

# ULTRASONIC CLEANING

## MACHINERY DECONTAMINATION



Damage to machinery can represent a great loss for a business. Replacing machinery parts is not only costly for a company but can also lead to business downtime while a machine is not in use. Any exposure to water, smoke, or other contaminants can wreak havoc on machine parts, so you should ensure that they are quickly cleaned and decontaminated.

BELFOR offers Ultrasonic Cleaning services – the fastest and most effective method available for cleaning and completely de-rusting machine parts, stock (injection molding, tools, gear parts) and semi-finished products.

Ultrasonic parts cleaning is a process that removes all traces of contamination from machinery or industrial equipment. It is a viable alternative to total replacement of machinery or parts, ultimately saving your business time and money.

At BELFOR, we have industrial-sized ultrasonic cleaning dip lines that can be mobilized, enabling them to be used on-site at most external industrial facilities.



**BELFOR** 

PROPERTY RESTORATION

RESTORING MORE THAN PROPERTY

24-HOUR EMERGENCY HOTLINE  
800-856-3333

### HOW IT WORKS

Ultrasonic cleaning uses high frequency sound waves to generate cavitation in the liquid. The resulting energetic bubbles act on contaminants adhering to substrates like metals, plastics, glass, rubber, ceramic, etc. This action penetrates blind holes, cracks, and recesses to thoroughly remove all traces of contamination adhering or embedded on the solid surface. Contaminants can include dust, dirt, oil, pigments, grease, polishing compounds, flux agents, soot, and more.

Ultrasonic cleaning can be used for a wide range of workpiece shapes, sizes, and materials, and may not require the part to be disassembled prior to cleaning.

### CLEANING SEQUENCE

#### BATH 1: Pre-cleaning and Hot Degreasing

Complete removal of various forms of surface contamination by means of ultrasound and hot cleaning solutions.

#### BATH 2: Rinsing, Grease/Cleaning

Rinsing of residual grease/dirt and cleaning solution from the component to avoid cross contamination of subsequent bath.

#### BATH 3: Corrosion Removal

Complete removal of the corrosion at 55°C using ultrasound and a gentle, slightly acidic complex de-ruster. Suitable for hardened or polished surfaces.

#### BATH 4: Rinsing and Acid Neutralization

Residual acid and removed corrosion residue are rinsed off. Prepares component for final step.

#### BATH 5: Water Displacement and Preservation

Water displacement and passivating agents ensure that the metal surfaces do not rust upon exposure to air.



### ADVANTAGES

- Fastest, most effective method available for cleaning and completely de-rusting machine parts, injection molds, tools, semi-finished and finished metal parts.
- Unmatched Effectiveness
- Speed
- Cost Savings
- Reduced Downtimes
- Effective at removing contamination within cavities.
- Cleaning agents developed by BELFOR, specifically ultrasonic cleaning services.
- Fully-tested in a wide variety of applications following fire and water damage.

