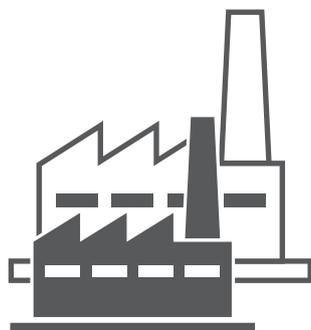


# Drive Systems Segment



## Expanded production capacity in the Indian growth market

At the end of 2014, only one year after the groundbreaking ceremony, the Drive Systems Segment's third production site in India was already partially operational. The plant is scheduled to be running at full production capacity in phase one in the third quarter of 2015. This new factory in the state of Gujarat will primarily provide the rapidly growing domestic market with a range of products from transmission synchronizers, for which India is already recognized as a competence center, to shifting solutions for transmissions used in commercial vehicles, off-road applications and passenger cars, to complete axle and transaxle assemblies for utility and recreational vehicles such as golf carts. Being in close proximity to customers through the local production facilities enables the Segment to further strengthen its customer relationships and improve operational efficiency.



In 2014, innovative driveline concepts for electric and hybrid vehicles were extended to off-highway vehicles and include technologies such as the 2SED and 4SED e-drive solutions, and the hybrid transmission OGeco with its patented drive technology.

2014 saw sales growth in the energy sector, thanks to new products for offshore drilling platforms, wind tower installation vessels and lift boats, as well as to the expansion into new geographical markets and applications for energy exploration, drilling and extraction.

Significant progress was made in 2014 toward achieving world-class operational excellence: productivity and occupational safety were improved and the production reject rate was reduced.

## Key figures

in CHF million

	2014	2013	Δ%
Order intake	781	792	-1.4%
Order backlog	199	180	10.6%
<b>Sales (third parties)</b>	<b>779</b>	<b>734</b>	<b>6.1%</b>
<b>EBITDA</b>	<b>82</b>	<b>67</b>	<b>22.4%</b>
- as % of sales	10.5%	9.1%	-
<b>EBIT</b>	<b>41</b>	<b>26</b>	<b>57.7%</b>
- as % of sales	5.3%	3.5%	-
Research and development expenses	14	13	7.7%

## Best-in-Class

BorgWarner: 11.6% operating income margin (2014).

## Profile

The Drive Systems Segment, with its brands Oerlikon Graziano and Oerlikon Fairfield, is a leading provider of gear, drive and shifting solutions. With over 90 years of experience, one of the Segment's core competencies is its in-house engineering and manufacturing expertise in developing innovative solutions, which can be anything from a custom-engineered synchronizer ring to a seamlessly integrated powertrain from the engine to the wheel. The Segment's high-tech products can be found in a wide range of applications for operating machinery and equipment used in agriculture, construction, energy, mining, transportation and high-performance sports cars. Examples include tractors, trucks, on-/off-highway vehicles such as city buses and airport towing tractors, power plants, oil and gas platforms and underground mining machines. The Segment's latest innovations for electric and hybrid vehicles are targeted at reducing emissions and environmental pollution, while still providing the desired vehicle performance and engine efficiency.

## Markets

As one of the largest manufacturers of precision gear components and assemblies, the Segment provides technologies for the agricultural, construction, energy and transportation markets. Around 70% of all agricultural machinery manufactured worldwide contains shifting solutions (e.g. synchronizer assembly and clutch units), making the agricultural industry the most important market for the Segment, followed by the construction industry. Customers include well-known brands that manufacture construction and agricultural machinery. In the high-performance automotive sector, complete systems from the Drive Systems Segment are used in premium sports car brands, as well as in environmentally friendly electric and hybrid vehicles. The Segment has an addressable market of CHF 15 billion, with the main geographic markets being Europe, the Middle East, Africa and Russia (EMEAR), the Americas, India and China.

## Business performance

The Drive Systems Segment posted sales of CHF 779 million in 2014, corresponding to an increase of 6.1% year-on-year (2013: CHF 734 million), while order intake remained around prior-year level (-1.4%) at CHF 781 million (2013: CHF 792 million). Thanks to ongoing measures to increase operational efficiency, the Segment's profitability continued to improve compared to the previous year, with EBITDA up 22.4% to CHF 82 million (2013: CHF 67 million), and an EBITDA margin of 10.5% (2013: 9.1%). EBIT amounted to CHF 41 million (2013: CHF 26 million), which corresponds to an EBIT margin of 5.3% (2013: 3.5%). In 2014, the Drive Systems Segment signed long-term agreements for high-precision gears and transmissions with leading manufacturers of agricultural and construction machinery. During the same period, customers also ordered innovative new products such as all-wheel drive gearboxes, high-performance gears and shifting solutions for tractors and commercial vehicles, axles for low-floor buses and planetary drives for oil and gas platforms. Several of these orders have enabled the Segment to gain access to new geographic markets.

## Key developments

In 2014, the Drive Systems Segment expanded its range of innovative drive concepts for electric and hybrid vehicles. With the 4SED (4-Speed Electric Drive), the Segment launched an innovative, compact and lightweight transmission that delivers smooth seamless shifting and enables over 90% powertrain efficiency over the full speed range. With the 4SED technology, automobile manufacturers are able to build more efficient and better-performing electric vehicles with a higher range, enabling them to successfully differentiate themselves from competitors. A further innovation is the new hybrid transmission OGecko with integrated electric motor – a technology fully developed in-house by Oerlikon Graziano and its subsidiary, VOCIS. The powerful 120 kW electric motor can be connected to the input or output shaft, either serving as an energy recovery system or adding torque over a variable speed range. The hybrid technology reduces fuel consumption and emissions by up to 30%, especially at frequently used low speeds, where the vehicle noise levels are also significantly reduced. At the same time, the system provides a boost in performance whenever needed. Further innovations in 2014 include a new patent-pending hybrid electric drivetrain technology for off-highway equipment, with an innovative energy recovery system.

Under the global Oerlikon operational excellence program, the Segment launched its operational excellence deployment plan in mid-2013, starting in India at the two key sites in Belgaum and Greater Noida. The initiatives continued to be implemented through the year under review. Targeted training was provided for the plant managers and other managerial staff, as well as for around 200 employees. A review carried out in mid-2014 revealed that significant progress had been made, including higher levels of engagement, increased productivity, greater safety awareness and lower scrap rates. The Segment will roll out their operational excellence initiatives in 2015 at further locations.