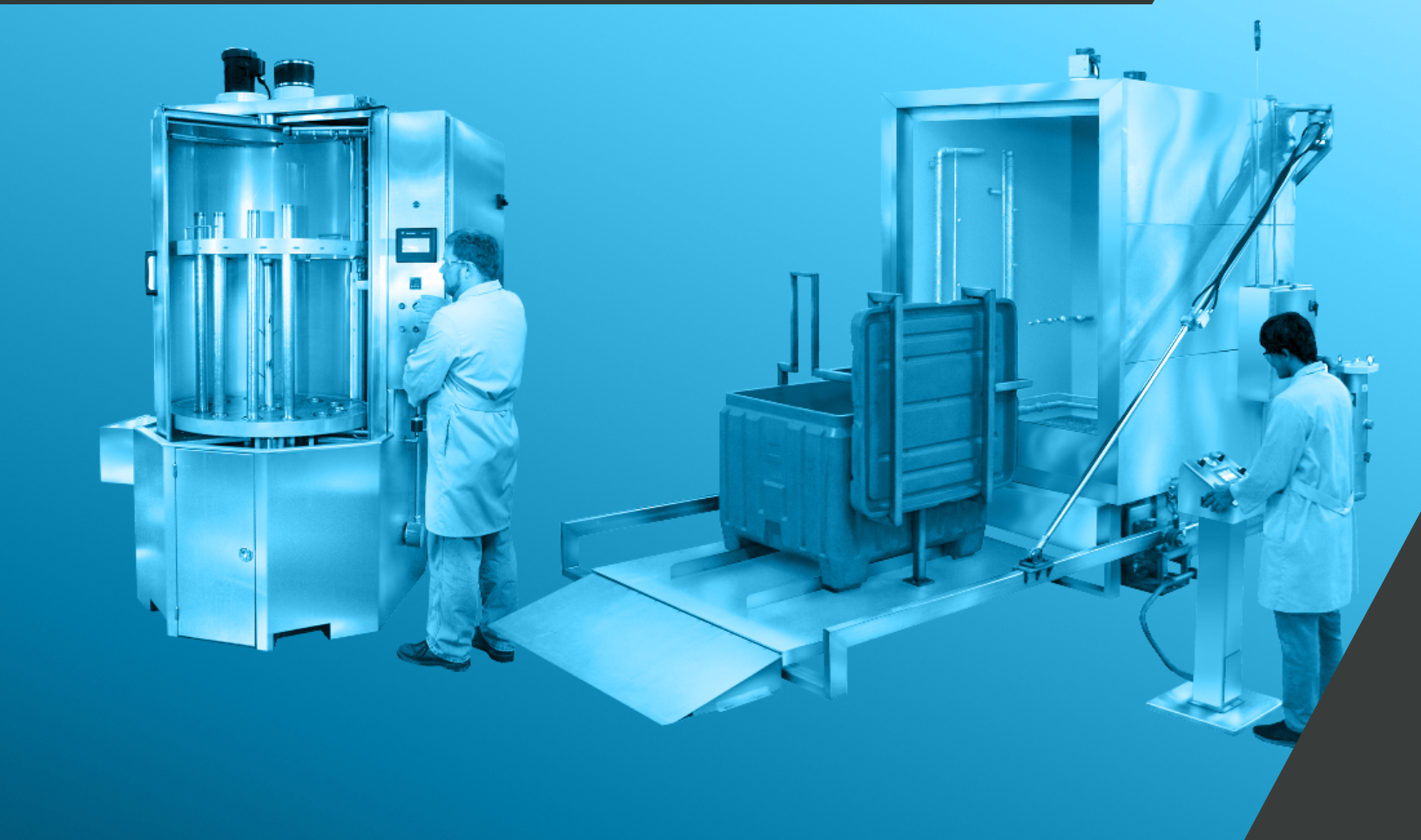
BETTER ENGINEERING

PRODUCT SPECIFICATIONS BROCHURE

ULTIMA-SAN CABINET WASHERS

Sanitary Batch Cleaning Systems



CHOOSE FROM THREE MACHINE STYLES

TURNTABLE SYSTEMS

40" - 80" DIAMETER TURNTABLES

- Multiple cabinet styles: roll-in doors or powered vertical doors
- Ergonomic design: allows for safe and convenient loading
- Customized fixtures and spray/dry manifolds

BIN WASHING

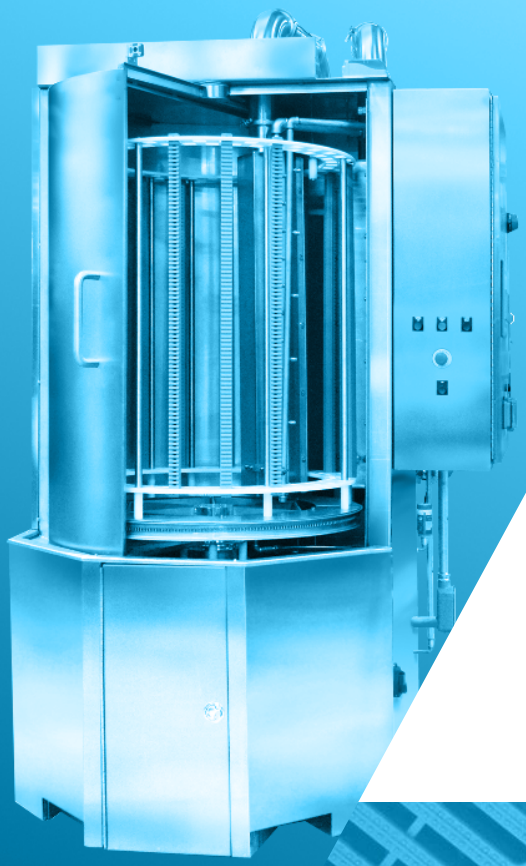
POWERED LIFT DOOR

- Multiple sizes: for one bin or multiple bins per cycle
- Spray manifold for inside cleaning is powered (sprocket driven)
- For the outsides of bins, a rectangular spray/dry manifold is powered back and forth

ROLL-IN CART UNITS

ELEVATOR (OPTIONAL) POWERS CARTS UP AND DOWN FOR EASY LOADING

- Machine can be mounted in a pit or ordered with optional elevator
- This machine is designed with safety in mind and does not require the use of dangerous ramps that compromise the depth of the tank while operation
- Doors on one or both sides of the cleaning chamber
- Rectangular spray/dry manifold assembly is powered back and forth



CLEANING & SANITIZING SYSTEMS BUILT SPECIFICALLY FOR FOOD AND PHARMA INDUSTRIES!

Better Engineering's "SAN" batch cleaning systems are ideal for the food, pharma, and cosmetic industries. These fully automatic machines are expertly engineered to comply with "clean design principles" and built to meet 3-A standards, making them the ultimate choice for your cleaning needs.

HYGIENIC BY DESIGN

WASH

Working tank fills, detergent is injected, and items are sprayed at high volume. After cycle, solution goes to drain or to an optional holding tank.

RINSE / SANITIZE

Automatic cycle then sequences to one or more rinses. Options for injecting sanitizing agent and for boosting temperature to 180° F.

DRY

For optional drying, steam is exhausted and powerful air knives sheer off water. Air temperatures can also be elevated to 200°F.

"SAN" NOTABLE FEATURES

1. A self-cleaning work tank that can fill and empty with each stage
2. An "open architecture" for maximum access. There are no hidden areas
3. Optional holding tank to re-use the wash solution
4. An optional hot water supply tank if hot water is in short supply
5. Options for sanitizing with chemistry or heat
6. PLC control with Ethernet communications and optional data

STANDARD FEATURES (1/2)

3-A Sanitary Standards

- Machines conform with most 3-A construction standards
- Sanitary spray and dry manifolds, sloped floors to avoid standing water, continuous inside welding (TIG)
- Complete access to the spray and dry chambers and to the tanks

Stainless Steel Construction

- All “wetted” parts of the system are stainless steel... sheet metal, pumps, blowers, etc.
- The exterior of the system has a natural stainless steel finish. Only components such as motors and wire-way are painted
- The main control panel is also stainless steel, NEMA 4

Automatic Cleaning Sequence

- Wash Stage: work tank fills, detergent is added items are spray washed, tank is emptied and self cleaned
- Rinse stage(s): identical to the wash stage except no detergent. Run multiple rinses if desired.
- Fresh Rinse Stage: items are directly sprayed with fresh water (3-10 GPM)
- Optional Stages: sanitize and dry

Clean and Dry: The Motion

- For excellent cleaning and drying, there is controlled motion
- For turntable systems, the motion comes from a powered turntable moving the items past the fixed spray and dry manifolds.
- Bin and cart washers feature powered manifolds.

STANDARD FEATURES (2/2)

Working Tank

- Working tank fills, detergent is injected, and items are sprayed at high volume. Solution then goes to drain or to an optional holding tank.
- The tank automatically empties and self-cleans after each stage shaped tank floor, 2-way pitch, auto drain valve, auto level control

Insulation and Stainless Steel Covers

- All vertical surfaces are insulated/guarded to the maximum extent possible
- A second sheet of stainless material is spaced 1” from hot surfaces to create a protective air gap
- There is no insulation material that can get wet and lead to microbial growth

High Volume Spray Pumps

- Working tank equipped with a high-volume spray pump; stainless steel
- Sanitary-type pumps are optional

Controls and Data Aquisition

- Central control panel is NEMA 4 with main power disconnect (breaker style, no fuses)
- All facets controlled via a PLC/HMI: Allen Bradley Micro850 and Panelview 800
- See options for PLC upgrades, Ethernet, and data acquisition

Drying Options

- Centrifugal blower (stainless steel) supplies high velocity air to sheer-off the water
- Air heating system boosts the air temperature for evaporative drawing
- Temperaturesare thermostatically controlled up to 200° F (Note: the air heating system is stainless steel and positioned on the inlet side of the blower.)

OPTIONAL FEATURES (1/4)

Wash Solution Holding Tank

Water is transferred from the working tank to this holding tank for re-use; specifications are:

- Same volume as working tank; stainless steel; insulated
- Auto water level controls
- A pump to transfer the water from the working tank to the holding tank
- Over-the-side heater to keep the wash water hot

Hot Water Tank

For customers that can't supply enough hot water to the machine, specifications are:

- Twice the volume of the working tank; stainless steel; insulated
- Auto water level controls
- Auto valve to allow water to gravity flow to the working tank

Sanitizing and Auto Chemistry Options

- Sanitize with chemistry or with heat using following options:
- "Dosatron" valve siphons chemistry into the working tank or the fresh rinse line
- Dosing pump injects chemistry into the working tank or fresh rinse line
- Pump and booster heater draw water from the hot water tank, boosts the temperature to 180° F, and fresh rinses the items

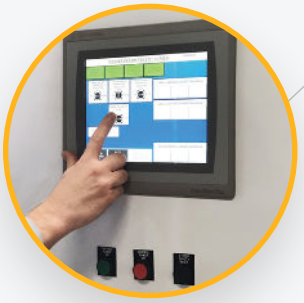
Steam Exhaust System

- Stainless steel blower is mounted to the machine
- Creates a negative draft in cycle and evacuates the steam at the end of a cycle
- Required if the drying options are ordered
- Steam exhaust type differs depending on machine type and use

Washdown Rated

- Washdown Levels:
- Level 1: Washdown electrical enclosure/conduit/buttons. All motorized components covered.
- Level 2: Same as Level 1 except with most motorized components washdown-rated (not necessarily stainless). Some items are still just covered.
- Level 3: Same as Level 2 except with most motorized components washdown-rated and stainless. Some items are still just covered.

OPTIONAL FEATURES (2/4)



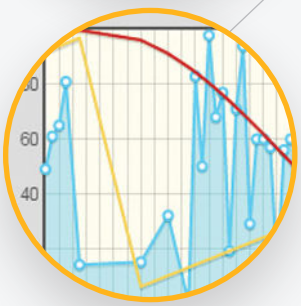
PLC/HMI Upgrade

- The PLC is upgraded to Allen Bradley's Compactlogix
- The HMI is upgraded to Allen Bradley's 600 series with a 10" screen
- The system includes Ethernet capability

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

Complete Data Aquisition System



The Ultima San Cabinet 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 8-port 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

OPTIONAL FEATURES (3/3)

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)

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

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
- Lengthened load and unload ends
- Steam heat

OPTIONAL FEATURES (4/4)

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 type differs based on machine

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 15,000 FPM 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

“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 Manager

APPLICATIONS

Any Bin, Container, or Drum

- Systems can be designed to clean any reusable plastic container
- Food: bins used for harvesting, processing, or distribution
- Pharma/cosmetic/nutraceutical: bins used for compounds or product storage

Baking Pans and Molds

- Systems have the power to clean the toughest pans, baking sheets, and molds
- Items can be cleaned “right side up” if requested

Stainless Steel Trays, Bins, Gondolas

- Virtually any size bin, weight is not an issue
- Any item used in meat processing

Better Engineering batch washers are highly flexible and customizable.

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.

FROM VISIBLY CLEAN TO MICROSCOPICALLY CLEAN

CLEANING AND SANITIZATION SYSTEMS

Macrobin Washer

Organic Recycling Bin Washer

Medical Waste Bin Washer

Cosmetic Container Washer

Medical Waste Bin Washer

Bin/Vat Washer

Pharma Drum Washer

Pharma Turntable Style System

Cosmetic Turntable Style System

Cosmetic Tube Cleaning Washer

Cosmetic Mixers Washer

Rack Washer Food Tray Washer

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