

GIRTON TUNNEL WASHER MODEL GTW

APPLICATION

The Girton Tunnel Washer is a heavy duty, conveyorized, hydrospray washer designed for thorough, efficient cleaning of cages, debris pans, bottles, feeder bowls, and miscellaneous items used in the care of laboratory animals.

SIZE (Please circle size desired.)

Tunnel Widths: 25", 31", 37", 43", 49", ____" (other)

Tunnel Heights: 19", 25", 31", 37", 43", ____" (other)

Overall Machine Length: 9', 12', 15' 20', 25', ____' (other)

Conveyor:

Belt Widths: 24", 30", 36", 42", 48", _____" (other)

Speed: Variable 2 to 4 feet per minute.

FEATURES

- A. **Removable Spray Headers.** The spray headers with machined jets attached, are equipped with quick-disconnect fittings with O-Ring type gaskets for easy removal.
- B. **Flat Wire Conveyor Belt.** The conveyor is a stainless steel flat wire 1" x 1" conveyor belt proven for strength, durability, and flexibility. Both ends of the conveyor are equipped with sprockets for reliable belt tracking. Drive system is equipped with a safety overload clutch to protect belt from damaging items being washed.
- C. **Drawer Type Solution Strainers.** The pre-wash, wash, and recirculated rinse solutions are recirculated through stainless steel screens. Screens are easily accessible and have perforations considerably smaller than the machined jet orifices to filter the solutions and prevent jets from clogging.
- D. **One Piece Construction.** Tanks, cabinet, and frame are of one-piece welded construction.
- E. **Insulated Construction.** The tunnel washer is provided with top and sides insulated with 1 inch thick foam insulation covered by a protective 20 gauge stainless steel jacket.

OPERATION

Items to be cleaned are loaded manually in the inverted position on the conveyor belt at the load end of the washer. Items are conveyed automatically through the various treatments and discharged at the unload end.

TREATMENT SCHEDULE

- A. **Pre-Wash.** Water recovered from the recirculated rinse tank under pump pressure flushes items to remove gross debris. Spent solution is directed to drain.
- B. **Wash.** Hot detergent solution is recirculated through the jet system under pump pressure. Temperature is adjustable to 190°F.
- C. **Recirculated Rinse.** Hot water is recirculated through the jet system under pump pressure. Temperature is adjustable to 190°F.
- D. **Final Rinse.** Hot water from house supply is sprayed through the jet system. Spent solution drains to recirculated rinse tank.

CONSTRUCTION

1. The frame, recirculating tanks, and cabinet are of one-piece welded stainless steel construction. The frame is equipped with adjustable legs, and supports for the pumps, steam heat exchanger, and drive mechanism.
2. The tunnel washer is provided with top, sides, and ends insulated with 1-inch thick rigid foam insulation covered by a protective 20-gauge stainless steel jacket.
3. Splash proof doors are provided for access to the jet systems and interior of the tunnel washer. Doors are hinged to hold doors in the open and closed positions. Doors are insulated with 1-inch thick rigid foam insulation and are equipped with gutters, handles, and heavy-duty hinges.
4. Each recirculating tank is equipped with an automatic solution level control, safety overflow piping, manual drain valve, and stainless steel steam injector heating for the recirculating treatment solutions. Automatic digital temperature controllers mounted on the operator's panel will display and monitor recirculating solution temperatures.
5. The wash solutions are under pressure from a 5 to 15 Hp pump. The recirculated rinse and pre-wash systems use a 3 to 10 Hp pump. Both pumps are Gusher, or equal, close coupled "Monobloc" vertical type.

6. Standard electrical service is 3 phase, 60 cycle, 208/230/460 volts; although any electrical service can be provided.
7. The pre-wash, wash, and recirculating rinse sections are equipped with easily accessible stainless steel drawer type screens. Screens are manufactured from perforated stainless steel with perforations smaller than the machined jet orifices to filter the solutions and prevent jets from clogging.
8. The electrical control system consists of the following:
 - Operator's control panel contains a power on-off selector switch and light, operational lights; warning lights; start and stop switches; drive system emergency stop button; and controls for operation of pumps and drive motor.
 - The unload end is equipped with a drive system emergency stop button and warning lights.
 - Within the control box are magnetic starters with overload protection for all motors, and all other electrical components required for the machine operation.
9. The jet systems for the pre-wash, wash, and recirculating rinse sections are composed of machined jets fitted into headers. Each header system is equipped with a quick-disconnect fitting with an O-Ring for easy removal when cleaning. In addition, jets are strategically placed so water bottles in baskets can be processed through the tunnel washer.
10. The final rinse jet system consists of spray headers with machined jets and a balancing valve in the line for optimum water use.
11. Drive system consists of a 1/2 Hp motor, gear reducer, automatic safety overload clutch, and variable speed drive.
12. Conveyor system includes a stainless steel flat wire mesh belt, sprockets at both drive and idler ends for positive tracking of belt, adjustable take-up bearings on the idler end, and stainless steel guides and supports along entire length.
13. The tunnel washer is equipped with stainless steel baffles and rubber curtains between each treatment and at both ends. The curtains are manufactured from 1/8" thick slit neoprene and, with the baffles, minimize the carryover of water.

OPTIONAL FEATURES Please circle features desired.

1. Right Hand or Left Hand Unit. The tunnel washer is designed to meet customer specifications by placing all serviceable components on either the right or left hand side of the tunnel washer.
2. Barrier Wall Flange. The tunnel washer is provided with a stainless steel trim flange to seal the opening between the tunnel washer and the masonry wall opening.
3. Automatic Self-Cleaning Screen. The discharge of the wash treatment pump is equipped with a stainless steel, automatic, self-cleaning screen, 3-1/2" diameter x 18" long manufactured from perforated stainless steel, with 1/16" diameter perforations. Screen accumulates debris prior to the jet system and is automatically flushed at timed periodic intervals. Fully ported, motor-operated Jamesbury ball valves direct the solution flow the jet system or the drain.
4. Stainless Steel Components. Pumps, valves and all piping and other components that come in contact with recirculating solutions are furnished in stainless steel.
5. Sectionalized Shipment. The tunnel washer is shipped in sections for entry into building. Sections are then welded or bolted together into place on site to eliminate any possibility of leakage.
6. Discharge Roller Conveyor. The tunnel washer is furnished with a discharge roller conveyor. Rollers are 2" in diameter on 3" centers and are constructed of stainless steel with corrosion-free bearings and shafts. A stainless steel drain pan with a 2-inch drain connection is furnished and installed under the entire length of the conveyor. Conveyor supports and legs are all stainless steel construction. Conveyor shall be supplied in 4-foot lengths.
7. Photoelectric Conveyor Stop. A photoelectric switch is located at the end of the discharge conveyor and will stop the conveyor drive when an item reaches the end of the conveyor.
8. Temperature Guarantee. The tunnel washer is provided with a temperature guarantee for both recirculating tanks. If the recirculating solution temperature drops below the set temperature, the conveyor belt temporarily stops until the recirculating solution reaches the proper temperature. Status lights will indicate which tank is not at proper temperature.

9. Hold-Down Device. A stainless steel hold-down device shall be supplied to hold light cages and steel pans in proper position for processing. The hold-down shall be adjustable in height and be power operated.
10. Hold-Down System. Jets are properly sized and the feed lines contain throttle valves to hydraulically hold down light plastic cages and steel pans to the conveyor belt.
11. Final Rinse Solenoid Supply Valve. Valve is operational with the conveyor drive system. When conveyor is stopped, final rinse water flow also stops, thus conserving the house fresh water supply when the tunnel washer is not operating.
12. Steam Coil Heating. The tunnel washer is equipped with stainless steel steam coil heating for the wash and recirculating tanks, complete with condensate return, steam traps, and strainers. Steam coils are removable for cleaning or maintenance.
13. Pass-Through Heat Exchanger. The system is equipped with a steam heat exchanger to raise the house hot water supply temperature by approximately 80°F. Heat exchanger is supplied with a temperature gauge and steam throttle valve to adjust the final rinse system temperature.
14. Dispenser-Ready. The tunnel washer is supplied with couplings and an electrical connection for future installation of automatic detergent dispensers.
15. Water Hammer Arrester. The tunnel washer is equipped with a water hammer arrester to protect customer's incoming water line from possible damage due to water hammer.
16. Low Water Cut-Off. The tunnel washer is provided with a low water cut-off for both recirculating tanks. The tunnel washer will cease operations and automatically fill tank to proper level. Status lights will indicate which tank is low. Operations resume automatically when tank is full.
17. Sealing Gaskets. Silicone door sealing gaskets shall be provided.
18. Pressure Gauge. Each pump shall be provided with a direct reading pressure gauge.
19. Speed Drive. A variable speed drive is available, 2 to 10 feet per minute.
20. Control Voltage Transformer. A control voltage transformer shall be provided to prevent the necessity of running a separate 1/60/115 volt line to the service connections.

MATERIALS

<u>STANDARD ITEMS</u>	<u>MATERIAL</u>
A. Frame	x 2 x 3/16 Angle S/S
B. Tanks	2 Gauge, S/S, #4 Finish
C. Cabinets	4 Gauge, S/S, #4 Finish
D. Recirculating Pump Piping	Stainless Steel
E. Water Piping - Internal	Stainless Steel
F. Water Piping - External	Stainless Steel
G. Steam Piping - Internal	Stainless Steel
H. Steam Piping - External	Black (Sch. 80)
I. Spray Jets	* Brass
J. Wash and Rinse Pump	* Cast Iron
K. Drain Piping - Internal	Stainless Steel
L. Drain Piping - External	Stainless Steel
M. Steam Coils	Pipe, S/S, Sch. 40
N. Insulation Jacket	18 Gauge, S/S, #4 Finish

Optional Items

- Barrier Flange 16 Gauge, S/S, #4 Finish

* Shall be stainless steel when stainless steel components option is selected.

OTHER OPTIONS ARE AVAILABLE, PLEASE CONSULT FACTORY *

**SPECIFICATIONS AND DRAWINGS ARE SUBJECT TO CHANGE
WITHOUT NOTICE, UNLESS CERTIFIED BY FACTORY.**

* Please note that all sub components of Girton Washers are **NON-PROPRIETARY** and **COMMERCIALY AVAILABLE** from various sources, for **FLEXIBLTY AND ECONOMY OF MAINTENANCE** throughout the life of the washer.