

The full electric minibus from the Renault group





- · Quiet and economical
- · Reliable Renault technology
- · Accelerated charging



- · Length: 6 meters
- · Light and agile
- · Bright (large glass surfaces)



- · 20 passengers
- · Customisable
- · Easy and safe driving



- Easy accessibility (integral low floor)
- · Easy to clean
- · Maintenance in the Renault network
- · «A la carte» funding







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| OREOS M20          |                                                         |  |  |  |  |  |
|--------------------|---------------------------------------------------------|--|--|--|--|--|
| BASE VEHICLE       | Renault Master E-TECH                                   |  |  |  |  |  |
| GVW                | 4,5 T with 1,5T of useful payload                       |  |  |  |  |  |
| CATEGORY           | M2 - Class A                                            |  |  |  |  |  |
| DIMENSIONS         | Length 6225 X Width 2470/2050 X Height 2750 mm          |  |  |  |  |  |
| AUTONOMY           | Up to 150 kms                                           |  |  |  |  |  |
| PASSENGER CAPACITY | 20 passengers with up to 10 seats                       |  |  |  |  |  |
| ELECTRIC DRIVE     | Electric engine Renault 57 kW / 225 Nm                  |  |  |  |  |  |
| TRACTION BATTERY   | Renault 52 kWh – less of 3 hours charge @ 22 kW         |  |  |  |  |  |
| WARRANTY           | 2 years on the entire vehicle and 10 years on corrosion |  |  |  |  |  |

## THE ADVANTAGES OF THE OREOS

- Vehicle from the Renault group
- Made in France at Gretz-Armainvilliers
- Easy to use and robust
- Reliable (proven, latest generation Renault electric vehicle)
- Quiet, zero emissions
- Light, compact and agile chassis
- Easy accessibility thanks to an integral low floor
- Customisable interior and exterior design
- Bright passenger saloon thanks to a large glass surfaces
- Accelerated charging (1 min per kilometre)
- Cost-efficient and economical (quick return on investment)
- Maintenance in the Renault PRO+ network (more than 500 maintenance centres all over Europe) for a maximum uptime of your vehicle
- « A la carte » maintenance contracts



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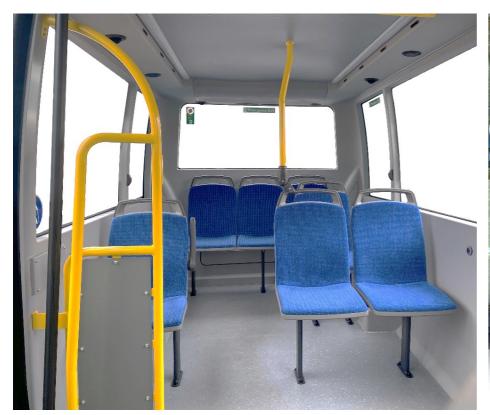








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# **OVERALL TECHNICAL SPECIFICATIONS**

## **DIMENSIONS**

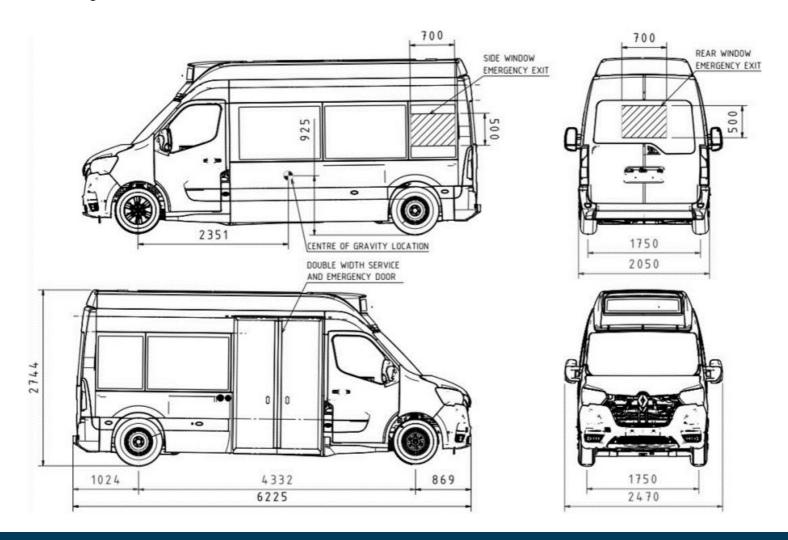
- Basic chassis: RENAULT MASTER E-TECH electrified by PVI in France
- External length 6225 mm
- External width with/without side mirrors 2470 / 2070 mm
- · External height 2750 mm
- · Internal length 3530 mm
- Internal width Front/between wheel arches 1880 / 1300 mm
- Internal height Front/Rear 1900 / 1800 mm
- Large windows (10 m2)
- Floor height Front/Rear 250 / 350 mm (integral low floor)
- Front overhang 869 mm
- · Rear overhang 1024 mm
- Turning radius 8,1 m
- Turning radius between kerbs 7,85 m

## **MASS**

- GVW 4500 kg
- Front axle capacity (min/max) 1450 / 1850 kg
- Rear axle capacity (min/max) 1550 / 2800 kg
- Payload 1500 kg

#### **PERFORMANCE**

- Range up to 150 kms
- Maxi start-up gradient @ Empty/GVW 20%/15%
- Max speed 70 km/h (electronic limitation)
- Less of 3 hours charge @ 22 kW



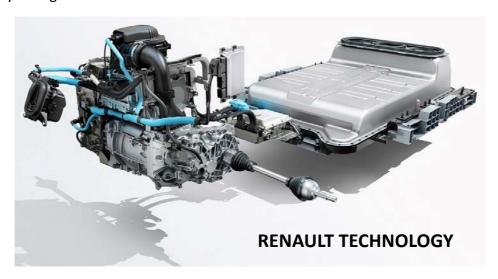


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## **OVERALL TECHNICAL DATA**

## **ELECTRIC POWERTRAIN**

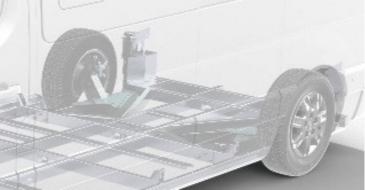
- Electric motor from Renault's major components pool
- Power / Torque max engine 57 kW / 225 Nm
- Traction battery capacity Li-Ion 52 kWh useful
- Traction battery voltage 400 V



## **CHASSIS AND SUSPENSIONS**

- Base Renault Master E-TECH cabin
- Integral low floor (without any steps inside the bus)
- Special stainless-steel structure covered with an underbody rubberized protective coating (10 years anticorrosion warranty)
- Front mechanical suspension with independent wheels (standard Renault Master axle)
- Mechanical rear suspension with independent wheels (specific axle without shaft)
- Front/Rear tyres 225/75/R16 (single)





INTEGRAL LOW FLOOR AND INDEPENDENT WHEEL SUSPENSIONS



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# STANDARD EXTERIOR EQUIPMENT

## **ACCESSIBILITY**

- · Metro type passengers service twin door, with anti-jamming device
- · Manuel book type ramp for wheelchair boarding and alighting
- Hinged driver door with remote control device
- 7 maintenance access hatches

## **PAINTING**

- Monochrome external paint including bumpers
- External chrome pack on the front face

## LIGHTING

- White during the day and blue at night LED lighting in passenger saloon
- Overhead lighting for the driver
- · Service door entrance lighting
- · Front fog lamps
- Dual-lens front headlamp with DRL LED
- · Reverse lights and rear fog lamps

#### **SAFETY**

- · ABS with emergency brake assistance (EBA)
- Electonic Stability Program (ESP)
- · Regenerative braking
- · Service door opening hazard warning lights
- Driver airbag
- Tyres inflation/puncture alert
- · Additional side marker lights
- Hill start

## **ELECTRIC CHARGING**

- On-board charger 7 kW (a 6-hours charge @80%)
- Charging time with 22 kW (a 1,5-hours charge from 20 to 80%)









| type d'installation             | puissance de charge | câble à utiliser                   |  | temps | temps de recharge batterie de 52 kWh |       |        |        |  |
|---------------------------------|---------------------|------------------------------------|--|-------|--------------------------------------|-------|--------|--------|--|
|                                 |                     |                                    |  | 100%  | 20-80%                               | 50 km | 120 km | 200 km |  |
| prise domestique<br>standard(2) | 2,3kW               | câble mode 2 standard<br>en option |  | 32 h  | 16 h                                 | 6h30  | 16 h   | 29 h   |  |
| prise domestique<br>Green'Up(1) | 3,7 kW              | câble mode 2 standard<br>en option |  | 19h   | 10 h                                 | 4h    | 10 h   | 19h    |  |
| borne domestique<br>Wallbox(1)  | 7,4 kW              | câble mode 3<br>Inclus à l'achat   |  | 9h30  | 5h                                   | 2h    | 5h     | 9h30   |  |
| borne de recharge<br>rapide     | 22kW                | câble solidaire<br>à la borne      |  | 3h    | 1h30                                 | 45mln | 1h40   | 3h     |  |



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# STANDARD INTERIOR EQUIPMENT

## **INTERIOR LAY-OUT**

- 8 Kiel fixed city bus type seats
- 2 Kiel tip up seats
- Exclusive wheelchair area
- Max. capacity without wheelchair user = 20 passengers
- Max. capacity with wheelchair user = 17 passengers





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# STANDARD INTERIOR EQUIPMENT

## **DRIVER CAB**

- Air suspended driver's seat
- Specific close compartment for the Automatic Vehicle Location (AVL) system with space for controller and cashier station
- · Electric hand-brake device
- Protected driver cab with partition wall and gate
- Electric driver air conditioning and heating devices
- Electric driver and co-driver window regulator and side mirrors
- · Front airbag
- City bell
- · Standard inner mirror overhead
- · Heated exterior rear view mirrors
- · Right hand side blind spot mirror
- Rotary sunshield
- 12 V plug and USB port
- Interior pack chrome











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# **INTERIOR STANDARD EQUIPMENT**

## INTERIOR MISCELLANEOUS SPECS

- Sound and thermal insulation of walls and roof
- 6 stop push bell buttons including 1 for the wheelchair user
- 1 stop request display
- 3 brake emergency hammers
- · Yellow hand rails
- 1 powder fire extinguisher behind driver, 1 safety kit and 1 first aid kit
- · Composite floor covered with Gerflor Tarabus or similar

# STOP



## **INTERIOR LIGHTING**

- Ambient passenger lighting with white LED strips for daytime (30 LUX), and blue at night (15 LUX)
- Original driver cab lighting overhead
- · Passenger entrance door lighting



## PASSENGER SALOON LIGHTING



## THERMAL COMFORT

- Electric heating for the driver with preconditioning cabin comfort system
- Thermal heating system for passengers (bioethanol or B100 or HVO)
- Original driver cab electric air conditioning system







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## **OPTIONS**

## PASSENGER COMFORT

- · Electric air conditioning system
- · Electric heating system for passengers
- · Hopper tilting windows
- USB ports for passengers

## **DRIVING AND SAFETY**

- Reverse radar and camera coupled with the Renault R-Link pack
- · Cruise control and max speed devices
- · CCTV system
- · Cyclist warning system
- Electronic tachygraph
- · Electronic breathalyser sobriety test
- · Heated rear window

## **OPERATIONAL SUPPORT (AVL) & PASSENGER INFORMATION SYSTEM**

- · Electric pre-installation
- · Front destination sign and controller
- · Side destination sign
- · Rear destination sign
- · Interior route display
- · Passenger saloon TFT screen
- · Passenger counting system
- Ticketing system

#### **ADDITIONAL OPTIONS**

- · Lockable and removable coin drawer
- Driver lateral airbag
- Interior high and glazed driver door
- Seat fabric, hand rails and floor covering customization
- · Van painting customization
- · Total or partial covering















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**PVI** manages the maintenance of the **OREOS M20** as the manufacturer and as the sole contact for clients who purchase the OREOS M20 product.

For maintenance, PVI, part of the Renault group, relies on the Renault PRO+ maintenance network comprising more than 500 workshops over Europe.

Renault PRO+ technicians take care of the maintenance related to the basic van. For the specific maintenance of the minibus conversion, PVI relies on its best-in-class automotive equipment suppliers as well as on a team of specialized mobile technicians.

# More than 500 After-Sales workshops in Europe

