NKDPF-50 Automatic Desiccant Pouch Inserter

N.K. Industries, headquartered in Ahmedabad, Gujarat, India, is a globally recognized manufacturer, supplier, and exporter of cutting-edge pharmaceutical packaging machinery. Among our most innovative offerings is the Automatic Desiccant Pouch Inserter Machine, an indispensable solution for moisture control in tablet packaging lines.

Built to support high-speed bottle packaging systems, our Model NKDPF-50 ensures the accurate and consistent placement of desiccant pouches inside each bottle. This process is critical in preserving the stability, shelf-life, and therapeutic effectiveness of moisture-sensitive pharmaceutical and nutraceutical products.

Precision Moisture Control for Pharmaceutical Packaging

Humidity is a primary threat to the integrity of tablets, capsules, and other solid dosage forms. By automatically inserting silica gel desiccant pouches into each bottle before sealing, the Automatic Desiccant Pouch Feeder eliminates moisture-related degradation, discoloration, and potency loss.

This state-of-the-art machine is ideal for pharmaceutical, nutraceutical, and health supplement manufacturers that demand maximum product protection with minimal manual intervention.

Salient Features:

CGMP Model: Designed and built in compliance with current Good Manufacturing Practices (cGMP) standards for pharmaceutical applications.

Automatic Roll Feed Mechanism: Servo motor-driven system with integrated tension control ensures smooth and consistent pouch feeding, eliminating slack or over-tightening issues.

Precision Cutting System: Integrated cutting assembly accurately slices the roll into individual pouches, perfectly synchronized with the bottle conveyor to insert one pouch per bottle.

Versatile Conveyor Assembly: Accommodates various bottle sizes and includes pneumatic cylinders to securely hold each bottle in place during pouch insertion.

Accurate Pouch Insertion: A precision-engineered chute system transfers each pouch directly into the bottle opening without damaging the pouch or the bottle.

No Bottle – No Silica Pouch: Sensor-based mechanism prevents pouch dispensing when no bottle is detected, ensuring zero wastage and enhanced reliability.

Imported Worm Gearbox & Motor for Conveyor: High-quality imported drive components ensure smooth and durable conveyor performance with minimal maintenance.

Toughened Glass Safety Cabinet: Mounted on an AISI 304 stainless steel frame, the safety enclosure features interlocking doors that prevent operation when open, ensuring maximum operator safety.

Durable Machine Construction: The main frame is built from corrosion-resistant AISI 304 stainless steel. The top plate is made of mild steel with SS304 cladding for long-term durability.

Advanced HMI Control Panel: A 7-inch PLC-based Human Machine Interface allows real-time monitoring, parameter setting, and quick diagnostics.

Multi-Level Login Access: Three-tier password-protected access levels (Operator, Supervisor, Administrator) provide controlled and secure machine operation.

Organized Electrical Integration: All wiring is internally routed and ferruled for clear identification, safety, and ease of maintenance.

Efficient Roll Feeding Assembly: Comprises a roll plate, guiding rollers, tension control unit, and dual vertical traveling belts for smooth and accurate feeding.

Integrated Chute Assembly: Guides each cut pouch precisely into the bottle mouth, minimizing the risk of misplacement or product damage.

User-Friendly Operating Panel: Features include emergency stop, inching, and main power switch for intuitive and safe machine operation.

CE Certified Electrical Components: All electronics and electrical components are CE certified, ensuring compliance with European safety and performance standards.

Technical Specifications

Model	NKDPF-50
Machine Operating Direction	Left to Right
Production Speed	Up to 50–60 Bottles per Minute
Applicable Desiccant	Silica Gel Pouches
Pouch Dimensions	22 mm ±2 mm (W) x 57 mm ±2 mm (L)

Bottle Diameter Range	40 mm to 80 mm
Bottle Height Range	55 mm to 200 mm
Roll Plate Diameter	300 mm
Machine Dimensions (L x W x H)	1280 mm x 700 mm x 1910 mm
Power Consumption	2 kW
Electrical Requirements	230V, Single Phase, 50 Hz
Air Pressure Requirement	6 Bar
Air Consumption	50 LPH