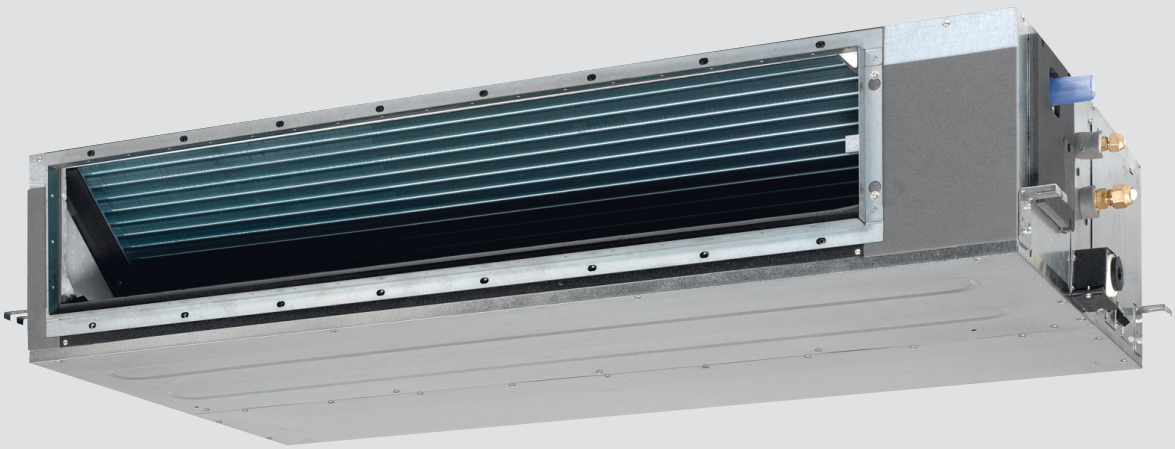
DAIKIN

Sky Air

Air Conditioning Technical Data

ADEA-A



> ADEA35A2VEB
> ADEA50A2VEB
> ADEA60A2VEB
> ADEA71A2VEB
> ADEA100A2VEB
> ADEA125A2VEB

TABLE OF CONTENTS

ADEA-A

1 Features

Ideal for residential applications with false ceilings

- Combination with split outdoor units is ideal for small retail, offices or residential applications
- Slimmest unit in class, only 245mm (300mm built-in height) and therefore narrow ceiling voids are no longer a challenge
- Low operation sound level down to 25dBA
- Medium external static pressure up to 150Pa facilitates using flexible ducts of varying lengths
- Possibility to change ESP via wired remote control allows optimisation of the supply air volume
- Discretely concealed in the ceiling: only the suction and discharge grilles are visible
- Multi zoning kit allows multiple individually-controlled climate zones to be served by one indoor unit

Home leave operation

2 Specifications

2-1 Technical Specifications					ADEA35A	ADEA50A	ADEA60A	ADEA71A	ADEA100A	ADEA125A
Casing	Colour				Not painted (galvanised)					
	Material				Galvanised steel plate					
Dimensions	Unit	Height/Width/Depth		mm	245/700/800		245/1,000/800		245/1,400/800	
	Packed unit	Height/Width/Depth		mm	890/900/295		890/1,200/295		890/1,600/295	
Weight	Unit			kg	28.0		35.0		46.0	
	Packed unit			kg	30.5		38.0		49.0	
Heat exchanger	Fin	Type			Cross fin coil (Multi slit fins with hydrophilic treatment and Ø5Hi-XA tubes)					
Air filter	Type				Resin net					
Fan	Model				QD16A1CM/QD16A1DM					
	Type				Sirocco fan					
	Quantity				1		2		3	
	Air flow rate	Cooling	High	m³/min	15.0		18.0		29.0	34.0
			Medium	m³/min	12.5 (1)		15.0 (1)		26.0 (1)	29.0 (1)
			Low	m³/min	10.5		12.5		23.0	23.5
		Heating	High	m³/min	15.0		18.0		29.0	34.0
			Medium	m³/min	12.5 (1)		15.0 (1)		26.0 (1)	29.0 (1)
			Low	m³/min	10.5		12.5		23.0	23.5
	External static pressure	High		Pa	150					
		Nom.		Pa	30				40	50
Fan motor	Quantity				1					
	Model				Brushless DC motor					
	Speed	Steps			3					
	Output	Rated		W	130		230		300	
Sound power level	Cooling			dBA	60		56		58	62
Sound pressure level	Cooling	High/Medium/Low		dBA	35/32 (1)/29		30/28 (1)/25		34/32 (1)/30	37/35 (1)/32
	Heating	High/Medium/Low		dBA	37/34/29		31/28/25		36/33/30	38/35/32
Control systems	Infrared remote control				BRC4C65 / BRC4C66					
	Wired remote control				BRC1D528 / BRC1E53A7 / BRC1E53B7 / BRC1E53C7					
Refrigerant	Type				R-32 / R-410A					
Piping connections	Sound absorbing insulation				Butyl Rubber					
	Liquid	Type/OD		mm	Flare connection/6,35			Flare connection/9,52		
	Gas	Type/OD		mm	Flare connection/ 9.52	Flare connection/12.70		Flare connection/15.90		
	Drain				VP20 (I.D. 20/O.D. 26)					
	Heat insulation				Foamed polystyrene / Foamed polyethylene					
Drain-up height				mm	625					

Standard Accessories : Operation manual; Quantity : 1;
Standard Accessories : Installation manual; Quantity : 1;
Standard Accessories : Drain hose; Quantity : 1;
Standard Accessories : Metal clamp for drain hose; Quantity : 1;
Standard Accessories : Washer for hanger bracket; Quantity : 8;
Standard Accessories : Screws; Quantity : 40;
Standard Accessories : Insulation for fitting; Quantity : 2;
Standard Accessories : Sealing pads; Quantity : 5;
Standard Accessories : Clamps; Quantity : 4;

2-2 Electrical Specifications			ADEA35A	ADEA50A	ADEA60A	ADEA71A	ADEA100A	ADEA125A
Power supply	Phase		1~					
	Frequency	Hz	50					
	Voltage	V	220-240/220					

2 Specifications

Notes

(1) See separate drawing for electrical data

Sound power level is an absolute value that a sound source generates.

3 Options

3 - 1 Options

ADEA35-125A

Discharge

Description	Option kit	SA: ADEA35A FBA35A(9) ADEA50A FBA50A(9)	SA: ADEA60A FBA60A(9) ADEA71A FBA71A(9)	SA: ADEA100A FBA100A ADEA125A FBA125A FBA140A
Air discharge adaptor for round ducts	KDAP25A56A	X		
	KDAP25A71A		X	
	KDAP25A140A			X

Operation control

Description	Option kit	SA: ADEA35A FBA35A(9) ADEA50A FBA50A(9)	SA: ADEA60A FBA60A(9) ADEA71A FBA71A(9)	SA: ADEA100A FBA100A ADEA125A FBA125A FBA140A
Wired remote control	BRC1D528, BRC1H51(9)W/S/K, BRC1H81W/S	X	X	X
	BRC1E53A7	X(*7)	X(*7)	X(*7)
	BRC1E53B7	X(*8)	X(*8)	X(*8)
	BRC1E53C7	X(*9,10)	X(*9,10)	X(*9,10)
Central remote control	DCS302CA51	X	X	X
Unified ON/OFF controller	DCS301BA51	X	X	X
Intelligent touch controller	DCS601C51	X	X	X
Schedule timer	DST301BA51	X	X	X
Adaptor for wiring (interlock for fresh air intake fan)	KRP1B54	X	X	X
Wiring adaptor for electrical appendices	KRP4A52	X(*4)	X(*4)	X(*4)
Wiring adaptor for electrical appendices	KRP4A51	X(*2,4)	X(*2,4)	X(*2,4)
Optional PCB for external electric heaters, humidifiers and/or hour meters	EKRP1B2A	X(*1,2)	X(*1,2)	X(*1,2)
Wireless remote control ·H/P·	BRC4C65	X	X	X
Wireless remote control ·C/O·	BRC4C66	X	X	X
Simplified remote control for hotel use	BRC2E52C7	X(*6,10)	X(*6,10)	X(*6,10)
Remote control for hotel use	BRC3E52C7	X(*6,10)	X(*6,10)	X(*6,10)
Remote sensor	KRCS01-4B	X	X	X
Electrical box with earth terminal	KJB411A	X	X	X
Installation box for adaptor PCB	KRP1BA101	X	X	X
	KRP1B101	X	X	X
Digital input adaptor	BRP7A51	X(*3,5)	X(*3,5)	X(*3,5)
iTouch Manager	DCM601A51	X	X	X
Wi-Fi adaptor for smartphones	BRP069A81 (*11)	X	X	X

(*1) Electric heaters and humidifiers are field-supplied. Do not install them inside the equipment (refer to installation manual ·EKRP1B2A·).

(*2) When installing electric heaters, an optional PCB for external electric heaters (·EKRP1B2·) is required for each indoor unit.
These options require mounting plate ·KRP4A96·.

(*3) Maximally ·2· optional PCBs can be mounted.

(*4) This option needs to be installed together with installation box ·KRP1B101/KRP1BA101·.

(*5) Only possible in combination with remote control ·BRC2/3E52C7, BRC1E53A/B/C7, BRC1H51(9)W/S/K, BRC1H81W/S·.

(*6) Included languages are:
Language pack ·1·: English, German, French, Dutch, Spanish, Italian, and Portuguese.
With PC cable ·EKPCCAB3· in combination with the Updater PC software, you can additionally change the language to:
Language pack ·2·: English, Bulgarian, Croatian, Czech, Hungarian, Romanian, and Slovenian.
Language pack ·3·: English, Greek, Polish, Russian, Serbian, Slovak, and Turkish.

(*7) Included languages are: English, German, French, Italian, Spanish, Portuguese, and Dutch.

(*8) Included languages are: English, Czech, Croatian, Hungarian, Slovenian, Romanian, and Bulgarian.

(*9) Included languages are: English, Russian, Greek, Turkish, Polish, Albanian, and Slovak.

(*10) Language pack ·3· of controller ·BRCE1E53C7· is different from that of controller ·BRC2/3E52C7·.

(*11) Only possible in combination with wired or wireless remote control (e.g. ·BRC1E*, BRC1H*, BRC7FA*·)

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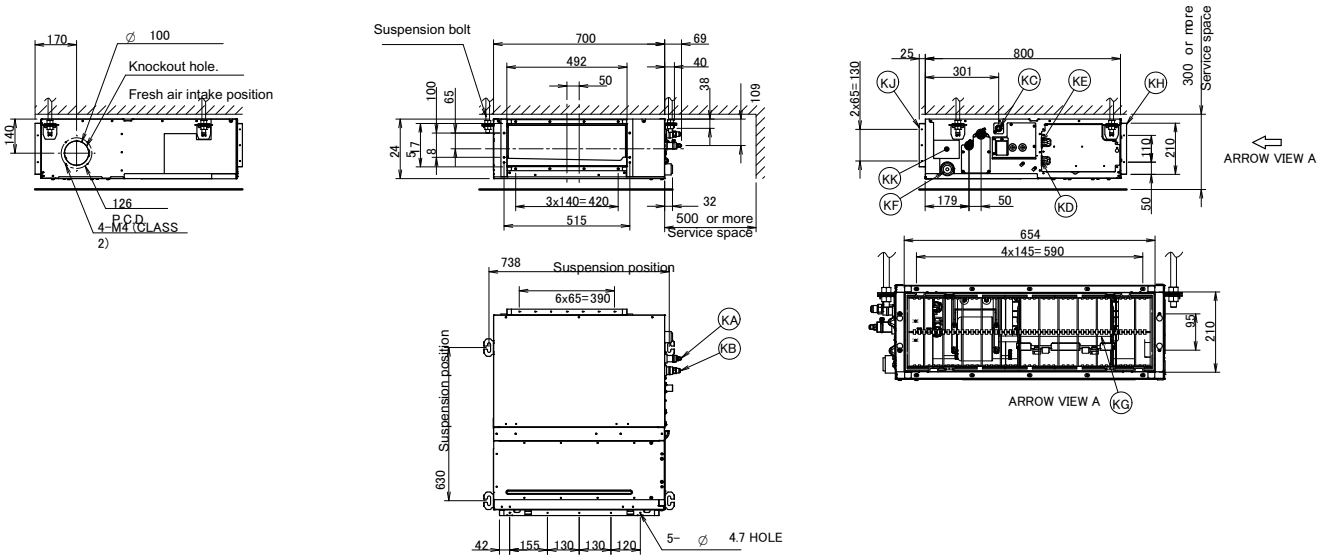
4 Dimensional drawings

4 - 1 Dimensional Drawings

ADEA35A



Item	Name	Description
KA	Liquid pipe connection port	Ø6.35 flared connection
KB	Gas pipe connection port	Ø9.52 flared connection
KC	Drain pipe connection	VP20 (OD Ø26, ID Ø20)
KD	Wiring connection	/
KE	Power supply connection	/
KF	Drain outlet	VP20 (OD Ø26, ID Ø20)
KG	Air filter	/
KH	Air suction side	/
KJ	Air discharge side	/
KK	Nameplate	/

Notes

1. When installing optional accessories, refer to their respective documentation.
2. The ceiling depth varies according to the documentation of the specific system.

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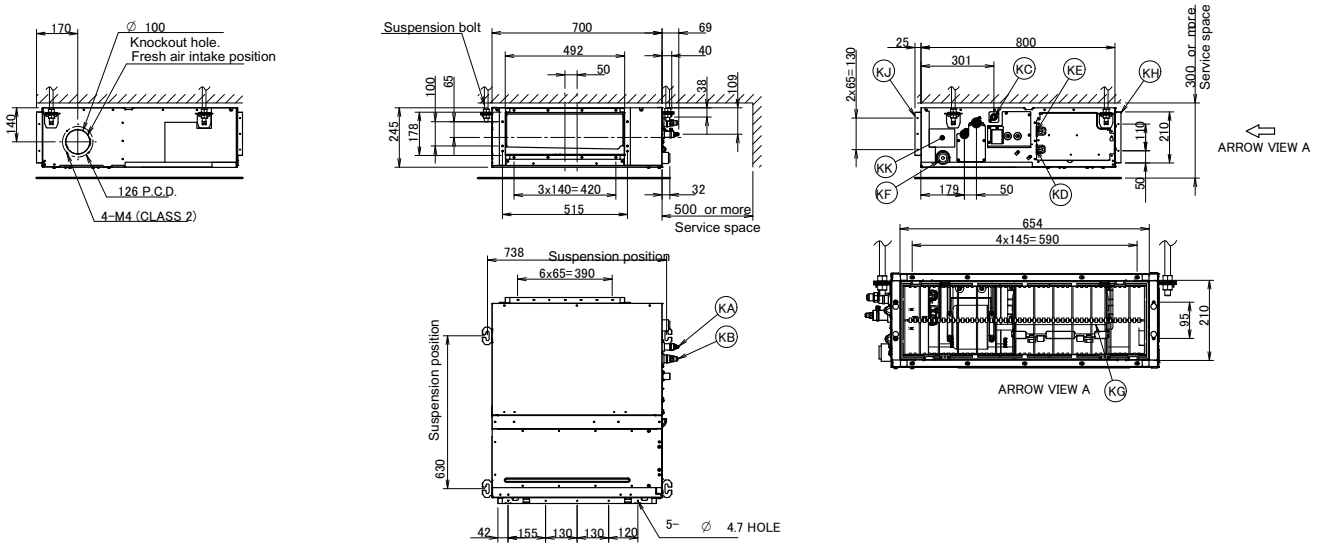
ADEA50A



Item	Name	Description
KA	Liquid pipe connection port	Ø6.35 flared connection
KB	Gas pipe connection port	Ø12.70 flared connection
KC	Drain pipe connection	VP20 (OD Ø26, ID Ø20)
KD	Wiring connection	/
KE	Power supply connection	/
KF	Drain outlet	VP20 (OD Ø26, ID Ø20)
KG	Air filter	/
KH	Air suction side	/
KJ	Air discharge side	/
KK	Nameplate	/

Notes

1. When installing optional accessories, refer to their respective documentation.
2. The ceiling depth varies according to the documentation of the specific system.

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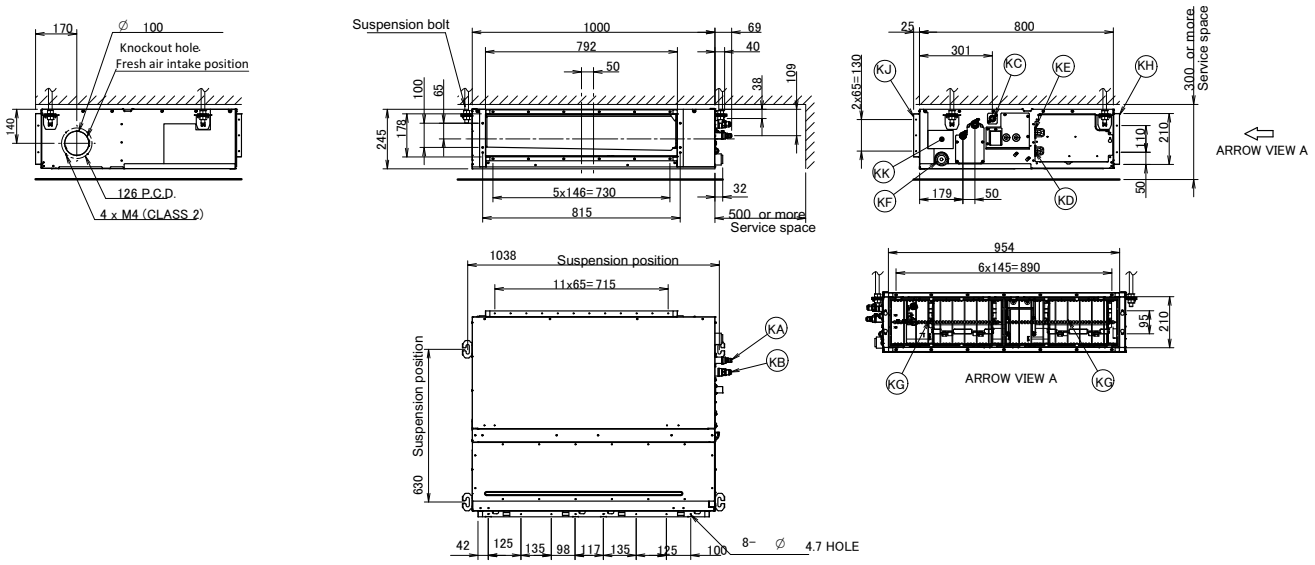
4 Dimensional drawings

4 - 1 Dimensional Drawings

ADEA60A



Item	Name	Description
KA	Liquid pipe connection port	Ø6.35 flared connection
KB	Gas pipe connection port	Ø12.70 flared connection
KC	Drain pipe connection	VP20 (OD Ø26, ID Ø20)
KD	Wiring connection	/
KE	Power supply connection	/
KF	Drain outlet	VP20 (OD Ø26, ID Ø20)
KG	Air filter	/
KH	Air suction side	/
KJ	Air discharge side	/
KK	Nameplate	/

Notes

1. When installing optional accessories, refer to their respective documentation.
2. The ceiling depth varies according to the documentation of the specific system.

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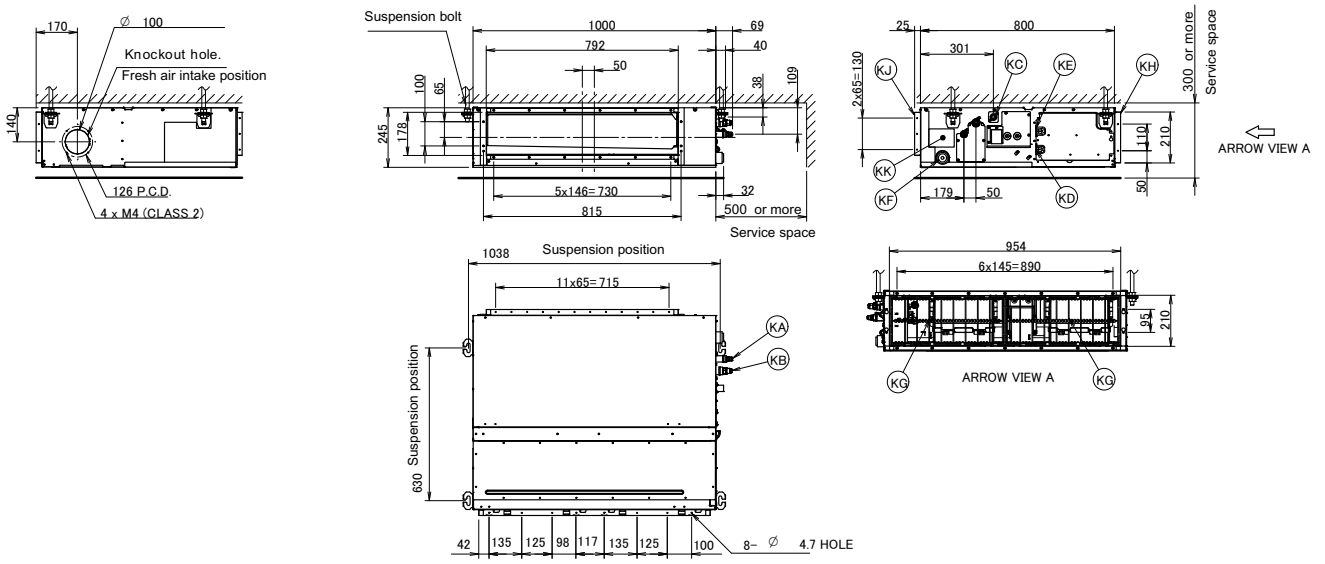
ADEA71A



Item	Name	Description
KA	Liquid pipe connection port	Ø9.52 flared connection
KB	Gas pipe connection port	Ø15.90 flared connection
KC	Drain pipe connection	VP20 (OD Ø26, ID Ø20)
KD	Wiring connection	/
KE	Power supply connection	/
KF	Drain outlet	VP20 (OD Ø26, ID Ø20)
KG	Air filter	/
KH	Air suction side	/
KJ	Air discharge side	/
KK	Nameplate	/

Notes

1. When installing optional accessories, refer to their respective documentation.
2. The ceiling depth varies according to the documentation of the specific system.

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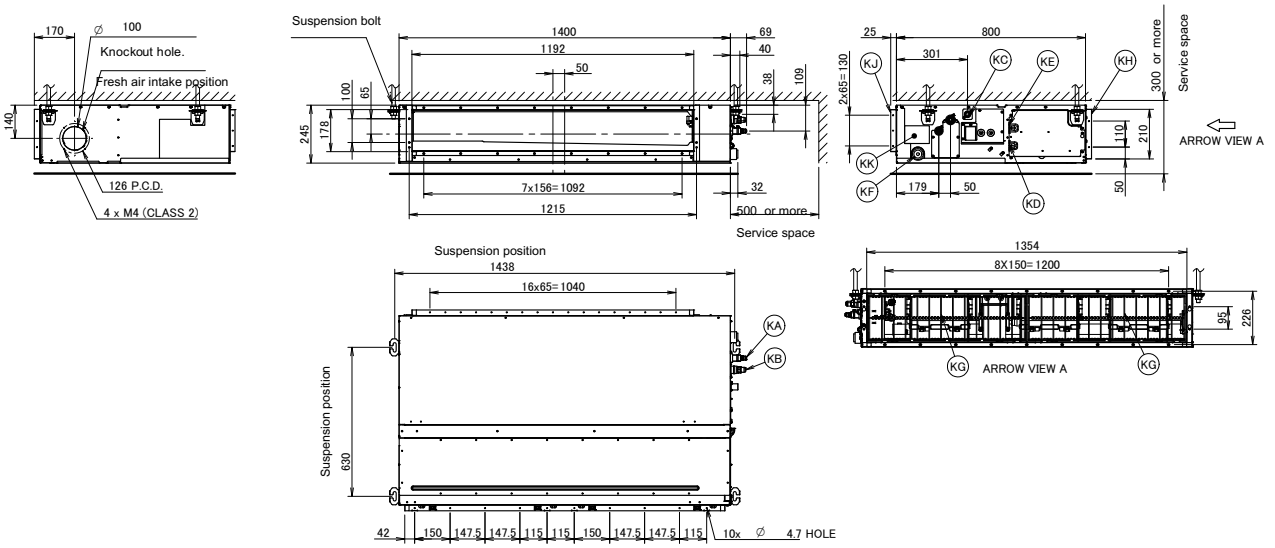
4 Dimensional drawings

4 - 1 Dimensional Drawings

ADEA100-125A



Item	Name	Description
KA	Liquid pipe connection port	Ø9.52 flared connection
KB	Gas pipe connection port	Ø15.90 flared connection
KC	Drain pipe connection	VP20 (OD Ø26, ID Ø20)
KD	Wiring connection	/
KE	Power supply connection	/
KF	Drain outlet	VP20 (OD Ø26, ID Ø20)
KG	Air filter	/
KH	Air suction side	/
KJ	Air discharge side	/
KK	Nameplate	/

Notes

1. When installing optional accessories, refer to their respective documentation.
2. The ceiling depth varies according to the documentation of the specific system.

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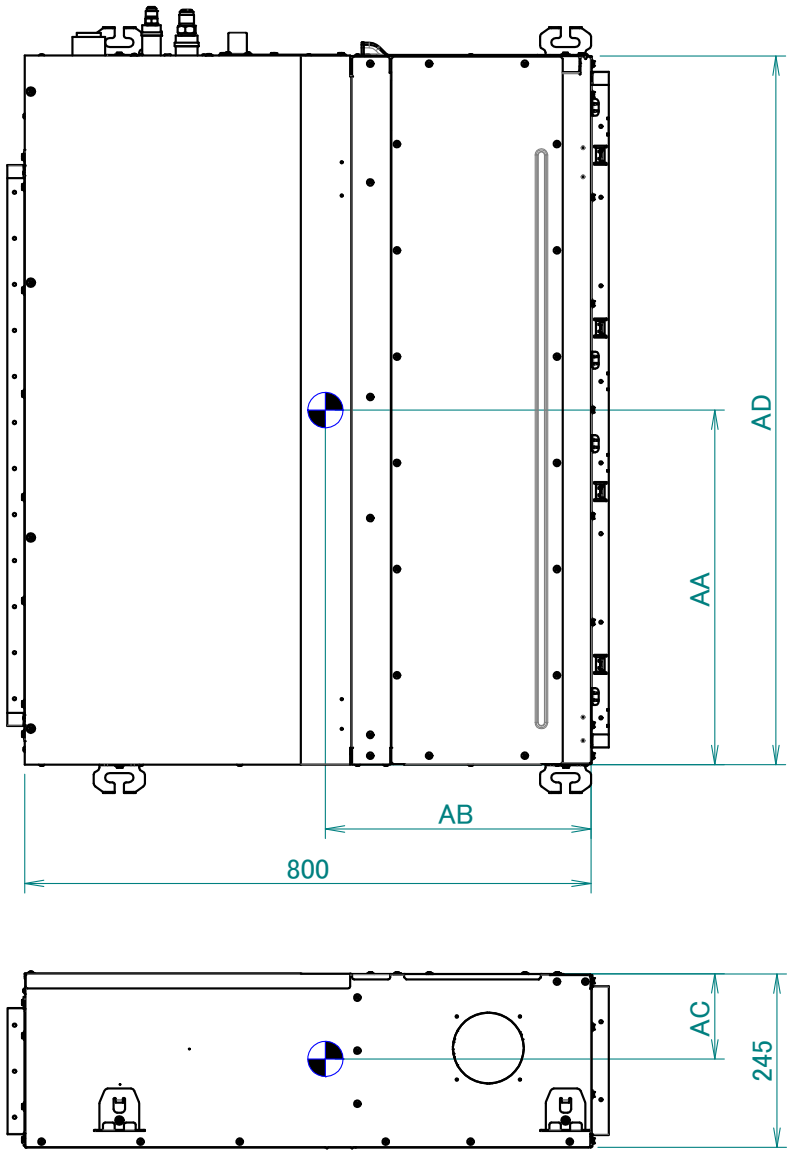
5 Centre of gravity

5 - 1 Centre of Gravity

ADEA-A



Applicable models	AA	AB	AC	AD
FBQ35/50, FBA35/50, ADEA35/50	410	375	125	700
FBQ60/71, ADEQ71, FBA60/71, ADEA60/71	525	380	125	1000
FBQ100/125/140, ADEQ100/125, FBA100/125/140, ADEA100/125	760	390	115	1400

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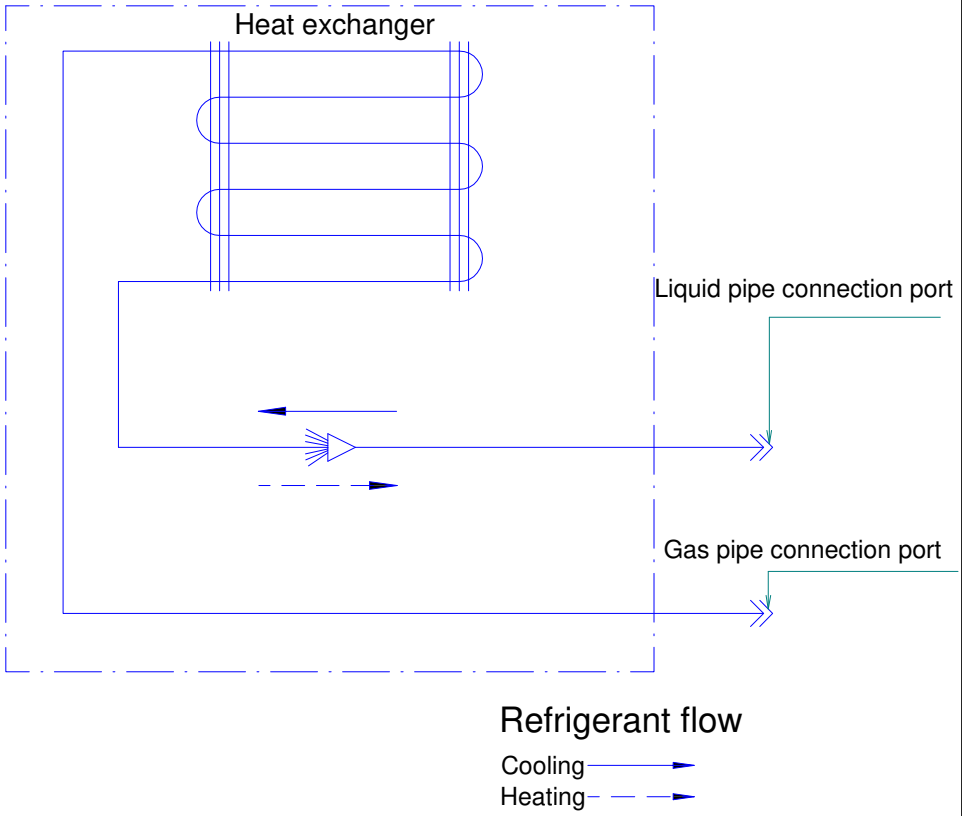
6 Piping diagrams

6 - 1 Piping Diagrams

ADEA-A

Piping connections Ø

Model	Gas	Liquid
FBQ35D2VEB	Ø 9.52	Ø 6.35
FBQ50D2VEB	Ø 12.70	Ø 6.35
FBQ60D2VEB	Ø 12.70	Ø 6.35
FBQ71D2VEB	Ø 15.90	Ø 9.52
FBQ100D2VEB	Ø 15.90	Ø 9.52
FBQ125D2VEB	Ø 15.90	Ø 9.52
FBQ140D2VEB	Ø 15.90	Ø 9.52
ADEQ71B2VEB	Ø 15.90	Ø 9.52
ADEQ100B2VEB	Ø 15.90	Ø 9.52
ADEQ125B2VEB	Ø 15.90	Ø 9.52
FBA35A2VEB (9)	Ø 9.52	Ø 6.35
FBA50A2VEB (9)	Ø 12.70	Ø 6.35
FBA60A2VEB (9)	Ø 12.70	Ø 6.35
FBA71A2VEB (9)	Ø 15.90	Ø 9.52
FBA100A2VEB	Ø 15.90	Ø 9.52
FBA125A2VEB	Ø 15.90	Ø 9.52
FBA140A2VEB	Ø 15.90	Ø 9.52
ADEA35A2VEB	Ø 9.52	Ø 6.35
ADEA50A2VEB	Ø 12.70	Ø 6.35
ADEA60A2VEB	Ø 12.70	Ø 6.35
ADEA71A2VEB	Ø 15.90	Ø 9.52
ADEA100A2VEB	Ø 15.90	Ø 9.52
ADEA125A2VEB	Ø 15.90	Ø 9.52



7 Wiring diagrams

7 - 1 Wiring Diagrams - Single Phase

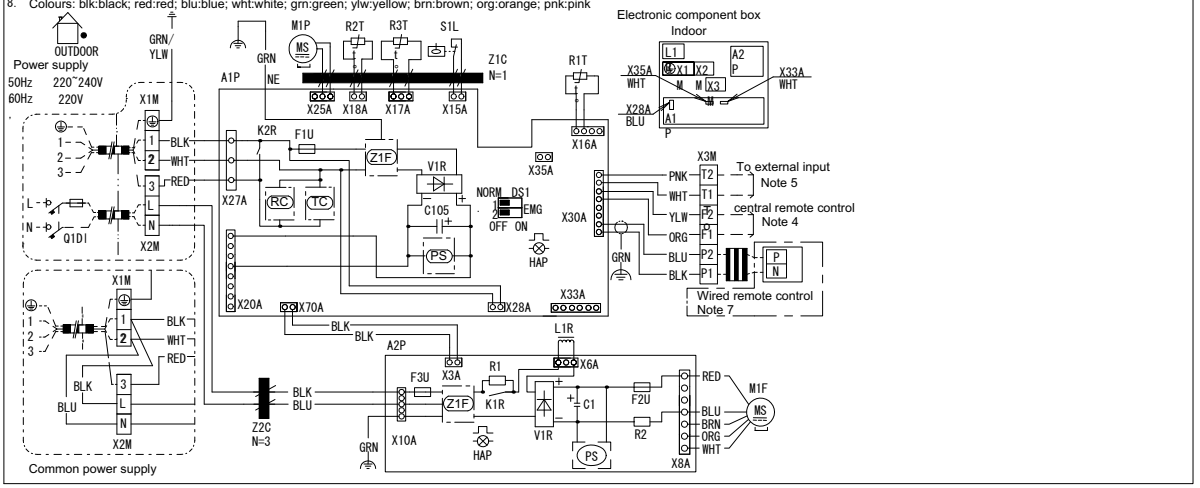
ADEA-A

Wiring diagram

Indoor unit

A1P	Printed circuit board	M1P	Motor (drain pump)	TC	Signal transmission circuit
A2P	Printed circuit board (fan)	R1	Resistor (current sensor)	X1M	Terminal strip (power supply)
C1	Capacitor			X2M	Terminal strip (power supply)
C10	Capacitor			X3M	Terminal block (control)
DS1	Selector switch			Z1F	Noise filter
F1U	Fuse T,3.15A,250V	R2	Resistor (current sensor)	Z1C	Ferrite core
F2U	Fuse T,5A,250V	R1T	Thermistor (suction)	Z2C	Ferrite core
F3U	Fuse T,6.3A,250V	R2T	Thermistor (liquid)	Q1DI	Earth leakage breaker
HAP	Indication lamps	R3T	Thermistor (coil)	Connector (optional accessories)	
K1R	Magnetic relay	S1L	Float switch		
K2R	Magnetic relay	V1R	Diode bridge	X28	Connector (power supply for wiring)
L1	Reactor	PS	Switching power supply	X33	Connector (for wiring)
M1F	Motor (indoor fan)	RC	Signal receiver circuit	X35	Connector (power supply for adaptor)

1 Screw terminal Connector Field wiring
2. In case of a multi-indoor-unit system with parallel operation, refer to the documentation of the indoor units.
3. For details, refer to the wiring diagram attached to the outdoor unit.
4. When using a central remote control, connect it to the unit according to the installation manual.
5. When connecting the input wires from outside, forced OFF or On/OFF control operation can be selected by remote control. For more information, refer to the installation manual.
6. For a multi-indoor-unit system with parallel operation, the connection ratio (number of indoor units you can connect to the outdoor unit) is different. Before connecting, refer to the Technical data or the General catalogue.
7. For how to switch between the main unit and the sub units, refer to the installation manual of the remote control.
8. Colours: blk:black; red:red; blu:blue; wht:white; grn:green; ylw:yellow; brn:brown; org:orange; pnk:pink



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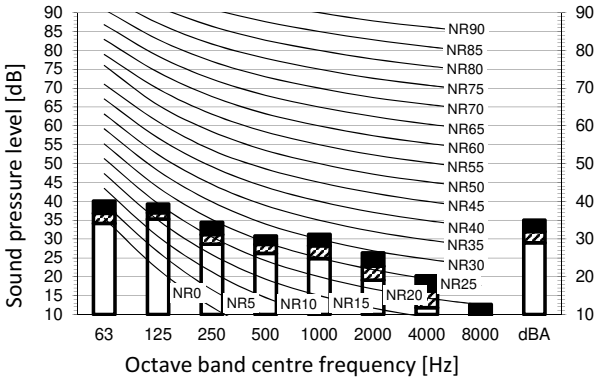
8 Sound data

8 - 1 Sound Pressure Spectrum

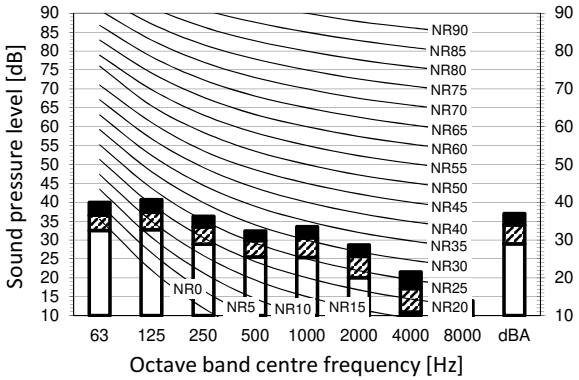
8

ADEA35A

Cooling mode



Heating mode



Legend

dBA = A-weighted sound pressure level (A scale according to IEC).

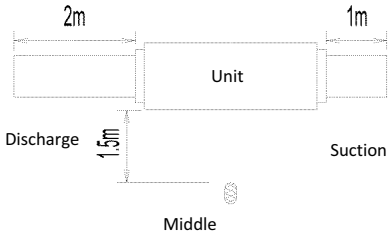
A Scale Fan speed

B High

C Medium

D Low

Location of microphone



Cooling Total dB

A	B	C	D
dBA	35,0	32,0	29,0

Heating Total dB

A	B	C	D
dBA	37,0	34,0	29,0

Notes

1. Operating conditions: power source 220-240 V/220 V 50/60 Hz; JIS standard
2. Background noise already taken into account.
3. Operating noise varies depending on operation and ambient conditions.
4. The operation noise measuring method is in accordance with JISC9612.
5. Measuring location: anechoic chamber

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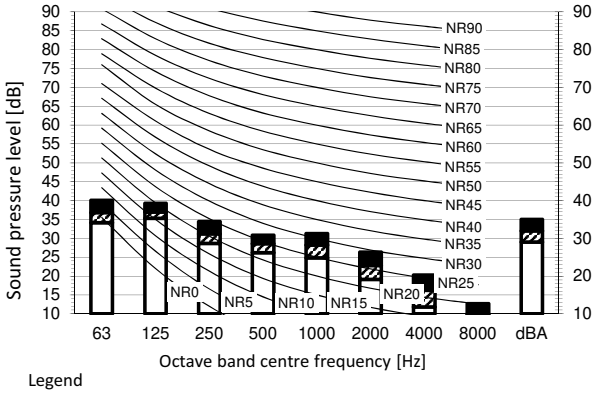
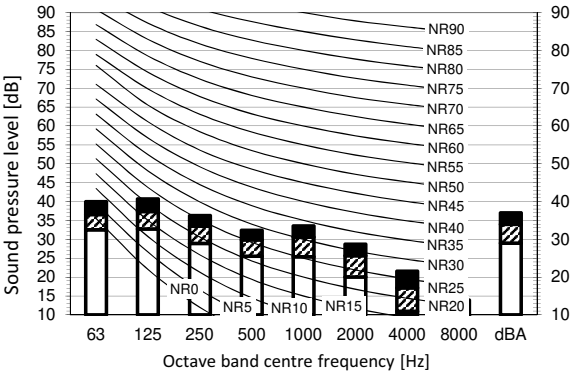
ADEA50A

Cooling mode



Heating mode



Legend

dBA = A-weighted sound pressure level (A scale according to IEC).

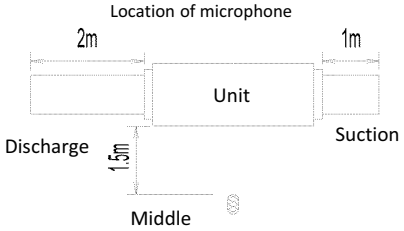
A Scale Fan speed

B High

C Medium

D Low

Location of microphone



Cooling Total dB

A	B	C	D
dBA	35,0	32,0	29,0

Heating Total dB

A	B	C	D
dBA	37,0	34,0	29,0

Notes

1. Operating conditions: power source 220-240 V/220 V 50/60 Hz; JIS standard
2. Background noise already taken into account.
3. Operating noise varies depending on operation and ambient conditions.
4. The operation noise measuring method is in accordance with JISC9612.
5. Measuring location: anechoic chamber

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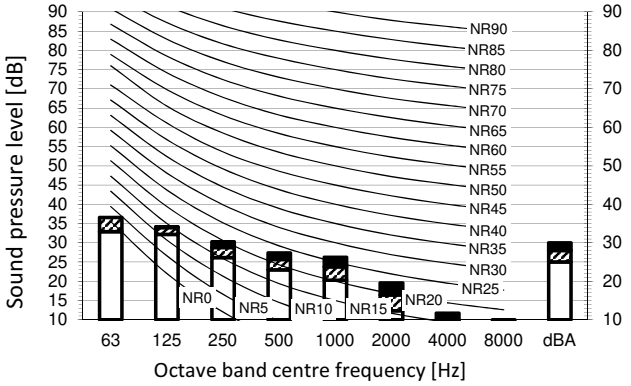
8 Sound data

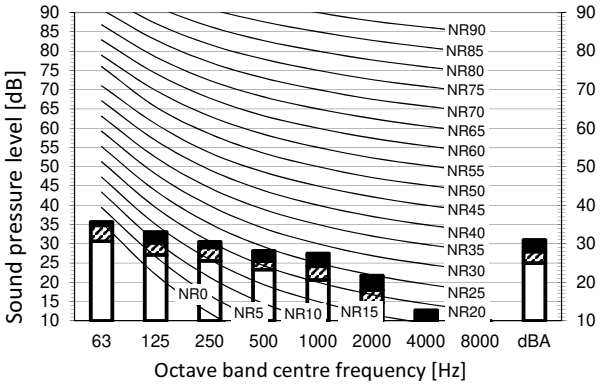
8 - 1 Sound Pressure Spectrum

ADEA60A

Cooling mode



Heating mode



Legend

dBA = A-weighted sound pressure level (A scale according to IEC).

A Scale — Fan speed

B High

C Medium

D Low

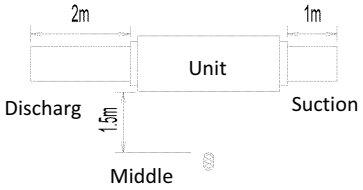
Cooling — Total dB

A	B	C	D
dBA	30,0	28,0	25,0

Heating — Total dB

A	B	C	D
dBA	31,0	28,0	25,0

Location of microphone



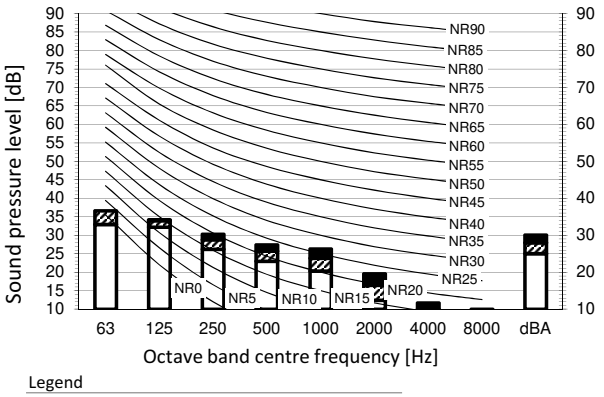
Notes

1. Operating conditions: power source 220-240 V/220 V 50/60 Hz; JIS standard
2. Background noise already taken into account.
3. Operating noise varies depending on operation and ambient conditions.
4. The operation noise measuring method is in accordance with JISC9612.
5. Measuring location: anechoic chamber

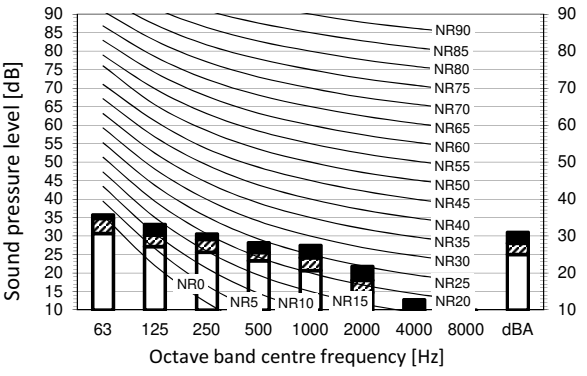
3D110168B

ADEA71A

Cooling mode



Heating mode



Legend

dBA = A-weighted sound pressure level (A scale according to IEC).

A Scale — Fan speed

B High

C Medium

D Low

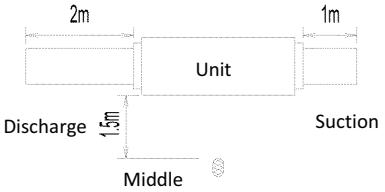
Cooling — Total dB

A	B	C	D
dBA	30,0	28,0	25,0

Heating — Total dB

A	B	C	D
dBA	31,0	28,0	25,0

Location of microphone



Notes

1. Operating conditions: power source 220-240 V/220 V 50/60 Hz; JIS standard
2. Background noise already taken into account.
3. Operating noise varies depending on operation and ambient conditions.
4. The operation noise measuring method is in accordance with JISC9612.
5. Measuring location: anechoic chamber

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8 Sound data

8 - 1 Sound Pressure Spectrum

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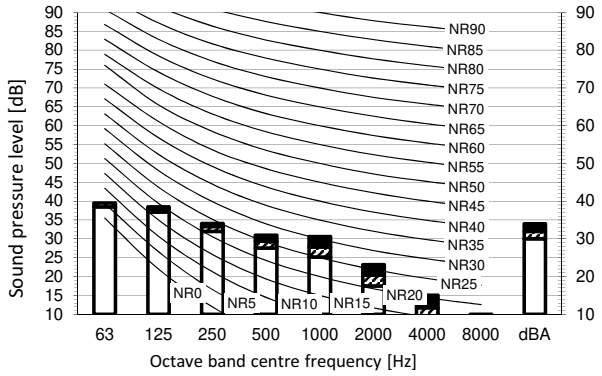
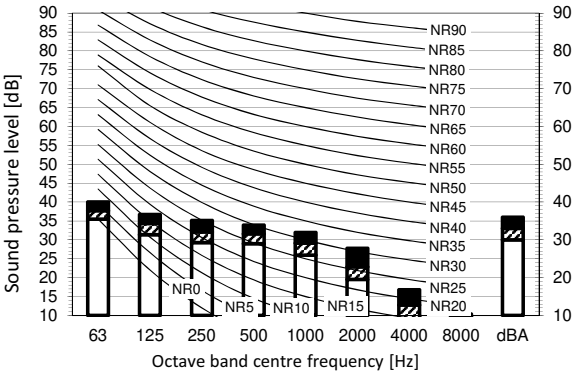
Cooling mode

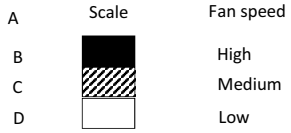


Heating mode

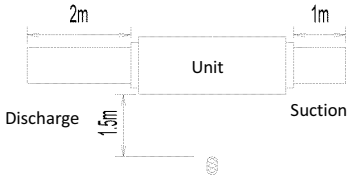


Legend

dBA = A-weighted sound pressure level (A scale according to IEC).



Location of microphone



Cooling				Total dB
A	B	C	D	
dBA	34	32	30	

Heating				Total dB
A	B	C	D	
dBA	36	33	30	

Notes

1. Operating conditions: power source 220-240 V/220 V 50/60 Hz; JIS standard
2. Background noise already taken into account.
3. Operating noise varies depending on operation and ambient conditions.
4. The operation noise measuring method is in accordance with JISC9612.
5. Measuring location: anechoic chamber

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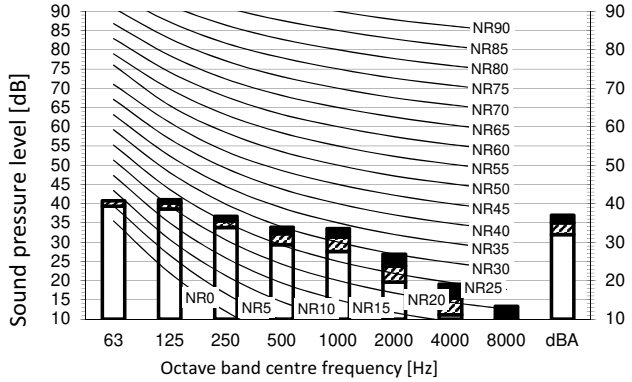
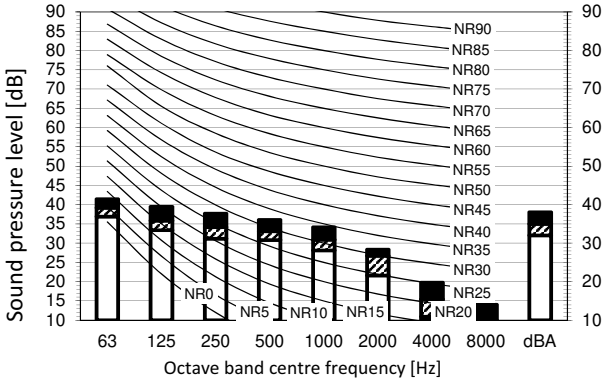
Cooling mode

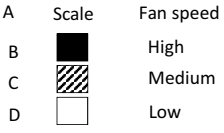


Heating mode

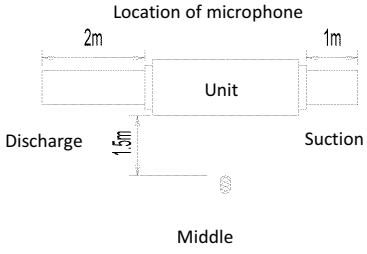


Legend

dBA = A-weighted sound pressure level (A scale according to IEC).



Location of microphone



Cooling				Total dB
A	B	C	D	
dBA	37	35	32	

Heating				Total dB
A	B	C	D	
dBA	38	35	32	

Notes

1. Operating conditions: power source 220-240 V/220 V 50/60 Hz; JIS standard
2. Background noise already taken into account.
3. Operating noise varies depending on operation and ambient conditions.
4. The operation noise measuring method is in accordance with JISC9612.
5. Measuring location: anechoic chamber

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9 Fan characteristics

9 - 1 Fan Characteristics

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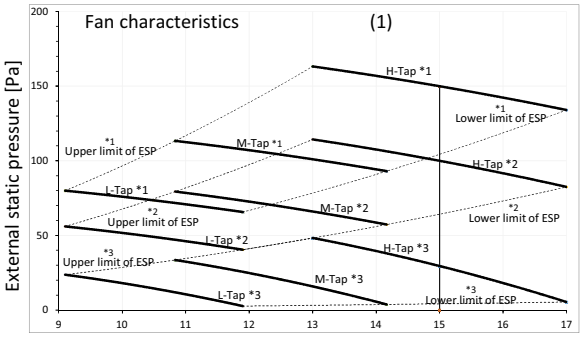
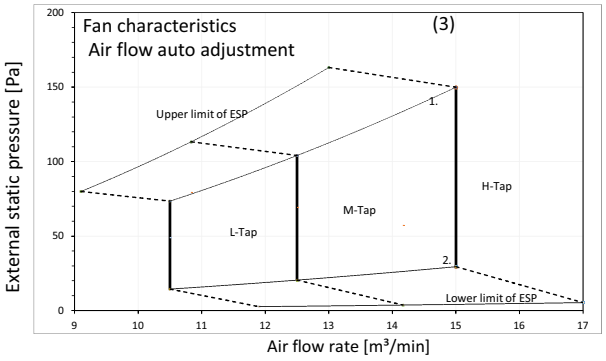
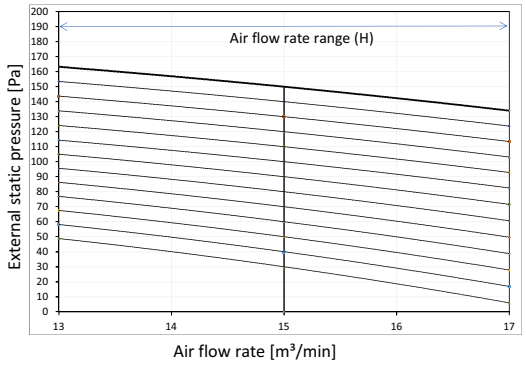




Mark		ESP [Pa]
*1	MAX	150
*2	-	100
*3	STD	30

Fan characteristics (2)

Field setting with remote control



1. Upper limit of ESP by air flow auto adjustment
2. Lower limit of ESP by air flow auto adjustment

Notes

1. The fan characteristics shown are in "fan only" mode.
2. ESP: External Static Pressure
3. Legend

Mark	Fan speed
H-Tap	High
M-Tap	Medium
L-Tap	Low

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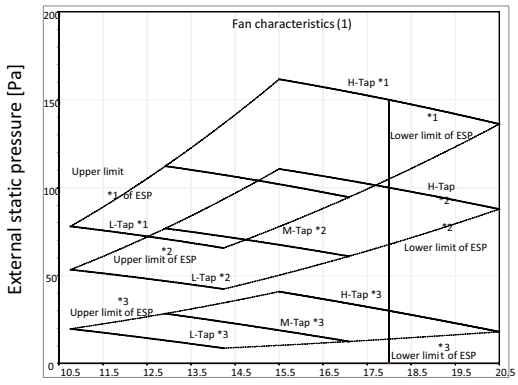
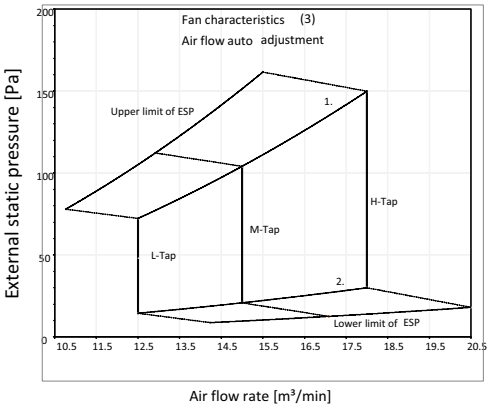
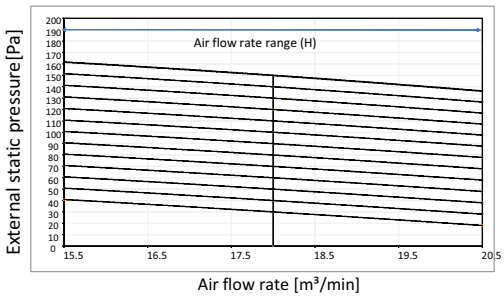




Mark		ESP [Pa]
*1	MAX	150
*2	-	100
*3	STD	30

Fan characteristics (2)

Field setting with remote control



1. Upper limit of ESP by air flow auto adjustment
2. Lower limit of ESP by air flow auto adjustment

Notes:

1. Fan characteristics as shown are in "fan only" mode.
2. ESP: External static pressure.

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9 Fan characteristics

9 - 1 Fan Characteristics

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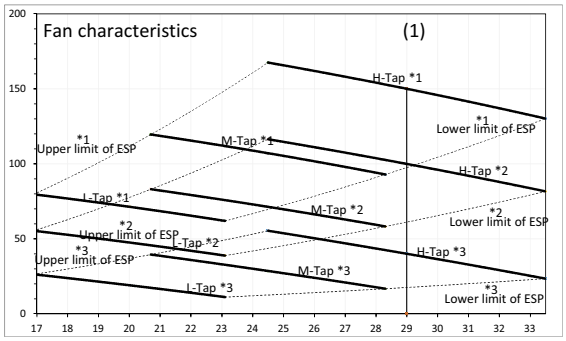
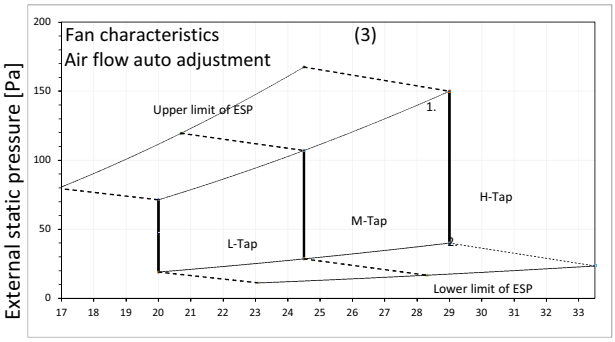
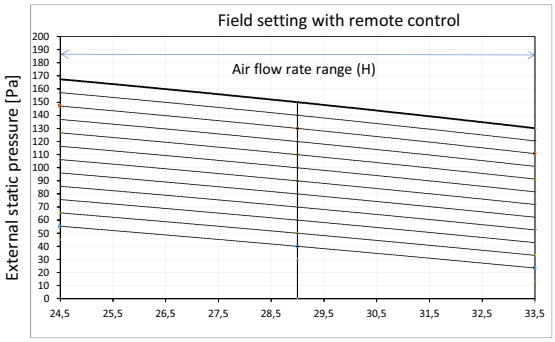


Mark		ESP [Pa]
*1	MAX	150
*2	-	100
*3	STD	40



Fan characteristics (2)



1. Upper limit of ESP by air flow auto adjustment
2. Lower limit of ESP by air flow auto adjustment

Notes
1. The fan characteristics shown are in "fan only" mode.
2. ESP: External Static Pressure
3. Legend

Mark	Fan speed
H-Tap	High
M-Tap	Medium
L-Tap	Low

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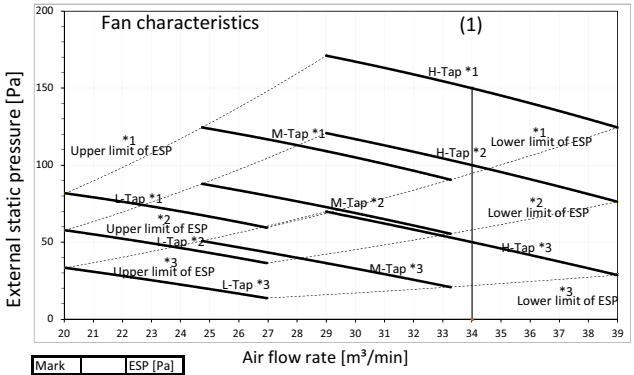
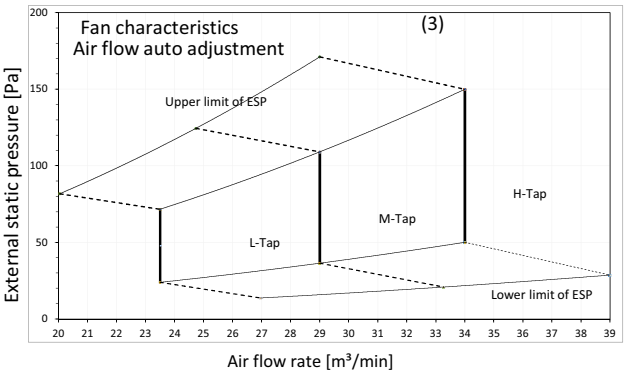
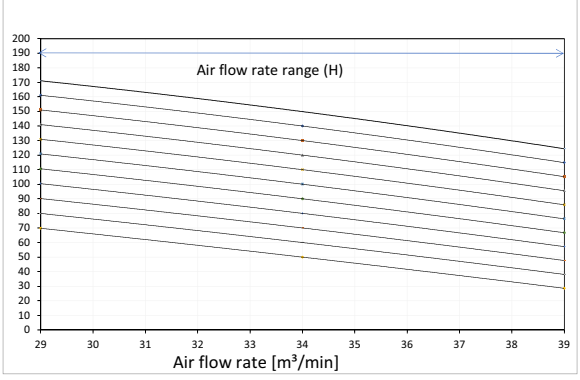


Mark		ESP [Pa]
*1	MAX	150
*2		100
*3	STD	50



Fan characteristics (2)

Field setting with remote control



1. Upper limit of ESP by air flow auto adjustment
2. Lower limit of ESP by air flow auto adjustment

Notes
1. The fan characteristics shown are in "fan only" mode.
2. ESP: External Static Pressure
3. Legend

Mark	Fan speed
H-Tap	High
M-Tap	Medium
L-Tap	Low

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10 Installation

10 - 1 Installation Method

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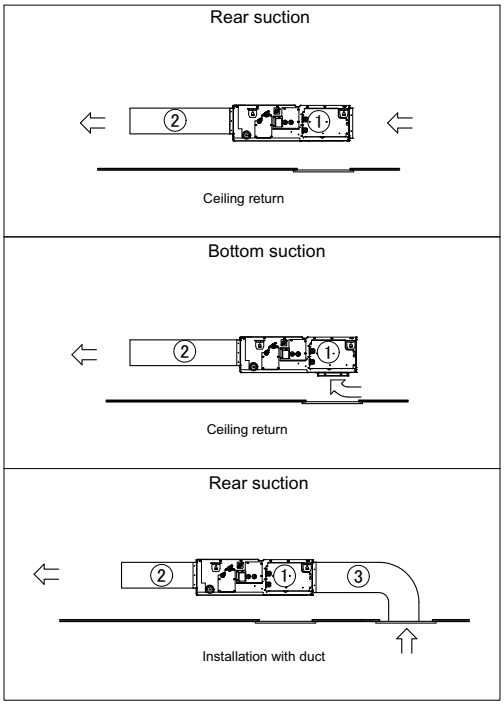
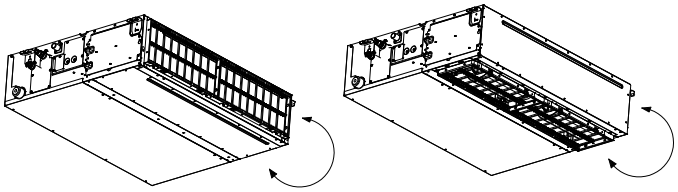
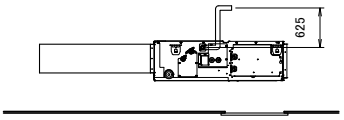
Installation methods





Easy modification from rear suction to bottom suction



Height of drain pump outlet pipe

Number	Description	
①	Indoor unit	
②	Air outlet duct	Field supply
③	Air inlet duct	Field supply

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