

Product specifications

(Temporary Edition)

2012-12-26

Product Name: Energy Recovery Ventilator

Product Model : FY-250ZDY8

FY-350ZDY8

FY-500ZDY8

FY-650ZDY8

FY-800ZDY8

FY-01KZDY8A

PESHK		
Approval	Check	Charge

PESESGD-BJ R&D		
Approval	Check	Charge

1. Scope of application

The Product specifications of Energy Recovery Ventilator produced by PESESGD-BJ for PESHK sales.

2. Target model

Model Number
FY-250ZDY8
FY-350ZDY8
FY-500ZDY8
FY-650ZDY8
FY-800ZDY8
FY-01KZDY8A

3. Specifications

Item	Contents (common)
Rated voltage	Single phase 220V
Rated frequency	50Hz
Supply Voltage	Rated voltage $\pm 10\%$
Operating conditions	-10~40°C below 85%RH
Storage conditions	-10~60°C 30~85%RH
Motor form	4-pole motor
Motor insulation class	Class E (Notes: motor in model FY-350ZDY8 is Class F.)
Fan category	Multi-blade centrifugal fan
Heat exchanger form	The static energy exchange element (Towards flow type)
Material of filter	Non-woven fabrics
Product Outline	Detailed in Product specifications

Performance Table	Detailed in Product specifications
Electrical schematics	Detailed in Product specifications
Printed matter	Detailed in Prints pasted sketch map and Prints patterns
Attachments prints	Each an Owners Manual, Maintenance Manual, Installation Manual
Package	Detailed in schematic view of package

4. Applicable technical regulations

- 4.1) IEC IEC60335-1, IEC60335-2-80 (Checked by JQA)
- 4.2) EN EN60335-1:2002 + A1:2002 + A11:2002 + A12:2006 + A2:2006
EN60335-2-80: 2003 + A1:2004
EN55014-1:2000 + A1:2001 + A2:2002
EN61000-3-2: 2000 + A2:2005,
EN61000-3-3: 1995 + A1:2001 + A2:2005

5. Performance

No.	Item	Characteristic
(1)	Air volume	Within $\pm 10\%$ of the Indicated value
(2)	Static pressure	Within $\pm 10\%$ of the Indicated value
(3)	Effectively change the amount of air	More than 90%
(4)	Heat exchange efficiency	More than 90% of the Indicated value
(5)	Dewing	No drops
(6)	Startup Characteristics	Start properly
(7)	Abnormal voltage characteristics	Normal operation
(8)	Power consumption	Within $\pm 15\%$ of the Indicated value
(9)	Temperature rise	E rank: 75K (environment temperature is 40°C) F rank: 100K (environment temperature is 40°C)
(10)	Insulation resistance	More than 1M Ω

(11)	Withstanding Voltage	No abnormal
(12)	Noise	below the Indicated value +3 DB

Notes:

- In accordance with the standards and test methods performed in accordance with the Japanese Industrial Standard (abbreviation: JIS)
(JIS B 8628 Energy Recovery Ventilator)
- Air volume is the supply and exhaust air volume of Energy Recovery Ventilator in rated static pressure.

6. Construction & materials

Detailed in Product specifications

7. Other

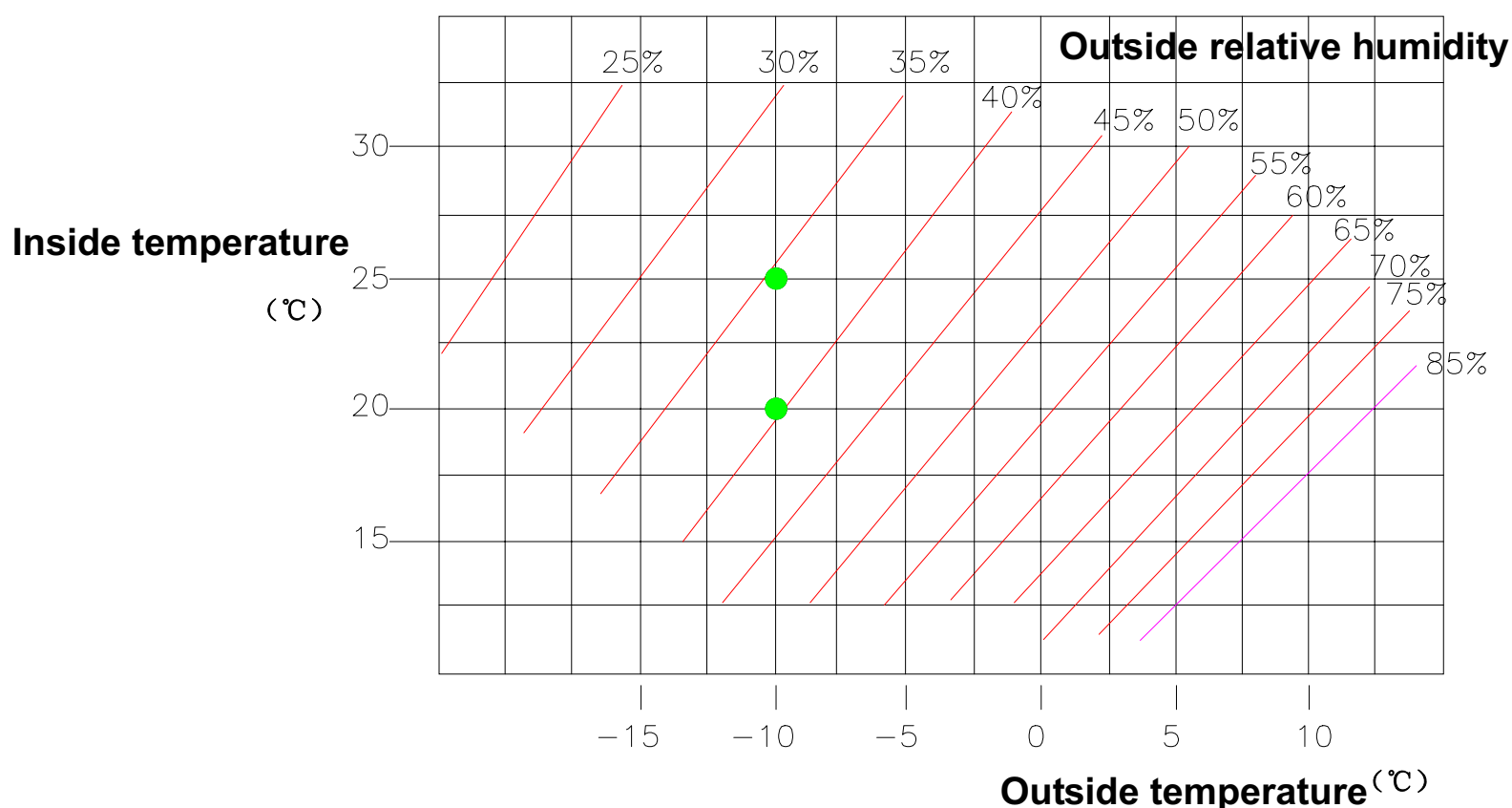
- The product sales for Europe.
- For quality improvement or cost reduction , there may be some manufacturing conditions change. But the change must obtain prior recognition two months before.
- On the name plate and packaging, as follows stamped with the product number.
For example: Produced in March 2011, the first set→1103001(YYMM001~ YYMM999)
- Motor bearings are ball bearings, if placed more than 6 months, for the storage conditions reasons, sometimes there will be a rust and noise, vibration possible.

Operating environmental conditions

Product itself condensation

- In winter conditions: the temp around the products, with high humidity, the outside temp is low, the products sometimes occur condensation.

Shown is the temp around the products related to the humidity and the outside air temp limit condition, product condensation generated.



Please operate the product in above figure required conditions

Example 1: As shown above when Outside air temp is -10°C , temp of air around the product is 20°C and relative humidity is 40%, no condensation occur.

Example 2: When Outside air temp is -10°C , temp of air around the product is 20°C and relative humidity is between 40%~50%, the product surface condensation occur. Please take measures to preheat outside air temp from -10°C to -3°C .

- In summer conditions: the temp around the products is low, the outside air temp and the humidity is high, the products sometimes occur condensation,

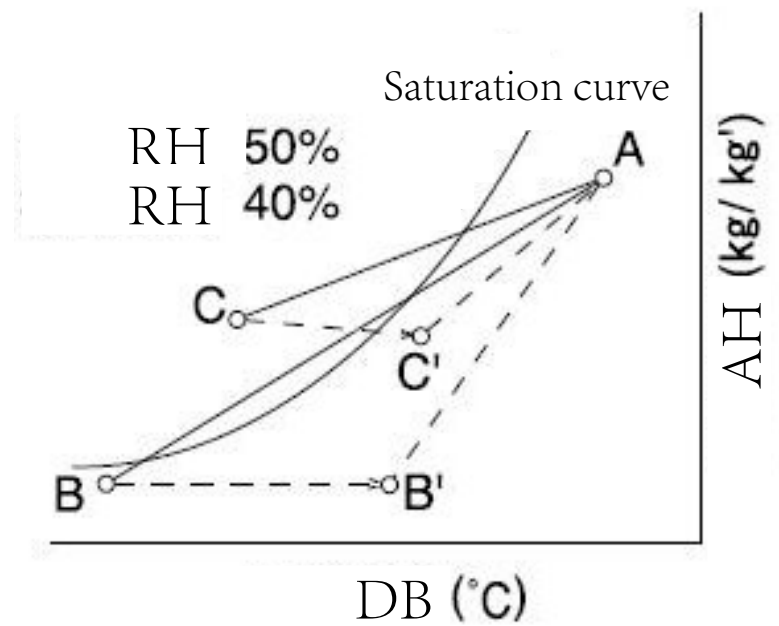
The following example is the temp around the products related to the humidity (RH85%) and the outside air temp limit condition, product condensation generated.

Example 1: As shown above when Outside air temp is 38°C and relative humidity is 85%, temp of air around the product is 25°C , if relative humidity is more than 60%, condensation occur; below 60%, no condensation occur.

Example 2: When Outside air temp is 35°C and relative humidity is 85%, relative humidity of air around the product is 60%, if temp is below 22.5°C , condensation occur; more than 22.5°C , no condensation occur.

Condensation in energy exchange element

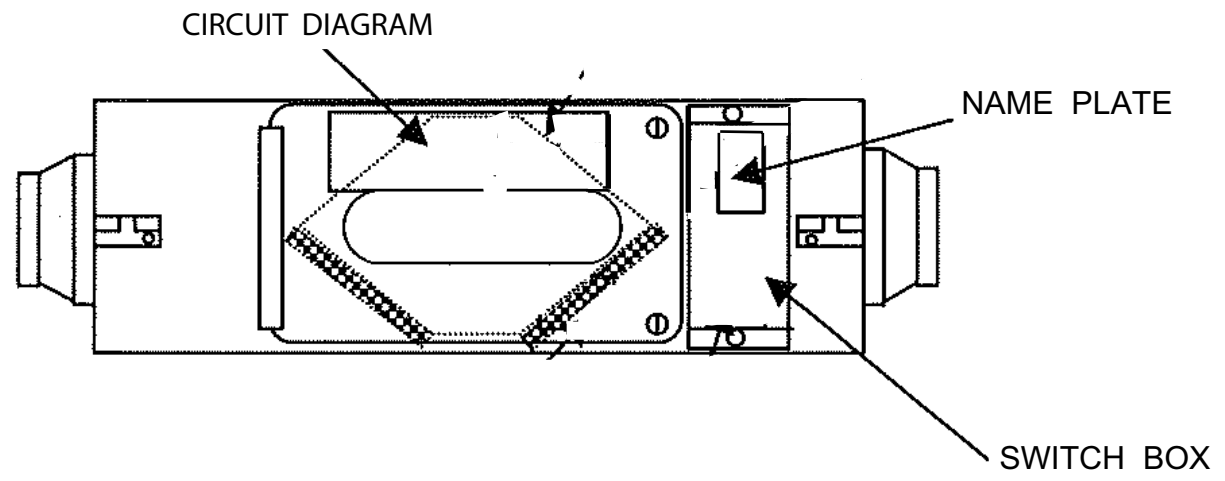
As shown in the figure to the right, suppose a high temp absorbing air condition A and a low temp absorbing air condition B are plotted on the air line figure, then a high temp air A is heat-exchanged by the unit and goes out of the saturation curve as shown by Point C.



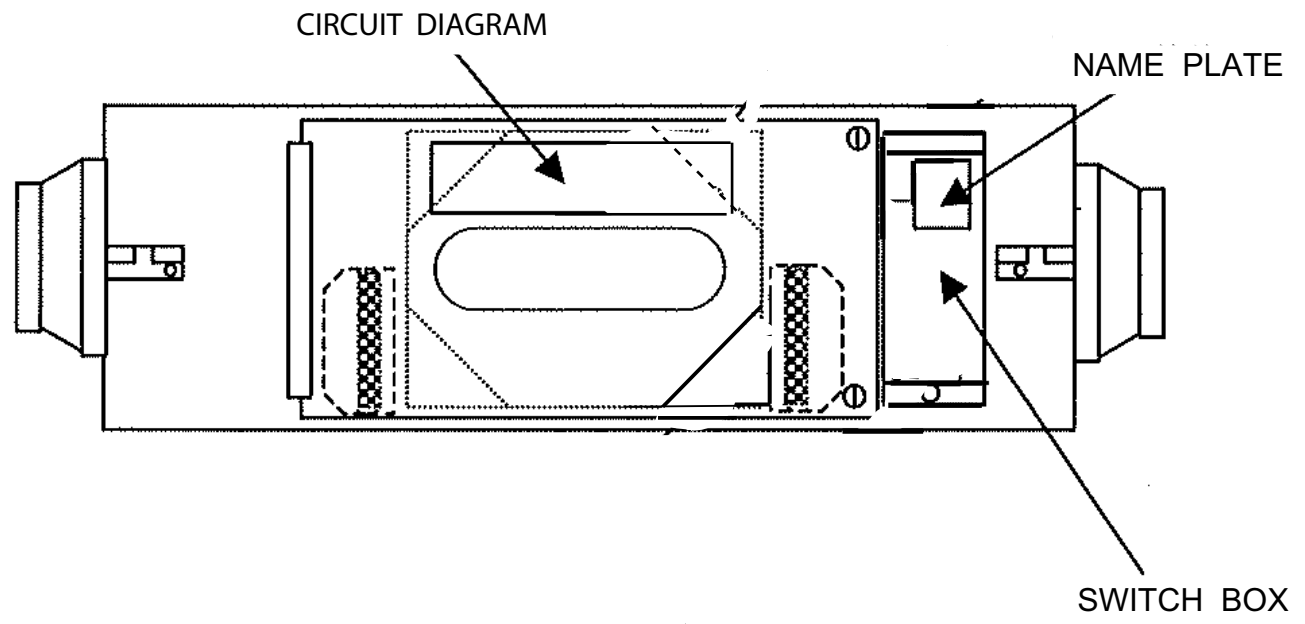
In this case, the unit will be dewed or frosted. To avoid this, you are required to heat a low temp air B up to B' so as to get C' below the saturation curve, before using the unit.

PACKAGE STICK POSITION

Model No. FY-250ZDY8、FY-350ZDY8
FY-500ZDY8



Model No. FY-650ZDY8、FY-800ZDY8
FY-01KZDY8A



NAME PLATE

Color : Black

Dimension : 92×60 (mm)

Material : Coated Paper

Panasonic		CE
Panasonic Energy Recovery Ventilator		
Model No. FY-250ZDY8		
Rated Voltage	220-240V ~	
Rated Frequency	50Hz	
Rated Input	124-141W	
IP Code	IPX2	
Climate	T	
Panasonic Corporation Manufacturer Panasonic Ecology Systems Guangdong Co.,Ltd.,Beijing Branch No.5 Tian Zhu Road,Tian Zhu Airport Industrial Zone, Shunyi District, Beijing Pursuant to the Directive 2006/42/EC, Annex I article 1.7.3 . Panasonic Testing Centre Panasonic Marketing Europe GmbH Winsbergring 15,22525 Hamburg,Germany		
Air Volume (m³/h)	External Static Pressure (Pa)	Input (W)
350	0	124-141
250	105	112-128
Weight 29kg		
Product Number 25ZDY80850		

Panasonic		CE
Panasonic Energy Recovery Ventilator		
Model No. FY-350ZDY8		
Rated Voltage	220-240V ~	
Rated Frequency	50Hz	
Rated Input	250-275W	
IP Code	IPX2	
Climate	T	
Panasonic Corporation Manufacturer Panasonic Ecology Systems Guangdong Co.,Ltd.,Beijing Branch No.5 Tian Zhu Road,Tian Zhu Airport Industrial Zone, Shunyi District, Beijing Pursuant to the Directive 2006/42/EC, Annex I article 1.7.3 . Panasonic Testing Centre Panasonic Marketing Europe GmbH Winsbergring 15,22525 Hamburg,Germany		
Air Volume (m³/h)	External Static Pressure (Pa)	Input (W)
475	0	250-275
350	140	182-190
Weight 49 kg		
Product Number 35ZDY80850		

Panasonic		CE
Panasonic Energy Recovery Ventilator		
Model No. FY-500ZDY8		
Rated Voltage	220-240V ~	
Rated Frequency	50Hz	
Rated Input	314-344W	
IP Code	IPX2	
Climate	T	
Panasonic Corporation Manufacturer Panasonic Ecology Systems Guangdong Co.,Ltd.,Beijing Branch No.5 Tian Zhu Road,Tian Zhu Airport Industrial Zone, Shunyi District, Beijing Pursuant to the Directive 2006/42/EC, Annex I article 1.7.3 . Panasonic Testing Centre Panasonic Marketing Europe GmbH Winsbergring 15,22525 Hamburg,Germany		
Air Volume (m³/h)	External Static Pressure (Pa)	Input (W)
645	0	314-344
500	120	263-289
Weight 57 kg		
Product Number 50ZDY80850		

Panasonic		CE
Panasonic Energy Recovery Ventilator		
Model No. FY-650ZDY8		
Rated Voltage	220-240V ~	
Rated Frequency	50Hz	
Rated Input	357-388W	
IP Code	IPX2	
Climate	T	
Panasonic Corporation Manufacturer Panasonic Ecology Systems Guangdong Co.,Ltd.,Beijing Branch No.5 Tian Zhu Road,Tian Zhu Airport Industrial Zone, Shunyi District, Beijing Pursuant to the Directive 2006/42/EC, Annex I article 1.7.3 . Panasonic Testing Centre Panasonic Marketing Europe GmbH Winsbergring 15,22525 Hamburg,Germany		
Air Volume (m³/h)	External Static Pressure (Pa)	Input (W)
690	0	357-388
650	65	326-347
Weight 68 kg		
Product Number 65ZDY80850		

Panasonic		CE
Panasonic Energy Recovery Ventilator		
Model No. FY-800ZDY8		
Rated Voltage	220-240V ~	
Rated Frequency	50Hz	
Rated Input	465-497W	
IP Code	IPX2	
Climate	T	
Panasonic Corporation Manufacturer Panasonic Ecology Systems Guangdong Co.,Ltd.,Beijing Branch No.5 Tian Zhu Road,Tian Zhu Airport Industrial Zone, Shunyi District, Beijing Pursuant to the Directive 2006/42/EC, Annex I article 1.7.3 . Panasonic Testing Centre Panasonic Marketing Europe GmbH Winsbergring 15,22525 Hamburg,Germany		
Air Volume (m³/h)	External Static Pressure (Pa)	Input (W)
1020	0	465-497
800	140	387-418
Weight 71 kg		
Product Number 80ZDY80850		

Panasonic		CE
Panasonic Energy Recovery Ventilator		
Model No. FY-01KZDY8A		
Rated Voltage	220-240V ~	
Rated Frequency	50Hz	
Rated Input	513-541W	
IP Code	IPX2	
Climate	T	
Panasonic Corporation Manufacturer Panasonic Ecology Systems Guangdong Co.,Ltd.,Beijing Branch No.5 Tian Zhu Road,Tian Zhu Airport Industrial Zone, Shunyi District, Beijing Pursuant to the Directive 2006/42/EC, Annex I article 1.7.3 . Panasonic Testing Centre Panasonic Marketing Europe GmbH Winsbergring 15,22525 Hamburg,Germany		
Air Volume (m³/h)	External Static Pressure (Pa)	Input (W)
1145	0	513-541
1000	105	437-464
Weight 83 kg		
Product Number 01KZDY8A0850		

CIRCUIT DIAGRAM

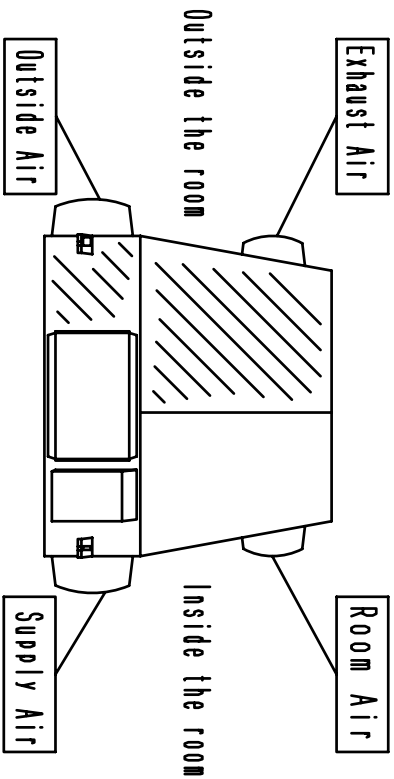
Color : Black

Dimension : 285x95 (mm)

Material : Coated Paper

FY-250ZDY8

■ Duct Piping Diagram



CAUTIONS

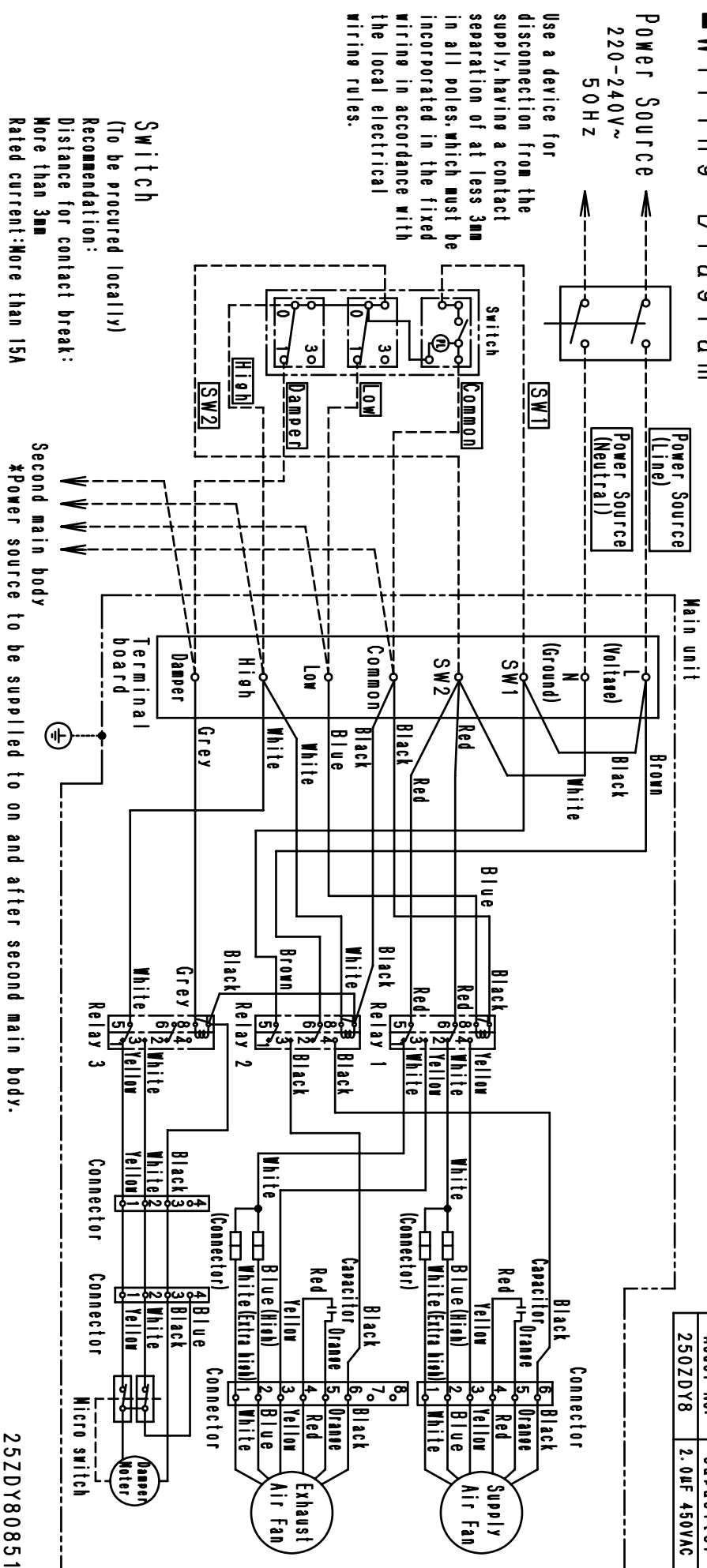
- The contractor is to connect the wires shown by the broken lines.
- At delivery time, the notch is set at "High"/"Low".
- In use of "Extra High" notch, please read an attached description.



Caution

Before accessing, stop the operation and switch the exclusive circuit breaker "OFF".

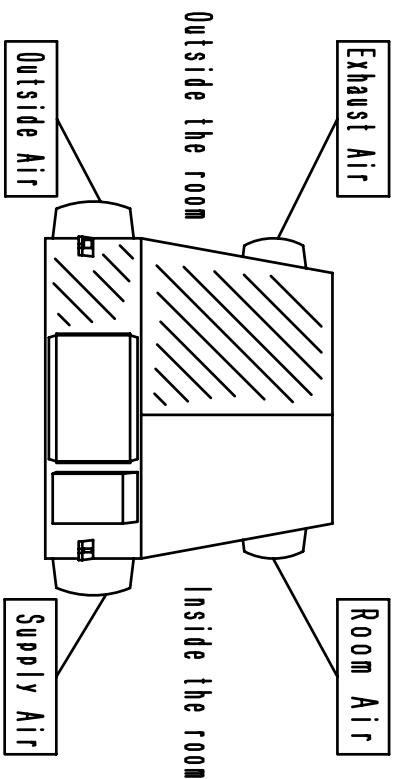
■ Wiring Diagram



25ZDY80851

FY-350ZDY8、FY-500ZDY8

■ Duct Piping Diagram



CAUTIONS

- The contractor is to connect the wires shown by the broken lines.
- At delivery time, the notch is set at "High"/"Low".
- In use of "Extra High" notch, please read an attached description.

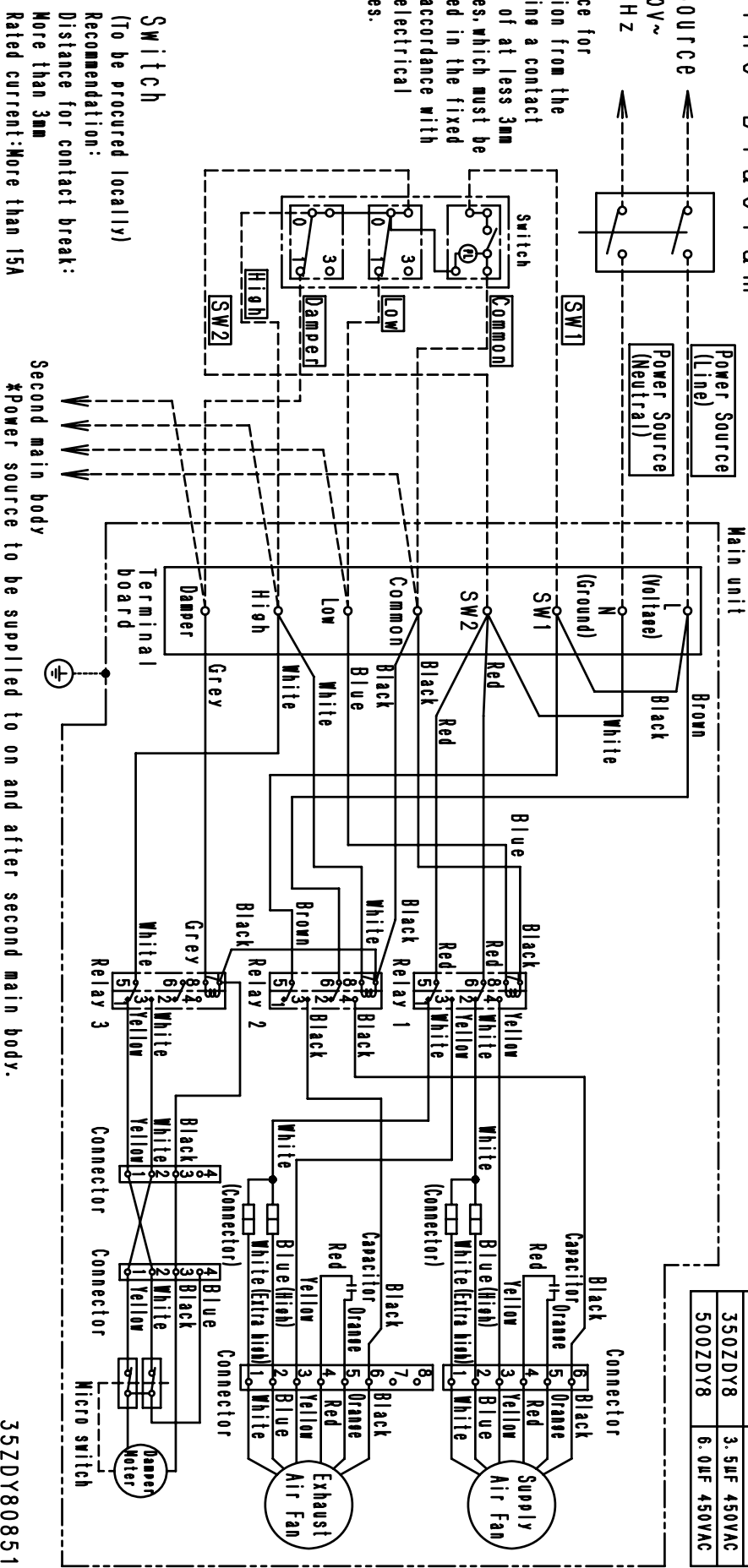


Before accessing, stop the operation and switch the exclusive circuit breaker "OFF".

■ Wiring Diagram

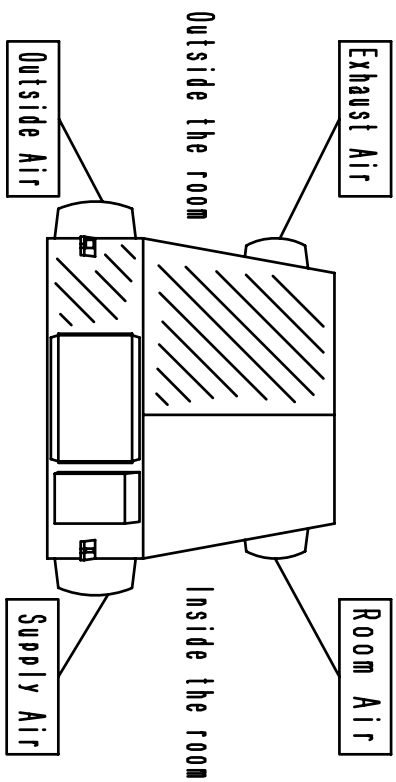
Power Source
220-240V~
50HZ

Use a device for disconnection from the supply, having a contact separation of at least 3mm in all poles, which must be incorporated in the fixed wiring in accordance with the local electrical wiring rules.



FY-650ZDY8

■ Duct Piping Diagram



CAUTIONS

- The contractor is to connect the wires shown by the broken lines.
- At delivery time, the notch is set at "High"/"Low".
- In use of "Extra High" notch, please read an attached description.

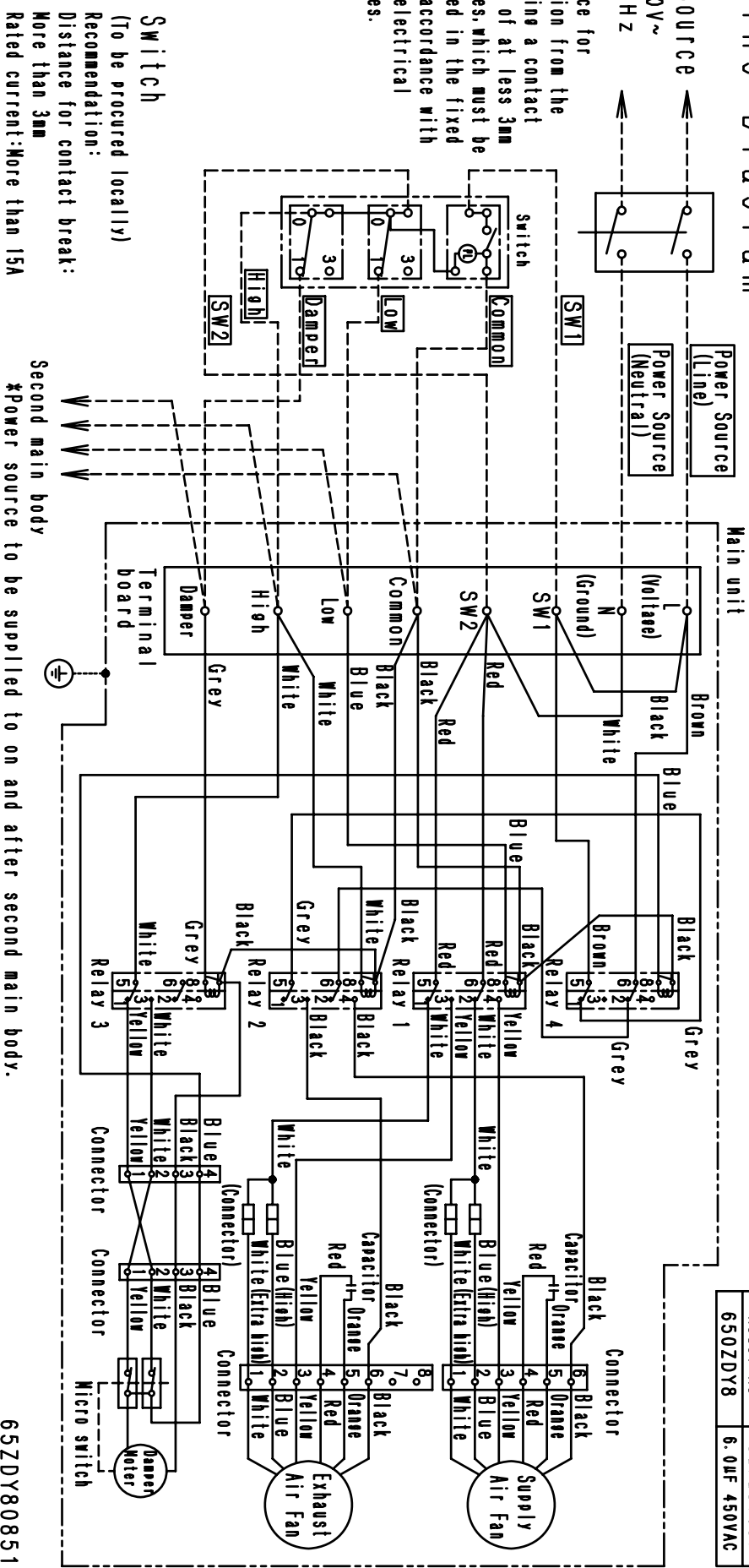


Before accessing, stop the operation and switch the exclusive circuit breaker "OFF".

■ Wiring Diagram

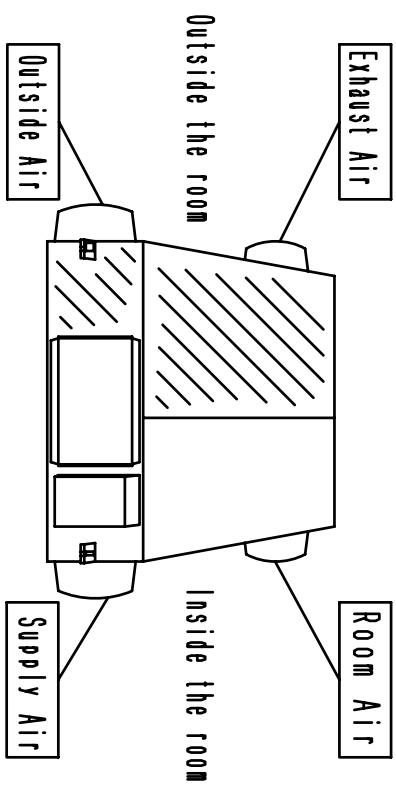
Power Source
220-240V~
50HZ

Use a device for disconnection from the supply, having a contact separation of at least 3mm in all poles, which must be incorporated in the fixed wiring in accordance with the local electrical wiring rules.



FY-800ZDY8、FY-01KZDY8A

■ Duct Piping Diagram



CAUTIONS

- The contractor is to connect the wires shown by the broken lines.
- At delivery time, the notch is set at "High"/"Low".
- In use of "Extra High" notch, please read an attached description.

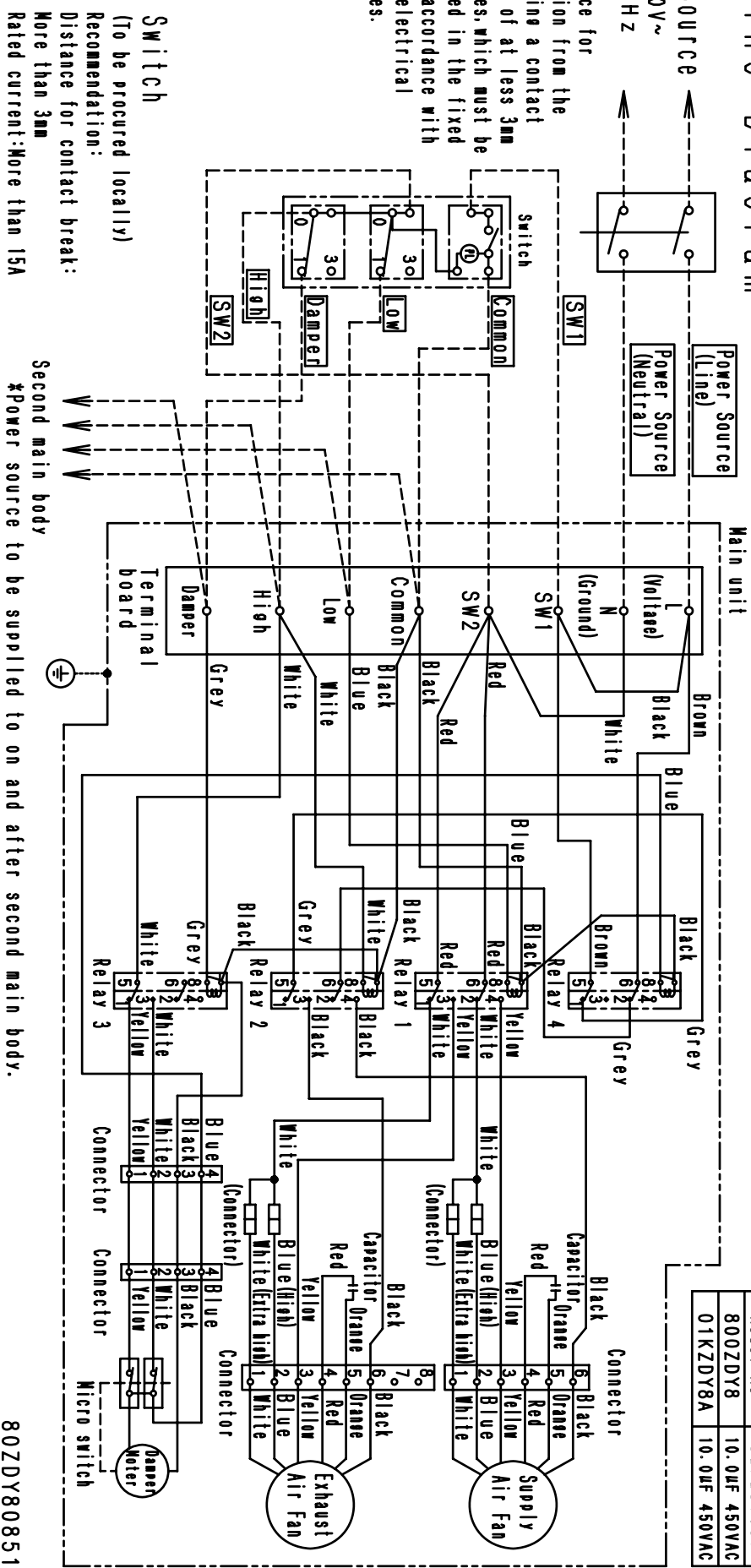


Before accessing, stop the operation and switch the exclusive circuit breaker "OFF".

■ Wiring Diagram

Power Source
220-240V~
50HZ

Use a device for disconnection from the supply, having a contact separation of at least 3mm in all poles, which must be incorporated in the fixed wiring in accordance with the local electrical wiring rules.

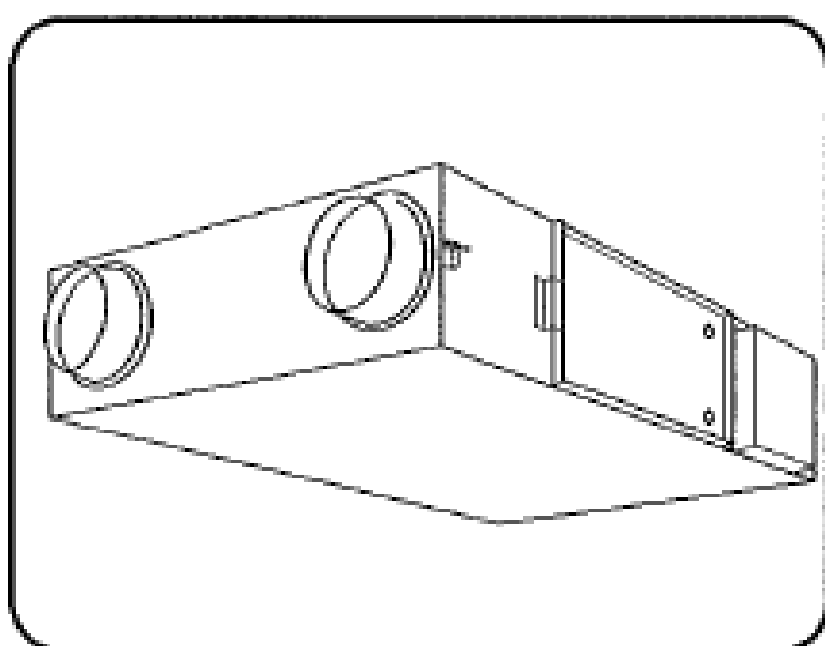


80ZDY80851

Panasonic

Energy Recovery Ventilators

Owner's Manual



Model No.
N° de modèle
Modell-Nr.
Modello N.
Modelo N.º
N° do modelo

FY-250ZDY8

FY-350ZDY8

FY-500ZDY8

FY-650ZDY8

FY-800ZDY8

FY-01KZDY8A

Installation manual is attached separately.
Le manuel d'installation est joint séparément.
Installationsanleitung ist gesondert beigelegt.
Il manuale di installazione è allegato separatamente.
El Manual de instalación se adjunta por separado.
O manual de instalação é fornecido em separado.

Ventilateurs d'échange de
chaleur
Manuel l'utilisateur

Lüftungsgerät mit
Wärmerückgewinnung
Bedienungsanleitung

Ventilatori a scambio
termico
Manuale d'istruzione

Ventiladores de intercambio
calorífico
Manual del propietario

Ventiladores de permutação de
calor
Manual do proprietário

ENGLISH

FRANÇAIS

DEUTSCH

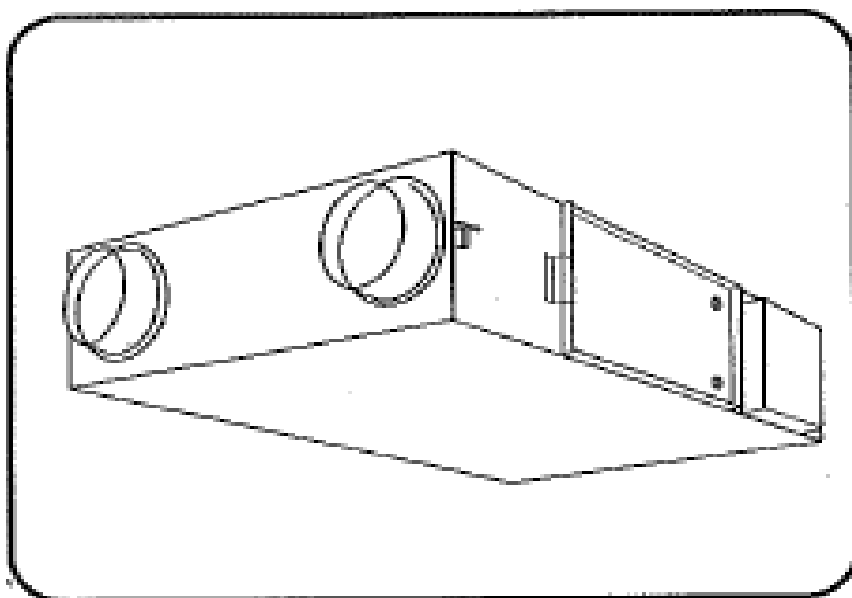
ITALIANO

ESPAÑOL

PORTUGUÊS

Panasonic

Energy Recovery Ventilators Installation Manual



Model No.
N° de modèle
Modell-Nr.
Modello N.
Modelo N.º
Nº do modelo

FY-250ZDY8
FY-350ZDY8
FY-500ZDY8
FY-650ZDY8
FY-800ZDY8
FY-01KZDY8A

Ventilateurs d'échange de
chaleur
Manuel d'installation

Lüftungsgerät mit
Wärmerückgewinnung
Installationshandbuch

Ventilatori a scambio
termico
Manuale di installazione

Ventiladores de intercambio
calorífico
Manual de instalación

Ventiladores de permutação
de calor
Manual de instalação

ENGLISH

FRANÇAIS

DEUTSCH

ITALIANO

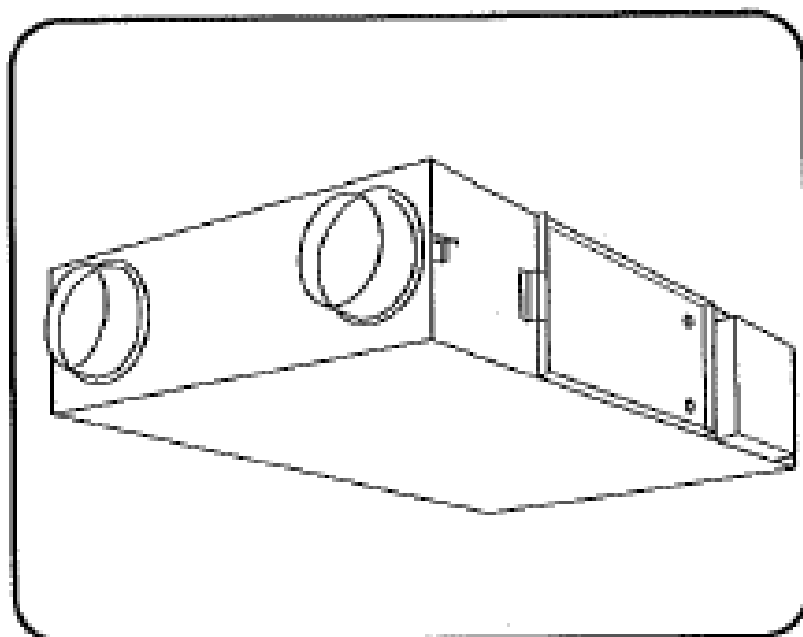
ESPAÑOL

FORTUGUÊS

Panasonic

Energy Recovery Ventilators

Maintenance Manual



Model No.
N° de modèle
Modell-Nr.
Modello N.
Modelo N.º
N° do modelo

FY-250ZDY8
FY-350ZDY8
FY-500ZDY8
FY-650ZDY8
FY-800ZDY8
FY-01KZDY8A

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Ventilateurs d'échange de
chaleur
Manuel d'entretien

Energiegewinnungs-
Ventilatoren
Wartungshandbuch

Ventilatori a recupero
energetico
Manuale di manutenzione

Operación
de energía
Manual de mantenimiento

Ventiladores de permutação de
calor
Manual de manutenção

ENGLISH

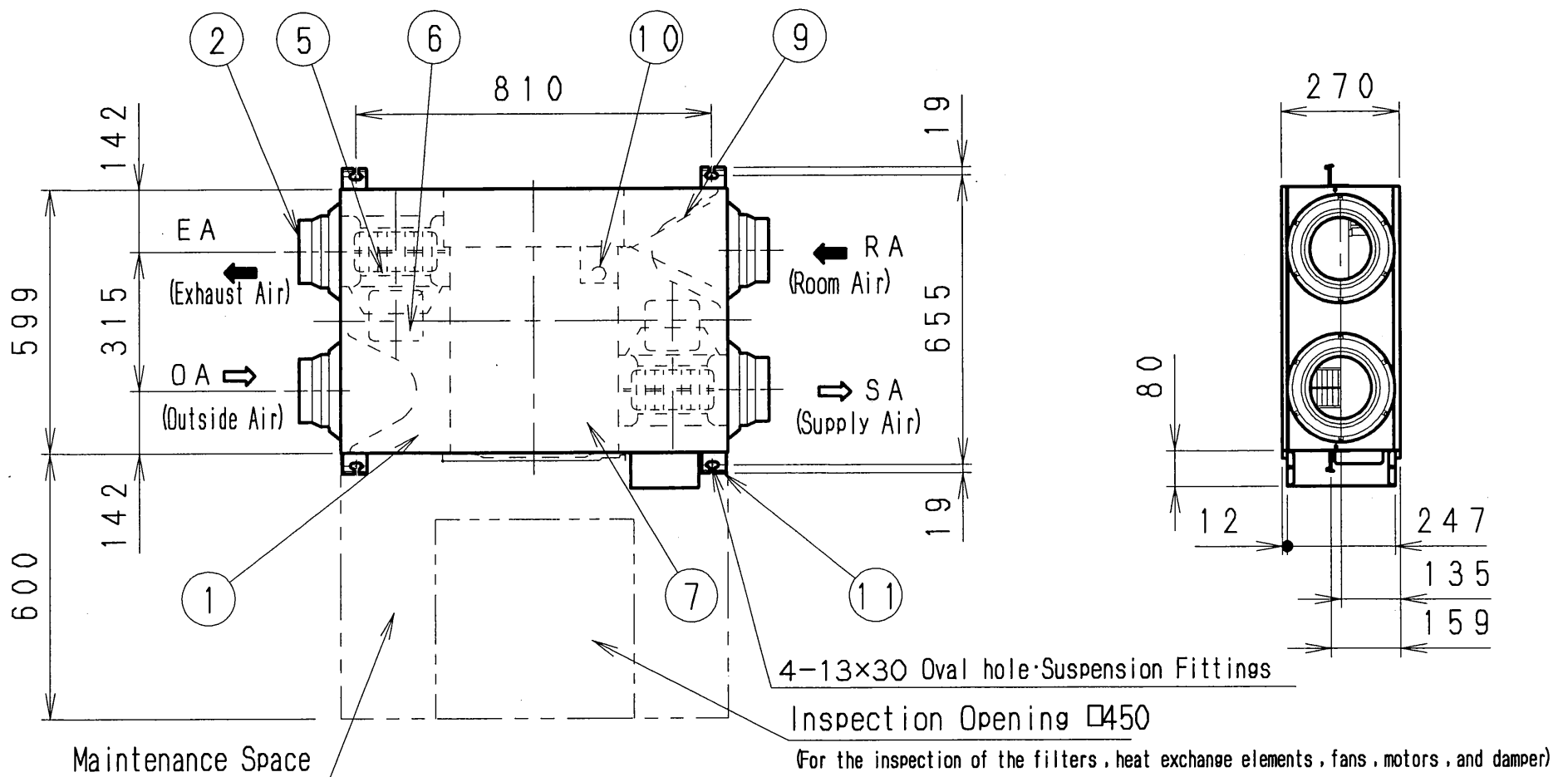
FRANÇAIS

DEUTSCH

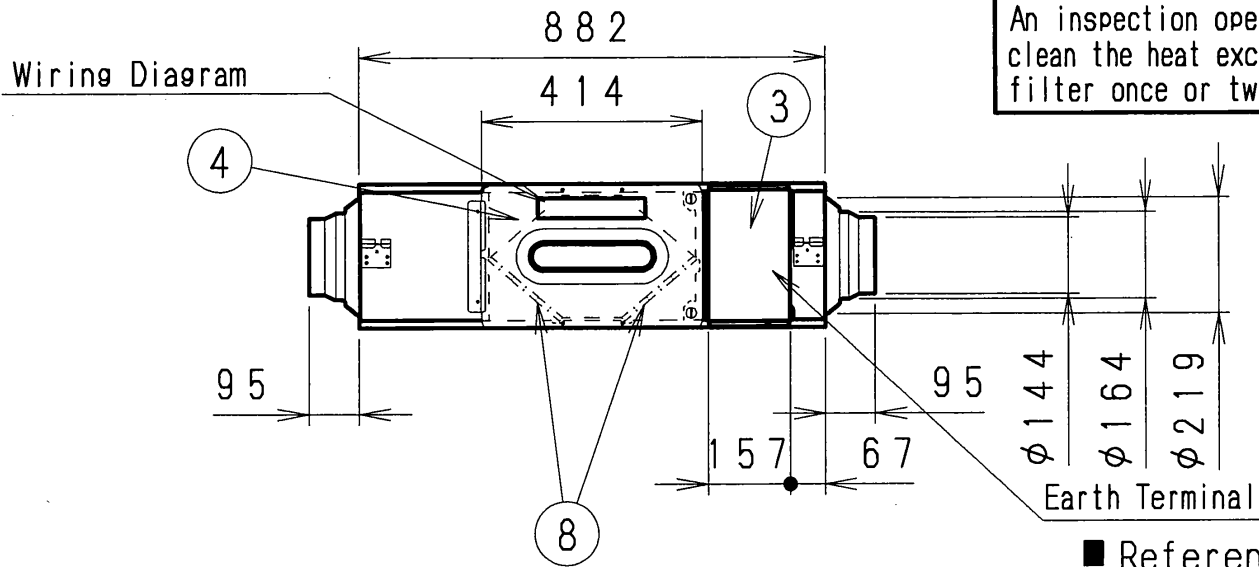
ITALIANO

ESPAÑOL

PORTUGUES

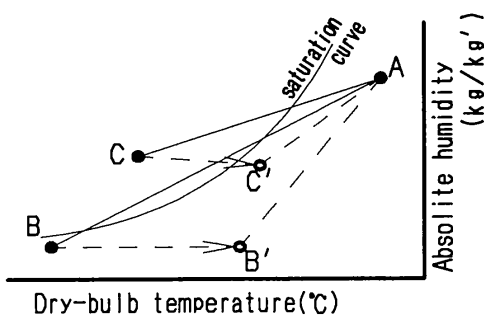


An inspection opening is necessary to clean the heat exchange element and filter once or twice a year.

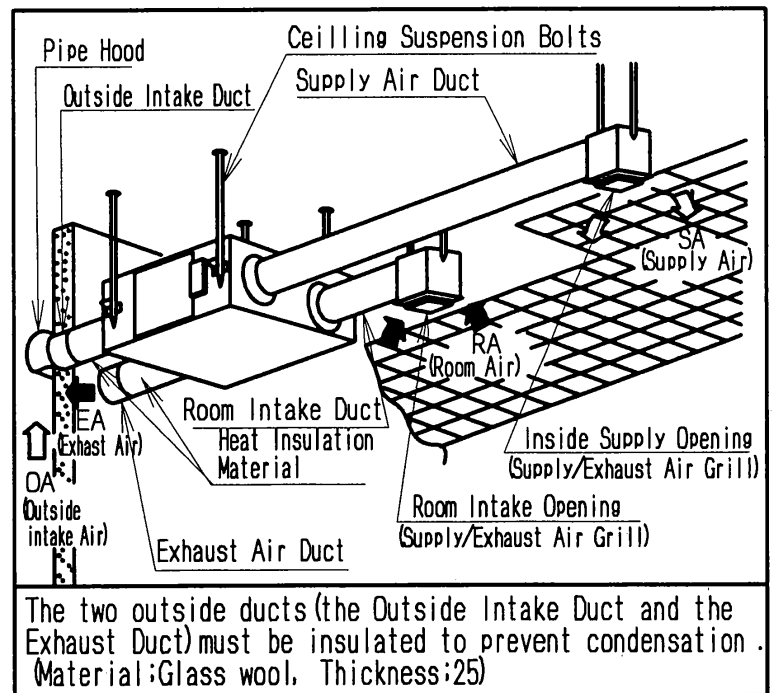


NO.	Parts Name	Qty.	Material	Remarks
1	Frame	1	Galvanized sheets	
2	Adapter	4	ABS	
3	Electrical Equipment Box	1		
4	Inspection Cover	1	Galvanized sheets	
5	Fan	2	ABS	
6	Motor	2		
7	Heat Exchange Element	1	Special paper + Resin	
8	Filter	2	Nylon-Polyester Fiber	Collection Efficiency AFI 82%
9	Damper	1		
10	Damper Motor	1		
11	Ceiling Suspension Fixture	4	Galvanized sheets	

Be careful of dewing and frosting.
 As shown in the Figure, suppose a high temp absorbing air condition A and a low temp absorbing air condition B are plotted on the air line figure, then a high temp air A is heat-exchanged by the unit and goes out of the saturation curve as shown by Point C.
 In this case, the unit will be dewed or frosted.
 To avoid this, you are required to heat a low temp air B up to B' so as to get C' below the saturation curve, before using the unit.



Reference Sketch



The two outside ducts (the Outside Intake Duct and the Exhaust Duct) must be insulated to prevent condensation. Material: Glass wool, Thickness: 25

* Duct size (Nominal Diameter) : $\phi 150$
 *** The above dimensions do not include the thickness of the insulation material on the unit body.

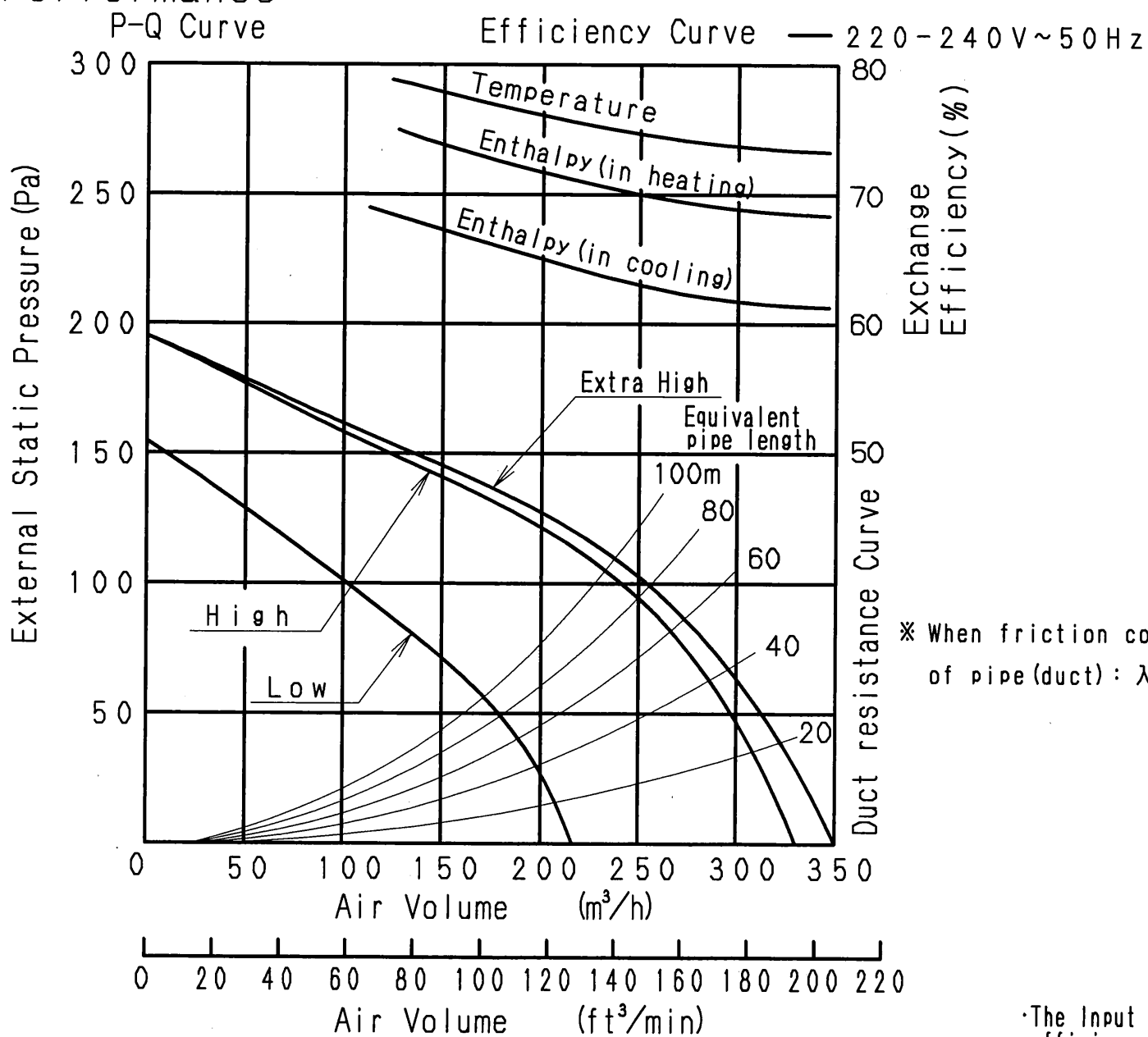
Name		Model No.	
Energy Recovery Ventilator (Dimensions)		FY-250ZDY8	
Date of Made	2012.12.20	Scale	Drawing
Date of Revision		Free	Reference No.
Panasonic Ecology Systems Guang Dong Co.,Ltd.,Beijing Branch			
			Rev. NO. 0

■ Specifications

Model No.	Power Source	Notch	Frequency (Hz)	Heat Exchange Ventilation								Normal Ventilation					Product Weight (kg)
				Input (W)	Current (A)	Air Volume (m ³ /h)	External Static Pressure (Pa)	Temperature Exchange Efficiency (%)	Enthalpy Exchange Efficiency (%)		Noise (dB)	Input (W)	Current (A)	Air Volume (m ³ /h)	External Static Pressure (Pa)	Noise (dB)	
									Cooling	Heating							
250ZDY8	220-240V a.c.	Extra High	50	112-128	0.51-0.53	250	105	75	63	70	30.0-31.5	112-128	0.51-0.53	250	105	30.0-31.5	29
		High	50	108-123	0.49-0.51	250	95	75	63	70	29.5-30.5	108-123	0.49-0.51	250	95	29.5-30.5	
		Low	50	87-96	0.40-0.41	190	45	77	65	72	23.5-26.5	87-96	0.40-0.41	190	45	23.5-26.5	

* This noise of the product is the value which was measured at the acoustic room. Actually, in the established condition, that undergo influence by the echoing of the room and so that become bigger than the display numerical value.

■ Performance



- The Input, the current and the exchange efficiency are values at the time of the mentioned air volume.
- The noise level shall be measured 1.5m below the center of the unit.
- The temperature exchange efficiency averages that of when cooling and when heating.

Use conditions

Outdoor air conditions
 Temperature range -10°C~40°C
 Relative humidity 85% or less

Indoor air conditions
 Temperature range -10°C~40°C
 Relative humidity 85% or less

Installation requirements
 Same as the indoor air conditions

*Indoor air here means air in air-conditioned living rooms. Its use in refrigerators or other places where temperature can fluctuate greatly is prohibited even if a temperature range is acceptable.

Example Indoor air conditions

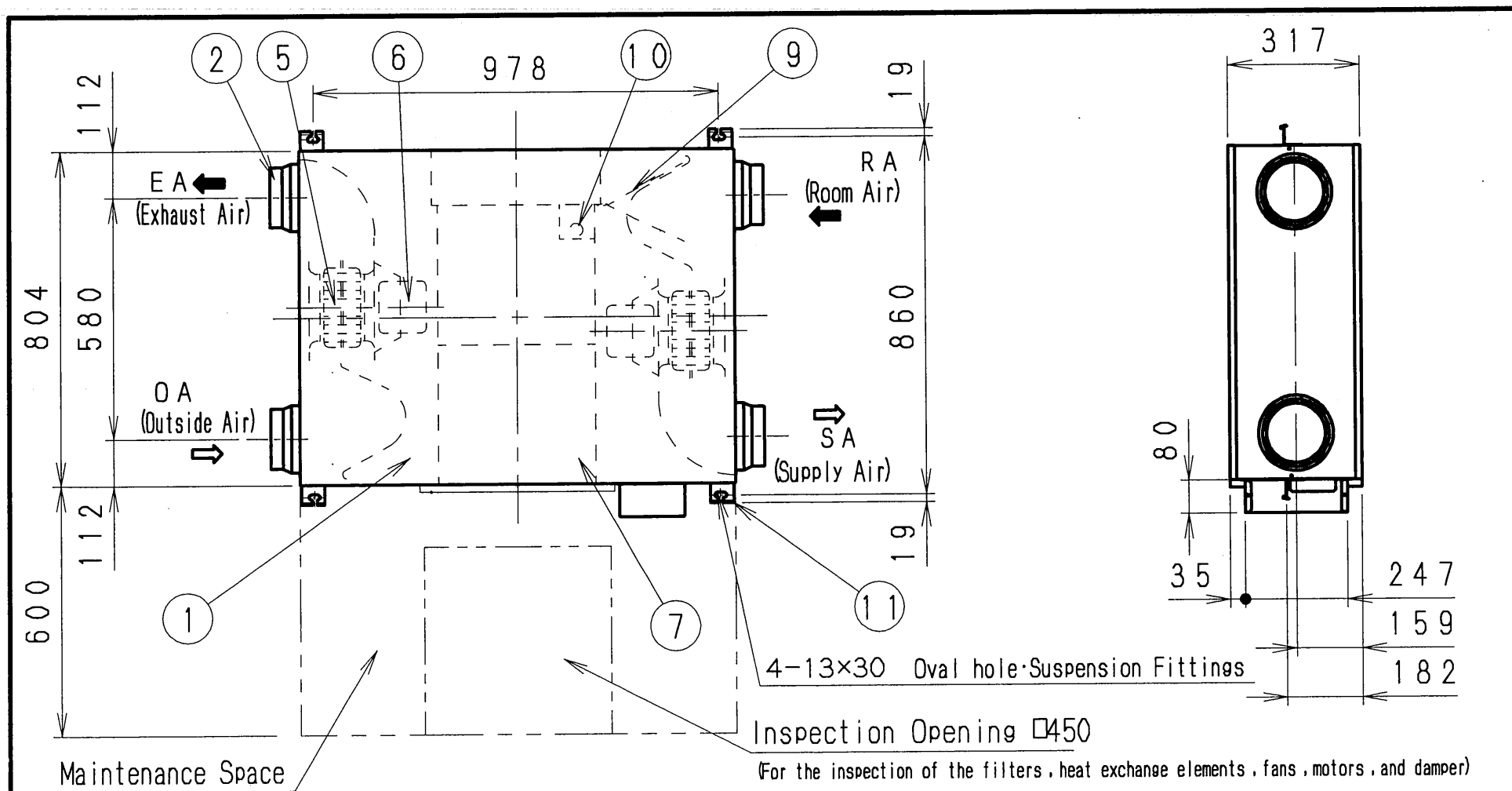
During cooling period
 Temperature 27°C
 Relative humidity 50%

During heating period
 Temperature 20°C
 Relative humidity 40%

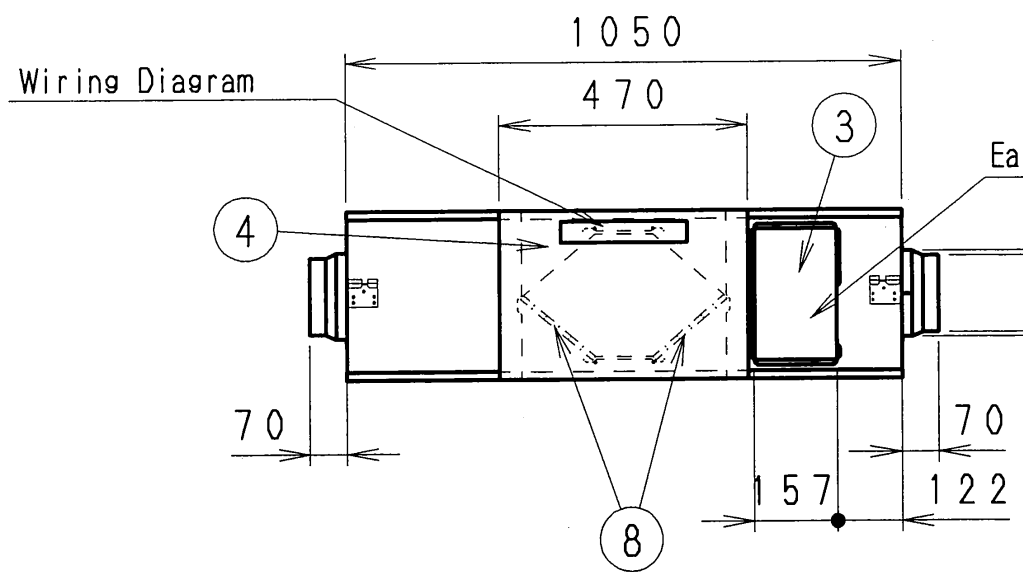
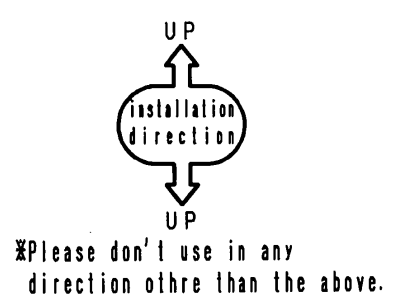
■ Motor Specifications

Type	4 Poles open type induction motor
Rating	Cont.
Insulation Class	class E
Temperature Rise	under 75 K
Surrounding Temperature	-10°C~40°C
Insulation Resistance	over 1M Ω (by DC500V)
Withstand Voltage	AC 1,500V for 1min

Name				Model No.			
Energy Recovery Ventilator (Specifications)				FY-250ZDY8			
Date of Made	2012.12.20	Scale	Drawing	Rev. NO.			
Date of Revision		Free	Reference No.	1			
Panasonic Ecology Systems Guang Dong Co.,Ltd.,Beijing Branch							

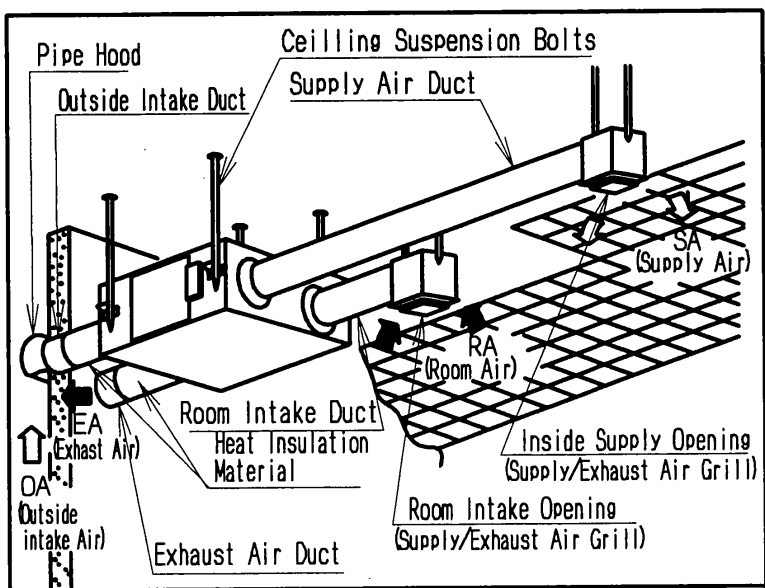


An inspection opening is necessary to clean the heat exchange element and filter once or twice a year.



Reference Sketch

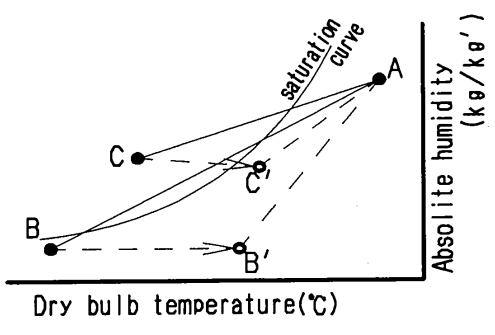
NO.	Parts Name	Qty.	Material	Remarks
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2	Adapter	4	ABS	
3	Electrical Equipment Box	1		
4	Inspection Cover	1	Galvanized sheets	
5	Fan	2	ABS	
6	Motor	2		
7	Heat Exchange Element	2	Special paper + Resin	
8	Filter	2	Nylon-Polyester Fiber	Collection Efficiency AF1 82%
9	Damper	1		
10	Damper Motor	1		
11	Ceiling Suspension Fixture	4	Galvanized sheets	



The two outside ducts (the Outside Intake Duct and the Exhaust Duct) must be insulated to prevent condensation. (Material: Glass wool, Thickness: 25)

* Duct size (Nominal Diameter) : $\phi 150$
 ** The above dimensions do not include the thickness of the insulation material on the unit body.

Be careful of dewing and frosting.
 As shown in the Figure, suppose a high temp absorbing air condition A and a low temp absorbing air condition B are plotted on the air line figure, then a high temp air A is heat-exchanged by the unit and goes out of the saturation curve as shown by Point C. In this case, the unit will be dewed or frosted. To avoid this, you are required to heat a low temp air B up to B' so as to get C' below the saturation curve, before using the unit.



Name		Model No.	
Energy Recovery Ventilator (Dimensions)		FY-350ZDY8	
Date of Made	2012.12.20	Scale	Drawing
Date of Revision		Free	Reference No.
Panasonic Ecology Systems Guang Dong Co.,Ltd.,Beijing Branch			
			Rev. NO. 0

■ Specifications

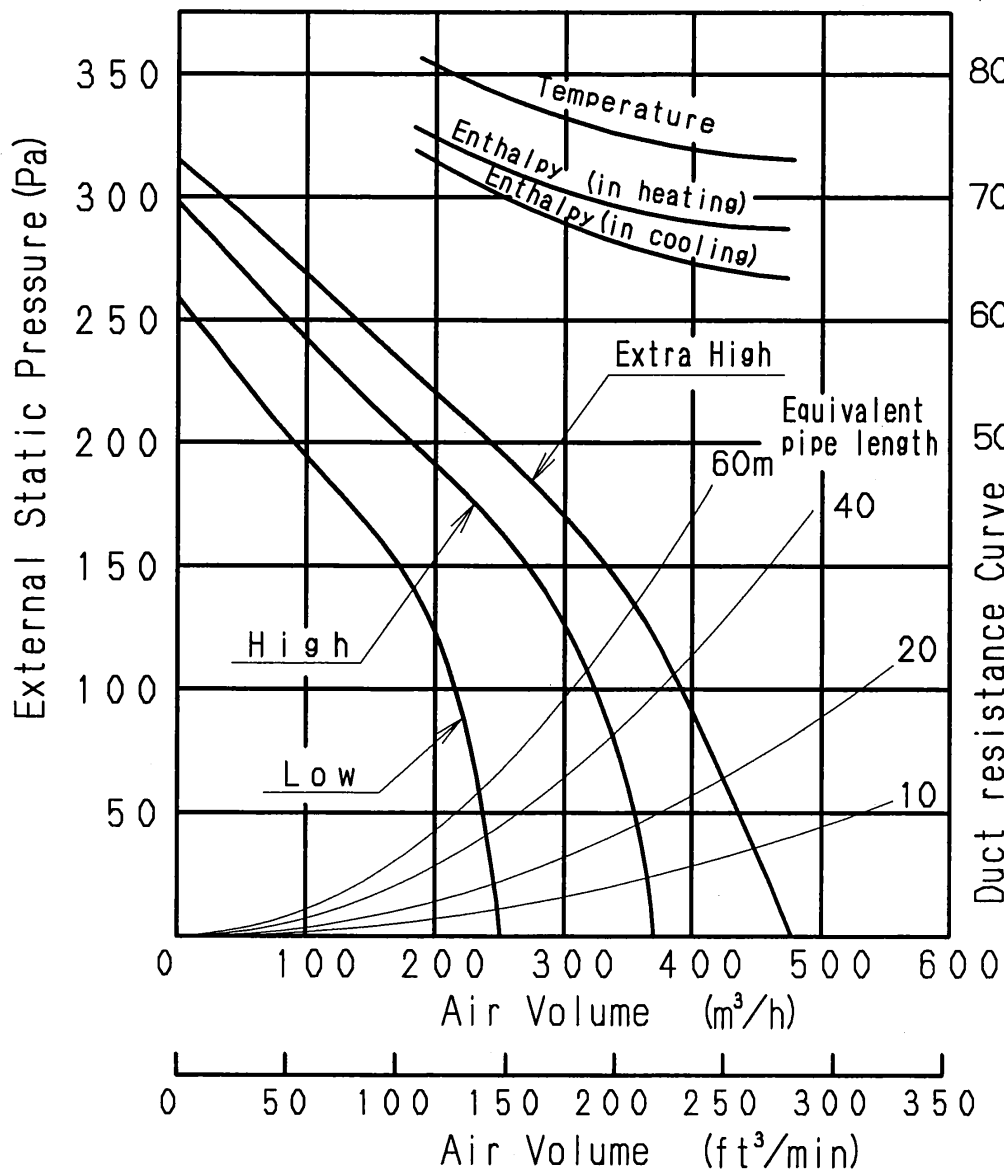
Model No.	Power Source	Notch	Frequency (Hz)	Heat Exchange Ventilation								Normal Ventilation				Product Weight (kg)	
				Input (W)	Current (A)	Air Volume (m ³ /h)	External Static Pressure (Pa)	Temperature Exchange Efficiency (%)	Enthalpy Exchange Efficiency (%)		Noise (dB)	Input (W)	Current (A)	Air Volume (m ³ /h)	External Static Pressure (Pa)		Noise (dB)
									Cooling	Heating							
350ZDY8	220-240V a.c.	Extra High	50	182-190	0.83-0.79	350	140	75	66	69	32.5-33.0	182-190	0.83-0.79	350	140	32.5-33.0	49
		High	50	178-185	0.81-0.77	350	60	75	66	69	30.5-31.0	178-185	0.81-0.77	350	60	30.5-31.0	
		Low	50	175-168	0.79-0.70	240	45	78	71	73	22.5-25.5	175-168	0.79-0.70	240	45	22.5-25.5	

* This noise of the product is the value which was measured at the acoustic room. Actually, in the established condition, that undergo influence by the echoing of the room and so that become bigger than the display numerical value.

■ Performance

P-Q Curve

Efficiency Curve — 220-240V~50Hz



* When friction coefficient of pipe (duct) : $\lambda=0.02$

- The Input, the current and the exchange efficiency are values at the time of the mentioned air volume.
- The noise level shall be measured 1.5m below the center of the unit.
- The temperature exchange efficiency averages that of when cooling and when heating.

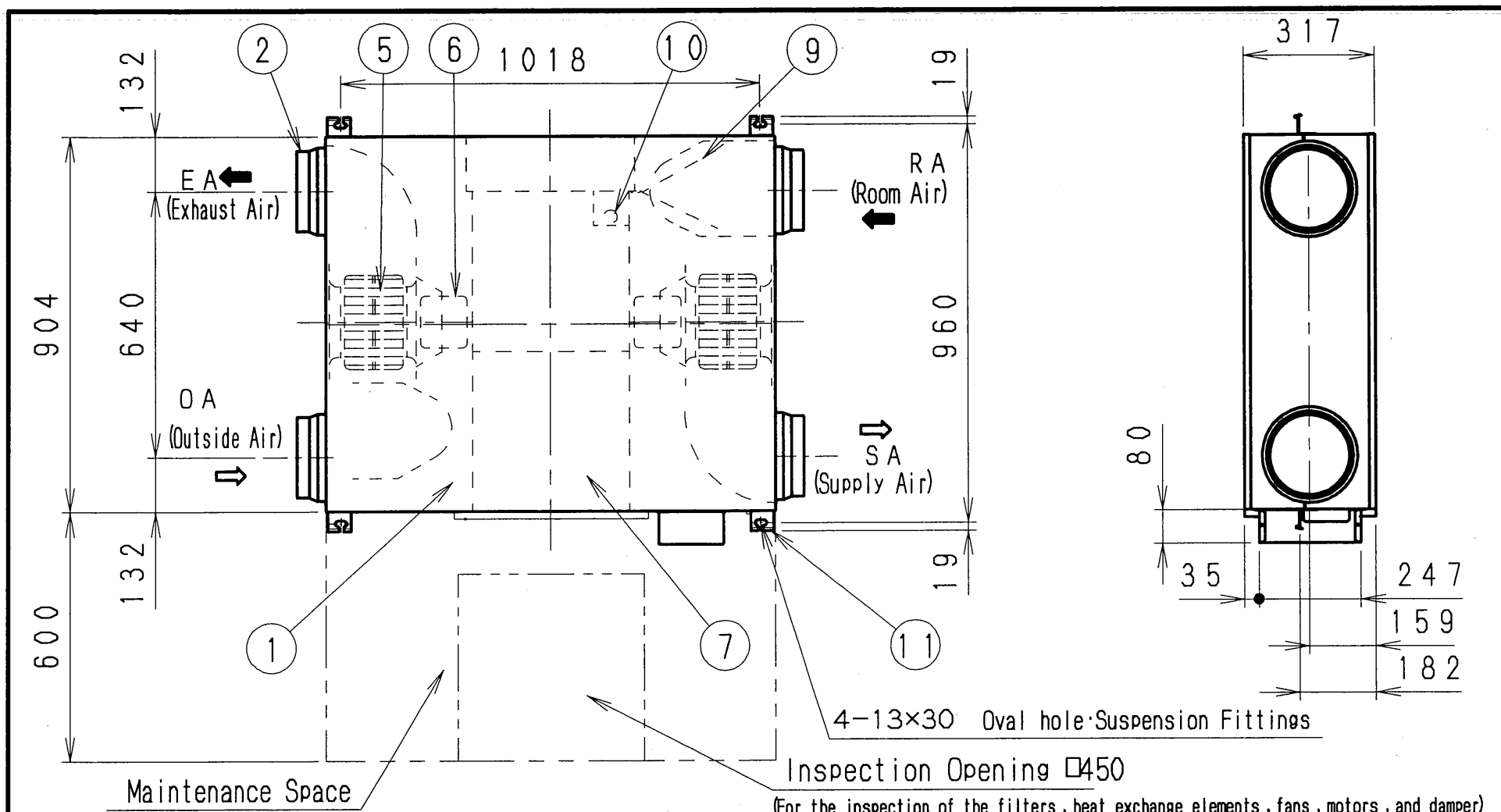
Use conditions

Outdoor air conditions
 Temperature range -10°C~40°C
 Relative humidity 85% or less
 Indoor air conditions
 Temperature range -10°C~40°C
 Relative humidity 85% or less
 Installation requirements
 Same as the indoor air conditions
 *Indoor air here means air in air-conditioned living rooms. Its use in refrigerators or other places where temperature can fluctuate greatly is prohibited even if a temperature range is acceptable.
Example Indoor air conditions
 During cooling period
 Temperature 27°C
 Relative humidity 50%
 During heating period
 Temperature 20°C
 Relative humidity 40%

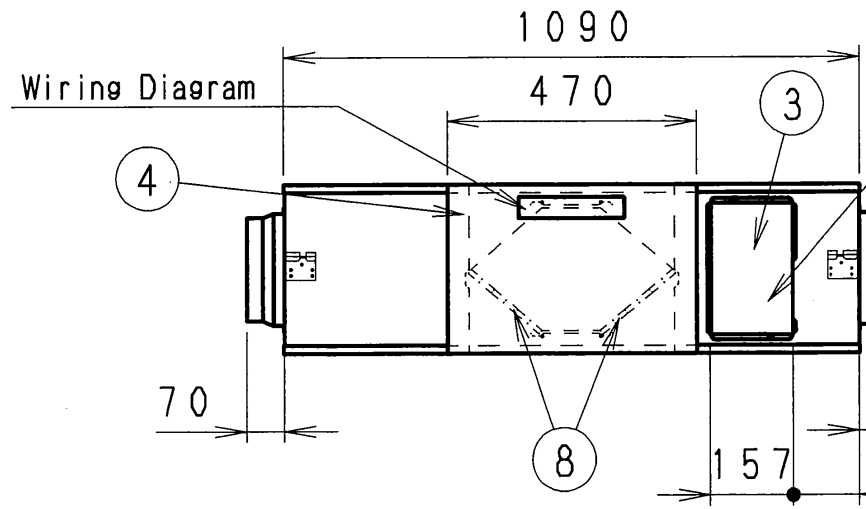
■ Motor Specifications

Type	4 Poles open type induction motor
Rating	Cont.
Insulation Class	class F
Temperature Rise	under 100K
Surrounding Temperature	-10°C~40°C
Insulation Resistance	over 1M Ω (by DC500V)
Withstand Voltage	AC 1,500V for 1min

Name				Model No.	
Energy Recovery Ventilator (Specifications)				FY-350ZDY8	
Date of Made	2012.12.20	Scale	Drawing	Rev. NO.	
Date of Revision		Free	Reference No.	0	
Panasonic Ecology Systems Guang Dong Co.,Ltd.,Beijing Branch					



Inspection Opening □450
(For the inspection of the filters, heat exchange elements, fans, motors, and damper)



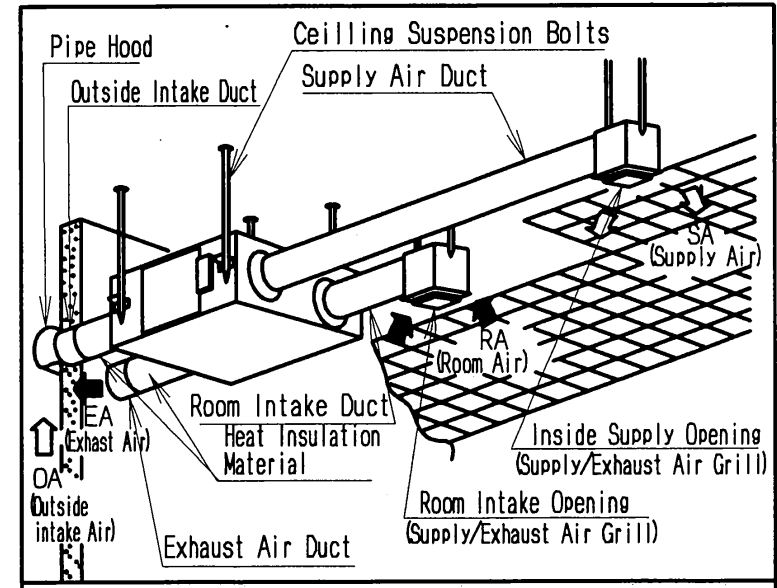
An inspection opening is necessary to clean the heat exchange element and filter once or twice a year.



※Please don't use in any direction other than the above.

■ Reference Sketch

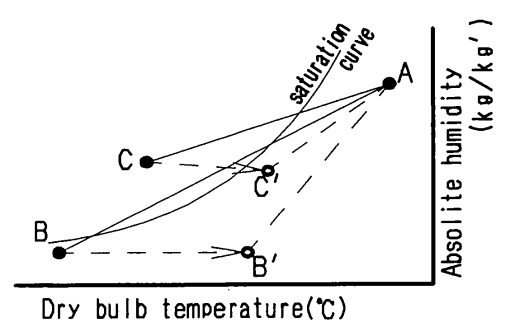
NO.	Parts Name	Qty.	Material	Remarks
1	Frame	1	Galvanized sheets	
2	Adapter	4	ABS	
3	Electrical Equipment Box	1		
4	Inspection Cover	1	Galvanized sheets	
5	Fan	2	ABS	
6	Motor	2		
7	Heat Exchange Element	2	Special paper + Resin	
8	Filter	2	Nylon-Polyester Fiber	Collection Efficiency AFI 82%
9	Damper	1		
10	Damper Motor	1		
11	Ceiling Suspension Fixture	4	Galvanized sheets	



The two outside ducts (the Outside Intake Duct and the Exhaust Duct) must be insulated to prevent condensation. (Material: Glass wool, Thickness: 25)

* Duct size (Nominal Diameter): $\phi 200$
 ※※ The above dimensions do not include the thickness of the insulation material on the unit body.

■ Be careful of dewing and frosting.
 As shown in the Figure, suppose a high temp absorbing air condition A and a low temp absorbing air condition B are plotted on the air line figure, then a high temp air A is heat-exchanged by the unit and goes out of the saturation curve as shown by Point C.
 In this case, the unit will be dewed or frosted.
 To avoid this, you are required to heat a low temp air B up to B' so as to get C' below the saturation curve, before using the unit.



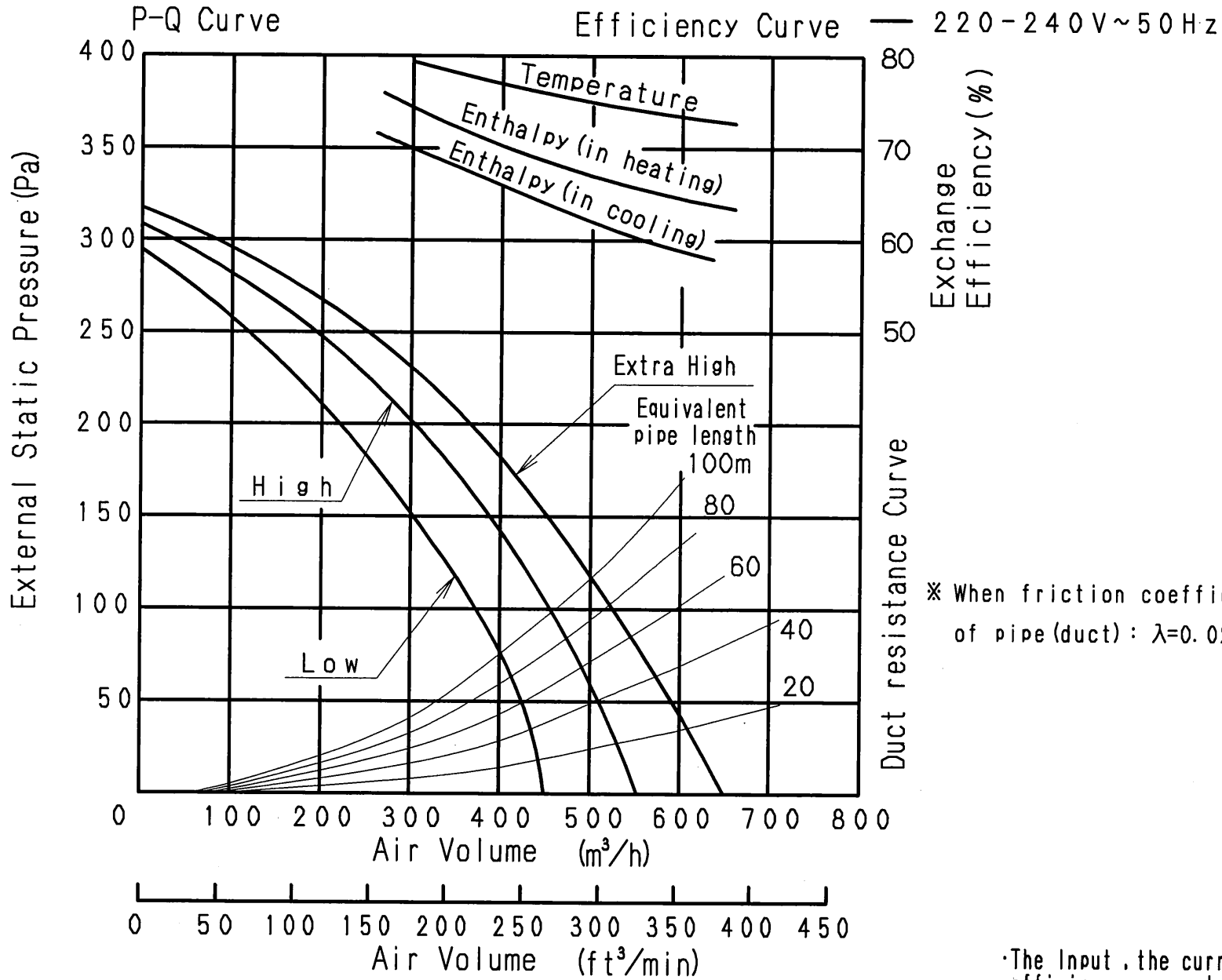
Name				Model No.	
Energy Recovery Ventilator (Dimensions)				FY-500ZDY8	
Date of Made	2012.12.20	Scale	Drawing	Rev. NO.	
Date of Revision		Free	Reference No.	0	
Panasonic Ecology Systems Guang Dong Co., Ltd., Beijing Branch					

■ Specifications

Model No.	Power Source	Notch	Frequency (Hz)	Heat Exchange Ventilation							Normal Ventilation					Product Weight (kg)	
				Input (W)	Current (A)	Air Volume (m ³ /h)	External Static Pressure (Pa)	Temperature Exchange Efficiency (%)	Enthalpy Exchange Efficiency (%)		Noise (dB)	Input (W)	Current (A)	Air Volume (m ³ /h)	External Static Pressure (Pa)		Noise (dB)
									Cooling	Heating							
500ZDY8	220-240V a.c.	Extra High	50	263-289	1.20-1.21	500	120	75	62	67	36.5-37.5	263-289	1.20-1.21	500	120	37.5-38.5	57
		High	50	204-225	0.93-0.94	500	60	75	62	67	34.5-35.5	204-225	0.93-0.94	500	60	37.0-38.0	
		Low	50	165-185	0.75-0.77	440	35	76	64	69	31.0-32.5	165-185	0.75-0.77	440	35	31.0-32.5	

* This noise of the product is the value which was measured at the acoustic room. Actually, in the established condition, that undergo influence by the echoing of the room and so that become bigger than the display numerical value.

■ Performance



Use conditions

Outdoor air conditions
 Temperature range -10°C~40°C
 Relative humidity 85% or less

Indoor air conditions
 Temperature range -10°C~40°C
 Relative humidity 85% or less

Installation requirements
 Same as the indoor air conditions

*Indoor air here means air in air-conditioned living rooms. Its use in refrigerators or other places where temperature can fluctuate greatly is prohibited even if a temperature range is acceptable.

Example Indoor air conditions
 During cooling period
 Temperature 27°C
 Relative humidity 50%

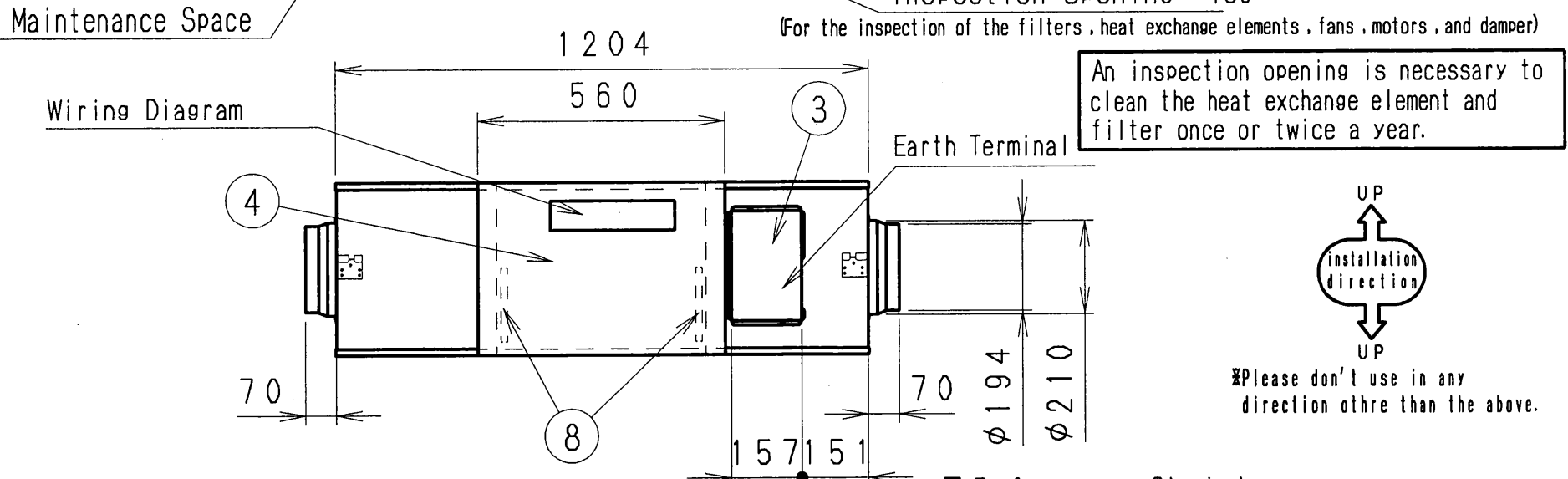
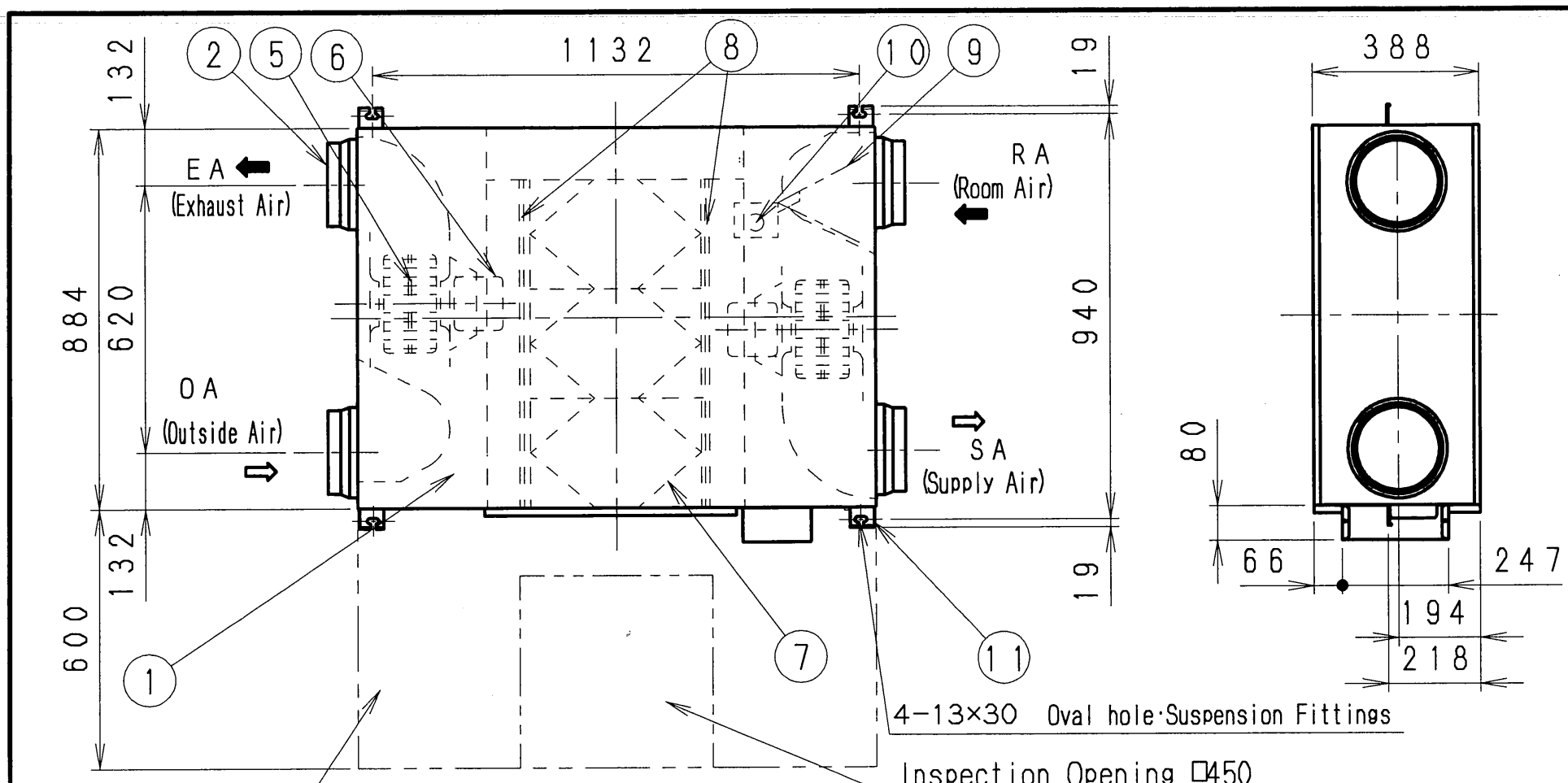
During heating period
 Temperature 20°C
 Relative humidity 40%

■ Motor Specifications

Type	4 Poles open type induction motor
Rating	Cont.
Insulation Class	class E
Temperature Rise	under 75 K
Surrounding Temperature	-10°C~40°C
Insulation Resistance	over 1MΩ (by DC500V)
Withstand Voltage	AC 1,500V for 1min

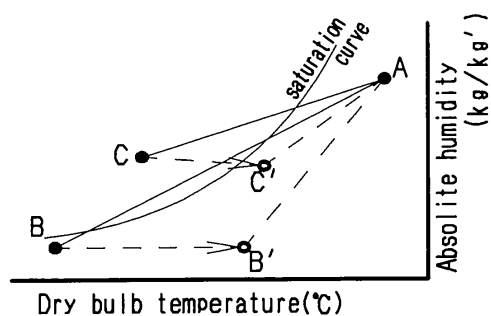
- The input, the current and the exchange efficiency are values at the time of the mentioned air volume.
- The noise level shall be measured 1.5m below the center of the unit.
- The temperature exchange efficiency averages that of when cooling and when heating.

Name				Model No.	
Energy Recovery Ventilator (Specifications)				FY-500ZDY8	
Date of Made	2012.12.20	Scale	Drawing	Rev. NO.	
Date of Revision		Free	Reference No.	2	
Panasonic Ecology Systems Guang Dong Co.,Ltd.,Beijing Branch					

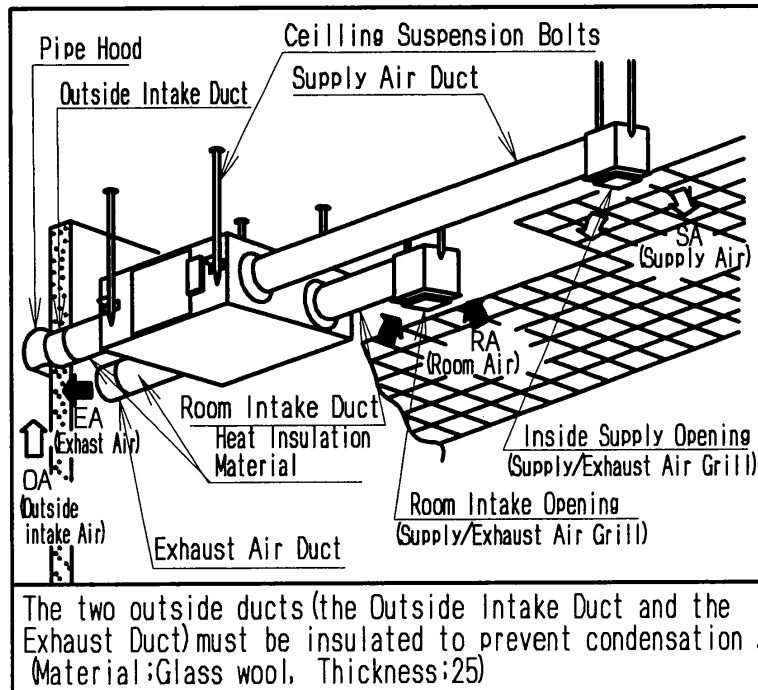


NO.	Parts Name	Qty.	Material	Remarks
1	Frame	1	Galvanized sheets	
2	Adapter	4	ABS	
3	Electrical Equipment Box	1		
4	Inspection Cover	1	Galvanized sheets	
5	Fan	2	ABS	
6	Motor	2		
7	Heat Exchange Element	3	Special paper + Resin	
8	Filter	2	Nylon-Polyester Fiber	Collection Efficiency AFI 82%
9	Damper	1		
10	Damper Motor	1		
11	Ceiling Suspension Fixture	4	Galvanized sheets	

■ Be careful of dewing and frosting.
 As shown in the Figure, suppose a high temp absorbing air condition A and a low temp absorbing air condition B are plotted on the air line figure, then a high temp air A is heat-exchanged by the unit and goes out of the saturation curve as shown by Point C. In this case, the unit will be dewed or frosted. To avoid this, you are required to heat a low temp air B up to B' so as to get C' below the saturation curve, before using the unit.



■ Reference Sketch



The two outside ducts (the Outside Intake Duct and the Exhaust Duct) must be insulated to prevent condensation. (Material: Glass wool, Thickness: 25)

* Duct size (Nominal Diameter): $\phi 200$
 ** The above dimensions do not include the thickness of the insulation material on the unit body.

Name				Model No.	
Energy Recovery Ventilator (Dimensions)				FY-650ZDY8	
Date of Made	2012.12.20	Scale	Drawing	Rev. NO.	
Date of Revision		Free	Reference No.	0	
Panasonic Ecology Systems Guang Dong Co., Ltd., Beijing Branch					

■ Specifications

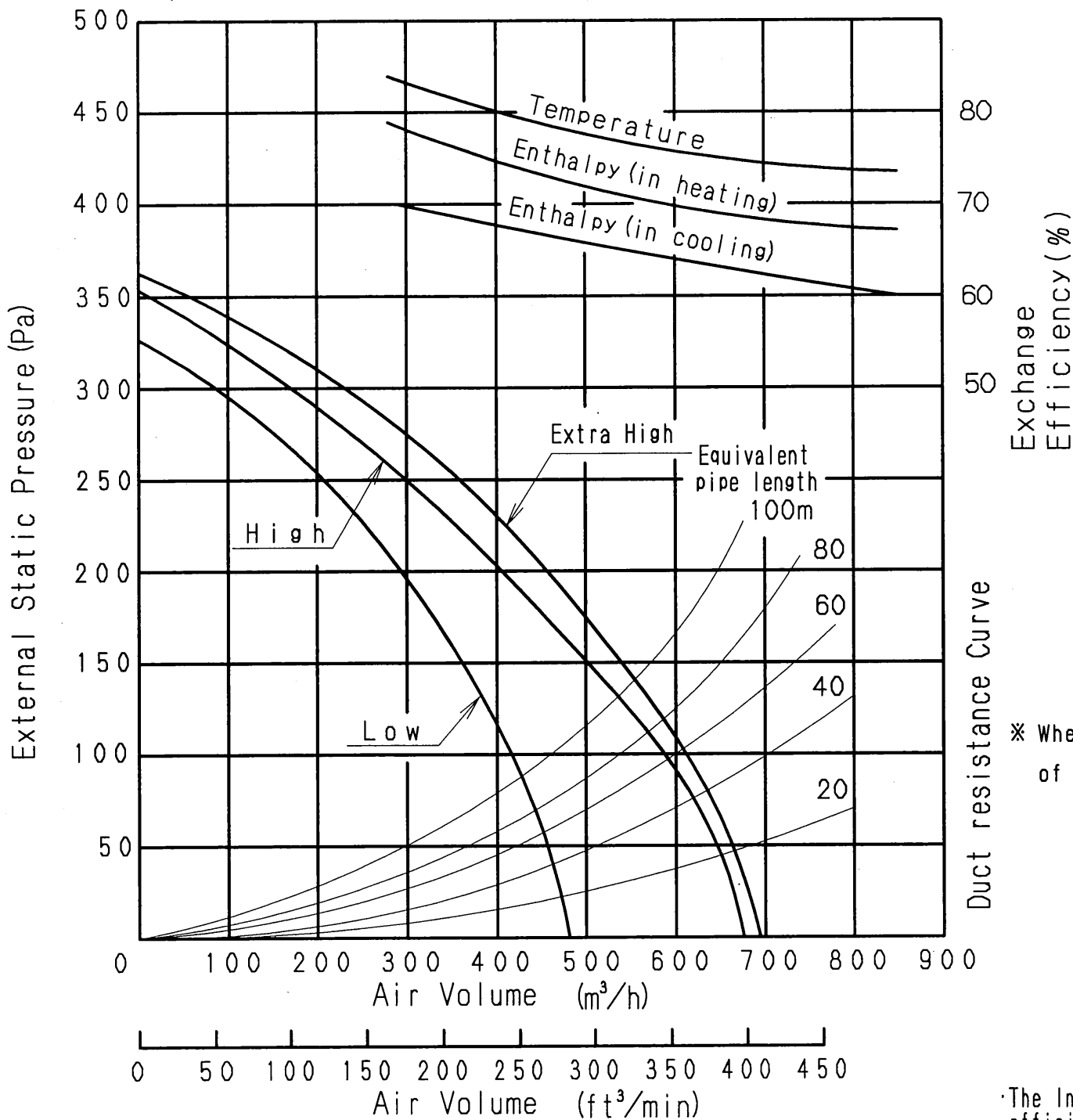
Model No.	Power Source	Notch	Frequency (Hz)	Heat Exchange Ventilation								Normal Ventilation					Product Weight (kg)
				Input (W)	Current (A)	Air Volume (m ³ /h)	External Static Pressure (Pa)	Temperature Exchange Efficiency (%)	Enthalpy Exchange Efficiency (%)		Noise (dB)	Input (W)	Current (A)	Air Volume (m ³ /h)	External Static Pressure (Pa)	Noise (dB)	
									Cooling	Heating							
650ZDY8	220-240V a.c.	Extra High	50	326-347	1.48-1.45	650	65	75	62	68	36.5-37.5	326-347	1.48-1.45	650	65	36.5-37.5	68
		High	50	269-295	1.22-1.23	650	40	75	62	68	34.5-35.0	269-295	1.22-1.23	650	40	35.0-35.5	
		Low	50	200-210	0.91-0.88	460	40	79	66	73	30.0-32.0	200-210	0.91-0.88	460	40	30.0-32.0	

* This noise of the product is the value which was measured at the acoustic room. Actually, in the established condition, that undergo influence by the echoing of the room and so that become bigger than the display numerical value.

■ Performance

P-Q Curve

Efficiency Curve — 220-240V~50Hz



* When friction coefficient of pipe (duct) : $\lambda=0.02$

The Input, the current and the exchange efficiency are values at the time of the mentioned air volume.

The noise level shall be measured 1.5m below the center of the unit.

The temperature exchange efficiency averages that of when cooling and when heating.

Use conditions

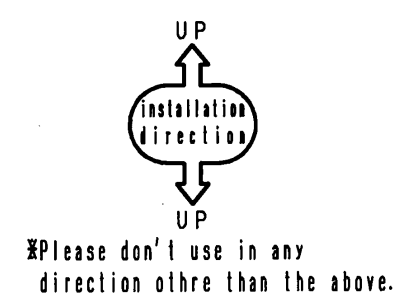
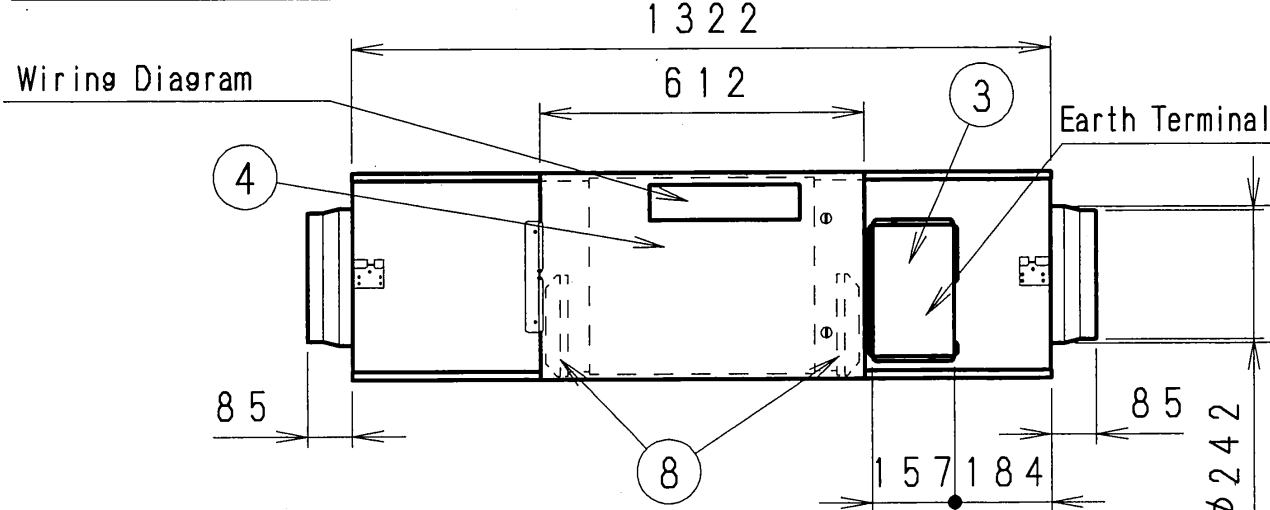
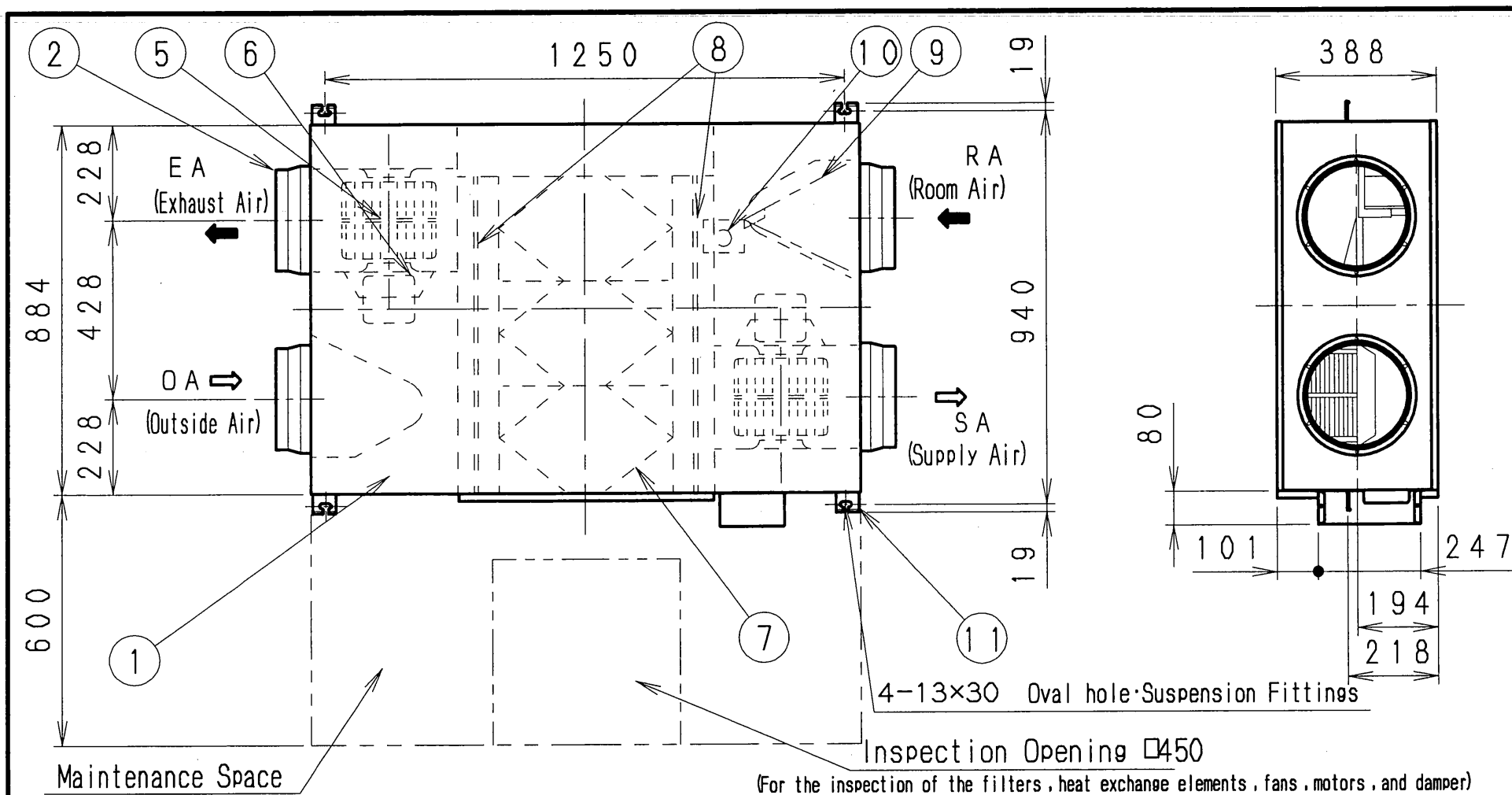
Outdoor air conditions
 Temperature range -10°C~40°C
 Relative humidity 85% or less
 Indoor air conditions
 Temperature range -10°C~40°C
 Relative humidity 85% or less
 Installation requirements
 Same as the indoor air conditions
 *Indoor air here means air in air-conditioned living rooms. Its use in refrigerators or other places where temperature can fluctuate greatly is prohibited even if a temperature range is acceptable.

Example Indoor air conditions
 During cooling period
 Temperature 27°C
 Relative humidity 50%
 During heating period
 Temperature 20°C
 Relative humidity 40%

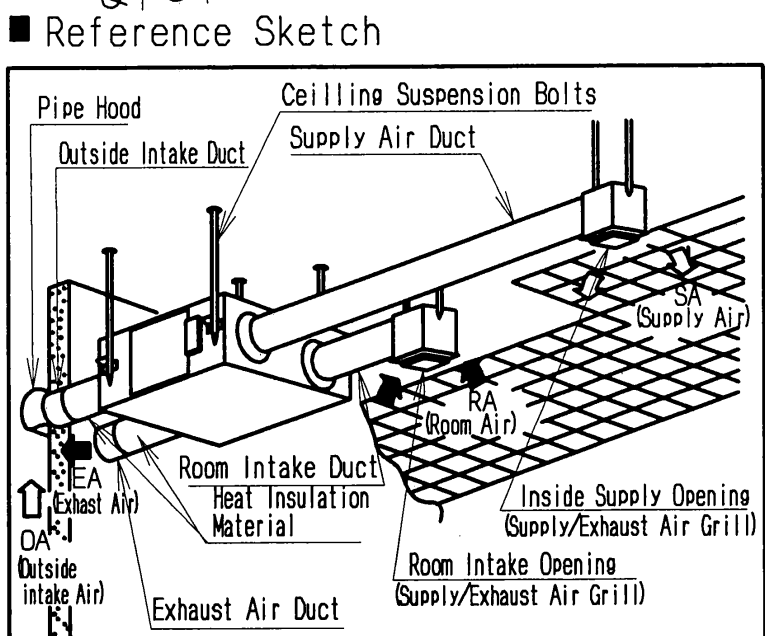
■ Motor Specifications

Type	4 Poles open type induction motor
Rating	Cont.
Insulation Class	class E
Temperature Rise	under 75 K
Surrounding Temperature	-10°C~40°C
Insulation Resistance	over 1M Ω (by DC500V)
Withstand Voltage	AC 1,500V for 1min

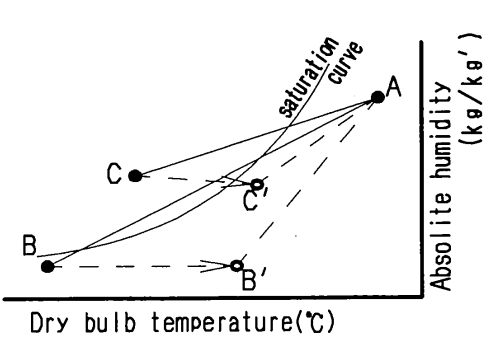
Name				Model No.	
Energy Recovery Ventilator (Specifications)				FY-650ZDY8	
Date of Made	2012.12.20	Scale	Drawing	Rev. NO.	
Date of Revision		Free	Reference No.	1	
Panasonic Ecology Systems Guang Dong Co.,Ltd.,Beijing Branch					



NO.	Parts Name	Qty.	Material	Remarks
1	Frame	1	Galvanized sheets	
2	Adapter	4	ABS	
3	Electrical Equipment Box	1		
4	Inspection Cover	1	Galvanized sheets	
5	Fan	2	ABS	
6	Motor	2		
7	Heat Exchange Element	3	Special paper + Resin	
8	Filter	2	Nylon-Polyester Fiber	Collection Efficiency AFI 82%
9	Damper	1		
10	Damper Motor	1		
11	Ceiling Suspension Fixture	4	Galvanized sheets	



■ Be careful of dewing and frosting.
 As shown in the Figure, suppose a high temp absorbing air condition A and a low temp absorbing air condition B are plotted on the air line figure, then a high temp air A is heat-exchanged by the unit and goes out of the saturation curve as shown by Point C. In this case, the unit will be dewed or frosted. To avoid this, you are required to heat a low temp air B up to B' so as to get C' below the saturation curve, before using the unit.



The two outside ducts (the Outside Intake Duct and the Exhaust Duct) must be insulated to prevent condensation. (Material: Glass wool, Thickness: 25)
 * Duct size (Nominal Diameter): $\phi 250$
 ** The above dimensions do not include the thickness of the insulation material on the unit body.

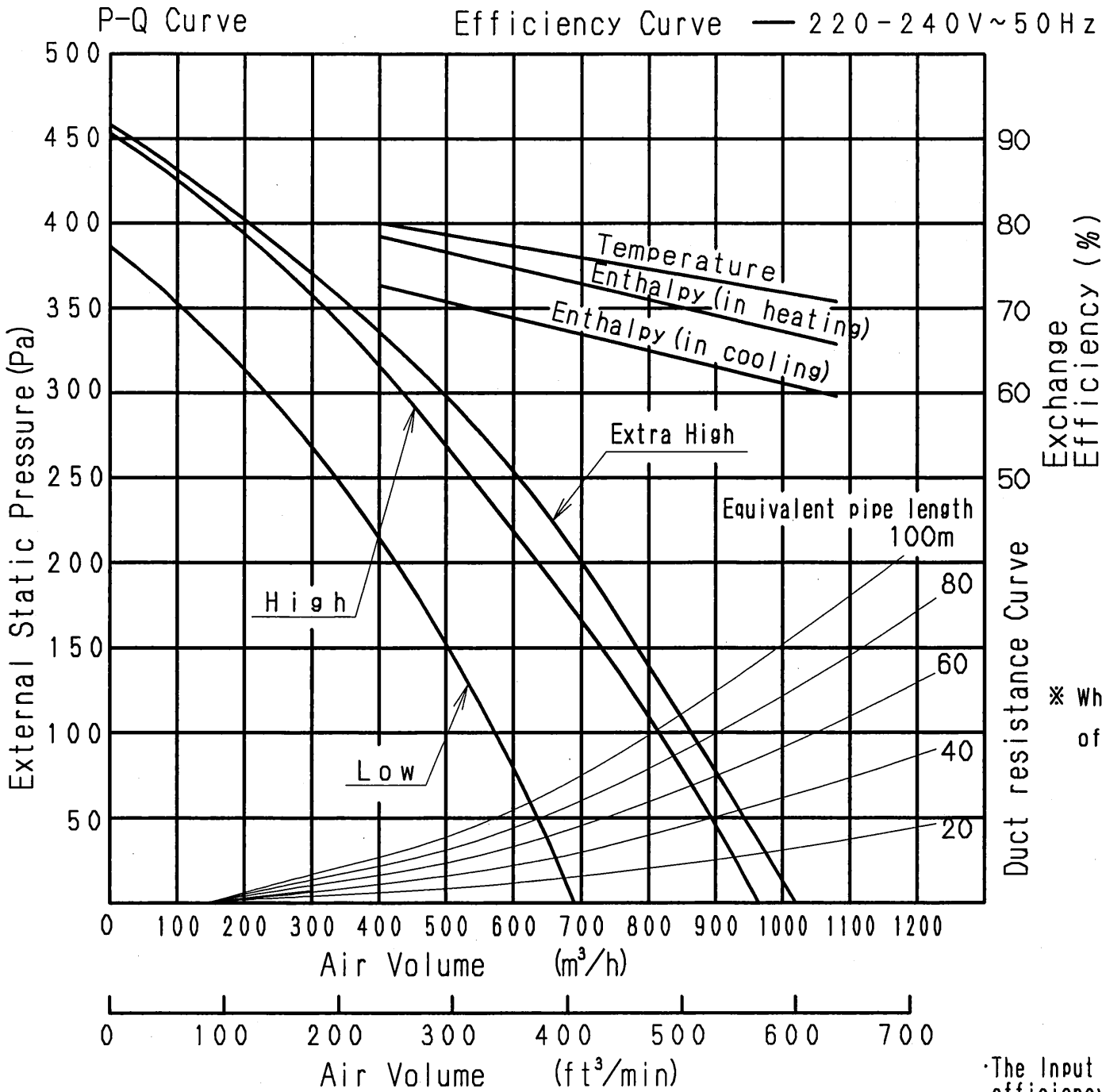
Name				Model No.	
Energy Recovery Ventilator (Dimensions)				FY-800ZDY8	
Date of Made	2012.12.20	Scale	Drawing	Rev. NO.	
Date of Revision		Free	Reference No.	0	
Panasonic Ecology Systems Guang Dong Co., Ltd., Beijing Branch					

■ Specifications

Model No.	Power Source	Notch	Frequency (Hz)	Heat Exchange Ventilation								Normal Ventilation					Product Weight (kg)
				Input (W)	Current (A)	Air Volume (m ³ /h)	External Static Pressure (Pa)	Temperature Exchange Efficiency (%)	Enthalpy Exchange Efficiency (%)		Noise (dB)	Input (W)	Current (A)	Air Volume (m ³ /h)	External Static Pressure (Pa)	Noise (dB)	
									Cooling	Heating							
800ZDY8	220-240V a.c.	Extra High	50	387-418	1.76-1.74	800	140	75	65	71	37.0-37.5	387-418	1.76-1.74	800	140	37.0-37.5	71
		High	50	360-378	1.64-1.58	800	110	75	65	71	36.5-37.0	360-378	1.64-1.58	800	110	36.5-37.0	
		Low	50	293-295	1.33-1.23	630	55	76	68	74	33.5-34.5	293-295	1.33-1.23	630	55	33.5-34.5	

* This noise of the product is the value which was measured at the acoustic room. Actually, in the established condition, that undergo influence by the echoing of the room and so that become bigger than the display numerical value.

■ Performance



·The Input, the current and the exchange efficiency are values at the time of the mentioned air volume.

·The noise level shall be measured 1.5m below the center of the unit.

·The temperature exchange efficiency averages that of when cooling and when heating.

Use conditions

Outdoor air conditions
 Temperature range -10°C~40°C
 Relative humidity 85% or less

Indoor air conditions
 Temperature range -10°C~40°C
 Relative humidity 85% or less

Installation requirements
 Same as the indoor air conditions

*Indoor air here means air in air-conditioned living rooms. Its use in refrigerators or other places where temperature can fluctuate greatly is prohibited even if a temperature range is acceptable.

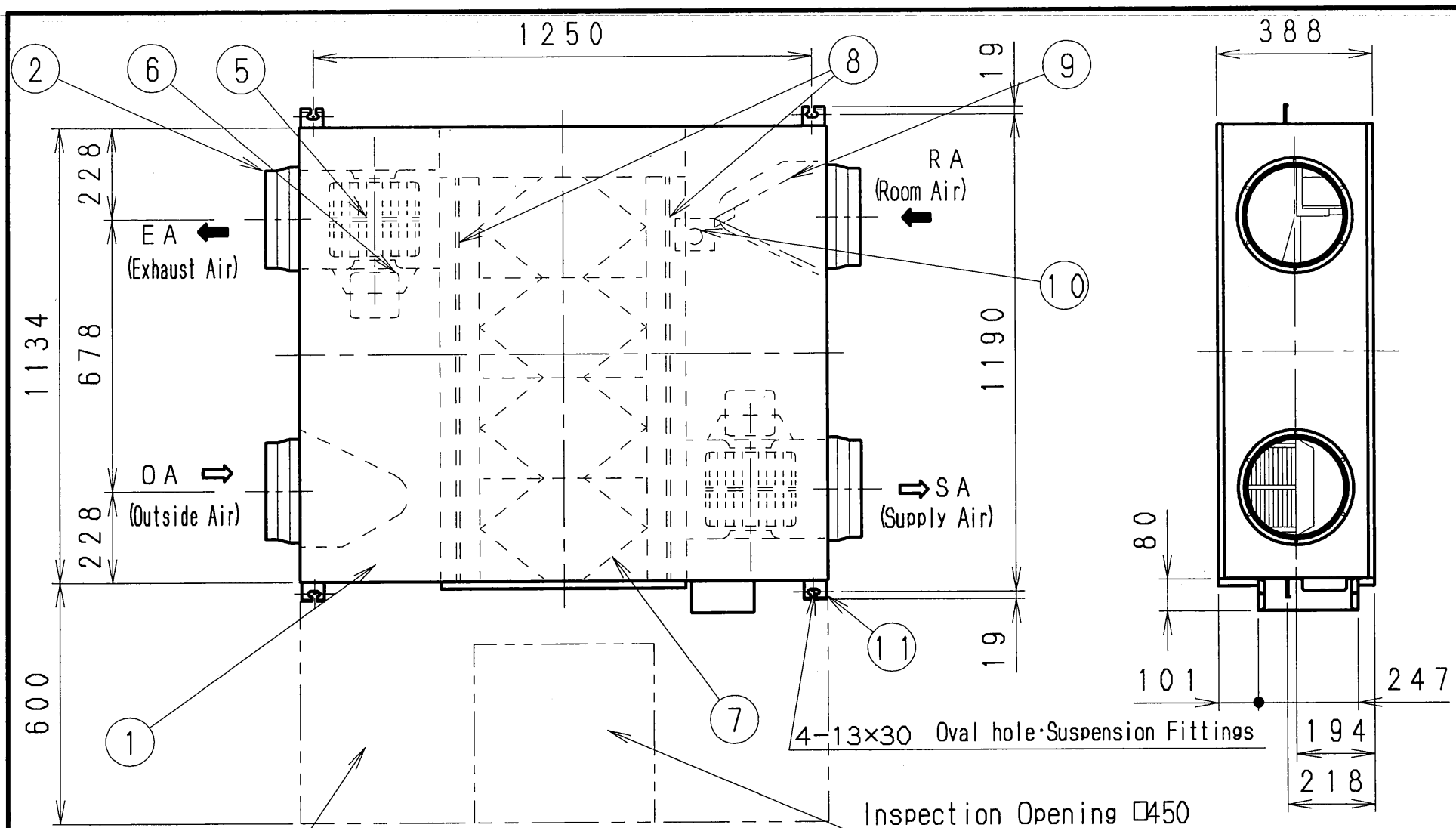
Example Indoor air conditions
 During cooling period
 Temperature 27°C
 Relative humidity 50%

During heating period
 Temperature 20°C
 Relative humidity 40%

■ Motor Specifications

Type	4 Poles open type induction motor
Rating	Cont.
Insulation Class	class E
Temperature Rise	under 75 K
Surrounding Temperature	-10°C~40°C
Insulation Resistance	over 1MΩ (by DC500V)
Withstand Voltage	AC 1,500V for 1min

Name				Model No.	
Energy Recovery Ventilator (Specifications)				FY-800ZDY8	
Date of Made	2012.12.20	Scale	Drawing	Rev. NO.	
Date of Revision		Free	Reference No.	0	
Panasonic Ecology Systems Guang Dong Co.,Ltd.,Beijing Branch					

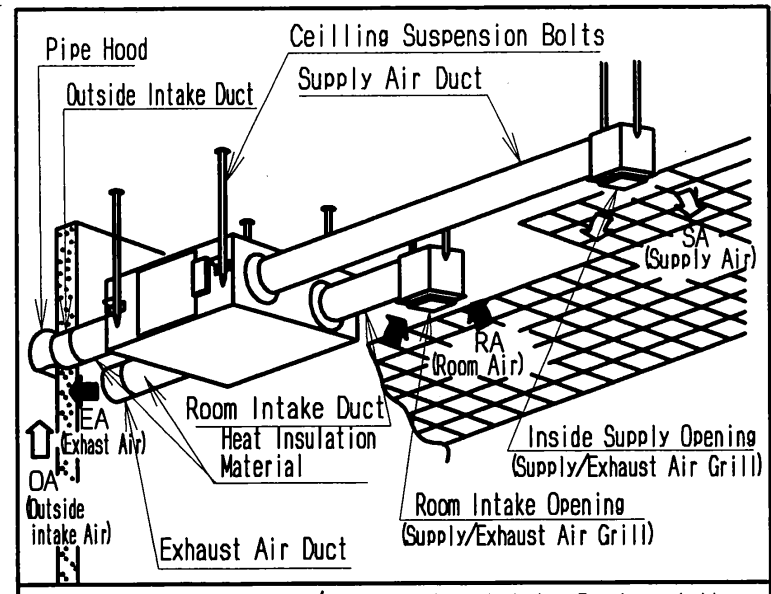


An inspection opening is necessary to clean the heat exchange element and filter once or twice a year.



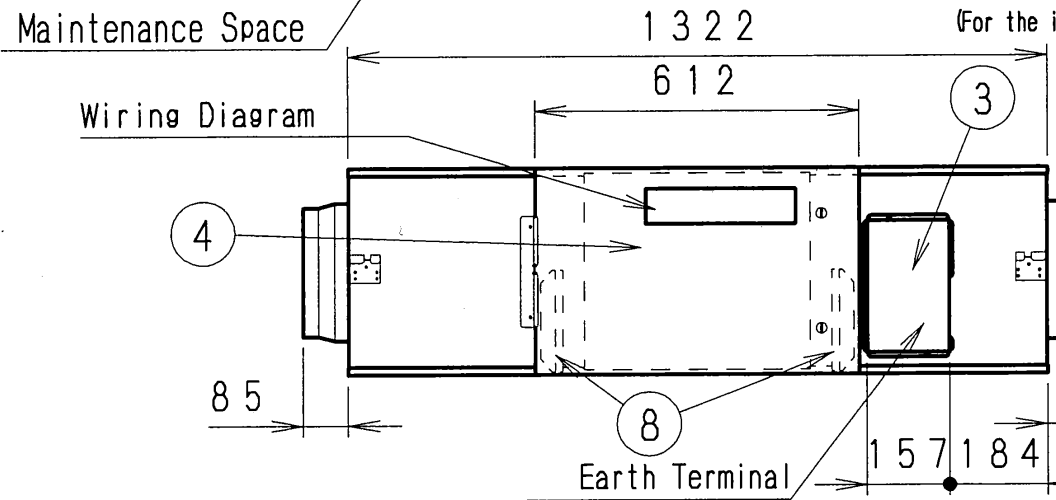
⚠ Please don't use in any direction other than the above.

■ Reference Sketch



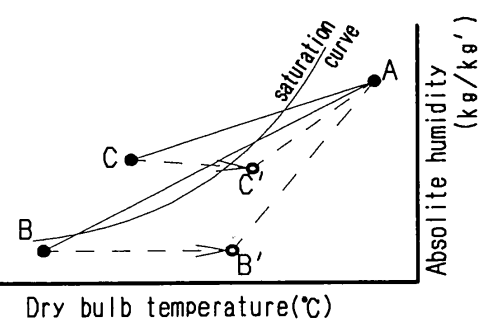
The two outside ducts (the Outside Intake Duct and the Exhaust Duct) must be insulated to prevent condensation. Material: Glass wool, Thickness: 25

* Duct size (Nominal Diameter): $\phi 250$
 *** The above dimensions do not include the thickness of the insulation material on the unit body.



NO.	Parts Name	Qty.	Material	Remarks
1	Frame	1	Galvanized sheets	
2	Adapter	4	ABS	
3	Electrical Equipment Box	1		
4	Inspection Cover	1	Galvanized sheets	
5	Fan	2	ABS	
6	Motor	2		
7	Heat Exchange Element	4	Special paper + Resin	
8	Filter	2	Nylon-Polyester Fiber	Collection Efficiency AFI 82%
9	Damper	1		
10	Damper Motor	1		
11	Ceiling Suspension Fixture	4	Galvanized sheets	

■ Be careful of dewing and frosting.
 As shown in the Figure, suppose a high temp absorbing air condition A and a low temp absorbing air condition B are plotted on the air line figure, then a high temp air A is heat-exchanged by the unit and goes out of the saturation curve as shown by Point C.
 In this case, the unit will be dewed or frosted.
 To avoid this, you are required to heat a low temp air B up to B' so as to get C' below the saturation curve, before using the unit.



Name		Model No.	
Energy Recovery Ventilator (Dimensions)		FY-01KZDY8A	
Date of Made	2012.12.20	Scale	Drawing
Date of Revision		Free	Reference No.
Panasonic Ecology Systems Guang Dong Co.,Ltd.,Beijing Branch			
			Rev. NO. 0

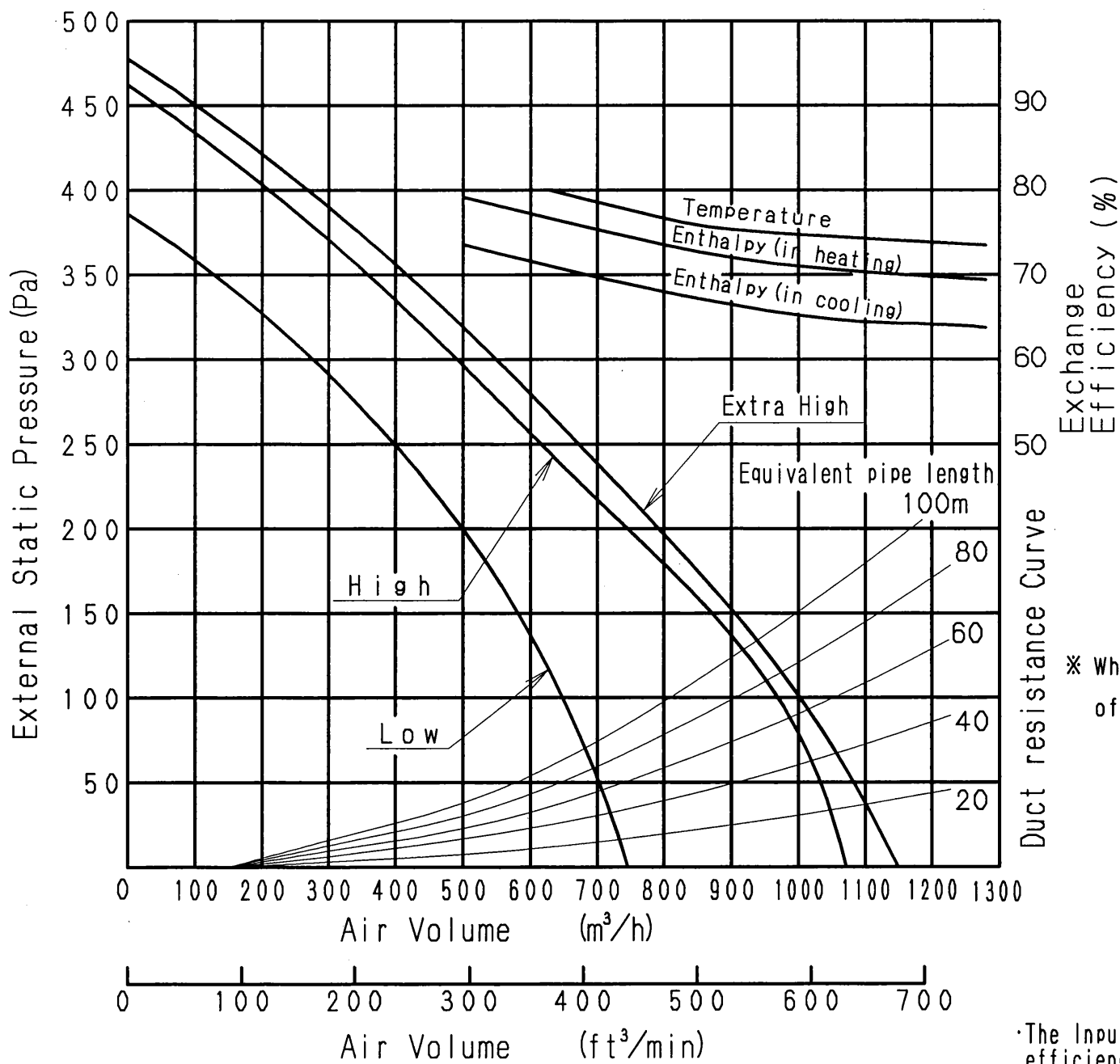
■ Specifications

Model No.	Power Source	Notch	Frequency (Hz)	Heat Exchange Ventilation								Normal Ventilation				Product Weight (kg)	
				Input (W)	Current (A)	Volume (m ³ /h)	External Static Pressure (Pa)	Temperature Exchange Efficiency (%)	Enthalpy Exchange Efficiency (%)		Noise (dB)	Input (W)	Current (A)	Air Volume (m ³ /h)	External Static Pressure (Pa)		Noise (dB)
									Cooling	Heating							
01KZDY8A	220-240V a.c.	Extra High	50	437-464	1.99-1.93	1000	105	75	65	71	37.5-38.5	437-464	1.99-1.93	1000	105	39.5-40.5	83
		High	50	416-432	1.89-1.80	1000	80	75	65	71	37.0-37.5	416-432	1.89-1.80	1000	80	39.0-39.5	
		Low	50	301-311	1.37-1.29	700	75	79	70	76	33.5-34.5	301-311	1.37-1.29	700	75	35.5-36.5	

* This noise of the product is the value which was measured at the acoustic room. Actually, in the established condition, that undergo influence by the echoing of the room and so that become bigger than the display numerical value.

■ Performance
P-Q Curve

Efficiency Curve — 220V-240V~50Hz



* When friction coefficient of pipe (duct): $\lambda=0.02$

·The Input, the current and the exchange efficiency are values at the time of the mentioned air volume.

·The noise level shall be measured 1.5m below the center of the unit.

·The temperature exchange efficiency averages that of when cooling and when heating.

Use conditions

Outdoor air conditions
Temperature range -10°C~40°C
Relative humidity 85% or less

Indoor air conditions
Temperature range -10°C~40°C
Relative humidity 85% or less

Installation requirements
Same as the indoor air conditions

*Indoor air here means air in air-conditioned living rooms. Its use in refrigerators or other places where temperature can fluctuate greatly is prohibited even if a temperature range is acceptable.

Example Indoor air conditions
During cooling period
Temperature 27°C
Relative humidity 50%

During heating period
Temperature 20°C
Relative humidity 40%

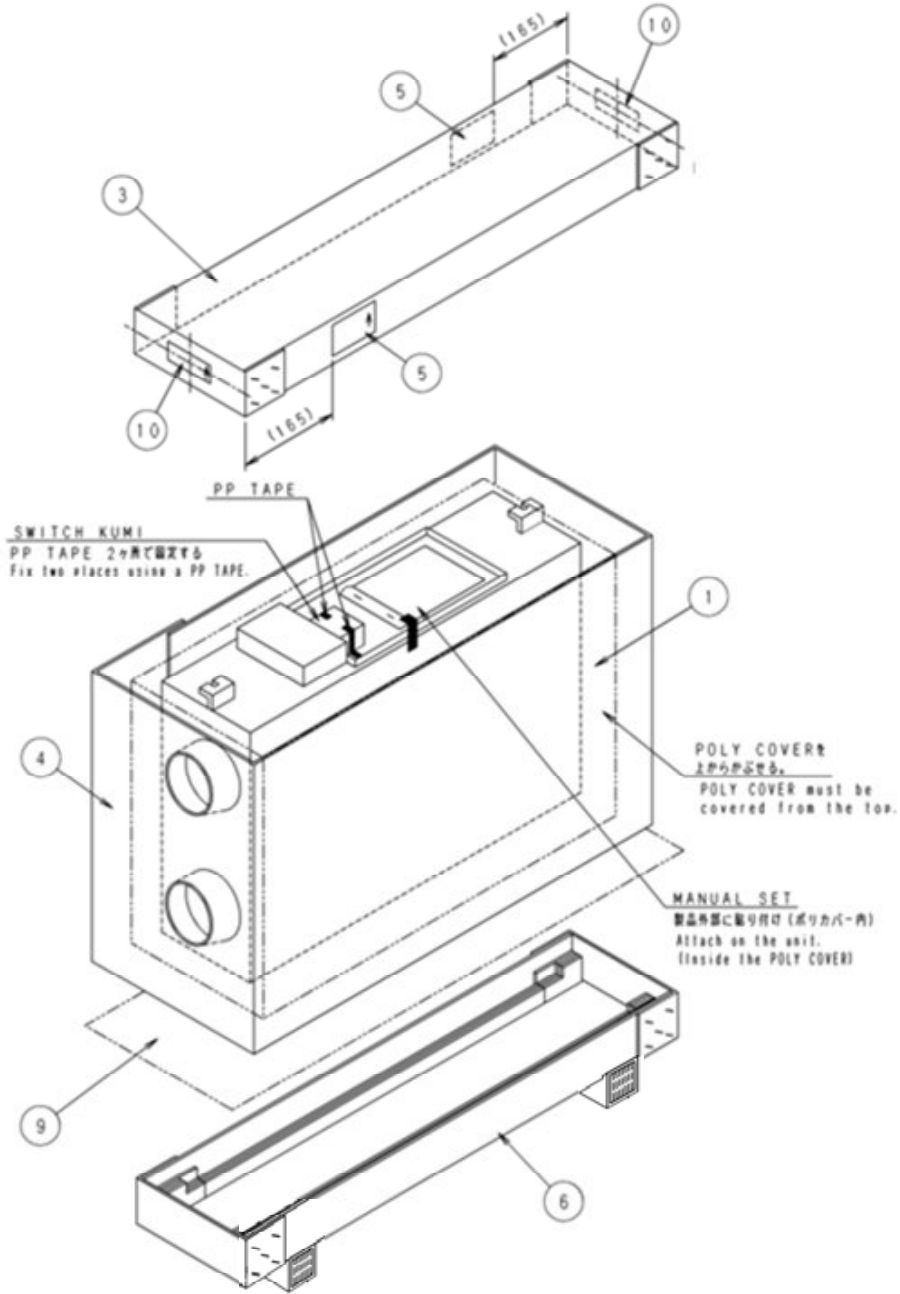
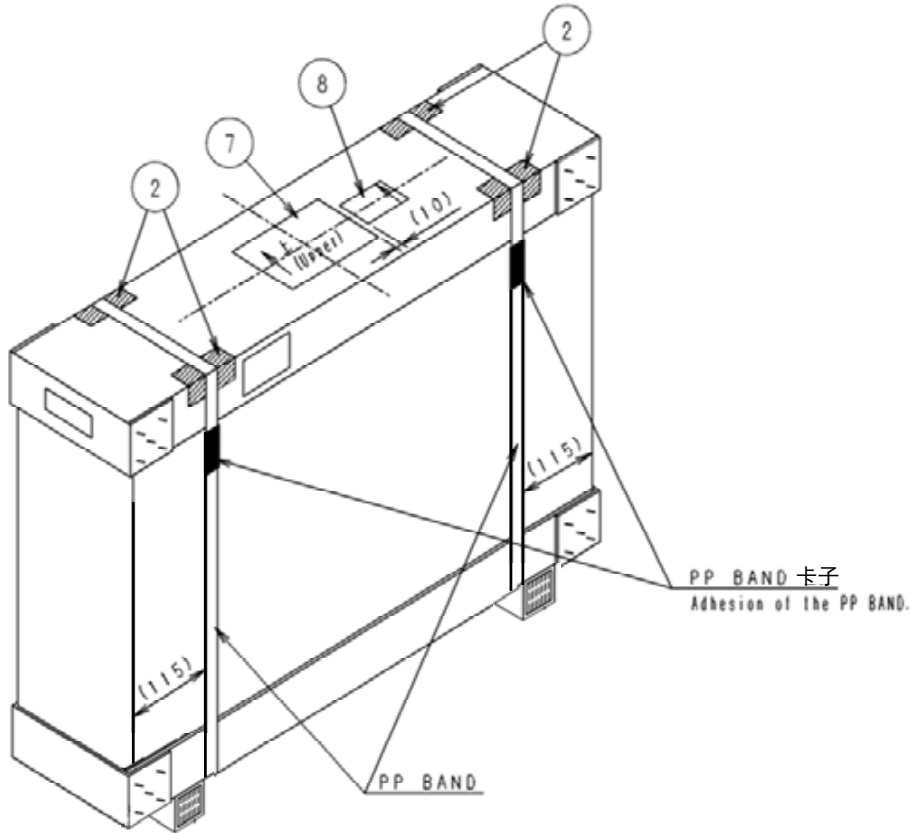
■ Motor Specifications

Type	4 Poles open type induction motor
Rating	Cont.
Insulation Class	class E
Temperature Rise	under 75 K
Surrounding Temperature	-10°C~40°C
Insulation Resistance	over 1M Ω (by DC500V)
Withstand Voltage	AC 1,500V for 1min

Name		Model No.	
Energy Recovery Ventilator (Specifications)		FY-01KZDY8A	
Date of Made	2012.12.20	Scale	Drawing
Date of Revision		Free Reference No.	1
Panasonic Ecology Systems Guang Dong Co.,Ltd.,Beijing Branch			

PACKAGE

	Model No.	Dimension
1	FY-250ZDY8	1132×349×760
2	FY-350ZDY8	1280×396×960
3	FY-500ZDY8	1251×396×1070
4	FY-650ZDY8	1634×467×1135
5	FY-800ZDY8	1552×467×1135
6	FY-01KZDY8A	1552×467×1370

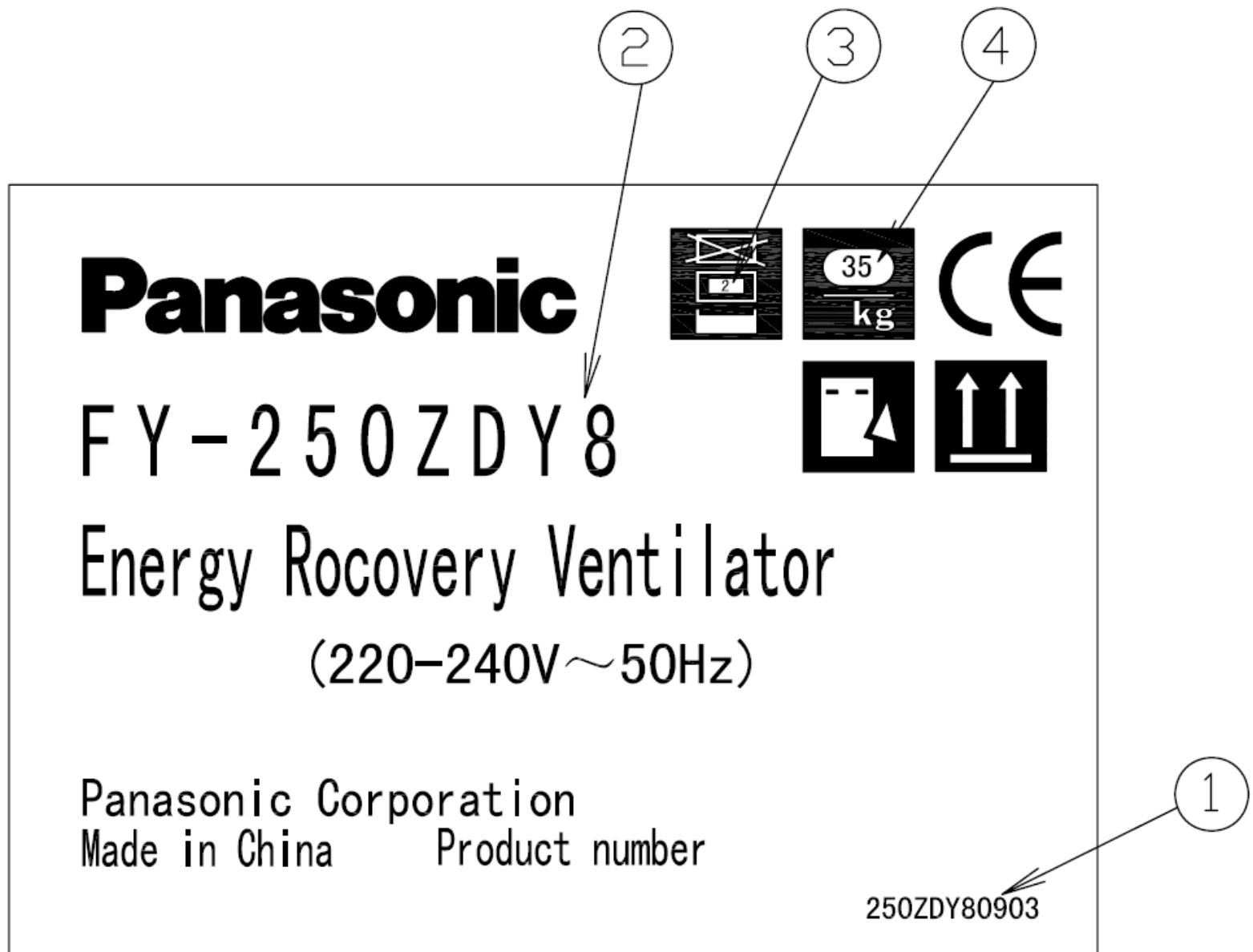


No.	Parts name	remarks	Qty.
1	POLY COVER		1
2	CORNER PAD		4
3	TOP CAP		1
4	SIDE CAP		1
5	PACKAGE LABEL		2
6	SOKO CAP		1
7	KONPOU LABEL		1
8	CAUTION LABEL		1
9	POLY SHEET		1

PACKAGE

Dimension : 105×148 (mm)

(Outline)

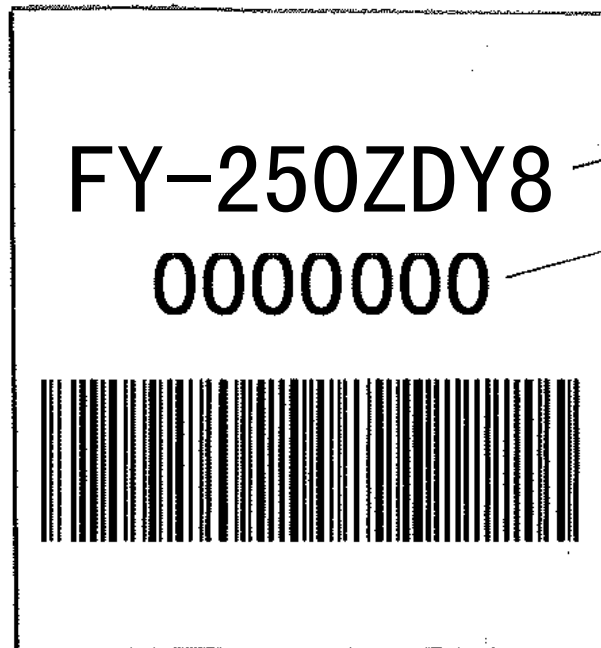


① Drawing No.	② Model No.	③ Stack Number	④ Weight
25ZDY80903	FY-250ZDY8	2	35
35ZDY80903	FY-350ZDY8	2	57
50ZDY80903	FY-500ZDY8	2	66
65ZDY80903	FY-650ZDY8	2	77
80ZDY80903	FY-800ZDY8	2	82
01KZDY8A0903	FY-01KZDY8A	2	98

Confirmed detailed information according to entity.

BAR CODE

Color : Black
Dimension : 56×60 (mm)
Material : Coated Paper



Model No.
Product Number

Model No.
FY-250ZDY8
FY-350ZDY8
FY-500ZDY8
FY-650ZDY8
FY-800ZDY8
FY-01KZDY8A

Example of Product Number :

The first one produced in January,2013→1301001

(The first two letters show produced year. The next two letters show produced month. The next three letters show count number of the product.)

Count Number of the product shown by three letters starts from 001 when the month changes.

Confirmed detailed information according to entity.