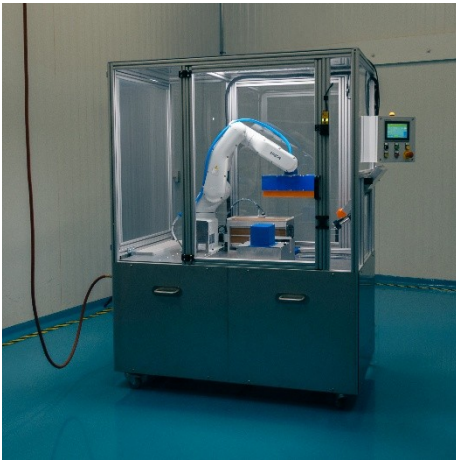


Nu-Tec Automated Coating Machine



INDUSTRIAL-SCALE COATING

Unmatched Throughput. Consistent Quality.

The Nu-Tec Automated Coating Machine is a high-throughput coating solution designed to apply food-grade adhesive and a consistent coating of powdered or granular material to cylindrical objects up to 11mm in diameter. Engineered to process 20 units simultaneously per cycle, the machine delivers up to 3,300 finished units per hour — replacing 8 to 12 manual workers with just 2 operators, while producing a more consistent, higher-quality product than any manual methods.

3,000 – 3,300

UNITS / HOUR

20

PRE- ROLLS / CYCLE

22.0s

MIN CYCLE TIME

2

OPERATORS REQUIRED

WHY NU-TEC LEADS THE MARKET

- 2x to 5x the throughput of competing machines — 20 units per cycle vs. 4–10 on competitors.
- 360° rotational adhesive coating ensures full, even coverage with a crisp, defined glue line.
- Consistent coating weight: 0.03–0.06g (adhesive) and 0.04–0.08g of coating material per unit (*See FAQ).
- No pre-gripper loading step — units load directly into the machine, reducing handling time and damage risk.
- Replaces 8–12 manual workers with just 2 operators (one to load, one to unload).
- Rotational kief dip coating at up to 1,000 RPM — thin, lump-free, consistent finish every cycle.
- 20L adhesive vessel enables extended run times without interruption for refilling.
- Built-in clump management — station actively breaks up clumping for consistent material flow.

Machine Station - Overview

01 Loading Station

Accepts 20 units simultaneously; hopper holds up to 140 units. No pre-gripper loading step required — units load directly, reducing operator handling and setup time. Unlike competing machines, no individual gripper seating is necessary.

02 Glue Application Station

The robotic arm passes all 20 units through the adhesive spray at a controlled speed while rotating each unit up to 1,000 RPM for a full 360° coverage. A precision mechanism creates a crisp adhesive cutoff line. Excess airborne adhesive is captured internally. Vessel capacity: 20 litres.

03 Coating Station

Units are simultaneously dipped into the coating application station while rotating at up to 1,000 RPM. Rotational motion ensures even, lump-free distribution. Includes a built-in clump-breaking mechanism. Dip duration and rotation speed are adjustable by the operator.

04 Ejection Station

Finished units are ejected into a collection tray, ready for QA inspection and packaging.

◀ Robotic Arm Tooling

Purpose-built end-of-arm tooling picks up exactly 20 units to a consistent depth in a single motion. Each gripper rotates at variable speeds that are controllable up to 1,000 RPM. Platform: Epson industrial robotic arm.

TECHNICAL SPECIFICATIONS

Dimensions	35" × 60" × 80"
Power Requirements	120V AC, 60 Hz, 1-Phase, 15A
Compressed Air	80–100 PSI
Output Capacity	Up to 3,300 units/hour
Minimum Cycle Time	22.0 seconds
Pre-Rolls Per Cycle	20
Loading Capacity	Up to 140 units
Adhesive Vessel Capacity	20 litres
Rotation Speed	Variable, up to 1,000 RPM
Adhesive Application Weight	0.03–0.06g per unit (*FAQ)
Coating Application Weight	0.04–0.08g per unit (*FAQ)
Analytics Platform	Bradley-Allen PLC
Pick-Up Failure Rate	<2% (units not wasted)
Recommended Coating Moisture	<12%

AVAILABLE ADD-ONS

- Cartridge-based alternative loading system
- Vision System + Remote Connect Modem

FREQUENTLY ASKED QUESTIONS

What coating material moisture level is recommended?

Less than 12%, with under 10% being ideal for optimal coating performance.

How consistent is the coating weight?

Coating application is highly uniform, as the coating station breaks up clumps and each unit is rotated and dipped for a consistent duration.

For a 2" long unit sprayed with a 30% adhesive formulation, coating material weight ranged from 0.04–0.08 g.

What is the pick-up failure rate?

The robot may fail to pick up <1% of units.

These are not wasted and can be reintroduced in the next cycle.

Does the machine support analytics?

Yes — production analytics are reported via the Bradley-Allen PLC platform

How can the coating weight be increased?

Apply more adhesive.

Increase the adhesive percentage in the glue formulation

Increase the dip time in the coating station

How consistent is the **adhesive** coating weight?

Adhesive application is highly consistent, as each unit is rotated and passed through the adhesive station at controlled speeds.

For a 2" long unit sprayed with a 30% adhesive formulation, the coating weight ranged from 0.03–0.06 g.

How is coating uniformity maintained?

Consistent insertion depth into the robotic tooling, along with controlled rotation and pass speeds through the glue and coating stations, ensures each unit receives identical treatment every cycle.