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Compact yet high-duty components succeeding in the marketplace

## **Large contracts for compact emission-reduction valve**

Pierburg GmbH, a member of the KSPG Group, has been awarded contracts worth a total €250 million (lifetime) for a newly developed compact exhaust-gas recirculation valve. Ordered by notable European and North American automakers, the valve will be installed in engines designed to comply with the strict Euro 6 emission norm. Since recently the valve has been a standard feature from a German premium carmaker. The other valves ordered will be installed in 2014 and 2015 when certain new engines go into production at the European and US plants of further manufacturers. With its comparatively compact footprint, the valve takes into account the continuous shrinkage of engine space on present car ranges.

In answer to the rising cost of fuel and ever tighter regulations regarding CO<sub>2</sub> emissions Pierburg GmbH has for decades now been specializing among other things in exhaust-gas recirculation (EGR) modules. Among the observable trends is that the EGR valves that since the start of the 1980s have chiefly been employed for the reduction of diesel engine emissions, nowadays are increasingly being fitted to gasoline engines given the incremental fuel-saving potential of such valves.

Meanwhile, Pierburg's annual production volume of EGR valves and modules is as high as six million units. The valves are made not only at the German plants but also in the Czech Republic, Spain, USA, India, and China.

The effect of exhaust-gas recirculation is based on a lowering of combustion temperatures in diesel and gasoline engines. Lower temperatures mean a reduction in nitrogen oxides. On gasoline units, this is accompanied by less fuel consumption because of engine dethrottling under partial load—one reason, in particular, why EGR modules are catching the eye of carmakers nowadays.

### **About the compact EGR valve**

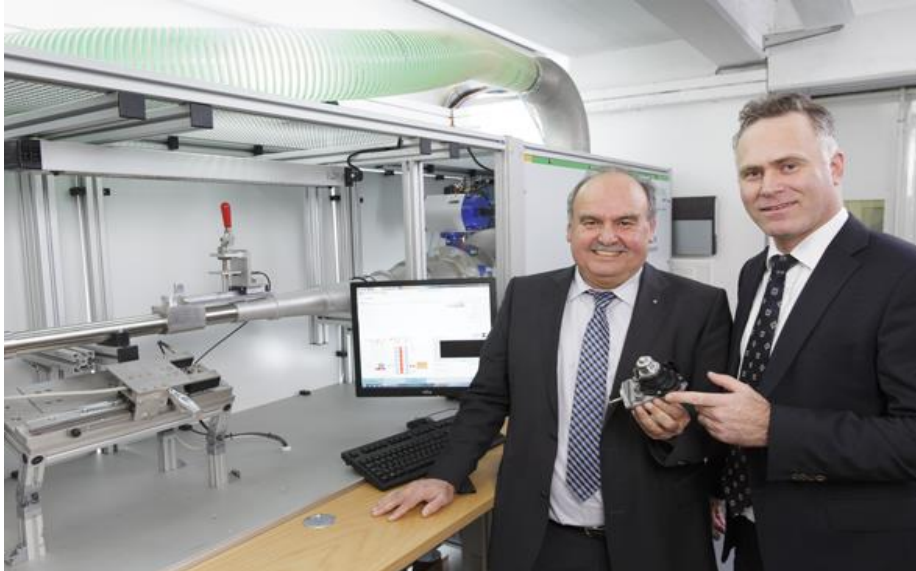
The compact EGR valve is operated by a geared DC motor and has a contactless Hall sensor for detecting valve position. Depending on customer wishes, it may feature electromagnetic protection and integrated water cooling. It is available in standalone, plug-in as well as fully integrated cooler module versions.

Regarding production materials, the tough thermal, mechanical and chemical environment requires the use of highly heat- and corrosion-resistant steels. Other critical component criteria include low flow resistance and good controllability of the recirculated waste gases especially of very small amounts. A high-strength actuator allows waste-gas backpressures of up to 5 bar to be coped with.

**About KSPG AG**

With annual sales of around €2.46 billion in 2013, the KSPG Group is among the 100-biggest auto-industry suppliers worldwide. With a workforce in excess of 12,000, it has more than 35 production plants situated in Europe, the Americas, Japan, India, and China. KSPG AG is the parent and flagship company of the Automotive sector within the Rheinmetall Group. This first-tier auto component supplier which has been operating on the international automotive markets for more than a century, has three divisions: Hardparts, Mechatronics, and Motorservice.

Photo download: <http://presse-center.kspg.de/en/press-releases.html>



*Final working test prior to series-production start-up. Michael Pachmann (r.), head of Pierburg Business Unit Automotive Emission Systems, and Osman Sari, chief developer of the new compact EGR valve.*



*Before going into series production, the EGR valves undergo extensive tests including endurance. Osman Sari, Pierburg's chief developer of the new compact EGR valve at a flow test rig.*

**Press contact:**

Folke Heyer  
Senior Manager Communications  
KSPG AG  
[presse@kspg.com](mailto:presse@kspg.com)