VLUERP

Enterprise resource planning · Industry edition

Plastics factory solutions

From resin to released lot in one system

Blend recipes that must total 100%, regrind put back into stock at its value, moulds tracked by shot count, shift OEE and lot QC — tied to accounting, inventory and manufacturing.

Recipes that total 100%
Virgin, regrind, filler, masterbatch

Shift OEE
Availability × performance × quality

Moulds by shot count
Service before the mould wears

Every kilo of polymer — weighed, costed and traced

From the resin sack to the customer's invoice, VLUERP links every step to the next — the recipe, the machine, the shift and the QC lot — and each step posts its own accounting entry.

1. **Materials** — Resin, regrind, masterbatch
2. **Recipe** — Percentages to 100
3. **Order** — Recipe exploded in kg
4. **Machine** — With its mould
5. **Shift** — Output, scrap, downtime
6. **QC lot** — Checked, then released
7. **Customer** — Delivery and invoice

Recipes as percentages

A blend must total 100% and stay within the regrind limit before it can be approved — each version kept, the old one archived.

Scrap that comes back

Runners, purge and rejects are ground and returned to stock at their value, so the good output carries less cost.

Moulds and machines

Shot weight, shots and kg per hour from cavities and cycle; a shot-life counter says when a mould is due for service.

Lots that hold themselves

A QC check outside its spec holds the lot and blocks release — with the genealogy back to the recipe and machine.

100%	30%	60%	6
recipe total, enforced	default regrind limit	regrind value vs. virgin	QC plan templates

The blend first — then the kilograms

Recipes written the way a plastics plant works — in percentages — and a regrind loop that values the scrap you put back into the hopper.

Blend recipes

- Virgin, regrind, filler, masterbatch and additives as percentages, under one code across versions.
- Approval blocked unless the blend totals **100%** and regrind is within the limit (default 30%).
- Approving a new version archives the old one; a draft can be cloned and normalised to 100%.
- Material cost per kg and cost per **good** kg, grossed up for the recipe's yield.

Regrind loop

- Each resin knows what its scrap grinds into, so runners and rejects go back as the right material.
- Recovered regrind is received to stock at **60%** of the blend cost by default, with its own entry.
- Recycling orders turn scrap into pellets with their own yield and cost per kg.
- Before production, the recipe is exploded into kilograms on the manufacturing order and shortages shown.

A month of production in the demo plant

In the demo plant, **7 orders** across film, injection and recycling and **12 shift logs** give a shift OEE of **81.65%**. One lot failed its melt-flow check and is **on hold**; bags and crates sold to customers show a **25.9% gross margin** on both lines.

Weight from geometry

Bags, pipe, sheet and moulded parts: unit weight, pieces per kg and kg per metre worked out for you.

Pipe SDR

The standard dimension ratio calculated from the pipe's outside diameter and wall.

Real product cost

Material, labour and machine overhead posted through the manufacturing module.

Every machine, every shift — measured and checked

Machine and mould registers that know their rates, shift logs that give OEE with the reasons behind it, and lots released only when QC passes.

Machines & moulds

- Machines by type — injection, blow, film, pipe, sheet, granulator — with rated kg/h, kWh/h and hourly rate.
- Moulds with cavities, cycle and part + runner weight → shot weight, shots/h, kg/h and runner ratio.
- A **shot-life counter** per mould; health goes ok, soon, due, worn, critical, with a maintenance log.

Shifts & QC

- **OEE** = availability × performance × quality, performance against the machine or mould rate.
- Downtime by reason as a pareto, and scrap by category, per shift and across the plant.
- QC plans with min/max per test; a failed check **holds the lot** and blocks release.

Worked examples from testing

Case	What happened	Result
Film order	2,000 kg ordered, 2,061.9 kg charged at 97% yield	**1,940 kg at 4.6155/kg**
Injection crates	400 crates = 500 kg; mould counter 486,300 → 486,696	**5.2576 per piece**
QC check	A 1,165 g part against a 1,200-1,300 g spec	**Held, release blocked**
Recycling	5,000 kg of scrap into pellets at 78% yield	**3,900 kg at 1.0897/kg**
Recipe v2	45% regrind, blend totalling 125%	**Blocked from approval**
Shift OEE	88.54% × 90.47% × 96.49%	**77.29%**

Figures from end-to-end tests on the running system. The film order also returned 55 kg of regrind to stock, which lowered the cost of the good output.

Every screen in the module — and what is on it

Read off the running application — the panels, columns and figures that are actually there.

9 screens

77 functions

01 Dashboard

- Good output by machine
- Scrap by category
- Downtime by reason
- Regrind recovered
- Regrind in blend
- Cost per kg
- Production value
- OEE
- Availability

02 Production orders

- Recipe
- Machine
- Mould
- Planned kg
- Made kg
- Scrap kg
- Cost / kg
- Status
- Filter

03 Shift log

- Downtime pareto
- OEE
- Availability
- Performance
- Quality
- Good kg
- Scrap kg
- Downtime
- Machine

04 Recipes

- Code
- Product
- Process
- Lines
- Total
- Regrind
- Cost / kg
- Status

05 Machines

- Code
- Type
- Capability
- Rate / h
- kWh / h
- Moulds
- Status

06 Moulds & dies

- Need attention
- Mounted
- Customer owned
- Cavities
- Cycle
- Shots done
- Life used
- To service
- Health

07 Lots & QC

- On hold
- Released
- Rejected
- Machine
- Recipe
- kg
- Pieces
- QC
- Status

08 Materials

- Kind
- Polymer
- Grade
- MFI
- Density
- Price
- Grinds into
- Food grade
- Save material

09 Settings

- Plant defaults
- New QC plan
- Test
- Unit
- Target
- Min
- Max
- Add check

Not a separate program — a complete business system

The trade module sits on top of a complete ERP: everything it does lands directly in the accounts, the stores and the reports — no double entry.

Accounting

Editable chart of accounts, automatic entries from every transaction, VAT and financial statements.

Financial dimensions

Cost centres, departments, business lines and sites — with statements per factory.

Inventory

Warehouses and bins, batches and serials, moving average, FIFO or standard cost.

Purchasing & sales

RFQs, purchase orders and receipts, quotations, invoices and ageing.

Maintenance & assets

Equipment register, preventive maintenance, work orders and depreciation.

Access & language

Roles and rights per module, audit trail, full Arabic and English interface.

Standards and regulations supported

OEE
Availability × performance × quality

MFI
Melt flow index on every resin grade

SDR
Pipe standard dimension ratio

Industry measures the module calculates and records. QC plans hold your own test specifications, with min, max and target for each check.

See a plastics plant running now

We run a complete demo company: a month of orders across film, injection and recycling, 12 shift logs, a lot on hold and sales delivered and invoiced.

Request a demo

Website	**www.vluerp.com**
Demo request	**www.vluerp.com/#demo**
Email	**hello@vluerp.com**

1. **Plant dashboard:** output, scrap, regrind recovered and OEE, by machine and by day.
2. **Held lot:** open the failed melt-flow check and see why the lot cannot be released.
3. **Open order:** 1,600 kg of bags on the floor — produce it and watch the regrind come back.
4. **Recipes:** try to approve a blend over the regrind limit and see it blocked.

Switched on from Add-ons with a free seven-day trial, and it runs on the same general ledger.