

Stone, ceramics, glass and blocks

Stone, ceramics and glass in one system

Blocks sawn to slabs with the veins kept running, tiles through the kiln with calibre and shade held together, glass toughened and tested, and blocks tested on net area.

ISIC 23

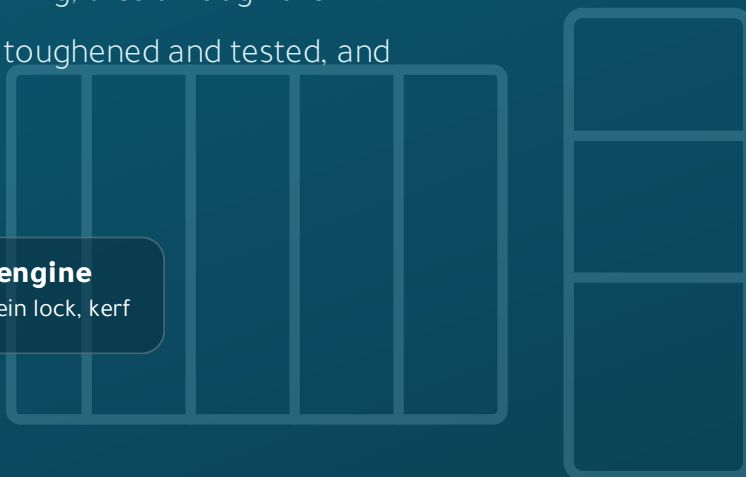
Non-metallic mineral products

2D nesting engine

Defect zones, vein lock, kerf

EN 12150-1

Toughened-glass fragmentation test



Four trades, one licence – one module

A Saudi factory licence is written by activity, so stone, ceramics, glass and concrete products sit together. VLUERP runs them as four routes in one module and shows each plant only its own.



The blade's share, shown

Slabs per block and the ceiling in m² per m³ are worked out from slab thickness and blade kerf, and every block is measured against its target.



Vein-matched tops

Each slab keeps its place in the block; a vein-matched job is refused unless a single block can carry it.



Kiln, calibre and shade

Press size from shrinkage, kiln loads sorted to first choice, and calibre and shade travelling with the lot.



Glass and blocks tested

Toughened glass by EN 12150-1 fragmentation, sealed units by dew point, and blocks by strength on net area.

4

trades in one module

40.0

m²/m³ ceiling, 20 mm slab

19.68%

of the block to the blade

62

slabs, 1,550 mm block

Sawn from the block – nested on the slab

Each block is a lot, like a steel heat: slabs keep their sequence, and cut pieces are nested onto them by a 2D engine that respects defects and veins.



Block to slab

- Slabs per block = $(\text{height} + \text{kerf}) \div (\text{thickness} + \text{kerf})$ – the last slab has no cut behind it.
- Squaring loss, slabs, area and m^2/m^3 for every block, against the target yield.
- Every slab carries its sequence, grade, finish, usable size and defects.
- Consecutive slabs book-match, so vein-matched work is planned from one block.



2D nesting engine

- MaxRects with six part orderings x two placement rules – the best layout wins.
- Defect zones are excluded; a vein-matched top is not allowed to rotate.
- Saw kerf and edge trim are allowed for on every slab.
- Cut-to-size yield per job, with the worst yields first on the dashboard.



Why 3 cm slabs pay

Worked by hand: at **20 mm** with a 5 mm blade, a 1,550 mm squared block gives **62 slabs** and the blade takes **19.68%** of it. At **30 mm** the blade's share falls to **13.87%** – the real argument for selling 3 cm.

Block yard

Blocks in the yard and sawn, the average yield and blocks under target.

Slab stock

Area, value, A grade and reserved slabs, with where each one is.

Cutting jobs

Pieces, sheets, yield, vein matching and value for every job.

Kiln, toughening, curing – each with its own tests

The other three routes carry their own physics: shrinkage in the kiln, fragmentation in toughened glass, and strength on the net area of a hollow block.



Ceramics

- Press die = finished ÷ (1 – shrinkage): a 600 mm tile presses at 645.2 mm.
- Kiln loads with first choice, gas per m² and kiln loss; calibre and shade travel with the sorted lot.
- ISO 10545 tests judged against the body.



Glass & concrete products

- Tempering loads tested for EN 12150-1 fragmentation; failed and untested loads flagged.
- Sealed units made and tracked; the dew point must be –40 °C or lower.
- Block-machine runs with rejects and cement; strength judged on net area, never gross.

Checks built into the routes

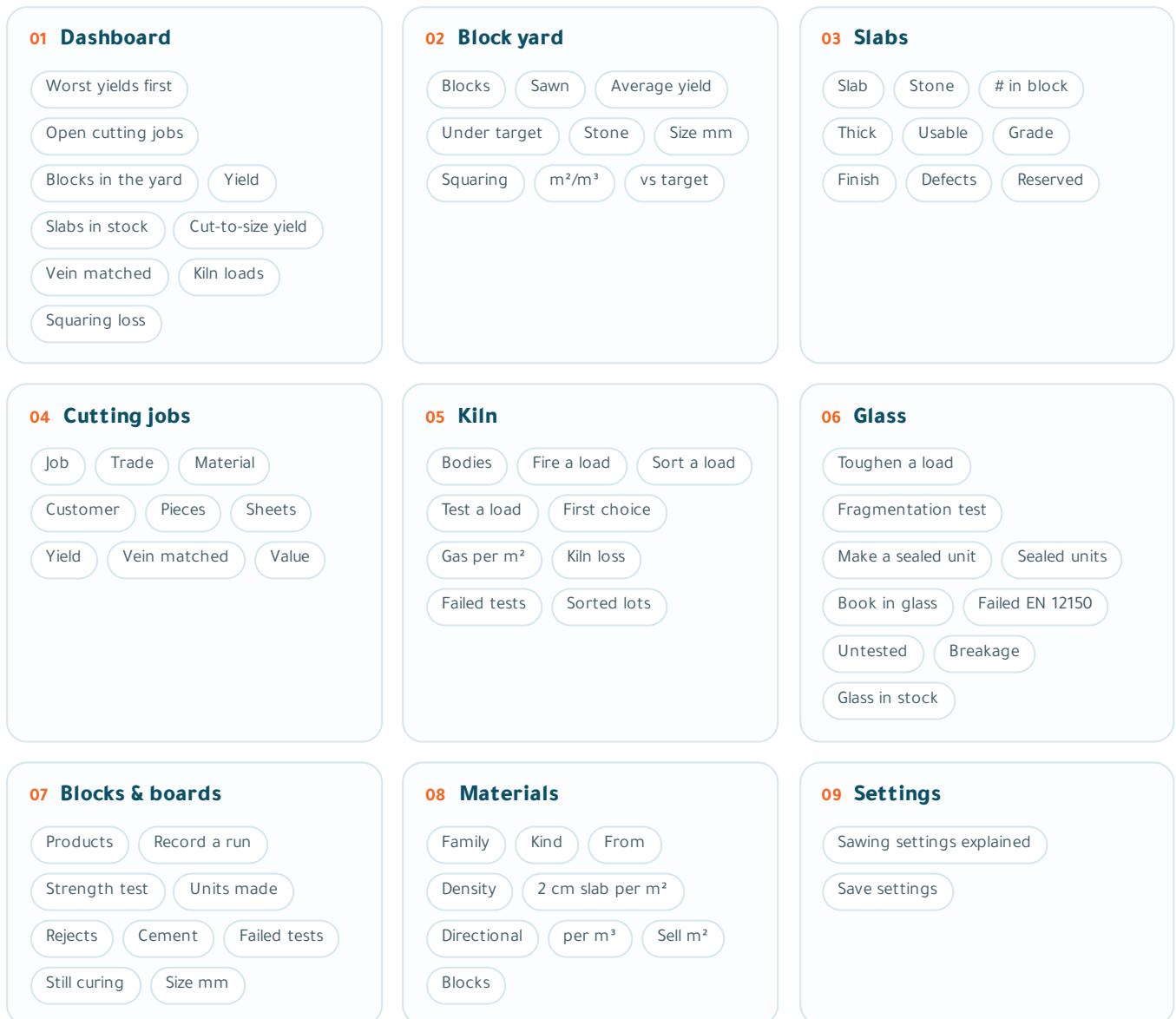
Route	Rule	Limit
Stone sawing	Ceiling in m ² per m ³ = 1000 ÷ (thickness + kerf)	40.0 at 20 mm / 5 mm
Kiln drift	0.6% on a 600 mm tile	3.6 mm – a new calibre
Toughened glass	Min pieces in the worst 50 mm square, 4-12 mm	40 pieces
Toughened glass	Longest fragment · bow	100 mm · 3 mm/m
Insulated glass unit	Dew point	≤ –40 °C
Hollow block	Strength on net area	55% of gross

Each plant switches on only the trades on its licence, so a stone yard never sees the kiln screens.

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 **74**
screens functions



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

EN 12150-1

Toughened safety glass – fragmentation

ISO 10545

Ceramic tiles – test methods

Glass fragmentation and ceramic-tile tests are judged inside the module, and every result is kept with its load or lot.

Bring one of your jobs to the demo

Book a session and we will set up your stones, ceramic bodies or glass with you, then run one of your own jobs – from block or kiln load to invoice.

Request a demo

Website

www.vluerp.com

Demo request

www.vluerp.com/#demo

Email

hello@vluerp.com

1 Block yard: slabs per block, the blade's share, and each block against its target.

2 Cutting job: a vein-matched top nested onto consecutive slabs, with its yield.

3 Kiln: a load fired and sorted to first choice, with calibre and shade on the lot.

4 Glass: a tempering load that failed the fragmentation test, and why.

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