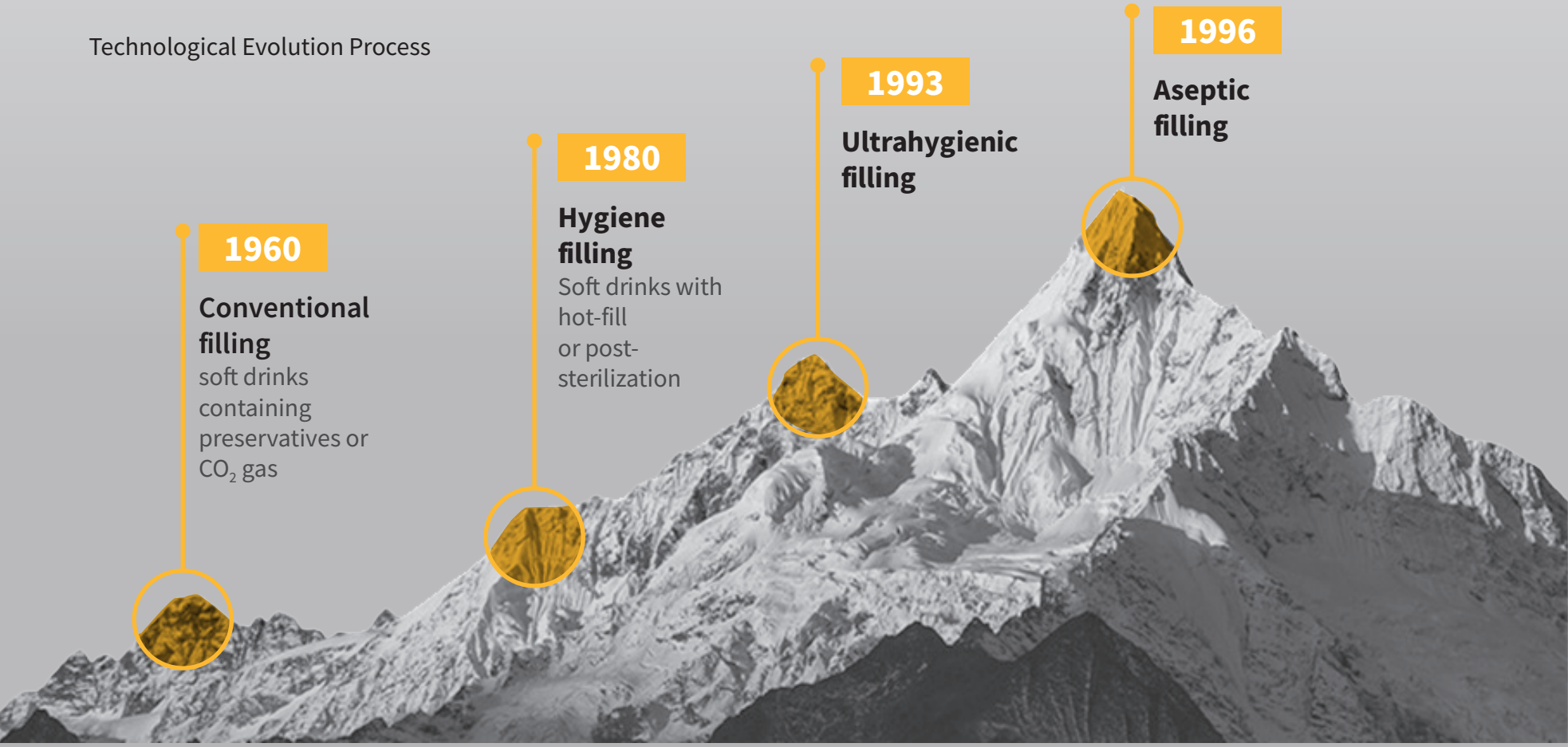
TECH-LONG



Aseptic Blowing-Filling-Capping Combi-block with Chemical Wet Bottle Sterilization

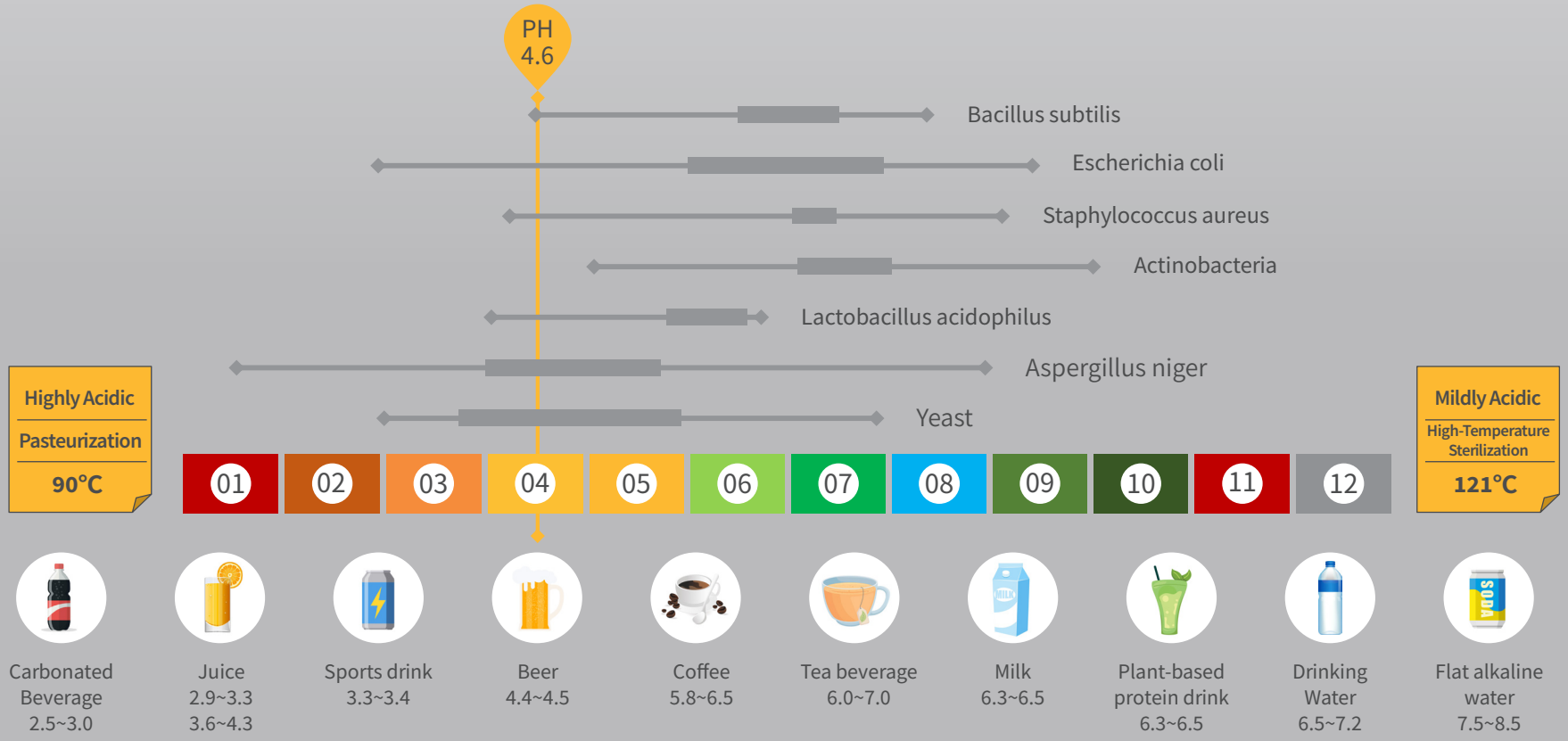
Aseptic filling—The state-of-the-art Production Technology for PET Bottled Beverages

Technological Evolution Process

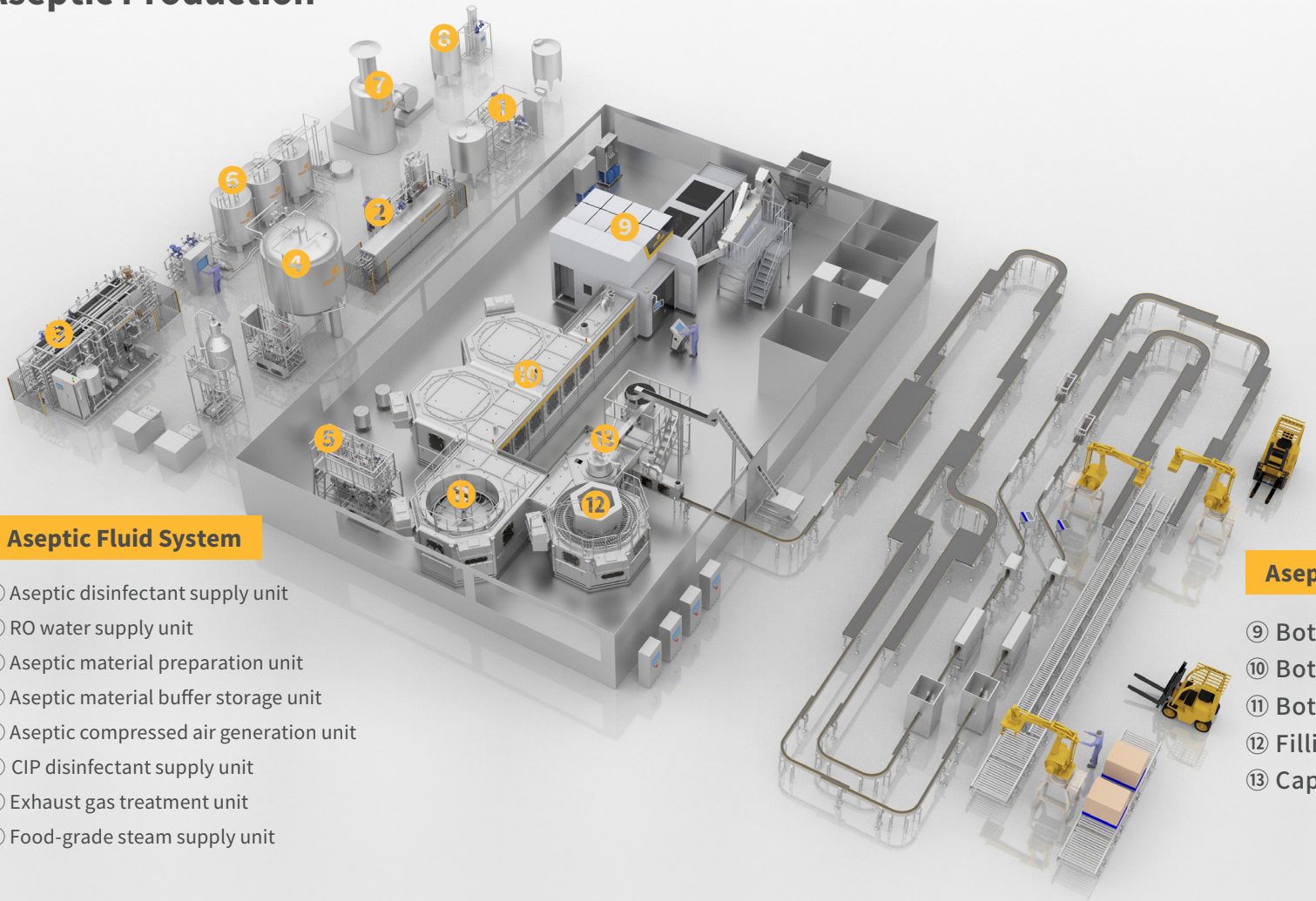


Aseptic PET Bottle Filling Technology—Distinctive Competitive Edge

Aseptic filling technology refers to the process of packaging ambient-temperature sterile products into sterile packaging materials within an aseptic environment using sterile equipment, with the final product achieving commercial sterility. Compared to hot-fill technology, it demonstrates distinctive advantages in reducing packaging material costs and producing neutral-pH products .



Multiple Standalone Machine Working in Coordination Ensuring Flawless Aseptic Production



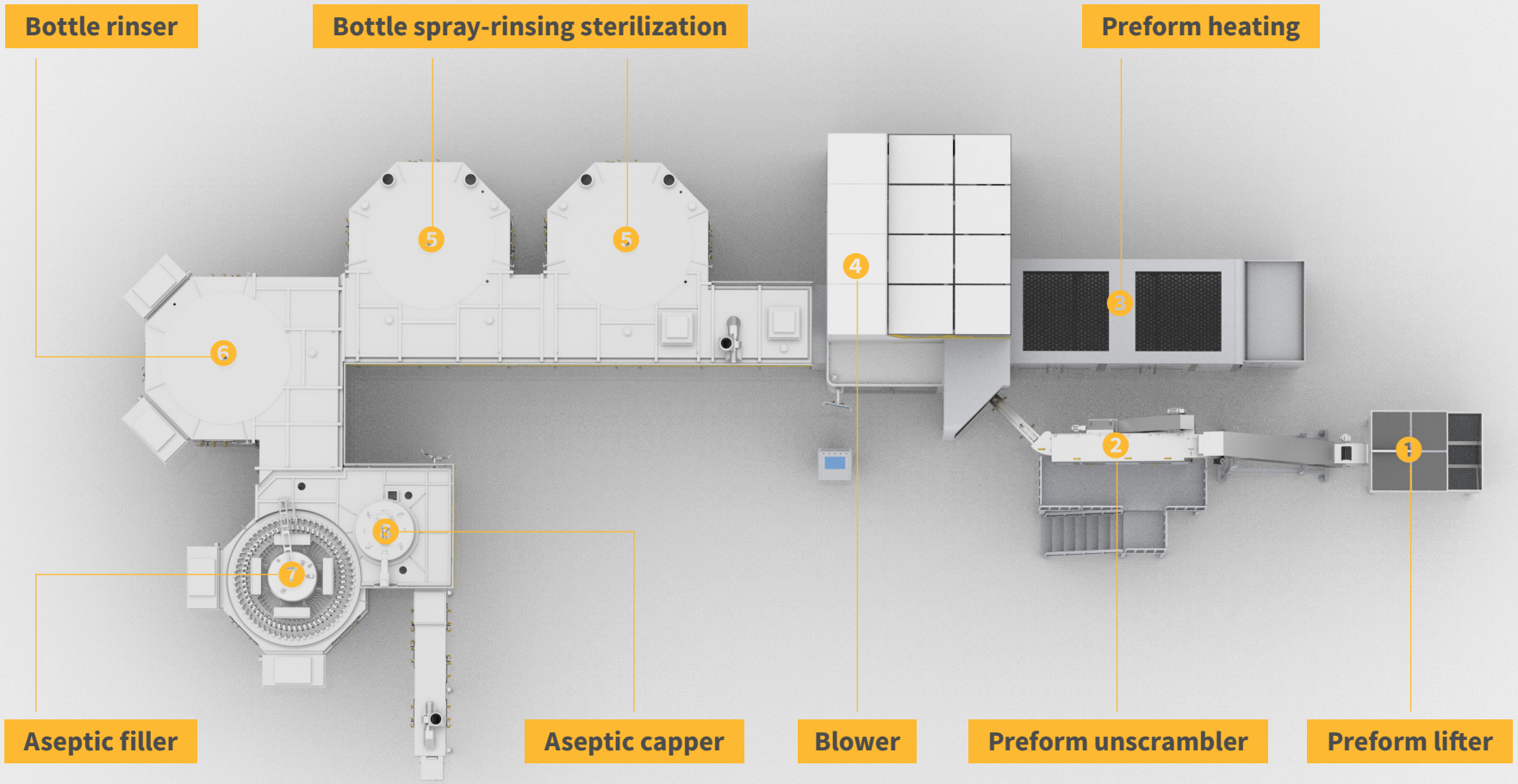
Aseptic Fluid System

① Aseptic disinfectant supply unit
② RO water supply unit
③ Aseptic material preparation unit
④ Aseptic material buffer storage unit
⑤ Aseptic compressed air generation unit
⑥ CIP disinfectant supply unit
⑦ Exhaust gas treatment unit
⑧ Food-grade steam supply unit

Aseptic Filling System

⑨ Bottle blowing
⑩ Bottle sterilization
⑪ Bottle rinsing
⑫ Filling-capping
⑬ Cap sterilization

Tech-Long Chemical Wet Bottle Sterilization Blowing-Filling-Capping Combi-block

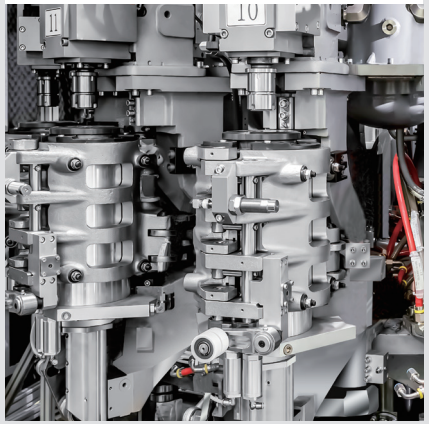


Key Features of Tech-Long Chemical Wet Bottle Sterilization Aseptic System

Bottle blowing

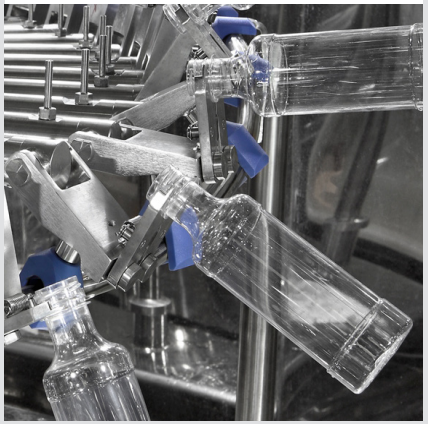
20+ years of innovation have empowered Tech-Long's high-speed, stable, and energy-efficient bottle-blowing technology.

- Stable output : 2,500-2,800 BPH/cavity
- 30-40% energy savings in preformheating
- 40-55% reduction for high-pressure air consumption.
- 30-50% lower maintenance costs vs. domestic counterparts.
- Quick-change functionality for mold & bottle neck.



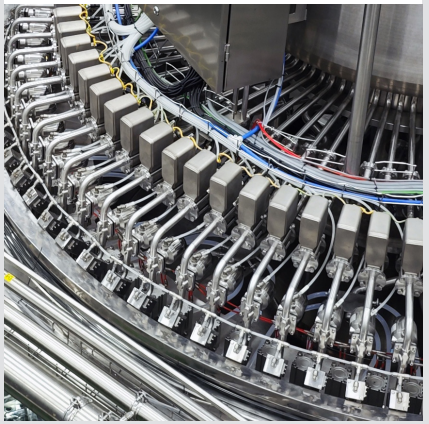
Bottle sterilization

- Sterilization with peracetic acid at 60~65°C, ≥1,800ppm for empty bottles.
- Cross-shaped nozzles with built-in filters for dead-angle-free spraying.
- Spray pressure monitoring and alarm
- Interior bottle surface KL value ≤6log(ATCC9732).
- Exterior bottle surface KL value ≤5log(ATCC9732).
- Packaging material peroxide residue (as H2O2) <0.5ppm.
- Quick mold change function for bottle and neck changeover.



Bottle filling

- Contamination rate in neutral culturemedium ≤1/10,000.
- Sterility maintenance time: Low-acid >96 hours, High-acid >168 hours.
- Capable of flexible filling for both conventional beverages and fruit-containing beverages with fruit particles ≤5mm.
- Capable of flexible filling for both carbonated and non-carbonated beverages.

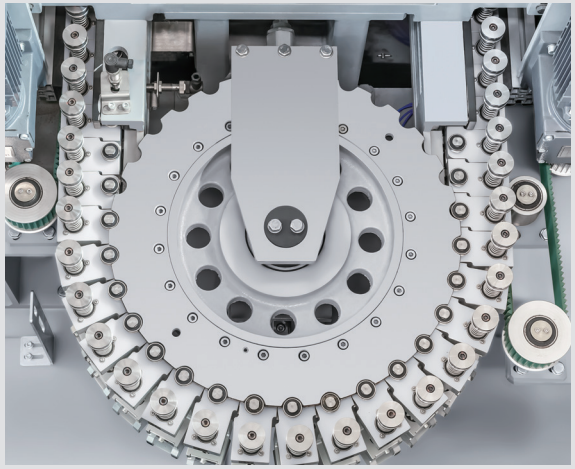


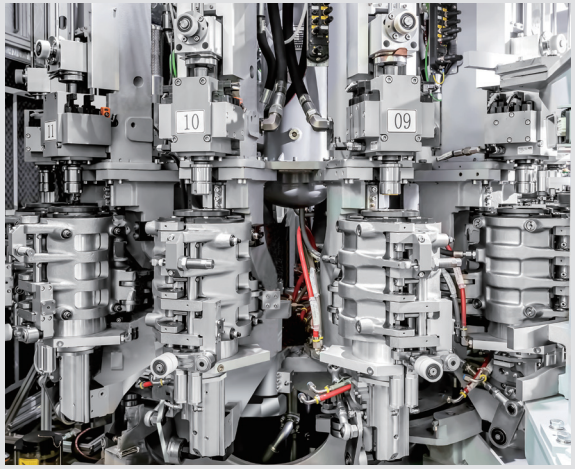
Bottle capping

- Equipped with Tech-Long's Self-owned Intellectual Property , high-efficiency and stable aseptic capping machine.
- Capable of meeting customers' capping requirements for various cap types and sizes.

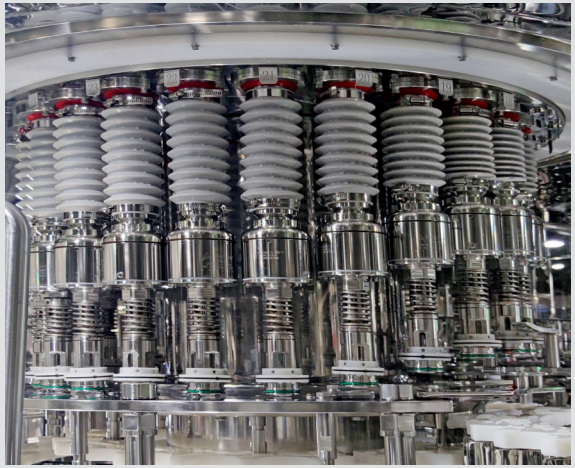


Details of Tech-Long Chemical Wet Bottle Sterilization Aseptic System













Market-Driven Dry/Wet Flexible Sterilization Aseptic System



- Combining Tech-Long's mature preform sterilization and empty-bottle sterilization technology to meet market demand.
- Dual-disinfectant process significantly broadens microbial spectrum coverage.
- Relaxed requirements for initial bioburden levels on preforms.
- Reduced floor space and TCO compared to traditional wet sterilization system.
- Enables flexible production with diverse packaging materials.
- Accommodates flexible production for products with varying characteristics.

Aseptic Validation Services That Brings You Added Value

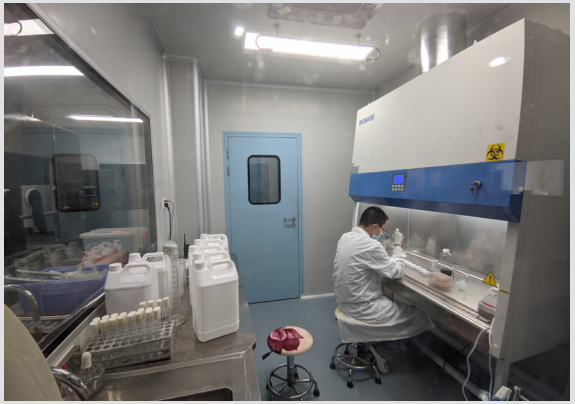
Tech-Long is equipped with an experienced aseptic validation team and maintains professional process & microbiology laboratories in-house, capable of providing customers with microbial operation skill training, aseptic validation training, and on-site aseptic validation services.












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SOY MILK


东鹏饮料
经典拿铁
大咖
经典拿铁


海岛椰汁
自然好椰
新品上市
海岛椰汁


三代白椰汁


FRESH
玫瑰椰子水


树上长的
天然电解质水
椰子水
100%


乌龙上茶


乌龙茶
解茶
纤解茶
玄米茶


乌龙奶茶


六安瓜片
祁门红茶
霍山黄芽


茅根竹蔗水
熬


中式古方 匠心熬煮
小吊梨汤
一缕东方香 沁润好滋味
清甜果味 细腻丝滑
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电解质饮料
200


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Versatile Container Sterilization Technologies to Meet The Needs of Diverse Clients



1 Chemical wet bottle sterilization



2 Chemical dry preform sterilization



3 Physical dry bottle sterilization



4 Dry/wet flexible sterilization

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