

Press kit

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New Kangoo Z.E. © Yannick Brossard

New KANGOO Z.E.: longer driving range and faster, easier charging

In January 2017, tailor-made business vehicle specialist Renault Pro+ presented New Kangoo Z.E., a pioneering electric van that incorporates a wealth of innovations designed to better meet customer requirements and environmental targets.

New Kangoo Z.E.'s driving range marks an increase of over 50 percent, which means it can cover even more ground than its predecessor, reaching 270km over an NEDC cycle ⁽¹⁾ (equivalent to 200km real use in summer) compared to 170km previously. A new battery mated to a new motor and the incorporation of a heat pump combine to produce the best driving range in the electric LCV (light commercial vehicle) market.

New Kangoo Z.E. is even faster and easier to charge. A new, twice-as-powerful charger enables the vehicle's battery to be fully charged in as little as six hours (easily possible overnight), whilst a one-hour lunch break allows enough time to add a 35-kilometre top-up, helping users to make optimum use of their working day. New connected services, Z.E. Trip and Z.E. Pass, simplify the charging process at public charging stations across Europe, which in turn eases day-to-day life for LCV users.

Kangoo Z.E. has topped the European small electric van market for the past six years, achieving sales in excess of 25,000 units since its launch in October 2011. New Kangoo Z.E. is built in France and will be available in Europe from mid-2017.

“Renault Pro+ tops the market when it comes to electric LCV sales in Europe, with a 29.5 percent market share as of end-May 2017. Our brand consistently strives to meet and exceed the expectations of its business customers. With New Kangoo Z.E., Renault Pro+ has shifted the goalposts in terms of driving range in this fast-growing sector (up 16 percent at end-May 2017), while continuing to provide additional bespoke services and solutions.”

Ashwani Gupta – SVP, Global Head of Renault-Nissan Light Commercial Vehicles Business Unit

“As the European standard-bearer in the realm of all-electric mobility, Renault is continually improving and refining its electric vehicles to extend operating range and make charging as simple as possible for its customers. The technological innovations built into New Kangoo Z.E. – a new high energy density battery mated to a new motor, plus a heat pump and a new charger that is twice as powerful as before – have resulted in a driving range gain of more than 50 percent, along with a faster, simpler charging process.”

Gilles Normand – SVP, Global Head of Electric Vehicle Business Unit

(1) NEDC: New European Driving Cycle, the European standard for emissions and fuel consumption monitoring.

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01

NEDC driving range extended by more than 50 percent to 270km

New Kangoo Z.E. boasts four major new innovations: **a new battery, a new motor, a new charger and the incorporation of a heat pump** for the climate control system.

New Kangoo Z.E. duly offers unrivalled driving range in the LCV market, achieving 270km over an NEDC cycle – a significant improvement over the 170km of its predecessor. In real-world use as a delivery vehicle (*), this corresponds to a range of between 120 and 200km on a single charge (depending on the type of terrain, temperature, wind, driving style, etc.) compared to between 80 and 125km previously.

() Delivery cycle: real-world usage based on a business customer carrying out deliveries on a route comprising both suburban areas and faster roads. Example: 107km in 2h25m at an average speed of 45kph, and with the vehicle stopped for 14 percent of that period.*

New Kangoo Z.E. carries over the qualities that forged the success of the original Kangoo Z.E.

As a model, Kangoo Z.E. stands out as both pioneer and market leader in the small electric van segment in Europe, having tallied over 25,000 sales since its launch in October 2011. Along the way, Kangoo Z.E. has collected a host of prestigious awards, including 'International Van of the Year 2012', whilst its environmentally-aware customers praise its driveability, carrying capacity and competitive running costs.

New Kangoo Z.E. **comes in the same wide range of versions** as its predecessor, with the same number of body types, equipment levels, options and a choice of lengths (4.28 or 4.66 metres / two or five seats / crew cab version / four equipment levels). At the same time, New Kangoo Z.E. benefits from a carrying capacity of between 3.0 and 4.6 cubic metres and a payload of 650kg. It combines the smooth, slick driveability of an electric vehicle with the user-friendliness of an automatic transmission and is easy to convert in order to meet the bespoke requirements of business customers (refrigerated vehicle, ambulance, pick-up, etc.).

New, higher energy density battery

- New Kangoo Z.E.'s extended driving range owes much to its new 33kWh 'Z.E. 33' battery.
- Developed thanks to the combined expertise of Renault and LG Chem, this new battery features a significant innovation: **upgraded energy density** which means its storage capacity has been increased without any changes to its bulk, so the vehicle's load carrying capacity is unchanged. Battery performance has been optimised not by adding extra modules but rather by improving the chemistry of the battery cells themselves in order to increase energy density.
- This major improvement was achieved with no trade-offs in terms of either reliability, safety or payload.

New, ultra-energy-efficient motor

- New Kangoo Z.E. also benefits from a **new energy-efficient motor and an optimised electronic battery management system**, which limits the electricity consumed by the vehicle during road use, with no detriment to power output.
- The all-Renault R60 motor delivers 44kW (60hp) and is based on the R90 motor that also powers ZOE.
- It is manufactured at Renault's Cléon plant in France, the Group's flagship facility for the production of high added-value engines, motors and transmissions.

Incorporation of a heat pump: a first for an electric LCV

- New Kangoo Z.E. comes with another real innovation in the realm of electric light commercial vehicles, the incorporation of a heat pump in the climate control system to maintain driving range even in cold weather.
- This heat pump improves the driving range in cold conditions by restricting the use of electrical resistors that consume both power and range.
- New Kangoo Z.E. is the world's first LCV to be equipped with this feature.
- By using the pre-conditioning system (the trigger time of which can be adjusted via the vehicle's steering wheel-mounted controls), New Kangoo Z.E. can be heated in advance when plugged in, or cooled (provided it is equipped with climate control).
- What's more, New Kangoo Z.E. is even capable of catering for the very coldest of climates thanks to the availability of an additional, independent fuel-powered mini heater unit that makes sure users stay comfortable in extreme conditions and that driving range is not impaired by very low temperatures.



New Kangoo Z.E. © Pagecran

02

Faster and easier battery charging

Charging New Kangoo Z.E. is now faster courtesy of a **new charger that is twice as powerful** and even more user-friendly thanks to **an upgraded range of connected services** to facilitate everyday life for electric van users. The new charger boasts twice the power capacity to charge the battery fully in six hours (much less than a night). It can also top up the vehicle with 35 kilometres of driving range in mild weather in just one hour (during a lunch break, for example) to deliver a valuable productivity boost. Meanwhile, new Renault Easy Connect connected services, Z.E. Trip and Z.E. Pass, further simplify charging at public stations across Europe to optimise working day schedules.

A new charger with twice the power capacity for faster charging

- New Kangoo Z.E. is equipped with a new-generation single phase 7kW (32A, 230V) AC charger.
- New Kangoo Z.E. can now be charged faster and reaches a **full charge in around six hours*** when plugged into a 7.4kW WallBox, instead of seven hours previously, yet driving range has been increased by 50%.
- New Kangoo Z.E. **can be topped up with 35 kilometres of driving range in one hour** (in temperate zones). That's the equivalent of a standard lunch break, or the time it takes to load the vehicle with goods before heading off on a fresh delivery run.
- New Kangoo Z.E. can consequently be driven all day and even handle two delivery runs (morning and afternoon), allowing users to optimise their work day schedules and provide their customers with an improved service.
- New Kangoo Z.E. comes as standard with a charging cable for a WallBox or public charging point. It is also available with a charging cable for a household power outlet or secure socket (optional or standard equipment depending on the country).

* In countries/infrastructure where a 32A single phase mains supply is available

An expanding network of charging points

Renault encourages the development of charging points in both public and private locations in addition to the development of solutions aimed at increasing driving range and charging electric vehicles faster.

The number of public charging stations has been growing yearly by between 30 and 60 percent since 2013. There are currently 80,000 charging points in Europe. Charging infrastructure is expected to grow at an even faster pace over the coming years.

The development of public charging points has a key role to play in changing the scale of the electric vehicle market.

Even though most people's main charging point is the home or a location such as their workplace, the increase in the number of public charging points is a way of promoting the use of electric vehicles. It is also reassuring for business customers who are still hesitating to switch to an electric vehicle.

A future of contactless charging of electric vehicles?

Renault has teamed up with Qualcomm Technologies and Vedecom to develop dynamic wireless electric vehicle charging (DEVC), which allows vehicles to charge while on the move. The system was demonstrated on May 18, 2017, in Versailles, near Paris, and can provide an electric vehicle with a charge of 20kW at speeds of up to 100kph.

The charging demonstrations involving two Renault Kangoo Z.E. vehicles took place on a 100-metre test track built by Vedecom in Satoy, Versailles, within the framework of the FABRIC* project (FeAsiBility analysis and development of on-Road charging solutions for electriC vehicles).

The two vehicles were able to pick up charge simultaneously in both directions along the track. Qualcomm Technologies and Vedecom installed the primary part of the DEVC system in the test track, while Vedecom and Renault installed the secondary part on two Renault Kangoo Z.E. vehicles. Vedecom will be starting a new phase of testing shortly. The aim will be to evaluate the operation and efficiency of power transfer to the vehicles for a wide range of practical scenarios, including vehicle identification and authorisation on entering the track, power-level compatibility between track and vehicle, and vehicle speed and alignment along the track.

FABRIC is a €9 million project, partly funded by the European Union, that addresses the technological feasibility, economic viability and socio-environmental sustainability of wireless DEVC. The project began in January 2014 and will continue until December 2017. It involves a consortium of 25 partners from nine European countries, including vehicle manufacturers, equipment suppliers, service providers and research organisations working in the worlds of automotive, road and energy infrastructure.

FABRIC's chief aim is to conduct a feasibility analysis of wireless DEVC as a means of EV range extension.

Easy Connect: new connected services for easier charging

New Kangoo Z.E. features the innovative new Renault Easy Connect Z.E. Trip and Z.E. Pass connected services, which make charging easier at public charging points in Europe. There are around 80,000 publicly accessible charging stations in Europe. These connected services will be gradually rolled out across the continent in 2017.

Z.E. Trip: using the vehicle's R-LINK navigation system to locate all charging points

- The Z.E. Trip application enables drivers to locate every **publicly accessible charging point** in the main European countries (*). Z.E. Trip is accessed via the Renault R-LINK navigation system and allows the driver to select a charging point and **start navigation directly to its location**.
- The Z.E. Trip application indicates the **real-time availability** of each charging point. It also provides information about the type of charging point and whether it is compatible with the car.
- Users can also access the network of charging stations on the Renault website or their MyRenault page to plan their trip ahead of time.
- Z.E. Trip can be downloaded from the R-Link Store and has been available to Kangoo Z.E. customers since November 2015.

(*) Germany, France, Nordic nations, Switzerland, the Netherlands, Austria, Belgium, the United Kingdom, Ireland, Italy, Portugal, Spain, Poland, Hungary and Slovenia.

Z.E. Pass: a single access and payment solution for most public charging points via a smartphone or tablet

- The Z.E. Pass application makes it possible to access most public charging points in Europe and pay for charging.
- The driver can locate available charging stations that are compatible with their car and compare prices at different stations nearby directly on their smartphone. They can pay 'per charge' using the smartphone app (iOS or Android) and/or an RFID payment card without necessarily being a registered member of each network of charging points.
- Developed in partnership with Bosch, Z.E. Pass is available in Germany, France, Belgium, Switzerland

and Austria. It will be available soon in the United Kingdom, the Netherlands and the Nordic nations.

My Z.E. Connect, Connect Pro and Inter@ctive still available to make everyday life easier

New Kangoo Z.E. continues to come with a range of services tailored to make driving an electric vehicle easier.

These include:

– **My Z.E. Connect**

This service lets users access their vehicle data from a smartphone or a PC using an internet connection. They can check information such as charge level, remaining range and charging history and personalise their settings to receive warning messages and tips.

– **My Z.E. Connect Pro**

My Z.E. Connect Pro is a web-based service providing raw data about electric vehicle fleets. The service delivers real-time information, including the battery's charge level, whether the vehicle is plugged into a charging facility, and driving range; then processes the data and presents it via a special interface.

The service makes it easier to manage a fleet of EVs and remotely monitor driving range, while data can be transported to the company's own software.

– **My Z.E. Inter@ctive**

This service lets users interact with their car from a smartphone or PC with an internet connection in order to programme charging (select a charging time and enjoy lower electricity rates or higher power outputs, or based on the cost and CO₂ emissions of the power used).

03

An enhanced customer experience with expert brand Renault Pro+

New Kangoo Z.E. benefits from the Renault Pro+ expert brand's considerable experience. Europe's number one electric LCV brand markets a range of bespoke solutions carefully tailored to meet the specific individual requirements of its business customers.

The expertise of the LCV market leader

Renault Pro+ is Europe's number one manufacturer of electric light commercial vehicles, with a 34.5 percent market share in 2016. Renault Pro+ offers the only electric vehicle range of its kind in the world, with Twizy Cargo, New ZOE Company, New Kangoo Z.E. and Master Z.E.

With New Kangoo Z.E., Renault Pro+ goes further still in its carefully-tailored offering thanks to a driving experience and a raft of new equipment and features developed specifically for professional use.

A business-oriented driving experience

- The experience behind the wheel of Renault's electric vehicles is above all a unique blend of punch and tranquillity: punch thanks to its brisk acceleration and pick-up response, with a level of torque that is particularly welcome when carrying a full load; and tranquillity thanks to the absence of engine noise and vibrations.
- New Kangoo Z.E. is a particularly manoeuvrable vehicle that can be adapted easily to meet the needs of a broad spectrum of trades and end-uses thanks to the wide variety of configurations and options available.
- In just a fraction of a second, the R60 electric motor delivers maximum torque of 225Nm, enabling brisk acceleration and pick-up from low speeds. This level of torque truly comes into its own when the vehicle is fully-laden.
- Acceleration is seamless and perfectly linear, with no jarring, giving the impression that the vehicle is equipped with the best automatic gearbox on the market. This is of particular benefit to those who spend the majority of their day on the road for work purposes.
- New Kangoo Z.E. is intrinsically appeasing to drive, most notably courtesy of the absence of any engine noise or vibrations, which helps to ease the inevitable stresses of the working day.
- New Kangoo Z.E. comes with equipment included specifically with wellbeing in mind, including a pre-conditioning function which ensures that the cabin is at the optimum temperature when the driver enters the vehicle, without sacrificing driving range since the ideal temperature is achieved using electricity from the mains supply.

New equipment to facilitate everyday life for business customers

- **Smartphone replication**
Thanks to the capacity of Renault R-LINK Evolution with Android Auto™ (available from autumn 2017, depending on the country), business users, while driving, will have easy access via the large on-board R-LINK display to all of their compatible Android applications, simply by synchronising their smartphone.

- **Permanent ECO mode**
This enables the permanent activation of the vehicle's ECO mode (as opposed to the standard ECO mode, which is activated by pressing a button close to the handbrake), thereby extending New Kangoo Z.E.'s driving range by up to 10 percent.
- **LED cargo area lighting**
The brightly lit load space is particularly useful for customers who use their vehicle for night-time work.
- **Wide View Mirror – Anti Blind Spot Mirror**
Characteristic of Renault's efforts to address the needs of business users, the Wide View Mirror – already a feature of Trafic and Master – will now also be available for New Kangoo Z.E. and Kangoo Express. Particularly helpful at traffic junctions and crossroads, this blind spot mirror on the passenger sun visor considerably enhances the vehicle's safety by broadening the passenger-side field of vision in panel vans and allows the driver to join a stream of traffic after assessing the flow of other vehicles.

Tailored solutions

- **A dedicated network for business users**
Renault Pro+ provides business customers with a specialist sales and after-sales network of 650 centres in 41 countries (as of end-2016) dedicated to business users and to meeting this clientele's very high standards.

This network benefits from the ultimate in electric vehicle expertise: Renault Pro+ staff are trained and equipped to look after electric LCVs, while taking into consideration users' professional preoccupations.
- **Bespoke solutions**
Thanks to a network of 400 approved converters in 29 countries, Renault Pro+ is able to convert vehicles to meet the specific requirements of individual customers.

New Kangoo Z.E. is the perfect illustration of this diversification since it boasts the widest range of versions and conversions available on the market, such as New Kangoo Z.E. Frigo, New Kangoo Z.E. Pick-up tipper and New Kangoo Maxi Z.E. 6m³.

New Kangoo Maxi Z.E. 6m³: a glowing example of the Renault Pro+ tailor-made approach

New Kangoo Maxi Z.E. 6m³ encompasses the very best of the Renault Pro+ expertise, making it readily adaptable to its customers' every need and ideal for delivering parcels in built-up areas, for example.

Greater volume

New Kangoo Maxi Z.E. 6m³ offers 2m³ more space than New Kangoo Maxi Z.E., making it the perfect choice for busy delivery rounds.

Urban agility

This vehicle greatly facilitates manoeuvres courtesy of its small turning circle and compact footprint. Its width allows for rapid drop-offs when double-parked or in a delivery bay. At the same time, its low height – at under two metres – enables it to be used in underground car parks or delivery areas for example, while its side and rear doors facilitate loading and unloading.

Renault, Europe's number one electric vehicle manufacturer

- There are currently almost 120,000 Renault electric vehicles on the road in Europe, including more than 50,000 in France.
- Renault has been Europe's best-selling electric vehicle brand in Europe since 2010.
- More than one electric vehicle in four sold today in Europe is a Renault.
- In France (Europe's biggest single market for electric vehicle unit sales), more than one electric vehicle sold today is a Renault.
- Renault ZOE is Europe's best-selling electric vehicle.
- Renault Kangoo Z.E. has been Europe's best-selling electric LCV for the past six years.
- Renault-Nissan Alliance electric vehicles top the global market with more than half of worldwide sales.

Renault Pro+, a major LCV player

At the end of 2015, Renault launched Renault Pro+, an expert brand set up to support business customers across the world by identifying and providing dedicated products and services. The objective of Renault Pro+ is to make life easier for business customers with solutions that improve their efficiency.

- **A wide range of small and large LCVs:**
 - **Kangoo** (65 versions).
 - **Traffic** (270 versions).
 - **Master** (350 versions).
- **A successful offensive on the pick-up market**, following the launch in Latin America in 2015 of **Duster Oroch**, a half-tonne pick-up that already ranks among the leaders in its segment, plus the launch in 2016 of **Alaskan**, a one-tonne pick-up designed for the global market and due to arrive in Europe in the course of 2017.
- **Europe's number one electric LCV brand** (market share in 2016: 34.5%) and **a unique wide range of electric LCV models** with Twizy Cargo, New ZOE Company, New Kangoo Z.E. and Master Z.E. (end 2017).
- **A specialist network** (sales and after-sales) comprising 650 Renault Pro+ (as of end-2016) in 41 countries dedicated to business users and to meeting their particularly high standards.
- **A network of 400 approved converters** in 29 countries to address the specific needs of individual customers.
- **An engineering centre** dedicated to LCVs in Villiers-Saint-Frédéric, France.
- **Production facilities on three continents:** Europe (three in France), Latin America (Argentina and Brazil) and Africa (Morocco).
- **LCVs sold in more than 110 countries** (key markets: Europe, Brazil, Argentina, Morocco, Turkey, Australia and Romania).
- **Record worldwide LCV sales in 2016: 434,000 vehicles (up 12.1% over 2015).**
- Renault Pro+ provides all the operational vehicles used by **Renault Sport Formula One Team**.

New Kangoo Z.E. manufactured in France at Renault's Maubeuge plant, a factory acclaimed for its expertise and focus on quality

Renault's Maubeuge plant (MCA, Maubeuge Construction Automobile) in brief:

- Fully-equipped body factory and assembly plant (stamping shop, body shop, paint shop and assembly line).
- Flexible production in compliance with Renault-Nissan Alliance standards.
- Production of passenger car and LCV versions of Kangoo since 2007, of Kangoo Z.E. (electric) since 2011 and the Mercedes Citan since 2012 (within the framework of the partnership signed between Renault-Nissan and Daimler in 2010).
- Total production in 2016: 162,254 vehicles.
- Kangoo and Citan production in 2016: 157,745 vehicles (internal combustion engine).
- Kangoo Z.E. production in 2016: 4,509 vehicles (electric motor).
- 60 percent of production is exported from France to around 30 different countries.
- Employees: 2,220.
- Surface area: almost 84 hectares (covered: 23 hectares).
- Certification: ISO 9 001 (quality), ISO 14001 (environment), HPR (risk protected).

Diversity management for a tailor-made vehicle range

The plant produces an extremely broad diversity of vehicles on a single production line. There are both passenger car versions of Kangoo (Kangoo and Grand Kangoo) and LCV versions. Kangoo LCV comes in a choice of three lengths: 3.89 metres (Kangoo Express Compact), 4.28 metres (Kangoo Express) and 4.66 metres (Kangoo Express Maxi). There is a choice of two lengths for Kangoo Z.E.: 4.28 metres (Kangoo Z.E.) and 4.66 metres (Kangoo Z.E. Maxi). Mercedes Citan, which is based on the same platform as Kangoo, is made on the same production line.

The MCA plant encompasses a Renault Tech facility for the customisation and conversion of vehicles to customers' individual specifications, notably for fleets and tradespeople.

Targeting zero defects

To ensure lasting customer satisfaction, the Renault-Nissan Alliance has instigated a plan that targets zero defects at its production facilities. It draws its inspiration from the Alliance Production Way, a production management system shared by Renault and Nissan to capitalise on the best practices of both companies.

An economic powerhouse for France's Val de Sambre region

Founded by SUC (Société des Usines Chausson) in 1971, the Maubeuge plant originally consisted of two workshops (stamping shop and body shop). It became a wholly-owned Renault subsidiary in 1978. The decision to produce Kangoo exclusively at the Maubeuge factory was taken in 1993. With a staff of 2,220, MCA is the private sector's biggest employer in France's Sambre-Avesnois region.