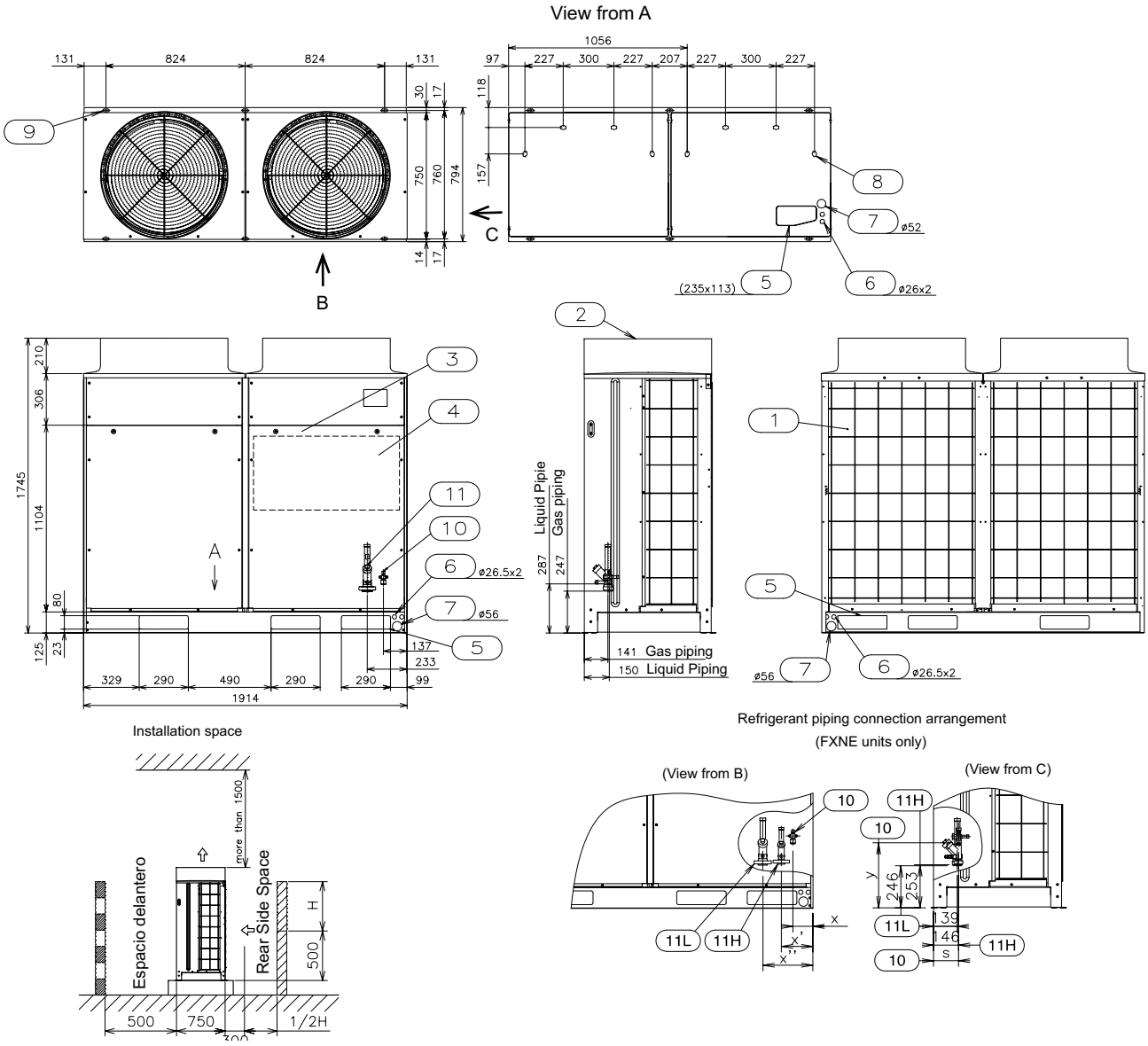
◆ RAS-18~20FSN1/RAS-16~20FXN



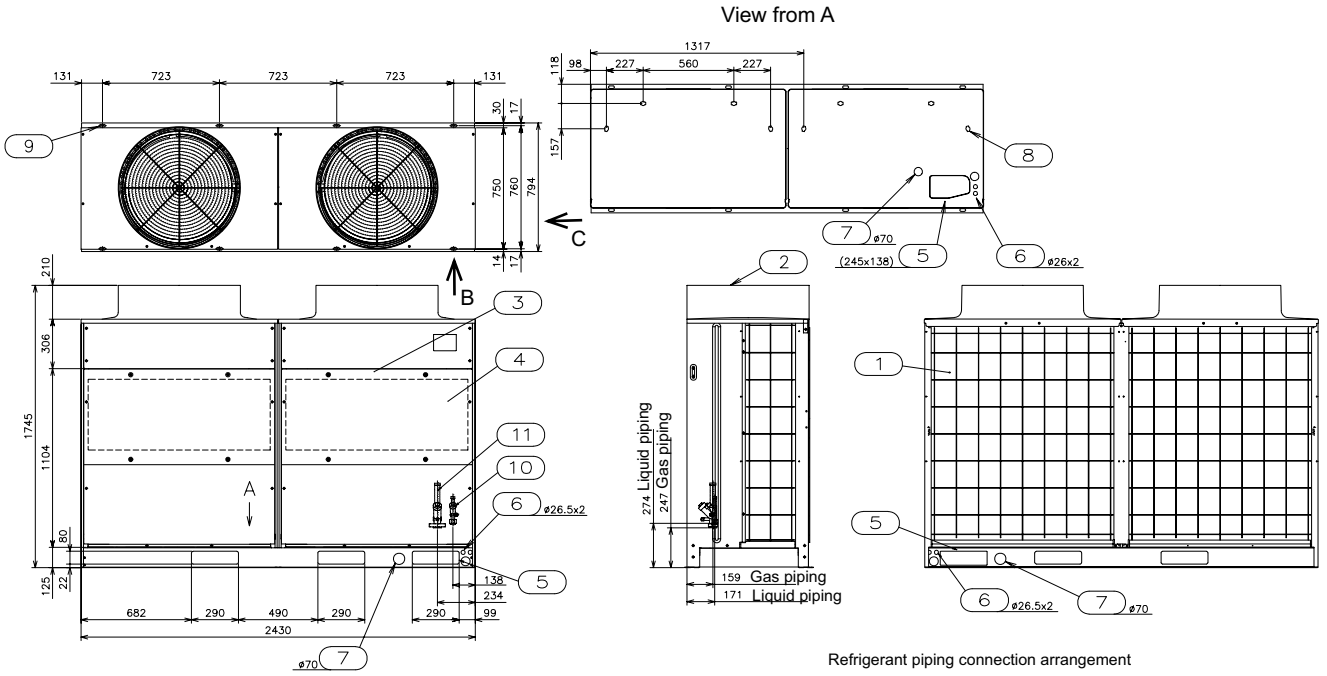
(Units: mm)

No.	Item	Remarks
1	Air intake	
2	Air outlet	
3	Service cover	
4	Electrical switch box	
5	Holes for Refrigerant Piping	
6	Holes for Control Line Wiring	
7	Holes for Power Supply Wiring	
8	Drain holes	8-Ø26
9	Holes for fixing machine to floor	6-(38x16)
10	Refrigerant Liquid Line	Flare nut: Øa
11	Refrigerant Gas Line	Flange: Ø28.6
11H	High Refrigerant Gas Line	Flange: Ø22.2
11L	Low Refrigerant Gas Line	Flange: Ø28.6

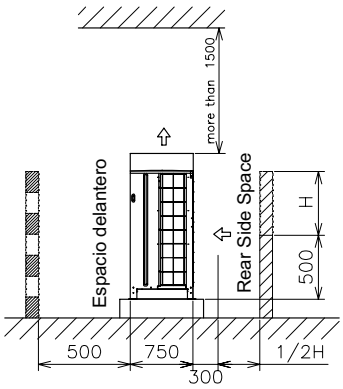
Models	a
RAS-18FSN1	12.70
RAS-20FSN1	15.88

Models	a	x	x'	x''	y
RAS-16FXN	12.70	115	183	292	385
RAS-18FXN	15.88	115	183	292	385
RAS-20FXN	15.88	118	186	295	381

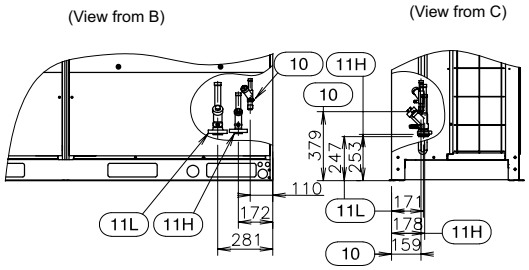
◆ RAS-24~32FSN1 / RAS24~32FXN



Installation space



Refrigerant piping connection arrangement
(FXNE units only)



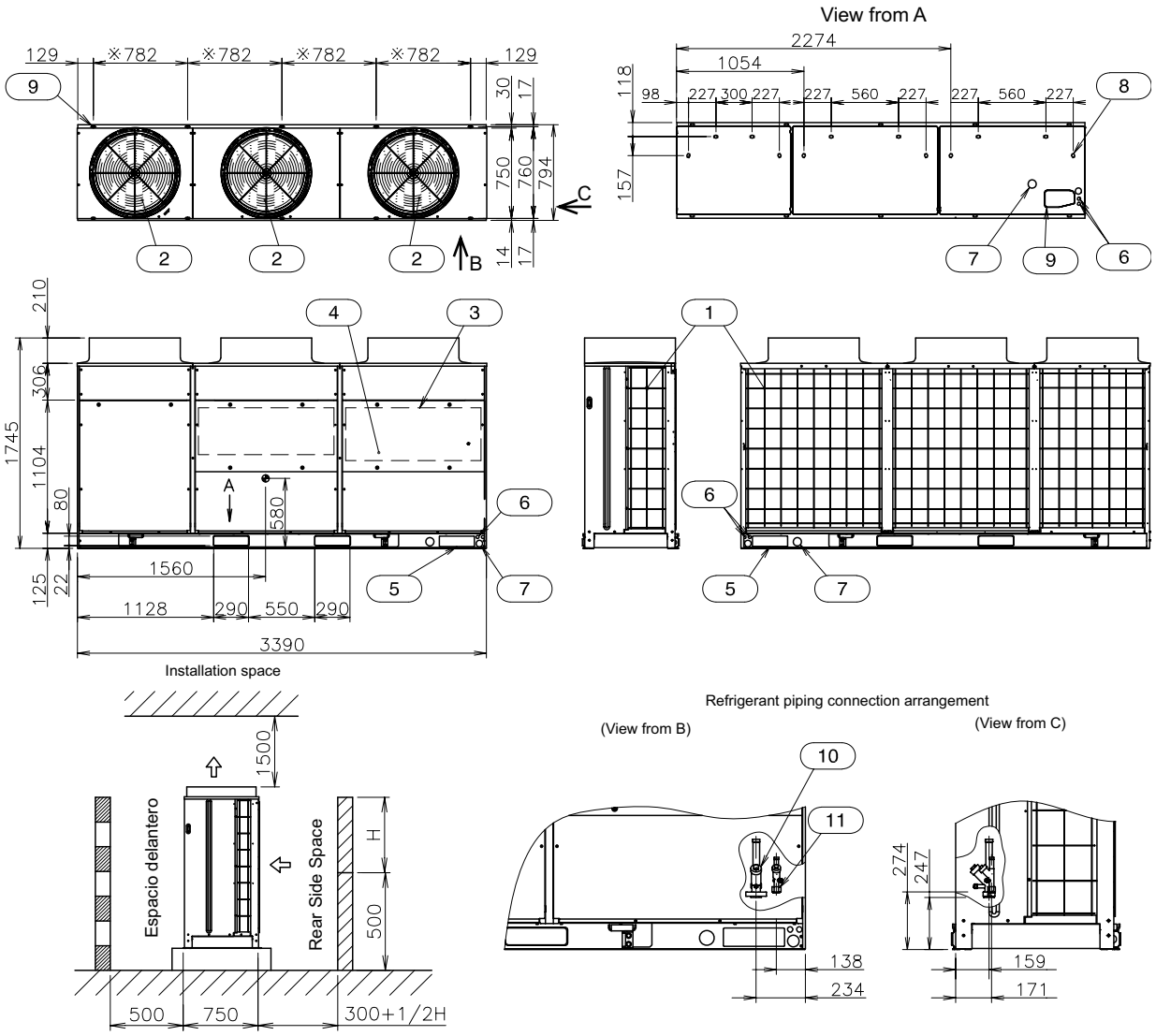
(Units: mm)

No.	Item	Remarks
1	Air intake	
2	Air outlet	
3	Service cover	
4	Electrical switch box	
5	Holes for Refrigerant Piping	
6	Holes for Control Line Wiring	
7	Holes for Power Supply Wiring	
8	Drain holes	8-Ø26
9	Holes for fixing machine to floor	8-(38x16)
10	Refrigerant Liquid Line	Flare nut: Øa
11	Refrigerant Gas Line	Flange:Øb
11H	High Refrigerant Gas Line	Flange: Øc
11L	Low Refrigerant Gas Line	Flange: Ød

Models	a	b
RAS-24FSN	19.05	28.60
RAS-28FSN	19.05	31.75
RAS-30FSN	19.05	31.75
RAS-32FSN	19.05	31.75

Models	a	c	d
RAS-24FXN	15.88	25.4	28.6
RAS-30FXN	15.88	28.6	31.75
RAS-32FXN	15.88	28.6	31.75

◆ RAS-36/42FSN

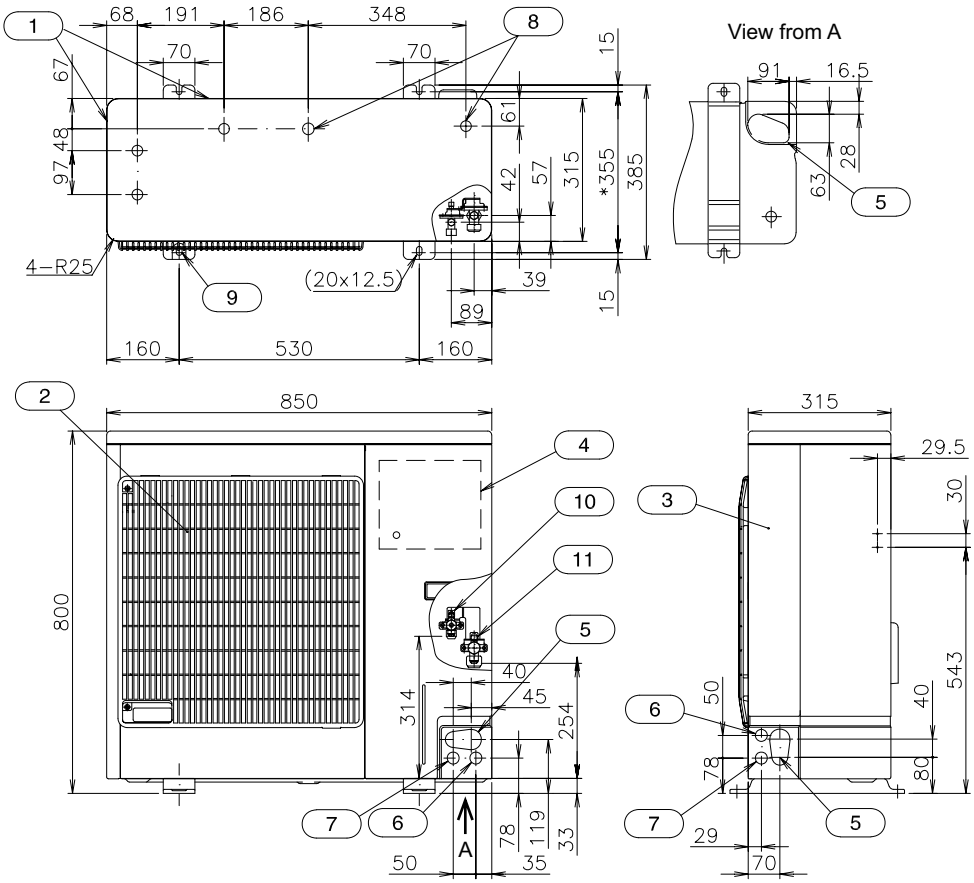


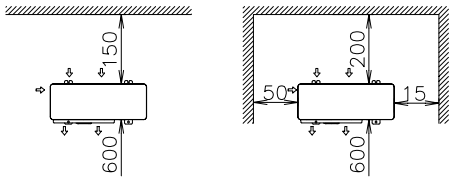
(Units: mm)

No.	Item	Remarks
1	Air intake	
2	Air outlet	
3	Electrical switch box	
4	Service Access Panel	
5	Holes for transportation	
6	Holes for Control Line Wiring	2-Ø26,5
7	Hole for Power Supply Wiring connection	Ø20
8	Hole for Condensate Drain	8-Ø26
9	Hole for Refrigerant Piping	
10	Refrigerant Gas Piping connection	Flange: Ø38.1
11	Refrigerant Liquid/Gas connection	Flare: Ø19.05

3.2.2. Set Free Mini Series – FSVNE

◆ **RAS-3FSVNE**

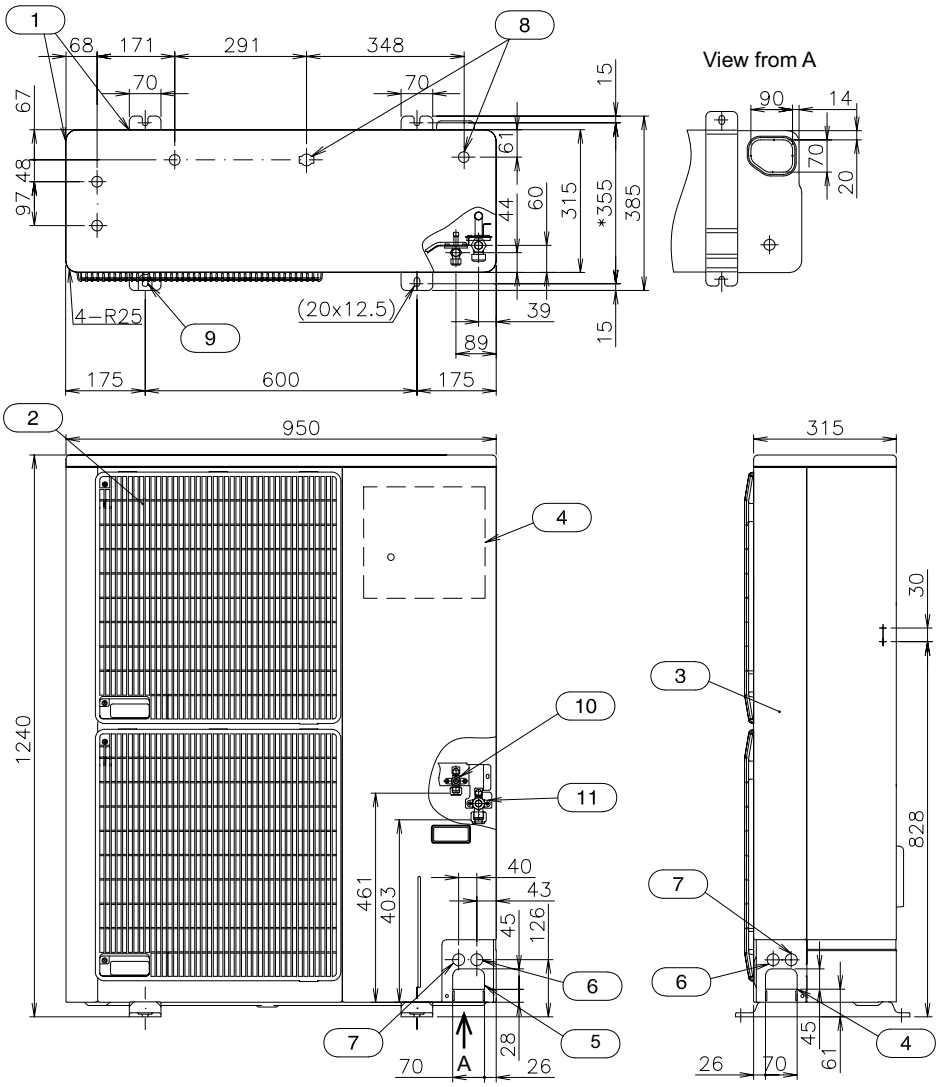




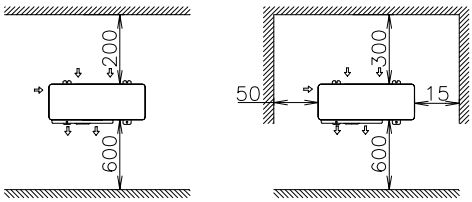
Units: mm

No.	Item	Remarks
1	Air intake	
2	Air outlet	
3	Service cover	
4	Electrical switch box	
5	Holes for Refrigerant Piping	
6	Holes for Control Line Wiring	
7	Holes for Power Supply Wiring	
8	Drain holes	
9	Holes for fixing machine to floor	
10	Refrigerant Liquid Line	Flare: Ø9.53
11	Refrigerant Gas Line	Flare: Ø15.88

◆ RAS-4/5FSVNE



Installation space



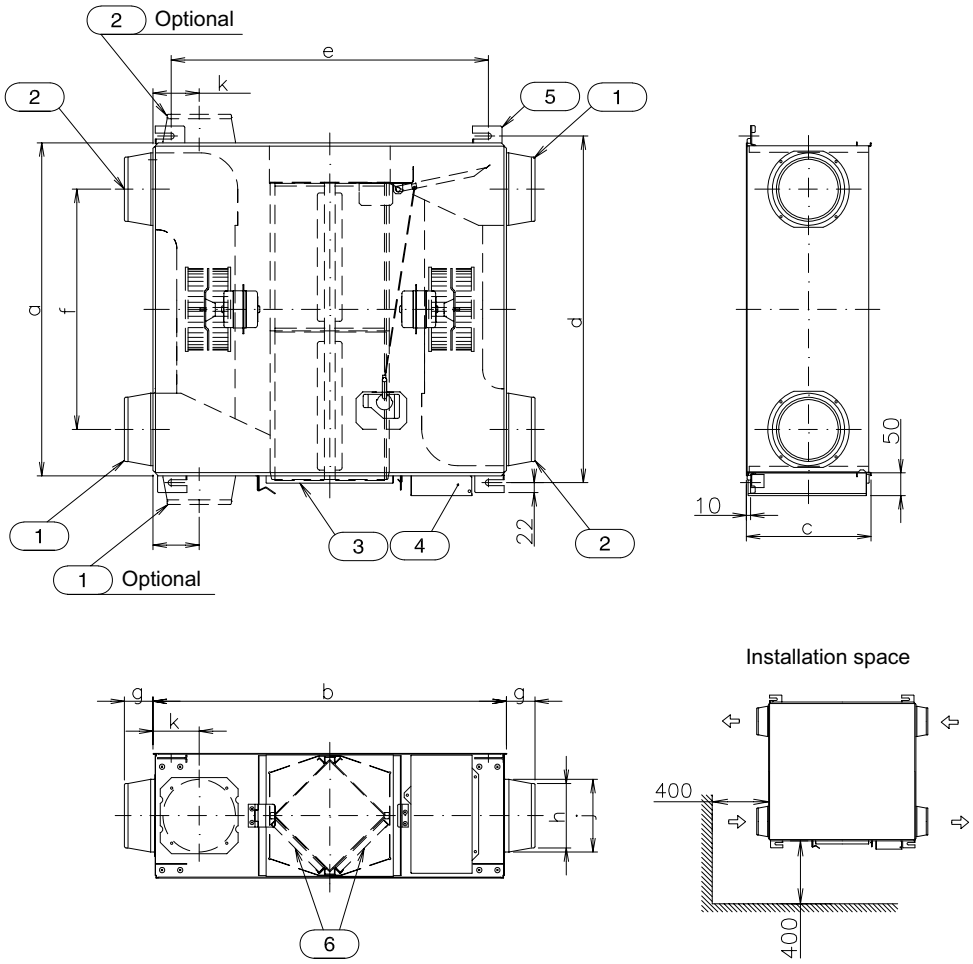
Units: mm

No.	Item	Remarks
1	Air intake	
2	Air outlet	
3	Service cover	
4	Electrical switch box	
5	Holes for Refrigerant Piping	
6	Holes for Control Line Wiring	
7	Holes for Power Supply Wiring	
8	Drain holes	
9	Holes for fixing machine to floor	
10	Refrigerant Liquid Line	Flare: Ø9.53
11	Refrigerant Gas Line	Flare: Ø15.88

3.3. Complementary units

3.3.1. Total heat exchanger

◆ **KPI-2521 / KPI-5021 / KPI-8021 / KPI-10021**



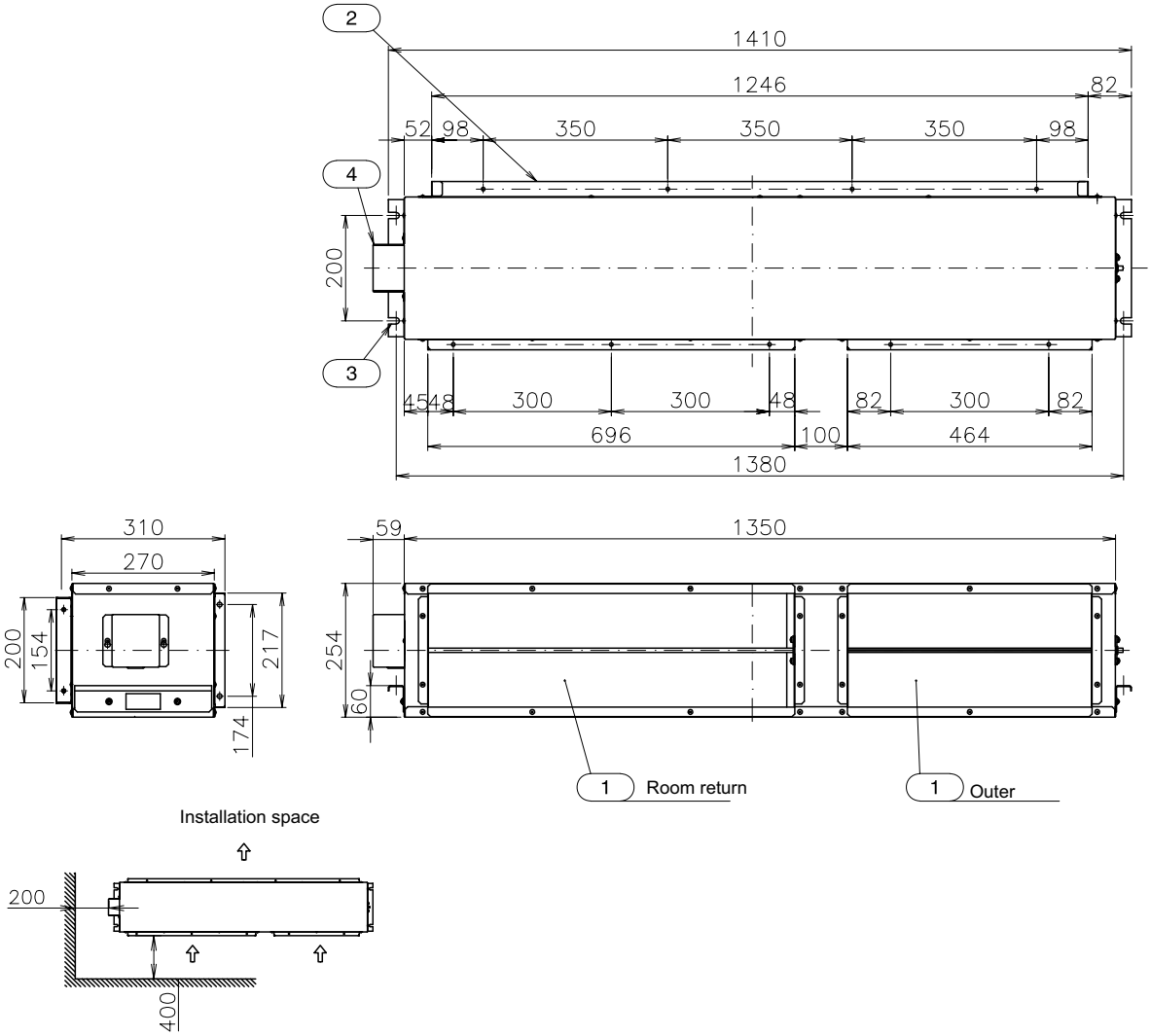
Units: mm

No.	Item	Remarks
1	Air intake	
2	Air outlet	
3	Service cover	
4	Electrical switch box	
5	Bracket to suspend the machine	Ø14
6	Air filter	

Models	External dimensions		For mounting		For duct		Duct Diameter		Duct direction change	
	a	b	c	d	e	f	g	h	j	k
KPI-2521	735	780	275	765	700	530	63	142	160	102
KPI-5021	1016	888	317	1048	790	745	79	192	208	124
KPI-8021	1004	1164	398	1036	1030	690	79	242	258	149
KPI-10021	1231	1164	398	1263	1030	920	79	242	258	149

3.3.2. Econofresh kit

◆ **EF-5GE**



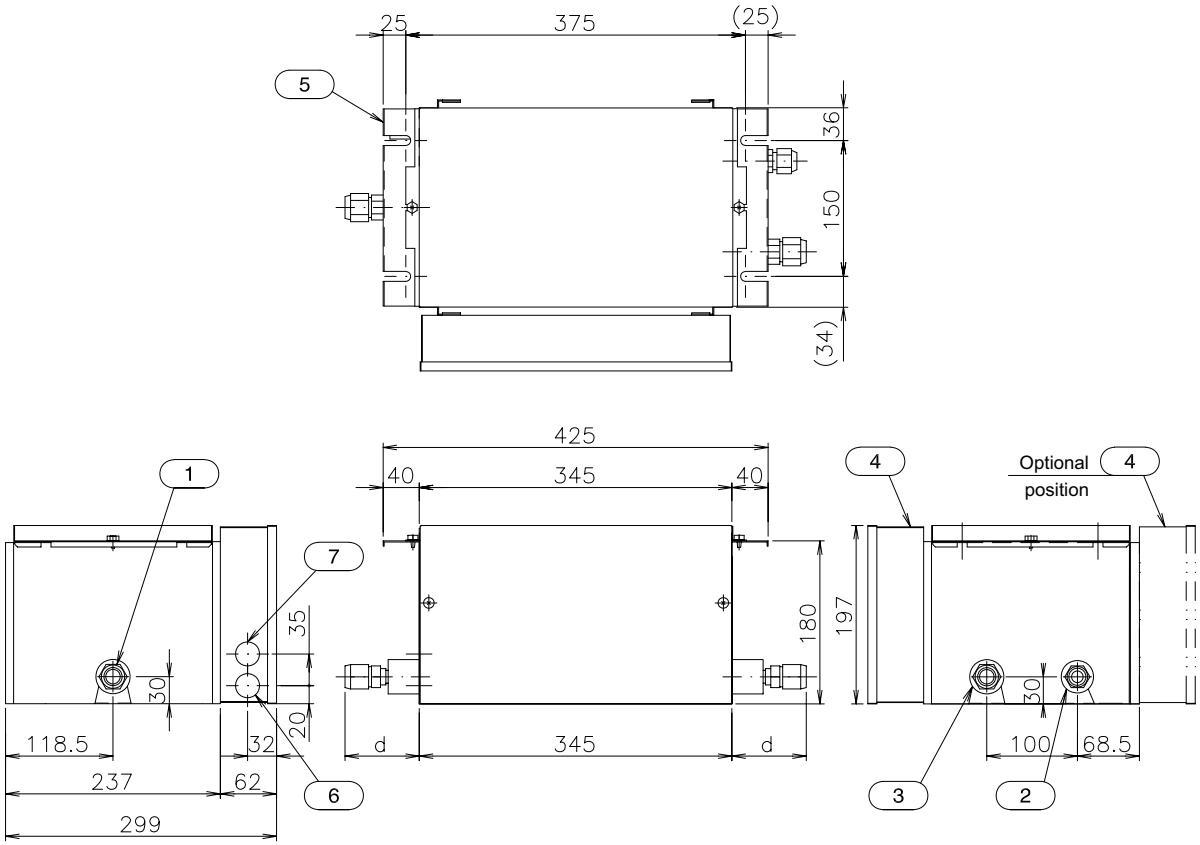
Units: mm

No.	Item	Remarks
1	Air intake	
2	Air outlet	
3	Bracket to suspend the machine	4-15x12
4	Electrical switch box	

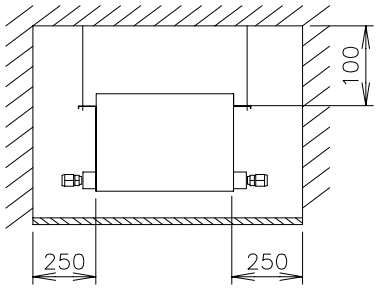
3.4. Accessories

3.4.1. CH Box units

◆ **CH-4.0/8.0NE**



Installation space

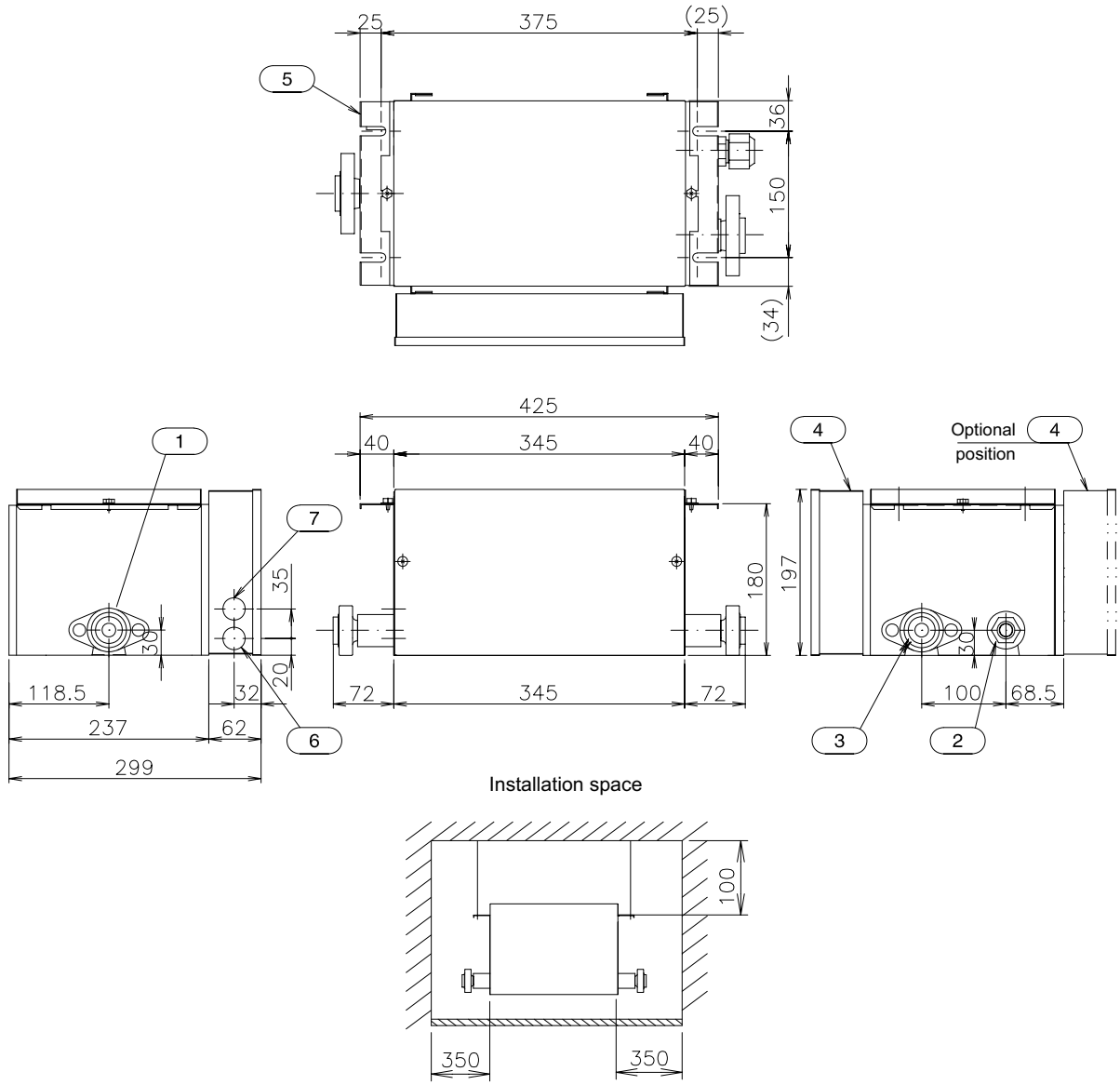


Units: mm

No.	Item	Remarks
1	Refrigerant Gas Line	Flange: Øa
2	High refrigerant gas line	Flange: Øb
3	Low refrigerant gas line	Flange: Ø c
4	Electrical switch box	
5	Holes for fixing machine	M8 o W5/16
6	Holes for Control Line Wiring	Ø26,5
7	Holes for Power Supply Wiring	Ø26,5

Models	a	b	c	d
CH-4.0	15,88	12,7	15,88	78
CH-8.0	19,05	15,88	19,05	82

◆ **CH-12.0NE**



Units: mm

No.	Item	Remarks
1	Refrigerant Gas Line	Flange: Ø22,2
2	High refrigerant gas line	Flange: Ø19.05
3	Low refrigerant gas line	Flange: Ø22,2
4	Electrical switch box	
5	Bracket to suspend the machine	M8 o W5/16
6	Holes for Control Line Wiring	Ø26,5
7	Holes for Power Supply Wiring	Ø26,5

4.Capacities and selection data

This chapter is a guide for selecting the most suitable units for your requirements and shows performance details of each unit of the new Hitachi SET FREE FSN(1)(E)/FXN(E)/FSVNE Series.

Contents

(Continued in next page)

Contents (Cont.)

4.1. Set-Free System Selection Procedure

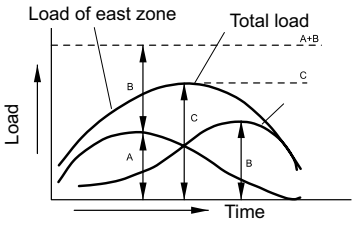
The following procedure is an example of how to select the system units and indicates how to use all the parameters indicated in this chapter.

4.1.1. Selecting unit features

Considering the building distribution, the possible indoor unit position and the available air flow distribution, select the unit features that is giving the best efficiency and comfort. Decide on a position for the outdoor unit that facilitates service and maintenance tasks, as well as easy installation of the refrigerant pipes.

Use the information provided in the following sections:

- For operation space possibilities: Chapter 3.
- For air flow distribution: Section 4.9 Temperature distribution diagrams.
- For noise characteristics: Subchapter 4.10 Sound Data.
- For determining the position of the outdoor units: Section 4.11 Outdoor unit.
- Piping length and lift range: Chapter 7.



Example:

Air Conditioning system for a building

NOTE:

The maximum indoor unit capacity combined with the capacity of the outdoor unit should be carefully considered to ensure the correct distribution of the indoor units in each building.

If a duct type unit is selected, the fan performance for duct calculation should be considered, as shown in Section 4.8. The units are designed with three possible static pressure ranges in order to adapt to all installation necessities.

The Set-Free system enable the outdoor unit to be up to 30% smaller in capacity when compared with the conventional systems. The diagram shows a typical building with a morning peak heat load on the east zone equivalent to a 6HP unit.

In the afternoon a peak occurs on the west zone equivalent to a 7HP unit. Therefore, a conventional system would require total installed plant of 6HP + 7HP = 13HP.
The maximum simultaneous load on the whole building occurs at noon and is equal to 10HP of unit capacity. A Set-Free System of 10HP can therefore be selected, and this capacity can be directed either to the east or west zone as dictated by the system controls.

Saving in installed plant = (13-10)/13x100 = 23%

4.1.2. Selection guide for Set Free

The following example is giving the method for indoor and outdoor units selection of Set -Free system.

System requirements

Calculate the cooling capacity and heating capacity of each indoor unit according to the following operating conditions:

- Total load required for each room

Step 1:

		Room			
Item		1	2	3	1+2+3
Estimated cooling load	kW	2.55	3.75	5.06	11.36
Estimated heating load	kW	2.32	3.40	4.80	10.52

◈ Temperature

Cooling mode	Heating mode
Outdoor air inlet Dry bulb: 32 °C	Outdoor air inlet Dry bulb: -1 °C Wet bulb: -5 °C
Indoor air inlet Dry bulb: 27 °C Wet bulb: 22 °C	Indoor air inlet Dry bulb: 18 °C

Equivalent piping length between Outdoor unit and farther Indoor unit	60 m
The height difference between the outdoor unit and the indoor unit	25 m

☛ **Step 2:**

Selection of unit capacity performance

The unit HP is selected following the Cooling capacity and Heating capacity showed in the next table:

– Nominal capacity of indoor units

Performance capacity	Horsepower (HP)	0.8	1	1.5	2	2.5	3	3.5	4	5	6	8	10
Cooling capacity	kW	2.20	2.80	4.50	5.60	7.10	8.00	9.00	11.20	14.00	16.00	22.40	28.00
Heating capacity		2.50	3.20	5.00	6.30	8.50	9.00	10.00	12.50	16.00	18.00	25.00	31.50

The indoor units capacity can be adjusted as indicated below, in order to adapt the unit to the real room needs.

– Capacity adjusted by Dip Switch

Horsepower (HP)		1.3		1.8		2.3	2.8
Variable capacity		1→1.3	1.3←1.5	1.5→1.8	1.8←2	2.3←2.5	2.5→2.8
Cooling capacity	kW	3.10	3.80	5.00	5.00	6.50	7.50
Heating capacity		3.50	4.30	5.50	5.70	7.80	8.90
Dip switch setting (DSW3)							 (Not available for FSN2M)

NOTE:

In the example shown on the right we have selected the following indoor units based on the conditions indicated above, and the outdoor unit based on the capacity corresponding to the combination of indoor units (shown in chapter 2).

An example of a calculation for cooling and heating is shown below.

Unit and nominal capacity selected for each room

Item		Room 1	Room 2	Room 3	1+2+3	Outdoor unit
Selected Model		RPI-1.5 (Adjusted to 1.3)	RPI-2.0	RPI-2.5 (Adjusted to 2.8)	6.1 HP 122%	RAS-5FSN (Chapter 2)
Nominal cooling capacity (Q_{nc})	kW	3.80	5.60	7.50	16.90	14
Nominal heating capacity (Q_{nh})		4.30	6.30	8.90	19.50	16

☛ **Step 3:**

Obtaining the selected unit performance

The unit's performance may be in cooling or in heating mode:

◆ Cooling mode

a) The unit performance should be calculated considering the following correction factors:

$$Q_c = Q_{nc} \times f_t \times f_l$$

Q_c: Cooling capacity (kW)
Q_{nc}: Nominal Cooling capacity (kW)
f_t: Temperature correction factor
f_1: Piping Length correction factor

☛ Example: Cooling:

b) Calculation of the actual cooling capacity of the outdoor unit

- Calculation of the nominal capacity:
  Calculate the nominal cooling capacity of unit RAS-5FSN at 122% of the combined indoor power (Section 4.4). By means of an interpolation of between 120% and 130% we can calculate that the nominal capacity is **14.30 kW**.
- Corrected capacity calculation:
  Calculate the corrected capacity by applying the temperature correction factor for cooling (Section 4.6.1). By means of an interpolation we calculate that the correction factor based on the selected temperature is 1.13. Therefore, we can calculate that the corrected capacity is 14.30 x 1.13 = **16.16 kW**.
- Calculation of the actual cooling capacity of the outdoor unit:
  Finally, we must apply the correction factor for piping length, since performance varies depending on it (Section 4.6.3). Since the correction factor we obtained is 0.83, the actual capacity is: 16.16 x 0.83 = **13.41 kW.**

NOTE:

Refer to the data in section 4.4, 4.5 to obtain the required temperatures for the electrical consumption of the outdoor unit.

Get indoor unit data from chapter 6, Electrical data.

c) Indoor unit capacity: The actual capacity of each unit is:

$$Q_{1c} = Q_c \times \frac{Q_{nc1}}{\sum Q_{nc}}$$

Q_{1c}: Cooling capacity in the first indoor unit (kW)
Q_c: Cooling capacity (kW)
Q_{nc1}: Nominal cooling capacity of the first indoor unit (kW)
$\sum Q_{nc}$: Cooling capacity of all indoor units (kW)

no. 1	<RPI-1.5> (adjusted at 1.3)	Cooling capacity =13.41 x (3.80 / 16.90) = 3.01 kW
no. 2	<RPI-2.0>	Cooling capacity =13.41 x (5.60 / 16.90) = 4.44 kW
no. 3	<RPI-2.5> (adjusted at 2.8)	Cooling capacity =13.41 x (7.50 / 16.90) = 5.95 kW

◆ Heating mode

a) The unit performance should be calculated considering the following correction factors:

$$Q_h = Q_{nh} \times f_t \times f_l \times f_d$$

Q_h: Actual heating capacity (kW)
Q_{nh}: Nominal heating capacity (kW)
f_t: Temperature correction factor
f_l: Piping Length correction factor
f_d: Defrost correction factor

☛ Example: Heating:

b) Calculation of the actual heating capacity of the outdoor unit

- Calculation of the nominal capacity:
  Calculate the nominal heating capacity of unit RAS-5FSN at 122% of the combined indoor power (Section 4.4). By means of an interpolation of between 120% and 130% we can calculate that the nominal capacity is **18.10 kW**.
- Corrected capacity calculation:
  Calculate the corrected capacity by applying the temperature correction factor for heating (Section 4.6.2). By means of an interpolation we calculate that the correction factor based on the selected temperature is 0.72. Therefore, we can calculate that the corrected capacity is 18.10 x 0.72 = **13.03 kW.**
- Calculation of the actual heating capacity of the outdoor unit:
  Finally, the unit's performance varies depending on the length of the piping and the defrosting operation of the unit.
  In the case of the piping length (Section 4.6.3), the correction factor is 0.955, while the correction factor for the defrosting operation (section 4.6.4) is 0.86.
  When we apply the factors, the actual capacity is: 13.03 x 0.95 x 086 = **10.70 kW.**

NOTE:

Refer to the data in section 4.4, 4.5 to obtain the required temperatures for the electrical consumption of the outdoor unit.

Get indoor unit data from chapter 6, Electrical data.

c) Indoor unit capacity. The actual capacity of each unit is:

$$Q_{1h} = Q_h \times \frac{Q_{nh1}}{\sum Q_{nh}}$$

Q_{1h}: Heating capacity in the first indoor unit (kW)
Q_h: Heating capacity (kW)
Q_{nh1}: Nominal heating capacity in the first indoor unit (kW)
$\sum Q_{nh}$: Heating capacity of all indoor units (kW)

no. 1	<RPI-1.5> (adjusted at 1.3)	Heating capacity =10.70 x (4.30 / 19.50) = 2.36 kW
no. 2	<RPI-2.0>	Heating capacity = 10.70 x (6.30 / 19.50) = 3.46 kW
no. 3	<RPI-2.5> (adjusted at 2.8)	Heating capacity =10.70 x (8.90 / 19.50) = 4.88 kW

The results are the following:

Item			Room 1	Room 2	Room 3	1+2+3	Outdoor unit
Selected Model			RPI-1.5 (Adjusted to 1.3)	RPI-1.5	RPI-2.5 (Adjusted to 2.8)	6.1 HP 122%	RAS-5FSN
Cooling mode	Performance capacity	kW	3.01	4.44	5.95	13.41	
	Estimated load	kW	2.55	3.75	5.06	11.36	
Heating mode	Performance capacity	kW	2.36	3.46	4.88	10.70	
	Estimated load	kW	2.32	3.40	4.80	10.52	

4.2. KPI system selection procedure

4.2.1. Selection guide for KPI

There are two methods for calculating the suitable unit:

- **Method 1, areas**
- **Method 2, occupants**

It is important to check the local legislation regarding certification of the final results. This is a quick method to calculate the ventilation. Remember that this result is only approximate.

The air will need to be renewed in order to reduce the CO_2 levels in the room and to eliminate unpleasant smells, smoke, and pollution. In short, the room must be ventilated to provide a greater comfort level for the occupants.

The first point to analyze is the kind of activity for which the room is used. An office is not the same as a bar.

Then, the volume of the room must be calculated.

☛ **Method 1:**

This method is based on **areas**, and the number of air renewals.

$$V = A \times B \times C$$

V: Volume (m^3)
A x B: Room surface (m2)
C: Ceiling height (m)

☛ Look to the table below in order to know the number of air ventilations per hour necessary depending on the kind of room. This table is not a standard ventilation depends of the each country it will be different but the layout will be the same.

Type of room	Air ventilation / hour (N)
Cathedral	0
Modern church (low ceiling)	1-2
Schools	2-3
Offices	3-4
Bars	4-6
Hospitals	5-6
Restaurants	5-6
Laboratories	6-8
Discos	10-12
Kitchens	10-15
Laundries	20-30

The air flow is calculated using the following formula:

$$C = V \times N$$

C: Air flow speed (m^3/h)
V: Room Volume (m^3)
N: Number of air ventilations

☛ Example:

A bank with an area of 60 m² and an average height of 3 m. requires 4 ventilations per hour. The airflow is therefore:

$$C = 180 \times 4 = 720\ m^3/h$$

The correct KPI model for this installation is KPI-8021. It has an airflow from 670 to 800 m³/h.

Method 2:

This system is based on the number of **occupants.**

$$F = \frac{20 \times A \times B}{CB}$$

F: Air flow (m^3/h)
20: Constant
A x B: Room surface (m^2))
CB: Area occupied by each person (m^2). This area area is limited to 10.

Example:

Bank with an area of 60 m² and 10 people.

$$F = \frac{20 \times 60}{60 / 10} = 200\ m^3/h$$

The correct KPI model for this installation is: KPI2521. It has an airflow from 165 to 250 m^3/h.

◆ Applicable range of surfaces

Considering an average height of 3 m, the suitable surface range for the KPI will be calculated for the following air ventilations.

Air ventilations (N)	Indoor	Air flow (m^3/h)	Room area (m^2)
2	KPI-2521	165-250	27-42
	KPI-5021	350-500	58-83
	KPI-8021	670-800	111-133
	KPI-10021	870-1000	145-167
5	KPI-2521	165-250	11-17
	KPI-5021	350-500	23-33
	KPI-8021	670-800	45-53
	KPI-10021	870-1000	58-67
7	KPI-2521	165-250	8-12
	KPI-5021	350-500	17-24
	KPI-8021	670-800	32-38
	KPI-10021	870-1000	41-48
10	KPI-2521	165-250	5-8
	KPI-5021	350-500	12-17
	KPI-8021	670-800	22-27
	KPI-10021	870-1000	29-33
15	KPI-2521	165-250	4-6
	KPI-5021	350-500	8-11
	KPI-8021	670-800	15-18
	KPI-10021	870-1000	19-22
20	KPI-2521	165-250	3-4
	KPI-5021	350-500	6-8
	KPI-8021	670-800	11-13
	KPI-10021	870-1000	14-17
30	KPI-2521	165-250	2-3
	KPI-5021	350-500	4-6
	KPI-8021	670-800	7-9
	KPI-10021	870-1000	10-11
40	KPI-2521	165-250	1-2
	KPI-5021	350-500	3-4
	KPI-8021	670-800	6-7
	KPI-10021	870-1000	7-8
50	KPI-2521	165-250	1-2
	KPI-5021	350-500	2-3
	KPI-8021	670-800	4-5
	KPI-10021	870-1000	6-7

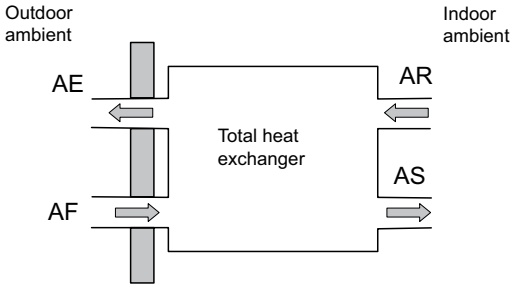
4.2.2. Calculation of the heat exchanger efficiency

NOTES:

AF: Outdoor fresh air
AE: Exhaust air
AS: Supply air
AR: Return air

The following procedure shows how to obtain the total heat exchanger efficiency of the KPI, and the method of calculating the supply air temperature.

This chart can be used:



The air supply flow volume of supply and exhaust is the same.

Now, it will be explained the equations that allow to know the necessary parameters to calculate the work conditions of the KPI. First, an energy balance has to be made.

NOTES:

i: The Enthalpy (kJ/kg)
t: Temperature (ºC and DB)
x: Humidity (kgw/kga)
ŋt: Temperature exchange efficiency

Temperature exchange efficiency (sensible exchange efficiency)

$$\eta t = \frac{t(AF) - t(AS)}{t(AF) - t(AR)} \times 100$$

Humidity exchange efficiency (latent exchange efficiency)

$$\eta t = \frac{x(AF) - x(AS)}{x(AF) - x(AR)} \times 100$$

NOTES:

ŋt can be obtained from the graphic in section 4.8.2.

By determining the desired air flow, we obtain the temperature exchange efficiency.

Total heat exchange efficiency (enthalpy exchanger efficiency)

$$\eta t = \frac{i(AF) - i(AS)}{i(AF) - i(AR)} \times 100$$

By using the temperature exchange efficiency, the temperature of the supply air can be deduced according to the following formula:

$$t(AS) = t(AF) - \eta t \, (t(AF) - t(AR))$$

4

4.3. Selection procedure for the Econofresh system

NOTES:

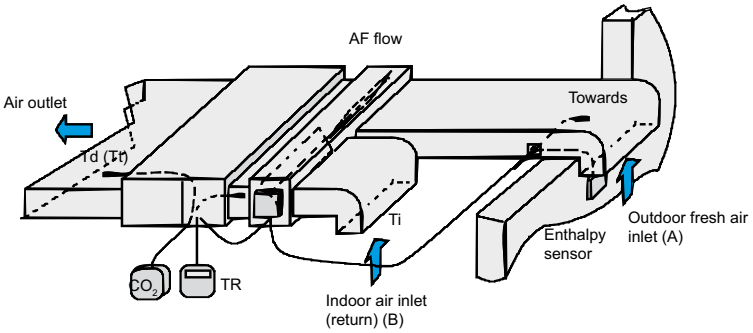
Td (Tt):Indoor fresh air temperature

CO_2: Gas sensor

TR: Temperature adjustment by Remote Control Switch

AF flow: Inlet flow of outside air

The Econofresh kit is an accessory that only works with the RPI 5HP. It is easy to install and allows the installers and designers to dispense with any additional installation for ventilation.



The air in the rooms must be renewed in order to reduce CO_2 levels, eliminate unpleasant smells, smoke, and pollution; however this fresh air causes an increase in the power supply. The Econofresh kit is able to reduce this supply. Using this system it is possible to intake fresh air using the indoor unit fan when the thermostat is off. Depending on the outlet and inlet temperature, the Econofresh kit works as an intelligent system, enabling the airflow to be controlled by modifying the position of the damper.

The Econofresh kit makes it possible to work with the CO_2 and enthalpic sensors in order to control the quality of the air inside the room (field supplied).

The following procedure explains the method for calculating the Econofresh kit and its advantages in a natural cooling system.

First, the pressure loss in the ducts of this installation must be factored in. This loss varies from one installation to another. (For more information, see the “Pressure loss data” chart).

These pressure loss charts must be included in the RPI chart. High Static Pressure fan performance curve achieving the Air flow Rate For 0% (B) air fresh and 100% (A) air fresh (Free Cooling System). (For Additional information See the “Air Flow Calculation” chart).

NOTES:

P_O: Pressure loss of fresh outdoor air duct.

P_i: Pressure loss in return air duct.

P_D: Pressure loss in air discharge duct.

P_{ECO}: Pressure loss for Econofresh kit

$P_A = P_o + P_D + P_{ECO}$

$P_B = P_i + P_D + P_{ECO}$

A: Supply air flow when fresh outdoor air damper is fully opened (return air damper is fully closed)

B: Supply air flow when fresh outdoor air damper is fully closed (return air damper is fully opened)

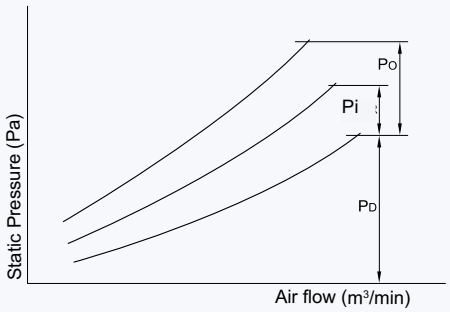
P_D:3 mmAq

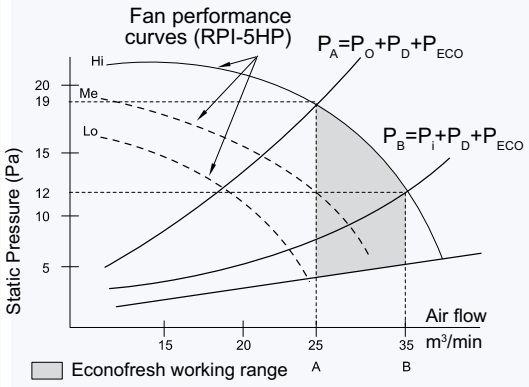
P_i: 6 mmAq

P_0: 13 mmAq

P_{econo}: 3 mmAq

Pressure loss data	Air flow calculation (RPI 5HP+ Econofresh kit)





The result of this calculation is an air flow rate of 35 m³/min for (B) and 25 m³/min for (A).

The energy saving calculation for 25 m³/min (Free cooling mode) is shown below.

◆ Free Cooling mode (economizer)

Determining the maximum heat capacity (free cooling)

Calculate the capacity with the following equation.

$$Q_{SHmax} = V_{Omax} (1-\beta) \times (T_I - T_O) \times 0.02$$

Q_{SHmax}:	Maximum heating capacity (= 4 kW)
V_{Omax}:	Maximum outdoor air flow (= 25 m3/min)
β:	By-pass factor (for RPI of 5 HP = 0.2)
T_I:	Room Temperature (= 25 ºC)
T_O:	Outdoor temperature (= 15 ºC)

This is the maximum capacity allowed by the Econofresh kit in these conditions to reduce the power supply each hour.

◆ All fresh control

New EconoFresh Kit could also work with All-Fresh mode. In order to configure this mode, you must use the additional E1 function, by configuring it with the remote control switch.

The All-Fresh mode allows Econofresh only to supply outdoor fresh air. It is able to do so because the damper is fully open during this operation mode, while the indoor unit is working.

If the All-Fresh mode is used constantly, the air flow rate will decrease. It is therefore necessary to calculate the cooling capacity by using the minimum air flow rate (point A).

This operation mode is extremely useful for buildings with a high density of occupants such as public buildings.

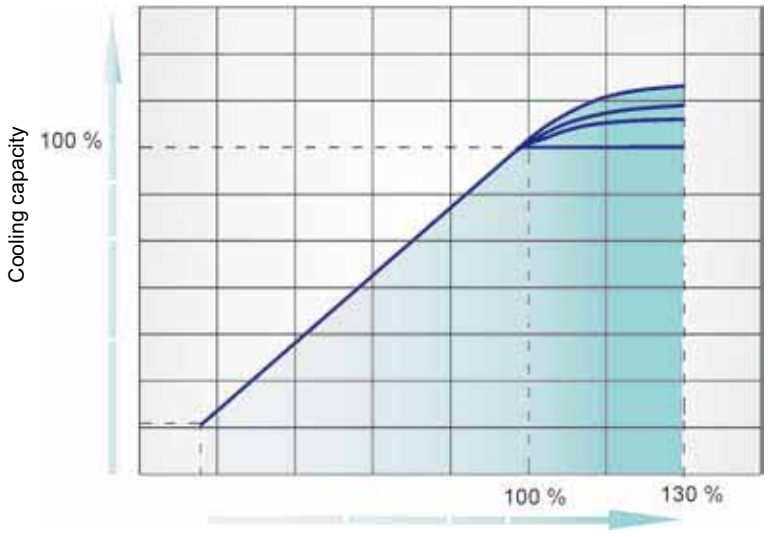
4.4. Nominal Cooling Capacity of the Outdoor Units

The following diagram shows the behavior of the cooling capacity of the outdoor unit with the total power of the combined indoor units up to 130%.

See the examples of the actual combinations.

4.4.1. Cooling capacity curve

Cooling capacity curve



Characteristic curves of the different outdoor units

4.4.2. Nominal Cooling Capacity of the Outdoor Units

◆ Cooling Capacity Tables for FSN(1)(E)

Nominal capacity at 19°C (Wet Bulb) and 35°C (Dry Bulb)

(kW)

Total Horsepower of Combined Indoor Units (%)	Outdoor Units HP													
	5		8		10		12		14		16		18	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
130	14.40	4.84	22.80	5.80	28.80	7.45	34.80	9.32	40.00	11.56	45.00	14.15	50.40	13.91
120	14.30	4.88	22.76	5.88	28.70	7.53	34.64	9.82	40.00	11.69	45.00	14.24	50.40	14.03
110	14.20	4.96	22.62	5.86	28.46	7.60	34.24	9.22	40.00	11.93	45.00	14.36	50.40	14.12
100	14.00	4.65	22.40	6.02	28.00	7.77	33.50	9.22	40.00	12.20	45.00	14.52	50.40	14.40
90	12.60	4.03	20.16	4.99	25.20	6.21	30.24	7.71	36.00	9.95	40.50	11.90	45.00	12.16
80	11.20	3.40	17.92	4.44	22.40	5.52	26.88	6.93	32.00	8.85	36.00	10.58	40.00	10.81
70	9.80	2.99	15.68	3.88	19.60	4.83	23.52	6.06	28.00	7.74	31.50	9.26	35.00	9.46
60	8.40	2.54	13.44	3.33	16.80	4.14	20.16	5.20	24.00	6.64	27.00	7.93	30.00	8.10
50	7.00	1.87	11.20	2.77	14.00	3.45	16.80	4.33	20.00	5.53	22.50	6.61	25.00	6.75

(kW)

Total Horsepower of Combined Indoor Units (%)	Outdoor Units HP											
	20		24		28		32		36		42	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
130	56.00	16.88	73.10	21.45	85.00	27.99	90.00	32.07	112	37.56	123.20	38.71
120	56.00	16.00	72.63	21.54	84.33	28.13	90.00	32.54	110.38	37.60	122.50	39.06
110	56.00	16.24	71.26	21.44	82.78	28.10	90.00	33.09	107.12	37.26	120.85	39.17
100	56.00	16.60	69.00	21.20	80.00	27.70	90.00	33.80	101	33.50	118	39.10
90	50.40	14.58	62.10	16.91	72.00	20.95	81.00	24.32	90.90	27.20	106.20	29.65
80	44.80	12.96	55.20	15.03	64.00	18.62	72.00	21.62	80.80	24.18	94.40	26.35
70	39.20	11.34	48.30	13.16	56.00	16.30	63.00	18.91	70.70	21.15	82.60	23.06
60	33.60	9.72	41.40	11.28	48.00	13.97	54.00	16.21	60.60	18.13	70.80	19.76
50	28.00	8.10	34.50	9.40	40.00	11.64	45.00	13.51	50.50	15.11	59.00	16.47

◆ Cooling Capacity Tables for FXN(E)

Nominal capacity at 19°C (Wet Bulb) and 35°C (Dry Bulb)

(kW)

Total Horsepower of Combined Indoor Units (%)	Outdoor Units (HP)									
	8		10		12		16		18	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
130	22.80	7.16	30.40	9.67	36.50	12.19	45.00	13.69	51.00	17.74
120	22.70	7.25	29.80	9.63	36.10	12.15	45.00	13.93	50.89	17.78
110	22.60	7.39	29.20	9.66	35.20	12.19	45.00	14.26	50.55	17.90
100	22.40	6.96	28.00	8.80	33.50	11.10	45.00	13.54	50.00	16.44
90	20.16	6.02	25.20	7.61	30.20	9.60	40.50	11.70	45.00	14.21
80	17.92	5.09	22.40	6.42	26.80	8.10	36.00	9.89	35.00	12.01
70	15.68	4.47	19.60	5.65	23.50	7.13	31.50	8.70	35.00	10.56
60	13.44	3.81	16.80	4.81	20.10	6.07	27.00	7.40	30.00	9.00
50	11.20	2.81	14.00	3.55	16.80	4.48	22.50	5.46	25.00	6.64

(kW)

Total Horsepower of Combined Indoor Units (%)	Outdoor Units (HP)							
	20		24		30		32	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
130	59.80	18.93	71.00	23.27	85.00	30.30	90.00	34.02
120	58.90	18.97	70.50	23.52	85.00	30.83	90.00	34.61
110	57.90	19.10	70.00	23.90	85.00	31.57	90.00	35.44
100	56.00	17.54	69.00	22.38	85.00	29.98	90.00	33.66
90	50.40	15.16	62.10	19.35	76.50	25.92	81.00	29.10
80	44.80	12.81	55.20	16.35	68.00	21.90	72.00	24.59
70	39.20	11.27	48.30	14.38	59.50	19.26	63.00	21.62
60	33.60	9.60	41.40	12.24	51.00	16.39	54.00	18.41
50	28.00	7.08	34.50	9.03	42.50	12.10	45.00	13.59

◆ Cooling Capacity Tables for FSVN(E)

Nominal capacity at 19°C (Wet Bulb) and 35°C (Dry Bulb)

(kW)

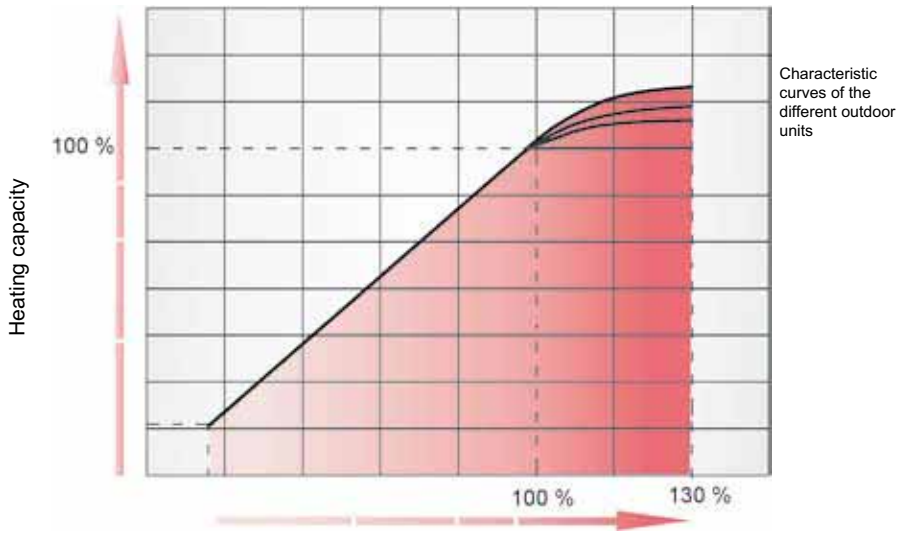
Total Horsepower of Combined Indoor Units (%)	Outdoor Units HP					
	3		4		5	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
130	8.50	2.51	11.90	3.57	14.90	4.58
120	8.40	2.49	11.85	3.53	14.80	4.53
110	8.30	2.46	11.65	3.49	14.60	4.48
100	8.00	2.16	10.80	3.07	14.00	3.94
90	7.20	1.90	9.72	2.70	12.60	3.47
80	6.40	1.64	8.64	2.32	11.20	2.98
70	5.60	1.44	7.56	2.04	9.80	2.62
60	4.80	1.22	6.48	1.74	8.40	2.23
50	4.00	1.08	5.40	1.54	7.00	1.97

4.5 Nominal heating capacity of outdoor units

The following diagram shows the behavior of the heating capacity of the outdoor unit with the total power of the combined indoor units up to 130%.

4.5.1. Heating capacity curve

Heating capacity curve



4.5.2. Heating Capacity Tables of Outdoor Units

◆ Heating Capacity Tables for FSN(1)(E) units

Nominal capacity at 20 °C (Dry Bulb) and 6 °C (Wet Bulb)

(kW)

Total Horsepower of Combined Indoor Units (%)	Outdoor Units HP													
	5		8		10		12		14		16		18	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
130	18.50	4.56	27.20	5.81	33.60	7.67	37.50	8.29	45.00	10.27	50.00	12.59	56	13.07
120	18.00	4.76	26.60	5.86	33.13	7.75	37.50	8.41	45.00	10.13	50.00	12.66	56.00	13.30
110	17.50	4.60	25.88	5.56	32.44	7.81	37.50	8.63	45.00	10.28	50.00	12.56	56.00	13.06
100	16.00	4.44	25.00	5.45	31.50	7.57	37.50	8.70	45.00	10.40	50.00	12.53	56.00	13.20
90	14.40	4.10	22.50	5.81	28.80	7.72	33.84	8.26	40.50	10.08	45.00	12.06	50.40	13.16
80	12.80	3.85	20.00	5.17	25.60	6.86	30.08	7.34	36.00	8.96	40.00	10.72	44.80	11.70
70	11.20	3.37	17.50	4.52	22.40	6.01	26.32	6.43	31.50	7.84	35.00	9.38	39.20	10.23
60	9.60	2.99	15.00	3.88	19.20	5.15	22.56	5.51	27.00	6.72	30.00	8.04	33.60	8.77
50	8.00	2.53	12.50	3.23	16.00	4.29	18.80	4.59	22.50	5.60	25.00	6.70	28.00	7.31

(kW)

Total Horsepower of Combined Indoor Units (%)	Outdoor Units HP											
	20		24		28		32		36		42	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
130	64.70	14.56	90.00	20.25	102.00	23.68	108.90	30.50	116.30	29.63	132.00	34.10
120	64.48	14.91	87.64	19.58	99.77	23.10	107.95	28.29	115.70	29.27	132.00	33.74
110	63.93	15.30	83.50	18.59	95.81	22.27	104.89	25.46	115.11	29.45	132.00	33.84
100	63.00	15.20	77.50	17.60	90.00	20.90	100.00	23.90	113.00	27.80	132.00	33.60
90	56.70	14.74	69.84	17.23	81.00	19.55	90.00	22.12	101.70	26.69	118.80	31.07
80	50.40	13.10	62.08	15.31	72.00	17.38	80.00	19.66	90.40	23.73	105.60	27.62
70	44.10	11.47	54.32	13.40	63.00	15.20	70.00	17.21	79.10	20.76	92.40	24.16
60	37.80	9.83	46.56	11.48	54.00	13.03	60.00	14.75	67.80	17.80	79.20	20.71
50	31.50	8.19	38.80	9.57	45.00	10.86	50.00	12.29	56.50	14.83	66.00	17.26

◆ Heating Capacity Tables for FXN(E) units

Nominal capacity at 20 °C (Dry Bulb) and 6 °C (Wet Bulb)

(kW)

Total Horsepower of Combined Indoor Units	Outdoor Units (HP)									
	8		10		12		16		18	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
130	30.20	7.00	33.60	9.31	37.50	10.87	50.00	10.79	56.00	13.96
120	28.90	7.03	33	9.27	37	10.81	50.00	13.17	56.00	16.22
110	27.50	6.80	32.50	9.25	37.50	10.80	50.00	13.34	56.00	16.33
100	25.00	6.26	31.50	9.10	37.50	10.62	50.00	13.54	56.00	16.34
90	22.50	5.59	28.35	8.13	33.75	9.49	45.00	12.10	50.40	14.60
80	20.00	4.90	25.20	7.11	30.00	8.30	40.00	10.58	44.80	12.76
70	17.50	4.33	22.05	6.29	26.25	7.11	35.00	9.36	39.20	11.29
60	15.00	3.72	18.90	5.41	22.50	6.11	30.00	8.05	33.60	9.71
50	12.50	3.14	16.00	4.63	18.75	5.15	25.00	6.78	28.00	8.19

(kW)

Total Horsepower of Combined Indoor Units	Outdoor Units (HP)							
	20		24		30		32	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
130	64.70	14.90	81.30	22.89	97.10	29.30	100.00	30.81
120	64.30	17.32	80.40	21.88	96.50	27.54	100.00	28.96
110	63.90	17.43	79.40	21.89	96.00	27.77	100.00	29.20
100	63.00	17.44	77.50	21.68	95.00	27.88	100.00	29.32
90	56.70	15.59	69.75	19.38	85.50	24.92	90.00	26.21
80	50.40	13.62	62.00	16.94	76.00	21.79	80.00	22.91
70	44.10	12.05	54.25	14.98	66.50	19.27	70.00	20.26
60	37.80	10.36	46.50	12.88	57.00	16.58	60.00	17.43
50	31.50	8.74	38.75	10.86	47.50	13.97	50.00	14.69

◆ Heating Capacity Tables for FSVN(E) units

Nominal capacity at 20 °C (Dry Bulb) and 6 °C (Wet Bulb)

(kW)

Total Horsepower of Combined Indoor Units (%)	Outdoor Units HP					
	3		4		5	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
130	10.20	2.48	14.10	3.21	18.10	4.22
120	10.00	2.58	14.00	3.36	17.90	4.41
110	9.68	2.50	13.50	3.24	17.20	4.26
100	9.00	2.41	12.50	3.13	16.00	4.11
90	8.10	2.23	11.25	2.89	14.40	3.80
80	7.20	2.09	10.00	2.71	12.80	3.56
70	6.30	1.83	8.75	2.38	11.20	3.12
60	5.40	1.62	7.50	2.11	9.60	2.77
50	2.51	1.37	6.25	1.78	8.00	2.34

4.6. Correction Factors

4.6.1. Temperature correction factor for cooling

The correction factors for each percentage are the same for the FSN(E) and FXN(E) models

◆ **FSN(E)/FXN(E) - 5~42 HP**

Total Power of Combined Indoor Units: 130%

(kW)

Outdoor Air Inlet Dry Bulb Temperature (ºC)	Indoor Air Inlet Wet Bulb (ºC)													
	14		16		18		19		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
10	0.89	0.72	0.97	0.74	1.06	0.75	1.10	0.76	1.14	0.77	1.22	0.79	1.31	0.81
12	0.89	0.72	0.97	0.74	1.05	0.75	1.10	0.76	1.14	0.77	1.22	0.79	1.31	0.81
14	0.89	0.73	0.97	0.75	1.05	0.76	1.09	0.77	1.14	0.78	1.22	0.79	1.30	0.82
16	0.89	0.73	0.97	0.75	1.05	0.77	1.09	0.77	1.13	0.78	1.22	0.80	1.30	0.82
18	0.89	0.74	0.97	0.76	1.05	0.78	1.09	0.78	1.13	0.79	1.21	0.82	1.29	0.84
20	0.88	0.76	0.96	0.78	1.04	0.79	1.08	0.80	1.12	0.81	1.20	0.83	1.29	0.85
22	0.88	0.77	0.96	0.79	1.04	0.80	1.08	0.81	1.11	0.82	1.20	0.85	1.28	0.87
24	0.88	0.79	0.95	0.81	1.03	0.82	1.07	0.83	1.11	0.84	1.19	0.87	1.27	0.89
26	0.87	0.81	0.95	0.84	1.02	0.85	1.06	0.86	1.10	0.87	1.18	0.89	1.25	0.91
28	0.87	0.84	0.94	0.86	1.01	0.87	1.05	0.88	1.09	0.89	1.16	0.92	1.24	0.94
30	0.86	0.87	0.93	0.89	1.00	0.90	1.04	0.91	1.07	0.92	1.15	0.95	1.22	0.97
32	0.86	0.90	0.92	0.92	0.99	0.94	1.02	0.94	1.06	0.96	1.13	0.98	1.21	1.01
34	0.85	0.93	0.91	0.95	0.98	0.97	1.01	0.98	1.04	0.99	1.12	1.02	1.19	1.04
35	0.85	0.95	0.91	0.97	0.97	0.99	1.00	1.00	1.04	1.01	1.11	1.04	1.18	1.07
36	0.85	0.97	0.90	0.99	0.96	1.01	0.99	1.09	1.03	1.03	1.10	1.06	1.17	1.09
38	0.84	1.01	0.89	1.03	0.95	1.05	0.98	1.13	1.01	1.07	1.08	1.10	1.15	1.13
40	0.83	1.05	0.88	1.08	0.93	1.09	0.96	1.18	0.99	1.12	1.06	1.15	1.12	1.18

Total Horsepower of Combined Indoor Units: 120%

(kW)

Outdoor Air Inlet Dry Bulb Temperature (ºC)	Indoor Air Inlet Wet Bulb (ºC)													
	14		16		18		19		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
10	0.89	0.76	0.97	0.78	1.04	0.80	1.08	0.80	1.12	0.81	1.21	0.84	1.31	0.86
12	0.89	0.77	0.97	0.79	1.04	0.80	1.07	0.81	1.12	0.82	1.21	0.84	1.30	0.86
14	0.89	0.77	0.96	0.79	1.04	0.81	1.07	0.81	1.12	0.83	1.21	0.85	1.30	0.87
16	0.89	0.78	0.96	0.80	1.03	0.81	1.07	0.82	1.11	0.83	1.21	0.85	1.30	0.88
18	0.89	0.79	0.96	0.81	1.03	0.82	1.06	0.83	1.11	0.84	1.20	0.87	1.29	0.89
20	0.89	0.80	0.95	0.82	1.02	0.84	1.06	0.84	1.10	0.85	1.19	0.88	1.28	0.90
22	0.88	0.82	0.95	0.83	1.02	0.85	1.05	0.86	1.10	0.87	1.19	0.89	1.27	0.92
24	0.88	0.83	0.95	0.85	1.01	0.87	1.05	0.87	1.09	0.89	1.18	0.91	1.26	0.93
26	0.87	0.85	0.94	0.87	1.01	0.88	1.04	0.89	1.08	0.90	1.17	0.93	1.25	0.95
28	0.87	0.87	0.93	0.89	1.00	0.90	1.03	0.91	1.07	0.93	1.15	0.95	1.24	0.97
30	0.86	0.89	0.93	0.91	0.99	0.93	1.02	0.94	1.06	0.95	1.14	0.97	1.22	1.00
32	0.86	0.91	0.92	0.93	0.98	0.95	1.02	0.96	1.05	0.97	1.13	1.00	1.20	1.02
34	0.85	0.94	0.91	0.96	0.97	0.98	1.01	0.99	1.04	1.00	1.11	1.03	1.18	1.05
35	0.85	0.95	0.91	0.97	0.97	0.99	1.00	1.00	1.03	1.01	1.10	1.04	1.17	1.07
36	0.84	0.97	0.90	0.99	0.96	1.01	0.99	1.02	1.03	1.03	1.10	1.06	1.16	1.08
38	0.84	1.00	0.89	1.01	0.95	1.04	0.98	1.05	1.02	1.06	1.08	1.09	1.14	1.12
40	0.83	1.03	0.89	1.05	0.94	1.07	0.97	1.08	1.00	1.09	1.06	1.12	1.12	1.15

Total Power of Combined Indoor Units: 110%

(kW)

Outdoor Air Inlet Dry Bulb Temperature (°C)	Indoor Air Inlet Wet Bulb (°C)													
	14		16		18		19		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
10	0.89	0.76	0.97	0.77	1.04	0.78	1.08	0.79	1.12	0.80	1.21	0.82	1.30	0.83
12	0.89	0.76	0.96	0.78	1.04	0.79	1.08	0.80	1.12	0.81	1.21	0.82	1.30	0.84
14	0.88	0.77	0.96	0.78	1.04	0.80	1.08	0.80	1.12	0.81	1.21	0.83	1.29	0.84
16	0.88	0.78	0.96	0.79	1.03	0.81	1.07	0.81	1.12	0.82	1.20	0.84	1.29	0.85
18	0.88	0.78	0.95	0.80	1.03	0.82	1.07	0.82	1.11	0.83	1.20	0.85	1.28	0.87
20	0.87	0.80	0.95	0.81	1.02	0.83	1.06	0.84	1.11	0.84	1.19	0.86	1.28	0.88
22	0.87	0.81	0.94	0.83	1.02	0.84	1.06	0.85	1.10	0.86	1.18	0.88	1.27	0.89
24	0.86	0.83	0.94	0.84	1.01	0.86	1.05	0.87	1.09	0.88	1.17	0.90	1.26	0.91
26	0.85	0.85	0.93	0.86	1.00	0.88	1.04	0.89	1.08	0.90	1.17	0.91	1.25	0.93
28	0.85	0.87	0.92	0.88	1.00	0.90	1.03	0.91	1.07	0.92	1.16	0.94	1.24	0.95
30	0.84	0.89	0.91	0.91	0.99	0.92	1.03	0.93	1.06	0.94	1.14	0.96	1.22	0.98
32	0.83	0.91	0.90	0.93	0.98	0.95	1.02	0.96	1.05	0.97	1.13	0.99	1.21	1.01
34	0.82	0.94	0.90	0.96	0.97	0.98	1.01	0.98	1.04	1.00	1.12	1.02	1.19	1.03
35	0.82	0.95	0.89	0.97	0.96	0.99	1.00	1.00	1.04	1.01	1.11	1.03	1.18	1.05
36	0.81	0.97	0.89	0.98	0.96	1.00	0.99	1.02	1.03	1.02	1.10	1.05	1.17	1.07
38	0.80	1.00	0.88	1.02	0.95	1.04	0.98	1.06	1.02	1.06	1.09	1.07	1.16	1.10
40	0.79	1.03	0.86	1.05	0.93	1.07	0.97	1.08	1.00	1.09	1.07	1.11	1.14	1.13

Total Power of Combined Indoor Units: 100%

(kW)

Outdoor Air Inlet Dry Bulb Temperature (°C)	Indoor Air Inlet Wet Bulb (°C)													
	14		16		18		19		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
10	0.91	0.82	0.97	0.83	1.02	0.85	1.05	0.85	1.10	0.85	1.20	0.83	1.30	0.81
12	0.90	0.82	0.96	0.83	1.02	0.85	1.05	0.86	1.10	0.85	1.20	0.83	1.29	0.81
14	0.90	0.82	0.96	0.83	1.02	0.85	1.05	0.86	1.10	0.85	1.19	0.83	1.29	0.81
16	0.90	0.83	0.96	0.84	1.02	0.86	1.05	0.86	1.10	0.85	1.19	0.83	1.28	0.82
18	0.89	0.83	0.95	0.85	1.02	0.86	1.05	0.87	1.09	0.86	1.18	0.84	1.28	0.82
20	0.89	0.84	0.95	0.85	1.01	0.87	1.04	0.88	1.09	0.87	1.18	0.85	1.27	0.83
22	0.89	0.85	0.95	0.86	1.01	0.88	1.04	0.89	1.08	0.88	1.17	0.86	1.25	0.84
24	0.88	0.86	0.94	0.88	1.00	0.89	1.03	0.90	1.08	0.89	1.16	0.87	1.24	0.85
26	0.88	0.87	0.94	0.89	1.00	0.91	1.03	0.91	1.07	0.90	1.15	0.89	1.22	0.87
28	0.87	0.89	0.93	0.91	0.99	0.92	1.02	0.93	1.06	0.92	1.13	0.90	1.21	0.88
30	0.86	0.91	0.93	0.92	0.99	0.94	1.02	0.95	1.05	0.94	1.12	0.92	1.19	0.90
32	0.86	0.92	0.92	0.94	0.98	0.96	1.01	0.97	1.04	0.96	1.10	0.94	1.16	0.92
34	0.85	0.94	0.91	0.96	0.97	0.98	1.00	0.99	1.03	0.98	1.09	0.96	1.14	0.94
35	0.85	0.96	0.91	0.97	0.97	0.99	1.00	1.00	1.03	0.99	1.08	0.97	1.13	0.95
36	0.84	0.97	0.90	0.98	0.97	1.00	1.00	1.02	1.02	1.00	1.07	0.98	1.12	0.96
38	0.83	0.99	0.90	1.01	0.96	1.03	0.99	1.05	1.01	1.03	1.05	1.00	1.09	0.98
40	0.83	1.02	0.89	1.04	0.95	1.06	0.98	1.05	0.99	1.05	1.03	1.03	1.06	1.01

Total Power of Combined Indoor Units: 90%

(kW)

Outdoor Air Inlet Dry Bulb Temperature (ºC)	Indoor Air Inlet Wet Bulb (ºC)													
	14		16		18		19		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
10	0.89	0.82	0.95	0.83	1.02	0.85	1.05	0.85	1.09	0.85	1.18	0.85	1.27	0.85
12	0.89	0.82	0.95	0.84	1.01	0.85	1.05	0.86	1.09	0.86	1.18	0.85	1.27	0.85
14	0.89	0.82	0.95	0.84	1.01	0.85	1.04	0.86	1.09	0.86	1.18	0.85	1.27	0.85
16	0.88	0.83	0.95	0.84	1.01	0.86	1.04	0.86	1.09	0.86	1.17	0.86	1.26	0.86
18	0.88	0.84	0.94	0.85	1.01	0.86	1.04	0.87	1.08	0.87	1.17	0.87	1.26	0.86
20	0.88	0.84	0.94	0.86	1.01	0.87	1.04	0.88	1.08	0.88	1.16	0.87	1.25	0.87
22	0.87	0.85	0.94	0.87	1.00	0.88	1.03	0.89	1.08	0.89	1.16	0.89	1.24	0.88
24	0.87	0.87	0.93	0.88	1.00	0.89	1.03	0.90	1.07	0.90	1.15	0.89	1.23	0.89
26	0.87	0.88	0.93	0.89	0.99	0.91	1.03	0.91	1.06	0.91	1.14	0.91	1.22	0.90
28	0.86	0.89	0.93	0.91	0.99	0.92	1.02	0.93	1.06	0.93	1.13	0.92	1.21	0.92
30	0.86	0.91	0.92	0.92	0.98	0.94	1.02	0.95	1.05	0.95	1.12	0.94	1.19	0.94
32	0.85	0.93	0.92	0.94	0.98	0.96	1.01	0.97	1.04	0.97	1.11	0.96	1.18	0.96
34	0.85	0.95	0.91	0.96	0.97	0.98	1.00	0.99	1.03	0.99	1.10	0.98	1.16	0.98
35	0.84	0.96	0.91	0.98	0.97	0.99	1.00	1.00	1.03	1.00	1.09	0.99	1.15	0.99
36	0.84	0.97	0.91	0.99	0.97	1.00	1.00	1.00	1.03	1.01	1.09	1.00	1.15	1.00
38	0.84	0.99	0.90	1.01	0.97	1.03	1.00	1.02	1.03	1.03	1.08	1.03	1.14	1.02
40	0.84	1.02	0.90	1.03	0.96	1.05	0.99	1.05	1.02	1.06	1.07	1.05	1.12	1.05

Total Power of Combined Indoor Units: 80%

(kW)

Outdoor Air Inlet Dry Bulb Temperature (ºC)	Indoor Air Inlet Wet Bulb (ºC)													
	14		16		18		19		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
10	0.87	0.83	0.94	0.84	1.01	0.85	1.04	0.86	1.08	0.87	1.16	0.88	1.24	0.90
12	0.87	0.83	0.94	0.84	1.01	0.86	1.04	0.86	1.08	0.87	1.16	0.88	1.24	0.90
14	0.87	0.84	0.94	0.85	1.01	0.86	1.04	0.87	1.08	0.87	1.16	0.89	1.24	0.90
16	0.87	0.84	0.93	0.85	1.00	0.86	1.04	0.87	1.08	0.88	1.16	0.89	1.24	0.91
18	0.86	0.84	0.93	0.86	1.00	0.87	1.03	0.88	1.07	0.89	1.15	0.90	1.23	0.92
20	0.86	0.85	0.93	0.87	1.00	0.88	1.03	0.89	1.07	0.89	1.15	0.91	1.23	0.93
22	0.86	0.86	0.93	0.88	1.00	0.89	1.03	0.89	1.07	0.90	1.15	0.92	1.22	0.94
24	0.86	0.88	0.93	0.89	0.99	0.90	1.03	0.91	1.06	0.91	1.14	0.93	1.22	0.95
26	0.86	0.89	0.92	0.90	0.99	0.91	1.02	0.92	1.06	0.93	1.14	0.95	1.21	0.96
28	0.86	0.90	0.92	0.91	0.99	0.93	1.02	0.93	1.06	0.94	1.13	0.96	1.20	0.98
30	0.85	0.92	0.92	0.93	0.98	0.95	1.01	0.95	1.05	0.96	1.12	0.98	1.20	1.00
32	0.85	0.93	0.91	0.95	0.98	0.96	1.01	0.97	1.04	0.98	1.12	1.00	1.19	1.01
34	0.85	0.95	0.91	0.97	0.97	0.98	1.00	0.99	1.04	1.00	1.11	1.02	1.18	1.03
35	0.84	0.96	0.91	0.98	0.97	0.99	1.00	1.00	1.03	1.01	1.11	1.03	1.18	1.05
36	0.84	0.97	0.90	0.99	0.97	1.00	1.00	1.02	1.03	1.02	1.10	1.04	1.17	1.06
38	0.84	1.00	0.90	1.01	0.96	1.03	0.99	1.06	1.03	1.04	1.09	1.06	1.16	1.08
40	0.83	1.02	0.89	1.04	0.95	1.05	0.98	1.08	1.02	1.07	1.08	1.09	1.15	1.11

Total Power of Combined Indoor Units: 70%

(kW)

Outdoor Air Inlet Dry Bulb Temperature (ºC)	Indoor Air Inlet Wet Bulb (ºC)													
	14		16		18		19		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
10	0.87	0.79	0.94	0.82	1.01	0.84	1.04	0.86	1.08	0.86	1.16	0.86	1.24	0.87
12	0.87	0.80	0.94	0.82	1.01	0.85	1.04	0.86	1.08	0.86	1.16	0.86	1.23	0.87
14	0.86	0.80	0.93	0.83	1.00	0.85	1.04	0.86	1.08	0.86	1.16	0.87	1.23	0.87
16	0.86	0.80	0.93	0.83	1.00	0.85	1.04	0.87	1.08	0.87	1.15	0.87	1.23	0.88
18	0.86	0.81	0.93	0.83	1.00	0.86	1.04	0.87	1.07	0.88	1.15	0.88	1.23	0.89
20	0.86	0.82	0.93	0.84	1.00	0.87	1.03	0.88	1.07	0.88	1.15	0.89	1.22	0.89
22	0.86	0.83	0.93	0.85	1.00	0.88	1.03	0.89	1.07	0.89	1.14	0.90	1.22	0.90
24	0.85	0.84	0.92	0.86	0.99	0.89	1.03	0.90	1.06	0.91	1.14	0.91	1.21	0.92
26	0.85	0.85	0.92	0.88	0.99	0.90	1.02	0.92	1.06	0.92	1.13	0.92	1.21	0.93
28	0.85	0.86	0.92	0.89	0.98	0.92	1.02	0.93	1.05	0.94	1.13	0.94	1.20	0.94
30	0.84	0.88	0.91	0.91	0.98	0.93	1.01	0.95	1.05	0.95	1.12	0.95	1.19	0.96
32	0.84	0.89	0.91	0.92	0.98	0.95	1.01	0.96	1.04	0.97	1.12	0.97	1.19	0.98
34	0.84	0.91	0.90	0.94	0.97	0.97	1.00	0.98	1.04	0.99	1.11	0.99	1.18	1.00
35	0.83	0.93	0.90	0.95	0.97	0.98	1.00	1.00	1.03	1.00	1.10	1.01	1.17	1.01
36	0.83	0.93	0.90	0.96	0.96	0.99	1.00	1.01	1.03	1.01	1.10	1.01	1.17	1.02
38	0.83	0.95	0.89	0.98	0.96	1.01	0.99	1.02	1.03	1.03	1.09	1.04	1.16	1.04
40	0.82	0.98	0.89	1.01	0.95	1.04	0.99	1.03	1.02	1.06	1.09	1.06	1.16	1.07

Total Power of Combined Indoor Units: 60%

(kW)

Outdoor Air Inlet Dry Bulb Temperature (ºC)	Indoor Air Inlet Wet Bulb (ºC)													
	14		16		18		19		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
10	0.85	0.76	0.92	0.81	1.00	0.85	1.04	0.87	1.08	0.86	1.16	0.85	1.24	0.84
12	0.85	0.77	0.93	0.81	1.00	0.85	1.04	0.87	1.08	0.86	1.16	0.85	1.24	0.84
14	0.85	0.77	0.93	0.81	1.00	0.85	1.04	0.87	1.08	0.87	1.16	0.86	1.24	0.84
16	0.86	0.77	0.93	0.81	1.00	0.86	1.04	0.87	1.07	0.87	1.15	0.86	1.23	0.85
18	0.86	0.78	0.93	0.82	1.00	0.86	1.03	0.88	1.07	0.88	1.15	0.87	1.23	0.86
20	0.86	0.79	0.93	0.83	1.00	0.87	1.03	0.89	1.07	0.89	1.15	0.87	1.22	0.86
22	0.86	0.79	0.93	0.84	0.99	0.88	1.03	0.90	1.07	0.89	1.14	0.88	1.22	0.87
24	0.86	0.81	0.93	0.85	0.99	0.89	1.02	0.91	1.06	0.90	1.14	0.89	1.21	0.89
26	0.86	0.81	0.92	0.86	0.99	0.90	1.02	0.92	1.06	0.92	1.14	0.91	1.21	0.90
28	0.86	0.83	0.92	0.87	0.98	0.92	1.02	0.94	1.05	0.93	1.13	0.92	1.21	0.91
30	0.86	0.84	0.92	0.89	0.98	0.93	1.01	0.95	1.05	0.95	1.13	0.94	1.21	0.93
32	0.85	0.86	0.91	0.90	0.98	0.95	1.01	0.97	1.05	0.97	1.12	0.95	1.20	0.94
34	0.85	0.87	0.91	0.92	0.97	0.97	1.00	0.99	1.04	0.98	1.12	0.97	1.20	0.96
35	0.85	0.88	0.91	0.93	0.97	0.98	1.00	1.00	1.04	1.00	1.12	0.98	1.20	0.97
36	0.84	0.89	0.90	0.94	0.97	0.99	1.00	0.98	1.04	1.01	1.12	1.00	1.20	0.98
38	0.84	0.91	0.90	0.96	0.96	1.01	0.99	1.00	1.03	1.03	1.11	1.02	1.20	1.00
40	0.83	0.94	0.89	0.98	0.95	1.03	0.99	1.03	1.03	1.05	1.11	1.04	1.19	1.03

Total Power of Combined Indoor Units: 50%

(kW)

Outdoor Air Inlet Dry Bulb Temperature (°C)	Indoor Air Inlet Wet Bulb (°C)													
	14		16		18		19		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
10	0.85	0.90	0.92	0.91	1.00	0.92	1.04	0.93	1.08	0.93	1.16	0.93	1.24	0.94
12	0.85	0.91	0.93	0.92	1.00	0.93	1.04	0.94	1.08	0.94	1.16	0.94	1.24	0.94
14	0.85	0.91	0.93	0.92	1.00	0.94	1.04	0.94	1.08	0.94	1.16	0.95	1.24	0.95
16	0.86	0.92	0.93	0.93	1.00	0.94	1.04	0.95	1.07	0.95	1.15	0.95	1.23	0.96
18	0.86	0.92	0.93	0.94	1.00	0.95	1.03	0.96	1.07	0.96	1.15	0.96	1.23	0.96
20	0.86	0.93	0.93	0.94	1.00	0.96	1.03	0.97	1.07	0.97	1.15	0.97	1.22	0.97
22	0.86	0.94	0.93	0.95	0.99	0.96	1.03	0.97	1.07	0.97	1.14	0.97	1.22	0.97
24	0.86	0.94	0.93	0.96	0.99	0.97	1.02	0.97	1.06	0.98	1.14	0.98	1.21	0.98
26	0.86	0.95	0.92	0.96	0.99	0.97	1.02	0.98	1.06	0.98	1.14	0.98	1.21	0.99
28	0.86	0.95	0.92	0.97	0.98	0.98	1.02	0.99	1.05	0.99	1.13	0.99	1.21	0.99
30	0.86	0.96	0.92	0.97	0.98	0.98	1.01	0.99	1.05	0.99	1.13	0.99	1.21	1.00
32	0.85	0.96	0.91	0.97	0.98	0.99	1.01	1.00	1.05	1.00	1.12	1.00	1.20	1.00
34	0.85	0.97	0.91	0.98	0.97	0.99	1.00	1.00	1.04	1.00	1.12	1.00	1.20	1.00
35	0.85	0.97	0.91	0.98	0.97	0.99	1.00	1.00	1.04	1.00	1.12	1.00	1.20	1.00
36	0.84	0.97	0.90	0.98	0.97	1.00	1.00	1.01	1.04	1.00	1.12	1.00	1.20	1.01
38	0.84	0.97	0.90	0.98	0.96	1.00	0.99	1.01	1.03	1.01	1.11	1.01	1.20	1.01
40	0.83	0.97	0.89	0.99	0.95	1.00	0.99	1.01	1.03	1.01	1.11	1.01	1.19	1.01

◆ Correction Factors for FSVN(E)

Total Power of Combined Indoor Units: 130%

(kW)

Outdoor Air Inlet Dry Bulb Temperature (°C)	Indoor Air Inlet Wet Bulb (°C)													
	14		16		18		19		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
10	0.81	0.72	0.85	0.74	0.96	0.75	1.00	0.76	1.07	0.77	1.08	0.79	1.19	0.81
12	0.81	0.72	0.85	0.74	0.96	0.75	1.00	0.76	1.07	0.77	1.08	0.79	1.19	0.81
14	0.81	0.73	0.85	0.75	0.96	0.76	1.00	0.77	1.07	0.78	1.08	0.79	1.19	0.82
16	0.81	0.73	0.85	0.75	0.96	0.77	1.00	0.77	1.07	0.78	1.08	0.80	1.19	0.82
18	0.81	0.74	0.85	0.76	0.96	0.78	1.00	0.78	1.07	0.79	1.08	0.82	1.19	0.84
20	0.81	0.76	0.85	0.78	0.96	0.79	1.00	0.80	1.07	0.81	1.08	0.83	1.19	0.85
22	0.81	0.77	0.85	0.79	0.96	0.80	1.00	0.81	1.07	0.82	1.08	0.85	1.19	0.87
24	0.81	0.79	0.85	0.81	0.96	0.82	1.00	0.83	1.07	0.84	1.08	0.87	1.19	0.89
26	0.81	0.81	0.85	0.84	0.96	0.85	1.00	0.86	1.07	0.87	1.08	0.89	1.19	0.91
28	0.81	0.84	0.85	0.86	0.96	0.87	1.00	0.88	1.07	0.89	1.08	0.92	1.19	0.84
30	0.81	0.87	0.85	0.89	0.96	0.90	1.00	0.91	1.07	0.92	1.08	0.95	1.19	0.97
32	0.81	0.90	0.85	0.92	0.96	0.94	1.00	0.94	1.07	0.96	1.08	0.98	1.19	1.01
34	0.81	0.93	0.85	0.95	0.96	0.97	1.00	0.98	1.07	0.99	1.08	1.02	1.19	1.04
35	0.81	0.95	0.85	0.97	0.96	0.99	1.00	1.00	1.07	1.01	1.08	1.04	1.19	1.07
36	0.79	0.97	0.86	0.99	0.96	1.01	1.01	1.09	1.06	1.03	1.08	1.06	1.18	1.09
38	0.77	1.01	0.88	1.03	0.98	1.05	1.02	1.13	1.05	1.07	1.07	1.10	1.17	1.13
40	0.74	1.05	0.90	1.08	0.99	1.09	1.04	1.18	1.04	1.12	1.06	1.15	1.16	1.18

Total Power of Combined Indoor Units: 120%

(kW)

Outdoor Air Inlet Dry Bulb Temperature (°C)	Indoor Air Inlet Wet Bulb (°C)													
	14		16		18		19		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
10	0.81	0.76	0.85	0.78	0.96	0.80	1.00	0.80	1.07	0.81	1.08	0.84	1.19	0.86
12	0.81	0.77	0.85	0.79	0.96	0.80	1.00	0.81	1.07	0.82	1.08	0.84	1.19	0.86
14	0.81	0.77	0.85	0.79	0.96	0.81	1.00	0.81	1.07	0.83	1.08	0.85	1.19	0.87
16	0.81	0.78	0.85	0.80	0.96	0.81	1.00	0.82	1.07	0.83	1.08	0.85	1.19	0.88
18	0.81	0.79	0.85	0.81	0.96	0.82	1.00	0.83	1.07	0.84	1.08	0.87	1.19	0.89
20	0.81	0.80	0.85	0.82	0.96	0.84	1.00	0.84	1.07	0.85	1.08	0.88	1.19	0.90
22	0.81	0.82	0.85	0.83	0.96	0.85	1.00	0.86	1.07	0.87	1.08	0.89	1.19	0.92
24	0.81	0.83	0.85	0.85	0.96	0.87	1.00	0.87	1.07	0.89	1.08	0.91	1.19	0.93
26	0.81	0.85	0.85	0.87	0.96	0.88	1.00	0.89	1.07	0.90	1.08	0.93	1.19	0.95
28	0.81	0.87	0.85	0.89	0.96	0.90	1.00	0.91	1.07	0.93	1.08	0.95	1.19	0.97
30	0.81	0.89	0.85	0.91	0.96	0.93	1.00	0.94	1.07	0.95	1.08	0.97	1.19	1.00
32	0.81	0.91	0.85	0.93	0.96	0.95	1.00	0.96	1.07	0.97	1.08	1.00	1.19	1.02
34	0.81	0.94	0.85	0.96	0.96	0.98	1.00	0.99	1.07	1.00	1.08	1.03	1.19	1.05
35	0.81	0.95	0.85	0.97	0.96	0.99	1.00	1.00	1.07	1.01	1.08	1.04	1.19	1.07
36	0.79	0.97	0.86	0.99	0.96	1.01	1.01	1.08	1.06	1.03	1.08	1.06	1.18	1.08
38	0.77	1.00	0.88	1.01	0.98	1.04	1.02	1.12	1.05	1.06	1.07	1.09	1.17	1.12
40	0.74	1.03	0.90	1.05	0.99	1.07	1.04	1.15	1.04	1.09	1.06	1.12	1.16	1.15

Total Power of Combined Indoor Units: 110%

(kW)

Outdoor Air Inlet Dry Bulb Temperature (ºC)	Indoor Air Inlet Wet Bulb (ºC)													
	14		16		18		19		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
10	0.81	0.76	0.85	0.77	0.96	0.78	1.00	0.79	1.07	0.80	1.08	0.82	1.19	0.83
12	0.81	0.76	0.85	0.78	0.96	0.79	1.00	0.80	1.07	0.81	1.08	0.82	1.19	0.84
14	0.81	0.77	0.85	0.78	0.96	0.80	1.00	0.80	1.07	0.81	1.08	0.83	1.19	0.84
16	0.81	0.78	0.85	0.79	0.96	0.81	1.00	0.81	1.07	0.82	1.08	0.84	1.19	0.85
18	0.81	0.78	0.85	0.80	0.96	0.82	1.00	0.82	1.07	0.83	1.08	0.85	1.19	0.87
20	0.81	0.80	0.85	0.81	0.96	0.83	1.00	0.84	1.07	0.84	1.08	0.86	1.19	0.88
22	0.81	0.81	0.85	0.83	0.96	0.84	1.00	0.85	1.07	0.86	1.08	0.88	1.19	0.89
24	0.81	0.83	0.85	0.84	0.96	0.86	1.00	0.87	1.07	0.88	1.08	0.90	1.19	0.91
26	0.81	0.85	0.85	0.86	0.96	0.88	1.00	0.89	1.07	0.90	1.08	0.91	1.19	0.93
28	0.81	0.87	0.85	0.88	0.96	0.90	1.00	0.91	1.07	0.92	1.08	0.94	1.19	0.95
30	0.81	0.89	0.85	0.91	0.96	0.92	1.00	0.93	1.07	0.94	1.08	0.96	1.19	0.98
32	0.81	0.91	0.85	0.93	0.96	0.95	1.00	0.96	1.07	0.97	1.08	0.99	1.19	1.01
34	0.81	0.94	0.85	0.96	0.96	0.98	1.00	0.98	1.07	1.00	1.08	1.02	1.19	1.03
35	0.81	0.95	0.85	0.97	0.96	0.99	1.00	1.00	1.07	1.01	1.08	1.03	1.19	1.05
36	0.79	0.97	0.86	0.98	0.96	1.00	1.01	1.07	1.06	1.02	1.08	1.05	1.18	1.07
38	0.77	1.00	0.88	1.02	0.98	1.04	1.02	1.10	1.05	1.06	1.07	1.07	1.17	1.10
40	0.74	1.03	0.90	1.05	0.99	1.07	1.04	1.13	1.04	1.09	1.06	1.11	1.16	1.13

Total Power of Combined Indoor Units: 100%

(kW)

Outdoor Air Inlet Dry Bulb Temperature (ºC)	Indoor Air Inlet Wet Bulb (ºC)													
	14		16		18		19		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
10	0.81	0.82	0.85	0.83	0.96	0.85	1.00	0.85	1.07	0.84	1.08	0.83	1.19	0.81
12	0.81	0.82	0.85	0.83	0.96	0.85	1.00	0.86	1.07	0.85	1.08	0.83	1.19	0.82
14	0.81	0.82	0.85	0.83	0.96	0.85	1.00	0.86	1.07	0.85	1.08	0.83	1.19	0.81
16	0.81	0.83	0.85	0.84	0.96	0.86	1.00	0.86	1.07	0.85	1.08	0.83	1.19	0.82
18	0.81	0.83	0.85	0.84	0.96	0.86	1.00	0.87	1.07	0.86	1.08	0.84	1.19	0.82
20	0.81	0.84	0.85	0.85	0.96	0.87	1.00	0.88	1.07	0.87	1.08	0.85	1.19	0.83
22	0.81	0.85	0.85	0.86	0.96	0.88	1.00	0.89	1.07	0.88	1.08	0.86	1.19	0.84
24	0.81	0.86	0.85	0.88	0.96	0.89	1.00	0.90	1.07	0.89	1.08	0.87	1.19	0.85
26	0.81	0.87	0.85	0.89	0.96	0.91	1.00	0.92	1.07	0.90	1.08	0.89	1.19	0.87
28	0.81	0.89	0.85	0.91	0.96	0.92	1.00	0.93	1.07	0.92	1.08	0.90	1.19	0.88
30	0.81	0.91	0.85	0.92	0.96	0.94	1.00	0.95	1.07	0.94	1.08	0.92	1.19	0.90
32	0.81	0.93	0.85	0.94	0.96	0.96	1.00	0.97	1.07	0.96	1.08	0.94	1.19	0.92
34	0.81	0.94	0.85	0.96	0.96	0.98	1.00	0.99	1.07	0.98	1.08	0.96	1.19	0.93
35	0.81	0.96	0.85	0.97	0.96	0.99	1.00	1.00	1.07	0.99	1.08	0.97	1.19	0.95
36	0.79	0.97	0.86	0.98	0.96	1.00	1.01	0.96	1.06	1.00	1.08	0.98	1.18	0.96
38	0.77	0.99	0.88	1.01	0.98	1.03	1.02	0.98	1.05	1.03	1.07	1.00	1.17	0.98
40	0.74	1.02	0.90	1.04	0.99	1.06	1.04	1.01	1.04	1.06	1.06	1.03	1.16	1.01

Total Power of Combined Indoor Units: 90%

(kW)

Outdoor Air Inlet Dry Bulb Temperature (ºC)	Indoor Air Inlet Wet Bulb (ºC)													
	14		16		18		19		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
10	0.81	0.82	0.85	0.83	0.96	0.85	1.00	0.85	1.07	0.85	1.08	0.85	1.19	0.85
12	0.81	0.82	0.85	0.84	0.96	0.85	1.00	0.86	1.07	0.86	1.08	0.85	1.19	0.85
14	0.81	0.82	0.85	0.84	0.96	0.85	1.00	0.86	1.07	0.86	1.08	0.85	1.19	0.85
16	0.81	0.83	0.85	0.84	0.96	0.86	1.00	0.86	1.07	0.86	1.08	0.86	1.19	0.86
18	0.81	0.84	0.85	0.85	0.96	0.86	1.00	0.87	1.07	0.87	1.08	0.87	1.19	0.86
20	0.81	0.84	0.85	0.86	0.96	0.87	1.00	0.88	1.07	0.88	1.08	0.87	1.19	0.87
22	0.81	0.85	0.85	0.87	0.96	0.88	1.00	0.89	1.07	0.89	1.08	0.89	1.19	0.88
24	0.81	0.87	0.85	0.88	0.96	0.89	1.00	0.90	1.07	0.90	1.08	0.89	1.19	0.89
26	0.81	0.88	0.85	0.89	0.96	0.91	1.00	0.91	1.07	0.91	1.08	0.91	1.19	0.90
28	0.81	0.89	0.85	0.91	0.96	0.92	1.00	0.93	1.07	0.93	1.08	0.92	1.19	0.92
30	0.81	0.91	0.85	0.92	0.96	0.94	1.00	0.95	1.07	0.95	1.08	0.94	1.19	0.94
32	0.81	0.93	0.85	0.94	0.96	0.96	1.00	0.97	1.07	0.97	1.08	0.96	1.19	0.96
34	0.81	0.95	0.85	0.96	0.96	0.98	1.00	0.99	1.07	0.99	1.08	0.98	1.19	0.98
35	0.81	0.96	0.85	0.98	0.96	0.99	1.00	1.00	1.07	1.00	1.08	0.99	1.19	0.99
36	0.79	0.97	0.86	0.99	0.96	1.00	1.01	1.00	1.06	1.01	1.08	1.00	1.18	1.00
38	0.77	0.99	0.88	1.01	0.98	1.03	1.02	1.02	1.05	1.03	1.07	1.03	1.17	1.02
40	0.74	1.02	0.90	1.03	0.99	1.05	1.04	1.05	1.04	1.06	1.06	1.05	1.16	1.05

Total Power of Combined Indoor Units: 80%

(kW)

Outdoor Air Inlet Dry Bulb Temperature (ºC)	Indoor Air Inlet Wet Bulb (ºC)													
	14		16		18		19		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
10	0.81	0.83	0.85	0.84	0.96	0.85	1.00	0.86	1.07	0.87	1.08	0.88	1.19	0.90
12	0.81	0.83	0.85	0.84	0.96	0.86	1.00	0.86	1.07	0.87	1.08	0.88	1.19	0.90
14	0.81	0.84	0.85	0.85	0.96	0.86	1.00	0.87	1.07	0.87	1.08	0.89	1.19	0.90
16	0.81	0.84	0.85	0.85	0.96	0.86	1.00	0.87	1.07	0.88	1.08	0.89	1.19	0.91
18	0.81	0.84	0.85	0.86	0.96	0.87	1.00	0.88	1.07	0.89	1.08	0.90	1.19	0.92
20	0.81	0.85	0.85	0.87	0.96	0.88	1.00	0.89	1.07	0.89	1.08	0.91	1.19	0.93
22	0.81	0.86	0.85	0.88	0.96	0.89	1.00	0.89	1.07	0.90	1.08	0.92	1.19	0.94
24	0.81	0.88	0.85	0.89	0.96	0.90	1.00	0.91	1.07	0.91	1.08	0.93	1.19	0.95
26	0.81	0.89	0.85	0.90	0.96	0.91	1.00	0.92	1.07	0.93	1.08	0.95	1.19	0.96
28	0.81	0.90	0.85	0.91	0.96	0.93	1.00	0.93	1.07	0.94	1.08	0.96	1.19	0.98
30	0.81	0.92	0.85	0.93	0.96	0.95	1.00	0.95	1.07	0.96	1.08	0.98	1.19	1.00
32	0.81	0.93	0.85	0.95	0.96	0.96	1.00	0.97	1.07	0.98	1.08	1.00	1.19	1.01
34	0.81	0.95	0.85	0.97	0.96	0.98	1.00	0.99	1.07	1.00	1.08	1.02	1.19	1.03
35	0.81	0.96	0.85	0.98	0.96	0.99	1.00	1.00	1.07	1.01	1.08	1.03	1.19	1.05
36	0.79	0.97	0.86	0.99	0.96	1.00	1.01	1.06	1.06	1.02	1.08	1.04	1.18	1.06
38	0.77	1.00	0.88	1.01	0.98	1.03	1.02	1.08	1.05	1.04	1.07	1.06	1.17	1.08
40	0.74	1.02	0.90	1.04	0.99	1.05	1.04	1.11	1.04	1.07	1.06	1.09	1.16	1.11

Total Power of Combined Indoor Units: 70%

(kW)

Outdoor Air Inlet Dry Bulb Temperature (ºC)	Indoor Air Inlet Wet Bulb (ºC)													
	14		16		18		19		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
10	0.81	0.90	0.85	0.91	0.96	0.92	1.00	0.93	1.07	0.93	1.08	0.93	1.19	0.94
12	0.81	0.91	0.85	0.92	0.96	0.93	1.00	0.94	1.07	0.94	1.08	0.94	1.19	0.94
14	0.81	0.91	0.85	0.92	0.96	0.94	1.00	0.94	1.07	0.94	1.08	0.95	1.19	0.95
16	0.81	0.92	0.85	0.93	0.96	0.94	1.00	0.95	1.07	0.95	1.08	0.95	1.19	0.96
18	0.81	0.92	0.85	0.94	0.96	0.95	1.00	0.96	1.07	0.96	1.08	0.96	1.19	0.96
20	0.81	0.93	0.85	0.94	0.96	0.96	1.00	0.97	1.07	0.97	1.08	0.97	1.19	0.97
22	0.81	0.94	0.85	0.95	0.96	0.96	1.00	0.97	1.07	0.97	1.08	0.97	1.19	0.97
24	0.81	0.94	0.85	0.96	0.96	0.97	1.00	0.97	1.07	0.98	1.08	0.98	1.19	0.98
26	0.81	0.95	0.85	0.96	0.96	0.97	1.00	0.98	1.07	0.98	1.08	0.98	1.19	0.99
28	0.81	0.95	0.85	0.97	0.96	0.98	1.00	0.99	1.07	0.99	1.08	0.99	1.19	0.99
30	0.81	0.96	0.85	0.97	0.96	0.98	1.00	0.99	1.07	0.99	1.08	0.99	1.19	1.00
32	0.81	0.96	0.85	0.97	0.96	0.99	1.00	1.00	1.07	1.00	1.08	1.00	1.19	1.00
34	0.81	0.97	0.85	0.98	0.96	0.99	1.00	1.00	1.07	1.00	1.08	1.00	1.19	1.00
35	0.81	0.97	0.85	0.98	0.96	0.99	1.00	1.00	1.07	1.00	1.08	1.00	1.19	1.00
36	0.79	0.97	0.86	0.98	0.96	1.00	1.01	1.01	1.06	1.00	1.08	1.00	1.18	1.01
38	0.77	0.97	0.88	0.98	0.98	1.00	1.02	1.01	1.05	1.01	1.07	1.01	1.17	1.01
40	0.74	0.97	0.90	0.99	0.99	1.00	1.04	1.01	1.04	1.01	1.06	1.01	1.16	1.01

Total Power of Combined Indoor Units: 60%

(kW)

Outdoor Air Inlet Dry Bulb Temperature (ºC)	Indoor Air Inlet Wet Bulb (ºC)													
	14		16		18		19		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
10	0.81	0.76	0.85	0.81	0.96	0.85	1.00	0.87	1.07	0.86	1.08	0.85	1.19	0.84
12	0.81	0.77	0.85	0.81	0.96	0.85	1.00	0.87	1.07	0.86	1.08	0.85	1.19	0.84
14	0.81	0.77	0.85	0.81	0.96	0.85	1.00	0.87	1.07	0.87	1.08	0.86	1.19	0.84
16	0.81	0.77	0.85	0.81	0.96	0.86	1.00	0.87	1.07	0.87	1.08	0.86	1.19	0.85
18	0.81	0.78	0.85	0.82	0.96	0.86	1.00	0.88	1.07	0.88	1.08	0.87	1.19	0.86
20	0.81	0.79	0.85	0.83	0.96	0.87	1.00	0.89	1.07	0.89	1.08	0.87	1.19	0.86
22	0.81	0.79	0.85	0.84	0.96	0.88	1.00	0.90	1.07	0.89	1.08	0.88	1.19	0.87
24	0.81	0.81	0.85	0.85	0.96	0.89	1.00	0.91	1.07	0.90	1.08	0.89	1.19	0.89
26	0.81	0.81	0.85	0.86	0.96	0.90	1.00	0.92	1.07	0.92	1.08	0.91	1.19	0.90
28	0.81	0.83	0.85	0.87	0.96	0.92	1.00	0.94	1.07	0.93	1.08	0.92	1.19	0.91
30	0.81	0.84	0.85	0.89	0.96	0.93	1.00	0.95	1.07	0.95	1.08	0.94	1.19	0.93
32	0.81	0.86	0.85	0.90	0.96	0.95	1.00	0.97	1.07	0.97	1.08	0.95	1.19	0.94
34	0.81	0.87	0.85	0.92	0.96	0.97	1.00	0.99	1.07	0.98	1.08	0.97	1.19	0.96
35	0.81	0.88	0.85	0.93	0.96	0.98	1.00	1.00	1.07	1.00	1.08	0.98	1.19	0.97
36	0.79	0.89	0.86	0.94	0.96	0.99	1.01	0.98	1.06	1.01	1.08	1.00	1.18	0.98
38	0.77	0.91	0.88	0.96	0.98	1.01	1.02	1.00	1.05	1.03	1.07	1.02	1.17	1.00
40	0.74	0.94	0.90	0.98	0.99	1.03	1.04	1.03	1.04	1.05	1.06	1.04	1.16	1.03

Total Power of Combined Indoor Units: 50%

(kW)

Outdoor Air Inlet Dry Bulb Temperature (ºC)	Indoor Air Inlet Wet Bulb (ºC)													
	14		16		18		19		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
10	0.81	0.79	0.85	0.82	0.96	0.84	1.00	0.86	1.07	0.86	1.08	0.86	1.19	0.87
12	0.81	0.80	0.85	0.82	0.96	0.85	1.00	0.86	1.07	0.86	1.08	0.86	1.19	0.87
14	0.81	0.80	0.85	0.83	0.96	0.85	1.00	0.86	1.07	0.86	1.08	0.87	1.19	0.87
16	0.81	0.80	0.85	0.83	0.96	0.85	1.00	0.87	1.07	0.87	1.08	0.87	1.19	0.88
18	0.81	0.81	0.85	0.83	0.96	0.86	1.00	0.87	1.07	0.88	1.08	0.88	1.19	0.89
20	0.81	0.82	0.85	0.84	0.96	0.87	1.00	0.88	1.07	0.88	1.08	0.89	1.19	0.89
22	0.81	0.83	0.85	0.85	0.96	0.88	1.00	0.89	1.07	0.89	1.08	0.90	1.19	0.90
24	0.81	0.84	0.85	0.86	0.96	0.89	1.00	0.90	1.07	0.91	1.08	0.91	1.19	0.92
26	0.81	0.85	0.85	0.88	0.96	0.90	1.00	0.92	1.07	0.92	1.08	0.92	1.19	0.93
28	0.81	0.86	0.85	0.89	0.96	0.92	1.00	0.93	1.07	0.94	1.08	0.94	1.19	0.94
30	0.81	0.88	0.85	0.91	0.96	0.93	1.00	0.95	1.07	0.95	1.08	0.95	1.19	0.96
32	0.81	0.89	0.85	0.92	0.96	0.95	1.00	0.96	1.07	0.97	1.08	0.97	1.19	0.98
34	0.81	0.91	0.85	0.94	0.96	0.97	1.00	0.98	1.07	0.99	1.08	0.99	1.19	1.00
35	0.81	0.93	0.85	0.95	0.96	0.98	1.00	1.00	1.07	1.00	1.08	1.01	1.19	1.01
36	0.79	0.93	0.86	0.96	0.96	0.99	1.01	1.02	1.06	1.01	1.08	1.01	1.18	1.02
38	0.77	0.95	0.88	0.98	0.98	1.01	1.02	1.04	1.05	1.03	1.07	1.04	1.17	1.04
40	0.74	0.98	0.90	1.01	0.99	1.04	1.04	1.07	1.04	1.06	1.06	1.06	1.16	1.07

4.6.1. Heating correction factor for outdoor units

The correction factors for each percentage are the same for the FSN(1)(E) and FXN(E) models.

◆ **FSN(1)(E)/FXN(E) - 5~42 HP**

Total Power of Combined Indoor Units: 130%

(kW)

Outdoor Air Inlet Temperature WB (°C)	Indoor Air Inlet Dry Bulb (ºC)									
	16		18		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
-20	0.51	0.92	0.51	0.96	0.51	1.00	0.51	1.06	0.51	1.12
-17	0.54	0.91	0.54	0.95	0.54	0.99	0.54	1.05	0.54	1.10
-15	0.55	0.89	0.56	0.94	0.56	0.98	0.56	1.04	0.56	1.09
-13	0.59	0.87	0.59	0.91	0.59	0.96	0.59	1.01	0.59	1.06
-11	0.62	0.85	0.62	0.89	0.62	0.93	0.62	0.98	0.62	1.03
-9	0.65	0.83	0.65	0.87	0.65	0.91	0.65	0.96	0.65	1.01
-7	0.69	0.80	0.69	0.84	0.69	0.88	0.68	0.93	0.68	0.98
-6	0.71	0.79	0.70	0.83	0.70	0.87	0.70	0.92	0.70	0.96
-5	0.73	0.80	0.73	0.84	0.72	0.88	0.72	0.93	0.72	0.97
-3	0.78	0.82	0.77	0.86	0.77	0.90	0.77	0.95	0.77	1.00
-1	0.82	0.84	0.82	0.88	0.82	0.92	0.82	0.97	0.82	1.02
1	0.87	0.86	0.87	0.90	0.87	0.94	0.87	0.99	0.86	1.04
3	0.92	0.88	0.92	0.92	0.92	0.96	0.92	1.02	0.92	1.07
5	0.98	0.90	0.97	0.94	0.97	0.99	0.97	1.04	0.97	1.09
6	1.00	0.91	1.00	0.96	1.00	1.00	1.00	1.05	1.00	1.11
7	1.03	0.93	1.03	0.97	1.03	1.02	1.03	1.07	1.03	1.13
9	1.09	0.96	1.09	1.01	1.09	1.05	1.09	1.11	1.09	1.17
11	1.16	0.99	1.16	1.04	1.16	1.09	1.16	1.15	1.16	1.21
14	1.23	1.04	1.23	1.08	1.24	1.13	1.24	1.20	1.24	1.25
15	1.28	1.06	1.28	1.11	1.28	1.16	1.28	1.22	1.28	1.29

Total Power of Combined Indoor Units: 120%

(kW)

Outdoor Air Inlet Temperature WB (°C)	Indoor Air Inlet Dry Bulb (ºC)									
	16		18		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
-20	0.51	0.92	0.51	0.96	0.51	1	0.51	1.06	0.51	1.12
-17	0.54	0.91	0.54	0.95	0.54	0.99	0.54	1.05	0.54	1.10
-15	0.55	0.91	0.55	0.95	0.56	0.97	0.56	1.04	0.56	1.11
-13	0.58	0.89	0.58	0.92	0.59	0.95	0.59	1.02	0.59	1.08
-11	0.61	0.87	0.62	0.90	0.62	0.93	0.62	1.00	0.62	1.05
-9	0.65	0.84	0.65	0.88	0.65	0.91	0.65	0.97	0.65	1.03
-7	0.68	0.82	0.68	0.86	0.68	0.88	0.68	0.95	0.68	1.00
-6	0.70	0.81	0.70	0.85	0.70	0.87	0.70	0.94	0.70	0.99
-5	0.72	0.82	0.72	0.86	0.72	0.88	0.72	0.95	0.72	1.00
-3	0.77	0.84	0.77	0.88	0.77	0.91	0.77	0.97	0.77	1.03
-1	0.82	0.87	0.82	0.90	0.82	0.93	0.81	1.00	0.81	1.06
1	0.87	0.89	0.87	0.92	0.86	0.95	0.86	1.02	0.86	1.08
3	0.92	0.91	0.92	0.94	0.92	0.97	0.92	1.04	0.92	1.10
5	0.98	0.92	0.97	0.96	0.97	0.99	0.97	1.06	0.97	1.13
6	1.00	0.93	1.00	0.97	1.00	1.00	1.00	1.07	1.00	1.14
7	1.03	0.96	1.03	1.00	1.03	1.03	1.03	1.10	1.03	1.17
9	1.10	1.00	1.10	1.05	1.10	1.08	1.10	1.16	1.10	1.22
11	1.17	1.05	1.17	1.10	1.17	1.13	1.16	1.21	1.16	1.28
14	1.25	1.11	1.25	1.16	1.25	1.19	1.25	1.28	1.25	1.36
15	1.30	1.15	1.30	1.20	1.30	1.23	1.30	1.32	1.30	1.40

Total Power of Combined Indoor Units: 110%

(kW)

Outdoor Air Inlet Temperature WB (°C)	Indoor Air Inlet Dry Bulb (ºC)									
	16		18		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
-20	0.51	0.92	0.51	0.96	0.51	1	0.51	1.06	0.51	1.12
-17	0.54	0.91	0.54	0.95	0.54	0.99	0.54	1.05	0.54	1.10
-15	0.58	1.07	0.58	1.05	0.59	1.03	0.59	1.09	0.59	1.15
-13	0.62	1.05	0.62	1.03	0.62	1.01	0.62	1.07	0.62	1.13
-11	0.65	1.03	0.65	1.01	0.65	0.99	0.65	1.05	0.66	1.11
-9	0.68	1.01	0.68	0.99	0.68	0.97	0.69	1.03	0.69	1.09
-7	0.72	0.99	0.72	0.97	0.72	0.95	0.72	1.01	0.72	1.07
-6	0.74	0.98	0.74	0.96	0.73	0.95	0.74	1.00	0.74	1.06
-5	0.76	1.00	0.76	0.98	0.76	0.96	0.76	1.02	0.76	1.07
-3	0.81	1.03	0.81	1.01	0.81	0.99	0.80	1.05	0.79	1.10
-1	0.87	1.05	0.86	1.03	0.86	1.02	0.84	1.08	0.83	1.13
1	0.92	1.08	0.92	1.06	0.91	1.05	0.89	1.11	0.86	1.17
3	0.98	1.07	0.96	1.05	0.95	1.03	0.93	1.09	0.92	1.15
5	1.03	1.05	1.01	1.03	0.98	1.01	0.98	1.07	0.97	1.13
6	1.06	1.04	1.03	1.02	1.00	1.00	1.00	1.06	1.00	1.12
7	1.08	1.06	1.06	1.04	1.03	1.02	1.03	1.08	1.03	1.15
9	1.12	1.11	1.11	1.09	1.10	1.07	1.10	1.14	1.10	1.20
11	1.16	1.17	1.16	1.14	1.17	1.12	1.17	1.19	1.16	1.25
14	1.25	1.23	1.25	1.20	1.25	1.18	1.25	1.25	1.25	1.32
15	1.30	1.26	1.30	1.24	1.30	1.22	1.30	1.29	1.30	1.36

Total Power of Combined Indoor Units: 100%

(kW)

Outdoor Air Inlet Temperature WB (°C)	Indoor Air Inlet Dry Bulb (°C)									
	16		18		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
-20	0.51	0.92	0.51	0.96	0.51	1	0.51	1.06	0.51	1.12
-17	0.54	0.91	0.54	0.95	0.54	0.99	0.54	1.05	0.54	1.10
-15	0.62	1.26	0.62	1.18	0.62	1.09	0.62	1.15	0.62	1.20
-13	0.65	1.24	0.65	1.16	0.65	1.08	0.66	1.13	0.66	1.18
-11	0.69	1.22	0.69	1.14	0.69	1.06	0.69	1.11	0.70	1.17
-9	0.72	1.20	0.72	1.13	0.72	1.05	0.73	1.10	0.73	1.15
-7	0.76	1.19	0.76	1.11	0.76	1.03	0.76	1.08	0.77	1.13
-6	0.78	1.18	0.78	1.10	0.78	1.02	0.78	1.07	0.79	1.12
-5	0.80	1.20	0.80	1.12	0.80	1.04	0.80	1.09	0.80	1.14
-3	0.86	1.24	0.86	1.16	0.86	1.07	0.84	1.13	0.82	1.18
-1	0.92	1.27	0.91	1.19	0.91	1.11	0.88	1.16	0.84	1.22
1	0.97	1.32	0.97	1.23	0.97	1.14	0.91	1.20	0.86	1.25
3	1.04	1.25	1.01	1.17	0.98	1.09	0.95	1.14	0.91	1.19
5	1.10	1.18	1.05	1.11	0.99	1.03	0.98	1.08	0.97	1.13
6	1.13	1.15	1.07	1.08	1.00	1.00	1.00	1.05	1.00	1.10
7	1.14	1.18	1.09	1.10	1.03	1.02	1.03	1.07	1.03	1.12
9	1.15	1.23	1.12	1.15	1.10	1.07	1.10	1.12	1.10	1.17
11	1.16	1.28	1.16	1.20	1.17	1.11	1.17	1.16	1.17	1.22
14	1.25	1.34	1.25	1.26	1.25	1.17	1.25	1.23	1.25	1.28
15	1.31	1.38	1.31	1.30	1.30	1.20	1.30	1.26	1.30	1.32

Total Horsepower of Combined Indoor Units: 90%

(kW)

Outdoor Air Inlet Temperature WB (°C)	Indoor Air Inlet Dry Bulb (°C)									
	16		18		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
-20	0.51	0.92	0.51	0.96	0.51	1	0.51	1.06	0.51	1.12
-17	0.54	0.91	0.54	0.95	0.54	0.99	0.54	1.05	0.54	1.10
-15	0.67	1.37	0.68	1.31	0.68	1.26	0.68	1.32	0.69	1.39
-13	0.71	1.36	0.71	1.30	0.71	1.25	0.71	1.31	0.71	1.37
-11	0.75	1.35	0.75	1.29	0.75	1.23	0.74	1.30	0.73	1.36
-9	0.79	1.33	0.79	1.28	0.79	1.22	0.77	1.29	0.76	1.35
-7	0.83	1.32	0.83	1.27	0.83	1.21	0.80	1.27	0.78	1.33
-6	0.85	1.32	0.85	1.26	0.85	1.21	0.82	1.27	0.79	1.33
-5	0.88	1.30	0.87	1.24	0.86	1.19	0.83	1.25	0.79	1.31
-3	0.92	1.27	0.91	1.21	0.89	1.16	0.85	1.22	0.81	1.28
-1	0.97	1.24	0.94	1.19	0.92	1.13	0.87	1.19	0.82	1.25
1	1.01	1.20	0.98	1.15	0.95	1.10	0.91	1.16	0.86	1.21
3	1.05	1.15	1.01	1.10	0.97	1.05	0.94	1.11	0.92	1.16
5	1.08	1.10	1.03	1.05	0.98	1.01	0.98	1.06	0.97	1.11
6	1.10	1.09	1.05	1.04	1.00	1.00	1.00	1.05	1.00	1.10
7	1.11	1.12	1.07	1.07	1.03	1.02	1.03	1.08	1.03	1.13
9	1.12	1.17	1.11	1.12	1.10	1.07	1.10	1.13	1.10	1.18
11	1.16	1.22	1.17	1.17	1.17	1.12	1.17	1.18	1.17	1.23
14	1.26	1.29	1.26	1.23	1.26	1.18	1.25	1.24	1.25	1.30
15	1.31	1.33	1.31	1.27	1.31	1.22	1.31	1.28	1.30	1.34

Total Power of Combined Indoor Units: 80%

(kW)

Outdoor Air Inlet Temperature WB (°C)	Indoor Air Inlet Dry Bulb (°C)									
	16		18		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
-20	0.51	0.92	0.51	0.96	0.51	1	0.51	1.06	0.51	1.12
-17	0.54	0.91	0.54	0.95	0.54	0.99	0.54	1.05	0.54	1.10
-15	0.71	1.37	0.72	1.39	0.72	1.41	0.73	1.49	0.74	1.56
-13	0.76	1.37	0.76	1.39	0.76	1.41	0.75	1.48	0.75	1.56
-11	0.80	1.36	0.80	1.38	0.80	1.40	0.77	1.48	0.75	1.55
-9	0.84	1.36	0.84	1.37	0.84	1.39	0.79	1.47	0.75	1.54
-7	0.89	1.35	0.88	1.37	0.87	1.39	0.81	1.46	0.76	1.54
-6	0.91	1.35	0.90	1.37	0.89	1.38	0.83	1.46	0.76	1.53
-5	0.93	1.30	0.91	1.32	0.89	1.34	0.83	1.41	0.76	1.48
-3	0.96	1.20	0.93	1.22	0.90	1.23	0.83	1.30	0.77	1.36
-1	0.99	1.10	0.95	1.11	0.90	1.13	0.84	1.19	0.77	1.25
1	1.03	1.00	0.97	1.01	0.90	1.03	0.87	1.09	0.83	1.14
3	1.03	0.96	0.97	0.98	0.92	0.99	0.90	1.05	0.88	1.10
5	1.03	0.93	0.98	0.94	0.94	0.96	0.94	1.01	0.94	1.06
6	1.04	0.97	1.02	0.98	1.00	1.00	1.00	1.05	1.00	1.11
7	1.04	0.97	1.02	0.98	1.00	1.00	1.00	1.05	1.00	1.11
9	1.06	1.02	1.06	1.04	1.07	1.05	1.07	1.11	1.07	1.16
11	1.12	1.07	1.13	1.09	1.13	1.10	1.13	1.16	1.13	1.22
14	1.22	1.13	1.22	1.15	1.22	1.16	1.22	1.23	1.21	1.29
15	1.27	1.17	1.27	1.18	1.27	1.20	1.27	1.27	1.26	1.33

Total Power of Combined Indoor Units: 70%

(kW)

Outdoor Air Inlet Temperature WB (°C)	Indoor Air Inlet Dry Bulb (°C)									
	16		18		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
-20	0.51	0.92	0.51	0.96	0.51	1	0.51	1.06	0.51	1.12
-17	0.54	0.91	0.54	0.95	0.54	0.99	0.54	1.05	0.54	1.10
-15	0.86	1.60	0.83	1.61	0.81	1.61	0.78	1.70	0.76	1.78
-13	0.89	1.54	0.86	1.54	0.83	1.55	0.79	1.63	0.76	1.71
-11	0.91	1.47	0.88	1.48	0.85	1.48	0.81	1.56	0.76	1.64
-9	0.93	1.41	0.90	1.41	0.87	1.42	0.82	1.49	0.76	1.57
-7	0.96	1.35	0.93	1.35	0.90	1.35	0.83	1.42	0.76	1.50
-6	0.97	1.31	0.94	1.32	0.91	1.32	0.84	1.39	0.77	1.46
-5	0.98	1.27	0.94	1.27	0.91	1.28	0.84	1.34	0.77	1.41
-3	1.00	1.18	0.96	1.18	0.91	1.19	0.85	1.25	0.79	1.31
-1	1.02	1.09	0.97	1.09	0.91	1.10	0.86	1.16	0.81	1.22
1	1.04	1.01	0.98	1.01	0.91	1.01	0.89	1.07	0.86	1.12
3	1.05	0.99	0.99	0.99	0.94	1.00	0.93	1.05	0.92	1.10
5	1.05	0.98	1.01	0.98	0.97	0.99	0.97	1.04	0.97	1.09
6	1.05	0.99	1.03	1.00	1.00	1.00	1.00	1.05	1.00	1.10
7	1.07	1.02	1.05	1.02	1.04	1.03	1.04	1.08	1.04	1.14
9	1.11	1.08	1.11	1.08	1.11	1.08	1.11	1.14	1.11	1.20
11	1.17	1.13	1.17	1.13	1.18	1.14	1.18	1.20	1.17	1.26
14	1.26	1.20	1.26	1.20	1.27	1.21	1.26	1.27	1.26	1.34
15	1.31	1.24	1.31	1.25	1.32	1.25	1.32	1.31	1.31	1.38

Total Power of Combined Indoor Units: 60%

(kW)

Outdoor Air Inlet Temperature WB (°C)	Indoor Air Inlet Dry Bulb (°C)									
	16		18		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
-20	0.51	0.92	0.51	0.96	0.51	1	0.51	1.06	0.51	1.12
-17	0.54	0.91	0.54	0.95	0.54	0.99	0.54	1.05	0.54	1.10
-15	1.01	1.75	0.95	1.79	0.88	1.82	0.81	1.91	0.74	2.01
-13	1.01	1.62	0.95	1.65	0.88	1.68	0.81	1.77	0.74	1.85
-11	1.01	1.48	0.95	1.52	0.88	1.54	0.81	1.62	0.74	1.70
-9	1.01	1.35	0.95	1.38	0.88	1.40	0.81	1.48	0.74	1.55
-7	1.01	1.22	0.95	1.24	0.88	1.26	0.81	1.33	0.74	1.40
-6	1.01	1.15	0.95	1.17	0.88	1.19	0.81	1.26	0.74	1.32
-5	1.01	1.12	0.95	1.14	0.88	1.16	0.82	1.22	0.76	1.28
-3	1.01	1.05	0.95	1.07	0.88	1.09	0.84	1.15	0.79	1.21
-1	1.01	0.99	0.95	1.01	0.88	1.02	0.85	1.08	0.83	1.13
1	1.02	0.92	0.95	0.94	0.88	0.95	0.87	1.01	0.86	1.06
3	1.02	0.94	0.98	0.96	0.93	0.97	0.92	1.02	0.92	1.08
5	1.03	0.96	1.00	0.97	0.98	0.99	0.97	1.04	0.97	1.10
6	1.03	0.96	1.02	0.98	1.00	1.00	1.00	1.05	1.00	1.10
7	1.06	0.99	1.05	1.01	1.04	1.03	1.04	1.08	1.04	1.14
9	1.12	1.05	1.11	1.07	1.11	1.09	1.11	1.15	1.11	1.20
11	1.18	1.11	1.18	1.13	1.18	1.15	1.18	1.21	1.18	1.27
14	1.25	1.18	1.26	1.20	1.27	1.22	1.27	1.29	1.27	1.35
15	1.30	1.23	1.31	1.25	1.32	1.27	1.32	1.34	1.32	1.40

Total Power of Combined Indoor Units: 50%

(kW)

Outdoor Air Inlet Temperature WB (°C)	Indoor Air Inlet Dry Bulb (°C)									
	16		18		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
-20	0.51	0.92	0.51	0.96	0.51	1	0.51	1.06	0.51	1.12
-17	0.54	0.91	0.54	0.95	0.54	0.99	0.54	1.05	0.54	1.10
-15	1.02	1.80	0.96	1.81	0.89	1.83	0.82	1.91	0.74	1.99
-13	1.02	1.66	0.96	1.67	0.89	1.68	0.82	1.76	0.75	1.83
-11	1.03	1.52	0.96	1.53	0.89	1.54	0.82	1.61	0.75	1.68
-9	1.03	1.38	0.96	1.39	0.89	1.40	0.82	1.46	0.75	1.52
-7	1.03	1.24	0.96	1.25	0.89	1.25	0.82	1.31	0.75	1.36
-6	1.03	1.16	0.96	1.17	0.89	1.18	0.82	1.23	0.75	1.28
-5	1.03	1.14	0.96	1.14	0.89	1.15	0.82	1.21	0.75	1.26
-3	1.03	1.08	0.96	1.09	0.90	1.09	0.82	1.15	0.75	1.19
-1	1.02	1.02	0.96	1.03	0.90	1.04	0.85	1.08	0.80	1.13
1	1.02	0.97	0.96	0.98	0.90	0.98	0.88	1.03	0.86	1.07
3	1.03	0.93	0.97	0.94	0.92	0.94	0.91	0.98	0.91	1.03
5	1.04	0.96	1.00	0.97	0.95	0.98	0.96	1.02	0.97	1.06
6	1.05	0.98	1.02	0.99	1.00	1.00	1.00	1.04	0.99	1.09
7	1.05	1.01	1.04	1.02	1.03	1.02	1.03	1.07	1.03	1.11
9	1.05	1.06	1.07	1.06	1.10	1.07	1.10	1.12	1.10	1.17
11	1.12	1.10	1.14	1.11	1.16	1.12	1.16	1.17	1.16	1.22
14	1.19	1.16	1.21	1.17	1.24	1.17	1.24	1.23	1.25	1.28
15	1.23	1.19	1.26	1.21	1.29	1.21	1.29	1.26	1.30	1.32

◆ Heating Capacity Factor for FSVN(E) units

Total Power of Combined Indoor Units: 130%

(kW)

Outdoor Air Inlet Temperature WB (°C)	Indoor Air Inlet Dry Bulb (ºC)									
	16		18		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
-20	0.55	0.92	0.53	0.96	0.52	1	0.51	1.06	0.51	1.12
-17	0.62	0.91	0.61	0.95	0.59	0.99	0.58	1.05	0.58	1.10
-15	0.66	0.89	0.65	0.94	0.64	0.98	0.63	1.04	0.63	1.09
-13	0.71	0.87	0.70	0.91	0.69	0.96	0.68	1.01	0.67	1.06
-11	0.75	0.85	0.75	0.89	0.73	0.93	0.73	0.98	0.72	1.03
-9	0.80	0.83	0.79	0.87	0.78	0.91	0.77	0.96	0.76	1.01
-7	0.84	0.80	0.83	0.84	0.82	0.88	0.81	0.93	0.79	0.98
-6	0.87	0.79	0.85	0.83	0.84	0.87	0.83	0.92	0.81	0.96
-5	0.89	0.80	0.88	0.84	0.86	0.88	0.84	0.93	0.83	0.97
-3	0.92	0.82	0.91	0.86	0.89	0.90	0.87	0.95	0.84	1.00
-1	0.95	0.84	0.95	0.88	0.92	0.92	0.89	0.97	0.85	1.02
1	0.99	0.86	0.98	0.90	0.95	0.94	0.91	0.99	0.86	1.04
3	1.02	0.88	1.00	0.92	0.97	0.96	0.93	1.02	0.87	1.07
5	1.05	0.90	1.03	0.94	0.99	0.99	0.94	1.04	0.88	1.09
6	1.06	0.91	1.04	0.96	1.00	1.00	0.94	1.05	0.88	1.11
7	1.08	0.93	1.05	0.97	1.01	1.02	0.94	1.07	0.88	1.13
9	1.11	0.96	1.07	1.01	1.02	1.05	0.94	1.11	0.88	1.17
11	1.13	0.99	1.08	1.04	1.02	1.09	0.94	1.15	0.88	1.21
14	1.15	1.04	1.10	1.08	1.02	1.13	0.94	1.20	0.88	1.25
15	1.16	1.06	1.11	1.11	1.02	1.16	0.94	1.22	0.88	1.29

Total Power of Combined Indoor Units: 120%

(kW)

Outdoor Air Inlet Temperature WB (°C)	Indoor Air Inlet Dry Bulb (ºC)									
	16		18		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
-20	0.55	0.92	0.53	0.96	0.52	1	0.51	1.06	0.51	1.12
-17	0.62	0.91	0.61	0.95	0.59	0.99	0.58	1.05	0.58	1.10
-15	0.66	0.91	0.65	0.95	0.64	0.97	0.63	1.04	0.63	1.11
-13	0.71	0.89	0.70	0.92	0.69	0.95	0.68	1.02	0.67	1.08
-11	0.75	0.87	0.75	0.90	0.73	0.93	0.73	1.00	0.72	1.05
-9	0.80	0.84	0.79	0.88	0.78	0.91	0.77	0.97	0.76	1.03
-7	0.84	0.82	0.83	0.86	0.82	0.88	0.81	0.95	0.79	1.00
-6	0.87	0.81	0.85	0.85	0.84	0.87	0.83	0.94	0.81	0.99
-5	0.89	0.82	0.88	0.86	0.86	0.88	0.84	0.95	0.83	1.00
-3	0.92	0.84	0.91	0.88	0.89	0.91	0.87	0.97	0.84	1.03
-1	0.95	0.87	0.95	0.90	0.92	0.93	0.89	1.00	0.85	1.06
1	0.99	0.89	0.98	0.92	0.95	0.95	0.91	1.02	0.86	1.08
3	1.02	0.91	1.00	0.94	0.97	0.97	0.93	1.04	0.87	1.10
5	1.05	0.92	1.03	0.96	0.99	0.99	0.94	1.06	0.88	1.13
6	1.06	0.93	1.04	0.97	1.00	1.00	0.94	1.07	0.88	1.14
7	1.08	0.96	1.05	1.00	1.01	1.03	0.94	1.10	0.88	1.17
9	1.11	1.00	1.07	1.05	1.02	1.08	0.94	1.16	0.88	1.22
11	1.13	1.05	1.08	1.10	1.02	1.13	0.94	1.21	0.88	1.28
14	1.15	1.11	1.10	1.16	1.02	1.19	0.94	1.28	0.88	1.36
15	1.16	1.15	1.11	1.20	1.02	1.23	0.94	1.32	0.88	1.40

Total Power of Combined Indoor Units: 110%

(kW)

Outdoor Air Inlet Temperature WB (°C)	Indoor Air Inlet Dry Bulb (ºC)									
	16		18		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
-20	0.55	0.92	0.53	0.96	0.52	1	0.51	1.06	0.51	1.12
-17	0.62	0.91	0.61	0.95	0.59	0.99	0.58	1.05	0.58	1.10
-15	0.66	1.07	0.65	1.05	0.64	1.03	0.63	1.09	0.63	1.15
-13	0.71	1.05	0.70	1.03	0.69	1.01	0.68	1.07	0.67	1.13
-11	0.75	1.03	0.75	1.01	0.73	0.99	0.73	1.05	0.72	1.11
-9	0.80	1.01	0.79	0.99	0.78	0.97	0.77	1.03	0.76	1.09
-7	0.84	0.99	0.83	0.97	0.82	0.95	0.81	1.01	0.79	1.07
-6	0.87	0.98	0.85	0.96	0.84	0.95	0.83	1.00	0.81	1.06
-5	0.89	1.00	0.88	0.98	0.86	0.96	0.84	1.02	0.83	1.07
-3	0.92	1.03	0.91	1.01	0.89	0.99	0.87	1.05	0.84	1.10
-1	0.95	1.05	0.95	1.03	0.92	1.02	0.89	1.08	0.85	1.13
1	0.99	1.08	0.98	1.06	0.95	1.05	0.91	1.11	0.86	1.17
3	1.02	1.07	1.00	1.05	0.97	1.03	0.93	1.09	0.87	1.15
5	1.05	1.05	1.03	1.03	0.99	1.01	0.94	1.07	0.88	1.13
6	1.06	1.04	1.04	1.02	1.00	1.00	0.94	1.06	0.88	1.12
7	1.08	1.06	1.05	1.04	1.01	1.02	0.94	1.08	0.88	1.15
9	1.11	1.11	1.07	1.09	1.02	1.07	0.94	1.14	0.88	1.20
11	1.13	1.17	1.08	1.14	1.02	1.12	0.94	1.19	0.88	1.25
14	1.15	1.23	1.10	1.20	1.02	1.18	0.94	1.25	0.88	1.32
15	1.16	1.26	1.11	1.24	1.02	1.22	0.94	1.29	0.88	1.36

Total Power of Combined Indoor Units: 100%

(kW)

Outdoor Air Inlet Temperature WB (°C)	Indoor Air Inlet Dry Bulb (ºC)									
	16		18		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
-20	0.55	0.92	0.53	0.96	0.52	1.00	0.51	1.06	0.51	1.12
-17	0.62	0.91	0.61	0.95	0.59	0.99	0.58	1.05	0.58	1.10
-15	0.66	1.26	0.65	1.18	0.64	1.09	0.63	1.15	0.63	1.20
-13	0.71	1.24	0.70	1.16	0.69	1.08	0.68	1.13	0.67	1.18
-11	0.75	1.22	0.75	1.14	0.73	1.06	0.73	1.11	0.72	1.17
-9	0.80	1.20	0.79	1.13	0.78	1.05	0.77	1.10	0.76	1.15
-7	0.84	1.19	0.83	1.11	0.82	1.03	0.81	1.08	0.79	1.13
-6	0.87	1.18	0.85	1.10	0.84	1.02	0.83	1.07	0.81	1.12
-5	0.89	1.20	0.88	1.12	0.86	1.04	0.84	1.09	0.83	1.14
-3	0.92	1.24	0.91	1.16	0.89	1.07	0.87	1.13	0.84	1.18
-1	0.95	1.27	0.95	1.19	0.92	1.11	0.89	1.16	0.85	1.22
1	0.99	1.32	0.98	1.23	0.95	1.14	0.91	1.20	0.86	1.25
3	1.02	1.25	1.00	1.17	0.97	1.09	0.93	1.14	0.87	1.19
5	1.05	1.18	1.03	1.11	0.99	1.03	0.94	1.08	0.88	1.13
6	1.06	1.15	1.04	1.08	1.00	1.00	0.94	1.05	0.88	1.10
7	1.08	1.18	1.05	1.10	1.01	1.02	0.94	1.07	0.88	1.12
9	1.11	1.23	1.07	1.15	1.02	1.07	0.94	1.12	0.88	1.17
11	1.13	1.28	1.08	1.20	1.02	1.11	0.94	1.16	0.88	1.22
14	1.15	1.34	1.10	1.26	1.02	1.17	0.94	1.23	0.88	1.28
15	1.16	1.38	1.11	1.30	1.02	1.20	0.94	1.26	0.88	1.32

Total Power of Combined Indoor Units: 90%

(kW)

Outdoor Air Inlet Temperature WB (°C)	Indoor Air Inlet Dry Bulb (°C)									
	16		18		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
-20	0.55	0.92	0.53	0.96	0.52	1.00	0.51	1.06	0.51	1.12
-17	0.62	0.91	0.61	0.95	0.59	0.99	0.58	1.05	0.58	1.10
-15	0.66	1.37	0.65	1.31	0.64	1.26	0.63	1.32	0.63	1.39
-13	0.71	1.36	0.70	1.30	0.69	1.25	0.68	1.31	0.67	1.37
-11	0.75	1.35	0.75	1.29	0.73	1.23	0.73	1.30	0.72	1.36
-9	0.80	1.33	0.79	1.28	0.78	1.22	0.77	1.29	0.76	1.35
-7	0.84	1.32	0.83	1.27	0.82	1.21	0.81	1.27	0.79	1.33
-6	0.87	1.32	0.85	1.26	0.84	1.21	0.83	1.27	0.81	1.33
-5	0.89	1.30	0.88	1.24	0.86	1.19	0.84	1.25	0.83	1.31
-3	0.92	1.27	0.91	1.21	0.89	1.16	0.87	1.22	0.84	1.28
-1	0.95	1.24	0.95	1.19	0.92	1.13	0.89	1.19	0.85	1.25
1	0.99	1.20	0.98	1.15	0.95	1.10	0.91	1.16	0.86	1.21
3	1.02	1.15	1.00	1.10	0.97	1.05	0.93	1.11	0.87	1.16
5	1.05	1.10	1.03	1.05	0.99	1.01	0.94	1.06	0.88	1.11
6	1.06	1.09	1.04	1.04	1.00	1.00	0.94	1.05	0.88	1.10
7	1.08	1.12	1.05	1.07	1.01	1.02	0.94	1.08	0.88	1.13
9	1.11	1.17	1.07	1.12	1.02	1.07	0.94	1.13	0.88	1.18
11	1.13	1.22	1.08	1.17	1.02	1.12	0.94	1.18	0.88	1.23
14	1.15	1.29	1.10	1.23	1.02	1.18	0.94	1.24	0.88	1.30
15	1.16	1.33	1.11	1.27	1.02	1.22	0.94	1.28	0.88	1.34

Total Power of Combined Indoor Units: 80%

(kW)

Outdoor Air Inlet Temperature WB (°C)	Indoor Air Inlet Dry Bulb (°C)									
	16		18		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
-20	0.55	0.92	0.53	0.96	0.52	1	0.51	1.06	0.51	1.12
-17	0.62	0.91	0.61	0.95	0.59	0.99	0.58	1.05	0.58	1.10
-15	0.66	1.37	0.65	1.39	0.64	1.41	0.63	1.49	0.63	1.56
-13	0.71	1.37	0.70	1.39	0.69	1.41	0.68	1.48	0.67	1.56
-11	0.75	1.36	0.75	1.38	0.73	1.40	0.73	1.48	0.72	1.55
-9	0.80	1.36	0.79	1.37	0.78	1.39	0.77	1.47	0.76	1.54
-7	0.84	1.35	0.83	1.37	0.82	1.39	0.81	1.46	0.79	1.54
-6	0.87	1.35	0.85	1.37	0.84	1.38	0.83	1.46	0.81	1.53
-5	0.89	1.30	0.88	1.32	0.86	1.34	0.84	1.41	0.83	1.48
-3	0.92	1.20	0.91	1.22	0.89	1.23	0.87	1.30	0.84	1.36
-1	0.95	1.10	0.95	1.11	0.92	1.13	0.89	1.19	0.85	1.25
1	0.99	1.00	0.98	1.01	0.95	1.03	0.91	1.09	0.86	1.14
3	1.02	0.96	1.00	0.98	0.97	0.99	0.93	1.05	0.87	1.10
5	1.05	0.93	1.03	0.94	0.99	0.96	0.94	1.01	0.88	1.06
6	1.06	0.97	1.04	0.98	1.00	1.00	0.94	1.05	0.88	1.11
7	1.08	0.97	1.05	0.98	1.01	1.00	0.94	1.05	0.88	1.11
9	1.11	1.02	1.07	1.04	1.02	1.05	0.94	1.11	0.88	1.16
11	1.13	1.07	1.08	1.09	1.02	1.10	0.94	1.16	0.88	1.22
14	1.15	1.13	1.10	1.15	1.02	1.16	0.94	1.23	0.88	1.29
15	1.16	1.17	1.11	1.18	1.02	1.20	0.94	1.27	0.88	1.33

Total Power of Combined Indoor Units: 70%

(kW)

Outdoor Air Inlet Temperature WB (°C)	Indoor Air Inlet Dry Bulb (°C)									
	16		18		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
-20	0.55	0.92	0.53	0.96	0.52	1.00	0.51	1.06	0.51	1.12
-17	0.74	1.08	0.61	0.95	0.59	0.99	0.58	1.05	0.58	1.10
-15	0.80	2.07	0.65	1.79	0.64	1.82	0.63	1.91	0.63	2.01
-13	0.85	1.91	0.70	1.65	0.69	1.68	0.68	1.77	0.67	1.85
-11	0.90	1.76	0.75	1.52	0.73	1.54	0.73	1.62	0.72	1.70
-9	0.96	1.60	0.79	1.38	0.78	1.40	0.77	1.48	0.76	1.55
-7	1.01	1.44	0.83	1.24	0.82	1.26	0.81	1.33	0.79	1.40
-6	1.04	1.36	0.85	1.17	0.84	1.19	0.83	1.26	0.81	1.32
-5	1.07	1.33	0.88	1.14	0.86	1.16	0.84	1.22	0.83	1.28
-3	1.10	1.25	0.91	1.07	0.89	1.09	0.87	1.15	0.84	1.21
-1	1.14	1.17	0.95	1.01	0.92	1.02	0.89	1.08	0.85	1.13
1	1.18	1.09	0.98	0.94	0.95	0.95	0.91	1.01	0.86	1.06
3	1.22	1.11	1.00	0.96	0.97	0.97	0.93	1.02	0.87	1.08
5	1.26	1.13	1.03	0.97	0.99	0.99	0.94	1.04	0.88	1.10
6	1.28	1.14	1.04	0.98	1.00	1.00	0.94	1.05	0.88	1.10
7	1.29	1.17	1.05	1.01	1.01	1.03	0.94	1.08	0.88	1.14
9	1.33	1.24	1.07	1.07	1.02	1.09	0.94	1.15	0.88	1.20
11	1.35	1.31	1.08	1.13	1.02	1.15	0.94	1.21	0.88	1.27
14	1.38	1.40	1.10	1.20	1.02	1.22	0.94	1.29	0.88	1.35
15	1.40	1.45	1.11	1.25	1.02	1.27	0.94	1.34	0.88	1.40

Total Power of Combined Indoor Units: 60%

(kW)

Outdoor Air Inlet Temperature WB (°C)	Indoor Air Inlet Dry Bulb (°C)									
	16		18		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
-20	0.55	0.92	0.53	0.96	0.52	1.00	0.51	1.06	0.51	1.12
-17	0.62	0.91	0.61	0.95	0.59	0.99	0.58	1.05	0.58	1.10
-15	0.66	1.60	0.65	1.61	0.64	1.61	0.63	1.70	0.63	1.78
-13	0.71	1.54	0.70	1.54	0.69	1.55	0.68	1.63	0.67	1.71
-11	0.75	1.47	0.75	1.48	0.73	1.48	0.73	1.56	0.72	1.64
-9	0.80	1.41	0.79	1.41	0.78	1.42	0.77	1.49	0.76	1.57
-7	0.84	1.35	0.83	1.35	0.82	1.35	0.81	1.42	0.79	1.50
-6	0.87	1.31	0.85	1.32	0.84	1.32	0.83	1.39	0.81	1.46
-5	0.89	1.27	0.88	1.27	0.86	1.28	0.84	1.34	0.83	1.41
-3	0.92	1.18	0.91	1.18	0.89	1.19	0.87	1.25	0.84	1.31
-1	0.95	1.09	0.95	1.09	0.92	1.10	0.89	1.16	0.85	1.22
1	0.99	1.01	0.98	1.01	0.95	1.01	0.91	1.07	0.86	1.12
3	1.02	0.99	1.00	0.99	0.97	1.00	0.93	1.05	0.87	1.10
5	1.05	0.98	1.03	0.98	0.99	0.99	0.94	1.04	0.88	1.09
6	1.06	0.99	1.04	1.00	1.00	1.00	0.94	1.05	0.88	1.10
7	1.08	1.02	1.05	1.02	1.01	1.03	0.94	1.08	0.88	1.14
9	1.11	1.08	1.07	1.08	1.02	1.08	0.94	1.14	0.88	1.20
11	1.13	1.13	1.08	1.13	1.02	1.14	0.94	1.20	0.88	1.26
14	1.15	1.20	1.10	1.20	1.02	1.21	0.94	1.27	0.88	1.34
15	1.16	1.24	1.11	1.25	1.02	1.25	0.94	1.31	0.88	1.38

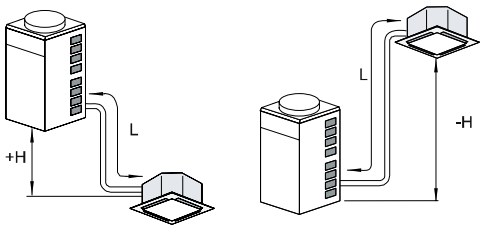
Total Power of Combined Indoor Units: 50%

(kW)

Outdoor Air Inlet Temperature WB (°C)	Indoor Air Inlet Dry Bulb (ºC)									
	16		18		20		22		24	
	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed	Maximum capacity	Electrical power consumed
-20	0.55	0.92	0.53	0.96	0.52	1.00	0.51	1.06	0.51	1.12
-17	0.62	0.91	0.61	0.95	0.59	0.99	0.58	1.05	0.58	1.10
-15	0.66	1.80	0.65	1.82	0.64	1.83	0.63	1.91	0.63	2.00
-13	0.71	1.66	0.70	1.68	0.69	1.68	0.68	1.76	0.67	1.84
-11	0.75	1.52	0.75	1.53	0.73	1.54	0.73	1.61	0.72	1.68
-9	0.80	1.38	0.79	1.39	0.78	1.40	0.77	1.46	0.76	1.52
-7	0.84	1.24	0.83	1.25	0.82	1.25	0.81	1.31	0.79	1.36
-6	0.87	1.16	0.85	1.17	0.84	1.18	0.83	1.24	0.81	1.29
-5	0.89	1.14	0.88	1.15	0.86	1.15	0.84	1.21	0.83	1.26
-3	0.92	1.08	0.91	1.09	0.89	1.09	0.87	1.15	0.84	1.20
-1	0.95	1.03	0.95	1.03	0.92	1.04	0.89	1.09	0.85	1.13
1	0.99	0.97	0.98	0.98	0.95	0.98	0.91	1.03	0.86	1.07
3	1.02	0.93	1.00	0.94	0.97	0.94	0.93	0.98	0.87	1.03
5	1.05	0.97	1.03	0.97	0.99	0.98	0.94	1.02	0.88	1.06
6	1.06	0.98	1.04	0.99	1.00	1.00	0.94	1.04	0.88	1.09
7	1.08	1.01	1.05	1.02	1.01	1.03	0.94	1.07	0.88	1.12
9	1.11	1.06	1.07	1.06	1.02	1.07	0.94	1.12	0.88	1.17
11	1.13	1.10	1.08	1.11	1.02	1.12	0.94	1.17	0.88	1.22
14	1.15	1.16	1.10	1.17	1.02	1.18	0.94	1.23	0.88	1.28
15	1.16	1.20	1.11	1.21	1.02	1.21	0.94	1.26	0.88	1.32

4.6.3. Piping Length correction factor

The correction factor is based on the equivalent piping length in meters (EL) and the height between outdoor and indoor units in meters (H).



H:
Height between indoor and outdoor units (m).

- H>0: Position of outdoor unit is higher than position of indoor unit (m).
- H<0: Position of outdoor unit is lower than position of indoor unit (m).

L:
Actual one-way piping length between indoor unit and outdoor unit (m).

EL:
Equivalent one-way piping length between indoor unit and outdoor unit (m).

NOTES:

- In order to ensure correct unit selection, consider the furthest Indoor Unit.
- In order to calculate the Equivalent Piping Length, use the following equivalences:
  - One 90º elbow is equivalent to 0.5m.
  - One 180º elbow is equivalent to 1.5 m.
  - One multiple connections kit is equivalent to 0.5m.
- If the Equivalent Piping Length (EL) is more than 100m, increase both the Liquid and the Gas Pipe by one size and use the Size-up Correction Factor. (See sections 7.1.3 and 7.1.6 for additional information.)

◆ FSN(1)(E)

Cooling capacity:

The cooling capacity must be corrected using the following formula:

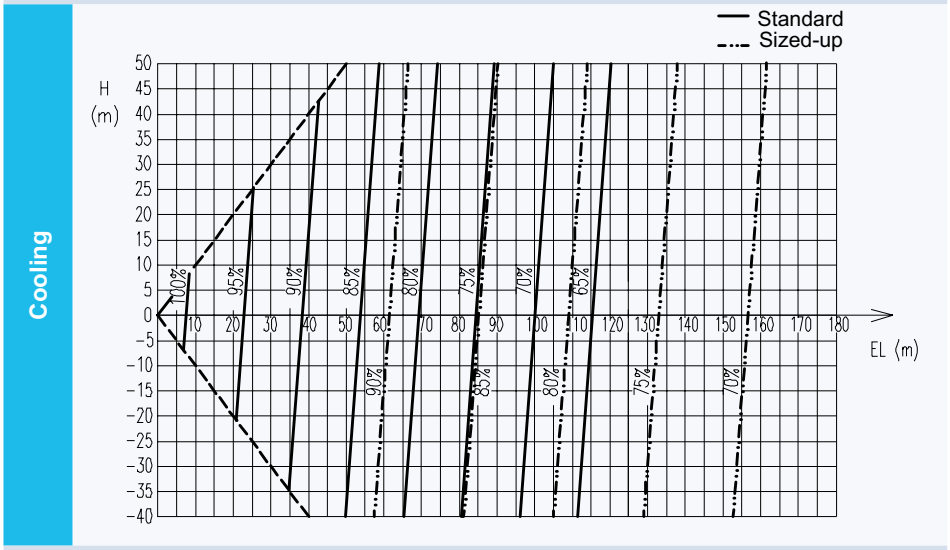
TCA = TC x F

TCA:
Actual corrected cooling capacity (kW).

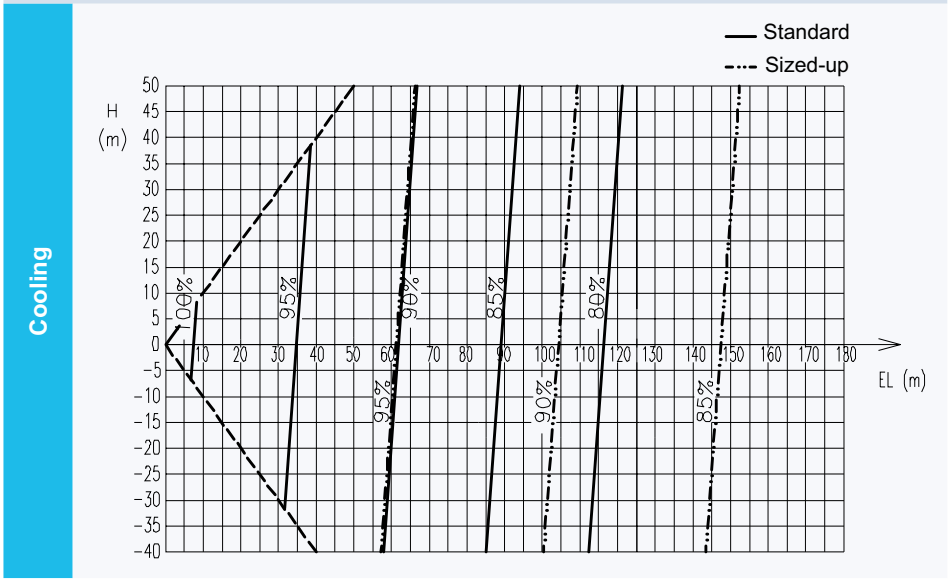
TC:
Cooling capacity in the table of cooling capacities (kW).

F:
Correction factor based on the equivalent length of tubing (%).

RAS-5FSN/RAS-8FSN(1)(E)



RAS-10~42FSN(1)(E)



Heating capacity:

The heating capacity must be corrected using the following formula:

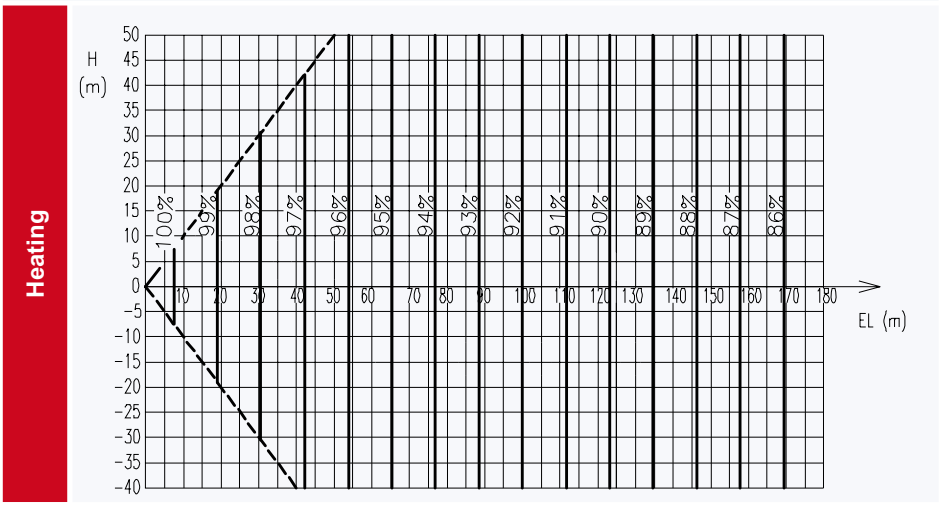
THA = TH x F

THA:
Actual corrected heating capacity (kW).

TH:
Heating capacity from the table of heating capacities (kW).

F:
Correction factor based on the equivalent length of tubing (%).

RAS-5/36/42FSN



Heating capacity:

The heating capacity must be corrected using the following formula:

THA = TH x F

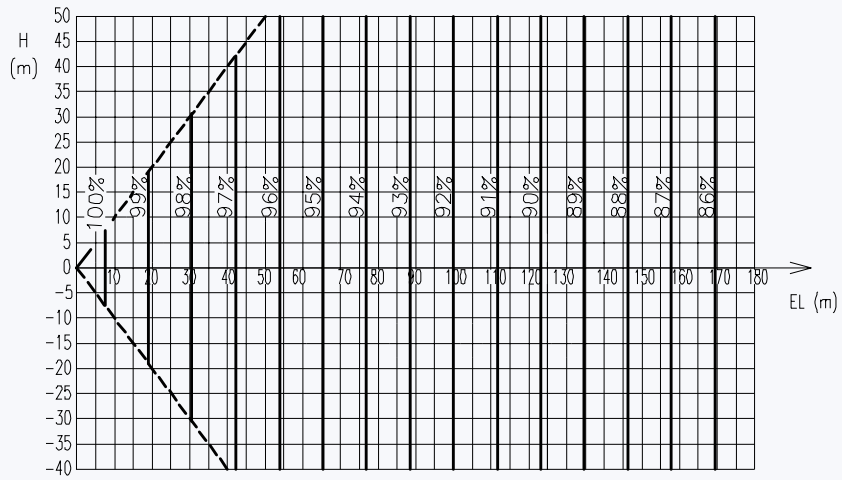
THA:
Actual corrected heating capacity (kW).

TH:
Heating capacity from the table of heating capacities (kW).

F:
Correction factor based on the equivalent length of tubing (%).

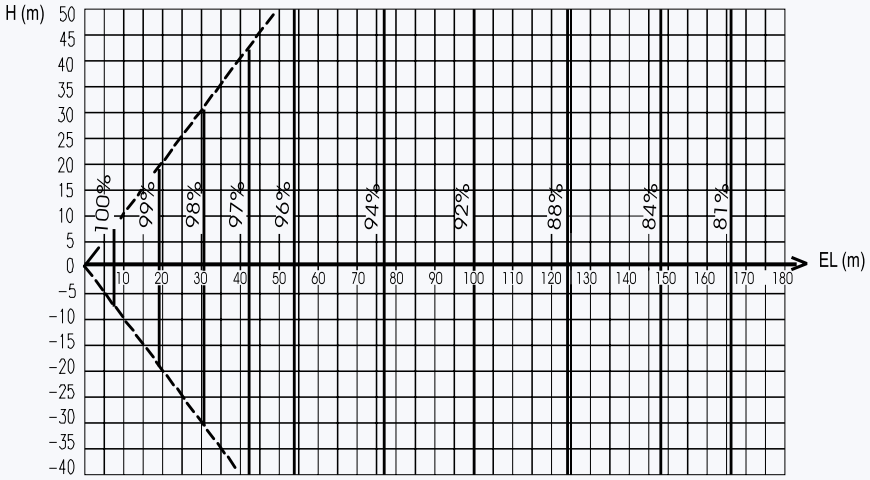
RAS-8/24/28/32FSN1(E)

Heating



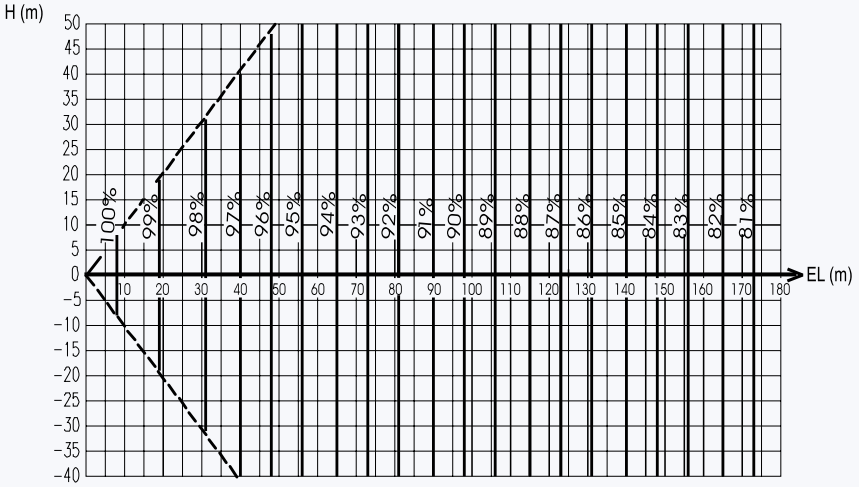
RAS-10/12FSN1E

Heating



RAS-14/16/20FSN1

Heating



4

◆ FXN(E)

Cooling capacity:

The cooling capacity must be corrected using the following formula:

TCA = TC x F

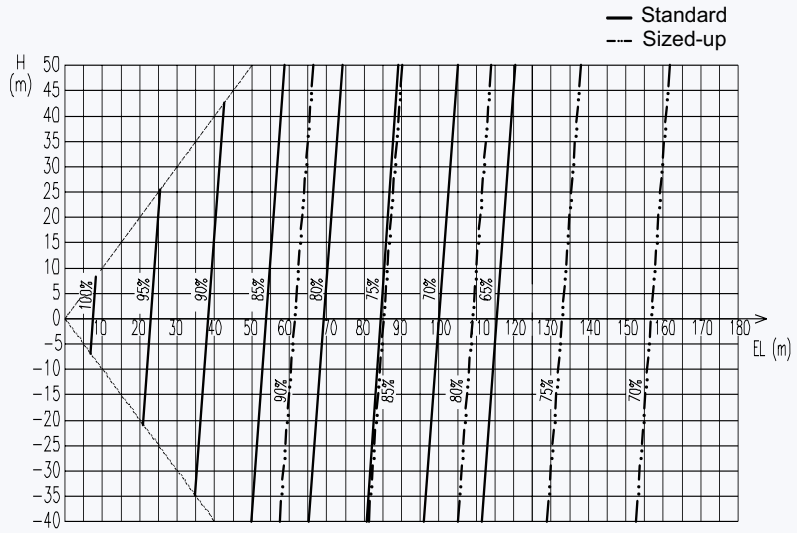
TCA:
Actual corrected cooling capacity (kW).

TC:
Cooling capacity in the table of cooling capacities (kW).

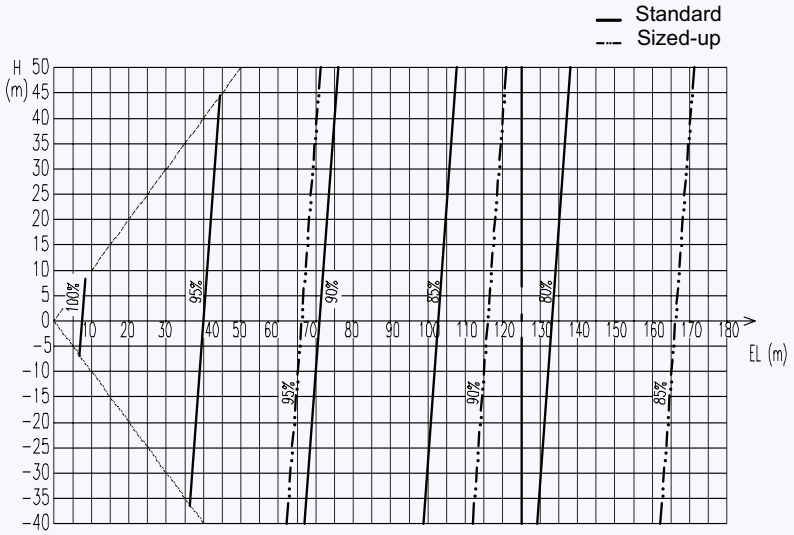
F:
Correction factor based on the equivalent length of tubing (%).

Cooling

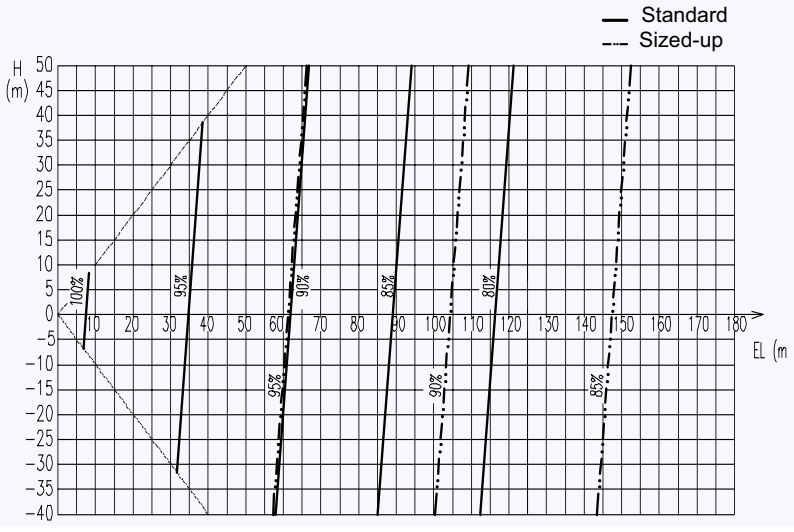
RAS-8FXN(E)



RAS-16FXN



RAS-10~14FXN(E), RAS-20~32FXN



Heating capacity:

The heating capacity must be corrected using the following formula:

THA = TH x F

THA:
Actual corrected heating capacity (kW).

TH:
Heating capacity from the table of heating capacities (kW).

F:
Correction factor based on the equivalent length of tubing (%).

Cooling capacity:

The cooling capacity must be corrected using the following formula:

TCA = TC x F

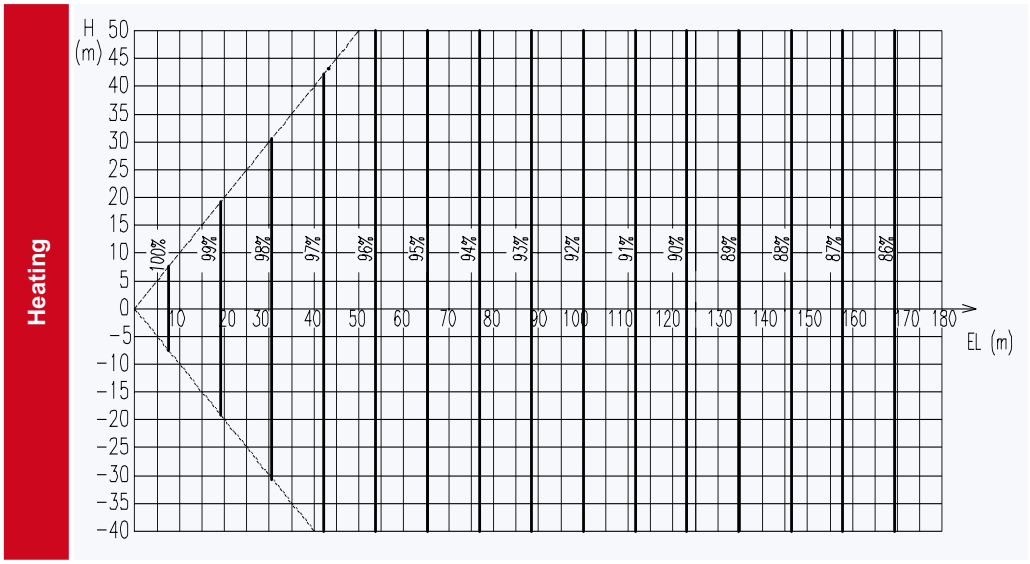
TCA:
Actual corrected cooling capacity (kW).

TC:
Cooling capacity in the table of cooling capacities (kW).

F:
Correction factor based on the equivalent length of tubing (%).

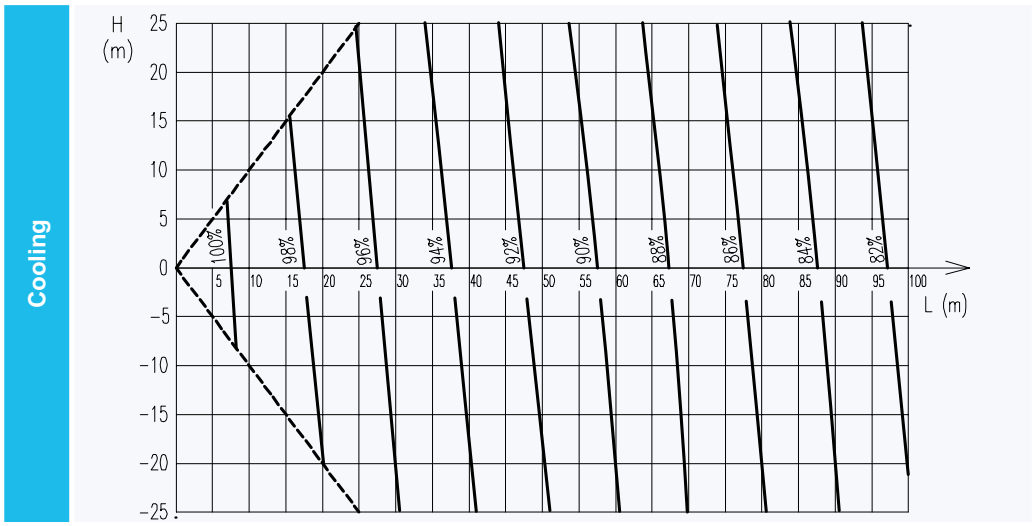
◆ FXN(E) (Cont.)

RAS-8~32FXN(E)

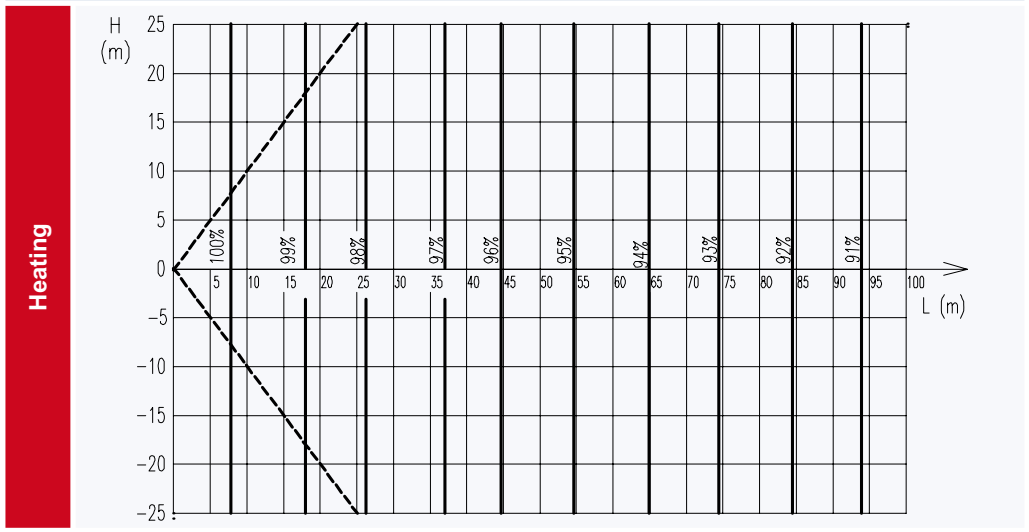


◆ FSVN(E)

RAS-3/4/5FSVNE



RAS-3/4/5FSVNE



4.6.4. Defrost correction factor

The heating capacity excludes the frost or the defrosting operation period.

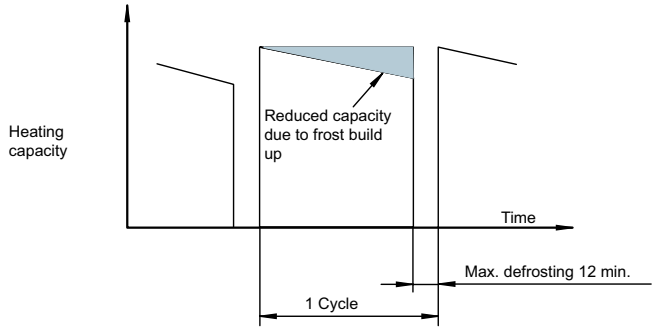
In the case of these types of operations, the heating capacity must be corrected by the following equation.

Corrected Heating Capacity =
Correction Factor x Heating Capacity

Outdoor inlet air temp. (°C DB) (Relative humidity=85%)	-20	-7	-5	-3	-0	3	5	7
Correction Factor	0,95	0,95	0,93	0,88	0,85	0,87	0,90	1

NOTE:

The correction factor is not valid for special conditions such as during snow or operation in a transitional period.



4.7. Sensible heat factor (SHF)

The sensible heat factor of indoor units at each fan speed (Hi, Me, Lo) based on JIS Standard B8616, is given below.

Indoor unit models	SHF		
	Hi	Med	Low
RCI-1.0FSN1E	0.80	0.77	0.75
RCI-1.5FSN1E	0.77	0.75	0.73
RCI-2.0FSN1E	0.78	0.76	0.75
RCI-2.5FSN1E	0.73	0.71	0.69
RCI-3.0FSN1E	0.79	0.76	0.72
RCI-3.5FSN1E	0.79	0.76	0.72
RCI-4.0FSN1E	0.78	0.75	0.72
RCI-5.0FSN1E	0.74	0.70	0.68
RCI-6.0FSN1E	0.73	0.69	0.68
RCIM-1.0FSN	0.74	0.71	0.70
RCIM-1.5FSN	0.74	0.71	0.70
RCIM-2.0FSN	0.71	0.68	0.67
RCD-1.0FSN	0.85	0.78	0.75
RCD-1.5FSN	0.73	0.69	0.66
RCD-2.0FSN	0.75	0.67	0.65
RCD-2.5FSN	0.74	0.67	0.65
RCD-3.0FSN	0.74	0.67	0.65
RCD-4.0FSN	0.73	0.67	0.65
RCD-5.0FSN	0.69	0.67	0.65

Indoor unit models	SHF		
	Hi	Med	Low
RPC-2.0FSNE	0.72	0.70	0.67
RPC-2.5FSNE	0.72	0.70	0.67
RPC-3.0FSNE	0.72	0.70	0.67
RPC-3.5FSNE	0.72	0.70	0.67
RPC-4.0FSNE	0.72	0.70	0.67
RPC-5.0FSNE	0.72	0.70	0.67
RPC-6.0FSNE	0.72	0.70	0.67
RPK-1.0FSN2M	0.73	0.72	0.70
RPK-1.5FSN2M	0.73	0.72	0.70
RPK-2.0FSN2M	0.72	0.71	0.68
RPK-2.5FSN2M	0.75	0.74	0.71
RPK-3.0FSN2M	0.74	0.73	0.70
RPK-4.0FSN2M	0.71	0.70	0.67
RPI-0.8FSN1E	0.81	0.69	0.69
RPI-1.0FSN1E	0.81	0.69	0.69
RPI-1.5FSN1E	0.73	0.69	0.65
RPI-2.0FSN1E	0.76	0.75	0.74
RPI-2.5FSN1E	0.76	0.74	0.72
RPI-3.0FSN1E	0.75	0.71	0.67
RPI-3.5FSN1E	0.75	0.71	0.67
RPI-4.0FSN1E	0.73	0.71	0.65
RPI-5-0FSN1E	0.72	0.68	0.64
RPI-6.0FSN1E	0.72	0.69	0.67
RPI-8.0FSNE	0.70	0.68	0.63
RPI-10.0FSNE	0.71	0.68	0.64
RPIM-0.8FSN1E	0.81	0.69	0.69
RPIM-1.0FSN1E	0.81	0.69	0.69
RPF-1.0FSNE	0.73	0.69	0.65
RPF-1.5FSNE	0.73	0.69	0.65
RPF-2.0FSNE	0.73	0.69	0.65
RPF-2.5FSNE	0.73	0.69	0.65
RPFI-1.0FSNE	0.73	0.69	0.65
RPFI-1.5FSNE	0.73	0.69	0.65
RPFI-2.0FSNE	0.73	0.69	0.65
RPFI-2.5FSNE	0.73	0.69	0.65

4

◈ The following example shows the method for calculating the latent and perceivable heat .

Selected Model	Indoor unit		
	RPI-1.3	RPI-2.0	RPI-2.8
Actual heating capacity	Cooling mode		
	3.02	4.45	5.96

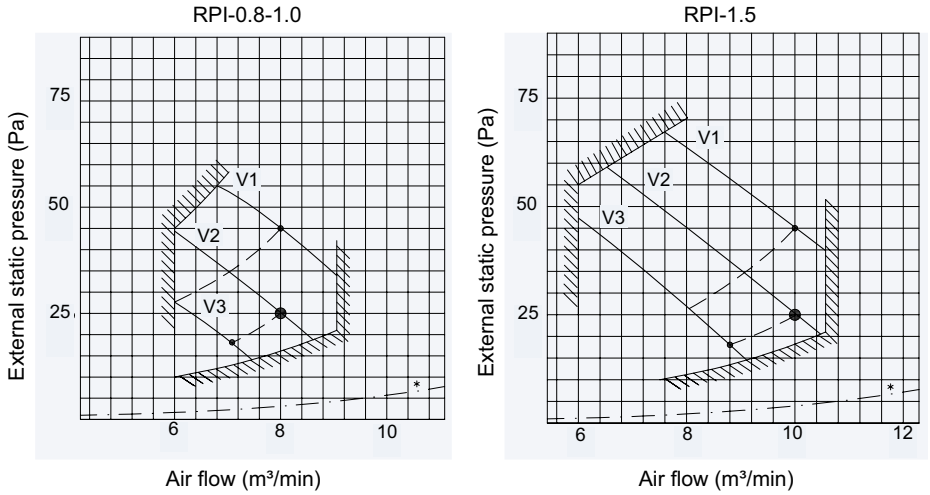
RPI-1.3	Sensible load	Latent load
Fan High Speed	Performance capacity in cooling mode x Sensible heat factor	Performance capacity in cooling mode x (1 - Sensible heat factor)
	3.02 x 0.73 = 2.20 kW	3.02 x 0.27 = 0.81 kW

4.8. Fan performance

4.8.1. RPI-0.8~1.5 – Fan performance

NOTES:

- - - - *Standard filter pressure loss.*
"•" *Nominal Point*
$V_{(1,2,3)}$ *Fan motor speed*
"*" *Standard suction filter*



NOTES:

$V_{(1,2,3)}$ *Fan motor speed*
(*) *Factory set speed*
SP *Static Pressure*

Meaning of the nominal performance values for fan RPI-0.8~1.5:

Ventilation speed (remote control) / Static pressure configuration	Remote control indicator	Hi	Med	Low
SP-01	C5-01	V1	V2	V3
SP-00 (*)	C5-00	V2	V2	V3
SP-02	C5-02	V2	V2	V3

ATTENTION:

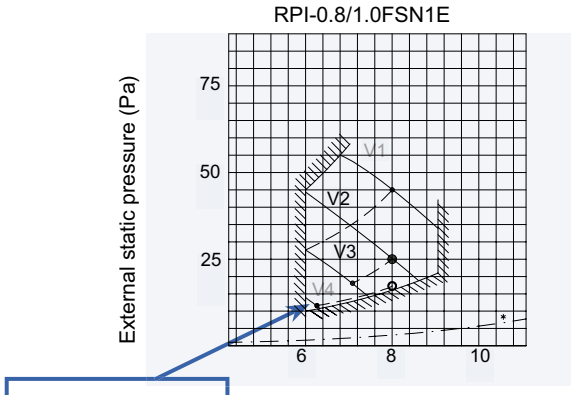
In the specific case of the RPI 0.8/1.0 units, with a duct installation that is "extra short" or within the working range limit of the unit, a lower fan speed is available (V4). To perform this operation, the installer must disconnect pin No. 4 and connect pin No. 5 in the fan motor connector, (in the electrical box), as explained in the diagram below. The static pressure must be kept in SP-00.

This operation is not allowed for installations with a high static pressure (long duct); for those cases choose SP-01, (keeping pin No. 4 in its initial position)

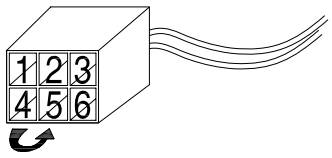
After changing the pin, the fan's performance will change as shown in the figure.

NOTES:

- - - - *Standard filter pressure loss.*
"•" *Nominal Point*
$V_{(1,2,3)}$ *Fan motor speed*
(*) *Standard suction filter*
Hi (v2)
Low (v4, special fan speed)



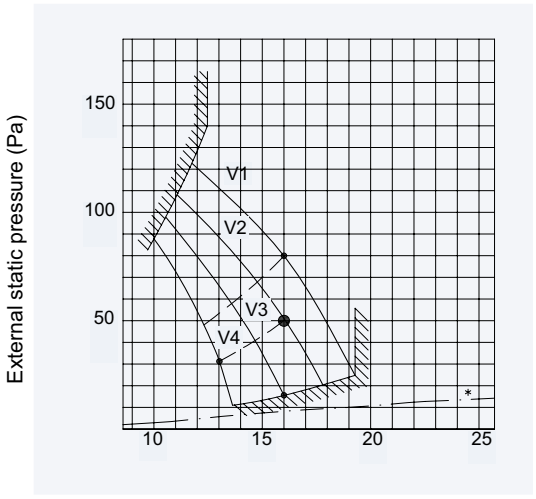
Fan Motor Connector



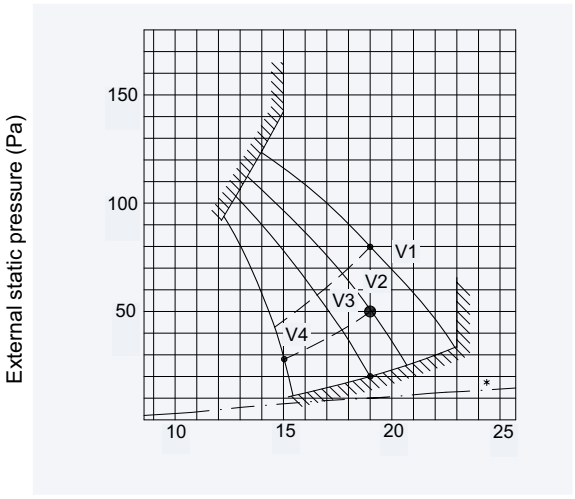
(Refer to the CN22 in the Electrical Wiring chapter off the service manual)

4.8.2. RPI-2.0~6.0 – Fan performance

RPI-2.0

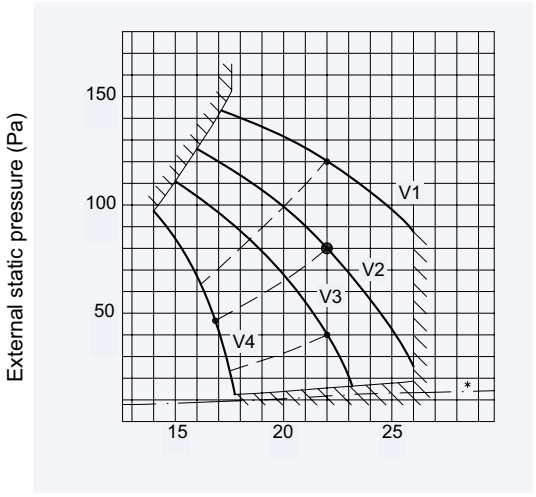


RPI-2.5

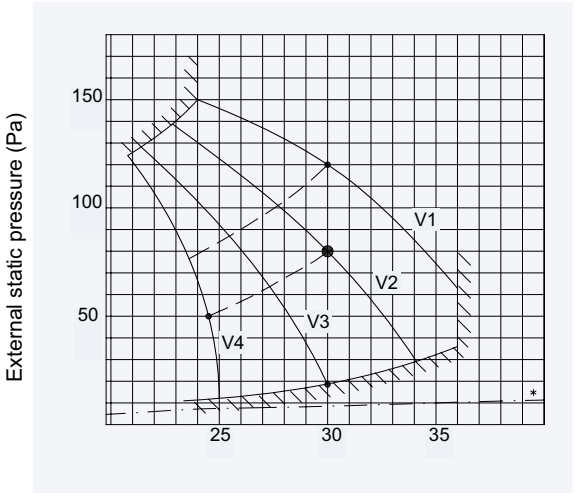


4

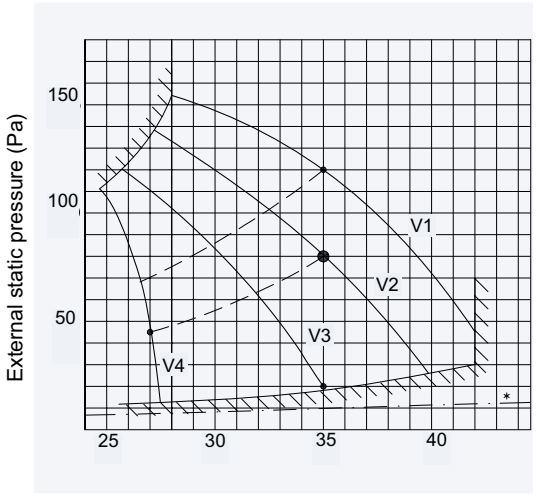
RPI-3.0/3.5



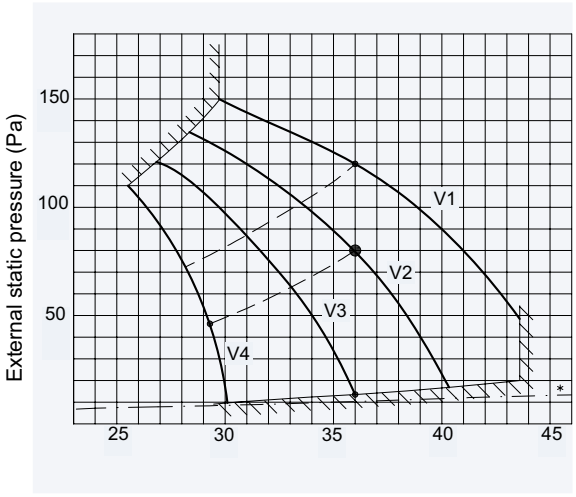
RPI-4.0



RPI-5.0



RPI-6.0



◆ **RPI-2.0~6.0 – Fan performance (cont.)**

NOTES:

$V_{(1,2,3)}$	*Fan motor speed*
"*"	*Factory set speed*
SP	*Static Pressure*

Meaning of the nominal performance values for fan RPI-2.0~6.0:

Ventilation speed (remote control) / Static pressure configuration	Remote control indicator	Hi	Med	Low
SP-01	C5-01	v1	v2	v4
SP-00 (*)	C5-00	v2	v3	v4
SP-02	C5-02	v3	v3	v4

ATTENTION:

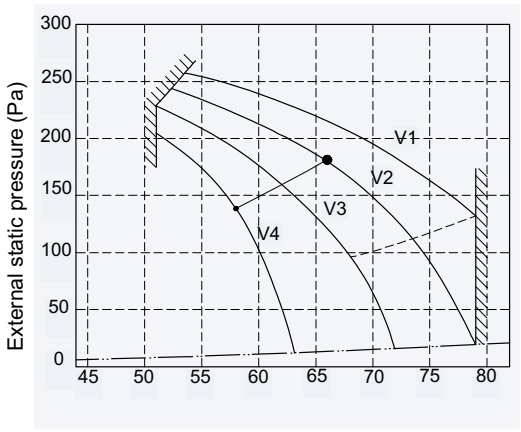
For RPI 2.0~6.0 HP units, in the case of installations with a short duct, make sure to select SP-02 on the remote control switch.
In order to configure SP-02, check optional functions C5→"02", low static pressure option.
Maintain a minimum resistance in the duct, as shown in the fan performance graph. Running the unit with a too short duct will make the unit run outside the accepted working range.

4.8.3. RPI-8.0/10.0 – Fan performance

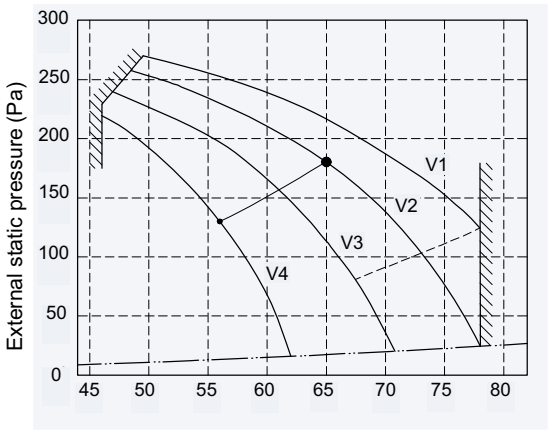
NOTES:

- - - -	*Standard filter pressure loss.*
"•"	*Nominal Point*
$V_{(1,2,3,4)}$	*Fan motor speed*
"*"	*Standard suction filter*

RPI-8.0



RPI-10.0



NOTES:

$V_{(1,2,3)}$	*Fan motor speed*
"*"	*Factory set speed*
HSP	*High static pressure*
LSP	*Low static pressure*

Meaning of the nominal performance values for fan RPI-8.0/10.0:

Ventilation speed (remote control) / Static pressure configuration	Remote control indicator	Hi	Med	Low
HSP	C5-01	v1	v1	v3
LSP (*)	C5-00	v2	v2	v4

ATTENTION:

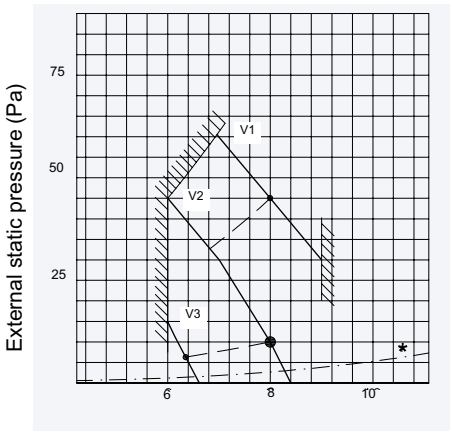
For RPI 8.0/10.0 HP units, in the case of installations with an extra-short duct, make sure that the low static pressure is correctly selected.
Maintain a minimum resistance in the duct, as shown in the fan performance graph. Running the unit with a too short duct will make the unit run outside the accepted working range.

4.8.4. RPIM-0.8/1.0 – Fan performance

NOTES:

- - - - *Standard filter pressure loss.*
"•" *Nominal Point*
$V_{(1,2,3)}$ *Fan motor speed*
"*" *Standard suction filter*

RPIM-0.8-1.0



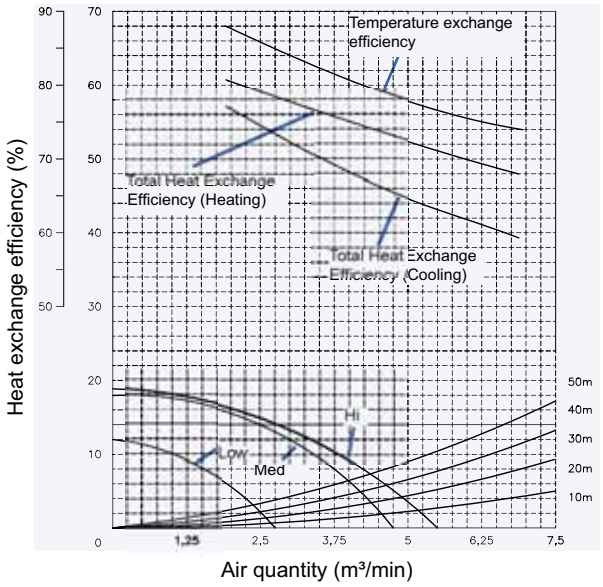
Air flow (m³/min)

Meaning of the nominal performance values for fan RPIM-0.8/1.0:

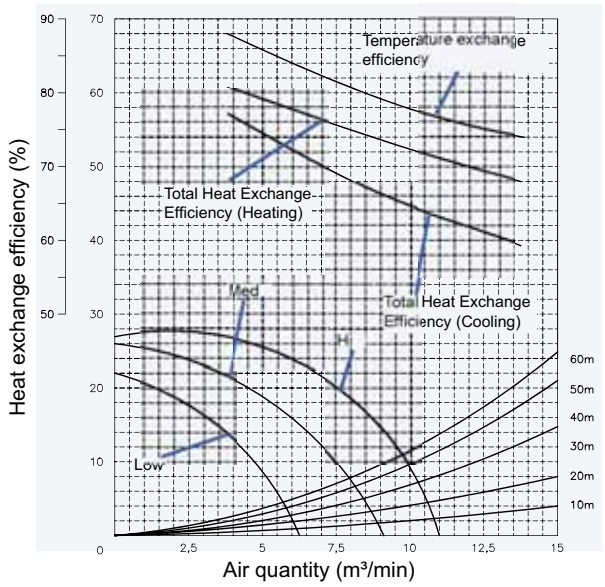
Ventilation speed (remote control) / Static pressure configuration	Remote control indicator	Hi	Med	Low
LSP	C5-00	v2	v2	v3
HSP	C5-01	v1	v1	v2

4.8.5. KPI – Fan performance

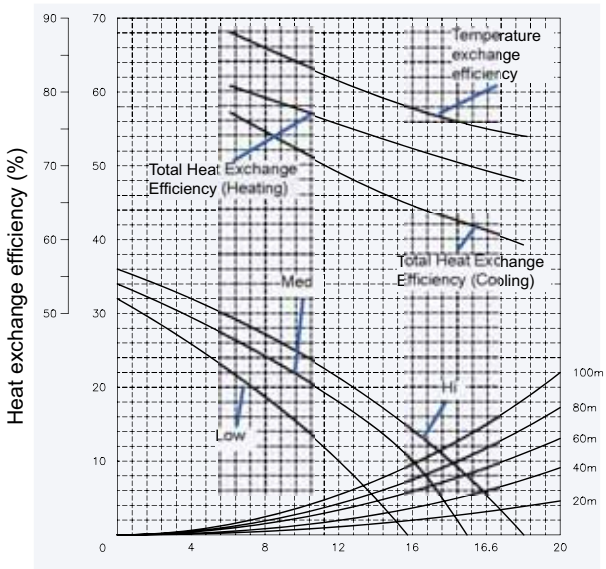
KPI-2521



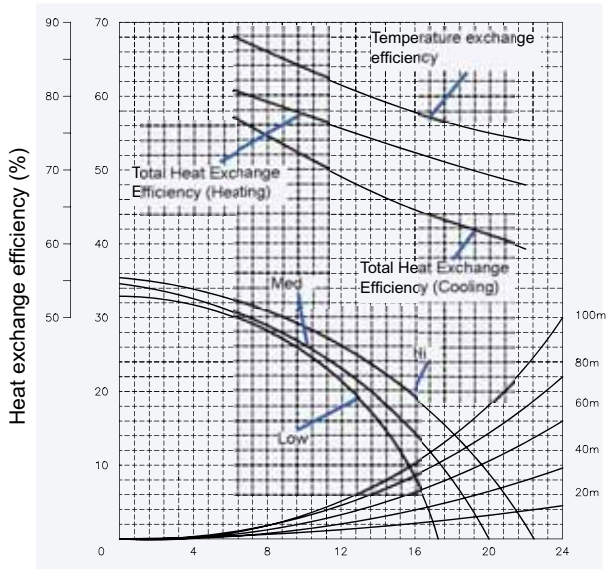
KPI-5021



KPI-8021

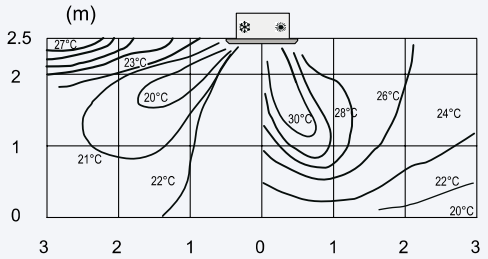
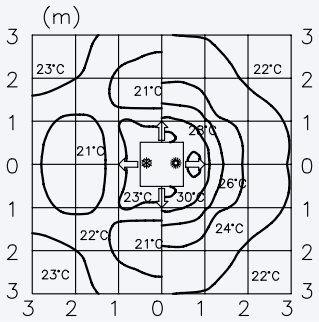
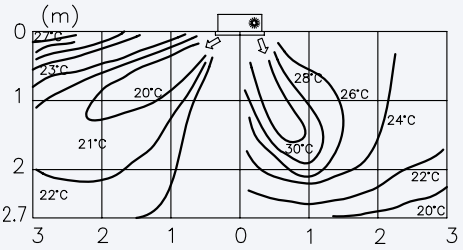
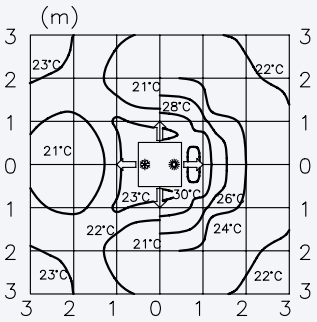
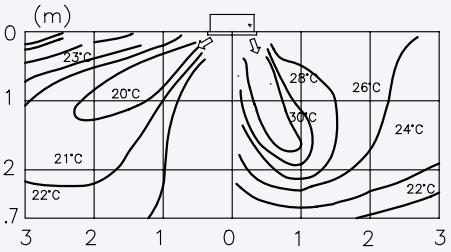
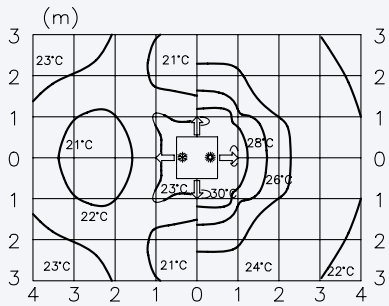
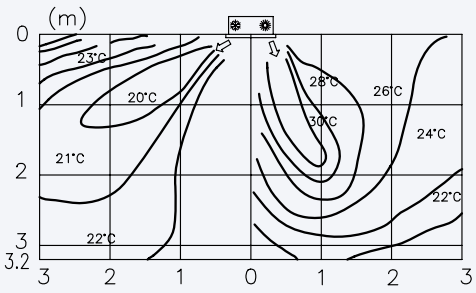
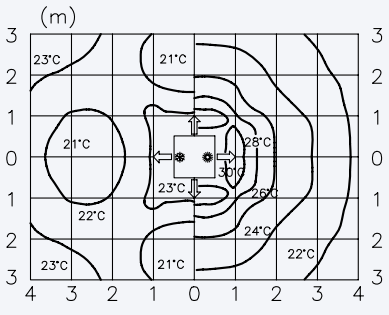


KPI-10021



4.9. Temperature distribution diagrams

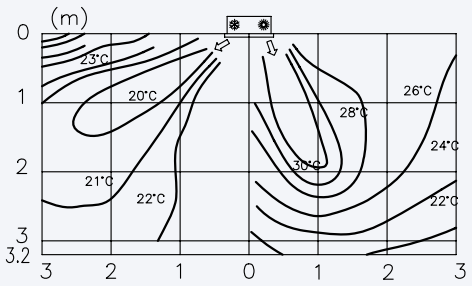
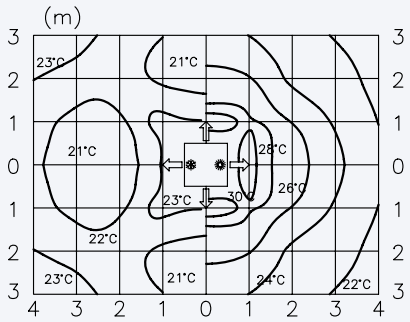
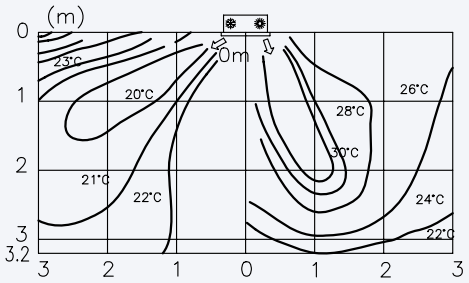
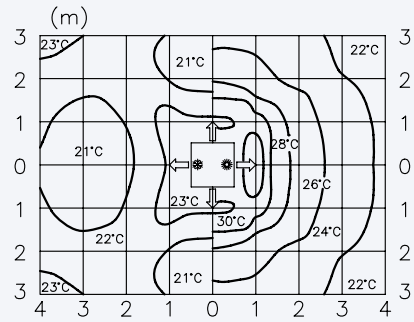
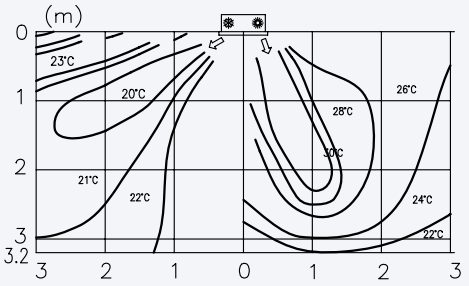
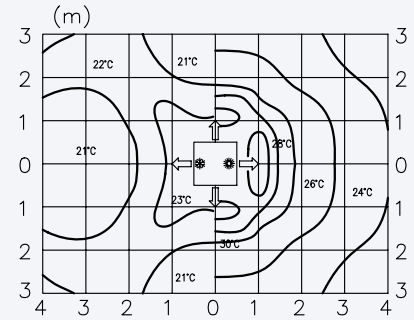
4.9.1. RCI – 4-way cassette type

	Vertical temperature distribution		Horizontal temperature distribution (Height: 1.2 m)	
	Cooling (Indoor temperature: 27°C DB / 19°C WB)	**Heating (Indoor temperature: 20°C DB)**	**Cooling (Indoor temperature: 27°C DB / 19°C WB)**	**Heating (Indoor temperature: 20 °C DB)**
Model: RCI-1.0/1.5FSN1E Air-throw distance: 2.7 m (when air velocity is: 0.3m/s)				
Model: RCI-2.0FSN1E Air-throw distance: 2.7 m (when air velocity is: 0.3m/s)				
Model: RCI-2.5FSN1E Air-throw distance: 2.7 m (when air velocity is: 0.3m/s)				
Model: RCI-3.0/3.5FSN1E Air-throw distance: 3.3 m (when air velocity is: 0.3m/s)				

NOTE:

The air is almost symmetrically discharged.
These figures show the distribution when no obstruction exists.

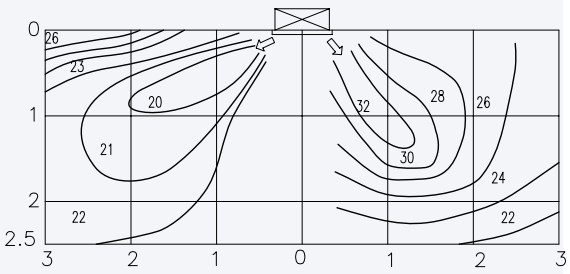
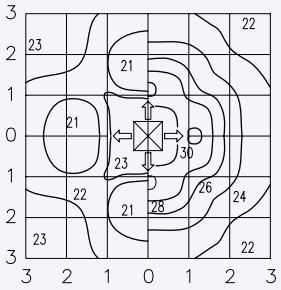
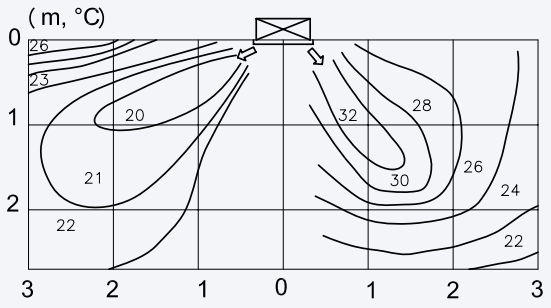
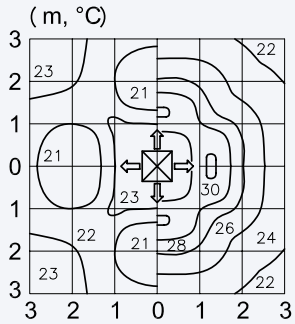
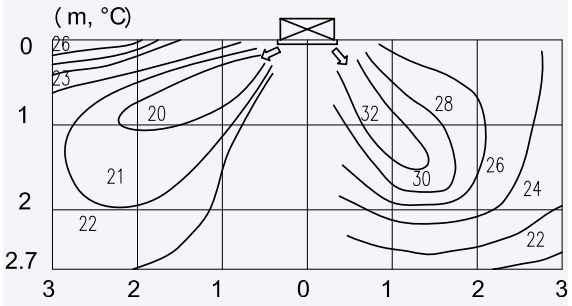
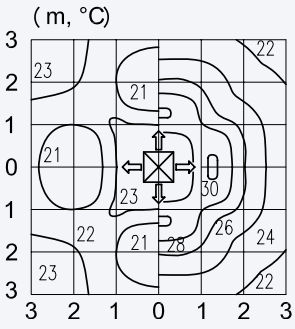
◆ RCI – 4-Way Cassette Type (Cont.)

	Vertical temperature distribution		Horizontal temperature distribution (Height: 1.2 m)	
	Cooling (Indoor temperature: 27°C DB / 19°C WB)	**Heating (Indoor temperature: 20°C DB)**	**Cooling (Indoor temperature: 27°C DB / 19°C WB)**	**Heating (Indoor temperature: 20 °C DB)**
Model: RCI-4.0FSN1E Air-throw distance: 3.3 m (when air velocity is: 0.3m/s)				
Model: RCI-5.0FSN1E Air-throw distance: 3.3 m (when air velocity is: 0.3m/s)				
Model: RCI-6.0FSN1E Air-throw distance: 3.3 m (when air velocity is: 0.3m/s)				

NOTE:

The air is almost symmetrically discharged.
These figures show the distribution when no obstruction exists.

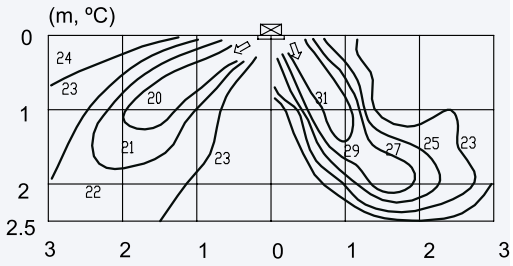
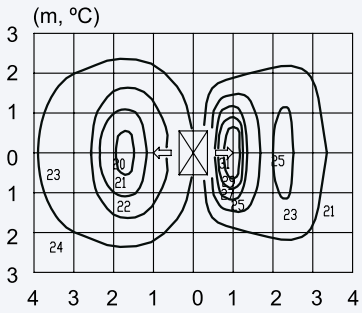
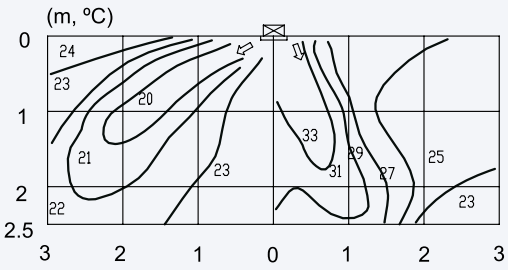
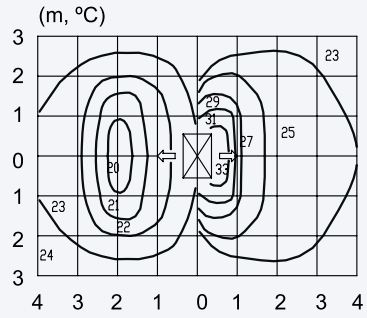
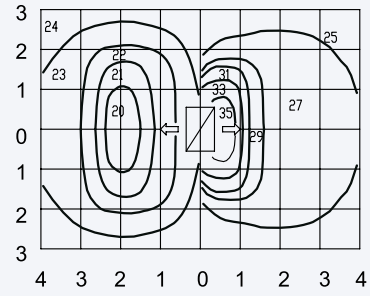
◆ RCIM – 4-way cassette type

	Vertical temperature distribution		Horizontal temperature distribution (Height: 1.2 m)	
	Cooling (Indoor temperature: 27°C DB / 19°C WB)	**Heating (Indoor temperature: 20°C DB)**	**Cooling (Indoor temperature: 27°C DB / 19°C WB)**	**Heating (Indoor temperature: 20°C DB)**
Model: RCIM-1.0FSN Air-throw distance: 2.7 m (when air velocity is: 0.3m/s)				
Model: RCIM-1.5FSN Air-throw distance: 2.7 m (when air velocity is: 0.3 m/s)				
Model: RCIM-2.0FSN Air-throw distance: 2.7 m (when air velocity is: 0.3 m/s)				

NOTE:

The air is almost symmetrically discharged.
These figures show the distribution when no obstruction exists.

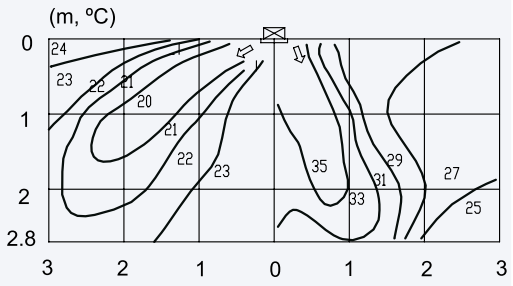
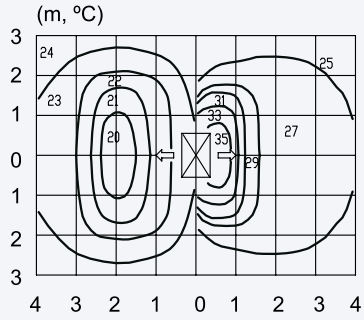
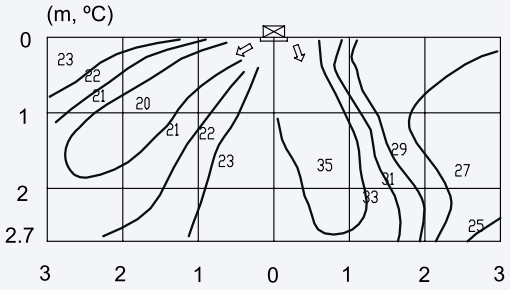
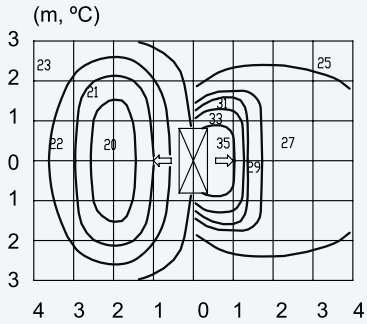
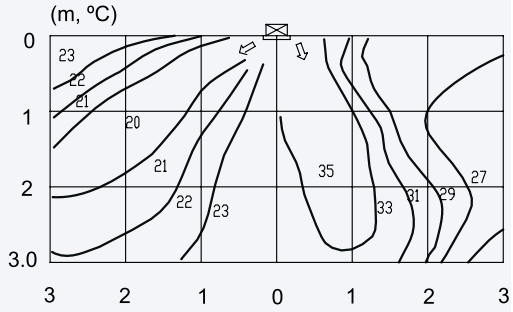
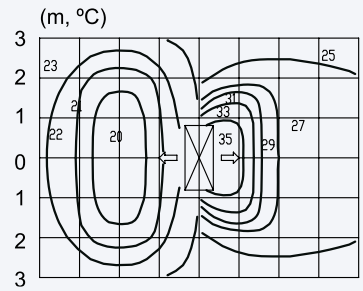
4.9.2. RCD – 2-way cassette type

	Vertical temperature distribution		Horizontal temperature distribution (Height: 1.2 m)	
	Cooling (Indoor temperature: 27°C DB / 19°C WB)	Heating (Indoor temperature: 20°C DB)	Cooling (Indoor temperature: 27°C DB / 19°C WB)	Heating (Indoor temperature: 20 °C DB)
Model: RCD-1.0/1.5FSN Air-throw distance: 2.8 m (when air velocity is: 0.3m/s)				
Model: RCD-2.0FSN Air-throw distance: 3 m (when air velocity is: 0.3m/s)				
Model: RCD–2.5FSN Air-throw distance: 3 m (when air velocity is: 0.3m/s)				

NOTE:

The air is almost symmetrically discharged.
These figures show the distribution when no obstruction exists.

◆ RCD - 2-Way Cassette Type (cont.)

	Vertical temperature distribution		Horizontal temperature distribution (Height: 1.2 m)	
	Cooling (Indoor temperature: 27°C DB / 19°C WB)	**Heating (Indoor temperature: 20°C DB)**	**Cooling (Indoor temperature: 27°C DB / 19°C WB)**	**Heating (Indoor temperature: 20 °C DB)**
Model: RCD-3.0FSN Air-throw distance: 3.1 m (when air velocity is: 0.3m/s)				
Model: RCD-4.0FSN Air-throw distance: 3.3 m (when air velocity is: 0.3m/s)				
Model: RCD–5.0FSN Air-throw distance: 3.3 m (when air velocity is: 0.3m/s)				

NOTE:

The air is almost symmetrically discharged.
These figures show the distribution when no obstruction exists.

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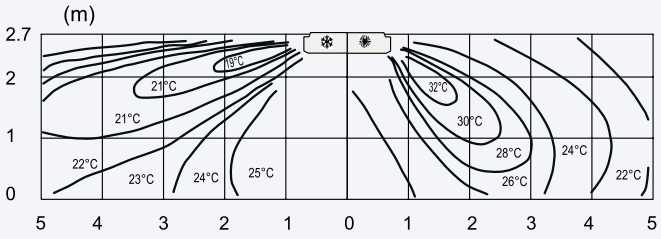
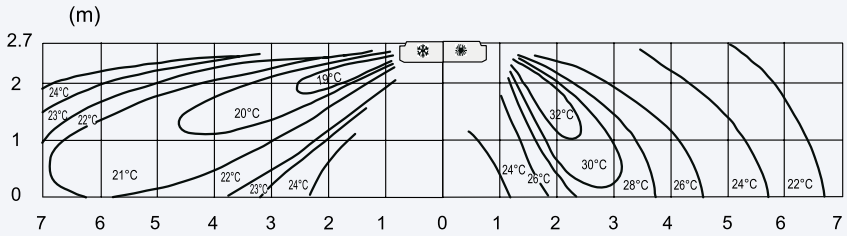
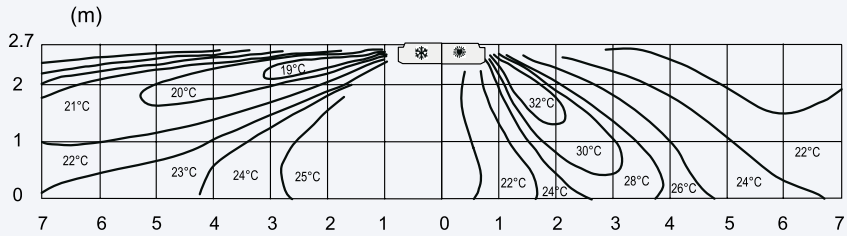
4.9.3. RPC – Ceiling type

	Vertical temperature distribution		Horizontal temperature distribution (Height: 1.2 m)	
	Cooling (Indoor temperature: 27°C DB / 19°C WB)	**Heating (Indoor temperature: 20°C DB)**	**Cooling (Indoor temperature: 27°C DB / 19°C WB)**	**Heating (Indoor temperature: 20 °C DB)**
Model: RPC-2.0/2.5FSNE Air-throw distance: 4.9 m (when air velocity is: 0.5 m/s)				
Model: RPC-3.0~4.0FSNE Air-throw distance: 6.9 m (when air velocity is: 0.3m/s)				
Model: RPC-5.0/6.0FSNE Air-throw distance: 7.5 m (when air velocity is: 0.3m/s)				

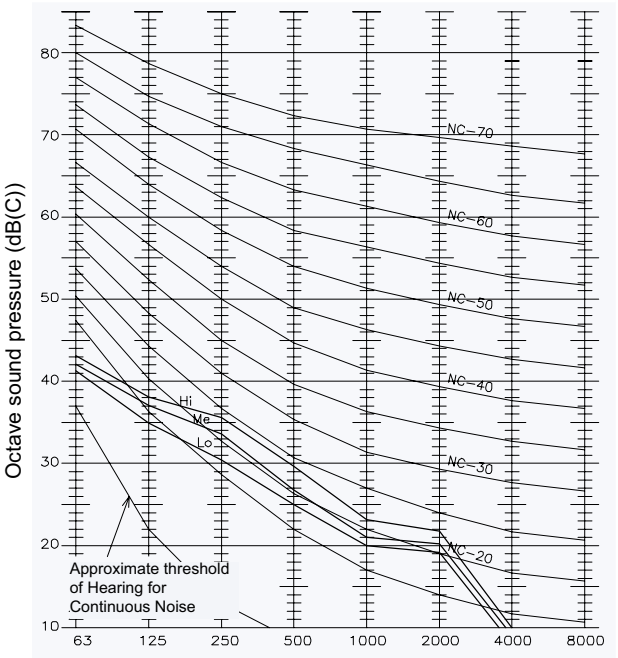
NOTE:

The air is almost symmetrically discharged.
These figures show the distribution when no obstruction exists.

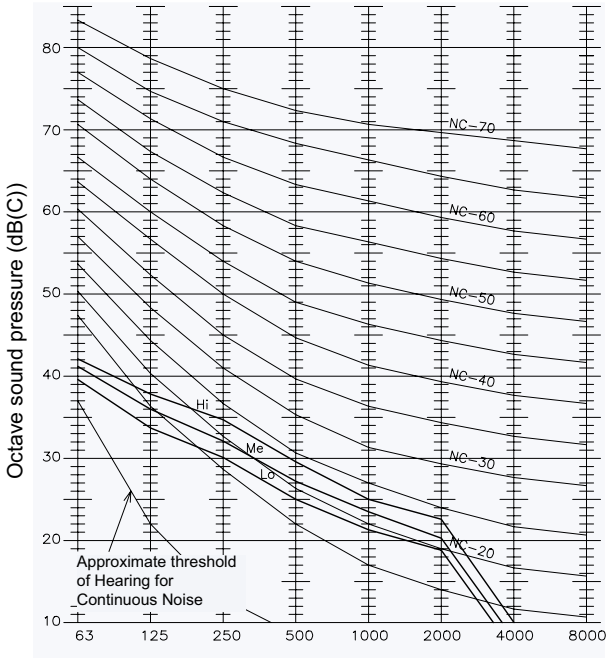
4.10. Noise-related data

4.10.1. RCI – 4-way cassette type

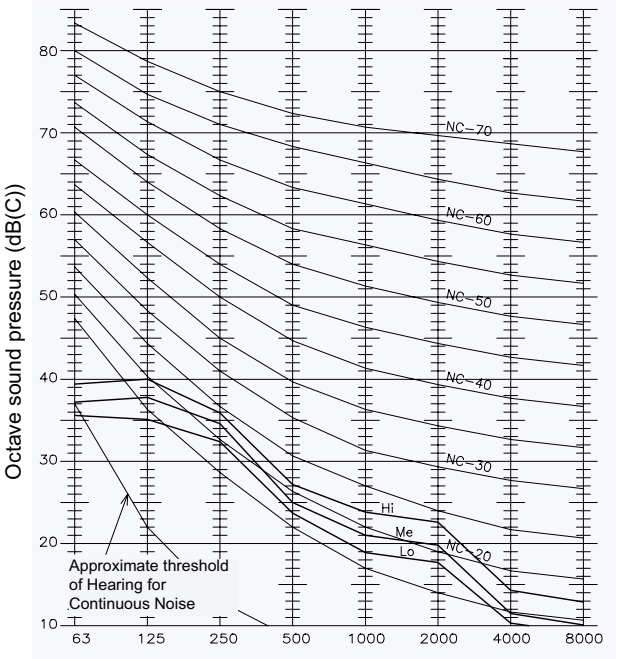
Model: RCI-1.0	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 32/30/28 dB(A)



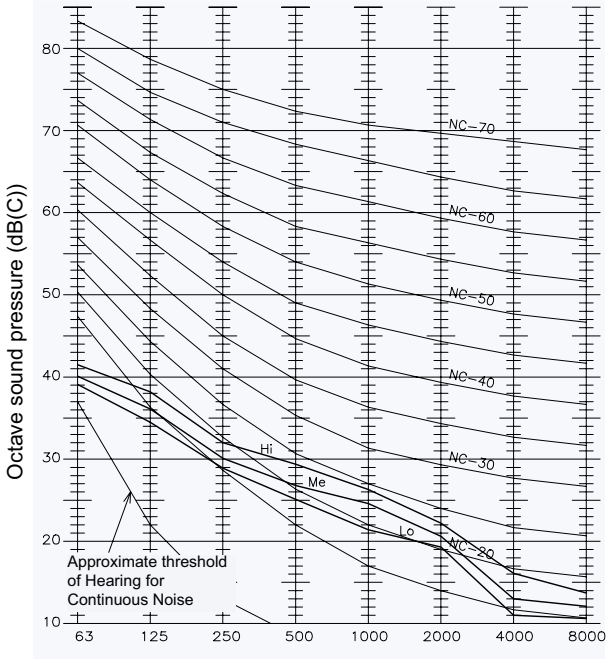
Model: RCI-1.5	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 32/30/28 dB(A)



Model: RCI-2.0	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 32/30/28 dB(A)

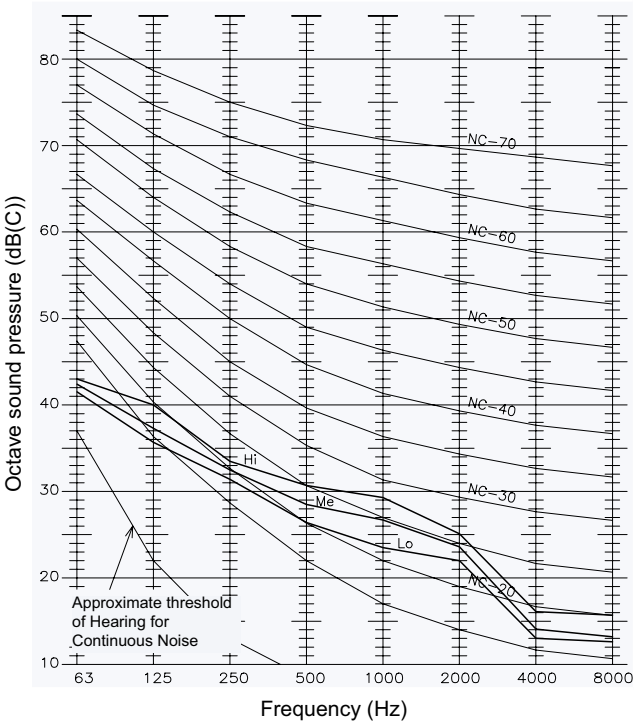


Model: RCI-2.5	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 32/30/28 dB(A)

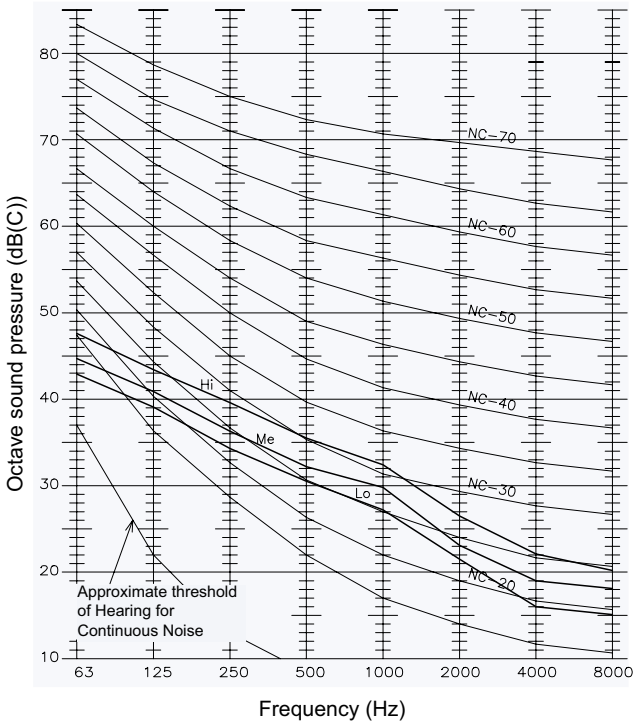


◆ RCI – 4-Way Cassette Type (Cont.)

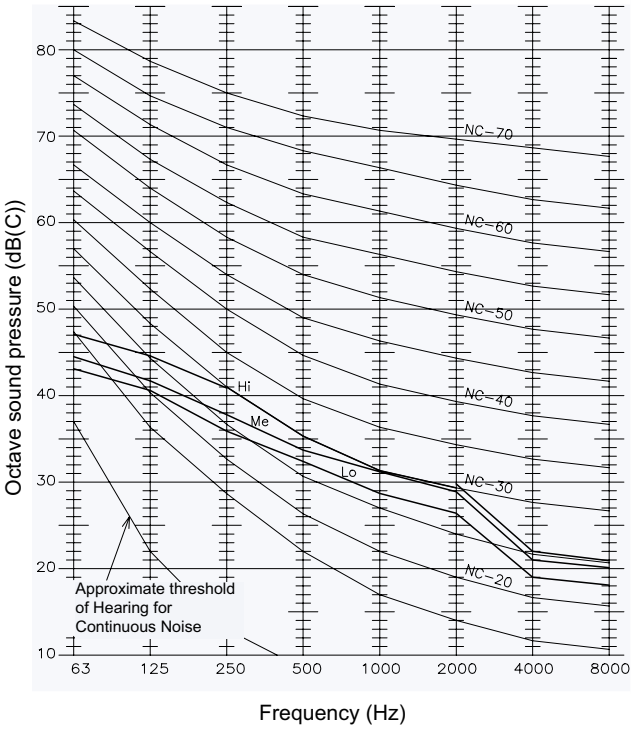
Model: RCI-3.0/3.5	Power source: 230 V, 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 34/32/30 dB(A)



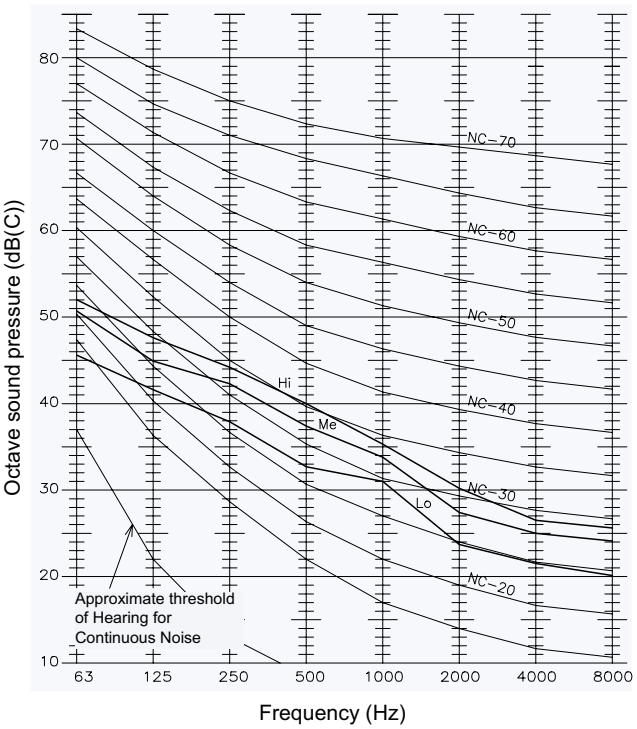
Model: RCI-4.0	Power source: 230 V, 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 38/35/33 dB(A)



Model: RCI-5.0	Power source: 230 V, 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 39/37/35 dB(A)

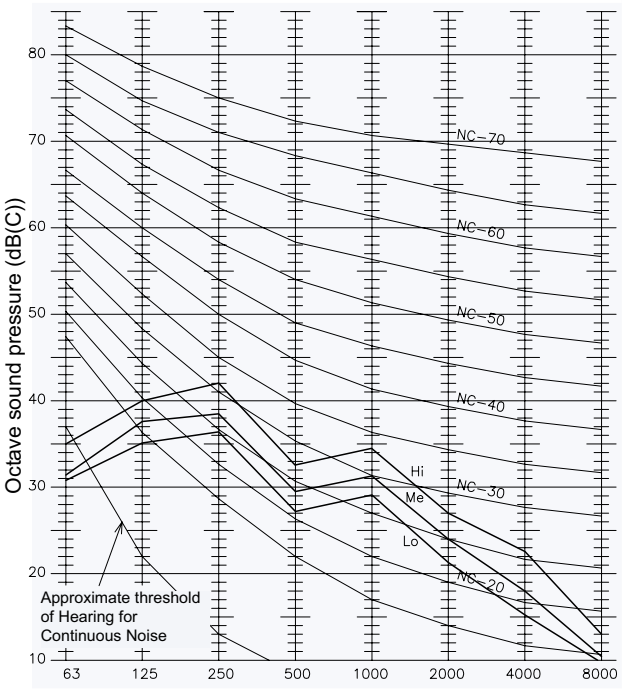


Model: RCI-6.0	Power source: 230 V, 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 42/40/36 dB(A)

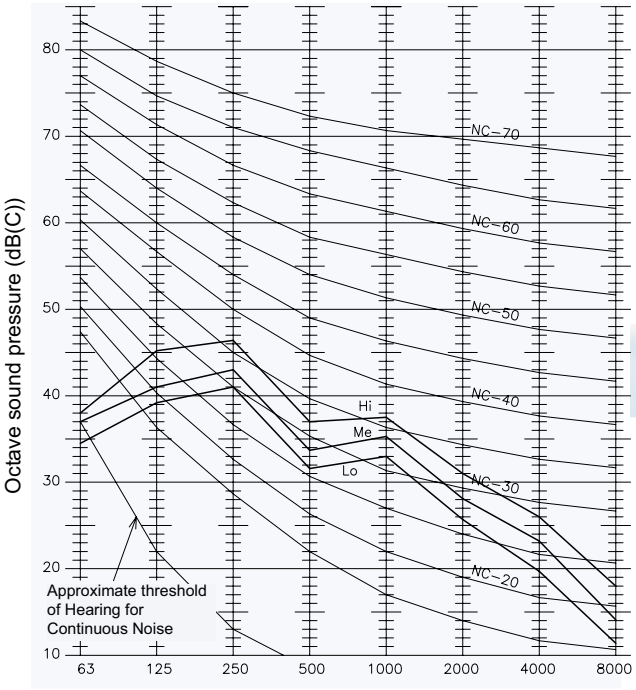


◆ **RCIM – 4-Way Cassette Type (cont.)**

Model: RCIM-1.0/1.5	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 1 HP: 36/34/32 dB(A) 1.5 HP: 38/35/33 dB(A)



Model: RCIM-2.0	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 42/39/37 dB(A)



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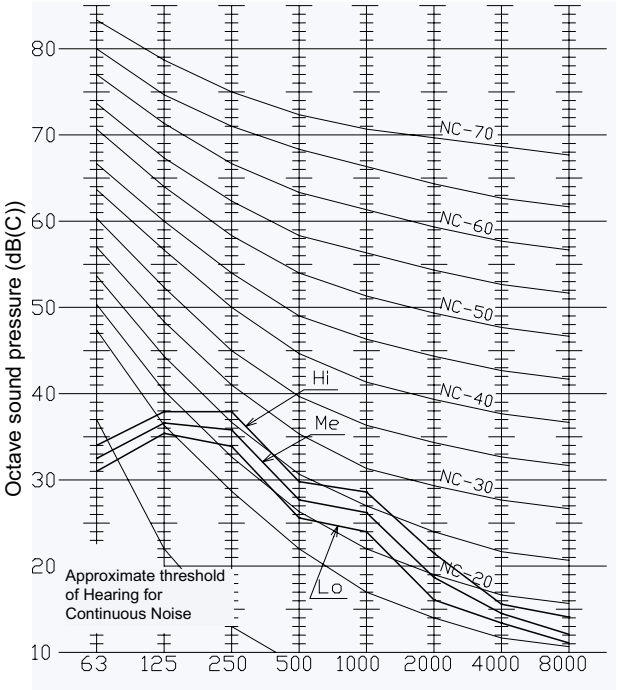
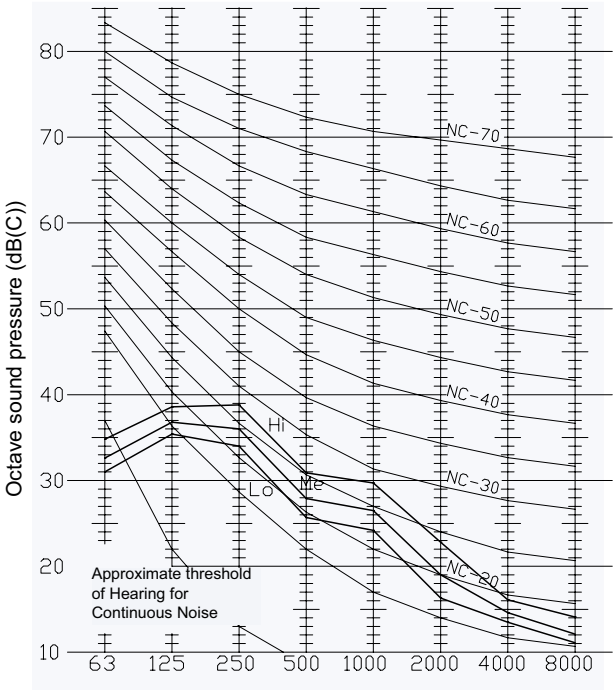
4.10.2. RCD – 2-way cassette type

Model: RCD-1.0	Power source: 230 V, 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 34/32/30 dB(A)

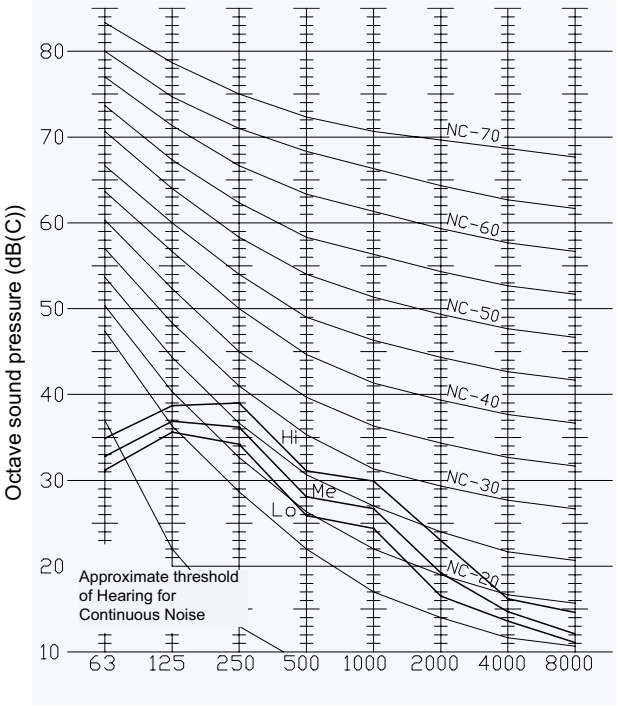


Model: RCD-1.5	Power source: 230 V, 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 35/32/30 dB(A)



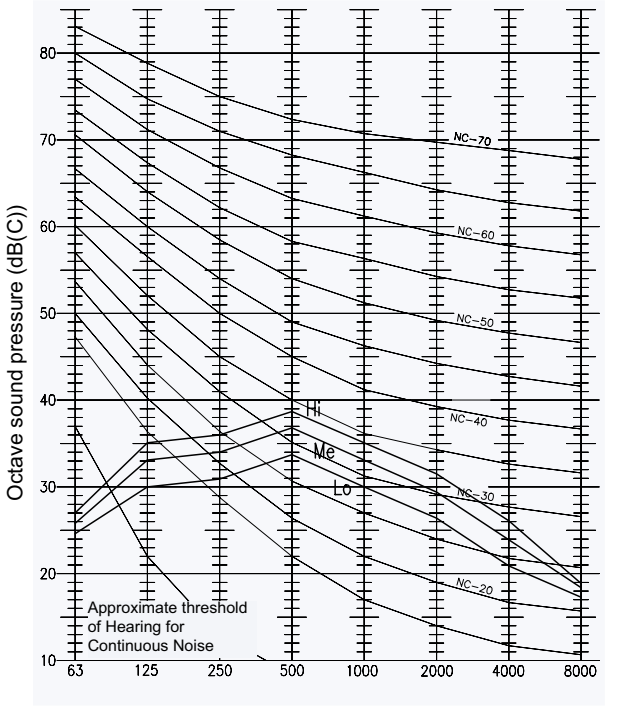
◆ RCD - 2-Way Cassette Type (cont.)

Model: RCD-2.0	Power source: 230 V, 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 35/32/30 dB(A)



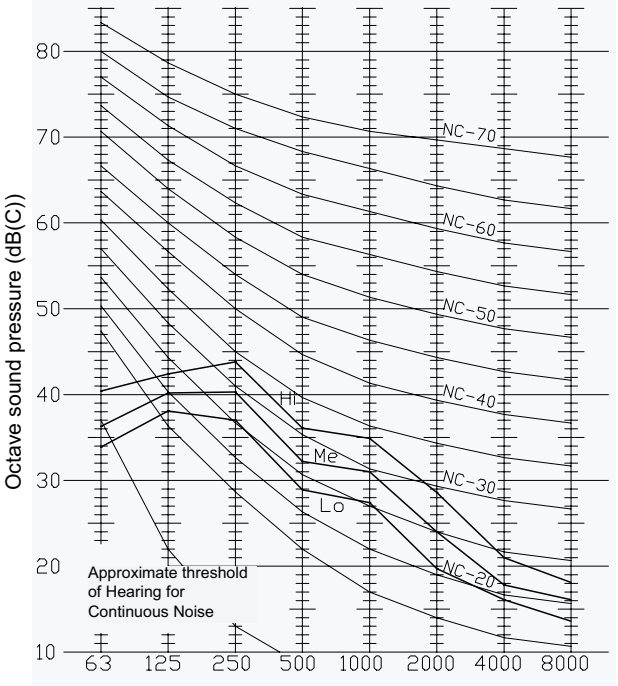
Frequency (Hz)

Model: RCD-2.5	Power source: 230 V, 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 38/34/31 dB(A)



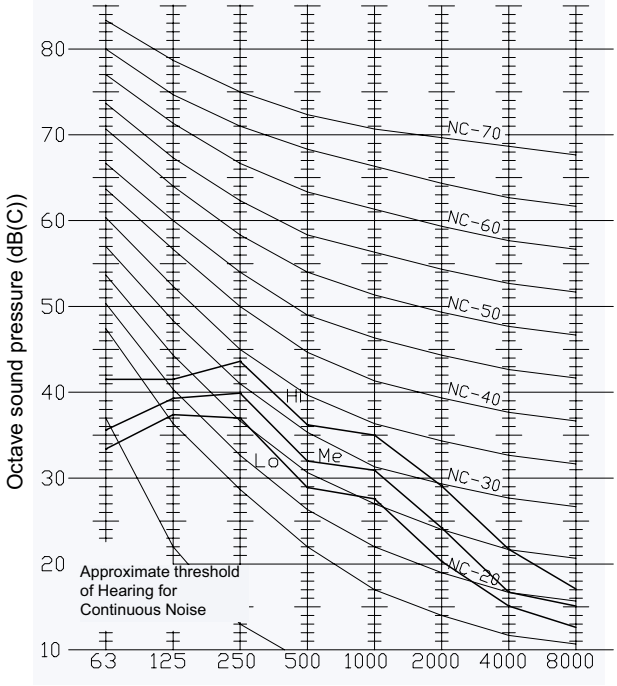
Frequency (Hz)

Model: RCD-3.0	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 40/36/33 dB(A)



Frequency (Hz)

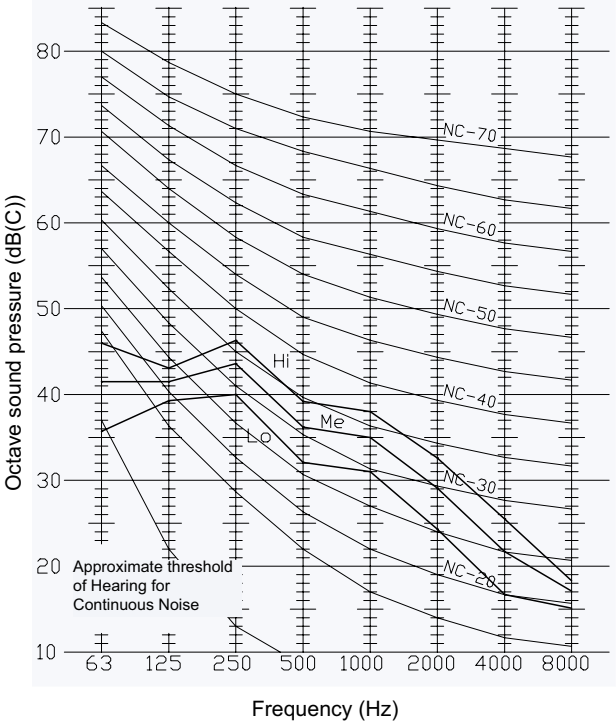
Model: RCD-4.0	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 34/36/33 dB(A)



Frequency (Hz)

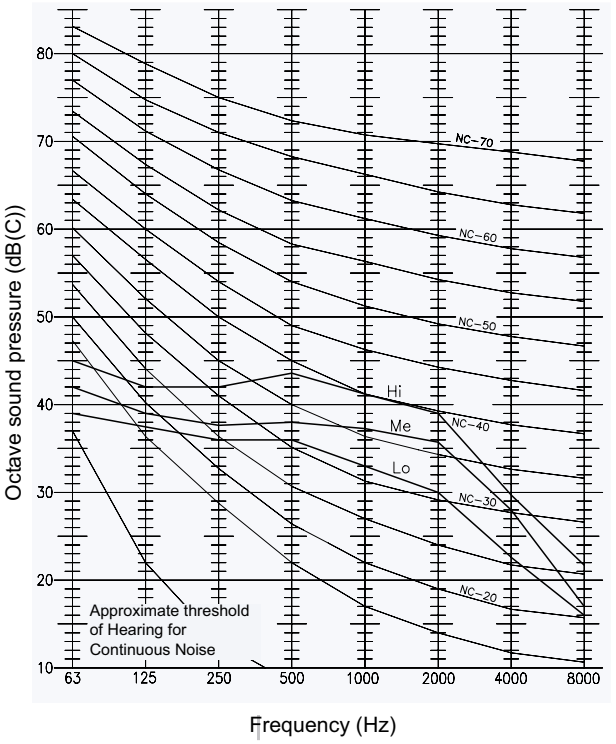
◆ **RCD - 2-Way Cassette Type (cont.)**

Model: RCD-5.0	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 43/40/36 dB(A)

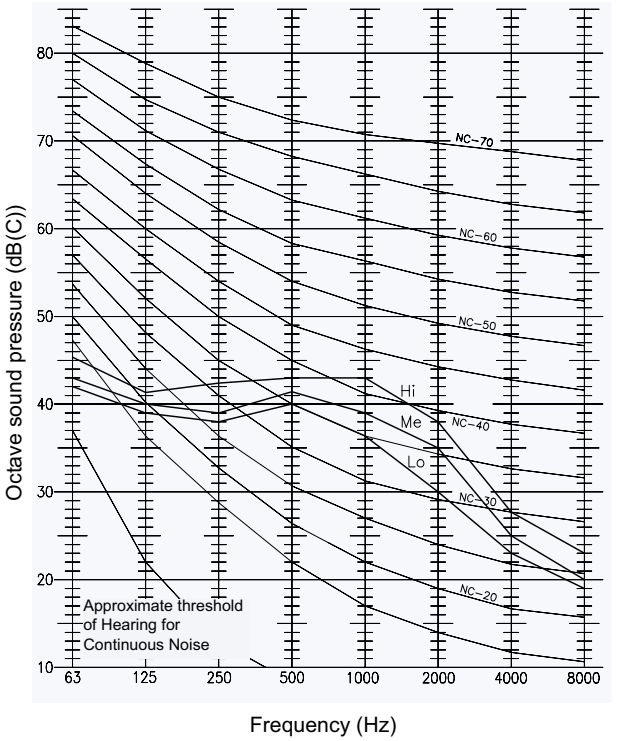


4.10.3. RPC – Ceiling type

Model: RPC-2.0	Power source: 230 V 50 Hz
Point of measurement:	1 meter below the unit. 1 meter from the impulse louver.
	Acoustic criteria curve
	Hi/Me/Lo: 44/45/38 dB(A)

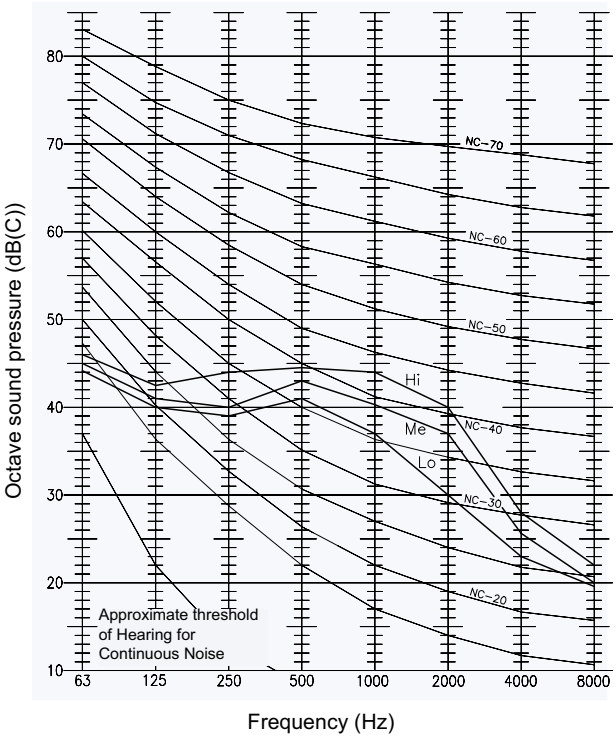


Model: RPC-2.5	Power source: 230 V 50 Hz
Point of measurement:	1 meter below the unit. 1 meter from the impulse louver.
	Acoustic criteria curve
	Hi/Me/Lo: 46/43/41 dB(A)

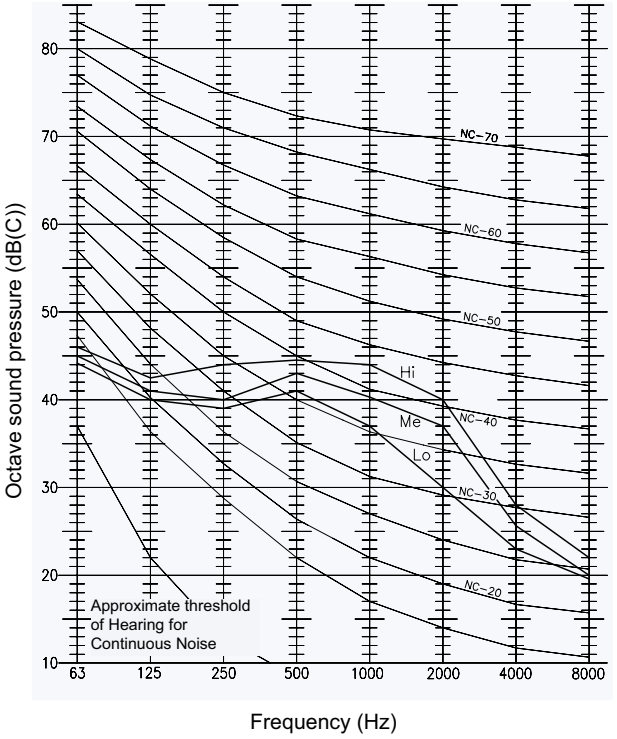


◆ RPC – Ceiling Type (Cont.)

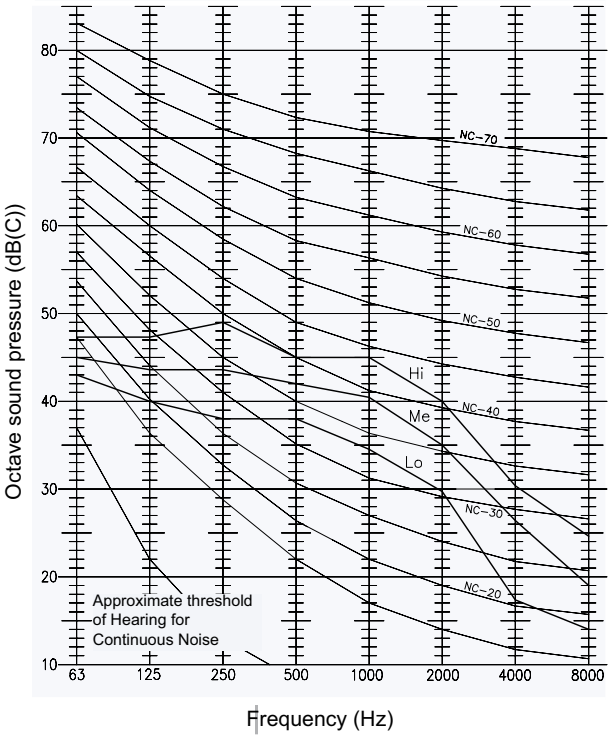
Model: RPC-3.0	Power source: 230 V 50 Hz
Point of measurement:	1 meter below the unit. 1 meter from the impulse louver.
	Acoustic criteria curve
	Hi/Me/Lo: 48/45/42 dB(A)



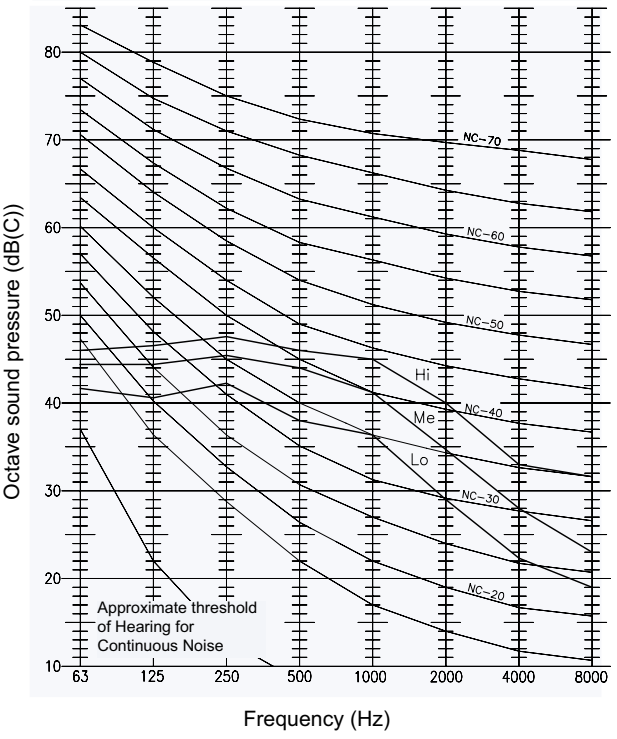
Model: RPC-3.5	Power source: 230 V 50 Hz
Point of measurement:	1 meter below the unit. 1 meter from the impulse louver.
	Acoustic criteria curve
	Hi/Me/Lo: 48/45/42 dB(A)



Model: RPC-4.0	Power source: 230 V 50 Hz
Point of measurement:	1 meter below the unit. 1 meter from the impulse louver.
	Acoustic criteria curve
	Hi/Me/Lo: 49/45/39 dB(A)

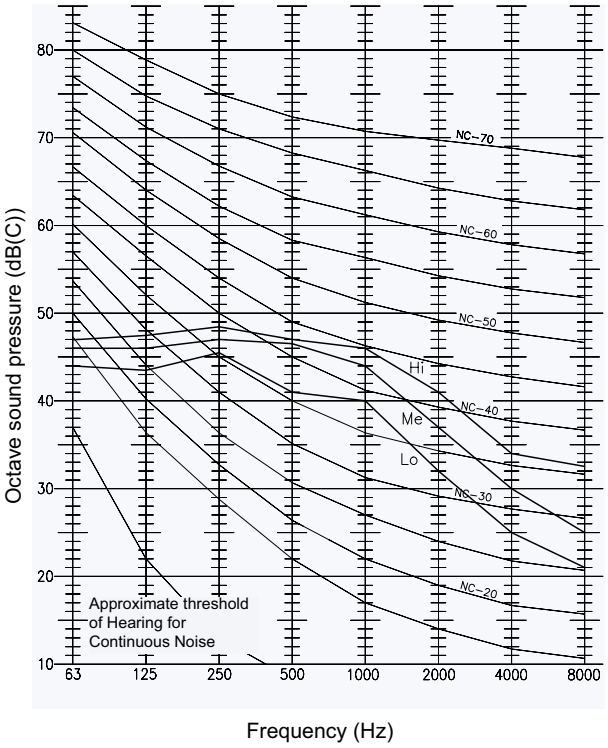


Model: RPC-5.0	Power source: 230 V 50 Hz
Point of measurement:	1 meter below the unit. 1 meter from the impulse louver.
	Acoustic criteria curve
	Hi/Me/Lo: 49/46/41 dB(A)



◆ **RPC – Ceiling Type (Cont.)**

Model: RPC-6.0	Power source: 230 V 50 Hz
Point of measurement:	1 meter below the unit. 1 meter from the impulse louver.
	Acoustic criteria curve
	Hi/Me/Lo: 50/48/44 dB(A)



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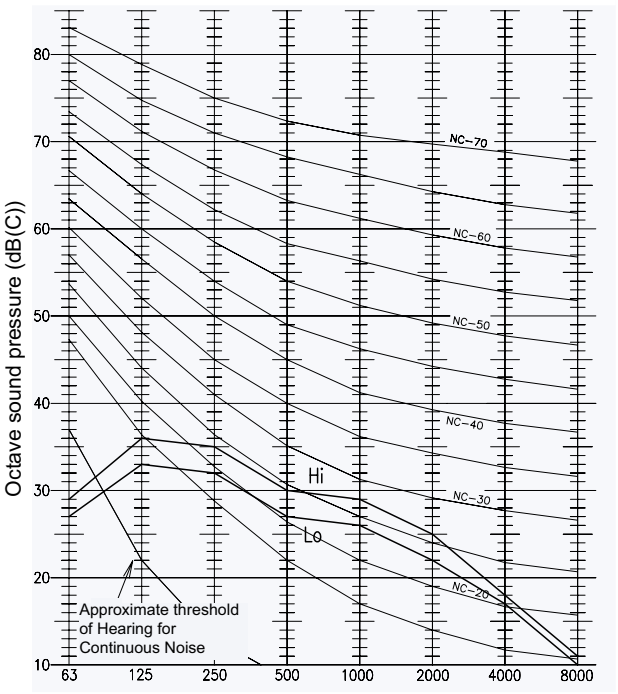
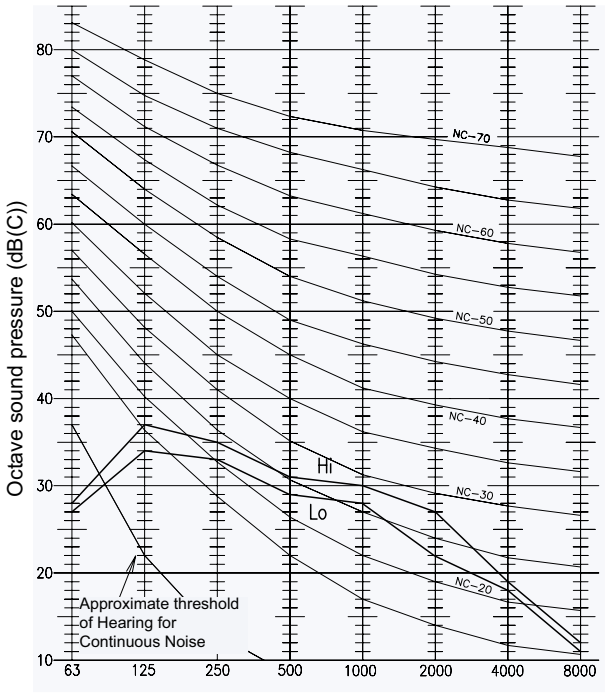
4.10.4. RPI – RPI - in-the-ceiling type

Model: RPI-0.8/1.0	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 34/34/31 dB(A)

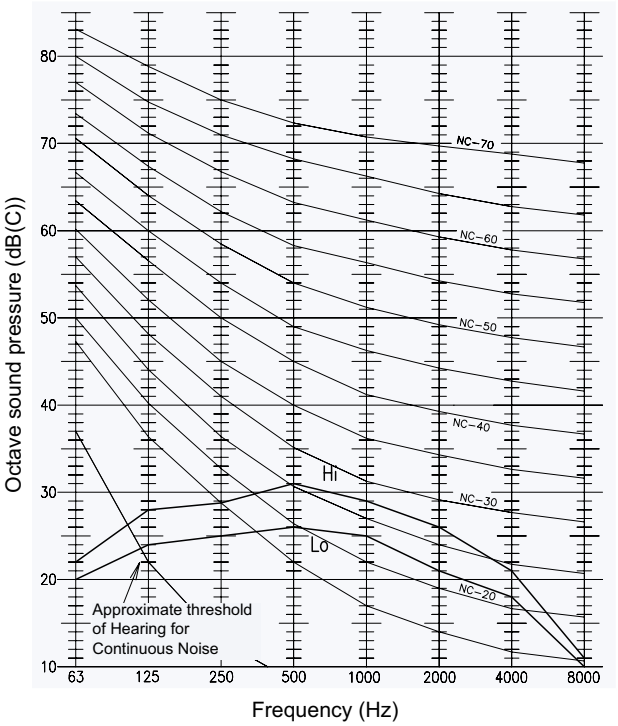


Model: RPI-1.5	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 35/35/32 dB(A)

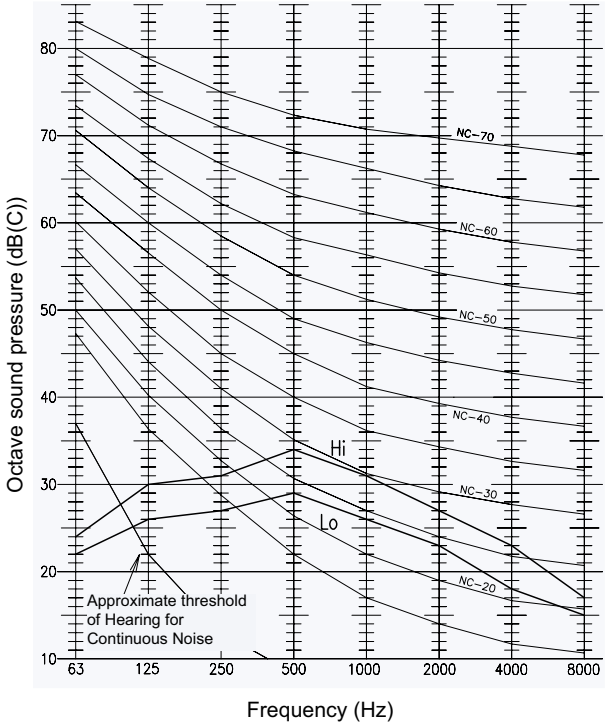


◆ RPI – In-the-Ceiling Type (Cont.)

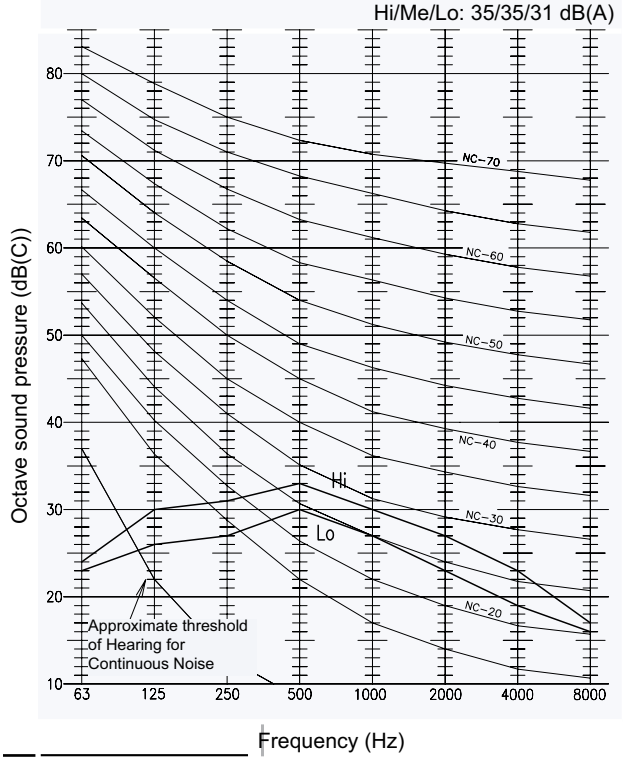
Model: RPI-2.0	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 33/31/29 dB(A)



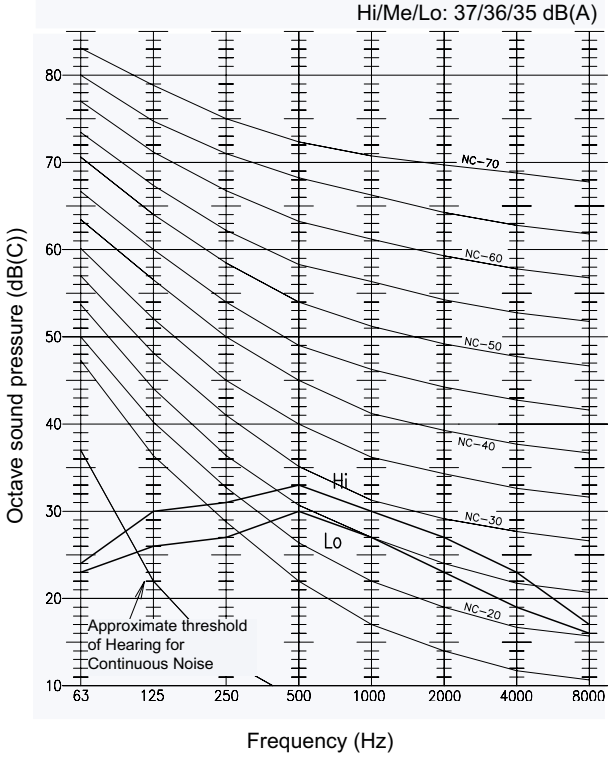
Model: RPI-2.5	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 35/33/30 dB(A)



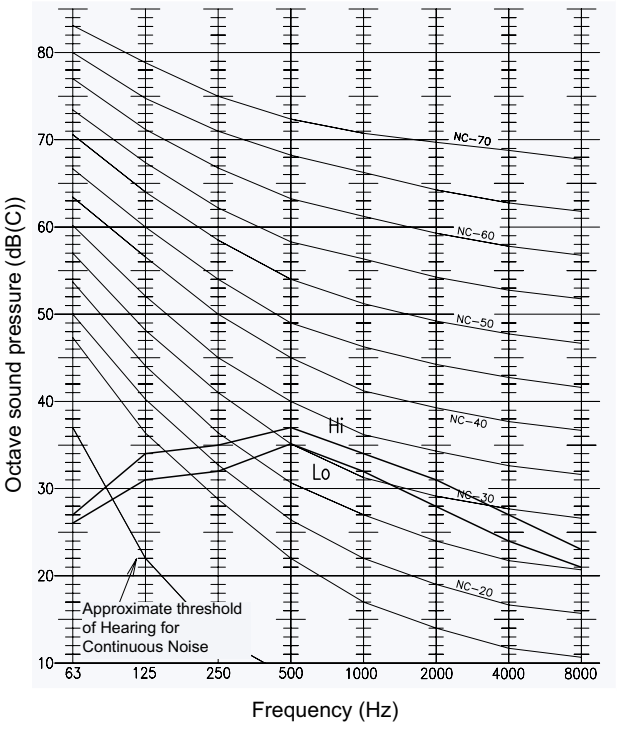
Model: RPI-3.0/3.5	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 35/35/31 dB(A)



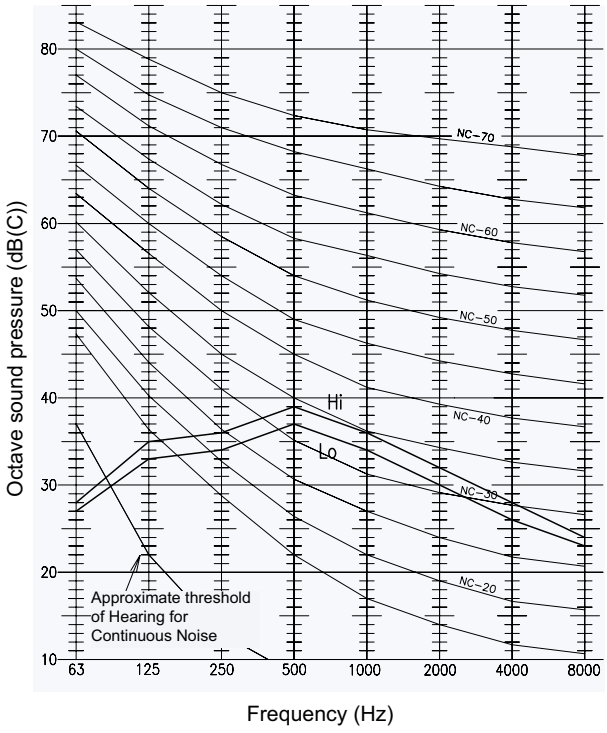
Model: RPI-4.0	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 37/36/35 dB(A)



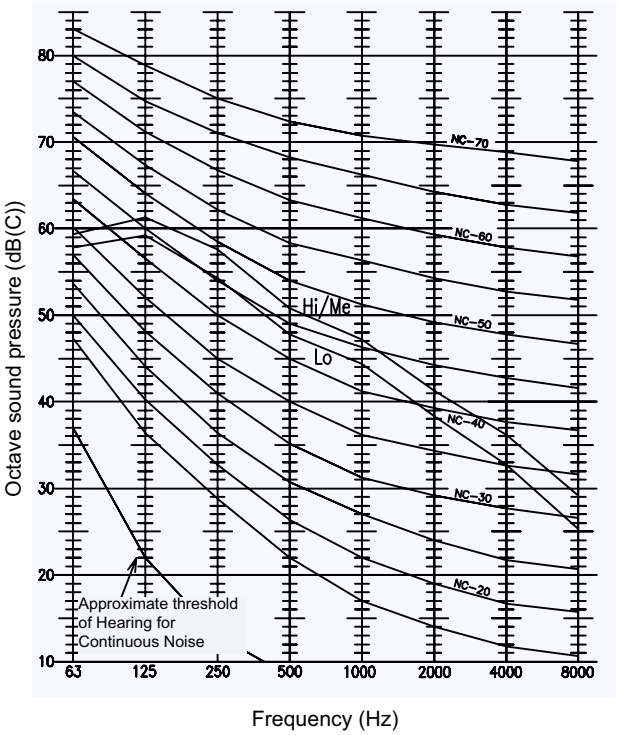
Model: RPI-5.0	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 39/38/36 dB(A)



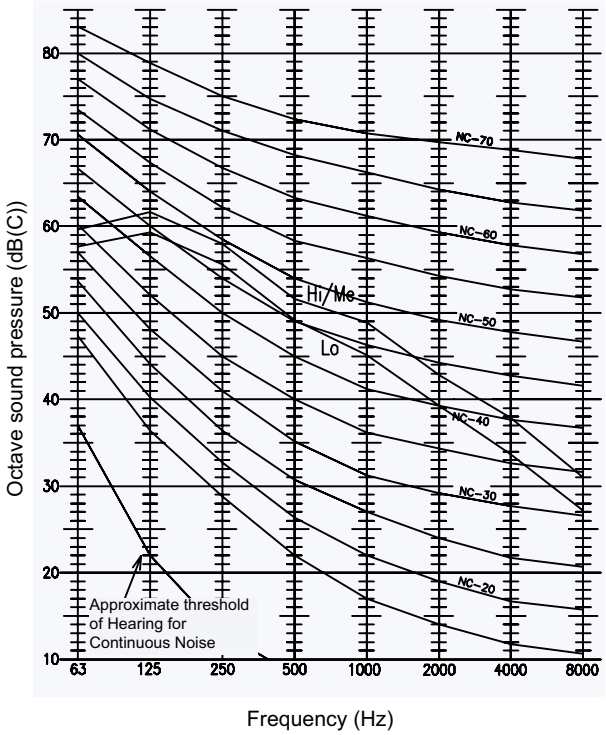
Model: RPI-6.0	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 40/39/38 dB(A)



Model: RPI-8.0	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 54/54/51 dB(A)

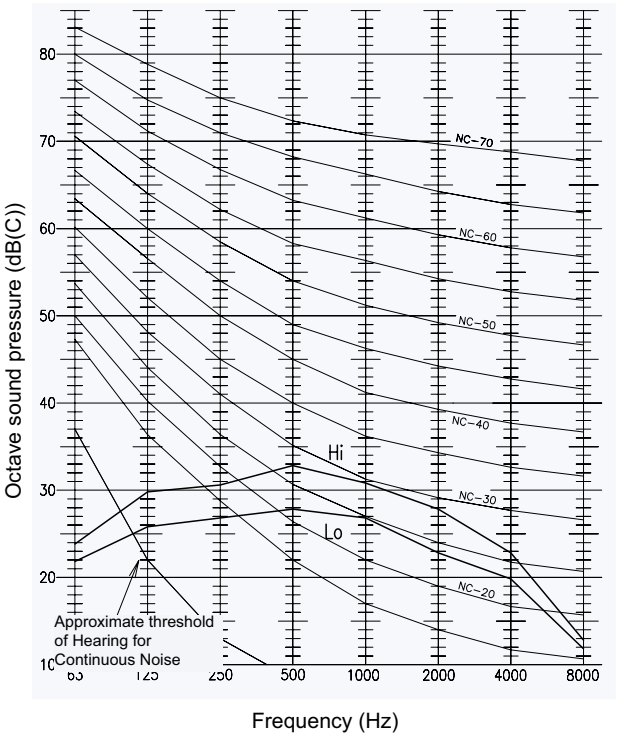


Model: RPI-10.0	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 55/55/52 dB(A)

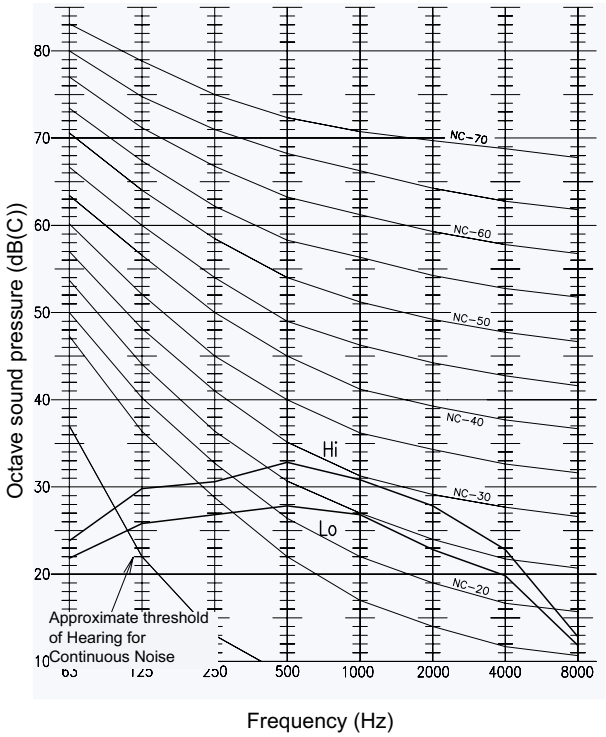


◆ RPIM - In-the-ceiling type

Model: RPIM-0.8	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 31/27 dB(A)

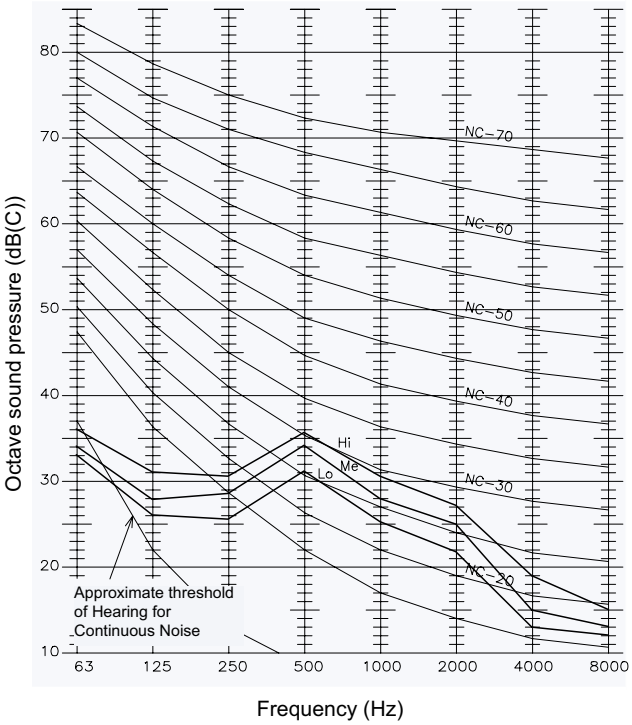


Model: RPIM-1.0	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters below the unit
	Acoustic criteria curve
	Hi/Me/Lo: 31/27 dB(A)

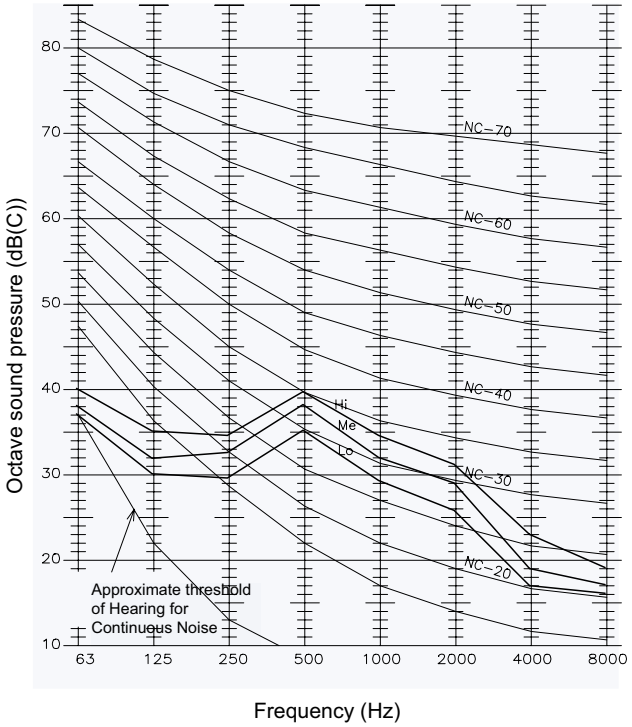


4.10.5. RPK – Wall type

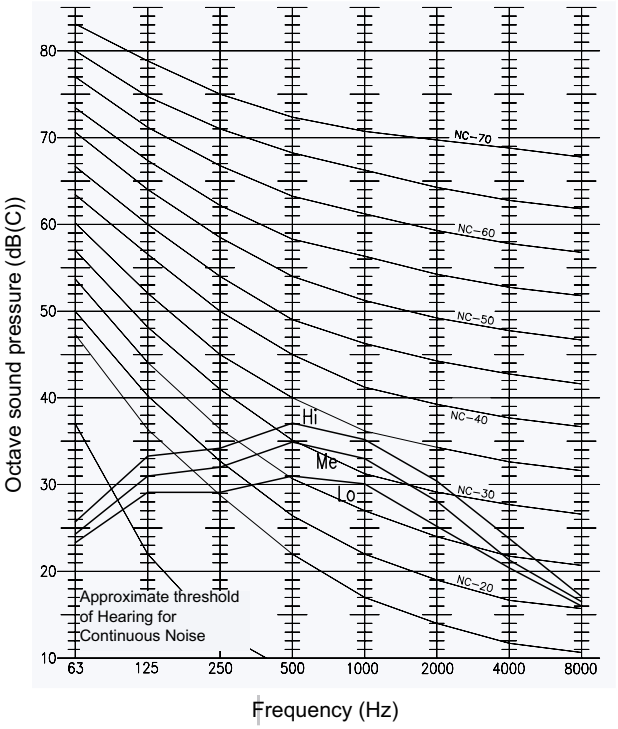
Model: RPK-1.0/1.5	Power source: 230 V 50 Hz
Point of measurement:	1 meter below the unit. 1 meter from the impulse louver.
	Acoustic criteria curve
	Hi/Me/Lo: 1 HP: 38/36/34 dB (A)
	Hi/Me/Lo: 1.5 HP: 40/38/36 dB (A)



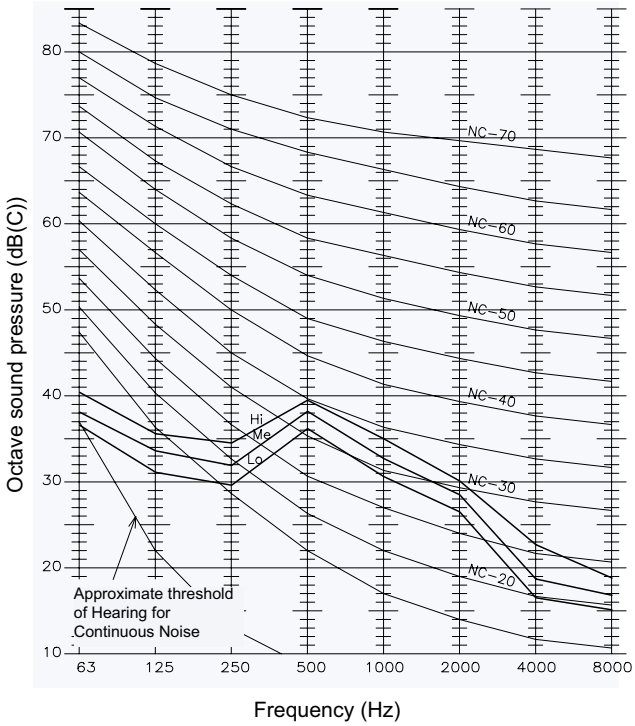
Model: RPK-2.5/3.0	Power source: 230 V 50 Hz
Point of measurement:	1 meter below the unit. 1 meter from the impulse louver.
	Acoustic criteria curve
	Hi/Me/Lo: 43/40/37 dB(A)



Model: RPK-2.0	Power source: 230 V 50 Hz
Point of measurement:	1 meter below the unit. 1 meter from the impulse louver.
	Acoustic criteria curve
	Hi/Me/Lo: 41/39/37 dB(A)

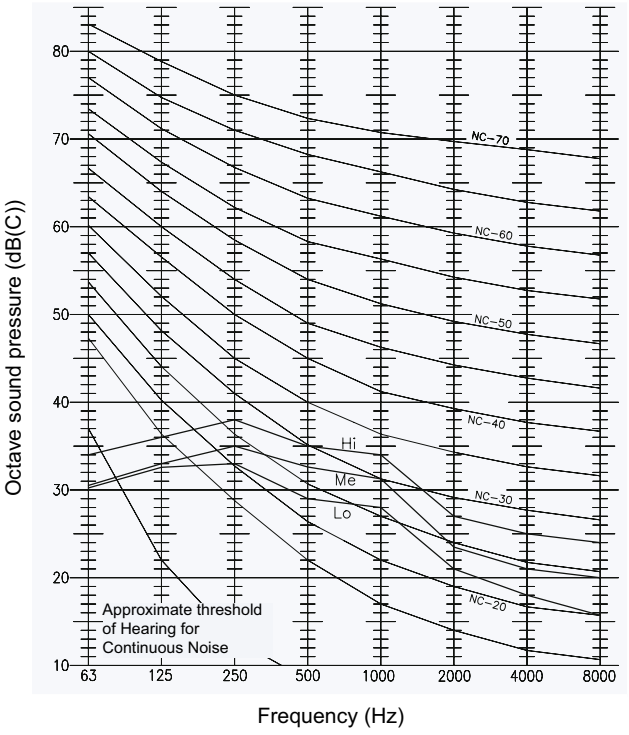


Model: RPK-4.0	Power source: 230 V 50 Hz
Point of measurement:	1 meter below the unit. 1 meter from the impulse louver.
	Acoustic criteria curve
	Hi/Me/Lo: 49/46/43 dB(A)

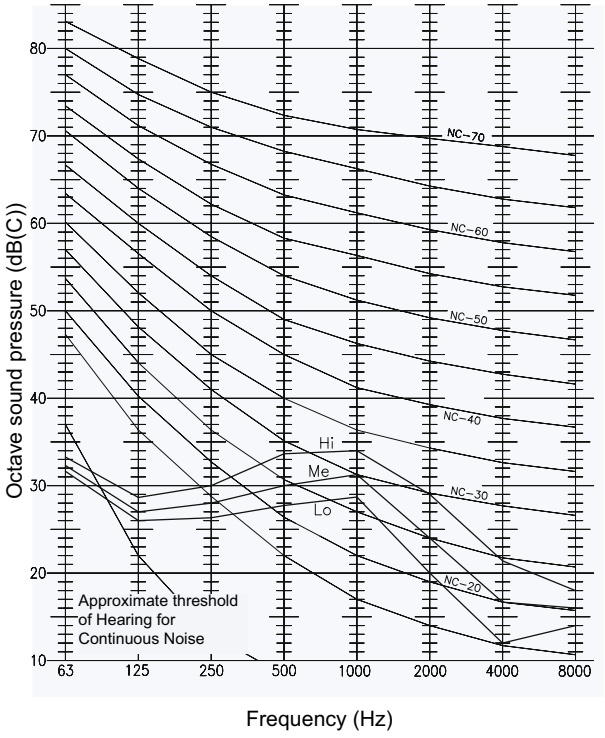


4.10.6. RPF – Floor Type

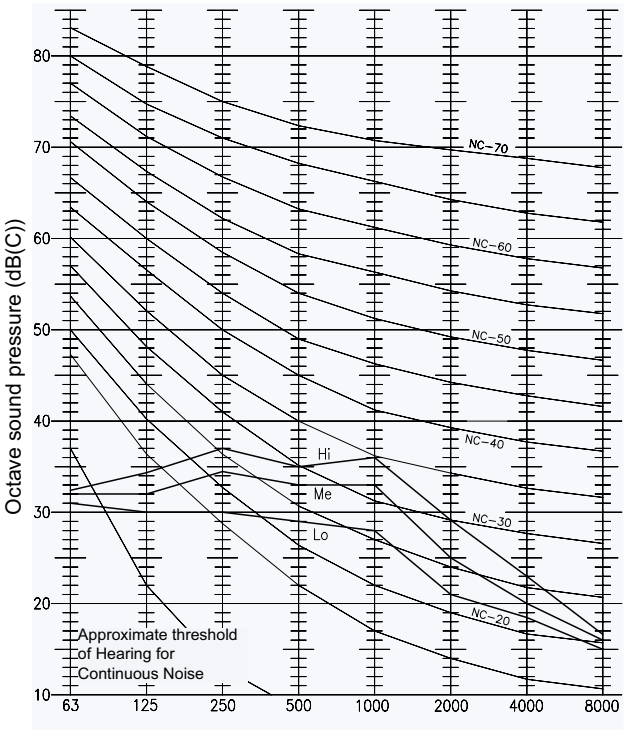
Model: RPF-1.0	Power source: 230 V 50 Hz
Point of measurement:	1 m from the floor level. 1 m from the front surface of the units.
	Acoustic criteria curve
	Hi/Me/Lo: 35/32/29 dB(A)



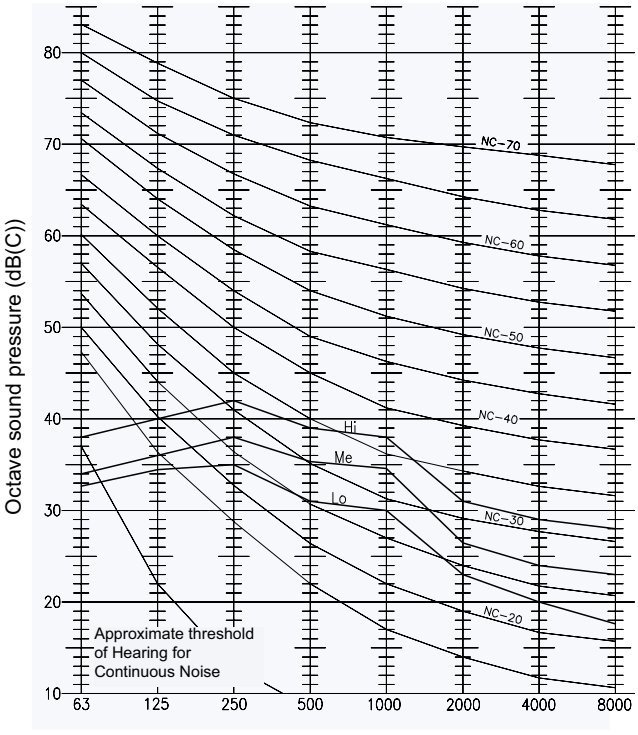
Model: RPF-1.5	Power source: 230 V 50 Hz
Point of measurement:	1 m from the floor level. 1 m from the front surface of the units.
	Acoustic criteria curve
	Hi/Me/Lo: 38/35/31 dB(A)



Model: RPF-2.0	Power source: 230 V 50 Hz
Point of measurement:	1 m from the floor level. 1 m from the front surface of the units.
	Acoustic criteria curve
	Hi/Me/Lo: 39/36/32 dB(A)

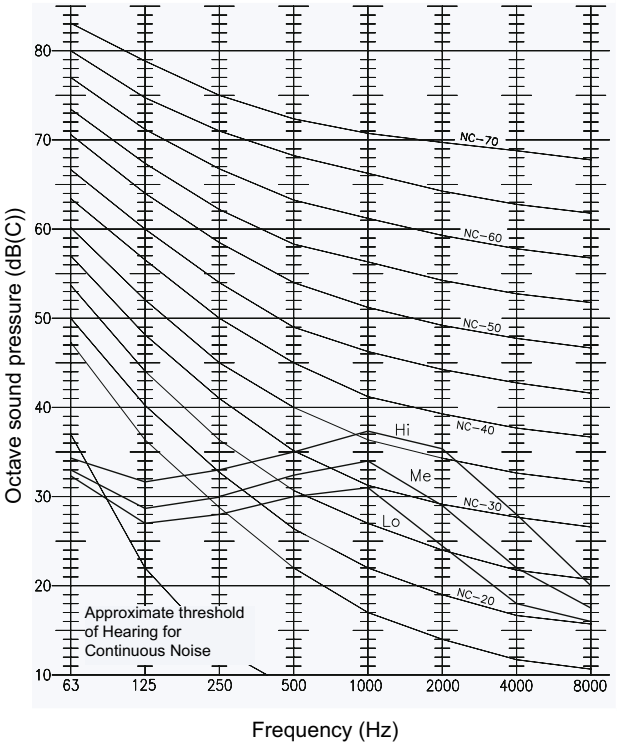


Model: RPF-2.5	Power source: 230 V 50 Hz
Point of measurement:	1 m from the floor level. 1 m from the front surface of the units.
	Acoustic criteria curve
	Hi/Me/Lo: 42/38/34 dB(A)

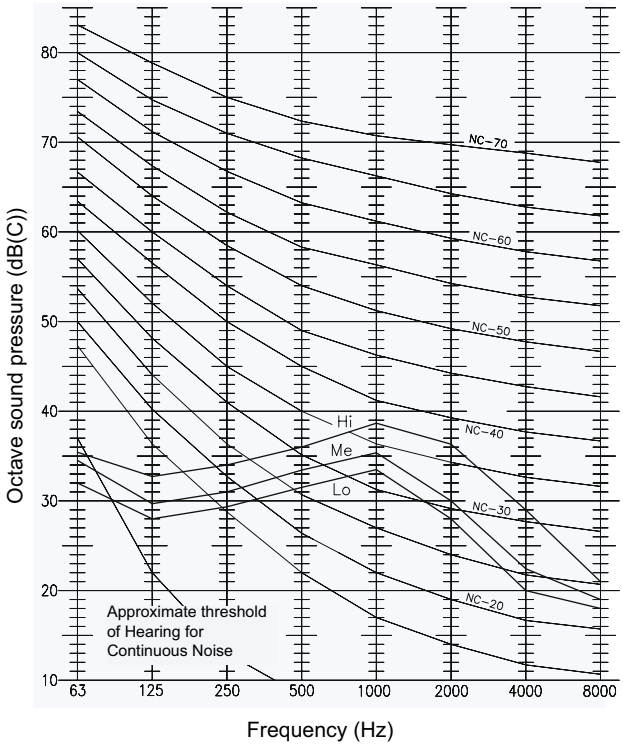


4.10.7. RPFI – Floor concealed type

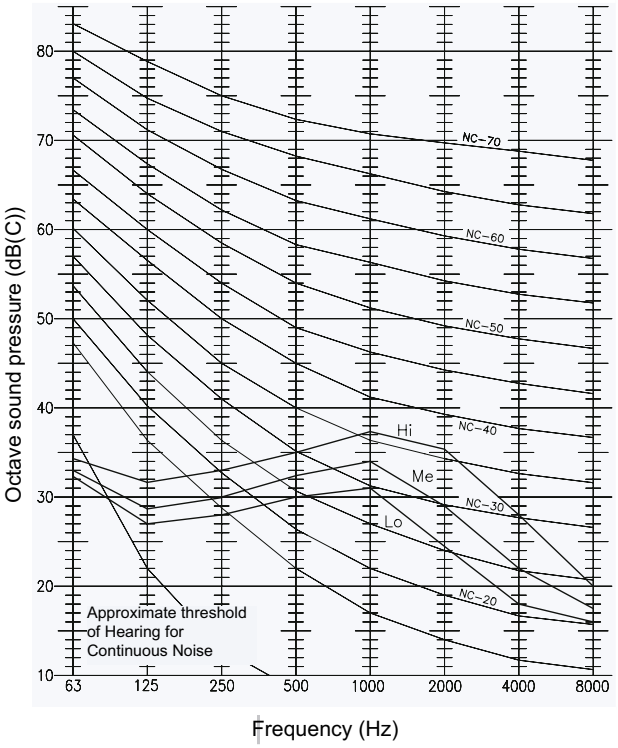
Model: RPFI-1.0	Power source: 230 V 50 Hz
Point of measurement:	1 m from the floor level. 1 m from the front surface of the units.
	Acoustic criteria curve
	Hi/Me/Lo: 35/32/29 dB(A)



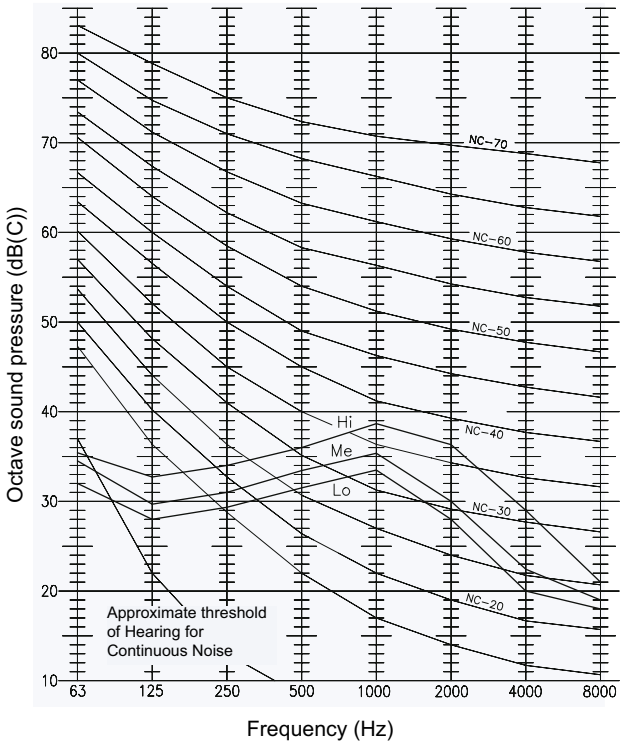
Model: RPFI-1.5	Power source: 230 V 50 Hz
Point of measurement:	1 m from the floor level. 1 m from the front surface of the units.
	Acoustic criteria curve
	Hi/Me/Lo: 38/35/31 dB(A)



Model: RPFI-2.0	Power source: 230 V 50 Hz
Point of measurement:	1 m from the floor level. 1 m from the front surface of the units.
	Acoustic criteria curve
	Hi/Me/Lo: 39/36/32 dB(A)

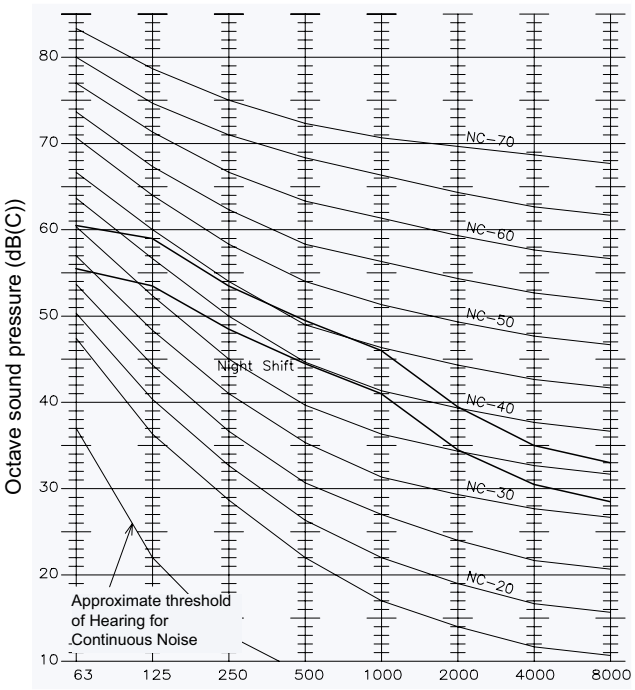


Model: RPFI-2.5	Power source: 230 V 50 Hz
Point of measurement:	1 m from the floor level. 1 m from the front surface of the units.
	Acoustic criteria curve
	Hi/Me/Lo: 42/38/34 dB(A)

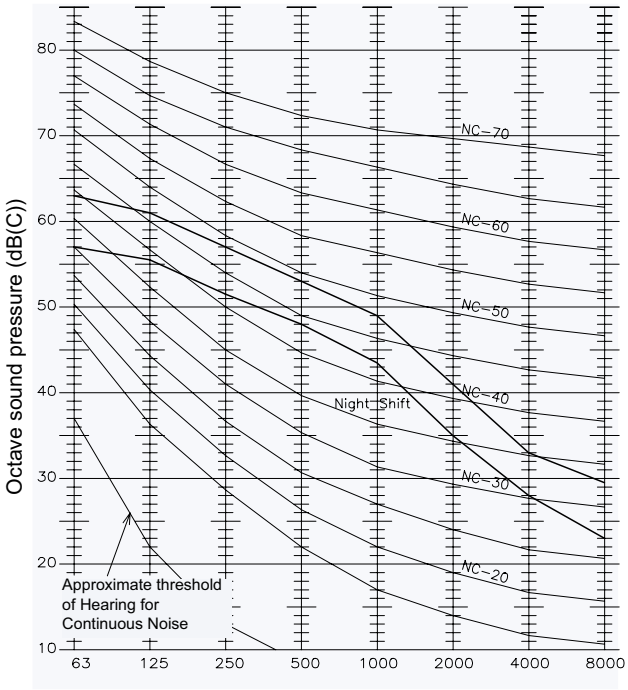


4.10.8. RAS – FSN(1)(E) Outdoor units

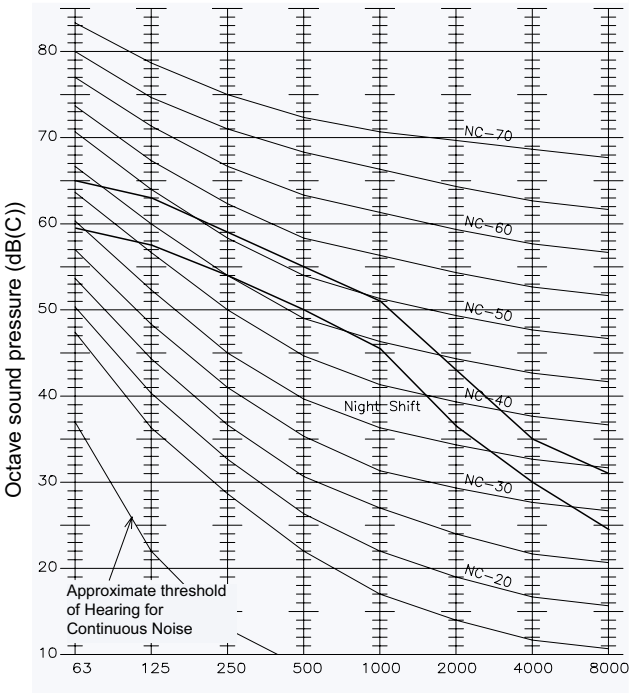
Model: RAS-5FSN	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 52/47 dB(A)



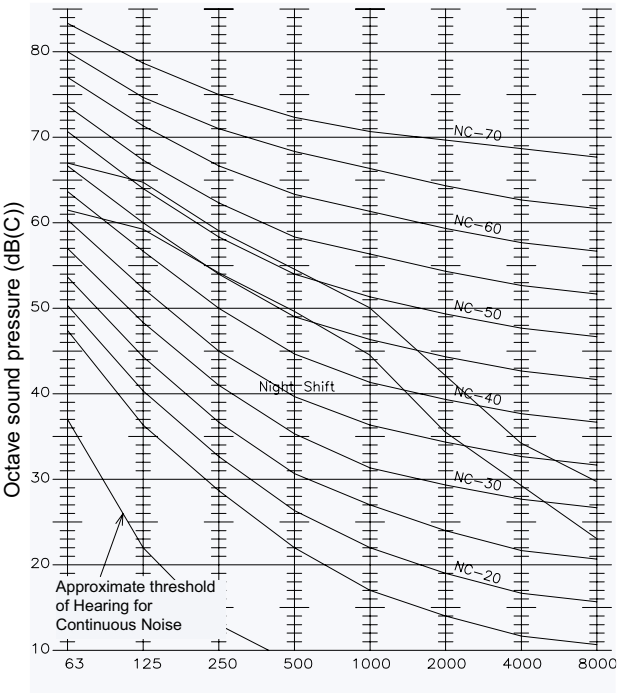
Model: RAS-8FSN1E	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 56/51 dB(A)



Model: RAS-10FSN1E	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 58/53 dB(A)

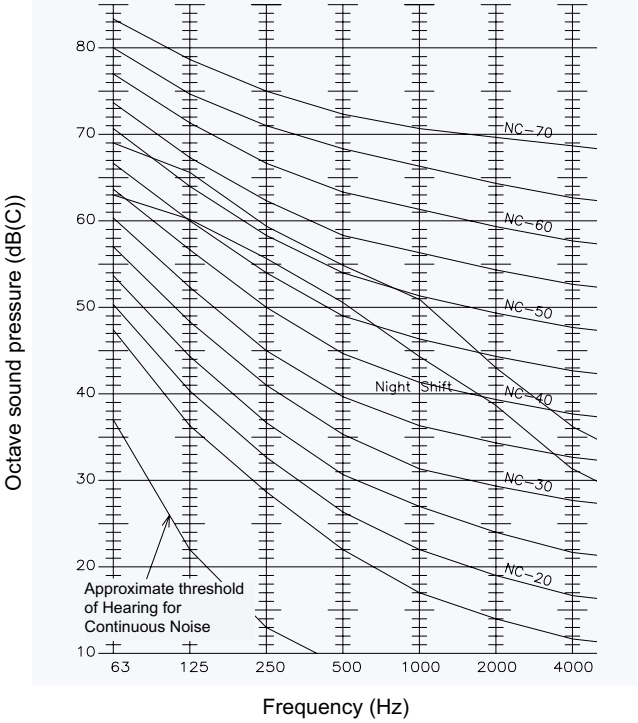


Model: RAS-12FSN1E	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 60/55 dB(A)

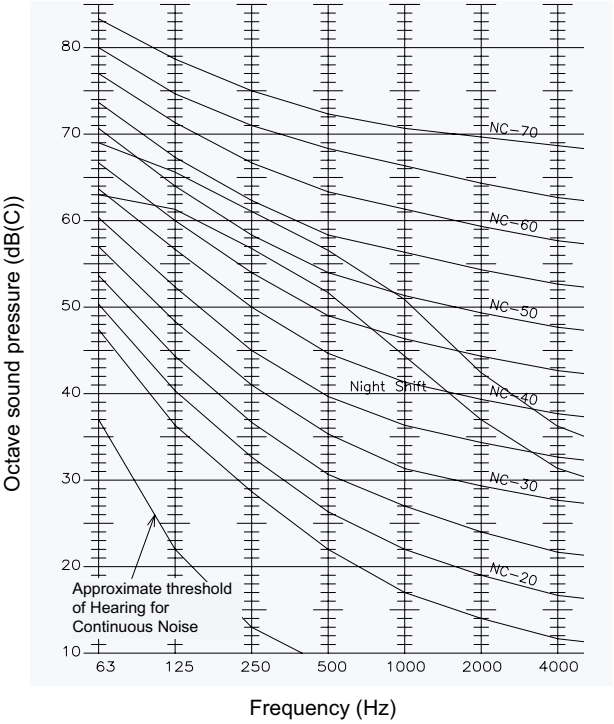


◆ RAS – FSN(E) Outdoor units (cont.)

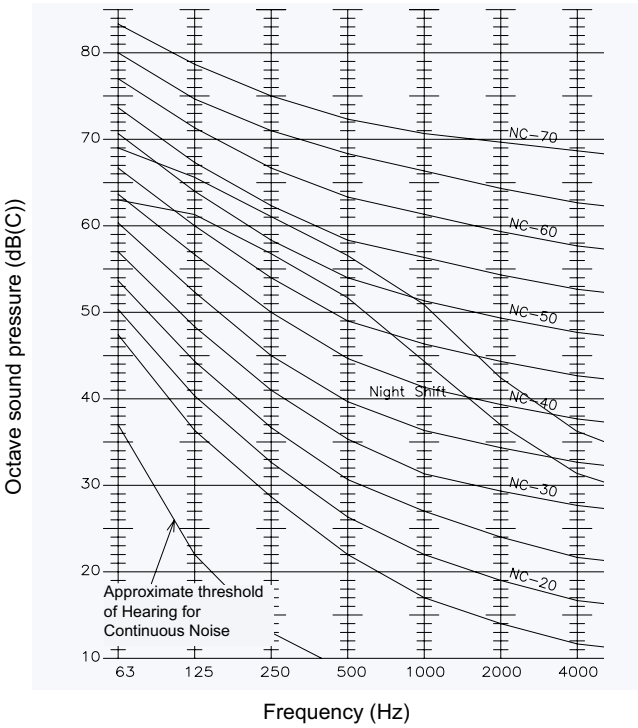
Model: RAS-14FSN1	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 61/56 dB(A)



Model: RAS-16FSN1	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 62/57 dB(A)

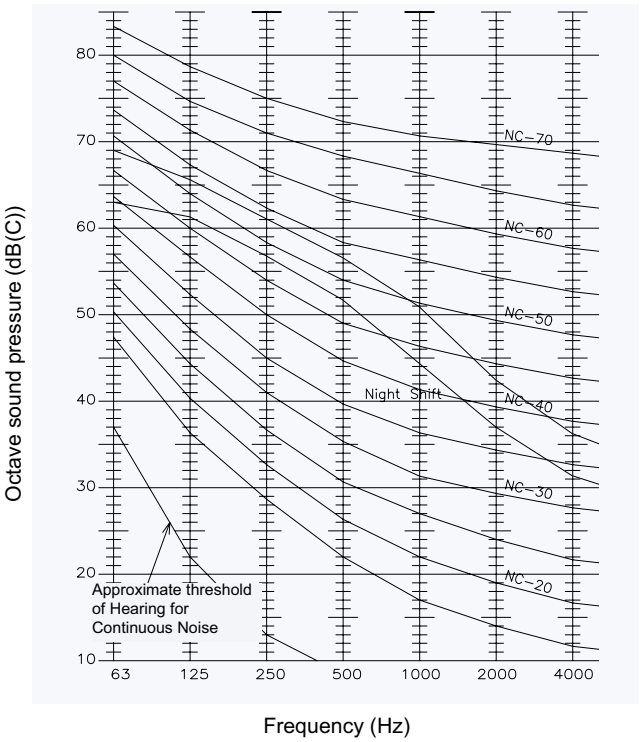


Model: RAS-18FSN1	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 62/57 dB(A)

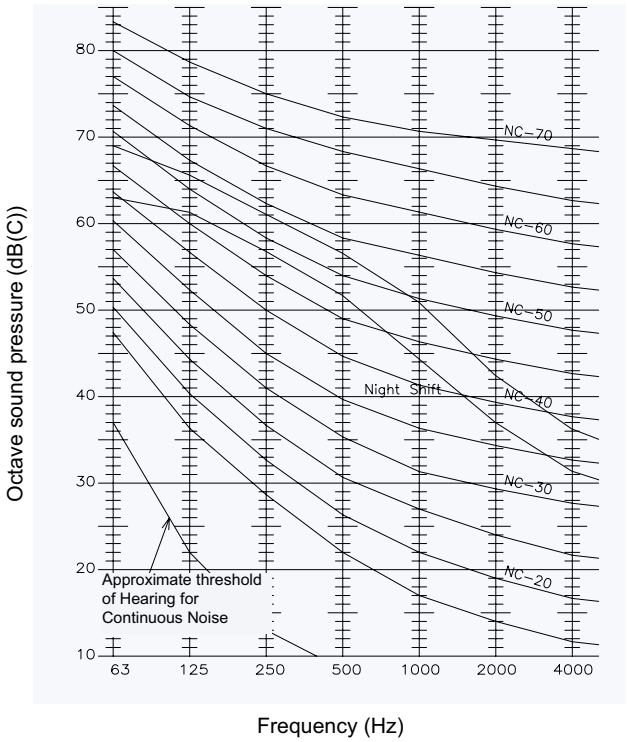


◆ RAS – FSN(E) Outdoor units (cont.)

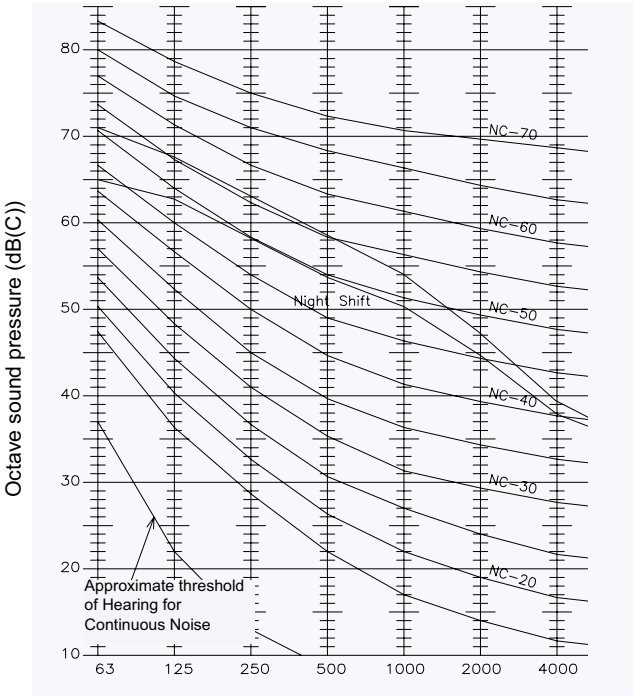
Model: RAS-20FSN1	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 62/57 dB(A)



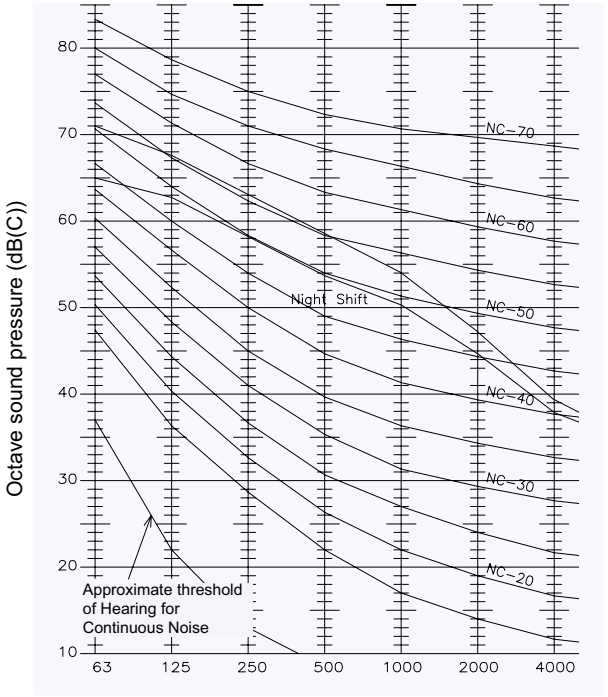
Model: RAS-24FSN1	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 63/58 dB(A)



Model: RAS-28FSN1	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 64/59 dB(A)

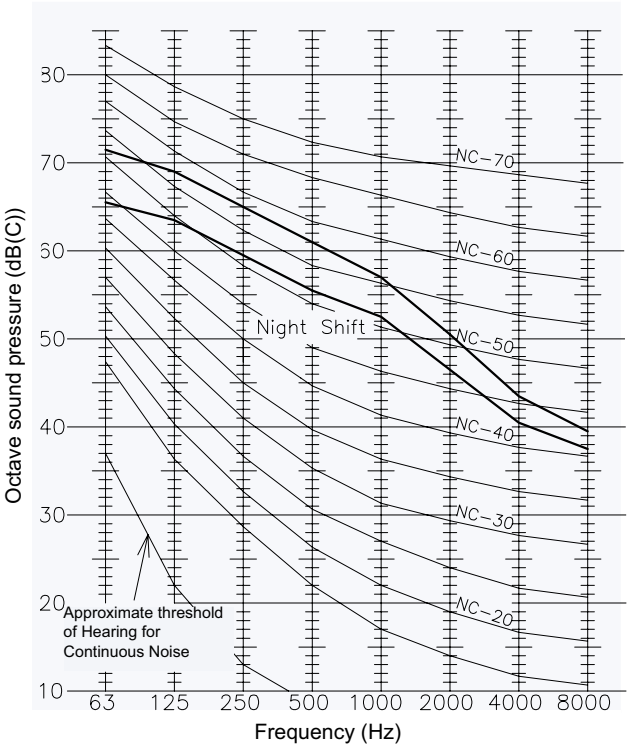


Model: RAS-32FSN1	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 64/59 dB(A)

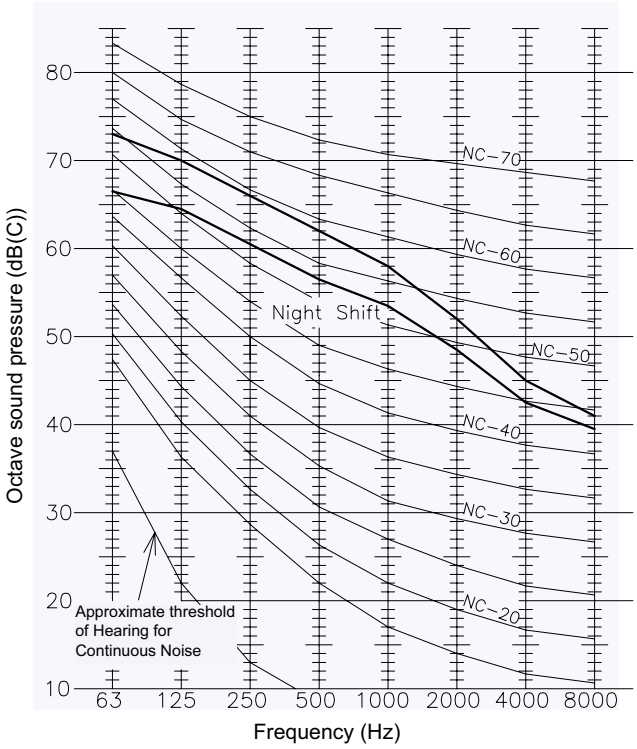


◆ RAS – FSN(E) Outdoor units (cont.)

Model: RAS-36FSN	Power source: 400V 50Hz
Point of measurement:	1 meter from the frontal surface of the unit. 1.5 meters from floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 64/59 dB(A)



Model: RAS-42FSN	Power source: 400V 50Hz
Point of measurement:	1 meter from the frontal surface of the unit. 1.5 meters from floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 65/60 dB(A)



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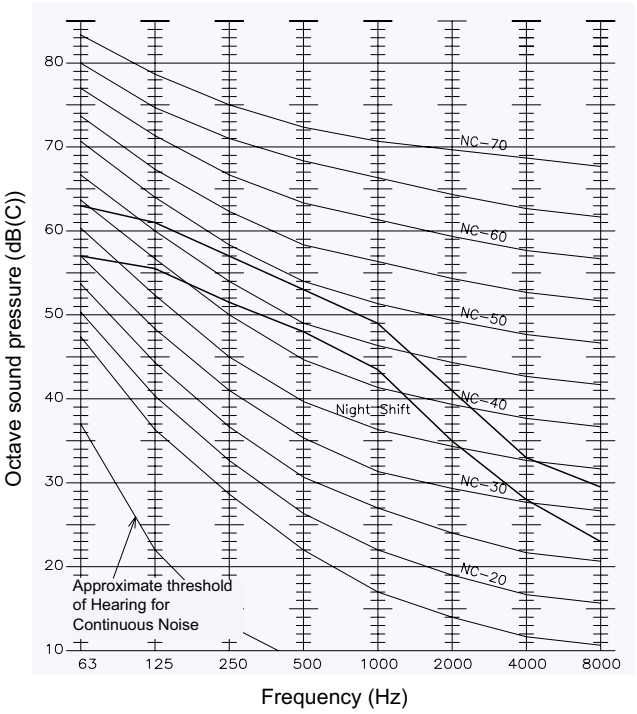
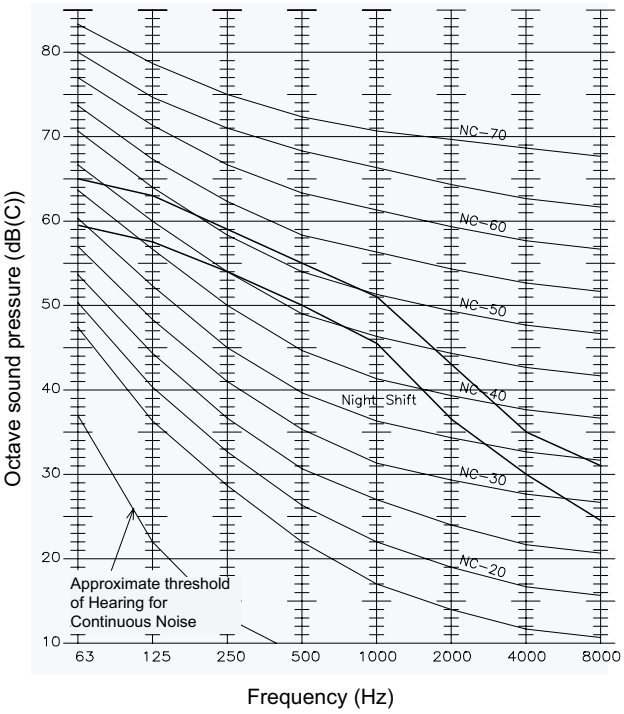
4.10.9. RAS – FXN(E) Outdoor units

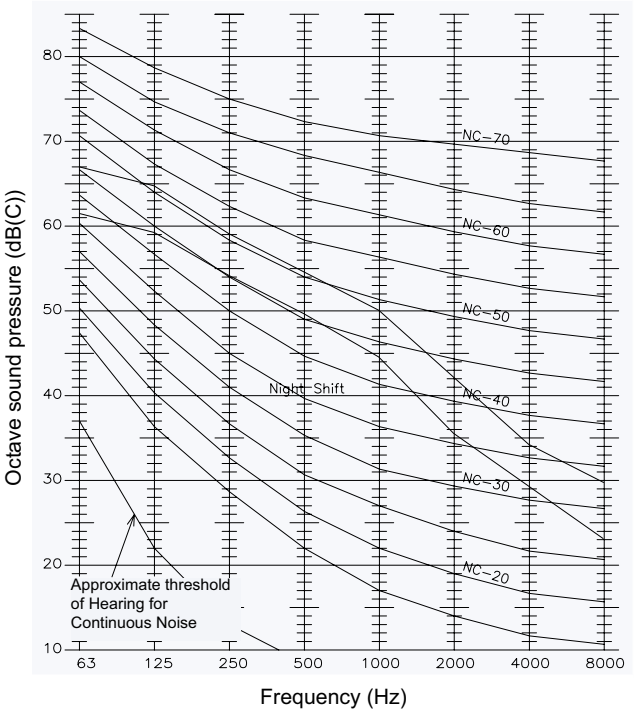
Model: RAS-8FXN(E)	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 56/51 dB(A)



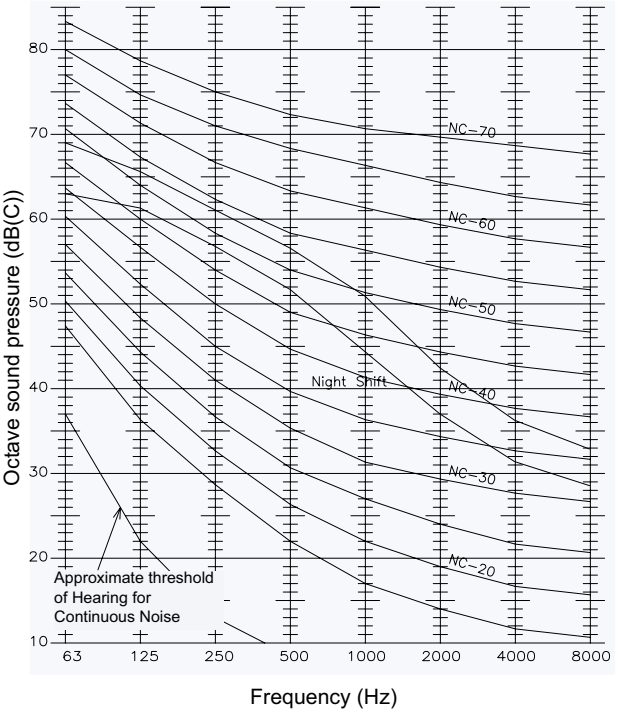
Model: RAS-10FXN(E)	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 58/53 dB(A)



Model: RAS-12FXN(E)	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 60/55 dB(A)

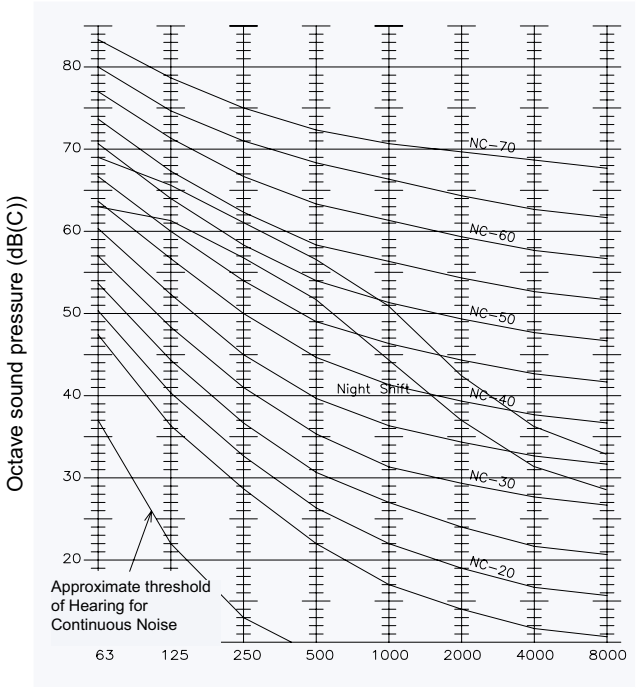


Model: RAS-16FXN(E)	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 62/57 dB(A)

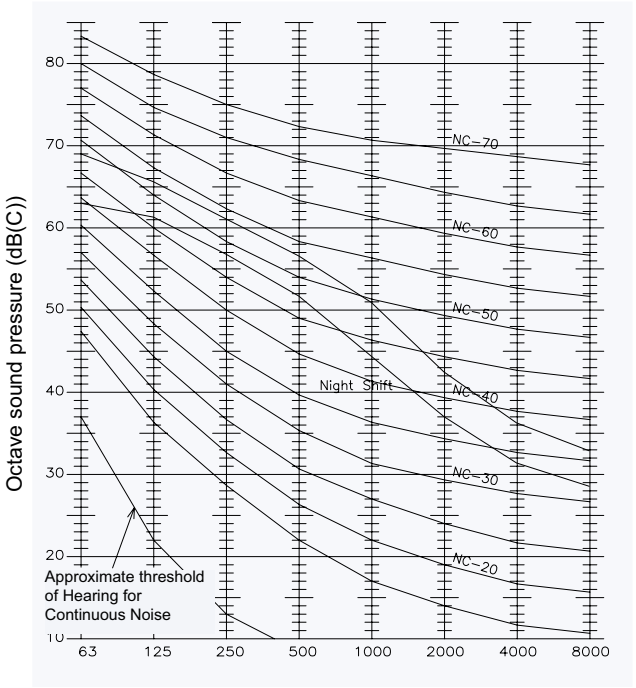


◆ RAS – FXN(E) Outdoor units (cont.)

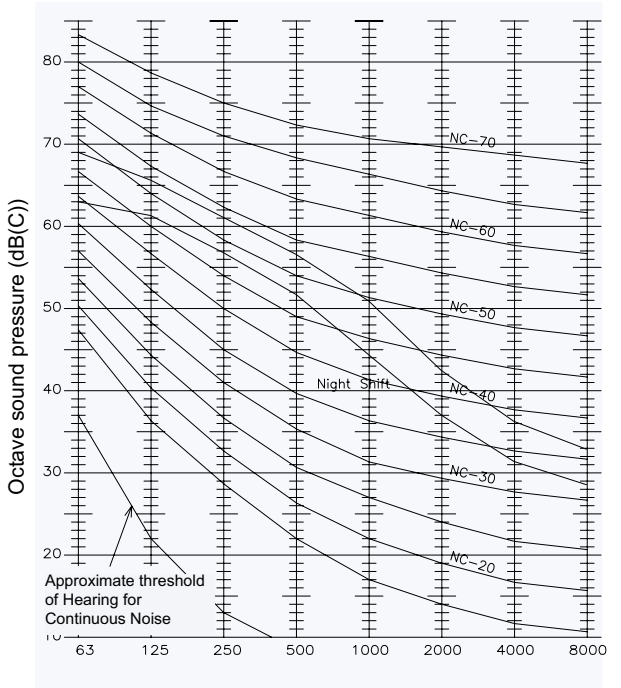
Model: RAS-18FXN	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 62/57 dB(A)



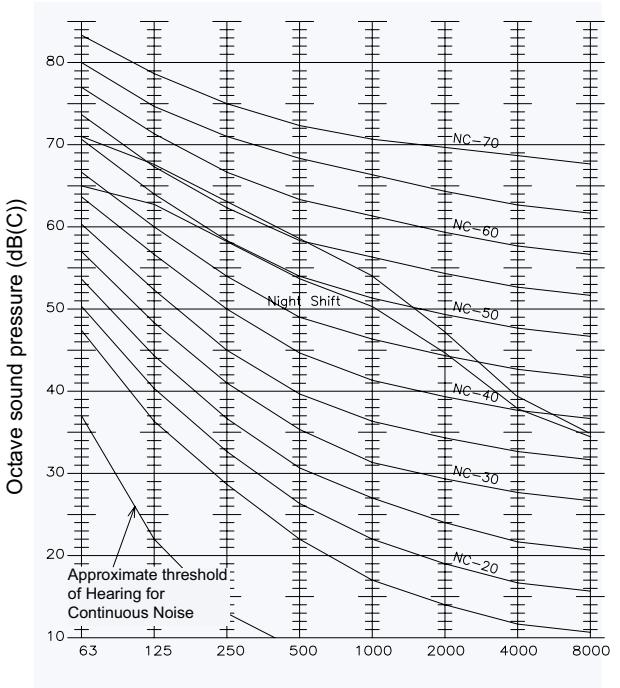
Model: RAS-20FXN	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 62/57 dB(A)



Model: RAS-24FXN	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 62/57 dB(A)

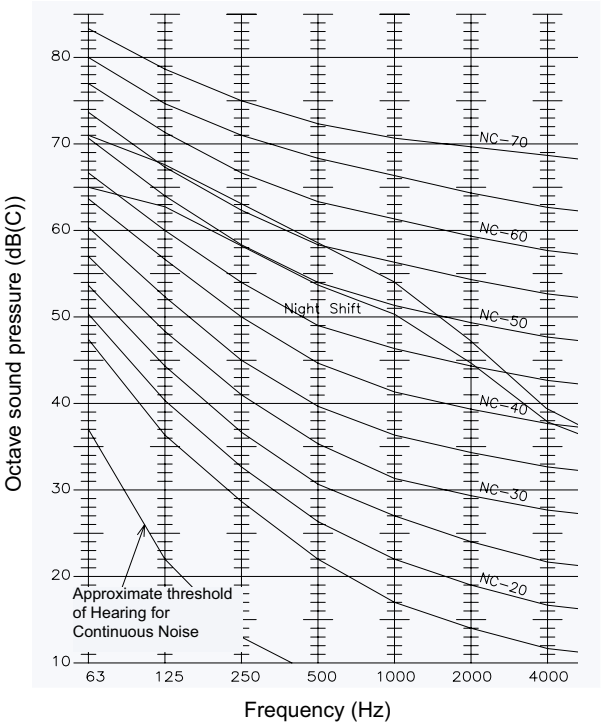


Model: RAS-30FXN	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 63/58 dB(A)



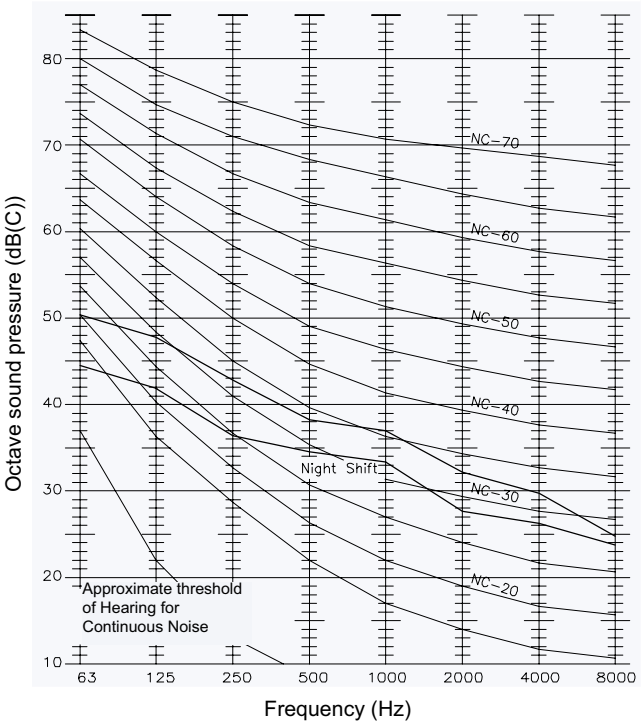
◆ RAS – FXN(E) Outdoor units (cont.)

Model: RAS-32FXN	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 mm from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 63/58 dB(A)

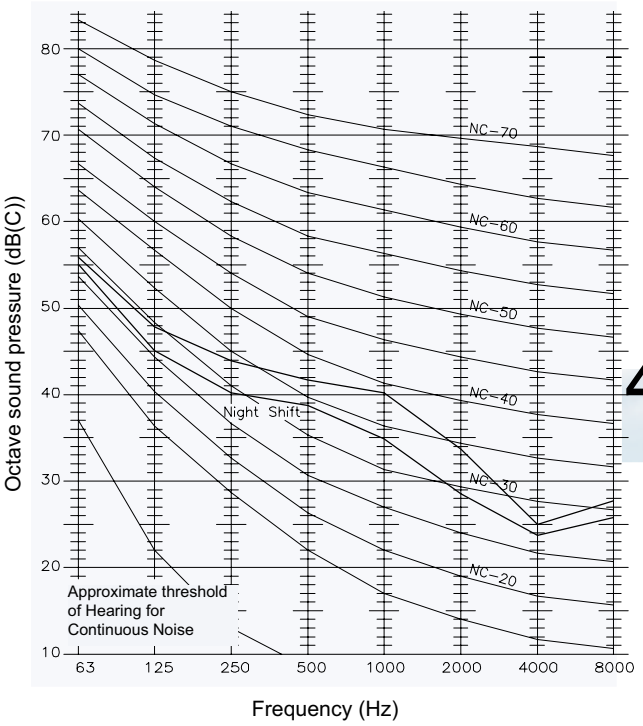


4.10.10. RAS – FSVNE Outdoor units

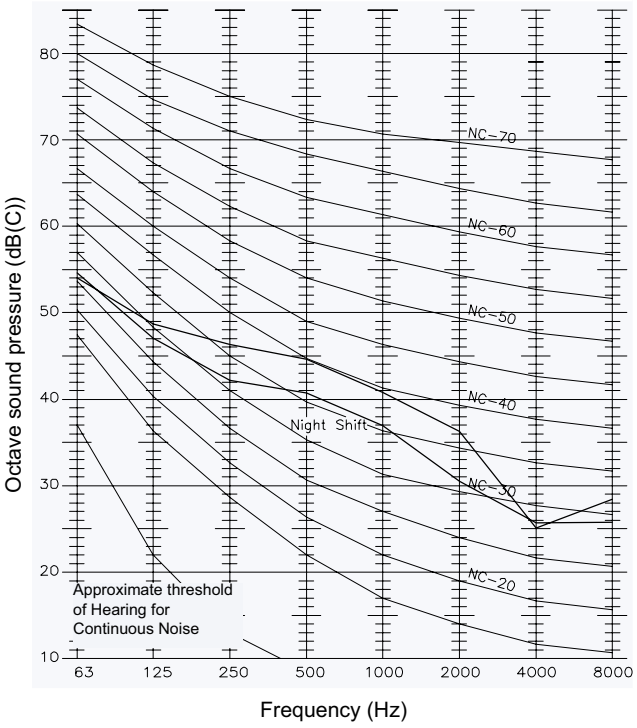
Model: RAS-3FSVNE	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 45/41 dB(A)



Model: RAS-4FSVNE	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 47/43 dB(A)

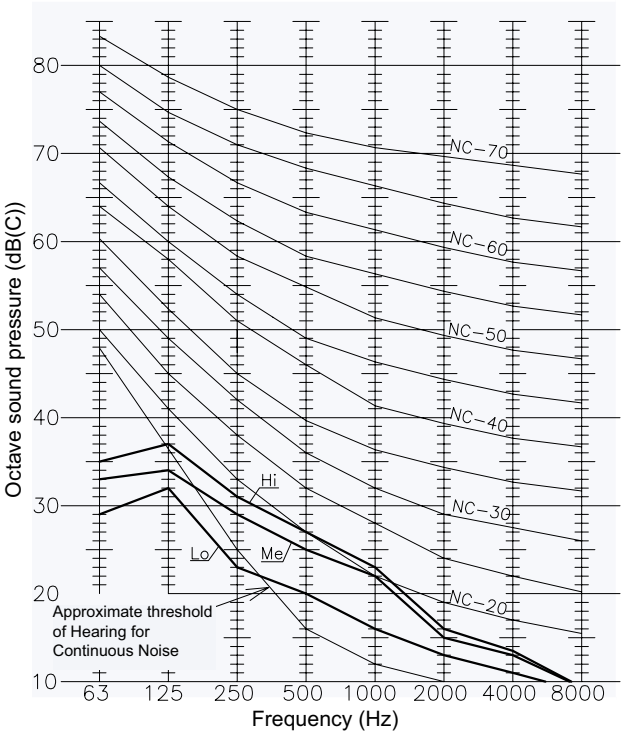


Model: RAS-5FSVNE	Power source: 400V 50Hz
Point of measurement:	1 m from the front surface of the unit. 1.5 m from the the floor level.
	Acoustic criteria curve
	Hi/Me/Lo: 49/45 dB(A)

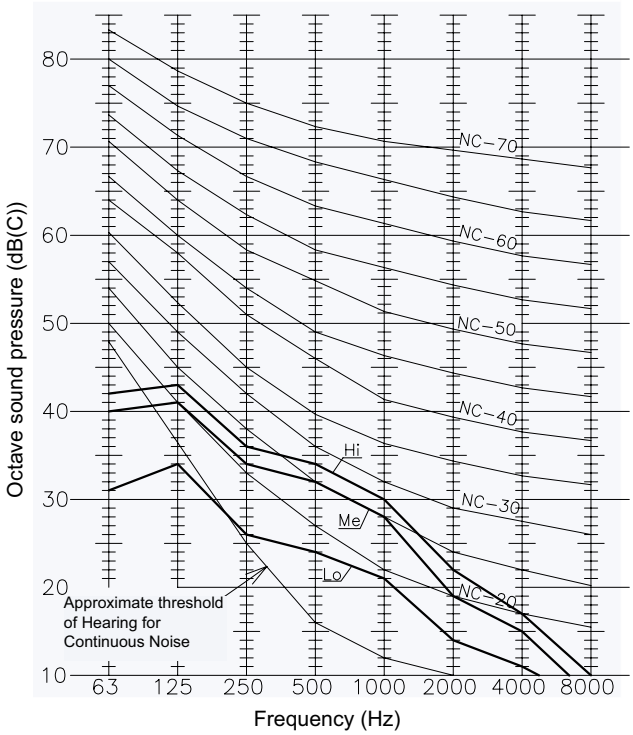


4.10.11. KPI – Complementary units

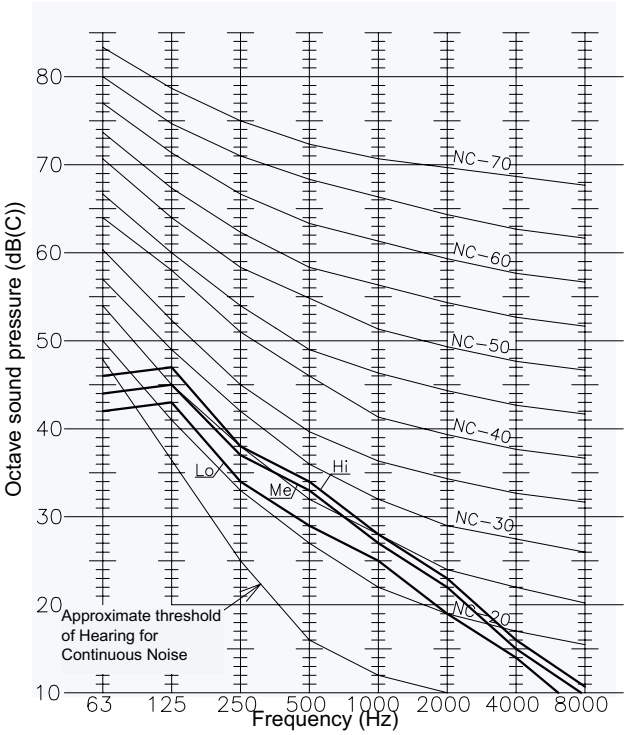
Model: KPI-2521	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters beneath the unit with noise protected duct
	Acoustic criteria curve
	Hi/Me/Lo: 27/22.5/21.5 dB(A)



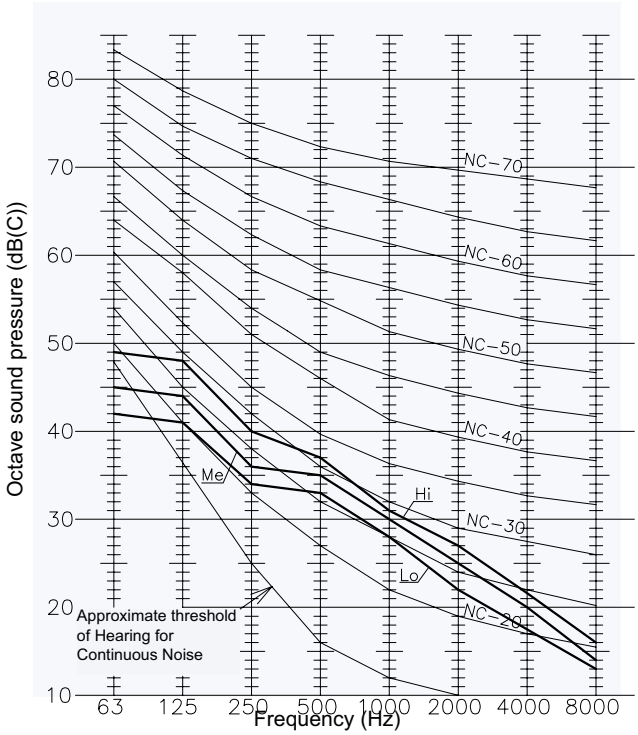
Model: KPI-5021	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters beneath the unit with noise protected duct
	Acoustic criteria curve
	Hi/Me/Lo: 33/30.5/48 dB(A)



Model: KPI-8021	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters beneath the unit with noise protected duct
	Acoustic criteria curve
	Hi/Me/Lo: 34/32.5/30.5 dB(A)

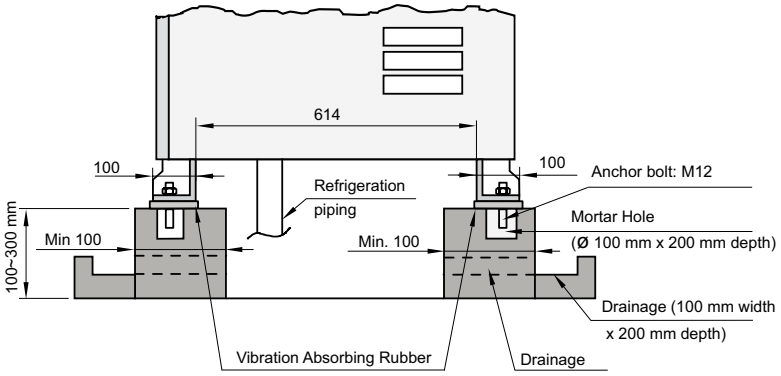


Model: KPI-10021	Power source: 230 V 50 Hz
Point of measurement:	1.5 meters beneath the unit with noise protected duct
	Acoustic criteria curve
	Hi/Me/Lo: 38/34.5/32 dB(A)



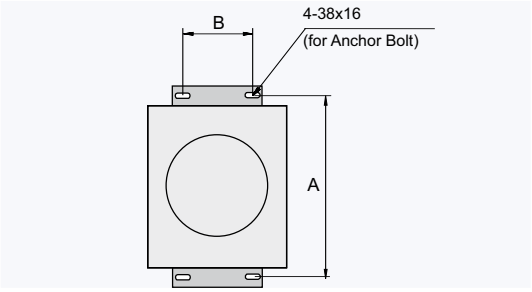
4.11. Foundation

4.11.1. Foundation for models FSN(1)(E) and FXN(E)

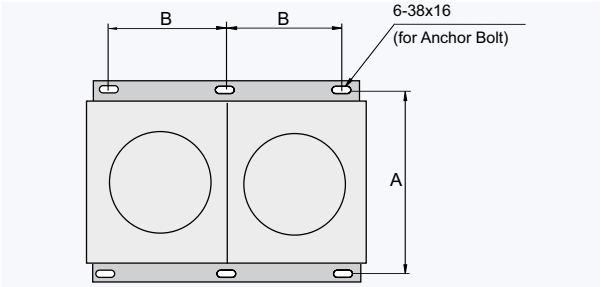


◆ **Position of anchor bolts**

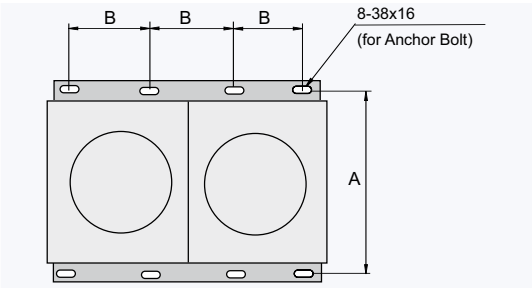
RAS-5~16FSN1(E)/RAS-8~12FXNE



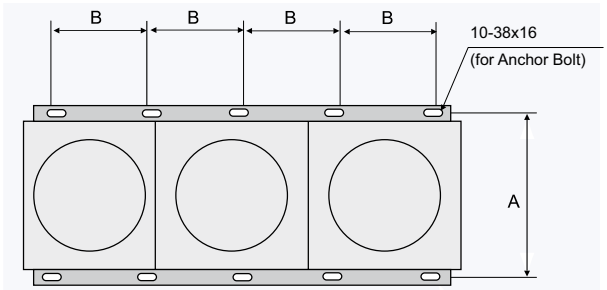
RAS-18~20FSN(1)/RAS-16~20FXN



RAS-24~32FSN(1)/RAS-24~32FXN



RAS-18~22FSN(1)



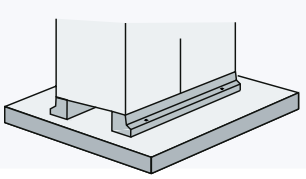
NOTE:

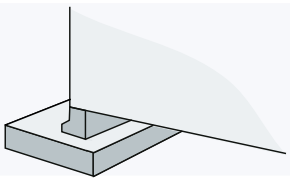
Design the foundation as show above and confirm that the foundation carries all of the feet of the unit.

MODEL	A	B
RAS-5FSN	760	368
RAS-8~12FSN(1)(E)/FXN(E)		688
RAS-14/16FSN(1)		948
RAS-16FXN		824
RAS-18~22FSN(1)/FXN		824
RAS-24~32FSN(1)/FXN		723
RAS-36/42FSN		782

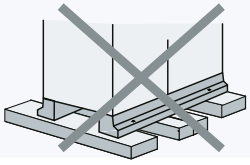
(Units: mm)

Correct foundation



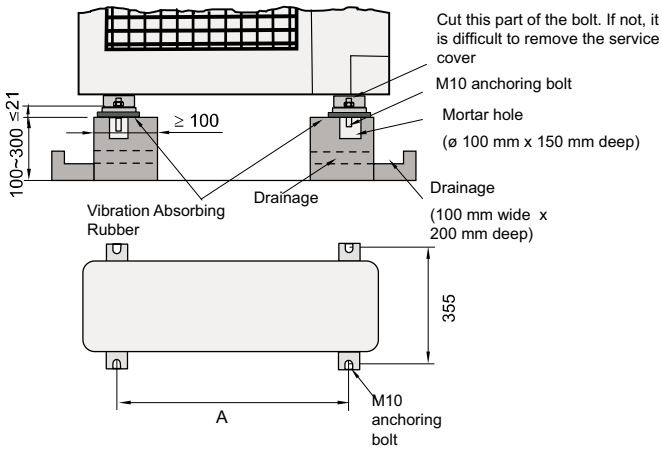


Incorrect foundation

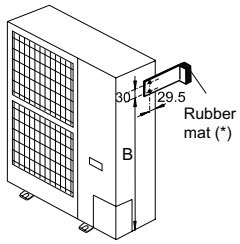


4.11.2. Foundation for FSVNE models

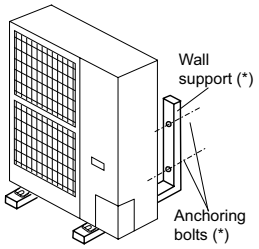
◆ **Concrete foundations**



Fix the unit to the wall



Hanging unit



(*) Supplied by the installer

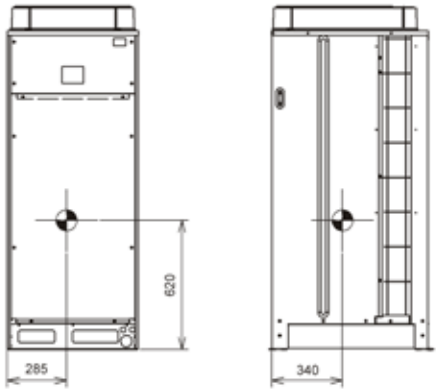
MODEL	A	B
RAS 3FSVNE	530	511
RAS4/5FSVNE	630	796

(Units: mm)

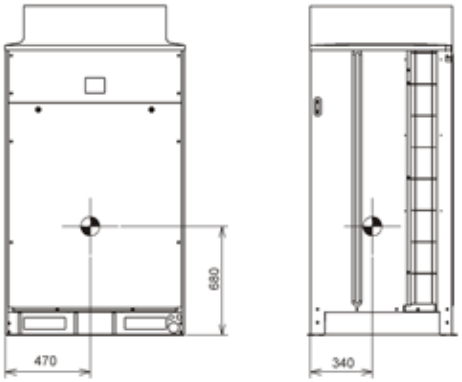
4.12. Center of Gravity

4.12.1. Center of gravity for FSN(1)(E)

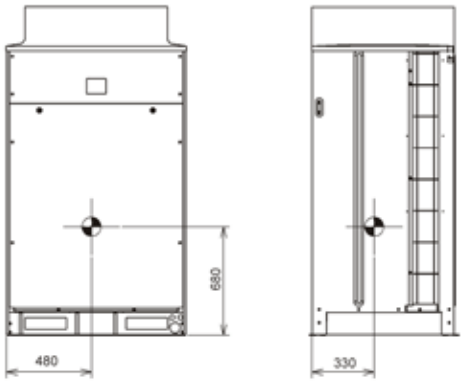
Models: RAS-5FSN



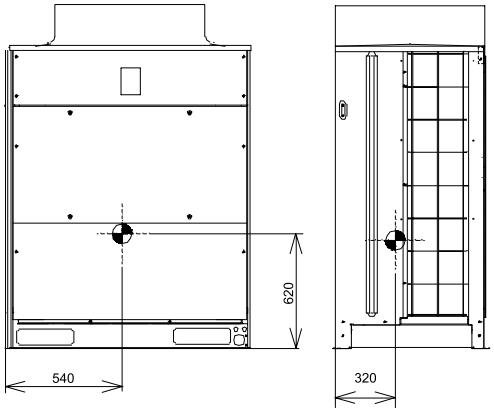
Models: RAS-8FSN1E



Models: RAS-10/12FSN1E

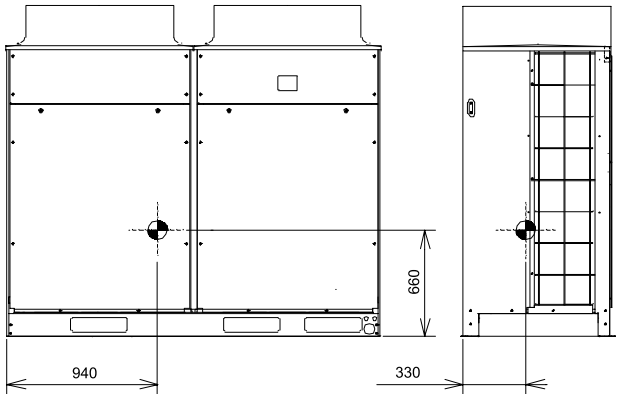


Models: RAS-14/16FSN1

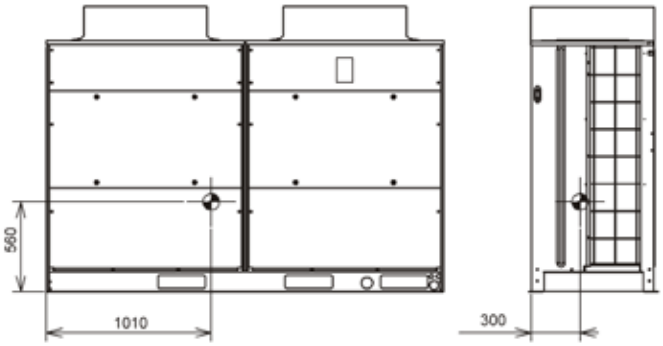


◆ **Center of gravity for FSN(1)(E) (cont.)**

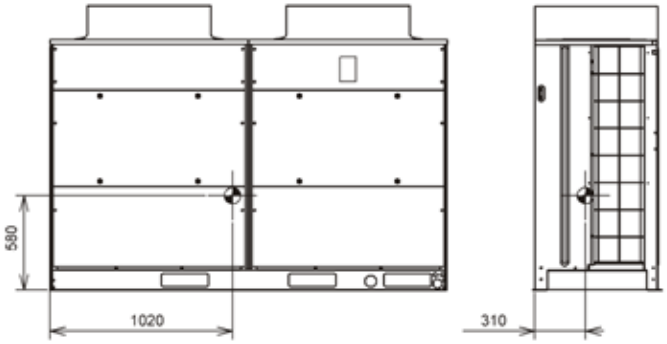
Models: RAS-18/20FSN1



Models: RAS-24FSN1

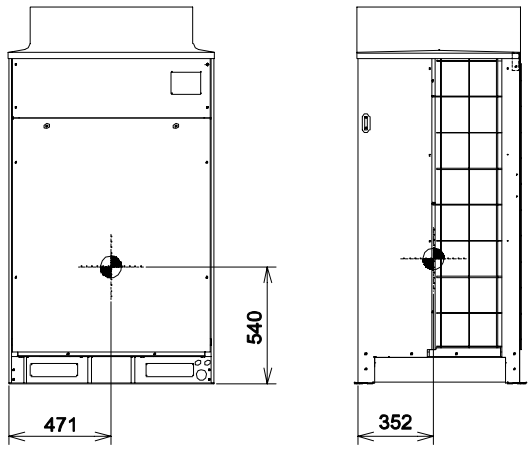


Models: RAS-28/32FSN1

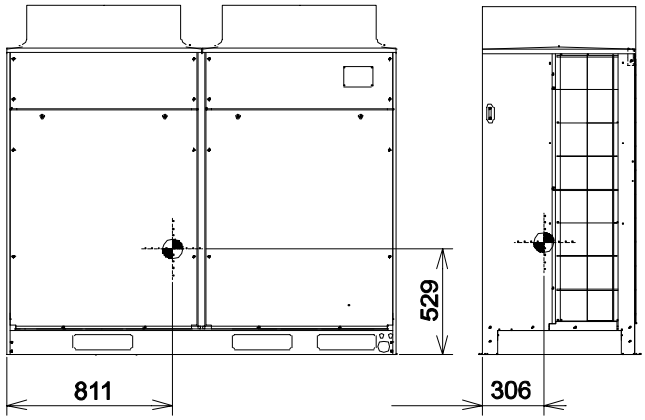


4.12.2. Center of gravity for FXN(E)

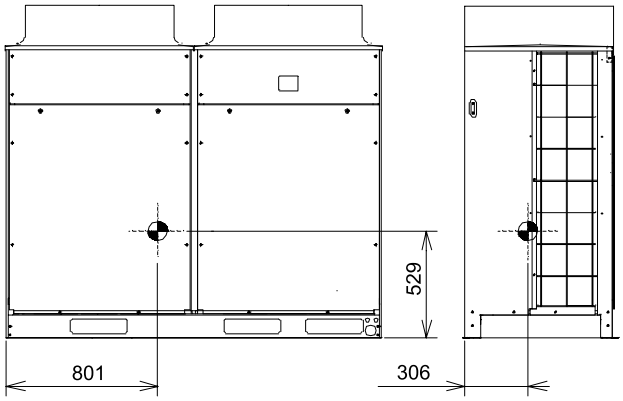
Models: RAS-8/10/12FXN(E)



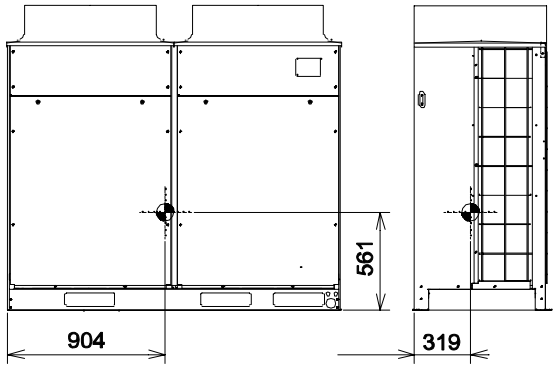
Models: RAS-16FXN



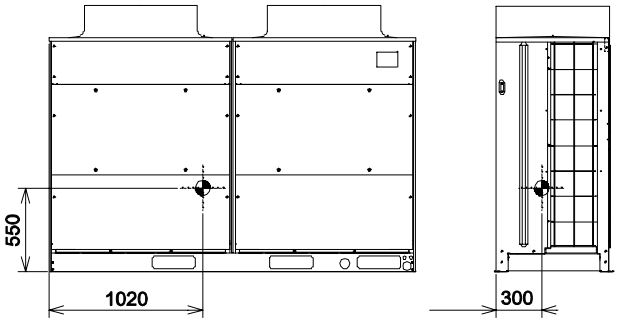
Models: RAS-18FXN



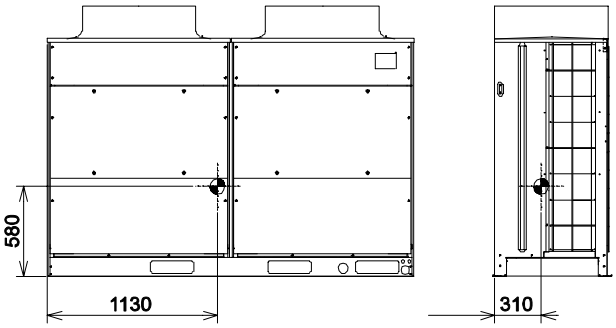
Models: RAS-20FXN



Models: RAS-24FXN



Models: RAS-28/30/32FXN



5. Working range

This chapter shows the working range of the new Hitachi SET FREE FSN(1)(E)/FXN(E)/FSVNE series.

Contents

5.1. Power supply

Operating voltage	90% to 110% of the nominal voltage
Voltage imbalance	Within a 3% deviation from each voltage at the main terminal of the outdoor unit
Starting voltage	Higher than 85% of the nominal voltage

Following Council Directive 89/336/EEC and its amendments 92/31/EEC and 93/68/EEC, relating to electromagnetic compatibility, the following table indicates maximum permissible system impedance Z_{max} at the interface point of the user's power supply, in accordance with EN61000-3-11.

MODEL	Z_{max} (Ω)	
	FSN(E) FXN(E)	FSN(1)(E)
RAS-8FSN1(E)/FXN(E)	0,17	-
RAS-10FSN1(E)/FXN(E)	0,16	-
RAS-12FSN1(E)/FXN(E)	0,16	-
RAS-14FSN1	0,16	0.16
RAS-16FSN1/FXN	0,15	0.16
RAS-18FSN1/FXN	0,14	0.12
RAS-20FSN1/FXN	0,13	0.12
RAS-24FSN1/FXN	0,12	0.12
RAS-28FSN1	0,11	0.11
RAS-30FXN	0,10	0.10
RAS-32FSN1/FXN	0,10	0.09
RAS-36FSN	0,09	
RAS-42FSN	0,08	
RAS-3FSVNE	0,35	
RAS-4FSVNE	0,27	
RAS-5FSVNE	0,26	

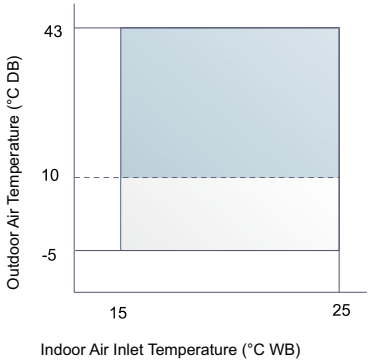
5.2. Temperature range

The temperature range is indicated in the following table:

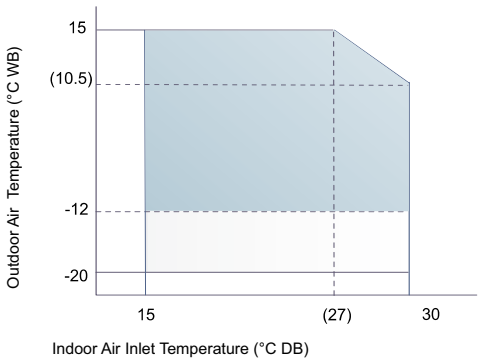
		Cooling Operation	Heating operation
Indoor temperature	Minimum	21 °C DB/15 °C WB	15 °C DB
	Maximum	32 °C DB/25 °C WB	27 °C DB
Outdoor temperature	Minimum	–5 °C DB (*)	–20 °C WB (**)
	Maximum	43°C DB	15 °C WB

Temperature Range Diagram:

Cooling Operation



Heating operation



NOTES:

(*) 10 °C DB ~ -5 °C DB, Operation Control Range

(**) -12 °C WB ~ -20 °C WB, Operation Control Range

DB: dry bulb; WB: wet bulb

Operation control range

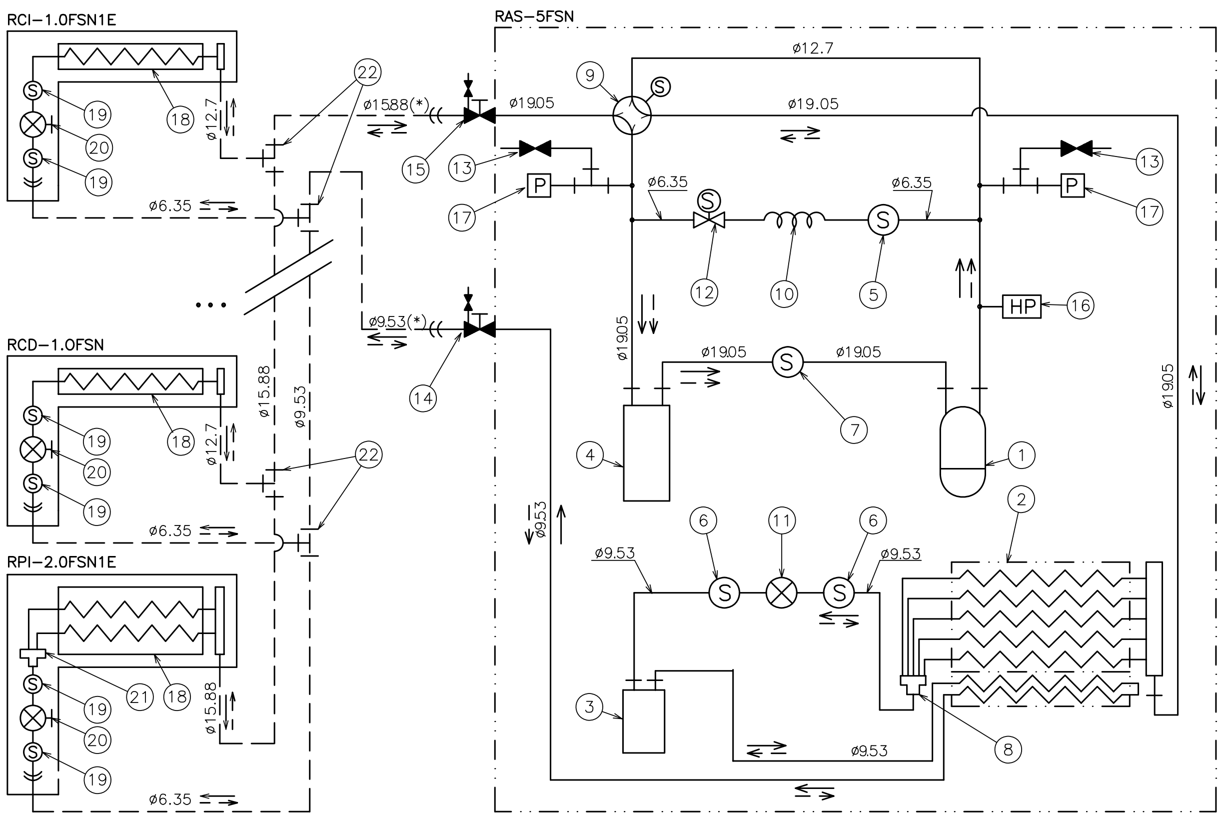
6. Refrigerant cycle

This chapter shows the refrigerant cycle for each unit of the Hitachi SET FREE FSN(1)(E)/FXN(E)/FSVNE series and accessories.

Contents

6.1. FSN(1)(E) Units

6.1.1. RAS-5FSN

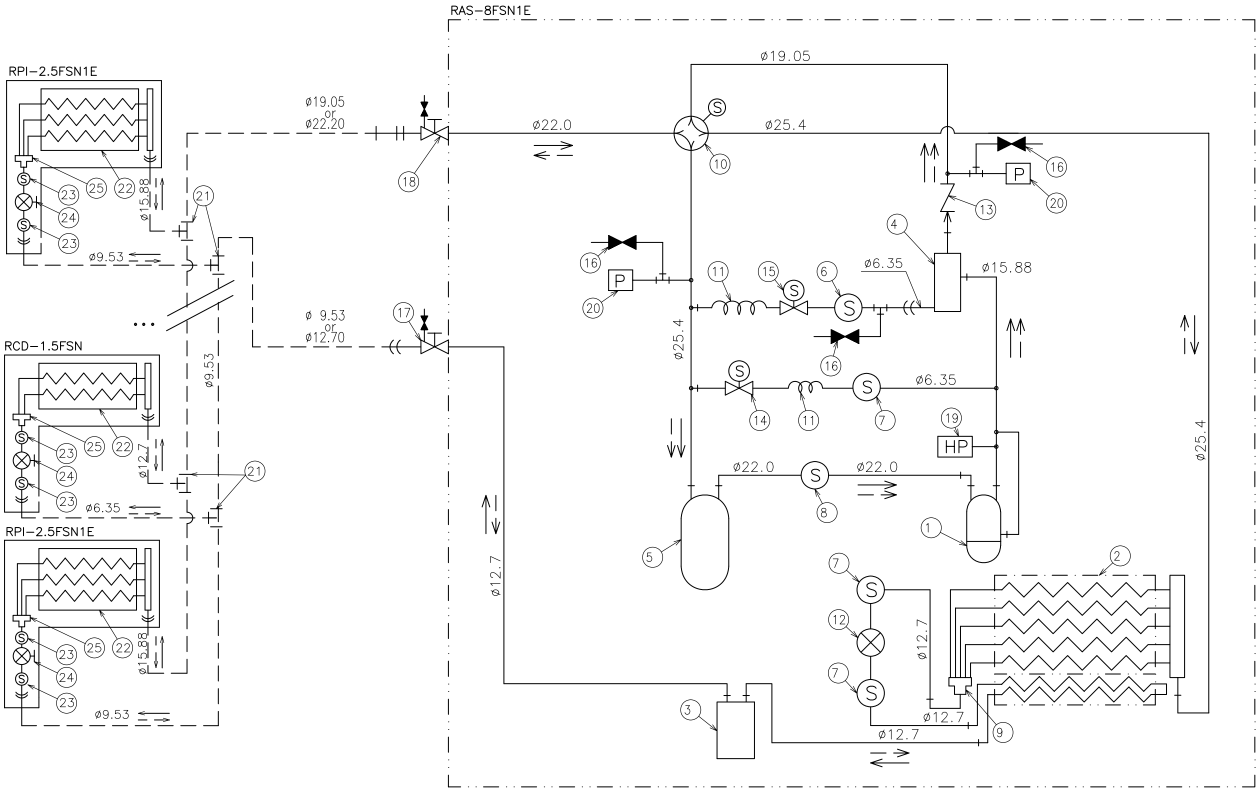


						R410A	4.15 MPa
Refrigerant flow for cooling	Refrigerant flow for heating	Refrigerant piping in the installation	Connection with flare nut	Flange connection	Brazing connection	Refrigerant :	Airtight test pressure

(*) If the equivalent piping length is more than 100 m, see chapter 7 (Piping and Refrigerant Charge).

no	Item	no	Item	no	Item
1	Compressor	9	4-way Valve	17	Sensor for Refrigerant Pressure
2	Heat exchanger	10	Capillary tube	18	Heat Exchanger Indoor
3	Receiver	11	Expansion valve	19	Strainer Indoor
4	Accumulator	12	Solenoid Valve (Gas Bypass)	20	Expansion Valve Indoor
5	Filter (1/4)	13	Check joint	21	Distributor Indoor
6	Filter (3/8)	14	Stop Valve for liquid line	22	Multi-Kit E-102SN
7	Filter (3/4)	15	Stop Valve for gas line		
8	Distributor	16	High-Pressure Switch for Protection		

6.1.2. RAS-8FSN1E

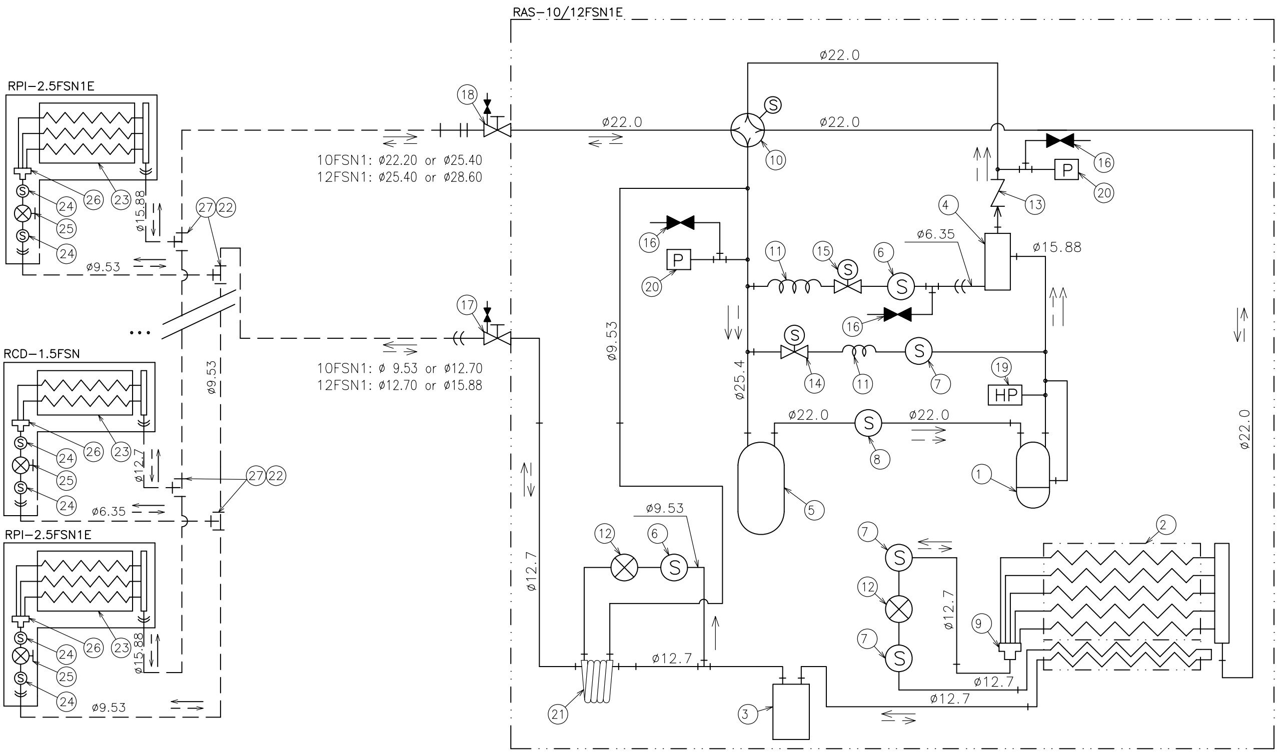


						R410A	4.15 MPa
Refrigerant flow for cooling	Refrigerant flow for heating	Refrigerant piping in the installation	Connection with flare nut	Flange connection	Brazing connection	Refrigerant :	Airtight test pressure

(*) If the equivalent piping length is more than 100 m, see chapter 7 (Piping and Refrigerant Charge).

no	Item	no	Item	no	Item
1	Compressor	10	4-way Valve	19	High-Pressure Switch for Protection
2	Heat exchanger	11	Capillary tube	20	Sensor for Refrigerant Pressure
3	Receiver	12	Expansion valve	21	Multi-Kit E-102SN
4	Oil separator	13	Check valve	22	Heat Exchanger Indoor
5	Accumulator	14	Solenoid Valve (Gas Bypass)	23	Strainer Indoor
6	Filter (3/8)	15	Solenoid Valve for Oil Return	24	Expansion Valve Indoor
7	Filter (1/2)	16	Check joint	25	Distributor Indoor
8	Filter (7/8)	17	Stop Valve for liquid line		
9	Distributor	18	Stop Valve for gas line		

6.1.3. RAS-10/12FSN1E

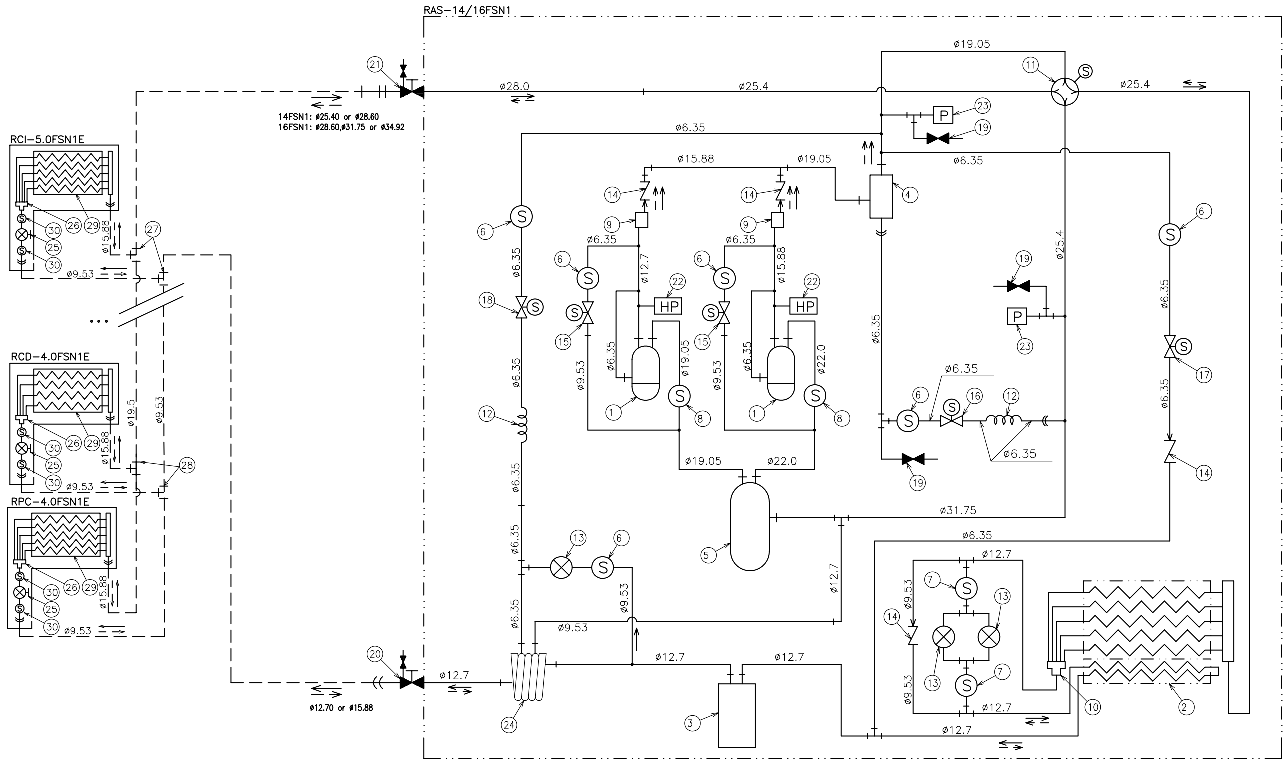


						R410A	4.15 MPa
Refrigerant flow for cooling	Refrigerant flow for heating	Refrigerant piping in the installation	Connection with flare nut	Flange connection	Brazing connection	Refrigerant :	Airtight test pressure

(*) If the equivalent piping length is more than 100 m, see chapter 7 (Piping and Refrigerant Charge).

no	Item	no	Item	no	Item
1	Compressor	11	Capillary tube	21	Double fin tube Hex
2	Heat exchanger	12	Expansion valve	22	Multi-Kit E-162SN
3	Receiver	13	Check valve	23	Heat Exchanger Indoor
4	Oil separator	14	Solenoid Valve (Gas Bypass)	24	Strainer Indoor
5	Accumulator	15	Solenoid Valve for Oil Return	25	Expansion Valve Indoor
6	Filter (3/8)	16	Check joint	26	Distributor Indoor
7	Filter (1/2)	17	Stop Valve for liquid line	27	Multi-Kit E-102SN
8	Filter (7/8)	18	Stop Valve for gas line		
9	Distributor	19	High-Pressure Switch for Protection		
10	4-way Valve	20	Sensor for Refrigerant Pressure		

6.1.4. RAS-14/16FSN1

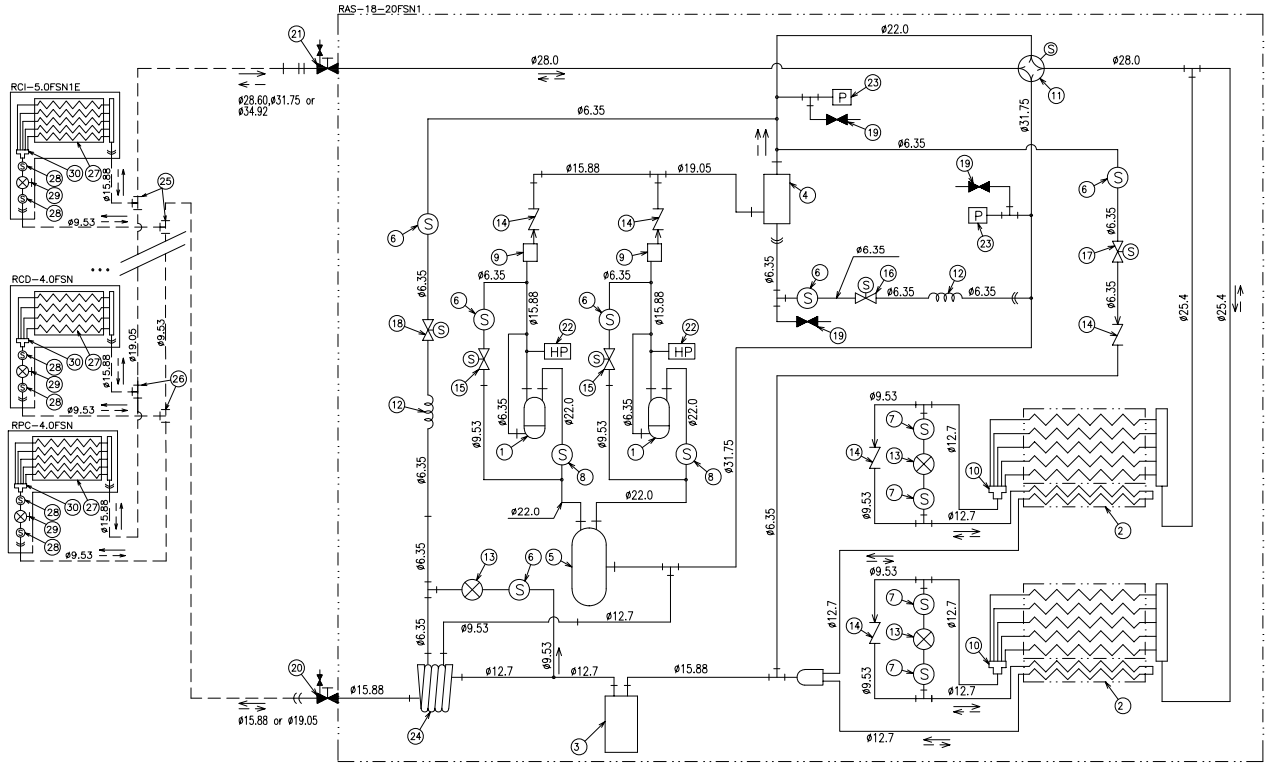


						R410A	4.15 MPa
Refrigerant flow for cooling	Refrigerant flow for heating	Refrigerant piping in the installation	Connection with flare nut	Flange connection	Brazing connection	Refrigerant :	Airtight test pressure

(*) If the equivalent piping length is more than 100 m, see chapter 7 (Piping and Refrigerant Charge).

no	Item	no	Item	no	Item
1	Compressor	11	4-way Valve	21	Stop Valve for gas line
2	Heat exchanger	12	Capillary tube	22	High-Pressure Switch for Protection
3	Receiver	13	Expansion valve	23	Sensor for Refrigerant Pressure
4	Oil separator	14	Check valve	24	Double fin tube Hex
5	Accumulator	15	Solenoid Valve (Gas Bypass)	25	Expansion Valve Indoor
6	Filter (1/4)	16	Solenoid Valve for Oil Return	26	Distributor Indoor
7	Filter (1/2)	17	Solenoid Valve for Bypass	27	Multi-Kit E-162SN
8	Filter (3/4)	18	Solenoid Valve for Bypass	28	Multi-Kit E-102SN
9	Silencer	19	Check joint	29	Heat Exchanger Indoor
10	Distributor	20	Stop Valve for liquid line	30	Strainer Indoor

6.1.5. RAS-18/20FSN1



Refrigerant flow for cooling	Refrigerant flow for heating	Refrigerant piping in the installation	Connection with flare nut	Flange connection	Brazing connection	Refrigerant : R410A	Airtight test pressure 4.15 MPa

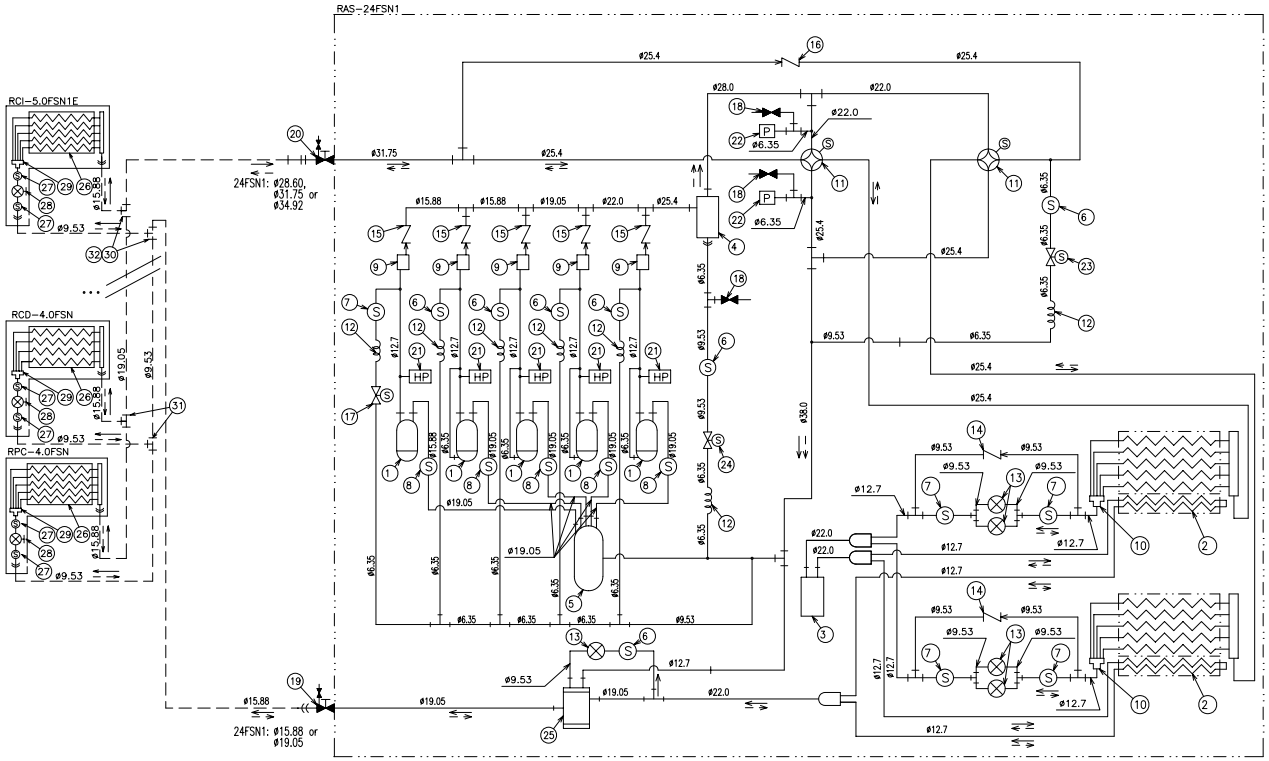
(*) If the equivalent piping length is more than 100 m, see chapter 7 (Piping and Refrigerant Charge).

no	Item
1	Compressor
2	Heat exchanger
3	Receiver
4	Oil separator
5	Accumulator
6	Filter (1/4)
7	Filter (1/2)
8	Filter (3/4)
9	Silencer
10	Distributor
11	4-way Valve

no	Item
12	Capillary tube
13	Expansion valve
14	Check valve
15	Solenoid Valve (Gas Bypass)
16	Solenoid Valve for Oil Return
17	Solenoid Valve for Bypass
18	Solenoid Valve for Bypass
19	Check joint
20	Stop Valve for liquid line
21	Stop Valve for gas line
22	High-Pressure Switch for Protection

no	Item
23	Sensor for Refrigerant Pressure
24	Double fin tube Hex
25	Multi-Kit E-242SN (RAS-18FSN1) Multi-Kit E-302SN (RAS-20FSN1)
26	Multi-Kit E-102SN
27	Heat Exchanger Indoor
28	Strainer Indoor
29	Expansion Valve Indoor
30	Distributor Indoor

6.1.7. RAS-24FSN1

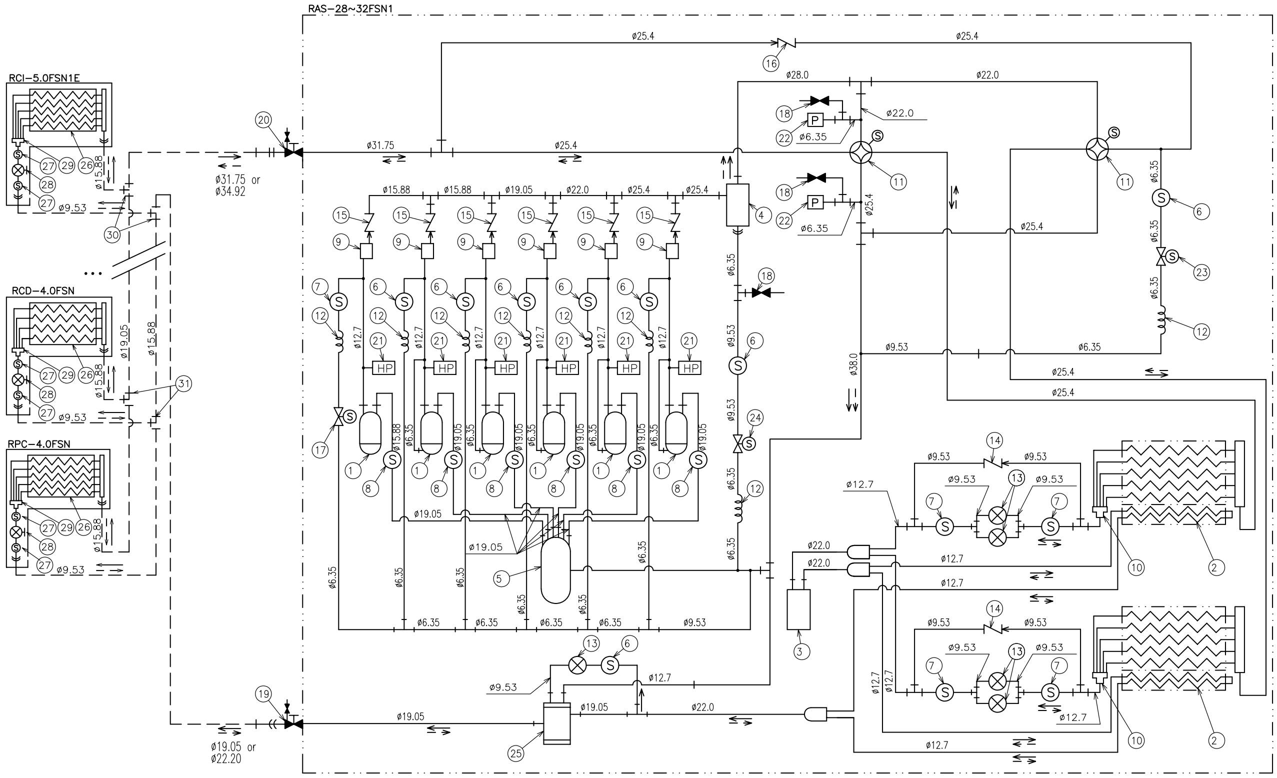


→	-•-•-	———				R410A	4.15 MPa
Refrigerant flow for cooling	Refrigerant flow for heating	Refrigerant piping in the installation	Connection with flare nut	Flange connection	Brazing connection	Refrigerant :	Airtight test pressure

(*) If the equivalent piping length is more than 100 m, see chapter 7 (Piping and Refrigerant Charge).

no	Item	no	Item	no	Item
1	Compressor	12	Capillary tube	23	Solenoid valve (refrigerant)
2	Heat exchanger	13	Expansion valve	24	Solenoid Valve for Oil Return
3	Receiver	14	Check valve (3/8)	25	Plate Heat Exchanger
4	Oil separator	15	Check valve (1/2)	26	Heat Exchanger Indoor
5	Accumulator	16	Check valve (1/1)	27	Strainer Indoor
6	Filter (3/8)	17	Solenoid Valve (Gas Bypass)	28	Expansion Valve Indoor
7	Filter (1/2)	18	Check joint	29	Distributor Indoor
8	Filter (3/4)	19	Stop Valve for liquid line	30	Kit de conexiones múltiples E-242SN
9	Silencer	20	Stop Valve for gas line	31	Multi-Kit E-102SN
10	Distributor	21	High-Pressure Switch for Protection	32	Multi-Kit E-302SN
11	4-way Valve	22	Sensor for Refrigerant Pressure		

6.1.8. RAS-28~32FSN1

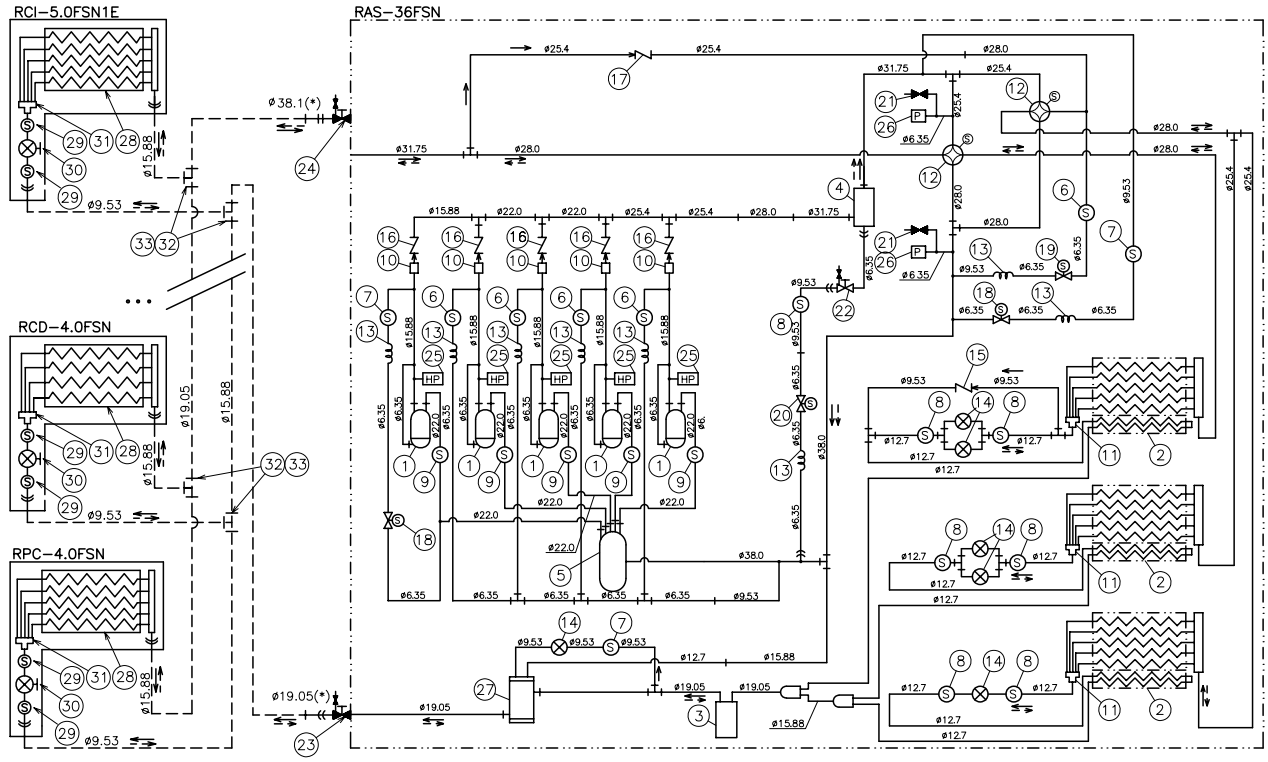


						R410A	4.15 MPa
Refrigerant flow for cooling	Refrigerant flow for heating	Refrigerant piping in the installation	Connection with flare nut	Flange connection	Brazing connection	Refrigerant :	Airtight test pressure

(*) If the equivalent piping length is more than 100 m, see chapter 7 (Piping and Refrigerant Charge).

no	Item	no	Item	no	Item
1	Compressor	12	Capillary tube	23	Solenoid valve (refrigerant)
2	Heat exchanger	13	Expansion valve	24	Solenoid Valve for Oil Return
3	Receiver	14	Check valve (3/8)	25	Plate Heat Exchanger
4	Oil separator	15	Check valve (1/2)	26	Heat Exchanger Indoor
5	Accumulator	16	Check valve (1/1)	27	Strainer Indoor
6	Filter (3/8)	17	Solenoid Valve (Gas Bypass)	28	Expansion Valve Indoor
7	Filter (1/2)	18	Check joint	29	Distributor Indoor
8	Filter (3/4)	19	Stop Valve for liquid line	30	Multi-Kit E-302SN
9	Silencer	20	Stop valve for gas line	31	Multi-Kit E-102SN
10	Distributor	21	High-Pressure Switch for Protection		
11	4-way Valve	22	Sensor for Refrigerant Pressure		

6.1.9. RAS-36FSN

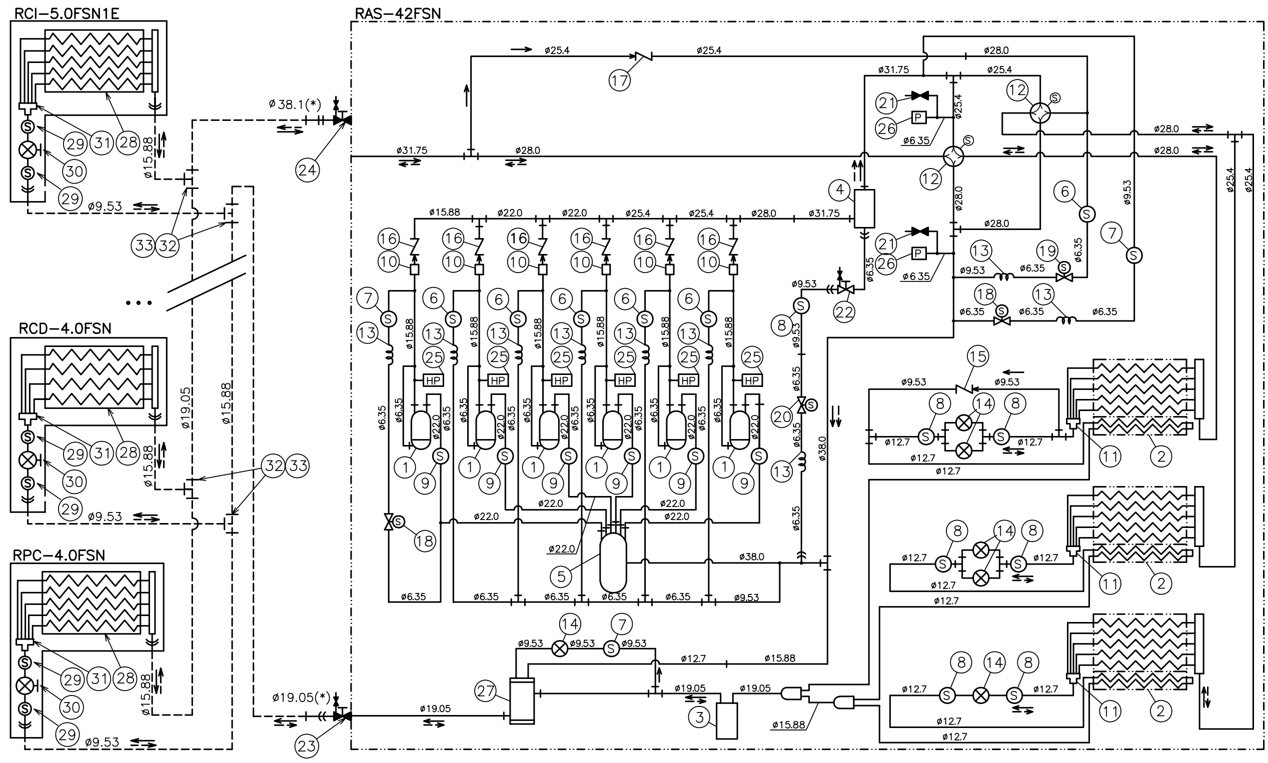


Refrigerant flow for cooling	Refrigerant flow for heating	Refrigerant piping in the installation	Connection with flare nut	Flange connection	Brazing connection	Refrigerant : R410A	Airtight test pressure 4.15 MPa

(*) If the equivalent piping length is more than 100 m, see chapter 7 (Piping and Refrigerant Charge).

no	Item	no	Item	no	Item
1	Compressor	12	4-way Valve	23	Stop Valve for liquid line
2	Heat exchanger	13	Capillary tube	24	Stop Valve for gas line
3	Receiver	14	Expansion valve	25	High-Pressure Switch for Protection
4	Oil separator	15	Check valve (3/8)	26	Sensor for Refrigerant Pressure
5	Accumulator	16	Check valve (1/2)	27	Plate Heat Exchanger
6	Filter (1/4)	17	Check valve (1/1)	28	Heat Exchanger Indoor
7	Filter (3/8)	18	Solenoid Valve (Gas Bypass)	29	Strainer Indoor
8	Filter (1/2)	19	Válvula de solenoide para refrigerante	30	Expansion valve
9	Filter (7/8)	20	Solenoid Valve for Oil Return	31	Distributor Indoor
10	Silencer	21	Check joint	32	Multi-Kit E-302SN
11	Distributor	22	Solenoid Valve for Oil Return	33	Multi-Kit E-102SN

6.1.10. RAS-42FSN



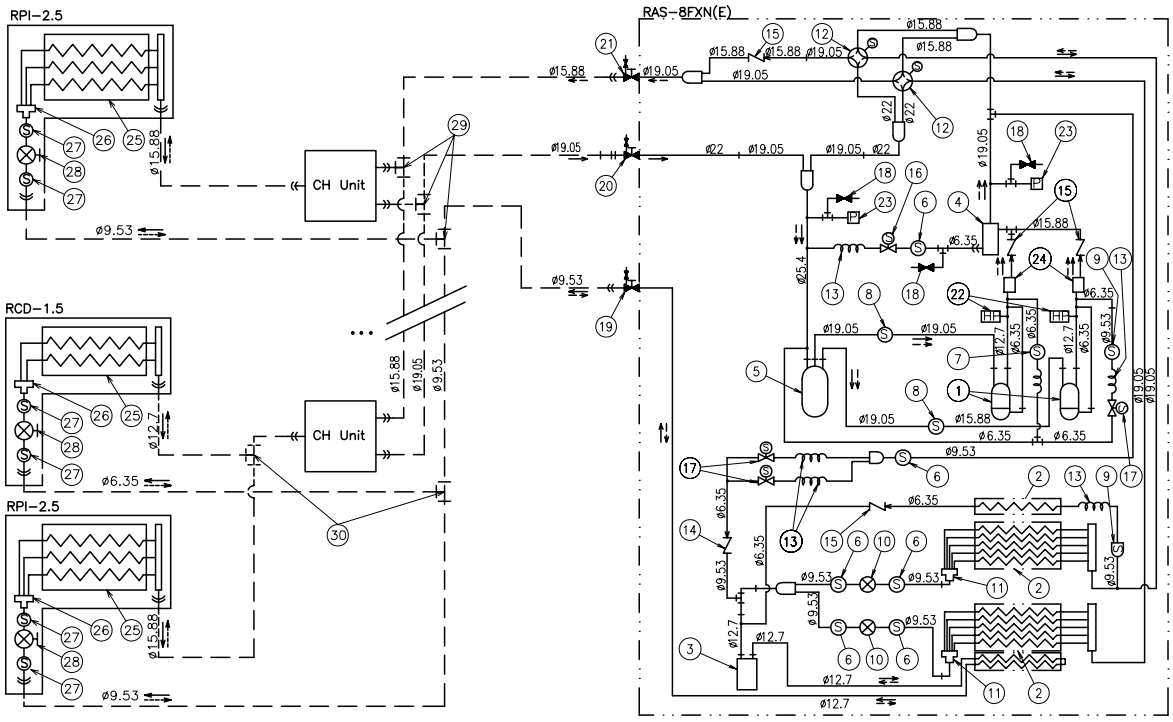
						R410A	4.15 MPa
Refrigerant flow for cooling	Refrigerant flow for heating	Refrigerant piping in the installation	Connection with flare nut	Flange connection	Brazing connection	Refrigerant :	Airtight test pressure

(*) If the equivalent piping length is more than 100 m, see chapter 7 (Piping and Refrigerant Charge).

no	Item	no	Item	no	Item
1	Compressor	12	4-way Valve	23	Stop Valve for liquid line
2	Heat exchanger	13	Capillary tube	24	Stop Valve for gas line
3	Receiver	14	Expansion valve	25	High-Pressure Switch for Protection
4	Oil separator	15	Check valve (3/8)	26	Sensor for Refrigerant Pressure
5	Accumulator	16	Check valve (1/2)	27	Plate Heat Exchanger
6	Filter (1/4)	17	Check valve (1/1)	28	Heat exchanger
7	Filter (3/8)	18	Solenoid Valve (Gas Bypass)	29	Strainer Indoor
8	Filter (1/2)	19	Válvula de solenoide para refrigerante	30	Expansion valve
9	Filter (7/8)	20	Solenoid Valve for Oil Return	31	Distributor
10	Silencer	21	Check joint	32	Multi-Kit E-302SN
11	Distributor	22	Solenoid Valve for Oil Return	33	Multi-Kit E-102SN

6.2. FXN(E) Units

6.2.1. RAS-8FXNE

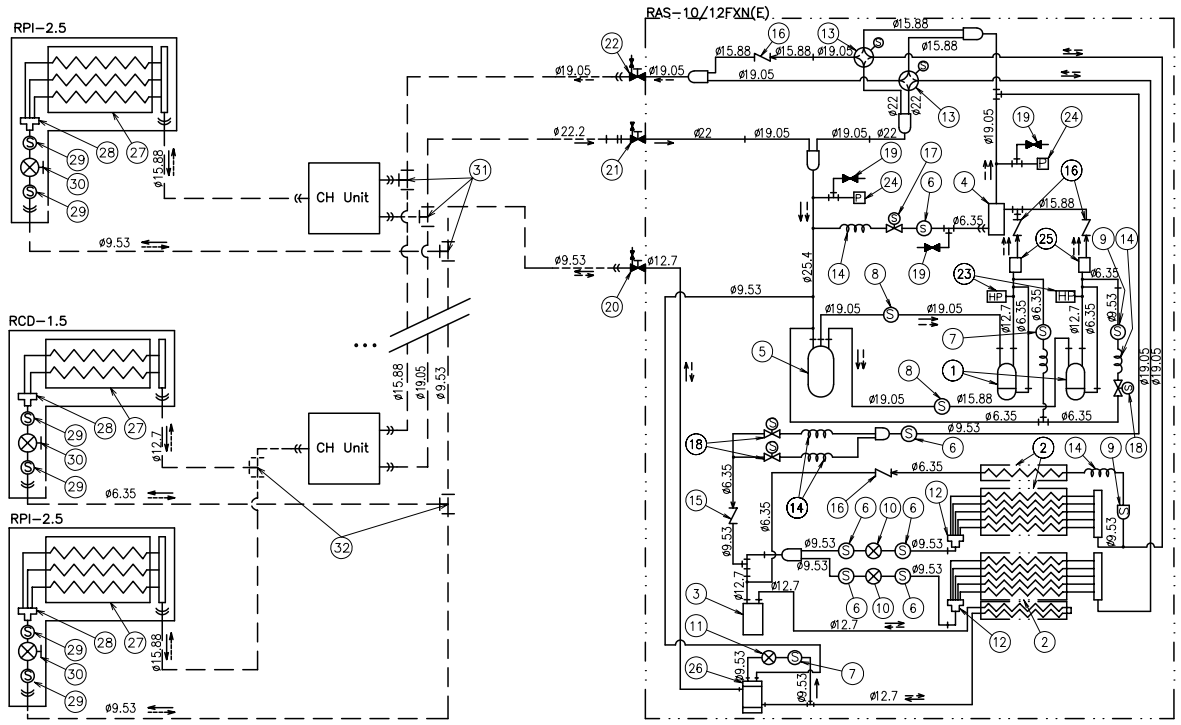


Refrigerant flow for cooling	Refrigerant flow for heating	Refrigerant piping in the installation	Connection with flare nut	Flange connection	Brazing connection	R410A Refrigerant :	4.15 MPa Airtight test pressure

(*) If the equivalent piping length is more than 100 m, see chapter 7 (Piping and Refrigerant Charge).

no	Item	no	Item	no	Item
1	Compressor	11	Distributor	21	Stop Valve for gas (High) Line
2	Heat exchanger	12	4-way Valve	22	High-Pressure Switch for Protection
3	Receiver	13	Capillary tube	23	Sensor for Refrigerant Protection
4	Oil separator	14	Check valve (3/8)	24	Silencer
5	Accumulator	15	Válvula de retención (5/8), (1/4)	25	Heat Exchanger Indoor
6	Filter (3/8)	16	Solenoid Valve for Oil Return	26	Distributor Indoor
7	Filter (1/4)	17	Solenoid Valve (Gas Bypass)	27	Strainer Indoor
8	Filter (3/4)	18	Check joint	28	Expansion Valve Indoor
9	Filtro (-)	19	Stop Valve for liquid line	29	Multi-Kit E-102XN
10	Expansion valve	20	Stop Valve for gas line (Low)	30	Multi-Kit E-102SN

6.2.2. RAS-10/12FXNE

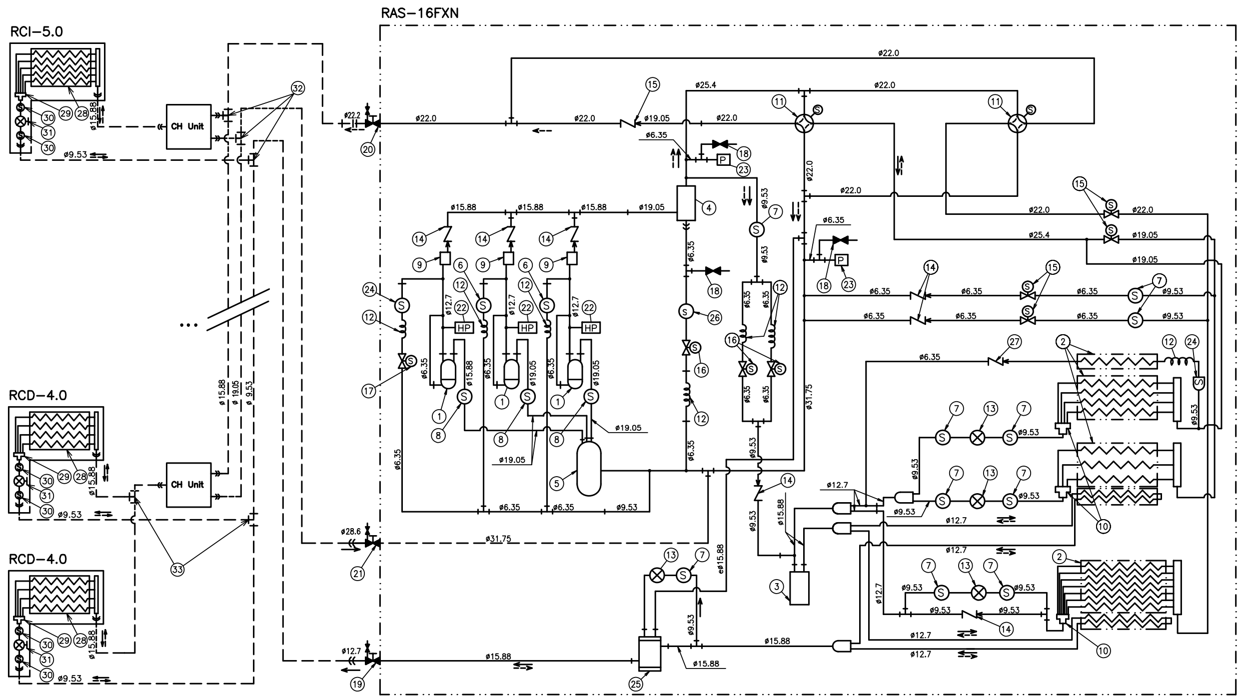


→	-•←- -	___	—)—	—‖—	—|—	R410A	4.15 MPa
Refrigerant flow for cooling	Refrigerant flow for heating	Refrigerant piping in the installation	Connection with flare nut	Flange connection	Brazing connection	Refrigerant :	Airtight test pressure

(*) If the equivalent piping length is more than 100 m, see chapter 7 (Piping and Refrigerant Charge).

no	Item	no	Item	no	Item
1	Compressor	12	Distributor	23	High-Pressure Switch for Protection
2	Heat exchanger	13	4-way Valve	24	Sensor for Refrigerant Pressure
3	Receiver	14	Capillary tube	25	Silencer
4	Oil separator	15	Check valve (3/8)	26	Plate Heat Exchanger
5	Accumulator	16	Válvula de retención (5/8), (1/4)	27	Heat Exchanger Indoor
6	Filter (3/8)	17	Solenoid Valve for Oil Return	28	Distributor Indoor
7	Filter (1/4)	18	Solenoid Valve (Gas Bypass)	29	Expansion Valve Indoor
8	Filter (3/4)	19	Check joint	30	Strainer Indoor
9	Filtro (-)	20	Stop Valve for liquid line	31	Multi-Kit E-102XN
10	Expansion valve	21	Stop Valve for gas line (Low)	32	Multi-Kit E-102SN
11	Expansion valve	22	Stop Valve for gas (High) Line		

6.2.3. RAS-16/18FXN

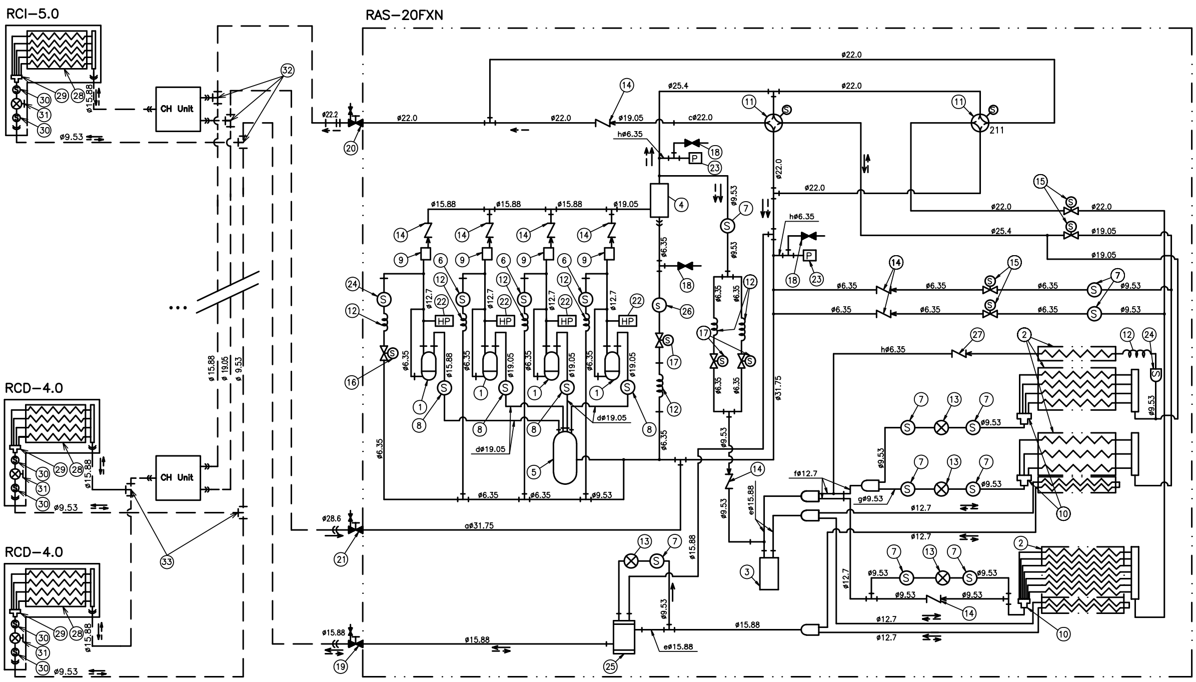


						R410A	4.15 MPa
Refrigerant flow for cooling	Refrigerant flow for heating	Refrigerant piping in the installation	Connection with flare nut	Flange connection	Brazing connection	Refrigerant :	Airtight test pressure

(*) If the equivalent piping length is more than 100 m, see chapter 7 (Piping and Refrigerant Charge).

no	Item	no	Item	no	Item
1	Compressor	12	Capillary tube	23	Sensor for Refrigerant Pressure
2	Heat exchanger	13	Expansion valve	24	Filter
3	Receiver	14	Check valve	25	Plate Heat Exchanger
4	Oil separator	15	Selenoid Valve	26	Filter
5	Accumulator	16	Solenoid Valve for Oil Return	27	Check valve
6	Filter (1/4)	17	Solenoid Valve (Gas Bypass)	28	Heat Exchanger Indoor
7	Filter (3/8)	18	Check joint	29	Distributor Indoor
8	Filter (3/4)	19	Stop Valve for liquid line	30	Expansion Valve Indoor
9	Silencer	20	Stop Valve for gas (High) Line	31	Strainer Indoor
10	Distributor	21	Stop Valve for gas line (Low)	32	Multi-Kit E-162XN
11	4-way Valve	22	High-Pressure Switch for Protection	33	Multi-Kit E-102SN

6.2.4. RAS-20FXN

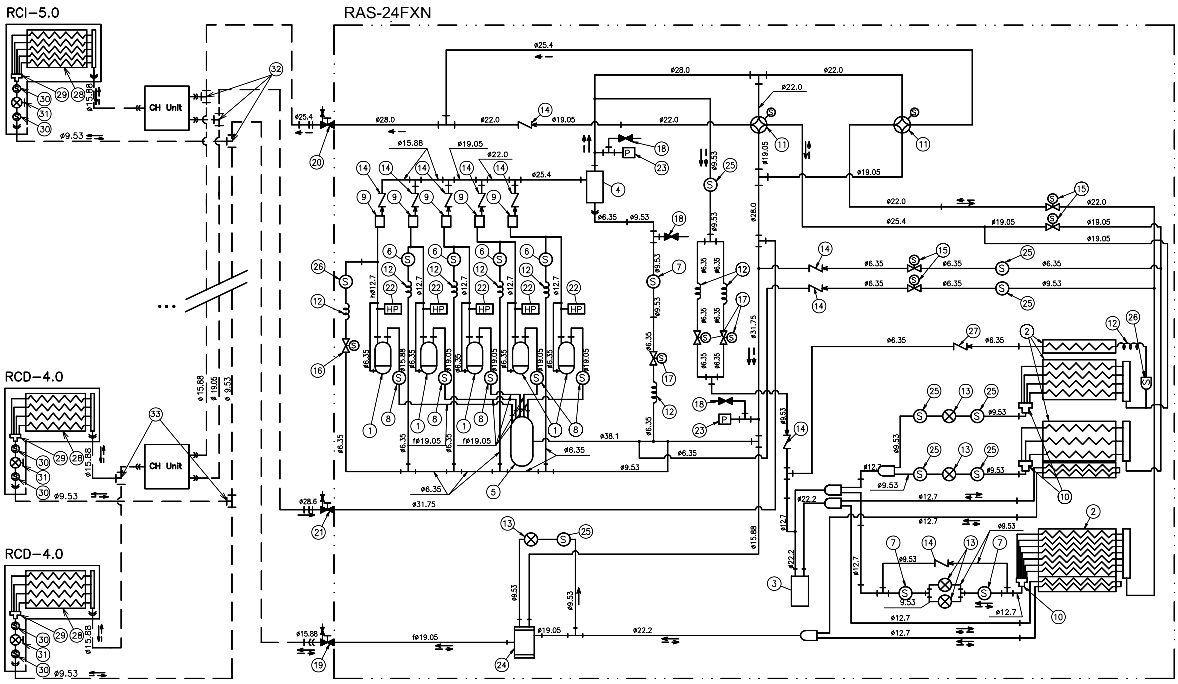


						R410A	4.15 MPa
Refrigerant flow for cooling	Refrigerant flow for heating	Refrigerant piping in the installation	Connection with flare nut	Flange connection	Brazing connection	Refrigerant :	Airtight test pressure

(*) If the equivalent piping length is more than 100 m, see chapter 7 (Piping and Refrigerant Charge).

no	Item	no	Item	no	Item
1	Compressor	12	Capillary tube	23	Sensor for Refrigerant Pressure
2	Heat exchanger	13	Expansion valve	24	Filter
3	Receiver	14	Check valve	25	Plate Heat Exchanger
4	Oil separator	15	Selenoid Valve	26	Filter
5	Accumulator	16	Solenoid Valve for Oil Return	27	Check valve
6	Filter (1/4)	17	Solenoid Valve (Gas Bypass)	28	Heat Exchanger Indoor
7	Filter (3/8)	18	Check joint	29	Distributor Indoor
8	Filter (3/4)	19	Stop Valve for liquid line	30	Strainer Indoor
9	Silencer	20	Stop Valve for gas (High) Line	31	Expansion Valve Indoor
10	Distributor	21	Stop Valve for gas line (Low)	32	Multi-Kit E-202XN
11	4-way Valve	22	High-Pressure Switch for Protection	33	Multi-Kit E-102SN

6.2.5. RAS-24FXN

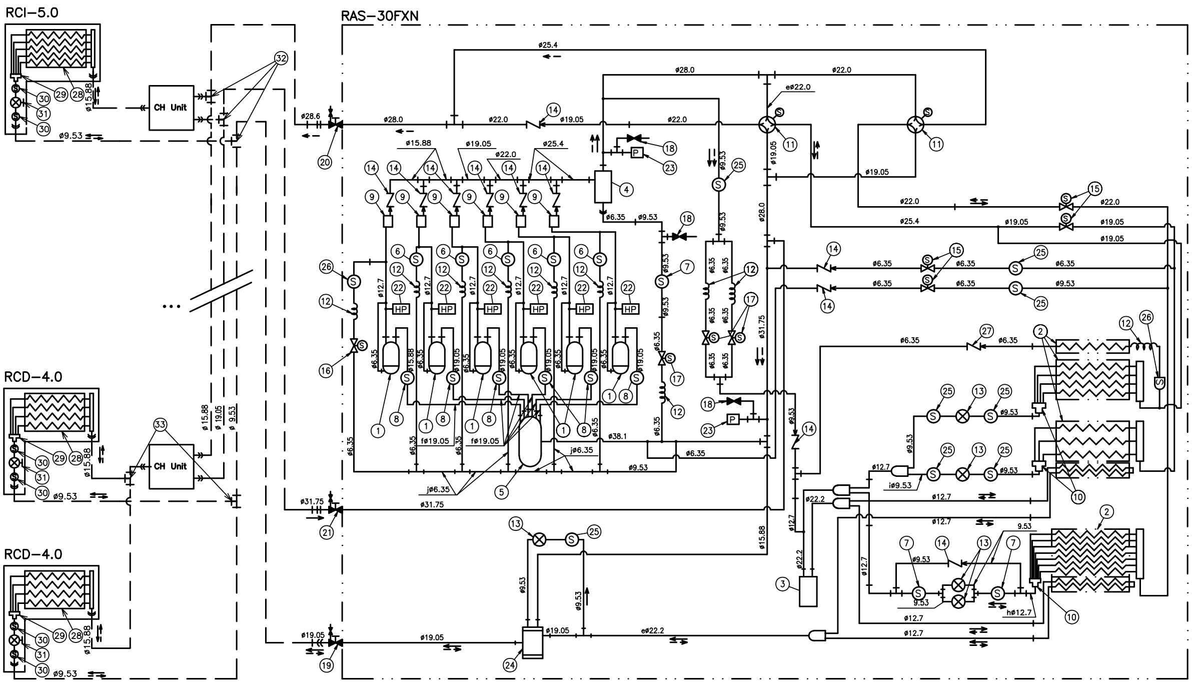


						R410A	4.15 MPa
Refrigerant flow for cooling	Refrigerant flow for heating	Refrigerant piping in the installation	Connection with flare nut	Flange connection	Brazing connection	Refrigerant :	Airtight test pressure

(*) If the equivalent piping length is more than 100 m, see chapter 7 (Piping and Refrigerant Charge).

no	Item	no	Item	no	Item
1	Compressor	12	Capillary tube	23	Sensor for Refrigerant Pressure
2	Heat exchanger	13	Expansion valve	24	Filter
3	Receiver	14	Check valve	25	Plate Heat Exchanger
4	Oil separator	15	Selenoid Valve	26	Filter
5	Accumulator	16	Solenoid Valve for Oil Return	27	Check valve
6	Filter (1/4)	17	Solenoid Valve (Gas Bypass)	28	Heat Exchanger Indoor
7	Filter (1/2)	18	Check joint	29	Distributor Indoor
8	Filter (3/4)	19	Stop Valve for liquid line	30	Strainer Indoor
9	Silencer	20	Stop Valve for gas (High) Line	31	Expansion Valve Indoor
10	Distributor	21	Stop Valve for gas line (Low)	32	Multi-Kit E-242XN
11	4-way Valve	22	High-Pressure Switch for Protection	33	Multi-Kit E-102SN

6.2.6. RAS-28~32FXN



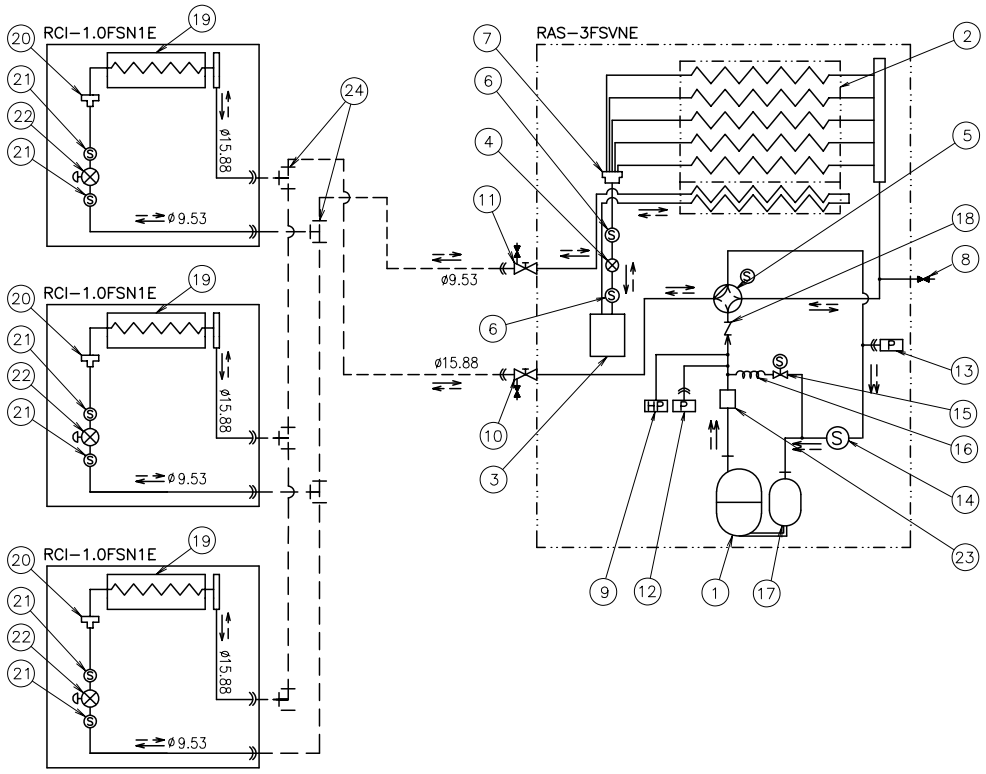
——>	<-- --	— — —	—)|—	—||—	—+—	R410A	4.15 MPa
Refrigerant flow for cooling	Refrigerant flow for heating	Refrigerant piping in the installation	Connection with flare nut	Flange connection	Brazing connection	Refrigerant :	Airtight test pressure

(*) If the equivalent piping length is more than 100 m, see chapter 7 (Piping and Refrigerant Charge).

no	Item	no	Item	no	Item
1	Compressor	12	Capillary tube	23	Sensor for Refrigerant Pressure
2	Heat exchanger	13	Expansion valve	24	Filter
3	Receiver	14	Check valve	25	Plate Heat Exchanger
4	Oil separator	15	Selenoid Valve	26	Filter
5	Accumulator	16	Solenoid Valve for Oil Return	27	Check valve
6	Filter (1/4)	17	Solenoid Valve (Gas Bypass)	28	Heat Exchanger Indoor
7	Filter (1/2)	18	Check joint	29	Distributor Indoor
8	Filter (3/4)	19	Stop Valve for liquid line	30	Strainer Indoor
9	Silencer	20	Stop Valve for gas (High) Line	31	Expansion Valve Indoor
10	Distributor	21	Stop Valve for gas line (Low)	32	Multi-Kit E-322XN
11	4-way Valve	22	High-Pressure Switch for Protection	33	Multi-Kit E-102SN

6.3. FSVNE Units

6.3.1. RAS-3FSVNE



Refrigerant flow for cooling	Refrigerant flow for heating	Refrigerant piping in the installation	Connection with flare nut	Flange connection	Brazing connection	Refrigerant : R410A	Airtight test pressure 4.15 MPa

(*) If the equivalent piping length is more than 100 m, see chapter 7 (Piping and Refrigerant Charge).

no	Item
1	Compressor
2	Heat exchanger
3	Receiver
4	Expansion valve
5	4-way Valve
6	Filter
7	Distributor
8	Check joint

no	Item
9	High-Pressure Switch for Protection
10	Stop Valve for gas line
11	Stop Valve for liquid line
12	Low pressure Sensor
13	High pressure sensor
14	Filter
15	Solenoid Valve (Gas Bypass)
16	Capillary tube

no	Item
17	Accumulator
18	Check valve
19	Heat Exchanger Indoor
20	Distributor Indoor
21	Strainer Indoor
22	Expansion Valve Indoor
23	Multi-Kit E-102SN