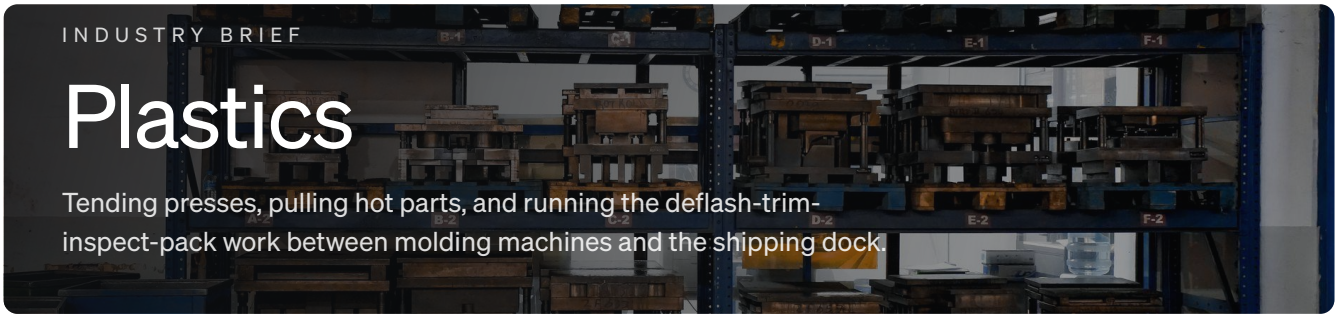

INDUSTRY BRIEF

Plastics

Tending presses, pulling hot parts, and running the deflash-trim-inspect-pack work between molding machines and the shipping dock.

A plastics floor runs many machines at once: injection presses, extruders, thermoformers, each cycling on its own clock. Molds and SKUs change often, parts come off hot and flexible, and gates, sprues, and flash vary shot to shot. Most of the work fixed automation skips is here -- degating, deflashing, insert loading, trimming, decorating, inspecting, and packing -- the contact-rich tasks that still ride on manual labor between cycles.

One Relling cell tends the machines and carries the secondary ops behind them: it pulls parts from the press, degates and deflashes, loads inserts, trims, assembles, decorates, inspects, and packs. The same hardware reconfigures in software when the mold changes -- no retooling, no new fixtures per SKU. Every cell is qualified against your parts at Relling HQ before it ships, then tuned on 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

Hot, flexible parts

Parts leave the press hot and soft, sag under their own weight, and must be gripped and placed without marking, warping, or deforming the surface.

B

Constant changeovers

Molds and SKUs swap several times a shift, so the cell must reconfigure per part in software rather than wait on dedicated tooling.

C

High SKU mix

Short runs and wide part variety make fixed automation hard to justify; one cell must hold a library of parts and switch between them on demand.

D

Gate and flash variability

Gates, sprues, and flash differ shot to shot and tool to tool, so removal and finishing demand force-aware contact, not a fixed canned path.

E

Tight secondary ops

Degating, trimming, decorating, and inspection are dexterous, contact-rich steps wedged between the press and the box that resist hard automation.

02 Why now

THE CASE FOR MOVING NOW

Hot, dull jobs lose people

Machine tending next to a hot press is repetitive, uncomfortable work that floors struggle to staff and keep. A cell takes the dull, hot, between-cycle tending so scarce labor moves to setup, quality, and higher-value work.

Thin margins, short runs

Plastics margins are thin and runs are short and varied, so dedicated tooling rarely pays back before the next changeover. A software-reconfigurable cell amortizes across the whole SKU mix instead of one part.

Reshoring high-mix work

Reshored molding and finishing brings high-mix, contact-rich work back without the labor to staff it. A cell that tends machines and runs secondary ops makes that work viable on domestic floors at competitive cost.

OEMS WE WORK WITH

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

03 What we automate in plastics

TASKS ON THE LINE

A — Part removal
Pull molded parts from the press or take-out and stage them clear of the platen.

B — Degating
Separate parts from runners and clip sprues and gates without stressing the part.

C — Deflashing
Trim and deburr flash from parting lines and edges with force-aware contact.

D — Insert loading
Place metal inserts or threads into the mold before the shot for insert molding.

E — Trimming
Trim thermoformed or extruded parts to profile and clear scrap webbing.

F — Assembly
Snap, press, or fasten molded components into finished subassemblies.

G — Decorating
Pad-print, label, or apply decoration to molded surfaces with consistent registration.

H — Inspect and pack
Check dimensions and leaks, then kit, pack, and palletize good parts.

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