

“DOUGLAS” MODEL BW-2000-C DUAL BIN WASHER PRE-WASH, WASH, AND SANITIZING SYSTEM

**DESIGN AND
OPERATION**

Designed for batch type operation where two (2) bins are loaded into support brackets mounted on the door. The door, activated by holding the open/close switch, is lifted and closed by two (2) hydraulic cylinders. The cycle start button is then pushed which initiates a recirculating non-detergent pre-wash (which removes any loose debris left in the bins), a 150° F. recirculating detergent wash and then an ambient chemical or 180° F. hot water sanitizing rinse. The sanitizing rinse water is directed back into the the recirculated pre-wash tank to freshen it. The excess water then overflows to drain. Booster heaters maintain proper operating temperatures.

**OPTIONAL
SAFETY CAGE**

The safety cage prevents machine door operation when the cage doors are not in the closed position. Also with this feature, after the bin has been loaded and the cage doors have been closed, the start button is pushed which activates the complete cycle. This includes the machine door closing, pre-wash, wash, sanitizing rinse and the door returning to the open position for unloading. A separate open/close machine door switch is also provided for manual override, operational only when the cage doors are in the closed position.

**GENERAL
CONSTRUCTION**

Upper housing will be constructed of #12 gauge, type #304 STAINLESS STEEL with a #3 finish. Pre-wash and wash tanks to be constructed of #12 gauge, type #304 STAINLESS STEEL also with a #3 finish. Door is doubled skinned constructed of #14 and #12 gauge, type #304 STAINLESS STEEL with internal and external bracing for maximum strength. Manually opened and closed with a switch and protected from any cycle operating when not in the closed position. Base frame constructed of 3” x 3” x 1/4” structural STAINLESS STEEL angle. All seams are mig or tig welded and continuous. All welds are cleaned inside, cleaned and buffed outside.

**RECIRCULATING
PRE-WASH AND
WASH TANKS**

Recirculating pre-wash and wash tanks heated by electric or steam coil, thermostatically controlled, low water protected, complete with automatic tank diverter controlled by air operated cylinder and pump intake butterfly valves to separate pre-wash and wash tanks, 1” NPT automatic fill systems, 1 1/2” NPT overflow connections, 3” STAINLESS STEEL gate drain valves, thermometers and liquid filled pressure gauges. 345 gallon pre-wash and 315 gallon wash tank capacities, sloped to drain.

**PRE-WASH AND
WASH PUMP**

Closed coupled centrifugal pump with STAINLESS STEEL casing and impeller. Complete with 60 H.P. wash down duty motor, 208/230/460 or optional 575 volt, 3 phase, 60 cycle. Rated for 630 gallons per minute at 80 PSI.

**FINAL
SANITIZING RINSE**

Fresh sanitizing rinse delivers 18 gallons per 30 second cycle at 20 PSI flow. 180° F. sanitizing rinse water supplied to unit by customer or optional 60 gallon pumped rinse tank heated by electric or steam coil with 1 H.P. wash down duty motor, 208/240/480 or optional 575 volt, 3 phase, 60 cycle. If booster heater is required, the water supply temperature is 120° F. minimum.

**SPRAY
PIPING SYSTEM**

Two (2) rotating hubs with extended arms to pre-wash and wash the inside of the bin driven by a 1/2 H.P. TENV gear motor and five (5) compressed air piston driven oscillating spray arms for coverage on the outside. Pre-wash, wash and final rinse constructed of STAINLESS STEEL piping, fittings, high velocity “V” wash jets and full cone rinse jets.

FILTRATION	Soil filter diverter is located above the water line and is sloped to direct solids to outside filter tanks, accessed through a removable lid on the side of the machine.
STEAM EXHAUST VENT	Steam exhaust vent collar, 12 7/8" inside diameter, constructed of #14 gauge STAINLESS STEEL. Bolted to the top of the machine pre wired with a control timer for the addition of a fan.
OPTIONAL EXHAUST FAN	12" diameter fan, STAINLESS STEEL, mounted on washer to exhaust excess steam after sanitizing rinse cycle. 1/2 H.P. TEFC or optional wash down duty motor, 208/230/460 or optional 575 volt, 3 phase, 60 cycle, 1750 RPM rated for 700 CFM each at .36" static pressure.
ELECTRICAL PANEL AND CONTROLS	Electrical control panel is UL listed, NEMA 4X STAINLESS STEEL with Square "D" components. Optional panel disconnect switch with lockout feature also available. 120 volt control circuit with lighted "POWER ON" switch, "START" and "STOP" buttons, "RUN" indicator light, "OPEN/CLOSE" door switch, and short, medium and long "WASH CYCLE SELECTOR" switch. Complete recirculating pre-wash, recirculating wash, final sanitizing rinse and dwell/fan cycles initiated by pushing the "START" button. Pre-wash, wash and final rinse cycle times are adjustable.
OTHER FEATURES	Adjustable STAINLESS STEEL legs for leveling machine. Complete hydraulic system with 20 gallon tank reservoir and 20 H.P. wash down duty motor, 208/230/460, or optional 575 volt, 3 phase, 60 cycle.
CONTAINER SPECIFICATIONS	Designed for bins or similar size containers measuring 48" x 48" x 45" high. Other design variations available for different container sizes.
DIMENSIONS	Washer Cabinet Dimensions: 144" wide x 60" deep x 120" high Overall Dimensions: 189" wide x 99 1/2" deep x 123" high
CONNECTIONS	Electrical: Single-point connection Pre-wash and wash tank water inlets: (2) 1" NPT, 120° F. Final rinse water inlet: (1) 1" NPT, 180° F. or 120° F. with optional booster heater Drains: (2) 3" NPT Overflows: (2) 1 1/2" NPT Steam Option: (2) 3/4" NPT or (3) 3/4" NPT with optional final rinse booster heater Steam Condensate: (2) 3/4" NPT or (3) 3/4" NPT with optional final rinse booster heater Compressed Air: (1) 1/4" NPT, 30 CFM @ 100 PSI
SERVICES	Electric Heated: 480 Volt, 3 Phase, 229 Running Amps, 300 Amp Service Breaker 575 Volt, 3 Phase, 189 Running Amps, 250 Amp Service Breaker Steam Heated: 208 Volt, 3 Phase, 60 Cycle, 168 Running Amps, 225 Amp Service Breaker 240 Volt, 3 Phase, 60 Cycle, 164 Running Amps, 225 Amp Service Breaker 480 Volt, 3 Phase, 60 Cycle, 83 Running Amps, 110 Amp Service Breaker 575 Volt, 3 Phase, 60 Cycle, 70 Running Amps, 90 Amp Service Breaker Steam Consumption: 430 lbs. per hour for recirculating pre-wash and wash tanks 160 lbs. per hour for optional final rinse booster Please add the following amps to those above for optional exhaust fan (2.1 at 208 volt, 1.8 at 240 volt, .8 at 480 volt, or .5 at 575 volt) and/or pumped rinse. steam heated (2.8 at 208 volt, 2.6 at 240 volt, 1.3 at 480 volt, or 1 at 575 volt) or pumped rinse tank, electric heated (54 at 480 volt, or 43.1 at 575 volt) and recalculate service breaker size, which should be at least 125% of total running amps.