

Expertise

Our expertise has been developed over 30 years in the design and production of systems for minimal lubrication MQL with high performance monitoring devices.

We pursue fanatically the integration of precise mechanical, hydraulic and optoelectronic components to deliver minimal dosing with tight tolerances.

A proper lubrication of high-speed bearings with maximum safety is only possible using an MWM system with integrated optical control.

MWM minimal Air+Oil lubrication

- Optimized quantity of lubricant
- Reduction of heating from hydrodynamic friction
- No mist generation; no environmental pollution
- No dust and particles
- Internal bearing temperature constant
- Continuous monitoring of all parameters
- High performance oil filtering

Benefits: a longer life for bearings, increased spindle speed and 100% safety.

Research and Development

Based on our customer requests and expectations, we have developed in the last 20 years many patented control systems to produce the most technologically advanced and reliable solutions.

We have been the first to introduce and patent inductive control systems and optical sensors in MQL Air+Oil applications.

Work with 100% safety

With the use of optical sensors, MWM has advanced the concept of continuous and automatic monitoring. Thanks to the reliability of the MWM lubrication and monitoring systems our customers can assure higher safety and reduced downtime to the users of their machines.

Products

MWM product range includes a wide choice of single components, such as pumps, filters, hydraulic and electronic components. Every component has been optimized to ensure the best solution at the right value.

These are also integrated in our wide range of MWM Air+Oil lubrication units, available from standard systems to our new top **SL Pro** 100% safety unit.

Last but not least, MWM develops custom Air+Oil units for many first-class machine tool manufacturers.

The wide range of MWM production is better described in an extensive collection of technical documents available on request or through the MWM website.

Technology

The patented MWM MVF-A, beating heart of the A+O system

20 years experience in control of minimal quantities of Air+Oil flow has allowed us to develop the only patented mixer which:

- Mixes
- Meters
- Controls the oil streak and air flow
- Digitally monitors air pressure
- All in one compact block

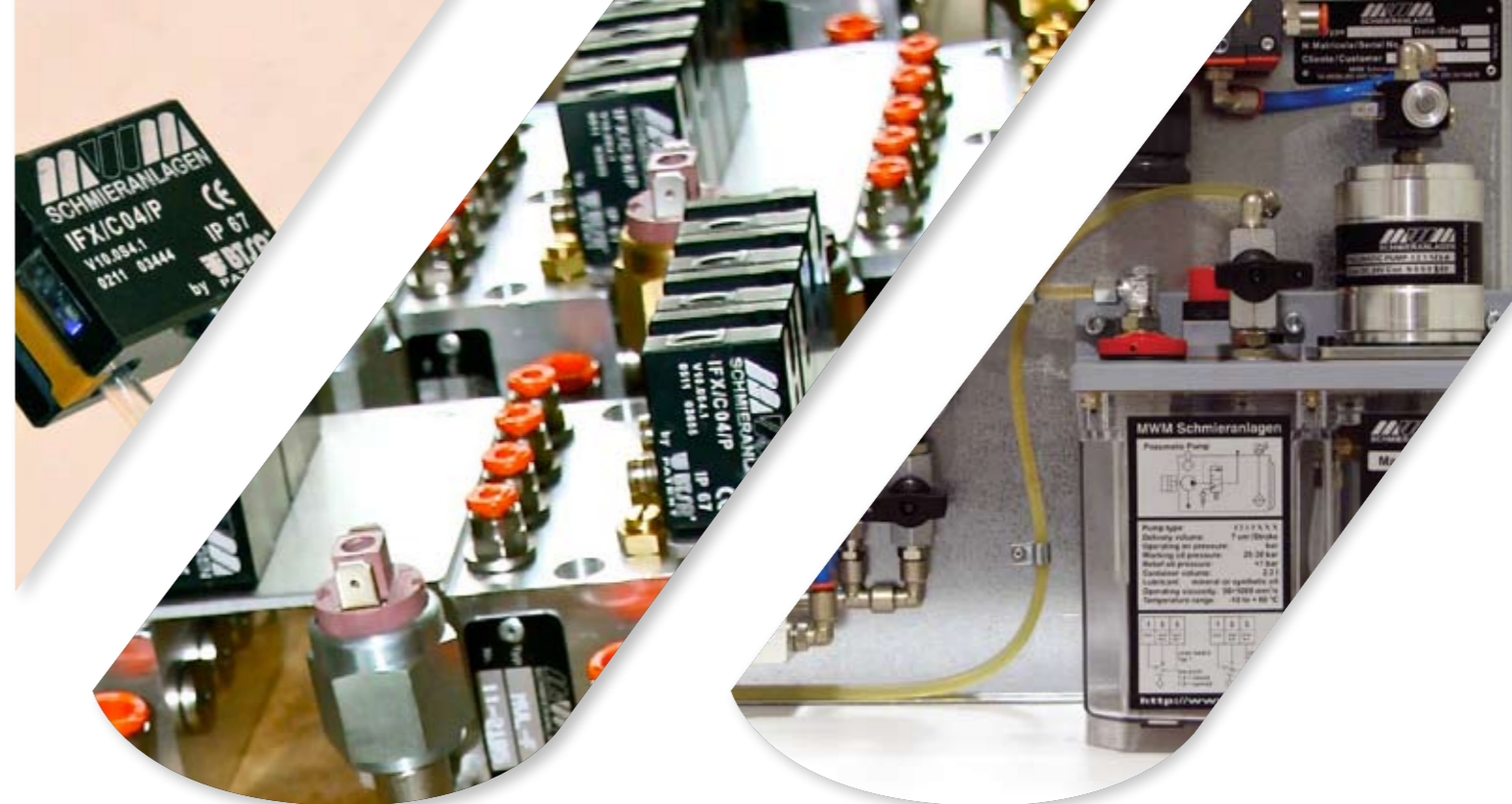
The automatic control of Air+Oil mixture feed is implemented by a compact assembly of: aluminium plates, transparent polycarbonate segment, precise metering elements and integrated electronic controls using BTSR streaks sensors, built for MWM (Patent Pending).

Optionally available digital air pressure sensors.

This assures the precise oil supply, the presence of a proper air flow and the continuous monitoring of all parameters with visual and digital feedback.

MVF-A with optical sensors: 100% Safety at High Speed in 1 unit

- Precise metering of minimal quantities of oil down to 10 mm³
- Direct control of oil and air flow at the point of injection
- No remote placement of monitoring devices
- Monitoring of air pressure
- Standard piping
- Simple on-off signal
- Pre-set calibration of optical sensor
- Easy mounting and reduced connections



MWM Air+Oil Units with Optical Control

Applications

Air+Oil minimal lubrication offers the most appropriate solution for the lubrication of high speed bearings without overheating due to an excess of lubricant.

MWM designs and produces Air+Oil lubrication systems with optical sensor control for high-speed bearings used in spindles, high speed gears, recirculation ball screws, linear guides and sliding surfaces.

The main fields of application for MWM technology are: machine tools, cutting and grinding machinery for the steel industry, grinding and polishing machines for marble, wood and metals, textile machinery, rotating machines for power cables and steel ropes and any other machinery where bearings have to work at high speed and/or high power.



Grinding Machines



Machining Centers



Boring & Milling Machines

