

Renault Group

## CITY BUS H2-TECH Hydrogen-powered urban minibus





- Refueling time 5 minutes
- Hydrogen system from HYVIA
- Electrical technology from Renault

# COMPACITY

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



- Range up to 300 kms
- 15 passengers
- Customisable
- Easy and safe driving

# SIMPLI CITY

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



### www.pvi.fr



Hydrogen-powered urban minibus



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CITY BUS H2-TECH	
BASE VEHICLE	Renault Master E-TECH
GVW	4,5 T with 1,05T of useful payload
CATEGORY	M2 – Class A
DIMENSIONS	Length 6225 X Width 2070/2470 X Height 2750 mm
AUTONOMY	Up to 300 kms
PASSENGER CAPACITY	15 passengers with up to 10 seats
HYDROGEN REFUELING	@350b – compatible 700b
FUEL CELL POWER	30 kW max
EMBEDDED HYDROGEN USABLE	4,5 kg
H2 TANK PRESSURE	350b
WARRANTY	2 years on the entire vehicle and 10 years on corrosion

### THE ADVANTAGES OF THE CITY BUS H2-TECH

- Vehicle from the Renault group
- Made in France at Gretz-Armainvilliers
- Easy to use and robust
- Large autonomy
- Refueling time 5 minutes
- Based on the lastest electric powertrain and battery from Renault
- Using the hydrogen fuel cell from HYVIA manufactured in France
- Quiet, zero emissions
- Easy accessibility thanks to an integral low floor
- Customisable interior and exterior design
- Bright passenger saloon thanks to a large glass surfaces
- Maintenance in the Renault PRO+ network
- "A la carte" maintenance contracts
- Leasing offer



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# **OVERALL TECHNICAL SPECIFICATIONS**

#### DIMENSIONS

• Basic chassis : Renault Master E-TECH electrified at PVI

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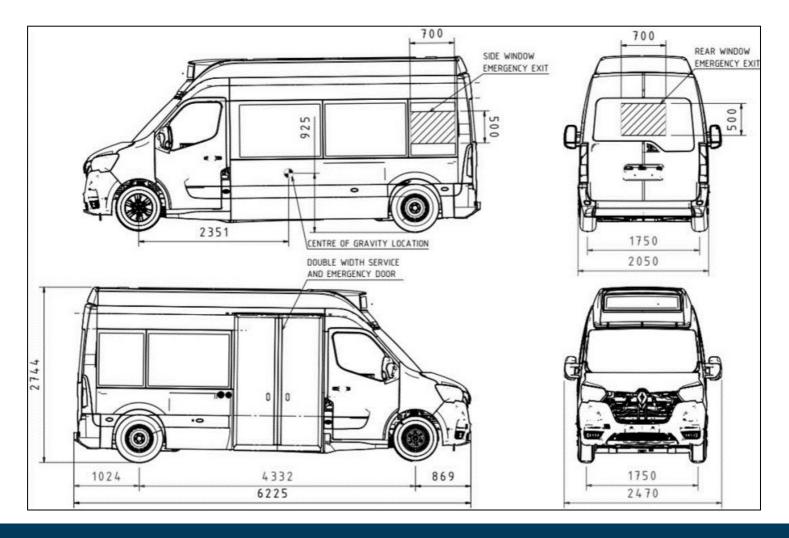
- External length 6225 mm
- External width with/without external mirrors 2470 / 2070 mm
- External height 2750 mm
- Internal length for passengers 3530 mm
- Internal width Front/between wheel arches 1880 / 1300 mm
- Internal height Front/Rear 1900 / 1800 mm
- Large windows (10 m2)
- Floor height Front/Rear 250 / 350 mm (integral low floor)
- Front overhang 869 mm
- Rear overhang 1024 mm
- Turning radius between kerbs 7,85 m
- Turning radius 8,1 m

#### MASS

- GVW 4500 kg
- Front axle capacity (min/max) 1650 / 1850 kg
- Rear axle capacity (min/max) 1500 / 2800 kg
- Payload 1050 kg

#### PERFORMANCE

- Range up to 300 kms
- Maxi start-up gradient @ Empty/GVW 20%/15%
- Max speed 70 km/h (electronic limitation)
- H2 consumption : 2 KG H2/100 kms.
- H2 refueling time: 5 minutes.





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# **OVERALL TECHNICAL DATA**

#### **ELECTRIC POWERTRAIN**

• Electric motor from Renault's major components pool

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- Power / Torque max engine 57 kW / 225 Nm
- Traction battery capacity Li-Ion 33 kWh useful
- Traction battery voltage 400 V

RENAULT TECHNOLOGY



#### HYDROGEN SYSTEM

- Fuel cell 30kW
- H2 tanks 4,5kg @350b



HYVIA TECHNOLOGY

#### **CHASSIS & 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

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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)
- Electronic Stability Program (ESP)
- Regenerative braking
- Service door opening hazard warning lights
- Driver airbag
- Tyres inflation/puncture alert
- Additional side marker lights
- Hill start

#### CHARGING

- Refuelling time : 5 minutes (max flow 60g/sec)
- On-board charger 7 kW (a 6-hours charge @80%)











Hydrogen-powered urban minibus

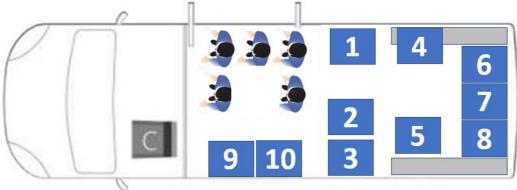
# STANDARD INTERIOR EQUIPMENT

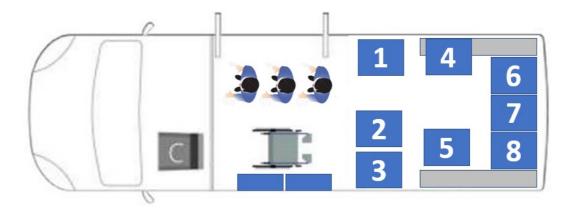
#### **INTERIOR LAY-OUT**

- 8 Kiel fixed city bus type seats
- 2 Kiel tip up seats
- Exclusive wheelchair bay
- Max capacity without wheelchair user = 15 passengers (10 sitting)
- Max capacity with wheelchair user = 12 passengers (8 sitting)

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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

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- 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

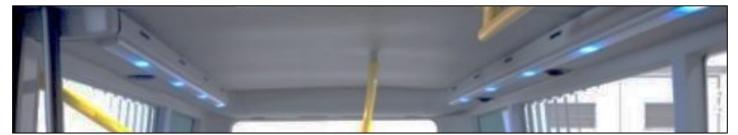
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- 6 stop push bell buttons including 1 for the wheelchair user
- 1 stop request display
- 3 brake emergency hammers
- Yellow hand rails
- 1 powder fire extinguisher behind driver, 1 safety kit and 1 first aid kit
- Composite floor covered with Gerflor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

#### **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
- Electric heating system for passengers
- Original driver cab electric air conditioning system















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# **OPTIONS**

#### PASSENGER COMFORT

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

#### **DRIVING AND SAFETY**

• Reverse radar and camera coupled with the Renault R-Link pack

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- 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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# CITY BUS H2-TECH Hydrogen-powered urban minibus



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AFTER-SALES SERVICE



LARGE STOCK OF SPARE PARTS



**PVI** manages the maintenance of the **City Bus H2-TECH** as the manufacturer and as the sole contact for clients who purchase the City Bus H2-TECH product.

For maintenance, **PVI**, **part of 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

