

ALL-ELECTRIC ROOFTOP AIR CONDITIONING UNIT FOR ELECTRO- AND HYBRID BUSES

REVO[®]-E GLOBAL



STRONG LIGHTWEIGHT ELECTRIFIES THE WORLD

The REVO[®]-E Global is supplementing our range of all-electric rooftop air conditioning units and is specifically oriented to the demands of the global markets. A special emphasis was placed on lightweight construction, performance and simple installation. In addition to heat pump technology, customers also have the option of PTC heating and battery cooling.

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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 up to 33 kW
- Heating with PTC heater or heat pump possible as an option
- Tropical version: High cut off temperature of 55°C



Range of driving

- Range of Driving: -20°C to +50°C
- Maximized range due to reduced system weight and highly efficient heat pump down to -10°C (R407C)
- Variable regulation of the PTC heater
- Automatic de-icing function for energy saving heat pump operation at cold outside temperatures < 5°C
- Flexibel and efficient power output due to infinitely variable compressor and fans
- Electronic expansion valves (EEV) with Valeo control units for efficient operation with optimum high pressure control (optimal COP control)



Others

- Integrated compressor, no installation of refrigerant lines necessary
- Integrated plate heat exchanger for BTM
- Designed 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 Valeo.



Optionally with PTC heating, available in 20 kW versions.

TECHNICAL DATA

REVO®-E Global REVO®-E Global T	Version 1 Cooling	Version 1 Tropo Cooling (application up to 55°C)	Version 2 Cooling + PTC heater	Version 3 Cooling + heat pump	Version 4 Cooling + heat pump + PTC heater + BTM
Integrated converter	24V DC / 380V DC	24V DC / 380V DC	24V DC / 380V DC	24V DC / 380V DC	24V DC / 380V DC
Max. cooling capacity (kW) Refrigerant R 134a ²⁾ Refrigerant R 407c	25 33	- 33	25 33	23 30	23 30
Heating capacity heat pump (kW) ³⁾ Refrigerant R 134a ²⁾ Refrigerant R 407c	- -	- -	- -	13 19	13 19
Heating capacity PTC (opt.) (kW)	-	-	0 - 20	-	0 - 20
BTM capacity (kW) during the ride during the night charge	max 7 10	max 7 10	max 7 10	max 7 10	max 7 10
Current consumption (A) (26V DC)	nominal 70 ¹⁾	nominal 70 ¹⁾	nominal 70 ¹⁾	nominal 70 ¹⁾	nominal 70 ¹⁾
Current consumption (A) (600V DC) Refrigerant R 134a ²⁾ Refrigerant R 407c	12 ²⁾ / 7 ³⁾ 18 ²⁾ / 11 ³⁾	- 18 ²⁾ / 11 ³⁾	12 ²⁾ / 7 ³⁾ 18 ²⁾ / 11 ³⁾	12 ²⁾ / 10 ⁴⁾ 15 ²⁾ / 14 ⁴⁾	12 ²⁾ / 10 ⁴⁾ 15 ²⁾ / 14 ⁴⁾
Fresh air (optional) ⁵⁾	20 %	20 %	20 %	20 %	20 %
Evaporator air flow m ³ /h	6,900	6,900	6,900	6,900	6,900
Unit weight (kg)	230	238	250	250	270
Cut-off temperature (°C)	50	55	50	50	55
Dimensions (L x W x H in mm)	3,100 x 1,900 x 295	3,550 x 1,900 x 295	3,100 x 1,900 x 295	3,100 x 1,900 x 295	3,100 x 1,900 x 295

1) Nominal (condenser 80 %, evaporator 70 %)

2) Max. cooling capacity (compressor speed 90 Hz)

3) Regulated: temperature passenger compartment at set-point 27°C and ambient 35°C)

4) Max. heat pump (compressor speed 90 Hz)

5) Referring of total free evaporator air flow;

6) Heat Pump Application: 5°C ≤ T_{AMBIENT} ≤ 15°C

7) R134A on demand