

PennTech Newsletter

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Quote of the Week

"What separates those who achieve from those who do not, is in direct proportion to one's ability to ask for help"....
Donald Keough

Next Weeks Topic

* Introduction to PennTech-Tofflon, LLC. *

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PennTech Single and Dual Trayloaders...

Automatic trayloaders are used in many areas throughout an aseptic production line. The systems can be used after vial washing (for batch sterilization), after filling/stopper inserting (for lyophilized products), after the aluminum capping machine, post inspection machine or after labeling. Needless to say, these machine are very useful.

Models of Trayloaders

PennTech Machinery Corporation manufactures two models of trayloaders, a single trayloader (model TL-100), thus loading only one tray and a dual trayloader (model TL-200), loading two trays simultaneously. Typically the TL-100 trayloader is used in sub 200 vials per minute applications, wherby the dual trayloader can handle throughputs in excess of 400 vials per minute. Both models can handle trays up to 18" wide by 24" deep (46 x 61cm). Stainless steel, cardboard, plastic or fiberglass.

Simplicity

PennTech believes that simplicity is the essence of design. This simplicity can be seen throughout its range of products, especially the trayloaders. A trayloader is essentially a conveyor with a loading actuator(s) and nesting acutator. These actuators are closed loop stepper motor driven precision ball screw systems. The use of stepper motors is critical to the accuracy of the loading process. Via the HMI a recipe can be set for each vial format. For example, for small unstable 2 and 3cc vials, the loading speed, acceleration and deceleration is less than that of a stable 30 or 100cc vial. PennTech does not beleive in the use of pneumatics or mechanically operated cam systems as a means for loading rows of vials since it is difficult or simply not possible to regulate the motion profile.

Nested/Staggered Loading Pattern

As a standard offering, all PennTech trayloaders come equipped with a nesting actuator. This again is a closed-loop stepper motor design. The nesting actuator automatically moves the next row to be loaded in or out exactly half the diameter of the vial size in use resulting in a perfect staggered (nested) loading pattern.

Aseptic Process

There are no overhead parts that interfere with vertical unidirectional airflow. The machine frame is approximately 20cm (8 inches) below the work surface to minimize the vertical airflow disturbance at the work surface. A special raised track conveyor is used to aid the cleaning process. Also for cleaning purposes the tray beds and conveyor are mounted on columns, away from the machine frame. The machine is constructed from AISI-304 stainless steel, including frame, and AISI-316L where required/desired.

Maintenance and Changeovers

PennTech trayloaders are essentially maintenance free. There are no serviceable components within the loading or nesting actuators. The conveyor drive motor/gearbox is a zero maintenance sealed unit, all bearings are stainless steel. There are no components underneath the machine base...zero! Changeover from one vial format to another should never take more than 2 minutes to accomplish.

