DAIKIN

# technical data

air conditioning systems

**FUQ-BU**

**4-Way Blow Ceiling Suspended Cassette, Inverter Controlled**

OPTIMISED DESIGN R-410A

# 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. is participating in the EUROVENT Certification Programme. Products are as listed in the EUROVENT Directory of Certified Products.

Specifications are subject to change without prior notice.

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Prepared in Belgium by Goekint Graphics

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## FUQ-BU



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

OPTIMISED DESIGN R-410A

# 1 Features



- Ideal for refurbishment
- Leaves maximum floor and wall space for furniture, decoration and fittings
- Air can be discharged in any of four directions
- Air flow distribution for ceiling heights up to 3.5m without loss of capacity.
- Possibility to shut off 1 or 2 flaps for easy installation in corners
- Extremely quiet in operation both indoors and outdoors
- The air filter, drain pan and heat exchanger fin are mildew proof and anti-bacterial treated
- Drain-up pump with increased lift of 500mm
- Flexible installation: can be installed in the middle of a room or in a corner
- For equal distribution in larger rooms, up to 3 indoor units can be connected to 1 outdoor
- These indoor units can also be connected to the Sky Air super inverter RZQ-B.
- The wired remote control has following features:
  - A real time clock
  - A schedule timer:
    - Possibility to program a weekly schedule timer.
    - Possibility to program 5 actions for each day of the week.
  - Limit operation (min./max.): room temperature is controlled within adjustable upper and lower limits.
  - Home leave (frost protection): during absence, the indoor temperature can be maintained at a certain level. This function can also switch the unit ON/OFF.


Optional


Optional


Optional



Heat pump


2 steps


# 2 Specifications



| NOMINAL CAPACITY and NOMINAL INPUT | | | | | | |
|---|---|---|---|---|---|---|
| **For indoor units only:** | | | | | | |
| **INDOOR UNITS** | | | | **FUQ71BUV1B** | **FUQ100BUV1B** | **FUQ125BUV1B** |
| NOMINAL INPUT | Cooling | | kW | 0.180 | 0.289 | 0.289 |
| | Heating | | kW | 0.160 | 0.269 | 0.269 |

| **For combination indoor + outdoor units (air cooled):** | | | | | | |
|---|---|---|---|---|---|---|
| **INDOOR UNITS** | | | | **FUQ71BUV1B** | **FUQ100BUV1B** | **FUQ125BUV1B** |
| **OUTDOOR UNITS** | | | | **RZQ71B7V3B** | **RZQ100B7V3B** | **RZQ125B7V3B** |
| NOMINAL CAPACITY (3) | Cooling (1) | min.~nom.~max. | kW | 3.20~7.10~8.02 | 5.00~10.00~11.20 | 5.75~12.50~14.00 |
| | Heating (2) | min.~nom.~max. | kW | 3.52~8.00~9.04 | 5.15~11.20~12.77 | 6.02~14.00~16.24 |
| NOMINAL INPUT | Cooling | nominal | kW | 2.26 | 3.05 | 4.25 |
| | Heating | nominal | kW | 2.71 | 3.29 | 4.76 |
| EER | | | | 3.14 | 3.28 | 2.94 |
| COP | | | | 2.95 | 3.40 | 2.94 |
| ENERGY LABEL | Cooling | | | B | A | C |
| | Heating | | | D | C | D |
| ANNUAL ENERGY CONSUMPTION | Cooling | | kWh | 1,131 | 1,525 | 2,126 |

| TECHNICAL SPECIFICATIONS | | | | | | |
|---|---|---|---|---|---|---|
| **INDOOR UNITS** | | | | **FUQ71BUV1B** | **FUQ100BUV1B** | **FUQ125BUV1B** |
| DIMENSIONS | Unit | H | mm | 165 | 230 | 230 |
| | | W | mm | 895 | 895 | 895 |
| | | D | mm | 895 | 895 | 895 |
| WEIGHT | Unit | | kg | 25 | 31 | 31 |
| MATERIAL | Unit | | | Resin | | |
| COLOUR | Unit | | | White | | |
| SOUND LEVEL | Sound pressure (cooling/heating) (3) | high | dB(A) | 40/40 | 43/43 | 44/44 |
| | | low | dB(A) | 35/35 | 38/38 | 39/39 |
| | Sound power (cooling/heating) (4) | high | dB(A) | 56/56 | 59/59 | 60/60 |
| | | low | dB(A) | 51/51 | 54/54 | 55/55 |
| FAN | Air flow rate (cooling/heating) | high | $m^3$/min | 19/19 | 29/29 | 32/32 |
| | | low | $m^3$/min | 14/14 | 21/21 | 23/23 |
| | Speed | steps | | 2 steps | | |
| | Type | | | Turbo fan | | |
| | Qty x motor output | | W | 1 x 45 | 1 x 90 | 1 x 90 |
| HEAT EXCHANGER | Type | | | Cross fin coil (Multi louver fins and N-HiX tubes) | | |
| | Rows x stages x fin pitch | | mm | 3 x 6 x 1.5 | 3 x 8 x 1.5 | 3 x 8 x 1.5 |
| | Face area | | $m^2$ | 0.265 | 0.353 | 0.353 |
| AIR FILTER | | | | Resin net (with mold resistant) | | |
| PIPING CONNECTIONS | | liquid | mm | ϕ9.5 (flare) | | |
| | | gas | mm | ϕ15.9 (flare) | | |
| | | drain | mm | I.D. ϕ20 | | |
| | | drain | mm | O.D. ϕ26 | | |
| INSULATION MATERIAL | Heat insulation | | | Heat resistant foamed polyethylene, regular foamed polyethylene | | |

| | | |
|---|---|---|
| **For outdoor units** | Pair application | See chapters RZQ-B |

# 2 Specifications



## ELECTRICAL SPECIFICATIONS

| For indoor units only: | | | | FUQ71BUV1B | FUQ100BUV1B | FUQ125BUV1B |
|---|---|---|---|---|---|---|
| CURRENT | Nominal running current | cooling | A | See chapter RZQ-B | | |
| | | heating | A | | | |
| | Maximum running current | cooling | A | | | |
| | | heating | A | | | |

| For combination indoor units + outdoor units: | | | | FUQ71BUV1B | FUQ100BUV1B | FUQ125BUV1B |
|---|---|---|---|---|---|---|
| | | | | RZQ71B7V3B | RZQ100B7V3B | RZQ125B7V3B |
| CURRENT | Nominal running current | cooling | A | See chapter RZQ-B | | |
| | Maximum running current | cooling | A | | | |
| | Starting current | cooling | A | | | |

| For indoor units only: | | | FUQ71BUV1B | FUQ100BUV1B | FUQ125BUV1B |
|---|---|---|---|---|---|
| POWER SUPPLY | | | V1 | V1 | V1 |
| NOMINAL DISTRIBUTION SYSTEM VOLTAGE | Phase | | 1~ | 1~ | 1~ |
| | Frequency | Hz | 50 | 50 | 50 |
| | Voltage | V | 220-240 | 220-240 | 220-240 |

**NOTES**

1 Nominal cooling capacities are based on: indoor temperature 27°CDB/19°CWB * outdoor temperature 35°CDB * refrigerant piping length: 7.5m * level difference: 0m.

2 Nominal heating capacities are based on: indoor temperature: 20°CDB/12°CWB * outdoor temperature: 7°CDB/6°CWB * refrigerant piping length: 7.5m * level difference 0m.

3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.

4 The sound pressure level is measured via a microphone at 1m distance from the unit. It is a relative value, depending on the distance and acoustic environment. For measuring conditions: please refer to item 6 of this chapter.

5 The sound power level is an absolute value indicating the "power" which a sound source generates.

6 Energy label: scale from A (most efficient) to G (less efficient).

7 The Energy Label Directive 2002/31/EC will enter into force once the relevant measurement standard will be published in the European Official Standard.

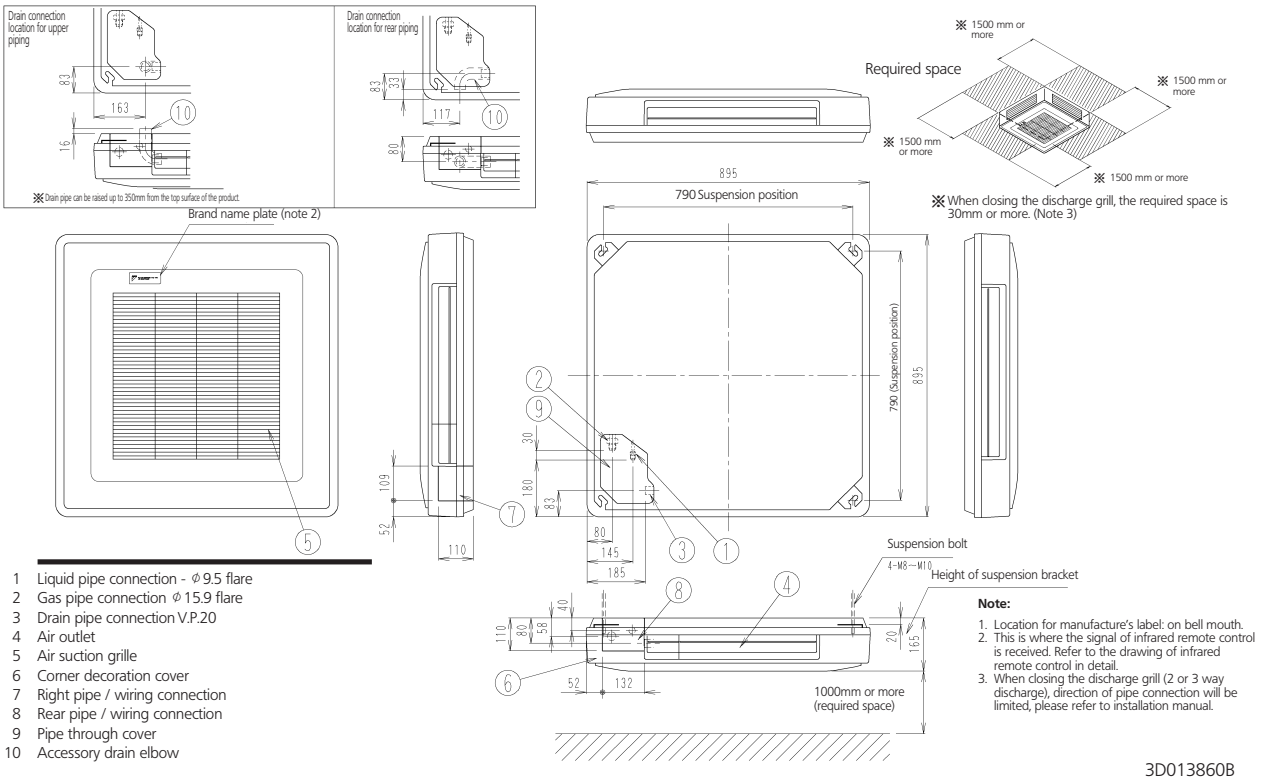
8 Annual energy consumption: based on average use of 500 running hours per year at full load (= nominal conditions)

# 3 Dimensional drawings



unit (mm)

## FUQ71BUV1B




1 Liquid pipe connection - ⌀9.5 flare
2 Gas pipe connection ⌀15.9 flare
3 Drain pipe connection V.P.20
4 Air outlet
5 Air suction grille
6 Corner decoration cover
7 Right pipe / wiring connection
8 Rear pipe / wiring connection
9 Pipe through cover
10 Accessory drain elbow

**Note:**

1. Location for manufacture's label: on bell mouth.
2. This is where the signal of infrared remote control is received. Refer to the drawing of infrared remote control in detail.
3. When closing the discharge grill (2 or 3 way discharge), direction of pipe connection will be limited, please refer to installation manual.

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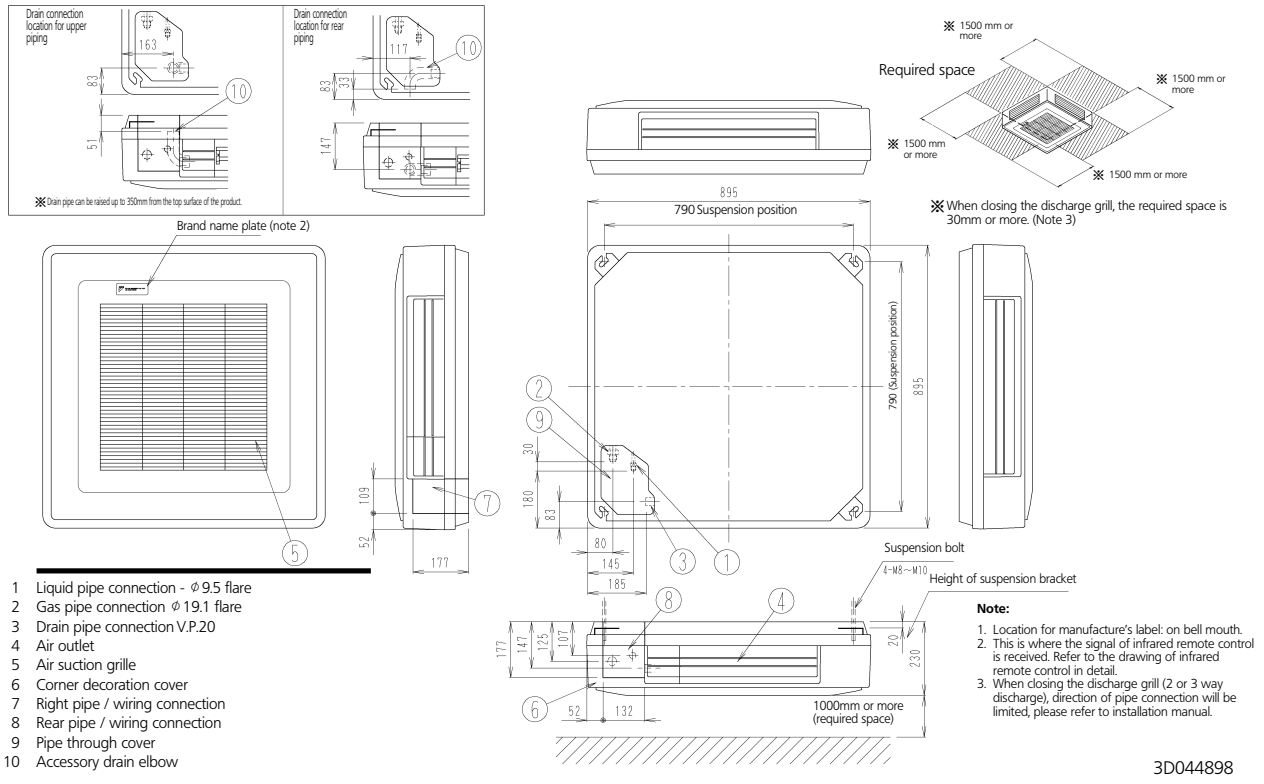
unit (mm)

## FUQ100-125BUV1B




1 Liquid pipe connection - ⌀9.5 flare
2 Gas pipe connection ⌀19.1 flare
3 Drain pipe connection V.P.20
4 Air outlet
5 Air suction grille
6 Corner decoration cover
7 Right pipe / wiring connection
8 Rear pipe / wiring connection
9 Pipe through cover
10 Accessory drain elbow

**Note:**

1. Location for manufacture's label: on bell mouth.
2. This is where the signal of infrared remote control is received. Refer to the drawing of infrared remote control in detail.
3. When closing the discharge grill (2 or 3 way discharge), direction of pipe connection will be limited, please refer to installation manual.

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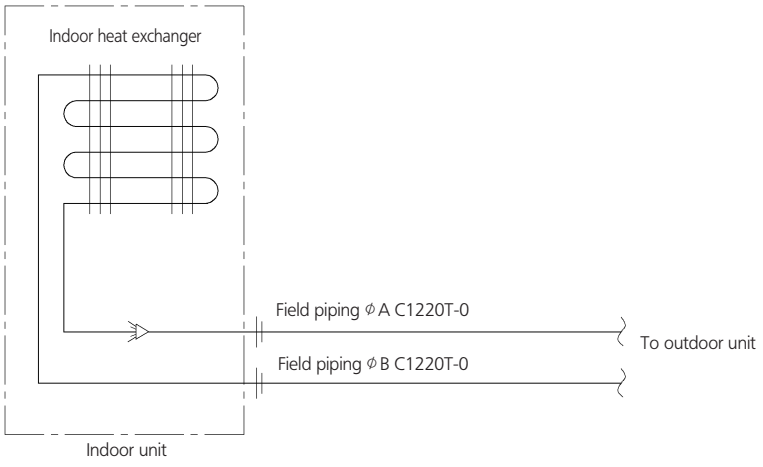
# 4 Piping diagrams

4

**FUQ71-100-125BUV1B**




Refrigerant pipe connection port diameters

| Model | A | B |
|---|---|---|
| FUQ71, 100, 125BUV1B | ∅9.5 | ∅15.9 |

Check valve — Flare connection — Screw connection — Flange connection — Pinched pipe — Spinned pipe

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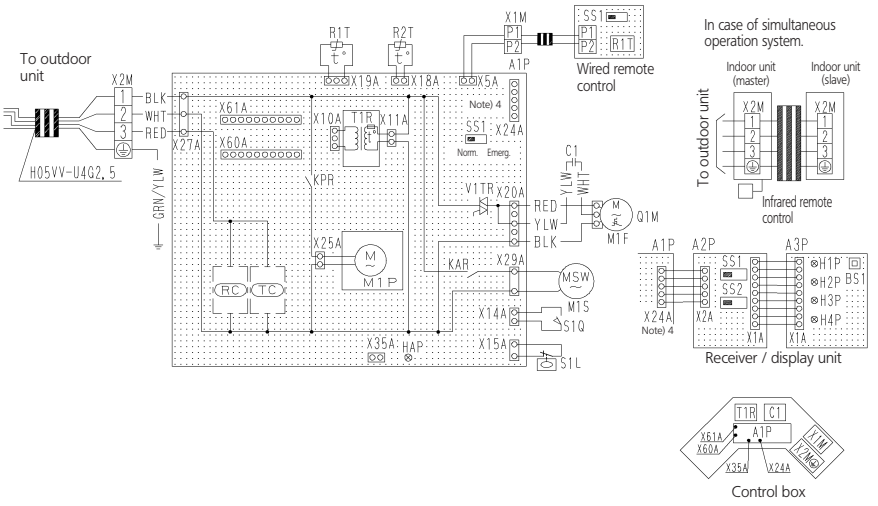
# 5 Wiring diagrams



## FUQ71~125BUV1B

Notes

1. ▭▭ : Terminal ⊡, ⊏3⊐ : Connector
   ⏚ : Protective earth (screw)
2. — — — : Field wiring
3. In case using central remote control, connect it to the unit in accordance with the attached instruction manual.
4. X24A is connected when the infrared remote control kit is being used.
5. Remote control model varies according to the combination system, confirm technical materials and catalogs, etc. before connecting.
6. Symbols show as follows Red:red, Blk:black, Ylw:yellow, Org:orange, Gry:gray, Prp:purple, Blu:blue
7. Confirm the method of setting the selector switch (SS1, SS2) by installation manual and engeneering materials, etc.




1-RED, 2-WHITE, 3-BLACK
33A Limit switch (swing flap)
33H Float switch
A1P Printed circuit board
A2P Printed circuit board (Transformer) 230V/16V)
C1R Capacitor (M1F)
HAP Light emitting diode (service monitor green)
HBP Light emitting diode (service monitor green)
M1A Motor (swing flap)
M1F Motor (indoor fan)
M1P Motor (drain pump)
Q1F Thermo switch (M1F embedded)

R1T Thermistor (air)
R2T Thermistor (coil)
RyA Magnetic relay (M1A)
RyP Magnetic relay
SS1 Selector switch (emergency)
X1M Terminal strip
X2M Terminal strip
(RC) Signal receiver circuit
(TC) Signal transmission circuit
(PC) Phase control circuit
Wired remote control
R1T Thermistor (air)
SS1 Selector switch (main/sub)

Receiver / display unit (attached to infrared remote controller)
A3P Printed circuit board
A4P Printed circuit board
BS Push button (on/off)
H1P Light emitting diode (service monitor red)
H2P Light emitting diode (service monitor green)
H3P Light emitting diode (service monitor red)
H4P Light emitting diode (service monitor orange)
SS1 Selector switch (main/sub)
SS2 Selector switch (wireless address set)

Connector for optional parts
X30A Connector (interface adapter for sky air series)
X33A Connector (adapter for wiring)
X35A Connector (group control adapter)
X40A Connector
ON/OFF input from outside

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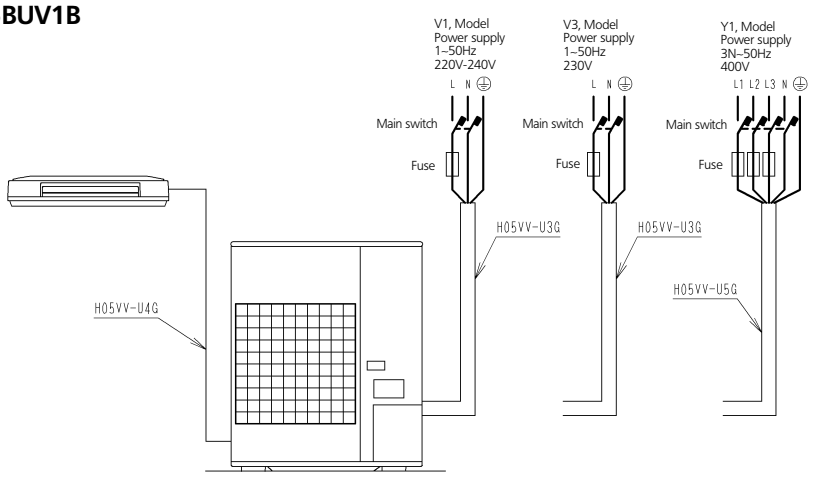
## FUQ71~125BUV1B




**NOTES**

1. ——— Line voltage wiring
   ——— Control circuit wiring
2. All wiring, components and materials to be produced on the site must comply with the applicable local and national codes.
3. Use copper conductors only.
4. See wiring diagrams for details.
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 compilance 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.

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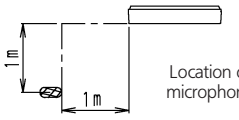
# 6 Sound level

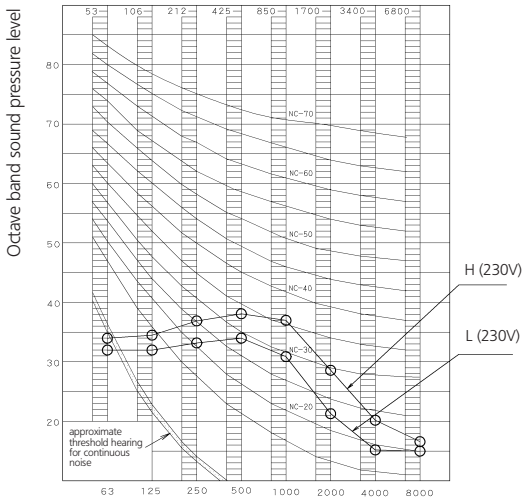
## 6-1 Sound level data



| Model | Sound pressure level 230V 50Hz | | | Sound power level | |
|---|---|---|---|---|---|
| | Cooling (H/L) | Heating (H/L) | Measuring location | Cooling (H/L) | Heating (H/L) |
| FUQ71BUV1B | 40/35 | 40/35 |   Location of microphone | 56/51 | 56/51 |
| FUQ100BUV1B | 43/38 | 43/38 | | 59/54 | 59/54 |
| FUQ125BUV1B | 44/39 | 44/39 | | 60/55 | 60/55 |

## 6-2 Sound pressure spectrum

**FUQ71BUV1B**

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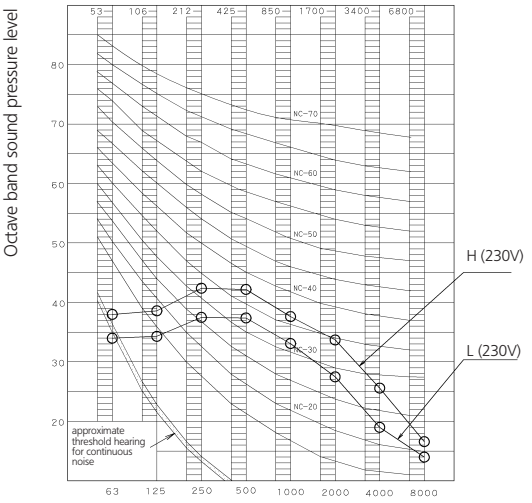
**FUQ100BUV1B**

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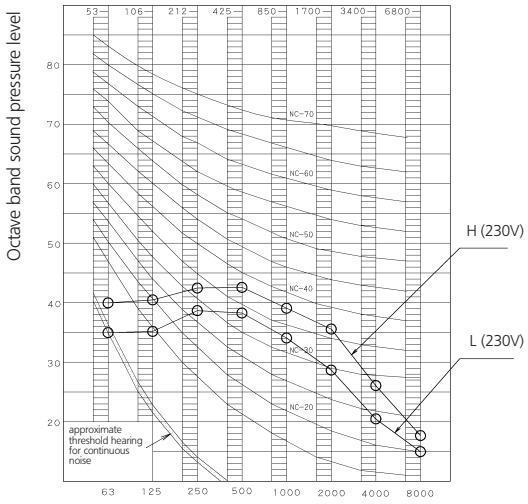
**FUQ125BUV1B**

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**NOTES**

1 Sound pressure levels are measured in an anechoic room.

2 Operation sound levels are valid at nominal operation condition

3 Operation sound level differs with operation and ambient conditions.

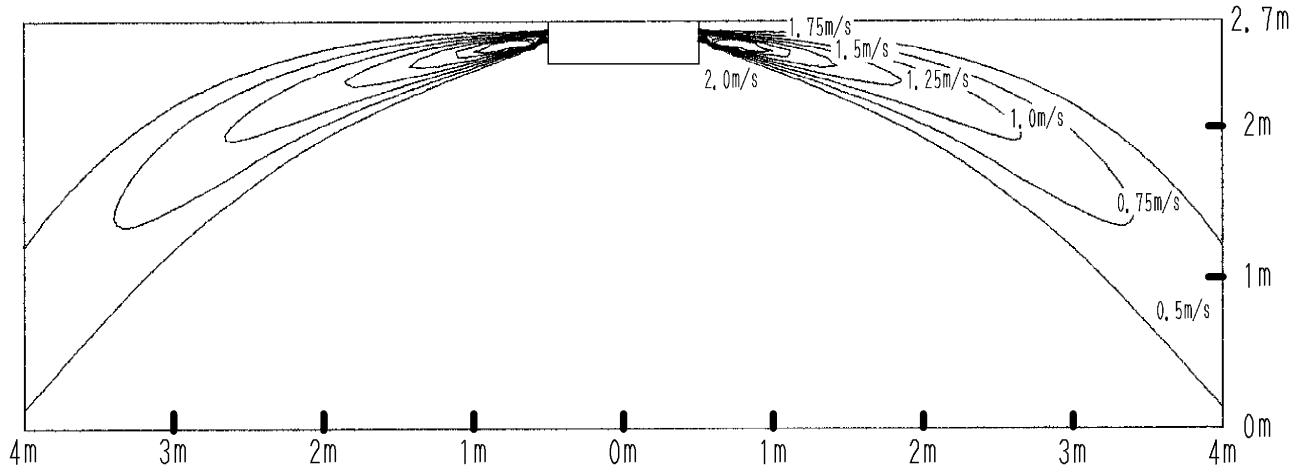
# 7 Air flow patterns



**FUQ71BUV1B**

Cooling - air velocity distribution

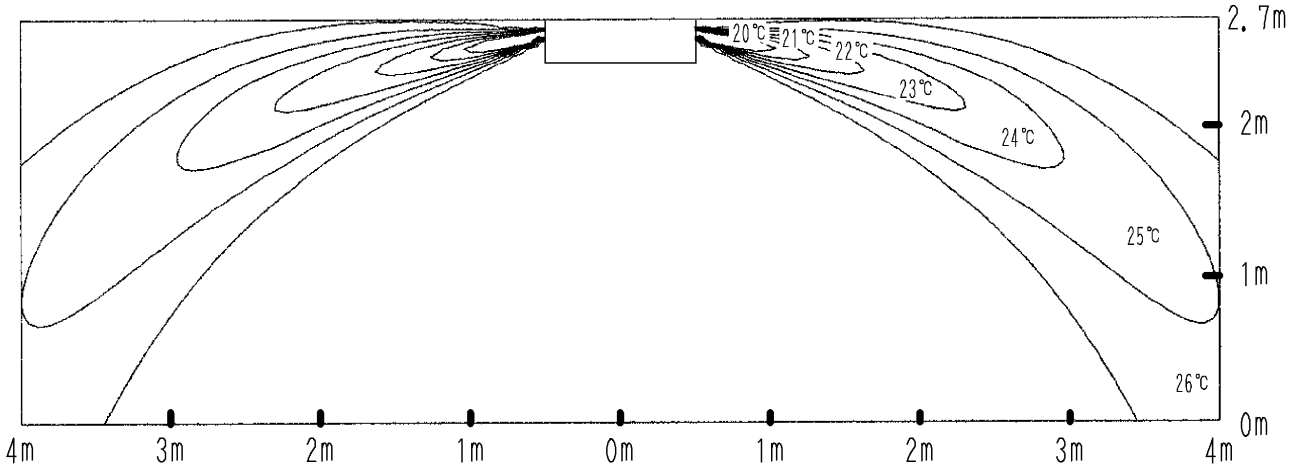
4-way discharge air flow direction: horizontal




**FUQ71BUV1B**

Cooling - air temperature distribution

4-way discharge air flow direction: horizontal

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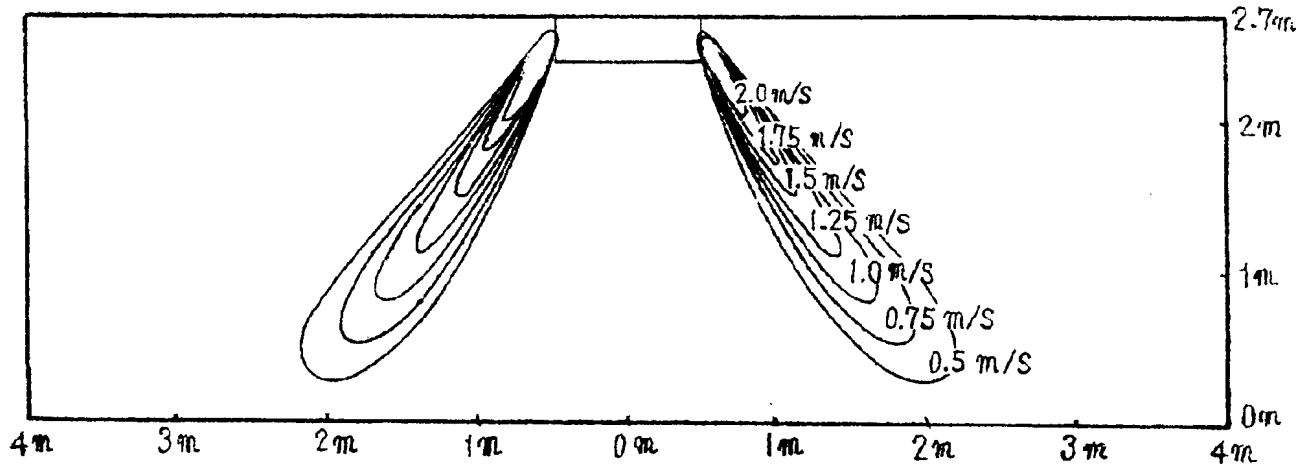
# 7 Air flow patterns

7

**FUQ71BUV1B**

Heating - air velocity distribution

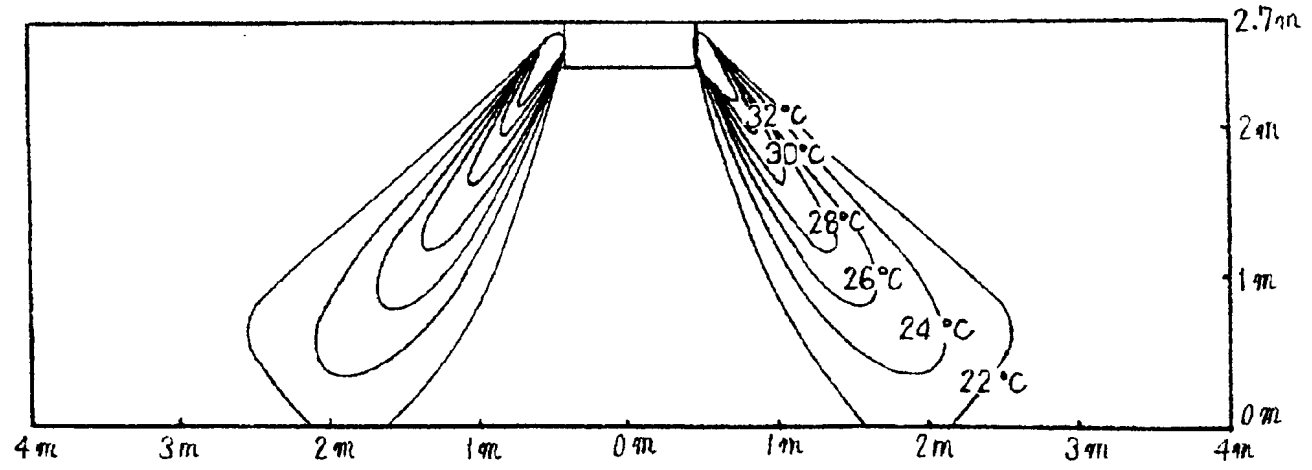
4-way discharge, air flow direction: down




**FUQ71BUV1B**

Heating - air temperature distribution

4-way discharge, air flow direction: down

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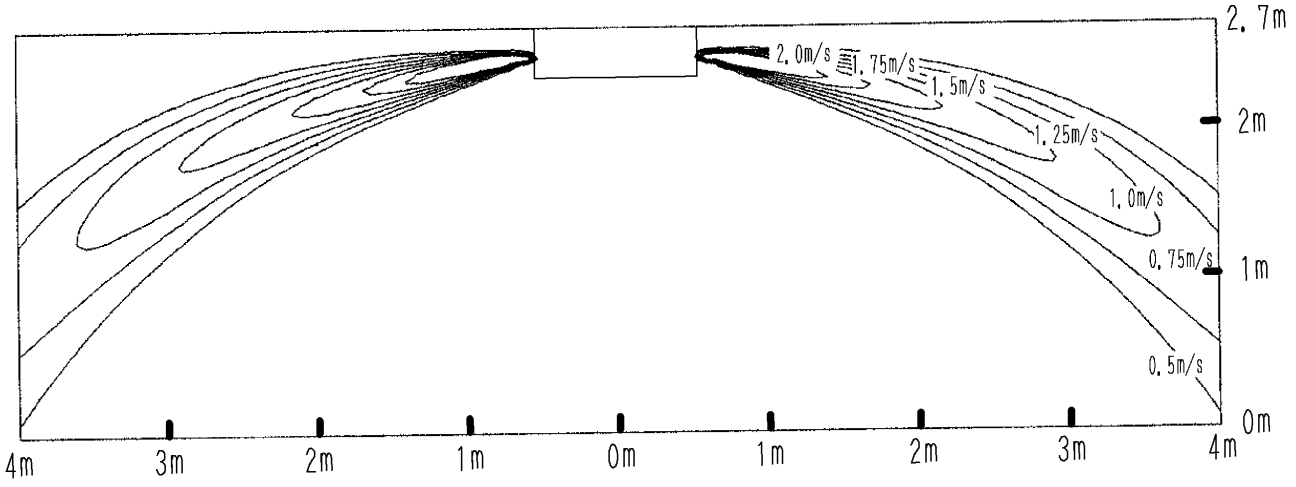
# 7 Air flow patterns



**FUQ100BUV1B**

Cooling - air velocity distribution

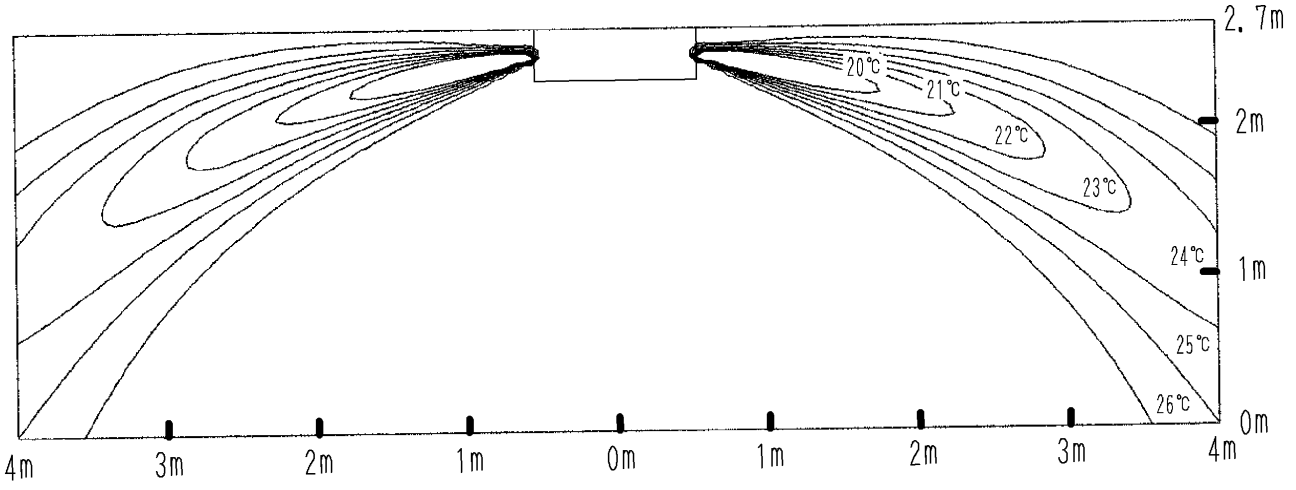
4-way discharge air flow direction: horizontal




**FUQ100BUV1B**

Cooling - air temperature distribution

4-way discharge air flow direction: horizontal

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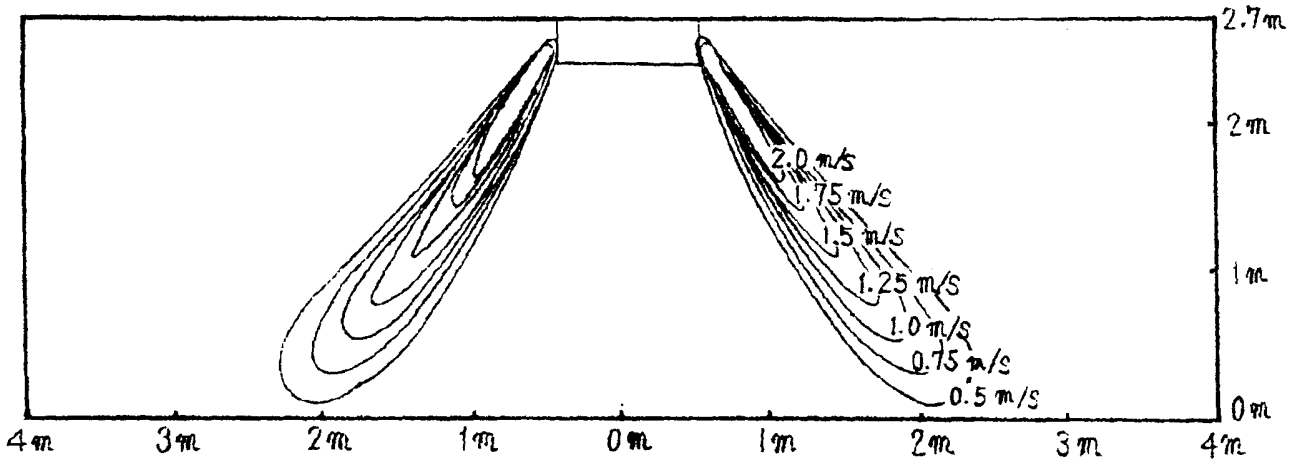
# 7 Air flow patterns

7

**FUQ100BUV1B**

Heating - air velocity distribution

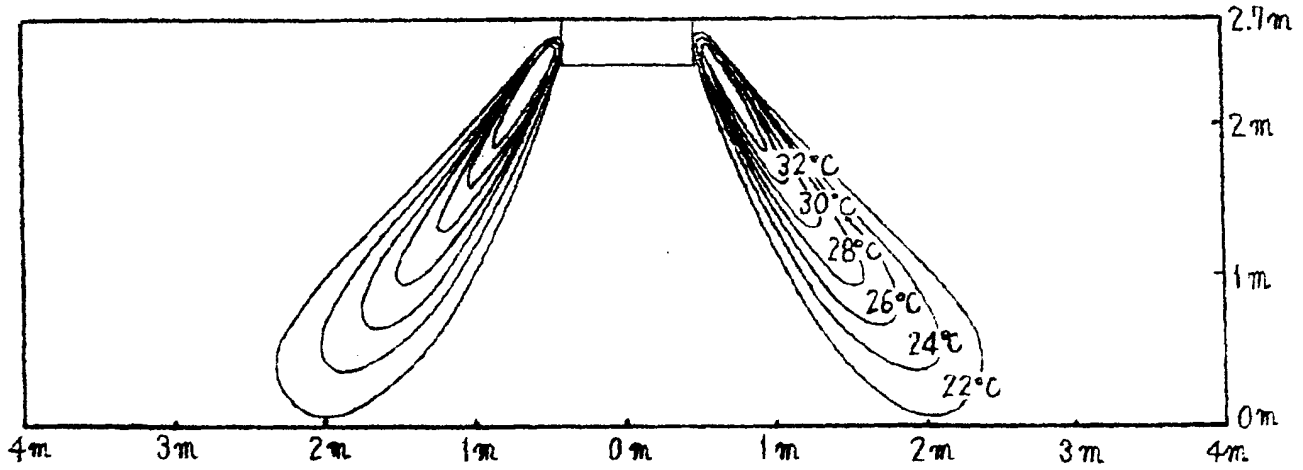
4-way discharge, air flow direction: down




**FUQ100BUV1B**

Heating - air temperature distribution

4-way discharge, air flow direction: down

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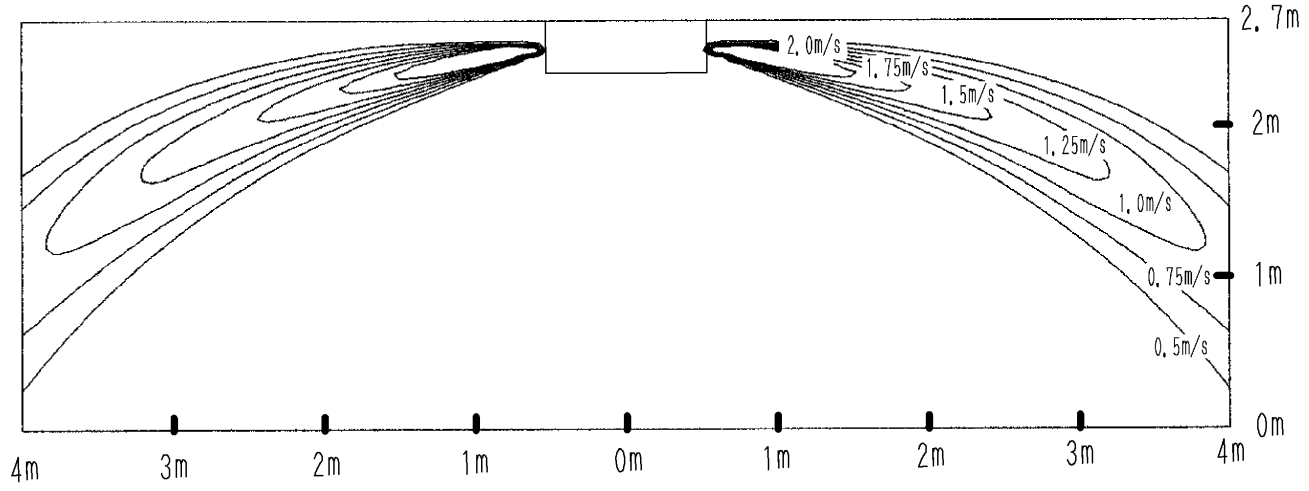
# 7 Air flow patterns



**FUQ125BUV1B**

Cooling - air velocity distribution

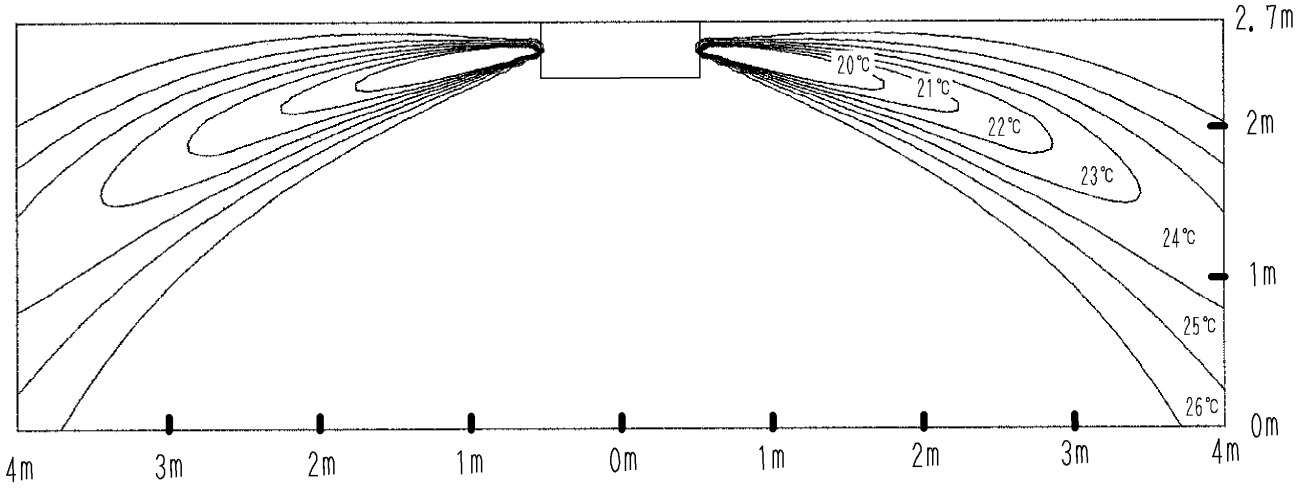
4-way discharge air flow direction: horizontal




**FUQ125BUV1B**

Cooling - air temperature distribution

4-way discharge air flow direction: horizontal

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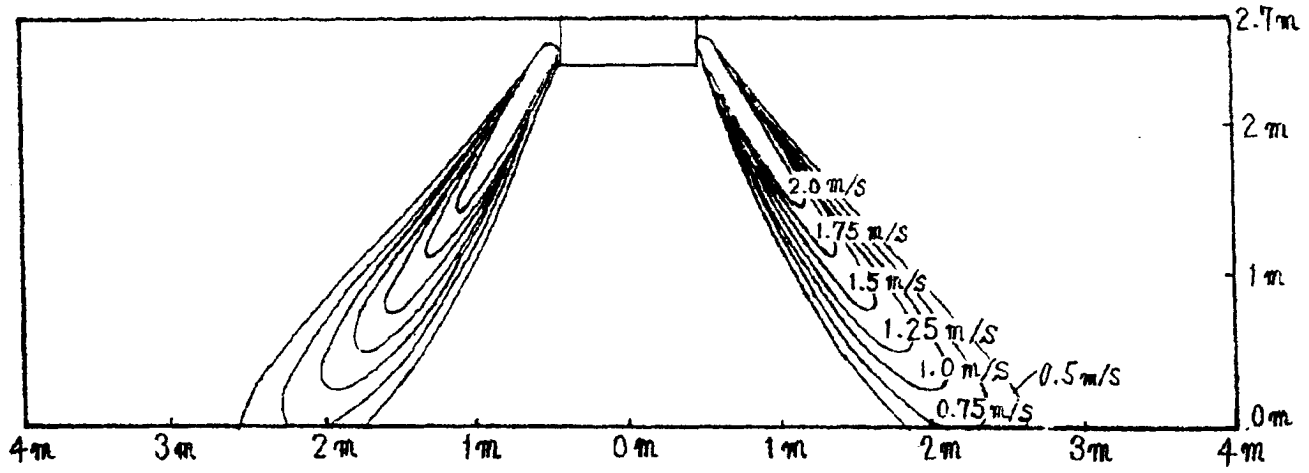
# 7 Air flow patterns

7

**FUQ125BUV1B**

Heating - air velocity distribution

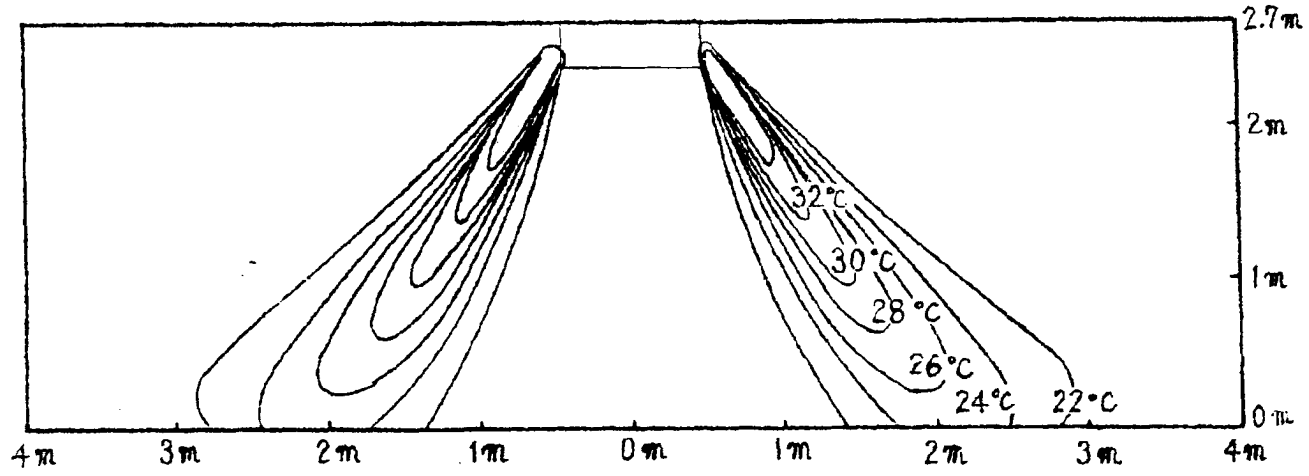
4-way discharge, air flow direction: down




**FUQ125BUV1B**

Heating - air temperature distribution

4-way discharge, air flow direction: down

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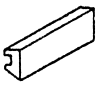
# 8 Accessories

## 8-1 Standard accessories



| Name | ① Drain hose | ② Clamp | ③ Washer for hanging bracket | ④ Clamp |
|---|---|---|---|---|
| Quantity | 1 pc. | 1 pc. | 8 pcs. | 6 pcs. |
| Shape |  |  |  |  |

| Name | ⑤ Washer fixing plate | Insulation for fitting | ⑧ Sealing pad | ⑫ Elbow |
|---|---|---|---|---|
| Quantity | 4 pcs. | 1 of each | 1 pc. | 1 pc. |
| Shape |  |  ⑧ For gas pipe  ⑦ For liquid pipe |  |  |

| Name | ⑩ Paper pattern for installation | ⑪ Blocking pad | ⑫ Retainer for blocking pad | ⑬ Retainer for blocking pad |
|---|---|---|---|---|
| Quantity | 1 pc. | 2 pcs. | 2 pcs. | 2 pcs. |
| Shape | Also used as packing material  |  |  |  |

| Name | ⑭ Center retainer for blocking pad | |
|---|---|---|
| Quantity | 2 pcs. | |
| Shape |  | (Other)<br>● Installation manual<br>● Operation manual |

# 8 Accessories

## 8-2 Optional accessories



| Name of option | | | FUQ-BUV1B | | |
|---|---|---|---|---|---|
| | | | 71 | 100 | 125 |
| Sealing member of air discharge outlet | | | KDBHJ49F80 | KDBHJ49F140 | |
| Decoration panel for air discharge | | | KDBTJ49F80 | KDBTJ49F140 | |
| Vertical flap kit | | | KDGJ49F80 | KDGJ49F140 | |
| Replacement long-life filter | | | KAFJ495F140 | | |
| L connection piping kit | | | KHFP49M140 | | |
| Remote control | Wired type | | BRC1D527 | | |
| | Infrared type | Heat pump | BRC7C528W | | |
| | | Cooling only | BRC7C529W | | |
| Central remote control | | | DCS302C51 | | |
| Unified ON/OFF control | | | DCS301B51 | | |
| Schedule timer | | | DST301B51 | | |
| Wiring adapter for electrical appendices ※1 | | | KRP4A53 | | |
| Interface adapter for Sky Air series | | | DTA112B51 | | |
| Installation box for adapter PCB | | | KRP1B97 | | |
| Remote sensor | | | KRCS01-1 | | |
| Connector for forced on, forced off | | | EKRORO | | |
| Electrical box with earth terminal (3 blocks) | | | KJB311A | | |
| Electrical box with earth terminal (2 blocks) | | | KJB212A | | |

Note *1; installation box for adaptor PCB (KRP1B97) is necessary.

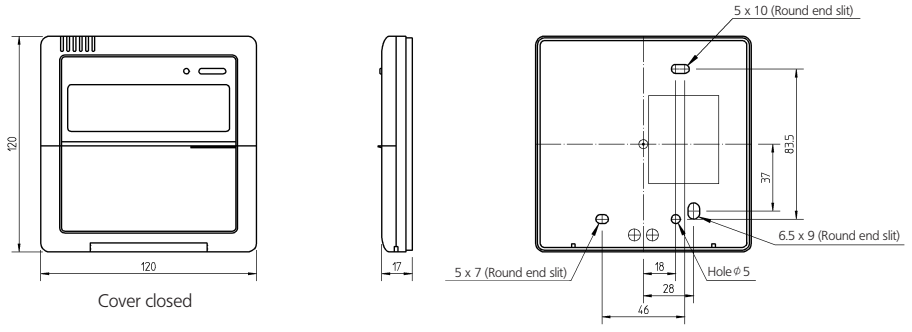
3D044484

# 9 Control systems

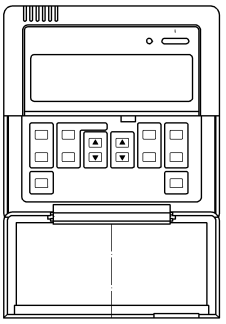
## 9-1 Wired remote control



**BRC1D527**




Cover closed



Cover open

3TW23651-2

# 10 Safety device settings

10 **FUQ71-100-125BUV1B**

| Model | Safety devices | FUQ71BUV1B | FUQ100BUV1B | FUQ125BUV1B |
|---|---|---|---|---|
| FUQ-BUV1B | Fuse | – | – | – |
| | Fan motor thermal fuse (°C) | – | – | – |
| | Fan motor thermal protector (°C) | Off: 130±5 | Off: 130±5 | Off: 130±5 |

4D013856C

# 11 Installation

**Names and functions of parts**

ⓐ Indoor unit
ⓑ Outdoor unit
ⓒ Infrared remote control
ⓓ Inlet air
ⓔ Discharged air
ⓕ Air outlet
ⓖ Air flow flap (at air outlet)
ⓗ Refrigerant piping, connection electric wire
ⓘ Drain pipe
ⓙ Air inlet
The built-in air filter removes dust and dirt.
ⓚ Ground wire
Wire to ground from the outdoor unit to prevent electrical shocks.
Ⓛ Drain pumping out device (built-in)
Drains water removed from the room during cooling