

# FDU standard inverter

## FDU (10.0-25.0 kW)

**FDU:** Packed with features and the latest technologies in commercial air conditioning, the FDU Standard Inverter ducted range offers energy efficient cooling and heating from 10.0-25.0kW cooling capacity for high static ducted applications. Wired control or infra red remote control options are available while the new fan control kit accessory enables greater static pressure up to 200Pa.

FDU 100/125/140 VD



FDU 200/250 VD

Wired remote control



RC-E5 (option)



RCH-E3 (option)

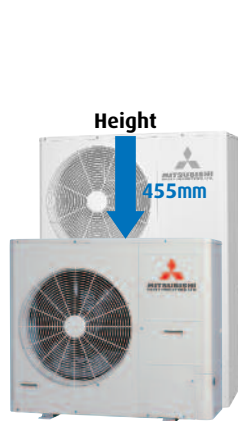
Wireless remote control



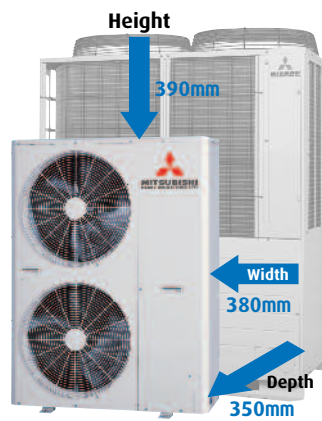
RCN-KIT3-E (option)



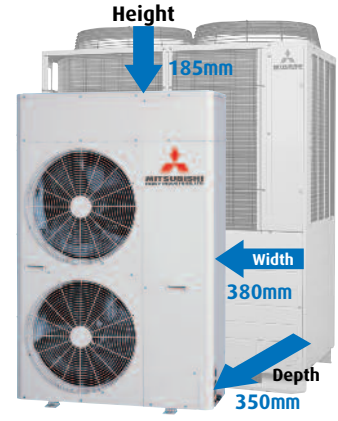
## Compact design of outdoor units



FDC100/125/140 VN(S)X



FDC200VS

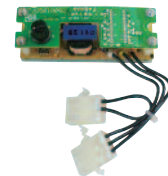


FDC250VS

	*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%
FDC 200 VS	-103 kgs	72%
FDC 250 VS	-85 kgs	67%

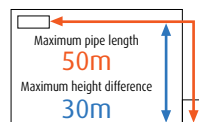
\*Comparison with former models

Fan control kit (100-200Pa)

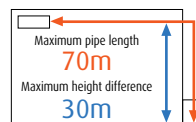


U-FCRA For 200/250 VD (option)

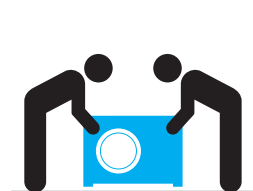
## Long piping



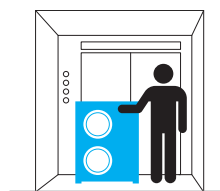
FDU100/125/140 VD



FDU200/250 VD



Easy installation

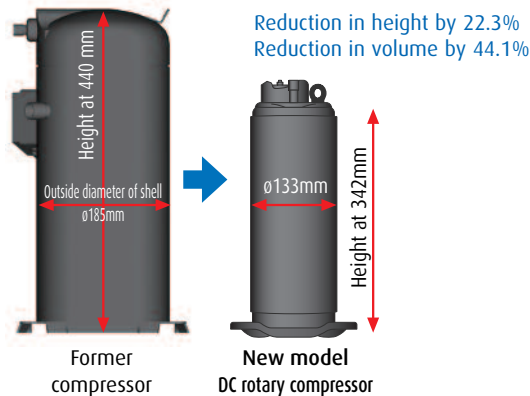


Fits into elevators



## High performance twin rotary compressors

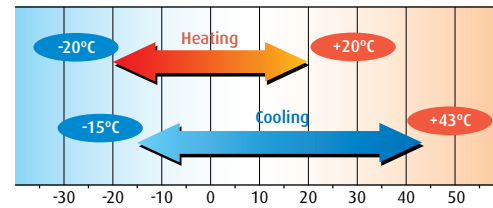
Employing new DC twin rotary compressors enables a maximum high speed range of 120rps to achieve the required capacity. Vector inverter control optimises compressor control further, reducing vibration, noise levels and start up current.



## 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

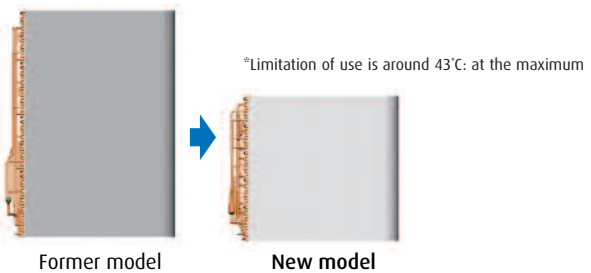


## Controllability

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

## 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\*.



INDOOR UNIT		FDU100VD	FDU100VD	FDU125VD	FDU125VD	FDU140VD	FDU140VD	FDU200VD	FDU250VD	
OUTDOOR UNIT		FDC100VN	FDC100VS (3 phase)	FDC125VN	FDC125VS (3 phase)	FDC140VN	FDC140VS (3 phase)	FDC200VS (3 phase)	FDC250VS (3 phase)	
WIRED CONTROLLER		RC-ES	RC-ES	RC-ES	RC-ES	RC-ES	RC-ES	RC-ES	RC-ES	
Cooling (Nominal)	kW	10.0	10.0	12.5	12.5	14.0	14.0	20.0	25.0	
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	7.0 to 22.4	10.0 to 28.0	
UK Cooling	kW	9.4	9.4	11.8	11.8	12.7	12.7	19.1	23.8	
UK Sensible Cooling	kW	8	8	10	10	10.3	10.3	14.2	18.2	
E.E.R (Energy Label)		3.47 (A)	3.47 (A)	3.09 (B)	3.09 (B)	2.83 (C)	2.83 (C)	3.03 (B)	2.52 (E)	
Heating (Nominal)	kW	11.2	11.2	14	14	16	16	22.4	28	
Heating Range	kW	4.0 to 12.5	4.0 to 18.0	4.0 to 16.0	4.0 to 16.0	4.0 to 16.5	4.0 to 16.5	7.6 to 25.0	9.5 to 31.5	
C.O.P (Energy Label)		3.75 (A)	3.75 (A)	3.69 (A)	3.69 (A)	3.61 (A)	3.61 (A)	3.68 (A)	3.29 (C)	
Operating Range (Outdoor Air) Cooling	°C DB	15 to 43								
Operating Range (Outdoor Air) Heating	°C WB	-20 to 20				-15 to 20				
INDOOR UNIT										
Exterior Dimensions (H x W x D)	mm	350 x 1370 x 650	350 x 1370 x 650	350 x 1370 x 650	350 x 1370 x 650	350 x 1370 x 650	350 x 1370 x 650	360 x 1570 x 830	360 x 1570 x 830	
External Static Pressure (Standard / Max)	Pa	50 / 130	50 / 130	50 / 130	50 / 130	50 / 130	50 / 130	100 / 200	100 / 200	
Size Of Supply Air Spigot (H x W)	mm	297 x 1368	297 x 1368	297 x 1368	297 x 1368	297 x 1368	297 x 1368	250 x 1450	250 x 1450	
Net Weight	kg	63	63	63	63	63	63	92	92	
Air Volume (L - H)	m <sup>3</sup> /s	0.45 - 0.57	0.45 - 0.57	0.56 - 0.70	0.56 - 0.70	0.56 - 0.70	0.56 - 0.70	0.85	1.13	
Sound Pressure Level (L / H)	dB(A)	37 / 42	37 / 42	38 / 43	38 / 43	38 / 43	38 / 43	51	51	
OUTDOOR UNIT										
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	1300 x 970 x 370	1505 x 970 x 370	
Net Weight	kg	81	83	81	83	81	83	122	140	
Sound Pressure Level	dB(A)	49	49	51	51	51	51	57	58	
ELECTRICAL DATA										
Power Source Rating MCB	A	32	20 per phase	32	25 per phase	32	25 per phase	32 per phase	32 per phase	
Mains Power To	Outdoor	230V/1ph/50Hz	415V/3ph/50Hz	230V/1ph/50Hz	415V/3ph/50Hz	230V/1ph/50Hz	415V/3ph/50Hz	415V/3ph/50Hz	415V/3ph/50Hz	
Interconnecting Wires		3 + E	3 + E	3 + E	3 + E	3 + E	3 + E	3 + E	3 + E	
Running Current - Cooling	A	12.7	4.3 per phase	17.8	6.0 per phase	21.7	7.4 per phase	10.8 per phase	15.7 per phase	
Running Current - Heating	A	13.1	4.4 per phase	16.6	5.6 per phase	19.5	6.6 per phase	10.2 per phase	14.4 per phase	
Power Input - Cooling	kW	2.88	2.88	4.04	4.04	4.95	4.95	6.59	9.91	
Power Input - Heating	kW	2.99	2.99	3.79	3.79	4.43	4.43	6.08	8.50	
Start - Max Run Current	A	5 - 25	5 - 16 per phase	5 - 27	5 - 18 per phase	5 - 28	5 - 19 per phase	5 - 24 per phase	5 - 27 per phase	
INSTALLATION/REFRIGERANT										
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)	<40m=3/8" >40m=1/2"	1/2"	
	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)	<35m=7/8->35m=1 1/8"	<35m=7/8->35m=1 1/8"	
Ref. Max Piping Length	m	50	50	50	50	50	50	70	70	
Vertical Height Difference (Max)										
- Outdoor Unit Above Indoor Unit	m	30	30	30	30	30	30	30	30	
- Outdoor Unit Below Indoor Unit	m	15	15	15	15	15	15	15	15	
Refrigerant Amount Precharged	kg	3.8	3.8	3.8	3.8	3.8	3.8	5.4	7.2	
- For Pipe Length Up To	m	30	30	30	30	30	30	30 (15 if 1/2" & 1 1/8")	30	
Additional Refrigerant	g/m	60	60	60	60	60	60	60 (120 if 1/2" & 1 1/8")	120	



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