MUC - MOLD UTILITY CLEANERS

HEAVY DUTY ULTRSONIC CLEANING SYSTEMS DESIGNED SPECIFICALLY FOR LARGE TOOLING APPLICATIONS

Blue Wave's Model MUC Series Ultrasonic Cleaning Systems are extreme-duty, high performance cleaning systems that incorporate unique features to accommodate mold, tool, and die cleaning applications. These systems automatically accommodate the variable displacement created by different size mold plates and smaller basket loads, maintaining a constant volume and power density in the ultrasonic cleaning chamber.

In conjunction with our heavy-duty zero-spaced, silver brazed, magnetostrictive transducers and powerful 30kHz sweep-frequency ultrasonic generators, this design offers the ultimate in a high performance tool cleaning system.

When combined with Blue Wave's environmentally safe, water-based cleaning formulations, these systems do an excellent job removing oils, light petroleum-based grease, outgassing residues (including waxy buildup) and release agents, as well as rust.

A unique benefit that our ultrasonic technology offers is that it not only removes contamination from mold surfaces, but from intricacies such as vent paths, ejector pin holes, and cooling channels. This not only eliminates tedious manual labor, but improves mold performance while extending the life in the press.

UNCONDITIONAL LIFETIME GUARANTEE

All of Blue Wave's Ultrasonic Cleaning Systems are backed by the exclusive Unconditional Lifetime Guarantee on the magnetostrictive transducer and diaphragm. Only Blue Wave offers this unparalleled warranty that ensures you are getting the most reliable ultrasonic cleaning equipment available. The Blue Wave Ultrasonics magnetostrictive transducer is guaranteed for a lifetime against:

- Transducer Failure
- Transducer Deterioration
- Transducer Diaphragm Wear Through
- Transducer Diaphragm Bond Failure

BLUE WAVE ULTRASONICS

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The Mold Utility Cleaner consists of two sections integrated into one main unit. The front section (Figure 1) consists of the ultrasonic cleaning section, and the rear section is the overflow/oil separation area. An overflow weir divides the two sections. Solution is pumped continuously at a low flow rate from the clean side of the overflow section back to a sparger, located opposite the overflow weir at the top of the ultrasonic cleaning section. This provides a constant surface skimming action that removes oil and floating particulate from the ultrasonic section. The heavy duty system design easily accommodates heavy injection mold plates and baskets full of inserts and cores.

Once a mold component is placed into the tank, the displaced solution instantly flows over the weir and is channeled into the oil accumulation chamber at the back of the tank (Figure 2: far right tank). The floating oil remains on the surface, and the clean solution counter-flows into the make-up solution chamber (Figure 2: left side of tank), where it is then pumped back to the sparger. As the mold is pulled out of the tank and displacement is lost, the pump diverts from the sparger to a fill line in the main tank for quick solution make-up in the ultrasonic cleaning section.

Another benefit this system offers is an integrated sliding lid system (Figure 3) over the ultrasonic cleaning section (the overflow section in the back has removable lift-off lids). The tank can easily be covered when not in use. The unit also has an exhaust port on the back that can be connected to customer supplied exhaust system to remove vapors and humidity.

Particulate contamination from the cleaning tank is removed by a recirculating filtration system (Figure 4). This system consists of two 20" filter canisters with disposable cartridge type elements in a variety of micron levels. The filtration system components are mounted directly to the system for convenience. The entire mold cleaner is wrapped with 1" foil backed, fiberglass insulation and stainless steel skins for heat retention.

All electrical controls for the system are contained within the NEMA Control Enclosure (Figure 5). This enclosure mounts all of the individual generator modules (for easy maintenance) and all control switches. An optional closed-loop air conditioner provides NEMA-12 integrity to the control enclosure for use in harsh environments.

FIGURE 1: ULTRASONIC CLEANING TANK

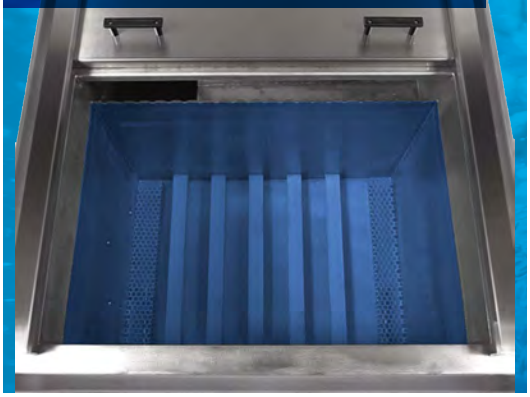

FIGURE 2: MAKE UP/OIL ACCUMULATION

FIGURE 5: NEMA CONTROL ENCLOSURE

FIGURE 3: SLIDING LID

FIGURE 4: FILTRATION SYSTEM

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