

# VOLKSWAGON GROUP SOUTH AFRICA

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CORPORATE BROCHURE



# Investing in the future

Having cornered the global export market for the right-hand drive Polo and total production for the derivative Cross Polo, automotive manufacturer Volkswagen Group South Africa has embarked on a major development programme to upgrade facilities, and improve productivity and efficiency. Manufacturing planning division head Chris Glover talks to Gay Sutton about the latest project—the construction of a new press shop



The automotive landscape in South Africa is far from static, as it gears up to take its place as a major player in the international export market. One of the trailblazers in this rapid evolution is Volkswagen Group South Africa, and this year the company is celebrating its 60th anniversary in the country, marking the date in 1951 when SAMAD (South Africa Motor Assemblers and Distributors) first began producing the iconic Volkswagen Beetle from the same manufacturing site at Uitenhage, Eastern Cape. Today, of course, the company is a wholly owned subsidiary of Europe's largest auto manufacturer, the Volkswagen Group.

Volkswagen Group South Africa has been at the forefront of a remarkable change in the South African automotive industry, not only introducing the latest concepts in manufacturing best practice, but increasing the volume of products exported to the global market and encouraging the establishment of an array of the world's top automotive suppliers close to the plant.

"Our policy in recent years has been to reduce the number of platforms produced at the plant from five to two, thereby reducing complexity in the plant," explains manufacturing planning division head Chris Glover. "But at the same time, we have significantly increased volume through the plant, and this has been a big incentive for international supplier companies to establish themselves locally. We currently produce over 600 cars a day but still have some possibilities for future expansion."

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Every business aspires to be excellent, but by definition, only a few can ever achieve that status. Even fewer can sustain it. A business that is excellent today can be overtaken tomorrow if it does not commit to continuous improvement. As others improve, standing still means moving backwards.

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The most significant change in manufacturing efficiency and export output began in 2008 when the South African plant was awarded the contract to manufacture right-hand drive Polo models for the worldwide market. The plant's comprehensive business case and investment plan for producing the model were supported by the fact that Volkswagen could derive economies of scale by having right hand drive manufacturing located at one site.

The South African subsidiary also offered a favourable logistical position. With the two major markets for right-hand drive Polos being Japan and the UK, the plant's location close to the Port Elizabeth port and the new international deepwater port at Ngqura made it well positioned for the receipt of CKD material and the export of finished vehicles to both destinations, as well as other markets in Malaysia, Singapore, Hong Kong, Australia and New Zealand.

"By 2008, we had already invested some ZAR

750 million (over €70 million) commissioning a new paint shop, which gave us the capacity to deliver world-class water-based painted bodies in an energy efficient and environmentally friendly way," Glover says. "But with approval of the worldwide Polo production in 2008, we began a €300 million investment programme which included the installation of a state of the art production line capable of handling 500 units per day. Right-hand Polo production then commenced as planned in July 2009."

In parallel with this, the company embarked on an extensive training programme to prepare its staff for the introduction of the new Volkswagen production system, which was being rolled out concurrently across the group. Three new training academies were built and all production employees were extensively trained.

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“This has enabled us to drive improvement from the shop floor upwards, resulting in a big breakthrough in productivity,” Glover comments. “And of course the timing was perfect, as it coincided with the introduction of our new production line.”

In true kaizen (continuous improvement) fashion, however, improvement has not been a one-off single investment but an ongoing process. With the refurbished facilities up and running and output increased, it became apparent that the existing press shop had a number of shortcomings. “We then received approval from the Group to invest a further €43.5 million in the construction of a new press shop and high speed press line. This brings our press plant in line with the Group-standard investment we had made into other areas of the plant.”

The new press line is to be housed in a purpose built 10,800 square metre facility located alongside the existing press shop. Construction commenced in January this year and the building will be ready for press installation at the end of November. There will be six presses in all, the lead press having a press capacity of 2,100 tonnes and the five following presses with 1,200 tons capacity each. “The line will incorporate brand new technology, ‘Wave Line’ motion for the presses from the Spanish company Fagor Arrasate,





began we've had abnormally high rainfall, posing some interesting challenges for the project."

The entire project is being conducted according to a very tight timeframe. With production scheduled to start in July 2012, building work has been progressing in parallel with the development and manufacture of the presses in Europe. "The presses will arrive literally just in time for installation into the building," Glover says. While this will undoubtedly be quite a planning feat, it is no less than the JIT delivery one would expect of the highly efficient automotive sector.

For Volkswagen Group South Africa, when the press shop comes online next year, there will be many benefits. Not only will it deliver a marked reduction in operating costs and an improvement in reliability, but it will also future-proof the plant. "The new press line will create greater efficiencies,"

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For more than 32 years we at IC-L have been working as expert planners for the automotive industry, in particular VW on international industrial construction and civil engineering projects. To this end we have been—and in part still are—involved in projects in South Africa, Russia, Mexico and the US, China, Slovakia, Spain and Poland, among others. Our focus is mainly on project control, full design team package, general planning, object planning/design, structural design and construction supervision, as well as architectural visualization.

Glover concludes, "and this will enable us to expand production volumes in the future, in line with our long-term strategic initiatives." [www.vw.co.za](http://www.vw.co.za) ■

integrated with automated 'Cobra' part transfer system and special software from the company KUKA Systems. We believe we are the first company in the world to use it," comments press shop project leader, Robert Pressly. "The presses are highly automated and include an automatic five-minute die changeover cycle which is a considerable improvement on our current manual tool changeover process. Every minute saved means additional parts we can produce."

Considerable attention has also been paid to the environmental performance of the new building and plant. Recycled building materials have been used where possible, maximised usage of natural light and rain water harvesting are all included. Energy consumption played a significant part in the selection of the press line.

The construction project has not been without its challenges, though. "We are building onto bedrock, and the area has

a high water table so we have had to pay special attention to the design and waterproofing of our press pit," Glover explains.

The press pit is a vast L-shaped hole in the ground with a total surface area of 451 square meters. The entire area of the pit is six metres in depth with an additional 2.5m foundation thickness. The construction methodology necessitates the removal of 7,247 cubic meters of natural ground. While the bedrock provides a solid foundation for the presses, experience shows there is a risk that vibrations can be transmitted through the rock to surrounding buildings. A special imported damping layer will therefore be installed between the pit base and the bedrock to alleviate this problem. To ensure all technical details are being thoroughly addressed in the project, the local team is working closely with specialist engineers from Volkswagen in Germany.

"Interestingly," Glover continues, "we have also proved that Murphy is alive and well in South Africa! For the last five years we've had drought conditions here in Uitenhage. But from the moment construction

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