



CLIMATE CONTROL SYSTEMS / CONSTRUCTION

# HARD WORK – PERFECT TEMPERATURE

Heating & Air Conditioning Solutions



# CLIMATE CONTROL SYSTEMS



- Enhanced application expertise for heating and cooling
- Extensive product portfolio for heating and cooling
- Accessories for large variety of applications
- Kalori A/C specialists merged into one powerful team

## INNOVATIVE MARKET AND CUSTOMIZED SOLUTIONS



# EXPERTS IN COOLING AND HEATING

## FOR SPECIAL VEHICLES

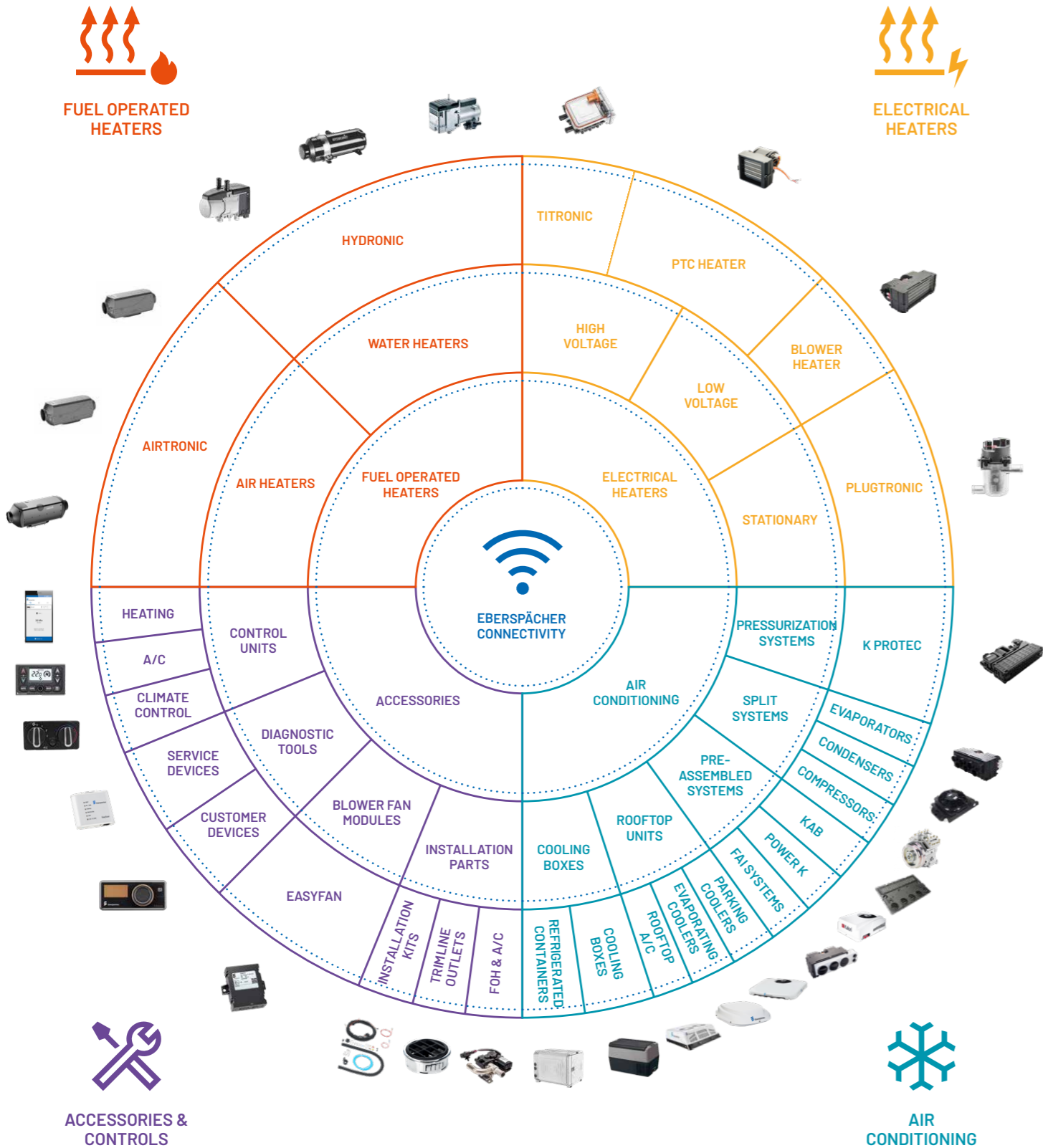
**Ideal conditions for construction machinery – the perfect solution for every need**

As a heating and cooling system supplier, Eberspächer provides ideal thermal management for construction machinery. Our climate control systems offer enhanced comfort and safety: drivers can enjoy pre-heated engines and warm cabs in winter and pleasantly cool driver cabs in summer. Machine operators demonstrably perform better and are more alert in a cab with a pleasant climate. At the same time, we also help customers comply with statutory workplace regulations and ensure operational readiness. Thanks to our experience in HVAC development, application and production, we can offer customized heating and air-conditioning applications – all from a single source.

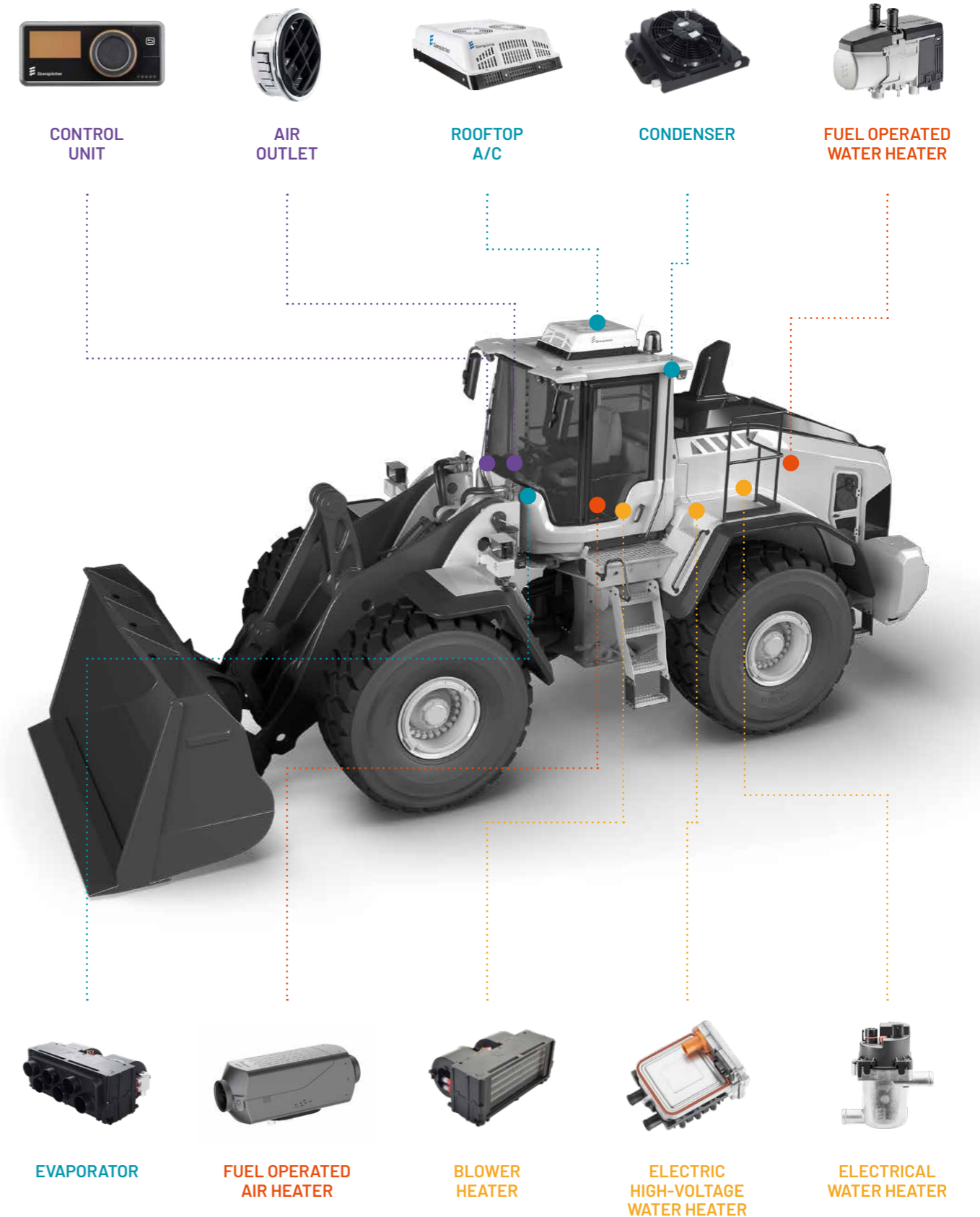
[Construction]



# OUR PRODUCT PORTFOLIO



# PRODUCTS FOR CONSTRUCTION MACHINERY



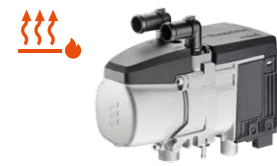


# FUEL OPERATED HEATING SOLUTIONS

## FUEL OPERATED WATER HEATERS

- Pre-heat both - the vehicle and the engine interior
- Pre-heating reduces engine wear due to reduced cold starts and saves fuel and money
- Pre-heated cabins defrost the windshield and secure safe operation

### HYDRONIC S3



Version [Diesel, 24 V]	Commercial D5L	Commercial D6L
Heating performance kW	1.3 to 5.0	1.3 to 5.6
Main dimension mm	215 x 91 x 180 [With straight connection fittings]	
Weight kg	2.0	
Fuel consumption l/h	0.59	0.65
Interfaces	CAN/S+	

### HYDRONIC M



Version [Diesel, 24 V]	M8 Biodiesel*	M10	M12
Heating performance kW	1.5 to 8.0	1.5 to 9.5	1.2 to 12.0
Main dimension mm	331 x 138 x 221		
Weight kg	6.2		
Fuel consumption l/h	0.18 - 0.9	0.18 - 1.2	0.15 - 1.5
Interfaces	LIN		

\* 100 % biodiesel compatible in accordance with FAME DIN EN 14214

### HYDRONIC L



Version [Diesel, 24 V]	L16	L24	L30	L35
Heating performance kW	16.0	24.0	30.0	35.0
Main dimension mm	600 x 230 x 222			
Weight kg	18.0			
Fuel consumption l/h	2.00	2.90	3.65	4.20
Interfaces	S+			

## FUEL OPERATED AIR HEATERS

### AIRTRONIC S3 / M3



- Extremely fast air heating
- Low energy consumption – ideal for long heating periods while the vehicle is at standstill
- Integrated altitude sensor: automatic altitude adjustment up to 5,500 m

Version [Diesel, 24 V]	S3 Commercial	M3 Commercial
Heating performance kW	0.85 to 2.2	1.05 to 4.0
Main dimension mm	310 x 115 x 122	376 x 140 x 150
Weight kg	2.5	4.5
Fuel consumption l/h	0.1 - 0.27	0.12 - 0.49
Interfaces	CAN/S+	



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



# ELECTRICAL HEATING SOLUTIONS

## HIGH-VOLTAGE COOLANT HEATER - TITRONIC



- Third generation of high-voltage PTC water heater for electric vehicles
- Reliable and powerful PTC technology offering a high heating performance of 5 kW\*
- Six heat stages

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

\* Un = 350 V, Tco = 60 °C, Qco = 10 l/min, Coolant = 50 : 50

## ELECTRICAL WATER HEATER - PLUGTRONIC



- Vehicle pre-heating system, consisting of a 230 V-heater for pre-heating the engine and interior, a water pump, wiring and an electronic charger
- Can be combined with vehicle-specific kits
- Flexible positioning with a water pump as standard for simple installation
- Water pump available for 12 V or 24 V
- 20 mm water spigot diameter

Version	800	1850	
Heating performance	kW	0.8	1.85
Main dimension	mm	151 x 131 x 81	
Weight	kg	0.8	
Operating voltage range (HV)	V AC	230	
Interfaces	V DC	12 / 24	

## ELECTRICAL HVAC EVAPORATOR



- Vertically mounted hybrid evaporator for conventional A/C with PTC heating element
- Features with directional scrolls which can be pivoted to direct the air in the right direction
- Also available as non-electric version with water heat exchanger

Version	MKO EHVAC ED4	
Heating performance	kW	2.2
Cooling performance	kW	4.3
Airflow	m <sup>3</sup> /h	390
Electrical consumption	W	220
Operating voltage range	V DC	24 - 800

## ELECTRICAL BLOWER HEATER



- Compact size perfectly suited to small cabins
- Electric heater with secured PTC element and equipped with safety thermal switch
- Water blower heater also available

Version	ALIZE 2 VI ELEC	
Heating performance	kW*	1.6 - 2.2
Airflow	m <sup>3</sup> /h*	210
Ventilation speed	3	
Operating voltage range	V DC*	PTC from 12 to 800
Ventilation voltage	V*	12   24

\*Depending on model



# AIR CONDITIONING SOLUTIONS

## HORIZONTAL EVAPORATORS FOR SPLIT SYSTEMS



- Large portfolio enables solutions to be installed for almost every cabin
- Available as A/C only, heating only or HVAC version
- Also available for battery electric vehicles using a PTC heating element

Version		Super K	Kool	Falkon
Cooling performance	kW	3.5	4.5	7.7
Heating performance	kW	4.3	6.6	10
Airflow	m <sup>3</sup> /h	440	520	660
Electrical consumption	W	100	180	360
Main dimensions	mm	216 x 368 x 137	261 x 384 x 158	297 x 432 x 167

## VERTICAL EVAPORATORS FOR SPLIT SYSTEMS



- Directional scrolls can be positioned independently
- With integrated electrical flap on the air intake for outside air / circulating operation
- Available as A/C only, heating only or HVAC version

Version		MK1
Cooling performance	kW	7
Heating performance	kW	7.8
Airflow	m <sup>3</sup> /h	700
Electrical consumption	W	360
Main dimensions	mm	159 x 428 x 443

## PRE-ASSEMBLED HVAC EVAPORATOR SYSTEMS - KAB



- Pre-assembled HVAC evaporator systems for integration in the cab ceiling
- System with integrated air distribution and manual operating elements
- Easy to install in the cab roof
- Over 10 system variants available for every requirement

Version		HVAC 4.3 / 3.5	HVAC 6.6 / 4.5	HVAC 10 / 7.7
Cooling performance	kW	3.5	4.5	7.7
Heating performance	kW*	4.3	6.6	10.0
Airflow	m <sup>3</sup> /h*	440	520	725
Electrical consumption	W	100	180	360
Main dimensions	mm	589 x 380 x 137.5	589 x 380 x 160.5	589 x 380 x 169

\*Depending on model

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

## ROOFTOP A/C UNIT - ELECTRIK



- Compact roof-mounted system with an integrated electrical compressor
- Suitable for all applications where it is difficult to install a conventional A/C unit with an engine-driven compressor
- Voltage range: 12 to 650 VDC - 220 VAC

Version		Elektrik
Cooling performance	kW	3.5
Weight	kg	25
Airflow	m <sup>3</sup> /h*	440
Electrical consumption	W*	950 to 1560
Main dimensions	mm	475 x 721 x 278

\*Depending on model

## ROOFTOP A/C UNIT - KANADA



- Evaporator/heater rooftop condenser unit
- Features with integrated drier filter
- Can be connected to a standard or electric compressor on an electrically driven vehicle.
- Also available as air-conditioning only version

Version		Kanada 2
Cooling performance	kW	4.5
Heating performance	kW	1 to 4
Weight	kg	19
Airflow	m <sup>3</sup> /h*	500
Electrical consumption	W*	330
Main dimensions	mm	891 x 588 x 182


\*Depending on model

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# ACCESSORIES AND CONTROLS

## OUTLETS

 You can choose the optimum items for your project from our huge range of outlets with different designs, functionalities and installation options.




TRIMLINE



FUEL OPERATED HEATING

## CONTROL UNITS

 We offer control units for every product and requirement, from web-based devices with remote diagnosis for pre-heaters and combined control units for heating and cooling systems to automatic HVAC control units.




WEB-BASED CONTROL UNIT FOR HEATING



HEATING, A/C, HVAC


## HVAC MANAGEMENT

 Our KAN-Box allows you to control different HVAC components via CAN bus in one system and to choose your individual preferred control option.



KAN-BOX

## DIAGNOSTICS

 Services and tools for easy diagnosis are available for our products.

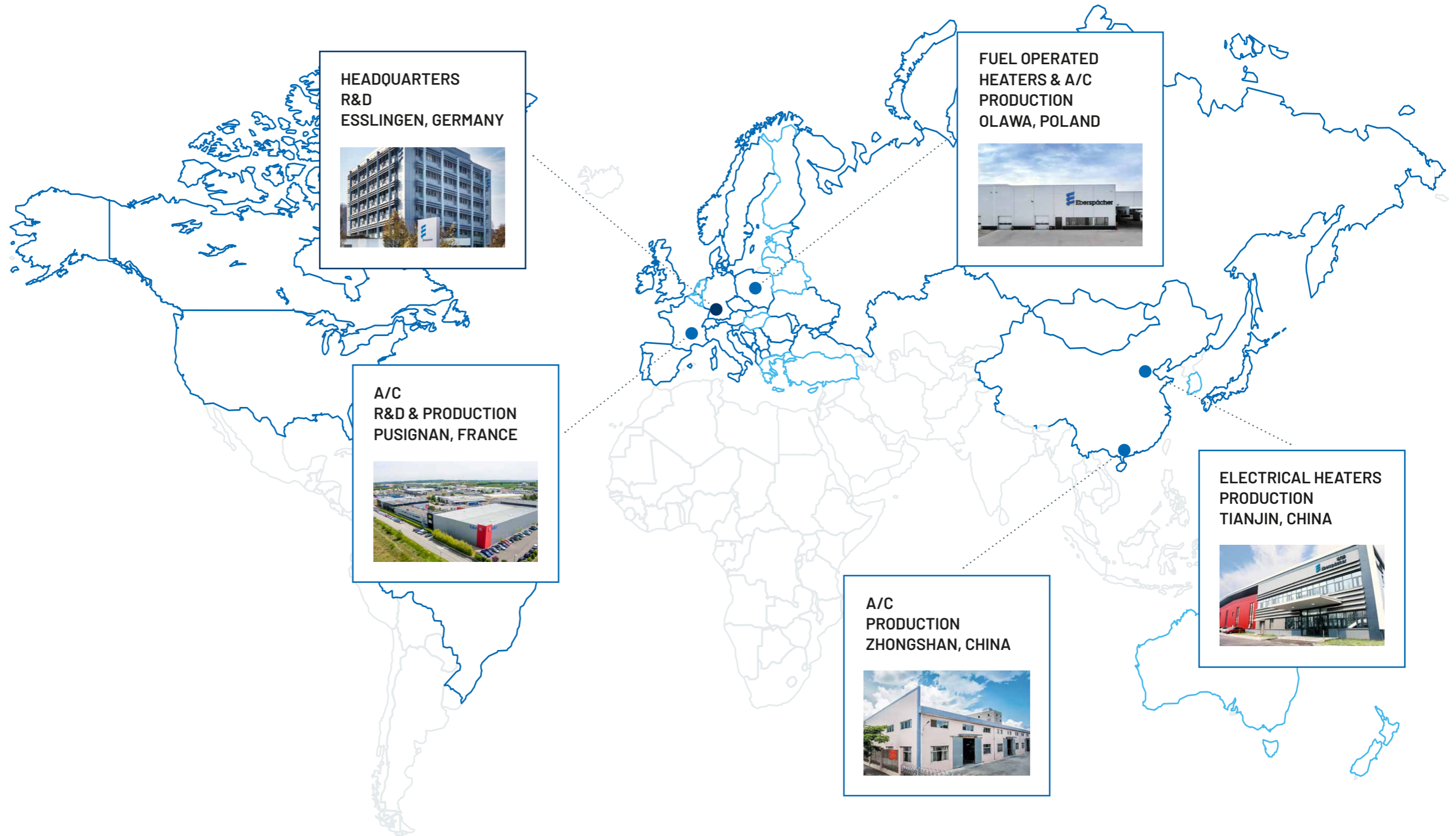


EASYSKAN





# GLOBAL FOOTPRINT



**HEADQUARTERS  
R&D  
ESSLINGEN, GERMANY**




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



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



**A/C  
PRODUCTION  
ZHONGSHAN, CHINA**



**ELECTRICAL HEATERS  
PRODUCTION  
TIANJIN, CHINA**



BRANCHES  
ESSLINGEN, GERMANY

SUBSIDIARY

GENERAL AGENTS



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