

SPECIFICATIONS

GIRTON PALLET WASHER CW10PS

GENERAL

Girton CW-10PS Pallet Washer to wash and rinse plastic and wooden pallets up to 48" x 48" x 7-1/2" high at the rate of 60 to 180 per hour.

CONSTRUCTION

The tank, hull, infeed and discharge sections are fabricated of 14 gauge, type 304 stainless steel with 2B finish. All seams are welded and cleaned in a thorough manner. Guide rails, conveyor channels, piping and headers with jet spray deflectors are stainless steel.

The inside of the washer shall have all surfaces readily accessible or removable for cleaning. All surfaces shall be non-toxic, non-absorbent and corrosion resistant materials. Permanently joined metal surface shall be ground flush and equal to the surrounding area. All surfaces or cavities where contaminants can collect shall be avoided.

CONVEYOR

The conveyor consists of stainless steel conveyor chain and is designed to convey the pallets through the washer in a vertical position. Conveyor speed can be increased to 12 feet per minute.

The conveyor will extend 4 ft. from the infeed and 4 ft. from the discharge ends of the washer, to facilitate loading and unloading the pallets. (Additional infeed and discharge conveyor is available as an option.)

Heavy duty stainless steel guide rails will support and guide the pallets through the washer.

DETERGENT PORT

The washer will be provided with a coupling for automatic detergent dispensing.

DRIVE

1/2 Hp T.E.F.C. gearhead motor, arranged to carry the conveyor through the washer at a variable speed of 4 ft. to 12 ft. per minute.

SCREENS

Drawer type stainless steel tray screens will be used, with perforations smaller than the jet openings, to trap debris and protect the pump and spray orifices. The screens are supported above the solution level so all water must fall through the screens to get into the solution tank.

SIDE ACCESS DOOR

A hinged, latched and gasketed door is located on the service side of the washer. This feature allows access to the center of the washer for cleaning and inspection.

VENT

A 10" I.D. circular exhaust connection is provided on top of the washer at each end, to be connected to customer's exhaust system.

HEATING

See various heating options: Steam, Electric, Natural Gas. Direct steam injection heating is standard.

RINSE

Rinse consists of a single spray loop spraying all outside surfaces at house temperature and pressure, controlled by hand operated valve.

THERMOMETER

The wash tank will be equipped with an indicating thermometer.

WASH PUMP

The 10 Hp. wash pump is cast iron stainless steel fitted, horizontal, close coupled motor mounted type, Wash Down Duty, and is rated at 360 GPM at 70 ft. hd.

PIPING

One water connection, one steam connection, and one drain connection are provided. All piping shall be stainless steel.

JETS

The headers are equipped with straight through orifices and stainless steel spray deflectors, and are directly related to pump specifications.

OPERATION AND TREATMENTS

Load - The operator places the pallet in a vertical position onto the infeed extension. The guide rails are so designed that the pallet may be loaded and unloaded from the side. The pallet then moves at the pre-determined speed of 4 to 12 ft. per minute through the following treatments:

1. Wash - Wash solution at a temperature up to 150°F, as determined by the customer, is recirculated and sprayed onto all outside surfaces of the pallet.
2. Rinse - The house water supply, at house temperature and pressure, provides the rinse treatment. Consumption is 4.2 gallons per minute at 40 PSI.
3. Discharge and Unload - The operator removes the washed and rinsed pallet from the 4 ft. discharge extension of the conveyor.

MOTORS

3/60/208-230-460 volts, meeting NEMA standards. Other specifications available.

Motor shall be Wash Down Duty or Chemduty.

WIRING

The Girton Model CW10PS will include two position selector manual switches and contactors to separately control each pump. All systems come pre-wired. The stainless steel control box, shall include the following: control transformer, solid state overload relays, time delay fuses, emergency stop switch and illuminated status beacon with audible alarm.

In addition to the above, the following control system shall be included:

Allen Bradley MicroLogic 1200 Series PLC, and Microview operator interface.

PLC control – The heart of the control system will be an Allen Bradley Micrologix 1200 series PLC. The PLC shall be able to meet various voltage needs as well as I/O capabilities. As a standard, the input modules will be based on the 120 VAC-control voltage. The output modules will be isolated relays.

PLC control adds many features that standard relay logic cannot provide (or cannot provide without a large expense). These features include low level pump protection; low level heating protection; staggered start up of large motors; diagnostic ability of heating, pump overloads, and instruments, advanced conveyor control; as well as other features involving time delays and complex functions.

Equipment diagnostics and alarms help prevent down time by finding equipment failures quickly rather than waiting for operating personnel to recognize a failure.

The PLC software shall insure the highest level of safety for personnel, as well as the machinery, by providing alarms and control features that prevent potentially dangerous situations.

Operator interface – A Microview two line LCD data display shall be provided as an operator interface. This display shall be equipped with a keypad for input of critical parameters that the PLC controls. The display shall show status or alarm messages when required, informing the operator of any abnormal situations.

The washer will be wired and tested before leaving the factory.

A safety disconnect, provided by the customer, should be mounted on an adjacent wall, and customer will provide wiring from this switch to the washer's main control panel. (See optional Safety Disconnect at the end of specification.)

SERVICE REQUIREMENTS

3/60/230 volts, 1/60/115 volt controls, 60 amps.

1 - 1" water line, 40 PSI minimum pressure, 4.2 GPM operating consumption.

1 – 1" steam connection (40 PSI minimum, 575 Lb/Hr consumption).

1 - 2" gravity drain connections.

2 - 10" ID vent connection, total 1420 CFM required.

OPTIONS

1. Air blow-off section, to remove excess moisture from the surface of the pallets. A squirrel-cage type blower is used to distribute air through stainless steel plena onto all surfaces of the pallets. (Adds 80" to the overall length of the washer. Also adds 15 amps at 230 volts and 10 amps at 460 volts.)
2. All stainless steel circulating pump.
3. Automatic Detergent Pump – A pump will be supplied to automatically add detergent at pre-determined amounts. The pump will be under the control of the washer's PLC.
4. Conveyor stop switch, activated by the pallet (in case the operator is not present to remove it as it discharges from the washer), shuts off the drive motor.
5. Final rinse conservation switch. Consists of solenoid valve to control final rinse water from plant supply, thereby conserving fresh water when no pallets are moving through the washer.
6. Infeed or discharge conveyor.
7. Pump Pressure Gauge – A gauge will be used to monitor performance of pump. The gauge shall indicate recirculation water pressure.
8. Sanitizing and Rinse Injection System – A pump will be supplied to automatically add sanitizing and/or a rinsing agent to the fresh rinse loop.
9. Steam coil for indirect heating of wash tank, 1" pipe size, 40 PSI minimum 575 lb/hr consumption for 180° F wash.
10. Pass through heat exchanger to raise house 120° F. water supply to 180° F. for final rinse.
11. Electric heat in lieu of steam heat 3/60/230 volt 108 KW for 150°F wash.
12. Electric heat in lieu of steam heat 3/60/480 volt 216 KW for 180°F wash.
13. Natural Gas Heat – 510,000 BTU/hr.

End of Specification