Zünd Cut Center – ZCC
The software suite for digital cutting

Your first choice in digital cutting.
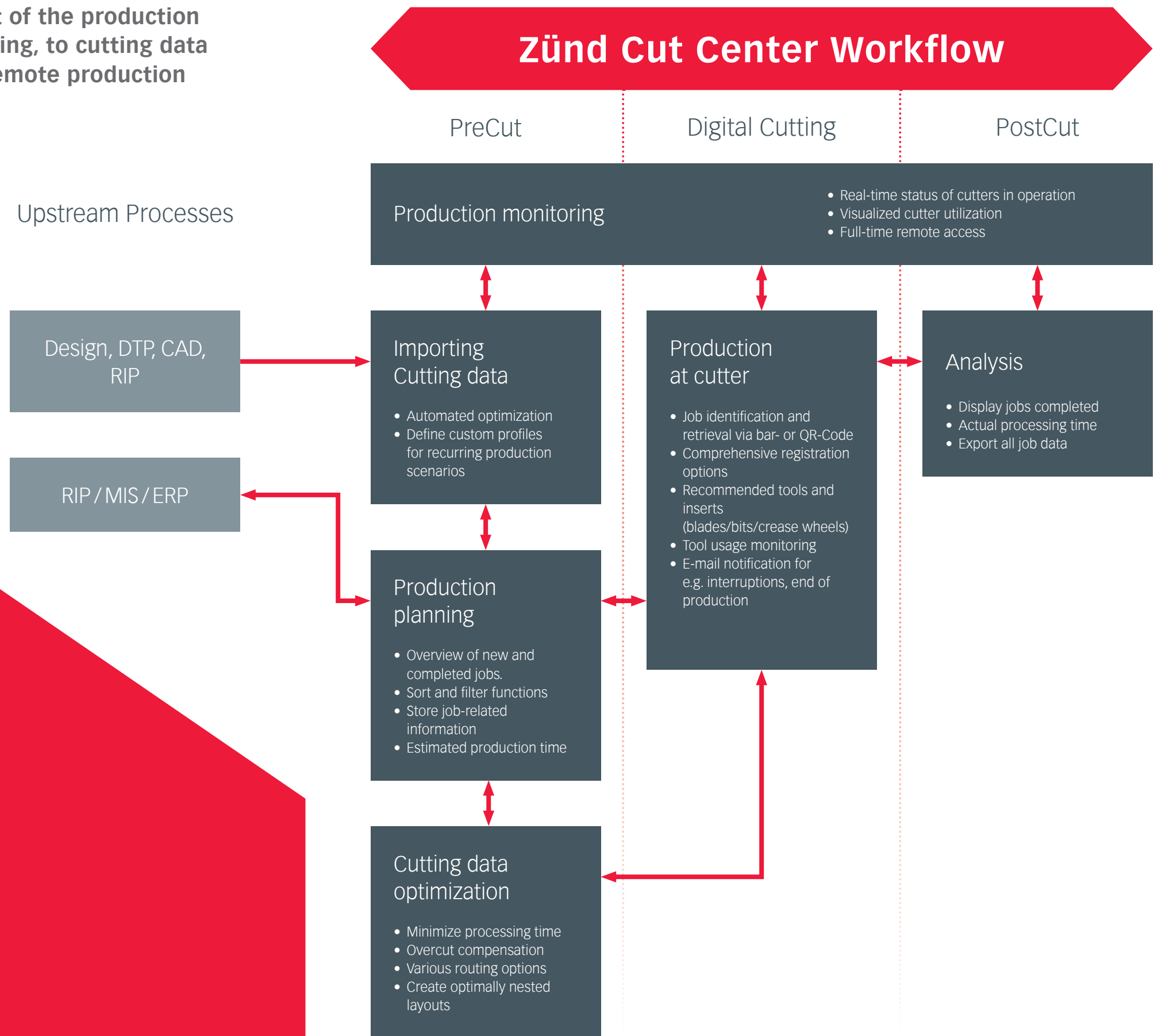
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Zünd Cut Center
Software designed to take you further

Zünd Cut Center software facilitates every aspect of the production workflow – from file import and production planning, to cutting data optimization, cutting system management, and remote production monitoring.

Zünd Cut Center Workflow

PreCut | Digital Cutting | PostCut

Upstream Processes

Production monitoring
- Real-time status of cutters in operation
- Visualized cutter utilization
- Full-time remote access

Design, DTP, CAD, RIP

Importing Cutting data
- Automated optimization
- Define custom profiles for recurring production scenarios

Production at cutter
- Job identification and retrieval via bar- or QR-Code
- Comprehensive registration options
- Recommended tools and inserts (blades/bits/crease wheels)
- Tool usage monitoring
- E-mail notification for e.g. interruptions, end of production

Analysis
- Display jobs completed
- Actual processing time
- Export all job data

RIP / MIS / ERP

Zünd Cut Center takes finishing to the next level. By optimizing both cutter utilization and manpower, ZCC significantly increases your productivity.

Production planning
- Overview of new and completed jobs.
- Sort and filter functions
- Store job-related information
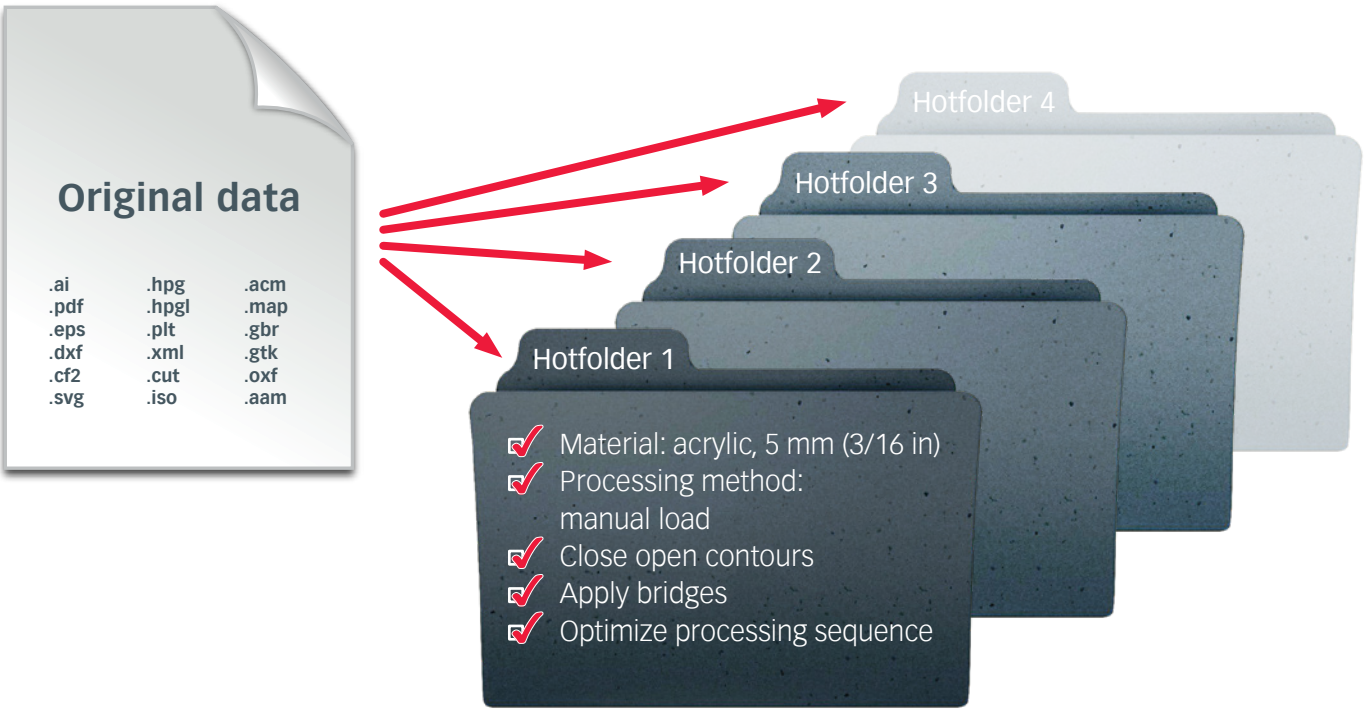- Estimated production time

- Process more jobs without adding manpower.

- Optimize material utilization through software-assisted setup.

- Maximize process reliability with automated workflows, flexible job management, and reliable pre- & post-production analysis.

- Make your production workflow more transparent and efficient through data exchange with ERP and MIS systems.

Cutting data optimization
- Minimize processing time
- Overcut compensation
- Various routing options
- Create optimally nested layouts

Import cutting data » H Hot Folder
Intelligent, automated file preparation

Let Hot Folders do cutter-related file preparation for you! Automatic generation of production-ready data accelerates your workflow and eliminates the need for manual steps in file preparation.

Original data

.ai	.hpg	.acm
.pdf	.hpgl	.map
.eps	.plt	.gbr
.dxf	.xml	.gtk
.cf2	.cut	.oxf
.svg	.iso	.aam

Hotfolder 4
Hotfolder 3
Hotfolder 2
Hotfolder 1

☑ Material: acrylic, 5 mm (3/16 in)
☑ Processing method:
   manual load
☑ Close open contours
☑ Apply bridges
☑ Optimize processing sequence

Automatic cutting data optimization
Reduce processing time even as you import data. ZCC optimizes cutting data for the best processing direction and sequence, keeping travel distances as short as possible. Among other things, the software also defines open contours, removes duplicate lines, and smoothes curves.

Customizable import settings
Insert bridges for every routing job, or make sure a certain material is always processed using the same methods and parameters. User-definable import profiles help you deal with recurring production scenarios without the need for manual entries.
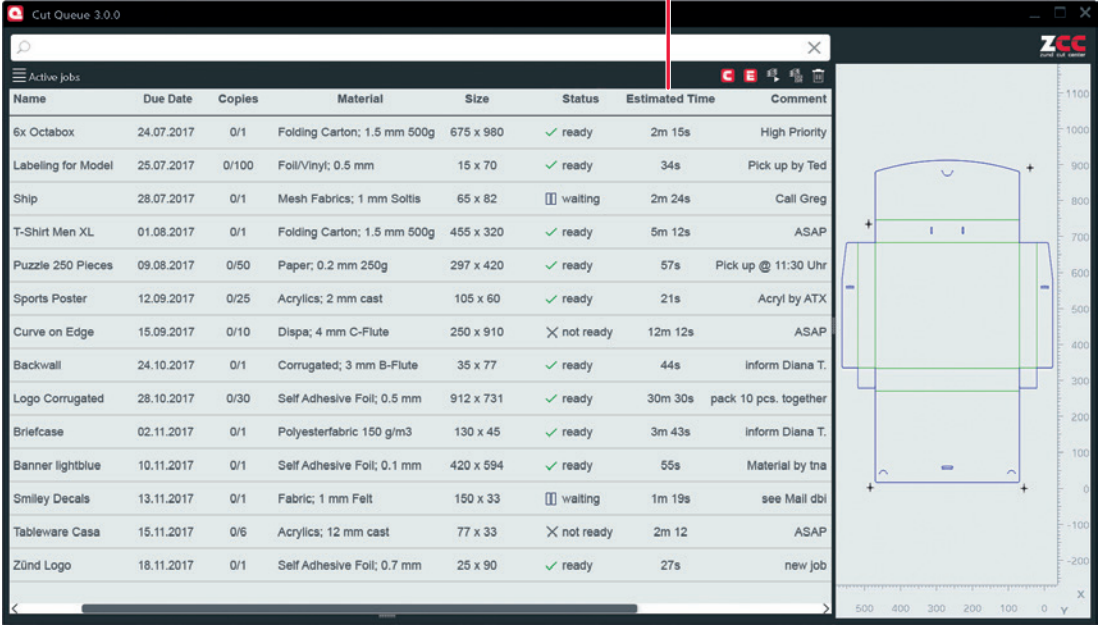
Production planning » e Cut Queue
Organization & overview of all your jobs

Cut Queue facilitates production planning and order management. It gives you the ability to easily manage orders, sort, filter or combine jobs for batch processing.

Comprehensive metadata
Information such as due dates, order number, material, status helps filter and identify jobs

Estimated production time

Name	Due Date	Copies	Material	Size	Status	Estimated Time	Comment
6x Octabox	24.07.2017	0/1	Folding Carton; 1.5 mm 500g	675 x 980	✓ ready	2m 15s	High Priority
Labeling for Model	25.07.2017	0/100	Foil/Vinyl; 0.5 mm	15 x 70	✓ ready	34s	Pick up by Ted
Ship	28.07.2017	0/1	Mesh Fabrics; 1 mm Soltis	65 x 82	⏸ waiting	2m 24s	Call Greg
T-Shirt Men XL	01.08.2017	0/1	Folding Carton; 1.5 mm 500g	455 x 320	✓ ready	5m 12s	ASAP
Puzzle 250 Pieces	09.08.2017	0/50	Paper; 0.2 mm 250g	297 x 420	✓ ready	57s	Pick up @ 11:30 Uhr
Sports Poster	12.09.2017	0/25	Acrylics; 2 mm cast	105 x 60	✓ ready	21s	Acryl by ATX
Curve on Edge	15.09.2017	0/10	Dispa; 4 mm C-Flute	250 x 910	✗ not ready	12m 12s	ASAP
Backwall	24.10.2017	0/1	Corrugated; 3 mm B-Flute	35 x 77	✓ ready	44s	inform Diana T.
Logo Corrugated	28.10.2017	0/30	Self Adhesive Foil; 0.5 mm	912 x 731	✓ ready	30m 30s	pack 10 pcs. together
Briefcase	02.11.2017	0/1	Polyesterfabric 150 g/m3	130 x 45	✓ ready	3m 43s	inform Diana T.
Banner lightblue	10.11.2017	0/1	Self Adhesive Foil; 0.1 mm	420 x 594	✓ ready	55s	Material by tna
Smiley Decals	13.11.2017	0/1	Fabric; 1 mm Felt	150 x 33	⏸ waiting	1m 19s	see Mail dbi
Tableware Casa	15.11.2017	0/6	Acrylics; 12 mm cast	77 x 33	✗ not ready	2m 12	ASAP
Zünd Logo	18.11.2017	0/1	Self Adhesive Foil; 0.7 mm	25 x 90	✓ ready	27s	new job

Job preview
Preview of selected job including all contours

Pending jobs
Clear overview of pending jobs and related information

Benefits at a glance:
- Automatically optimized cut-paths and processing time
- Create user-definable import profiles
- User-definable processing methods

Benefits at a glance:
- Scheduling and management of pending jobs
- Sort and filter functions facilitate production planning
- All job-related information stored in one place
- Processing time estimates for reliable production planning
- Batch processing for efficient production workflow

Optimize cutting data » E Cut Editor
Powerful functions for perfect results

Cut Editor lets you change settings any time. Make the most of your cut files!

Estimate production time
Changes in cutting parameters can affect production time. Compare settings and estimate production times for accurate production planning & scheduling.
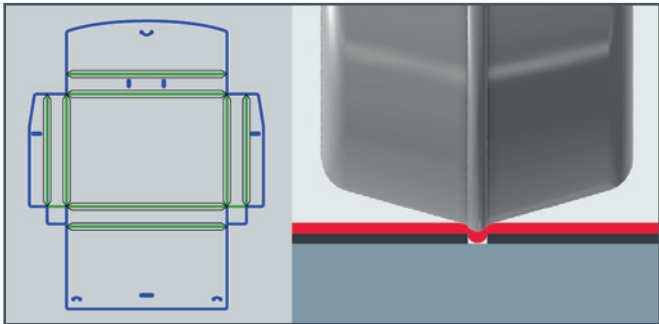

Eliminate overcuts
Optimize cut quality with overcut elimation. The system determines the best cut path based on material thickness and blade used for processing.

Perfect creasing
The use of creasing counters optimizes the quality of creases. In Cut Editor, you can now create matching counters with just few mouse clicks.

Powerful nesting function
Designed for maximum yield from unprinted materials, Cut Editor offers intelligent nesting algorithms that create layouts with perfectly nested contours.

Benefits at a glance:
- Estimated production time calculations
- Numerous functions for cutting-data optimization
- Last-minute changes to objects and cut paths
- Cut Editor can be run on several PCs simultaneously

Cut Editor, a powerful editing tool with numerous routing functions:


Inlay function
To ensure inlays fit perfectly, the inlay function automatically creates a secondary cut file from the positive shape, which is then used to create the negative shape.
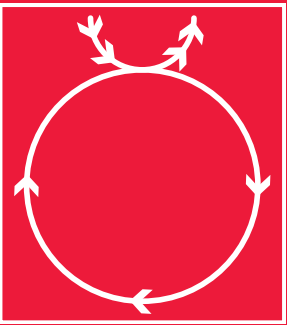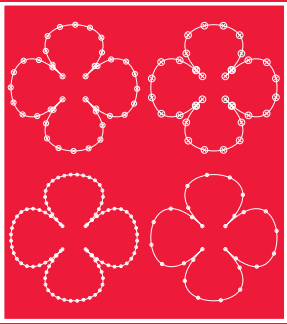

Lead in/lead out
For best results, start and end points are positioned outside the cut path.
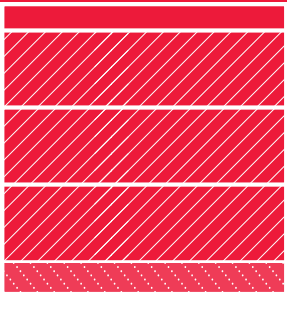
Multipass optimization
The system automatically determines the ideal number of passes for optimal speed and bit longevity.
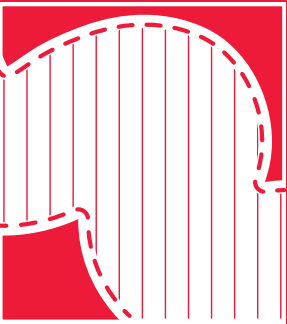
Multi-function passes
Switch from clockwise to counter-clockwise passes, or from rough cuts to smoothing and polishing.

Dotted line patterns
The user defines the number and distance of drill holes to be cut on a path. The holes are evenly distributed and centered on the designated contour.
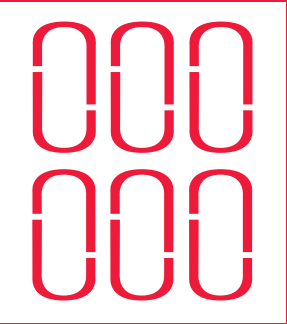
Automatic bridging
User-definable number of bridges and minimum spacing between them.

Production at cutter » ◪ Cut Center
Well-conceived control center

Cut Center serves as direct interface to the Zünd cutting system and facilitates your production workflow. The software suggests recommended tooling based on the job at hand.

Intelligent materials database
Based on the cutter configuration and available tools, Cut Center suggests ideal tooling for the job at hand. All materials contained in the ever-growing database have been assigned recommended processing parameters.

Tool usage monitoring
The software tracks the processing distances of each blade in use and compares these with the job data. If necessary, the system will suggest a blade replacement before processing begins in order to prevent interruptions during production.

Unique job identification
QR-codes applied to the substrate simplify identifying and retrieving the current job. Once the cutting data has been retrieved, processing begins automatically.

E-mail notification
The user specifies the processes that will trigger a notification, e.g. for job completion, unexpected interruptions, etc.

A perfect preview
For final review, simulate the job either onscreen or on the cutting system.

OCC – ultimate efficiency

Mounted above the cutting system, the Over Cutter Camera – OCC captures all register marks in a single shot.

Digital capture in seconds
The high-resolution optics system captures all register marks at once. This significantly speeds up the registration process.

For a perfect cut-to-print match, reliable registration is indispensable.

High-resolution optics combined with powerful algorithms: The modularity of Zünd cutting systems extends to the solutions available for digitally capturing registration marks. The highly precise ICC camera and registration system can be easily expanded with the remarkably fast Over Cutter Camera – OCC.

Automatically register rolled materials
After each material advance, ICC and OCC determine the exact position. This ensures maximum productivity and consistently high quality.

Precise material placement no longer matters
Board and sheeted materials can be placed randomly on the cutter. Intelligent optics automatically determine position and orientation.

Suitable for all materials
The ICC camera reliably captures register marks even with low-contrast or reflective materials.

ICC – maximum precision

The ICC camera mounted on the module carriage sequentially captures as many register marks as needed for precise cut-to-print registration.

When jobs call for ultimate precision
The ICC camera captures the exact position of each register mark. Algorithms intelligently process the data and calculate material position, orientation, and possible distortions.

Edge recognition
Unprinted materials, or printed substrates that need to be cut from the back with the print facing down, can be registered with edge recognition.

User-defined registration marks possible
Instead of traditional register marks, users can define picture or text elements printed along with graphics for the system to capture and interpret.
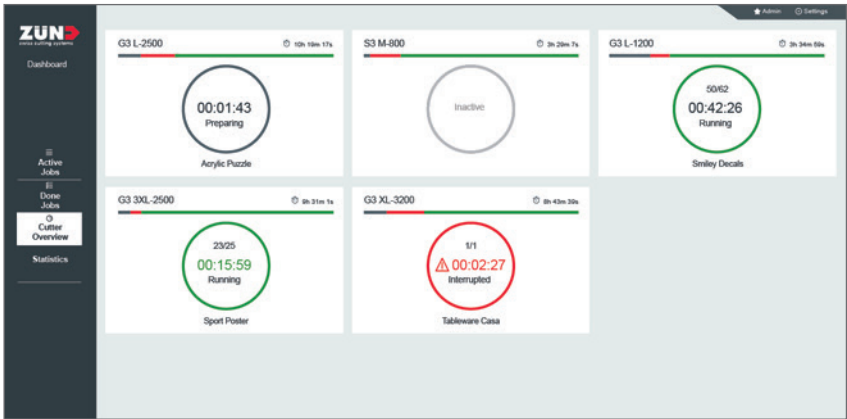
Production monitoring » Dashboard
Online 24/7: always know what's going on

The browser-based Dashboard gives management and production staff easy, full-time remote access to relevant performance data. It lets you always keep an eye on real-time order status and Zünd cutter utilization.

Analysis » Cut Queue
Useful metrics, greater profitability

Increase productivity and profitablity by analyzing completed jobs. In-depth, easily reviewable production data highlights workflow efficiencies and potential areas for improvement.

Keeping an eye on production
Real-time data on setup, processing and idle time.

Statistics
Display and appraisal of production data for overall productivity studies.

Completed jobs
Overview of completed jobs with relevant production details

Export information
Production data pertaining to e.g. cutting time or tool usage can be exported for further analysis.

Job preview
Visualizing the job facilitates identification

Production time
Actual production time, relevant for production analysis and accounting

Productivity
Productivity visualized for each job produced, incl. setup and idle time

Benefits at a glance:
- Review job queue via mobile device – anytime, anywhere
- Quickly and easily add comments or additional job information
- Identify problem areas early, with in-depth production monitoring

Benefits at a glance:
- Fast, detailed analysis of production data
- In-depth data creates transparency for evaluating profitability
- Centralized storage of job and production data

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