

Revolutionary MQL technology

The Revolution™ is a reliable, digitally-controlled applicator designed specifically for CNC machines. Its patented technology brings accuracy, precision, and repeatability to your cutting tool lubrication. The Revolution™ offers up to two independently-controlled MQL outputs. Each can be programmatically controlled through M-codes. The Revolution™ is a good choice for through-spindle lubrication when digital control is needed but only a few MQL rates are required.

Revolutionary control

The Revolution™ allows the operator to control the amount of fluid being dispensed directly from the CNC program. Support for MQL rates down to 6 mL/hr. makes the Revolution™ an ultra-precise lubrication system. Lubricant is delivered in programmable steps of 25, 50, 75, or 100% of a user selectable maximum rate. In addition to the MQL output, the Revolution™ has an optional air blow-off nozzle to assist in chip removal. This air blow-off delivers electronically adjustable pulses to maximize effectiveness while minimizing the air used. Both the frequency (1-255 pulses/minute) and duty cycle (1-100%) can be set. The Revolution™ is versatile and easy to use. All operational setup and configuration are done through intuitive menus which are shown on a high-contrast 4-line X 20 character LCD display.



U.S. Pat. No.
8,934,998

- Improve surface finish
- Increase production rates
- Extend the life of your tools
- Eliminate flood coolant mess



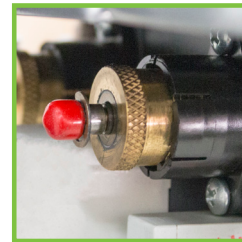
Digitally-controlled output for process control



Up to 4 output rates controlled through M-codes



Pulsed air blow-off for easy chip removal



Positive-displacement pump for consistent output



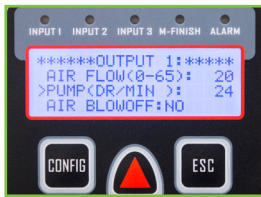
Active monitoring with alerts informs operators when critical issues arise



For best results, use Unist Coolube® in your Revolution™ system. Coolube® lubricants are 100% natural, biodegradable, and derived from renewable vegetable products. They are specifically formulated for superior MQL performance and contain no VOC's, chlorine, or silicone. Coolube® lubricants will not irritate machinists' skin or stain parts, and will never oxidize or leave a sticky residue.

Keeping you machining with intelligent, precision application technology

The Revolution™ electronically controls the MQL rates as well as the air blow-off for chip removal. Through-spindle MQL can eliminate the need for external spray nozzles which can get in the way and require positioning. With proper design, fluid passages can be placed to deliver the MQL output precisely where it is needed for each specific tool, eliminating the need for operator adjustments. Active monitoring of flow, pressure and fluid level ensures you know when critical situations arise, so you can react before you destroy valuable tools or ruin your work piece.



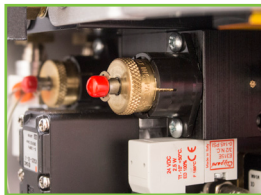
Programmable output

Lubricant is delivered in programmable steps of 25, 50, 75, or 100% of a user selectable maximum rate



Control fluid usage

Digitally-controlled output means knowing exactly how much lubricant is dispensed



Proven technology

The Revolution™ uses proven Unist positive-displacement pumps



Process monitoring

The Revolution™ will let you know when you have low air pressure, low fluid, and no fluid flow

System specifications

MQL outputs:	2	Reservoir size:	64 oz. (1893 mL)
Unist Spindle Kit available:	yes	Pump output:	6 - 400 mL/hr. per pump
Fluid delivery approach:	intermittent positive-displacement pump	Low fluid level sensor:	yes
Air pressure sensor:	yes	Fluid flow sensor:	flow/no-flow sensing
Programmable MQL rates:	4	Dimensions:	H - 14.10" (358 mm) W - 10.63" (270 mm) D - 8.46" (215 mm)



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(800) 991-4225

www.ahbinc.com

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customerservice@ahbinc.com