35.6 °FDB, 33.8 °FWB Entering water temperature 140.0 °F Leaving water temperature 163.4 °F Water volume 3.8 gal/min (including capacity reduction due to defrosting)
- ★9 5-15/16 in (150 mm) between the heat source unit and the cascade unit, 0 in (0 mm) height difference
- The water quality used is water supply and JRA GL-02-1994 (high-level medium-temperature water system), and it cannot be used for drinking.
- The water supply water pressure should be 5.8 psig (40 kPa) or more, and the maximum working pressure on the water side is 72.5 psig (500 kPa).
- ★10 The driving sound conforms to JIS B 8616 standard and is the value when converted to an anechoic chamber. When measured in the actual installed state, it receives ambient noise and reflection. It is usually larger than the displayed value.
- When connecting pipes, Depending on the piping connection form (front connection, bottom connection), it is necessary to prepare on-site work (expansion, bending) and piping joints (L joints, same diameter joints).
- ★11 The pipe diameter on the gas side of the heat source unit is different between the heat source unit and the cascade unit. When arranging piping, procure with the gas side piping diameter between the heat source unit and the cascade unit. (Deformed joints are attached to the cascade unit)
- ★12 The same installation and operation manuals can be used for both heat source unit and cascade unit.

BRP26B2VJU

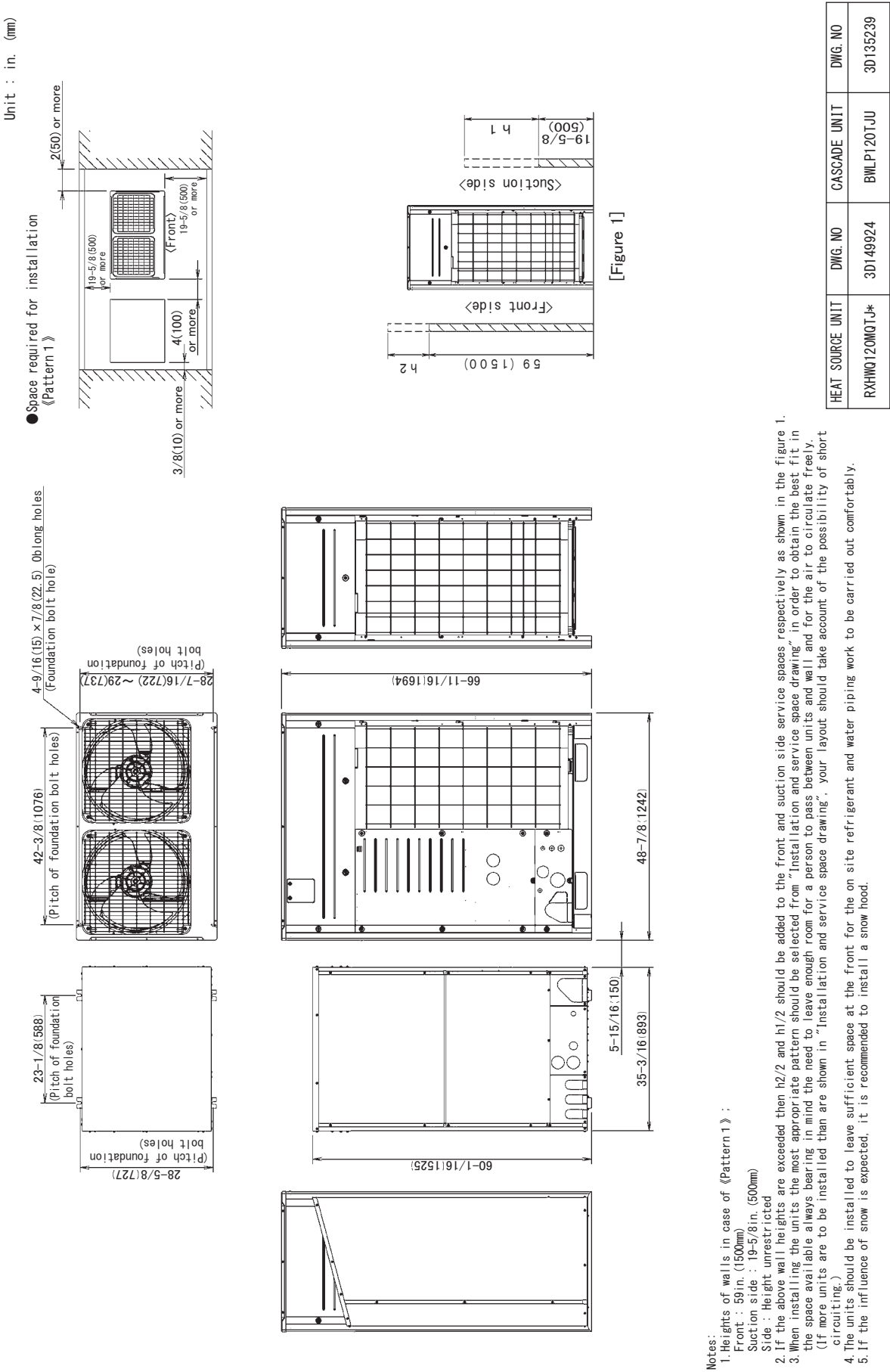
Unit model name				Tank controller kit
Model name				BRP26B2VJU
Controller box	Power supply			1-phase 208/230 V 60 Hz
	Exterior			Ivory white (5Y7.5/1)
	Dimensions	H × W × D	in. (mm)	20-19/32 (523) × 16-11/32 (415) × 5-5/8 (143)
	Weight		lbs. (kg)	23 (10.5)
External output				Operation ON
				Malfunction
External input				Operation ON
				Demand control
				Hot water set temperature switch
Water temperature sensor				Thermistor for hot water tank (Screw type) × 3
Controller				Remote controller

Notes:

1. Tank controller allows temperature setting in °C.

3. Dimensions

RXHWQ120MQTJA + BWLP120TJU



RXHWQ120MQTJA

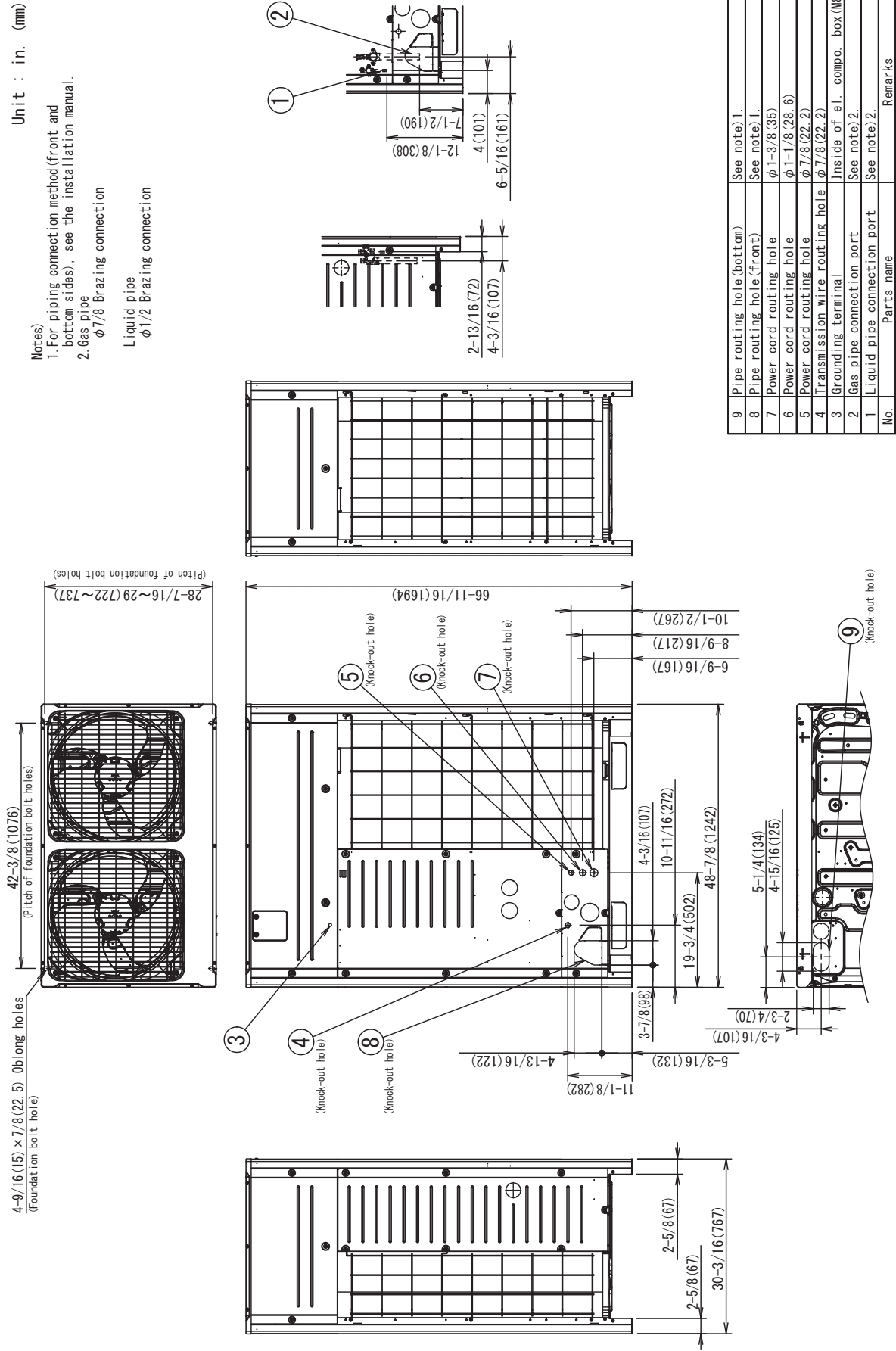
Unit : in. (mm)

Notes)

1. For piping connection method (front and bottom sides), see the installation manual.

2. Gas pipe
φ7/8 Brazing connection

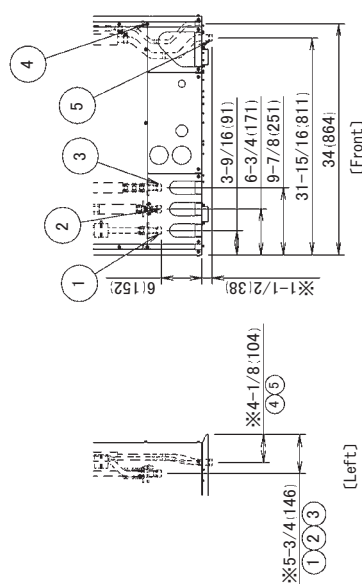
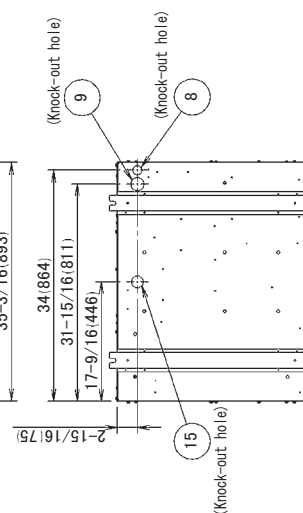
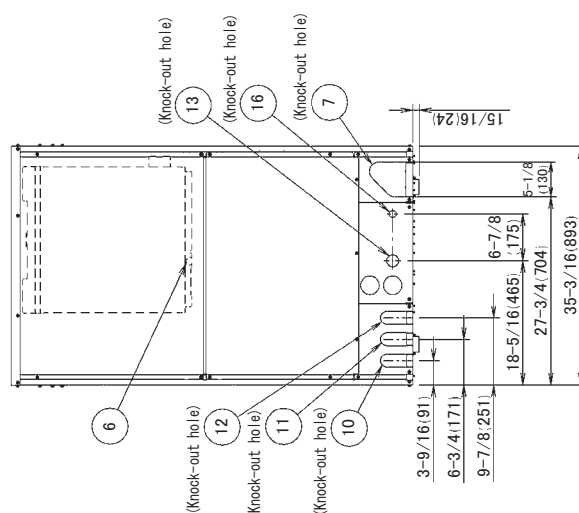
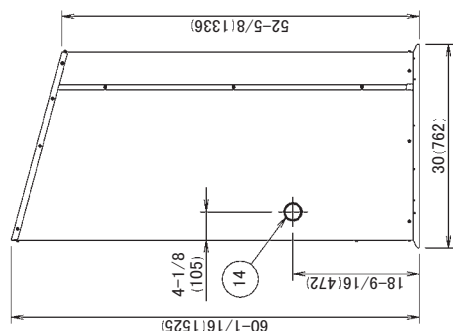
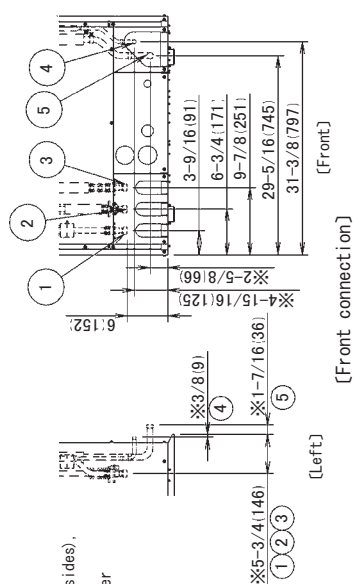
Liquid pipe
φ1/2 Brazing connection



BWLP120TJU

Unit : in. (mm)

Notes: 1. For piping connection method (front and bottom sides), see the installation manual.
2. The dimensions ※ marked are the dimensions after installing the attached piping.

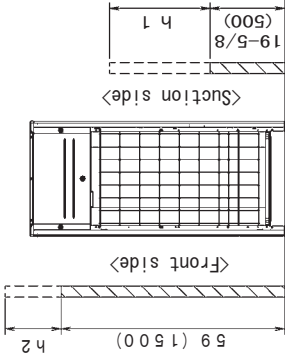
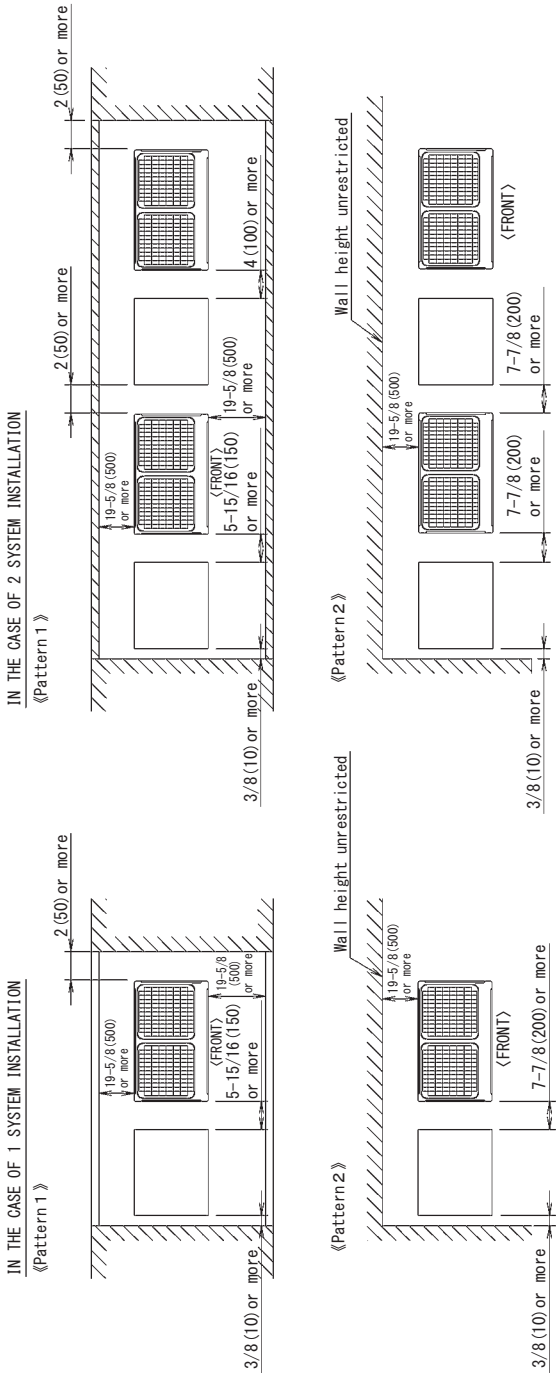


16	Power cord routing hole (front)	φ 1-1/16 (27)
15	Power cord routing hole (bottom)	φ 1-3/4 (45)
14	Power cord routing hole (side)	φ 2-7/16 (62)
13	Power cord routing hole (front)	φ 1-3/4 (45)
12	Out let (hot water) pipe hole (front)	
11	Circulating (water) pipe hole (front)	
10	Inlet (water) pipe hole (front)	φ 2 (50)
9	Pipe routing hole (bottom)	φ 1-1/2 (35)
8	Pipe routing hole (bottom)	
7	Pipe routing hole (front)	
6	Grounding terminal	Inside of el. compo. box (M8)
5	Gas pipe connection port	φ 7/8 (22.2) Brazing connection
4	Liquid pipe connection port	φ 1/2 (12.7) Brazing connection
3	Outlet (hot water) pipe connection port	1/2" M16 Thread
2	Circulating (water) pipe connection port	1/2" M16 Thread after the installation of piping adaptor
1	Inlet (water) pipe connection port	M16
Remarks		M16 ports will not be used for this product

4. Service Space

RXHWQ120MQTJA + BWLP120TJU

Unit : in. (mm)



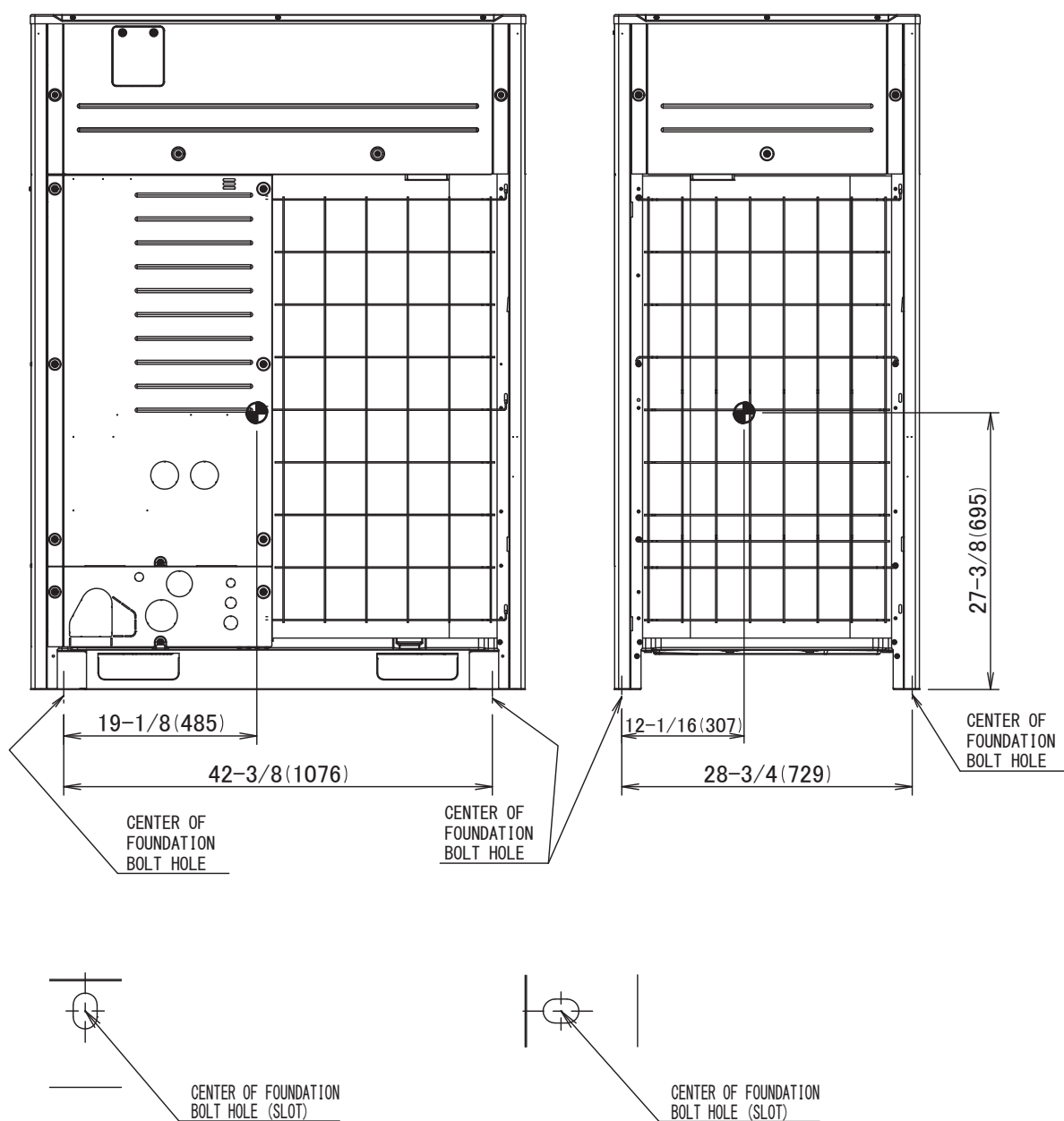
[Figure 1]

- Notes:
1. Heights of walls in case of 《Pattern 1》 :
Front : 59in. (1500mm)
Suction side : 19-5/8in. (500mm)
Side : Height unrestricted
 2. If the above wall heights are exceeded then h2/2 and h1/2 should be added to the front and suction side service spaces respectively as shown in the figure 1.
 3. When installing the units the most appropriate pattern should be selected from “Installation and service space drawing” in order to obtain the best fit in the space available always bearing in mind the need to leave enough room for a person to pass between units and wall and for the air to circulate freely. (If more units are to be installed than are shown in “Installation and service space drawing”, your layout should take account of the possibility of short circuiting.)
 4. The units should be installed to leave sufficient space at the front for the on site refrigerant and water piping work to be carried out comfortably.
 5. If the influence of snow is expected, it is recommended to install a snow hood.

5. Center of Gravity

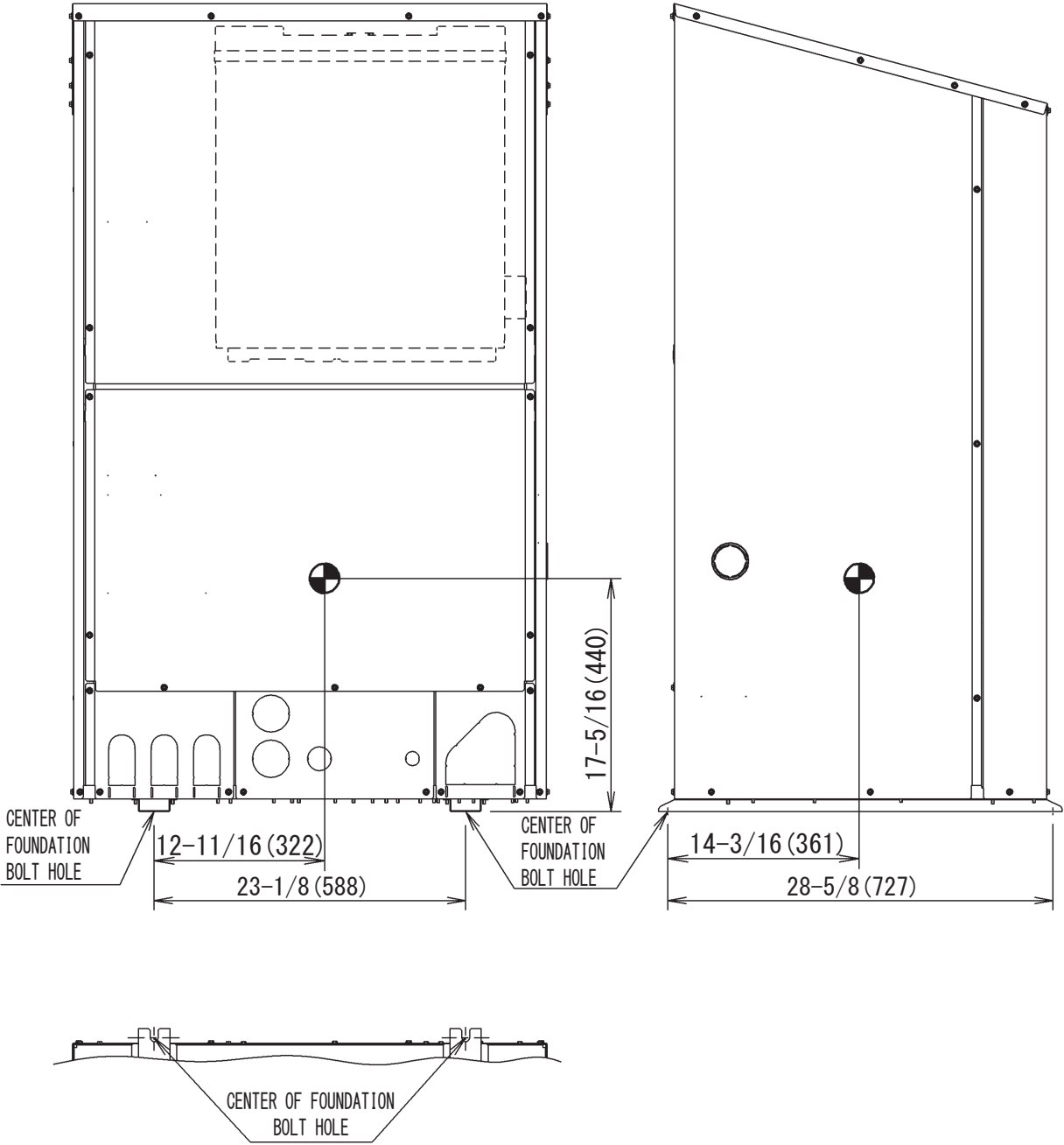
RXHWQ120MQTJA

Unit : in. (mm)



BWLP120TJU

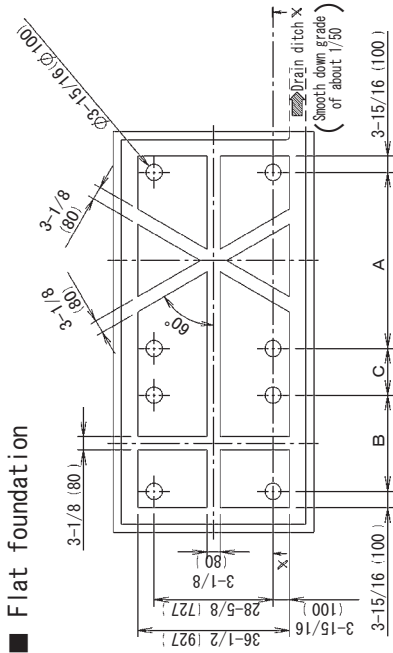
Unit : in. (mm)



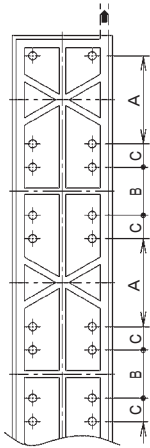
6. Foundation Drawing

RXHWQ120MQTJA + BWLP120TJU

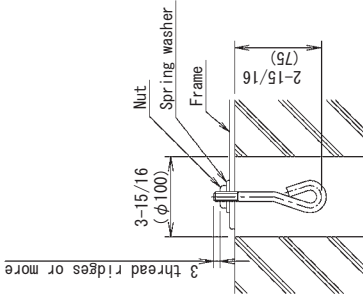
Flat foundation



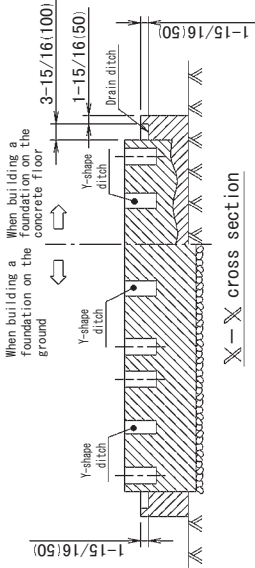
Unit : in. (mm)



When installing multiple units in connection



Foundation bolt executing method(part φ)



×-× cross section

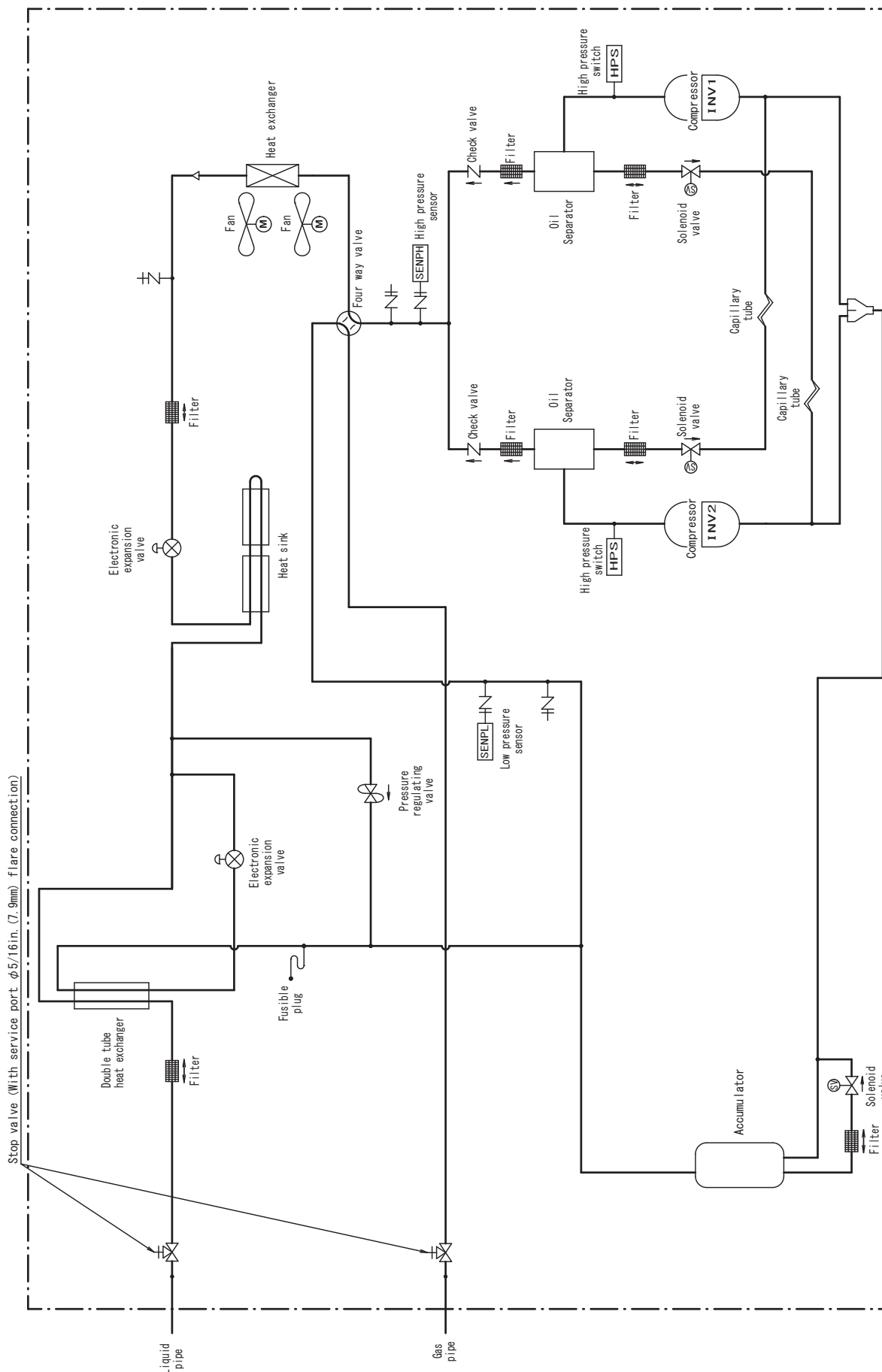
Model	A	B	C	Foundation Bolt	
				Type	Piece
BWLP120TJU RXHWQ120MQTJ-	42-3/8 (1076)	23-1/8 (588)	11-1/4 (285) or more	JA M12	8

Notes)

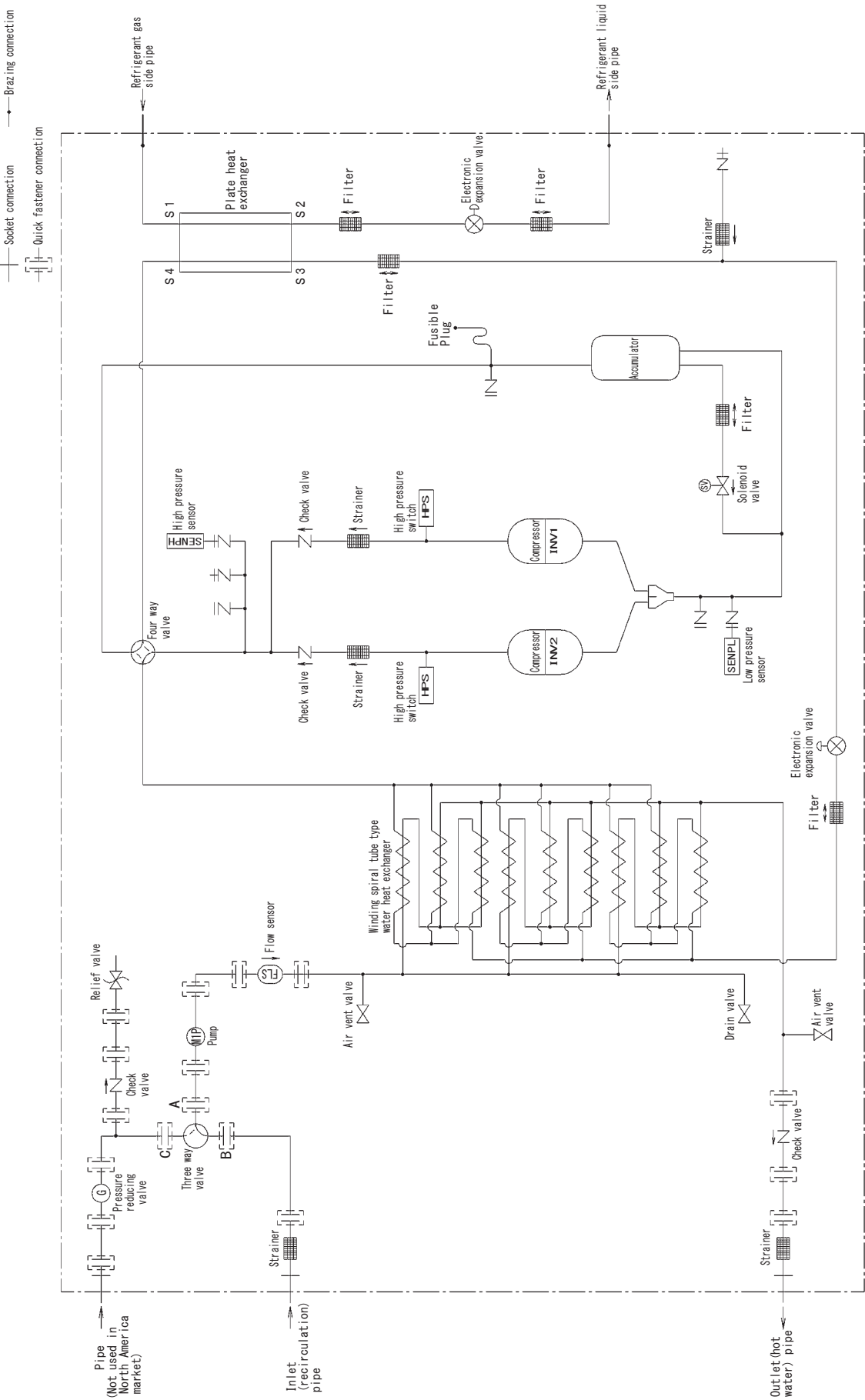
1. The proportions of cement:sand:gravel for the concrete shall be 1:2:4, and the reinforcement bars that their diameter are 3/8in (10mm), (approx. 11-3/4in. (300mm) intervals) shall be placed.
2. The surface shall be finished with mortar. The corner edges shall be chamfered.
3. When the foundation is built on a concrete floor, rubble is not necessary. However, the surface of the section on which the foundation is built shall have rough finish.
4. A drain ditch shall be made around the foundation to thoroughly drain water from the equipment installation area.
5. When installing the equipment on a roof, the floor strength shall be checked, and water-proofing measures shall be taken.
6. Determine the required installation space for maintenance and the dimensions between the units based on the "installation and service space".

7. Piping Diagrams

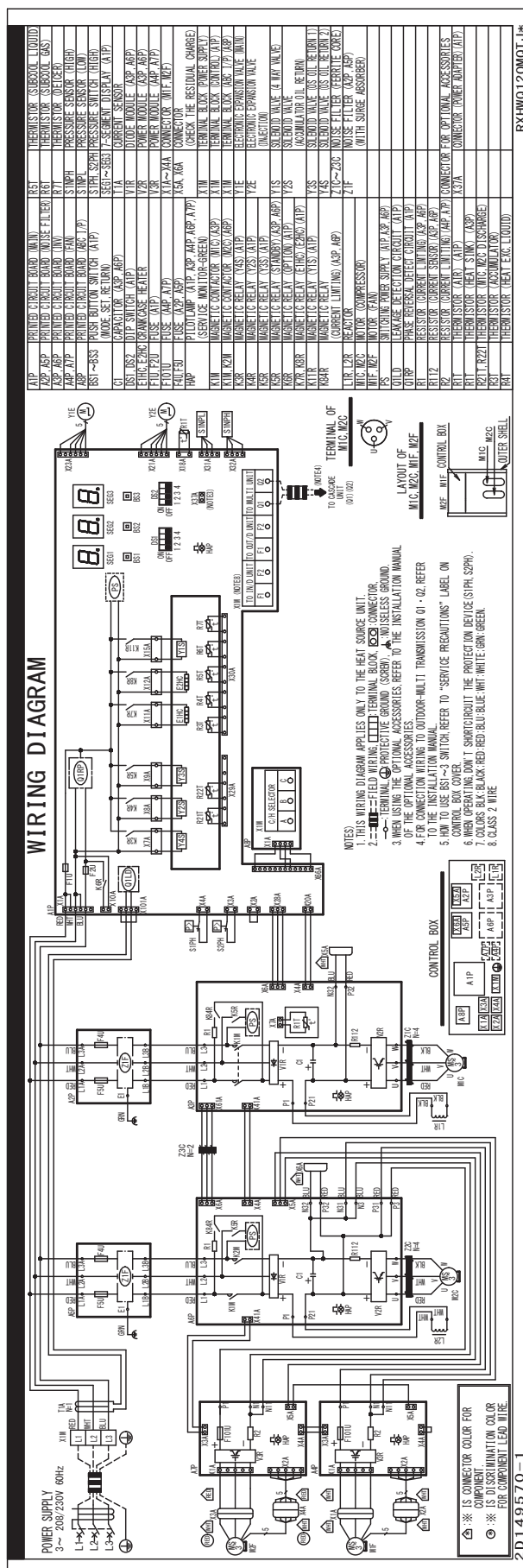
RXHWQ120MQTJA



BWLP120TJU



8. Wiring Diagrams

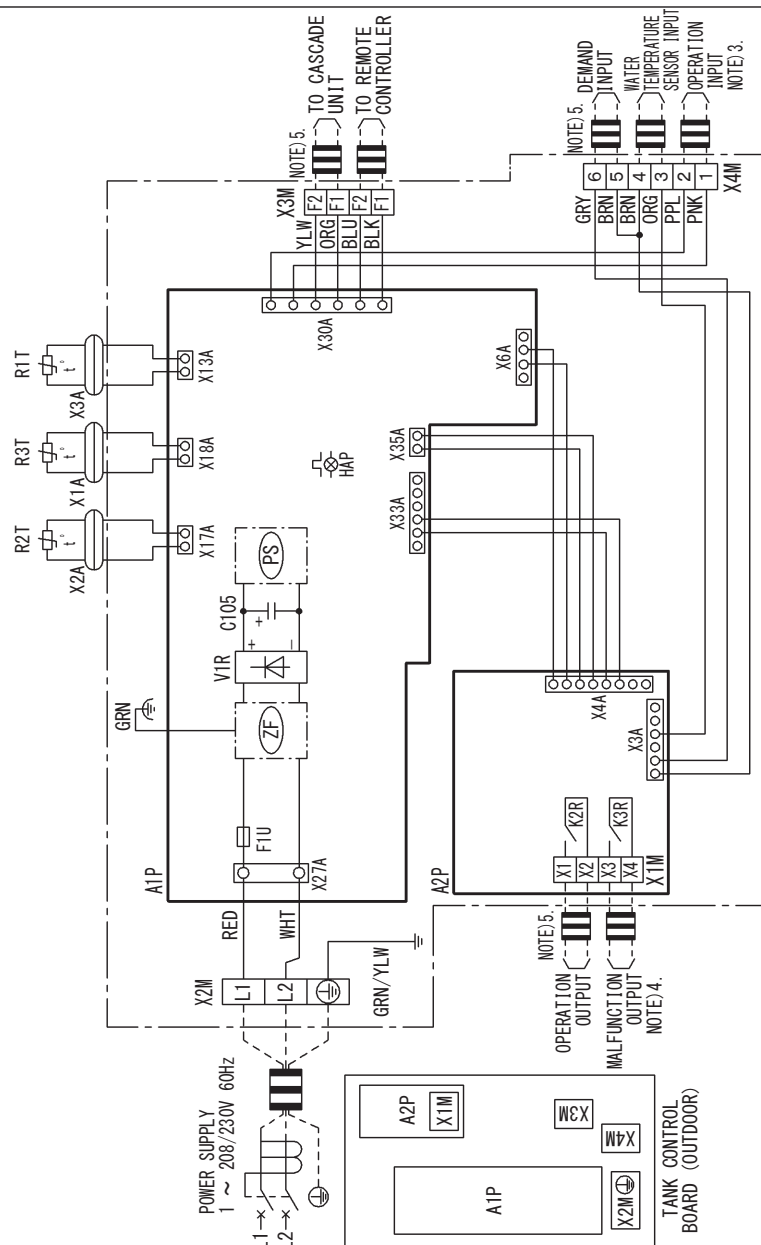
RXHWQ120MQTJA

C: 2D135226F



BRP26B2VJU

WIRING DIAGRAM



NOTES)

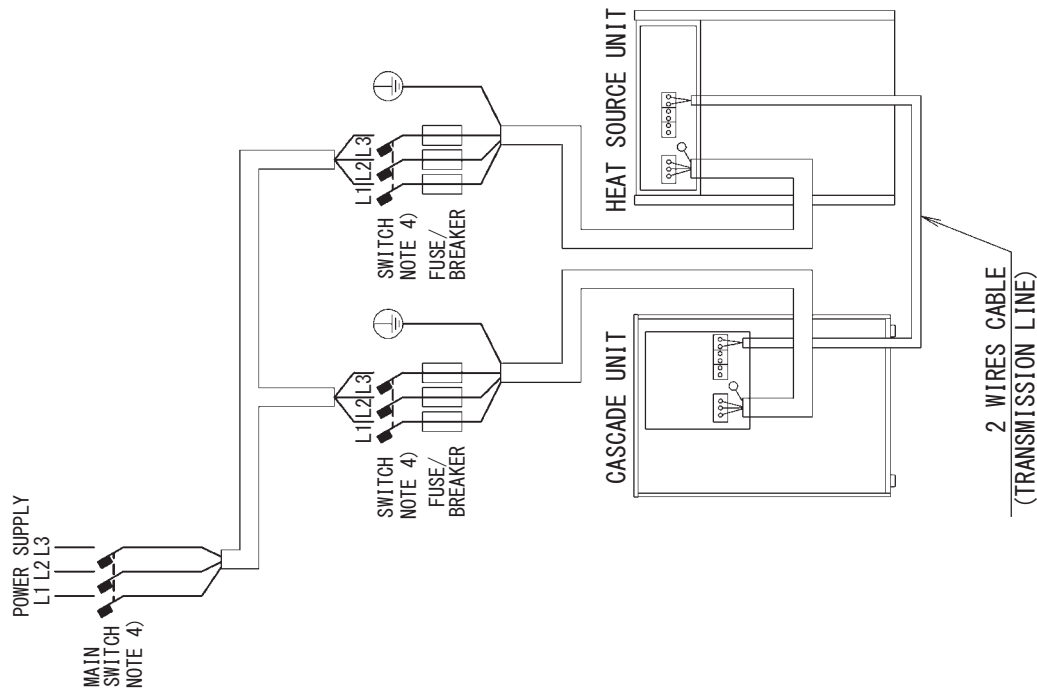
1. INSIDE  IS WIRING DIAGRAM FOR TANK CONTROL BOARD.
2.  : FIELD WIRING,  : TERMINAL BLOCK,  : CONNECTOR,  : RELAY CONNECTOR,  : TERMINAL,  : PROTECTIVE GROUND (SCREW).
-  : NOISELESS GROUND, $\pm$: GROUND.
3. FOR NON-VOLTAGE CONTACT INPUT, USE CONTACT FOR MICRO CURRENT (WHICH CONNECTS WHEN THE CIRCUIT IS ON).
4. USE THE NON-VOLTAGE CONTACT OUTPUT AT AC208/230V 2A OR LESS.
5. CLASS 2 WIRE

A1P	PRINTED CIRCUIT BOARD (CONTROL)	RT1~R3T	THERMISTOR	
A2P	PRINTED CIRCUIT BOARD (I/F)	V1R	DIODE MODULE	
C105	CAPACITOR	X1A~X3A	CONNECTOR	
F1U	FUSE	X1M	TERMINAL BLOCK (CONTROL) (A2P)	
H4P	PILOT LAMP (A1P) (SERVICE MONITOR-GREEN)	X2M	TERMINAL BLOCK (POWER SUPPLY)	
K1R	MAGNETIC RELAY (A1P)	X3M	TERMINAL BLOCK (CONNECTION WIRING)	
K2R, K3R	MAGNETIC RELAY (A2P)	X4M	TERMINAL BLOCK (CONTACT INPUT)	
S	SWITCHING POWER SUPPLY (A1P)	ZF	NOISE FILTER	

BRP26B2VJU

9. Field Wiring

RXHWQ120MQTJA + BWLP120TJU



- Notes
- 1) All wiring, components and materials to be procured on the site must comply with the applicable local and national codes.
 - 2) Use copper conductors only.
 - 3) As for details, see wiring diagram.
 - 4) Field wiring diagram is to be used as a guideline only.
Wiring should comply with applicable local and national codes.
 - 5) Unit shall be grounded in compliance with the applicable local and national codes.
 - 6) Wiring shown are general points-of-connection guides only and are not intended for or to include all details for a specific installation.
 - 7) Be sure to install the switch and the breaker/fuse to the power line of each piece of equipment.
 - 8) Install the main switch that can interrupt all the power sources in an integrated manner because this system consists of the equipment utilizing the multiple power sources.
 - 9) Be sure to observe the refrigerant pipe length limit for the wire length between units.

10. Electrical Characteristics

RXHWQ120MQTJA + BWLP120TJU

MODEL NAME	UNIT			POWER SUPPLY		COMP.		WATER PUMP		SCCR
	Hz	Volts	Min.	Max.	MCA	MOP	RLA	kW	FLA	
BWLP120TJU	60	208 / 230	187	253	43	50	5.0+5.5	0.2	0.6	SHORT-CIRCUIT CURRENT(SCCR): 5kA RMS SYMMETRICAL 600V MAXIMUM.

MODEL NAME	UNIT			POWER SUPPLY		COMP.		OFM		SCCR
	Hz	Volts	Min.	Max.	MCA	MOP	RLA	kW	FLA	
RXHWQ120MQTJ*	60	208 / 230	187	253	55.1	60	16.7+16.7	0.75x2	2.7x2	SHORT-CIRCUIT CURRENT(SCCR): 5kA RMS SYMMETRICAL 600V MAXIMUM.

Symbols:
MCA :Min.Circuit Amps. (A)
MOP :Max.Overcurrent Protector (A)
RLA :Rated Load Amps. (A)
kW :Rated Motor Output (kW)
FLA :Full Load Amps. (A)
OFM :Outdoor Fan Motor

Notes:

1. RLA is based on the following condition.
Outside air temperature: 44.6°FDB (16°CDB) , 42.8°FWB (12°CWB) , Water supply temperature 48.2°F (17°C) , Hot water temperature 149.0°F (65°C) , Water volume 2.4gal/min (10.5L/min)

2. Voltage range

Units are designed to operate only at the rated voltage provided in the table above.

3. The maximum percent unbalance of phase voltage shall be 2%.

4. Select wire size based on the value of MCA.

5. MOP is used to select the circuit breaker.

6. Refer to electrical characteristics of each independent unit for SCCR.

11. Capacity Tables

RXHWQ120MQTJA + BWLP120TJU

※ If the inlet water temperature to Mega-Q is 158 °F or higher, the outlet water temperature from Mega-Q will be limited to a maximum of 187 °F.

HOT WATER STORAGE OPERATION (WHEN THE OUTLET HOT WATER TEMPERATURE IS SET TO 149 °F)																	
OUTDOOR TEMPERATURE		41		48		63		75		85		95		104		122	
TDB	FHB	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)
-4	-6	95.5	13.0	95.5	13.0	93.8	13.0	92.1	13.0	92.1	13.0	90.4	13.8	90.2	12.3	49.5	8.40
14	12	112.6	14.5	112.6	14.5	112.6	14.5	112.6	14.5	112.6	14.5	112.6	14.5	112.6	14.5	112.6	14.5
23	21	119.4	14.8	119.4	14.8	119.4	14.8	119.4	14.8	119.4	14.8	119.4	14.8	119.4	14.8	119.4	14.8
36	34	119.4	14.0	119.4	14.0	119.4	14.0	119.4	14.0	119.4	14.0	119.4	14.0	119.4	14.0	119.4	14.0
41	39	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6
45	43	119.4	10.1	119.4	10.1	119.4	10.1	119.4	10.1	119.4	10.1	119.4	10.1	119.4	10.1	119.4	10.1
61	54	119.4	8.75	119.4	8.75	119.4	8.75	119.4	8.75	119.4	8.75	119.4	8.75	119.4	8.75	119.4	8.75
77	70	119.4	7.61	119.4	7.61	119.4	7.61	119.4	7.61	119.4	7.61	119.4	7.61	119.4	7.61	119.4	7.61
95	81	119.4	7.15	119.4	7.15	119.4	7.15	119.4	7.15	119.4	7.15	119.4	7.15	119.4	7.15	119.4	7.15
99	95	119.4	7.05	119.4	7.05	119.4	7.05	119.4	7.05	119.4	7.05	119.4	7.05	119.4	7.05	119.4	7.05

HOT WATER STORAGE OPERATION (WHEN THE OUTLET HOT WATER TEMPERATURE IS SET TO 158 °F)																	
OUTDOOR TEMPERATURE		41		48		63		75		85		95		113		131	
TDB	FHB	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)
-4	-6	95.5	13.8	95.5	13.8	93.8	13.8	92.1	13.8	92.1	13.8	90.4	14.1	90.2	13.0	49.5	8.76
14	12	112.6	15.6	112.6	15.6	112.6	15.6	112.6	15.6	112.6	15.6	112.6	15.6	112.6	15.6	112.6	15.6
23	21	119.4	15.6	119.4	15.6	119.4	15.6	119.4	15.6	119.4	15.6	119.4	15.6	119.4	15.6	119.4	15.6
36	34	119.4	14.9	119.4	14.9	119.4	14.9	119.4	14.9	119.4	14.9	119.4	14.9	119.4	14.9	119.4	14.9
41	39	119.4	11.1	119.4	11.1	119.4	11.1	119.4	11.1	119.4	11.1	119.4	11.1	119.4	11.1	119.4	11.1
45	43	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6
61	54	119.4	9.33	119.4	9.33	119.4	9.33	119.4	9.33	119.4	9.33	119.4	9.33	119.4	9.33	119.4	9.33
77	70	119.4	8.24	119.4	8.24	119.4	8.24	119.4	8.24	119.4	8.24	119.4	8.24	119.4	8.24	119.4	8.24
95	81	119.4	7.78	119.4	7.78	119.4	7.78	119.4	7.78	119.4	7.78	119.4	7.78	119.4	7.78	119.4	7.78
99	95	119.4	7.54	119.4	7.54	119.4	7.54	119.4	7.54	119.4	7.54	119.4	7.54	119.4	7.54	119.4	7.54

HOT WATER STORAGE OPERATION (WHEN THE OUTLET HOT WATER TEMPERATURE IS SET TO 176 °F)																	
OUTDOOR TEMPERATURE		41		48		63		75		85		95		113		131	
TDB	FHB	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)
-4	-6	95.5	15.2	95.5	15.2	93.8	15.2	92.1	15.0	92.1	15.0	90.4	16.1	90.2	13.0	49.5	10.5
14	12	112.6	16.8	112.6	16.8	112.6	16.8	112.6	16.8	112.6	16.8	112.6	16.8	112.6	16.8	112.6	16.8
23	21	119.4	16.6	119.4	16.6	119.4	16.6	119.4	16.6	119.4	16.6	119.4	16.6	119.4	16.6	119.4	16.6
36	34	119.4	16.1	119.4	16.1	119.4	16.1	119.4	16.1	119.4	16.1	119.4	16.1	119.4	16.1	119.4	16.1
41	39	119.4	12.0	119.4	12.0	119.4	12.0	119.4	12.0	119.4	12.0	119.4	12.0	119.4	12.0	119.4	12.0
45	43	119.4	11.7	119.4	11.7	119.4	11.7	119.4	11.7	119.4	11.7	119.4	11.7	119.4	11.7	119.4	11.7
61	54	119.4	10.4	119.4	10.4	119.4	10.4	119.4	10.4	119.4	10.4	119.4	10.4	119.4	10.4	119.4	10.4
77	70	119.4	9.28	119.4	9.28	119.4	9.28	119.4	9.28	119.4	9.28	119.4	9.28	119.4	9.28	119.4	9.28
95	81	119.4	8.74	119.4	8.74	119.4	8.74	119.4	8.74	119.4	8.74	119.4	8.74	119.4	8.74	119.4	8.74
99	95	119.4	8.41	119.4	8.41	119.4	8.41	119.4	8.41	119.4	8.41	119.4	8.41	119.4	8.41	119.4	8.41

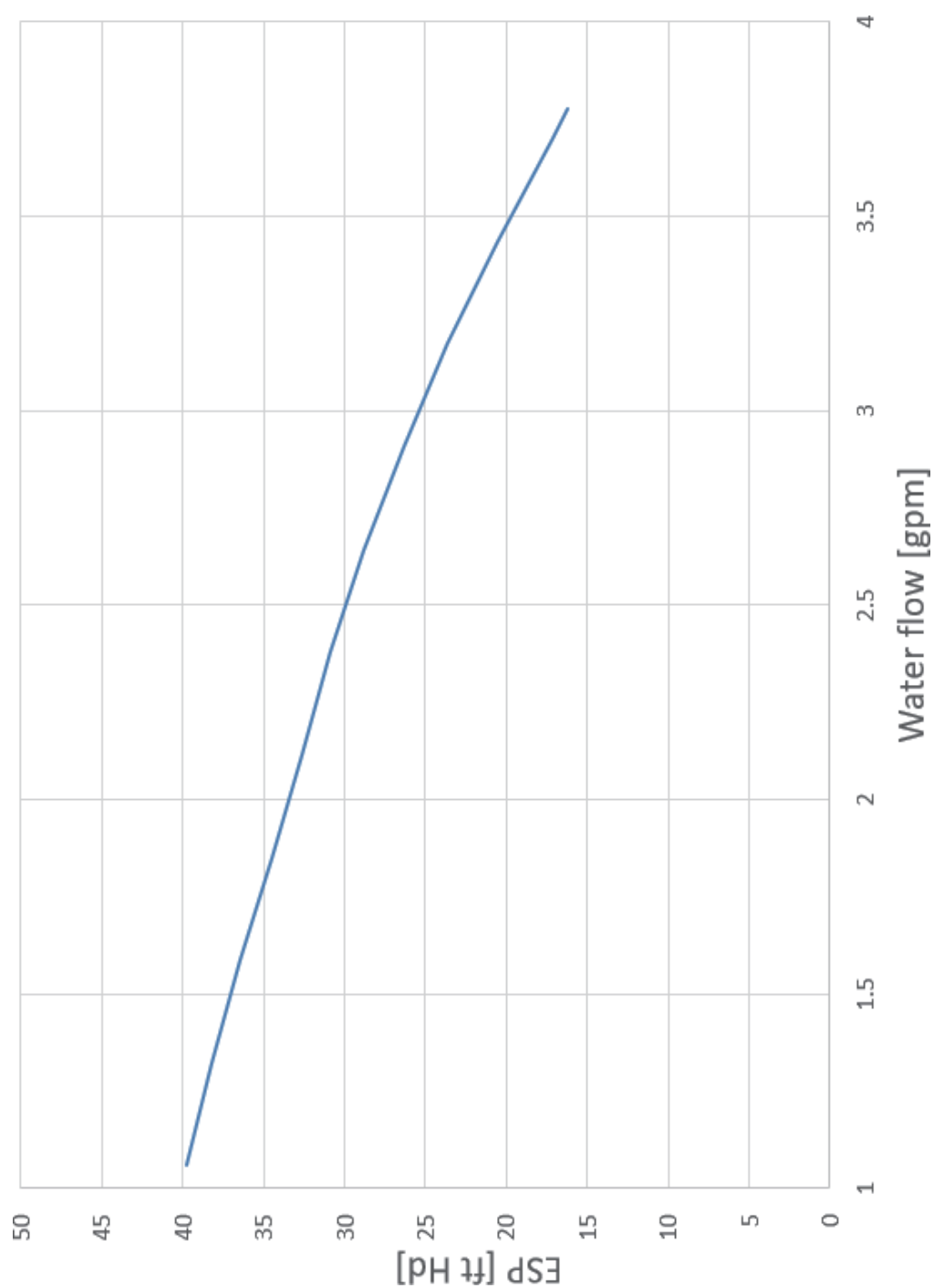
HOT WATER STORAGE OPERATION (WHEN THE OUTLET HOT WATER TEMPERATURE IS SET TO 194 °F)																	
OUTDOOR TEMPERATURE		41		48		63		75		85		95		113		149	
TDB	FHB	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)
-4	-6	95.5	15.2	95.5	15.2	93.8	15.2	92.1	15.0	92.1	15.0	90.4	16.1	90.2	13.0	49.5	10.5
14	12	112.6	16.8	112.6	16.8	112.6	16.8	112.6	16.8	112.6	16.8	112.6	16.8	112.6	16.8	112.6	16.8
23	21	119.4	16.6	119.4	16.6	119.4	16.6	119.4	16.6	119.4	16.6	119.4	16.6	119.4	16.6	119.4	16.6
36	34	119.4	16.1	119.4	16.1	119.4	16.1	119.4	16.1	119.4	16.1	119.4	16.1	119.4	16.1	119.4	16.1
41	39	119.4	12.0	119.4	12.0	119.4	12.0	119.4	12.0	119.4	12.0	119.4	12.0	119.4	12.0	119.4	12.0
45	43	119.4	11.7	119.4	11.7	119.4	11.7	119.4	11.7	119.4	11.7	119.4	11.7	119.4	11.7	119.4	11.7
61	54	119.4	10.4	119.4	10.4	119.4	10.4	119.4	10.4	119.4	10.4	119.4	10.4	119.4	10.4	119.4	10.4
77	70	119.4	9.28	119.4	9.28	119.4	9.28	119.4	9.28	119.4	9.28	119.4	9.28	119.4	9.28	119.4	9.28
95	81	119.4	8.74	119.4	8.74	119.4	8.74	119.4	8.74	119.4	8.74	119.4	8.74	119.4	8.74	119.4	8.74
99	95	119.4	8.41	119.4	8.41	119.4	8.41	119.4	8.41	119.4	8.41	119.4	8.41	119.4	8.41	119.4	8.41

HOT WATER STORAGE OPERATION (WHEN THE OUTLET HOT WATER TEMPERATURE IS SET TO 149 °F)																	
OUTDOOR TEMPERATURE		41		48		63		75		85		95		113		149	
TDB	FHB	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)
-4	-6	95.5	16.7	95.5	16.7	93.8	16.7	92.1	16.3	92.1	16.3	90.4	17.1	90.2	13.0	49.5	10.5
14	12	112.6	18.3	112.6	18.3	112.6	18.3	112.6	18.3	112.6	18.3	112.6	18.3	112.6	18.3	112.6	18.3
23	21	119.4	17.7	119.4	17.7	119.4	17.7	119.4	17.7	119.4	17.7	119.4	17.7	119.4	17.7	119.4	17.7
36	34	119.4	17.4	119.4	17.4	119.4	17.4	119.4	17.4	119.4	17.4	119.4	17.4	119.4	17.4	119.4	17.4
41	39	119.4	12.9	119.4	12.9	119.4	12.9	119.4	12.9	119.4	12.9	119.4	12.9	119.4	12.9	119.4	12.9
45	43	119.4	12.6	119.4	12.6	119.4	12.6	119.4	12.6	119.4	12.6	119.4	12.6	119.4	12.6	119.4	12.6
61	54	119.4	11.5	119.4	11.5	119.4	11.5	119.4	11.5	119.4	11.5	119.4	11.5	119.4	11.5	119.4	11.5
77	70	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6
95	81	119.4	10.0	119.4	10.0	119.4	10.0	119.4	10.0	119.4	10.0	119.4	10.0	119.4	10.0	119.4	10.0
99	95	119.4	9.38	119.4	9.38	119.4	9.38	119.4	9.38	119.4	9.38	119.4	9.38	119.4	9.38	119.4	9.38

HOT WATER STORAGE OPERATION (WHEN THE OUTLET HOT WATER TEMPERATURE IS SET TO 164 °F)																	
OUTDOOR TEMPERATURE		41		48		63		75		85		95		113		149	
TDB	FHB	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)
-4	-6	95.5	16.7	95.5	16.7	93.8	16.7	92.1	16.3	92.1	16.3	90.4	17.1	90.2	13.0	49.5	10.5
14	12	112.6	18.3	112.6	18.3	112.6	18.3	112.6	18.3	112.6	18.3	112.6	18.3	112.6	18.3	112.6	18.3
23	21	119.4	17.7	119.4	17.7	119.4	17.7	119.4	17.7	119.4	17.7	119.4	17.7	119.4	17.7	119.4	17.7
36	34	119.4	17.4	119.4	17.4	119.4	17.4	119.4	17.4	119.4	17.4	119.4	17.4	119.4	17.4	119.4	17.4
41	39	119.4	12.9	119.4	12.9	119.4	12.9	119.4	12.9	119.4	12.9	119.4	12.9	119.4	12.9	119.4	12.9
45	43	119.4	12.6	119.4	12.6	119.4	12.6	119.4	12.6	119.4	12.6	119.4	12.6	119.4	12.6	119.4	12.6
61	54	119.4	11.5	119.4	11.5	119.4	11.5	119.4	11.5	119.4	11.5	119.4	11.5	119.4	11.5	119.4	11.5
77	70	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6	119.4	10.6
95	81	119.4	10.0	119.4	10.0	119.4	10.0	119.4	10.0	119.4	10.0	119.4	10.0	119.4	10.0	119.4	10.0
99	95	119.4	9.38	119.4	9.38	119.4	9.38	119.4	9.38	119.4	9.38	119.4	9.38	119.4	9.38	119.4	9.38

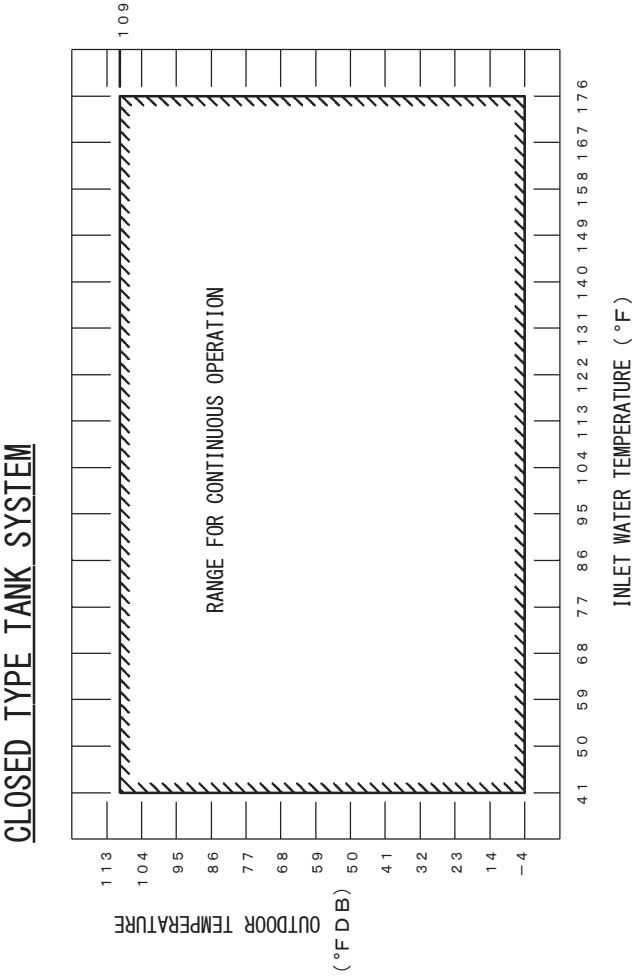
HOT WATER STORAGE OPERATION (WHEN THE OUTLET HOT WATER TEMPERATURE IS SET TO 182 °F)																	
OUTDOOR TEMPERATURE		41		48		63		75		85		95		113		149	
TDB	FHB	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)	CAPACITY FHW Q (kW)	FHW Q (kW)		

12. Head Pressure Curve (Integrated Water Pump) (Reference Data)



13. Operation Limits

RXHWQ120MQTJA + BWLP120TJU

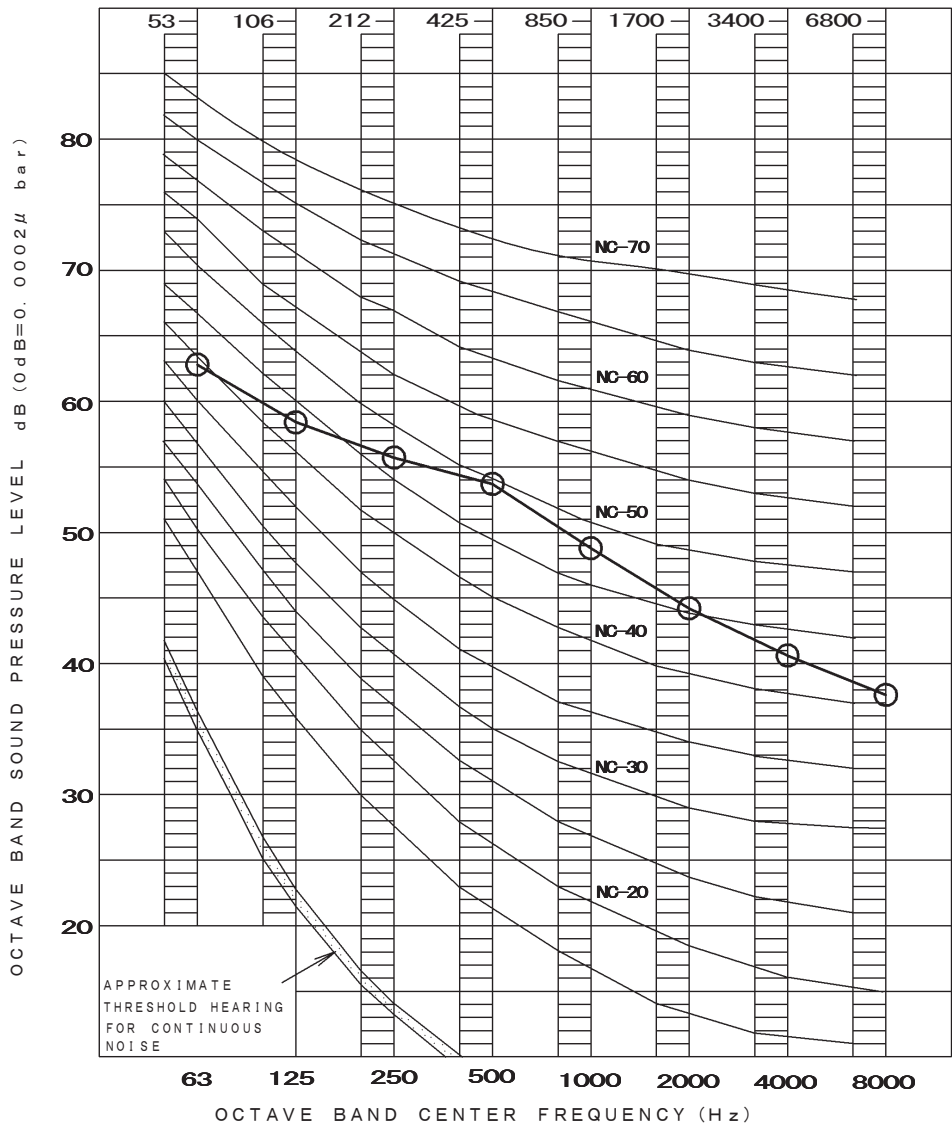


Note)

- 1. Installation conditions : heat source unit-between cascade units within 65.6ft (20m) height difference within ±65.6ft (20m) .
- 2. : Range for continuous operation.
- 3. See performance characteristics drawing for capacity changes.

14. Sound Levels (Reference Data)

RXHWQ120MQTJA + BWLP120TJU



OVER ALL (dB)

SCALE	60Hz
A	55

(B. G. N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

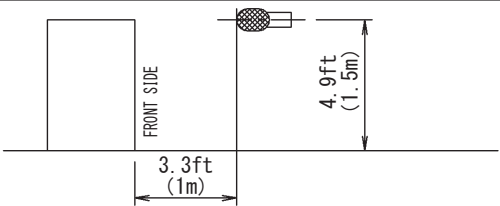
POWER SOURCE 208/230 V 60 Hz

INTERMEDIATE HEATING RATING CONDITIONS

MEASURING PLACE

ANECHOIC CHAMBER (CONVERSION VALUE)

LOCATION OF MICROPHONE



NOTE)
THE OPERATING SOUND IS MEASURED IN ANECHOIC CHAMBER,
IF IT IS MEASURED UNDER THE ACTUAL INSTALLATION CONDITIONS,
IT IS NORMALLY OVER THE SET VALUE DUE TO ENVIROMENTAL NOISE
AND SOUND REFLECTION.

Warning

- Ask a qualified installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Use only those parts and accessories supplied or specified by Daikin. Ask a qualified installer or contractor to install those parts and accessories. Use of unauthorised parts and accessories or improper installation of parts and accessories can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Read the user's manual carefully before using this product. The user's manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

If you have any enquiries, please contact your local importer, distributor and/or retailer.

Cautions on product corrosion

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided. If you need to install the outdoor unit close to the sea shore, contact your local distributor.