FRIGOBLOCK

WORRY-FREE IN THE CITY

ELECTRIC TRANSPORT COOLING FOR SUSTAINABLE DELIVERIES

FK 2

THERMO KING

TOMORROW'S TECHNOLOGY TODAY

More and more cities are – rightfully – implementing environmental legislation to improve inner-city living conditions. Low Emission Zones (LEZs) are areas where the most polluting vehicles are regulated.

Vehicles (and refrigeration units) that don't meet a certain emission threshold aren't allowed to enter these specific zones. Increasingly, European cities are enforcing LEZs: Antwerp, Amsterdam, Paris, Vienna, Budapest, … to name a few. London even went the extra mile and implemented an Ultra-Low Emission Zone.

FK 2 – WORRY-FREE INTO THE CITY

Fortunately, the FK 2's revolutionary new design reflects how it pushes forward-thinking businesses to set up clean distribution routes across Europe while optimizing operations based on data insights.

The result?
A brand new 100% electric solution with no direct CO_2 emissions that lets you enter the city now – and in the future.

GO GREEN WITH THE FK 2

LEZ, NRMM Stage V, … Municipalities and governments are implementing sustainable legislation to improve living conditions in urban areas.

FRIGOBLOCK's 100% electric clean cooling tech isn't just sustainable, compliant and future-proof – it also saves you a ton of money. It consumes less fuel and provides more uptime.

- IDEAL FOR RIGID TRUCK APPLICATIONS
- HIGH REFRIGERATION CAPACITY
- DESIGNED FOR HIGHLY DEMANDING AMBIENT CONDITIONS
- UP TO 50% LESS FUEL CONSUMPTION
- ENVIRONMENTALLY COMPATIBLE REFRIGERANT R410A

GENERATE MORE UPTIME

Compared to traditionally more complex diesel units, FRIGOBLOCK 100% electric units require fewer maintenance thanks to its hard-wearing components.

But that didn't stop us from improving the architecture of our FK 2 to make it even more reliable. The FK 2 conceptual design allows for high-quality repair and maintenance activities.

These small yet impactful changes will give you more uptime. And that is why the FRIGOBLOCK refrigeration machines are:

- **Subjected to extensive testing** full-scale function and leak tests
- **Fail-safe machine and alternator** With 40+ years of experience
- **Increased serviceability** revolutionary design allows better access to internal components

EFFICIENCIES THAT **SAVE YOU MONEY**

Reduced fuel consumption, more efficient use of electricity and engineered to increase uptime. FRIGOBLOCK's innovative FK 2 is designed to generate operational efficiencies that save you money. Even better, it's easy access to internal components and ultra-reliable mechanics mean that even repair or scheduled maintenance will be quick and efficient.

TURN DATA INTO PRACTICAL INTELLIGENCE

Refrigerated transport is changing. Simply keeping your load at temperature until it reaches the customer is no longer the last word. Luckily, the FK 2 goes above and beyond: Remote monitoring of vehicle, driver and refrigeration performance put you in complete control of the deliveries your customers rely on. Data you can analyze and use to optimize your operations into the future.

CONNECTED SOLUTIONS

TRACK YOUR CARGO 24/7

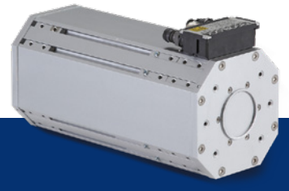
The **FK 2** is the very first FRIGOBLOCK unit with the possibility to be equipped with a Bluebox (Thermo King's telematics), directly from the factory. This enables you to **demonstrate the condition of your cargo at all times**.

- **Visibility of key operational metrics** including driver behavior, tire pressure, and temperature
- **Information and alerts** on the condition of individual cargoes
- **Real-time access** to load temperature out on the road

SEE. KNOW. GROW. WITH THERMO KING TELEMATICS: CONNECTED SOLUTIONS

Turn driving data into practical intelligence with Connected Solutions, Thermo King's telematics software and hardware. It delivers the information that matters to you most.

Putting this data to work gives you the ability to track & trace individual deliveries across your fleet. You'll be able to demonstrate temperature levels, meet regulatory requirements, and respond instantly to new challenges.



ALTERNATOR

CAPTURE
LOST ENERGY

Braking, accelerating, stopping, starting... A lot of the energy is lost when your vehicles are on the road. Energy that you could re-use to keep your load at optimum temperature. Our solution? Our pioneering alternator technology.

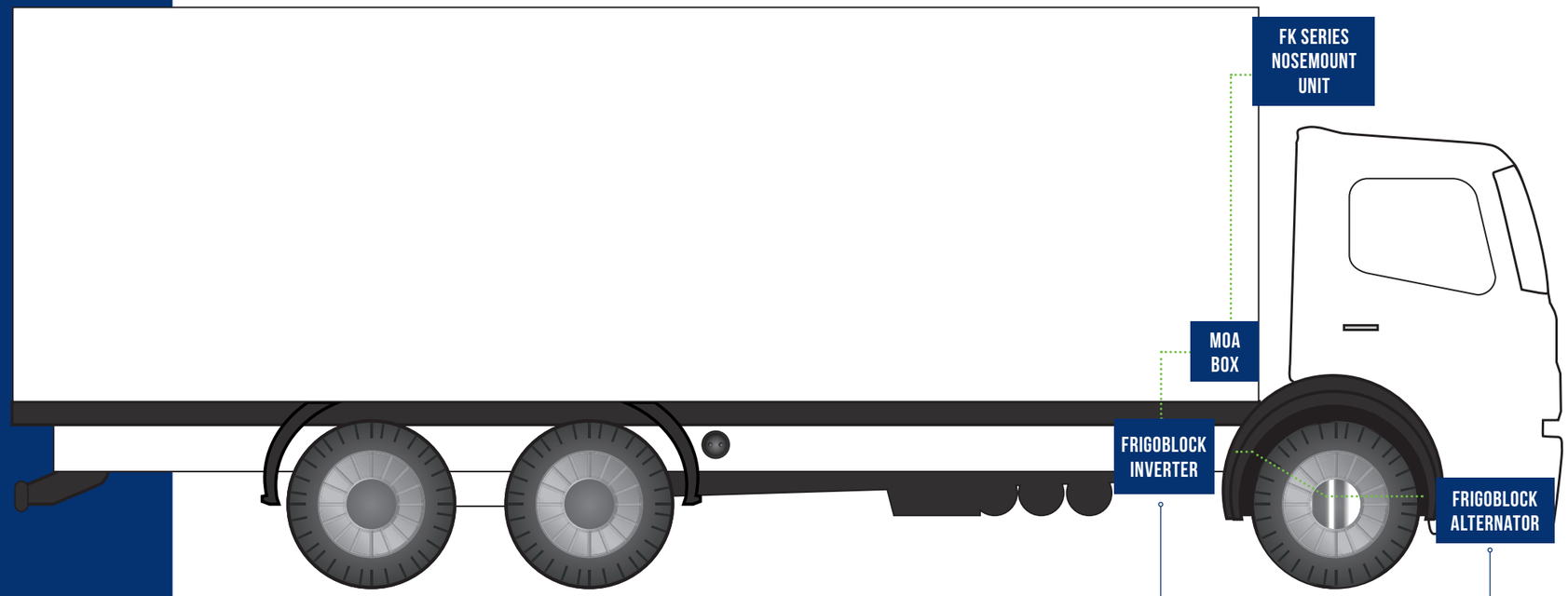
Since the foundation of FRIGOBLOCK, alternators have been the driving technology for generating electricity. Like an electric generator, the alternator is integrated in the belt drive of the truck engine. As the truck engine revs up, the rotary frequency of the alternator increases and generates voltage and amperage.

- **Low noise, high powered performance**
- **Cutting edge technology** for truck cooling - an unlimited source of energy
- **Tractor independent** for easy integration into your fleet.

HOW DOES IT WORK

A high-performance alternator is directly driven by the vehicle engine. The alternator supplies electricity with minimal energy transfer losses. In the case of a HV e-truck, the electricity is supplied by the battery pack.

The Power generated passes to the full electric unit via an inverter. The inverter modulates the current so that the electric motors for compressor and fans can operate with optimum control and efficiency.



FRIGOBLOCK INVERTER

Delivers constant voltage and frequency to the unit regardless of vehicle engine speed. Guarantees rapid start-up of the unit with low mechanical stress. Provides optimum load temperature control with minimum power consumption.

ALTERNATOR

Transforms electricity from alternator to power the FK refrigeration unit.

TECHNICAL INFORMATION

FK 2 **SINGLE TEMP**

Integrated Evaporators			1	
Return air / ambient temperature		°C	0 / 30	-20 / 30
Refrigeration Capacity	Road Mode	W	15.500	9.050
	Standby Operation	W	14.520	8.560
Defrost Capacity (Hotgas)		W	up to 32000	
Heating Capacity (Electric)		W	8.200	
Refrigerant			R 410A	
Airflow		m^3/h	4.150	
Unit Weight		kg	335	
Condenser Dimensions (H+W+D)		mm	645 x 2365 x 780	
Compressor				
Cylinders			4	
Displacement		m^3/h	43,68	

FK 2 **MULTI TEMP**

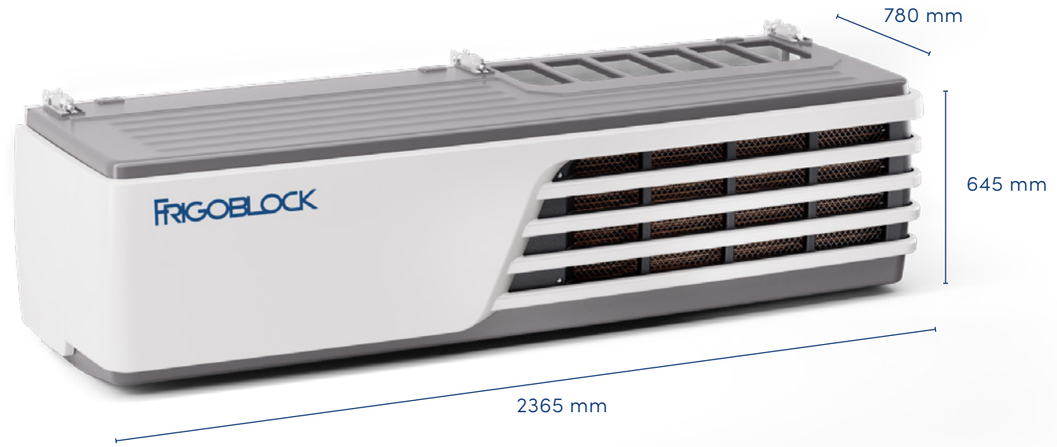
RE Series			RE 11-2		RE 22-2		RE42-1		RE 44-2	
Return air / ambient temperature		°C	0 / 30	-20 / 30	0 / 30	-20 / 30	0 / 30	-20 / 30	0 / 30	-20 / 30
Individual Refrigeration Capacity	Road Mode	W	10.600	6.170	13.290	7.155	12.810	7.305	15.900	9.330
	Standby Operation	W	10.310	5.800	13.010	6.570	12.360	7.130	15.080	8.800
Airflow		m^3/h	1.900		3.800		4.000		6.500	
Evaporator Fans			1		2		2		4	
Discharge			Dual		Dual		Single		Dual	
Dimensions										
Height*		mm	160		160		140		140	
Length		mm	1.120		1.120		680		1.020	
Width		mm	720		1.160		2.160		2.160	
Weight		kg	46		74		52		92	

* can be recessed 40mm into the roof

ALTERNATORS

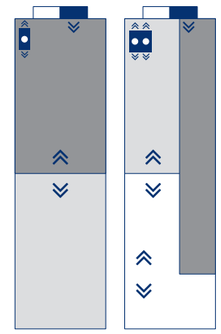
		G 17	G 24	AW 22,5	AW 30
Power	kVA	17,3	24,2	22,5	30
Voltage	V	400	400	400	400
Current	A	25	35	32	43
Speed	RPM	3.000	3.000	3.000	3.000
Dimensions					
Length	mm	460	560	336	411
Height	mm	214	214	187	187
Width	mm	245	245	187	187
Shaft	mm	43	43	30	30
Weight	kg	76	98	49	60

TRANSPORT REFRIGERATION UNIT

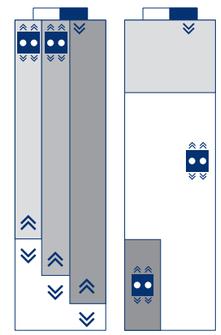


MULTIPLE **CONFIGURATION OPTIONS**

Possible
2 zones configuration



Possible
3 zones configuration



4 REASONS TO CHOOSE
THE ALL NEW FK 2

- **Industry-leading connectivity with practical data**
- **Constructed for sustainable ambitions**
- **Revolutionary design for more uptime**
- **100% electric highly performant unit**

FRIGOBLOCK is a brand of Thermo King®. Thermo King – by Trane Technologies (NYSE: TT), a global climate innovator – is a worldwide leader in sustainable transport temperature control solutions. Thermo King has been providing transport temperature control solutions for a variety of applications, including trailers, truck bodies, buses, air, shipboard containers and railway cars since 1938.

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