

PRESS KIT

VALEO'S AFTERMARKET INNOVATIONS

AUTOMECHANIKA 2018 - Frankfurt

Press kit

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Automechanika 2018 – Valeo's game changing innovations

Valeo is presenting its latest automotive aftermarket innovations at the 25th Automechanika trade show in Frankfurt from September 11 to 15, 2018.

By investing heavily in innovation, with nearly 1.9 million euros dedicated to Research and Development in 2017, Valeo is now at the epicenter of the three revolutions that are redefining the automotive industry: electrification, autonomous vehicles and digital mobility.

As well as innovating for the car of the future, Valeo innovates for cars already on the road, providing technological developments for the replacement parts and repair markets. This is a major challenge considering the average age of vehicles on the road in Europe is almost ten years. Over the years and kilometers driven, transmission systems inevitably undergo maintenance or have to be replaced. With the constant growth in automatic and semi-automatic transmissions, the clutch market in particular has undergone profound changes in recent years.

At this year's Automechanika, Valeo is debuting its most comprehensive range of transmission systems ever. This range showcases the Group's clutch expertise (*see page 4*) and the contributions made possible by Valeo's acquisition in October 2017 of industry specialist FTE Automotive (namely their active actuator technology used in automatic transmissions).

The innovation challenge in the aftermarket also includes safety, which is why Valeo is also unveiling two new systems to improve driver visibility, now available on the replacement market:

- Valeo AquaBlade™ windshield wiper technology, which reduces braking distance.
- Valeo MatrixBeam headlights, which resolve the until now insurmountable problem of high beams blinding oncoming drivers (*see pages 4 and 5*).

Maintenance professionals are using spare parts and products with increasingly technical content. They have to combine speed of execution, performance obligations, cost effectiveness and environmental requirements, and Valeo is committed to providing them with the necessary support. Product innovation is no longer enough; service innovation is now just as important.

In light of this, Valeo is making digital technology a priority in workshops and has in fact developed solutions with the input of front-line aftermarket operators. Valeo has consulted with over 600 professionals on three continents (Europe, Asia and South America) to implement new forms of assistance. Available on over 15 websites launched in 2018, these e-services help find the right part easily, get expert advice, gather detailed technical information and also incorporate a rewards program, which is unique for its simplicity. Valeo's innovative digital services, particularly Valeo Tech@ssist and Valeo Specialist Club (*see page 6*), exemplify the Group's innovation strategy for the automotive aftermarket.

DID YOU KNOW?

Valeo is adding some 10,000 new products to its catalog in 2018

In 2017, Valeo added almost 7,700 new products to its aftermarket catalog and, in 2018, a further 10,000 new products will be added. At this rate, by 2022, Valeo will be able to provide 95% of cars on the road worldwide with transmission systems and 98% with wiper blades, growing the repair and replacement part offering by nearly 200 new products per week. The catalog includes product lines for passenger cars and for commercial vehicles. In particular, Valeo is investing in six strategic product lines for its aftermarket catalog: transmission systems, wiper systems, lighting systems, interior climate control, electrical systems and braking systems.

Game changing product innovations

At Automechanika, Valeo is showcasing innovations that leverage its automotive expertise.

A comprehensive range to repair transmission systems

At this year's Automechanika, Valeo is presenting its most comprehensive range of transmission systems yet. For the first time, FTE ranges will be included in the Valeo aftermarket offering.

In October 2017, Valeo acquired FTE Automotive, a German company specialized in automotive clutch and transmission systems. It has particularly deep expertise in electric actuators used in automatic, dual-clutch and semi-automatic transmissions. These systems allow for fast and smooth automatic shifting. With the acquisition of FTE Automotive, Valeo is extending its offering in a strategic high-growth market largely driven by surging demand for vehicles fitted with automatic transmissions as well as for hybrid and electric vehicles.

Valeo's aftermarket offering in the manual transmission segment is both comprehensive, with over 3,000 OEM products, and, above all, of high quality, with FTE Automotive's products making a meaningful addition to Valeo's dual mass flywheel, clutch kit, and hydraulic parts ranges. These products are recognized for being high-tech, easy to install and exceptionally long lasting, making them a one of a kind offering on the market.



By expanding its dual mass flywheel range, Valeo can fulfill 80% of market need. The same goes for its VBlade™ DMF technology, protected by more than 80 Valeo patents and launched in 2018. Valeo is now in a position to offer a wide range of all-in-one kits, including Valeo FullPACK DMF™, clutch kits with a hydraulic stop and Valeo KIT4P™ conversion kits with a hydraulic stop. These unique kits, made up of the best Valeo and FTE parts, are the easiest and most reliable choice for suppliers and mechanics.

Innovative wiper and lighting technologies for greater driving safety

Valeo is bringing to the aftermarket two major innovations that will considerably increase road safety through improved visibility: the Valeo AquaBlade™ wiper technology and Valeo Matrix Beam headlights.

The Valeo AquaBlade™ wiper technology reduces braking distance by four meters



Valeo's new patented wiper technology, Valeo AquaBlade™ (integrated in the Valeo Silencio™ wiper range) delivers wiper fluid directly onto the windshield via the wiper blades, rather than via nozzles mounted on the hood. The windshield is wiped instantly and uniformly, regardless of vehicle speed, allowing for constant and perfect visibility. Front-facing cameras, which are now more and more common on car windshields, also benefit from an improved field of vision.

As a result, according to a study including 7,500 tests carried out by the independent organization Fraunhofer IOSB in Karlsruhe, drivers in vehicles equipped with the Valeo AquaBlade® react 315 milliseconds more quickly than drivers using traditional windshield wiper systems. That faster reaction time translates into a braking distance reduced by four meters in urban driving conditions at speeds of 50 km/h.

DID YOU KNOW?

Valeo ranks number one worldwide in wiper systems.
Valeo manufactures more than 350,000 wiper blades a day.

Valeo Matrix Beam headlights provide better visibility without blinding oncoming drivers

At Automechanika 2018, Valeo is exhibiting its Valeo Matrix Beam technology. These latest generation headlights allow drivers to leave their high beams on without blinding oncoming drivers, providing maximum visibility in all conditions. LEDs produce beams of light that allow all obstacles to be identified, without reducing visibility for oncoming drivers and without having to switch high beams off.



Also on show are Valeo's BiLED™ modules, which replace xenon with LED lighting. This technology combines low and high beam functions in a single, highly compact component, and offers continuous, automatic transition from high to low. Driving comfort can be further improved by activating the directional lighting function. Valeo BiLED™ modules are already in series production and are fitted to models of eight brands in North America, China and Europe.

In these high-tech headlights, automotive repair and maintenance professionals have a product that adds value to their work. The additional safety afforded to customers by this technological advance hinges on a mechanic's installation expertise.

DID YOU KNOW?

Valeo ranks number one worldwide in lighting systems.

Around 25% of new vehicles in Europe are fitted with Valeo technology.

Valeo is a partner to all automakers in Europe, Asia and North and South America.

Valeo innovations are reducing CO₂ emissions

The pioneer and world number one in vehicle electrification, Valeo fits one in every three vehicles worldwide with electrical systems for reducing CO₂ emissions. From mild hybrid to high-power solutions, Valeo electrification technologies span the full spectrum of requirements across all vehicle segments, from small urban cars through to SUVs and premium sedans. These systems are compatible with both gasoline and diesel engines as well as manual and automatic transmissions. Valeo invented the Stop-Start system, which now equips millions of vehicles across the world. It also leads the field in mild hybridization, producing around 25 million 12 V systems per year.

Various Valeo products are now available in the aftermarket for the ever-growing number of electrified vehicles on the road. These solutions include the Valeo StARS and Valeo i-StARS starter-alternators and Valeo ReStart, a reinforced starter. Valeo is the only supplier to offer Stop-Start technologies for the aftermarket.

The first of these solutions comprises the Valeo StARS (first generation in 2004) and Valeo i-StARS (since 2011) starter-alternators. Valeo i-StARS optimizes Stop-Start technology by cutting the engine before the vehicle comes to a complete stop and restarting it immediately, silently and vibration-free. The second solution is the ReStart reinforced starter, which can restart in a variety of conditions including at very low temperatures.

Given that professionals needing to replace parts may feel apprehensive about new technologies, Valeo's sales and technical teams provide training and personalized advice (*see page 6*). Thorough understanding of products allows workshops to perform high value-added repairs.

DID YOU KNOW?

One of Valeo's overall objectives is to reduce the environmental impact of cars. Part of this objective is expressed through its commitment to the circular economy. For example, Valeo refurbishes alternators that have already had a first life. One thousand two hundred different alternator products can be reconditioned in this way, representing coverage of more than 90% of cars on the road in Europe. Valeo's range of remanufactured products is expected to grow by an additional 10% over the coming months.

Game changing service innovations

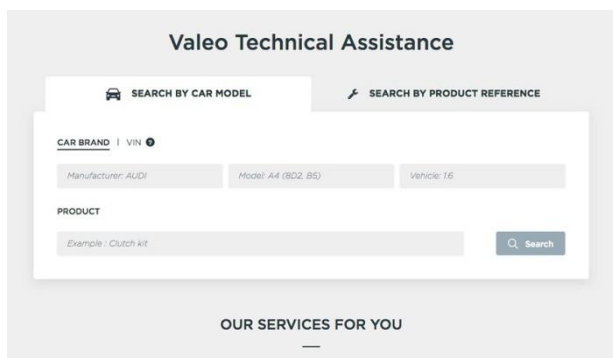
Valeo's digital revolution is here. The Group is assisting vehicle repair professionals with the launch of three new technical and digital services. How are they special? They were designed for and in collaboration with retailers and mechanics.

Valeo has implemented innovative digital information and training tools for front-line operators. Together, these tools make up a new kind of connected assistance.

New Valeo Tech @ssist: all Valeo technical information just two clicks away

Following interviews conducted with 600 retailers and mechanics in seven countries (Brazil, China, France, Germany, India, Spain and the United Kingdom), Valeo is announcing the launch of Valeo Tech @ssist.

1. A quick and intuitive part search engine



Thanks to Valeo Tech @ssist, easily accessible from valeoservice.com¹, finding the right Valeo product reference has never been faster or more intuitive. By using the TecDoc¹ database, mechanics can find Valeo product details with ease, including technical features, automaker compatibility information and product images. Users can search by vehicle type (brand, model or version), Vehicle Identification Number (VIN) or product. To increase the speed with which users get access to parts, Valeo has included an autocomplete² feature for input fields.



Technical documents which provide detailed information on products related to:

- health effects of exposure to the product
- evaluation related to the product's handling, storage or use
- measure to protect workers at risk of exposure
- emergency procedures

Valeo Service offers online training on:

- Clutches
- Air Conditioning
- Starters and Alternators
- as well as troubleshooting modules for all product lines...

Thanks to our advanced technical knowledge of years of experience in the automotive industry, this dedicated program is all about sharing our know-how with you. Get personalized support with Valeo!

The Valeo Technical Hotline allows you and your customers to get a quick and professional answer:

- Product support on cross reference enquiries
- Product support on fitment issues
- Product support on application enquiries

2. All technical information in one place

Valeo's technical information, including technical service bulletins, instructions and installation videos are now available in a single location for immediate consultation.

Valeo has observed that the ability to search for technical information specific to each spare part is

essential for its partner users. That is why Valeo Tech @ssist provides access to technical information based on product references to increase efficiency and reduce risk of errors.

3. On-demand training modules

Training is crucial in the increasingly technology rich sector of automotive maintenance. And yet, in 73% of independent garages, not a single employee has received training of any kind in the last 12 months (GiPA repairer survey, 2017). Ongoing training for professionals is particularly challenging due to a lack of time and the difficulty of interrupting mechanics' everyday routines. To overcome these limitations, Valeo has made online training modules available via Valeo Tech @ssist.

¹ Available in Germany and the United Kingdom from September 2018 before a wider international launch.

² Predicts results in real time based on the first two letters as the user types.

Valeo Connected Assistance: Valeo experts working alongside mechanics

Four in five professionals have a smartphone, and the majority of them already use their device professionally (GiPA French repairer survey, 2017).

In addition to its conventional support hotline, available in the majority of its operating regions, Valeo has set up Connected Assistance to bring its expertise directly to mechanics. Connected Assistance allows Valeo technicians to see what mechanics see, via a free smartphone app, and provide them with advice in real time as if they were right there with them in the garage. This solution provides rapid, effective assistance for all complex assembly situations, and in the use of charging stations, for example. It also enhances productivity and improves diagnosis accuracy.



Valeo Specialist Club: an innovative rewards program for mechanics



Valeo is announcing the launch of Valeo Specialist Club, a rewards program for mechanics, accessible via a smartphone app or the Valeo Service website.

The program's defining characteristic is its total freedom from cumbersome procedures: no cutting out boxtops, no documents to collect and return by mail. Valeo has opted for a simple and effective 100% digital solution, unlike any other automotive supplier on the market.

It takes participants only two minutes to create and activate their account, allowing them to start scanning Valeo products and watch points accumulate in their account in real time.

Another distinctive feature is that, in addition to recognizing spare parts for light vehicles, Valeo Specialist Club offers rewards on commercial vehicle parts.

Developed after consulting with partner workshops, Valeo Specialist Club includes a feature allowing garages to sign up using one account or open multiple accounts to reward individual teams.

The program will be launched in Spain in September 2018. An international launch, beginning in major European countries, will start in early 2019.

Innovation: at the heart of Valeo's strategy

Valeo is an automotive supplier, partner to all vehicle makers worldwide. As a technology company, Valeo proposes innovative products and systems that contribute to the reduction of CO₂ emissions and the development of autonomous driving.

One in every three vehicles worldwide is equipped with a Valeo electric system. In autonomous

The two focuses of Valeo's growth strategy

1 Innovation

Innovative technologies for CO₂ emissions reduction and intuitive driving.

2 Geographical expansion

Geographical expansion in high-growth potential regions, especially in Asia and emerging countries.

driving, Valeo boasts the widest range of sensors on the market. Its SCALA[®] is the only LiDAR (Light Detection And Ranging) scanner in series production today. SCALA[®] won a 2018 Automotive News PACE (Premier Automotive Suppliers' Contribution to Excellence) Award, a prestigious international accolade that recognizes innovation, at the prize ceremony on April 9, 2018 in the United States. More than 12 million vehicles worldwide are already fitted with Valeo automated parking systems. World-first runs by Valeo autonomous vehicle demonstrators include 24 hours around the Paris beltway and tours of Europe and the United States.

Valeo also develops digital solutions that improve everyday convenience for vehicle users, such as Valeo In'Blue[®], a securely shareable virtual smartkey for locking, unlocking and starting a vehicle from a smartphone.

Valeo-designed, Valeo-made high-tech products place the Group at the epicenter of the three revolutions disrupting today's automotive industry: electrification, autonomous vehicles and digital mobility.

Innovation is a cornerstone of Valeo's strategy, with R&D drawing a budget approaching 1.9 billion euros in 2017, i.e., nearly 12% of the Group's OEM sales. In 2017, Valeo filed more than 2,000 patents worldwide and for the second year in a row took first place in the intellectual property institute (INPI) ranking of French companies filing patents in France. Innovation is clearly instrumental in driving Valeo's growth, with products introduced less than three years ago representing 50% of order intake in 2017.

Valeo's approach to innovation starts with a detailed worldwide analysis of major trends in society (demographics, population aging, urbanization, shifts in mobility needs, etc.) over a timeframe of 30 to 50 years, providing input for drawing up a detailed ten-year technology roadmap.

Teams at Valeo's 20 research centers and 35 development centers worldwide harness and continually enrich the most advanced skills in areas such as artificial intelligence, deep learning and big data, working with an agile, flexible startup spirit to design and develop innovative new technological solutions.

Valeo also fields a network of 1,000 experts on key subjects, tasked with specifying and sharing best practices in innovation and design.

Across a wide ecosystem spanning universities, laboratories, companies in other industry sectors and startups, Valeo leverages cooperative innovation to diversify its sources of inspiration and streamline its development cycles. Valeo estimates that there are around 30,000 startups whose work in relevant areas may hold particular interest. To help it pinpoint the most promising cooperation opportunities, Valeo invests in venture capital funds such as Cathay Innovation, which is especially active in the San Francisco Bay Area, China and France.

In December 2017, Valeo announced that it had invested 375 million Chinese renminbi (around 50 million euros) in the Cathay CarTech fund, the first renminbi-denominated fund launched by Cathay Capital specializing in automotives and mobility in China. Cathay CarTech expects to invest up to 1.5 billion Chinese renminbi (around 200 million euros) in innovative companies and start-ups.

China is the world's largest automotive market and is leading the new mobility sector, while pursuing a strategic roadmap in the three revolutions taking place in the automotive industry: electrification, autonomous vehicles and digital mobility.

Valeo key figures:

18.6 billion euros in sales in 2017

1.895 billion euros in R&D spending in 2017 (nearly 12% of the Group's OEM sales)

27.6 billion euros in order intake in 2017 and 6.1 billion euros for the Valeo-Siemens joint venture, created in December 2016

50% of 2017 order intake was for innovative products introduced less than three years ago

A footprint in 33 countries

185 plants

20 research centers.

35 development centers

15 distribution platforms

113,600 employees

Valeo Service – key figures

1.9 billion euros in sales in 2017

Valeo Service products are sold in over 150 countries

45,000 products for both light and heavy commercial vehicles make up Valeo Service's portfolio

10,000 new products were launched in 2017, and 10,000 additional launches are scheduled for 2018

26 distribution logistics centers worldwide