

A photograph of a worker in a white uniform operating a yellow robotic arm on an assembly line. The worker is seen from the side, reaching towards the robot. The background shows a complex industrial environment with various cables, pipes, and machinery. The Renault Group logo is overlaid in the top left corner.

**Renault
Group**

The Palencia plant

at the forefront of innovation

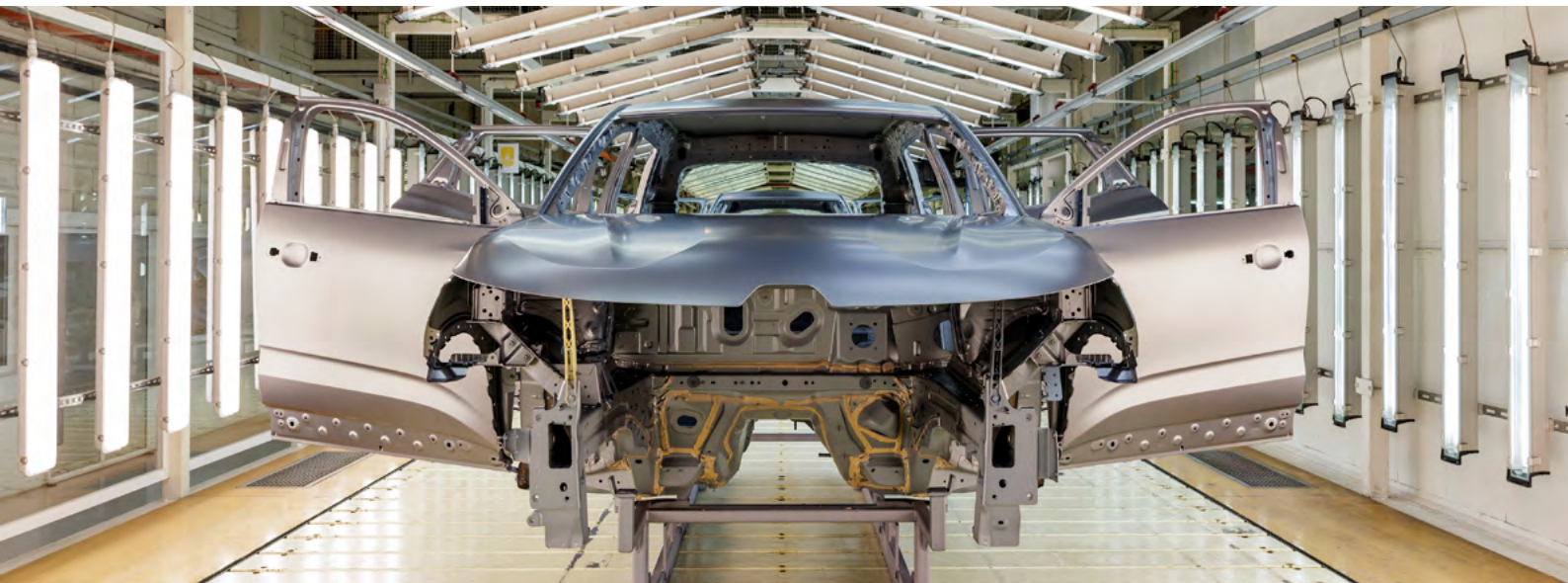
The Palencia plant has adapted its industrial facilities to manufacture Renault Austral and has positioned itself at the forefront of innovation, with a high-quality staff, very demanding quality processes, and, in addition, a particularly environmentally friendly production.

José Martín Vega

Director of the Palencia plant
Director of the Iberia Vehículo industrial cluster

History

- 1978** Creation of the Palencia plant Manufacturing **Renault 12** and **Renault 18** models
- 1979** Start of production of **Renault 14**
- 1981** Start of production of **Renault 9** and **Renault 11**
- 1986** Start of production of **Renault 21**
- 1988** Start of production of **Renault 19**
- 1993** Start of production of **Laguna**
- 1995** Start of production of **Megane**
- 2003** Start of production of **Megane II**, **5-door sedan, coupe and break**
- 2008** Start of production of **Megane III**
- 2015** Start of production of **Kadjar** and **Megane IV**
- 2016** Annual production record with **300,000 vehicles** produced
- 2018** **7 million vehicles** produced
- 2019** Start of production of **Kadjar Phase II**
- 2020** Start of production of the first plug-in hybrid vehicle, **Megane E-TECH Plug-in hybrid**
- 2021** The Renaulution España strategic plan creates in Spain a **Renault Group Hybridization Division** and provides for the allocation of three new C and D segment models to the Palencia plant
- 2022** Start of production of **Austral** - full hybrid vehicle - first vehicle of the 2021-2024 Industrial Plan



Key figures

13 models produced since the creation of the plant

7.7 million vehicles produced since manufacturing started

5 million Renault Megane I to IV manufactured

86 % of production is sold outside Spain

1,822 employees

21 % of women in the workforce



A process at the forefront of innovation

In order to host the manufacturing of **Austral**, the first vehicle of the 2021-2024 industrial plan and the new CMF-CD platform, the Palencia plant has been profoundly transformed. A year and a half of work has enabled the plant to have state-of-the-art technologies, to implement quality at the highest level, while respecting the environment.



Stamping

Manufacturing of **aluminum parts** (covers and doors) allowing a gain of 28 kg on Austral, compared to the same steel parts on Kadjar. A contribution to reducing the environmental impact.

A state-of-the-art **high-speed press**, capable of striking steel parts such as aluminum parts, with twice the output of old presses, up to 17 pieces per minute.

State-of-the-art robots to transfer and containerize parts at high speed.

Automatic camera control of parts appearance, with artificial intelligence to detect any aspect defect.



Bodyshop

4,800 welding points per vehicle, 76% of which are made in the factory in a 100% automated way, which is a reference in automation.

1,320 handling and welding robots, including **400 new generation robots**. Among which:

- ArPlas robots, which apply welding points without leaving a trace
- Laser radar robots, which measure vehicle bodies in 3D, allowing a gain of time, accuracy and quality
- advanced artificial vision robots, to ensure perfect vehicle geometry



Painting

Introduction of a **new satin paint offer**, a first for a general car manufacturer: a new generation of robust, easy-to-maintain paint with a satin appearance, the result of a specially studied chemistry.

Automatic detection tunnel: **38 cameras map 100% of the vehicle's surface** with 30,000 photos, guaranteeing the quality of the surface and the final appearance of the paint.

New two-tone line to propose this offer, standard on the top of the range.

New primer line.

75 robots distributed over the puttying, primer, paint and two-tone lines.

Control in the **light cabin** of colour harmony between parts painted in the factory and by suppliers.



Assembly

More than **1,800 part numbers assembled** in just over **four hours** on each vehicle.

Automation of secondary flows routing parts to the edge of the line thanks to AGVs (automatic guided vehicles).

All parts required for each vehicle are pre-selected and accompany the vehicle throughout the assembly process. No more choice of parts at the edge of the line, in order to guarantee quality at the workstation and a better ergonomics.



Logistics

Fully synchronized logistics with upstream and downstream processes, both with suppliers and with the sales network.

Implementation of **Fast Track**, a delivery offer that allows customers to take delivery of their vehicles **within 30 days**.



Digital

Numerous digital projects have been carried out thanks to the Manufacturing 4.0 plan, including :

A troubleshooting tool (DAVE) dedicated to maintenance, which anticipates incidents on installations and provides the steps to follow in the event of a breakdown.

The digital portal for the team manager, on a tablet, which provides the information necessary for his activity and allows him to carry out his tasks, while remaining mobile, with his team.

Quality controls by camera in stamping, bodyshop and painting.



Quality

Variable-height balancers that allow the height of the vehicle to be adapted throughout the vehicle manufacturing process, to improve ergonomics at work and promote quality in operations.

Quality controls assisted by advanced digital tools:

- Control of the appearance of parts after stamping, using cameras with artificial intelligence.
- Control of the geometry of the bodies in bodyshop, thanks to PERCEPTRON, a tool with four robots with cameras incorporated at their ends, which measure 90 specific dimensions dynamically.
- 12 ADAS (Advanced Driver-Assistance Systems) test benches, to ensure the quality level of all the vehicle's connected elements: 4CONTROL advanced,

MULTI-SENSE advanced, OpenR Link - with integrated Google - etc.

100% of vehicles controlled at the end of manufacturing on more than 100 points, reinforced by a **double check** of the vehicle in static mode and strict dynamic controls.

Direct contact between the European sales network and the plant in case of quality problems encountered by the customer. A system that allows both to quickly solve the problem for the customer and not to repeat the defect in manufacturing. Result: 60% reduction in incidents.

Innovative tests-drive called Confirmation Run, more demanding: more than 150 Austral have driven **2 million kilometres in 6 months** to guarantee the total quality of the product.

Environment

As a pillar of the Renalution, the **Renault Group's Climate Plan** sets ambitious decarbonization targets, with the aim of achieving carbon neutrality at its industrial sites in Europe by 2030 and worldwide by 2050. The Palencia plant is fully in line with this approach.

- Consumption of **100% renewable electricity**, thanks to the power purchase agreement signed in April 2021 with the energy supplier Iberdrola.
- Monitoring of energy consumption through the **Energy Portal**, a management tool that can be consulted on smartphones by all managers to react in the event of any drift or peak.
- **99.5% waste recycling** rate.
- **100% water treatment** using biological membranes to return water of better quality than the incoming water.
- **Zero paper project**: by 2021, the plant has reduced its paper consumption by 10 million sheets.
- A privileged environment, surrounded by **27,000 m² of green space** planted with 2,247 trees and shrubs.



Fabricado en España

The Palencia plant benefits from the entire Renault Group industrial ecosystem in Spain to manufacture **Austral**:

- The tailgate, bumpers, and other plastic injection parts are manufactured at the Valladolid assembly plant
- The Seville plant supplies the gearboxes
- The Motores plant in Valladolid supplies the engines. **Austral** is the first vehicle for which it supplies a hybrid engine.

The Valladolid R&D center participated in the design of **Austral** and will continue to guarantee its quality throughout the product's serial life.

