

Aluminium window & door fabricators

From profile to opening cut to the millimetre

Window types with their cutting list, bars nested against an offcut rack, the U-value checked against the Saudi Building Code, site measure, and coating and glass sent out and costed.

EN ISO 10077-1

Window U-value with the glass edge

SBC 601 / 602

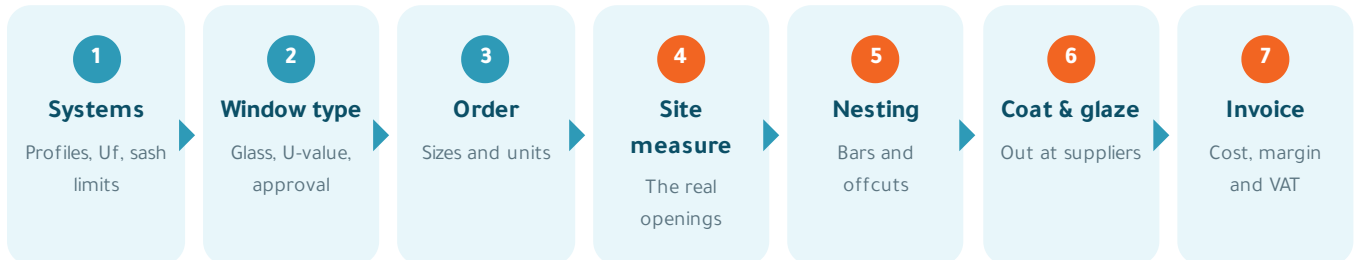
Energy limits by climate zone

Offcut rack first

Remnants over 400 mm kept as stock

Every window, every bar — **costed and traceable**

One window type serves every opening size: VLUERP explodes the order into a cutting list, nests it onto bars, sends out coating and glass, and costs the job — works and bought-in.



Cutting optimised, not guessed

Longest-first bar nesting with the saw kerf and trim — explainable to the saw operator, and within a bar or two of optimal.



Offcuts are stock

The offcut rack is searched first; any tail over the minimum length (400 mm by default) goes back on the rack with its value, not into scrap.



Energy code at approval

Each window type's U-value and solar heat gain are checked against the SBC limit for your climate zone before it can be approved.



Real cost per square metre

Profiles by kg/m, hardware, labour and bought-in coating and glass roll up into a cost per m² and a margin on every order.

8

screens in the module

400 mm

default minimum offcut

25 mm

site variance flagged

3

spacer types, Ψ built in

Every bar drawn – before it is cut

The order is exploded into a cutting list from each type's deductions, then nested onto whole bars – offcuts first – with every bar drawn to scale.



Cutting list

- Each profile in a type follows the width or height less a deduction, so one type serves every opening size.
- The shop cuts to the measured size less the site clearance, not to the drawing.
- An opening more than **25 mm** off the drawing is flagged at site measure.
- Hardware is counted per window, per sash, per metre or per corner.



Bar nesting

- Longest piece first onto the first bar that takes it, allowing the saw kerf and a trim off each fresh bar.
- The **offcut rack is searched first**, longest remnant first.
- Tails over the minimum length return to the rack as stock, with their value.
- Material is released off the nest – whole bars – not off the cutting list.



The nest reconciles to the millimetre

In testing, a frame profile needed **15.7 bars** in theory and used **17** – a **92.81%** yield. The arithmetic closes exactly: **94,200 mm** of pieces + **170** trim + **295** kerf = **94,665 mm** used.

Offcut rack

Each remnant with its profile, length, weight, rack, age and value; old ones scrapped in one step.

Bars to scale

The cutting plan draws each bar to scale with its pieces, kerf and tail.

Yield on the dashboard

Nesting yield by order and the value sitting on the offcut rack.

U-value worked out – not copied from a brochure

Each window type's U-value is calculated from its glass, frame and spacer per EN ISO 10077-1, and checked against the SBC limit for your zone.



Thermal check

- Uw from the glass area and Ug, the frame area and Uf, and the glass-edge term – the one usually left out.
- Spacer Ψ built in: aluminium 0.11, stainless 0.08, warm edge 0.05.
- Shows what a warm-edge spacer alone would save – the cheapest fix for a marginal window.



Coating, glass & approval

- Approval refuses a type over the system's sash size, weight or glass limits, or one failing the SBC check.
- Profiles go to the coater by developed surface (m^2/m); insulated units are ordered cut to size.
- Supplier jobs tracked with due dates and late flags; the bought-in cost joins the order costing.

Worked example – U-value per EN ISO 10077-1

Item	What it is	Value
Formula	$U_w = (A_g \cdot U_g + A_f \cdot U_f + I_g \cdot \Psi) \div (A_g + A_f)$	EN ISO 10077-1
Spacer Ψ	Aluminium · stainless · warm edge	0.11 · 0.08 · 0.05
Result	Casement 1200 × 1500 mm, verified by hand	1.857 W/m²K
Limit, zone 1 (Riyadh)	Maximum window U-value	$U \leq 2.10$
Limit, zone 1 (Riyadh)	Maximum solar heat gain coefficient	SHGC ≤ 0.25
Site measure	Opening off the drawing	Flagged over 25 mm

The limits for each climate zone are held in Settings (Saudi Building Code fenestration limits), where your engineer can keep them current.

Every screen in the module – and what is on it

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

8

screens

68

functions

01 Dashboard

Nesting yield by order

U-value against the limit

Units this month

Order value

In the shop

Awaiting measure

Approved types

Offcuts on the rack

Rack value

02 Window types

Type

System

Opening

Size mm

Glass

Uw

SHGC

Energy code

Status

03 Orders

Order

Customer

Site

Units

Area

Measured

Yield

Value

Status

04 Offcut rack

Profile

Length

Weight

Rack

Age

Value

Used

Scrapped

Add an offcut by hand

05 Coating & glass

Out at suppliers

Late

Coating

Glass

Supplier

Specification

Sent

Due

Bought-in cost

06 Systems

Supplier

Thermal break

Frame Uf

Max sash

Max weight

Max glass

Profiles

Certificate

Add a system

07 Glass

Make-up

Thickness

Spacer

Ug

SHGC

Light

Weight

Price/m²

Used by

08 Settings

SBC fenestration limits

Zone

Max window U-value

Max solar heat gain

Save settings

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 ISO 10077-1

Thermal performance of windows – Uw

SBC 601

Energy conservation – non-residential

SBC 602

Energy conservation – residential

The U-value method and the energy-code limits are built into window-type approval; the limits for each climate zone are editable in Settings.

Bring a real order **to the demo**

Book a session and we will set up your profile system, glass make-ups and window types with you, then run one of your own orders from site measure to costed invoice.

Request a demo

Website

www.vluerp.com

Demo request

www.vluerp.com/#demo

Email

hello@vluerp.com

- 1 Window designer:** the U-value sum line by line, with the verdict against your zone's limit.
- 2 Cutting & nest:** every bar drawn to scale, offcuts used first, and the yield per profile.
- 3 Site measure:** enter the measured sizes and see an opening that is off the drawing flagged.
- 4 Order costing:** works plus bought-in coating and glass, cost per m² and margin.

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