FILAMATIC®
Specialists in Liquid Filling Systems

APPLICATION: Filling, Pump Insertion, Crimping, Capping

Industry - Pharmaceutical
Container -10ml & 25ml round amber glass
Speed - 50 cpm
Metering System - Piston Pump
Combination - 2 container sizes/styles
1 actuator/dust cap

Filling Equipment

Filling, crimping, and capping is a combination for the Monobloc Fill/Finish Packaging System. This double index Monobloc includes the following features:

- Filling the containers utilizing positive displacement piston pump technology
- Placing/Crimping pump assemblies with dip tubes onto the container neck openings
- Placing push-on actuator/dust cap assemblies onto the containers over the pump assemblies

The filling aspect of this application starts when the containers are transferred from the conveyor into the pockets of the turret indexing assembly by an infeed screw assembly. Once in the turret, they are indexed, in pairs, through the filling, pump assembly placing/crimping, and actuator/dust cap assembly placing functions.

Challenge

The challenge or this application requires accurately placing a dip tube/pump into a small neck opening and crimping the closure onto the glass bottle.

Solution

The dip tube/pump is sorted, oriented and positioned in a discharge nest. A two-axis servo driven arm moves over a filled bottle and a funnel mechanism guides the dip tube into the bottle. Then two stage crimping collets secure the dip tube/pump to the glass bottle. The heavy gauge aluminum closure requires both downward force for proper seating and a two- step crimping process to form and finish each closure.

Filling, Pump Insertion, Crimping, Capping

The crimping process is where the crimping devices firmly attach the pump assemblies to the containers.

This technique positions the containers in pairs below the fill nozzles while the nozzles are inserted to a point just inside the necks of the containers. By lowering the nozzles into the necks of the containers, product splashing is eliminated and foaming is minimized.

During the crimping process, the tubes are guided into the mouths of the container by the funnel mechanisms which open to allow the pump to rest on the container openings. The containers then are indexed to the crimping process where the crimping devices firmly attach the pump assemblies to the containers.

The capping technique allows for the actuator/dust cap assemblies to be loaded into the feed bowl via the chute. The pick and place mechanism then transfers two actuator/dust cap assemblies onto the containers held in position by the turret.

Filamatic • A Division of National Instrument, LLC. • 4119 Fordleigh Road • Baltimore, MD 21215
1.866.258.1914 • info@filamatic.com • www.filamatic.com