

#### **Key Benefits**

Food Safety & Compliance	РАА	H2O2	EB	CSD & Still	ESL & Dairy
✔ US FDA compliance for sensitive beverage filling: Chemical residual less than 0.5ppm	•	•	•	•	
✓ Zero spoilage in over 20 billion filled bottles to date	•	•	•	•	•
✓ No thermal degradation of beverage	•	•	٠	•	•
Profit Contribution	РАА	H2O2	EB	CSD & Still	ESL & Dairy
✓ Provide the lowest total cost of ownership (TCO)		•	•		
✓ Proven quick return on investment (ROI)			•		
Sustainability	РАА	H2O2	EB	CSD & Still	ESL & Dairy
✓ Reduction of CO2 emissions		•	•		
<ul> <li>Less water consumption (EB technology and/or hot air rinse instead of water rinse)</li> </ul>		•	•	•	
System Efficiency	РАА	H2O2	EB	CSD & Still	ESL & Dairy
✓ Over 200 hours of continuous aseptic production without CIP & SIP		•	•	•	
✔ Quick Production changeover: Full package and beverage change over within 2.5 hours	٠	•	•	•	•
✓ High productivity and system efficiency (≥95%)	•	•	•	•	•
Supply Chain Benefits	РАА	H2O2	EB	CSD & Still	ESL & Dairy
✓ Enables longer best-before dates (Longer product Shelf Life) No preservatives required	•	•	•	•	•
✓ No preservatives required	•	٠	•	•	•
✓ Enable transport and storage at ambient temperature	•	٠	٠	٠	



### **Technical Advantage**

Decontamination Technology	РАА	H2O2	EB	CSD & Still	ESL & Dairy
✓ Decontamination level: up to 6 log reduction value	•	•	•	•	
✓ Double decontamination method with peracetic acid and hydrogen peroxide for the chamber cleaning and decontamination process	•	•	•	•	•
✓ Electron Beam (EB) PET bottle Decontamination			•		
Aseptic System Design	РАА	H2O2	EB	CSD & Still	ESL & Dairy
✓ Bottle outlet continuous disinfection of sterile / non-sterile barrier	•	•	•	•	٠
✔ Robust positive pressure control: Maintain sterility of chamber with the overpressurized sterile air	•	•	٠	٠	٠
✓ Clean design for aseptic filler (No dead leg nor steam condensation pool)	•	•	٠	•	٠
✓ Aseptic chamber: Dynamic sealing of rotating and stationary parts (Filler and Capper)	•	•	•	•	٠
Filling & Capping Capability	РАА	H2O2	EB	CSD & Still	ESL & Dairy
✓ Fill all sensitive beverage, high and low-acid with and without particles, even with UHT milk		•	•	•	
<ul> <li>Net weight filling method for high accuracy (0.3g 1σ 500ml)</li> </ul>	•	•	•		•
✓ 100% individually controlled servo motors for reliable capping	•	•	•	•	٠
<ul> <li>Aseptic Particle filling capability: up to 5mm (one stage filling), up to 10mm (two stage filling) with proven effective CIP/SIP method</li> </ul>	•	•	•		•
✓ Multi-purpose filling valve (Still, CSD and CSD with high juice contents)				•	



### Flexibility

System Output	РАА	H2O2	EB	CSD & Still	ESL & Dairy
✓ Output: 5bpm to 1200bpm (or 300bph to 72000bph)	•	•	•	•	•
Packaging Flexibility	РАА	H2O2	EB	CSD & Still	ESL & Dairy
✓ PET and HDPE bottle (60ml ~ 3800ml)	•	•		•	•
<ul> <li>Allows greater freedom in bottle design (round rectangular square or any shape stand alone) / enables reduction of bottle weight</li> </ul>	•	•	•	•	
Quick & Automatic Changeover	РАА	H2O2	EB	CSD & Still	ESL & Dairy
✓ Quick & Automatic packaging changeover without breaking sterility (between small PET and Large PET)	•	•	•	•	•
✓ Two neck profile handling (various closure size 28mm ~ 38mm) and quick changeover without breaking sterility	•	•	•	•	•
✔ Two Closure handling (capper with individual servo motor) and changeover without any breaking sterility	•	•	•	•	•
Filling Capability	РАА	H2O2	EB	CSD & Still	ESL & Dairy
✓ Multi-purpose filling valve (Still, CSD and CSD with high juice contents)				•	
✓ Same filling valve for dairy, juice and smoothie (up to 1000 cps)	•	•	•	•	•



### Safety / Productivity / Reliability

Product Safety	РАА	H2O2	EB	CSD & Still	ESL & Dairy
✔ Chemical residual: less than 0.5ppm	•	•	•	•	•
✓ No preservatives required	•	•	٠	•	•
✓ No thermal degradation of beverage	•	•	•	•	•
✓ Enable extension of best-before dates (Longer product Shelf Life)	•	•	٠	•	•
✓ Zero spoilage in over 20 billion filled bottles to date	•	•	٠	•	•
Productivity	РАА	H2O2	EB	CSD & Still	ESL & Dairy
✓ One-man operation	•	•	•	•	•
✓ Filling volume can be adjusted easily using switches on the operation panel, reducing changeover time	•	•	•	•	•
✓ The simplified liquid path with no irregular surface allows efficient washing and sanitation	•	•	•	•	•
✓ Employing the Synchro System drastically reduces the footprint of the entire system	•	•	•	•	•
✓ Maintain beverage safety in case of extended or emergency stop	•	•	•	•	•
✓ Servo synchro drive with no timing belts	•	•	•	•	•
Reliability	РАА	H2O2	EB	CSD & Still	ESL & Dairy
✓ Preform and closure inline inspection	•	•	•	•	•
✓ 100% filling & capping data collection and monitoring	•	•	•	•	•
✓ Programmable filling cycles to minimize foaming / splashing	•	•	٠	•	•
✓ The weight control computer automatically corrects for the effects of the centrifugal forces of the filler rotation	•	•	٠		•
✓ Automatic zero and tare weighing functions combine for accurate fill weighing regardless of machine speed	•	•	•		•
<ul> <li>An electromagnetic flowmeter especially developed for filling applications and filling volume correction system ensure accurate filling</li> </ul>				•	
✓ Clean design for aseptic filler (No dead leg nor steam condensation pool)	•	•	•	•	•
✔ Aseptic chamber: Dynamic sealing of rotating and stationary parts (Filler and Capper)	•	•	٠	•	•