BETTER ENGINEERING

ADVANCED CLEANING
& SANITIZATION SYSTEMS

PRODUCT
SPECIFICATIONS
BROCHURE

PURIFIER JET WASHERS

Turntable Style Systems
Heavy Duty Cleaning
(Rinse & Dry Options)

PURIFIER systems are the best line of industrial jet washers in the world!

Using water based solutions, these heavy duty spray washing systems clean the dirtiest parts in just minutes. Rinse and dry stages are optional. Choose from front and top loading styles. Most units have the namesake “Purifier” filtration feature to extend the life of the wash solution.

Lifetime Guarantees

Welds

Against any welds cracking or leaking.*

Turntable

For the turntable itself and its sealed bearing assembly.

Door

Against the door/lid ever jamming.

*Warranty void if leaks are caused by corrosion

Choose from 4 cabinet styles

"T" Models

Top Loading

- The body of the cabinet slopes downward so the loading edge is closer to the ground and to the turntable surface
- The lid is powered up and down by an electric, linear actuator – push buttons require 2 handed operation
- Lid is supported with a continuous hinge (full length of the lid)
- Deflector plate inside the lid prevents dripping on the floor when the lid is opened
- Labyrinth seal prevents water from escaping
- Snap-on gasket seals in steam

"F" Models

Front Loading Hinged Door

- 55% of the turntable is exposed, allowing a hoist chain to be positioned over the center of the turntable
- Machine design keeps the turntable close to the ground
- Door is supported with a continuous hinge (full length of door)
- Door bottom is pitched to direct all residual water back to the tank
- Labyrinth seal prevents water from escaping
- Snap-on gasket seals in steam

"RD-W" and "RD" Models

Front Loading Rolling Door

- Allows center hoist loading... the center of the turntable is in front of the door axis (RD-W models only), allowing a chain hoist to be positioned over the center of the turntable
- Full turntable access... when the door is open, the entire turntable diameter is exposed from the front (RD-W models only)
- Top bearing support... the weight of the door is supported by a top, center bearing that is outside the cleaning chamber... requires minimal effort to open and close
- Machine design keeps the turntable close to the ground
- Labyrinth seal prevents water from escaping
- Snap-on gasket seals in steam (RD-W models only)

"PD" Models

Powered Vertical Doors

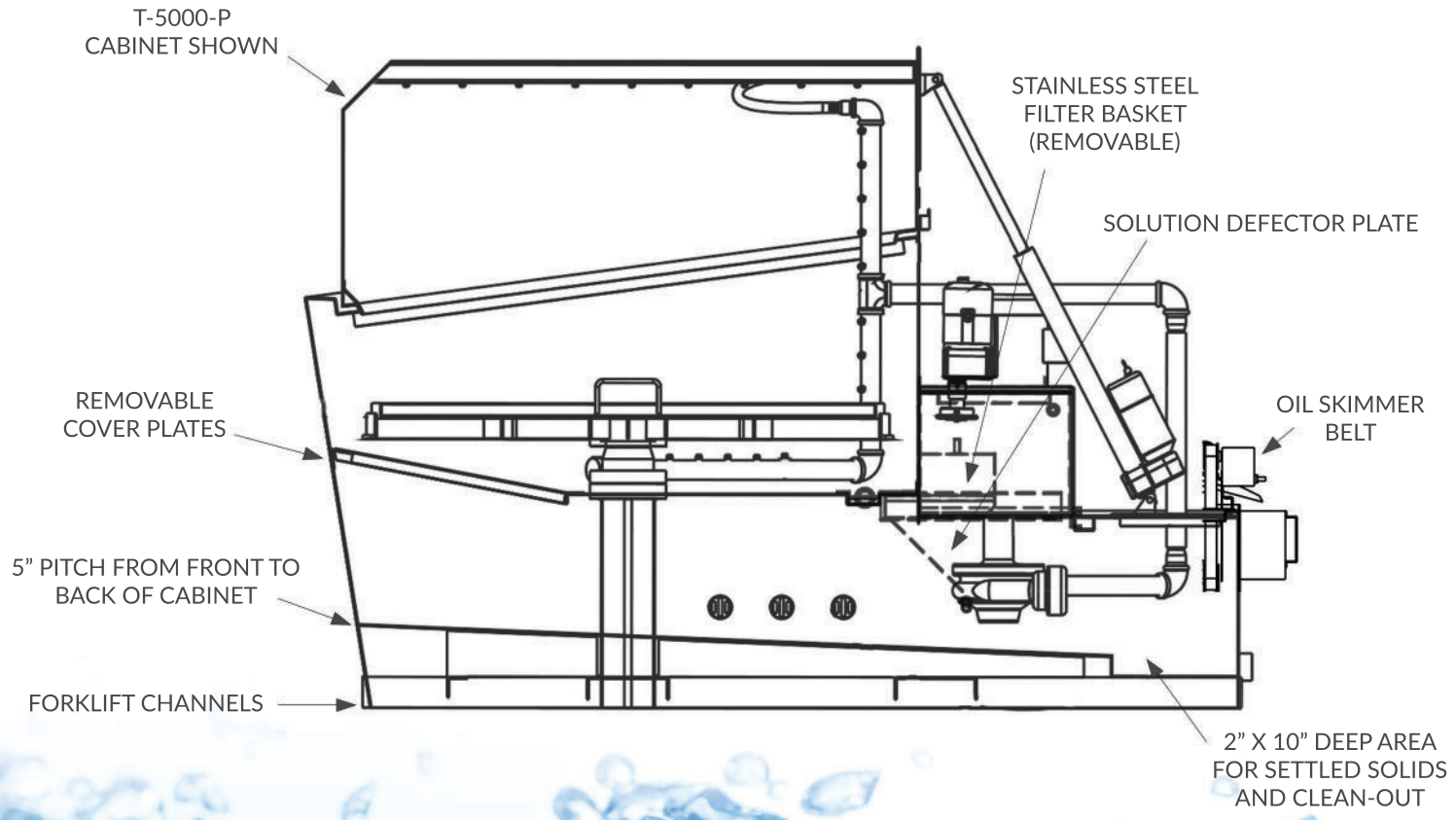
- Machines have either one or two powered vertical doors. If the unit has two doors, they are on opposite sides.
- Various loading scenarios: 1) baskets or racks can be rolled in or out, 2) a dolly can be rolled in or out, 3) supplied with or without external rails or roller conveyor sections, and 4) manual or robotic loading
- Doors are powered with pneumatic cylinders. Safety features include: 1) automatic brakes on the cylinders, 2) requires two-handed switch operation, and 3) in cycle, the doors are electrically interlocked and will not open
- Labyrinth seal prevents water from escaping; doors are inset for secondary containment

Purifier Filtration

The namesake feature of these models is the “Purifier” filtration system which greatly extends the life of the washing solution. After the solution hits the parts it flows through a removable stainless filtration basket. A deflector plate then shunts the solution to the rear of the tank where most of the fine sediment is trapped in a 2” deep by 10” wide canal that spans the width of the machine. A radical floor pitch from front to back further influences the sediment toward the rear. To extract the sediment, simply remove the rear cover plates and dredge out the canal.

Floating oils are continuously removed with the OSW-11 skimming system and channeled into a removable container.

* Some of these features are not on the following models: T-2500, RD-3000, and RD-4000.



More Features

Loading and Safety

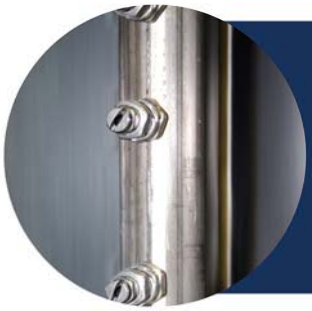
- Parts are loaded directly on the turntable (basket does not have to be rolled in and out of cabinet) except for “PD” models.
- Turntable is mounted on structural beam tied to the ground (the door bears none of the load and the load is never suspended or cantilevered)

Turntable Drive System

- Center bearing spindle is completely sealed
- External grease cup for the bearing assembly
- Turntable rim and spokes have a minimum thickness of 3/16”
- Friction drive system... metal chain wraps around the circumference of the turntable; if the turntable ever jams, the chain simply slips
- TEFC drive motor
- Removable parts basket (smooth, welded wire, 1” open mesh)

Vertical Seal-less Pumps

- All pumps are vertical (seal-less) style units (designed to withstand abrasive particles up to 1/4” in diameter
- There are no bearings or seals beneath the solution level
- Driven with TEFC motors
- Motors have extended shafts that connect directly to the impeller (no couplings)



Spray Manifolds

- Stainless steel “V” jet spray nozzles
- Manifolds positioned above, below, and on outside of turntable
- Front loading models have a mid-level, overhead spray manifold that pivots out of the way for tall parts
- On top loading models, overhead manifolds retract with the lid

Control System

- Nema 12 panel, NFPA 79 standards, 110 V controls, all circuits have MCB’s (no fuses)
- Standard PLC/HMI: Allen Bradley’s Micro 850 PLC and Panelview 800
- HMI functions: wash/rinse/dry times; cycle status and faults; temperature control/read-outs
- 7-day/24-hour timers for tank heaters and for the oil skimmer
- E-stop switch and turntable jog function

Model Specifications

Model	Turntable Diameter	Work Height	Turntable Area	Tank Size	Weight Capacity	Pump Motor	Overall Dimensions (W x D x H)
T-2500	25”	18”	490 sq. in.	50 gallons	500 lbs.	3.0 HP, 50GPM / 50PSI	42” x 53” x 50”
RD-3000	30”	36”	710 sq. in.	95 gallons	750 lbs.	5.0 HP, 75GPM / 60 PSI	45” x 62” x 69”
RD-3000-ZXX	30” x 2	15” x 2	1420 sq. in.	95 gallons	750 lbs.	5.0 HP, 75GPM / 60 PSI	45” x 62” x 69”
F-3000-P	30”	36”	710 sq. in.	95 gallons	750 lbs.	5.0 HP, 75GPM / 60 PSI	45” x 62” x 69”
F-3000-P-ZXX	30” x 2	15” x 2	1420 sq. in.	95 gallons	750 lbs.	5.0 HP, 75GPM / 60 PSI	45” x 62” x 69”
RD-4000	40”	40”	1260 sq. in.	140 gallons	1,500 lbs.	5.0 HP, 100GPM / 60 PSI	63” x 72” x 72”
RD-4000-ZXX	40” x 2	17” x 2	2520 sq. in.	140 gallons	1,500 lbs.	5.0 HP, 100GPM / 60 PSI	63” x 72” x 72”
F-4000-P	40”	40”	1260 sq. in.	140 gallons	1,500 lbs.	5.0 HP, 100GPM / 60 PSI	63” x 72” x 72”
F-4000-P-ZXX	40” x 2	17” x 2	2520 sq. in.	140 gallons	1,500 lbs.	5.0 HP, 100GPM / 60 PSI	63” x 72” x 72”
F-4000LX-P	40”	60”	1260 sq. in.	140 gallons	1,500 lbs.	7.5 HP, 150GPM / 60 PSI	63” x 72” x 92”
F-4000LX-P-ZXX	40” x 2	27” x 2	2520 sq. in.	140 gallons	1,500 lbs.	7.5 HP, 150GPM / 60 PSI	63” x 72” x 92”
F-5000-P	50”	60”	1970 sq. in.	200 gallons	2,500 lbs.	10 HP, 200GPM / 60 PSI	75” x 84” x 92”
F-5000-P-ZXX	50” x 2	25” x 2	3940 sq. in.	200 gallons	2,500 lbs.	10 HP, 200GPM / 60 PSI	75” x 84” x 92”
RD-W-5000-P	50”	60”	1970 sq. in.	300 gallons	2,500 lbs.	10 HP, 200GPM / 60 PSI	97” x 100” x 115”
RD-W-5000-P-ZXX	50” x 2	25” x 2	3940 sq. in.	300 gallons	2,500 lbs.	10 HP, 200GPM / 60 PSI	97” x 100” x 115”
T-5000-P	50”	31”	1970 sq. in.	200 gallons	1,500 lbs.	7.5 HP, 150GPM / 60PSI	70” x 91” x 62”
F-6000-P	60”	60”	2830 sq. in.	260 gallons	2,500 lbs.	15 HP, 250GPM / 60PSI	85” x 94” x 92”
F-6000-P-ZXX	60” x 2	25” x 2	5660 sq. in.	260 gallons	2,500 lbs.	15 HP, 250GPM / 60PSI	85” x 94” x 92”
RD-W-6000-P	60”	60”	2830 sq. in.	380 gallons	2,500 lbs.	15 HP, 250GPM / 60PSI	107” x 110” x 115”
RD-W-6000-P-ZXX	60” x 2	25” x 2	5660 sq. in.	350 gallons	2,500 lbs.	15 HP, 250GPM / 60PSI	107” x 110” x 115”
T-6000-P	60”	31”	2830 sq. in.	260 gallons	2,500 lbs.	10 HP, 200GPM / 60 PSI	80” x 100” x 62”
F-7000-P	70”	60”	3860 sq. in.	300 gallons	2,500 lbs.	15 HP, 250GPM / 60PSI	116” x 124” x 107”
RD-W-7000-P	70”	60”	3860 sq. in.	450 gallons	2,500 lbs.	15 HP, 250GPM / 60PSI	117” x 120” x 118”
T-7000-P	70”	31”	3860 sq. in.	320 gallons	2,500 lbs.	10 HP, 200GPM / 60 PSI	91” x 109” x 62”
RD-W-8000-P	80”	60”	5035 sq. in.	540 gallons	2,500 lbs.	20 HP, 300GPM / 60 PSI	129” x 133” x 115”
RD-W-9000-P	90”	60”	6300 sq. in.	620 gallons	2,500 lbs.	20 HP, 300GPM / 60 PSI	139” x 143” x 115”
RD-W-10000-P	100”	60”	7800 sq. in.	710 gallons	2,500 lbs.	25 HP, 350GPM / 60 PSI	149” x 153” x 115”
Larger Models	Consult Factory						(Dimensions Prior to Options)

Optional Features

The "ZXX" Configuration

ZXX-11 UPPER LEVEL TURNTABLE: Simply add the "ZXX" suffix to any front loading model # (e.g. F-3000-P-ZXX). These ZXX models have a removable upper parts basket which doubles the cleaning capacity for small parts. The spray manifolds are modified so that both baskets are sprayed from the bottom, top, and sides.

Rinse Systems

ARC-11 RINSE SYSTEM: When the wash cycle ends, there is a programmed pause to allow the wash solution to return to the "wash tank" and then the parts are sprayed with fresh water (3-15 GPM). The rinse water is automatically diverted to an outside drain connection.

ARC-22 RINSE SYSTEM: this option includes a separate heated tank: stainless steel tank, 50 gallon capacity, 9 KW heat, 2 HP pump, and auto water level controls. Rinse functionality is the same as the ARC-11 except the system has a 3-way diverter such that the rinse water can be recirculated or go to an outside drain. For larger models, the rinse tank can be upsized to 100 gallons.

Drying Systems

RGB-11 AIR DRYING SYSTEM: After the wash or wash/rinse sequence, the parts are dried by blasting them with ambient or hot air (see AHS-11). Consult the factory to determine specifications. Optional sound shield available.

AHS-11 AIR HEATERS: installed in between the RGB-11 blower and the cleaning chamber to boost air temperatures up to 250-300° deg F. The AHS-11 option includes a stainless steel housing, low watt density heating element, and thermostatic control.

Macro & Micro Filters

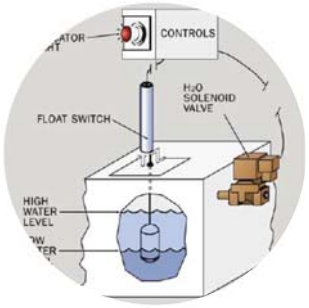
ILS-11 MACRO FILTER: Filter with strainer is installed on the pressure side of the pump to trap particles that could otherwise clog the spray nozzles.

ILF-22 MICRO FILTER: Large capacity bag filter traps suspended particles in the "micron" range. Recommended for applications where minuscule redeposition cannot be tolerated.

Steam Exhaust Systems

The ASX-11 STEAM EXHAUST SYSTEM evacuates the steam before you open the door or lid. A two (2) position selector switch allows the blower to start running at the beginning of a cycle or at the end. ASX-11 blowers have a TEFC motor and a cast aluminum fan body. (Picture also shows optional DRP-11 Drip Leg on the outlet of the blower, "T" ducting with brace, and drip leg.)

Optional Features



Water Level Controls

These electro-mechanical systems prevent damage to the heating elements and pumps that can otherwise occur when the water level is low. The LWS-11 LOW WATER SHUT-OFF shuts down the pump and heaters when the water level reaches a critical level. An indicator light notifies the operator to correct the water level. The LWS-F1 SHUT-OFF AND AUTO FILL only shuts down the machine as a last resort. With this option, water is added incrementally whenever the water level falls as little as 1/4" from its maximum level.

Side Tray / Baskets

SST-11 SIDE TRAY: With the side tray, you can hand detail parts with the same jet washer solution. A stainless steel wash basin (24" long x 18" wide x 4" deep) is attached to the side of your jet washer. A stainless steel pump brings the hot solution to the hand brush and the solution then drains back to the jet washer.
RCB-11 COATED BASKETS: To avoid scratching critical parts, the parts basket is coated with a highly elastic, polyvinyl material.
SPB-11 SMALL PARTS BASKET: Hinged lid baskets to contain small parts. The small basket is 12"L x 6" W x 6"H. The larger one is 15"L x 9"W x 6"H.

Increased Height, Diameter & Load

TALLER, BIGGER: Better Engineering is expert at custom building super large systems that have more working height (e.g. 150"), larger turntables (e.g. 180" diameter or larger), and higher weight capacities (up to 50,000 lbs).
CSM-11 CHIP/ SLUDGE DRAG-OUT CONVEYOR: For F-5000 and larger models. Scrapers drag solids out from the deepest part of the tank, convey the solids out of the tank, and drop them into a customer supplied waste bin (55 gallon drum or equal).

Oil Coalescer

OWC-1.5 & OWC-3.0 OIL WATER COALESCERS: For applications with a high level of oil contamination. Effective at removing floating (non-emulsified) oils. Rated for 1.5 GPM and 3.0 GPM pump flow respectively. Oil/water are continuously skimmed from the washer tank; most of the oil gets trapped in the coalescer for later removal. The filtered water gravity fl ows back to the washer tank.

Additional Options

SPP-11 SUMP PUMP: To pump out one tank to an overhead line.
STT-11 SUMP TANK: Used to pump out multiple tanks and diverted rinse water
ELE-500: upgrades the PLC to Allen Bradley's Compactlogix (with Ethernet) and HMI to 10" color screen
ELE-300: Main breaker disconnect; cuts power before control panel is opened
EBL-11 and EBL-22: Beacon lights; 1 and 3 colors available
PSS-11: Pressure sensors
FSS-11: Flow sensors
DSL-11: Locking door switch
CHEMISTRY: Options to monitor and adjust chemistry levels

Aqueous Detergents

Better Engineering Aqueous Detergents

These detergents are specially formulated to maximize cleaning performance and to protect your machine. These detergents, backed by "BE's" chemistry department and factory test center, allow Better Engineering to offer customers a full service cleaning solution.

Benefits of "BE" Chemistry

- 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 skim-ming
- Low foaming – Designed for powerful spray washers and agitation
- Excellent rust inhibition
- Free-rinsing

Lab Test Services

Engineering Test Lab & Machine Demonstration Center

Better Engineering has a complete engineering lab and machine demonstration center to test clean your parts. We feel that seeing is believing and that is why we invite you to visit our plant and test center in Joppa, MD to see your parts get cleaned first-hand. Or send us your parts and we'll test clean them for you. Every test comes with a detailed report of our process, the results, and the recommended machinery. Contact Us for additional information or to schedule your FREE parts cleaning test.

Over **15,000** Systems in Service

Automatic, Aqueous-Based Parts Washing and Sanitization Systems

Sanitization Washers

- For sanitizing applications
- Ideal for food, beverage, medical, pharma, and cosmetic industries
- Clean Totes, Bins, MacroBins, Trays, Pans, Racks, Sharps, etc.

Turntable Washers

- Four (4) major product groups
- Over 30 standard models
- Mild steel or stainless steel
- Unlimited customization

Conveyor Washers

- Rugged construction, elegant design
- Standard belt widths 14" - 48"
- Custom widths & systems available
- Modular construction

Immersion - Ultrasonics

- Agitating Platforms (Multi-speed)
- Ultrasonic Power
- Unlimited Stages
- Full Automation Available

Tumbling Washers

- Spray/Immersion technology
- Ultrasonic cleaning available
- Parts tumble in baskets or lock in fixtures
- Ideal for small parts or parts with blind holes

Drum Washers

- Clean small parts in volume
- Stnd. drum diameters 14" - 48"
- Continuously welded helix
- Modular construction

RTO Washers

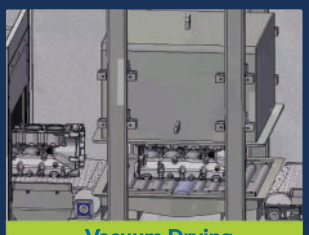
- Super compact
- Designed for work cells and lean manufacturing centers
- Often incorporated in automation processes

Custom Washers

- Dunnage washers, tote washers
- Tube and pipe washers
- Rack and vat washers
- Monorail washers
- Flushing systems and more...

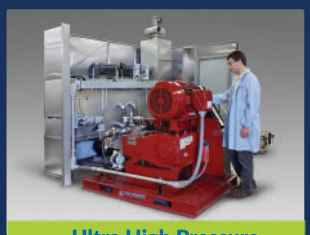
Robotics & Washing

- For auto loading & unloading
- For moving spray & dry nozzles around a part
- For lifting & turning a part for water drainage



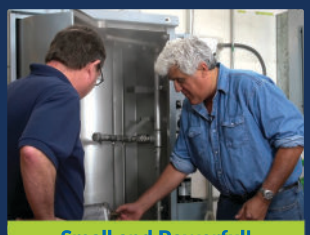
Vacuum Drying

- Drying deep cavities & passage-ways
- Water evaporates at zero atmospheric pressure



Ultra High Pressure

- Pressures up to 10,000 PSI
- Units from 5-100 HP



Small and Powerful!

- For wash-only applications
- Automatic spray washers
- Industrial quality
- "BE" guarantees

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