



PRODUCT SPECIFICATIONS BROCHURE

# IMMERSOSONIC MACHINE LINE

Automated Immersion with Agitation, and Ultrasonic Systems





# A NEW, HIGHER STANDARD FOR IMMERSION WASHERS

An immersion parts washer is the perfect solution for cleaning intricate parts and components that are difficult to disassemble or require long soaking cycles to remove contaminants such as rust or carbon. It consists of one or multiple tanks, where the parts are loaded into a basket, submerged in the cleaning solution, and vertically agitated for optimal cleaning. This machine is a modular multi-stage system equipped with advanced oil-skimming technology. Optional automation and ultrasonic cleaning capabilities are available.

## THE BE ADVANTAGE

1

### AUTOMATION

Better Engineering's automated industrial ultrasonic parts washer will index baskets through all stages/tanks of the system. The indexing mechanism incorporates a walking beam and pushing arms that shuttle baskets from one tank to the next

2

### MECHANICAL AGITATION METHODS

Ultrasonics, platform oscillation, and turbulence (spray under immersion) directly in the main tank of a module

3

### BASKET ROTATION

Combines automatic basket indexing and vertical oscillation, while rotating the basket 360 degrees

4

### VACUUM DRYING

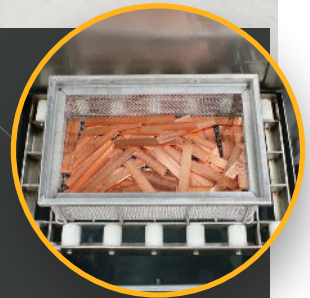
Vacuum drying module to ensure parts are 100% dry in a short period of time

# STANDARD FEATURES



## Powered Platforms

- Each stage has a powered platform that can oscillate



## Central Control System

- NEMA-4 central control panel standard; PLC and HMI



## Pneumatic Controls

- Pneumatic controls power agitating platform for better platform agitation

## Powered Lids

- Lids are powered automatically with pneumatic cylinder



## Insulation/ Heat Shields

- Vertical surfaces are insulated wherever feasible
- 1" insulating material is covered with stainless steel panels
- Cladding for insulation 16 gauge sheet

## Water Level Controls and Auto Fill

- Includes sensor for three water levels: normal, emergency low, and emergency high
- Water is automatically added when water is not at a "normal" level
- Water level sensor with digital readout



# OPTIONAL FEATURES (1 / 3)



## Oil Skimming

For skimming oils from a given tank, BE offers two options:

1. The OSB motorized belt skimmer. This skimmer has a stainless steel belt and is controlled with a 7 day/ 24 hour timer
2. The OWC oil water coalescer. This stainless steel coalescing tank comes in two sizes, small or large, for "light" and "heavy" oil applications



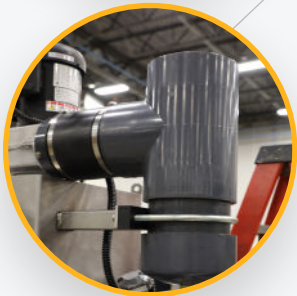
## Filtration

- Bag filter (hinged top and eye bolts) is installed on the pressure side of a given pump to trap suspended particles before they can be redeposited on the parts. Pressure gauges indicate when the filter bag (specify micron rating) has to be changed



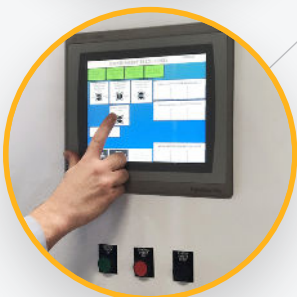
## Beacon Lights

- A safety beacon light is mounted on the top of the main electrical enclosure. Pictured is a 3-color beacon light, part EBL-3



## Steam Exhaust System

- Fan is mounted on the roof and ducted so as to create negative drafts on both ends of the system
- Customer provides duct work from discharge side of fan
- The vent port(s) on the top of the machine are connected to a central fan with a non-corrosive duct
- Steam exhaust systems come default with a drip leg
- Steam exhaust type differs depending on machine type and machine use



## PLC HMI Upgrade

- The PLC is upgraded to Allen Bradley's Compactlogix
- The upgraded HMI is a Panelview Plus 7
- The system includes Ethernet capability

# OPTIONAL FEATURES (2 / 3)

## Complete Data Acquisition System

The Immersosonic Immersion washer is equipped with all the necessary hardware and software to effortlessly acquire and analyze data, providing a reliable and efficient data acquisition system. Enhanced features include:

- PLC upgrade for OPC-UA compliance and Ethernet communications with an ethernet switch (Must also purchase the Compactlogix PLC upgrade, not included with this option.)
- "OAS" DAQ Software - includes Historian, Alarms, Trends & Reports
- Industrial PC mounted inside the main control panel. With this option, the user has access to all data via a web-based platform

## Pressure Switch

- An electronic switch to detect low pressure
- Typically installed after a filter to indicate when a filter bag needs to be replaced
- A "low pressure" signal appears when the pressure falls below "X" value

## Flow Switch

- An electronic switch to detect flow (does not quantify exact flow)
- Typically installed after an air blower or chemical pump to confirm proper operation
- A "no flow" signal will appear if flow is not detected

## Sump Tank

- Used to pump out multiple tanks as well as diverted rinse water or overflow water
- Includes a stainless steel sump tank, an air operated diaphragm pump, water level controls, valves for each tank drain, and plumbing connections from the sump pump to all designated drains on the washer

## Conductivity Meter

- This includes a sensor for a designated tank and a digital meter (mounted on the main panel)
- Can be used to detect dirty rinse water or low chemistry in a tank (check with a chemistry supplier for suitability)

## Drying Modules

Better Engineering offers drying modules as well as simple blow-off sections. The drying modules have the following specifications:

1. Centrifugal blowers for high air velocity
2. Recirculation system to conserve heat and prevent "blow-out"
3. Optional air heater to boost the air temperatures up to 250 degrees F
4. Top and bottom air knives
5. Pitched floor directs most of the water back to the previous spray

# OPTIONAL FEATURES (3 / 3)



## Chemical Dosing Pump

- Automatically adds chemistry to a tank (from customer's chemical tote)
- Assumes the customer's chemical tote is within 5 feet of the pump
- Works in conjunction with conductivity meter, which also must be purchased



## Chemical Siphon Valve

- This purely mechanical device siphons detergent into the water fill line
- Adds "X" GPM of detergent for a given flow of fresh water
- Assumes the customer's chemical tote is within 5 feet of the pump



## Robotic Integration

- Better Engineering is a certified integrator for robots and uses robots in multiple ways to bring automation to the highest level



## Additional Rinse Stages

- There are two additional rinse stages that can be ordered. For especially challenging applications, the customer can add a 3rd or 4th high capacity working tank



## Ultrasonics

- \*Ultrasonics varies depending on the model
- "TRU-Sweep" frequency can be used with wash and rinse immersion stages
- Transducer bolted in place above the tank floor



## Vacuum Dryer

- Vacuum Dryers are a key solution for industries looking to thoroughly dry parts with recesses, save energy, and increase dry time speeds. Vacuum drying is a complementary technology that, when combined with traditional blow-off methods, offers 100% part dryness, regardless of part intricacies

## Additional Options

With over 64 years of experience in the industry, Better Engineering is the go-to solution for industrial cleaning systems. We offer additional optional add-ons and can customize our machines to clean even the most challenging parts and materials. Our team of experts takes pride in delivering top-notch solutions to our client's unique cleaning needs. Feel free to contact one of our sales associates to learn how we can assist you.

# AQUEOUS DETERGENTS

## Better Engineering Aqueous Detergents

At BE, we take pride in being your trusted partner for cleaning needs. We understand the importance of environmental and sustainability goals and have taken steps to ensure that our products align with these objectives. Since the 1980s, we formulated solvent-free technology chemistry to wash our client's products. BE's custom formulated detergents are designed to provide superior cleaning performance while safeguarding your equipment's lifespan. Our skilled chemistry department and factory test center ensure that our detergents are of the highest quality. We offer full-service cleaning solutions to our customers, backed by our expertise and experience.



## BE'S ECO-FRIENDLY, SOLVENT-FREE CHEMISTRY HELPS MEET SUSTAINABILITY GOALS



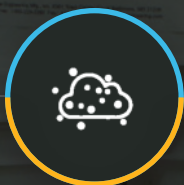
Biodegradable – No VOC'S, non-flammable, and generally non-hazardous



Lower pH's – Generally safe on all metals



Forces oils to the surface for easy skimming



Low foaming – Designed for powerful spray washers and agitation



Excellent rust inhibition



Free-rinsing



## Engineering Test Lab & Machine Demonstration Center

Better Engineering provides advanced laboratory testing services that showcase the efficiency of our cleaning systems. BE invites you to send us your most challenging parts for a thorough cleaning test and experience the BE advantages of our cleaning processes. After performing the cleaning test, a comprehensive report on our findings, results, and recommended machinery will give you the confidence to trust Better Engineering with all your part cleaning machine needs. Don't hesitate to contact us to schedule your FREE parts cleaning test and learn more about our services.

# AUTOMATED INDUSTRIAL PARTS WASHERS AND CLEANING SYSTEMS

At Better Engineering, we offer an impressive range of industrial parts washers and cleaning lines designed to meet your business needs. Our range includes turntable-style cleaning systems, conveyor washers, immersion and ultrasonic cleaning units, heavy-duty degreasers, and cellular parts cleaning units. Our cleaning systems are powered by environmentally safe aqueous detergents that are water soluble and biodegradable, ensuring safety for both the user and the environment while meeting sustainable practice goals. Our industrial parts washers are built to last and are fully customizable, modular, and designed to meet the highest standards of quality and performance. You can trust Better Engineering to deliver the best possible cleaning solutions for your industrial washing needs.



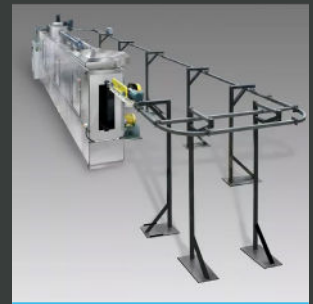
Conveyor Washer



Rotary Drum Washer



Immersion Washer



Monorail Washer



Carousel Washer



Turntable Washer



Rotary Basket Washer



Return-to-Operator