

# Inverter Packaged Air Conditioners

## **FD** series

High Performance Air Conditioning



**FDT** 4 way



**FDTC** 4 way compact



**CHALIAN CORPORATION**  
Tel: 01.259042 - 70.900575



# New Generation

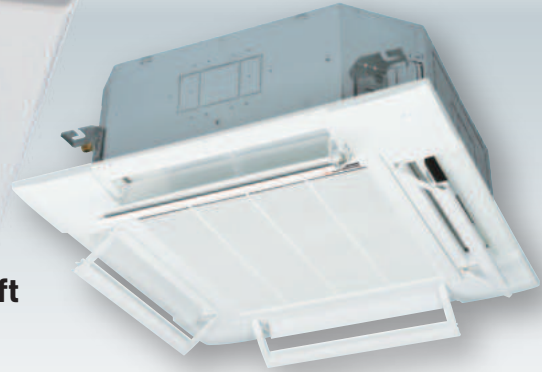
Ceiling Cassette  
4way

New

# FDT



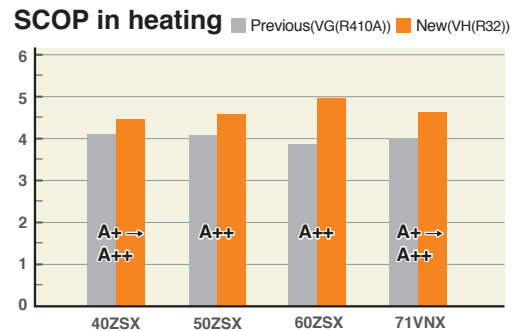
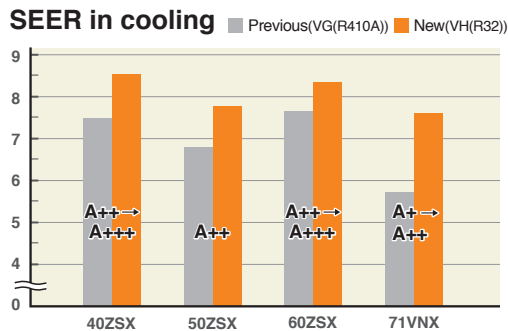
- Automatic energy saving control
- Keep maximum comfort with minimal draft
- Quiet operation



## High energy efficiency with new technology

New FDT can achieve higher seasonal efficiency by utilising Mitsubishi Heavy Industries latest technology.

● SEER and SCOP is defined in European regulations. Please refer to P96.



## Quieter noise & Improved aerodynamic performance of the unit

New technology has realised quiet noise with keeping capacity and comfort. A low noise is achieved by reducing the pressure fluctuation in an indoor unit.

A fan guard attains both safety and quietness by flow.

New design turbo fan



Fan guard (standard equipment)



## Flexible flap control for draft prevention Brand new function in the market



### Draft Prevention Panel (Option)

Each of the 4 flaps can be controlled individually at each operation mode. They change air flow direction and prevent draft feeling. This new function also achieve more flexible control for air flow direction.



### Motion Sensor (Option)

New motion sensor (option) detects human activity. Energy saving control is achieved by shifting set temperature according to detected amount of activity.



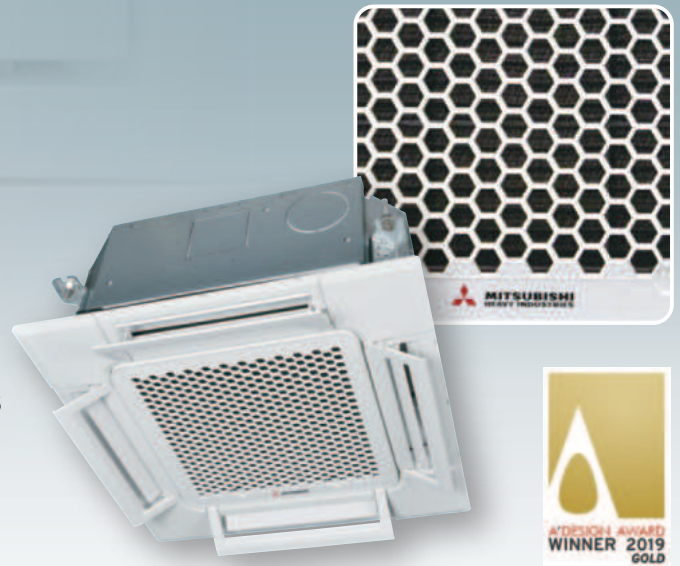
Ceiling Cassette  
4way compact

New

# FDTC



- More comfort and Higher energy savings
- New European design
- Lower noise



## European Design & Flat Panel

A' Design Award and Competition is the World's largest, most prestigious and influential design accolade, the highest achievement in design. A' Design Award Winner Logo, symbolizes exceptional design excellence in your products, projects and services.

**Thin Panel**

FDTC thin panel fit within 10mm from the ceiling.

**Unique Grille Design**

Honeycomb grille

**Big Louver**

Improved distribution

**Compact Design**

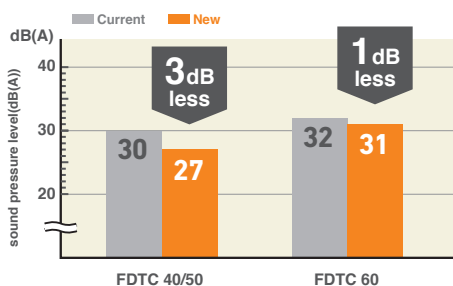
□700mm → □620mm

It's only 14kg  
Height of thin panel and main body is only 248mm allowing a very easy installation.

**Integrated Ceiling System Design(600×600)**

## Quieter Operation

(Sound Pressure level in the Lo mode)



Adopting new turbo fan and improving new heat exchanger enable to reduce noise.



## Draft Prevention Panel and Motion Sensor (option)



It is available to set draft prevention panel and motion sensor as well as FDT.

# Draft Prevention

Keep maximum comfort with minimal draft:  
New FDT & FDTC control flaps with more flexibility.



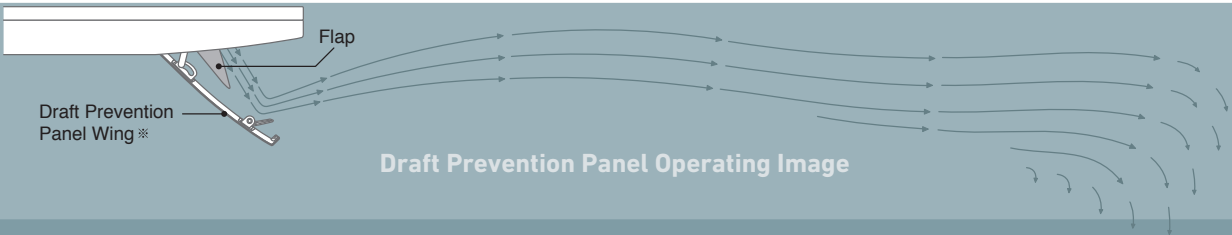
Ceiling cassette Compact  
**FDTC-VH** series



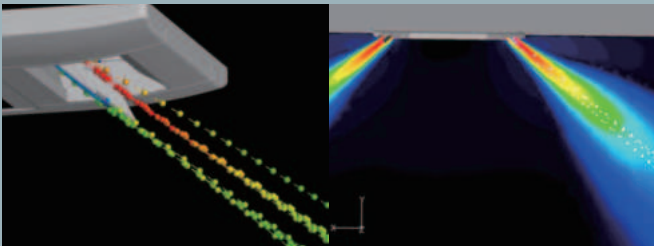
Ceiling cassette  
**FDT-VH** series



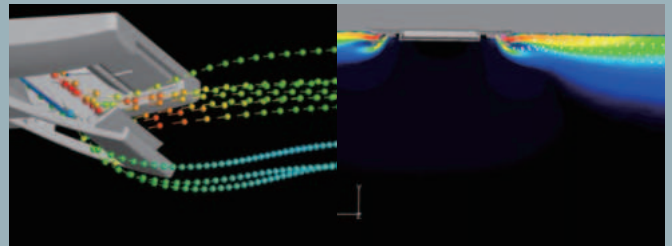
The Good Design Award is Japan's only comprehensive design evaluation and recommendation initiative, originating with the "Good Design Products Selection System" founded in 1957. It is now a global design award with participation from numerous Japanese and international companies and organizations. The "G Mark", the symbol of the Good Design Award, is known widely as a symbol of excellent design. (FDT)



**Draft Prevention Panel off**



**Draft Prevention Panel working** ※



Draft Prevention Panel provides a comfortable airflow without any draft feeling. Whether cooling or heating a room, the remote control can be used to instantly suppress any warm or cool drafts. This accurately assists how air flow is directed out of the indoor unit.

※ Images is for illustration purposes.

# Motion Sensor

## Energy saving operation by detecting human movement

### 3 Step Control

- 1 Power Control** New motion sensor (option) detects human activity. Energy saving control is achieved by shift set temperature according to detected amount of activity.
- 2 Stand by** Unit will go on stand-by mode when no activity is detected. When the motion sensor detects activity again, the unit will automatically re-start operation.
- 3 Auto Off** Unit will go off automatically when no activity is detected for 12 hours.

Applied models



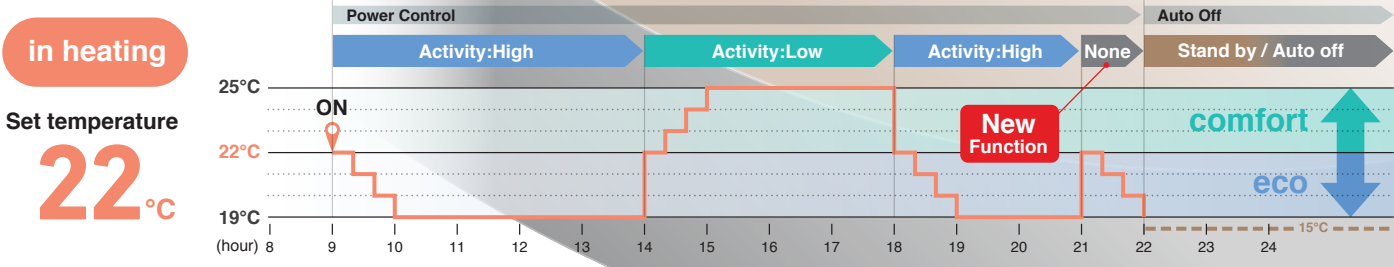
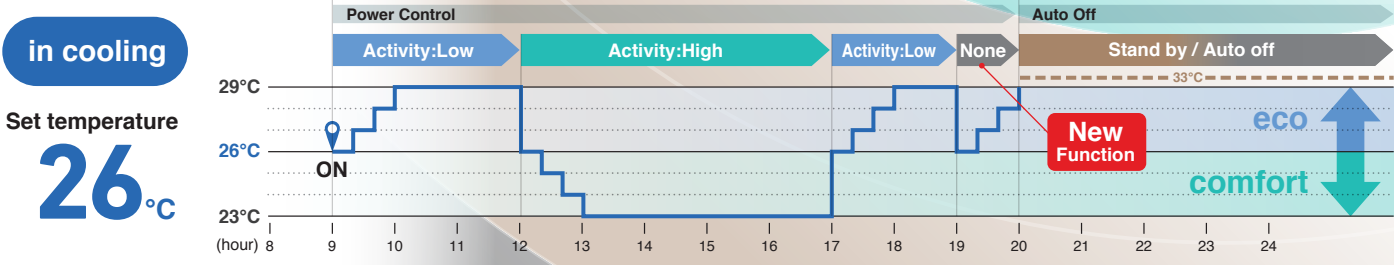
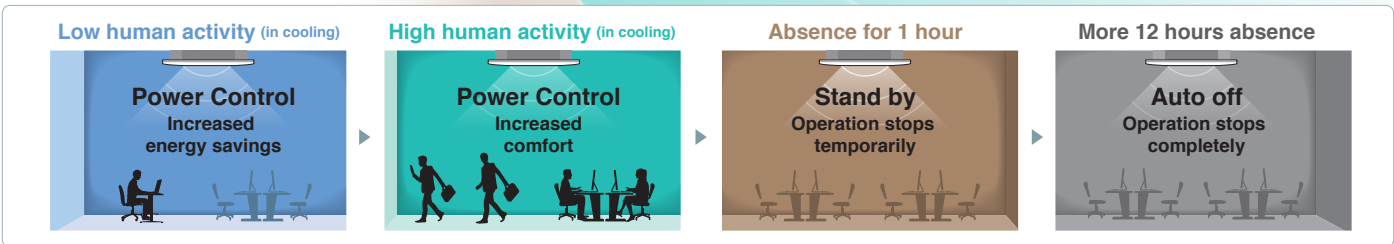
FDT

FDTC

FDU

FDUM

FDE



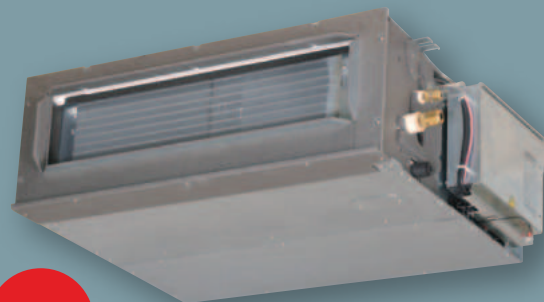
Operation mode and Control of Motion sensor		Human activity	Operation mode				
			Auto	Cool	Heat	Dry	Fan
Power Control ※1	Low	Cooling +3°C Heating +3°C	+3°C	+3°C	-	-	
	High	Cooling -3°C Heating -3°C	-3°C	-3°C	-	-	
	None	Cooling +3°C Heating -3°C	+3°C	-3°C	-	-	
Auto Off ※2			●	●	●	●	

※1 Set temperature is revised maximum  $\pm 3^{\circ}\text{C}$  at Cooling/Heating mode by detecting heat volume movement.  
 ※2 Absence for 1 hour  $\Rightarrow$  Operation stops ("Stand-by") More 12 hours absence  $\Rightarrow$  Operation stops completely



# FDUM

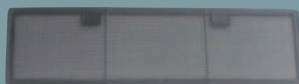
Indoor Unit  
**Duct Connected**  
**-Low/Middle Static pressure-**



**New**

FDUM 40/50/60/71/100/125/140

Filter kit (option)



UM-FL1EF : for 40, 50  
 UM-FL2EF : for 60, 71  
 UM-FL3EF : for 100, 125, 140  
 external static pressure loss:5Pa



- Energy Saving
- Automatic Operation
- Silent Operation
- Hi Power
- Weekly/Sleep/Peak-Cut Timer
- Self-Diagnostics



Remote control (option)

Wired			Wireless	
RC-EX3A	RC-E5	RCH-E3	RCN-KIT4-E2	

\*Not all functions available with all remote control options.

## Thin Design

The height of all FDUM models is only 280mm.

FDUM100/125/140		FDUM40/50/60/71	
<b>70mm less</b>		<b>19mm less</b>	
H 350mm	<b>H 280mm</b>	H 299mm	<b>H 280mm</b>

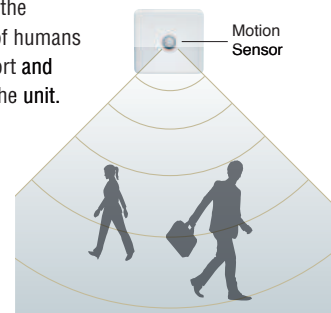
## Motion Sensor (Option)

**New**

Motion sensor is equipped in the ceiling plane or wall plane and detects the presence/absence and activity of humans in a room to improve the comfort and energy saving performance of the unit.



LB-KIT

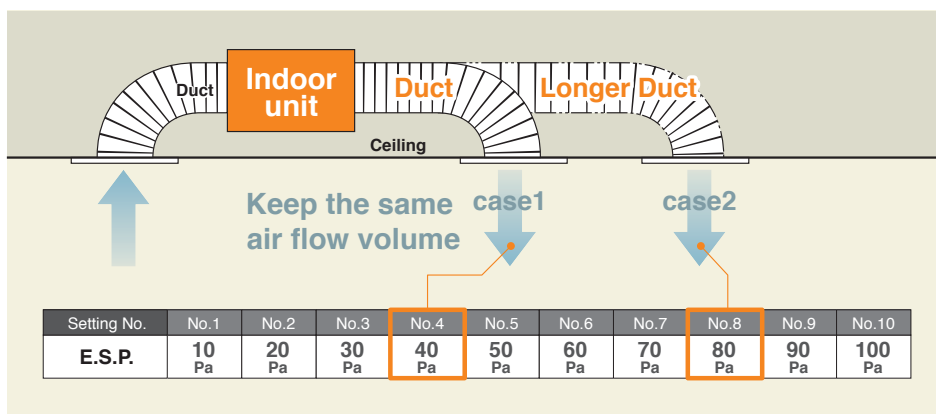


## Automatic External Static Pressure (E.S.P.) Control

Duct design was simplified.  
 Using DC motor, the most optimum air flow volume can be achieved by this automatic control.  
 Indoor unit will recognize external static pressure by itself automatically and keep rated air flow volume.

**RC-E5**  
**E.S.P. button**

External Static Pressure (E.S.P.) can be set by E.S.P. button.



## OUTDOOR UNIT

		Hyper Inverter		
SRC · FDC		40~60ZSX-W1	71VNX-W	-
		40~60ZSX-S	71VNX	100~140VN(S)X
model				
Chargeless		15m	30m	
Height x Width x Depth (mm)		640 x 800(+71) x 290	750 x 880(+88) x 340	1,300 x 970 x 370

		Micro Inverter			Standard Inverter		
FDC		100~140VN(S)A-W	-	-	71VNP-W	90~100VNP-W	-
		100~140VN(S)A	200VSA	250VSA	71VNP	90VNP1	100VNP
model							
Chargeless		30m			15m		
Height x Width x Depth (mm)		845 x 970 x 370	1,300 x 970 x 370	1,505 x 970 x 370	640 x 800(+71) x 290	750 x 880(+88) x 340	845 x 970 x 370

## SPECIFICATIONS - FDUM -

R410A		Hyper Inverter		
Set model name		FDUM40ZSXVH	FDUM50ZSXVH	FDUM60ZSXVH
Indoor unit		FDUM40VH	FDUM50VH	FDUM60VH
Outdoor unit		SRC40ZSX-S	SRC50ZSX-S	SRC60ZSX-S
Power source		1 Phase 220-240V, 50Hz / 220V, 60Hz		
Nominal cooling capacity (Min~Max)		kW		5.6 ( 1.1 ~ 6.3 )
Nominal heating capacity (Min~Max)		kW		6.7 ( 0.6 ~ 7.1 )
Power consumption		Cooling/Heating kW		1.54 / 1.75
EER/COP		Cooling/Heating		3.62 / 3.72
Inrush current		A		5
Max. current		A		15
Sound power level*1	Indoor	dB(A)		60 / 60
	Outdoor	dB(A)		63 / 63
Sound pressure level*1	Indoor	dB(A)		37 / 32 / 29 / 26
	Outdoor	dB(A)		50 / 49
Air flow	Indoor	m <sup>3</sup> /min		13 / 10 / 9 / 8
	Outdoor	m <sup>3</sup> /min		36 / 33
External static pressure*2		Pa		Standard:35 Max:100
Exterior dimensions	Indoor	mm		280 x 750 x 635
	Outdoor	mm		640 x 800(+71) x 290
Net weight	Indoor	kg		29
	Outdoor	kg		45
Ref.piping size		ømm		6.35(1/4") / 12.7(1/2")
Refrigerant line (one way) length		m		Max.30
Vertical height differences		m		Max.20 / Max.20
Outdoor operating temperature range	Cooling	°C		-15~46*3
	Heating	°C		-20~24
Air filter (option)		Filter kit : UM-FL1EF		Filter kit : UM-FL2EF
Remote control (option)		wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2		

### NOTES:

The data are measured under the following conditions(R410A : ISO-T1, R32 : ISO-T1, H1).

Cooling:Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating:Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.

\*1 : Indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

\*2 : External static pressure is changeable to be set by the remote control. MAX external static pressure is "High static pressure" setting. The values of sound pressure level become 5dB(A) higher at external static pressure of 100Pa.

\*3 : If a cooling operation is conducted when the outdoor air temperature is -5°C or lower, the outdoor unit should be installed at a place where it is not influenced by natural wind. If wind blows, the low pressure will drop and compressor frequency will increase, this will cause the capacity to drop and may cause the unit to break down.

## SPECIFICATIONS - FDUM -

R410A		Hyper Inverter			
Set model name		FDUM71VNXVH	FDUM100VNXVH	FDUM125VNXVH	FDUM140VNXVH
Indoor unit		FDUM71VH	FDUM100VH	FDUM125VH	FDUM140VH
Outdoor unit		FDC71VNX	FDC100VNX	FDC125VNX	FDC140VNX
Power source		1 Phase 220-240V, 50Hz / 220V, 60Hz			
Nominal cooling capacity (Min~Max)		kW 7.1 (3.2 ~ 8.0)	10.0 (4.0 ~ 11.2)	12.5 (5.0 ~ 14.0)	14.0 (5.0 ~ 16.0)
Nominal heating capacity (Min~Max)		kW 8.0 (3.6 ~ 9.0)	11.2 (4.0 ~ 12.5)	14.0 (4.0 ~ 17.0)	16.0 (4.0 ~ 18.0)
Power consumption		Cooling/Heating kW 2.03 / 1.99	2.68 / 3.02	3.49 / 3.77	4.28 / 4.42
EER/COP		Cooling/Heating 3.50 / 4.02	3.73 / 3.71	3.58 / 3.71	3.27 / 3.62
Inrush current		A 5	5	5	5
Max. current		A 17	24	26	26
Sound power level*1	Indoor	Cooling/Heating 65 / 65	65 / 65	67 / 67	70 / 70
	Outdoor	Cooling/Heating 66 / 66	70 / 70	70 / 70	72 / 72
Sound pressure level*1	Indoor	Cooling (P-Hi/Hi/Me/Lo) 38 / 33 / 29 / 25	44 / 38 / 36 / 30	45 / 40 / 34 / 29	47 / 40 / 35 / 30
	Outdoor	Heating (P-Hi/Hi/Me/Lo) 38 / 33 / 29 / 25	44 / 38 / 36 / 30	45 / 40 / 34 / 29	47 / 40 / 35 / 30
Air flow	Indoor	Cooling (P-Hi/Hi/Me/Lo) 24 / 19 / 15 / 10	36 / 28 / 25 / 19	39 / 32 / 26 / 20	48 / 35 / 28 / 22
	Outdoor	Heating (P-Hi/Hi/Me/Lo) 24 / 19 / 15 / 10	36 / 28 / 25 / 19	39 / 32 / 26 / 20	48 / 35 / 28 / 22
External static pressure*2		Pa Standard:35 Max:100	Standard:60 Max:100		
Exterior dimensions	Indoor	HeightxWidthxDepth mm 280 x 950 x 635	280 x 1,370 x 740		
	Outdoor	750 x 880(+88) x 340	1,300 x 970 x 370		
Net weight	Indoor	kg 34	54		
	Outdoor	60	105		
Ref.piping size		Liquid/Gas ømm 9.52(3/8") / 15.88(5/8")			
Refrigerant line (one way) length		m Max.50	Max.100		
Vertical height differences		Outdoor is higher/lower m Max.30 / Max.15			
Outdoor operating temperature range		Cooling °C -15~43*3			
		Heating °C -20~20			
Air filter (option)		Filter kit : UM-FL2EF	Filter kit : UM-FL3EF		
Remote control (option)		wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2			

R410A		Hyper Inverter		
Set model name		FDUM100VSXVH	FDUM125VSXVH	FDUM140VSXVH
Indoor unit		FDUM100VH	FDUM125VH	FDUM140VH
Outdoor unit		FDC100VSX	FDC125VSX	FDC140VSX
Power source		3 Phase 380-415V, 50Hz / 380V, 60Hz		
Nominal cooling capacity (Min~Max)		kW 10.0 (4.0 ~ 11.2)	12.5 (5.0 ~ 14.0)	14.0 (5.0 ~ 16.0)
Nominal heating capacity (Min~Max)		kW 11.2 (4.0 ~ 16.0)	14.0 (4.0 ~ 18.0)	16.0 (4.0 ~ 20.0)
Power consumption		Cooling/Heating kW 2.68 / 3.02	3.49 / 3.77	4.28 / 4.42
EER/COP		Cooling/Heating 3.73 / 3.71	3.58 / 3.71	3.27 / 3.62
Inrush current		A 5	5	5
Max. current		A 15	15	15
Sound power level*1	Indoor	Cooling/Heating 65 / 65	67 / 67	70 / 70
	Outdoor	Cooling/Heating 70 / 70	70 / 70	72 / 72
Sound pressure level*1	Indoor	Cooling (P-Hi/Hi/Me/Lo) 44 / 38 / 36 / 30	45 / 40 / 34 / 29	47 / 40 / 35 / 30
	Outdoor	Heating (P-Hi/Hi/Me/Lo) 44 / 38 / 36 / 30	45 / 40 / 34 / 29	47 / 40 / 35 / 30
Air flow	Indoor	Cooling (P-Hi/Hi/Me/Lo) 36 / 28 / 25 / 19	39 / 32 / 26 / 20	48 / 35 / 28 / 22
	Outdoor	Heating (P-Hi/Hi/Me/Lo) 36 / 28 / 25 / 19	39 / 32 / 26 / 20	48 / 35 / 28 / 22
External static pressure*2		Pa Standard:60 Max:100		
Exterior dimensions	Indoor	HeightxWidthxDepth mm 280 x 1,370 x 740		
	Outdoor	1,300 x 970 x 370		
Net weight	Indoor	kg 54		
	Outdoor	105		
Ref.piping size		Liquid/Gas ømm 9.52(3/8") / 15.88(5/8")		
Refrigerant line (one way) length		m Max.100		
Vertical height differences		Outdoor is higher/lower m Max.30 / Max.15		
Outdoor operating temperature range		Cooling °C -15~43*3		
		Heating °C -20~20		
Air filter (option)		Filter kit : UM-FL3EF		
Remote control (option)		wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2		

### NOTES:

The data are measured under the following conditions(ISO-T1).

Cooling:Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating:Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.

\*1 : Indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

\*2 : External static pressure is changeable to be set by the remote control. MAX external static pressure is "High static pressure" setting. The values of sound pressure level become 5dB(A) higher at external static pressure of 100Pa.

\*3 : If a cooling operation is conducted when the outdoor air temperature is -5°C or lower, the outdoor unit should be installed at a place where it is not influenced by natural wind. If wind blows, the low pressure will drop and compressor frequency will increase, this will cause the capacity to drop and may cause the unit to break down.

\*4 : The values are for one indoor unit operation. (Multi system only)