

## Overview of new products and technologies - Report fair EMO 2023 -

MWM Schmieranlagen presents best technologies for safe and reliable lubrication processes.

Our topics:

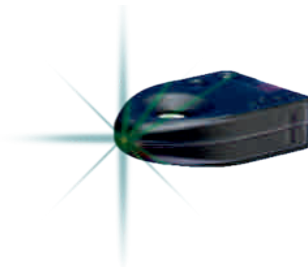
- Systems with electronic functional detection for oil+air lubrication of high-speed bearings,
- Innovative patented MQL systems for internal tools lubrication with functional detection.
- Patented oil+air mixer with streak sensors integrated.
- New Leakage sensor for monitoring small liquid leaks in transparent tube, for example leak monitoring of rotary joints.
- Furthermore: sensors for spray lubricant, oil-mist sensors and the new patented laser sensor for monitoring small lubricant flow rates.

### - MWM Systems for air+oil lubrication - Lubrication for high-speed bearings

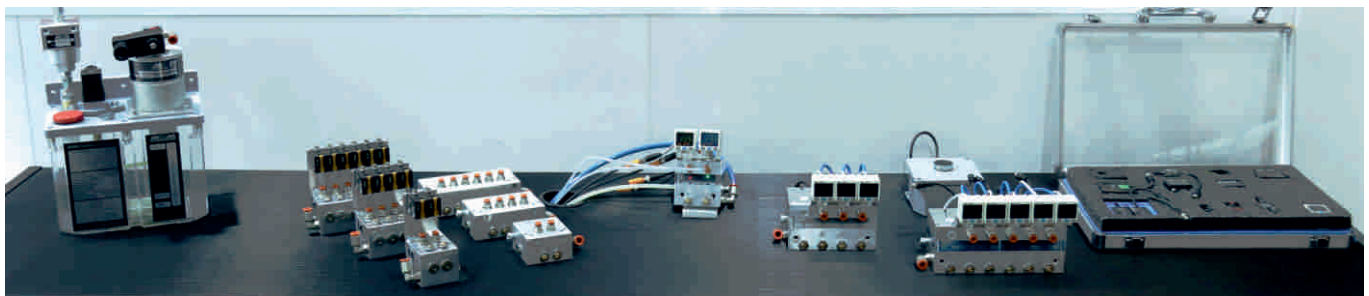
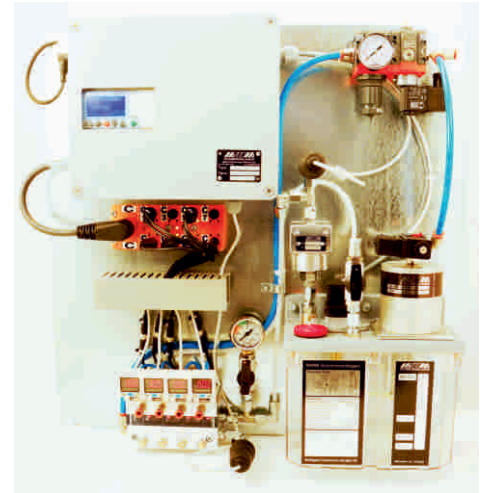
**Patented Oil+Air mixer MVF-AY**, the state of the art of Oil+Air mixers with integrated internal functional monitoring through optical sensor IFX-3D.



It can be supplied with certified precision dosing elements, it is unique in his category and is protected by international patents.



**Oil streaks sensor IFX-3D** represents the latest MWM innovation in the design and development of optoelectronic sensors for lubricant streaks detection, fed by a compressed air carrier flowing inside a flexible tube. IFX-3D features MWM's closed eyelet two-dimensional technology for precise detection of the displacement of small quantities of lubricant.



**Oil+air systems** as complete units, ready for installation. Oil+Air system equipped with control unit, oil+air mixture for each lubrication point is monitored by an optical sensor, using oil+air mixer type MVE-A and oil streaks sensor IFX-C.

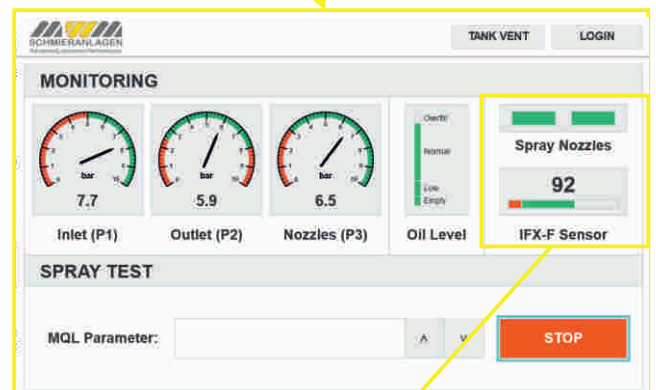


## - MQL System LS35 PRO - Minimal internal lubrication for machine tools

Innovative patented MQL systems for internal tools lubrication with functional monitoring. LS35 PRO MQL unit is developed with a refined technology, based on precise proportional valves instead of the traditional control step valves with pulsating operation. In the MQL LS35 PRO system, the continuous modulation of flow rates and detection of air flows are managed by a PLC that controls the high flow proportional valves. These valves are optimised for the lubrication of various types of tools used in different working conditions of machine tools. The system allows high-pressure machining and high air flow rate to optimise the consumption of the tool cutting edge, even in difficult deep drilling operations or when machining tough materials.



A colour display on the unit provides useful information. This touch screen display, has no equal on the current market and has much higher performance, features, precision, flexibility and ease of use than competing systems. The display can allow the operator to easily change lubrication parameters, without having to operate the machine tool control. Functional messages and process warnings are also shown on the display.



For maximum MQL process safety, the flow of the aerosol produced is monitored by the patented IFX-F optoelectronic mist sensor, which provides continuous feedback to the MQL System. The oil-mist sensor IFX-F, monitors the amount of oil in the aerosol stream to the tool. The MQL System with feedback through oil-mist sensor is an international MWM patent.

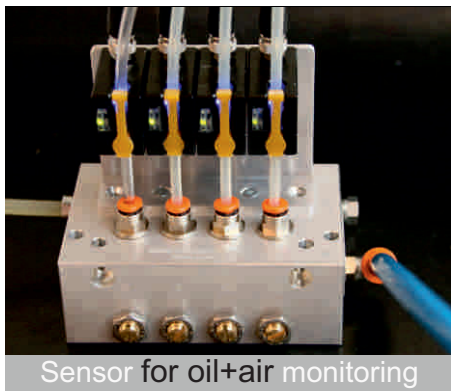


**- New patented laser sensor - Small lubricant flow rates monitoring.**

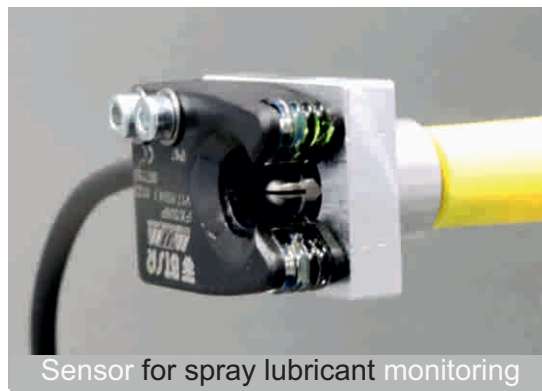
Programmable oil flow sensor IFL-A 0.2 for micro flow rates, laser optics (patented-PCT). This new sensor sets new standards in minimum quantity lubrication for mechanical components such as speed/power bearings for machine tool spindles. Based on the technique of laser interferometry, it is designed to detect extremely low flow rates of up to a few drops of oil per hour with extreme precision, providing instantaneous detection of minimum flow rates.



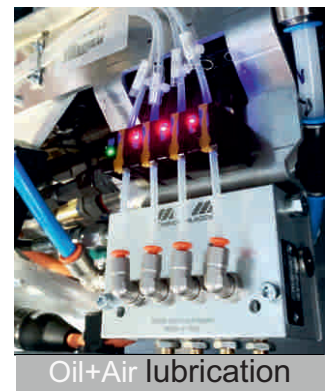
Laser sensor IFL-A 0.2 oil monitoring



Sensor for oil+air monitoring



Sensor for spray lubricant monitoring



Oil+Air lubrication

**SAFE LUBRICATION PROCESS  
with Sensor and digital monitoring**



Thanks to everyone who came to visit us and to those who collaborated to a satisfying EMO 2023