

## Climate Control from VOMAT GmbH

New workshop energy recapture technology that offers significant energy savings.

With its high-performance ultra-fine coolant filtration systems, the filter manufacturer from Treuen has made a name for itself among metal processing companies worldwide. Now, the machine builders are going one better: with a new air-conditioning technology that firstly recaptures surplus energy generated by production processes which is then used to provide climate control for the production hall, offering a significant energy saving compared to conventional air conditioning units.

In modern metalworking, such as tool manufacture, efficient coolant filtration has a direct impact on tool quality, process productivity, and is critical to optimising the performance and lifespan of grinding oils. Consequently, whether grinding carbides (HM) or high-speed steels (HSS), selecting the right filter is an important consideration and can be a source of quality and efficiency improvements for the entire value chain. VOMAT's innovative filter designs put them in a position to offer reliable and cost-effective filtration of cooling lubricants. The full-flow filtration, for example, ensures 100% separation of clean and dirty oil, thanks to special high-performance precoat filters. This method means high purity oil at NAS 7 quality (3-5 µm) is continuously available for delivery to the workpiece.



When it comes to energy efficiency, VOMAT units have many built in features to reduce energy consumption, not least the full-flow (non-bypass) method of filtration which automatically adapts to changing production volumes, grinding speeds, and operational machines. This means that backwash cycles are performed only when required, responding to the level of oil contamination and thereby reducing wasted energy costs and also drag out. Another key feature of the VOMAT units are their capacity for highly accurate temperature control between +/- 0.2 K, critical for high precision machining and tight tolerances.

Now, the company has combined this expertise in energy efficiency and temperature management in its new climate control equipment offering. The LBG8000, for example, which was displayed at the Grinding Hub exhibition in Stuttgart in May 2022, is capable of both cooling a workshop during the summer and providing heat during colder months, reducing climate control costs in a highly energy-efficient manner.

Steffen Strobel, technical sales manager at VOMAT: *"Just like cooling lubricants, accurate conditioning and temperature control of the workspace air is a particularly important topic and critical to energy efficiency. This is something we understand well as a company; the accurate temperature control of cooling lubricants is an essential factor in the success of our filtration technology because it is so important to our customer's productivity and efficiency. We understand cooling so our engineers have taken this expertise and developed this new air-conditioning unit. The system uses excess energy from production and peripheral machines such as grinding machines, oil extraction systems, machine pumps, etc., and then returns it to the production hall via the air-conditioning shafts with an accuracy of +/- 1 °C to either cool, or heat, the production hall with up to 60 % more energy-efficient than conventional air conditioning systems."*

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*For UK-based sales and enquiries relating to the climate control options available from VOMAT GmbH, please contact oelheld UK on 01745 814 777.*

