FILAMATIC®
Specialists in Liquid Filling Systems

APPLICATION: Filling, Capping, Overcapping

Industry - Pharmaceutical
Container - Round, Plastic Containers
Speed - 160 cpm
Metering System - Piston Pump
Combination - 6 container sizes/styles, screw cap, overcap

Filling Equipment

Filling, capping, and overcapping is a combination for the Monobloc Fill/Finish Packaging System. This continuous-motion Monobloc includes the following features:

- Filling each container utilizing positive displacement piston pump technology (peristaltic also available)
- Applying a screw thread cap to each container
- When applicable, applying an overcap to each container

Challenge

The challenge for this application was to fill and cap containers at high speeds in an intrinsically-safe (Class 1, Division 1) environment while allowing for quick changeover.

Solution

This intrinsically safe system includes a dockable trolley-mounted filler that operates in a continuous motion mode in order to achieve the required fill rate. A walking beam nozzle bracket fills the containers from the bottom up, eliminating foaming. The remote main control enclosure is positioned outside of the hazardous environment, with an option of having it within the environment exists as well.

Furthermore, the servomotor drives and dockable trolley help in minimizing the changeover time between products and/or fill volumes. Other features such as quick change container tooling and capping chucks assist in further reducing changeover time.

Filling, Capping, Overcapping

The allignment of the containers facilitates the placement of the overcap onto each container.

This technique places the empty containers below the fill nozzles by the feed-screw indexing system. The nozzles are then inserted 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 capping process, the containers enter the grippers from the infeed turret. There they are held firmly in the grippers as the screw caps are preciesely placed and tightened onto each container.

The containers are then indexed to the overcapping process where more grippers receive the capped containers. The allignment of the containers facilitates the placement of the overcap onto each container. Any container or cap that fails to receive the desired torque is removed automatically.

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