Container Filling System (CFS)

KEY FEATURES & BENEFITS

- Accurate and gentle product dispensing
- Fill vials, syringes and cartridges with a single machine
- Optional integrated weigh scale for real-time fill weight measurement
- Can be configured with peristaltic or rotary piston pumps
- Intuitive touchscreen interface for easy system operation
- Semi-automated production of up to 10 containers per minute
- Inert gas purging during filling
- Tool-less format change parts
- Optional Electronic Batch Reporting (EBR) system
- Compact system footprint allows placement within an isolator, bio-safety cabinet or laminar airflow hood
AST's Container Filling System (CFS) is a bench-top, semi-automatic machine used for filling pre-filled syringes and cartridges, and the filling and stoppering vials and bottles. The system is designed to meet the demanding requirements for small batch processing of sterile injectable products. The system’s versatility, features and compact size make it ideally suited for R&D labs and cGMP environments.

CONSISTENT & ACCURATE CONTAINER FILLING
The Container Filling System is integrated with advanced system features to provide consistent and accurate product dispensing. The system is integrated with a peristaltic pump that provides accurate dispensing with minimal product shear. When integrated with a weight scale the system can fill the container to measure the dispensed material in real-time, and provide automatic adjustment to the pump. The system’s electronically controlled axis inserts the filling needle to the container and slowly lifts to minimize shear, foaming or product agitation. For applications where a peristaltic pump is not ideal, such as dispensing viscous materials, the system can be configured with a rotary piston pump.

INTUITIVE PROCESS CONTROL
The Container Filling System provides the operator with complete control of the critical filling process. Using the HMI touchscreen the operator is able to create recipes that control parameters such as; dispense volume, filling needle depth into the container, fill needle retraction speed, pump speed, and many others variables. All the critical process variables can be monitored and recorded with the optional Electronic Batch Reporting (EBR) system for batch documentation, process analysis, technology transfer and optimization.

EASE OF USE & FORMAT CHANGES
The filling process is performed by placing the container on the support fixture and for vial processing the vial stopper is placed on the stopper fixture. With the container placed the operator activates the safety switches on the side of the machine. Once activated the filling needle dives near the bottom of the container and slowly retracts while dispensing. For vials, after filling is completed the stopper is seated onto the vial to close the container.

The fluid path is pre-sterilized and completely disposable, eliminating cross-contamination risks and simplifies change-over of the equipment to another product. All format parts are tool-less and can be changed to another product container in minutes.

To further enhance the sterility assurance of the equipment for cGMP applications the equipment can be integrated within a laminar airflow hood, bio-safety cabinet or an isolator.