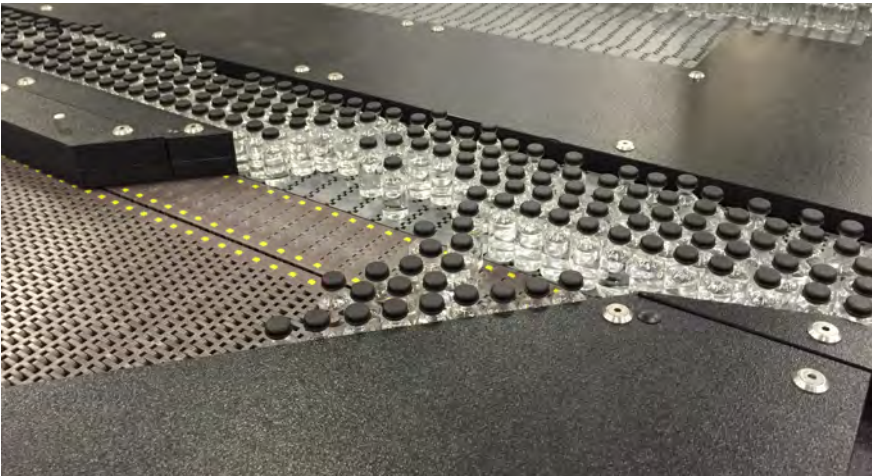




Garvey Automatic Vial Dryer

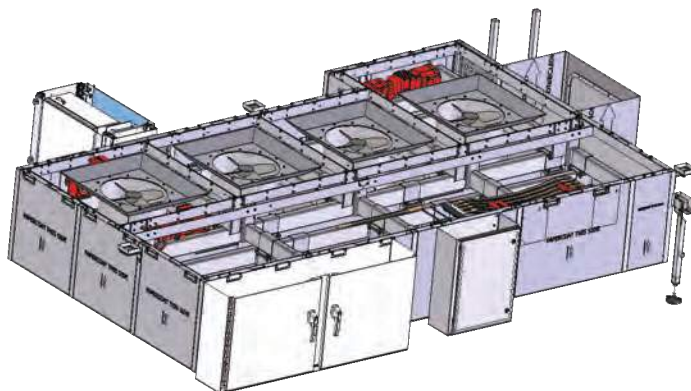




Keeping the Cold Chain Cold

Temperature-sensitive products in a cold chain, like vaccines, serums and tests, must be kept under the proper conditions in order to maintain their potency. Any time such a product is removed from the cold chain and exposed to incorrect temperature, its potency will decrease. Unfortunately, any loss of potency is permanent and irreversible. This cumulative damage may result in the drug being completely destroyed, with all of its potency lost. The cold chain system is a description of the processes for storing and transporting temperature-sensitive products in their potent states from the manufacturer to the end user. Much of the cold chain's focus has been placed on the equipment used during storage and shipment, but Garvey Corporation has found a method to reduce the time out of the cold chain by 24 to 48 hours during the packaging process.

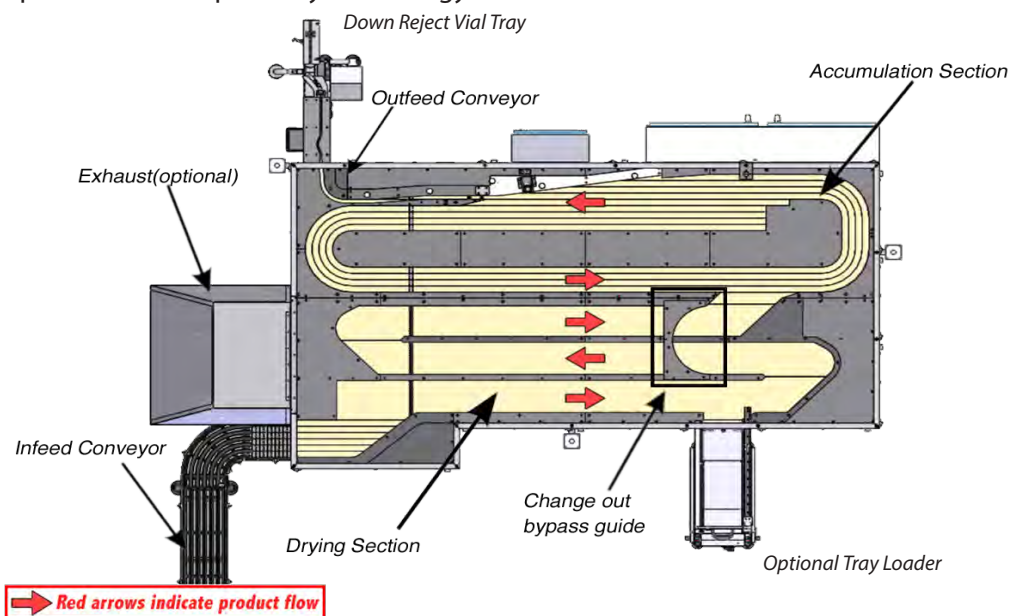
The Automatic Vial Dryer speeds up the drying process from 24-48 hours down to as little as 5 minutes.



This process allows vials to go directly to labeling or inspection, reducing time out of refrigeration and labor.

The Automatic Vial Dryer utilizes a modular design and can be configured to fit in even the tightest production line layouts. Various in-feed and out-feed options are offered and the machine will handle products ranging from 2ml to 50ml lyophilized and liquid filled vials.

After drying, our high speed Infinity Rx accumulation table gently single files vials at rates up to 800 vials per minute using our patented pressureless loop Infinity technology.



Benefits

Increased efficiency

- Reduce time out of cold chain
- Single file outfeed up to 800vpm

Multi-Functional

- Single File
- Lane Divide
- On Demand Flow Divide
- Mass flow infeed

Improved product quality

- Eliminate microfractures in vials
- Eliminates pressure
- No stainless to vial contact

Flexible operation

- Wide product range
- Wide speed range
- Simple to no changeover

Lean Manufacturing

- Reduce Space Requirements
- Minimize Friction & Noise
- Reduce product handling time
- Reduce labor

Garvey's systems are designed to be as simple as possible, ensuring the highest level of reliability. With the lowest operational cost of any accumulator on the market, the Infinity™ keeps maximum production more affordable than ever.



Automatic Vial Dryer



Vial Dryer with optional lexan enclosure

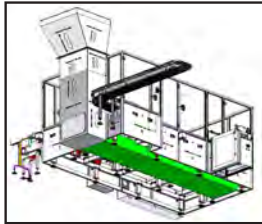
Product Features and Options

Upper Enclosure



The optional enclosure is fabricated using a stainless steel frame structure with 3/8" thick polycarbonate door panels. The panels open easily to allow access to vials and when closed, they help reduce noise levels to below 75dB. The enclosure encourages consistent laminar flow and when combined with the lower air duct, it also enables a Hepa filtration system to be installed above the table to create a closed-loop drying system.

Lower Air Duct



Instead of the fan exhausting from louvered side panels, you can choose to guide the air to either end of the vial dryer through an air duct installed beneath the fans. The exhaust can then be directed to any location using standard HVAC system components.

Down Vial Reject Device



As the dried vial exit the machine in a single row, this device will reject any vials that are lying down. The vials are gently guided into a stainless steel bin which is lined with a soft rubber cushion.

HMI Strong Arm Mount



Our precision-designed products combine the ruggedness of our industrial displays with our wide range of fully customized enclosures, articulating arms, unlimited mounting solutions, and wide range of accessories including keyboards, pointers, PCs and Thin Clients to provide the ideal solution for any operator interface application.

Andon Lights



Andon lights come in handy because of their relative simplicity and their ability to be seen from a distance and attract the eye, especially in places where noise is high and other signals might not be noticed. Depending on the color that displays, workers can immediately rectify problems and get the production line moving again.

Manual Tray Loader



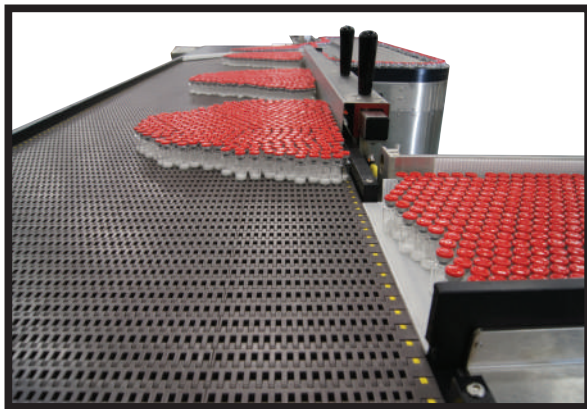
Garvey's manual tray loader can be configured to feed various tray and vial sizes onto the dryer section. The innovative design captures the edge of the tray by raising slightly as it is positioned for loading.

Maximize Your Production

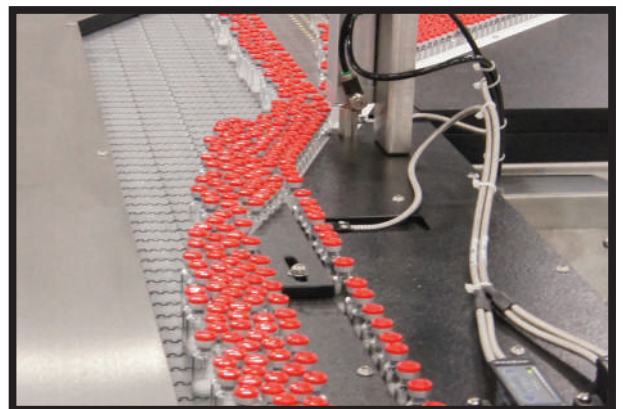
Garvey Vial Dryer



Dry vials in minutes instead of hours.



Garvey's vial drying system allows you to remove the vials from the tray and utilize more of the airflow.



After drying, our high speed Infinity Rx accumulation table gently single files the vials at up to 800 vials per minute.

Vials coming out of cold storage need to be dried prior to inspection and labeling. The traditional solution is to batch dry them in trays in a room with sufficient airflow. The trays remove most of the benefit from this airflow, extending the drying time up to several hours.

Garvey's vial drying system reduces this time down to mere minutes, allowing for continuous operation.

Dries:

Freeze dried vials

Liquid filled vials

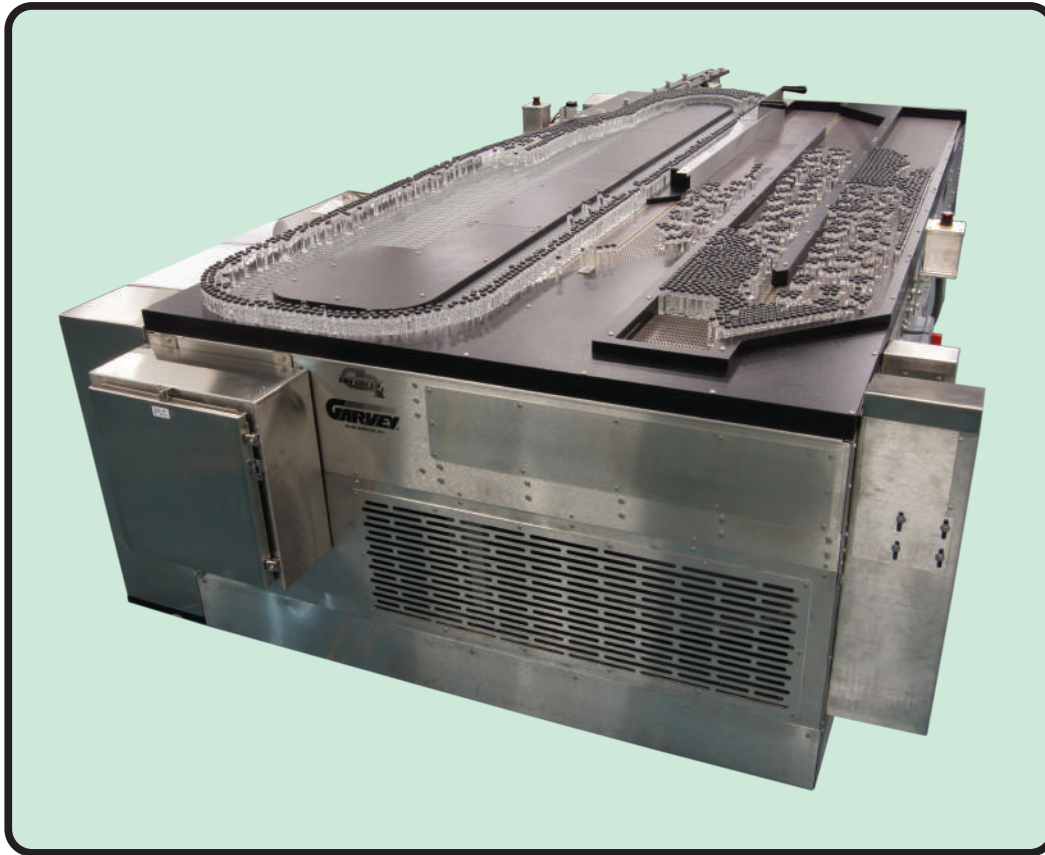
Terminally sterilized vials

www.garvey.com

GARVEY
CORPORATION

Maximize Your Production

Garvey Vial Dryer for 10ml Liquid Filled Vials



This Vial Drying System was designed to handle 10ml liquid filled vials

The vials enter the system on the right and travel along serpentine-like conveyors that pull air over the vials.

By the time the vials reach the RX Infinity to the left, They are dry and room temperature.

The RX Infinity then out-feeds the vials single-file at speeds as high as 600 vials per minute.



Air is pulled through the conveyor chain shown above at speeds of 1000fpm. When wet or frozen vials are placed on the conveyor, the airflow dries them in a matter of minutes.

Dries:

Freeze dried vials

Liquid filled vials

Terminally sterilized vials

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