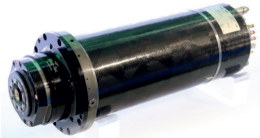


**- Oil+Air Lubrication for Spindles**

MWM is a specialist for this lubrication technology. Oil+air systems, ready for installation, equipped with control unit. Oil+air mixture for each lubrication point is monitored by streaks sensor.

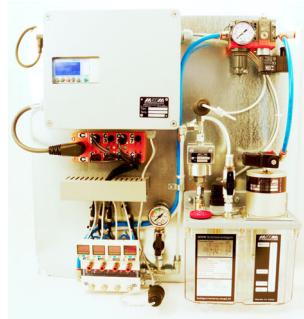
**Patented Oil+Air mixer MVF-AY**, is the state of the art of Oil+Air mixers with integrated internal functional monitoring through **streak sensors IFX-3D**.

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



A wide range of ready-to-use oil+air lubrication systems, supplied with every accessory for controlling and programming lubrication cycles, are available.

Oil+Air Systems for spindles lubrication of all brands, perfectly interchangeable with old lubrication units, such as the **new ZB4 type Oil+Air unit** specifically designed for application on GMN spindles.



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



Hall 8 Stand C78

Thanks to everyone who came to visit us and to those who collaborated to a satisfying AMB 2024

**Preview AMB 2024 Fair Stuttgart**

Overview of new products and technologies

MWM Schmieranlagen presents the latest technologies for safe and reliable lubrication processes.

Our topics:

- New Laser Sensor IFL-A. Flowmeter for micro flow rate.
- New ZLaseR-1, automatic system for feeding micro flow rates.
- Systems with electronic functional detection for oil+air lubrication of high-speed bearings,
- Patented MQL systems for MQL, internal tools lubrication with functional detection.
- Patented oil+air mixer with integrated streak sensors .
- Leakage sensor for monitoring small liquid leaks in transparent tube and for leak

**- Laser Sensor IFL-A - Flowmeter for micro flow rate**



**Patented Flow Meter IFL-A**



**Patented Flow Meter IFL-A.** This sensor allows the immediate detection of micro flow rate. The IFL-A is based on laser interferometry technology and it's designed to measure extremely low flow rates as low as few drops per hour with extreme accuracy. IFL-A sensor ensures effective and instantaneous detection of minimum micro flow rates.

Application: to monitor micro flow rates and to dose small volumes of fluid. Unrivalled micro flow rate detection of viscous or sanitary liquids from 0,5 ml/h.

E.g. for monitoring lubrication lines in order to avoid overheating at high speed due to over lubrication; to monitor spraying lines in order to ensure the right amount of fluid is applied; for spraying and coating; for chemical mixing as a monitoring of mixing fluid; in product filling to check that the right amount of fluid has been added in a production process.

**- New ZLaseR-1 System for micro flow rate**

The patented system **ZLaseR-1** is equipped with a proportional valve operated by a control PLC that determines the supply pressure to a tank that generates the micro flow.

The system includes an IFL-A flow meter, with laser sensor, which precisely monitors the value of fed micro flow.

The system can be used for the continuous feeding of micro flow rates from 0.5 ml/h or for micro pulse dosing. In operation as a calibrated micro-dose dispenser, the ZLaseR-1 system emits a control signal at each dose. The micro volumes are freely programmable.



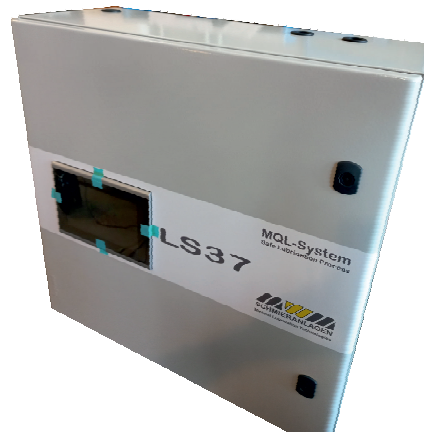
## - MQL System Models LS30-LS35-LS37 for tools lubrications

Innovative patented MQL systems for internal tools lubrication with functional monitoring. The LS series are developed with a refined technology based on precise proportional valves instead of the traditional control step valves with pulsating operation.

In the MQL LS systems the continuous modulation of flow rates and detection of air flows are managed by a PLC which 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 machinings (max. 20 bar with LS37 model) 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.



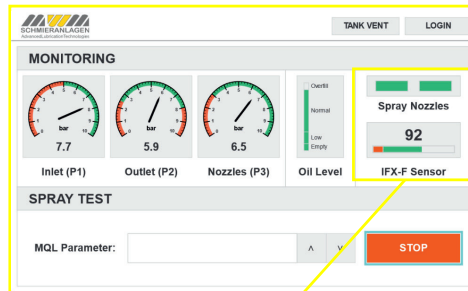
New LS37 max 20 bar

A colour display on the unit provides useful information.

This touch screen display has no equal on the market and has much higher performances, features, precision, flexibility and user-friendliness 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.

## - Solutions for controlled mist lubrication

Oil mist lubrication systems complete with IFX-F fog sensor with digital display

digital sensors for air flow and air pressure. For oil mist system applications where it is necessary to detect the lubricant quantity supplied at lubrication points.

To ensure the functional safety of oil mist lubrication systems.



IFX-F with display

## - Leakage Monitoring - Sensor Model N8751

The sensor is designed to monitor liquid leaks in transparent pipes, e.g. to monitor leaks in the leakage pipe of rotary joints. It detects liquids leaking in the sealing bushing and the flooding of the bearing inside the rotary union.

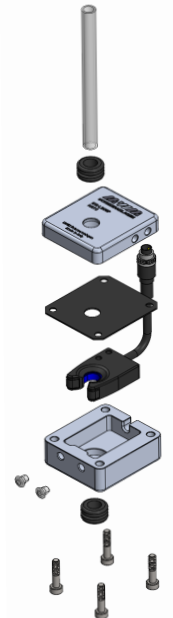


With this sensor, it is even possible to perform a predictive analysis of rotary joint failures before they occur. This drastically reduces production downtime and repair costs.

The N8751 sensor detected instantaneously the presence of liquid; it has programmable triggering thresholds to optimise its operating characteristics of monitors the presence of leakage of the rotating union.

The sensor thus distinguishes between 'actual functional leakage' and 'abnormal leakage'.

The sensor can be easily fitted on the diameter 8 pipe without having to cut the pipe.



Sensor N8751