

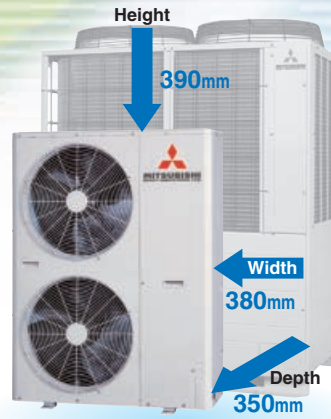
# Micro Inverter

## Compact Design of outdoor units

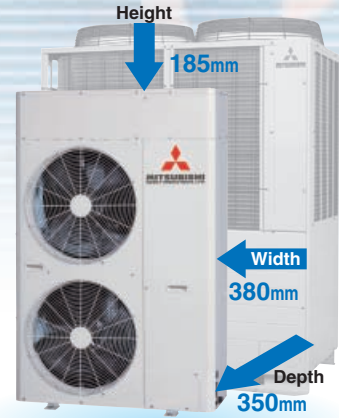
### Line up

	1.5	2	2.5	3	4	5	6	8	10
Micro Inverter					●	●	●	●	●

FDC100VN/VS (4.0HP)  
FDC125VN/VS (5.0HP)  
FDC140VN/VS (6.0HP)

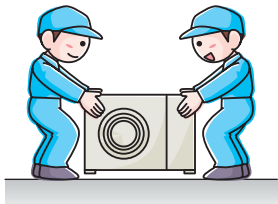


FDC200VS (8.0HP)



FDC250VS (10.0HP)

### Easy installation



### Reduction in weight (kg)

	Former model	New model	*Reduction
4.0HP	82	74	-8
5.0HP	118	74	-44
6.0HP	125	74	-51
8.0HP	225	122	-103
10.0HP	225	140	-85

\* Comparison with former models

### Fits into elevators



### Reduction in volume (%)

	Former model	New model	*Reduction
4.0HP	328	303	8%
5.0HP	467	303	35%
6.0HP	467	303	35%
8.0HP	1643	467	72%
10.0HP	1643	540	67%

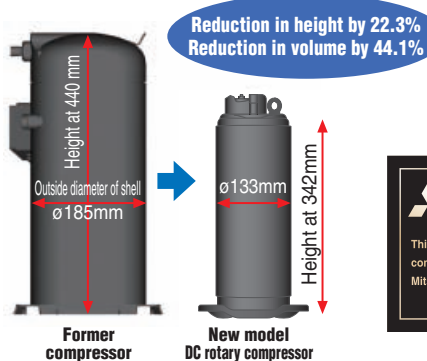
\* Comparison with former models

## Size reduction and high efficiency performance on the DC twin rotary compressors

(Micro Inverter 4-6HP)

Employment of DC twin rotary compressor has enabled to utilize a high-speed range of up to 120 rps at the maximum to secure the required capacity.

Optimum compressor control has been realized by employing the vector control\* and the starting current has been improved significantly compared with former models. Moreover, vibration has been reduced.



\* Vector control means a technique to realize an optimum control by converting the current wave to a smooth sinusoidal waveform

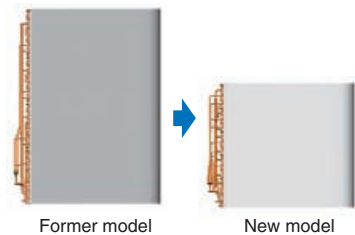


## Improved efficiency of heat exchanger

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 HP 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\*.

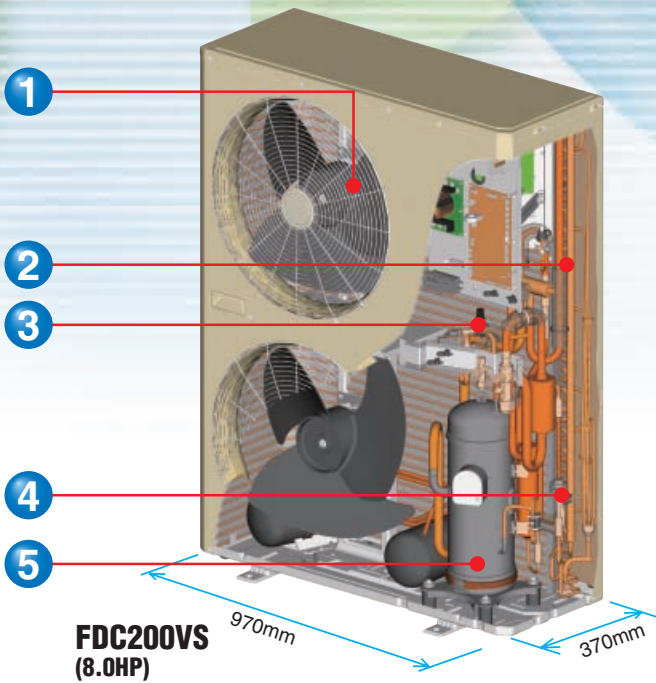
\* Limitation of use is around 43°C at the maximum.



## Controllability

Reliability in the protection of compressor has been improved by optimizing the controls of oil return, electronic expansion valve, etc.

## High technology



POINT  
1

DC fan motor uses less energy

POINT  
2

Optimization of heat exchanger path.  
More efficient heating and cooling

POINT  
3

Super heat control with low pressure  
sensor, works better in tough conditions

POINT  
4

High efficiency refrigeration circuit

POINT  
5

Newly developed High efficiency DC  
scroll compressor

### Employment of the scroll inverter compressors(8/10HP)

A control over wide range of capacity and a high efficiency has been realized by inverter-driven scroll compressors. In addition, the starting current significantly is improved. The size has also been reduced by 3.2% in height and 31.8% in volume.

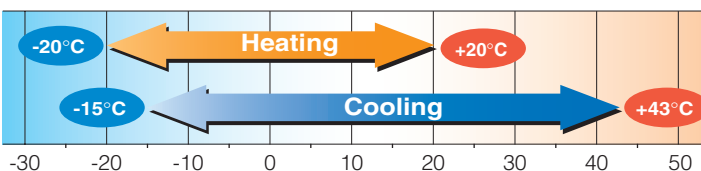
### Employment of DC fan motor

Employment of DC fan motor has enabled to realize an excellent efficiency of approx. 60% higher than former models.

### Wide range of operation

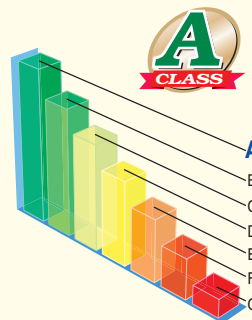
Our new advanced technology has expanded the heating and cooling operation range. This permits installation of the units under a low outdoor temperature conditions down to -20°C In heating operation and -15°C in cooling operation.

(FDC 100/125/140)



### Energy labeling "Class A"

MHI models have cleared the class A standard, the highest energy saving level, with their high COP (coefficient of performance).



Energy		Air-conditioner
Manufacturer		
Outside unit		
Inside unit		
<b>More efficient</b>		
A		
B		
C		
D		
E		
F		
G		
<b>Less efficient</b>		
Annual energy consumption, kWh in cooling mode		
<small>(Actual consumption will depend on how the appliance is used)</small>		
Cooling output	kW	
Energy efficiency ratio		
<small>Full load (the higher the better)</small>		
Type	Cooling only	—
	Cooling + Heating	—
	Air cooled	—
	Water cooled	—
Heat output		kW
Heating performance		
A: higher G: lower		
Noise		
<small>(dB(A) re 1 pW)</small>		
<small>Further information is contained in product brochures</small>		
<small>Air-conditioner Energy Label Directive 2002/31/EC</small>		