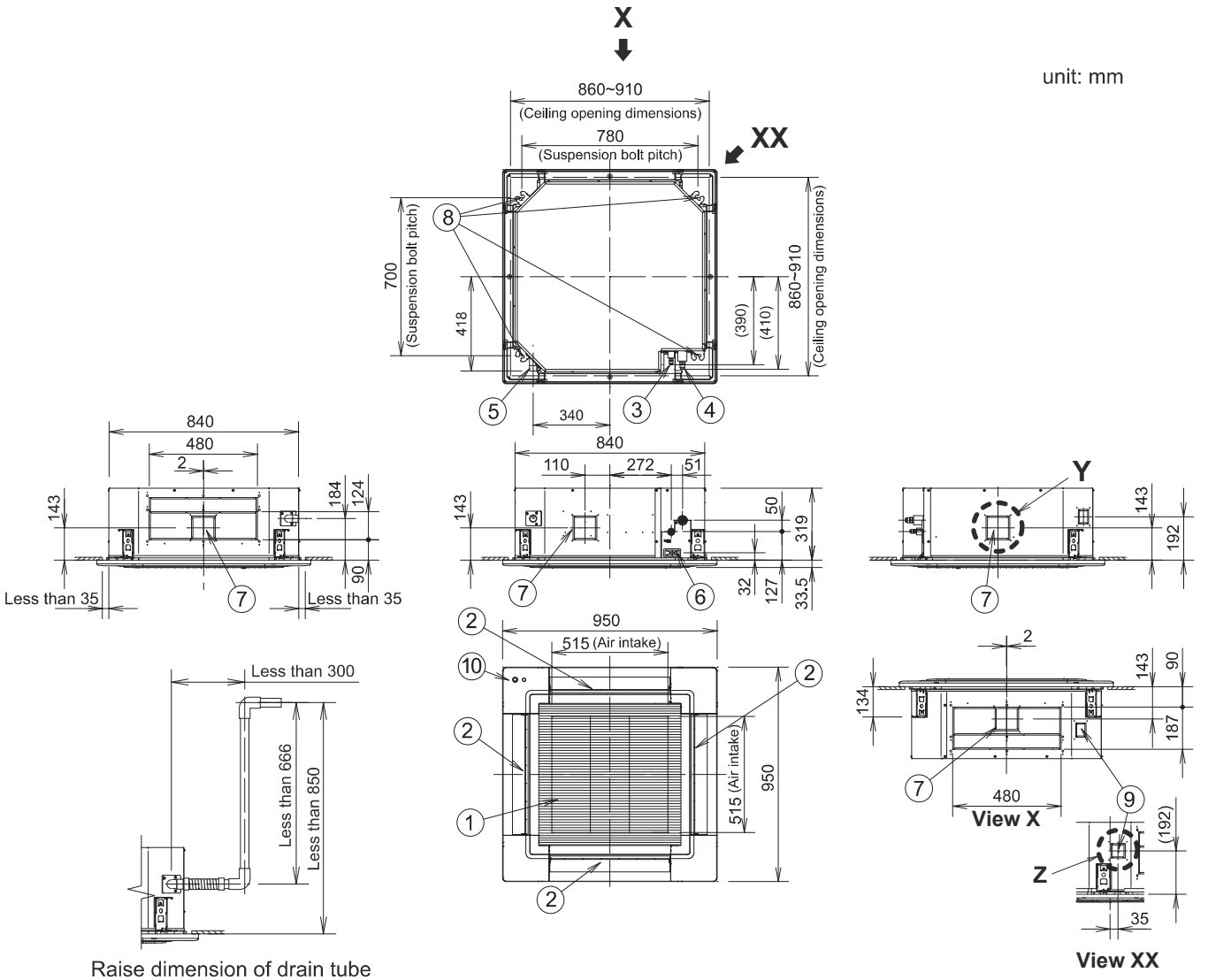
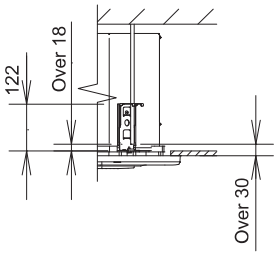
1-2-1-1. 4-Way Cassette Type S-1014PU3E

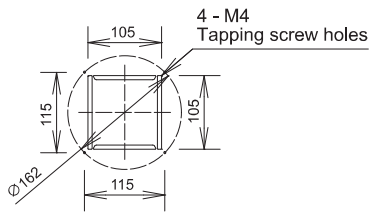
unit: mm



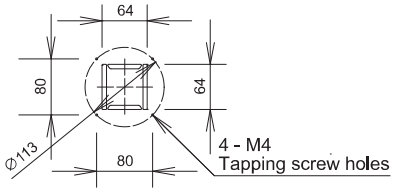
Raise dimension of drain tube

The length of the suspension bolts should be selected so that there is a gap of 30 mm or more below the lower surface of the ceiling (18 mm or more below the lower surface of the main unit), as shown in the figure at right. If the suspension bolt is too long, it will contact the ceiling panel and the unit cannot be installed.





Detailed view Y



Detailed view Z

①	Air intake
②	Discharge outlet
③	Refrigerant tubing (liquid tube) ø9.52 (flared)
④	Refrigerant tubing (gas tube) ø15.88 (flared)
⑤	Drain tube connection port VP25 (outer dia. ø32)
⑥	Power supply port
⑦	Discharge duct connection port (ø150)
⑧	Suspension bolt hole (4-12×30 elongated hole)
⑨	Fresh air intake duct connection port (ø100) *
⑩	ECONAVI sensor (Only CZ-KPU3A or CZ-KPU3AW)

* Necessary to attach duct connecting flange(field supply).

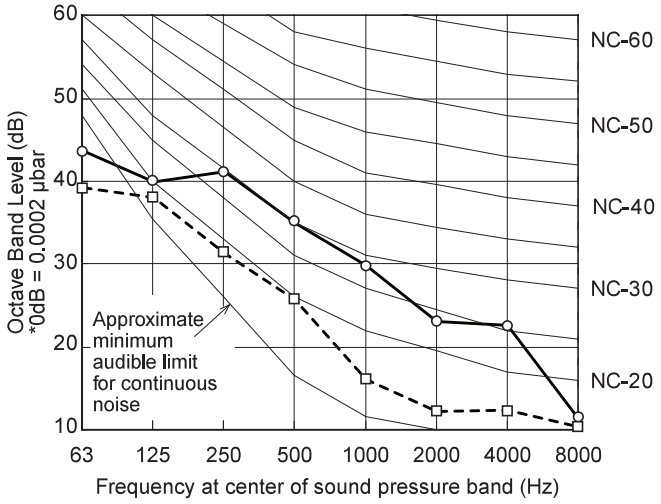
<Filter dimension>

520 x 520 x 15

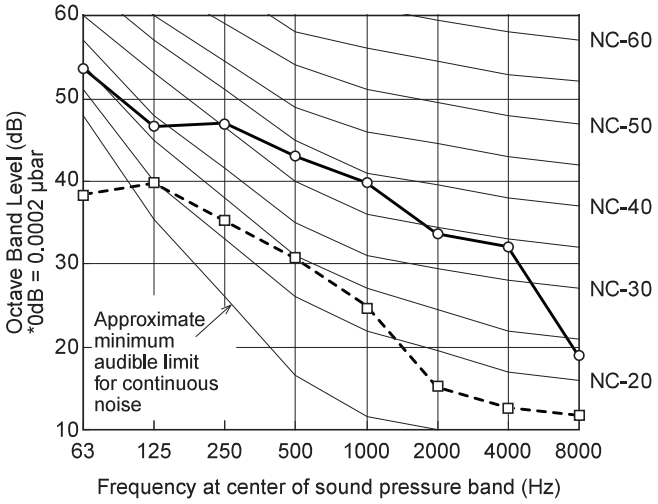
1-6-1-1. 4-Way Cassette Type

High
Low

MODEL	: S-6071PU3E (71)
SOUND LEVEL	: High 37 dB(A)
	Low 28 dB(A)
CONDITION	: Under the unit 1.5m
SOURCE	: 220-230-240V, 1 phase, 50Hz

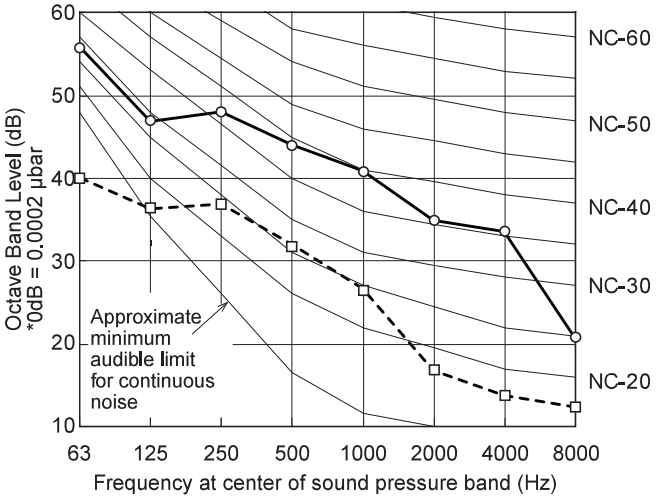


MODEL	: S-1014PU3E (100)
SOUND LEVEL	: High 45 dB(A)
	Low 32 dB(A)
CONDITION	: Under the unit 1.5m
SOURCE	: 220-230-240V, 1 phase, 50Hz

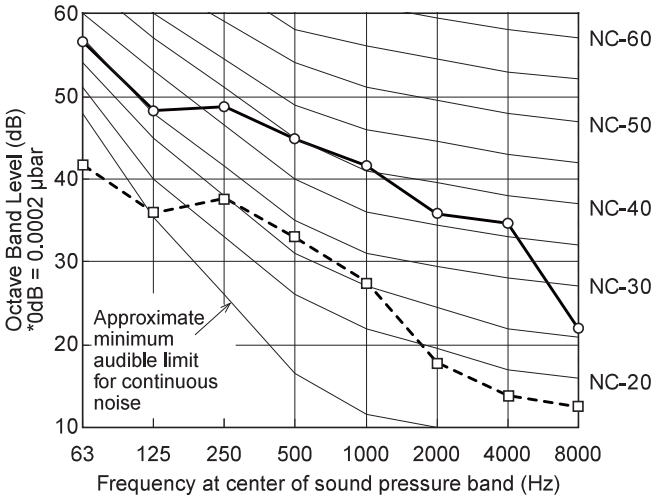


* For S-6071PU3E (71) and S-1014PU3E (100), see the Combination Table items 71 and 100 on page 20 to 22.

MODEL	: S-1014PU3E (125)
SOUND LEVEL	: High 46 dB(A)
	Low 33 dB(A)
CONDITION	: Under the unit 1.5m
SOURCE	: 220-230-240V, 1 phase, 50Hz



MODEL	: S-1014PU3E (140)
SOUND LEVEL	: High 47 dB(A)
	Low 34 dB(A)
CONDITION	: Under the unit 1.5m
SOURCE	: 220-230-240V, 1 phase, 50Hz



* For S-1014PU3E (125) and S-1014PU3E (140), see the Combination Table items 125 and 140 on page 20 to 22.

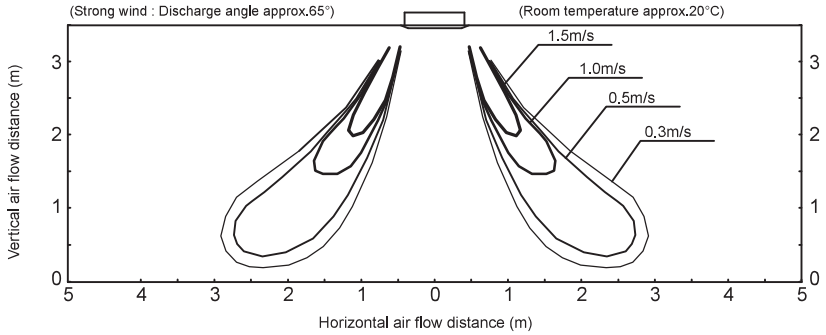
REMARKS:

1. Value obtained in the actual place where the unit is installed may be slightly higher than the values shown in this graph because of the conditions of operation, the structure of the building, the background noise and other factors.
2. The test results were obtained from an anechoic room.

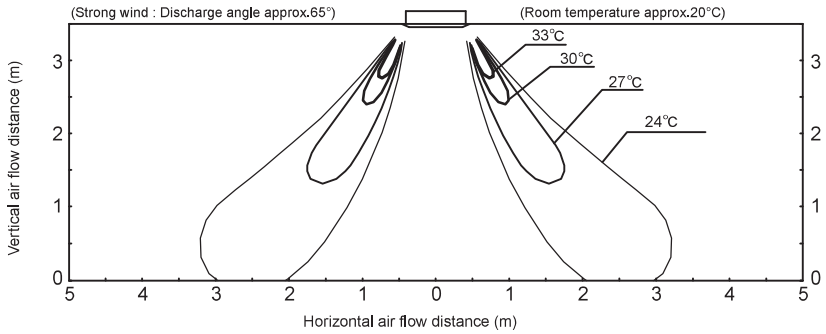
NOTE

To evaluate "Noise level" the maximum number of the measured OCTAVE BAND SOUND PRESSURE LEVEL is used.
Read the number on each BAND CENTER FREQUENCIES (horizontal axis) ranging from 63 Hz to 8000 Hz and select the maximum value (vertical axis) among them.

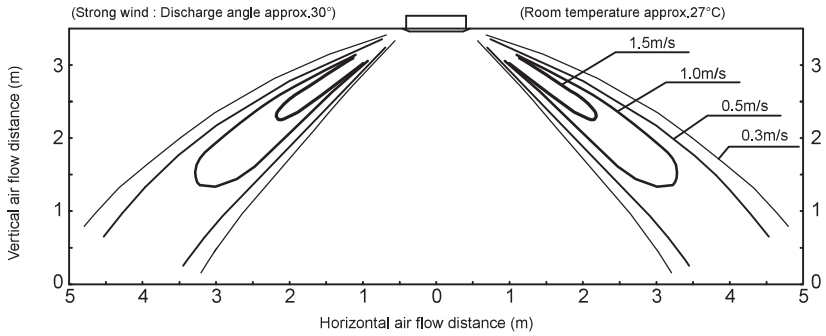
Heating : Distribution of wind velocity



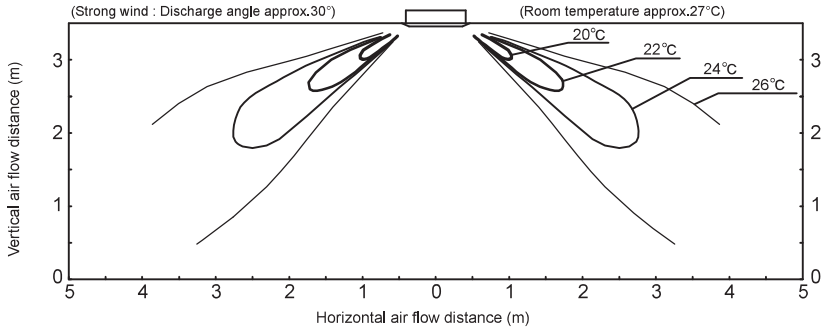
Heating : Distribution of temperature



Cooling : Distribution of wind velocity



Cooling : Distribution of temperature



1-9. Fresh Air Intake

1-9-1. Precautions Regarding External Air Intake

(1) Ventilation Load

Ensure that the design of the air-conditioner takes air-conditioning loads into consideration when external air intake is involved.

(2) Restrictions on External Air Intake

Ensure that the design conforms to the restrictions on air intake volume stipulated in accordance with the model of the indoor unit and the intake method. Consideration must also be taken to mixed air content listed in (3) below without fail.

* If the air intake volume does not satisfy the required ventilation volume, air must be fed into the room separately with the use of a total heat exchanger or a fresh air processing air-conditioner, etc.

(3) Mixed Air

The amount of external air intake must be set within the scope of the unit's usage conditions when external air and internal air is mixed together. This is especially important in the following cases, in which it is necessary to either feed external air into the room after it has been processed or reduce the amount of external air that is fed in.

① When the external dew-point temperature is greater than the dry-bulb temperature of the air sucked into the unit
Ensure that processing is performed so that the external dew-point temperature is lower than the temperature of the air sucked into the unit to prevent the risk of condensation building up.

② In the case of low external temperatures
There are cases in which the temperature of mixed air is lower than the operating range of the unit if excessive amounts of external air intake are used when the external temperature is low.
This problem is to be solved by either feeding external air into the room after it has been processed or reducing the amount of external air that is fed in.

③ When used in combination with humidifiers
External air must always be processed when the external air temperature reaches freezing point to prevent the risk of the humidifier freezing.

(4) Arranging Ducts and Filters in the Field

External air intake ducting must be arranged in the field.
External air filters must also be installed without fail in order to prevent the intake of dust and grit.

(5) Thermal Insulation for Ducts

Ensure that all external air intake ducting is heat-insulated without fail. Failure to observe this may result in the build-up of condensation.

(6) External Air Intake Coupling

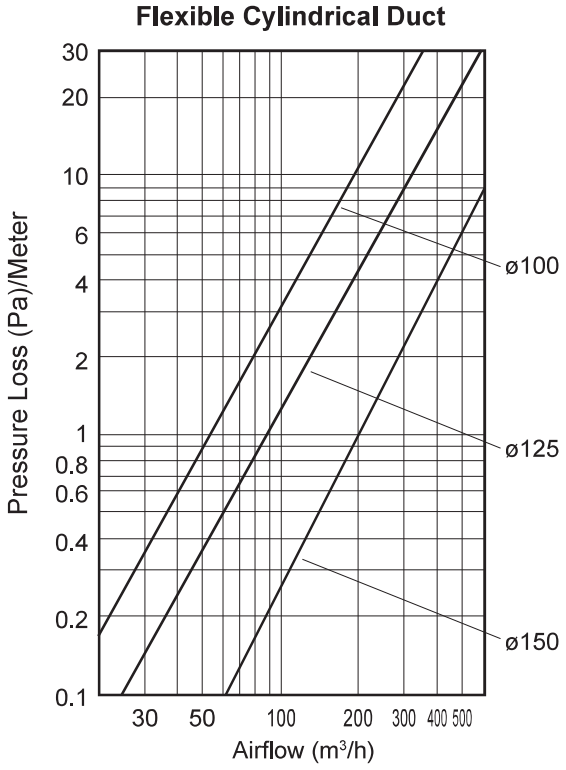
Ensure that the design for external air intake is coupled with the fan blower operations of the indoor unit.
There are cases in which the dust that accumulates in the filter is blown into the room if the external air is fed from the filter. There are also cases in which the noise of external air being fed into the room can be heard from the indoor unit if external air is forcibly fed when the booster fan or other components on the indoor unit are not operating.

(7) Booster Fan Selection

Select the booster fan in accordance with the resistance of the external air intake duct (diagram on the pressure loss characteristics of the air flow volume for flexible cylindrical ducts) and the resistance prevalent inside the unit (external air intake volume & resistance within unit / operation noise characteristics).

(8) Attaching the External Air Intake Flange

Regarding the installation direction of the external air intake duct, refer to the Installation Instructions provided with the external air intake duct.



Air Flow Volume for Flexible Cylindrical Duct-Pressure Loss

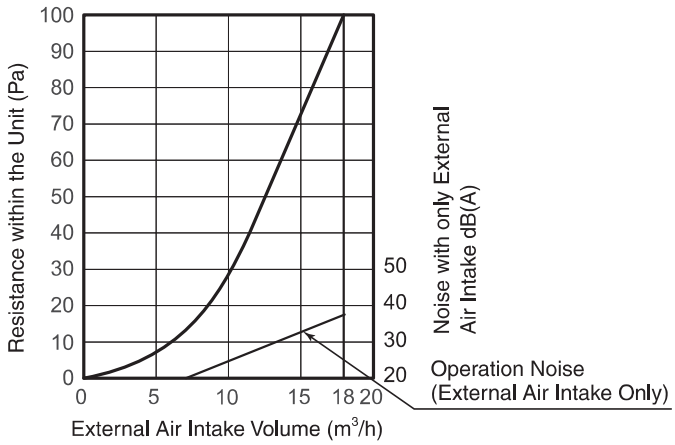
1-9-2. External Air Intake Volume & Resistance Within Unit / Operation Noise Characteristics

CAUTION **Use the following diagram along with the section "1-9-1. Precautions Regarding External Air Intake"**

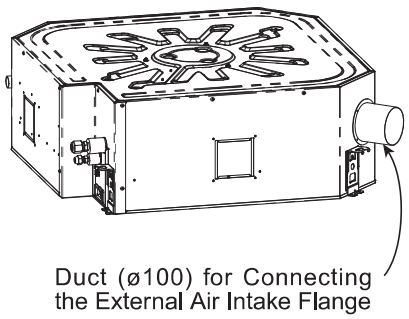
1-9-2-1. 4-Way Cassette Type

■ **When an External Air Intake Flange (ø100) is in Use**

External Air Intake Volume and Resistance and Operation Noise Characteristics within the Unit



With the External Air Intake Flange Attached



- Calculate the operation noise when external air is being fed by combining the noise when only external air is being fed as shown in the graph for operation noise characteristics and the operation noise of the unit as stipulated in the catalogue.
- The operation noise conforms to JIS standards and constitute measurements taken in an anechoic chamber 1.5 m directly beneath the indoor unit. Under normal circumstances, the values shown here are greater owing to the effects of surrounding noise and reverberation when the unit is actually installed.

The amount of external air that is possible to feed when it is fed directly into the unit (ø100)

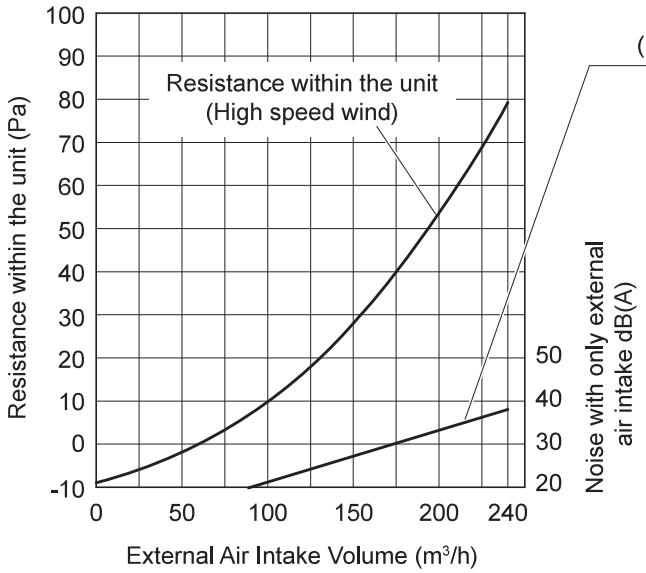
Type	S-3650PU3E	S-6071PU3E	S-1014PU3E
Permissible Air Intake Volume (m³/h)	15	17 (60)* 18 (71)*	18

* For S-6071PU3E (60) and S-6071PU3E(71), see the Combination Table items 60 and 71 on page 20 to 22.

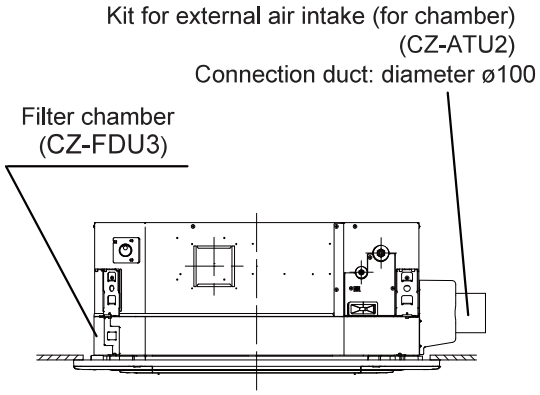
NOTE

The operation noise for models that use small units is lower, so use values that are within the range shown in the above table. Using values that exceed these will result in noise when only external air is fed being louder than the noise emitted from the unit.

■ In a Case of External Air Intake Using Air Intake Chamber (CZ-FDU3+CZ-ATU2)



External Air Intake Volume & Resistance Within Unit/ Operation Noise Characteristics



With the External Air Intake Chamber Attached

1. Calculate the operation noise when external air is being fed by combining the noise when only external air is being fed as shown in the diagram for operation noise characteristics and the operation noise of the unit as stipulated in the catalogue.
2. The operation noise conforms to JIS standards and constitute measurements taken in an anechoic chamber 1.5m directly below the indoor unit. Under normal circumstances, the diagram shown above is greater owing to the effects of surrounding noise and reverberation when the unit is actually installed.

The amount of external air that is possible to feed when external air intake chamber is in use (CZ-FDU3+CZ-ATU2)

Type	S-3650PU3E	S-6071PU3E	S-1014PU3E
Permissible air intake volume (m³/h)	180	190 (60)* 240 (71)*	240

* For S-6071PU3E (60) and S-6071PU3E (71), see the Combination Table items 60 and 71 on page 20 to 22.

* The operation noise for models that use small units is lower, so use values that are within the range shown in the above table. Using values that exceed these will result in noise when only external air is fed being louder than the noise emitted from the unit.

● **Sample selection of booster fans**

In a case of necessity at 200m³/h of external air intake:

1. Resistance within the unit Diagram from "Resistance within the unit" 55 Pa
2. Duct resistance in case of duct with 4m length

Duct resistance	Diagram from "Air Flow Volume for Flexible Cylindrical Duct-Pressure Loss"	40 Pa	(=10 Pa/m × 4m)
		Total 95 Pa	

Therefore, a booster is required to save a total 95 Pa of static pressure.

3-1. Indoor Unit (Electric Wiring Diagram)

3-1-1. 4-Way Cassette Type

S-3650PU3E, S-6071PU3E, S-1014PU3E

