

Battery Paper Pasting Machine 2026

The Spec & RFQ Guide for Cylindrical Cell Preparation — NEGUP MACHINE

What the machine does

Battery paper pasting machine applies a barley-paper or PVC insulation pad onto the terminal of cylindrical lithium cells (18650, 21700, 26650, 32650, 32700) before nickel-strip spot welding and pack assembly. The pad is the dielectric barrier that stops the later weld from arcing to the adjacent cell or to the steel can. Commercial units run **4,000–4,800 cells per hour** on a 2–4 channel head and start around **USD 6,300 per station**. With global Li-ion shipments at 1,842.6 GWh in 2026 and the large 46-series growing 71.3%, the stations that prepare and protect each terminal scale with the whole cylindrical build-out.

Table 1 — The 2026 cylindrical demand wave

Global Li-ion cell shipments, 2026	1,842.6 GWh (2025: 1,503.4 GWh, +22.6%)	GEP Research, 2026
Cylindrical format share of Li-ion	15.3% ≈ 282 GWh in 2026	GEP Research, 2026
Large 46-series (4680-class) shipments, 2026	>98.7 GWh, +71.3% YoY	GEP Research, 2026
Cylindrical Li-ion battery market value	USD 18.6B (2026) → 61.45B (2035), 14.2% CAGR	MarkWide Research, 2026
4680 cylindrical battery market	USD 5.48B (2025) → 6.11B (2026) → 11.24B (2032)	360iResearch, 2026
Cylinder battery winding machine market	USD 3.82B (2025) → 7.86B (2032), 10.85% CAGR	PW Consulting, 2026
Battery spot welder market	USD 685.4M (2026) → 1,452.15M (2035), 8.7% CAGR	MarkWide Research, 2026

More cylindrical cells drive more winding and assembly lines, each needing a terminal-insulation and spot-welding prep cell — so the pasting station scales with the whole build-out.

Table 2 — Machine specification (2026)

Throughput	4,000–4,800 cells/hour	Must clear line takt
Supported cells	18650 / 21700 / 26650 / 32650 / 32700	Quick changeover
Placement consistency	Stable, low-defect; mis-paste <0.1%	Latent short if skewed
Power & supply	220 V 50 Hz, ~2 kW	Bench or inline
Pneumatic pressure	0.4–0.8 MPa, filtered air	Adhesion & flatness
Control	PLC + servo, 7.5" touch screen	Recipe + traceability
Insulation material	Barley paper or PVC, 0.1–0.3 mm	Dielectric barrier
Channels / bin	2–4 channels; ~400-cell hopper	Parallel output
Price	From ~USD 6,300 per station	Scale by head count

Two specs decide yield: placement (skew <0.5 mm) and clean scrap handling — both cheap to specify, expensive to discover missing on an acceptance run.

Table 3 — Prep & joining by cell format (real cells)

Terminal insulation prep	Barley-paper / cap stick (paper pasting machine)	Laser-cleaned busbar + film	Insulating film + edge seal

Core joining	Full-body laser / busbar weld	Busbar laser weld + screw	Ultrasonic + flexible busbar
Interconnect weld	Multispot resistance weld	Busbar laser weld	Ultrasonic tab weld
Line takt	60–200 ppm; 4680 up to 15+ PPM	10–12 PPM line-level	6–10 PPM line-level
Short risk prevented	Terminal-to-can / adjacent cell	Busbar-to-case	Tab-to-case
Downstream proof	Pack aging 24–72 h	Pack aging 48–72 h	Pack aging 24&48 h

Cylindrical cells are the format where terminal-insulation paper is mandatory; prismatic and pouch solve the same risk with film and laser cleaning.

RFQ acceptance criteria

Throughput: cells/hour at your mix, not demo cells; ≥95% uptime in trial.

Placement: pad centred, skew <0.5 mm, mis-paste <0.1%; checked on every cell.

Adhesion: pad survives weld pressure and thermal cycling; destructive sample per shift.

Changeover: 18650 ↔ 21700 ↔ 32700 in <15 min with stored recipe.

Scrap handling: off-cut paper collected; no feeder jam in 10,000-cycle test.

Acceptance: trials on your cells and fixtures; documented yield and Cpk as condition of payment.

NEGUP MACHINE supplies the cylindrical final-assembly chain end to end: the **NG-005 paper pasting machine** for terminal insulation, the **NG-007 spot-welding / EOL test system** and **NG-008 comprehensive tester** for the weld and electrical gates, and the **NG-013 cell grading machine** and **NG-014 pack aging machine** that sort and activate what the line produces. Tell us your cell format, pack architecture and hourly volume, and we size the line to the process rather than to a datasheet.

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