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In today's machining industry, efficiency and sustainability are more crucial than ever. In response to these growing demands, Minimum Quantity Lubrication (MQL) has been developed as an innovative method to optimize machining processes and reduce environmental impact.

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MQL: SUSTAINABLE INNOVATION FOR MODERN MACHINING

What is Minimum Quantity Lubrication (MQL)?

Minimum Quantity Lubrication (MQL) is an advanced approach that uses small amounts of lubricant to enhance machining processes. This method has been adopted as an alternative to traditional liquid coolant systems, which can be costly and environmentally hazardous. MQL employs lubricant aerosols applied directly at the cutting point via compressed air, improving machining precision by reducing friction and extending tool life.



**PROMOTE A
GREENER AND
SUSTAINABLE
ENVIRONMENT**



Key Benefits

- Reduces work cycle times, typically between 25% and 80%.
- Increases tool life.
- Achieves better surface finishes and tolerances.

Industrial Application

Precision machining: For operations like milling, drilling, and turning where high precision and fine surface finishes are required.

Automotive industry: Particularly in the manufacturing of engine and transmission components, where precise lubrication is crucial for maintaining tight tolerances and prolonging tool life.

Mold and die manufacturing: For producing molds and dies used in plastics, metals, and ceramics industries, where dimensional accuracy and wear resistance are critical.

Aerospace: In the fabrication of aerospace components such as turbines, rotors, and aircraft structures, requiring efficient lubrication that does not compromise structural integrity or safety.

ere una lubricación eficiente que no comprometa la integridad estructural ni la seguridad.

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In conclusion, Minimum Quantity Lubrication (MQL) represents a significant advancement in the machining industry, addressing environmental concerns and improving operational efficiency. By minimizing lubricant usage and integrating innovative technologies, it not only enhances tool life and machining quality but also reduces cycle times and environmental impact. These systems provide a sustainable solution by decreasing reliance on coolants, optimizing resource utilization, and achieving precise lubrication across various machining operations. MQL stands as a transformative approach towards achieving economic and environmental sustainability in metal machining.

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