

Success Story - Coolant Mist Removal**Revolutionary MistBuster developed in response to Remmele Engineering, Inc.'s, passion for excellence.**

Remmele Engineering's long established reputation as a pacesetter in micro machining for high technology applications is known worldwide. With annual revenues in excess of 100 million Remmele has a stake in defining the leading edge of manufacturing technology. The successful manufacture of sub-millimeter ultra-precision components requires virtually vibration free equipment to maintain quality, consistence and on-time production to extraordinarily tight tolerances.

Of course, modern machining technology requires the use of coolants for longer tool life, closer tolerances and superior finishes. Remmele uses both mineral oil and synthetic water-based coolants. These coolants create mists and smoke that are no longer tolerated in leading shops. With the advent of the new approach to applying coolant in a small diameter, high pressure stream rather than just flooding the tool with coolant, even finer mists and more smoke are being created than ever before. These very fine airborne contaminants are not effectively removed with centrifugal mist collectors.

As you are well aware, metal working fluid mists have been the subject of attention from the UAW, NIOSH and OSHA. If experience is any guide, we can expect this attention to eventually result in new regulations regarding coolant mists in machining facilities. As an industry leader, Remmele values their highly trained employees and has chosen to address this concern as a matter of responsible business management rather than in response to regulatory concerns.

Previous to working with Air Quality Engineering, Inc., Remmele had tried centrifugal mist collectors. However, they were unhappy with the vibration, noise and inefficiency of these traditional units. The centrifugal mist units become unbalanced with accumulated mist on the impeller and create vibration that can be transmitted to the CNC machine tool. Exacting manufacturing requirements meant that Remmele could not tolerate the vibrations that are created by traditional mist collectors.

At Remmele, engineering excellence is their passion. They demand excellence in the products they produce and the equipment they use. They also demand a spotless, mist free environment that required using state-of-the-art cleaning technology. Therefore Remmele contacted Air Quality Engineering in July 1998, and purchased a Smokemaster Model F33 Electronic Air Cleaner. This unit was remotely mounted and ducted to three machine tools. Their experience with the F33 in capturing not only very fine mist, but smoke as well, was extraordinarily successful. However, Remmele found the ductwork between the electronic air cleaner and their machine tools to be unsightly in their spotless 60,000 square foot world-class machining facility.

Unfortunately, an effective, high efficiency, compact and economical air cleaner that would mount directly on the machine tools without transmitting vibration to precision components was not available on the market. Consequently, Remmele contacted Air Quality Engineering in the Fall of 1998 and requested that we design a machine-tool-mounted electronic units to match their state-of-the-art facility.

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Drawing from experience gained from over a quarter century in designing and developing quality, rugged, high efficiency air cleaners, Air Quality Engineering rose to Remmele's challenge and developed the MistBuster 500. We built a small prototype unit incorporating 4" of metal mesh impingers and a small electrostatic cell. This prototype was tested at Remmele's facility for two months with outstanding results. The vibration-free MistBuster 500 prototype completely eliminated fine mist and smoke without affecting micro machining of ultra-precision components.

Remmele now has 18 MistBuster 500's at their Plant 30. Most of these air cleaners run 24 hrs/day, 7 days a week. Because these units are virtually self-cleaning, no maintenance has been required in the first 5 months of operation. Based on this experience, Remmele anticipates that servicing of their MistBusters will only be required on an annual basis.

Air Quality Engineering's vast experience in developing and producing economical, high-quality state-of-the-art air cleaning equipment includes not only Remmele but the Honeywell OEM account and a host of other well-known companies as well. Air Quality Engineering's industrial and commercial customers of all sizes benefit from the most recent developments in air cleaning technology provided by our complete line of air cleaning equipment.