

## Press Release

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### Linde showcases advanced solution ensuring metal powder integrity for additive manufacturing at FORMNEXT 2018

Munich, 08 November 2018 – Linde Gases, a division of The Linde Group, today announced they will be featuring their innovative ADDvance® powder cabinet at FORMNEXT, the leading exhibition and conference showcasing the best of next generation manufacturing technologies. Linde's ADDvance® powder cabinet has been designed to retain the quality of the valuable, sensitive metal powders used in additive manufacturing (AM) by protecting them from exposure to ambient air and humidity. The quality of metal powder has fundamental impact on the microstructure and physical properties of the printed item, so they must be of a defined and consistent quality, meaning that correct storage and handling is vital.

Metal powders are typically stored in containers or closed cabinets in the vicinity of the printer until needed. However, with each opening of the vessel, ambient air and humidity is allowed to enter, affecting the chemical and physical characteristics of the powder and causing it to age. This can result in degradation of the powder and increased porosity, ultimately reducing tensile strength, heat tolerance and impact and corrosion resistance. When stored in typical cabinets, metal powders can also react with the atmosphere within the cabinet itself. Even if the cabinet is purged, ambient air and humidity flow in each time the doors are opened resulting in contamination and degradation.

With the innovative ADDvance® powder cabinet, Linde has developed an innovative solution to resolving this storage challenge. The powder cabinet works with a moisture control and monitoring unit to continuously measure humidity levels, triggering a high-volume purge gas flow as soon as

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Christian Bruch, Bernd Eulitz  
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the doors are closed to rapidly remove moisture in the air. It then applies a lower stream of gas to ensure a consistently low level of humidity.

“Linde has long been a pioneer in developing innovative gas technologies, delivering productivity and economic benefits across a wide range of industry applications”, said [name & job title]. “Our new ADDvance® powder cabinet will optimise storage of high value AM powders and mitigate wastage.”

The ADDvance® powder cabinet with moisture control and monitoring unit can be seen at Linde’s stand D90, Hall 3 at FORMNEXT from 13-16 November 2018 at Messe Frankfurt.

### About The Linde Group

In the 2017 financial year, The Linde Group generated revenue of EUR 17.113bn, making it one of the leading gases and engineering companies in the world, with approximately 58,000 employees working in more than 100 countries worldwide. The strategy of The Linde Group is geared towards long-term profitable growth and focuses on the expansion of its international business, with forward-looking products and services. Linde acts responsibly towards its shareholders, business partners, employees, society and the environment in every one of its business areas, regions and locations across the globe. The company is committed to technologies and products that unite the goals of customer value and sustainable development.

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