CutOptim

ENGINE API · LIVE TODAY

The Cutting-Optimization Engine, as an API

A deterministic cutting-optimization engine, callable over HTTP — the same solver that powers the CutOptim app, exposed for your ERP, quoting tool or machine software. Send parts and stock, get back the full layout, cut plan and yield.

1,259	87.5%	4 modes	REST
PUBLIC BENCHMARK JOBS	ON THE BOUND OR WITHIN A SHEET	2D·1D·WOOD·NEST	JSON · OPENAPI 3.1

Live today — a free validate endpoint checks any job with no key and no quota, so you can build the integration before holding a key.

Why build on it, not build it

Every ERP, quoting tool and machine controller that cuts material needs waste optimization — but a correct cutting-stock solver is months of work and easy to get subtly wrong. Cutting in list order routinely wastes **15–30% of the sheet or bar**; getting it down means a real guillotine algorithm with kerf and trim handling.

The gap is not “an optimizer” — those exist, locked inside desktop suites. The gap is a **deterministic, panel-saw-aware optimizer you can call from your own software** and trust for a quote — the same request always returns the same plan, so you can audit it and reproduce last year’s order.

What the API does

Four modes, one call each: `POST /v1/optimize/2d` for panels, `/1d` for linear stock, `/wood` for timber with cross-section matching, and `/nest` for **true-shape nesting** of irregular polygons (laser, plasma, waterjet). Send parts and stock as JSON; get the layout, the cut plan (or the nest) and the yield.

Material-aware, edge-banding, inline export: tag parts with a material and each is cut only from its own stock; ask for `include:["svg","dxf","csv"]` and the cut list comes back as a ready file inline, with any `meta` object returned verbatim on every placed piece.

POST /v1/optimize/2d

```
{
  "parts": [
    { "w": 600, "h": 400, "qty": 8 },
    { "w": 300, "h": 300, "qty": 12 }
  ],
  "stock": [
    { "w": 2800, "h": 2070, "qty": 20 }
  ],
  "options": { "kerf": 3.2 }
}
```

200 OK

```
{
  "engineVersion": "1.0.0+8682",
  "summary": {
    "sheetsUsed": 3,
    "yieldPct": 84.0,
    "producible": true
  },
  "sheets": [ /* layout + cut plan */ ]
}
```

Every request is schema-checked for free at `POST /v1/validate/{2d,1d,wood,nest}` — no key, no quota — so you can confirm a payload before you spend a call.

How it fits your stack

Deterministic and version-pinned. No randomness, no clock in the algorithm: the same input always returns the same plan. Cache it, diff it in tests, reproduce a quote months later. A pinnable `engineVersion` and an OpenAPI 3.1 document describe the whole contract.

DETERMINISTIC

Same input → same output. Auditable, cacheable, reproducible for quotes and repeat orders.

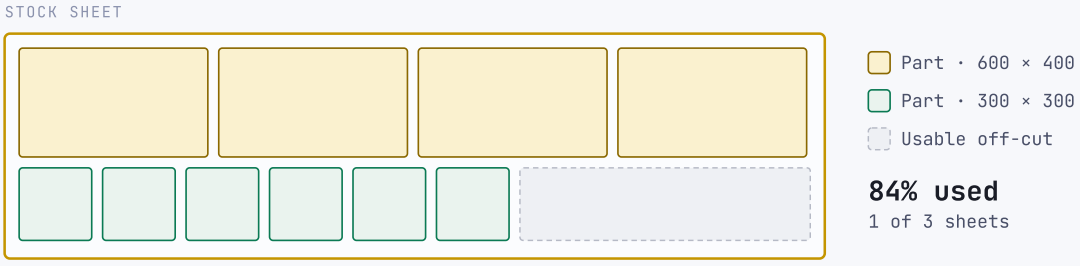
A REAL CUT PLAN

Not just rectangles: the guillotine cut sequence, cut lines vs. saw passes, and a producible-on-a-panel-saw flag.

PANEL-SAW AWARE

Kerf, per-side trim, tolerance, cost mode, grain groups, max stages — the same options the app exposes.

What the plan looks like



One sheet from a 3-sheet job. Parts packed by the guillotine algorithm; the dashed area is the usable off-cut. The API returns this as coordinates plus the cut sequence — not just a picture.

Integrate in three steps

1. **Validate for free** — `POST /v1/validate/2d` confirms your payload with no key and no quota.
2. **Get a sandbox key** in the dashboard and start the 14-day trial.
3. **Call optimize** and read the plan straight into your ERP, quote or machine file.

Pricing

€49 /month

- → **10,000 requests / month** — hard cap, no overage, no surprise bill.
- → **14-day trial** · billed in EUR.
- → Higher volume or separate staging keys? Tell us your numbers.

See the engine run on your job

Reply with a sample cut list and we'll show you the plan the API returns — live, on your own data. Or start the trial and call it yourself today.

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SCAN TO OPEN
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