

Managing perfection with ADDvance® O₂ Precision.

Ensuring the right gas composition for additive manufacturing processes.

ADDvance® O₂ Precision from Linde is a one-of-a-kind measuring technology that enables metal additive manufacturers to analyse and precisely control the level of oxygen and humidity within the printer chamber for perfect printing results.

Benefits of ADDvance O₂ Precision at a glance

- Universal solution offering best possible performance from your AM chamber
- Continuous analysis of gas atmosphere – with no cross-sensitivity
- Detection of oxygen levels down to 10 ppm accuracy
- Compact design with plug-and-play connectivity
- Ergonomic touch-sensitive interface





Today's quality challenges in AM manufacturing

Additive manufacturing (AM) takes place in a closed chamber filled with high-purity inert gases such as argon and nitrogen. However, impurities due to incomplete purging, small machine leaks and metal powder can have an influence on the oxygen level. Even a slight variation in oxygen content in the chamber can affect the mechanical properties or chemical composition of the end product. This could result in discolouration or compromise performance characteristics such as fatigue resistance.

The ADDvance O₂ Precision advantage

We developed ADDvance O₂ Precision to resolve the quality and performance challenges that additive manufacturers face as a result of incorrect oxygen and moisture levels in the printer chamber. This revolutionary breakthrough is the first solution that lets operators define the precise oxygen level for their individual material and printing application to guarantee optimal results, every time.

ADDvance O₂ Precision continually monitors the oxygen concentration in the printer chamber, detecting levels down to 10 parts per million (ppm) without cross-sensitivity. If the oxygen level rises, ADDvance O₂ Precision automatically triggers the argon or nitrogen purging process to bring oxygen and moisture levels back within the required parameters.

Flawless 3D printing customised to your needs

Our ADDvance O₂ Precision solution includes:

- Specially engineered, ergonomic measurement and analysis unit with touch-sensitive interface
- Argon or nitrogen supply scheme spanning design, provisioning and installation
- On-site support – process and technical support, maintenance included
- Gas safety – equipment, safety checks and training



Talk to our AM experts today to see how we can enhance the efficiency and environmental performance of your 3D printing processes. Email us at info@additivemanufacturing@linde.com or visit www.linde-gas.com/am.

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