

Automatic Hot Air Tube Filling and Sealing Machine



The fully automatic tube filling and hot air sealing machine is designed to handle precise filling and sealing operations for soft tubes in industries such as cosmetics, pharmaceuticals, food, and chemicals. This high-performance equipment automates the process from tube feeding, filling, hot air sealing, and trimming, to product ejection, ensuring efficiency and quality in each step.

Key Features and Functionalities:

Automatic Tube Feeding: Equipped with an intelligent tube sorting and feeding system, the machine automatically loads tubes into the designated holders, streamlining the setup process for high-speed production lines. It supports various tube materials, including plastic, laminated, and metal tubes.

Accurate Dosing and Filling System: The filling unit is driven by a precision pneumatic system, offering adjustable dosing volumes with high accuracy (up to $\pm 0.5\%$). It accommodates a wide range of viscosities, making it suitable for creams, gels, pastes, and other semi-viscous products.

Hot Air Sealing Technology: Utilizing advanced hot air sealing technology, the machine ensures airtight and aesthetically pleasing seals on each tube. The hot air system heats the interior of the tube, melting the plastic and providing a strong, durable seal without compromising the product's integrity.

Tail Trimming and Coding Options: Post-sealing, the machine automatically trims excess material for a neat, consistent appearance. It also includes options for embossing or inkjet printing codes, dates, or batch numbers on the tube, ensuring traceability and compliance with industry standards.

User-Friendly Control System: The machine is operated via a modern PLC with a touch-screen interface, allowing operators to adjust filling volume, sealing temperature, and production speed easily. The system includes memory functions for different product specifications, allowing quick and efficient changeovers.

Precision Tube Alignment and Positioning: With photoelectric sensors and automated tube orientation, the machine ensures that each tube is correctly positioned before filling and sealing, reducing waste and enhancing output quality.

Hygienic, Durable Construction: Constructed from stainless steel and corrosion-resistant materials, the machine adheres to GMP and FDA standards for hygiene and safety, making it ideal for sensitive products. Its design is easy to clean and maintain, minimizing downtime and maximizing operational efficiency.

Safety and Fault Detection: The machine includes multiple safety features such as overload protection, emergency stop functions, and automatic fault detection systems. In the event of a fault, the machine pauses and displays the issue on the control panel, allowing operators to address it promptly.

Application and Benefits:

This fully automatic tube filling and hot air sealing machine is ideal for large-scale production facilities where efficiency, accuracy, and product integrity are crucial. By automating the entire process, it reduces labor costs, minimizes product waste, and ensures consistent, high-quality output with every cycle. The machine is versatile enough to handle a variety of tube sizes and fill materials, providing exceptional flexibility to meet diverse production needs.

Parameter

Tube type:	Plastic tube, Multiple tube
Filling range:	A.6-60ml, B.10-120ml, C.25-250ml, D.50-500ml
Sealing type:	Heating sealing
Capacity:	1800-4200 tubes/hour
Number of work positions:	12
Safety protection:	overload protection
Filling nozzle:	Anti-drop
Filling accuracy:	±1%
Sealing shape:	Flat tail, curved tail, special-shaped tail
Applicable tube diameter:	12-50mm
Applicable tube height	50-250mm
Automatic detection function:	No work without tube
Tube loding:	Automatic
Air pressure:	0.6-0.7Mpa
Air comsumption:	0.3m3/min
Power:	3KW
Voltage:	380V/50Hz
Air consumption:	1-3m ³ /min
Machine size:	2600×1250×1980mm
Machine weight:	1100kgs