



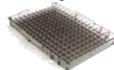
INNELWASH

Custom Designed for Reliable, Consistent Cleaning

The Sani-Matic TUNNELWASH is custom designed to clean a wide variety of items such as pans, totes, pails, buckets, trays and barrels. The basic design is provided with detergent and final rinse zones - however - pre-rinse and recirculated rinse zones may be provided for heavy product residues or high capacity requirements.

Advantages of a (TÜNNELWASH

- · Consistent, repeatable results from a controlled process
- · Allows higher temperatures and stronger concentrations while minimizing worker exposure
- Adjustable guide bars accommodate a variety of sizes
- · Simple, fast and ergonomic loading and unloading
- · Reduces labor costs, minimizes chemical usage, and lowers water and utility costs





Pharmaceutical Tray Washer

Standard Features

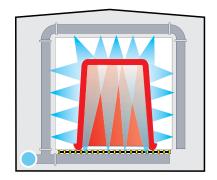
- 2, 3 or 4-section configurations
- 304 SS construction
- · Rollaway cover for easy access to sprays, instruments and conveyor
- Variable-speed, gear-driven conveyor with torque limiter
- High-impact, 360° adjustable spray nozzles
- Two-stage solution-straining system with removable elements
- Pre-piped centrifugal supply pump(s)
- · Automatic temperature and water level controls with alarm and shutdown
- · Steam heating system
- PLC controls with control interface and indicator lights

Options:

- T316L SS construction
- · Automatic detergent injections/concentration control
- Automatic sanitizer injection system
- Automatic final rinse control
- · Custom spray manifold/nozzle configurations
- Custom guide-rail container restraint system
- Exit end blow-off/dryer system
- Motor starter/disconnect with cabinet-mounted enclosure
- Variable frequency drive for conveyor speed and pumps
- · Removable shrouds to cover utility sections
- · Material handling including entrance/exit conveyors



Tunnel Washer spray manifolds



360° spray manifolds with adjustable, high-impact nozzles provide complete cleaning coverage of the washed item's internal and external surface area







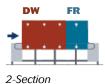
BIO-PHARM

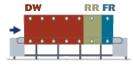
How it Works



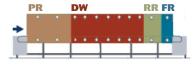
DW Detergent Wash
FR Final Rinse
RR Recirculated Rinse

PR Pre-Rinse
Ext Extended Length









3-Section (most common

3-Section with extended length

4-Section (see Operational Overview)

General TÜNNELWASH Operation

Three section washers (detergent wash, recirculated rinse and final rinse) are the most commonly requested designs, however, the use of a pre-rinse section may be required for heavy product residues.

Operational overview of a 4-section washer:

- 1 Soiled product containers are conveyed through the Pre-Rinse (PR) section to loosen and flush off heavy particulates.
- 2 The Detergent Wash (DW) section loosens and sprays off the remaining product residue.
- 3 The Recirculated Rinse (RR) removes most of the residual detergent solutions from the product containers and overflows to Pre-Rinse if present.
- The Fresh Water Rinse (FR) removes the remaining detergent film and overflows to Recirculated Rinse (RR) to conserve water.

Pallet Washers and Integrated Material Handling

Improve quality control and sanitary product handling with a Sani-Matic Pallet Washer. Available in either a horizontal or vertical design, the Pallet Washer operates similar to the Tunnel Washer and has the same standard features and options. Integrated material handling may be added to provide synchronized stacking and de-stacking of pallets to maximize cleaning and handling efficiencies.



Pallet Washer with Stacker and De-Stacker



Vertical Pallet Washer



In-Line Conveyor

Documentation

- · Operation and maintenance manuals
- · Recommended spare parts list
- Instrument lists
- · Instrumentation calibration procedures
- Performance data
- Material certificates
- Weld qualification and inspection records
- · Inspection test results, reports and certificates
- ASME data
- · Component catalog cut sheets
- As built assembly drawings
- · As built process and instrumentation diagrams
- · As built electrical drawings
- Annotated PLC ladder diagrams

OPTIONAL

- · (FRS/FDS) Functional Design Specifications
- · Control System Design Specification (HRS and SRS)
- (FAT) Factory Acceptance Test report
- (SAT) Site Acceptance Test document
- IQ/OQ Installation and Operation Qualification
- Traceability matrix
- ISA Data Sheets
- · Cleaning and passivation report
- Weld video record (Boroscope)



