

SPECIFICATIONS

GIRTON HARVESTING CRATE WASHER

GENERAL

Girton Harvesting Crate Washer, designed to wash and rinse Plastic Harvesting Crates from 4 to 12 per minute.

CONTAINER DIMENSIONS

24" long x 18" wide x 11" high

CONSTRUCTION

The washer will be fabricated of all-welded stainless steel, including tank, hood, structural members, all internal piping, spray deflectors, track and conveyor returns.

Pump is stainless steel, close-coupled, motor-mounted type. This gives greatest efficiency with the minimum maintenance possible from centrifugal pumps of the horizontal type.

HEADERS

The headers are provided to give most effective coverage of all internal and external surfaces of the containers. They are provided with straight through jets and stainless steel deflectors. The straight through jet greatly reduces the tendency of the jets to plug, as there is no protrusion of the jet into the headers. The stainless steel deflector insures a high intensity, properly spread stream for most effective cleaning.

The headers are arranged above, on both sides and below the containers. The headers are installed so that one end of each header pipe protrudes from the washer, making it easy to brush the inside of the pipes and then by starting the pumps to flush them clean. This is the simplest and most effective header system on any washer.

SCREENS

Screens are tray type units located under the bottom area of the spray compartment. The tray screens are removable from either side of the washer. The screens are supported above the solution level so all water must fall through the screens to get into the solution tank. Openings in the screens are 1/16" to trap all debris. The superior screening in conjunction with the Girton jet design virtually eliminates clogging.

VENTS

The washer is supplied with a 10" diameter vent opening in the hood or top of the unit, to be connected by the customer to the outside, or to his ventilation system. A ventilating fan may need to be incorporated in the stack to insure proper ventilation 1040 CFM required.

WASH DOWN DUTY MOTORS

3/60/208-230 Volt, meeting NEMA standards. Other specification available.

Motor shall be Wash Down Duty or Chemduty.

WIRING

The Girton Harvesting Crate Washer will include two position selector manual switches and contactors to separately control individual pumps, and motors. 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.

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.

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

Allen Bradley Micrologix 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.

PLUMBING

One water connection, one steam connection, one overflow connection, and one drain connection are provided.

SELF-CONTAINED CONVEYOR DRIVE SYSTEM

Includes stainless steel conveyor chains, 1/2 Hp. drive motor, take-up, shafts, sprockets, etc.

HEATING

The wash tank shall be heated by direct steam injection.

AUTOMATIC TEMPERATURE CONTROL

The tank temperature is controlled by an automatic controller, which is adjustable to the most efficient temperature for the job. The controller operates a solenoid valve, which permits steam to enter the tank to heat the wash solution. The temperature in the tank is maintained by direct steam injection.

WATER LEVEL CONTROL

The water level control in the recirculated wash tank shall be maintained by a sanitary switch.

GUIDE RAILS

Adjustable guide rails shall be supplied to hold containers in proper position for washing.

EMERGENCY STOP BUTTONS

To enable operator on the load and unload end of the washer to stop the conveyor in the event of an emergency.

TREATMENTS

1. LOAD - The containers are delivered to the washer by customer's conveyor in an upside-down position.
2. DRAIN POSITION - To prevent wash solution from discharging at the infeed opening of the washer.
3. PUMP WASH - Detergent wash solution is recirculated and sprayed through strategically placed, properly designed jets at high velocity and volume under pressure by a stainless steel pump. Circulation is at the proper gallons per minute and heated to properly clean the items to be washed. Soaking action of the recirculated hot detergent solution chemically softens the soil and contamination, which is continually scrubbed and flushed away by mechanical force of the spray.
4. FRESH FINAL RINSE/SANITIZING LOOP - Utilizes fresh water from the house supply, at house pressure and temperature. (6 GPM consumption at 40 PSI.) A sanitizing agent may be introduced into the final rinse water supply.
5. DRAIN POSITION - To prevent wash solution from being discharged from the machine.
6. DISCHARGE - The containers continue on customer's conveyor.

SERVICE REQUIREMENTS

3/60/230 volts (state voltage available when ordering.)

1 - 1" steam connection, 40 PSI minimum.

1 - 3/4" hot water connection.

1 - 2" drain connection, gravity.

1 - 10" dia. vent connection, 1040 CFM required.

1 - 2" overflow connection.