



ZENITH

Mfg & Chemical Corp.

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ACS Automotive Cleaning System

Cleans Automotive and Aviation Engine and Transmission Components with Ease.

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 an 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.

Available With



Multi-Frequency Ultrasonics

Patent #5,865,199

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 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.

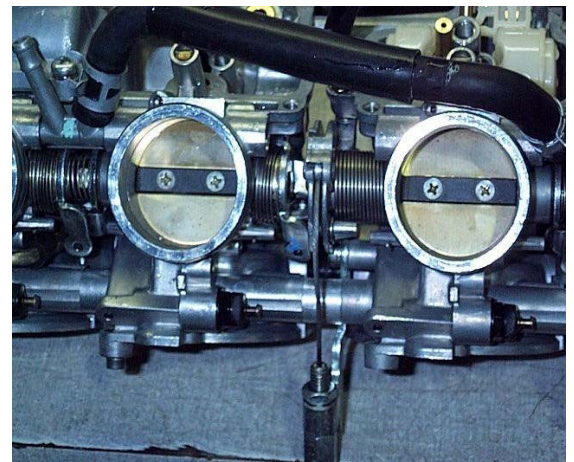
Each ultrasonic frequency produces a different type of scrubbing action. Lower frequencies produce very powerful scrubbing action, but the action is not very evenly distributed in the tank (similar to a microwave oven, which also heats parts unevenly). Parts are not cleaned consistently. Higher frequencies 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 system produces powerful **AND** evenly distributed cleaning action in the



tank, a feature only available at Zenith Mfg.

The ACS line of cleaning systems also includes these other standard features:

- **Dual-housing Filtration System** to remove dirt which is taken off of the parts. Extends the life of the cleaning fluid. Filter cartridges which are included are reusable.
- **Overflow Filtration** continuously sweeps the surface of the fluid to remove oils and greases.
- **Digital Ultrasonic Timer** with Pushbutton Start to time the duration of the ultrasonic cycle.
- **Fluid Heating System** with Insulation Package to heat up and maintain the cleaning fluid temperature.
- **Oil Skimming System** to remove oils from the surface of the cleaning fluid, depositing it into a separate container for disposal.
- **Steel Support Frame** with stainless steel latching access panels.
- **Swivel casters** for easy system movement.
- **CROSSFIRE Multiple Frequency Ultrasonic System**, 25 kHz and 40 kHz operation.
- **Ultrasonic Generator Indicator Lights** to indicate if all ultrasonic components are operating properly.
- **Air Agitation System** to remove large amounts of contamination using air bubbles which are emitted from a stainless steel emitter on the bottom of the tank.
- **200 pound capacity load rest platform.**
- **Stainless Steel mesh basket** with handles that extend above liquid for dry parts removal.



- **Tank Cover/Inspection Table:** When cover is open, basket can be rested on it for inspection. Dripped liquids are channeled back to the tank
- **Many other features.**

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 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.

System Specifications:

Basket Size: ACS-30: 27" x 17" x 8" tall basket included, liquid height extends to 15"

ACS-70: 35" x 23" x 8" tall basket included, liquid height extends to 18".

External System Size: ACS-30: 60" x 32" x 38" tall
ACS-70: 72" x 38" x 38" tall

Ultrasonic System Included: CROSSFIRE Simultaneous Multiple Frequency, 25/40 kHz operation.

Tank Construction: 316L Low Carbon Stainless Steel.

Filtration System: Dual 10: polypropylene housings with SS pressure gauges, reusable filter cartridges 250 and 100 micron, flexible PVC plumbing, 1/10HP magnetic-drive seal-less pump, flow control valve.

Air Agitation System: Stainless steel actuator valve with flow control to permit fine tuning of bubble curtain.

Tank Cover: Manufactured of 316L stainless steel, also acts as a work rest platform to be used before and after cleaning.

Frame Construction: 1.25" tubular epoxy-painted steel frame with stainless steel access panels which allow access to all internally mounted components.

Oil skimmer: Capable of removing 1 quart of floating oil per hour. Oil is deposited into a separate



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