

# Intensive urban deliveries, demanding needs



Maintaining constant cold throughout your intense delivery schedule is an everyday challenge. When choosing a refrigeration unit, you need to be confident it will help you deliver goods to customers in a perfect state, everytime.

### **HIGH CAPACITY NEED...**

Frequent stops, multiple door openings, traffic congestion, multi-temperature goods and sensitive products – it's hard to maintain the cold chain. To keep the temperature just right, your refrigeration unit needs to provide quick pull-down and high capacity at all times.

#### ...EVEN AT IDLE SPEED

Conventional refrigeration units depend on engine speed and reach optimum capacity at 2400 RPM. But during city deliveries, your van is operating 90% of the time at low speed (under 2400 RPM)\*. This compromises refrigeration capacity and makes it even harder to maintain the right temperature for your goods.

\* In a standard urban delivery cycle

## New Pulsor® range, rewriting the rules



#### **COLD CHAIN REVOLUTION**

# 100% cooling capacity at low engine speed

Pulsor's unique technology gives you constant optimum capacity throughout your entire delivery cycle.

#### **LOW COST OF OWNERSHIP**

# 20% reduction in fuel consumption during pull-down

Designed with the E-Drive technology, Pulsor achieves high levels of reliability thanks to fewer moving parts and fittings. Optimum fleet availability together with reduced maintenance and fuel consumption during pull-down phase maintain a low cost of ownership.

#### **ENSURING SUSTAINABILITY**

**75% improvement in containment** With a significant reduction in hoses and fittings, CO<sub>2</sub> emissions from refrigerant leaks have been reduced to protect the environment.

## OUR ANSWER: THE REVOLUTIONARY PULSOR RANGE.

Benefiting from the E-Drive™ technology associated with an inverter and hermetic variable compressor, Pulsor ensures constant cold throughout the day.

#### **UNEQUALLED TECHNOLOGY**



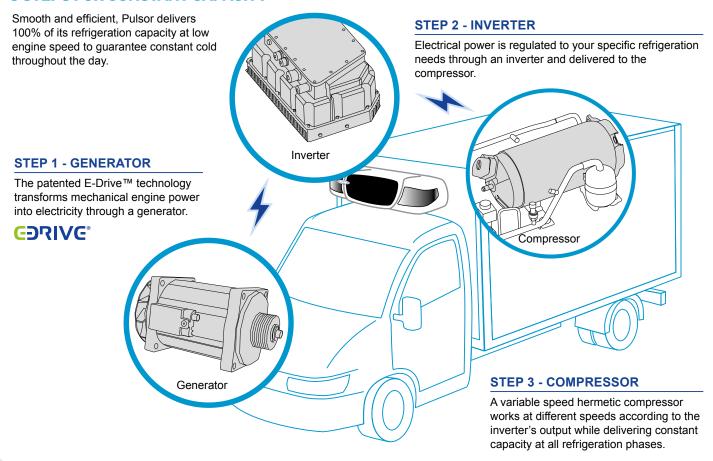
Behind our new Pulsor range is groundbreaking E-Drive™ technology. Removing the mechanical transmissions found in belt-driven systems, E-Drive™ transforms engine power into electricity. This unique and patented solution is now available for the first time in vans.



## A technological breakthrough you can rely on

Pulsor® benefits from the latest technological innovations, combining Carrier E-Drive™ technology with an inverter and variable speed hermetic compressor.

#### **3 STEPS FOR CONSTANT CAPACITY**



### **RELIABILITY MEANS MAXIMUM UPTIME**

#### INNOVATIVE E-DRIVE™

Benefiting from a long experience on trailers, E-Drive™ improves reliability by tackling the usual sources of breakdown with less moving parts plus a 85% reduction in fittings and hose length for reduced cost of ownership.

#### **EFFICIENT INVERTER**

The inverter has already shown a long and successful experience in the air conditioning industry.

### **UNIQUE COMPRESSOR**

Pulsor micro logic ensures the compressor always works within its envelope for lower risk of breakdown and reduced maintenance costs.

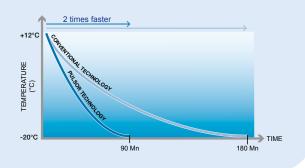


## Strong Cold Chain features with less environmental impact

With an impressively quick pull-down time and precise temperature control, Pulsor® is the perfect fit for customers operating in city centers with multiple door-openings, sensitive products and multi-temperature deliveries.

### **FAST PULL-DOWN**

Load up faster with quick pre-cooling. Pulsor is 2 times faster compared to conventional technology to reach the set point, also resulting in a 20% reduction in fuel consumption during pull-down. Most importantly, temperature is quickly recovered after door openings.



### **WIDE TEMPERATURE RANGE**

Operating in outside temperatures of -25°C to +50°C, Pulsor can deliver -25°C to +30°C in the box in all these conditions\*.

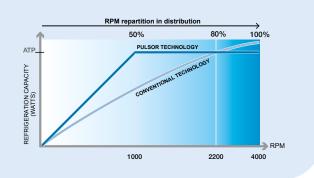
\*depending on box «K factor» performances



## **CONSTANT COLD**

High capacity at low engine speed together with quick pull-down enables you to recover temperature during all conditions: traffic jams, stops, multiple-door openings.

Capacity is constant throughout your delivery cycle.



### PRECISE TEMPERATURE CONTROL

Guarantee the quality of your goods during transportation. As the compressor works at different speeds, temperature control can be maintained within +/-0.8°C.\*

\*The temperature control can vary from application and/or box specification



### SUSTAINABLE SOLUTION



The Pulsor range carries the « Sustainable Solutions » mark, offered globally by Carrier. This label is exclusively for products that reduce environmental impact.

## REDUCED CO, EMISSIONS

The E-Drive technology enables a significant reduction in fittings and hose length, drastically reducing refrigerant leaks. Pre-loaded in refrigerant from the factory, a hermetic compressor also improves refrigerant containment. With an average of 2.5% of refrigerant leak per year, Pulsor reduces  ${\rm CO_2}$  emissions by 75% per year.

## User friendly interface with flexibility





#### **EFFICIENT DRIVER'S OPERATION**

Easy to operate and read, the cab command installed in the driver's cab will give the driver visibility on:

- · Box temperature
- Temperature changes
- · Message codes

The driver can easily set:

- Display brightness
- Set point temperature
- Defrost interval
- Unit function accordingly with the load transported

#### **OPTIMIZED UNIT MANAGEMENT**

Designed with a new micro and logic, Pulsor will provide you with innovative functionalities to help you get the best out of your refrigeration unit:

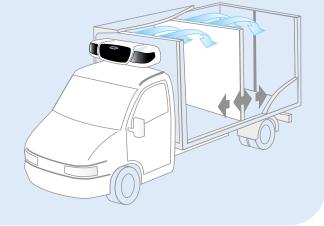
- Automatic maintenance message
- Door switch (single & MT)\*
- Evaporator harness extension for remote evaporator (single & MT)\*
- · Roof cut kit / Roof top kit\*
- \* Optional feature

- Water drain heater (single T°C)\*
- Independent temperature control with the DataCOLD temperature recorder range\*
- Real time cold chain monitoring with COLDTrans\*

#### **MULTI-TEMPERATURE FLEXIBILITY**

With E-Drive electrical power, Pulsor offers improved heating capacity that is independent of refrigeration capacity. Quick defrost boosts efficiency. All types of configurations combining heating and refrigeration capacities are available.

An extensive line-up of ultraslim evaporators including the MCV 850 vertical evaporator is available for multi-product deliveries. Contact your sales representative for more details.



## Check out our specification table to choose the right Pulsor® unit for your specific needs.

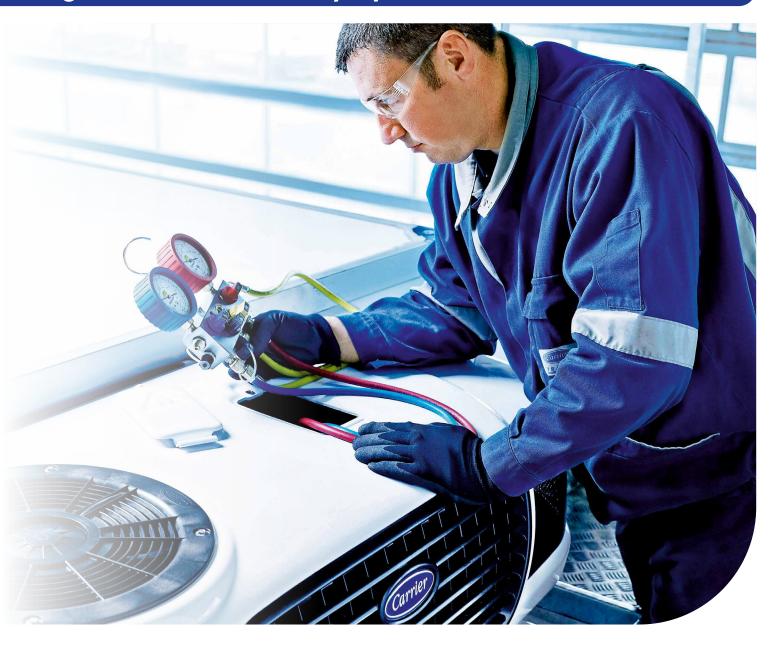
		PULSOR 300	PULSOR 350	PULSOR 400	PULSOR 500	PULSOR 400 MT	PULSOR 600 MT
COOLING CAPACITY ROAD (Watts)	0°C/+30°C	2 575	3 110	3 575	3 930	3 825	4 520
	-20°C/+30°C	1 300	1 780	1 930	2 165	1 930	2 376
COOLING CAPACITY STAND BY (Watts)	0°C/+30°C	2 610*	3 160*	3 615*	3 985*	3 870*	4 555
	-20°C/+30°C	1 310*	1 805*	1 920*	2 180*	1 990*	2 385
HEATING CAPACITY (Watts)		1 500	2 100	3 000	3 000	up to 2 100	up to 3 000
AIRFLOW (m³/h)		710	1 030	1 580	1 490	up to 1 030	up to 1 500
WEIGHT (Kg) COND. + EVAP.		108	113	121	130	up to 135	up to 150
DIMENSIONS (mm)		1124 x 577 x 235	1124 x 577 x 235	1124 x 577 x 235	1289 x 579 x 353	1124 x 577 x 235	1289 x 579 x 353
SOUND PRESSURE (dB(A))**		57	57	57	57	57	57

<sup>\*</sup> Stand by capacities are given for 400 VAC version. Stand by capacities are linked to voltage version (400 VAC or 230 VAC)

All units running on R452A refrigerant.

<sup>\*\*</sup> Measured in Stand by mode

## Together with a network of experts



By combining fewer moving parts with a hermetic system, Pulsor requires less maintenance. When you do need help, advanced diagnostic tools keep maintenance time to a bare minimum, saving cost and maximising uptime. We've also developed a full range of services to help you improve fleet efficiency.

#### **LARGE NETWORK**

Put your fleet in the hands of professionals. Using the latest equipment, 2000 fully trained technicians across 600 service centres are ready to keep your fleet on the road. We'll assist you wherever you are, 24 hours a day.

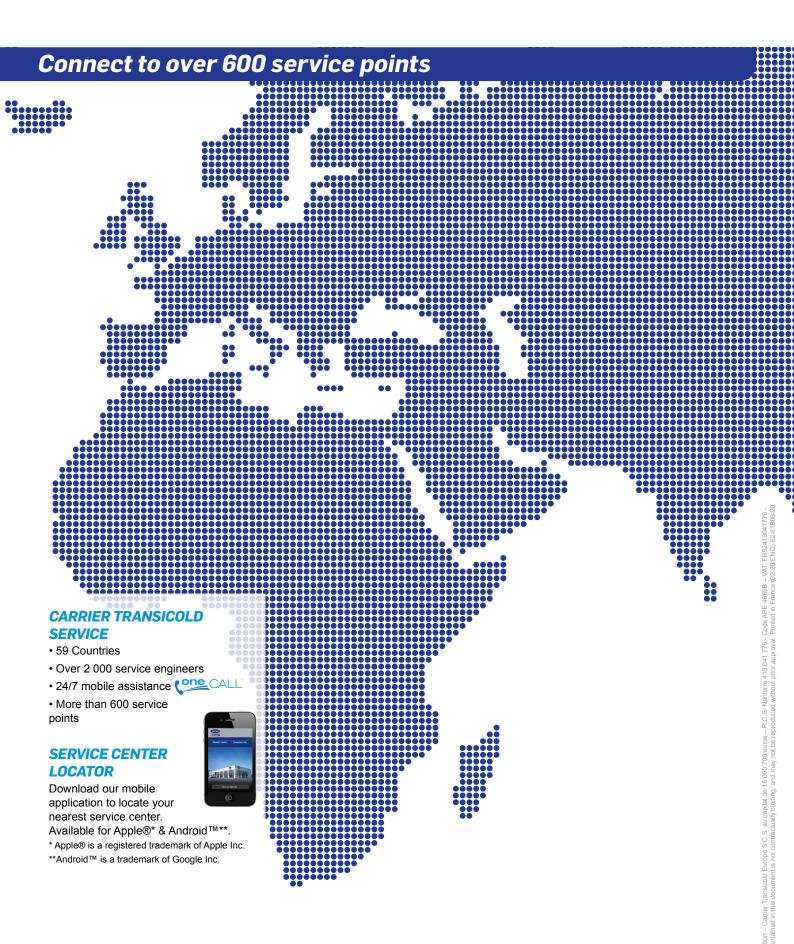
#### **QUALITY PARTS**

The right parts at the right time. Rely on Carrier Genuine Performance Parts and you can be confident your fleet benefits from the best quality, availability, choice and cost efficiency.

#### **ON CONTRACT**

Plan ahead for peace of mind. Our everCOLD contract ensure your equipment is always operating at maximum efficiency.





Discover Pulsor website: www.carrierpulsor.com



