

SPECIFICATIONS

“DOUGLAS” MODEL 1536-FBW FLEXIBLE BATCH WASHER

**DESIGN AND
OPERATION**

Designed for batch type operation where the wash rack is loaded with items to be cleaned. With the door open, the docking cart is wheeled over to the machine where it is locked in place. The wash rack is then released from the cart and rolled into the cabinet. The docking cart is removed, then the door is closed. After the door is closed, the short, medium or long wash cycle is selected. The start button is then pushed which initiates closing of the drain valve, filling of the wash tank at 150° F and the adding of detergent, if applicable. After the wash tank is filled, the cycle starts which includes a recirculating detergent wash, followed by a fresh water rinse (ambient, 180° F. sanitizing or chemical sanitizing) and an exhaust fan/dwell cycle. At the end of the wash cycle the wash tank drain valve is opened to remove contaminated solution before the next rack is loaded. During the exhaust fan/dwell cycle, the door is opened and the docking cart is returned and locked into place where the wash rack is rolled back onto the cart, secured, and removed from the machine. An additional “Auto Clean” cycle is included to purge the pump, cabinet and supply manifolds at the end of the day or between product changes. Booster heaters maintain proper operating temperatures.

CABINET

54” wide x 51” deep x 104 1/2” high. Overall footprint is 55 1/2” wide x 74” deep. Door Opening: 36” wide x 76 1/2” high. Wash Chamber: 36” wide x 42” deep x 76 1/2” high. Constructed of #14 gauge, #304 STAINLESS STEEL with a #3 finish. All seams, excluding filter section, are tig or mig welded and continuous. All welds are cleaned inside, cleaned and buffed outside.

DOOR

Constructed of #16 and #18 gauge, #304 STAINLESS STEEL with a #3 finish. Door is double skinned with integral framework for additional strength. Standard right hand, or optional left hand swing, equipped with external latch, inside release handle and is interlocked to prevent machine operation while open.

**WASH RACK
GUIDE RAILS**

Wash rack rails constructed of 1 1/2” dia. heavy wall STAINLESS STEEL tubing.

**RECIRCULATING
WASH TANK**

Constructed of #14 gauge, #304 STAINLESS STEEL, heated by 12 KW electric immersion heater (live steam or steam coil options are available) to maintain operating temperature. Complete with low water protection, automatic fill, 1 1/4” NPT overflow connection, 2 1/2” automatic STAINLESS STEEL drain valve and is thermostatically controlled. 20 gallon tank capacity, sloped to drain.

WASH PUMP

Closed coupled centrifugal wash pump, bronze fitted with cast iron casing. Complete with 15 H.P. TEFC motor (optional wash down duty motor available). 208/240/480 or optional 575 volt, 3 phase, 60 cycle. Rated for 225 gallons per minute at 35 to 45 PSI. Optional STAINLESS STEEL wet end available.

**ROTATING WASH
HUB ASSEMBLY**

Water driven, STAINLESS STEEL spray arm assembly with STAINLESS STEEL jets, removable end caps and hand operated quick release mechanism for easy cleaning and reassembly.

FILTRATION

Perforated STAINLESS STEEL basket type. Designed for increased effectiveness and easily removed from outside of the cabinet.

OPTIONAL SANITIZING RINSE TANK	Constructed of #14 gauge, #304 STAINLESS STEEL, heated by 18 KW electric immersion heater (steam coil option is available). Complete with thermometer, pressure gauge and is thermostatically controlled. Uses 12 gallons per 30 second cycle and has a 20 gallon capacity.
OPTIONAL PUMPED SANITIZING RINSE TANK	Constructed of #14 gauge, #304 STAINLESS STEEL, heated by 24 KW electric immersion heaters (steam coil option is available). Complete with low water protection, automatic fill, and thermostatically controlled to provide 12 gallons per 30 second cycle at 20 PSI and has a 36 gallon capacity. Also supplied with a closed coupled centrifugal pump with STAINLESS STEEL casing and impeller. 3/4 H.P. TEFC motor (optional wash down duty motor available) 208/240/480 or optional 575 volt, 3 phase, 60 cycle.
FINAL RINSE PIPING	#304 STAINLESS STEEL tubing, compression fittings and full cone rinse jets.
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 120 volt control circuit, motor starters, Programmable Logic Controller and Operator Interface with color touch screen. The display indicates time remaining for each cycle, wash temperature and pressure, rinse temperature and pressure plus error messages for ease of troubleshooting. Cycle sequence and duration are fully adjustable.
STEAM EXHAUST VENT	Steam exhaust vent 12 7/8" I.D. consisting of #16 gauge rolled collar for PVC pipe connection bolted to the top of the machine. Machine pre-wired with control timer for the addition of a fan.
OPTIONAL EXHAUST FAN	One (1) 12" diameter fan with 12 7/8" I.D. collar mounted on washer to extract excess steam after final rinse cycle. Constructed of STAINLESS STEEL housing and aluminum blade with 1/4 H.P. TEFC or optional wash down duty motor, 120 volt, 1 phase, 1725 RPM, rated 500 CFM at .5" static pressure. Optional fan with STAINLESS STEEL housing and blade is available with 1/2 H.P. motor.
OPTIONAL HOOD AND EXHAUST FAN ASSEMBLY	STAINLESS STEEL hood with 15" diameter fan mounted over door and activates upon door opening to evacuate steam that escapes. Constructed of STAINLESS STEEL housing and blade with 1 H.P. TEFC or optional wash down duty motor, 208/240/480 or optional 575 volt, 3 phase, 60 cycle, 3450 RPM, rated for 2450 CFM at .56" static pressure.
WASH RACK AND DOCKING CART	Wash racks customized to hold your specific items. Constructed of STAINLESS STEEL rod, square tubing and rigid grooved wheels, mig welded. Docking cart constructed of STAINLESS STEEL tubing, locking mechanisms, casters and nylon wheels, fixed front and swiveled rear.
CONNECTIONS	Wash Tank Fill: 1/2" NPT, 150° F. Final Rinse Inlet: 1" NPT, 180° F., Ambient or Ambient Chemical or (1) 1" NPT, 150° F. Common Water Inlet with Optional Final Rinse Booster Heater: Drain: 2 1/2" NPT Overflow: 1 1/4" NPT Steam Option: 1/2" NPT or (2) 1/2" NPT with optional steam heated rinse tank Steam Condensate: 1/2" NPT or (2) 1/2" NPT with optional steam heated rinse tank Compressed Air: 1/4" NPT, 20 CFM @ 80 PSI Electrical: Two-point connection, except for 575 volt, which is a single-point.
UTILITIES	See attached Utilities Chart for service requirements specific to various combinations of wash and rinse tank heating.



UTILITY CHART

“DOUGLAS” MODEL 1536-FBW

FLEXIBLE BATCH WASHER

120 Volt - 1 Phase, 5 Running Amps, 15 Amp Service Breaker plus one of the following (except for 575 volt, which is a single point connection):

**ELECTRIC HEATED
WASH TANK**

208 Volt - 3 Phase, 72 Running Amps, 90 Amp Minimum Service Breaker
240 Volt - 3 Phase, 67 Running Amps, 80 Amp Minimum Service Breaker
480 Volt - 3 Phase, 34 Running Amps, 45 Amp Minimum Service Breaker
575 Volt - 3 Phase, 27 Running Amps, 35 Amp Minimum Service Breaker

**STEAM HEATED
WASH TANK**

208 Volt - 3 Phase, 38 Running Amps, 50 Amp Minimum Service Breaker
240 Volt - 3 Phase, 36 Running Amps, 45 Amp Minimum Service Breaker
480 Volt - 3 Phase, 18 Running Amps, 25 Amp Minimum Service Breaker
575 Volt - 3 Phase, 17 Running Amps, 25 Amp Minimum Service Breaker

Steam Consumption: 65 lbs. per hour at 15 PSI min. 80 PSI max.

Steam Consumption with Optional Rinse Tank: 135 lbs. per hour at 15 PSI min. 80 PSI max.

For single-point connection option for 208, 240 or 480 volt, add 2 running amps to total and recalculate service breaker size, which should be at least 125% of total running amps.

Please add the following running amps to those noted above for an optional electric rinse tank (50 at 208 volt, 45.2 at 240 volt, 22.5 at 480 volt, and 18 at 575 volt). With a pumped rinse system add for Steam Heating: (3 at 208 volt, 2.4 at 240 volt, 1.2 at 480 volt, and .75 at 575 volt) or Electric Heating (66.6 at 208 volt, 60.24 at 240 volt, 30.12 at 480 volt, and 24 at 575 volt) and/or hood and fan assembly (3.8 at 208 volt, 3.2 at 240 volt, 1.6 at 480 volt, and 1 at 575 volt) and recalculate service breaker size, which should be at least 125% of total running amps.