

All-electric rooftop air conditioning unit for electro and hybrid buses

REVO[®]-E GLOBAL



Strong lightweight electrifies the world

The REVO[®]-E Global is our latest global air conditioning development for buses with alternative powertrains, designed specifically to meet the demands of global markets. Particular emphasis has been placed on lightweight construction, performance and ease of installation.

In addition to heat pump technology, customers also have the option of PTC heating and battery cooling. To enhance riders' experience, the system cools and heats the interior of the electric vehicle efficiently and with low energy consumption. The system is a "plug & play" unit that can even be delivered pre-filled to the customer.

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SPHEROS

HIGHLIGHTS



Low life-cycle costs

- Low consumption of energy due to the low unit weight
- Short dimensions allow space for battery system on the roof
- Long duration due to brushless EC blowers
- Nearly maintenance-free



Environmentally friendly

- Safety against leakage due to the hermetically sealed refrigerant circuit
- Noise emissions optimized



Comfort

- Cooling capacity from 21 up to 40 kW
- Heating with heat pump or PTC heater possible as an option
- Tropical version: High cut off temperature of 55 °C



Range of driving

- Range of application: -20 °C to +55 °C
- Maximized range due to the low unit weight and highly efficient heat pump up to -10 °C (R407C)
- Optimized power consumption
- Variable regulation of the PTC heater
- Automatic de-icing function on demand, for energy saving heat pump operation at cold outside temperatures < 5 °C
- Flexibel and efficient power output due to infinitely variable compressor and fans

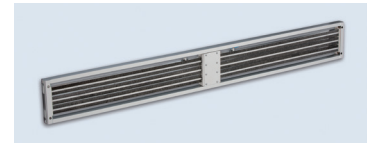


Battery Cooling function and more

- Integrated compressor, no installation of refrigerant lines necessary
- Integrated plate heat exchanger for BTM
- Designed for R407C
- Design for R134a on demand

PTC HEATER

The new high-voltage PTC heaters complement our heating systems. They are intended for use whenever there is simply an additional need for heating. In operation the PTC heaters can be infinitely adjusted by means of an electronic control unit developed by Spheros.



TECHNICAL DATA

	REVO®-E Global 250	REVO®-E Global 350	REVO®-E Global 400	REVO®-E Global 450	REVO®-E Global 500
Max. cooling capacity (kW)	21	26	33	35	40
Max. cooling / heat pump capacity (kW)	21 / 12	26 / 16	30 / 19	32 / 21	37 / 24
Optional PTC heater (kW)	0-10	0-15	0-20	0-20	0-20
HV range	450VDC to 850VDC	450VDC to 850VDC	450VDC to 850VDC	450VDC to 850VDC	450VDC to 850VDC
Refrigerant	R407c	R407c	R407c	R407c	R407c
Fresh air (optional)	20 %	20 %	20 %	20 %	20 %
Unit weight (kg)	180	210	215	240	230
with heat pump	250	260	280	270	290
Cut-off temperature (°C)	50	50	50	55	55
Dimensions (L x W x H in mm)	1,960 x 1,900 x 295	2,410 x 1,900 x 295	3,100 x 1,900 x 295	3,360 x 1,900 x 295	3,360 x 1,900 x 295
Battery cooling or Frontbox connection*	optional	optional	optional	optional	optional
Fans / Blowers	2 / 4	3 / 4	5 / 6	5 / 8	5 / 8
		SOP Q4/2024			SOP Q2/2024

* max 7 / 10kW - Battery cooling during driving / overnight charging
All with integrated inverter 24V / 380V DC, customized version without DC/DC converter possible