



Air Conditioning Technical Data

Fully flat cassette



EEEN14-100

FFQ-C

TABLE OF CONTENTS

FFQ-C

1	Features	2
2	Specifications	3
	Technical Specifications	3
	Electrical Specifications	4
3	Safety device settings	5
4	Options	6
5	Dimensional drawings	7
6	Centre of gravity	9
7	Piping diagrams	10
8	Wiring diagrams	11
	Wiring Diagrams - Single Phase	11
9	External connection diagrams	12
10	Sound data	13
	Sound Pressure Spectrum - Cooling	13
	Sound Pressure Spectrum - Heating	14
11	Air flow patterns	15
	Air Flow Pattern - Cooling	15
	Air Flow Pattern - Heating	19

1 Features

- Fully flat integration in standard architectural ceiling tiles, leaving only 8mm
- Remarkable blend of iconic design and engineering excellence with an elegant finish in white or a combination of silver and white
- Two optional intelligent sensors improve energy efficiency and comfort. The presence sensor adjusts the set point if no one is detected in the room. It also automatically directs air flow away from any person to avoid draught. The infrared floor sensor detects the average floor temperature and ensures even temperature distribution between ceiling and floor to prevent cold feet.
- The floor sensor (optional) detects the average floor temperature and ensures even temperature distribution between ceiling and floor. Cold feet will become history.
- Refurbishing the room? Flexibility to suit every room layout without changing the location of the unit! Via the wired remote controller you can easily control each flap individually and even close the flaps.
- Reduced energy consumption thanks to specially developed small tube heat exchanger, DC fan motor and drain pump
- Fresh air intake integrated in the same system thus reducing installation cost as no additional ventilation is required
- No optional adapter needed for DIII-connection, link your unit into the wider building management system.



Inverter



Presence & floor sensor



Home leave operation



Fan only



Draught prevention



Auto cooling-heating changeover



Whisper quiet



Ceiling soiling prevention



Individual flap control



Vertical auto swing



Fan speed steps



Dry programme



Air filter



Weekly timer



Infrared remote control



Wired remote control



Auto-restart



Self diagnosis



Drain pump kit



Twin/triple/double twin application



Multi model application



VRV for residential application

2 Specifications

2-1 Technical Specifications				FFQ25C	FFQ35C	FFQ50C	FFQ60C	
Casing	Material			Galvanised steel plate				
Dimensions	Unit	Height/Width/Depth	mm	260/575/575				
	Packed unit	Height/Width/Depth	mm	270/780/616				
Weight	Unit	kg		16		17.5		
	Packed unit	kg		19		20.5		
Decoration panel	Model			BYFQ60CW				
	Colour			White (N9.5)				
	Dimensions	Height/Width/Depth	mm	46/620/620				
	Weight			kg 2.8				
Decoration panel 2	Model			BYFQ60CS				
	Colour			White (N9.5) + Silver				
	Dimensions	Height/Width/Depth	mm	46/620/620				
	Weight			kg 2.8				
Decoration panel 3	Model			BYFQ60B3W1				
	Colour			White (RAL9010)				
	Dimensions	Height/Width/Depth	mm	55/700/700				
	Weight			kg 2.7				
Heat exchanger	Inside length		mm	1,295		1,248		
	Outside length		mm	1,342				
	Rows	Quantity		2		3		
	Fin pitch		mm	1.2				
	Passes	Quantity		5		7		
	Face area		m ²	0.290		0.300		
	Stages	Quantity		12		16		
	Empty tubeplate hole	Quantity		0				
	Fin	Type		Cross fin coil (multi slit fins and hi-XA tubes)				
	Air filter	Type			Resin net with mold resistance			
Fan	Type			Turbo fan				
	Quantity			1				
	Air flow rate	Cooling	High	m ³ /min	9	10	12	14.5
			Nom.	m ³ /min	8	8.5	10	12.5
			Low	m ³ /min	6.5		7.5	9.5
	Heating	High	High	m ³ /min	9	10	12	14.5
			Nom.	m ³ /min	8	8.5	10	12.5
Low			m ³ /min	6.5		7.5	9.5	
Fan motor	Model			QTS32D15M				
	Speed	Steps		3				
	Output	High	W	50				
Sound power level	Cooling		dBA	48	51	56	60	
	Heating		dBA	-				
Sound pressure level	Cooling	High/Nom./Low	dBA	31/28.5/25	34/30.5/25	39/34/27	43/40/32	
	Heating	Super high/High/Nom./Low	dBA	-/31/28.5/25	-/34/30.5/25	-/39/34/27	-/43/40/32	
Refrigerant	Type			R-410A				
Piping connections	Sound absorbing insulation			Foamed Polyurethane				
	Liquid	Type/OD	mm	Flare connection/6.35				
	Gas	Type/OD	mm	Flare connection/9.52		Flare connection/12.7		
	Drain			VP20 (I.D. 20/O.D. 26)				
	Heat insulation			Foamed polystyrene/polyethylene				

Standard Accessories : Washer for hanger bracket; Quantity : 8;

Standard Accessories : Operation manual; Quantity : 1;

Standard Accessories : Insulation for fitting; Quantity : 2;

Standard Accessories : Paper pattern for installation; Quantity : 1;

2 Specifications

Standard Accessories : Installation manual; Quantity : 1;

Standard Accessories : Clamps; Quantity : 7;

Standard Accessories : Sealing pad; Quantity : 4;

Standard Accessories : Screws; Quantity : 4;

Standard Accessories : Drain hose; Quantity : 1;

Standard Accessories : Metal clamp for drain hose; Quantity : 1;

2

2-2 Electrical Specifications		FFQ25C	FFQ35C	FFQ50C	FFQ60C
Power supply	Name	VE			
	Phase	1~			
	Frequency	Hz	50		
	Voltage	V	220-240		

Notes

(1) Dimensions do not include control box

(2) The sound power level is an absolute value indicating the power which a sound source generates.

3 Safety device settings

3 - 1 Safety Device Settings

FFQ-C

Safety devices		FFQ25-60C
Fuse		250V 5A
Fan motor thermal fuse	°C	---
Fan motor thermal protector	°C	---
Drain pump fuse	°C	---

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4 Options

4 - 1 Options

4

Description	Compatibility			Sky Air
	BYFQ60R2W1 BYFQ60R3W1	BYFQ60C2W1W	BYFQ60C2W1S	Model name
Decoration panel (Current)	-	-	-	BYFQ60R2W1
Decoration panel (Current)	-	-	-	BYFQ60R3W1
New decoration panel (White)	-	-	-	BYFQ60C2W1W
New decoration panel (Silver)	-	-	-	BYFQ60C2W1S
Sensor kit (White)	NO	YES	NO	BRYQ60A2W (*3)
Sensor kit (Silver)	NO	NO	YES	BRYQ60A2S (*3)
Sealing member of air discharge outlet	YES	YES	YES	BDBHQ44C60
Panel spacer	YES	NO	NO	KDBQ44B60
Replacement long-life filter	YES	YES	YES	KAFQ441BA60
Fresh air intake kit	YES	YES	YES	KDDQ44X460
Infrared remote controller (H/P)	YES	NO	NO	BRC7EBS30W (*1,2)
Infrared remote controller (H/P) (White)	NO	YES	NO	BRC7F530W (*1,2)
Infrared remote controller (H/P) (Silver)	NO	NO	YES	BRC7F530S (*1,2)
Wired remote controller	YES	YES	YES	BRC1D528 (*2)
Wired remote controller	YES	YES	YES	BRC1E52A7 + B7 (*4)
Simplified remote controller (with operation mode selector button)	YES	YES	YES	BRC2E52C (*5)
Simplified remote controller (without operation mode selector button)	YES	YES	YES	BRC3E52C (*5)
Central remote control	YES	YES	YES	DCS302B51
Unified ON/OFF control	YES	YES	YES	DCS301B51
Schedule timer	YES	YES	YES	DST301B51
Wiring adapter for electrical appendices	YES	YES	YES	KRP1B57
Wiring adapter for electrical appendices	YES	YES	YES	KRP4A53
Wiring adapter (hour meter)	YES	YES	YES	EKR1B2
Installation box for adaptor PCB	YES	YES	YES	KRP1B101, KRP1BA101
Remote sensor	YES	YES	YES	KRCS01-4B
I-touch controller	YES	YES	YES	DCS601CS1
Digital input adaptor	YES	YES	YES	BRP7A51 (*6,7)

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(*1) Sensing function not available
 (*2) Independently controllable flaps function not available
 (*3) Sensor kit option not applicable with RR and RQ models
 (*4) Independently controllable flaps function not available in combination RR and RQ models
 (*5) Included languages are:
 Language pack - 1: English, German, French, Dutch, Spanish, Italian and Portuguese.
 With PC cable - EKPCAB3 - 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.
 (*6) Only possible in combination with simplified remote control BRC2/3E52C.
 (*7) Requires installation box for adaptor PCB.

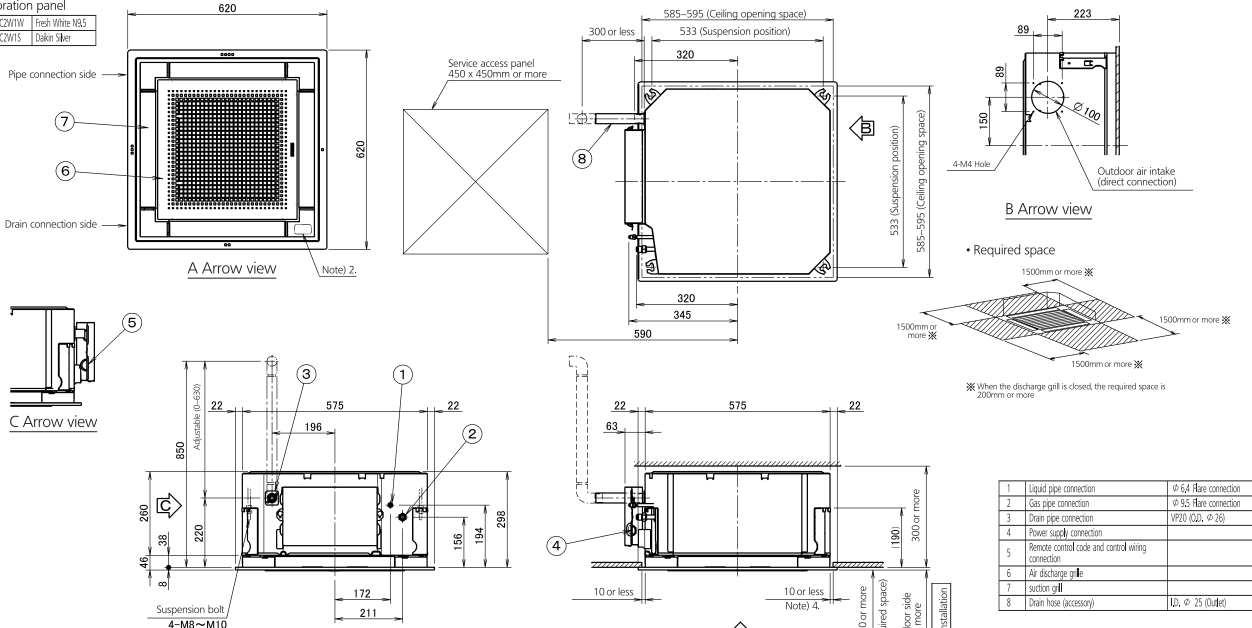
5 Dimensional drawings

5 - 1 Dimensional Drawings

FFQ25-35C

• Decoration panel

BRFR0C2M1W	Fresh White N&S
BRFR0C2M1S	Balck Silver



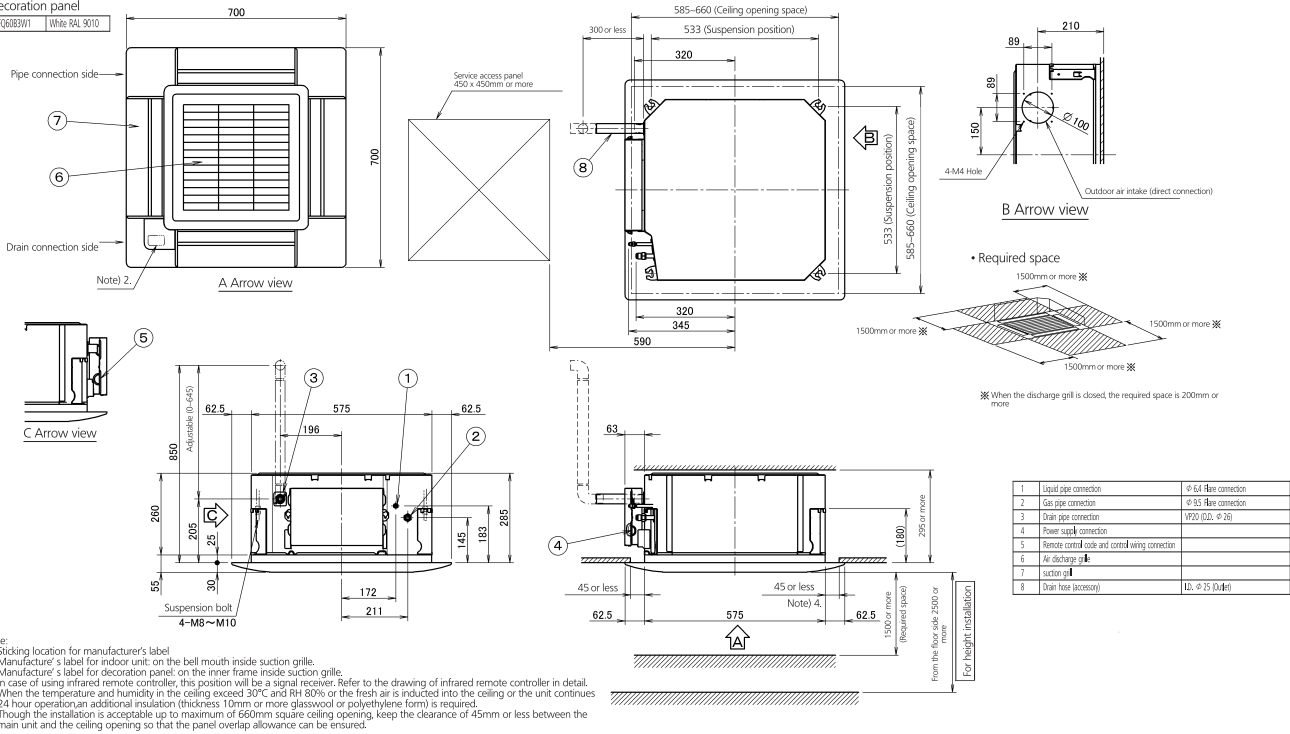
- Note:
1. Sticking location for manufacturer's label
 Manufacturer's label for indoor unit: on the bell mouth inside suction grille.
 Manufacturer's label for decoration panel: on the inner frame inside suction grille.
 2. In case of using infrared remote controller, this position will be a signal receiver. Refer to the drawing of infrared remote controller in detail.
 3. When the temperature and humidity in the ceiling exceed 30°C and RH 80% or the fresh air is inducted into the ceiling or the unit continues 24 hour operation, an additional insulation (thickness 10mm or more glasswool or polyethylene form) is required.
 4. Though the installation is acceptable up to maximum of 595mm square ceiling opening. Keep the clearance of 10mm or less between the main unit and the ceiling opening so that the panel overlap allowance can be ensured.

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FFQ25-35C

• Decoration panel

BRFR0B3M1	White RAL 9010
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 4. Though the installation is acceptable up to maximum of 660mm square ceiling opening, keep the clearance of 45mm or less between the main unit and the ceiling opening so that the panel overlap allowance can be ensured.

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5 Dimensional drawings

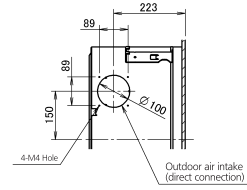
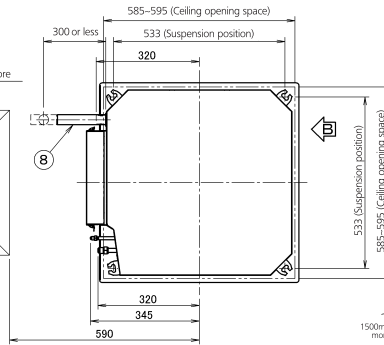
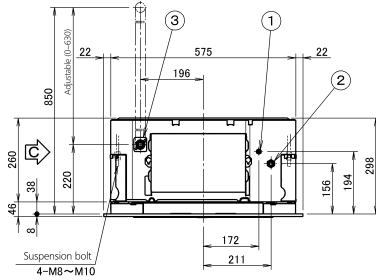
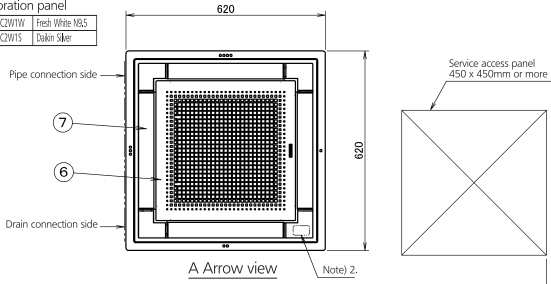
5 - 1 Dimensional Drawings

5

FFQ50-60C

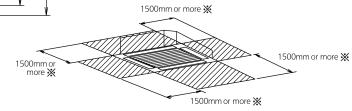
• Decoration panel

BYR60C3WV Fresh White M3S
BYR60C3WIS Dark Silver



B Arrow view

• Required space



※ When the discharge grill is closed, the required space is 200mm or more

1	Liquid pipe connection	φ 6.4 Flare connection
2	Gas pipe connection	φ 12.7 Flare connection
3	Drain pipe connection	VP20 (OD, φ 28)
4	Power supply connection	
5	Remote control code and control wiring connection	
6	Air discharge grille	
7	suction grill	
8	Drain hose (accessory)	LD, φ 25 (Outer)

Note:

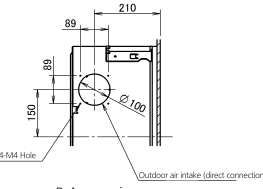
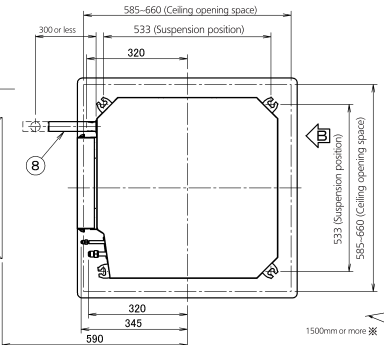
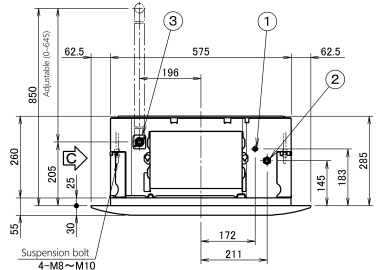
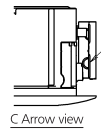
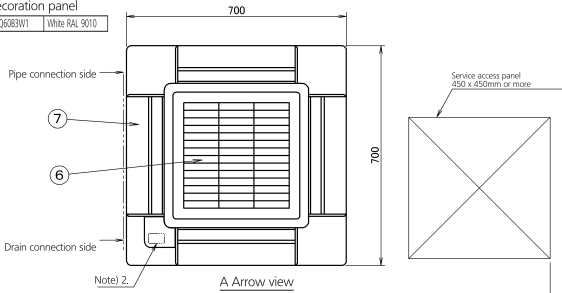
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FFQ50-60C

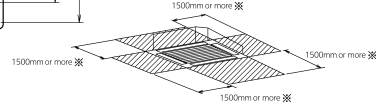
• Decoration panel

BYR60B3WV White RAL 9010



B Arrow view

• Required space



※ When the discharge grill is closed, the required space is 200mm or more

1	Liquid pipe connection	φ 6.4 Flare connection
2	Gas pipe connection	φ 12.7 Flare connection
3	Drain pipe connection	VP20 (OD, φ 28)
4	Power supply connection	
5	Remote control code and control wiring connection	
6	Air discharge grille	
7	suction grill	
8	Drain hose (accessory)	LD, φ 25 (Outer)

Note:

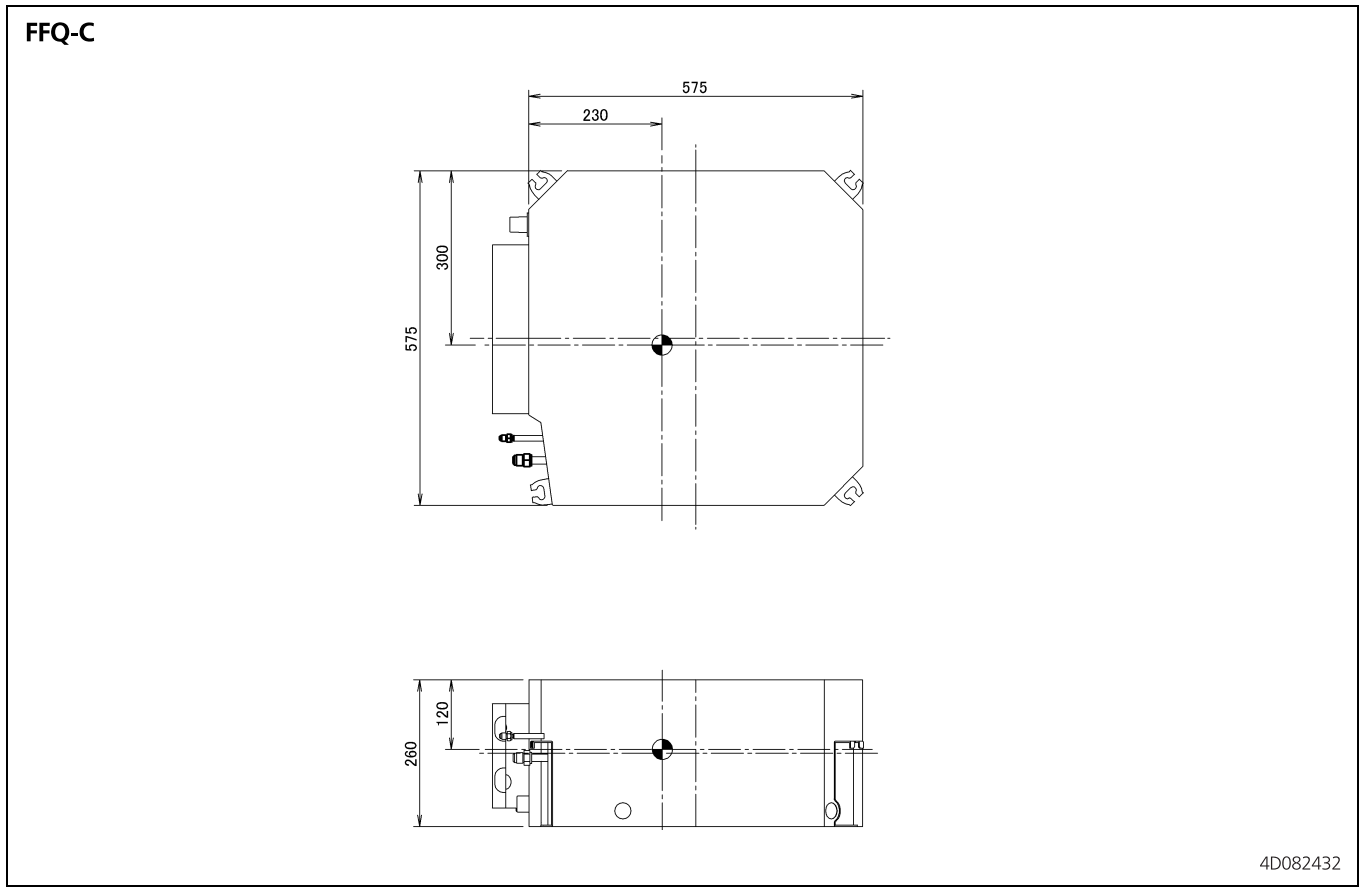
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8

6 Centre of gravity

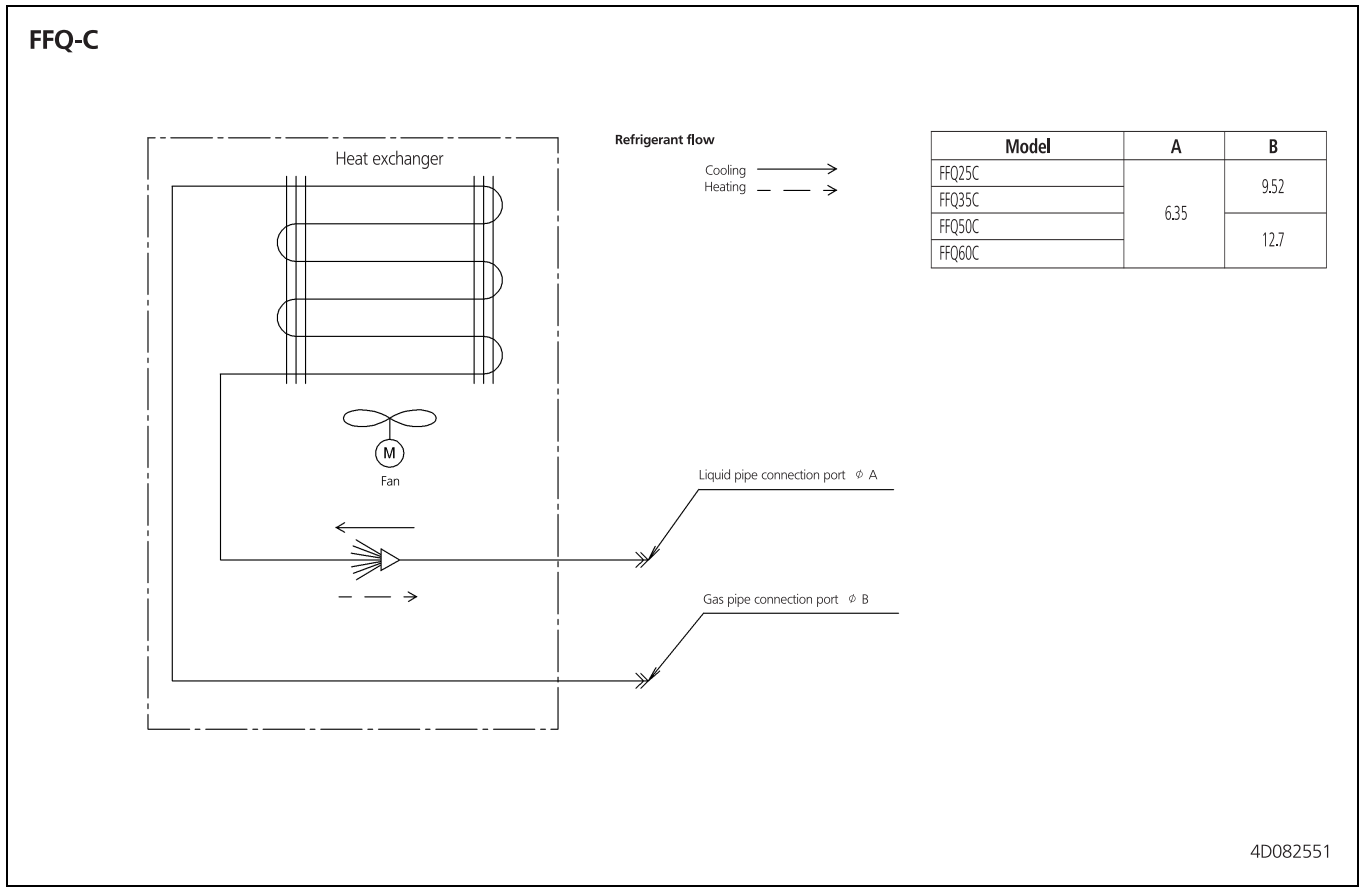
6 - 1 Centre of Gravity



7 Piping diagrams

7 - 1 Piping Diagrams

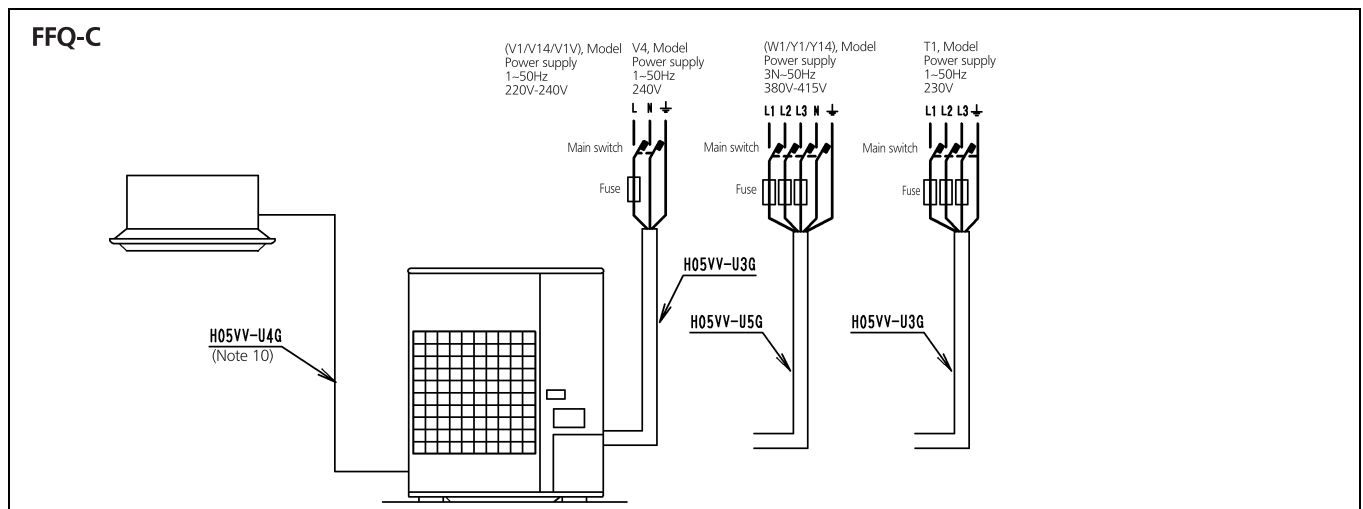
7



9 External connection diagrams

9 - 1 External Connection Diagrams

9



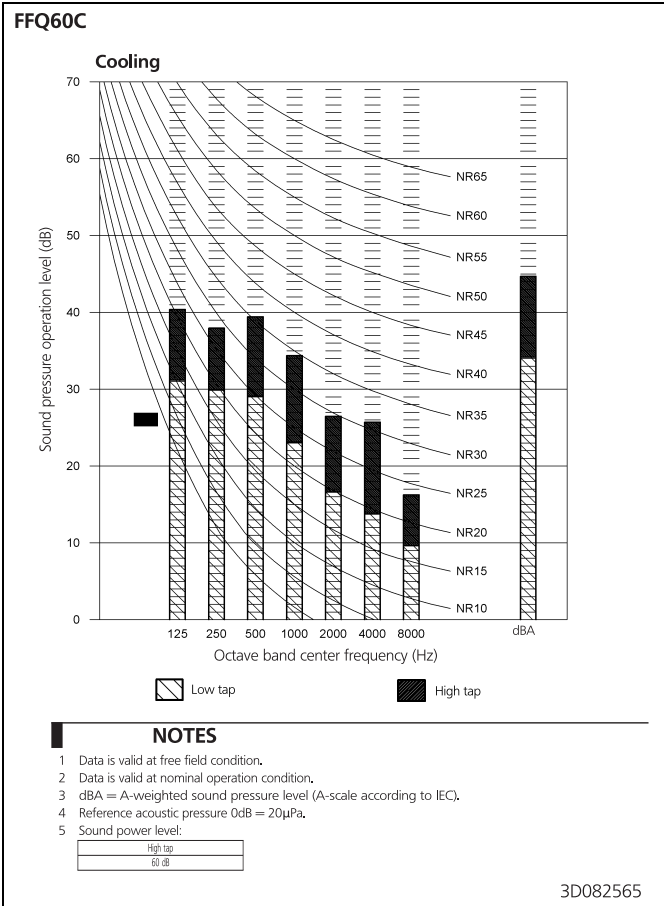
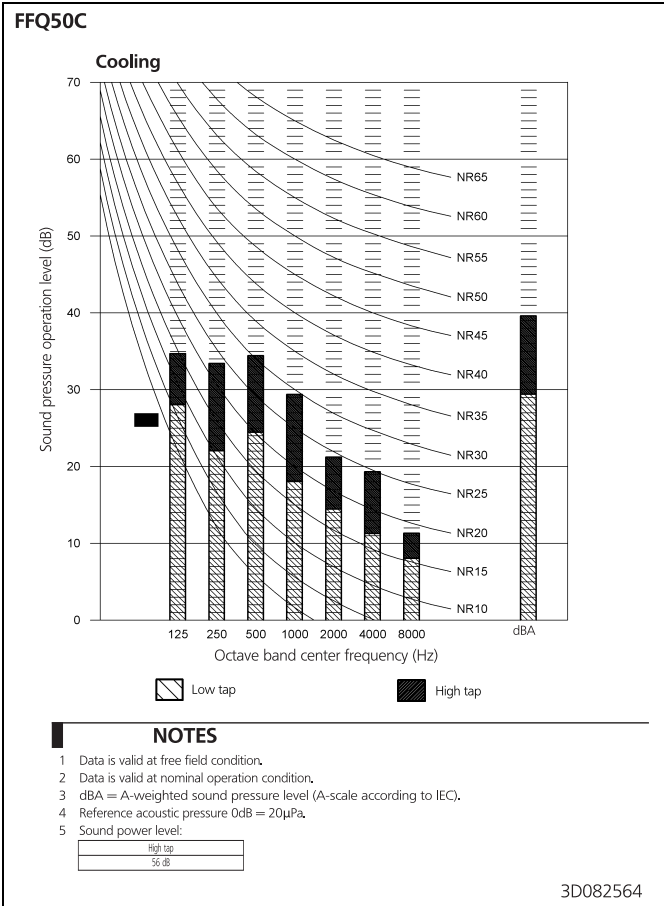
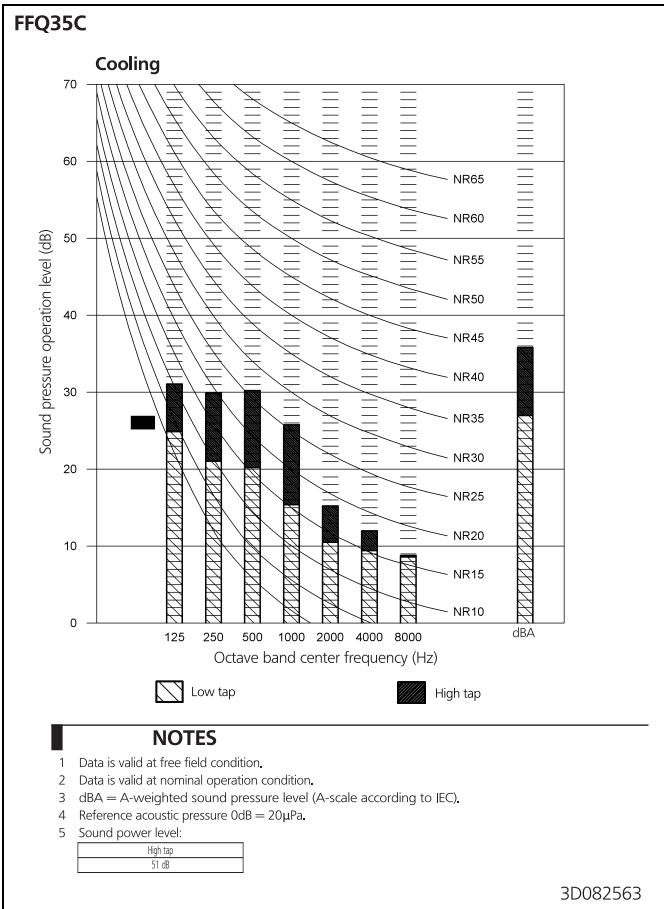
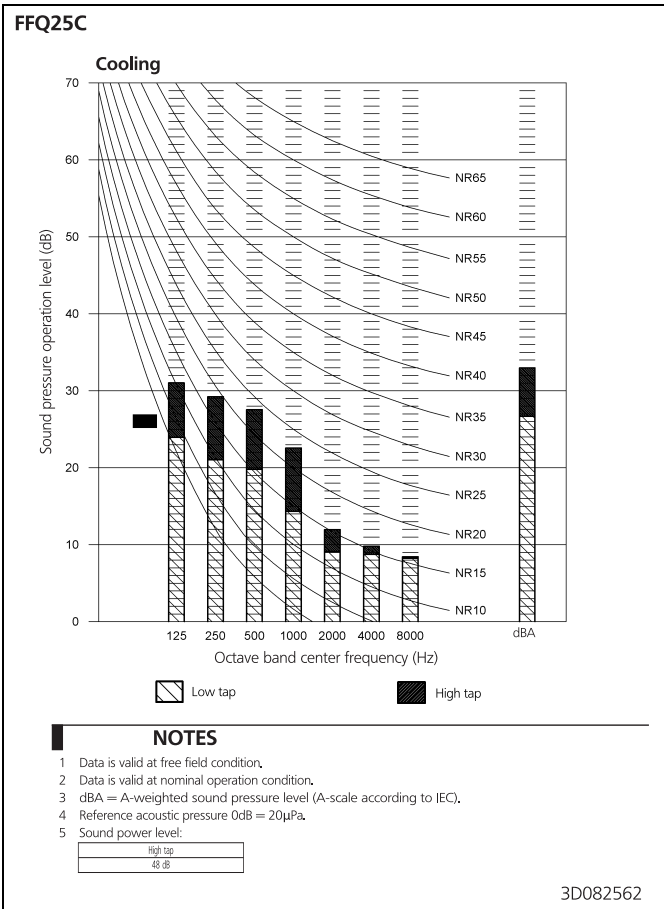
NOTES

- 1 Line voltage wiring
 Control circuit wiring
- 2 All wiring, components and materials to be procured on the site must comply with the applicable local and national codes.
- 3 Use copper conductors only.
- 4 As for details, see wiring diagrams.
- 5 Install fuse and mainswitch for safety.
- 6 All field wiring and components must be provided by a licensed electrician.
- 7 The unit shall be grounded in compliance with the applicable local and national codes.
- 8 Wiring shown are general points-of-connection guides only and are not intended for or to include all details for a specific installation.
- 9 Never share a common power supply with other equipment.
- 10 Show only in case of protected pipes. Use HO7RN-F in case of no protection.

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10 Sound data

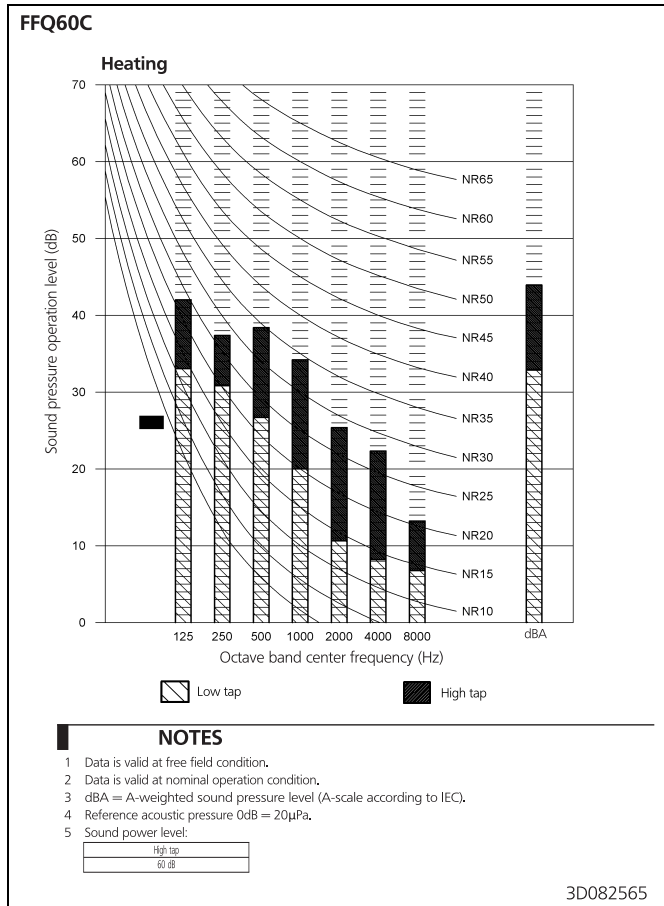
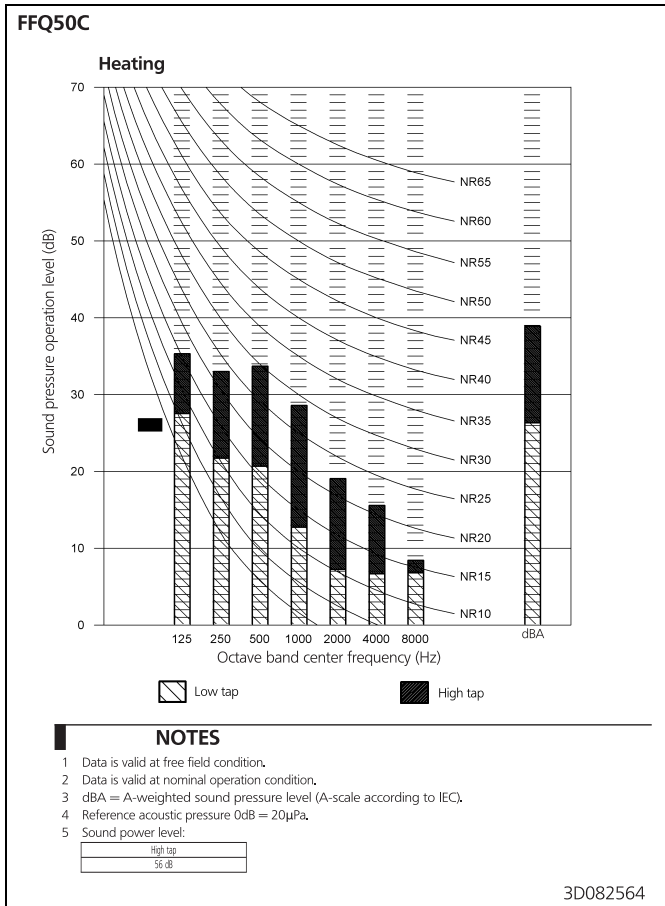
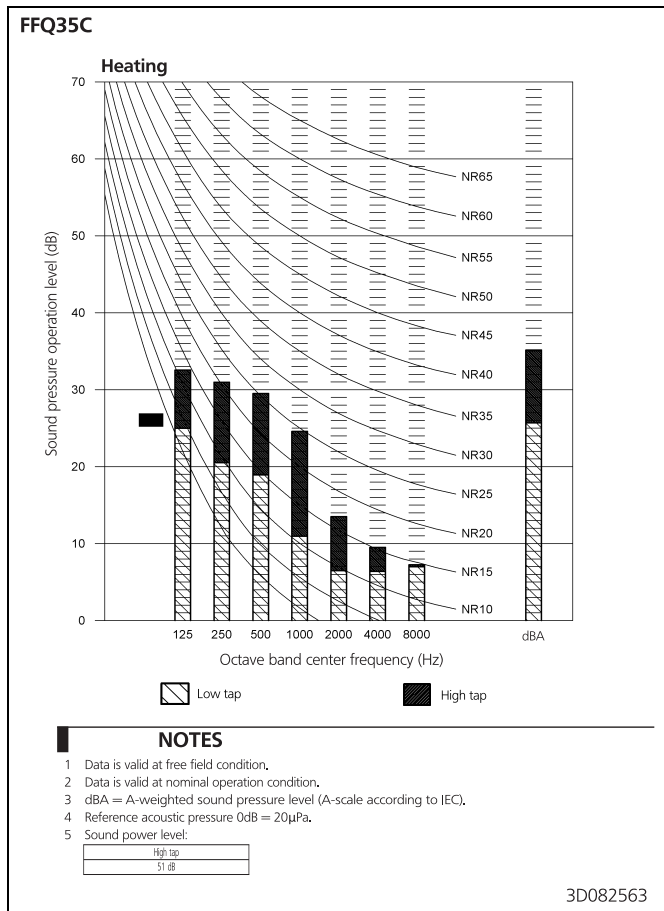
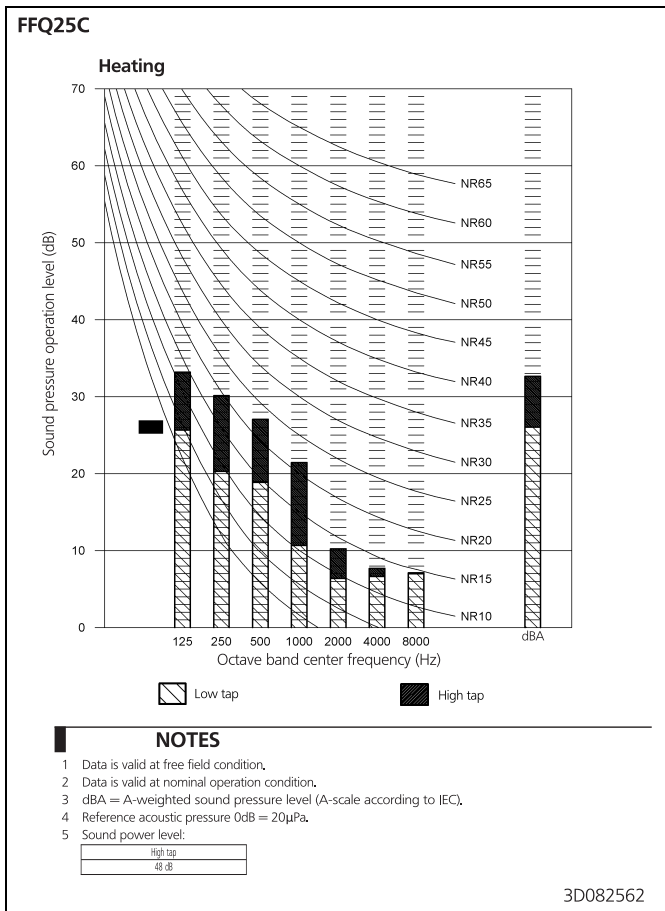
10 - 1 Sound Pressure Spectrum - Cooling



10 Sound data

10 - 2 Sound Pressure Spectrum - Heating

10



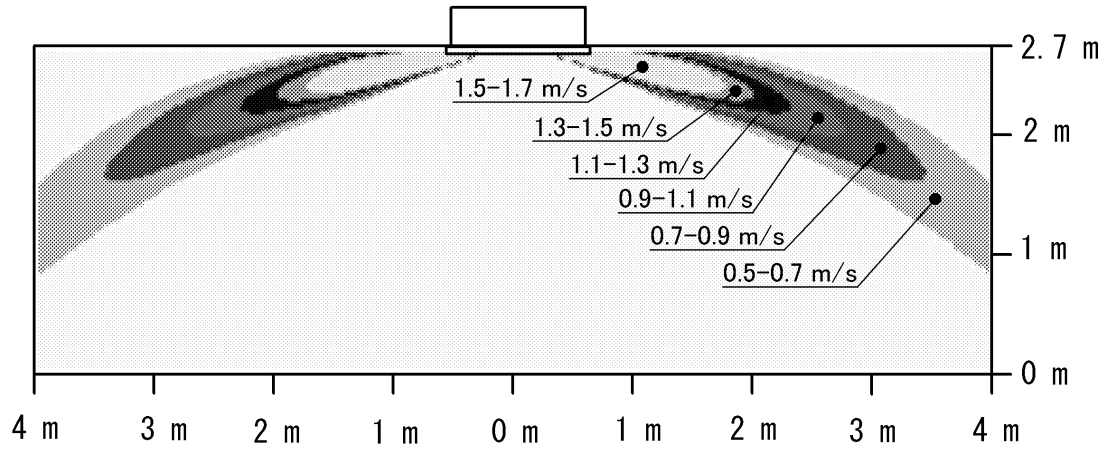
11 Air flow patterns

11 - 1 Air Flow Pattern - Cooling

FFQ25C

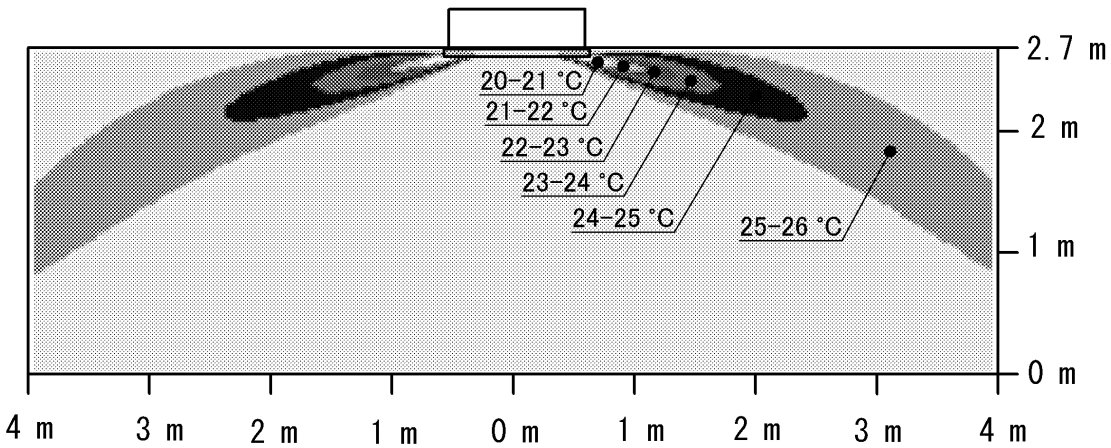
Cooling air velocity distribution

All round air discharge, air flow direction: horizontal



Cooling air temperature distribution

All round air discharge, air flow direction: horizontal



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11 Air flow patterns

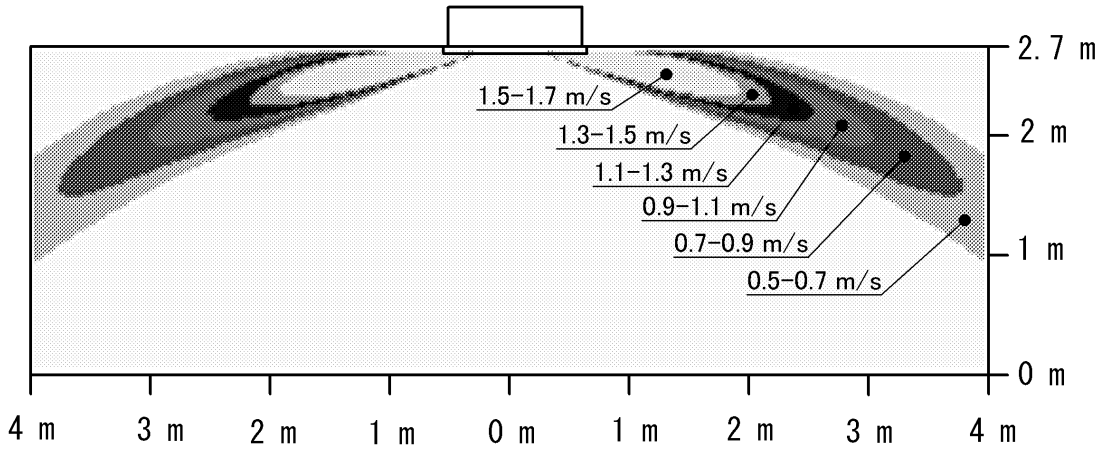
11 - 1 Air Flow Pattern - Cooling

11

FFQ35C

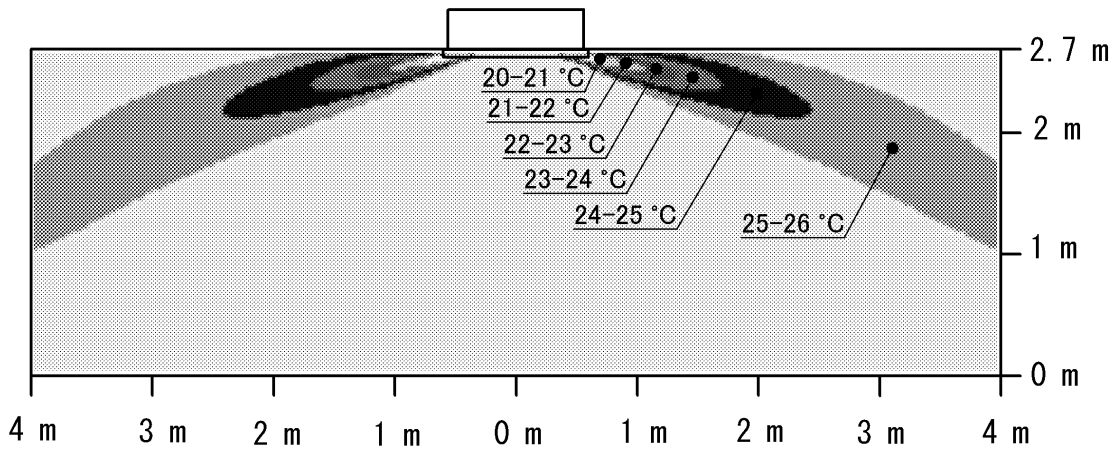
Cooling air velocity distribution

All round air discharge, air flow direction: horizontal



Cooling air temperature distribution

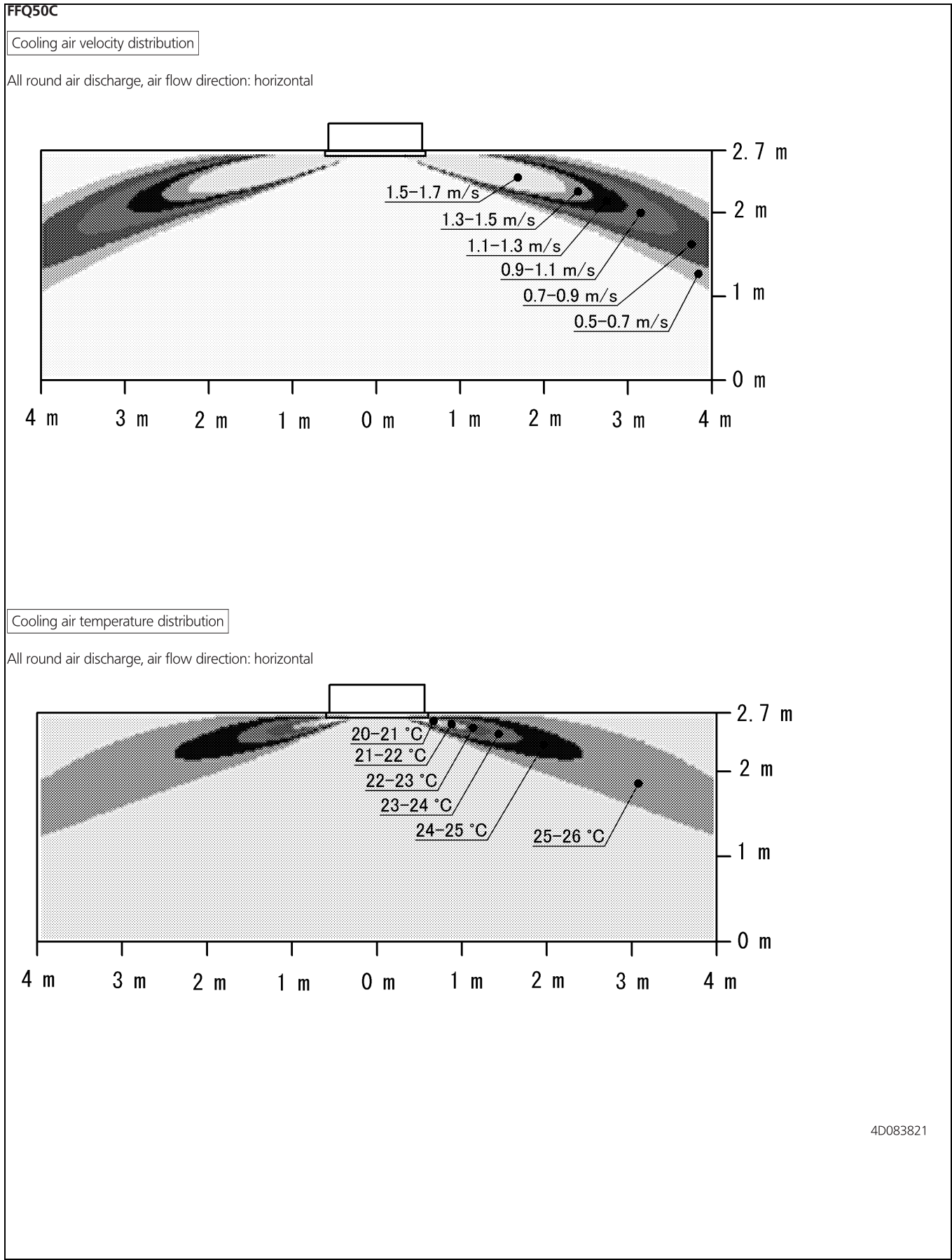
All round air discharge, air flow direction: horizontal



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11 Air flow patterns

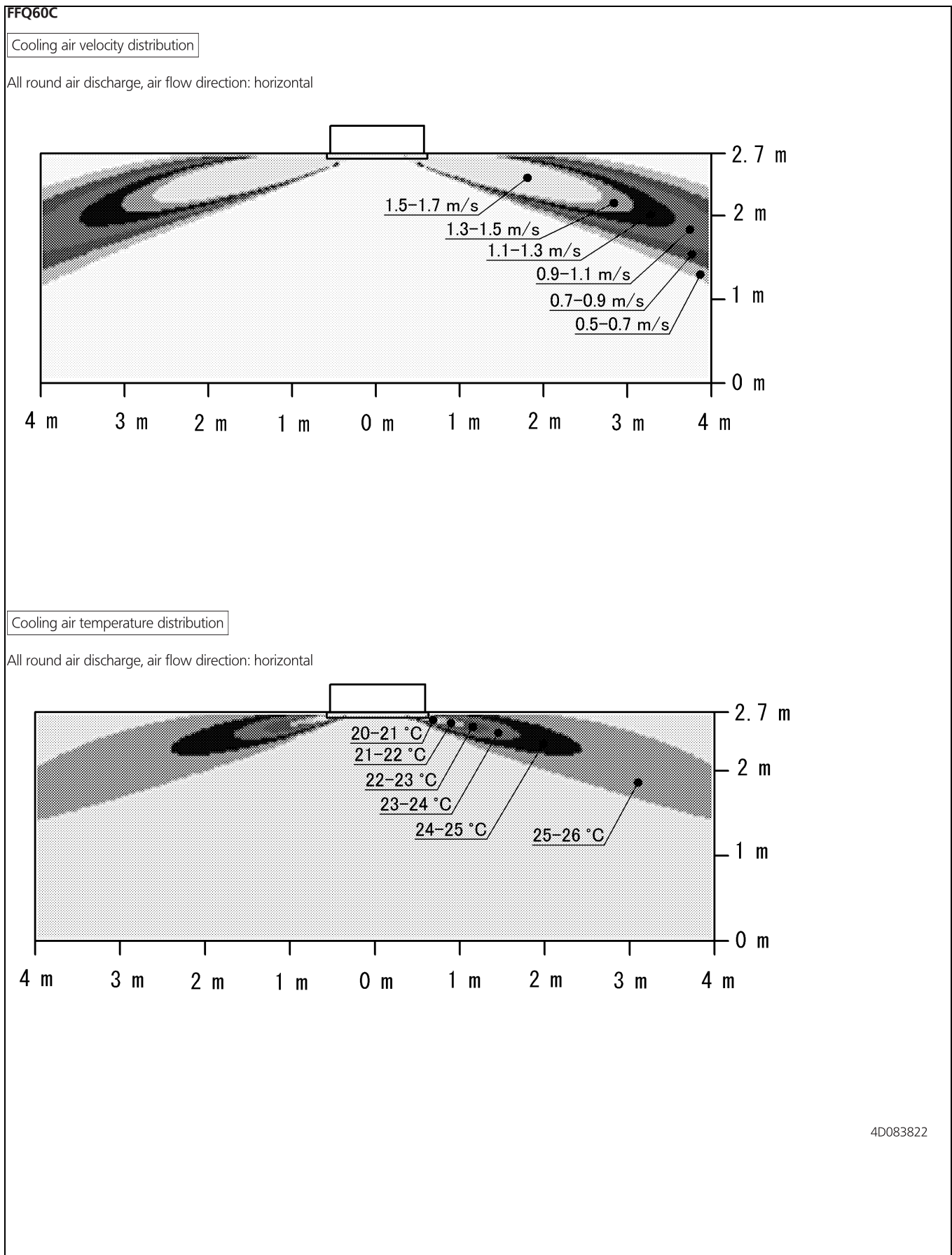
11 - 1 Air Flow Pattern - Cooling



11 Air flow patterns

11 - 1 Air Flow Pattern - Cooling

11



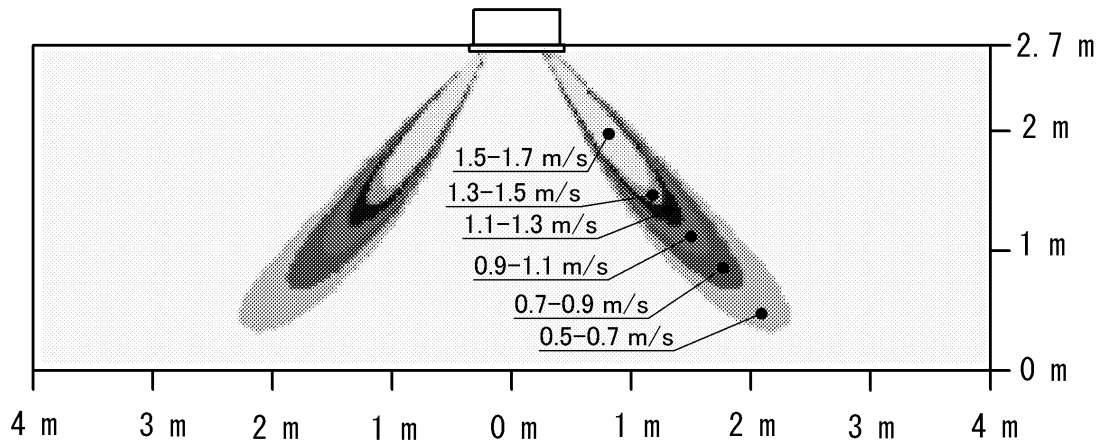
11 Air flow patterns

11 - 2 Air Flow Pattern - Heating

FFQ25C

Heating air velocity distribution

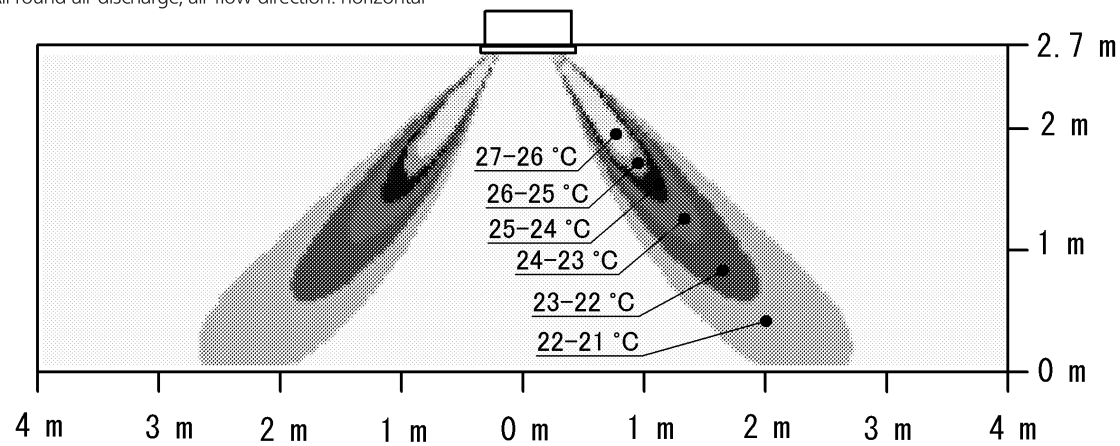
All round air discharge, air flow direction: horizontal



11

Heating air temperature distribution

All round air discharge, air flow direction: horizontal



4D083829

11 Air flow patterns

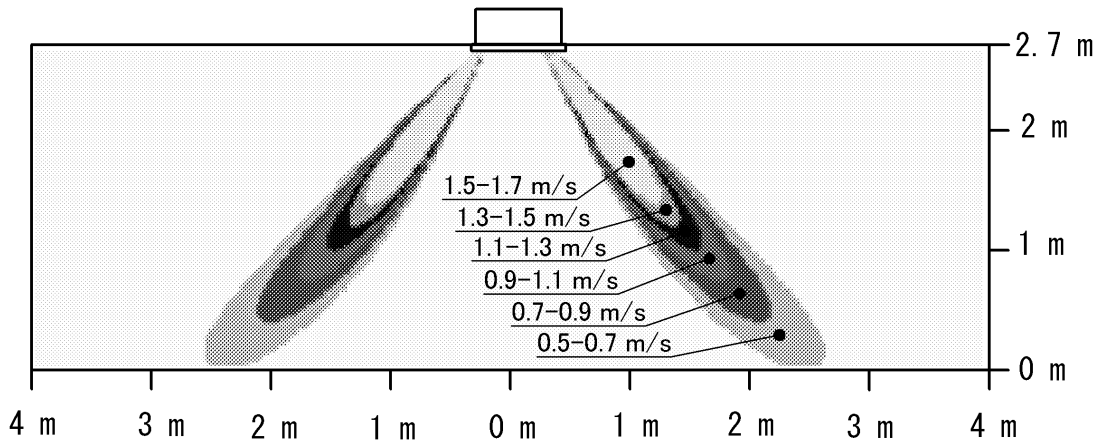
11 - 2 Air Flow Pattern - Heating

11

FFQ35C

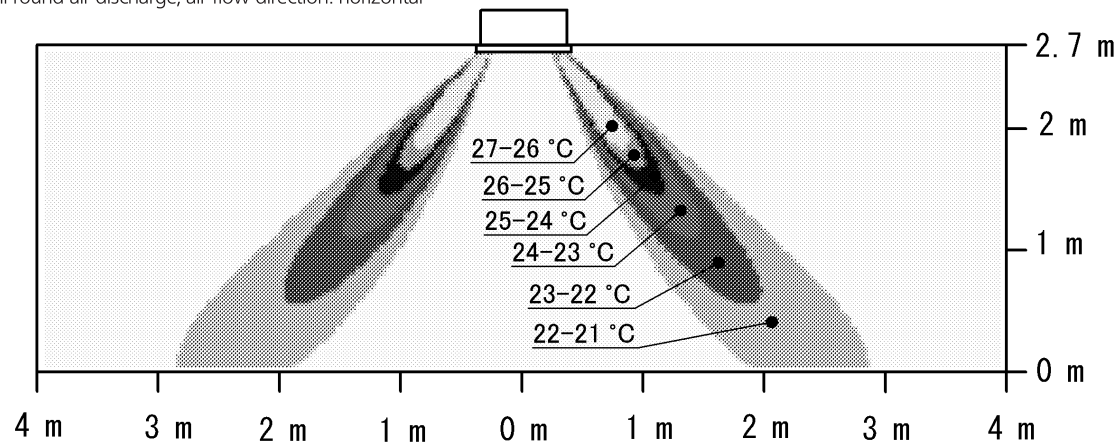
Heating air velocity distribution

All round air discharge, air flow direction: horizontal



Heating air temperature distribution

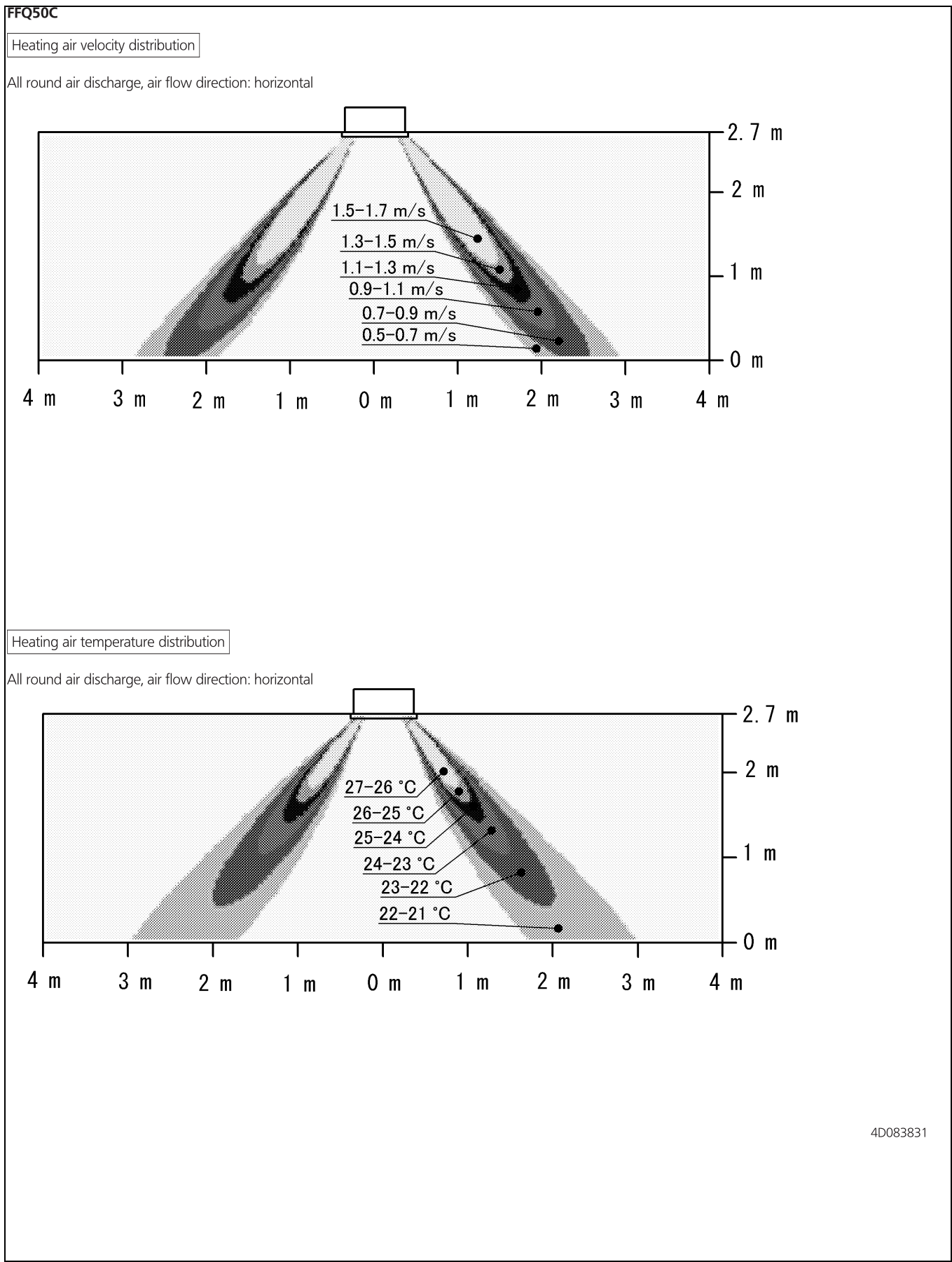
All round air discharge, air flow direction: horizontal



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11 Air flow patterns

11 - 2 Air Flow Pattern - Heating



11 Air flow patterns

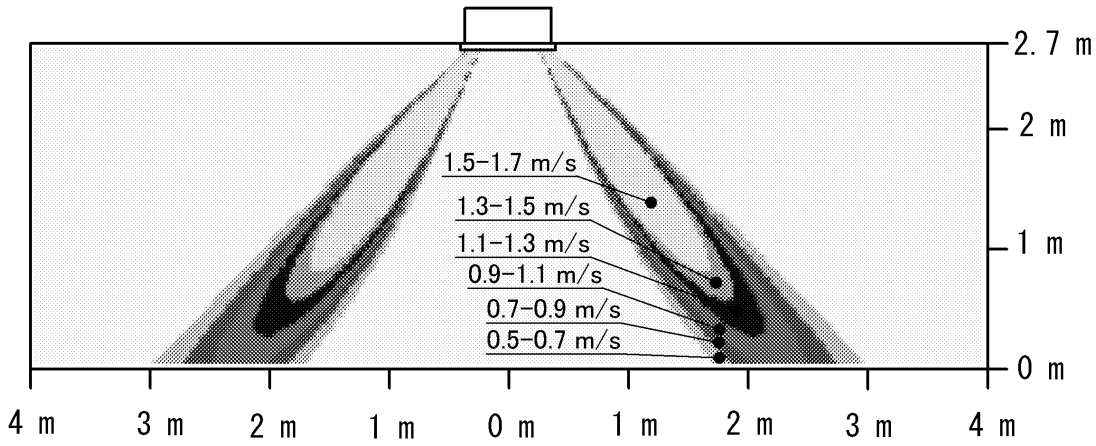
11 - 2 Air Flow Pattern - Heating

11

FFQ60C

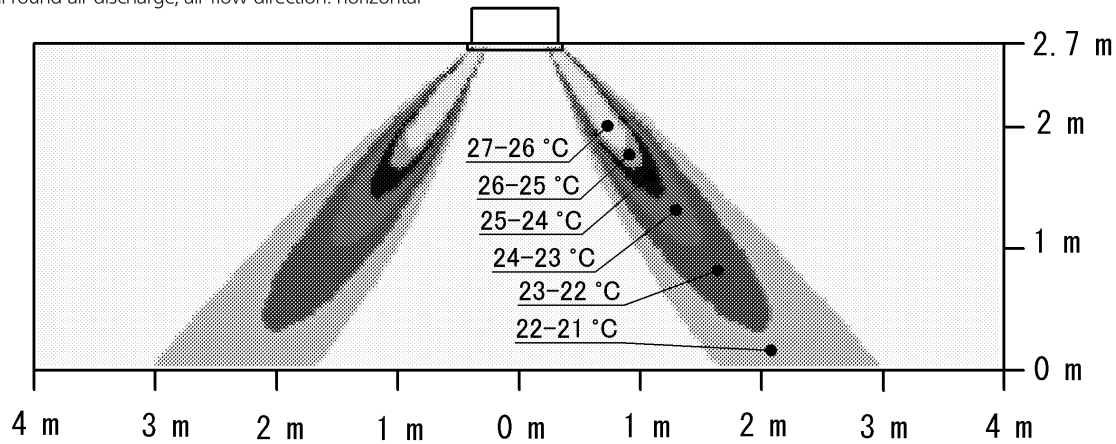
Heating air velocity distribution

All round air discharge, air flow direction: horizontal



Heating air temperature distribution

All round air discharge, air flow direction: horizontal



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