



HYUNDAI · KIA MOTORS

The Hyundai Kia European R&D Center



Stepping Forward

Grand Opening of **HYUNDAI · KIA** Europe R&D Center

Investing in Hyundai and Kia's European Future

A balance of functionality and form, the new Hyundai Kia European R&D Center is bold visual statement of the Hyundai Automotive Group and its plans for growth in the European market.

The role of the R&D Center is to ensure that every future Hyundai and Kia model is fitted to the exacting demands of the European customer, a role that is true to Hyundai Motor's strategy of "thinking globally but acting locally."

The Engineering Center, representing an initial investment of 12.6 million Euro and offering a working area of 8,472 square metres, is equipped to evaluate new or existing powertrains as well as actively engage in their development. Like other departments sharing the premises, the Engineering Center employs the latest IT technologies to remain in constant communication with the Central R&D headquarters in Namyang, Korea and with other R&D Centers in Japan and the United States.

In the powertrain section, six dynamometers are constantly engaged in benchmarking, research and diesel engine development. Here, working with emission analyzing equipment Euro emission norms are met or exceeded. Alongside them is a chassis dynamometer dealing with engine-vehicle correlation, calibration and benchmarking, as well as testing the quality of European supplied technology and components. A test rig is exclusively engaged in the development of injection and port systems. In addition, there is a teardown and inspection section where the results can be quantified and analyzed.

The purpose of these facilities is to optimize engine and vehicle performance, fuel economy and drivability. And the effort is bearing fruit — powertrains that warrant mechanical quality comparison with the very best European competition.



In the vehicle evaluation section, three superbly equipped test rooms determine the road going qualities of new models. The NVH test room deals with Noise, Vibration and Harshness. The K&C test room optimizes steering and suspension settings. The shock absorber test room fine tunes the suspension to the highly demanding standard of the European driver. The results can then be reviewed and analyzed in the teardown and inspection room, allowing benchmarking and durability inspections. At every point of the development and testing process, comparisons are made with the premium car brands of Europe.

“Our aims are straightforward, but not simple,” explains Nam Yong Kim head of the facility. “We want to develop the best power trains and chassis. We combine new technology and advanced technology from European suppliers and create a major European resource, in fact a European customized product.”

The Hyundai Kia European Design Center

“Creating the best design value for European customers” perfectly sums up the objectives of the Design Center. This includes closely studying European design tendencies and needs, employing European creative talent and feeding them into the infrastructure of design studios throughout the Hyundai Automotive Group.

The Design Center occupies 5,780 square metres of purpose built workspace. Included in this area are a modeling shop, paint shop, hard modeling room, machining room, two modeling workshops, an exhibition room and both indoor and outdoor presentation areas. The open-air display facility, in the form of an amphitheatre, will allow designers to exhibit and compare several models in daylight while providing total security.

Utilizing the very latest in 3-D virtual reality simulation hardware and software, designers can review design proposals and confer with their counterparts at the main Hyundai Design Center in Namyang, Korea and the regional studios in Irvine, California and Chiba, Japan.

In the past three years, European design involvement has helped shape a number of front-running Hyundai models. The first was the Matrix minivan, followed by the Getz supermini and the Coupe. But European input has also helped germinate the ideas for many other vehicles throughout the Hyundai range, and this input is due to increase as the company's policy of regionalization — tailoring models specifically to their target markets — increases.

Speaking at the groundbreaking ceremony, Hyundai Automotive Group Chairman Mong-koo Chung said: “We know that in Europe — and particularly in Germany — passion or emotion is one of the most important criteria involved in the purchase of a car. A car must awaken emotions if it is to succeed. Design plays a primary role here.”

But design also plays an important role in the continuing rationalization of the Group, which is committed to reducing the number of platforms from the current 29 to just 7 by 2009. By placing the Design Center directly next to the Engineering Center the creativity of the designers can directly interact with the technical skills of the engineers.

In this continuing rationalization programme, the strong points of European design input can be seen as the ability to create a European package by fashioning a unique design identity on the base of traditional character. Creating a strong design identity entails, among other things, the harnessing of outstanding values of interior colour and material processing. And by applying European lifestyle expectations to the package quality standards are thereby raised.

In turn, this leads to developing exterior and interior styling that conveys a more distinctive European flavor. The multi-national and talented team at Rüsselsheim will work on developing the right package for the market segment tailored to European engineering specifications. They'll be able to provide high quality interiors by meeting European preference for colours, materials and surface textures. The multi-national and talented team at Rüsselsheim are more than ready and willing to meet these challenges.