



CLIMATE CONTROL SYSTEMS / UTILITY & CARGO

JUST THE RIGHT CLIMATE FOR PROFESSIONALS

Heating & Air Conditioning Solutions -Connected with Digital Services 2 / EBERSPÄCHER - CLIMATE CONTROL SYSTEMS

CLIMATE CONTROL SYSTEMS



INNOVATIVE MARKET AND CUSTOMIZED **SOLUTIONS**





EXPERTS IN COOLING AND HEATING.

FOR SPECIAL VEHICLES

Heating, cooling and digital services - various solutions, one partner

Whether it's winter or summer, the right temperature in the driver's cab and loading compartment is crucial for transporters. It provides comfortable driving and working conditions, and ensures that temperature-sensitive goods and materials can be transported safely. As a system provider of heating and cooling solutions, Eberspächer ensures the perfect climate inside the vehicle - regardless of the application or powertrain type. As experts in thermal management, we are continuously developing and improving our innovative solutions: In addition to heaters and air conditioning systems, Eberspächer also offers innovative digital services such as cold chain monitoring - all from a single source.

[Utility & Cargo]























4 / UTILITY & CARGO SEGMENT

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OUR PRODUCT PORTFOLIO

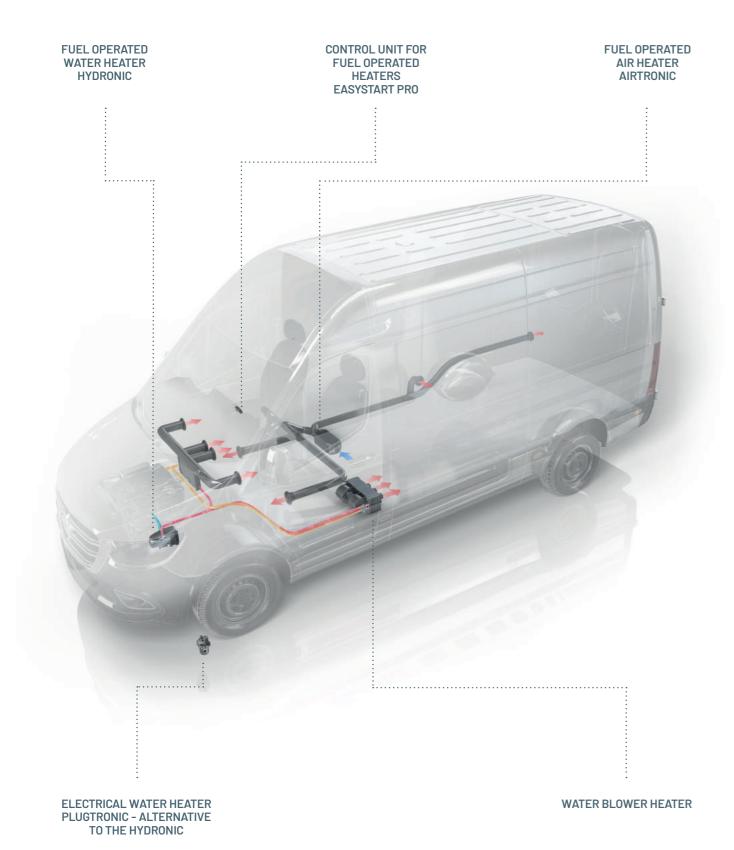
COOLING HEATING ELECTRICAL HEATERS SPLIT SYSTEMS BLOWERHEATERS COONTRO PRESSURIZATION SYSTEMS e /// connected ^{FU}EL OPERATED HEATERS COOLING BOXES XELLSTOR CONTROL ACCESSORIES POOLS BLOWERFAN INSTALLATION **ACCESSORIES & CONTROLS**

PRODUCTS FOR UTILITY & CARGO VEHICLES

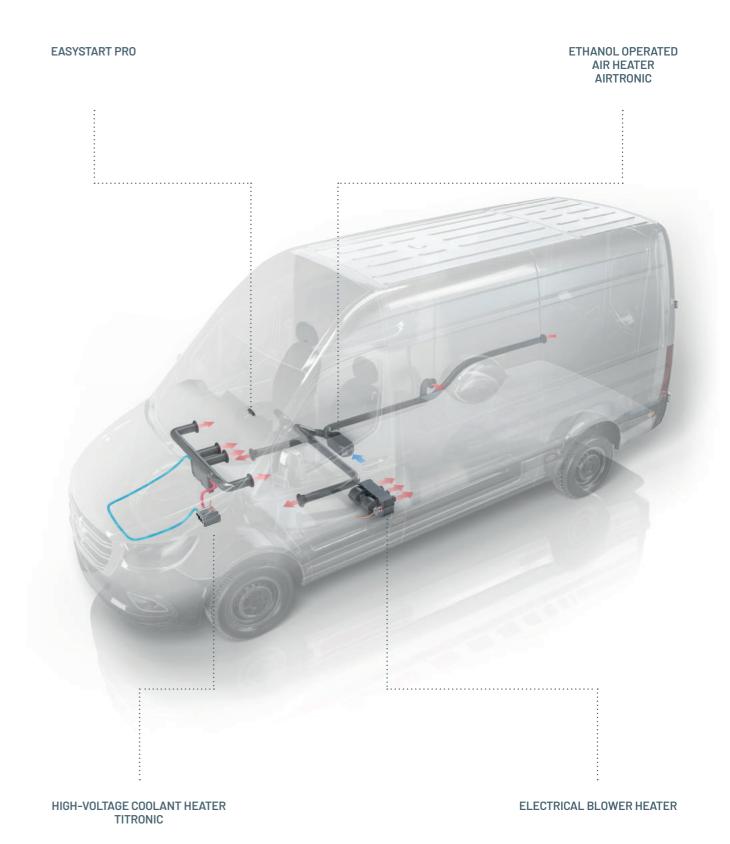


HEATING SOLUTIONS

HEATING SOLUTIONS FOR FUEL-OPERATED TRANSPORTER



HEATING SOLUTIONS FOR ELECTRIC TRANSPORTER



FUEL OPERATED AIR HEATERS

AIRTRONIC S3/M3/L3



- Fast and reliable heating of the loading compartment and driver cabin
- Low energy consumption ideal for long heating periods while the vehicle at a standstill
- Brushless motor ensures a long service life of 5,000 hrs.
- Operates quietly so loading compartment can be used as a work or resting space

| Fuel | | Gasoline | | Diesel | | |
|-------------------------|--------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Version | [12 V] | S3 Commercial B2L | M3 Commercial B4L | S3 Commercial D2L | M3 Commercial D4L | L3 Commercial D6L |
| Heating performance | kW | 1.0 – 2.0 | 1.3 - 4.0 | 0.85 - 2.2 | 1.05 – 4.0 | 1.5 – 6.0 |
| Fuel consumption | l/h | 0.14 - 0.26 | 0.17 - 0.55 | 0.1 - 0.27 | 0.1 - 0.49 | 0.16 - 0.74 |
| Weight | kg | 2.5 | 4.5 | 2.5 | 4.4 | 6.8 |
| Main dimension* x w x | h mm | 310 x 115 x 122 | 376 x 140 x 150 | 310 x 115 x 122 | 376 x 140 x 150 | 438 x 160 x 170 |
| Interfaces | | | | CAN/ LIN/ S+ | | |

^{*} Air heater connection diameter ø 75 mm

AIRTRONIC 2 ETHANOL



- Fast and reliable heat for electric vehicles
- No impact on the vehicle's electric range
- Low-emission heating of the vehicle's interior
- Constant, individually adjustable temperature
- Flexible installation in the interior, trunk or underfloor

| Fuel | | Ethanol |
|--------------------------|--------|----------------------|
| Version | [12 V] | S2 Commercial E2L |
| Heating performance | kW | 0.9 - 2.2 |
| Fuel consumption | l/h | 0.16 – 0.49 |
| Weight | kg | 2.7 |
| Main dimension* Ixwxh mm | | 310 x 115 x 122 |
| Interfaces | | CAN/LIN/S+ |

 $^{^{\}ast}$ Heating air connection diameter ø 75 mm

FUEL OPERATED WATER HEATERS

HYDRONIC S3





- Preheating of the engine and the vehicle's interior
- Long service life of 5,000 hrs. and fewer spare parts due to robust components
- Cost savings and less downtime for end customers thanks to low fuel and energy consumption
- Heater operation integrated in the vehicle's control panel and integration in vehicle's own diagnostics possible

| Fuel | | Gaso | oline | Diesel | |
|-------------------------|--------|-------------------|-------------------|-------------------|-------------------|
| Version | [12 V] | S3 Economy B4E | S3 Economy B5E | S3 Economy D4E | S3 Economy D5E |
| Heating performance | kW | 1.8 - 4.3 | 1.8 – 5.0 | 1.3 - 4.3 | 1.3 - 5.0 |
| Fuel consumption | l/h | 0.57 | 0.67 | 0.53 | 0.59 |
| Weight | kg | 2.0 | | | |
| Main dimension* x w x | h mm | 215 x 91 x 124 | | | |
| Interfaces | | CAN/S+ or CAN/LIN | | | |

^{*}With straight connection fittings



BLOWER HEATER SOLUTIONS

WATER BLOWER HEATER





- Ideal auxiliary heater for the interiors of vans with internal combustion engines
- Large portfolio of different sizes and power levels to fit every customer application
- Easily and quickly adapted to meet customer-specific requirements as well as existing applications
- Complete system including hoses, control units and air diffusion available

| Version | [12 V] | Alizé 2 HV | Compact EV01 | Compact EV02 | Silencio 2 HV | Super K HV | Kool HV | Falkon HV |
|------------------------|--------|--------------------|--------------------|--------------------|----------------------|--------------------|--------------------|--------------------|
| Heating performance | kW | 3.4 | 4.3 | 5.2 | 5.5 | 7.6 | 10 | 14.8 |
| Airflow | m³/h | 220 | 230 | 350 | 250 | 500 | 520 | 725 |
| Electrical consumption | W | 70 | 70 | 100 | 16 | 100 | 180 | 360 |
| Main dimensions Ixwxh | mm | 189 x 175 x 132 | 114 x 255 x 189 | 114 x 279 x 106 | 152 x 321 x 125.5 | 216 x 368 x 130 | 261 x 384 x 158 | 296 x 430 x 167 |

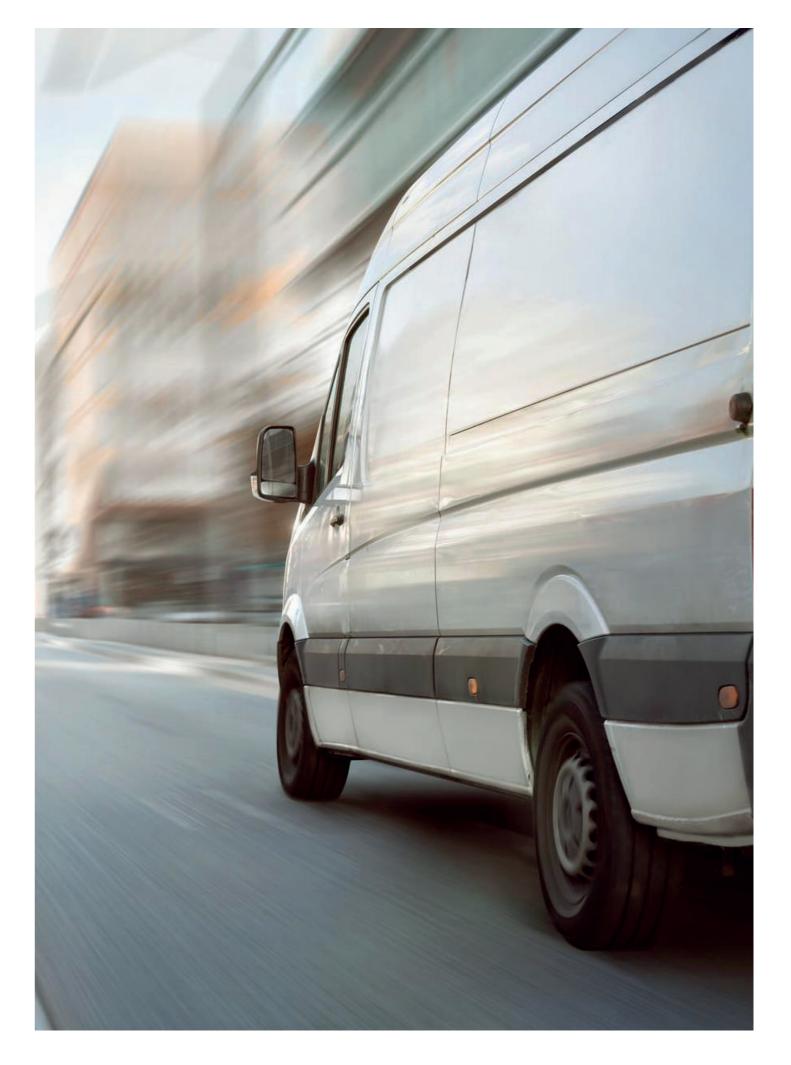
ELECTRICAL BLOWER HEATER





- Fast and reliable heating solution for electric transporters
- Heater is equipped with secured PTC element and safety thermal switch
- Large portfolio of different sizes and power levels to fit every customer application
- Complete system including control units and air diffusion systems available

| Version | [12 V] | Alizé 2 EHV | Kelec EV01 | Kelec EV02 | Kool 2 EHV | Falkon EHV |
|-------------------------|--------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Heating performance | kW | up to 2.2 | up to 1.7 | up to 2.2 | up to 4 | up to 6 |
| Airflow | m³/h | 210 | 230 | 350 | 520 | 411 |
| Electrical consumption | W | from 18 to 33 | from 11 to 74 | from 7 to 74 | depends on version | depends on version |
| Operating voltage range | V DC | 48 - 120 | 24 - 80 | 24 - 300 | 48 - 750 | 48 - 800 |
| Operating voltage range | V AC | 230 - 480 | | | | |
| Main dimensions Ixwxh | mm | 189 x 175 x 132 | 114 x 255 x 114 | 196 x 273 x 114 | 261 x 384 x 158 | 297 x 432 x 167 |



ELECTRICAL HEATERS

HIGH-VOLTAGE COOLANT HEATER - TITRONIC





- Powerful and reliable PTC technology offers high heating performance
- Precise and convenient heating of the loading compartment
- Battery conditioning extends battery life, shortens charging times and increases range
- Designed with high-voltage expertise for OEM installations

| Version | | CHHV 50 G3 |
|------------------------------|----|-----------------|
| Heating performance | kW | 5.0* |
| Operating voltage range (HV) | V | 250 - 450 / 12 |
| Weight | kg | 2.0 |
| Main dimensions I x w x h | mm | 160 x 159 x 105 |
| Interfaces | | LIN 2.1 |

^{*} UN = 350 V, TCO = 60 °C, QCO = 10 L/MIN, COOLANT = 50:50

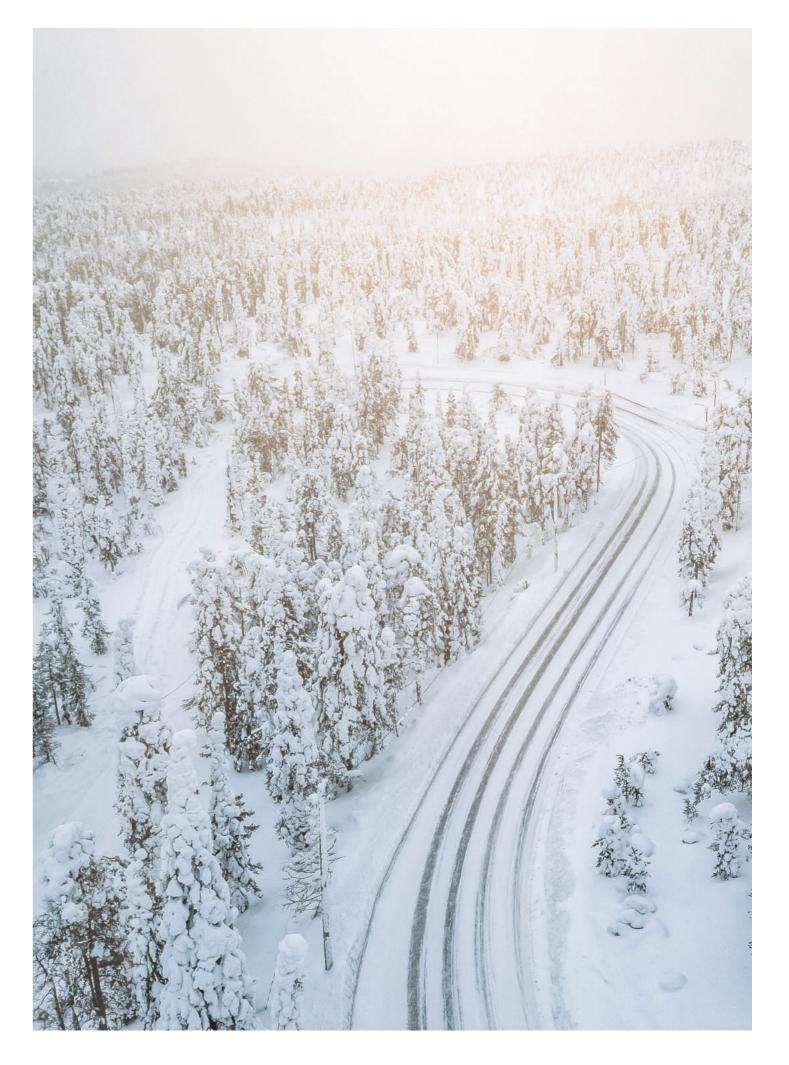
ELECTRICAL WATER HEATER - PLUGTRONIC





- Quick coolant circuit heating for a pre-heated engine
- Ideal temperature in the loading compartment for more effective work
- Perfect solution for last mile application
- Several installation positions possible
- Environmentally friendly heating solution for parked vehicles
- No fossil fuels, zero emissions
- One-handed, easy power cable plug-in

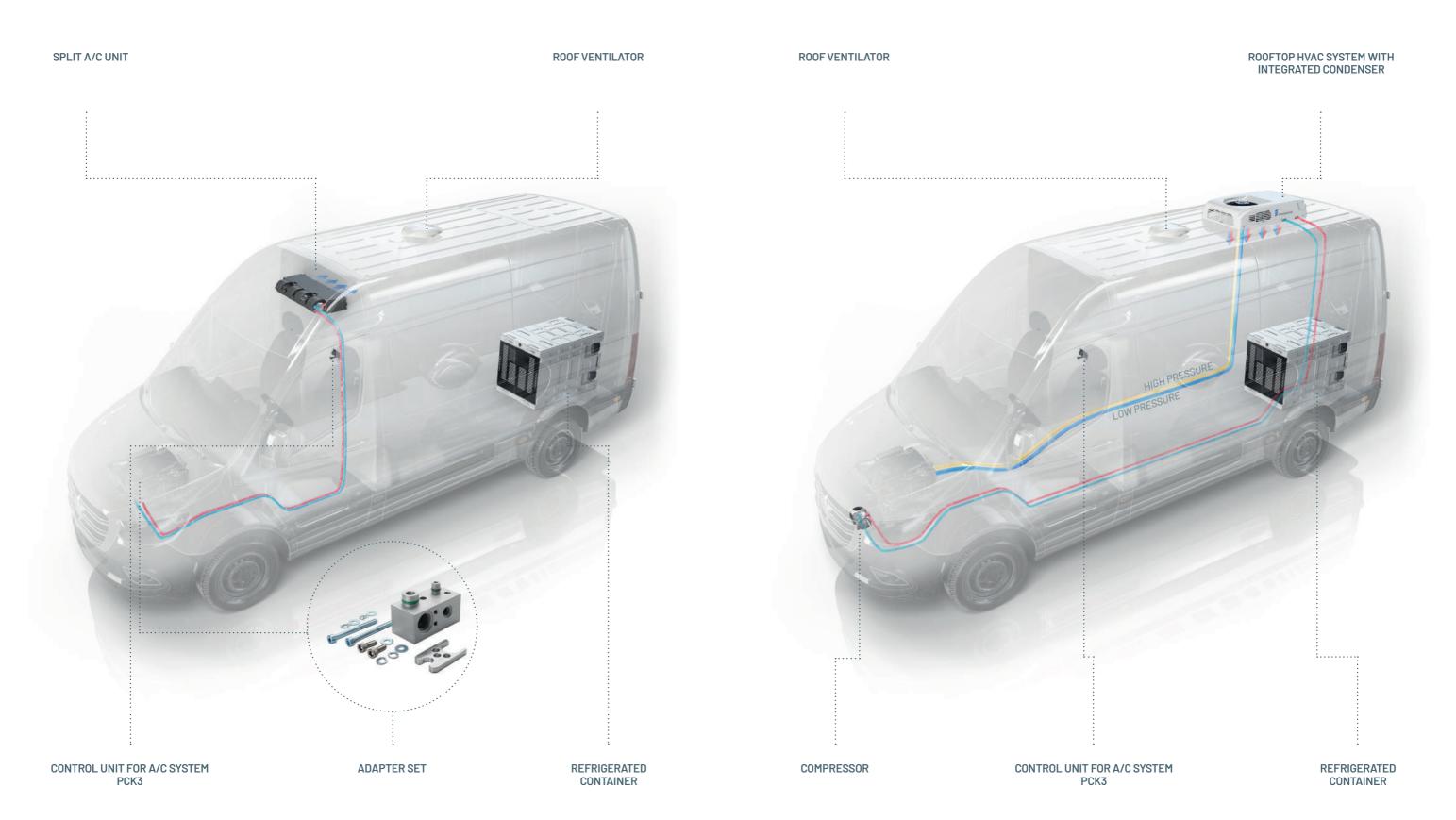
| Version | | 800 | 1,850 | |
|------------------------------|------|----------------|-------|--|
| Heating performance | kW | 0.8 | 1.85 | |
| Operating voltage range (HV) | VAC | 230 | | |
| Weight | kg | 0.8 | | |
| Main dimensions Ixwxh | mm | 151 x 131 x 81 | | |
| Interfaces | V DC | 12 / 24 | | |



COOLING SOLUTIONS

COOLING SOLUTIONS WITH INTEGRATED ADAPTER SET

COOLING SOLUTIONS WITH ADDITIONAL COMPRESSOR



SPLIT SYSTEMS

HORIZONTAL EVAPORATORS FOR SPLIT SYSTEMS

- Powerful evaporators provide climate control for both the driver cabin and loading compartment
- Available as A/C only (VAC), HVAC or EHVAC version for electric transporter
- Large portfolio of different sizes and power levels to fit every customer application
- Complete system including hoses, control units and air diffusion systems available



VAC UNITS FOR BOTH FUEL OPERATED AND ELECTRIC TRANSPORTER



| á | - | be. | |
|---|----|-----|--|
| | | - | |
| 1 | | -46 | |
| 4 | | | |
| | 14 | 10 | |

| Version | [12 V] | Super K VAC | Kool 2 VAC ⁽²⁾ | Falkon VAC (1) | HK EVO4 VAC (2) |
|------------------------|--------|-----------------|---------------------------|-----------------|-----------------|
| Cooling performance | kW | up to 4 | 5.7 | 9 | 10.7 |
| Airflow | m³/h | 440 | 520 | 660 | 1,300 |
| Electrical consumption | W | 100 | 180 | 360 | 190 |
| Main dimensions Ixwxh | mm | 216 x 368 x 137 | 261 x 384 x 158 | 297 x 432 x 167 | 780 x 334 x 120 |

⁽¹⁾ Available in FA version with air diffusion included. ⁽²⁾ Available in FAI version with air diffusion and control unit included.

HVAC UNITS FOR FUEL OPERATED TRANSPORTER





| Version | [12 V] | Super K HVAC | Kool 2 HVAC (2) | Falkon HVAC (1) | HK EVO4 HVAC (2) |
|-------------------------|--------|-----------------|-----------------|-----------------|------------------|
| Cooling performance | kW | 3.5 | 4.5 | 7.7 | 8.6 |
| Heating performance | kW | 4.3 | 6.6 | 10 | 9.5 |
| Airflow | m³/h | 440 | 520 | 660 | 1,300 |
| Electrical consumption | W | 100 | 180 | 360 | 190 |
| Main dimensions x w x | h mm | 216 x 368 x 137 | 261 x 384 x 158 | 297 x 432 x 167 | 780 x 334 x 120 |

⁽¹⁾ Available in FA version with air diffusion included. ⁽²⁾ Available in FAI version with air diffusion and control unit included.

EHVAC UNITS FOR ELECTRIC TRANSPORTER





| Version | [12 V] | Super K EHVAC | Kool 2 EHVAC | Falkon EHVAC |
|-------------------------|--------|-----------------|-----------------|-----------------|
| Cooling performance | kW | 3.5 | 4.5 | 7.7 |
| Heating performance | kW | up to 4 | up to 4 | up to 5 |
| Airflow | m³/h | 440 | 520 | 660 |
| Electrical consumption | W | 100 | 180 | 360 |
| Operating voltage range | V DC | 24 - 750 | | |
| Operating voltage range | VAC | | 230 - 480 | |
| Main dimensions Ixwxh | mm | 216 x 368 x 137 | 261 x 384 x 158 | 297 x 432 x 167 |

EHVACs are also available in a hybrid version: evaporator + PTC heater + water heater

VERTICAL EVAPORATORS FOR SPLIT SYSTEMS

- Directional scrolls can be positioned independently
- Integrated electrical flap on air intake for outside air circulating operation available (MK1), optional for MK0
- Available as HVAC or EHVAC version for electric transporter
- Fast application development and easy installation
- Different covers and air distribution systems available

HVAC UNITS FOR FUEL OPERATED TRANSPORTER





| Version | [12 V] | MKO HVAC | MK1 HVAC |
|---------------------------|--------|-----------------|-----------------|
| Cooling performance | kW | 4.3 | 7 |
| Heating performance | kW | 3.3 | 7.8 |
| Airflow | m³/h | 435 | 700 |
| Electrical consumption | W | 220 | 360 |
| Main dimensions x w x h | n mm | 160 x 315 x 378 | 159 x 428 x 443 |

EHVAC UNIT FOR ELECTRIC TRANSPORTER



| Version | [12 V] | MK0 EHVAC |
|---------------------------|--------|-----------------|
| Cooling performance | kW | 4.3 |
| Heating performance | kW | 2.2 |
| Airflow | m³/h | 390 |
| Electrical consumption | W | 220 |
| Operating voltage range | V DC | 24 - 750 |
| Main dimensions x w x h | mm | 160 x 324 x 378 |

Picture shows optional air filters: the air section can be fit with two paper filters.

ROOFTOP EVAPORATORS FOR SPLIT SYSTEMS

- Powerful rooftop evaporator system
- Air diffusion with integrated control unit available
- Saves space in the vehicle

- Can be combined with external condenser unit Power K Reverse, which includes an electric compressor and drier filter
- Available as A/C only (VAC) or HVAC

VAC AND HVAC UNITS





| Version | [12 V] | Klimatop VAC | Klimatop HVAC | |
|------------------------|--------|-----------------|---------------|--|
| Cooling performance | kW | 5.5 | | |
| Heating performance | kW | - | 6 | |
| Airflow | m³/h | 595 560 | | |
| Electrical consumption | W | 150 | | |
| Main dimensions Ixwxh | mm | 125 x 445 x 580 | | |



ROOFTOP SYSTEMS

- Compact system, includes evaporator, condenser and drier filter
- Can be connected to a standard compressor
- Especially suited for air conditioning in loading compartments
- Available as A/C only (VAC), HVAC or EHVAC version for electric transporter

VAC AND HVAC SYSTEMS





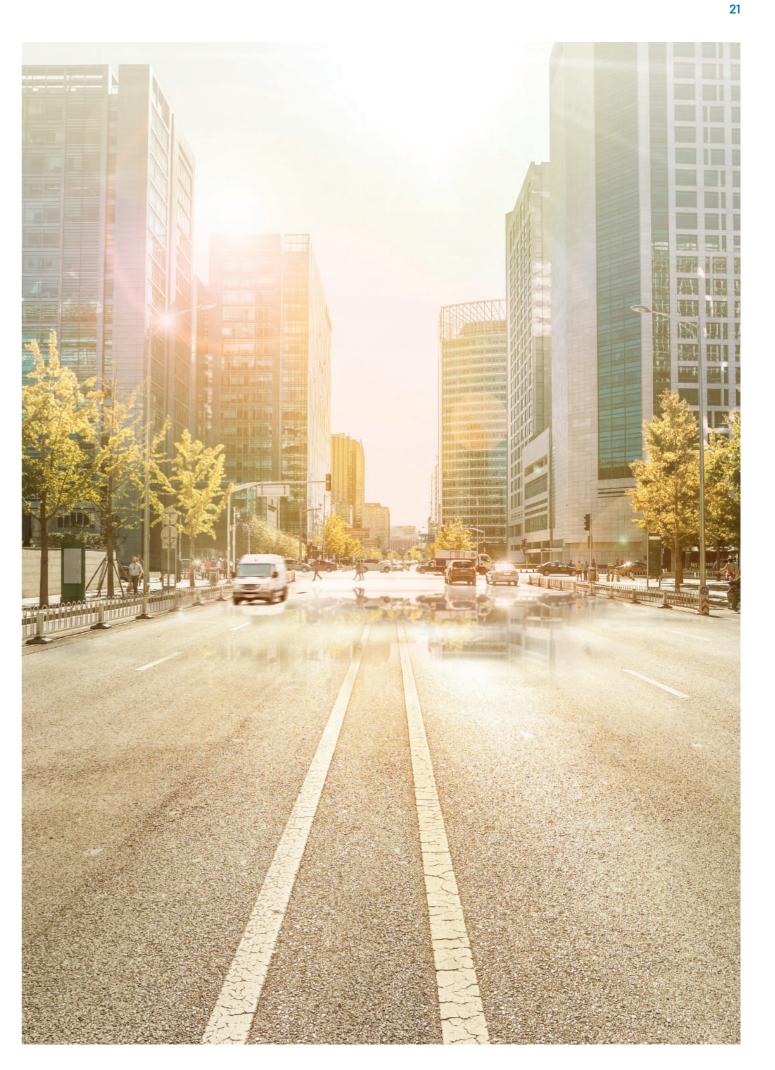
| Version | [12 V] | RK12 VAC | RK12 HVAC | |
|----------------------|--------|-------------------|-----------|--|
| Cooling performance | kW | 11.5 | 11.5 | |
| Heating performance | kW | - | 15 | |
| Airflow | m³/h | 950 | | |
| Weight | kg | 50 | | |
| Main dimensions Ixwx | h mm | 1,090 x 940 x 179 | | |

EHVAC SYSTEM





| Version | [12 V] | RK12 EHVAC CPF | |
|-------------------------|--------|-------------------|--|
| Cooling performance | kW | up to 11 | |
| Heating performance | kW | up to 14 | |
| Airflow | m³/h | up to 1,380 | |
| Weight | kg | 84.5 | |
| Main dimensions x w x | th mm | 1,504 x 890 x 250 | |



ACCESSORIES AND CONTROLS

BUILT-IN CONTROL UNIT FOR FUEL OPERATED HEATERS - EASYSTART PRO





- Intuitive timer setup
- Easy to use even while wearing work gloves
- Operation of two heaters with only one control unit possible
- Integrated temperature sensor makes installation very simple and reduces costs
- Quick servicing thanks to rapid troubleshooting

REMOTE CONTROL UNIT FOR FUEL OPERATED HEATERS - EASYSTART WEB





- State-of-the-art technology for operating multiple heaters with one account
- Central operation of heaters by fleet manager
- Responds to most common communication protocols such as CAN, LIN or S+
- Integrated antenna for time-saving installation in all vehicles
- Compatible with other operating devices (EasyStart Pro)
- Intuitive, user friendly app for iOS and Android

BUILT-IN CONTROL UNIT FOR FUEL OPERATED HEATERS AND A/C SYSTEM - PCK3 FOH





- Intuitive control of air conditioning system and Hydronic or Airtronic
- · Simple and fast operation
- Robust, reliable and easily integrated
- · Stepless heating performance control
- Easy to use even while wearing work gloves

DIAGNOSTIC TOOL - EASYSCAN





- Failure analysis of devices and components
- Comprehensive evaluation of current operating status
- Error code display including additional system parameters
- Easy optimization of control units such as EasyStart Pro or EasyStart Web including firmware updates

ROOF VENTILATOR





- Very flat roof ventilators
- Different designs and air outlets available
- Electric and non-electric versions
- Easy-to-fit roof adapter and air channel option

AIR OUTLETS





- Huge range of outlets with different designs, functionalities and installation options
- Developed in house, designed for modern dashboards
- Durable elements, made of high-quality plastic
- Simple and easy to install

HANDIWASH





- Ideal for clean and hygienic working conditions in the van
- Hot and cold water at any location
- Installation on any vertical surface and wired to a 12-V power source
- Powerful heating element thermostatically controls water up to 60 °C

ADAPTER SET





- Enables an additional evaporator to be connected to the original A/C system
- Simple and low-cost solution
- Designed for every brand of vehicle
- Fast installation

ADAPTER SETS ARE AVAILABLE FOR THE FOLLOWING VEHICLE MODELS, AMONG OTHERS:

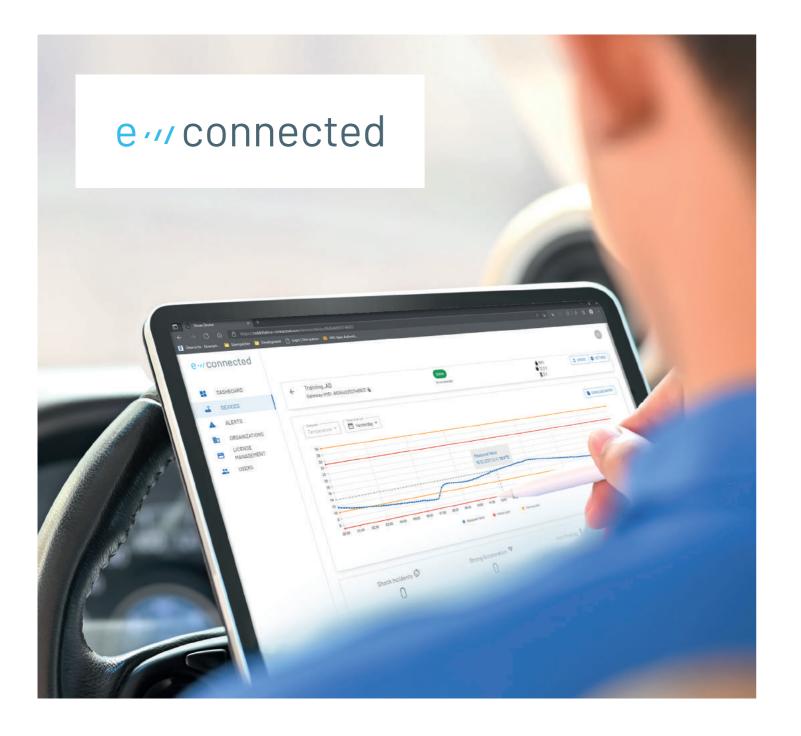
| Vehicle models | | | | | |
|---------------------|------------------------|-------------|---------------|----------------|--------------------|
| Citroën Jumpy | Mercedes Benz Sprinter | MAN TGE | Nissan Navara | Renault Master | Volkswagen Crafter |
| Ford Transit Custom | Mercedes Benz Vito | Iveco Daily | Peugeot Boxer | Renault Trafic | Volkswagen T6 |



Eberspächer offers a variety of lithium iron phosphate batteries. Xellstor batteries come with important advantages such as longer lifespan, greater safety and improved charge and discharge efficiency. Furthermore, all Xellstor batteries are equipped with a fully integrated battery management system.

E-CONNECTED AND COLD CHAIN MONITORING

The specially developed e-connected platform forms the basis for all digital services from Eberspächer. GPS trackers or sensors collect data for transfer to the cloud via a gateway in each vehicle. Diverse data-based services can be developed for various customer segments using this intelligent network. They offer enhanced efficiency, transparency and safety such as cold chain monitoring.



COLD CHAIN MONITORING

PERFECTLY COOLED FROM POINT A TO POINT B, AND ALWAYS UNDER CONTROL

Eberspächer refrigerated containers ensure consistent temperatures during transportation. With the Eberspächer cold chain monitoring service, they can be reliably checked at any time. The cold chain monitoring service enables seamless analysis of the temperature of the refrigerated container. Via a connected gateway and a temperature sensor installed in the refrigerated container, the system collects various data such as temperature, GPS position, battery capacity and the shock behavior of the container. The data can be monitored and evaluated in real time via the e-connected online platform. With the ability to download detailed reports on temperatures during transportation, companies can track the cold chain from start to finish.

COLD CHAIN MONITORING



COMPRESSOR REFRIGERATED CONTAINERS | COLDTAINER





- Vehicle-independent solution for transporting temperature-sensitive goods at constant temperatures
- Autonomous versions with integrated battery supply available
- Easy to install and remove
- Single diecast body made of shock-resistant material

| Version | | T0056 FDH | F0140 FDH | F0720 FDH |
|-----------------------|-------|-----------------|-------------------|---------------------|
| Volume | L | 56 | 140 | 720 |
| Temperature range | °C | -24 to 40 | -21 to 30 | -24 to 30 |
| Voltage range | V DC* | 12 / 24 | 12 / 24 | 12 |
| Max. current draw | Α* | 9 | 18 | 32 |
| Weight | kg | 33 | 57 | 153 |
| Refrigerant | | R134 a | R134 a | R404 a |
| Main dimensions Ixwxh | n mm | 330 x 440 x 355 | 520 x 1,000 x 710 | 1,100 x 1,400 x 780 |

^{*}At 12

Sizes with other temperature ranges also available

/ GLOBAL FOOTPRINT

GLOBAL FOOTPRINT





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