

# Winner: ACR Product of the Year 2016



Toshiba SMMS-E VRF range

## ACR Product of the Year 2016

# TOSHIBA

Leading Innovation >>>

Developments in three core technologies - the compressor, heat exchanger and advanced intelligent control - combine to ensure all outdoor units in the new SMMS-E VRF range have an ESEER (European Seasonally Adjusted Energy Efficiency Rating) higher than 7, an industry first.

Wear surfaces on compression vanes are treated with a high-tech Diamond-Like Carbon (DLC) coating, giving outstanding hardness, wear resistance and reliability. This enables significant increase in compressor rotation speed, resulting in a higher displacement volume. Up to 50 per cent greater than previous generations.

**Highly Commended:** Mitsubishi Electric City Multi YLM Range of VRF

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## Details

The heat exchanger has been completely redesigned, which results in a 13 percent increase in surface area available for heat transfer. It provides continuous heating with no requirement to stop during defrost. This is made possible by the use of a new hot-gas bypass control.

A new approach to intelligent operation gives occupants improved comfort, energy efficiency and reliability by using the independent Pulse Motor Valves (PMV's) to control the flow of refrigerant to each indoor unit. Wireless commissioning allows performance data and status reports to be automatically emailed to end users or engineers. Pipe work and connectivity has been increased, giving double the previous allowable length.

Finally, as a result of the new compressors design and improved system controls, the operating temperature range has been significantly extended, and is now -5 to 46deg C for cooling operation and -25deg C in heating mode.