

# FDUM standard inverter

## FDUM (10.0-14.0 kW)

**FDUM:** Packed with features and the latest technologies in commercial air conditioning, the FDUM Standard Inverter ducted range offers energy efficient cooling and heating from 10.0-14.0kW cooling capacity for medium static ducted applications. Wired control or infra red remote control options are available with this compact, discreet model.



FDUM 100/125/140VD

### Wired remote control



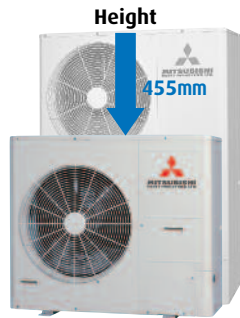
RC-E5 (option) RCH-E3 (option)

### Wireless remote control



RCN-KIT3-E (option)

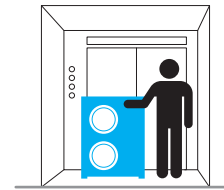
## Compact design of outdoor units



FDC100/125/140 VN(S)X



Easy installation

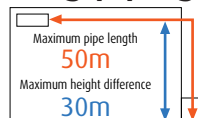


Fits into elevators

	*Reduction in weight	*Reduction in volume
FDC 100 VN(S)X	-8 kgs	8%
FDC 125 VN(S)X	-44 kgs	35%
FDC 140 VN(S)X	-51 kgs	35%

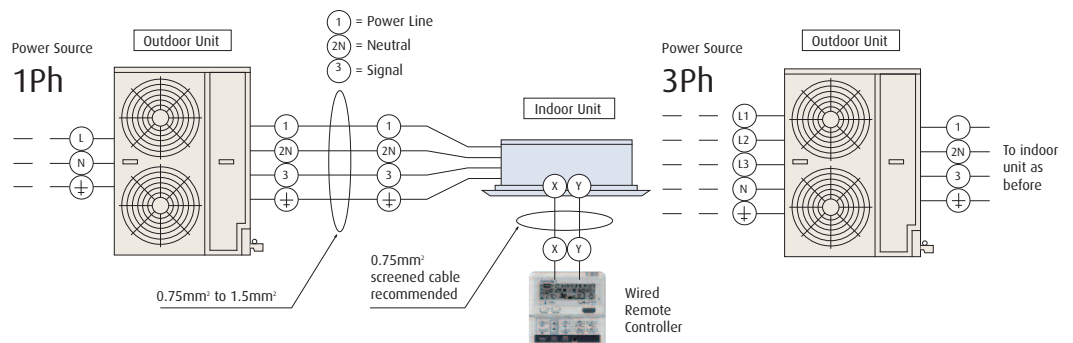
\*Comparison with former models

## Long piping



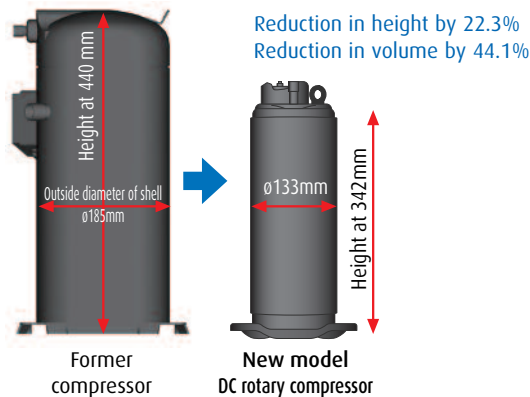
Filter kit  
UM-FL3E : for 100, 125, 140 (option)  
external static pressure loss: 5pa

## Power supply and interconnecting wiring



## High performance twin rotary compressors

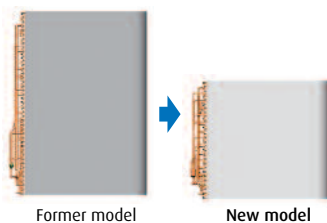
Employing new DC twin rotary compressors enables a maximum high speed range of 120rps to achieve the required capacity. Vector inverter control optimises compressor control further, reducing vibration, noise levels and start up current.



## Improved efficiency of heat exchanger

Redesigning the fins to a straight shape has reduced the pressure loss of the airflow in the heat exchanger. Surface treatment on the fin has enhanced the frost resistance capacity compared with former models.

Owing to the reduction in the size of heat exchanger, the appropriate number of circuits for each model has been applied. Employment of a high-speed motor has increased the airflow and enabled to keep the cooling capacity under a condition of higher outdoor air temperatures<sup>\*)</sup>.

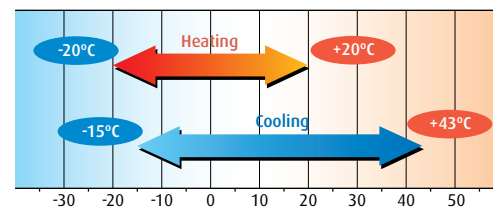


<sup>\*)</sup>Limitation of use is around 43°C: at the maximum

## Wide range of operation

Our new advanced technology has expanded the heating and cooling operation range. This permits installation of the units under low outdoor temperature conditions down to -20°C in heating operation and -15°C in cooling operation.

### FDC 100/125/140



## Controllability

Reliability and compressor protection have also been improved by optimizing the control of the expansion valves and the oil return process.

INDOOR UNIT			FDUM100VD	FDUM100VD	FDUM125VD	FDUM125VD	FDUM140VD	FDUM140VD
OUTDOOR UNIT			FDC100VN	FDC100VS (3 phase)	FDC125VN	FDC125VS (3 phase)	FDC140VN	FDC140VS (3 phase)
WIRED CONTROLLER			RC-E5	RC-E5	RC-E5	RC-E5	RC-E5	RC-E5
Cooling (Nominal)	kW		10.0	10.0	12.5	12.5	14.0	14.0
Cooling Range	kW		4.0 to 11.2	4.0 to 11.2	5.0 to 14.0	5.0 to 14.0	5.0 to 14.5	5.0 to 14.5
UK Cooling	kW		9.4	9.4	11.8	11.8	12.7	12.7
UK Sensible Cooling	kW		7.8	7.8	9.0	9.0	9.4	9.4
E.E.R (Energy Label)			3.57 (A)	3.57 (A)	3.10 (B)	3.10 (B)	2.83 (C)	2.83 (C)
Heating (Nominal)	kW		11.2	11.2	14.0	14.0	16.0	16.0
Heating Range	kW		4.0 to 12.5	4.0 to 12.5	4.0 to 16.0	4.0 to 16.0	4.0 to 16.5	4.0 to 16.5
C.O.P (Energy Label)			4.04 (A)	4.04 (A)	3.68 (A)	3.68 (A)	3.26 (C)	3.26 (C)
Operating Range (Outdoor Air) Cooling	°C DB		-15 to 43					
Operating Range (Outdoor Air) Heating	°C WB		-20 to 20					
INDOOR UNIT			350 x 1370 x 635	350 x 1370 x 635	350 x 1370 x 635	350 x 1370 x 635	350 x 1370 x 635	350 x 1370 x 635
Exterior Dimensions (H x W x D)	mm		350 x 1370 x 635	350 x 1370 x 635	350 x 1370 x 635	350 x 1370 x 635	350 x 1370 x 635	350 x 1370 x 635
External Static Pressure (Standard / Max)	Pa		60 / 90	60 / 90	60 / 85	60 / 85	60 / 85	60 / 85
No. Of Supply Air Spigots	mm		4 x 200	4 x 200	4 x 200	4 x 200	4 x 200	4 x 200
Net Weight	kg		59	59	59	59	59	59
Air Volume* (L - M - H - EH)	m <sup>3</sup> /s		0.37-0.42-0.47-0.57	0.37-0.42-0.47-0.57	0.37-0.42-0.47-0.57	0.37-0.42-0.47-0.57	0.37-0.42-0.47-0.57	0.37-0.42-0.47-0.57
Sound Pressure Level (L / M / H / EH)	dB(A)		32 / 35 / 37 / 41	32 / 35 / 37 / 41	32 / 36 / 38 / 41	32 / 36 / 38 / 41	32 / 36 / 38 / 41	32 / 36 / 38 / 41
OUTDOOR UNIT			845 x 970 x 370	845 x 970 x 370	845 x 970 x 370	845 x 970 x 370	845 x 970 x 370	845 x 970 x 370
Exterior Dimensions (H x W x D)	mm		845 x 970 x 370	845 x 970 x 370	845 x 970 x 370	845 x 970 x 370	845 x 970 x 370	845 x 970 x 370
Net Weight	kg		81	83	81	83	81	83
Sound Pressure Level	dB(A)		49	49	51	51	51	51
ELECTRICAL DATA			32	20 per phase	32	20 per phase	32	20 per phase
Power Source Rating MCB	A		32	20 per phase	32	20 per phase	32	20 per phase
Mains Power To	Outdoor		230V/1ph/50Hz	415V/3ph/50Hz	230V/1ph/50Hz	415V/3ph/50Hz	230V/1ph/50Hz	415V/3ph/50Hz
Interconnecting Wires			3 + E	3 + E	3 + E	3 + E	3 + E	3 + E
Running Current - Cooling	A		12.5	4.2 per phase	18.3	6.1 per phase	23.2	7.6 per phase
Running Current - Heating	A		12.4	4.1 per phase	17.0	5.7 per phase	22.3	7.4 per phase
Power Input - Cooling	kW		2.80	2.80	4.03	4.03	4.95	4.95
Power Input - Heating	kW		2.77	2.77	3.80	3.80	4.89	4.89
Start - Max Run Current	A		5 - 24	5 - 15 per phase	5 - 24	5 - 15 per phase	5 - 24	5 - 15 per phase
INSTALLATION/REFRIGERANT			3/8" (9.52)	3/8" (9.52)	3/8" (9.52)	3/8" (9.52)	3/8" (9.52)	3/8" (9.52)
Ref. Piping Size o.d ins (mm)	Liquid		3/8" (9.52)	3/8" (9.52)	3/8" (9.52)	3/8" (9.52)	3/8" (9.52)	3/8" (9.52)
	Gas		5/8" (15.88)	5/8" (15.88)	5/8" (15.88)	5/8" (15.88)	5/8" (15.88)	5/8" (15.88)
Ref. Max Piping Length	m		50	50	50	50	50	50
Vertical Height Difference (Max)								
- Outdoor Unit Above Indoor Unit	m		30	30	30	30	30	30
- Outdoor Unit Below Indoor Unit	m		15	15	15	15	15	15
Refrigerant Amount Precharged	kg		3.8	3.8	3.8	3.8	3.8	3.8
- For Pipe Length Up To	m		30	30	30	30	30	30
Additional Refrigerant	g/m		60	60	60	60	60	60

<sup>\*)</sup> If wireless remote controller is used, only 3 fan speeds are available: LOW/MED/HIGH.



Because of our policy of continuous improvement, we reserve the right to make changes in all specifications without notice.