



Morrison Dual Lane Servo Driven Orienting System

INDUSTRY: Pharmaceutical **OPERATING SPEED:** 100-200 CPM

CONTAINER: 5ml, 10ml, 50ml syringes

Customer Container Handling Challenge:

Our customer needed a solution to transfer syringes from a Bosch filler discharge to a timing screw infeed. The syringes were presented from a hanging neck rail and needed to be inserted into magazines. The system needed to be able to support three different syringe sizes that could run on the same system.

Morrison Solution:

Our design team devised a total solution system focusing on orienting, indexing and feeding through a variety of integrated equipment. Accepting a single lane of syringes, they were transferred downstream and fed into two lines through a 1-to-2 lane gate diverter, feeding the slugs of syringes into each lane, maintaining a prime of product on the timing screw infeeds. An air conveyor was used to feed the screws so the product backed up on itself.

Following this, the next servo driven timing screw assembly accepted the 2 random oriented lanes and oriented them so "flanges" faced the same direction, while keeping them positively controlled so they would stack on one another. After orienting, the timing screws placed the containers on constant pitch, maintaining for a length to match the magazine pitch. Once the timing screw fills the magazine length, the screw indexes and the top gripper rails actuate and come into grip with the body of syringes. After engaging the rails on the syringes, the discharge guide rail backs off so the magazine can be moved into the equipment tray and a new magazine can be interested to be filled by the next set of syringes in the timing screw.

Utilizing Morrison change parts, the 5ml, 10ml, and 50ml syringes could all run on the same system.

Construction: Stainless Steel and Black Anodized Aluminum



**INNOVATIVE
CONTAINER HANDLING
EXPERT DESIGN
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