

## ***NKLSC-150MF High-Speed Rotary Liquid Filling & Pick And Place Capping Machine***



N.K. Industries, based in Ahmedabad, Gujarat, India, is a distinguished manufacturer, supplier, and exporter of advanced packaging machinery tailored for high-speed, precision-driven operations. Our Automatic 16 Head Rotary Liquid Filling Machine & 8 Head Pick and Place Capping Machine is a cutting-edge monoblock solution designed to streamline your bottling operations by integrating the filling and capping processes within a single compact footprint.

This innovative monoblock system is engineered for conductive and non-conductive liquid products, including viscous, foamy, and complex liquid formulations. It offers exceptional versatility and accuracy, making it ideal for industries such as pharmaceuticals, cosmetics, food & beverages, pesticides, lubricants, and more.

### **Product Overview**

The Automatic 16 Head Rotary Liquid Filling Machine utilizes magnetic and mass flow meter technology for contactless, high-accuracy liquid filling. Coupled with the 8 Head Pick and Place Capping Machine, it ensures precise, high-speed placement and tightening of caps—making it a complete bottling solution for medium to large-scale production lines.

This monoblock integrates seamlessly with CIP systems, supports recipe-based batch operations via HMI, and is engineered for minimal maintenance and user-friendly operation.

### **How It Works**

***Bottle Infeed:*** Bottles are precisely guided using synchronized infeed screw and star wheel systems.

Filling Process: Each of the 16 rotary filling heads dispenses liquid based on pre-programmed flow meter parameters.

Cap Placement: Caps are automatically sorted and picked, then placed accurately on each bottle.

Cap Tightening: 8 pneumatic capping heads apply consistent torque using maintenance-free grippers.

Discharge: Capped bottles are conveyed out of the machine for labeling or secondary packaging.

## Filling Technology

Magnetic Flow Meters: Ideal for conductive liquids (e.g., syrups, handwash, lotions) with a minimum electrical conductivity of 5 micro Siemens.

Mass Flow Meters: Suited for non-conductive liquids (e.g., oils, pesticides) where traditional methods may fail.

Flow meters ensure no moving parts are in contact with the liquid, eliminating contamination risks and enabling drip-free, splash-free, and highly accurate filling operations.

## Technical Specifications

| Machine Type          | Rotary Monoblock Filling & Capping System                                 |
|-----------------------|---|
| Model                 | 16 Head Flow Meter Filler + 8 Head Pick & Place Capper                    |
| Direction             | Left to Right   |
| Filling System        | Magnetic Flow Meter / Mass Flow Meter                                     |
| No. of Filling Heads  | 16  |
| No. of Capping Heads  | 8 (Pick and Place with pneumatic gripper)                                 |
| Speed                 | 130 to 150 Bottles Per Minute (depending on volume and liquid properties) |
| HMI                   | 7" Color Touchscreen with Error Messaging                                 |
| Control System        | PLC Based with Recipe Memory & Auto Sync                                  |
| Cap Feeder            | Integrated with Auto Start/Stop Feature                                   |
| Construction Material | SS 316 (Contact Parts), SS 304 & MS Frame with SS Cladding (Non-Contact)  |
| Safety Features       | Interlock Doors, Emergency Stop, Fault Alarms                             |
| Cleaning              | CIP up to 70°C  |
| Fill Volume Accuracy  | ±1%   |
| Torque Control        | Fully Adjustable via Capping Head   |