

News Release

Hyundai Motor Group develops Smart Air Purification System

- Smart Air Purification monitors and improves in car air quality
- Passengers can check real-time information of interior air quality through vehicle's Audio, Video, and Navigation (AVN) system
- Innovative laser-based fine particulate sensors ensure system's durability and reliability

Seoul May 16, 2019 – Hyundai Motor Group developed an intelligent 'Smart Air Purification system' that monitors interior air quality to automatically filter the air inside a car. The innovation builds on the Group's prior work to enhance in-car air quality by introducing a new automated monitoring system, which continually checks interior air quality until it achieves an 'Excellent' status.

Combined with advanced filtering innovations, the technology can remove fine particulates before passengers enter the car, and purification of cabin air throughout a journey. The new development, already under consideration for future Hyundai and Kia vehicles, responds to growing concerns about the health impact of fine particulates, especially in highly-congested urban areas.

Conventional air purification systems only operate for a set period when activated, turning off after a designated time regardless of current cabin air quality. However, the new Smart Air Purification system constantly monitors the car's air quality, activating the purification function if the air quality decreases to 'Fair' level. It then maintains the cleaning process until the air quality improves to an 'Excellent' level. Even if the exterior air quality is at 'Poor' level, the system can purify air inside to 'Excellent' quality in almost instantaneously.

Passengers can monitor interior air quality levels via the car's audio-video navigation (AVN) screen, with a visual 16-bar digital display of air quality that fluctuates in real-time. This is categorized according to Korea Environmental Corporation Standards, which categorizes four levels of air quality based on the presence of fine particulate matter: Excellent, Good, Fair and Poor.

"Enabling our customers to breathe the cleanest air, even in highly-polluted areas, is a demonstration of how Hyundai Motor Group strives to care for its customers," said YongSuk Shin,

head of FR Interior & Exterior System Engineering Design Team. “This innovation is just one of many projects we are working on to provide our customers with the best in-car environments.”

Hyundai Motor Group designed an integrated, laser-based sensor to ensure the system’s durability and reliability. Typical sensors are prone to reliability issues as fine particulates can gradually build up on the measurement lens. A laser-based design sidesteps this problem, giving room for innovation by the Hyundai Motor Group R&D team. Furthermore, rigorous testing guarantees that the purifier’s fan motors and sensors will maintain full functionality at environments of both extreme heat and cold.

The new interior purification system is paired with advanced high-performance air filters which enhance the collection rate of fine particulates from 94% to 99%. Moreover, the new filtration system features a charcoal-based deodorization function and can automatically close car windows to assist the purification process.

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About Hyundai Motor Europe HQ

Hyundai Motor Europe was formally established in 2000 with its main office in Offenbach, Germany. Hyundai currently sells cars in 41 European countries through 3,000 outlets and in 2018 achieved registrations of 543,292 vehicles in the region – an increase of 3.9 percent compared to 2017, a higher rate than the market average. 2018 was the fourth consecutive year with a record sales result. 75 percent of the vehicles Hyundai sold in the region are models designed, engineered, tested and built in Europe to meet the needs of European customers, served by the company’s extensive European infrastructure. This includes two factories in the Czech Republic and Turkey, which have a combined annual capacity of 600,000 units. Hyundai is proud to offer the youngest product line-up in Europe: 90 per cent of the models are less than two years old. Hyundai offers its unique Five Year Unlimited Mileage Warranty package with all new cars sold in the region, providing customers with a five-year warranty with no mileage limit, five years of roadside assistance and five years of vehicle health checks.

More information about Hyundai Motor Europe HQ and its products is available at www.hyundai.news.

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About Hyundai Motor

Established in 1967, Hyundai Motor Company is committed to becoming a lifetime partner in automobiles and beyond with its range of world-class vehicles and mobility services offered available in more than 200 countries. Employing more than 110,000 employees worldwide, Hyundai sold more than 4.5 million vehicles globally. Hyundai continues to enhance its product line-up with vehicles that are helping to build solutions for a more sustainable future, such as NEXO – the world's first dedicated hydrogen-powered SUV.

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