

technical data

CDKS/CDXS-C



**Concealed Ceiling,
Inverter Controlled Unit**



air conditioning systems

Split Sky Air

Split - Sky Air



ISO14001 assures an effective environmental management system in order to help protect human health and the environment from the potential impact of our activities, products and services and to assist in maintaining and improving the quality of the environment



Daikin units comply with the European regulations that guarantee the safety of the product.



Daikin Europe N.V. is approved by LRQA for its Quality Management System in accordance with the ISO9001 standard. ISO9001 pertains to quality assurance regarding design, development, manufacturing as well as to services related to the product.



Daikin Europe N.V. participates in the Eurovent Certification Programme for Air Conditioners (AC), Liquid Chilling Packages (LCP) and Fan Coil Units (FC); the certified data of certified models are listed in the Eurovent Directory.

Specifications are subject to change without prior notice.

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CDKS/CDXS-C

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* For capacity tables, please refer to part II: outdoor units

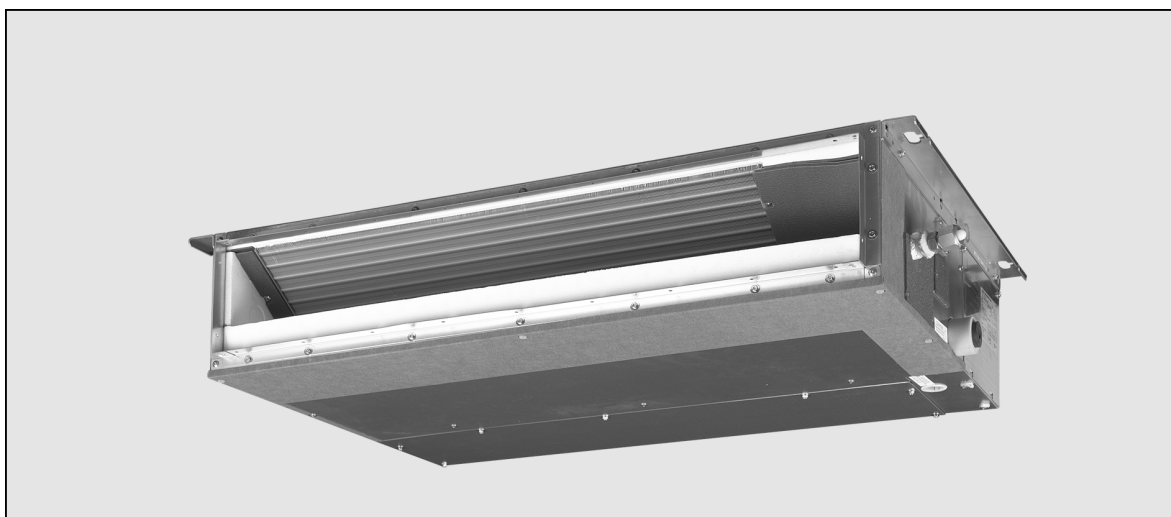




1 Features

1

- Slim design for flexible installation
- Compact dimensions: can easily be mounted in a ceiling void of only 240 mm
- Blends unobtrusively with any interior décor
- Can be installed in both new and existing buildings
- Leaves maximum floor and wall space for furniture, decoration and fittings
- Powerful mode can be selected for rapid cooling or heating.
- The home leave operation saves energy during absence.
- Standard suction filter: removes airborne dust particles to ensure a steady supply of clean air.
- Indoor/Outdoor unit silent operation: silent buttons on the remote control lower the operating sound of the indoor and/or outdoor unit by 3dB(A) each
- Night quiet mode automatically reduces the operating sound of the outdoor unit by 3dB(A) at night (only multi outdoor units in cooling mode)
- Medium external static pressure facilitates unit use with flexible duct of varying lengths



Standard



Optional



CDXS



CDKS



Standard



5 steps



MKS/MXS
(cooling application only)



2 Specifications


2

NOMINAL CAPACITY and NOMINAL INPUT					
For indoor units only:					
INDOOR UNITS				CDKS50CVMB	CDKS60CVMB
NOMINAL INPUT	Cooling	nominal	kW	0.140	0.160

For combination indoor + outdoor units (air cooled):					
INDOOR UNITS				CDKS50CVMB	CDKS60CVMB
OUTDOOR UNITS				4MKS58/75/90D	4MKS75/90D
NOMINAL CAPACITY (2-3)	Cooling (1)	min.-nom.-max	kW	For more information, see chapter MKS-D	
NOMINAL INPUT	Cooling	min.-nom.-max	kW		
EER					
ENERGY LABEL	Cooling				
ANNUAL ENERGY CONSUMPTION	Cooling		kWh		

TECHNICAL SPECIFICATIONS					
For indoor units only:					
INDOOR UNITS				CDKS50CVMB	CDKS60CVMB
DIMENSIONS	Unit	H	mm	200	200
		W	mm	900	1,100
		D	mm	620	620
			kg	27	30
WEIGHT	Unit				
SOUND LEVEL	Sound pressure (Cooling) (4)	high	dB(A)	37	38
		low	dB(A)	33	34
		super low	dB(A)	31	32
	Sound power (Cooling) (5)	high	dB(A)	55	56
FAN	Air flow rate (Cooling)	high	m ³ /min	12.0	16.0
		low	m ³ /min	10.0	13.5
		super low	m ³ /min	8.4	11.2
	Speed	steps		5 steps, silent and auto	
		high	rpm	1,270	1,280
		medium	rpm	1,180	1,160
		low	rpm	1,080	1,040
		super low	rpm	930	890
	Type			Sirocco fan	
	Motor output		W	130	130
HEAT EXCHANGER	Type			ML fin, ϕ 7Hi - XSS tube	
	Rows x stages x fin pitch		mm	3 x 12 x 1.5	2 x 12 x 1.5
AIR FILTER				Removable/washable/mildew proof	
TEMPERATURE CONTROL				Microprocessor control	
PIPING CONNECTIONS	liquid	mm		ϕ 6.4	
	gas	mm		ϕ 12.7	
	drain	mm		VP20 I.D. ϕ 20	
	drain	mm		VP20 O.D. ϕ 26	
INSULATION MATERIAL	Heat insulation tape			Both liquid and gas pipes	
For outdoor units	Multi model application			See chapter MKS-D	

2 Specifications



2

ELECTRICAL SPECIFICATIONS					
For indoor units only:				CDKS50CVMB	CDKS60CVMB
CURRENT	Nominal running current	cooling	A	0.64	0.74
	Max. running current	cooling	A	—	—
For combination indoor units + outdoor units:				CDKS50CVMB 4MKS58/75/90D	CDKS60CVMB 4MKS75/90D
CURRENT	Nominal running current	cooling	A	See chapter MKS-D: Electrical data	
	Max. running current	cooling	A		
	Starting current	cooling	A		
For indoor units only:				CDKS50CVMB	CDKS60CVMB
POWER SUPPLY				VM	VM
NOMINAL DISTRIBUTION SYSTEM VOLTAGE	Phase			1~	1~
	Frequency	Hz		50	50
	Voltage	V		230	230

NOTES

- Nominal cooling capacities are based on: indoor temperature 27°CDB/19°CWB * outdoor temperature 35°CDB * refrigerant piping length: 7.5m * level difference: 0m.
- Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- Units should be selected on nominal capacity. Maximum capacity is limited to peak periods.
- The sound pressure level is measured via a microphone at a certain distance from the unit.
For measuring conditions: please refer to item 6 of this chapter.
- The sound power level is an absolute value indicating the "power" which a sound source generates.
- Energy label: scale from A (most efficient) to G (less efficient).
- Annual energy consumption: based on average use of 500 running hours per year at full load (= nominal conditions)

2 Specifications


2

NOMINAL CAPACITY and NOMINAL INPUT					
For indoor units only:					
INDOOR UNITS				CDXS50CVMB	CDXS60CVMB
NOMINAL INPUT	Cooling	nominal	kW	0.140	0.160
	Heating	nominal	kW	0.140	0.160

For combination indoor + outdoor units (air cooled):					
INDOOR UNITS				CDXS50CVMB	CDXS60CVMB
OUTDOOR UNITS				2MXS52/3MXS52/4MXS68/80D	4MXS68/80D
NOMINAL CAPACITY (3~4)	Cooling (1)	min.~nom.~max	kW	For more information, see chapter MXS-D	
	Heating (2)	min.~nom.~max	kW		
NOMINAL INPUT	Cooling	min.~nom.~max	kW		
	Heating	min.~nom.~max	kW		
EER	Cooling				
COP	Heating				
ENERGY LABEL	Cooling				
	Heating				
ANNUAL ENERGY CONSUMPTION	Cooling		kWh		

TECHNICAL SPECIFICATIONS					
For indoor units only:					
INDOOR UNITS				CDXS50CVMB	CDXS60CVMB
DIMENSIONS	Unit	H	mm	200	200
		W	mm	900	1,100
		D	mm	620	620
WEIGHT	Unit		kg	27	30
SOUND LEVEL	Sound pressure (cooling/heating) (5)	high	dB(A)	37/37	38/38
		low	dB(A)	33/33	34/34
		super low	dB(A)	31/31	32/32
	Sound power (cooling/heating) (6)	high	dB(A)	55/55	56/56
FAN	Air flow rate (cooling/heating)	high	m³/min	12.0/12.0	16.0/16.0
		low	m³/min	10.0/10.0	13.5/13.5
		super low	m³/min	8.4/8.4	11.2/11.2
	Speed (cooling/heating)	steps		5 steps, silent and auto	
		high	rpm	1,270/1,270	1,280/1,280
		medium	rpm	1,180/1,180	1,160/1,160
		low	rpm	1,080/1,080	1,040/1,040
		super low	rpm	930/930	890/890
	Type	Sirocco fan			
	Motor output	W	130	130	
HEAT EXCHANGER	Type	ML fin, Ø 7Hi - XSS tube			
	Rows x stages x fin pitch	mm	2 x 12 x 1.5	2 x 12 x 1.5	
AIR FILTER	Removable/washable/mildew proof				
TEMPERATURE CONTROL	Microprocessor control				
PIPING CONNECTIONS	liquid	mm	Φ6.4		
	gas	mm	Φ12.7		
	drain	mm	VP20 I.D. Φ20		
	drain	mm	VP20 O.D. Φ26		
INSULATION MATERIAL	Heat insulation tape	Both liquid and gas pipes			
For outdoor units	Multi model application	See chapter MIXS-D			

2 Specifications



2

ELECTRICAL SPECIFICATIONS										
For indoor units only:				CDXS50CVMB		CDXS60CVMB				
CURRENT	Nominal running current	cooling	A	0.64		0.74				
		heating	A	0.64		0.74				
	Max. running current	cooling	A	—						
		heating	A							
For combination indoor units + outdoor units:				CDXS50CVMB		CDXS60CVMB				
				2MXS52/3MXS52/4MXS68/80D		4MXS68/80D				
CURRENT	Nominal running current	cooling	A	See chapter MXS-D: Electrical data						
		heating	A							
	Maximum running current	cooling	A							
		heating	A							
	Starting current	cooling	A							
		heating	A							
	For indoor units only:						CDXS50CVMB		CDXS60CVMB	
	POWER SUPPLY						VM		VM	
NOMINAL DISTRIBUTION SYSTEM VOLTAGE	Phase			1~		1~				
	Frequency		Hz	50		50				
	Voltage		V	230		230				

NOTES

- Nominal cooling capacities are based on: indoor temperature 27°CDB/19°CWB * outdoor temperature 35°CDB * refrigerant piping length: 7.5m * level difference: 0m.
- Nominal heating capacities are based on: indoor temperature: 20°CDB * outdoor temperature: 7°CDB/6°CWB * refrigerant piping length: 7.5m * level difference 0m.
- Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- Units should be selected on nominal capacity. Maximum capacity is limited to peak periods.
- The sound pressure level is measured via a microphone at a certain distance from the unit.
For measuring conditions: please refer to item 6 of this chapter.
- The sound power level is an absolute value indicating the "power" which a sound source generates.
- Energy label: scale from A (most efficient) to G (less efficient).
- Annual energy consumption: based on average use of 500 running hours per year at full load (= nominal conditions)

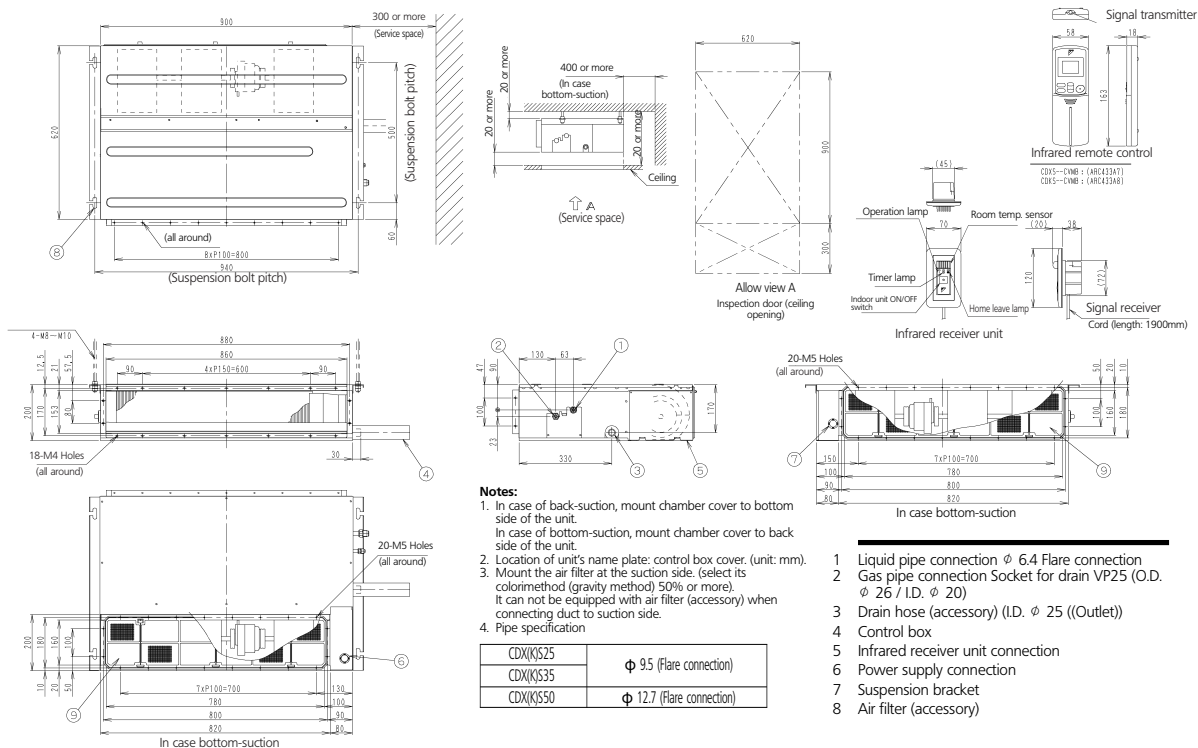


3 Dimensional drawings

3

CDK/XS50C

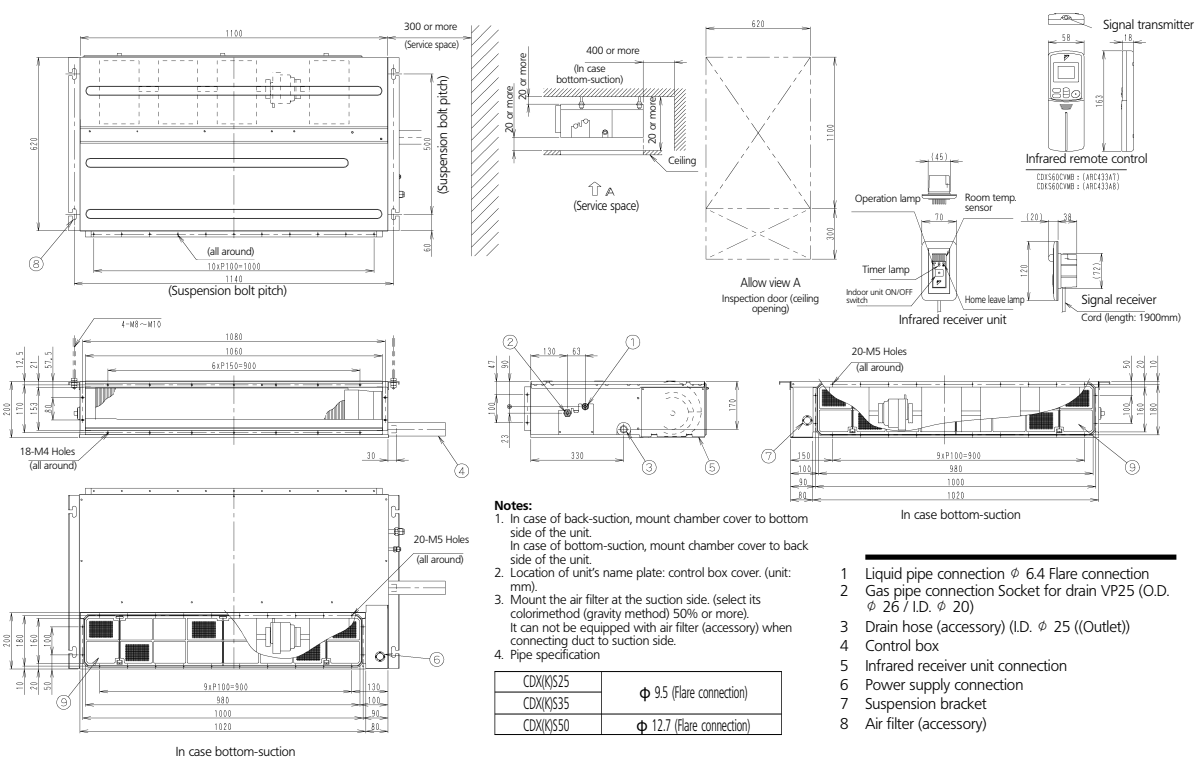
unit (mm)



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CDK/XS60C

unit (mm)



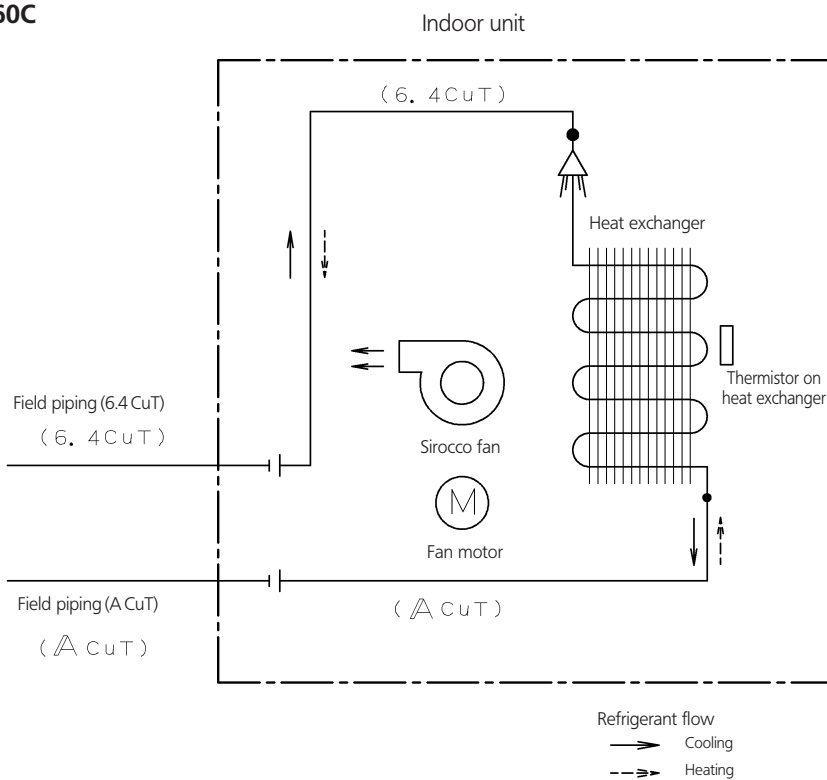
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4 Piping diagrams

4

CDK/XS50-60C



Model	A
CDXS25CVMB CDKS25CVMB CDXS35CVMB CDKS35CVMB	φ 9.5
CDXS50CVMB CDKS50CVMB CDXS60CVMB CDKS60CVMB	φ 12.7

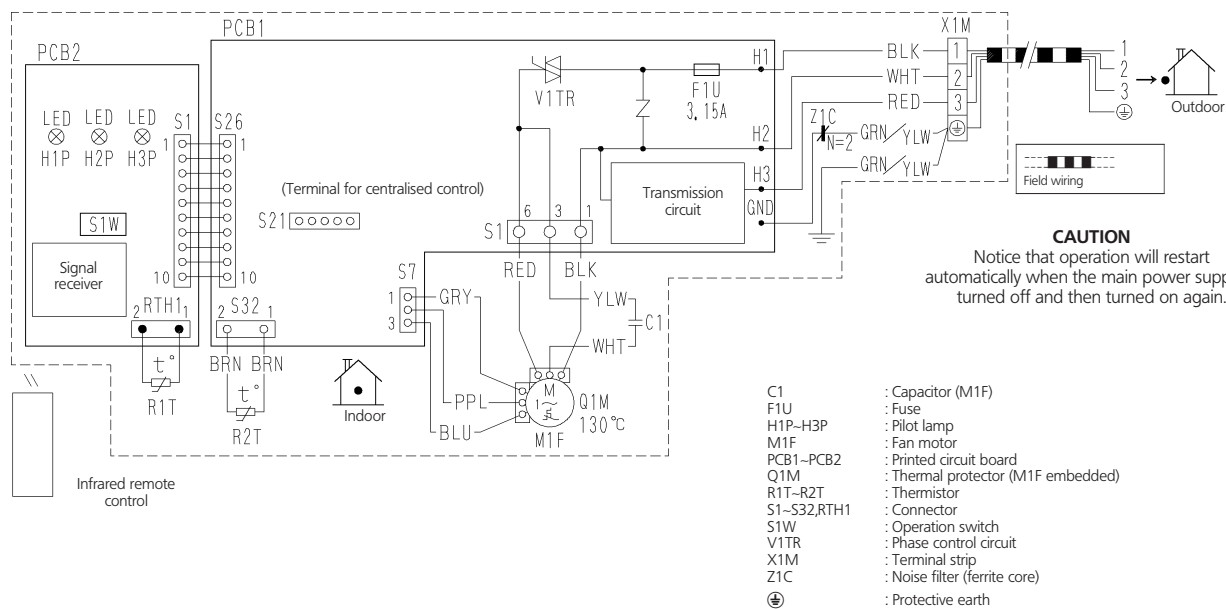
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5 Wiring diagrams

5

CDK/XS50-60C



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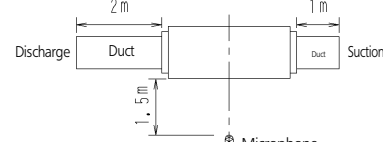


6 Sound level

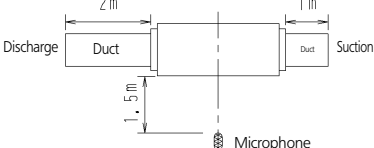
6-1 Sound level data

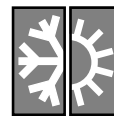
6 Cooling only

6-1

Model	Sound pressure level			Measuring location	Sound power level (H)
	230V,50Hz				
	Cooling				
	H	L	SL		
CDKS50C	37	33	31		55
CDKS60C	38	34	32		56

Heat pump

Model	Sound pressure level			Measuring location	Sound power level (H) (cooling/heating)
	230V,50Hz				
	Cooling/Heating				
	H	L	SL		
CDXS50C	37/37	33/33	31/31		55/55
CDXS60C	38/38	34/34	32/32		56/56



6 Sound level

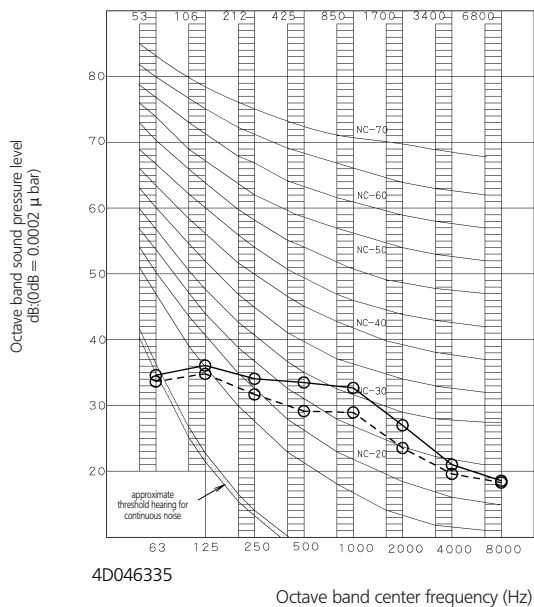
6-2 Sound pressure spectrum

Cooling only

6

6-2

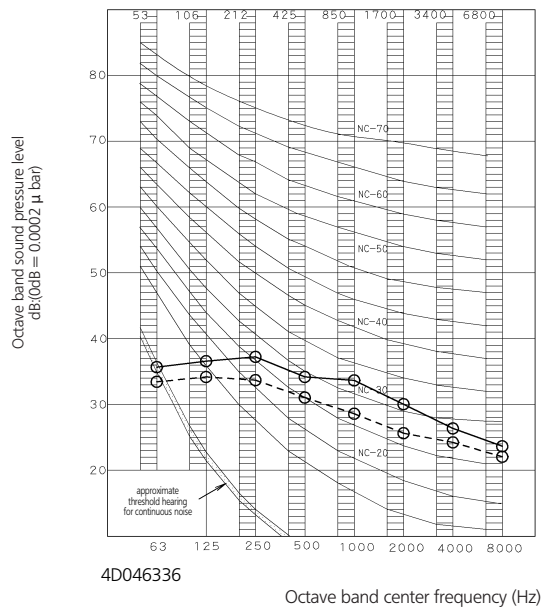
CDKS50C



Legend

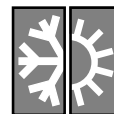
- 50/60Hz, 220-240/220-230V (H)
- - -○ 50/60Hz, 220-240/220-230V (L)

CDKS60C



NOTES

- 1 Operation sound is measured in an anechoic chamber.
- 2 Operation sound differs with operation and ambient conditions.



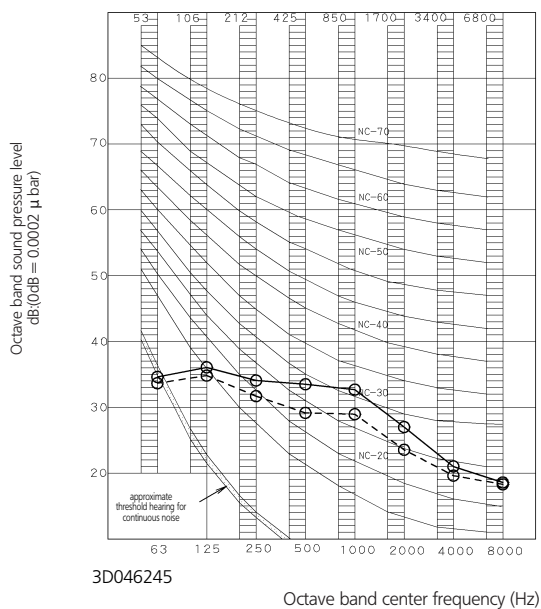
6 Sound level

6-2 Sound pressure spectrum

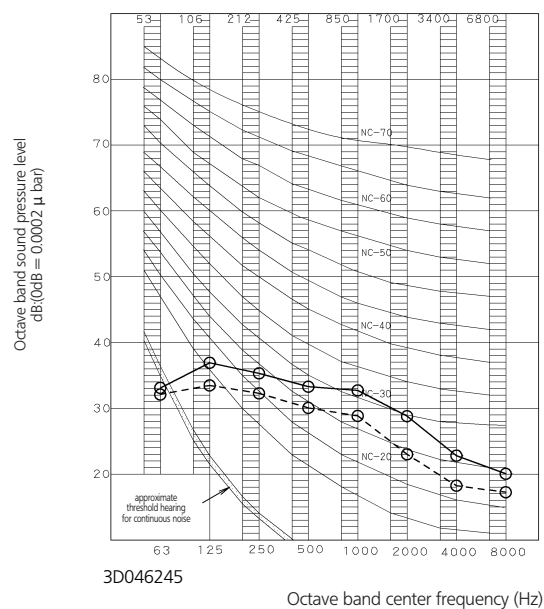
6 Heat pump

6-2

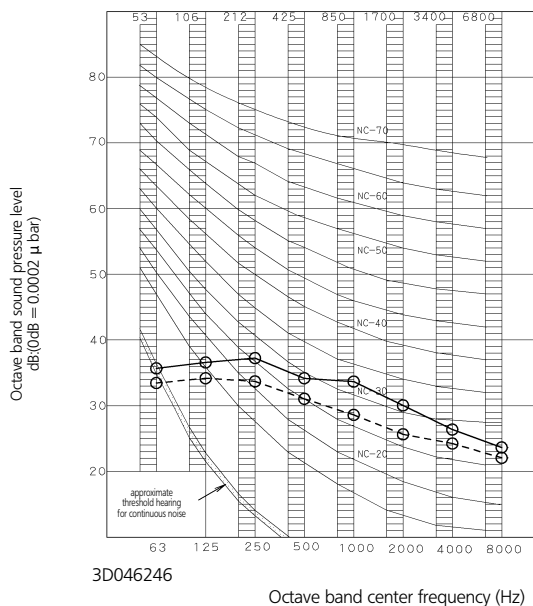
CDXS50C (Cooling)



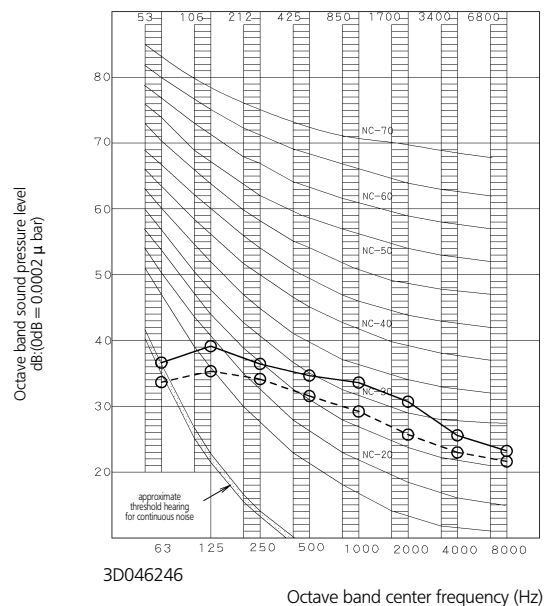
CDXS50C (Heating)



CDXS60C (Cooling)



CDXS60C (Heating)



Legend

- 50/60Hz, 220-240/220-230V (H)
- - ○ 50/60Hz, 220-240/220-230V (L)

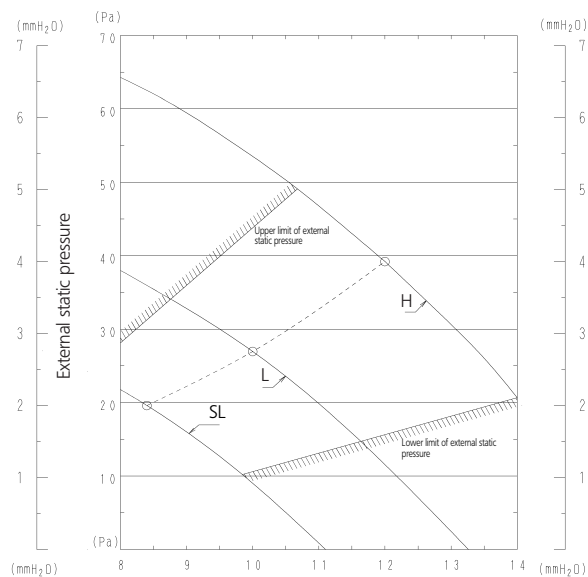
NOTES

- 1 Operation sound is measured in an anechoic chamber.
- 2 Operation sound differs with operation and ambient conditions.



7 Fan characteristics

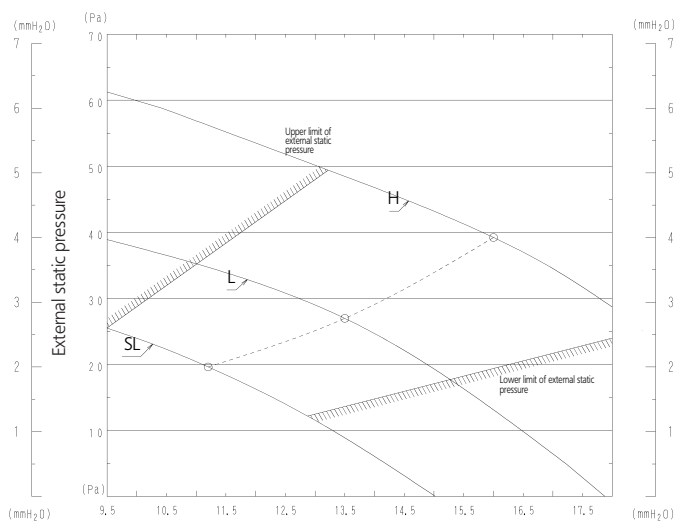
CDK/XS50C



Air flow (m³/min)

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CDK/XS60C



Air flow (m³/min)

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


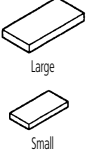

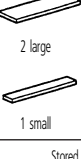

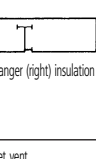








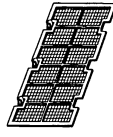


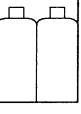




8 Accessories

8-1 Standard accessories

8 CDK/X-S

8-1

Clamp metal	Insulation for fitting	Sealing pad			Drain hose	Washer for hanging bracket	Sealing material	Clamp	Washer fixing plate	Screws for duct flanges
1	1 each	Large and small 1 each	3	1	1	8	2	6	4	1 set
	 For gas pipe  For liquid pipe	 Large  Small	 2 large  1 small	 Hanger (right) insulation Stored in outlet vent						

Air filter	Infrared remote control	Remote control holder	AAA dry-cell batteries	Receiver kit				(Other) • Operation manual • Installation manual
1	1	1	2	1 set	1	1	2	
				 Faceplate; faceplate frame	 Decorative cover	 Insulated mounting frame	 Screws M4 x 25	

8-2 Optional accessories

CDK/XS-C		50	60
Wiring adapter for time clock / remote control (1)	Normal open contact	KRP413A1S	
	Normal open pulse contact	KRP413A1S	
Centralised control board	Up to 5 rooms (2)	KRC72	
Central remote control		DCS302C51	
Unified ON/OFF control		DCS301B51	
Schedule timer		DST301B51	
Interface adapter (3)		KRP928A2S	
Anti-theft protection for remote control		KKF910A4	
Suction grille		KDG19A45	

(1) Wiring adapter supplied by Daikin. Time clock and other device: field supply.

(2) Wiring adapter is also required for each indoor unit.

(3) For DIII-NET adapter



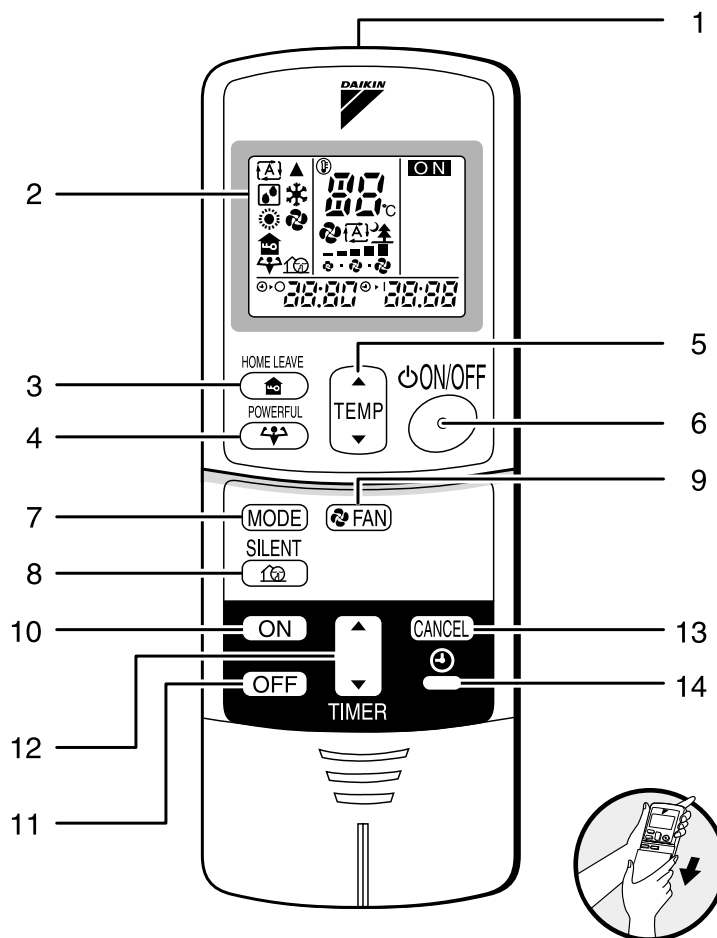
9 Control systems

9-1 Infrared remote control

9

9-1

CDK/XS50-60C



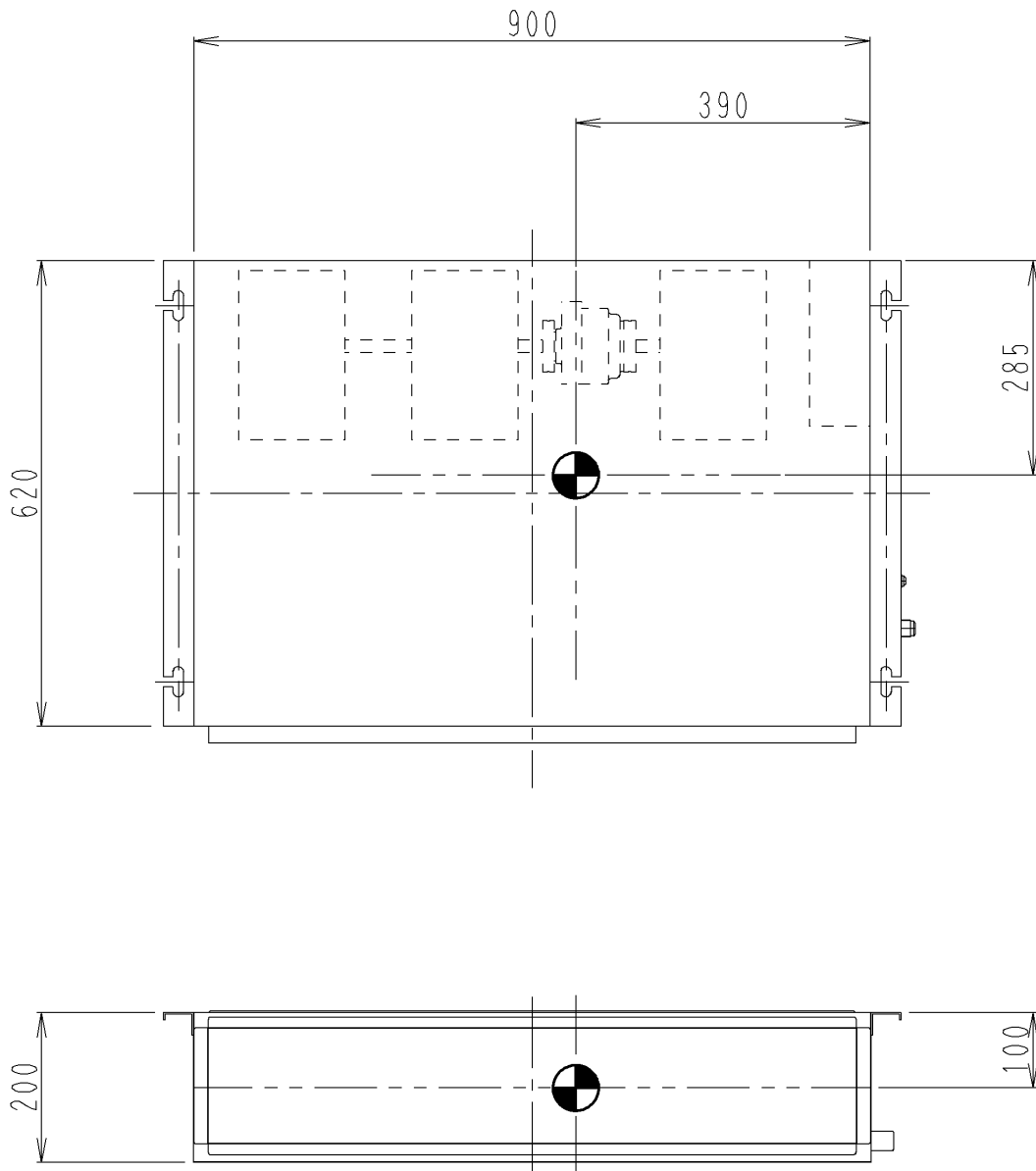
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- | | |
|--|--|
| <p>1 Signal transmitter:</p> <ul style="list-style-type: none"> • It sends signals to the indoor unit. <p>2 Display:</p> <ul style="list-style-type: none"> • It displays the current settings. (In this illustration, each section is shown with all its displays ON for the purpose of explanation.) <p>3 HOME LEAVE button:</p> <ul style="list-style-type: none"> for HOME LEAVE operation <p>4 POWERFUL button:</p> <ul style="list-style-type: none"> for POWERFUL operation <p>5 TEMPERATURE adjustment buttons:</p> <ul style="list-style-type: none"> • It changes the temperature setting <p>6 ON/OFF button:</p> <ul style="list-style-type: none"> • Press this button once to start operation. Press once again to stop it. <p>7 MODE selector button:</p> <ul style="list-style-type: none"> • It selects the operation mode
(Auto / Dry / Cool / Heat / Fan) | <p>8 OUTDOOR UNIT SILENT button:</p> <ul style="list-style-type: none"> SILENT operation <p>9 FAN setting button:</p> <ul style="list-style-type: none"> • It selects the air flow rate setting. <p>10 ON TIMER button</p> <p>11 OFF TIMER button</p> <p>12 TIMER setting button:</p> <ul style="list-style-type: none"> • It changes the time setting <p>13 TIMER CANCEL button:</p> <ul style="list-style-type: none"> It cancels the timer setting. <p>14 CLOCK button</p> |
|--|--|



10 Center of gravity

10 CDK/XS50C



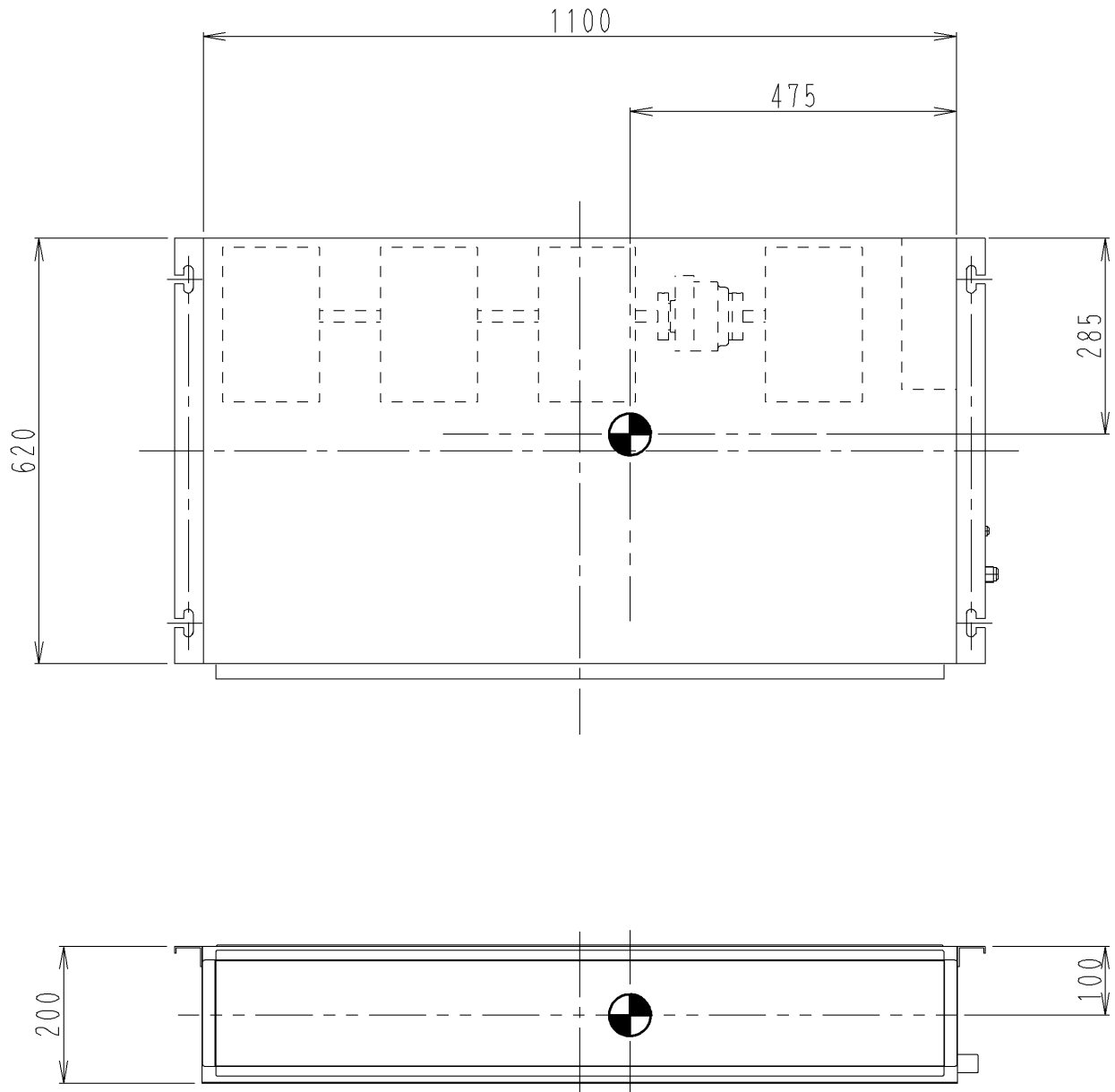
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10 Center of gravity

CDK/XS60C

10

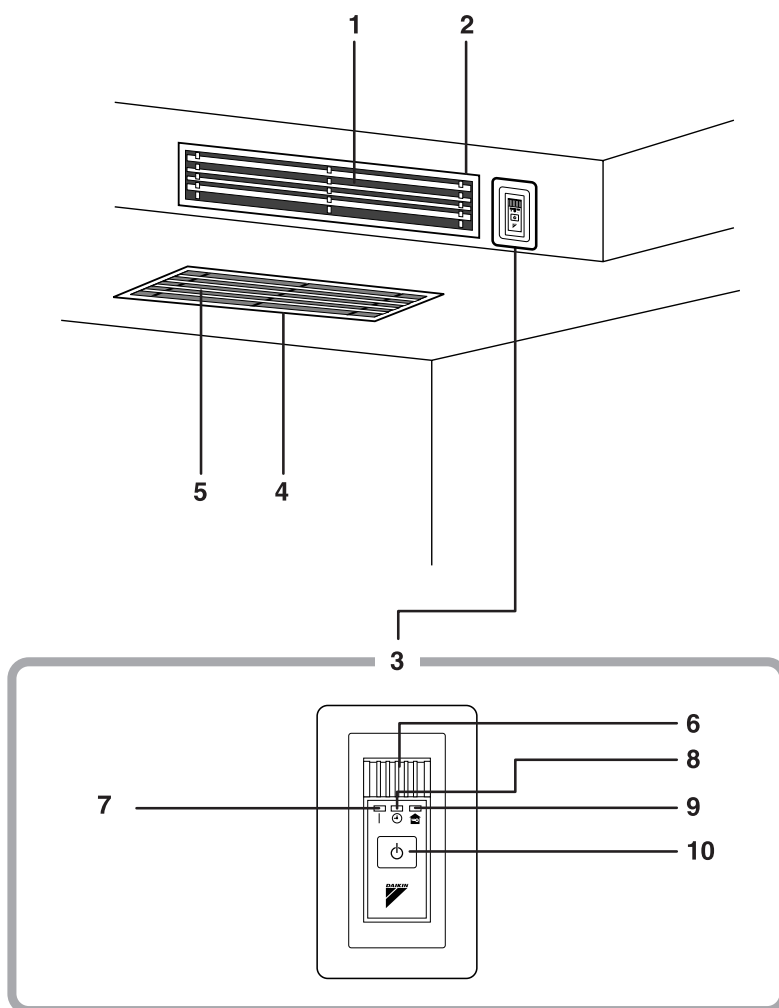


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11 Installation

11



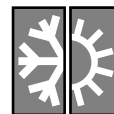
Indoor unit

- 1 **Air outlet**
- 2 **Air outlet grille** (Field supply)
 - Appearance of the air outlet grille and air inlet grille may differ with some models.
- 3 **Display, Control panel**
- 4 **Suction grille (Option)**
 - Appearance of the suction grille and Air inlet grille may differ with some models.
- 5 **Air inlet**
- 6 **Room temperature sensor:**
 - It senses the air temperature around the unit.
- 7 **Operation lamp (green)**
- 8 **TIMER lamp (yellow)**
- 9 **HOME LEAVE lamp (red)**
 - Lights up when you use HOME LEAVE operation.

- 10 **Indoor unit ON/OFF switch**
 - Push this switch once to start operation. Push once again to stop it.
 - This switch is useful when the infrared remote control is missing.

• The operation mode refers to the following table.

	Mode	Temperature setting	Air flow rate
CDKS	Cool	22 °C	AUTO
CDXS	AUTO	25 °C	AUTO



11 Installation

11

■ Relation of the unit to the suspension bolt positions

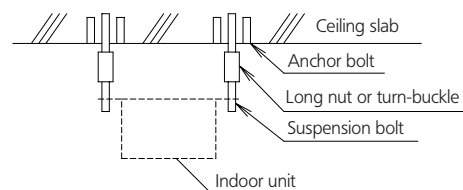
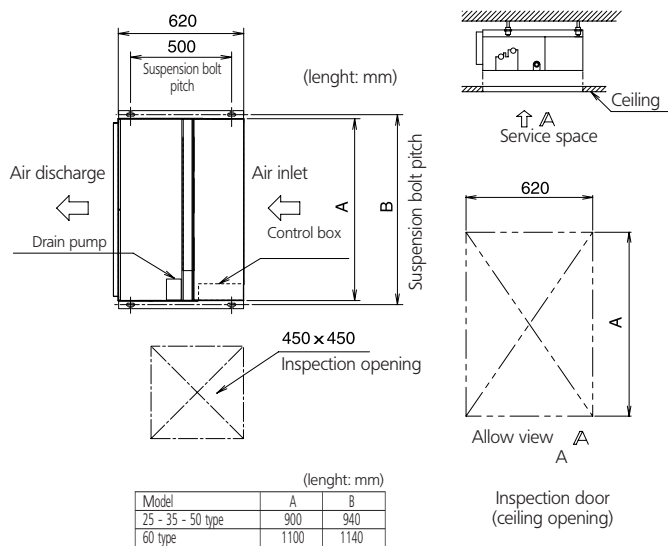
- Install the inspection opening on the control box side where maintenance and inspection of the control box and drain pump are easy. Install the inspection opening also in the lower part of the unit.

■ Make sure the range of the unit's external static pressure is not exceeded.

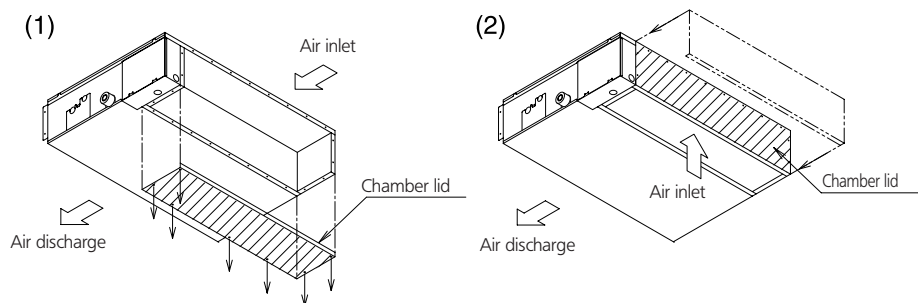
(See the technical documentation for the range of the external static pressure setting.)

■ Open the installation hole. (Pre-set ceilings)

- Once the installation hole is opened in the ceiling where the unit is to be installed, pass refrigerant piping, drain piping, transmission wiring, and remote controller wiring (unnecessary if using a wireless remote controller) to the unit's piping and wiring holes. See "REFRIGERANT PIPING WORK", "DRAIN PIPING WORK", and "WIRING".
- After opening the ceiling hole, make sure ceiling is level if needed. It might be necessary to reinforce the ceiling frame to prevent shaking. Consult an architect or carpenter for details.



Note: All the above parts are field supplied.



■ Install the suspension bolts

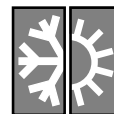
(Use W3/8 to M10 suspension bolts.)

Use a hole-in-anchor, sunken insert, sunken anchor for existing ceilings, and a sunken insert, sunken anchor or other part to be procured in the field to reinforce the ceiling to bearing the weight of the unit. (Refer to Fig.)

■ Mount chamber lid and air filter (accessory).

For bottom intake, replace the chamber lid in the procedure listed in Fig.

- (1) Remove the chamber lid. (7 locations)
- (2) Reattached the removed chamber lid in the orientation shown in Fig. (7 locations)



11 Installation

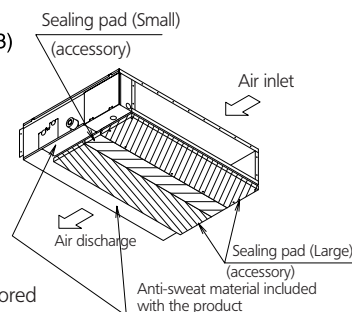
11

(3) Attach sealing pad as shown in the figure below.

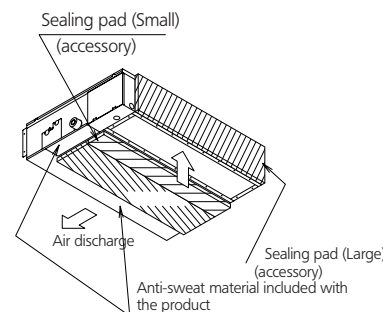
(Stored in outlet vent)

(In order to take in the air inside the ceiling, and when not taking in air from outdoor air, it is not necessary to stick.)

- Attach the sealing pad (accessory) to the plate metal sections which are not covered by anti-sweat material.
- Make sure there are no gaps between the different pieces of sealing pad.



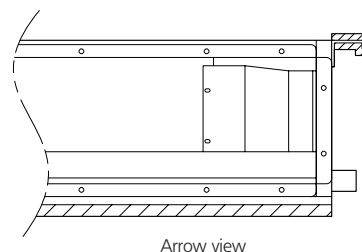
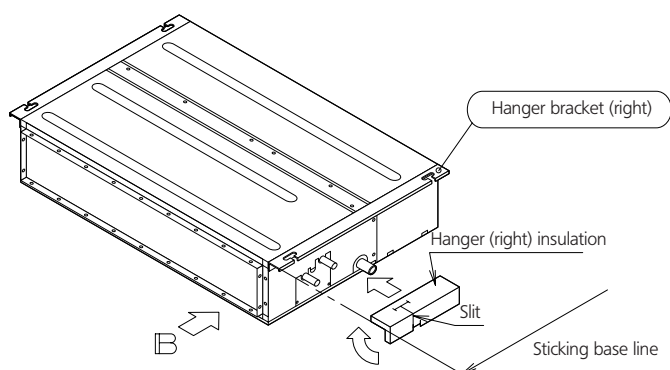
For rear intake type



For rear intake type

(4) Attach the hanger (right) insulation to the right hanger. (Stored in outlet vent)

(See the below figure for the sticking base line.)

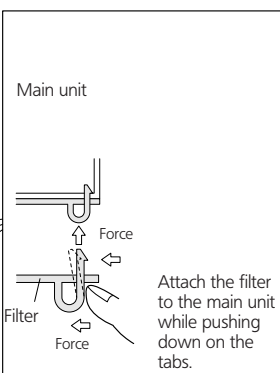
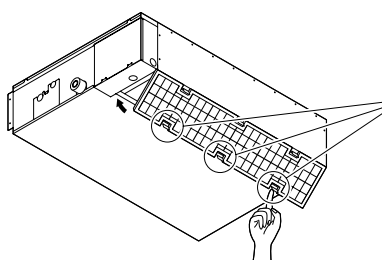


Arrow view

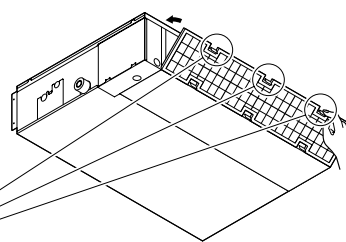
(5) Attach the air filter (accessory) in the manner shown in the diagram.

(5)

In case of bottom side



In case of back side

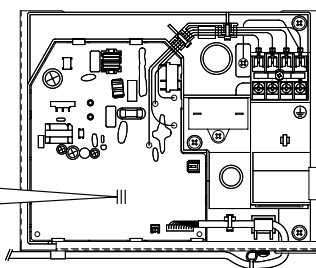


■ When two indoor units are installed in one room, the two remote controls can be easily set for different addresses.

PCB in the indoor unit

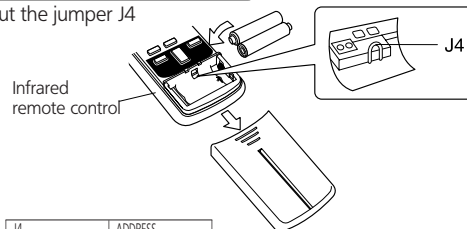
- Cut the jumper JA on PCB

JA	ADDRESS: JA
EXIST	1
CUT	2



Infrared remote control

- Cut the jumper J4



J4	ADDRESS
Exist	1
Cut	2