

Sustainable automation of manufacturing processes

Innovative cooling lubricant management with the **Mabanol CoolMatic** system



Smart Fluid Management

During the machining process, cooling lubricant is constantly consumed, so it must be continuously replenished in the correct mixing ratio. Conventional refilling is carried out manually by the respective machine operator. With an average refill volume of approx. 300 litres per week per 1,000-litre tank, this refilling process ties up important employee resources. In addition, varying tank levels and error-prone calculations of the refill concentration lead to fluctuating cooling lubricant concentrations, thereby promoting bacterial and fungal growth. This jeopardises emulsion and process stability, with far-reaching effects on manufacturing costs due to short cooling lubricant and tool service lives and inadequate workpiece quality. Furthermore, manual refilling of the cooling lubricant must be viewed critically in terms of employee health.

The automation of cooling lubricant management is therefore a fundamental component of efficient and sustainable production, which optimally combines economic goals such as **COST REDUCTION** and **AVAILABILITY** with EHS requirements regarding **EMPLOYEE SAFETY**, **PROCESS SAFETY** and **ENVIRONMENTAL PROTECTION**.

Your benefits of the Mabanol CoolMatic refill system:



Economic efficiency

Increased productivity and cost savings



Quality

Improvement in processing and product quality



Safety

Highest employee protection and maximum process reliability



Sustainability

Lower resource consumption and improvement of the carbon footprint



Reduction in personnel expenditure for non-value-adding activities



Process and emulsion stability



Consistent workpiece quality



Continuous machine operation



Extension of emulsion and tool service life



Highest standards of occupational health and safety



Reduced maintenance and downtime



Reduction in cooling lubricant consumption



Lower CO₂ emissions and reduced waste oil volume

Mabanol CoolMatic

The intelligent, fully automatic coolant level control system ensures a permanently optimised coolant supply to the machines. In addition to the general advantages of an automation solution, the efficient, demand-based coolant replenishment system **Mabanol CoolMatic** offers the following benefits:



Compact design

Flexible integration into existing machinery:

Individual machines & central systems → Mabanol CoolMatic Advanced

Multiple machine solution (up to 4) → Mabanol CoolMatic Premium



Plug & Play

Simple, quick installation and operation:

Pre-assembled connections, no downtime for installation, simple handling including overfill protection

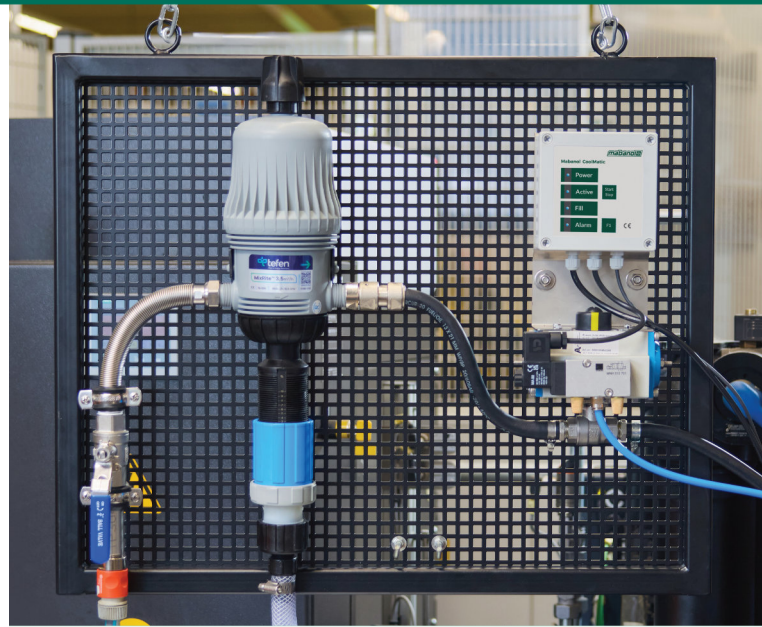


Cost-effective

Low acquisition costs: Amortisation after a short period of time (just a few months)

Low & constant refill concentration:

Lower cooling lubricant consumption combined with maximum emulsion and process stability as well as workpiece quality



Note on refill concentration:

The refill interval for the Mabanol CoolMatic system is not time-dependent, but is determined solely by the fill level using a level sensor.



The level sensor is set in a way that it reacts even to minimal deviations in the fill level and sends a signal to refill. This has the advantage of avoiding the need to refill larger volumes and preventing fluctuations in fill levels. As a result, it is not necessary to constantly recalculate the refill concentration.

By continuously refilling in small quantities, the refill concentration can be kept constant at a low percentage of 0.5-1%. The refill concentration therefore only needs to be set once during system installation on the proportional mixing device. This not only prevents miscalculations, but also ensures maximum process and emulsion stability thanks to a permanently filled tank with a consistent concentration. In addition, the consistently high lubrication performance ensures outstanding machining and product quality, reducing tool wear and the number of defective parts.

Customer testimonials

60 min

Lower daily maintenance costs per machine (for 1,500 litre tanks)

3x

Emulsion service life (extension from 1 to 3 years)

38 %

Longer tool life with consistently high workpiece quality

50 %

Lower refill concentration

> 10 %

Increase in overall productivity

Amortisation after

4 months