

SPECIFICATIONS

SPECIAL “DOUGLAS” MODEL WR-1500-RW ASSORTED RACK WASHER WASH AND SANITIZE CONVEYOR SYSTEM

DESIGN AND OPERATION	Designed for continuous operation with a variable speed drive and digital readout to modify and monitor speed for varying soil conditions. A heavy duty STAINLESS STEEL belt transports racks through a 150° F. recirculating wash chamber. After leaving the wash chamber the racks are sanitized with an ambient chemical or 180° F. fresh water before exiting the machine. Dwell zones and anti-splash curtains are provided at the entrance and exit ends to help prevent overspray from reaching the operators. A dwell zone is also provided between the wash and rinse sections to help minimize cross contamination of rinse and detergent water and to provide the opportunity to manage the flow of all or any portion of the fresh water back into the recirculating wash tank or to drain. Fixed product guides are provided to keep racks in place and prevent jamming. Booster heaters maintain proper operating temperatures.
GENERAL CONSTRUCTION	Upper housing will be constructed of #14 and #16 gauge 300 Series STAINLESS STEEL with a #3 finish. Wash tank to be constructed of #12 gauge 300 Series STAINLESS STEEL also with a #3 finish. Base frame constructed of 1 1/2” and 1” STAINLESS STEEL piping. All seams are mig or tig welded. Seams, where needed for watertight construction and at tank base frame, are continuously welded. All other seams are stitch welded for strength. All welds are cleaned inside, cleaned and buffed outside. Optional continuous welds in lieu of stitch welds available.
RECIRCULATING WASH TANK	Recirculating wash tank heated by gas, thermostatically controlled, low water protected, complete with 1” NPT automatic fill system, 1 1/2” NPT overflow connection, 2” NPT valved overflow connection from final rinse to wash tank or drain. 3” gate drain valve, thermometer and pressure gauge. 460 gallon wash tank capacity, sloped to drain.
WASH PUMP	Close coupled centrifugal wash pump, bronze fitted with cast iron casing. Complete with 25 H.P. TEFC or optional wash down duty motor, 460 volt, 3 phase, 60 cycle. Rated for 415 gallons per minute at 60 PSI. Optional STAINLESS STEEL wet end available. Externally mounted for ease of maintenance.
SANITIZING RINSE SECTION	Sanitizing rinse section delivers 7.56 GPM at 20 PSI flow. 180° F. fresh sanitizing water supplied to unit by customer or optional booster heater. If booster heater is required, the water supply temperature is 145° F. minimum. If ambient chemical rinse is preferred, it is to be supplied by customer.
SPRAY LINES AND NOZZLES	Interior recirculated wash supply lines includes STAINLESS STEEL tubing with quick disconnect, removable end caps and clip-on, chemical and corrosion resistant polypropylene nozzle assemblies with adjustable “quick release” V-jet spray tips. Interior sanitizing rinse line includes STAINLESS STEEL tubing, removable end caps and fixed “quick release” V-jet spray tips.

FILTRATION	Sliding filter screen drawers located above water line, easily removed and cleaned during operation. Conveniently removed from one side of the machine. Also provided with a secondary pump protection screen easily removed through the access panel on the pump box. Optional traveling filtration system with external dump basket is available. Note, with this option, load height is increased by 6".
CONVEYOR	One (1) 25" wide #304 STAINLESS STEEL 1" x 1" heavy duty flat wire belt complete with reversible A.C. variable speed inverter with ball detent clutch to prevent belt damage in case of jamming. 1 H.P. TENV helical worm gear motor, 460 volt, 3 phase, 60 cycle, corrosion resistant bearings, STAINLESS STEEL take up frames, supports, UHMW belt sprockets and wear strips.
STEAM EXTRACTION	Two (2) 12" diameter fans, mild steel painted or optional STAINLESS STEEL, mounted on hoods at entrance and exit of washer to exhaust excess steam. 1 1/2 H.P. TEFC or optional wash down duty motor, 460 volt, 3 phase, 60 cycle, 3450 RPM rated for 1350 CFM each at .69" 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 safety lockout is also available. Complete with motor starters, 120 volt control circuit with Power On switch, conveyor speed dial with foot per minute digital display, wash tank low water light, Start and Stop Buttons plus Run Indicator Lights. Emergency stop button, clutch trip indicator light and conveyor start/stop/reverse buttons on entrance end. Emergency stop button and conveyor stop button on exit end. Washer will be factory wired in hard aluminum conduit and tested prior to shipment.
OTHER FEATURES	Complete with load and unload tables. Sanitary sloped roof design. Adjustable STAINLESS STEEL legs for leveling machine. Fiber optic sensor to shut off final rinse with no pans present. Anti-splash curtains at entrance and exit of washer. Removable side panels for easy access. Optional safety interlocks are available.
ESTIMATED CAPACITY	Assuming the items will clean at the speeds listed below, the following quantities will be processed: Aluminum Distribution Racks (21 1/2" x 29 3/4" x 71") 240 pieces/hour at 11 FPM Aluminum Finishing Racks (23 3/4" x 26" x 74") 240 pieces/hour at 11 FPM Items of similar size and shape may be processed through this machine. Please check with Douglas Machines to confirm feasibility. Belt speed adjustable from 1 to 20 FPM for varying soil conditions.
DIMENSIONS	Washer Cabinet Dimensions: 4' - 3" wide x 20' - 0" long x 11' - 0" high Overall Dimensions: 6' - 0" wide x 26' - 0" long x 13' - 6 1/2" high
CONNECTIONS	Water Inlet: (1) 1" NPT Ambient to 140° F. max. and (1) 3/4" NPT 180° F. or (1) 3/4" Ambient or with optional booster heater (1) 3/4" NPT 145° F. Drain: (1) 3" NPT, (1) 2" NPT Overflow: (1) 1 1/2" NPT Gas Inlet: (1) 1" NPT @ 2 lbs. pressure min., (1) 3/4" NPT @ 1/2 lb. pressure max. for optional final rinse booster heater
SERVICES	Electrical: 480 volt, 3 phase, 60 cycle, 40 running amps, 50 amp service breaker Gas Firing Rate: 1,350,000 BTU/Hour for recirculated wash 200,000 BTU/Hour for optional final rinse booster heater

NOTE: Calculations are based on a room temperature of 72° F.