

## *NKCI Series Automatic Cotton Insertor Machine*



N.K. Industries, based in Ahmedabad, Gujarat, India, is a renowned manufacturer, supplier, and exporter of advanced pharmaceutical packaging machinery. Among our high-performance solutions is the Automatic Cotton Insertor Machine, designed for tablet bottle packaging lines. This machine plays a crucial role in protecting tablets, capsules, and other solid oral dosage forms by inserting pre-cut cotton or rayon into bottles, ensuring product integrity during transport and storage.

With options ranging from single-head to four-head configurations, the system supports production speeds of 30 to 100 bottles per minute, making it ideal for small-scale, mid-volume, and high-output packaging lines. The cotton is supplied in roll form and the machine precisely cuts, inserts, and positions the material inside each bottle automatically.

### **What is an Automatic Cotton Insertor Machine?**

The cotton insertor machine automates the process of feeding, cutting, and inserting cotton (or equivalent material) into bottles during the packaging process. Cotton is commonly inserted into bottles containing tablets or capsules to serve as a moisture absorber, cushion, or filler. In a high-speed production line, this function must be carried out with utmost accuracy, repeatability, and speed—which is where the Automatic Cotton Insertor from N.K. Industries excels.

The machine is compatible with cotton, rayon, polyester fiber, and similar wadding materials. It's widely used in pharmaceutical, nutraceutical, healthcare, and dietary supplement industries.

## Salient Features

### ✓CGMP-Compliant Construction

The machine is designed according to Current Good Manufacturing Practices (CGMP), ensuring hygienic design, clean ability, and long-term operational reliability in regulated production environments.

### ✓Servo-Driven Precision

A servo-controlled system ensures the cotton is fed, measured, and cut to exact lengths before insertion. This improves insertion accuracy and reduces the chance of cotton jamming or improper placement.

### ✓No Bottle – No Cotton Logic

Built-in bottle sensors ensure that cotton is only cut and inserted when a bottle is present beneath the insertion head. This prevents material wastage and supports continuous operation without manual intervention.

### ✓Multiple Head Configuration

Available in single-head, double-head, triple-head, and four-head models to meet different production speeds. Speeds range from 30 BPM to 100 BPM, depending on the number of heads selected.

### ✓Roll-to-Cut Cotton Feeding

The system uses cotton rolls as input, which are fed into the machine and cut into consistent lengths based on preset parameters. This ensures uniformity in each insertion cycle.

### ✓Robust SS Construction

Constructed with AISI 304 stainless steel, the frame and contact parts offer excellent durability, corrosion resistance, and GMP compliance. Ideal for pharmaceutical cleanroom environments.

### ✓User-Friendly Touchscreen HMI

Equipped with a 7" PLC-based Human Machine Interface, allowing operators to monitor, adjust settings, and perform diagnostics with ease. Functions like cotton length, feed timing, and head synchronization can be managed via the HMI.

### ✓Low Maintenance Design

The machine is designed for easy cleaning, quick part access, and minimal wear-and-tear. The straightforward mechanical layout makes it ideal for long production runs.

### ✓Compact Footprint

With its modular and space-efficient design, the machine is suitable even for production areas with space limitations, and it integrates seamlessly into existing tablet filling lines.

### ✓Safety & Emergency Controls

Includes emergency stop button, protective covers, and safe access to critical machine sections. Optional acrylic or polycarbonate guarding with interlocks is also available.

## Technical Specifications

Model	NKCI Series – Cotton Insertor Machine
Operating Direction	Left to Right
Head Configurations	1, 2, 3, or 4 Heads
Speed	30–100 Bottles per Minute (based on heads)
Cotton Input Type	Roll Form (Cotton, Rayon, Polyester)
Cut Length Adjustment	Digitally Adjustable
Material Construction	AISI SS 304 (Frame & Contact Parts)
Cutting & Insertion System	Servo Controlled
Control System	PLC with 7" HMI Touchscreen
Electrical Supply	230V, Single Phase, 50Hz
Power Consumption	Approx. 2 KW
Air Pressure Required	6 Bar
Air Consumption	80 LPH (varies by config.)