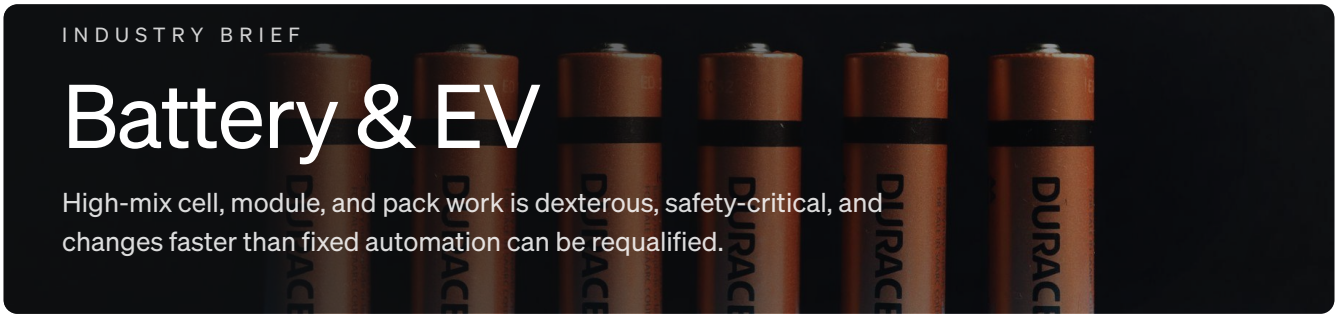

INDUSTRY BRIEF

Battery & EV

High-mix cell, module, and pack work is dexterous, safety-critical, and changes faster than fixed automation can be requalified.

Battery lines scale fast and rarely sit still. Cell formats shift from cylindrical to prismatic to pouch, module and pack geometries change between programs, and live cells make every contact a safety event. The hard work is contact-rich: seating cells, mating connectors, placing busbars, dispensing thermal material to spec. Tasks that demand force control and adaptation resist fixed automation, which can't be requalified at the pace these lines evolve.

Relling deploys workcells that learn a library of battery and EV skills and reconfigure in software when a format or program changes. One cell handles seating, fastening, dispensing, and mating with the force control and adaptation contact-rich assembly demands. Install to running runs two weeks or less. Every cell is qualified at Relling HQ before it ships, then tuned on-site to your line.

AT A GLANCE

Footprint	~2 × 2 m
Payload	12.5 kg
Reach	1.3 m
Placement	±0.05 mm
Power	Single-phase
Install	≤ 2 weeks

01 The work we take on

THE TASK PROFILE

A

Live, energized parts

Cells arrive charged and reactive, so handling, fastening, and connector work must stay precise and controlled to avoid short, arc, or thermal events.

B

Format churn

Cylindrical, prismatic, and pouch formats coexist and change between programs, demanding handling and force profiles that adapt without rebuilt tooling.

C

Contact-rich seating

Cells, modules, and connectors seat against tight interference fits, requiring force-controlled insertion rather than rigid position-only placement.

D

Dispense to spec

Thermal pads and adhesives demand controlled bead, coverage, and standoff on surfaces that vary part to part across a pack.

E

Full traceability

Every cell, module, and pack carries a serialized history, so each handling and assembly step must be logged and verifiable.

02 Why now

THE CASE FOR MOVING NOW

Gigafactory ramps outpace hiring

Reshoring and IRA-backed gigafactory buildout is adding capacity faster than skilled labor can be hired and trained. Relling cells stand up in two weeks or less and carry qualified skills from HQ, putting working capacity on new lines as they come online.

Formats churn faster than tooling

Cell and pack formats change across programs and chemistries, and fixed tooling can't keep pace. A workcell that reconfigures in software absorbs format changes without rebuilds, holding throughput as cylindrical, prismatic, and pouch lines evolve.

Safety and traceability are non-negotiable

Live cells carry thermal, fire, and high-voltage risk, and every part needs serialized history. Force-controlled handling reduces damage events, and each step is logged and verifiable, supporting traceability auditors and customers require.

OEMS WE WORK WITH

BECKHOFF · Rockwell Automation · SIEMENS · FANUC · KUKA · ABB · YASKAWA

03 What we automate in battery & ev

TASKS ON THE LINE

A — Cell sorting & grading
Sort and bin cells by grade and voltage, handling each format without damage.

B — Stack & wind handling
Move stacks and jelly rolls into fixtures with controlled, low-force placement.

C — Tab welding prep
Position and align tabs and bus connections ahead of weld stations.

D — Module assembly
Seat cells into modules and drive fasteners to specified torque sequences.

E — Busbar placement
Place and align busbars across cell terminals before joining or fastening.

F — Thermal & adhesive dispense
Dispense thermal pads and adhesives to bead, coverage, and standoff spec.

G — Connector mating
Mate high-voltage and signal connectors with force-confirmed, fully seated engagement.

H — End-of-line inspection
Inspect packs and log serialized results for labeling and traceability.

WHAT A CELL HOLDS

≤ 2 wk	±0.05 mm	100%
Install to running on your floor, not months of integration	In-hand placement for fit- and safety-critical parts	Inspection on every part — checked, not sampled

Representative configuration. Final specs are issued with the proposal.

04 Working with us

FROM YOUR PART TO A QUALIFIED CELL, IN ~TWO WEEKS ON-SITE

A · SCOPE & PO

We start with your part

We work from your part, volumes, takt, and the line you'd deploy on. A short scoping engagement confirms fit, defines acceptance criteria, and puts a fixed scope and price in writing — capital purchase and robotics-as-a-service, side by side.

B · PRE-BUILD AT RELLING HQ

We build & qualify it first

We build the cell on our own production floor and run it against your parts until it meets the acceptance criteria. The trial-and-error happens here, not on your line — so what ships is already proven.

C · ON-SITE CONFIGURATION

It arrives pre-built

The qualified cell shows up ready. On-site work is tuning, not assembly: under two weeks to integrate with your line, MES/ERP, and safety, followed by a supervised run on real product.

D · ACCEPTANCE & FIRST UNIT

Proven, then handed over

We run supervised until your safety engineer signs off and the cell hits its numbers. Your technicians operate it day to day; maintenance and software updates are covered.

05 Let's talk

We started Relling to help this country make more of what it needs. If you have a task that's hard to staff or hard to automate, send it over — we'll tell you straight whether a cell fits, and scope it if it does.

Talk to us: jai.relan@rellingsystems.com · rellingsystems.com

EXCEPTIONAL ENGINEERING, TEAM FROM

SPACEX · NASA · BOEING · TESLA · RIVIAN · ANYSIGNAL · coinbase