



2015



# FD Series

Inverter Packaged Air Conditioners

Proudly supporting



# FD Series

Inverter Packaged Air Conditioners

## *eco touch REMOTE CONTROL*

change  
setting by  
**button taps**  
only



**Run / Stop**

### High power operation

Maximum capacity operation (Max 15 minutes)

- Increased compressor speed
- Increased air flow

### Energy-saving operation

- Changes set temperature at 28°C in cooling mode and 22°C in heating mode, 25°C in auto mode.
- Operation correction by outdoor temperature

## Main functions

### Energy management

Peak cut timer • Automatic temperature set back • Weekly timer • Set ON/OFF timer by hour  
• Set ON/OFF timer by clock • Fan only operation • Sleep timer

### Comfort

Individual flap control • High power operation • External ventilation ON/OFF  
• Warm up operation • Automatic fan speed • Temperature increment setting by 0.5°C

### Convenience

LCD contrast setting • Back light setting • Filter clean sign • Control sound • Outdoor silent mode • Summer time setting • Home leave mode • Indoor & outdoor temperature display  
• Heating standby display • Defrosting operation display • Auto cooling/heating display  
• °C/°F display • Administrator settings • Room name setting

### Service

Error code display • Operation data display • Next service data display  
• Contact company display • USB connection (mini-B)

### Operation mode



Advanced touch screen panel with full dot **Liquid Crystal Display**

## Basic operation

All settings are changed by **tapping the touch screen panel**

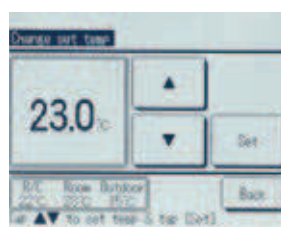
### Operation mode setting screen



The operation mode can be selected by simply tapping this button.



### Temperature setting screen



You can select the desired temperature by tapping the ▲▼ button.

# IntesisHome<sup>®</sup>

Your home in the cloud



**NEW**

## Intesis Wifi Adaptors



RAC Model: IS-IR-WIFI-1



PAC Model: MH-RC-WIFI-1



# FD Series

## Hyperinverter

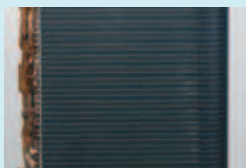
**HyperInverter**

Our advanced technology has allowed us to achieve high efficiency, powerful heating and long distance refrigerant piping specifications. This feature permits installation of the units when a heating in operation under temperature conditions down to -20°C is required. Design flexibility has been improved by an extension of the refrigerant piping length to 100m (12.5 & 14.0kW).



### Blue Fin 7.1-20.0kW

Due to application of blue coated fins (KS101) for the heat exchanger of the new outdoor unit, corrosion resistance has been improved compared to previous models.



### Base heater kit (option)

This kit is recommended for use in areas where the temperature drops below 0°C.

CW-H-E applied for  
FDCA100VN  
FDCA125~140VNX



### Installation workability

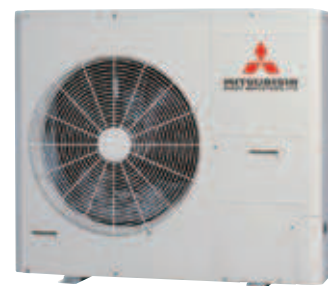
Enhanced installation workability thanks to the extended pipe length – one of the longest levels in the industry. Units are pre-charged with refrigerant.

### Micro Inverter

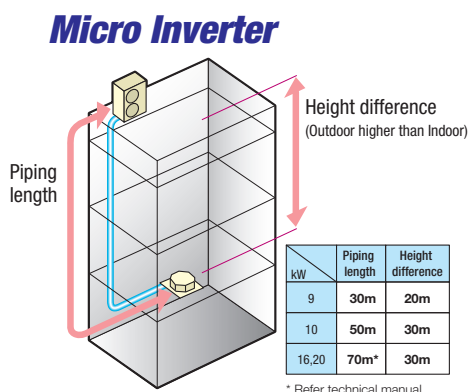
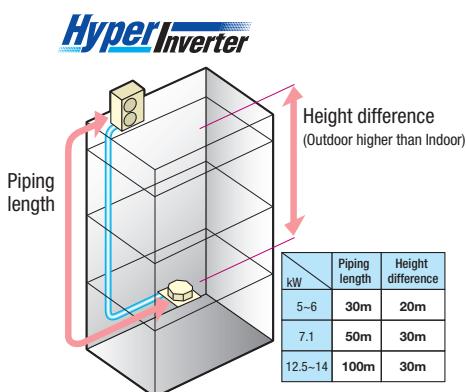
#### Compact design of outdoor units

FDCA100VN

Our single fan micro 10.0kW condenser is one of the most compact in the industry only 845(h)x970(w)x370(d)



### Long piping 12.5 & 14.0kW



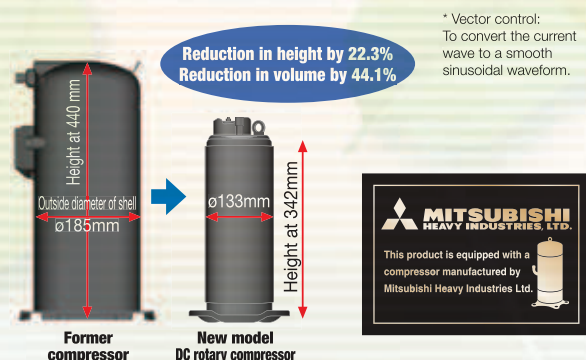
### Refrigerant precharged piping length extending to 30m

Precharged refrigerant piping length extends up to 30m. (5.0 & 6.0kW up to 15m)

This eliminates the need to add refrigerant on site, which sets it free from the trouble of excessive or insufficient charging of refrigerant, and allows smooth installation.

## Size reduction and high efficiency performance of the DC twin rotary compressor

The DC twin rotary compressor can operate at speeds as high as 120 rps. Vector control provides perfect compressor control. Starting current has reduced significantly and vibration has been minimized.

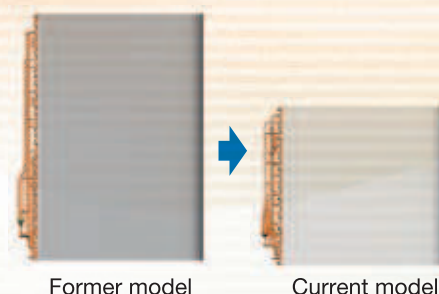


## Improved efficiency of the heat exchanger

Re-designing the fins to a straight shape has reduced the pressure loss of the air flow in the heat exchanger. A new surface treatment on the fins has enhanced the frost resistance capacity. A high speed fan motor has increased the airflow which allows cooling capacity to be maintained even at high outdoor air temperatures.

## Protection

Improved operation of the electronic expansion valve allows for more reliable oil return and this assists to protect the compressor.



## High efficiency

### Reduction of air flow pressure loss

Pressure caused by air flow in the indoor unit is reduced by making the air outlet larger. The reduction of pressure reduces the load on the fan motor so increasing efficiency.

### Increase of heat transfer efficiency

Heat transfer efficiency has improved by using high efficiency piping and by the redesign of the heat exchanger from 2 to 1 piece.

## Convenience

### CnT terminal

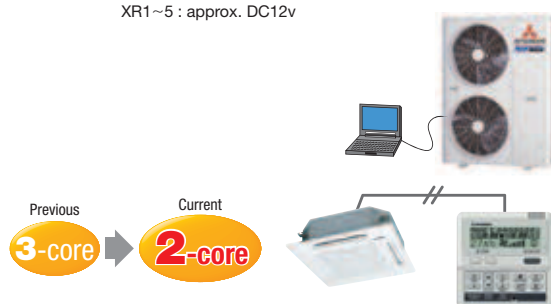
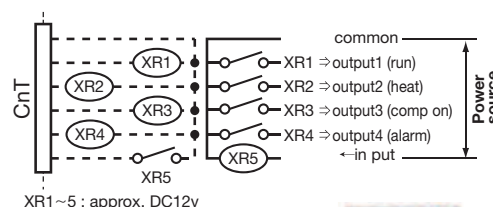
A dry contact is fitted to each indoor unit which is used when a signal output is required.

### Monitoring Function

Condensers are fitted with RS232C so you can connect directly to your PC for monitoring. MHI's service software (Mente PC) makes service simpler. PAC converter necessary required to connect to PC directly

### Remote control RC-E5

The new remote control for all indoor units. Non-polar 2 core wiring is used. Installation is easier.



## All models employ R410A with RoHS\* directive

### Employment of lead free solder

#### Adapt to RoHS

Pressure caused by air flow in the indoor unit is reduced by making the air outlet larger. The reduction of pressure reduces the load on the fan motor so efficiency increases.

\*\*"RoHS" is the abbreviation of the European standard, which means Restriction of Hazardous Substances.

### Employment of R410A refrigerant

All models of the FD inverter series use refrigerant R410A characterized by an ozone depletion coefficient of 0.

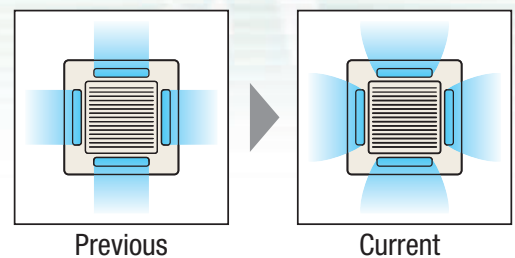
# FDT-FDTC

## Ceiling Cassette - 4way - Indoor units

### Individual flap control system

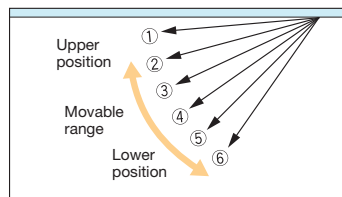
Individual flap control is possible even after installation. This means that the installation area has become wider than before.

The outlet design has been perfected to allow flow that can reach a long distance from the indoor unit.

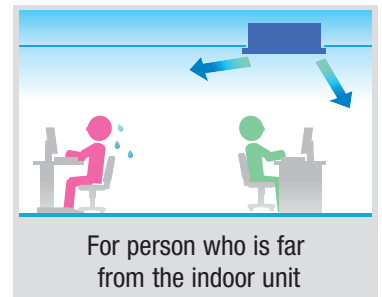


### Flap control system

The design of the heat exchanger has changed from 2 parts to a single piece. The height of the indoor unit has been reduced significantly.

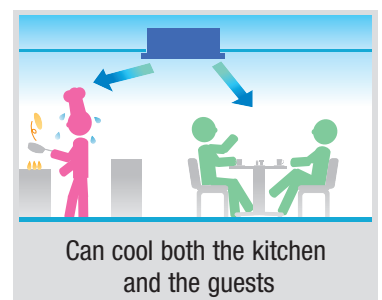
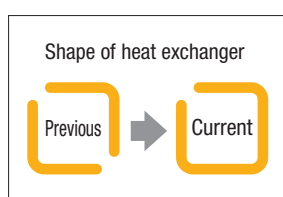
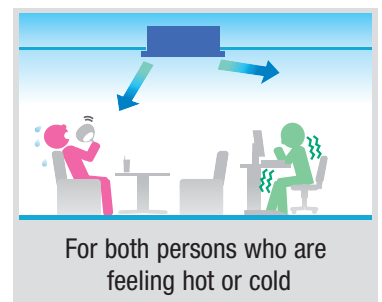
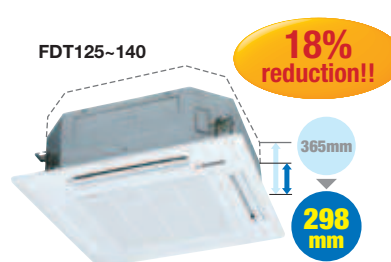


\*RCH-E3 is not applicable to the Individual flap control system and the Flap control system.



### The thinnest design

DC fan motors are used to increase efficiency. Weight has been reduced and as a result the unit has become one of the most compact in the industry.





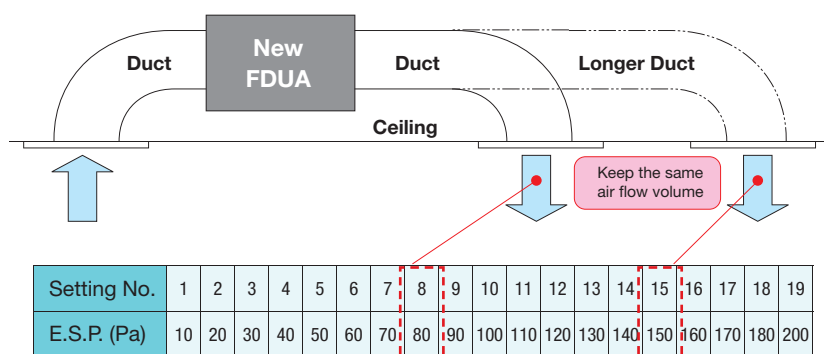
# FDDA Indoor Unit

Duct Connected - High Static Pressure



## External static pressure (E.S.P.) control

Selecting the external static pressure setting the optimum air flow volume can be achieved. The indoor unit will recognize the external static pressure setting and keep rated air volume.

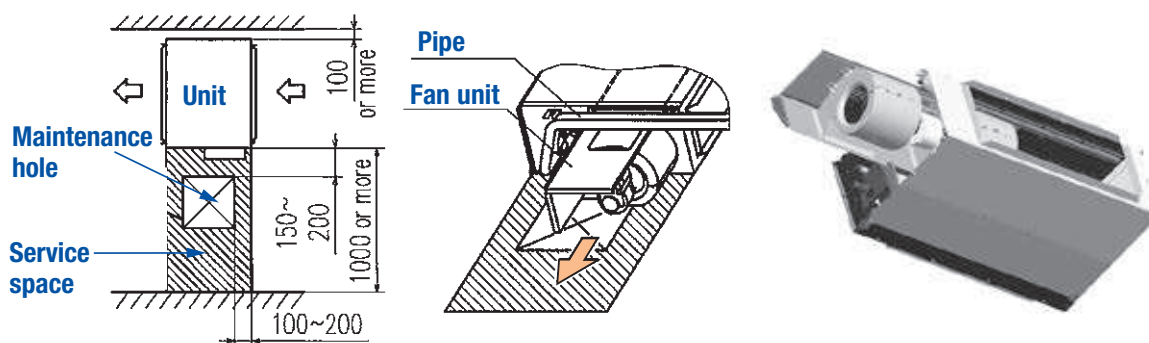


**E.S.P. button**

External static pressure can be set by E.S.P. button.

## Improved servicing

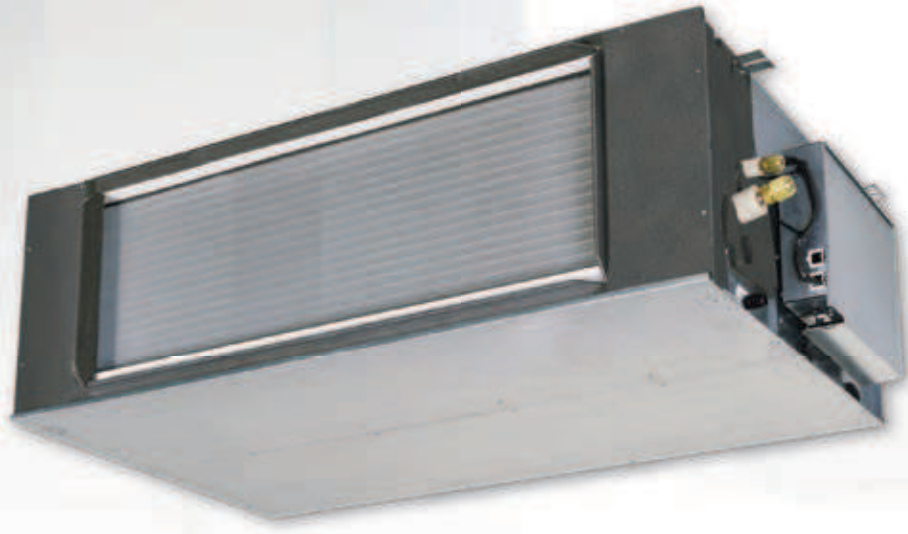
Fan unit (impeller and motor) can be pulled out from the right side of the unit. Maintenance access is available from both the right side and below the unit.



# FDA Indoor Unit

## Duct Connected - High Static Pressure

MODELS: FDA71VF, FDA100VF, FDA125VF, FDA140VF



Remote control (Options)

Wired



RC-EX1A



RC-E5



RCH-E3

Wireless



RCN-KIT3-E



DRED enabled model



## Dimension

H 398



FDA100/125/140/160VF

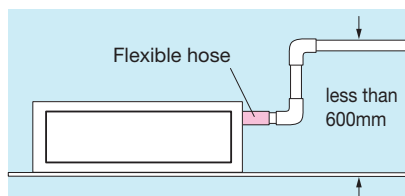
H 280



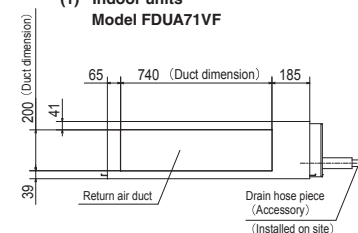
FDA71VF

## 600mm Drain Pump

Drain can be discharged upwards by 600mm from the ceiling surface. It allows a piping layout with a high degree of freedom depending on the installation location.

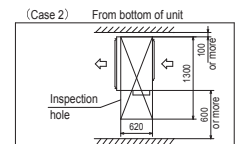
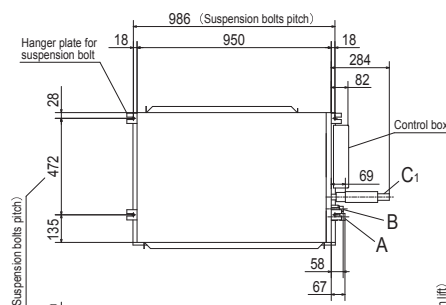


(1) Indoor units  
Model FDA71VF

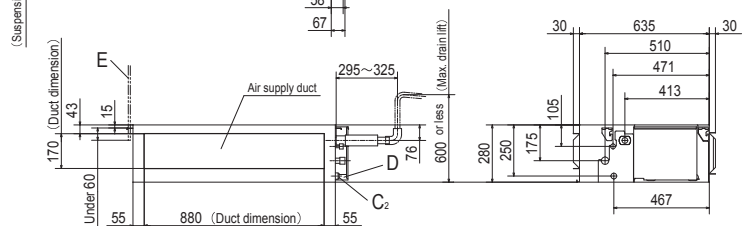


Unit:mm

Symbol	Content
A	Gas piping $\phi 15.88$ (5/8") (Flare)
B	Liquid piping $\phi 9.52$ (3/8") (Flare)
C1	Drain piping VP25 (I.D.25,O.D.32)
C2	Drain piping (Gravity drainage) VP20 (I.D.20,O.D.26)
D	Hole for wiring
E	Suspension bolts (M10)
F	Inspection hole (450X450)



Note (1) The model name label is attached on the lid of the control box.

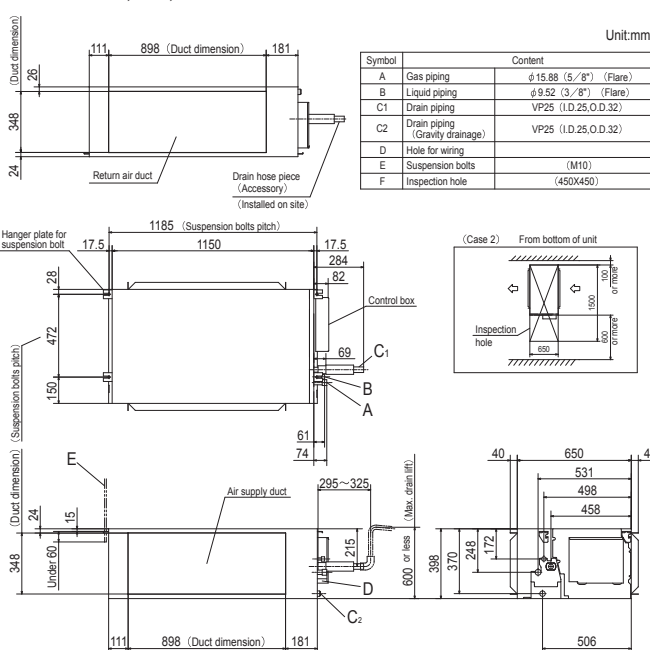




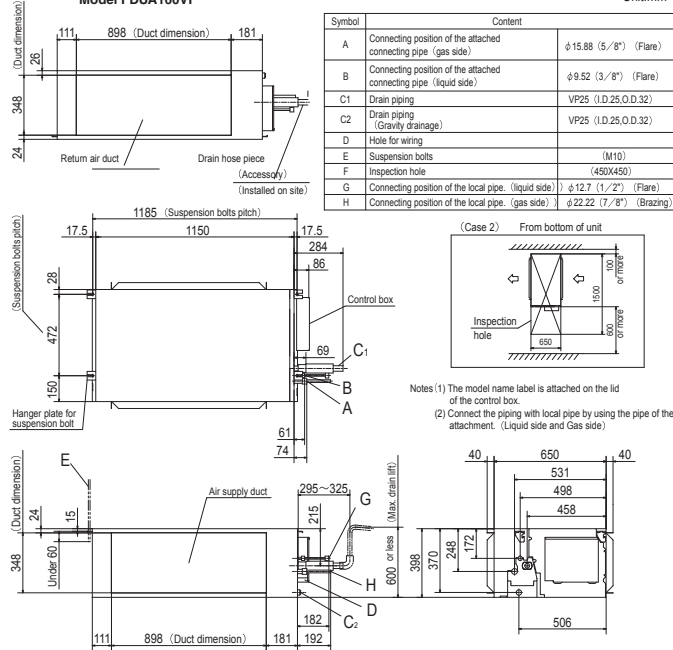
# FDUA

Set			FDUA71AVNXVF	FDUA100AVNVF	FDUA100AVNXVF	FDUA125AVNXVF	FDUA140AVNXVF
Indoor			FDUA71VF	FDUA100VF	FDUA100VF	FDUA125VF	FDUA140VF
Outdoor			FDCA71VNX	FDCA100VN	FDCA100VNX	FDCA125VNX	FDCA140VNX
Power supply	Outdoor Unit		1 Phase 220-240V 50Hz				
Capacity	Cooling T1	kW	7.1 (3.2-8.0)	10.0 (4.0-11.2)	10.0 (4.0-11.2)	12.5 (5.0-14.0)	14.0 (5.0-14.5)
	Heating H1		8.0 (3.6-9.0)	11.2 (4.0-12.5)	11.2 (4.0-12.5)	14.0 (4.0-17.0)	16.0 (4.0-18.0)
Input	Cooling T1	kW	2.22	3.05	2.85	3.83	4.44
	Heating H1		2.22	2.87	2.74	3.68	4.41
EER	Cooling T1		3.20	3.28	3.51	3.26	3.15
COP	Heating H1		3.60	3.90	4.09	3.80	3.63
Sound pressure level (JIS C9612)	Indoor	dB(A)	P-Hi:38 Hi:33 Me:29 Lo:25	P-Hi:43 Hi:42 Me:40 Lo:37	P-Hi:43 Hi:42 Me:40 Lo:37	P-Hi:45 Hi:43 Me:41 Lo:37	P-Hi:47 Hi:46 Me:43 Lo:40
	Outdoor		51	49	48	48	49
Sound power level (JIS C9612)	Outdoor		66	70			72
Airflow	Indoor	l/s	P-Hi: 400 Hi: 317 Me: 250 Lo: 167	P-Hi:650 Hi:600 Me:550 Lo:483		P-Hi:717 Hi:650 Me:600 Lo:500	P-Hi:850 Hi:800 Me:700 Lo:600
External static pressure		Pa	200				
External dimensions (H×W×D)	Indoor	mm	280x950x635	398x1150x650			
	Outdoor		750x880(+88)x340	845x970x370	1300x970x370		
Net weight	Indoor	kg	34	52			
	Outdoor		60	81	105		
Refrigerant piping	Liquid line	mm	Ø9.52				
	Gas line		Ø15.88				
	Connection method		Flare Connection				
Refrigerant R410A	Quantity	kg	2.95	3.8	4.5		
	Pre charged to pipe length	m	30				
Maximum pipe length		m	50		100		
Supply air connection		mm	170x880	348x898			
Return air connection		mm	200x740				
Controller			RC-E5, RC-EX1A or RCN-KIT3-E				
Safety pan			UA-SP1-E (Optional)	UA-SP2-E (Optional)			

Models FDUA100VF, 125VF, 140VF



Model FDUA160VF



Outline drawing (Unit:mm)

# FDUA Indoor Unit

## Duct Connected - High Static Pressure

MODELS: FDUA140VF, FDUA160VF

MODEL: FDUA200VG



Remote control (Options)

Wired



RC-EX1A



RC-E5



RCH-E3

Wireless



RCN-KIT3-E



DRED enabled model

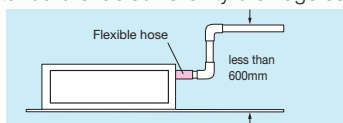


Compact design

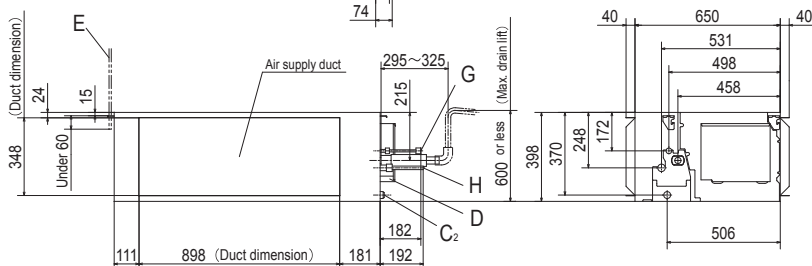
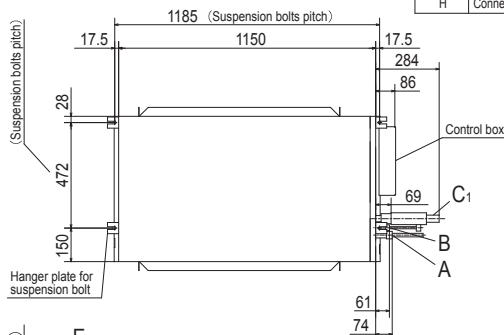
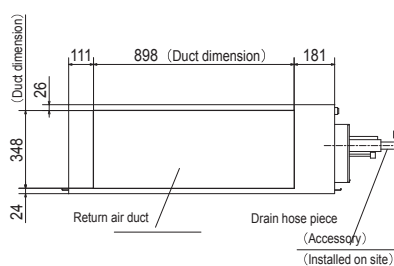


Drain pump standard enabled. Gravity drainage selectable.

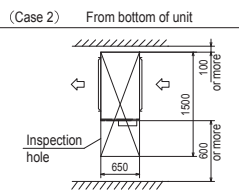
600mm  
drain  
pump



Model FDUA160VF



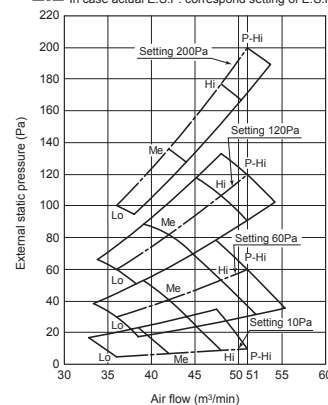
Symbol	Content
A	Connecting position of the attached connecting pipe (gas side) $\phi 15.88$ (5/8") (Flare)
B	Connecting position of the attached connecting pipe (liquid side) $\phi 9.52$ (3/8") (Flare)
C1	Drain piping VP25 (I.D.25.0.D.32)
C2	Drain piping (Gravity drainage) VP25 (I.D.25.0.D.32)
D	Hole for wiring
E	Suspension bolts (M10)
F	Inspection hole (450X450)
G	Connecting position of the local pipe. (liquid side) $\phi 12.7$ (1/2") (Flare)
H	Connecting position of the local pipe. (gas side) $\phi 22.22$ (7/8") (Brazing)



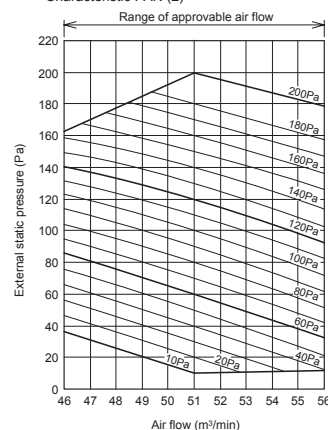
Notes (1) The model name label is attached on the lid of the control box.  
(2) Connect the piping with local pipe by using the pipe of the attachment. (Liquid side and Gas side)

SW8-4 : ON (Range of use limitation : Setting 10Pa-200Pa)  
Characteristic FAN (1)

--- In case actual E.S.P. correspond setting of E.S.P.



Characteristic FAN (2)

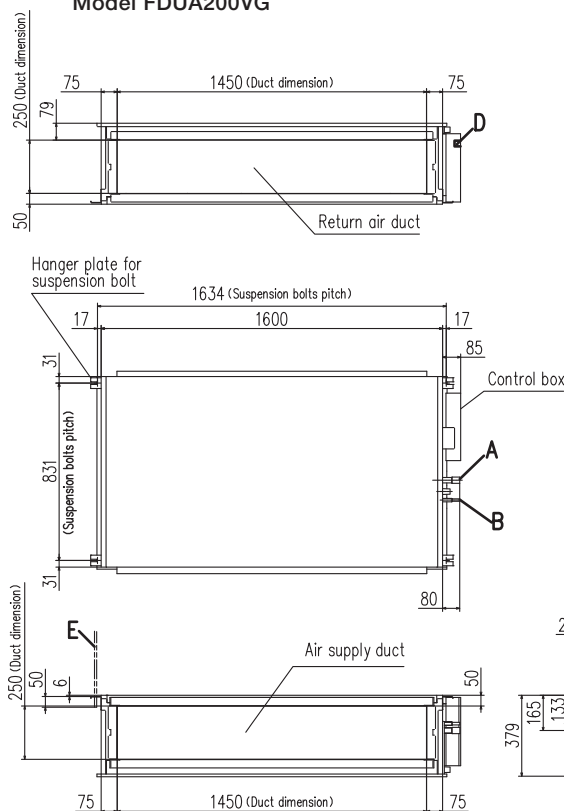


# FDUA

Set			FDUA140AVSXVF	FDUA160AVSAVF	FDUA200AVSAVG
Indoor			FDUA140VF	FDUA160VF	FDUA200VG
Outdoor			FDCA140VSX	FDCA160VSA	FDCA200VSA
Power supply	Outdoor Unit		3 Phase 415V 50Hz		
Capacity	Cooling T1	kW	14.0 (5.0-14.5)	16.0 (6.9-20.0)	20.0 (6.9-28.0)
	Heating H1		16.0 (4.0-18.0)	18.0 (5.5-22.4)	22.4(5.5-31.5)
Input	Cooling T1	kW	4.44	4.83	6.03
	Heating H1		4.44	4.66	5.5
EER	Cooling T1		3.15	3.31	3.32
COP	Heating H1		3.6	3.86	4.07
Sound pressure level (JIS C9612)	Indoor	dB(A)	P-Hi:47 Hi:46 Me:43 Lo:40	P-Hi:49 Hi:48 Me:45 Lo:42	P-Hi:52 Hi:50 Me:47 Lo:45
	Outdoor		49	59	59
Sound power level (JIS C9612)	Outdoor		70	73	
Airflow	Indoor	l/s	P-Hi:850 Hi:800 Me:700 Lo:600	P-Hi:850 Hi:800 Me:700 Lo:600	P-Hi:1333 Hi:1200 Me:1067 Lo:933
External static pressure		Pa	200		
External dimensions (HxWxD)	Indoor	mm	398x1150x650		379x1600x893
	Outdoor		1300x970x370	1505x970x370	
Net weight	Indoor	kg	52		89
	Outdoor		105	143	
Refrigerant piping	Liquid line	mm	Ø9.52	Ø12.7*	
	Gas line		Ø15.88	Ø22.22 , Ø25.4 or Ø28.58*	
	Connection method		Flare Connection	Liquid: Flare / Gas: Brazing*	
Refrigerant R410A	Quantity	kg	4.5	7.2	
	Pre charged to pipe length	m	30		
Maximum pipe length		m	100	70*	
Supply air connection		mm	348x898		250x1450
Return air connection		mm			
Controller			RC-E5, RC-EX1A or RCN-KIT3-E		
Safety pan			UA-SP2-E (Optional)		

\*Refer to technical manual

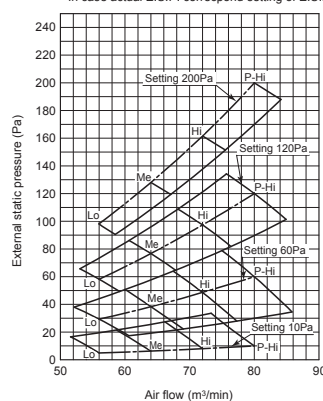
## Model FDUA200VG



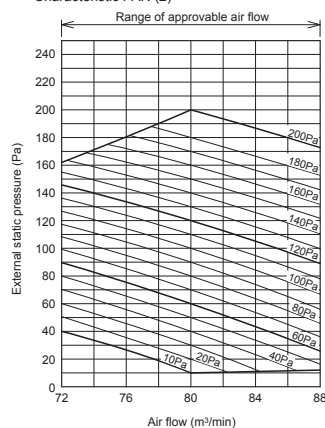
■SWS-4 : ON (Range of use limitation : Setting 10Pa-200Pa)

Characteristic FAN (1)

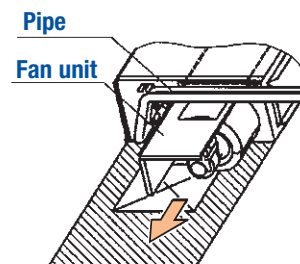
--- In case actual E.S.P. correspond setting of E.S.P.



Characteristic FAN (2)



The fan unit (impeller and motor) can be easily accessed and pulled out from the right side of the unit. Maintenance is accessible from both the right side and underneath the unit





# FDUM Indoor Unit

## Duct Connected - Medium Static Pressure

MODELS: FDUM50VF, FDUM60VF, FDUM71VF1, FDUM90VNPVF1, FDUM100VF1, FDUM125VF, FDUM140VF



Remote control (Options)

Wired



RC-EX1A



RC-E5



RCH-E3

Wireless



RCN-KIT3-E

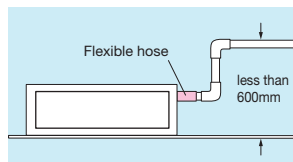


DRED enabled model



### 600mm Drain Pump

Drain can be discharged upwards by 600mm from the ceiling surface. It allows a piping layout with a high degree of freedom depending on the installation location.



### Thin design

The height of all FDUM models is only 280mm.

70mm less

H 350  
H 280



FDUM100/125/140VF

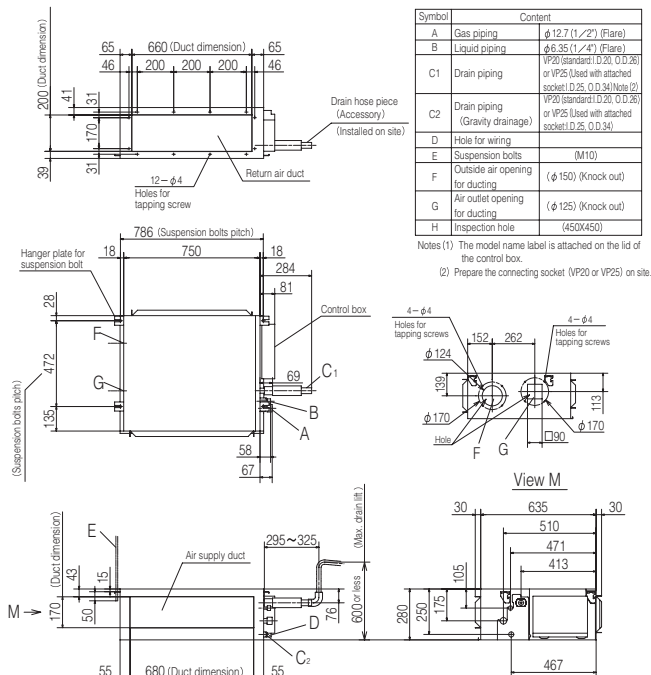
19mm less

H 299  
H 280

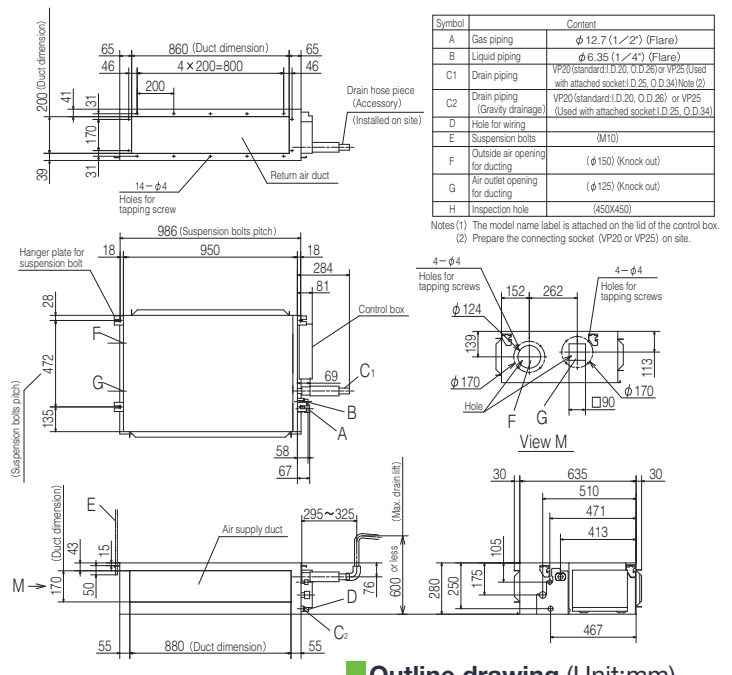


FDUM50/60/71VF

#### FDUM50VF



#### FDUM60VF

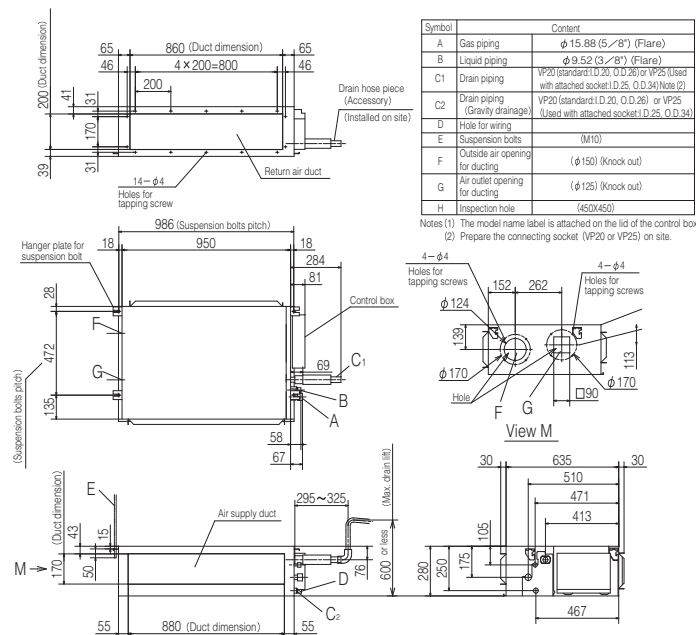


■ Outline drawing (Unit:mm)

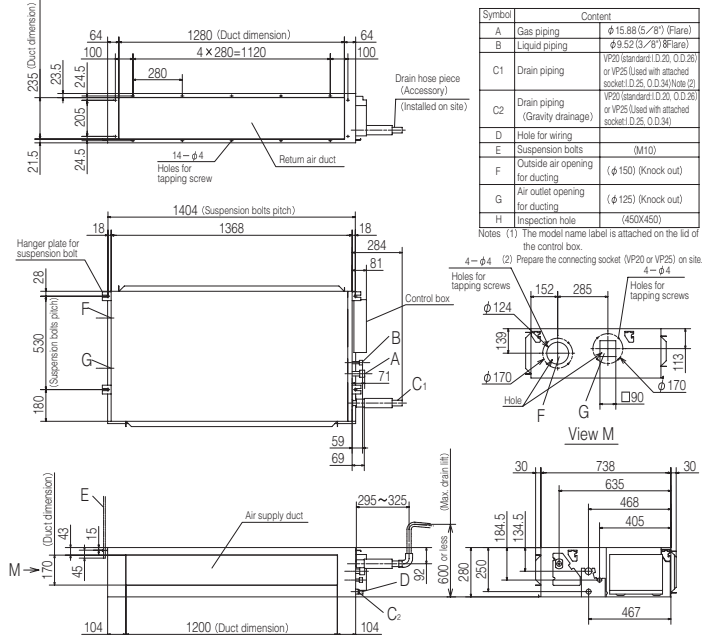
# FDUM

Set			FDUM50ZMXAVF	FDUM60ZMXAVF	FDUM71AVNXVF1	FDUM90VNPVF1	FDUM100AVNVF1	FDUM125AVNXVF	FDUM140AVNXVF	FDUM140AVSXVF
Indoor			FDUM50VF	FDUM60VF	FDUM71VF1	FDUM100VF1	FDUM100VF1	FDUM125VF	FDUM140VF	FDUM140VF
Outdoor			SRC50ZMXA-S	SRC60ZMXA-S	FDCA71VNX	FDC90VNP	FDCA100VN	FDCA125VNX	FDCA140VNX	FDCA140VSX
Power supply	Outdoor Unit		1 Phase 220-240V 50Hz							3 Phase 415V 50Hz
Capacity	Cooling T1	kW	5.0 (2.2-5.6)	5.6 (2.8-6.3)	7.1 (3.2-8.0)	9.0 (1.9-9.0)	10.0 (4.0-11.2)	12.5 (5.0-14.0)	14.0 (5.0-14.5)	14.0 (5.0-14.5)
	Heating H1		5.4 (0.6-6.3)	6.7 (0.6-7.1)	8.0 (3.6-9.0)	9.0 (1.9-9.0)	11.2 (4.0-12.5)	14.0 (4.0-17.0)	16.0 (4.0-18.0)	16.0 (4.0-16.5)
	Heating H2		4.3	4.9	7.0	N/A	11.4	13.7	14.3	N/A
Input	Cooling T1	kW	1.56	1.75	2.20	2.65	2.92	3.60	4.40	4.40
	Heating H1		1.70	2.00	2.20	2.25	3.20	3.90	4.54	4.54
EER	Cooling T1		3.21	3.20	3.23	3.40	3.42	3.47	3.18	3.18
COP	Heating H1		3.18	3.35	3.64	4.00	3.50	3.59	3.52	3.52
Sound pressure level (JIS C9612)	Indoor	dB(A)	P-Hi:37 Hi:32 Me:29 Lo:26	P-Hi:36 Hi:31 Me:28 Lo:25	P-Hi:38 Hi:33 Me:29 Lo:25	P-Hi:44 Hi:38 Me:36 Lo:30	P-Hi:44 Hi:38 Me:36 Lo:30	P-Hi:45 Hi:40 Me:34 Lo:29	P-Hi:47 Hi:40 Me:35 Lo:30	P-Hi:47 Hi:40 Me:35 Lo:30
	Outdoor		50	54	51	55	49	50	49	49
Sound power level (JIS C9612)	Outdoor		63	64	66	69	70		72	70
Airflow	Indoor	l/s	P-Hi: 217 Hi: 167 Me: 150 Lo: 133	P-Hi:333 Hi:250 Me:217 Lo:167	P-Hi: 400 Hi: 316 Me: 250 Lo: 166	P-Hi: 600 Hi: 467 Me: 417 Lo: 317	P-Hi: 600 Hi: 467 Me: 417 Lo: 317	P-Hi:650 Hi:533 Me:433 Lo:333	P-Hi:800 Hi:583 Me:467 Lo:367	P-Hi:800 Hi:583 Me:467 Lo:367
External static pressure		Pa	100							
External dimensions (H×W×D)	Indoor	mm	280x750x635		280x950x635		280x1370x740			
	Outdoor		640x800(+71)x290		750x880(+88)x340		845x970x370		1300x970x370	
Net weight	Indoor	kg	29	34	34	54				
	Outdoor		45		60	57	81	105		
Refrigerant piping	Liquid line	mm	Ø6.35		Ø9.52	Ø9.52/Ø6.35/Ø6.35		Ø9.52		
	Gas line		Ø12.7		Ø15.88					
	Connection method		Flare Connection							
Refrigerant R410A	Quantity	kg	1.5		2.95	2.1	3.8	4.5		
	Pre charged to pipe length	m	15		30	15	30			
Maximum pipe length		m	30		50	30	50	100		
Supply air connection		mm	170x680				170x1200			
Return air connection		mm	200x660				235x1280			
Controller	2 wire or infrared		RC-E5, RC-EX1A or RCN-KIT3-E							

## FDUM71VF



## FDUM100VF, 125VF, 140VF



# FDTC - Indoor Unit

## Ceiling Cassette-4way Compact 600x600mm

MODELS: FDTC50VF



### Remote control (Options)

#### Wired



RC-EX1A



RC-E5



RCH-E3

#### Wireless

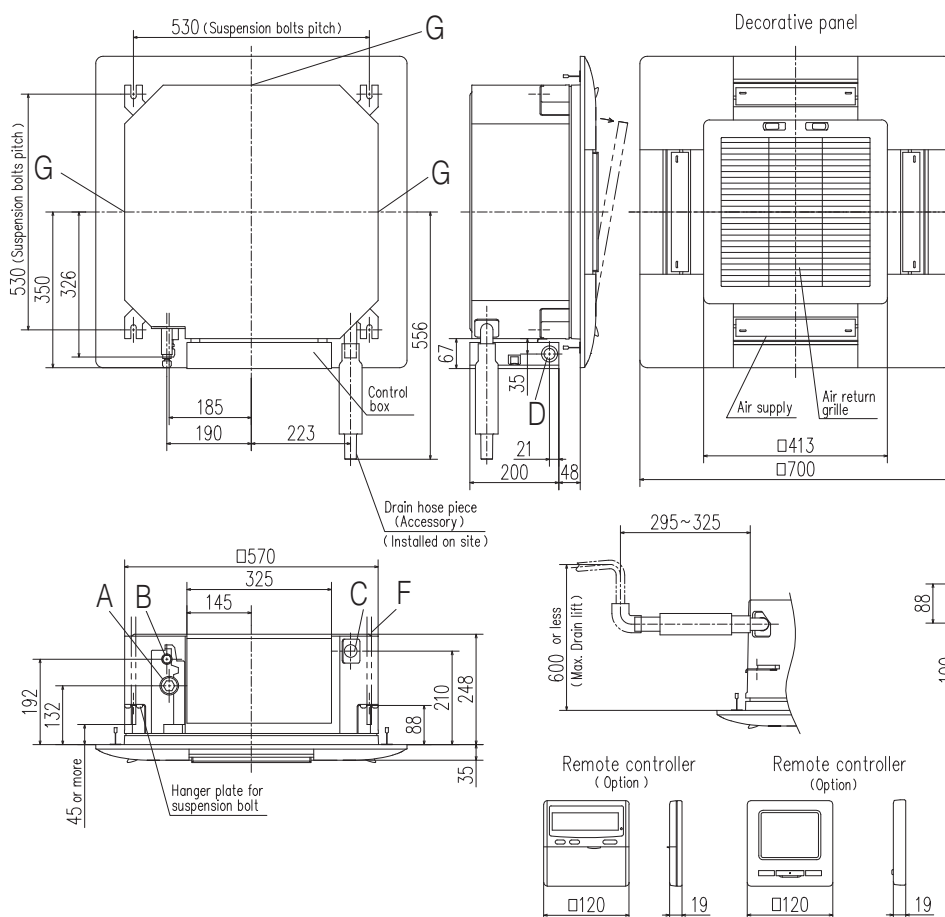


RCN-E1R

### DRED enabled model



### Outline drawing (Unit:mm)



Symbol	Content
A	Gas piping
B	Liquid piping
C	Drain piping
D	Hole for wiring
F	Suspension bolts
G	Air outlet opening for ducting

Model 25,35 : φ9.52 (3/8") (Flare)

40~60 : φ12.7 (1/2") (Flare)

Model 6.35 (1/4") (Flare)

VP20 (I.D.20, O.D.26) Note (2)

φ25

(M10 or M8)

(Knock out)

- Notes (1) The model name label is attached on the control box lid.  
 (2) Prepare the connecting socket (VP20) on site.  
 (3) This unit is designed for 2x2 grid ceiling.  
 If it is installed on a ceiling other than 2x2 grid ceiling, provide an inspection port on the control box side.



# FDTC

Set			FDTC50ZMXAVF
Indoor			FDTC50VF
Outdoor			SRC50ZMXA-S
Power supply	Outdoor Unit		1 Phase 220-240V 50Hz
Capacity	Cooling T1	kW	5.0(1.1-5.6)
	Heating H1		5.4 (0.6-6.3)
	Heating H2		5.10
Input	Cooling T1	kW	1.56
	Heating H1		1.45
EER	Cooling T1		3.20
COP	Heating H1		3.72
Sound pressure level (JIS C9612)	Indoor	dB(A)	P-Hi:47 Hi:42 Me:36 Lo:30
	Outdoor		54
Sound power level (JIS C9612)	Outdoor		63
Airflow	Indoor	l/s	P-Hi: 225 Hi: 191 Me: 150 Lo: 133
Panel	TC-PSA-25W-E	mm	35x700x700
External dimensions (HxWxD)	Indoor	mm	248x570x570
	Outdoor		640x800(+71)x290
Net weight	Indoor	kg	Unit 15 Panel 3.5
	Outdoor		45
Refrigerant piping	Liquid line	mm	Ø6.35
	Gas line		Ø12.7
	Connection method		Flare connection
Refrigerant R410A	Quantity	kg	1.5
	Pre charged to pipe length	m	15
Maximum pipe length		m	30
Controller			RC-E5, RC-EX1A or RCN-TC-24W-ER

## Taking OA (Outside air intake) into inside

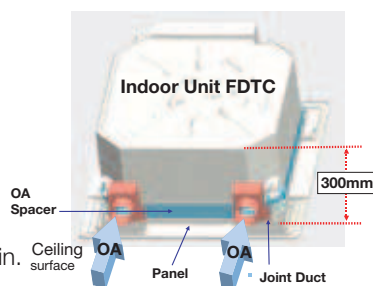
OA Spacer TC-OAS-E (option)  
Joint Duct TC-OAD-E (option)  
Utilizing OA spacer which comes as optional equipment, outside air can be taken into inside.

### Using 1 joint duct:

OA comes up to 1.3m³/min.

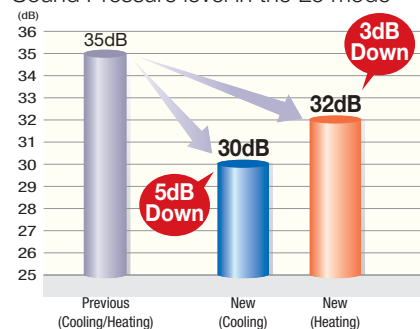
### Using 2 joint ducts:

OA comes from 1.3 to 2.6m³/min.

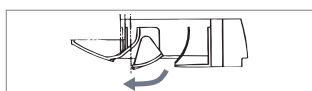


## Quiet operation

Sound Pressure level in the Lo mode



## “CLEARER” Air Flow



New shape & angled louver redirects the air current away from the ceiling, to reduce ceiling stains

## Installation Workability



For wireless control simply insert the infrared receiver kit on a corner of the panel



wireless remote control  
RCN-TC-24W-ER

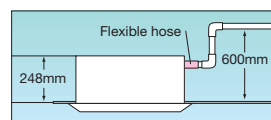
## Compact and Convenient

### • 600mm Drain Pump

Drain can be discharged upward by 600 mm from the ceiling surface close to the indoor unit. It allows a piping layout with a high degree of freedom depending on the installation location.

### • 600 x 600 ceiling

Indoor unit size (W:570 x D:570) brings easy installation for 600 x 600 ceiling and Panel size (700 x 700) is suitable for 600 x 600 ceiling. Height is one of the industry's lowest level at 248mm and weight is only 16.5kg.



# FDT - Indoor Unit

## Ceiling Cassette-4way

MODELS: FDT60VF, FDT71VF1, FDT90VNPVF1, FDT100VF1, FDT125VF, FDT140VF



### Remote control (Options)

#### Wired



RC-EX1A



RC-E5



RCH-E3

#### Wireless



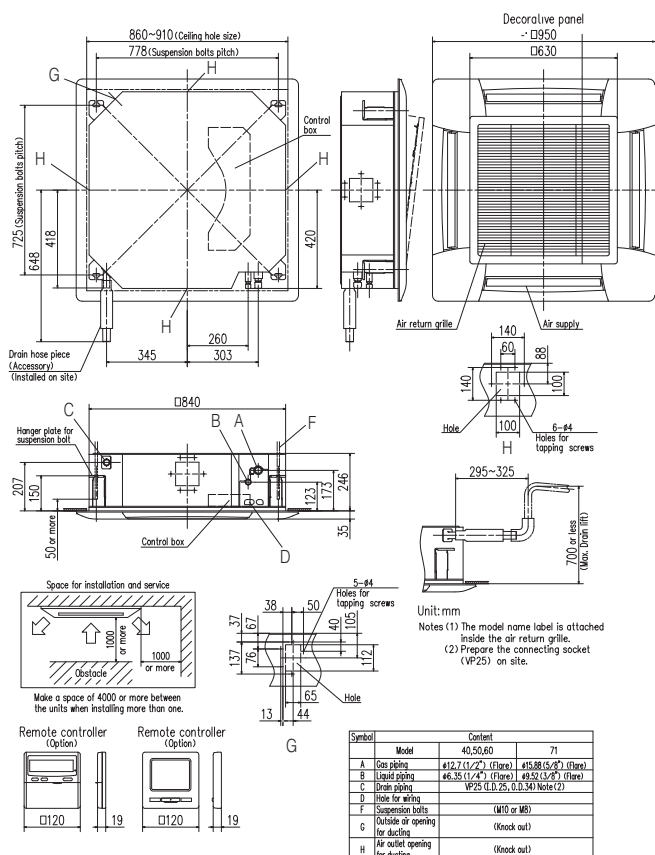
RCN-E1R

DRED enabled model

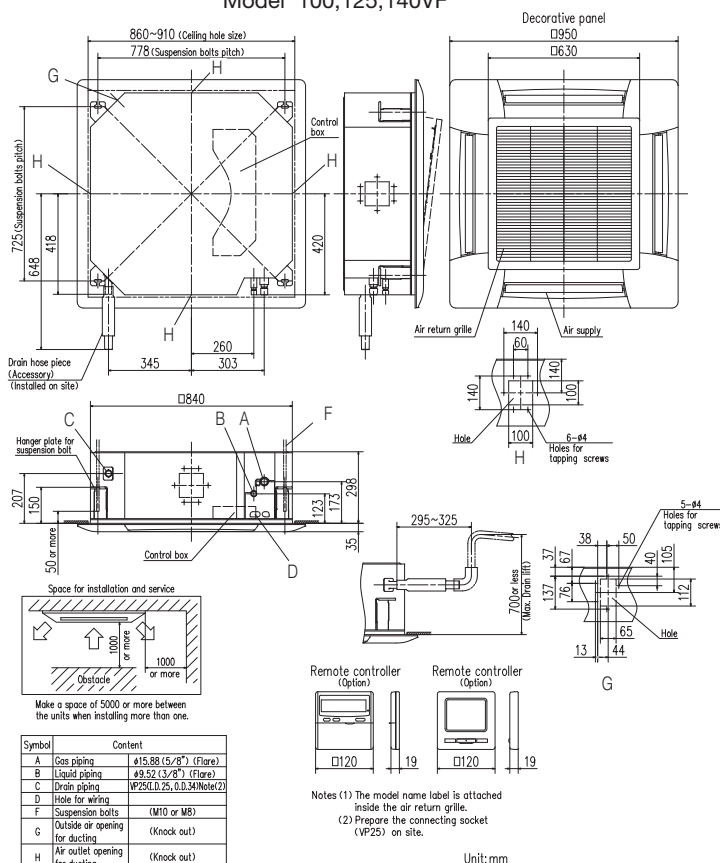


### Outline drawing (Unit:mm)

#### Model FDT 60,71VF



#### Model 100,125,140VF



FDT									
Set			FDT60ZMXAVF	FDT71AVNXVF1	FDT90VNPVF1	FDT100AVNVF1	FDT125AVNXVF	FDT140AVNXVF	FDT140AVSXVF
Indoor			FDT60VF	FDT71VF1	FDT100VF1	FDT100VF1	FDT125VF	FDT140VF	FDT140VF
Outdoor			SRC60ZMXA-S	FDCA71VNX	FDC90VNP	FDCA100VN	FDCA125VNX	FDCA140VNX	FDCA140VSX
Power supply	Indoor Unit		1 Phase 220-240V 50Hz						3 Phase 415V 50Hz
Capacity	Cooling T1	kW	5.6 (1.1-6.3)	7.1 (3.2-8.0)	9.0 (1.9-9.0)	10.0 (4.0-11.2)	12.5 (5.0-14.0)	14.0 (5.0-16.0)	14.0 (5.0-16.0)
	Heating H1		6.7 (0.6-7.1)	8.0 (3.6-9.0)	9.0 (1.5-9.0)	11.2 (4.0-12.5)	14.0 (4.0-17.0)	16.0 (4.0-18.0)	16.0 (4.0-20.0)
	Heating H2		5.29	7.2	N/A	N/A	15.6	13.8	N/A
Input	Cooling T1	kW	1.52	2.04	2.67	2.76	3.28	4.19	4.19
	Heating H1		1.70	1.94	2.19	2.74	3.43	4.2	4.20
EER	Cooling T1		3.68	3.48	3.37	3.62	3.81	3.34	3.34
COP	Heating H1		3.94	4.12	4.11	4.09	4.08	3.81	3.81
Sound pressure level (JIS C9612)	Indoor	dB(A)	P-Hi:46 Hi:33 Me:31 Lo:30	P-Hi:46 Hi:35 Me:33 Lo:31	P-Hi:51 Hi:40 Me:37 Lo:35	P-Hi:51 Hi:40 Me:37 Lo:35	P-Hi:51 Hi:42 Me:40 Lo:37	P-Hi:51 Hi:43 Me:41 Lo:38	P-Hi:51 Hi:43 Me:41 Lo:38
	Outdoor		54	51	55	49	50	52	49
Sound power level (JIS C9612)	Outdoor			65	66	69	70	70	72
Airflow	Indoor	l/s	P-Hi: 466 Hi: 300 Me: 266 Lo: 233	P-Hi: 466 Hi: 350 Me: 316 Lo: 283	P-Hi: 617 Hi: 450 Me: 400 Lo: 333	P-Hi: 616 Hi: 450 Me: 400 Lo: 333	P-Hi: 616 Hi: 500 Me: 450 Lo: 383	P-Hi: 616 Hi: 500 Me: 450 Lo: 383	P-Hi: 617 Hi: 500 Me: 683 Lo: 383
Panel		mm	T-PSA-3BW-E (35x950x950)						
External dimensions (H×W×D)	Indoor	mm	246x840x840			298x840x840			
	Outdoor		640x800(+71)x290	750x880(+88)x340		845x970x370	1300x970x370		
Net weight	Indoor	kg	Unit 24 Panel 5.5		Unit 27 Panel 5.5	Unit 27 Panel 5.5			
	Outdoor		45	60	57	81	105		
Refrigerant piping	Liquid line	mm	Ø6.35	Ø9.52					
	Gas line		Ø12.7	Ø15.88					
	Connection method		Flare connection						
Refrigerant R410A	Quantity	kg	1.5	2.95	2.1	3.8	4.5		
	Pre charged to pipe length	m	15	30	15	30			
Maximum pipe length		m	30	50	30	50	100		
Controller			RC-E5, RC-EX1A or RCN-T-36W-E						

## Installation

Detachable covers at each corner allows for easy alignment and balance.

The panel does not need to be removed. Installation time is reduced.



## Infrared control option

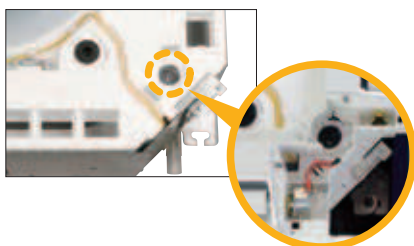
For wireless control simply insert the infrared receiver kit on the corner.

wireless remote control  
RCN-T-36W-E



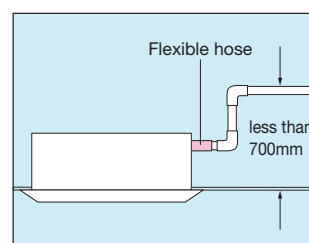
## Easy checking of drain pan

To check the drain pan simply remove the corner lid.



## 700mm Drain Pump

Drain can be discharged upwards by 700mm from the ceiling surface. The 260mm flexible hose is supplied as standard equipment.





# FDEN - Indoor Unit

## Ceiling Suspended

MODELS: FDEN100VF1, FDEN125VF



### Remote control (Options)

#### Wired



RC-EX1A



RC-E5



RCH-E3

#### Wireless

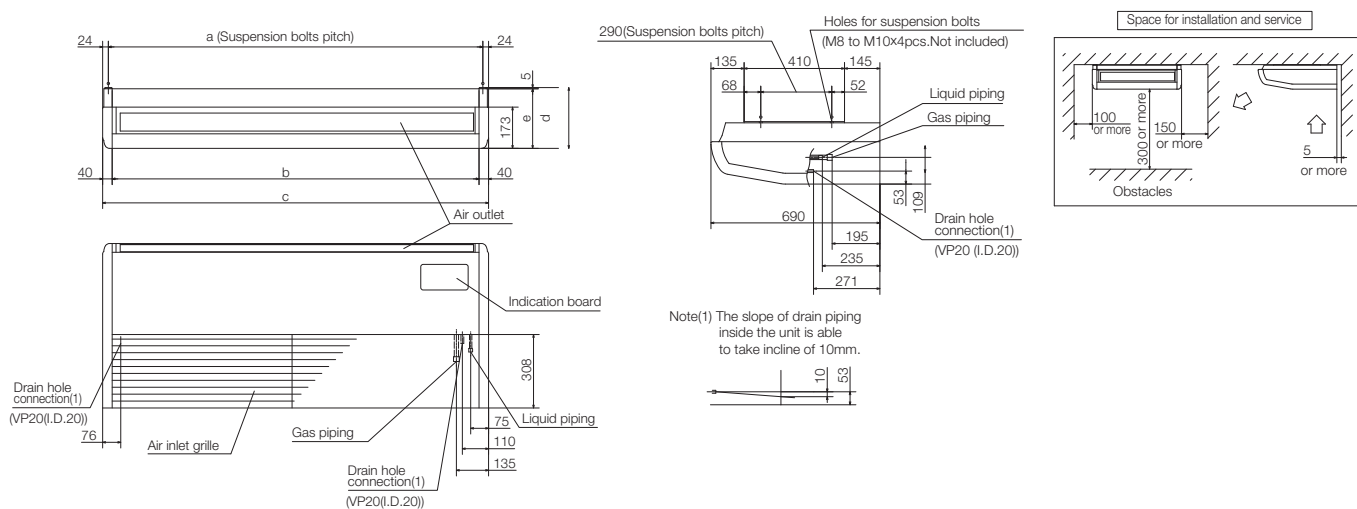


RCN-E1R

DRED enabled model



### Outline drawing (Unit:mm)



### Dimension Table

model	a	b	c	d	e
FDEN100~125	1572	1540	1620	255	250

# FDEN

Set			FDEN100VNVF1	FDEN125AVNXVF
Indoor			FDEN100VF1	FDEN125VF
Outdoor			FDCA100VN	FDCA125VNX
Power supply	Outdoor Unit		1 Phase 220-240V 50Hz	
Capacity	Cooling T1	kW	10.0 (4.0-11.2)	12.5 (5.0-14.0)
	Heating H1		11.2 (4.0-12.5)	14.0 (4.0-17.0)
	Heating H2		8.7	15.0
Input	Cooling T1	kW	2.85	3.86
	Heating H1		2.97	3.77
EER	Cooling T1		3.51	3.23
COP	Heating H1		3.77	3.71
Sound pressure level (JIS C9612)	Indoor	dB(A)	P-Hi:46 Hi:44 Me:41 Lo:39	P-Hi:50 Hi:46 Me:44 Lo:43
	Outdoor		49	50
Sound power level (JIS C9612)	Outdoor		70	
Airflow	Indoor	l/s	P-Hi:466 Hi:433 Me:383 Lo:350	P-Hi:533 Hi:483 Me:433 Lo:383
External dimensions (HxWxD)	Indoor	mm	250x1620x690	
	Outdoor		845x970x370	1300x970x370
Net weight	Indoor	kg	49	
	Outdoor		81	105
Refrigerant piping	Liquid line	mm	Ø9.52	
	Gas line		Ø15.88	
	Connection method		Flare Connection	
Refrigerant R410A	Quantity	kg	3.8	4.5
	Pre charged to pipe length	m	30	
Maximum pipe length		m	50	100
Controller			RC-E5, RC-EX1A or RCN-E-E	

## Improved installation workability

Increased freedom of a piping layout

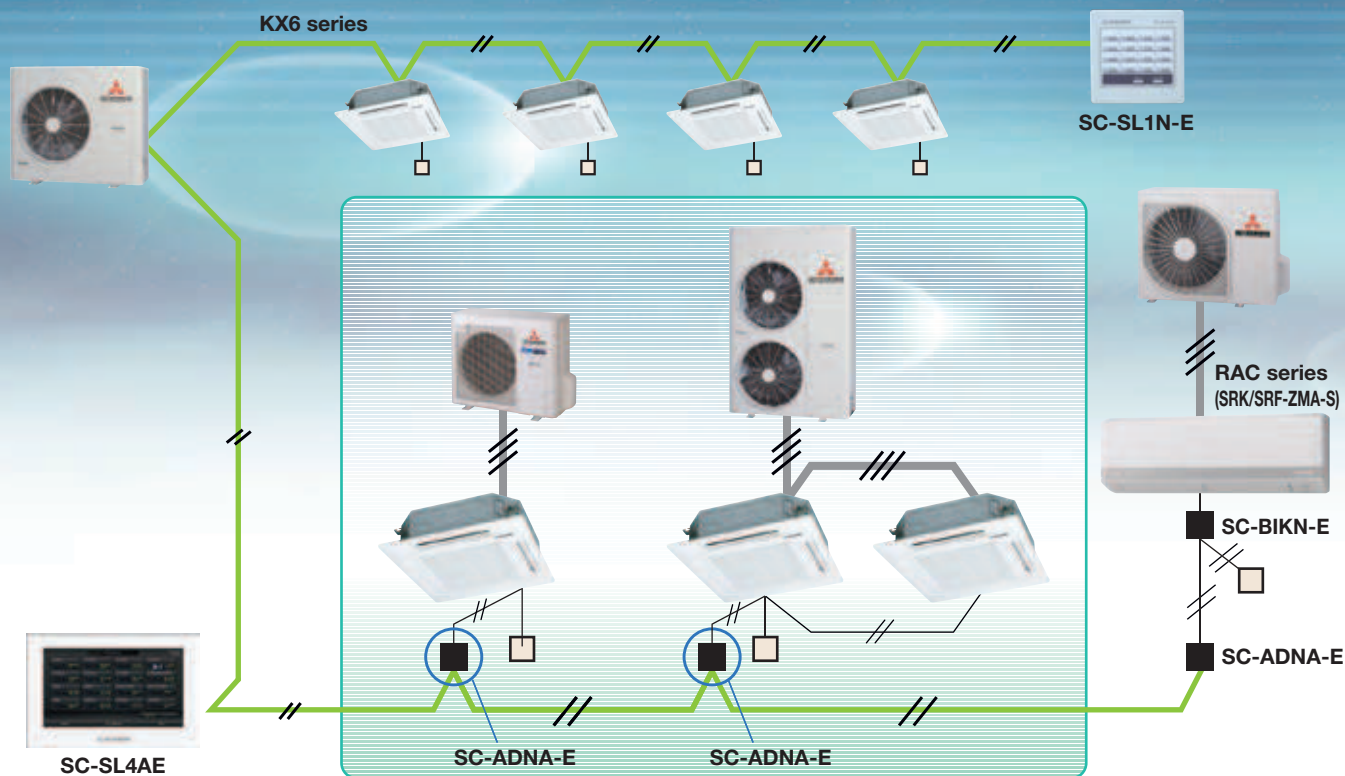


The refrigerant pipe from the unit can be arranged in three directions, rear, right and up. The drain pipe can be arranged in two directions, left and right. This will allow a free layout of piping for various installation conditions. The unit can only be serviced from below.

## Compact and modern design



All models fit compactly on ceiling. (Height-210mm or 250mm). Plain, modern design featuring rounded edges gives room a comfortable atmosphere.



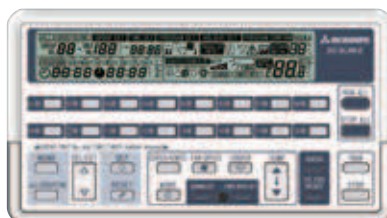
## Central Control

## SC-SL1N-E



Start/stop control of up to 16 indoor units is possible either individually or collectively. With simple operations, you can effect centralised control.

## SC-SL2NA-E



Centralised control of up to 64 indoor units. Allows connection with a weekly timer without using any interface.

## SC-SL4-AE/BE



Easy operation through the large color LCD and touch panel. Up to 128 indoor units can be controlled, when three SUPERLINK-II systems are connected.

## PC windows central control

## SC-WGWNA-A/B

(SC-WGWNA-B has electric power calculation function)



Up to 96 cells (some cells can have two or more indoor units and total number of indoor units can be up to 128 units) are controlled from the Internet. Additional engineering service, in the case of SCWGWNB256-A/B up to 256 cells cost is required. Please consult your dealer when using this central control.

## BMS interface unit

## SC-BGWNA-A/B

(BACnet gateway)

(SC-WGWN-B has electric power calculation function)



Up to 96 cells (some cells can have two or more indoor units and total number of indoor units can be up to 128 units) are controlled centrally from a BMS.

Additional engineering service, in the case of SCWGWNB256-A/B up to 256 cells cost is required. In case of SC-BGWN-B, communication test by qualified person regarding electric cost calculation function is required before commissioning. Please

## SC-LGWNA-A

(LonWorks gateway)



Up to 96 indoor units (48 indoor unit x 2) are linked as an open network. Centrally controlled through LonWorks.

Additional engineering service cost is required. Please consult your dealer when using this gateway.



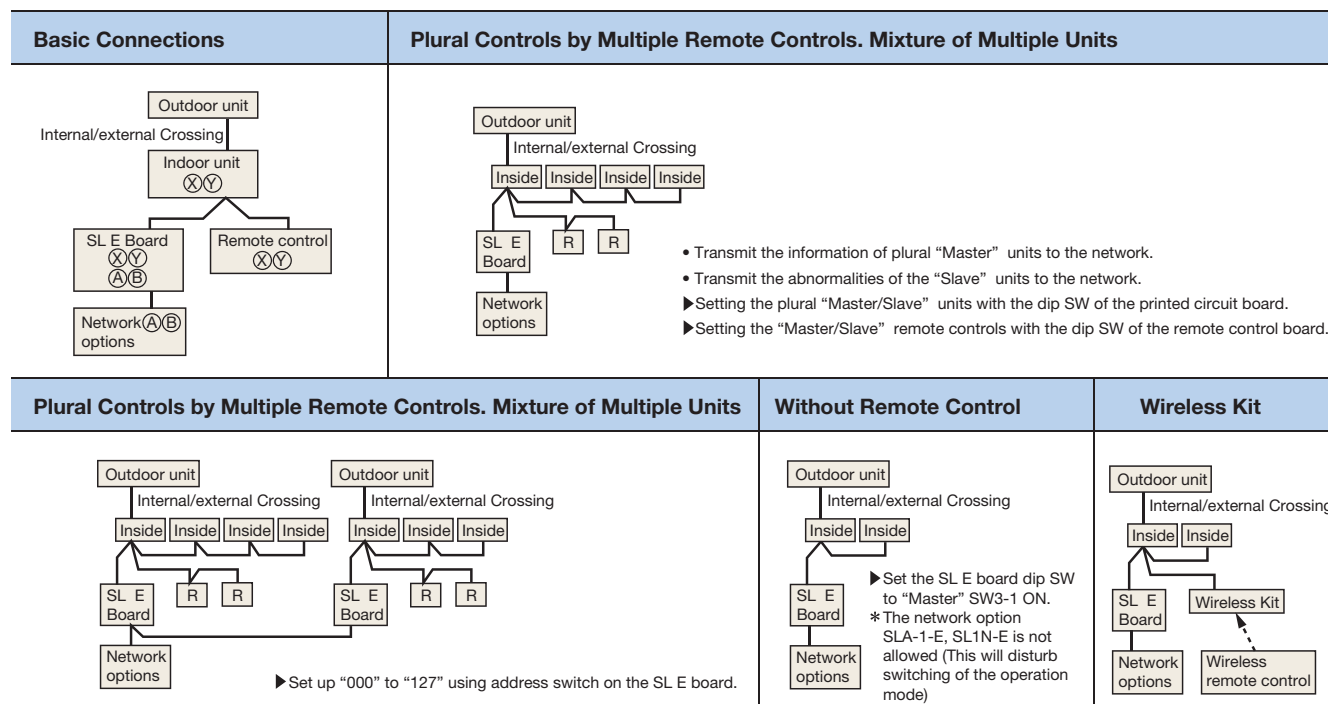
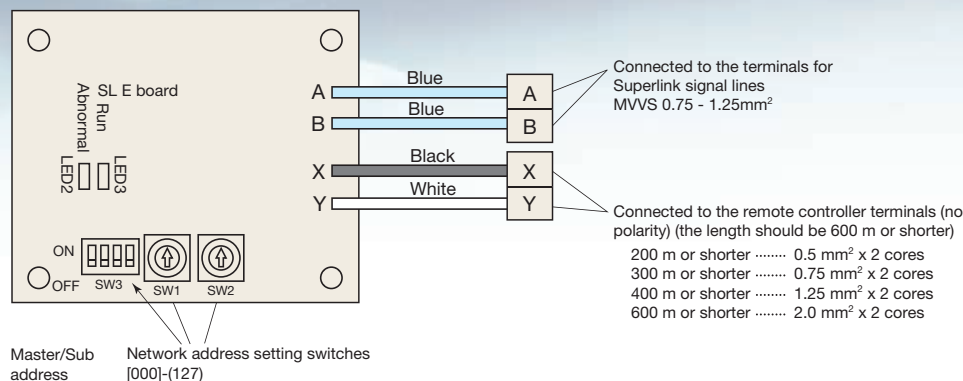
## SUPERLINK E BOARD (SC-ADNA-E)

This board is used when conducting control of the single package (wired remote control unit) 1-type series using a network option (SC-SL1N-E, SC-SL2NA-E, etc).

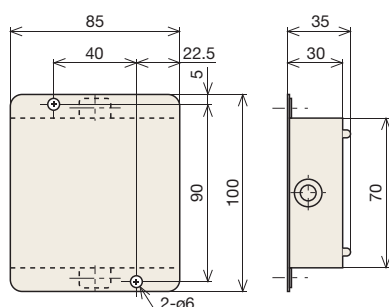
### (1) Functions

- Transmits the settings from the network option to the indoor units.
- Returns the priority indoor unit data in response to a data request from the network option.
- Inspects the error status of connected indoor units and transmits the inspection codes to the network option.
- A maximum of 16 units can be controlled (if in the same operation mode).

### (2) Wiring connection diagram



### (3) Metal box dimension



# Control System

## Individual Control

### Remote Control line up

	indoor unit	remote control
wired	all models	RC-E5
		RCH-E3
		RC-EX1A

	indoor unit	remote control
wireless	FDT	RCN-T-36W-E
	FDTC	RCN-TC-24W-ER
	FDUM, FDU	RCN-KIT3-E
	FDEN	RCN-E-E

### Wired remote control with weekly timer (option)

#### RC-E5



The RC-E5 controller enables extensive access to service and maintenance technical data combined with easy to use functions and a clear LCD display.

#### Weekly timer function as standard

RC-E5 provides (as a standard feature) a weekly timer, which allows one-week operation schedules to be registered. A user can specify up to four times a day to start/stop the air conditioner. (Temperature setting is also possible with the timer).

#### Timer operation

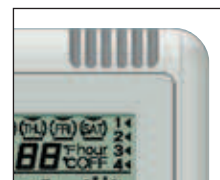
Time	..... 8	9	10	11	12	13	14	15	16	..... 23
RUN		Timer-1		Timer-2		Timer-3			Timer-4	
STOP										

#### Run hour metres to facilitate maintenance checking

RC-E5 stores operation data when an anomaly occurs and indicates the error on the LCD. It also displays cumulative operation hours of the air conditioner and compressor since commissioning.

#### Room temperature controlled by the remote control sensor

The temperature sensor is housed in the top section of the remote control unit. This arrangement has improved the sensitivity of the remote control unit's sensor, which permits more finely controlled air conditioning.



#### Changeable set temperature ranges

RC-E5 allows the upper and lower limits of a set temperature range to be specified separately.

By adjusting a set temperature range, you can ensure energy saving air conditioning by avoiding excessive cooling or heating.

Changeable range	
Upper limit	20~30C(effective for heating operation)
Lower limit	18~26C(effective for non-heating operation)

### Simple remote control (option)

#### RCH-E3 (wired)



Considering specialised usage in hotel rooms, control buttons are limited only to minimum required functions such as ON/OFF, mode, temperature setting and fan speed. It is really simple and easy to use.

RCH-E3 is not applicable to the Individual flap control system and the Flap control system. When RCH-E3 is used, the fan has 3 speed settings (Hi-Me-Lo) only.

#### Up to 16 units

It can control up to 16 units individually, by pressing the AIR CON No. button.

#### AUTO restart

This function allows starting the air conditioner automatically when power supply is restored after power failure or by turning on the power switch.

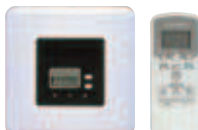
### Wireless remote control (option)

For wireless control simply insert the infrared receiver kit on a corner of the panel.

#### RCN-T-36W-E, RCN-TC-24W-ER



#### RCN-KIT3-E



#### RCN-E-E



When wireless remote control is used, the fan has 3 speed settings (Hi-Me-Lo) only.

### Thermistor (option)

#### SC-THB-E3

This sensor is used when individual remote control is not required in each room and the system is under central control. By installing sensors in strategic locations throughout the structure greater comfort control is achieved. In many instances one additional sensor is all that is required.



## KXZ-KXR

Industry leading energy efficiency and reliability from our advanced technology

Mitsubishi Heavy Industries offers one of the largest ranges of VRF multi inverter products in the industry. The compact M series (11.2 to 15.5kW) is a single fan, single phase outdoor that is providing air conditioning solutions all over Australia and New Zealand. The larger side blow (22.4 to 33.5kW) and top discharge (40 to 68kW) units can be used singularly or in combination to deliver up to 136kW of heat pump or heat recovery technology and energy saving in high rise and mid rise structures. With 16 types of indoor units and 78 different capacities available designs are only limited by imagination. Our eSolution software makes selection simple.

The SuperlinkII network can control up to 128 indoor units via a central control or BMS interface such as Web or BACnet gateways. Mente PC can be connected for fault finding and recording test run reports.

**HyperMulti**  
**KX·KXR**



PRODUCTS



## SR

### Residential Air Conditioner

Mitsubishi Heavy Industries wall mounted and floor standing inverter split systems are the ideal choice to control comfort in any residential situation.

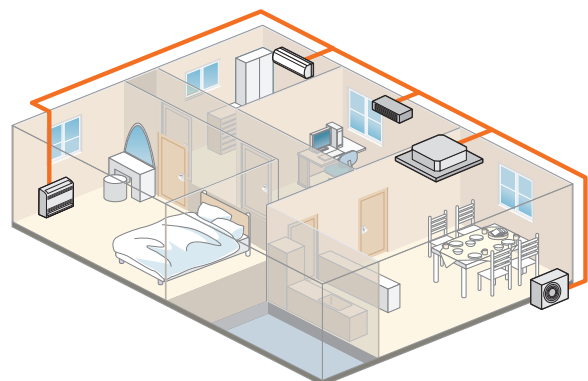
Mitsubishi Heavy Industries residential air conditioners have received great reviews in consumer magazines here and overseas when tested and compared to the competitions similar products. Energy efficiency, quiet operation and ease of use were the standout differences.



## SCM

### Residential Air Conditioner

These residential use inverter multi systems can condition 2 to 6 rooms using either wall mounted, floor standing, low static bulkhead or compact cassette type indoor units. The SCM series offers a total of 7 outdoor units and many indoor units making hundreds of different comfort combinations possible. Perfect for homes and apartments.



## Before starting use

### Heating performance

The heating performance values (kW) described in catalog are the values obtained by operating at an outdoor temperature of 7C and indoor temperature of 20C as set forth in the ISO Standards. As the heating performance decreases as the outdoor temperature drops, if the outdoor temperature is too low and the heating performance is insufficient, use other heating appliances as well.

### Indication of sound values

The sound values are the values (A scale) measured in a chamber such as an anechoic chamber following the ISO Standards. In the actual installation state, the value is normally larger than the values given in the catalog due to the effect of surrounding noise and echo. Take this into consideration when installing.

### Use in oil atmosphere

Avoid installing this unit in as atmosphere where oil scatters or builds up, such as in a kitchen or machine factory.

If the oil adheres to the heat exchanger, the heat exchanging performance will drop, mist may be generated, and the synthetic resin parts may deform and break.

### Use in acidic or alkaline atmosphere

If this unit is used in acidic atmosphere such as hot spring areas having high level of sulfuric gases or in alkaline atmosphere including ammonia or calcium chloride, places where the exhaust of the heat exchanger is sucked in, or at coastal areas where the unit is subject to salt breezes, the outer plate or heat exchanger, etc., will corrode. Please ask a dealer or specialist when you use an air conditioner in places differing from a general atmosphere.

### Use in places with high ceilings

If the ceiling is high, install a circulator to improve the heat and air flow distribution when heating.

### Refrigerant leakage

The refrigerant (R410A) used for Air conditioner is non-toxic and nonflammable in its original state.

However, in consideration of a state where the refrigerant leaks into the room, measures against refrigerant leaks must be taken in small rooms where the tolerable level could be exceeded. Take measures by installing ventilation devices, etc.

### Use in snowy areas

Take the following measures when installing the outdoor unit in snowy areas.

### Snow prevention

Install a snow-prevention hood so that the snow does not obstruct the air intake port or enter and freeze in the outdoor unit.

### Snow piling

In areas with heavy snow fall, the piled snow could block the air intake port. In this case, a frame that is 50cm or higher than the estimated snow fall must be installed underneath the outdoor unit.

### Automatic defrosting device

If the temperature is low, and the humidity is high, frost will stick to the heat exchanger of the outdoor unit. If use is continued, the heating performance will drop.

The "Automatic defrosting device" will function to remove this frost.

After heating for approx. three to ten minutes, it will stop, and the frost will be removed. After defrosting, hot air will be blown again.

### Servicing the air-conditioner

After the air-conditioner is used for several seasons, dirt will build up in the air-conditioner causing the performance to drop. In addition to regular servicing, we recommend the maintenance contract (charged for) by a specialist.

## Safety Precautions

### Air-conditioner usage target

The air-conditioner described in this catalog is a dedicated cooling/heating device for human use.

Do not use it for special applications such as the storage of foodstuffs, animals or plants, computer server rooms, precision devices or valuable art, etc.

This could cause the quality of the items to drop, etc.

Do not use this for cooling vehicles or ships. Water leakage or current leaks could occur.

### Before use

Always read the "User's Manual" thoroughly before starting use.

### Installation

Always commission the installation to a dealer or specialist. Improper installation will lead to water leakage, electric shocks and fires.

Make sure that the outdoor unit is stable in installation. Fix the unit to stable base.

### Usage place

Do not install in places where combustible gas could leak or where there are sparks.

Installation in a place where combustible gas could be generated, flow or accumulate, or places containing carbon fibers could lead to fires.

Only persons that are qualified and licensed are permitted to install and service products that contain refrigerants in Australia, go to [www.arctick.org](http://www.arctick.org). Suitable access for service must be provided in compliance with industry standards and local regulations.

Proudly supporting



### Australia:

ABN 92 133 960 275

Phone: 1300 138 007 Fax: 1800 644 329

#### NSW & Head Office

9C Commercial Road  
Kingsgrove NSW 2208  
PO Box 318 Kingsgrove  
NSW 1480

#### Victoria

2/24 Lakeside Drive  
Burwood East  
VIC 3151

#### Brisbane

5/26 Flinders Parade  
North Lakes  
QLD 4509

#### Townsville

12/31 Fleming Street  
Aitkenvale  
QLD 4812  
PO Box 1386 Aitkenvale  
QLD 4814

#### Western Australia

Unit 3A, 2 Mulgool Rd  
Malaga WA 6090  
PO Box 2089 Malaga  
WA 6944

[www.mhiala.com.au](http://www.mhiala.com.au)

### New Zealand:

G.S.T. 105-673-620

Phone: 0800 138 007 Fax: 09 442 5346

#### Auckland

Unit 2 100 Bush Road  
Albany 0632  
PO Box 300552  
Albany 0632

[www.mhiala.co.nz](http://www.mhiala.co.nz)

## MRE SPARE PARTS

[www.mrespareparts.com.au](http://www.mrespareparts.com.au) Tel: +61 (0) 2 9600 7444 Fax: +61 (0) 2 9600 8044

### ISO9001

Our Air Conditioning & Refrigeration Systems Headquarters is an ISO9001 approved factory for residential air conditioners and commercial-use air conditioners (including heat pumps).



BIWAJIMA PLANT  
Mitsubishi Heavy Industries, Ltd.  
Air-conditioning & Refrigeration Systems Headquarters  
Certified ISO 9001  
Certificate number : JQA-0708



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MAHAJAK AIR CONDITIONERS CO., LTD.  
Certified ISO 9001  
Certificate Number : 04100 1998 0813

### ISO14001

Our Air Conditioning & Refrigeration Systems Headquarters has been assessed and found to comply with the requirements of ISO14001.



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Air-conditioning & Refrigeration Systems Headquarters  
Certified ISO 14001  
Certificate number : JQA-EM058



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Mitsubishi Heavy Industries-  
MAHAJAK AIR CONDITIONERS CO., LTD.  
Certified ISO 14001  
Certificate Number : 04104 1998 0813 ES

