



CAPABILITY BRIEF

Material Handling & Palletizing

One cell that picks, packs, kits, sequences, and palletizes mixed orders, then reconfigures in software when the SKU mix shifts.

Order handling is where high-mix hurts. Cases vary in size, weight, and surface; pick faces change by the hour; pallet patterns differ per customer and per load. The work is repetitive, heavy, and ergonomically punishing, and it runs at takt. Fixed palletizers and case packers assume one product and one pattern, so every new SKU or layout means hard tooling changes or manual labor.

Relling runs the full order: vision-guided picking of varied cases, totes, and loose items, with grip and approach chosen per object. The cell builds stable pallet patterns, packs cases, kits parts, and sequences lines, then reconfigures in software when the SKU or pattern changes. No retooling between products. Every cell is qualified against your items and patterns at Relling HQ before it ships.

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**

Mixed SKU variety
Items differ in size, weight, surface, and rigidity within one run; grip, approach, and place force adapt per object rather than per line.
- B**

Vision-guided picking
Cameras locate and classify items in totes, on conveyors, or in bins, resolving pose and overlap so the cell picks varied parts without fixtures.
- C**

Pattern generation
Pallet and case layouts are computed per SKU and load, forming interlocked, stable stacks that hold through transport without manual pattern setup.
- D**

Takt-rate throughput
Cycle times are tuned to line takt, with motion and grip optimized to sustain rate across a mixed item stream rather than a single case size.
- E**

Stability & damage control
Place force, stack geometry, and grip pressure are controlled to protect fragile and irregular items and keep loads square and intact.

02 Why now

THE CASE FOR MOVING NOW

Labor is scarce and injury-prone

Pick, pack, and palletize work drives a large share of warehouse ergonomic injuries from repetitive lifting and twisting. The labor is hard to staff and harder to retain, and turnover compounds at peak volume.

E-commerce broke fixed automation

Order profiles now mix small SKUs, odd shapes, and single-unit picks. Fixed palletizers and case packers built for one product cannot follow that variety, leaving high-mix order handling manual by default.

Throughput has to hold at takt

Orders ship to a clock. A cell that picks, packs, and palletizes mixed items at sustained takt removes a bottleneck without the hard tooling and changeover cost of dedicated machines.

OEMS WE WORK WITH



03 What the service covers

TASKS ON THE LINE

- | | |
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| <p>A Mixed-case palletizing
Build interlocked, stable pallets from varied case sizes and weights per pattern.</p> <hr/> <p>C Case packing
Load loose product into cases or cartons at controlled rate and orientation.</p> <hr/> <p>E Line sequencing
Order parts and cases into the exact sequence the downstream line consumes.</p> <hr/> <p>G Tote handling
Move, induct, and empty totes between conveyors, racks, and work areas.</p> | <p>B Depalletizing
Break down incoming pallets, identifying and removing cases layer by layer.</p> <hr/> <p>D Kitting
Assemble multi-part kits by picking specified items into a single container.</p> <hr/> <p>F Bin picking
Pick varied items from cluttered bins and totes using vision-guided pose estimation.</p> <hr/> <p>H Layer forming
Form and place full pallet layers and dunnage between stacked product tiers.</p> |
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WHAT A CELL HOLDS

≤ 2 wk

Install to running on your floor, not months of integration

±0.05 mm

In-hand placement for fit- and safety-critical parts

100%

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.

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.

B · PRE-BUILD AT RELING 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.

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

