Introducing The First Aseptic Laboratory Fillers!

With models for 250 and 500 bottles per hour (BPH), these fillers can be integrated with our laboratory and small scale UHT, HTST and Aseptic processing equipment to create a complete laboratory aseptic processing line.

The use of these fillers enables our clients to truly simulate the entire production process and fill into consumer style 250 mL or 500 mL plastic bottles.

Featuring Commercial Grade:

- Automated sterilization of filling chamber
- Continuous sterilization of bottles and caps
- Continuous filling of bottles in sterile atmosphere in your lab!

500 bottle/hr. model shown

MicroThermics®

SMALL-SCALE HTST/UHT/ASEPTIC PROCESSORS
AND MINIATURE PLANT TRIAL SERVICES

MicroThermics, Inc. is proud to announce that we are the exclusive distributor of the X250 and X500 aseptic laboratory bottle fillers.

Just like in production, these fillers go through a pre-process SIP procedure to fully sterilize the filling chamber, product lines, and filling heads. After the SIP, the process conditions are changed to your product conditions, and the filler is started. It then sterilizes and fills the bottle with your product directly from the processor. After processing, the filler is CIP cleaned with the processor.

Finally- Actual aseptic* laboratory filling! Never before has this been possible. No more dealing with the limitations of media bottles and hand filling!

Unit Operation Description

SIP:

Prior to filling, the filler's chamber goes through an SIP process where it is steam sterilized with a vaporized sterilant. The sterilant condenses on all filler surfaces (steam is created on board). After the proper exposure time, HEPA filtered air is blown through the chamber, removing the sterilant and maintaining a positive pressure sterile zone. During this sterilization cycle, the product lines and filling nozzles are heat sterilized with hot water from the MicroThermics UHT processor. After SIP, processor and filler conditions are changed for product processing and filling.

Bottle Sterilization and Filling:

The bottles enter the sterile zone of the filler on a conveyor. Only their neck is in the sterile zone. They are sterilized by first having hot vaporized sterilant injection inside, and onto the top 25% of the outside of the bottle. The bottle then increments through timing stations to ensure proper exposure time to the sterilant to ensure a 5 log reduction of bacteria. Next, the bottles proceed through drying stations where hot sterile air is blown into the bottle, removing the sterilant. The bottle then moves to the next stage where it is filled with product.

Capping:

In our fillers with automatic capping, the caps proceed through a parallel set of sterilization steps. Finally, at the final stage, the bottle is held in place by a set of mandrills, and the cap is applied and tightened.

In our fillers with manual capping, the operator takes caps from a bath of sterilant, dries it in a stream of hot sterile air, and applies the cap to the bottle. These steps are done in the sterile zone with through the gloved ports on the filler.

X250 Aseptic Laboratory Filler

Type	Linear
Approximate Cycle Time (App. Secs.)	15
Bottles Per Hour (BPH)	250
Bottle Size* (mLs)	250 or 500
Bottle Height Range (mm)*	100-300
Bottle Diameter Range (mm)*	40-95
Bottle Neck Diameter (mm)*	28-40
Bottles Shape*	Variable
Change over Time (Mins)	15 Mins
CIP of Filling Lines via UHT Processor	60 Mins
SIP of Filling Lines via UHT Plant	30 Mins
Manual Cleaning Time	20 Mins

*Fillers are pre-arranged for 250 or 500 mL bottles and caps supplied by MicroThermics. Other custom bottle configurations are available. Aseptic for high acid products only.

X250 Options

Option	Highlights
Semi-Automated Capping	Manual feed cap track Continuous Sterilization Manually load cap into chuck Bottle held by hand Pneumatic cap applicator
Automated Capping	Cap hopper storage Auto feed cap track Continuous sterilization Automated neck clamping Automated capping

X250 Utility Requirements

Utility	Note
Power	220 volt, Single phase
Compressed Air	120 PSI, Dry and Oil Free
Compressed Air Consumption	8 CFM
Extraction	Ventilation to outdoors
Drainage	

CE

MicroThermics®

EASY, AFFORDABLE, PROCESS ACCURACY!

MICROTHERMICS, INC RECIPIENT OF 2011 IFT INDUSTRIAL ACHIEVEMENT AWARD

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