

temp probe  
factory piped steam to sump coils by factory  
Condensate  
EXHAUST VENT  
COLD WATER  
3 Steam In  
MANUAL CONTROL DAMPER  
REMOVABLE ACC  
STEAM COIL

# NORTHSTAR™



T200 SERIES  
TUNNEL WASHER  
FOR CAGES, PANS  
AND UTENSILS

# NORTHSTAR™ T200 SERIES TUNNEL WASHER FOR CAGES, PANS & UTENSILS

The Northstar T200 series tunnel washer is the result of a progressive approach to washer design. An approach that combines cleaning performance, ease of use and long-term durability to meet the demands of today's busy laboratories.

## ■ Interior Trim Panels

T200 tunnel washers are built with stainless steel trim panels to close the space between the interior sidewall and the moving conveyor belt. These panels prevent small items such as sipper tubes or bottle stoppers from falling into the washer sump.

## ■ Optional Integrated Bedding Dump Stations

We offer bedding dump stations using either vacuum or grinding technology to integrate with the Northstar tunnel washer.

## ■ Optional Automated Load System

Our equipment can be purchased with a fully automated cage loading system for high volume applications. Auto-loading systems use vision technology together with robotics to reduce repetitive motion injuries and increase productivity.

## ■ Safety Features

The Load End is equipped with an E-stop red button located on both sides of the opening into the 1st wash (pre-wash) module. The Unload End is also equipped with an E-stop red button on both sides of the face of the opening. When one of these buttons is pressed, the entire washer including the belt shuts down instantly. In addition to the E-stops, the belt has a safety clutch system that releases belt tension, stopping the belt if it is blocked. An additional two E-stops can be located on the front face of the Unload Module. These two E-stops are not a standard feature, but are available if required.


## ■ Noise Reduction

The stainless steel mesh belt on the Northstar washer runs on a series of nylon guides supported by a stainless steel frame. The nylon guides greatly reduce sound levels. Sound levels around the unit are in line with current worker safety recommendations.

## ■ Acid Compatible

All Northstar washers have a stainless steel cabinet and circulatory piping system, containing no plastic or rubber connections. This makes the washer compatible with all alkaline or acidic detergents.





temp. probe

factory piped steam to sump coils by factory

3 Steam In

50"

REMOVEABLE ACCESS PANEL TO STEAM COIL

- **Maintenance and Replacement Parts**

All Northstar washers use the Omron PLC program controllers for long life and ease of service diagnostics. All other components are non-proprietary and are available from local suppliers.

- **Optional Inline Bedding Dispenser**

We offer an inline-bedding dispenser for automated cage filling. The system is designed to handle most common forms of bedding material. The Northstar bedding dispenser can be connected to a vacuum tube to receive bedding dispensed from a remote location.

- **Optional Automated Unload System**

Our equipment can be purchased with a fully automated cage unloading system for high volume applications. Auto-unloading systems use vision technology together with robotics to reduce repetitive motion injuries and increase productivity of the washer.

- **Removable Upper and Lower Spray Manifolds**

Both spray manifolds use a spring-loaded positive connection to the washer piping. This ensures the best possible spray pressure from above and below the mesh belt. These manifolds are fitted with nylon wheels and wheel guides so they can be easily removed for cleaning.

- **Easy Access to Filter Screens**

Northstar tunnel washers use custom designed screen filters in three locations to collect bedding and debris. All filters are accessible at the side of the unit and are easily lifted out for cleaning. The Northstar debris filters are formed with fine stainless steel mesh into a deep basket shape. This is done to allow debris to be trapped without the flow of wash/rinse solution being restricted.

- **Insulated Doors and Side Panels**

All side access doors on the Northstar tunnel washer are fully insulated and lined with stainless steel to reduce heat loss and noise level within the room. Other washer manufacturer use gasketed windows in their access doors. These windows usually get cloudy soon after installation, leak after a few years, and make them more labor intensive to maintain and clean. Windows are poor insulators and poor sound barriers.

- **Better Service**

The main wash pumps and control valves are located on the side of the cabinet not underneath the unit for easy access during maintenance. This mounting feature reduces the cost of maintenance and repairs.



# NORTHSTAR™ T200 SERIES TUNNEL CAGE & UTENSIL WASHERS

## APPLICATION

The NORTHSTAR™ T200 Series conveyerized tunnel washers are automatic, heavy duty, high volume units designed to clean, sanitize and dry metal cages, plastic cages, water bottles in racks, pans and utensils used in the care and housing of research animals.

These units are designed to run on a continuous flow conveyor or they can be designed to advance the belt in an indexing fashion. The T200 series washer can be integrated with fully automatic robotics to load and unload the unit. See factory for details on robotics integration.

## CHAMBER SIZE

MODEL	CHAMBER		OVERALL	
	W	H	W	H
T224	24 x 25"	(61 x 63.5 cm)	64.5 x 71.5"	(163.8 X 181.6 cm)
T230	30 x 25"	(76.2 x 63.5 cm)	70.5 x 71.5"	(179.1 X 181.6 cm)
T236	36 x 25"	(91.4 x 63.5 cm)	76.5 x 71.5"	(194.3 X 181.6 cm)
T236P	36 x 40"	(91.4 x 101.6 cm)	76.5 x 85.5"	(194.3 X 217.2 cm)

Note: Custom sizes can be provided, see factory for details

## STANDARD FEATURES

- Microprocessor controlled, choice of cycles
- Touch pad control for programming functions, access is protected by security code
- Automatic five step cycle (includes optional dryer)
- Wash and Rinse Temperature Guarantee
- 180°F non recirculated final rinse
- Easily removable spray headers
- Large debris baskets are easy to remove for cleaning
- Stainless Steel piping and components
- All stainless steel modular construction
- RS 232 data port for connection to PLC hard drive
- Automatic solution level control
- Automatic fill and drain
- Hydraulic Hold Down
- 7.5 hp pump in both wash and rinse chambers on all models
- Chemical additive injection ports and electrical contacts
- Stainless Steel Steam coil heating in sumps
- Stainless Steel conveyor belt
- Side hinged chamber access doors
- Stainless Steel ventilation dampers
- Insulated Chamber and sumps
- Left or right side service access

## OPTIONAL FEATURES

- Strip chart recorder
- Water supply temperature booster
- Roller conveyor, gravity or powered
- Eight foot dryer section
- Power exhaust blower
- Barrier wall trim system
- Seismic anchoring system
- Knocked down shipment
- Bedding Disposal Unit
- Bedding Dispenser

## ACCESSORIES

- Feeder bottle baskets

## LOADING SYSTEMS

- Fully integrated robotics for load and unload, call factory for details

## ADDITIONAL PRODUCTS FROM NORTHWESTERN SYSTEMS

Cage & Rack Washers ▪ Multi-level Glassware Washers ▪ Bottle Fillers ▪ Necropsy Tables  
Custom Fixtures ▪ Bedding Handling Equipment ▪ Custom Stainless Steel Work Stations



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