

Paper mill & box plant solutions

From pulp to the box counted bone-dry

Fibre balanced bone-dry so water never passes for yield, deckle plans that set the knives once, strength sold as an index, and a McKee check on every box – tied to accounting and stock.

Bone-dry fibre

Water never counted as yield

Deckle planning

Few patterns, least trim

McKee box check

Compression from ECT and caliper

Water, width and strength – the three that count

From the bale in the stock yard to the box on the pallet, VLUERP links every step to the next – the furnish, the machine run, the reel, the roll and the board – and each step posts its own accounting entry.



Water taken out

Pulp is bought air-dry, stock is mostly water and paper is sold moist. Every balance is struck bone-dry, so yield is fibre, not water.



Width planned

The knives are set once for a run of reels, so the plan is a few patterns with multiplicities – not a cut per reel.



Strength per gramme

Grades are specified as burst and ring-crush index, so the mill is not giving fibre away to meet an absolute figure.



Board and box

Flute take-up, edge crush from the liners and medium, and box compression checked against the stack it must carry.

90%

fibre in air-dry pulp

99%

water in the machine stock

1.43

C-flute take-up

0.90

default ECT factor

Fibre in, fibre out – with the water left out

The stock yard, the furnish and the paper machine balanced on bone-dry fibre – so the yield you read is the yield you have.



Stock yard & furnish

- Every component with its moisture, yield and usable fibre, cost per tonne bought and per tonne of fibre.
- Burst and ring-crush indices and ash per component, so the furnish is judged by what it gives.
- A furnish optimiser built on the shared blending engine proposes the blend.
- Genealogy both ways from any starting point: where it went, and what went into it.



The machine

- Runs with hours, speed in m/min, tonnes, fibre, efficiency, yield, broke and breaks.
- Paper is sold at its moisture, so the dashboard shows what was made and **how much of it is fibre**.
- A run that shows more bone-dry fibre out than went in is **refused**.
- Slitter trim is posted back to the run as broke – never sold inside the rolls.



Seven points of yield that are only water

In the test mill, 14 runs made **6,890 t**. The fibre yield reads **89.52%** bone-dry against an apparent **96.77%** – a seven-point gap that is purely water, and the easiest way for a mill to believe it is doing better than it is.

Order book

Width, diameter, rolls, made, outstanding and over-made per order, priced per tonne.

Grades

Grammage window, caliper, bulk, burst and ring-crush index and selling price per tonne.

Rolls

Every roll with width, tonnes, fibre, moisture, test indices and the order it belongs to.

The width and the box – worked out, not guessed

A deckle engine that plans the knives the way a slitter really works, and board and box design that checks strength before you quote.



Deckle plans

- Patterns with multiplicities within the deckle and the knife count, because the knives are set once per run.
- Every pattern is tried as the opening move, so no width is left stranded at the end of the plan.
- Each extra pattern carries a penalty, so the plan will take a little more trim to save a knife change.



Board & boxes

- Board by flute, liners and medium, with **take-up** (C-flute 1.43) – leave it out and a quote is ~10% light.
- Edge crush estimated from the components' ring crush with a calibration factor the mill sets.
- **McKee**: $BCT = 5.87 \times ECT \times \sqrt{(\text{caliper} \times \text{perimeter})}$, and the inverse – the ECT a stack needs.

Worked figures from the test mill

Measure	Detail	Result
Fibre yield	Bone-dry, over all 14 runs	89.52%
Apparent yield	The same runs, with water counted as product	96.77%
Deckle trim	Average over 4 deckle plans	2.56%
C-flute board	140/120/140 on real testliner ring crush	5.1 kN/m ECT
Kraftliner, market pulp	Cost 2,918/t against a 2,650 selling price	Made at a loss
Boxes	One box deliberately over-specified	Caught by McKee

Figures from the seeded mill used to test the module. The kraftliner loss is real arithmetic: a mill without its own pulp mill has to price that grade higher.

Every screen in the module – and what is on it

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

10 **78**
screens functions

01 Dashboard

Where the fibre goes Made
Of which fibre Fibre yield
Efficiency Broke Trim
Power Recent runs

02 The machine

Hours m/min Tonnes
Fibre Efficiency Yield
Broke Breaks

03 Deckle plans

Deckle Patterns Reels
Trim Waste Tonnes State

04 Rolls

Width Tonnes Fibre
Moisture Burst index
RCT index Tests Order
State

05 Order book

Take an order Width
Diameter Rolls Made
Outstanding Over Due
Price / t

06 Grades

Grammage Window Caliper
Bulk Burst index RCT index
RCT absolute Sell / t

07 Stock yard

Moisture Yield Usable
Cost / t bought Cost / t fibre
Burst index RCT index Ash
In the yard

08 Board & boxes

Flute Liners and medium
Take-up Grammage Caliper
Edge crush Cost / m²
Box style Size

09 Genealogy

Pick a starting point
Where did it go?
What went into it?

10 Settings

Machines Wire Trim
Speed Grammage Knives
Ledger accounts

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

Bone-dry basis

Fibre balance on oven-dry weight

Burst index

Burst strength per gramme

RCT index

Ring crush per gramme

ECT

Edge crush with a mill-set factor

McKee BCT

Box compression from ECT and caliper

Industry measures the module calculates. The mill sets its own grade windows and ECT calibration factor rather than living with a fixed constant.

See it with your mill **step by step**

Book a session and we'll load one of your grades and a week of your order book, and walk through the fibre balance and a deckle plan with you.

Request a demo

Website

www.vluerp.com

Demo request

www.vluerp.com/#demo

Email

hello@vluerp.com

- 1 Fibre balance:** the gap between apparent yield and bone-dry fibre yield on your own runs.
- 2 Deckle plan:** your order widths planned into patterns, with the trim for each one.
- 3 Grades:** strength set as indices, and the margin per grade per tonne.
- 4 Board & box:** a board built from liners and medium, and the McKee check on a box.

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