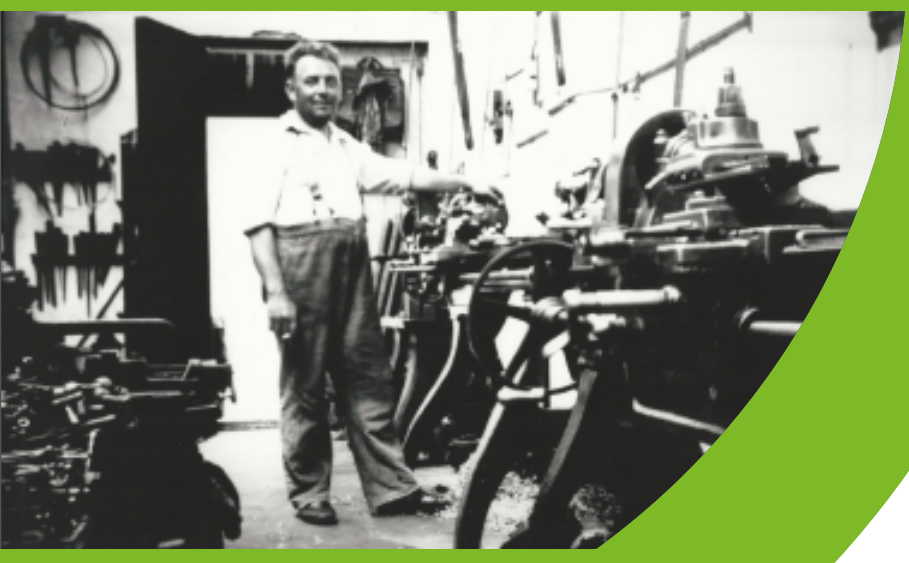
wouterstecnolub

Excellence in Minimum Quantity Lubrication

www.wouters-tecnolub.com



About Wouters-Tecnolub

Since 1926, Wouters SA is specialized in the manufacturing of mechanical parts for gases industry.

The company is fitted out with a mix of high performance CNC Turning Centers and versatile conventional lathes that allow to combine competitive costing and short lead time for any small to medium batch size production.

Our Design & Engineering Office (formerly known as Tecnolub) is specialized in Fluids Management Systems and especially in Minimum Quantity Lubrication Systems. Our expertise includes any application requiring mixing of gases and/or liquids, measure and control of flows, surface coating and lubrication.

In our workshop, true craftsmen traditionally trained build your parts in brass, stainless steel, aluminum, steel or plastic, based on your drawings.
Our core business : any piece inscribed in a cylinder of 150mm diameter and 400mm in length.
If needed, our Engineering Department can also draw plans based on your specifications.

Passion for work well done, pride in the job and loyalty to the family business & to its customers describe each employee of WOUTERS-TECNOLUB.

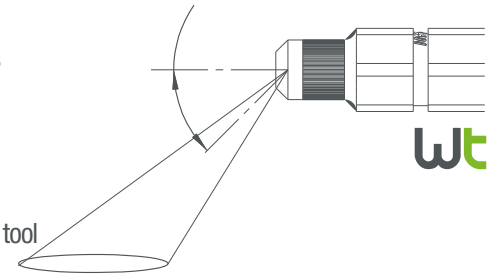
Minimum Quantity Lubrication

Minimum Quantity Lubrication (MQL), as its name suggests, replaces the traditional lubrication (flood coolant) by a mix of air/lubricant sprayed in a very small and controlled quantity. The air flow will cool continuously the workpiece and the tool while the micro-droplets of lubricant will ensure a proper lubrication.

This technology allows you to ensure to use the right quantity of lubricant at the right place.

THE RIGHT PRODUCT – IN THE RIGHT PLACE – AT THE RIGHT MOMENT – IN THE RIGHT QUANTITY

According to many studies, MQL is the most optimal way to cool a tool.
Through constant monitoring of the air/lubricant mix, the tool cooling process is better controled and thus the tool lifetime is optimized.



The Minimum Quantity Lubrication (MQL) can be apply on the tool or the workpiece by 2 different ways:

- **Internal Minimum Quantity Lubrication** : The lubricant is applied through the spindle, the tool holder and the tool straight to the point between the tool and the workpiece
- **External Minimum Quantity Lubrication** : The lubricant is sprayed through a nozzle exactly where the lubrication is needed.

Minimum Quantity Lubrication vs Traditional Lubrication

Oil injected into the machine

5.4 ml/minute (1.000 times less)

6 l/minute

Applications

Dedicated to metal processing industry, either by chipping or deformation, this technology performs particularly well in machining of all materials operations.

TURNING | MILLING | SAWING | TAPPING | DRILLING | BROACHING

Minimum Quantity Lubrication Advantages

Fast Payback - Increase Productivity

- significant decrease of lubricant consumption
- significant reduction of non-added value operation (cleaning, machine supervision, evacuation and treatment of chips, bins emptying...)
- reduction of hidden costs (workflow cleaning costs, maintenance decrease ...)
- direct savings on lubricant filters, treatment systems
- easy and quick set up

Increased Tools Lifetime - Improved OEE (Overall Equipment Efficiency)

- tools lifetime increase up to 30%
- direct saving on purchases
- less time spent for tools changes
- reduction of machines downtime
- reduction of manufacturing time

Easier Chips Treatment

- dry chips
- higher value chips
- less reconditioning operations (no need to dry the chips anymore, some chips can be melted directly on site ...)
- less investment needed for chips reconditioning

Dry pieces ready-to-use

- no more degreasing operations and degreasing machines
- significant time savings in production (less handling)

Better surface finishing

- better surface finishing of the machined parts
- easier machine settings thanks to a perfect visibility of the working area

Clean and healthy work environment

- no more lubricant projections, no more bin overflow
- workshop permanently clean
- better use of the full capacity of the machines tools
- substancial reduction in machinery cleaning costs (workflow, tools, parts and chips)
- fewer allergies and more pleasant environment
- elimination of bacteria problems in soluble oils baths

Eco-Friendliness of your business

- anticipation of future environmental rules
- reduction of the risk of pollution
- reduction of waste (lubricant, tools, degreaser, dirty chips, used cutting fluids)
- a green image for your company

Several studies claim that the transition to the Minimum Quantity Lubrication allows a saving of 8 to 16% on overall production costs.

Specific solutions for each activity

PulseLub Range

Volumetric micro pumps inject small amounts (max 5.4 ml / min) of lubricant through a capillary tube to the nozzle.
In parallel, a second capillary supplies the low pressure air to the nozzle.
This technology allows to spray an air/lubricant mix to a precise area while ensuring the optimum amount of lubricant at the right place and an air cooling of the tool/parts contact zone.

These micro-lubrication systems are available either as standard products or custom solutions and are distinguished according to their different control, adjustment and integration levels.

The PulseLub range :
- **Eco-PulseLub** : ready-to-use kit for 1 to 2 spray points (from 395 € (VAT excl.))
- **PulseLub** : cabinet with easier pressure and oil flow adjustments
- **PulseLub-C+** : more elaborate cabinet enabling seamless integration with the CNC machine PLC
- **CS-PulseLub** : fully customized cabinet according to your specifications

UPLub Range

The lubricant is kept pressurized in a tank and sent to the micro-lubrication nozzles.
An independent air capillary sprays the liquid to the targeted work area.
This system provides a very reactive response to the lubrication and a continuous and controlled flow of air / lubricant.

The UPLub range :
- **UPLub** : ready-to-use kit for 1 to 4 spray points
- **CS-UPLub** : fully customized cabinet according to your specifications

CSLub Range

These fully automated systems are integrated on new CNC machine tools but also as part of retrofited machines. From a central cabinet and through a gear pump,these systems provide a mix of air/lubricant up to 16 points of micro-lubrication.

These tailor-made systems are developed according to your needs with the following components:
- main cabinet with PLC, buffer tank and pump
- automatic filling station
- secondary cabinet delivering the lubricant to the nozzles
- spindle integrated lubrication crown
- lubrication through the spindle center with single or dual-channel rotary joints

Micro-spraying technology

Wouters-Tecnolub has also developed expertise in the field of micro-spraying. These applications allow to apply a liquid to a surface in minium and controlled quantities. This technlogy can find advantages in a lot of activities such as concrete mold, plastic injection, food industry, conveyor belts lubrication....

wouterstecnolub

Zoning Industriel des Plénesses | rue de l'Avenir, 14
B-4890 Thimister-Clermont - Belgium

T + 32 (0)87 33 17 07 | F + 32 (0)87 33 01 43

info@wouters-tecnolub.com

www.wouters-tecnolub.com