



ZENITH

Mfg. & Chemical Corp.

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IMMERSIBLE SYSTEMS

To Provide Existing Tanks with Ultrasonic Capabilities

Immersible ultrasonic systems are used when ultrasonic components are required to equip existing tanks with ultrasonic cleaning capabilities. Immersibles can be manufactured to fit virtually any tank shape or size, all available in a choice of operating frequencies to ensure the best possible cleaning results.

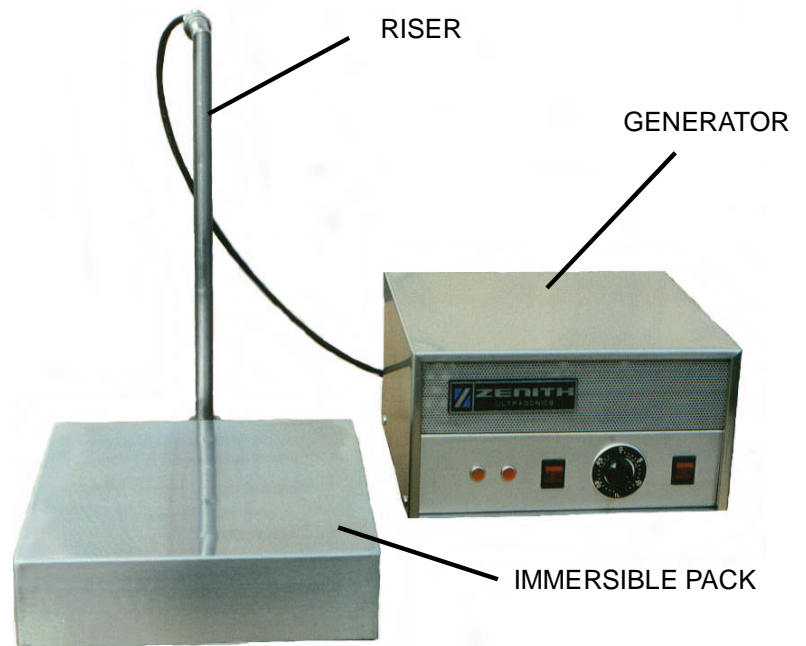
Immersibles packs which contain the actual transducers, are lowered into the cleaning fluid and are activated by the Ultrasonic Generators which are positioned nearby. Although the transducers are typically mounted to the tank bottom, they may also be mounted to the side of the tank by using a stainless steel "Immersible Holster." Immersible holsters also permit operators to quickly re-position the packs in the tanks.

Regardless of mounting location, the electrical cable of the immersible packs must exit the tank to attach to the ultrasonic generators. 2 electrical cable mounting styles are available. A "Bulkhead Mount" is a permanent mounting style which requires that holes are cut into the wall of the cleaning tank. The immersible pack is mounted over this hole, and the electrical cable is passed through the hole to connect to the generators. A seal is supplied to permanently seal the hole.

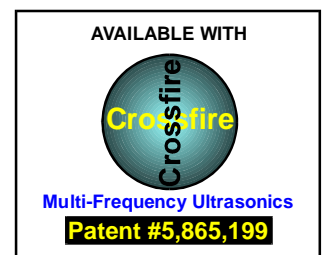
The second electrical cable mounting option is the "Riser Mount." This mounting style is preferred whenever it is expected that the immersible might be removed from the tank in the future, when easy and ultra-fast replacement of immersibles is required, or when customers do not wish to cut holes in the existing tank. In the Riser Mount design, the electrical cable exits the tank through a liquid-tight stainless steel tube which "rises" out through the liquid, out the top of the tank itself. Immersibles simply rest on the tank bottom, or are suspended in immersible holsters on the side of the tank, and no holes are required.

Immersible packs are manufactured of 316L stainless steel, and are welded shut once the transducers are mounted within. Before electrical testing is performed, immersibles are pressure tested for leaks, then electrically tested under the scrutiny of Zenith's quality control team, who are trained to look for even the smallest manufacturing defects or poor ultrasonic performance prior to shipment.

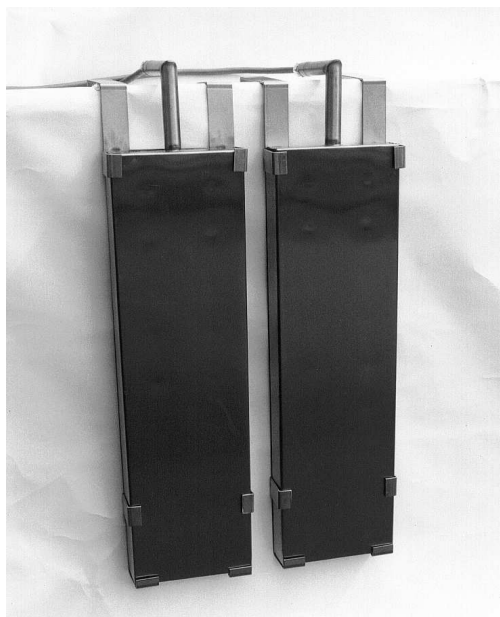
Immersible systems can be ordered with several different Operating Frequency



IMMERSIBLE AND GENERATOR SYSTEM



options. Ultrasonic operating frequency can play a major role in the performance of the system, and must be properly matched to your application (see Ultrasonic Cleaning Explained). Low frequency sonics, such as Zenith's 25Khz and 40Khz POWERSONIC systems, are used to remove stubborn industrial contamination, while high-frequency ultrasonics, such as 80Khz or 120Khz OMEGA-HF systems are used to remove light or sub-micron contamination in sensitive and critical cleaning applications, such as semiconductor, disk manufacturing, optical industries, and others, or if your components have small recessed areas or blind holes. And, if your application requires BOTH powerful industrial cleaning action PLUS the ability to clean inside small blind holes down to sub-micron levels, ask about the newly patented CROSSFIRE, the world's only simultaneous Multiple Frequency Ultrasonic System available anywhere (pat #5,865,199). This system mounts transducers with DIFFERENT ultrasonic frequencies into the SAME immersible. Hard Disk manufacturers prefer 80/120Khz



IMMERSIBLES IN HOLSTERS

CROSSFIRE, while automotive engine component manufacturers prefer the 40/80Khz CROSSFIRE system. A separate brochure is enclosed with full details on the CROSSFIRE system.



TYPICAL IMMERSIBLE WITH RISER MOUNT

Although Zenith offers a large selection of standard immersible sizes, we can manufacture immersibles to your exact specifications. If you have a particular tank that requires ultrasonics, our engineers will design a custom immersible pack that can be permanently, or temporarily mounted your tank.

STANDARD IMMERSIBLE SYSTEMS

- IS-200-1: Immersible Size 10.5" x 3.5" x 3" tall, 300 watts
- IS-400-1: Immersible Size 21" x 3.5" x 3" tall, 600 watts
- IS-400-2: Immersible Size 10.5" x 7" x 3" tall, 600 watts
- IS-800-1: Immersible Size 21" x 7" x 3" tall, 1200 watts
- IS-800-2: Immersible Size 14" x 10.5" x 3" tall, 1200 watts
- IS-1000-1: Immersible Size 21" x 10.5" x 3" tall, 1800 watts

Available options include cable length adjustments, ultrasonic timers, power intensity controllers, "holster" for side-tank mounting, and others. If you have a tank which may require ultrasonic cleaning capabilities, contact Zenith Ultrasonics. We will provide you with a system which you can count on for many years of satisfactory cleaning performance, perfectly matched to your tank, and your application.



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