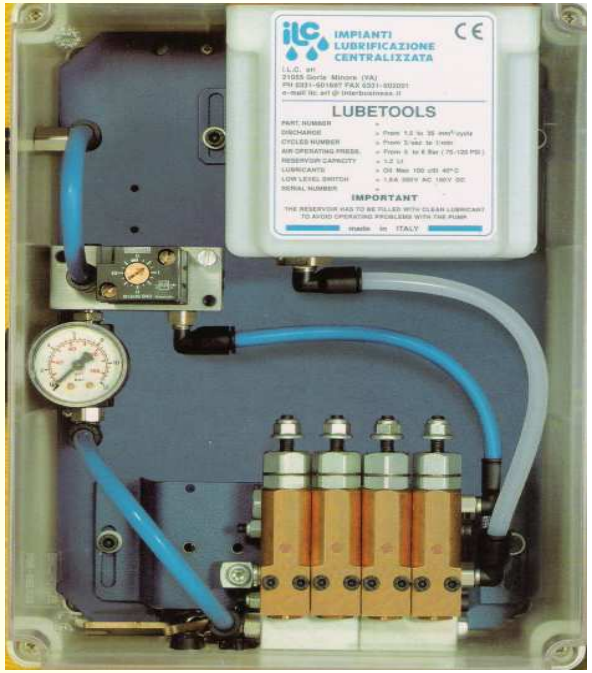


Biodegradable high performance cutting fluid form High Gain

High Gain EAL 315 is a high quality, anti wear, environmentally friendly cutting fluid designed to rapidly biodegrade. It is made from a high viscosity vegetable fluid and contains non toxic additives to improve wear protection, oxidation stability and corrosion resistance

Benefits of MQC delivery system and oil EAL 315

All round metal machining capabilities
Higher productivity
Improved surface finish
Higher cutting feeds and speeds
Extended tool life
Zero cleansing and disposal costs
Leaves dry machine, swarf and workpiece
Profitable dry swarf recycling
Clean atmosphere no fogging or smells
Environmentally acceptable, readily biodegrades if accidentally spilt
Minimises damage to the ecosystem if accidental spillage occurs

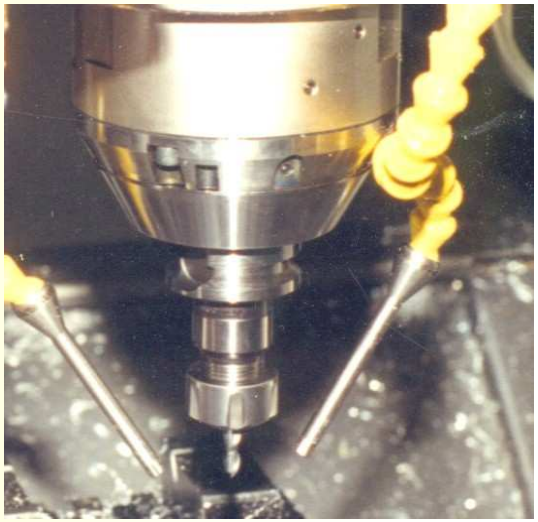
EAL 315 oil is an Exon Mobil product supplied to High Gain for MQC applications

High Gain delivery systems are made by ILC from Italy

High Gain Technology

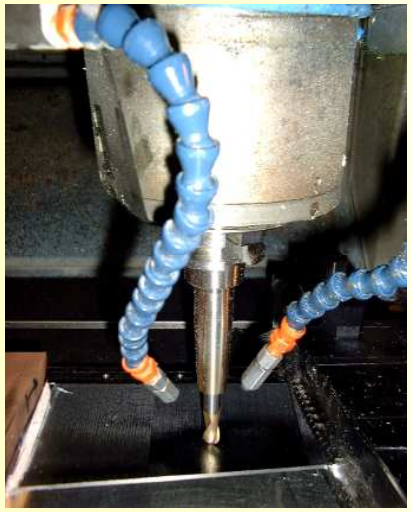
Minimum Quantity Coolant Systems (MQC)

Flood



MQC

Clean your machine, shop floor, environment and save money with MQC

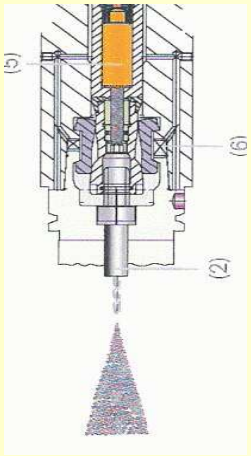


High speed milling of manganese bronze

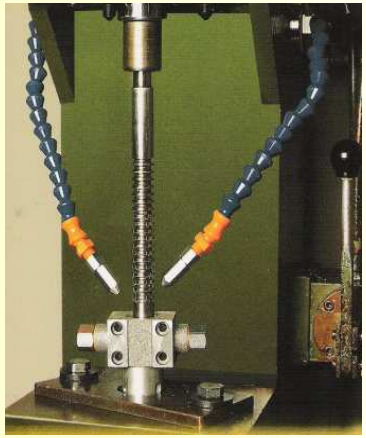
Milling of mould tool

Phone 07861233930
Email info@highgaintechnology.co.uk web www.highgaintechnology.co.uk

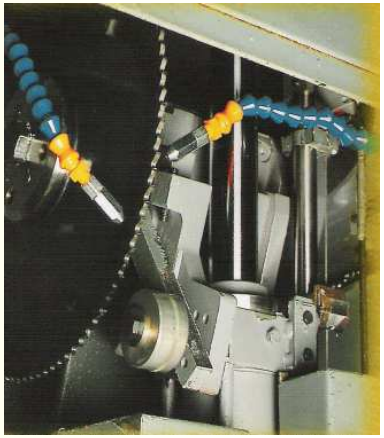
Machining Technologies benefiting from Minimal Quantity Coolant



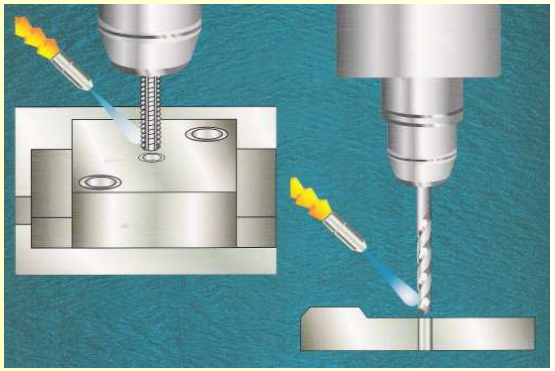
Through spindle MQC



Broaching

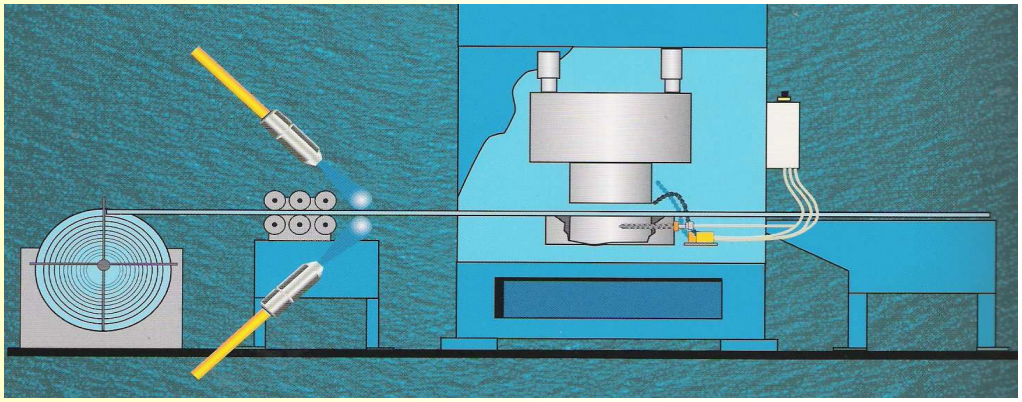


Circular sawing



Drilling and tapping

Conventional and high speed milling



All metal forming and punching operations

Minimal Quantity Coolant (MQC)

Technology

MQC permits dramatic cost savings whilst protecting workers and the workplace environment. Savings result from improved surface finish , longer tool life, clean workplace environment and zero waste disposal costs.

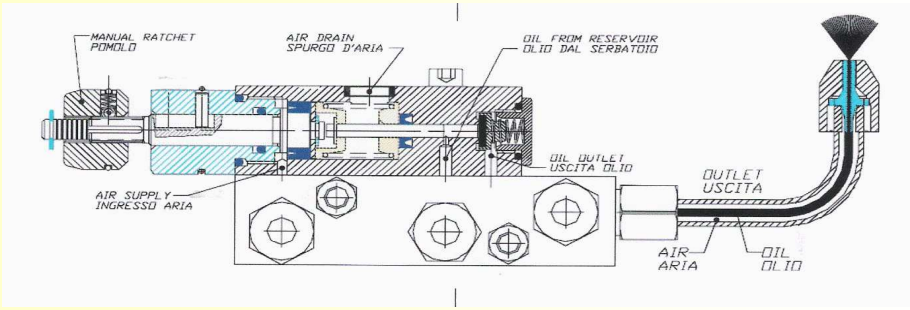
This relatively new technology is gaining acceptance as a cost saving and environmentally friendly option in place of wet flood cooling technology.

MQC can be delivered externally via 2 or 3 nozzles directed towards the cutting zone or internally via a spindle rotary joint

MQC is effective for all milling, drilling, tapping, broaching and metal forming technologies.

Process delivery is effected from an adjustable metering pump delivering a minimal amount of oil through an internal capillary tube which travels inside an air pressurised outer tube. The pressurised air is then mixed in a precise mixing nozzle providing a high velocity jet of air oil mixture directed to the actual cutting zone. Contact of the air oil mix with the tool provides both cooling and lubrication to the cutting process. The air oil mix is consumed during the cutting process leaving dry work pieces, clean swarf, and a clean sharp cutting edge to the tool or milling cutter.

A delivery metering pump is shown below



Cost Benefits

This typical analysis from a tool and die milling machine provides an indication of the MQC operating costs from which the huge cost savings over flood cooling can be assessed.

2 nozzle system;

Oil usage: 150 hours per litre of oil
Oil cost : £ 10 per litre
Coolant cost : less than 7 pence per hour plus air cost

Added savings result from increased tool life, better surface finish, and zero waste disposal costs