

## SPECIFICATIONS

### “DOUGLAS” MODEL LD-20

### POT, PAN, AND UTENSIL WASHER

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**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. final fresh water sanitizing rinse. The final 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**

50” wide x 36” deep x 73” high (100 3/4” overall clearance height with door open, 104 1/2” with gas heated rinse tank). Door Opening: 40” wide x 28 1/2” high. Wash Chamber: 38 3/4” wide x 26 3/8” deep x 28 1/2” high. Constructed of #16 gauge, 300 Series STAINLESS STEEL with a #3 finish. All seams are tig welded. Seams, where needed for water-tight 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**

Lift-up door type. Counter balanced with self-lubricating guides, STAINLESS STEEL cables on nylon rollers with cable guards to ensure tracking. Door is interlocked with limit switch to prevent machine operation while door is open. Constructed of #16 gauge, 300 Series STAINLESS STEEL with a #3 finish.

**RECIRCULATING  
WASH TANK**

Constructed of #14 gauge, 300 Series STAINLESS STEEL, heated by 12 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, 1 1/4” gate drain valve, thermometer, pressure gauge and is thermostatically controlled. 36 gallon tank capacity (27 if gas heated), sloped to drain. Optional automatic pump operation for elevated drain locations is available complete with 1/14 H.P., 120 volt, single-phase drain pump. With this option, wash tank completely drains when power is turned off.

**WASH PUMP**

Closed coupled centrifugal wash pump, bronze fitted with cast iron casing. Complete with 7 1/2 H.P. ODP motor (optional TEFC or wash down duty motors available). 208/240/480 or optional 575 volt, 1 or 3 phase, 60 cycle. Rated for 120 gallons per minute at 35 to 45 PSI. Optional STAINLESS STEEL wet end available with 10 H.P. motor.

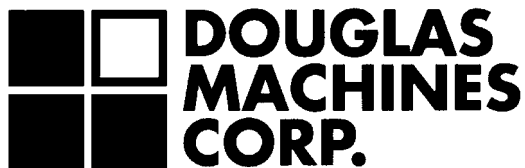
**ROTATING WASH  
HUB ASSEMBLY**

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. Double filter system for increased effectiveness and easy cleaning without emptying wash tank.

<b>SANITIZING RINSE TANK</b>	Constructed of #14 gauge, 300 Series STAINLESS STEEL, heated by 12 KW electric immersion heaters (infrared gas or steam coil options are available). Complete with thermometer, pressure gauge and is thermostatically controlled. Uses 5.6 gallons per 30 second cycle and has a 10 gallon capacity.
<b>FINAL RINSE PIPING</b>	300 Series STAINLESS STEEL tubing with brass compression fittings and full cone rinse jets. Optional STAINLESS STEEL fitting and jets are available .
<b>CONTROL AND INFORMATION CENTER</b>	Electrical control panel is NEMA 12 STAINLESS STEEL or optional NEMA 4X STAINLESS STEEL with Square "D" components. 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. NOTE: Optional NEMA 4X STAINLESS STEEL push button control panel and internal adjustable timers is available in lieu of NEMA 12 Digital Control and Information Center.
<b>EXTERNAL RINSE HOSE</b>	Externally mounted rinse hose with spray gun for easy cleaning and maintenance of machine.
<b>STEAM EXHAUST VENT</b>	Steam exhaust vent 6 3/4" I.D. consisting of #16 gauge rolled collar, for PVC pipe connection, welded to the top of the machine. Machine pre-wired with control timer for the addition of a fan.
<b>OPTIONAL EXHAUST FAN</b>	Draft inducer fan side mounted on exhaust duct to extract excess steam after final rinse cycle. 1/10 H.P. ODP motor, 110 volt, 1 phase, 1550 RPM, rated for 300 CFM at .05" static pressure.
<b>RACKS</b>	Customized to hold your specific items. Standard bakery racks include utensil basket with two (2) hold-down lids and two (2) bun/sheet pan inserts designed to hold ten (10) pans each. Constructed of STAINLESS STEEL rod, mig welded.
<b>CONNECTIONS</b>	Water Inlet: 3/4" NPT, 120° F. Drain: 1 1/4" 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 Gas Option: 1/2" NPT or (2) 1/2" NPT with optional steam heated rinse tank Electrical: Two-point connection, except for 575 volt, which is a single-point.
<b>UTILITIES</b>	See attached Utilities Chart for service requirements specific to various combinations of wash and rinse tank heating.



## UTILITY CHART

### “DOUGLAS” MODEL LD-20

### POT, PAN, AND UTENSIL WASHER

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**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**

240 Volt - 1 Phase, 129 Running Amps, 175 Amp Minimum Service Breaker  
208 Volt - 3 Phase, 86 Running Amps, 110 Amp Minimum Service Breaker  
240 Volt - 3 Phase, 79 Running Amps, 100 Amp Minimum Service Breaker  
480 Volt - 3 Phase, 40 Running Amps, 50 Amp Minimum Service Breaker  
575 Volt - 3 Phase, 33 Running Amps, 45 Amp Minimum Service Breaker

**INFRARED GAS  
HEATED WASH TANK,  
ELECTRIC HEATED  
RINSE TANK**

240 Volt - 1 Phase, 79 Running Amps, 100 Amp Minimum Service Breaker  
208 Volt - 3 Phase, 53 Running Amps, 70 Amp Minimum Service Breaker  
240 Volt - 3 Phase, 48 Running Amps, 70 Amp Minimum Service Breaker  
480 Volt - 3 Phase, 24 Running Amps, 35 Amp Minimum Service Breaker  
575 Volt - 3 Phase, 21 Running Amps, 30 Amp Minimum Service Breaker  
Gas Consumption: 45,000 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**

240 Volt - 1 Phase, 29 Running Amps, 40 Amp Minimum Service Breaker  
208 Volt - 3 Phase, 19 Running Amps, 25 Amp Minimum Service Breaker  
240 Volt - 3 Phase, 18 Running Amps, 25 Amp Minimum Service Breaker  
480 Volt - 3 Phase, 9 Running Amps, 15 Amp Minimum Service Breaker  
575 Volt - 3 Phase, 9 Running Amps, 15 Amp Minimum Service Breaker  
Gas Consumption: 90,000 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**

240 Volt - 1 Phase, 79 Running Amps, 100 Amp Minimum Service Breaker  
208 Volt - 3 Phase, 53 Running Amps, 70 Amp Minimum Service Breaker  
240 Volt - 3 Phase, 48 Running Amps, 70 Amp Minimum Service Breaker  
480 Volt - 3 Phase, 24 Running Amps, 35 Amp Minimum Service Breaker  
575 Volt - 3 Phase, 21 Running Amps, 30 Amp Minimum Service Breaker  
Steam Consumption: 50 lbs. per hour at 15 PSI minimum.

**STEAM HEATED  
WASH TANK,  
STEAM HEATED  
RINSE TANK**

240 Volt - 1 Phase, 29 Running Amps, 40 Amp Minimum Service Breaker  
208 Volt - 3 Phase, 19 Running Amps, 25 Amp Minimum Service Breaker  
240 Volt - 3 Phase, 18 Running Amps, 25 Amp Minimum Service Breaker  
480 Volt - 3 Phase, 9 Running Amps, 15 Amp Minimum Service Breaker  
575 Volt - 3 Phase, 9 Running Amps, 15 Amp Minimum Service Breaker  
Steam Consumption: 95 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 amps to those above for optional STAINLESS STEEL pump with 10 H.P. motor (8 at 208 volt, 7 at 240 volt, 3.5 at 480 volt, or 2.8 at 575 volt) and recalculate service breaker size, which should be 125% of total running amps.