BETTER ENGINEERING

PRODUCT SPECIFICATIONS BROCHURE

MODULAR CONTINUOUS DRUM WASHER

High Volume Cleaning For Small Parts

CLEANING A HIGH VOLUME OF SMALL PARTS

Better Engineering's line of rotary drum washers cleans a volume of small parts such as fasteners, stamped components, bullet casings, machine screws, dye castings, plastic and metal recycling, as well as plungers and stoppers for the medical industry. The drums are available in 14", 24", 36", and 48" diameters and are tailored to each application regarding perforation size, the helix's pitch, and the helix's height. The wet stages can have spray, immersion, or both, and the hot air dryers run as high as 250° F.

THE **BE ADVANTAGE**

SPRAY OR IMMERSION

Your Choice of Spray, Immersion or Both

DRUM IS CHAIN DRIVEN

Drum Positively Driven with a Chain

DRYING TECHNOLOGY

Blow Off, Heated and Non-heated

STANDARD FEATURES (1/3)

Rotary Drums

- Diameters: 12” - 48”, and Custom Diameters also available
- Helix: Continuously welded (height and pitch as needed)

Drum Supports and Drive

- Support: The drum has machined bearing surfaces on the ends (and at other points depending on the length and load rating of the drum) that ride on plastic wheels. The wheels have sealed bearings
- Drive: The drum is positively driven with a chain. The drum sprocket is bolted on the unload end. The drive motor is variable speed (1-2 RPM’s) and is protected by an electronic “smart drive” torque overload sensor

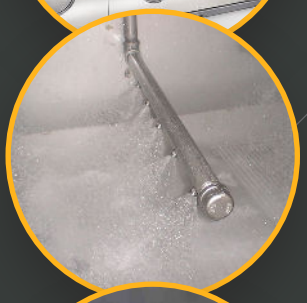
Drum Supports and Drive

- Support: The drum has machined bearing surfaces on the ends (and at other points depending on the length and load rating of the drum) that ride on plastic wheels. The wheels have sealed bearings
- Drive: The drum is positively driven with a chain. The drum sprocket is bolted on the unload end. The drive motor is variable speed (1-2 RPM’s) and is protected by an electronic “smart drive” torque overload sensor

STANDARD FEATURES (2/3)

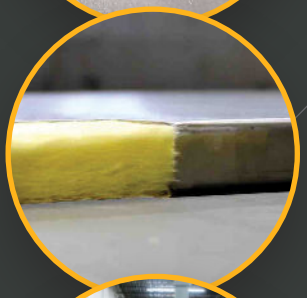
Exterior Drum Access

- Two different canopy styles are available: hinged doors on one side of the canopy in each zone



Wetted Parts are Stainless Steel

- With few exceptions, all the “wetted” parts of the system are stainless steel



Insulation & Natural Stainless Steel Finish

- Tanks and spray chambers are fully insulated with 1” insulation material covered with stainless steel metal cladding
- All exterior surfaces have a natural stainless steel finish, and painted surfaces for non-wetted components

Central Control Station

- NEMA-4 rating is standard on the control panel, with the option to upgrade to NEMA-12. Other PLC brands such as Simens and Mitsubishi available upon request. Equipped with a 2-channel, 7-day/24-hour timer; controls water heaters and optional oil skimmer(s) (using the HMI)
- The control panel is equipped with a speed dial to control conveyor speed (1-10)

Water Level Controls and Auto Fill

- There are four level sensor points: Emergency High, Emergency Low, Running Level, Stationary Level
- Water is automatically added when water is not at “Running” or “Stationary” levels based on machine state
- Water level sensor with digital readout

STANDARD FEATURES (3/3)

Solution Tanks | Vertical Seal-less Pumps

All solution tanks of these parts washers have the following features:

1. Vertical (seal-less) pumps with TEFC motors and single-piece shafts
2. Water level sensors for “normal”, “add water”, “low”, and “high” detection
3. Stainless steel solenoid for auto water fill
4. Large, slide out chip basket
5. Tank floor sloped from front to back for easy tank clean out

The Spray Chambers

The spray chambers/ tunnels for all the spray modules share the following characteristics:

1. Extended drain/ buffer areas on both sides of the spray zone to prevent splash-out and cross contamination
2. Inside flooring to force all water to enter the removable chip/ debris basket before re-entering the tank
3. Carriage tray is severely sloped to ensure removed contaminates flow back to respective tanks
4. All manifolds are designed to be easily removed

OPTIONAL FEATURES (1/4)

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

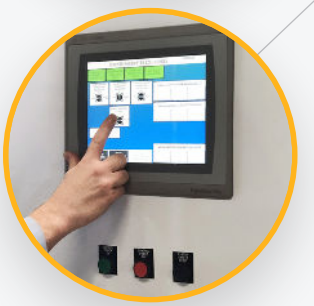
- Bag filter (hinged top and eye bolts) is installed on the pressure side of a given pump to trap suspended particles before they can be redeposited on the parts. Pressure gauges indicate when the filter bag (specify micron rating) has to be changed

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

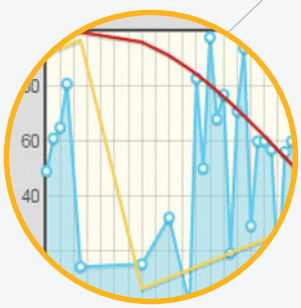
- Fan is mounted on the roof and ducted so as to create negative drafts on both ends of the system
- Customer provides duct work from discharge side of fan
- The vent port(s) on the top of the machine are connected to a central fan with a non-corrosive duct
- Steam exhaust systems come default with a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



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 (2/4)



Complete Data Acquisition System

The Rotary Drum 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 it 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)

OPTIONAL FEATURES (3/4)

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

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 module
6. Full insulation to protect user from hot surfaces

"Purchased a tray washing machine from Better Engineering. The installation technician was efficient, helpful, and very professional. He was able to address problems in a timely manner and get our machine up and running. Would highly recommend using Better Engineering."
-Nathan P., Project Engineer

OPTIONAL FEATURES (4/4)

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

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
  challenging applications, the customer can add a 3rd or 4th high capacity working tank

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

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

Better Engineering's line of industrial parts washers and cleaning systems includes turntable style cleaning systems, conveyor washers, immersion and ultrasonic cleaning units, heavy duty degreasers, and cellular parts cleaning units. BE cleaning systems use aqueous detergents that are water soluble and biodegradable, thereby making them safer for the user and for the environment. Our industrial parts washers are built to last, fully customizable, modular, and designed with your needs in mind.

Conveyor Washer

Rotary Drum Washer

Immersion Washer

Monorail Washer

Carousel Washer

Turntable Washer

Rotary Basket Washer

Return-to-Operator

BETTER ENGINEERING
betterengineering.com

1802 Fashion Court
Joppa, MD 21085 USA

Phone: 410-931-0000
Toll Free: 800-229-3380
Email: info@betterengineering.com