DOUGLAS MACHINES CORP.

Effective: August 1, 2017

SPECIFICATIONS
"DOUGLAS" MODEL 2554-B RACK, PAN, AND UTENSIL WASHER WITH REAR MOUNTED PUMP DESIGN

DESIGN AND OPERATION	Designed for batch type operation where the wash rack is loaded with items to be cleaned. After the door is closed, the short, medium or long wash cycle is selected then which initiates a 150° F. recirculating detergent wash followed by a 180° F. fresh water sanitizing rinse. The sanitizing rinse water flows into the recirculated wash tank for reuse and freshening causing excess water to overflow to drain. A buzzer and unload light indicates cycle completion. The door is then reopened for unloading and reloading for the next cycle. Booster heaters maintain proper operating temperatures.
CABINET	60" wide x 77" deep x 94" high. Overall footprint is 66" wide x 101 3/8" deep. (100 1/2" overall clearance height when floor mounted, 86 1/2" when used in a pit). Door Opening: 36" wide x 76 1/2" high. Wash Chamber: 36" wide x 65 1/2" deep x 76 1/2" high. Constructed of #14 gauge, 300 Series STAINLESS STEEL with a #3 finish. All seams are tig or mig welded. Seams, where needed for watertight construction, 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.
DOOR	Constructed of #16 and #18 gauge, 300 Series 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.
WASHER FLOOR	Constructed of #12 gauge STAINLESS STEEL formed sheets designed to provide maximum strength. Supports constructed of 2" x 2" x 1/4" STAINLESS STEEL angle.
RECIRCULATING WASH TANK	Constructed of #14 gauge, 300 Series STAINLESS STEEL, heated by 24 KW electric immersion heaters (infrared gas, live steam or steam coil options are available). Complete with low water protection, automatic fill, 1 1/4" NPT overflow connection, 2" gate drain valve, thermometer, pressure gauge and is thermostatically controlled. 205 gallon tank capacity (185 if gas heated), sloped to drain.
WASH PUMP	Closed coupled centrifugal wash pump, bronze fitted with cast iron casing. Complete with 25 H.P. ODP motor (optional TEFC or wash down duty motors available). 208/240/480 or optional 575 volt, 3 phase, 60 cycle. Rated for 430 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 easy cleaning without emptying wash tank.
SANITIZING RINSE TANK	Constructed of #14 gauge, 300 Series STAINLESS STEEL, heated by 18 KW electric immersion heater (infrared gas or steam coil options are available). Complete with thermometer, pressure gauge and is thermostatically controlled. Uses 16 gallons per 30 second cycle at 20 PSI and has a 20 gallon capacity.

OPTIONAL SANITIZING PUMPED RINSE TANK	Constructed of #14 gauge, 300 Series STAINLESS STEEL, heated by 24 KW electric immersion heaters (infrared gas or steam coil options are available). Complete with low water protection, automatic fill, and thermostatically controlled to provide 16 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 or optional wash down duty motor. 208/240/480 or optional 575 volt, 3 phase, 60 cycle.
RINSE PIPING	300 Series STAINLESS STEEL tubing with brass compression fittings and full cone rinse jets. Optional STAINLESS STEEL fittings and jets are available.
CONTROL AND INFORMATION CENTER	Electrical enclosure is UL 12 STAINLESS STEEL with Square "D" components. Optional panel disconnect switch with safety lockout is also available. 120 volt control circuit with push pad operation of "POWER ON", "STOP", and "SHORT, MEDIUM, or LONG WASH CYCLES". A digital display indicates "TIME REMAINING" for each cycle. LEDs indicate wash, rinse, and unload functions. A buzzer is also included to provide an audible indication of time to unload. A pre-programmed circuit board allows the push pad to be used as a "DIAGNOSTIC CENTER" by displaying "ERROR CODES" for ease of troubleshooting. Moisture resistant gauges measure temperature and pressure for recirculated wash and final rinse. Optional UL 4X STAINLESS STEEL control panel including Schneider Modicon PLC with Magellis 5.7" color operator interface touch screen including ethernet and data logging capabilities. Washer will be factory wired in hard aluminum conduit and tested prior to shipment.
EXTERNAL RINSE HOSE	Externally mounted rinse hose with spray gun for easy cleaning and maintenance of machine.
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 with 3/4 H.P. motor is available.
OPTIONAL HOOD AND EXHAUST FAN ASSEMBLY	STAINLESS STEEL hood with a 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 1/2 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.
RACKS	Customized to hold your specific items. Constructed of STAINLESS STEEL rod and formed angle, mig welded. Supplied with STAINLESS STEEL casters and nylon wheels, fixed front and swiveled rear.
CONNECTIONS	Water Inlet: 1" NPT, 120° F. at 20 PSI Drain: 2" NPT Overflow: 1 1/4" NPT Steam Option: (1) 3/4" NPT and (1) 1/2" NPT with optional steam heated rinse tank Steam Condensate: (1) 3/4" NPT and (1) 1/2" NPT with optional steam heated rinse tank Gas Option: (1) 3/4" NPT and (1) 1/2" NPT with optional gas heated rinse tank 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. Calculations are based on a room temperature of 72° F.

DOUGLAS MACHINES CORP.

UTILITY CHART
"DOUGLAS" MODEL 2554-B
RACK, PAN, AND UTENSIL 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, ELECTRIC HEATED RINSE TANK	208 Volt - 3 Phase, 185 Running Amps, 250 Amp Minimum Service Breaker 240 Volt - 3 Phase, 160 Running Amps, 200 Amp Minimum Service Breaker 480 Volt - 3 Phase, 80 Running Amps, 100 Amp Minimum Service Breaker 575 Volt - 3 Phase, 66 Running Amps, 90 Amp Minimum Service Breaker
INFRARED GAS HEATED WASH TANK, ELECTRIC HEATED RINSE TANK	208 Volt - 3 Phase, 118 Running Amps, 150 Amp Minimum Service Breaker 240 Volt - 3 Phase, 102 Running Amps, 150 Amp Minimum Service Breaker 480 Volt - 3 Phase, 51 Running Amps, 70 Amp Minimum Service Breaker 575 Volt - 3 Phase, 42 Running Amps, 60 Amp Minimum Service Breaker Gas Consumption: 180,000 BTUs per hour. Supply Pressure: Minimum 7" w.c. for natural, 11" w.c. for propane and 14" w.c. maximum.
INFRARED GAS HEATED WASH TANK, INFRARED GAS HEATED RINSE TANK	208 Volt - 3 Phase, 68 Running Amps, 90 Amp Minimum Service Breaker 240 Volt - 3 Phase, 58 Running Amps, 80 Amp Minimum Service Breaker 480 Volt - 3 Phase, 29 Running Amps, 40 Amp Minimum Service Breaker 575 Volt - 3 Phase, 24 Running Amps, 30 Amp Minimum Service Breaker Gas Consumption: 240,000 BTUs per hour. Supply Pressure: Minimum 7" w.c. for natural, 11" w.c. for propane and 14" w.c. maximum.
STEAM HEATED WASH TANK, ELECTRIC HEATED RINSE TANK	208 Volt - 3 Phase, 118 Running Amps, 150 Amp Minimum Service Breaker 240 Volt - 3 Phase, 102 Running Amps, 150 Amp Minimum Service Breaker 480 Volt - 3 Phase, 51 Running Amps, 70 Amp Minimum Service Breaker 575 Volt - 3 Phase, 42 Running Amps, 60 Amp Minimum Service Breaker Steam Consumption: 140 lbs. per hour at 15 PSI minimum.
STEAM HEATED WASH TANK, STEAM HEATED RINSE TANK	208 Volt - 3 Phase, 68 Running Amps, 90 Amp Minimum Service Breaker 240 Volt - 3 Phase, 58 Running Amps, 80 Amp Minimum Service Breaker 480 Volt - 3 Phase, 29 Running Amps, 40 Amp Minimum Service Breaker 575 Volt - 3 Phase, 24 Running Amps, 30 Amp Minimum Service Breaker Steam Consumption: 275 lbs. per hour at 15 PSI minimum.

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 pumped rinse system. Gas/Steam Heating: (2.4 at 208 volt, 2.3 at 240 volt, 1 at 480 volt, and .75 at 575 volt) or Electric Heating (19 at 208 volt, 16.7 at 240 volt, 8.2 at 480 volt, and 6.8 at 575 volt) and/or hood and fan assembly (4.9 at 208 volt, 4.2 at 240 volt, 2.1 at 480 volt and, 1.5 at 575 volt) and recalclate service breaker size, which should be at least 125% of total running amps.