

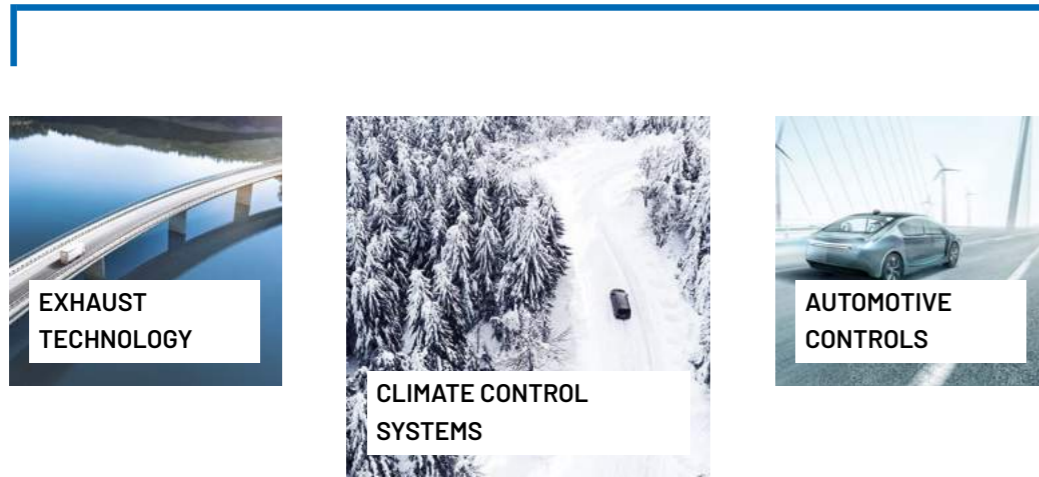


CLIMATE CONTROL SYSTEMS / PERSONAL TRANSPORT

PERFECT THERMAL MANAGEMENT FOR PERSONAL TRANSPORT

Heating & Air Conditioning Solutions -
Connected with Digital Services

EBERSPÄCHER GROUP



- Enhanced application expertise for heating and cooling
- Extensive product portfolio for heating and cooling
- Accessories for a wide variety of applications
- A/C and heating specialists

INNOVATIVE MARKET AND CUSTOMIZED SOLUTIONS



EXPERTS IN COOLING AND HEATING.

FOR SPECIAL VEHICLES

Heating, cooling and digital services – various solutions, one partner – Eberspächer offers a wide range of products for electrical vehicles

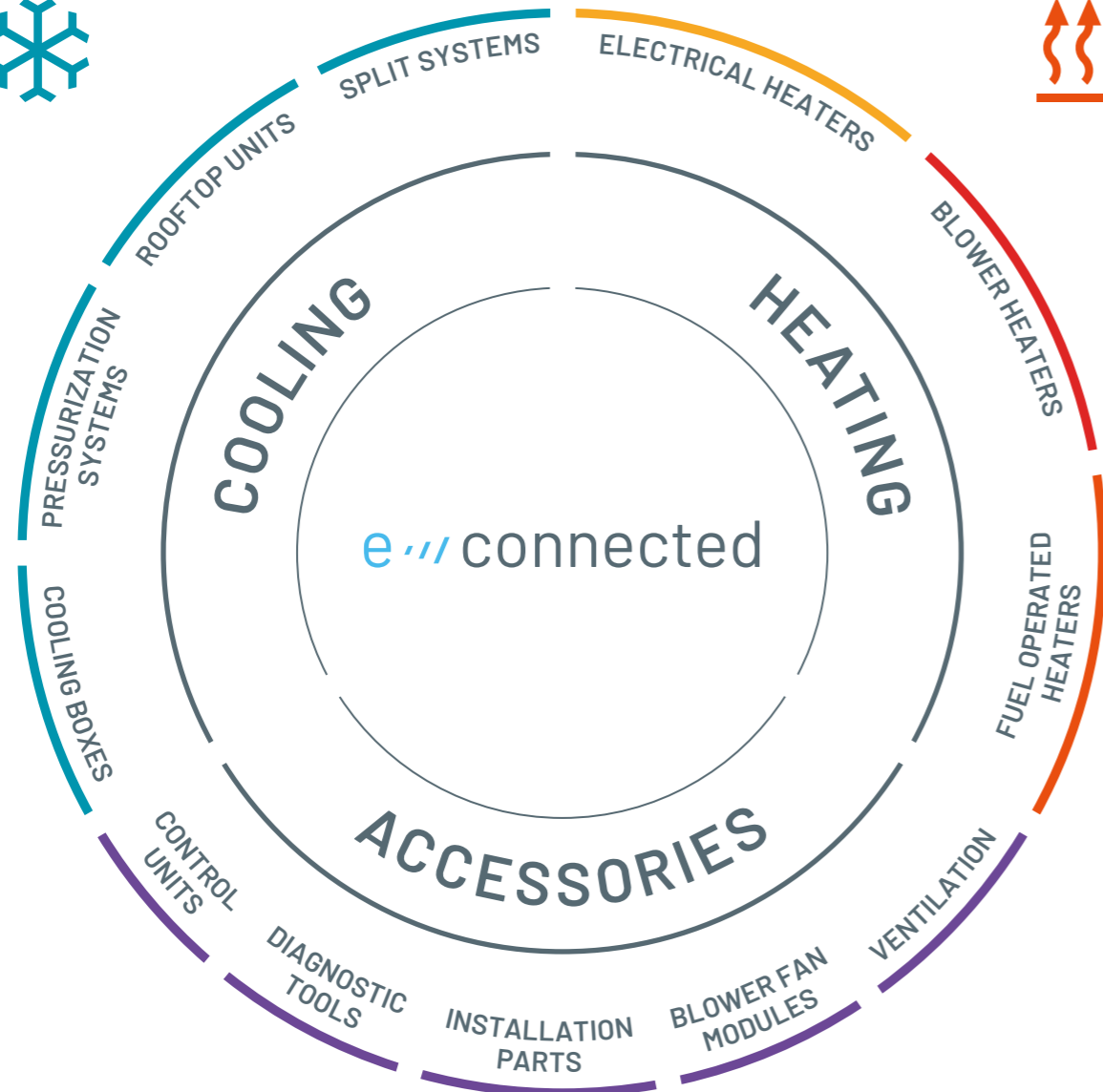
Irrespective of what type of bus is used – whether it be minibuses, i.e. small buses with up to nine seats, or the somewhat larger midibuses – they all have one thing in common: passengers and drivers should feel good in every respect. To ensure this, optimum temperatures are needed throughout the vehicle. This can be easily achieved with the heating and cooling solutions from Eberspächer.

[Personal Transport]



OUR PRODUCT PORTFOLIO

COOLING



ACCESSORIES & CONTROLS



PRODUCTS FOR PERSONAL TRANSPORT VEHICLES



CONTROL UNIT



EVAPORATOR



ROOFTOP A/C SYSTEM



ROOF VENTILATOR



FUEL OPERATED WATER HEATER



ELECTRICAL WATER HEATER



HIGHT-VOLTAGE COOLANT HEATER



BLOWER HEATER



FUEL OPERATED AIR HEATER

FUEL OPERATED HEATING SOLUTIONS

FUEL OPERATED AIR HEATERS

AIRTRONIC S3/M3/L3



- Fast and reliable heating of the patient area
- Brushless motor ensures a long lifetime of 5,000 hrs
- Low energy consumption – ideal for pre-heating or heating when the engine is off
- Suitable for EN1789 approval

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 dimensions* l 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 \varnothing 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 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 dimensions* l x w x h mm	310 x 115 x 122
Interfaces	CAN/LIN/ S+

* Heating air connection diameter \varnothing 75 mm

FUEL OPERATED WATER HEATER

HYDRONIC S3



- Preheating of the engine coolant and the vehicle interior when connected to an Eberspächer heat exchanger
- 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 the vehicle's own diagnostics possible

Fuel	Gasoline		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 dimensions* l 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 patient compartment
- Can be combined with a Hydronic water heater for use when the engine is off
- Large portfolio of different sizes and power levels to fit every kind of personal transport vehicle
- Complete system including hoses, control units and air diffusion available

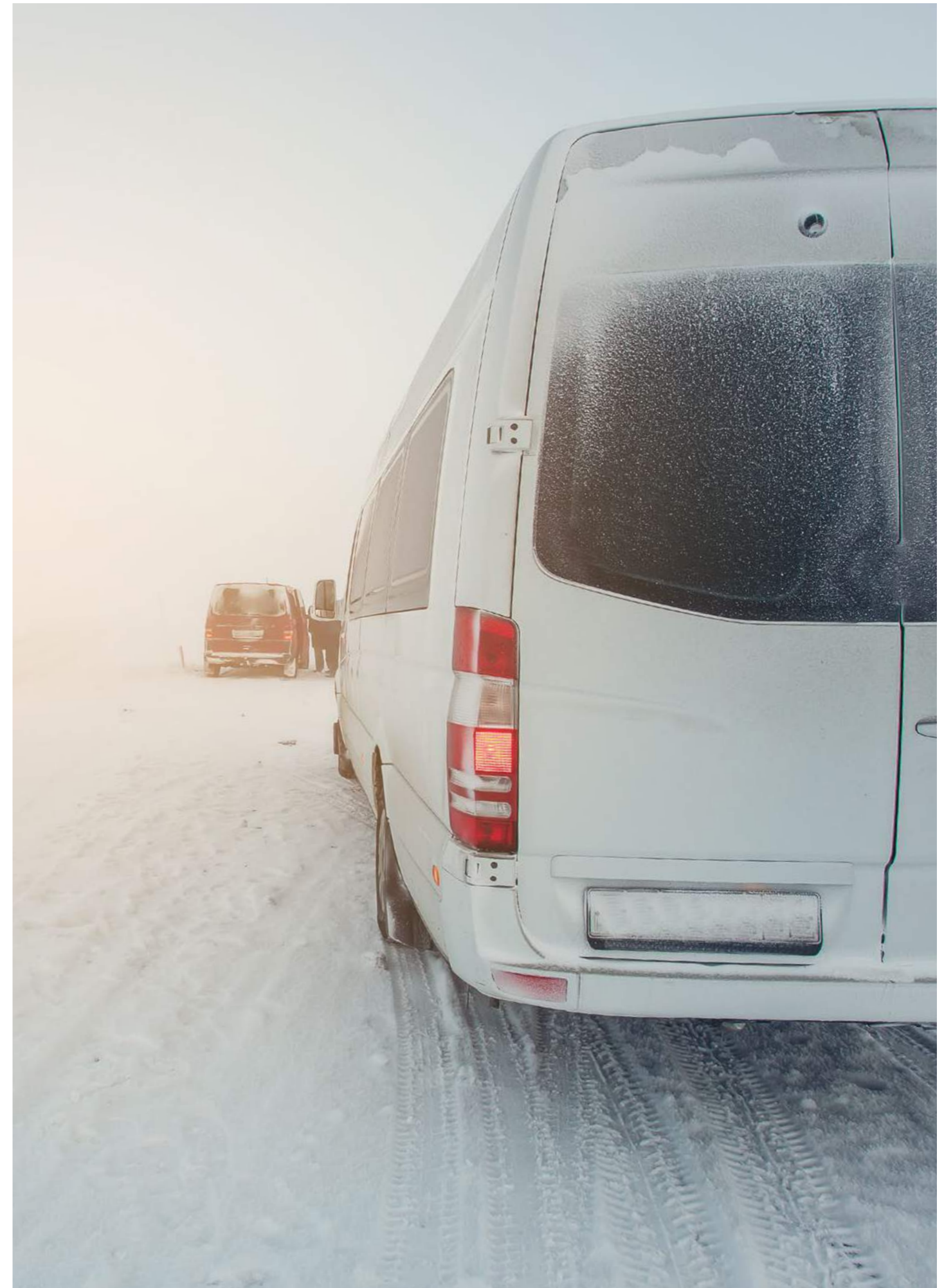
Version	[12 V]	Alizé 2 HV	Compact EV01	Compact EV02	Silencio 2 HV	Super K HV	Kool 2 HV	Falkon HV
Heating performance	kW	3.4	4.3	5.2	5.5	7.6	10	14.8
Airflow	m ³ /h	220	230	350	250	500	520	725
Electrical consumption	W	70	70	100	16	100	180	360
Main dimensions l x w x h	mm	189 x 175 x 132	114 x 255 x 189	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 the patient compartment
- Heater is equipped with secured PTC element and safety thermal switch
- Large portfolio of different sizes and power levels to fit every kind of personal transport vehicle
- Complete system including control units and air diffusion systems available

Version	[12 V]	Alizé 2 EHV	Silencelek EHV	Kelec EV01	Kelec EVO2	Kool 2 EHV	Falkon EHV
Heating performance	kW	up to 2.2	up to 0.5	up to 1.7	up to 2.2	up to 4	up to 6
Airflow	m ³ /h	210	95	230	350	520	411
Electrical consumption	W	from 18 to 33	510	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 l x w x h	mm	189 x 175 x 132	210 x 80 x 156	114 x 255 x 114	196 x 273 x 114	261 x 384 x 158	297 x 432 x 167



ELECTRICAL HEATING SOLUTIONS

ELECTRICAL WATER HEATER 230 V - PLUGTRONIC



- Quick coolant circuit heating for a pre-heated engine
- Also available with a 230-V air heater
- Ideal temperature in the patient area when the vehicle leaves for an intervention
- 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)	V AC	230	
Weight	kg	0.8	
Main dimensions l x w x h	mm	151 x 131 x 81	
Interfaces	V DC	12 / 24	

HIGH VOLTAGE COOLANT HEATER - TITRONIC



- Powerful and reliable PTC technology offers high heating performance
- Precise and convenient heating of the patient area
- 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 l 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



SPLIT SYSTEMS

HORIZONTAL EVAPORATORS FOR SPLIT SYSTEMS

- Powerful evaporators provide climate control for the passenger area
- Available as A/C only (VAC), HVAC or EHVAC version for electric personal transport vehicles
- Range of adapter sets available to extend original HVAC systems of main LCVs on the market
- Suitable for EN1789 approval
- Large portfolio of different sizes and power levels available to fit every kind of personal transport vehicles
- Complete system including hoses, control units and air diffusion systems available
- Can be combined with the Power K Reverse external condenser unit, which also includes an electric compressor and drier filter



VAC UNITS FOR BOTH FUEL OPERATED AND ELECTRIC PERSONAL TRANSPORT VEHICLES



Version	[12 V]	Super K VAC	Kool 2 VAC*	Falcon VAC**	HK EVO4 VAC*
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 l 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

* Available in FAI version with air diffusion and control unit included. ** Available in FA version with air diffusion included.

HVAC UNITS FOR FUEL OPERATED PERSONAL TRANSPORT VEHICLES



Version	[12 V]	Super K HVAC	Kool 2 HVAC*	Falcon HVAC**	HK EVO4 HVAC*
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 l 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

* Available in FAI version with air diffusion and control unit included. ** Available in FA version with air diffusion included.

EHVAC UNITS FOR ELECTRIC PERSONAL TRANSPORT VEHICLES



Version	[12 V]	Super K EHVAC	Kool 2 EHVAC	Falcon 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 V AC			230 - 480	
Main dimensions l x w x h	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

VAC, HVAC AND EHVAC UNITS



Version	[12 V]	VK9 HVAC	VK9 HVAC FAI*	VK9 EHVAC
Cooling performance	kW	8	6.5	6.5
Heating performance	kW	10	7.5	3
Airflow	m ³ /h	670	520	670
Electrical consumption	W	300		
Main dimensions l x w x h	mm	174 x 414 x 335		

*FAI version with air diffusion and control unit included.

ROOFTOP EVAPORATORS FOR SPLIT SYSTEMS

- Powerful rooftop evaporator system
- Air diffusion with integrated control unit available
- Saves space in the vehicle
- Suitable for EN1789 approval
- Can be combined with the Power K Reverse external condenser unit, which also 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	5
Heating performance	kW	-	6
Airflow	m ³ /h	595	560
Electrical consumption	W	150	
Main dimensions l x w x h	mm	125 x 445 x 580	

VENTILATORS

ADT



Model	Autogire	
Weight	kg	0.9
Main dimensions l x w x h	mm	245 x 245 x 113
Part number		830012140420

Non-electric ventilator. Works with the wind or the vehicle speed.

ADT



Model	ADT 350	ADT 360		
Airflow	m ³ /h	315	660	
Electrical consumption	W	37	72	73
Weight	kg	1.5		
Main dimensions l x w x h	mm	303 x 310 x 53		
Blower voltage	V	12	24	
Part number		830012140405	830012140406	830012140410

ADT



Model	ADT 452				ADT 750		
Airflow	m ³ /h	629					
Electrical consumption	W	72	73	72	73	72	73
Weight	kg	1.8		1.7	1.8		2.1
Main dimensions l x w x h	mm	320 x 360 x 65				340 x 388 x 80	339 x 388 x 80
Blower voltage	V	12	24	24	12	12	24
Part number		830012140415	830012140416	830012140456	830012140458	830012140000	830012140100

ROOFTOP SYSTEMS

- Compact system, includes evaporator, condenser and drier filter
- Can be connected to a standard compressor
- Especially suitable for air conditioning in the passenger compartment
- Available as A/C only (VAC), HVAC or EHVAC version for electric private transport vehicles



VAC AND HVAC SYSTEMS



Version	[12 V]	RK12 VAC	RK12 HVAC
Cooling performance	kW	11.5	11.5
Heating performance	kW	-	15
Airflow	m ³ /h	950	
Weight	kg	50	
Main dimensions	l x w x 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	m ³ /h	up to 1,380
Weight	kg	84.5
Main dimensions	l x w x h mm	1,504 x 890 x 250

ROOFTOP A/C UNIT - RK9



- Also available for battery electric vehicles using a PTC heating element
- Can integrate an electric compressor (SH version)
- Also available as air conditioning only version

Version		RK9
Cooling performance	kW	up to 9
Heating performance	kW	up to 10
Airflow	m ³ /h	725
Weight	kg*	23
Main dimensions	l x w x h mm	932 x 581 x 192

* Depending on version.

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

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

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

TRIMLINE AIR OUTLETS



trimLINE

AIR AT ITS FINEST

Following the latest dashboard design aesthetic, our designers and engineers developed Trimline to create a contemporary look for the vehicle air outlets in keeping with the “form follows function” principle. With different design, function and installation options tailored to match different vehicle interiors. What’s more, the durable, high-quality plastic elements are easy to install.



E-CONNECTED

DIGITAL SERVICES

Digital solutions for customer needs.



HARDWARE CONNECTIVITY

Networking of hardware and the gateway to make data accessible.

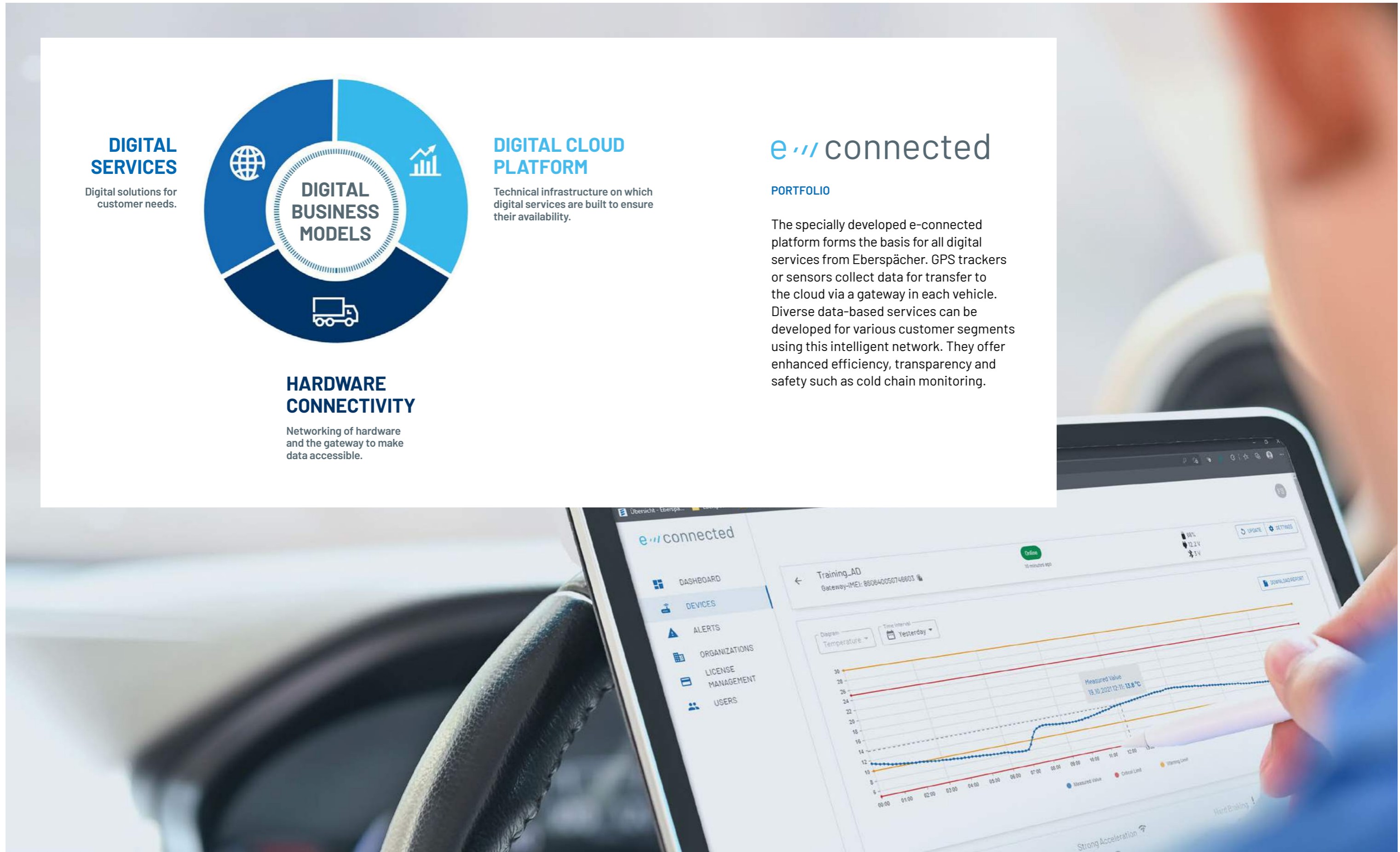
DIGITAL CLOUD PLATFORM

Technical infrastructure on which digital services are built to ensure their availability.

e///connected

PORTFOLIO

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.



SAME PRODUCT & SYSTEM DESIGN FOR COMBUSTION ENGINE & ELECTRIC DRIVE SOLUTIONS

With our identical product design for different drive trains you can simply adapt the HVAC & EHVAC system integration:

**SAME, SAME.
BUT DIFFERENT.**

EASY HANDLING FOR EVERY DEVELOPER

- Same design
- Same size
- Same mounting positions

For Electric & Internal Combustion Engine drive.



ALL OUR PRODUCTS ARE AVAILABLE AS HVAC AND EHVAC VERSIONS FOR EVERY REQUIREMENT - EXAMPLES



HVAC
Internal
Combustion Engine



EHVAC
Electric
Drive

Kool 2



Super K



Falkon



MK0



VK9

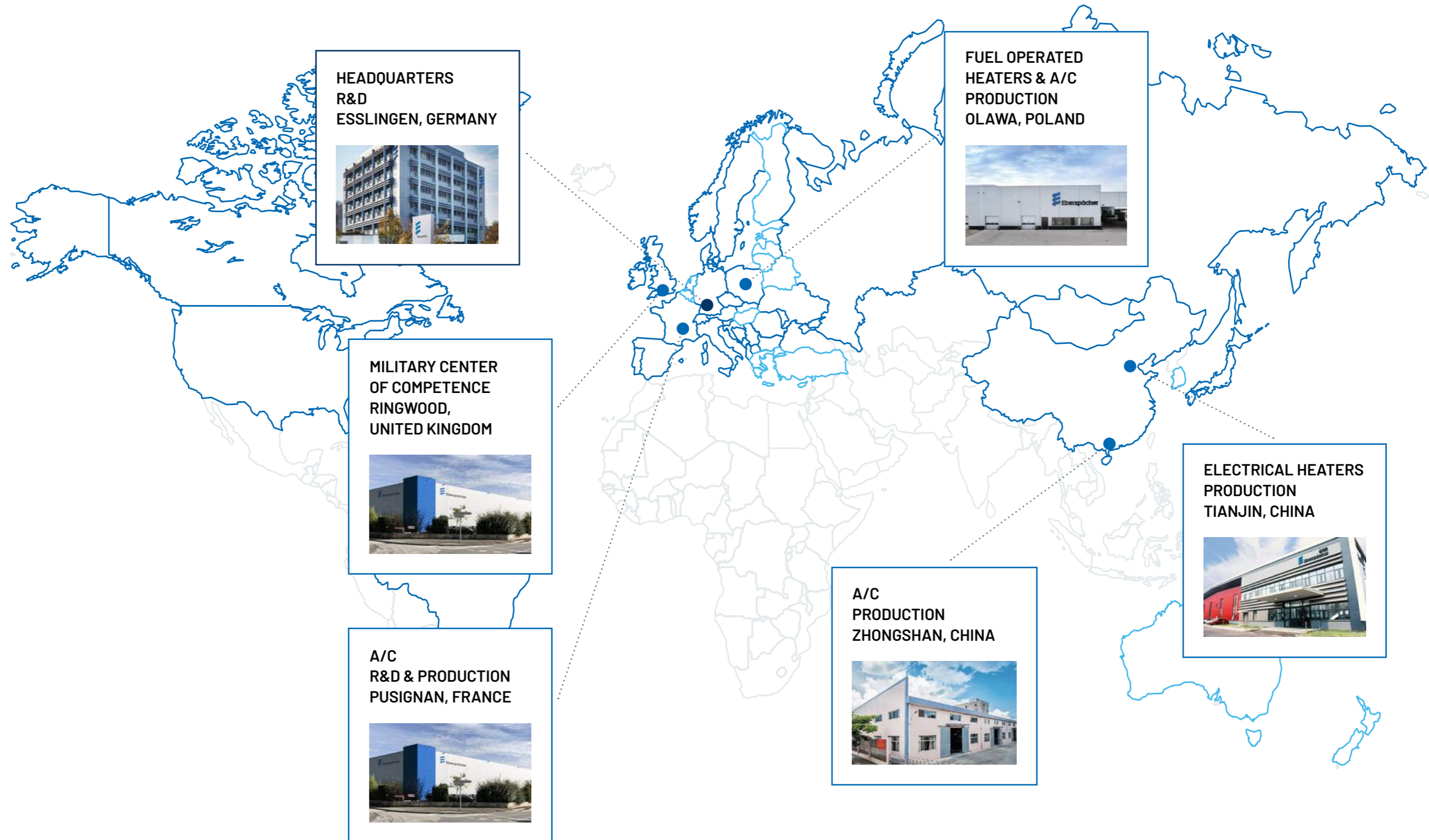


RK9



| Our entire product portfolio is available in our heating and air conditioning catalog.


GLOBAL FOOTPRINT




**HEADQUARTERS
R&D
ESSLINGEN, GERMANY**



**FUEL OPERATED
HEATERS & A/C
PRODUCTION
OLAWA, POLAND**



**MILITARY CENTER
OF COMPETENCE
RINGWOOD,
UNITED KINGDOM**



**ELECTRICAL HEATERS
PRODUCTION
TIANJIN, CHINA**



**A/C
R&D & PRODUCTION
PUSIGNAN, FRANCE**



**A/C
PRODUCTION
ZHONGSHAN, CHINA**



BRANCHES
ESSLINGEN, GERMANY

SUBSIDIARY

GENERAL AGENTS

EBERSPÄCHER CLIMATE CONTROL SYSTEMS GMBH
EBERSPÄCHERSTRASSE 24
73730 ESSLINGEN / GERMANY

PHONE: +49 711 939-00
FAX: +49 711 939-0634
info@eberspaecher.com
www.eberspaecher-climate.com