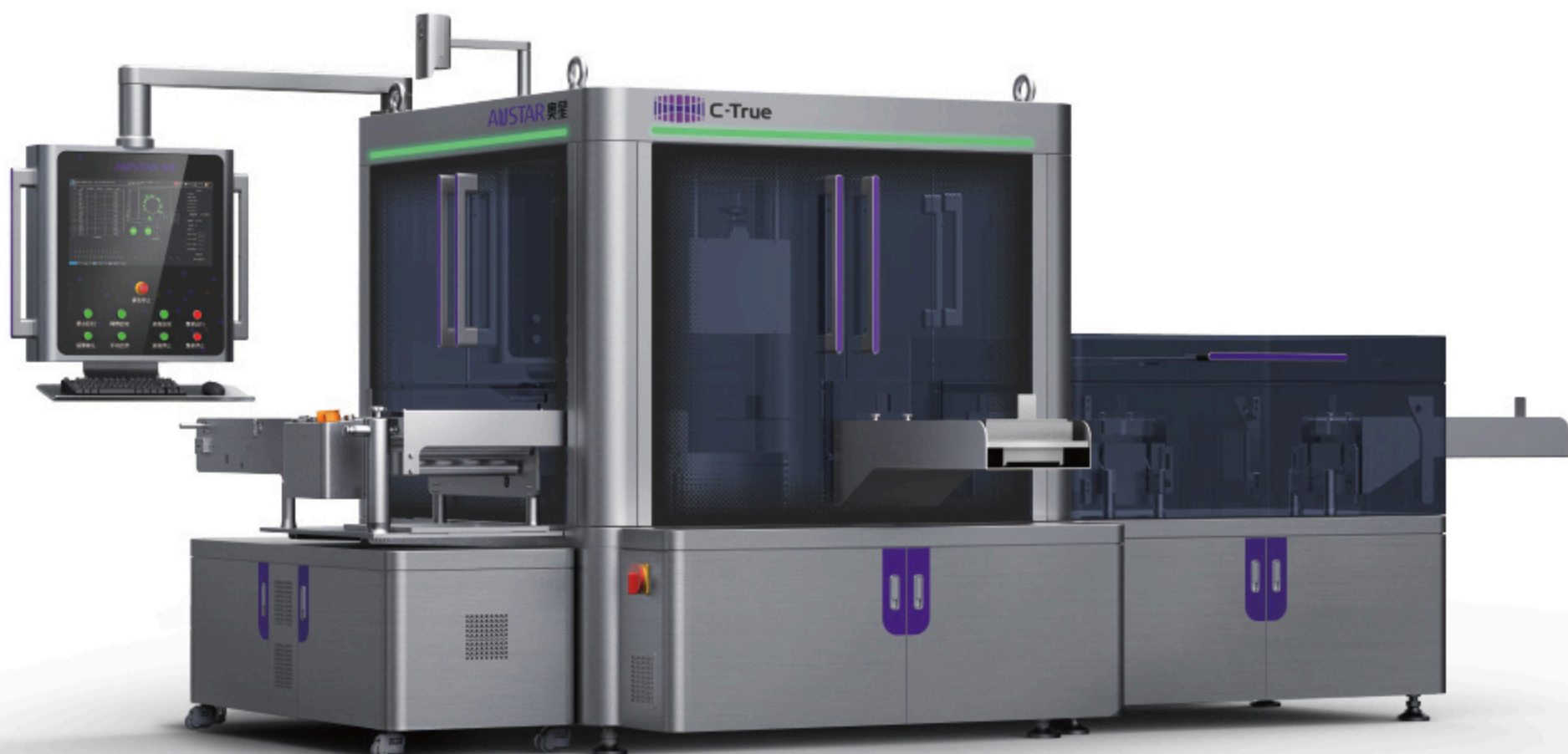


AU STAR



AU STAR

Automatic Visual Inspection Solutions

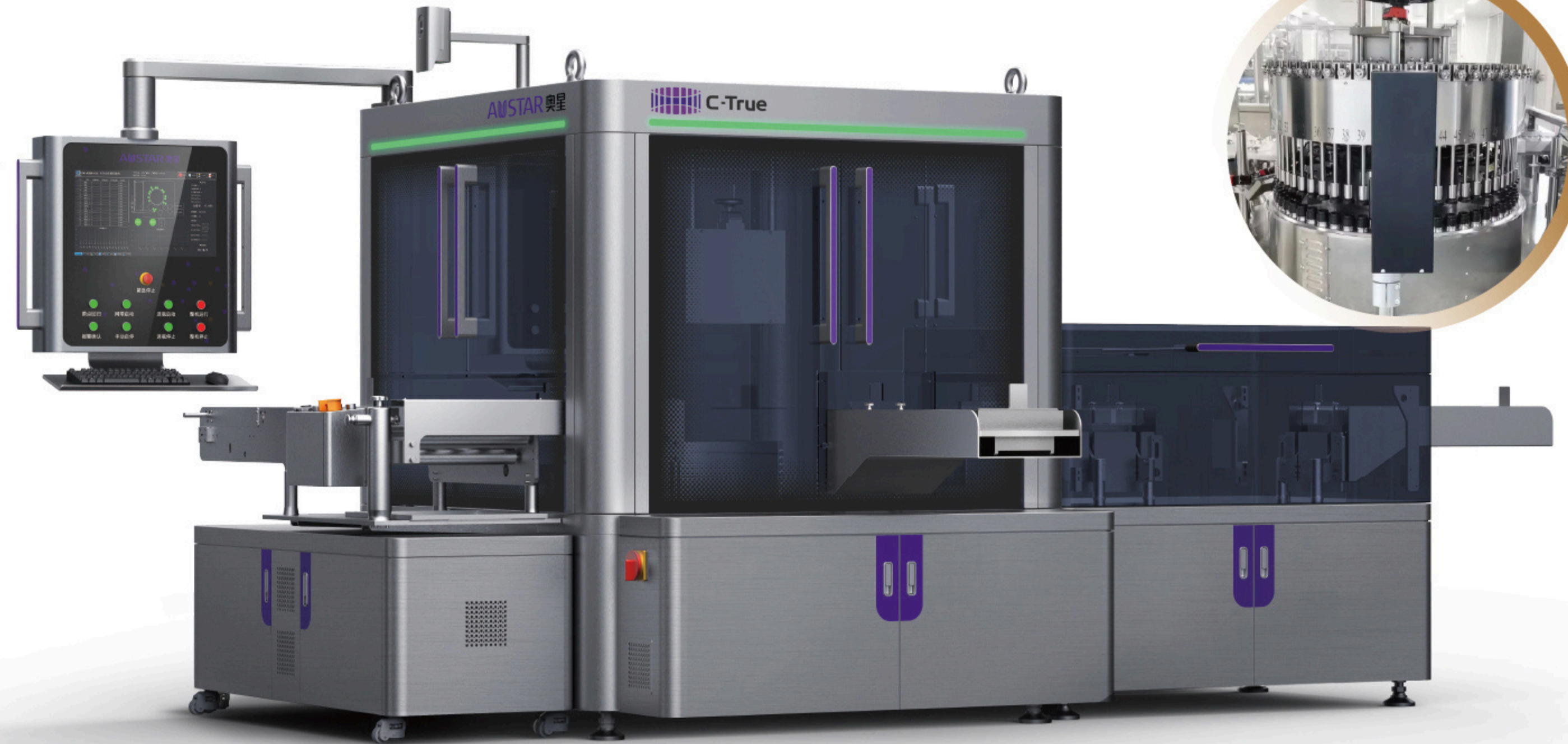
Fill-finish

Product Features

- Filling Volume and Visible Particles Inspection
- Cosmetic Defects Inspection
- High Voltage Leak Detection Technology (Optional)
- Vacuum/Pressure Decay Method (Optional)
- Headspace Gas Analysis Technology (Optional)
- Up to 600 pcs / min

Technical Advantages

- Unique 'Camera Non-tracking' visual inspection technology for more stable image acquisition is applied in C-True inspections to ensure accurate inspection. It allows multiple products and formats to be inspected in one machine.
- All servo-driven design for high speed and stable rotating improves the quality of image acquisition.
- High pixel and high frame rate cameras efficiently capture more stable images, increasing the defects inspection rate.
- Flexible and customized inspection solutions are tailored for various products and diverse defects.
- AI deep learning technology is used for better identification of defects to increase the inspection rate and decrease the false inspection rate.
- Machine will automatically alarm and shut down with the function of infeed monitoring of tipped-over bottles.



- Defective products are automatically and accurately rejected and classification of rejections can be customized.
- Artificial intelligence technology is used to effectively identify and classify defects.
- Statistical report is automatically generated.
- The software system configurations include recipes management, three-level privilege management, electronic signature, Knapp test, offline analysis and remote diagnosis.
- The software system equipped with database management , audit trail, all data can be downloaded, stored, backed up and printed, complying with 21 CFR Part11.
- Easy to clean and maintenance.

Technical Specifications

Applied Products

Inspection Containers: Ampoule, Vial, Cartridge, PFS, Bottle etc.

Inspection Contents: Liquid, LYO Product, Powder, Emulsion, Suspension, Capsule, Tablet etc.

Products	Applicable Dimensions	Defects of Inspection	Container Closure Integrity Test
Ampoule Liquid Injections	φ10-22mm	Visible Foreign Particles: glass, fiber, hair, black spot/block, white spot/block, other color spot, other particles Cosmetic: bubble, flat, dent, tip, crooked, sealing tail, carbonization, scratch, crack Others: empty, filling volume, color difference, turbidity	Equipped with High Voltage Leak Detection Module (Optional)
Vial Liquid Injections	φ8-52mm	Visible Foreign Particles: glass, fiber, hair, black spot/block, white spot/block, other color spot, other particles Plastic Cap: presence, deficiency, color mixture, scratch, logo Aluminum Cap: breakage, dirt, oxidation, dent, scratch, wrinkle, serration, crack, deformation Rubber Stopper: absence, breakage Neck: crack, breakage Shoulder: crack, breakage, stone, scratch Body and Bottom: crack, bubble, stone, hole, irregular, dirt Others: empty, filling level	Equipped with High Voltage Leak Detection Module (Optional)
Oral Liquid	φ8-52mm	Visible Foreign Bodies: glass, fiber, hair, floccule, insect, sediment, color block, scraps of paper Plastic Cap: presence, deficiency, mix up, scratch, logo Aluminum Cap: breakage, dirt, oxidation, dent, scratch, wrinkle, serration, crack, deformation Rubber Stopper: absence, breakage Body: crack, stone, hole, glass, dirt, large foreign body Others: empty, filling volume, color difference, turbidity	Equipped with High Voltage Leak Detection Module (Optional)
PFS/Cartridge Liquid Injections	φ6.85-22.05 mm	Visible Foreign Particles: glass ball presence, white scrap (same color with foreign particle), foreign particle (different color with foreign particle), glass, fibre, hair Rubber Stopper: malposition, stopper parallel to bottle bottom, stopper out of bottle bottom, foreign particles on stopper, leakage from stopper. Aluminum Cap: breakage, dirt, oxidation, dent, scratch, wrinkle, serration, crack, deformation Body: scratch, crack, breakage Bottom: crack, breakage Flange Needle cap: presence, damage, bent, dirt, pierced needle shield Others: empty, filling level	Equipped with High Voltage Leak Detection Module (Optional)

Products	Applicable Dimensions	Defects of Inspection	Container Closure Integrity Test
Freeze-Dried Powder	φ8-52mm Vial	<p>Plastic Cap: presence, deficiency, mix up, scratch, logo</p> <p>Aluminum Cap: breakage, dirt, oxidation, dent, scratch, wrinkle, serration, crack, deformation</p> <p>Rubber Stopper: absence, leak, stick powder, color spot, breakage</p> <p>Neck: crack, breakage</p> <p>Shoulder: crack. breakage. stone. scratch</p> <p>Body and Bottom: crack, breakage, bubble, stone, hole, irregular, dirt</p> <p>Powder Surface: visible foreign bodies, fragmentation, slant, shrinking, color difference, thawing</p> <p>Others: empty, filling level</p>	Equipped with Headspace Gas Analysis Module (Optional)
Powder	φ8-52mm Vial	<p>Plastic Cap: presence, deficiency, mix up, scratch, logo</p> <p>Aluminum Cap: breakage, dirt, oxidation, dent, scratch, wrinkle, serration, crack, deformation</p> <p>Rubber Stopper: presence, leak, stick powder, color spot, breakage</p> <p>Neck: crack, breakage</p> <p>Shoulder: crack. breakage. stone. scratch</p> <p>Body and Bottom: crack, breakage, bubble, stone, hole, irregular, dirt</p> <p>Powder Surface: visible foreign bodies, fragmentation, slant, shrinking, color difference, thawing</p> <p>Others: empty, filling volume</p>	Equipped with Headspace Gas Analysis Module (Optional)

MAIN Technical Data

Precision	Inspection accuracy $\geq 40\mu\text{m}$ (Adjustable)
	HVLD microhole $\geq 0.2\mu\text{m}$
	HGA Oxygen Concentration Precision: $\pm 0.15\%$
Specification	φ8-52mm
Speed	≤ 600 pcs/min
Dimensions	All-in-one Machine: 4655mm(L) × 2775mm(W) × 2045mm(H)
	Single Inspection Machine: 3200mm(L) × 2625mm(W) × 2045mm(H)
Weight	All-in-one Machine: 5000kg
	Single Inspection Machine: 3500kg
Power	All-in-one Machine: 380V/50Hz/13.5kW
	Single Inspection Machine: 380V/50Hz/11kW
Installation Mode	Offline/Inline