



Zenith Ultrasonics

Waves at Work

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ACS Automotive & Aviation Ultrasonic Cleaners

For the cleaning of highly-contaminated engine & transmission components



Automotive and aviation repair and rebuilding facilities have it tough when it comes to the cleaning of parts. These types of cleaning applications require the removal of dirt and contamination of many different types. Typical automotive and aviation contaminants include oils, greases, burned carbon, metal shavings, dirt/lubricant mixes, and many other difficult-to-remove contaminants.

For years, repair facilities have invested in a chemical sink washer, using hand brushes and toxic chemicals to clean parts. Operators would stand at the sink and brush the items clean for hours. It was, and still is, a tedious task which takes a long time, and

produces results which are less-than-satisfactory.

Today, a Zenith ACS-30 Ultrasonic Cleaning System can eliminate virtually all of the labor associated with cleaning of automotive and aviation components, with cleaning results which are sure to impress you. These systems have been specifically designed for automotive and aviation applications, and include the features which you will find necessary to effectively and consistently clean parts.

Parts to be cleaned are lowered into a heated bath of cleaning fluid which is being ultrasonically activated. The cover on the system is closed, the START button is pressed, and the operator walks away to do other work while the ultrasonic cleaning system continues to clean the parts. The moment the part enters the ACS cleaning system, a huge cloud of dirt will be removed from the parts, virtually instantly. It is quite amazing to see if you have never seen a Zenith ultrasonic cleaning system at work. It is as if the dirt is magically peeling off of the surface in huge sheets.

While the parts are in the cleaning tank, they are gently being scrubbed by millions of microscopic jets of liquid which are produced by the sonic energy in the tank. These jets of liquid are so small, they can clean areas which are difficult if not impossible to clean by any other method, such as threads on screws, carburetor jets, piston ring seats, even under your fingernails! The point is, the ultrasonic cleaning system cleans areas which typically cannot be reached by normal cleaning methods.

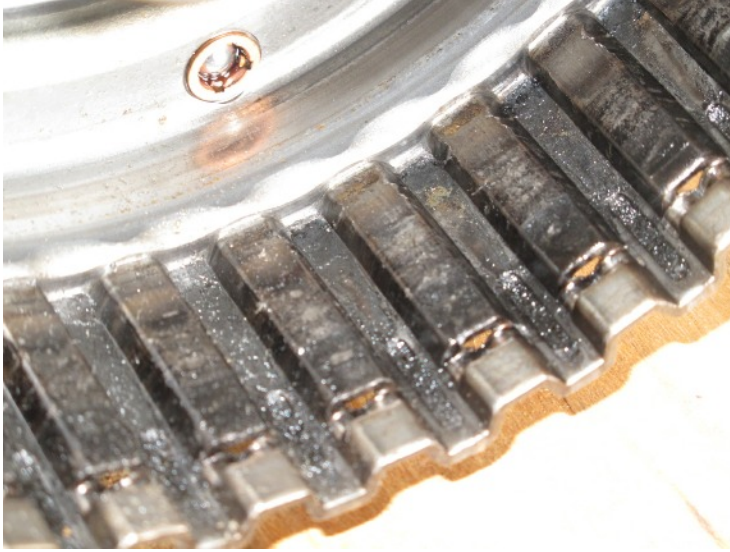
After 15 -30 minutes, the operator goes back to the ACS cleaning system, removes the parts, inserts the next batch of parts, and continues cleaning. Rather than wasting an operator's time cleaning



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parts, they can be used for more productive activities.

Here is the best part. Our ultrasonic cleaning system can clean **INSIDE** of objects as well, such as the inner recesses of a cylinder head, or inside of a carburetor. The Zenith ACS cleaning system can penetrate through the wall of a carburetor and clean the internal areas without having to take the item apart. The same applies to other items which you may wish to clean internally, such as a cylinder head, transmission components, or other metallic items. You will find yourself placing just about everything into the ultrasonic cleaner. Imagine re-assembling an engine

where all the screws and threads are perfectly clean. Hands are less dirty, and handling of parts becomes much easier.



The ACS line of cleaning systems is designed to specifically address the difficult task of automotive and aviation parts cleaning. The systems include features you will not find on competitive systems, such as our patented **CROSSFIRE Multiple Frequency Ultrasonic System** (US patents 5,865,199 and 6,019,852), which includes ultrasonic components of 2 different frequencies to improve the cleaning action in the tank. Each ultrasonic frequency produces a different type of scrubbing action.

Lower frequencies produce very powerful scrubbing action, but the action is not very evenly distributed in the tank (similar to a microwave oven, which also heats food unevenly). Parts are not cleaned consistently.

Higher frequencies have very evenly distributed scrubbing action, but the action does not have the same power as lower frequencies. By combining low and high frequencies together, the ACS systems produces powerful **AND** evenly distributed cleaning action in the tank, a feature only available at Zenith Ultrasonics.



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Each ACS cleaning system comes equipped with the following standard equipment:

- Dual-housing “Dual-draw” Filtration System to remove dirt from the cleaning fluid while simultaneously skimming oils from the surface of the liquid.
- Fast-heat Fluid Heating System with a Digital Temperature Controller to elevate and maintain operating temperatures.
- Oil Skimming System which keeps the surface of the bath free of oils, preventing it from re-depositing onto the parts when they are removed from the tank.
- Stainless Steel Support Frame for the ultimate in support frame corrosion resistance.
- Swivel casters to allow system to be easily moved to different locations in your shop.
- CROSSFIRE Multiple Frequency Ultrasonic System for the ultimate in ultrasonic cleaning performance, provides both power and penetration into detailed areas.
- Ultrasonic Generator Indicator Lights to indicate proper ultrasonic cleaning system activation.
- 200 pound capacity stainless steel load rest platform in the cleaning tank.
- Stainless Steel mesh basket
- Load-supporting Cover onto which baskets can be placed after cleaning for drip-off.
- Lighted Industrial-grade controls located in ergonomic locations.

If the ACS cleaning systems are too large for your facility, you can purchase a Zenith Table-top Ultrasonic Cleaning System which have smaller tank sizes and reduced cost. These systems will have nearly the same cleaning performance as our ACS line of systems, but do not include the many features detailed above, thereby making these systems slightly less convenient to operate.

If you are looking for the ultimate ultrasonic cleaner for automotive or aviation component cleaning, contact Zenith Ultrasonics for a formal quotation on the ACS cleaning systems.

Available Standard Models:

ACS 30 Basket Size: 27” x 17” x 8” wall height, maximum liquid height of 15” tall

ACS70 Basket Size: 35” x 23” x 8” wall height, maximum liquid height of 18” tall

Other sizes are available and custom-manufactured at no additional cost.



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