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BIN WASHING SYSTEM

Prism Pharma Machinery®

An ISO 9001 - 2015 Certified Company



Bin Washing System

Application & Process

The Bin washer is suitable for cleaning a wide variety of IBC bins, tote bins, wheelie bins, drums and pallet containers used in the Pharmaceuticals, Nutraceuticals, Foods, Confectionery, Cosmetics & Chemicals industries.

The Bin washer has been engineered in compliance with the main regulatory guidelines following cGMP regulations, with the aim to erase any variability of cleaning processes involving containers of different sizes and shapes. The Bin washing machine is customizable depending on specific client constraints, requirements and equipped with double door OR single door, Rotating platform, with inner rinsing, outer rinsing, drying & cooling.

The settings of the washing and rinsing cycle are adjustable, depending on the degree of pollution & residues of bin. Loads are processed with fresh water without recirculation, a guarantee against risk of any cross contaminations.

The operator positions the bin in the cabin and once the cycle starts a movable head enters in the container itself from the top granting a direct and perfect coverage of areas in contact with the product. The spraying heads on side and chamber floor, together rinsing, completes the cleaning of external surfaces and bottom valve. If needed, a drying unit concludes the cycle exposing the load to hot HEPA filtered air. The cleaning steps with liquid medium are circulated and the cleaning device is fully drained after each phase.



Bin Washing System

Salient Features

- Designed as per cGMP principles followed at pharmaceutical corporations globally.
- A washing chamber entirely made of AISI 316L, roughness lower than 0.5 μm with full thermal and acoustic insulation.
- High-pressure pump with AISI 316L, multi head and a flow rate of 27 l/min at 35 bar pressure.
- Chamber variants in different sizes, single, double with single double doors and with rotating platform or without rotating platform.
- Principle of high pressure and low volume of water for washing results in less water consumption and low effluent quantity.
- High Pressure Cleaning - a proven solution to reduce utilities and labour.
- Modular design allows installation of the chamber in classified areas whilst the technical components can be remote.
- Door with toughened glass doors with gastight inflatable seals. Powerful jets ensure complete internal and external washing of the IBC.
- Telescopic hood provides with pneumatic operated with spraying nozzle for washing and hot air flow inside of the IBC.
- Spraying nozzle for washing at all corners, bottom & all side walls for outer washing.
- Hot air flow nozzle provide for outside drying.
- Bottom surface in the cleaning chamber are sloped so that a full drainage is guaranteed.
- Piping with slope and air purging for full drainage with orbital welded and polished.
- All the operation processes take place in sealed pipe line, which is easy to operate saving work and meets high sanitary requirement
- Water skid with High pressure pump, detergent dosing pump, detergent tank, buffer tank-150L, inlet connection and outlet connection with pneumatic operated valves..

- Washing liquid flow and pressure are adjustable and display in HMI.
- Hand jet spray nozzle provide with flexible pipe.
- Hot air Inlet AHU with pre filter, blower, heat exchanger, final filter & HEPA filter.
- Steam or electrical heating with PT100 temperature probes.
- Exhaust air suction blower with 5 micron filtration for vapor extraction.
- Inlet Hot air flow and exhaust air flow controls by VFD.
- Drain connection with sampling pot and can be provide with
- Conductivity sensor & pH sensor monitoring of the final rinse water.
- Units are managed by a PLC with software compliant with GAMP5 guidelines. The operators, through an user-friendly interface, can select among 30 different customizable washing programs and
- SCADA. Access is prevented by different protection levels. All events are recognized in the audit trail.
- Air cooling system allows faster unloading reducing cycle time.

Optional Features

- Multiple Booth System for multiple bin washing at the time.
- Double door of chamber.
- Rotating platform.
- Glove Box for manual washing inside the chamber.
- Basket loading trolley.
- Hot water generator vessel for hot water.
- SCADA system for advance records, recipe management and interactive commands.
- Water conductivity and/or pH monitoring for final rinsing.



