



MQL IN PRACTICE

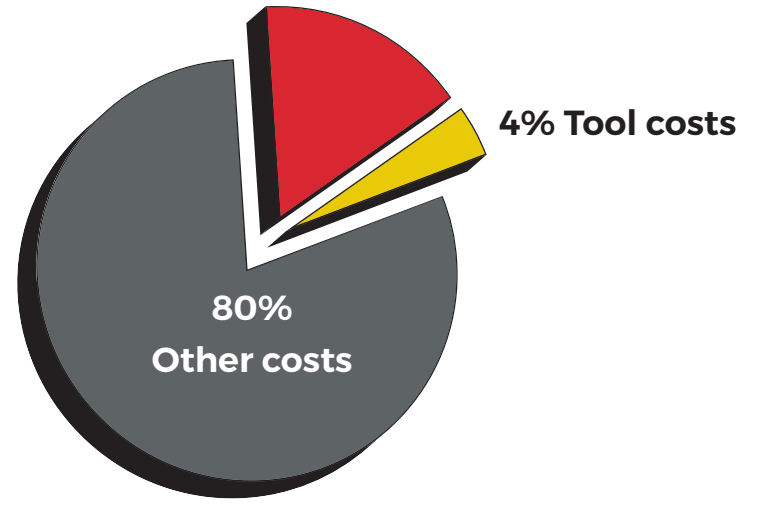
COSTS & THE ENVIRONMENT

EFFICIENT IN CONSUMPTION, FLEXIBLE IN USE. SUSTAINABLE PROTECTION OF PEOPLE AND THE ENVIRONMENT!

The main advantage of minimum quantity lubrication is the enormous reduction in the amount of lubricant used in comparison to conventional cooling lubrication systems and concepts. Unlike conventional flood lubrication or large-area application, minimal quantity lubrication only requires

a few millilitres per hour for the respective process. In addition, the minimal fluid application reduces the impact on people and the environment and is easy on the wallet.

8 - 16% Cooling lubrication costs



Proportionate costs using metal cutting as an example
Source: German Federal Statistical Office

8-16% cooling lubrication costs include proportionately	
Energy costs	7%
Work costs	10%
Cooling lubrication	14%
Disposal	22%
Other costs	7%
Assembly	40%

ALTERNATIVES

INFORMATION ABOUT OUR OTHER SERIES CAN BE FOUND ON THE INTERNET AT WWW.HPMTECHNOLOGIE.DE

HPM TECHNOLOGIE GMBH

ABOUT US

For 70 years now, the name of HPM Technologie has stood all over the world for the construction of highly modern plants in the area of minimum quantity spray application, trickling application and lubricants.

Thanks to a modular set-up, our systems for universal use can be adapted individually to any task - for purposeful application of any fluids to surfaces or to three-dimensional bodies.

FACTS

- Made in Germany
- Sustainable products
- 2500 individual and replacement parts in stock
- 1500 customers per year
- BDSH-certified expert for minimum quantity cooling lubrication (MQL) and fluids
- HPM-certified application technician for MQL and fluids
- Research partner of industry and academia
- High investment ratio in research and development

HPM TECHNOLOGIE INTERNATIONAL

Always being there for our customers on site and in the same time zone as well. This has been our motivation for over 70 years. For this reason, we try to offer you technically excellent support for all problems on site through the consistent expansion of our worldwide sales

activities. Regardless of whether in China, Poland, the USA or England. Our sales partners know all the technical details of our systems through constant education and training. This way, you are always in the best hands.



HPM Technologie GmbH
Paul-Lechler-Straße 21
72581 Dettingen/Erms

Tel: +49 7123 88039 -10 | Fax: +49 7123 88039 -81
E-Mail: info@hpmtechnologie.de | www.hpmtechnologie.de



HPM Technologie GmbH
spraying · trickling · lubricants



EFFICIENT AND ECONOMICAL PROCESSES WITH HPM BREEZE

HPM BREEZE
2019 / 2020

HPM TECHNOLOGIE BREEZE SERIES

ALWAYS THE PRECISE QUANTITY THAT YOUR PROCESS REQUIRES!

The future of your machining task starts right here!

For more and more companies, the topic of MQL machining is becoming increasingly important when considering costs, efficiency and environmental compatibility. This applies to original equipment manufacturers and end users equally.

Many companies look for alternatives in other lubricants. Fluids without additives or even emulsions with biocide are the most commonly used

alternative media in a work environment in which it has been long known that cooling lubricants are among the main causes of work-related skin disorders.

The fact that there are other options and that machining is even possible in a nearly dry operation is shown by the current technological developments in the area of MQL technology.

The HPM Breeze method!

ECONOMICAL AND ECOLOGICAL MACHINING WITH HPM BREEZE

OUR BREEZE TECHNOLOGY HAS MANY ENORMOUS ADVANTAGES OVER THE PREVIOUS CLASSIC LUBRICATION APPLICATIONS.

For the machining process, an average of between 5 and 50 ml of lubricant is used per process hour and tool. These consumption values can also be briefly – depending on the requirements of the individual operation – increased to up to 200 ml per process hour.

In addition to this excellent advantage over the previous method, the HPM Breeze method offers further enormous advantages from an economic and ecological point of view.

DRY MACHINING ACCORDING TO THE HPM BREEZE METHOD OFFERS ENORMOUS SAVINGS POTENTIALS IN SERIES PRODUCTION.

ECONOMIC ADVANTAGES:

- Reduction of the lubricant consumption many times over
- Reduction of the cleaning effort
- Reduction of emissions
- Reduction of skin irritations
- Always fresh medium in the process

ECOLOGICAL ADVANTAGES:

- Always fresh medium in the process
- Dry workpieces – dry chips
- Elimination of disposal costs for chips
- Higher cutting speeds
- No costs for emulsion treatment
- Better surface qualities.

ADVANTAGES OF HPM BREEZE

CAN BE USED ON PORTAL MILLING MACHINES, TURNING AND MILLING CENTRES, MULTI-REVOLVER TURNING CENTRES, MULTI-SPINDLE MACHINES AND ALL OTHER MACHINING CENTRES.

OPTIONAL SWITCHOVER BETWEEN CL/MQL

Different pressures can be controlled via NC machine program
Oil saturation can also be set via the injection nozzles
Fill quantity approx. 4 litres

INTEGRATED CONTROL

Interface: Profibus, ProfiNet, Ethernet
24 V DC power supply via the machine control system



FLEXIBLE

Response times < 0.1 s
Can be used between 4 - 16 bar (tool-dependent)
Air volume flow from 70 - 800 NI/min (tool-dependent)
Consumption between 5 - 100 ml/h
Several spindles can be supplied simultaneously
The spindles should be able to run dry

RETROFITTABLE

Only one axial spindle rotary transmission or similar is needed. No change to the spindle is necessary due to our 1-channel technology.

LSJ MINI

YOUR ENTRY INTO INTERNAL LUBRICATION WITH MQL.

Concentrated power paired with easy operation and an attractive price. In our LSJ Mini, we have combined all the advantages of the big brother LSJ Z35 with a compact design.

The pressure can be optimally adjusted to your requirements with manually adjustable pressure controllers. The additional option of regulating the aerosol saturation directly at the container always yields an optimum spray result. The unique possibility of using our Mini LSJ up

to an operating pressure of 15 bar makes even demanding machining possible.

This system is optimally used with uniform tool operations. Once optimally set, the system is absolutely reliable.

For optimum use with a cooling channel diameter of 0.9 mm² and up.

LSJ Z35

HIGH PERFORMANCE FOR INTERNAL LUBRICATION

Application area:

The HPM Breeze air spraying injector LSJ Z35 can be used in 95 percent of all machining processes, e.g. turning, milling, drilling, reaming, threading. With tools that have a diameter larger than 2 mm. And also where 2-channel solutions were previously used.

The LSJ Z35 is offered in 2 versions. 10 bar is standard. For more demanding applications, the LSJ Z35 is available in a version with 16 bar.

Application:

Internal lubrication with coolant adapter via internal coolant supply. Internal coolant supply tools with at least 0.15 mm² cross sectional area. External lubrication via mist pressure nozzles.

Function:

Even aerosol production using regulated compressed air (proportional technology). Transport via aerosol diverter, selection of HPM Breeze programs via ProfiBus/ProfiNet with Ethernet interface.

SINGLE-CHANNEL SYSTEM

- Simple installation
- CL/MQL switchover possible
- Fastest response time
- No oil wall fraction with optimum configuration

