

Media Release

## **Vacuum Supports Energy Efficiency**

## Oerlikon Leybold Vacuum Pumps Dry Electrodes in Li-Battery Manufacturing

February 15, 2016 – A well-known Korean group producing lithium-ion batteries has awarded the contract for the supply of vacuum systems to Oerlikon Leybold Vacuum. The company will equip several production lines. The delivery of these systems for electrode drying is expected for summer 2016.

With a system combination of the dry compressing screw vacuum pump DRYVAC DV 450C and the proven Roots RUVAC WH2500, the customer will optimize its production lines. Decisive factors for awarding the contract were in particular the superior process capability at low operating costs and the services offered. "Moreover, the smooth, interactive communication between customer, sales and application support showed our commitment," says HY Moon, Head of Sales Oerlikon Leybold Vacuum Korea.

In the manufacture of battery cells, vacuum technology is used for several production steps and has a high importance for the efficiency of production. During their entire life cycle, batteries need to maintain a high quality, therefore high-performance vacuum systems are necessary in order to provide the conditions for high-quality batteries, e.g. in specified drying processes. Especially with Li cells for electric vehicles, these quality requirements are increasingly important, as the demands for volumetric storage capacity, lightweight and safety are growing. Apart from electrode drying, the vacuum-assisted manufacturing steps comprise cell assembly and leak detection testing.

The vacuum pioneer from Cologne expects further business transactions in the current year. "With this order we position ourselves clearly in the fast-growing, attractive business field of modern energy storage for electric mobility," says Dr. Martin Füllenbach, CEO of Oerlikon Leybold Vacuum. The business potential for the current year shows positive aspects, especially since the market for lithium ion batteries is generally expected to grow at sustainable rates during the next three years.

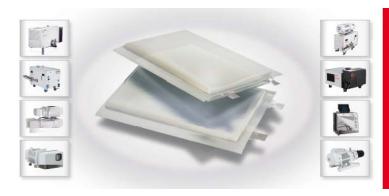
With its extensive and high degree of process and application knowledge, Oerlikon Leybold Vacuum will contribute to improve production concepts - also in order to reach a higher attractiveness of the lithium-ion batteries for mass-market applications due to a greater range per charge cycle and lower production costs.











## Vacuum Expertise

for Lithium Ion Battery Production Processes

Assure Benefits for Your Process:

- + Performance
- + Process upti
- + Throughput
- + Reliability

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For further information, please contact:

Christina Steigler
Corporate Communications
T: +49 221 347 1261

F: +49 221 347 31261

christina.steigler@oerlikon.com www.oerlikon.com/leyboldvacuum

## **About Oerlikon**

Oerlikon (SIX: OERL) is a leading global technology Group, focusing on providing market-leading technologies and services for surface solutions, manmade fibers manufacturing, drive systems and vacuum pumps and components in growth markets. These cutting-edge technologies benefit customers by improving their product performance, productivity, efficient use of energy and resources, and also by contributing to a more sustainable environment. A Swiss company with over 100 years of tradition, Oerlikon has a global footprint of over 15 500 employees at more than 200 locations in 36 countries and sales of CHF 3.2 billion in 2014. The company invested CHF 121 million in R&D in 2014 and has over 1 300 specialists developing innovative and customer-oriented products and services.

Oerlikon Leybold Vacuum offers a broad range of advanced vacuum solutions for use in manufacturing and analytical processes, as well as for research purposes. The Segment's core capabilities centre on the development of application- and customer-specific systems for the creation of vacuums and extraction of processing gases. Fields of application are coating technologies, thin films and data storage, analytical instruments and classic industrial processes.