

Model Name			PUHZ-SHW140YHA(-BS)	PUHZ-SHW230YKA2
Power supply (phase, cycle, voltage)			3φ, 400V, 50Hz	3φ, 400V, 50Hz
	Max. current	A	13.0	20.0
Breaker size		A	16	25
Outer casing			Galvanized plate	Galvanized plate
External finish			Munsell 3Y 7.8/1.1	Munsell 3Y 7.8/1.1
Refrigerant control			Linear expansion valve	Linear expansion valve
Compressor			Hermetic scroll	Hermetic scroll
	Model		ANB33FJQMT	ANB66FJNMT
	Motor output	kW	2.5	4.7
	Start type		Inverter	Inverter
	Protection devices		HP switch LP switch Discharge thermo Comp. Surface thermo	HP switch LP switch Discharge thermo Comp. Surface thermo Over current detection
	Oil (Model)	L	1.40 (FVC68D)	1.70 (FV50S)
Crankcase heater		W	-	-
Heat exchanger	Air		Plate fin coil	Plate fin coil
	Water		-	-
Fan	Fan(drive) x No.		Propeller fan ×2	Propeller fan ×2
	Fan motor output	kW	0.074 ×2	0.150 ×2
	Air flow	m³/min(CFM)	100 (3,530)	140 (4,940)
Defrost method			Reverse cycle	Reverse cycle
Noise level (SPL)	Heating	dB(A)	52	59
	Cooling	dB(A)	51	58
Noise level (PWL)	Heating	dB(A)	70	75
Dimensions	Width	mm(in)	950 (37-3/8)	1050 (41-5/16)
	Depth	mm(in)	330+30 (13+1-3/16)	330+30 (13+1-3/16)
	Height	mm(in)	1350 (53-1/8)	1338 (52-11/16)
Weight		kg(lbs)	134 (296)	143(315)
Refrigerant (GWP)			R410A (1975)	R410A (1975)
	Quantity	kg(lbs)	5.5 (12.1)	7.1 (15.7)
Pipe size O.D.	Liquid	mm(in)	9.52 (3/8)	12.7 (1/2)
	Gas	mm(in)	15.88 (5/8)	25.4 (1)
Connection method			Flared	Flared
Between the indoor & outdoor unit	Height difference	m	Max. 30	Max. 30
	Piping length	m	2 to 75	2 to 80
Guaranteed operating range (Outdoor)	Heating	°C	-28 (*1) to +21	-25 to +21
	DHW	°C	-28 (*1) to +35	-25 to +35
	Cooling *2	°C	-15 to +46	-15 to +46
Outlet water temp. (Max in heating, Min in cooling)	Heating	°C	+60	+60
	Cooling	°C	+5	+5
Nominal return water temperature range	Heating	°C	+10 to +59	+10 to +59
	Cooling	°C	+8 to +28	+8 to +28
Water flow rate range		L/min	17.9 to 40.1	28.7 to 65.9

*1 Service reference number from "R2" (before "R2" : -25°C)

*2 Optional air protection guide is required where ambient temperature is lower than -5°C.
The temperature is 10°C when the unit is connected with Cylinder unit or Hydrobox.
For more details, refer to "Cylinder unit / Hydrobox".

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Model name			PUHZ-SHW80VHA(-BS)	PUHZ-SHW112VHA(-BS)
Nominal water flow rate (Heating mode)		L/min	22.9	32.1
Heating (A7/W35)	Capacity	kW	8.00	11.20
	COP		4.65	4.46
	Power input	kW	1.72	2.51
Heating (A2/W35)	Capacity	kW	8.00	11.20
	COP		3.55	3.34
	Power input	kW	2.25	3.35
Pressure difference (water circuit)		kPa	-	-
Heating pump input (based on EN14511)		kW	-	-
Nominal water flow rate (Cooling mode)			20.4	28.7
Cooling (A35/W7)	Capacity	kW	7.10	10.00
	EER (COP)		3.31	2.83
	Power input	kW	2.15	3.53
Cooling (A35/W18)	Capacity	kW	7.10	10.00
	EER (COP)		4.52	4.74
	Power input	kW	1.57	2.11
Pressure difference (water circuit)		kPa	-	-
Cooling pump input (based on EN14511)		kW	-	-
Recommended plate heat exchanger			ACH70-40	ACH70-40

The table shows performance data obtained when a plate heat exchanger is connected.

Model name			PUHZ-SHW112YHA(-BS)	PUHZ-SHW140YHA(-BS)
Nominal water flow rate (Heating mode)		L/min	32.1	40.1
Heating (A7/W35)	Capacity	kW	11.20	14.00
	COP		4.46	4.22
	Power input	kW	2.51	3.32
Heating (A2/W35)	Capacity	kW	11.20	14.00
	COP		3.34	2.96
	Power input	kW	3.35	4.73
Pressure difference (water circuit)		kPa	-	-
Heating pump input (based on EN14511)		kW	-	-
Nominal water flow rate (Cooling mode)			28.7	35.8
Cooling (A35/W7)	Capacity	kW	10.00	12.50
	EER (COP)		2.83	2.17
	Power input	kW	3.53	5.76
Cooling (A35/W18)	Capacity	kW	10.00	12.50
	EER (COP)		4.74	4.26
	Power input	kW	2.11	2.93
Pressure difference (water circuit)		kPa	-	-
Cooling pump input (based on EN14511)		kW	-	-
Recommended plate heat exchanger			ACH70-40	ACH70-40

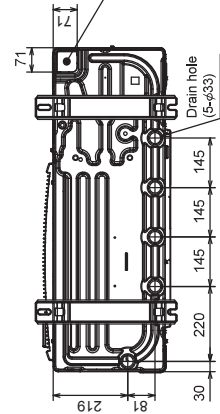
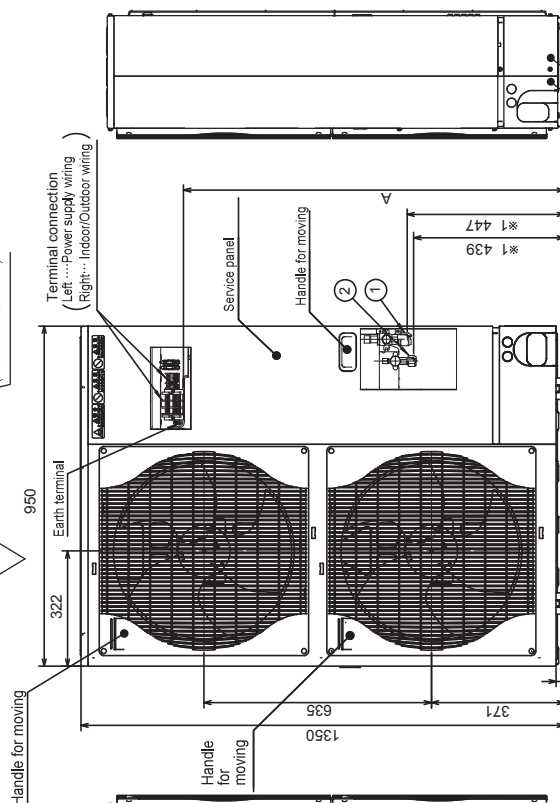
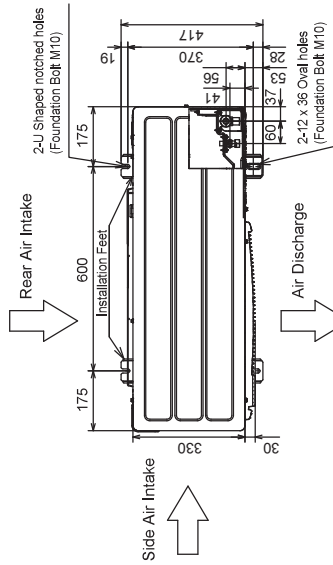
The table shows performance data obtained when a plate heat exchanger is connected.

Unit : mm

A.8.1.2 R410A type

1. PUHZ-SHW•HA PUHZ-SHW•KA

PUHZ-SHW112VHA(-BS)
PUHZ-SHW112YHA(-BS)
PUHZ-SHW140YHA(-BS)



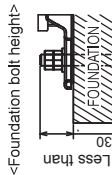
A	SHW-VHA	SHW-YHA
	1,079	930

4 PIPING-WIRING DIRECTIONS

Piping and wiring connections can be made from 4 directions: Front, Right, Rear and Below.

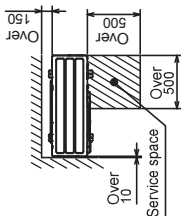
3 FOUNDATION BOLTS

Please secure the unit firmly with 4 foundation (M10) bolts. (Bolts and washers must be purchased locally.)



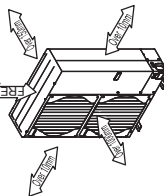
2 SERVICE SPACE

Dimensions of space needed for service access are shown in the below diagram.



1 FREE SPACE (Around the unit)

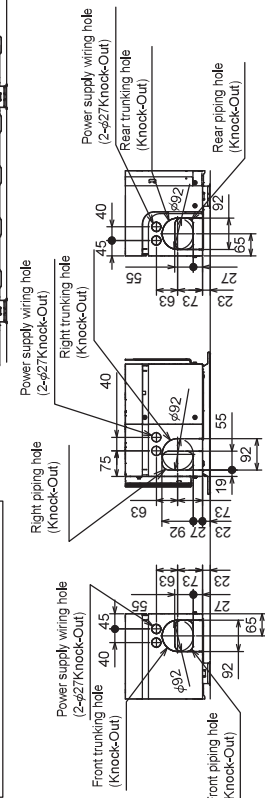
The diagram below shows a basic example. Explanation of particular details is given in the installation manuals etc.



Example of Notes

- ①...Refrigerant GAS pipe connection (FLARE)φ15.88(5/8 F)
- ②...Refrigerant LIQUID pipe connection (FLARE)φ9.52(3/8 F)
- ※1 ...Indication of STOP VALVE connection location.

Piping Knock-Out Hole Details



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Water outlet temperature[°C]			7		18	
Model	Ambient temperature [°C]		Capacity	COP	Capacity	COP
PUHZ-HW 112YHA2 (-BS)	Nominal	35	10.0	2.78	10.0	4.10
		30	10.0	3.39	10.0	4.84
		25	10.0	3.80	10.0	5.43
		20	10.0	4.35	10.0	6.11
	Mid	35	7.3	3.49	6.7	4.75
		30	7.3	4.22	6.7	5.57
		25	7.3	4.86	6.7	6.03
		20	7.3	5.61	6.7	6.75
	Min	35	4.0	3.29	5.9	4.79
		30	4.2	3.81	6.1	5.49
		25	4.5	4.72	6.3	6.00
		20	4.6	5.29	6.5	6.80
PUHZ-HW 140V/YHA2 (-BS)	Nominal	35	12.5	2.50	12.5	3.60
		30	12.5	2.96	12.5	4.26
		25	12.5	3.21	12.5	4.65
		20	12.5	3.62	12.5	5.15
	Mid	35	9.1	3.14	8.4	4.17
		30	9.1	3.69	8.4	4.89
		25	9.1	4.14	8.4	5.29
		20	9.1	4.72	8.4	5.92
	Min	35	5.0	2.96	7.4	4.21
		30	5.3	3.37	7.7	4.85
		25	5.5	3.96	7.9	5.35
		20	5.7	4.38	8.1	6.02
PUHZ-SHW 80VHA(-BS)	Max	35	9.6	2.83	10.0	4.74
		30	10.2	3.30	10.7	5.49
		25	10.2	3.45	11.0	5.80
		20	10.8	3.69	11.7	5.14
	Nominal	35	7.1	3.31	7.1	4.52
		30	7.2	3.85	9.3	5.19
		25	7.6	4.44	9.4	5.67
		20	9.3	4.29	10.8	4.91
	Mid	35	5.7	3.28	5.7	4.43
		30	7.2	3.85	9.3	5.19
		25	7.6	4.44	9.4	5.67
		20	9.3	4.29	10.8	4.91
	Min	35	3.4	3.10	4.5	4.40
		30	7.2	3.85	9.3	5.19
		25	7.6	4.44	9.4	5.67
		20	9.3	4.29	10.8	4.91
PUHZ-SHW 112V/YHA(-BS)	Max	35	11.2	2.46	14.0	3.78
		30	11.9	2.86	14.8	4.37
		25	11.9	3.00	14.9	4.50
		20	12.7	3.23	15.3	5.02
	Nominal	35	10.0	2.83	10.0	4.74
		30	10.0	3.36	10.0	5.54
		25	10.0	3.72	10.0	6.19
		20	10.0	4.49	10.8	4.90
	Mid	35	8.0	3.18	8.0	4.61
		30	8.0	3.85	9.3	5.18
		25	8.0	4.40	9.4	5.66
		20	9.3	4.27	10.8	4.90
	Min	35	3.4	3.09	4.5	4.39
		30	7.2	3.84	9.3	5.18
		25	7.6	4.43	9.4	5.66
		20	9.3	4.27	10.8	4.90

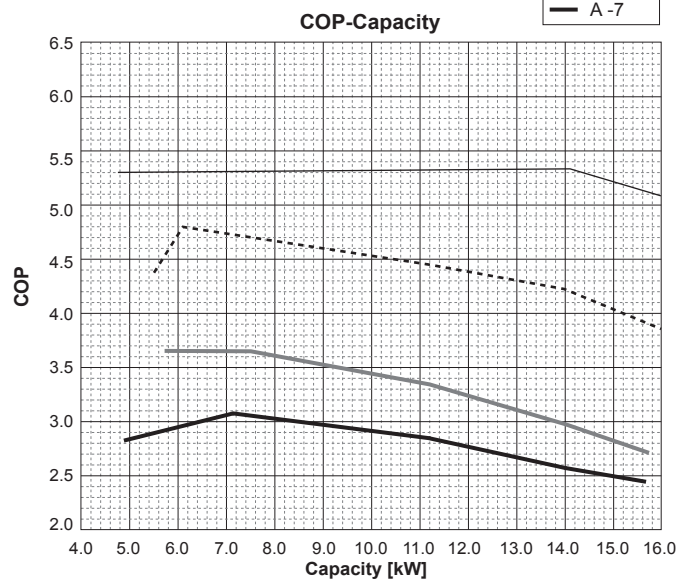
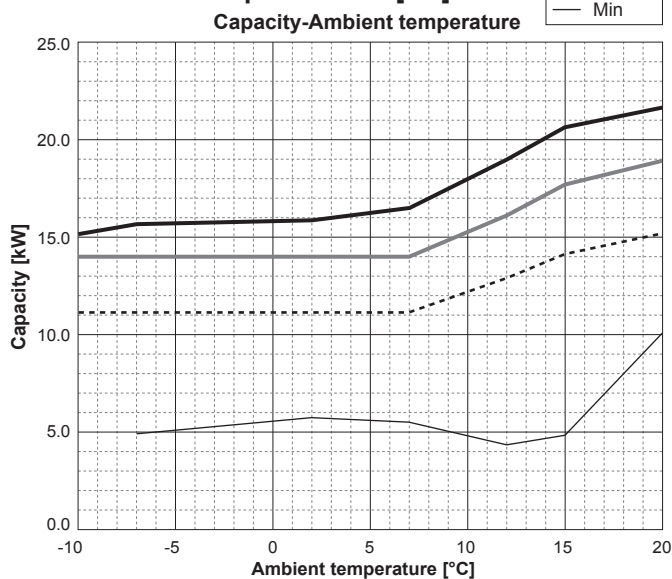
Water outlet temperature[°C]			7		18	
Model	Ambient temperature [°C]		Capacity	COP	Capacity	COP
PUHZ-SHW 140YHA(-BS)	Max	35	12.5	2.17	16.0	3.23
		30	13.3	2.43	16.9	3.58
		25	13.3	2.48	17.0	3.58
		20	14.1	2.84	17.5	3.96
	Nominal	35	12.5	2.17	12.5	4.26
		30	12.5	2.59	12.5	4.96
		25	12.5	2.75	12.5	5.35
		20	12.5	3.38	12.5	6.35
	Mid	35	10.0	2.74	10.0	4.73
		30	10.0	3.25	10.0	5.53
		25	10.0	3.60	10.0	6.18
		20	10.0	4.35	10.8	4.89
	Min	35	3.4	3.09	4.5	4.39
		30	7.2	3.83	9.3	5.16
		25	7.6	4.42	9.4	5.64
		20	9.3	4.26	10.8	4.89
PUHZ-SHW 230YKA2	Max	35	20.0	2.22	24.0	2.65
		30	21.1	2.46	25.1	2.89
		25	22.6	2.88	26.6	3.34
		20	22.4	2.88	26.0	3.20
	Nominal	35	20.0	2.22	20.0	3.55
		30	20.0	2.60	20.0	4.09
		25	20.0	3.19	20.0	4.85
		20	20.0	3.35	20.1	3.90
	Mid	35	16.0	2.47	16.0	4.15
		30	16.0	2.88	17.4	4.43
		25	16.0	3.48	17.6	4.82
		20	16.0	3.83	20.1	3.90
	Min	35	8.9	2.98	13.7	4.37
		30	11.9	3.24	17.4	4.43
		25	12.3	3.69	17.6	4.82
		20	14.4	3.24	20.1	3.90
PUHZ-SHW 80VAA/YAA (-BS)	Max	35	7.1	3.31	10.4	4.18
		30	8.0	4.24	11.0	4.93
		25	8.0	4.34	10.8	4.75
		20	7.4	3.96	10.5	4.42
	Nominal	35	7.1	3.31	7.1	4.52
		30	7.1	4.36	7.1	5.34
		25	7.1	4.57	7.1	5.74
		20	7.1	4.09	7.1	5.83
	Mid	35	5.6	4.03	5.6	4.46
		30	5.6	4.42	5.6	5.24
		25	5.6	4.84	5.6	5.87
		20	5.6	4.57	5.6	6.19
	Min	35	2.8	3.10	4.1	4.15
		30	3.1	3.91	4.3	4.90
		25	3.2	4.64	4.4	5.75
		20	3.1	4.70	4.4	6.27
PUHZ-SHW 112VAA/YAA (-BS)	Max	35	10.0	2.83	14.8	3.69
		30	11.5	3.68	15.7	4.34
		25	11.1	3.42	14.8	3.75
		20	10.0	2.91	13.8	3.20
	Nominal	35	10.0	2.83	10.0	4.74
		30	10.0	4.05	10.0	5.69
		25	10.0	3.85	10.0	5.57
		20	10.0	2.93	10.0	5.21
	Mid	35	8.0	3.26	8.0	5.01
		30	8.0	4.42	8.0	5.95
		25	8.0	4.51	8.0	6.20
		20	8.0	3.87	8.0	6.17
	Min	35	2.8	3.25	4.1	4.66
		30	3.1	4.09	4.3	5.51
		25	3.2	4.86	4.4	6.46
		20	3.1	4.93	4.4	7.04

■ PUHZ-SHW140YHA(-BS)

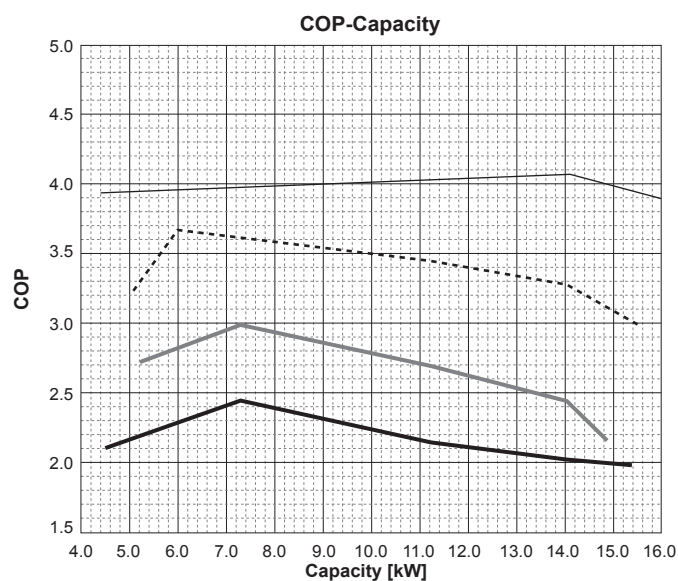
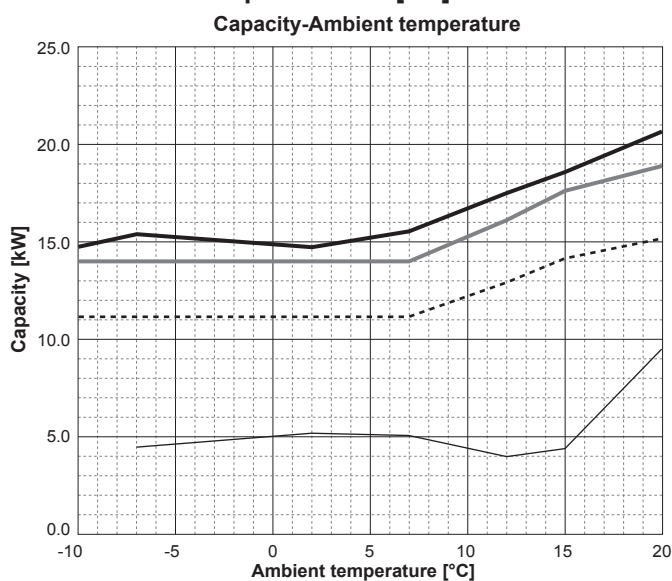
Water outlet temperature[°C]		25		35		40		45		50		55		60	
Ambient temperature[°C]		Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP
Max	(INJ) -28	-	-	9.0	1.85	9.0	1.68	9.0	1.50	-	-	-	-	-	-
	(INJ) -25	-	-	10.1	1.93	10.1	1.76	10.1	1.57	-	-	-	-	-	-
	(INJ) -20	-	-	11.8	2.08	11.8	1.89	11.8	1.69	-	-	-	-	-	-
	(INJ) -15	-	-	14.0	2.15	14.0	1.95	14.0	1.75	13.3	1.57	13.0	1.37	-	-
	(INJ) -10	15.2	2.64	15.0	2.33	15.0	2.11	14.9	1.89	14.6	1.71	14.3	1.51	-	-
	(INJ) -7	15.9	2.76	15.7	2.44	15.5	2.21	15.4	1.98	15.3	1.80	15.1	1.60	-	-
	(INJ) 2	16.8	3.02	15.8	2.71	15.3	2.43	14.8	2.16	14.6	1.95	14.4	1.72	13.8	1.47
	7	17.3	4.33	16.4	3.79	16.0	3.39	15.6	2.98	15.2	2.73	14.8	2.45	14.4	2.22
	12	20.0	4.78	19.0	4.23	18.2	3.75	17.5	3.27	17.1	3.00	16.6	2.70	16.3	2.48
	15	21.5	5.05	20.6	4.52	19.6	3.98	18.6	3.43	18.2	3.20	17.7	2.94	17.8	2.64
	20	22.6	5.21	21.6	4.69	21.1	4.20	20.6	3.72	20.1	3.42	19.6	3.09	19.5	2.81
Nominal	(INJ) -28	-	-	9.0	1.85	9.0	1.68	9.0	1.50	-	-	-	-	-	-
	(INJ) -25	-	-	10.1	1.93	10.1	1.76	10.1	1.57	-	-	-	-	-	-
	(INJ) -20	-	-	11.8	2.08	11.8	1.89	11.8	1.69	-	-	-	-	-	-
	(INJ) -15	-	-	14.0	2.15	14.0	1.95	14.0	1.75	13.3	1.57	13.0	1.37	-	-
	(INJ) -10	14.0	2.77	14.0	2.42	14.0	2.17	14.0	1.92	14.0	1.73	14.0	1.53	-	-
	(INJ) -7	14.0	2.98	14.0	2.58	14.0	2.30	14.0	2.02	14.0	1.84	14.0	1.64	-	-
	(INJ) 2	14.0	3.34	14.0	2.96	14.0	2.70	14.0	2.44	14.0	2.17	14.0	1.89	13.8	1.47
	7	14.0	4.75	14.0	4.22	14.0	3.75	14.0	3.28	14.0	2.91	14.0	2.49	14.0	2.23
	12	16.2	5.21	16.2	4.60	16.2	4.08	16.2	3.55	16.2	3.18	16.2	2.77	16.2	2.50
	15	17.6	5.52	17.6	4.86	17.6	4.29	17.6	3.73	17.6	3.36	17.6	2.96	17.6	2.66
	20	19.0	5.81	19.0	5.10	19.0	4.50	19.0	3.90	19.0	3.54	19.0	3.14	19.0	2.84
Mid	(INJ) -28	-	-	7.2	1.94	7.2	1.74	7.2	1.55	-	-	-	-	-	-
	(INJ) -25	-	-	8.0	2.02	8.0	1.82	8.0	1.62	-	-	-	-	-	-
	(INJ) -20	-	-	9.4	2.16	9.4	1.94	9.4	1.73	-	-	-	-	-	-
	(INJ) -15	-	-	11.2	2.31	11.2	2.06	11.2	1.80	10.6	1.59	10.4	1.38	-	-
	(INJ) -10	11.2	3.12	11.2	2.65	11.2	2.33	11.2	2.01	11.2	1.80	11.2	1.55	-	-
	(INJ) -7	11.2	3.38	11.2	2.85	11.2	2.50	11.2	2.14	11.2	1.91	11.2	1.66	-	-
	(INJ) 2	11.2	3.90	11.2	3.34	11.2	3.02	11.2	2.70	11.2	2.38	11.2	2.03	11.1	1.65
	7	11.2	4.98	11.2	4.45	11.2	3.94	11.2	3.44	11.2	3.06	11.2	2.64	11.2	2.34
	12	12.9	5.57	12.9	4.98	12.9	4.40	12.9	3.82	12.9	3.42	12.9	2.99	12.9	2.64
	15	14.1	5.93	14.1	5.33	14.1	4.70	14.1	4.07	14.1	3.66	14.1	3.22	14.1	2.85
	20	15.2	6.47	15.2	5.67	15.2	4.99	15.2	4.31	15.2	3.90	15.2	3.44	15.2	3.04
Min	-28	-	-	7.2	1.94	7.2	1.74	7.2	1.55	-	-	-	-	-	-
	-25	-	-	8.0	2.02	8.0	1.82	8.0	1.62	-	-	-	-	-	-
	-20	-	-	9.4	2.16	9.4	1.94	9.4	1.73	-	-	-	-	-	-
	-15	-	-	11.2	2.31	11.2	2.06	11.2	1.80	10.6	1.59	10.4	1.38	-	-
	-10	11.2	3.12	11.2	2.65	11.2	2.33	11.2	2.01	11.2	1.80	11.2	1.55	-	-
	-7	6.0	3.57	4.9	2.82	4.7	2.46	4.5	2.10	4.3	1.90	4.1	1.67	-	-
	2	8.0	4.35	5.7	3.67	5.5	3.19	5.2	2.72	5.0	2.43	4.7	2.11	-	-
	7	9.0	5.15	5.5	4.38	5.3	3.81	5.0	3.23	4.8	2.89	4.5	2.52	-	-
	12	10.5	5.69	4.4	4.88	4.2	4.23	4.0	3.58	3.8	3.20	3.6	2.78	-	-
	15	11.3	6.13	4.8	5.30	4.6	4.61	4.4	3.93	4.2	3.51	4.0	3.05	-	-
	20	12.3	6.66	10.0	5.90	9.7	5.19	9.4	4.49	9.1	4.01	8.7	3.50	-	-

PUHZ-SHW140YHA(-BS)

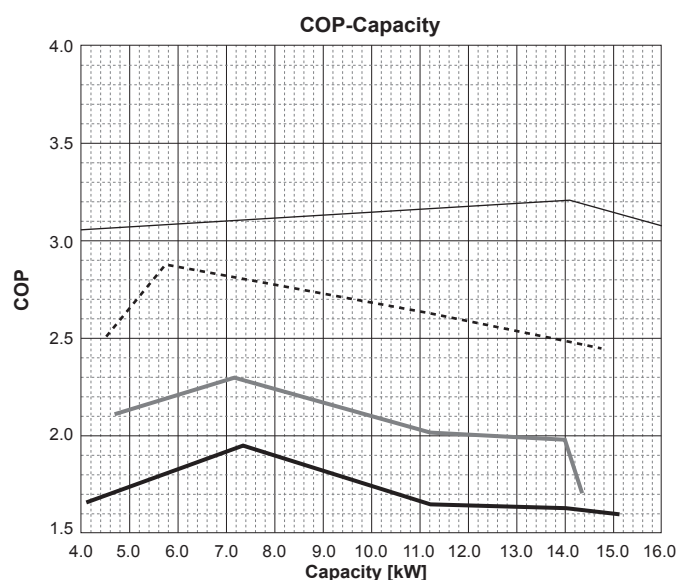
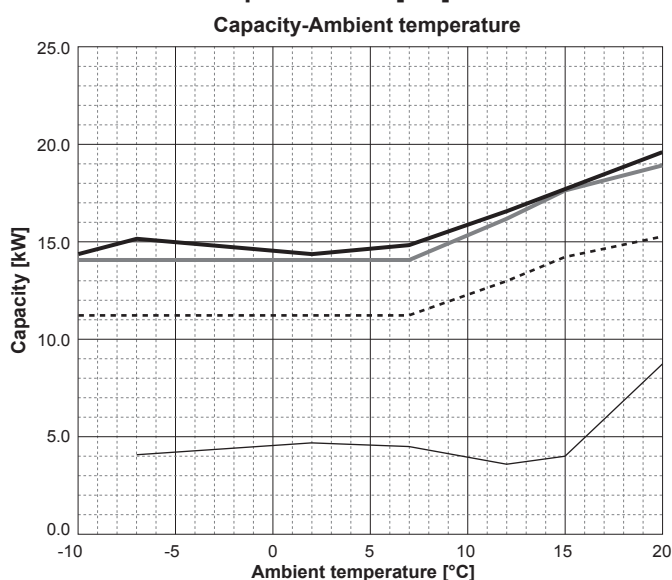
Water outlet temperature 35 [°C]



Water outlet temperature 45 [°C]



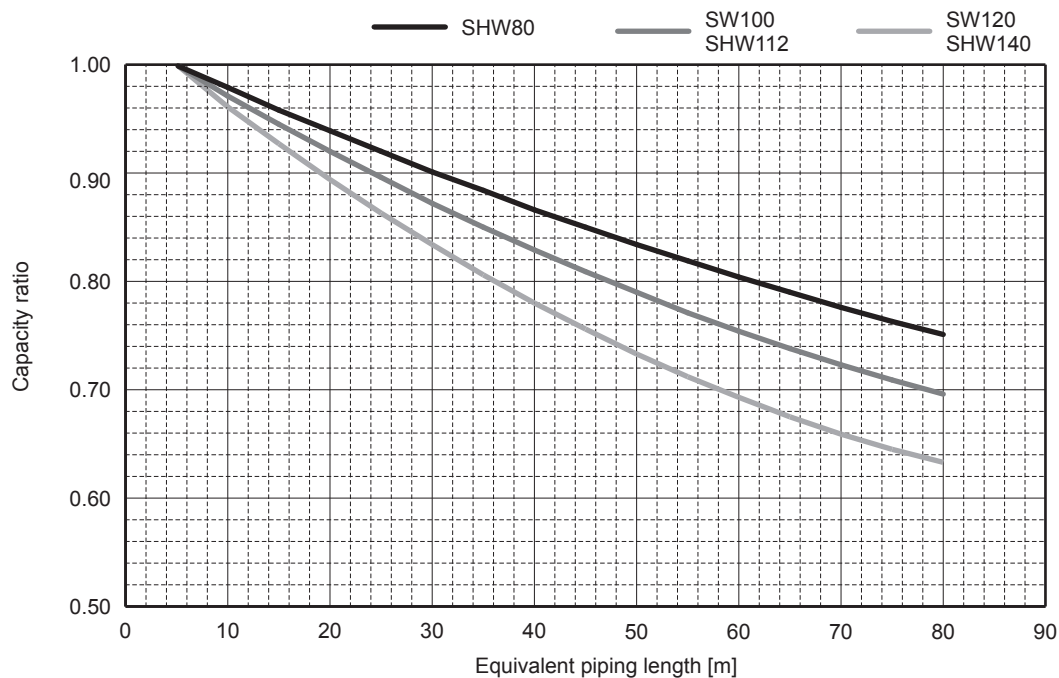
Water outlet temperature 55 [°C]



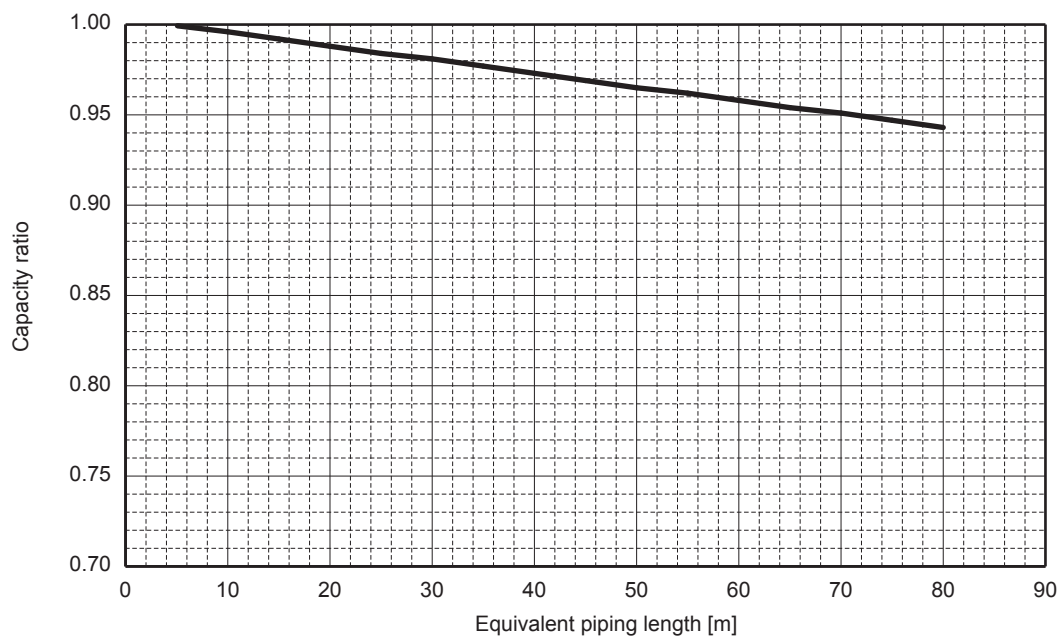
■ PUAZ-SW100/120VHA(-BS)
PUAZ-SW100/120YHA(-BS)
PUAZ-SW100VAA(-BS)
PUAZ-SW100YAA(-BS)

PUAZ-SHW80/112VHA(-BS)
PUAZ-SHW112/140YHA(-BS)
PUAZ-SHW80/112VAA(-BS)
PUAZ-SHW80/112YAA(-BS)

<Cooling>

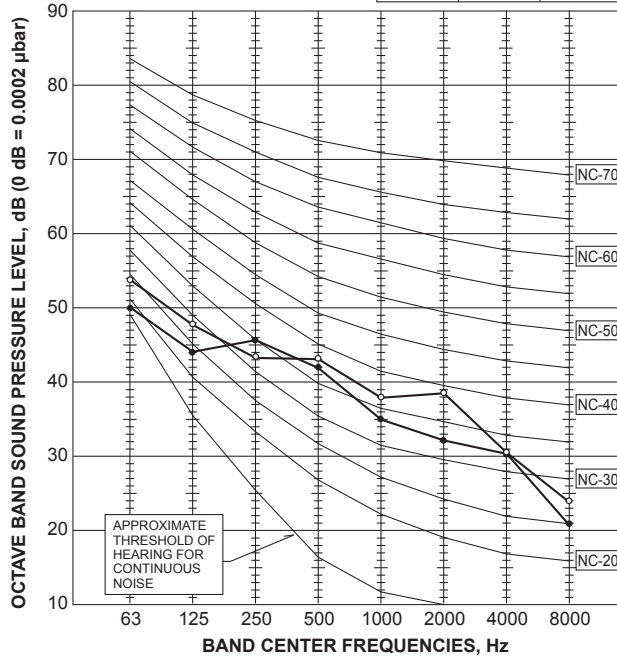


<Heating>



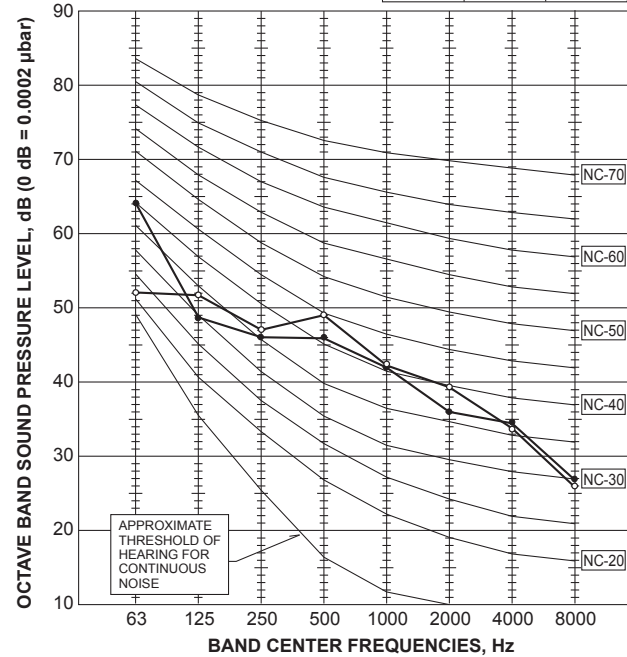
PUHZ-SW75VAA(-BS) PUHZ-SW75YAA(-BS)

MODE	SPL(dB)	LINE
COOLING	45	○—○
HEATING	43	●—●



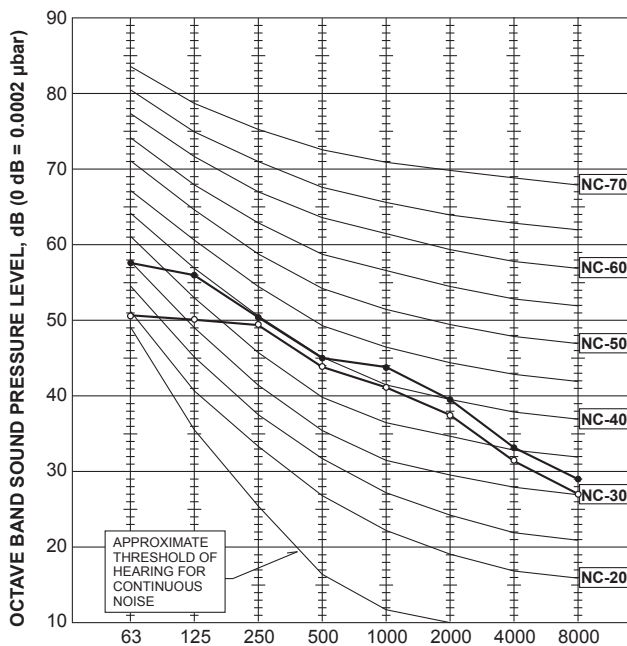
PUHZ-SW100VAA(-BS) PUHZ-SW100YAA(-BS)

MODE	SPL(dB)	LINE
COOLING	49	○—○
HEATING	47	●—●



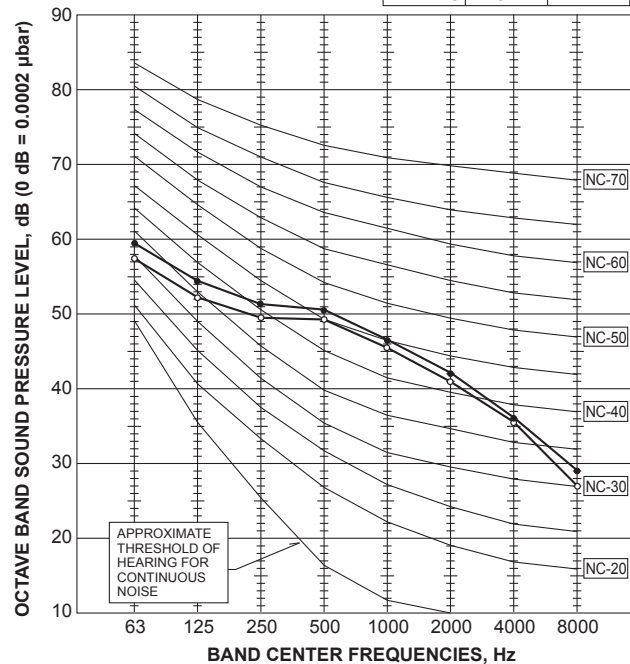
PUHZ-FRP71VHA2

MODE	SPL(dB)	LINE
ATA Cooling, HR Cooling	47	○—○
ATA Heating, ATW Heating	49	●—●



PUHZ-SHW80VHA(-BS) PUHZ-SHW112VHA(-BS) PUHZ-SHW112/140YHA(-BS)

MODE	SPL(dB)	LINE
COOLING	51	○—○
HEATING	52	●—●

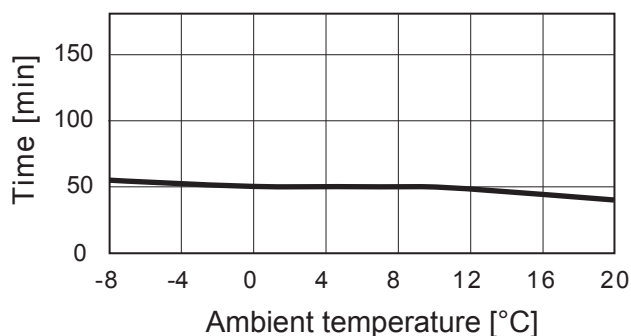


<Notes>

- 1) Sound data is taken when the system is running stably.
- 2) Relatively large noise could be heard transiently in the case 4-way valve, or LEV operates.

■ PUAZ-SHW140YHA(-BS)

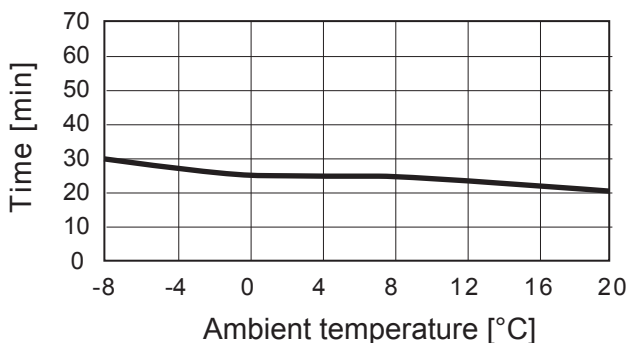
Heat time



	Ambient temperature [°C]			
	-7	2	7	20
Heat time (min)	55	50	50	40

- Mitsubishi's domestic hot water tank (200 [L])
- Time to raise DHW tank temperature 15 – 55[°C]

Reheat time

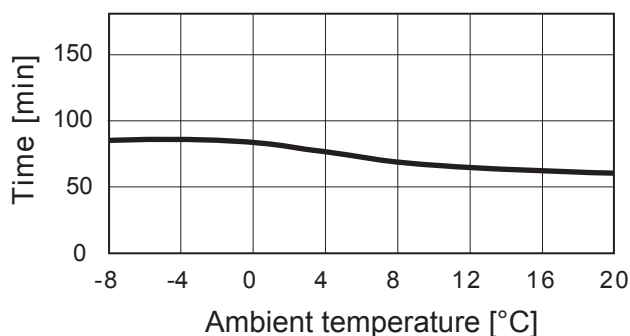


	Ambient temperature [°C]			
	-7	2	7	20
Reheat time (min)	30	25	25	20

- Mitsubishi's domestic hot water tank (200 [L])
- Time to reheat 50%(100 [L]) of DHW tank to 55 [°C]

■ PUAZ-SHW80VAA/YAA(-BS)

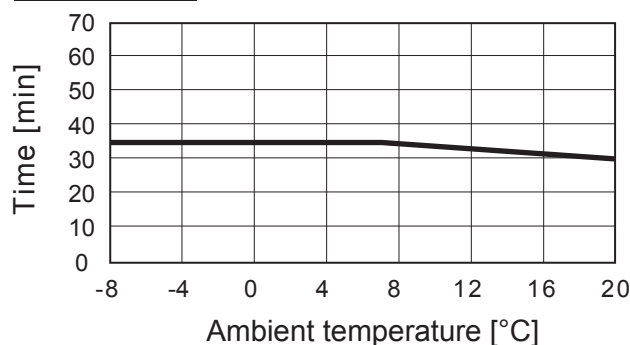
Heat time



	Ambient temperature [°C]			
	-7	2	7	20
Heat time (min)	85	80	70	60

- Mitsubishi's domestic hot water tank (200 [L])
- Time to raise DHW tank temperature 15 – 55[°C]

Reheat time

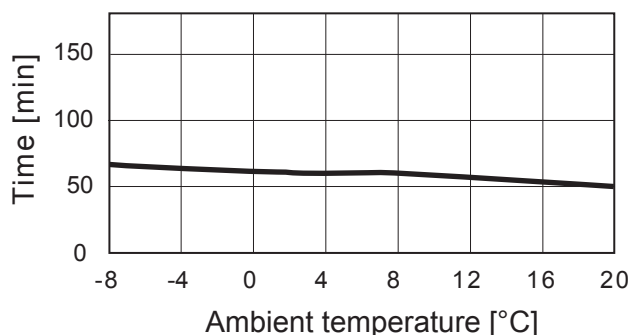


	Ambient temperature [°C]			
	-7	2	7	20
Reheat time (min)	35	35	35	30

- Mitsubishi's domestic hot water tank (200 [L])
- Time to reheat 50%(100 [L]) of DHW tank to 55 [°C]

■ PUAZ-SHW112VAA/YAA(-BS)

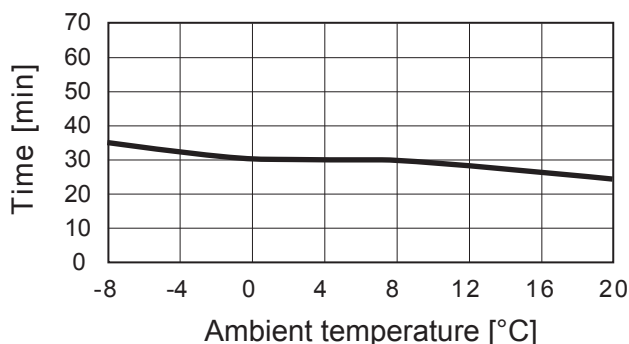
Heat time



	Ambient temperature [°C]			
	-7	2	7	20
Heat time (min)	65	60	60	50

- Mitsubishi's domestic hot water tank (200 [L])
- Time to raise DHW tank temperature 15 – 55[°C]

Reheat time



	Ambient temperature [°C]			
	-7	2	7	20
Reheat time (min)	35	30	30	25

- Mitsubishi's domestic hot water tank (200 [L])
- Time to reheat 50%(100 [L]) of DHW tank to 55 [°C]