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CZ PLUS L | EXTENDED

COMELZ

 **THE CUTTING
EDGE COMPANY**

PATTERN FABRIC CUTTING SYSTEM

CZ PLUS L - EXTENDED



CZ Plus L - Extended
with unwinder-aligner RD

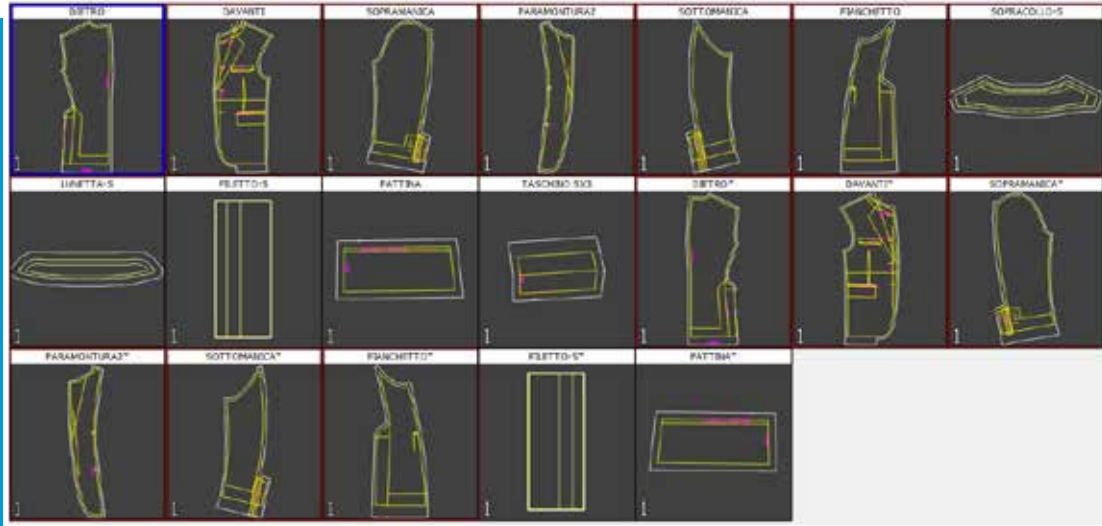
The **CZ Plus L Extended** represents the evolution in the field of cutting machines for single-ply fabrics. The **Vision** Comelz system makes it perfect for patterned fabrics, such as placed prints, all-over, plaid materials.

SOFTWARE

Proprietary software allows the machine extreme flexibility for cutting patterned fabrics.

PREPARATION: MODELS

Patterns are imported fully automatically from files in different formats (DXF, ISO, HPGL, ...), in the office or directly on the machine. Grading points, weft/warp anchorage and fabric drop stitches are handled automatically; any missing information can still be added after import.



PREPARATION: MATERIALS

New materials (Plaids, Printed patterns, All-over) can be categorised with a few clicks in the office or directly in the machine.

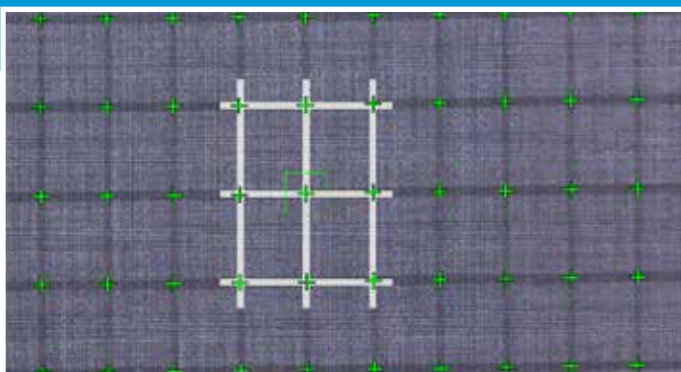
Automatic material deformation management:

- Standard system with error minimisation at various points.
- Advanced **CFSS** (Comelz Fabric Straightening System) exactly replicates the results of fabric straightening with a needle table by eliminating its limitations.
- **CFRS** system (Comelz Fabric Resizing System) for automatic management of “material drop” and material change’ (with different settings for warp and weft).

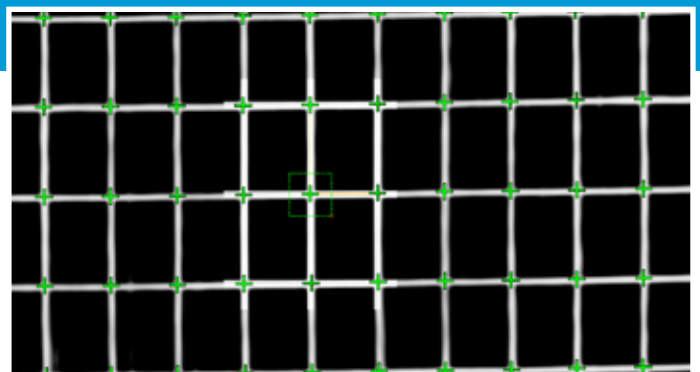
Automatic material defect management:

- **CFDS** system (Comelz Fabric Defect System) for automatic stamp reference recognition. Nesting, performed directly in the machine, is modified in real time to avoid fabric defect (minimising material waste).

Obviously the machine software also allows the cutting of plain-colour fabrics with excellent levels of productivity and efficiency.



Original



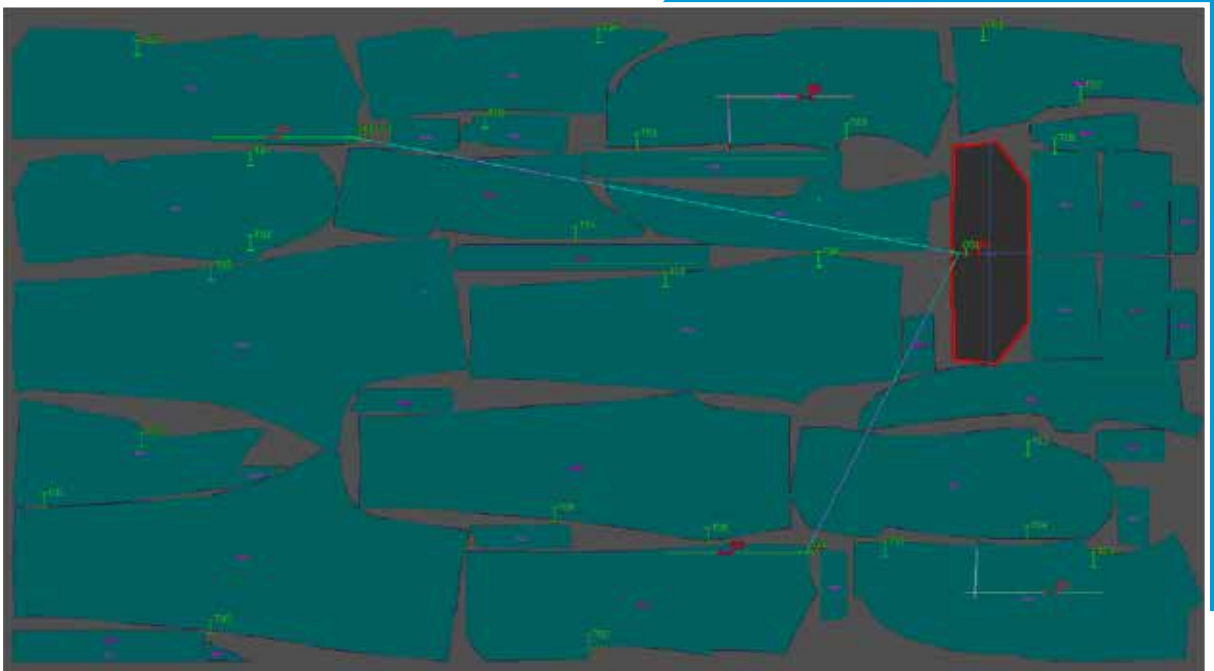
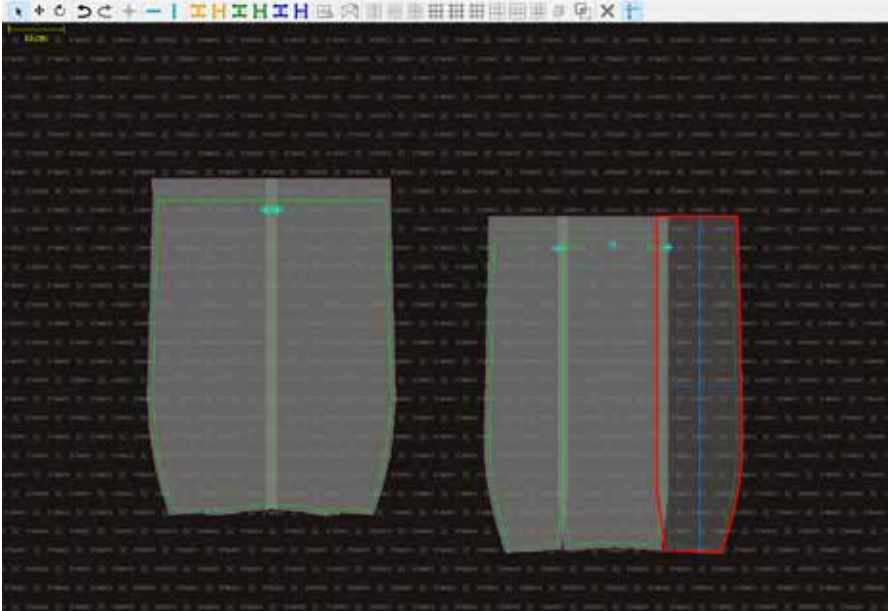
Processed by AI

PREPARATION: NESTING

For plaid or all-over fabrics, no marker preparation is necessary as the machine can operate with a fully automatic marker system performed directly at the time of cutting.

For printed pattern fabrics, an initial marker is of course required, which will then be used for subsequent automatic markers. The first nesting can be carried out in the machine, in the office or can be imported automatically from image files of the fabric with nesting (also files from 3D systems).

In conclusion, the complete preparation process is either fully automatic or requires just a few clicks. In any case, the user is completely autonomous.



AUTOMATIC NESTING

For plaid or all-over fabrics, a fully automatic nesting is available that optimises the material yield (a special feature is also available that allows, while optimising the yield, several pieces to be placed next to each other to avoid typical pitch variation problems). Nesting is carried out during the cutting of the previous garment and therefore does not involve machine downtime.

ALL-OVER MATERIAL

Materials with repeated logos or designs can be mapped using 'Vision' and the machine will take care of placing the parts using the anchor points precisely and correcting any deformation of the material.



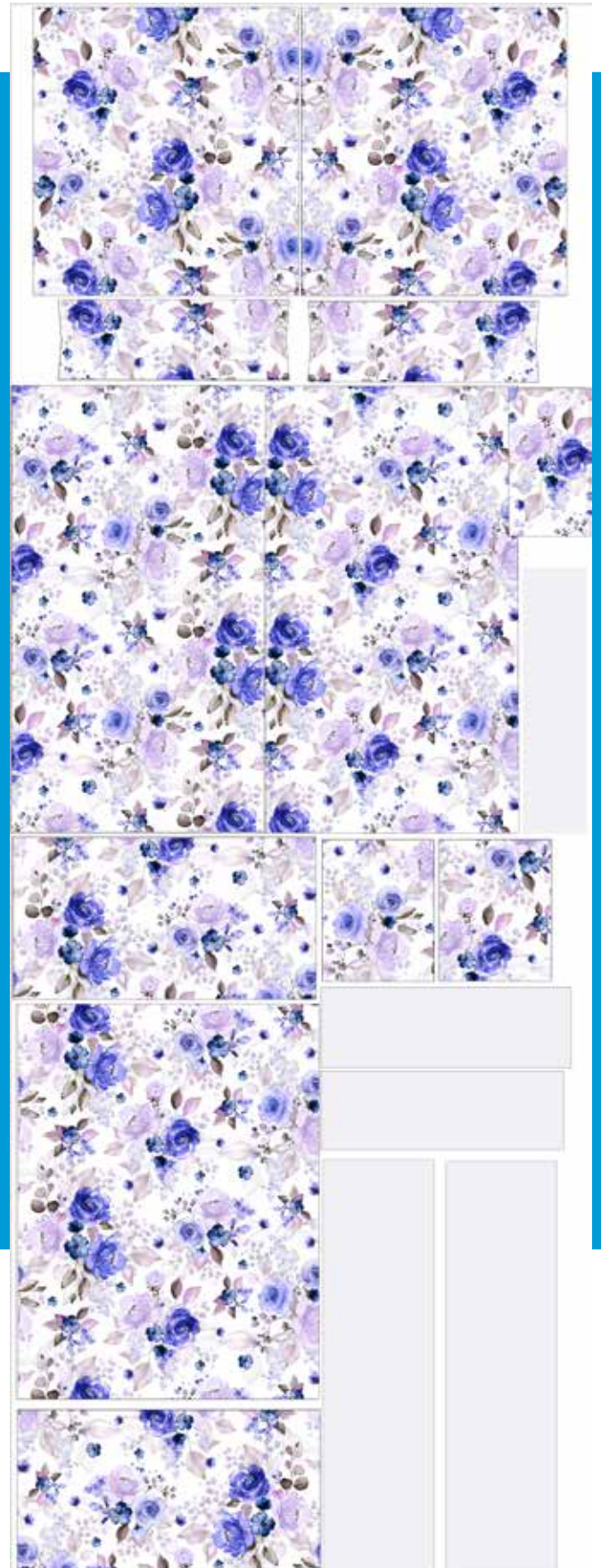
PLAID MATERIAL

Even materials with checked, plaid or striped patterns can be mapped with the 'Vision' system. Pieces can be connected to each other using meeting points that allow perfect positioning during garment making.



PRINTED PATTERN MATERIAL

Materials with placed prints are based on all-over graphics, but the areas of material where the pieces are to be cut are positioned on the panels in such a way as to optimise placement, thus minimising material waste.



VISION + LIGHTS

Comelz is the only company with a fully proprietary advanced vision system (from the design and production of the cameras and lighting system to the vision software).

The Comelz vision system is unique in that it is equipped with 12 high-resolution industrial cameras equipped with special lenses to recognise even the most difficult materials. The large number of cameras allows the vision system to be positioned close to the fabric, minimising the typical problems of systems with a few cameras positioned far from the fabric, which are less accurate and have to be recalibrated often.

The field of vision allows placements of any length to be cut. To be able to read even the most difficult fabrics, the machine is equipped with an innovative lighting system with 432 LEDs and lights from different angles.



PROJECTION

The machine is equipped with 5 projectors:

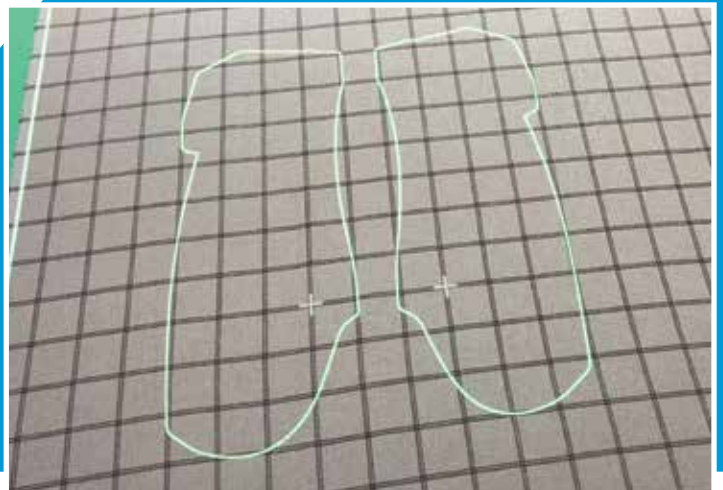
4 laser and 1 LCD

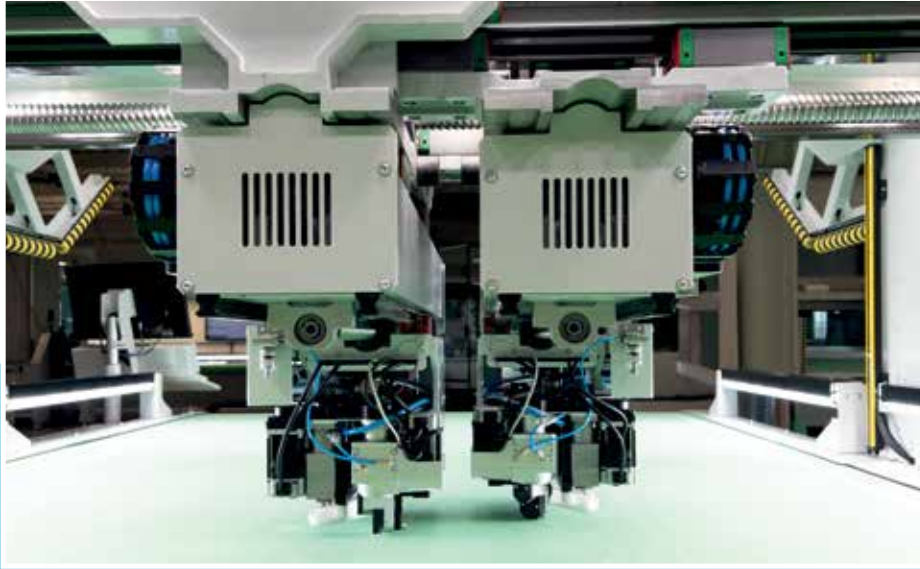
The 4 laser are much brighter and precise than conventional LCD projectors (approx. 65000 points instead of about 2000).

These projectors can be used for multiple purposes:

- for manual nesting directly on the fabric (e.g. for cutting samples and small batches)
- to carry out trimming of pre-assembled pieces.
- to carry out initial alignment of rolls
- to have centring or reference lines/symbols (selvedge, straightedge, meeting points)

The LCD projector is used to facilitate picking, projecting the parts in various colours according to the chosen settings.





CUT

Cutting is performed by two heads operating simultaneously in order to significantly increase productivity. Each head is equipped with a special set of tools dedicated to cutting fabrics:

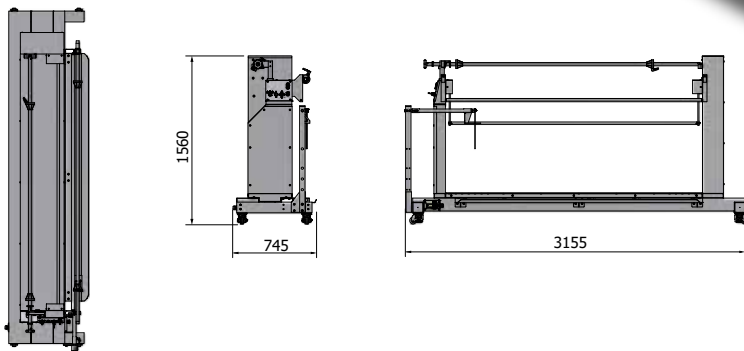
- Decagonal blade with a rotation speed that adapts to the speed of movement of the head, allowing precise cutting without damaging fabrics.
- Marking pen.
- 3 punches to create holes of various diameters.
- A heated needle for inserting reference points without deforming the fabric.
- A shaped die for inserting notches on the contours of pieces more precisely than the blade.

The cutting system combined with the best vacuum system on the market enables the cutting of most difficult materials even without the use of cardboard and underlay paper.



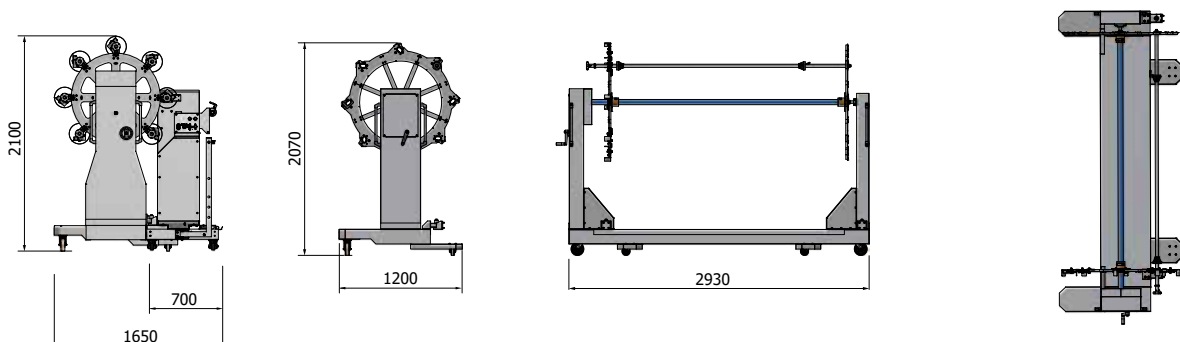
RA

Zero-tension roll unwinder with automatic selvedge alignment (pole).



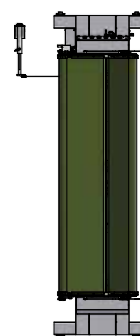
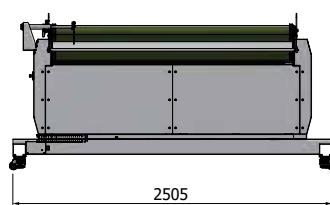
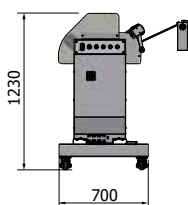
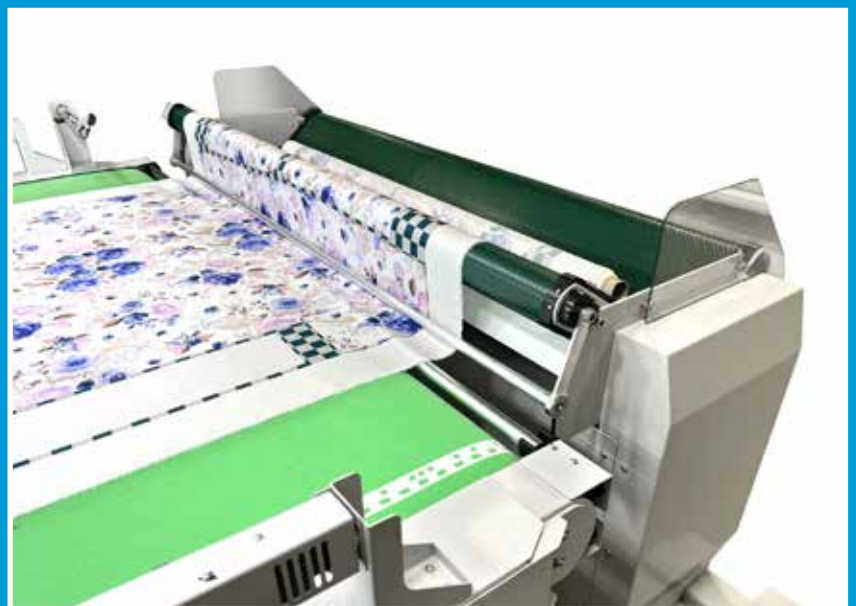
RR

Cup holder revolver (max. 8 poles) combined with the binder RA



RUD

Zero-tension roll unwinder with automatic selvage alignment (cradle)



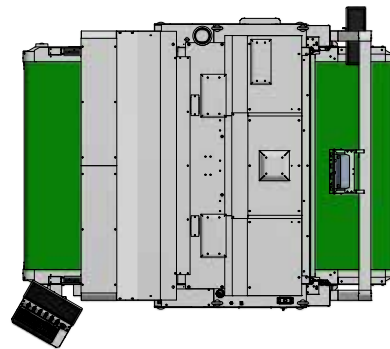
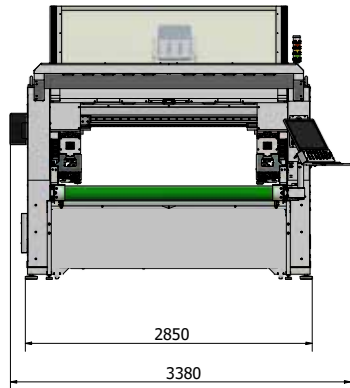
ERGONOMIC AND ECO-FRIENDLY SOLUTION

- Vacuum controlled by inverter and focused only where needed (micro-partialization automatic at 60 sectors/m²), for a total of 120 sectors.
- Numerical control is equipped with energy-efficient motors.
- Cutting without the need for perforated paper and cardboard.
- Powerful automatic online nesting that utilises the actual height of the fabric minimizing material waste.
- Low consumption laser projectors and dimmable LED lighting.
- Very small machine footprint that minimizes the space required and the associated operating costs.
- “Green plate” certification for the machine.
- Comelz produces cutting machines using only renewable energy.
- Automatically opening screen reduces noise and stops material in the rear collection station.
- All these factors lead to one of the most environmentally friendly solutions on the market.

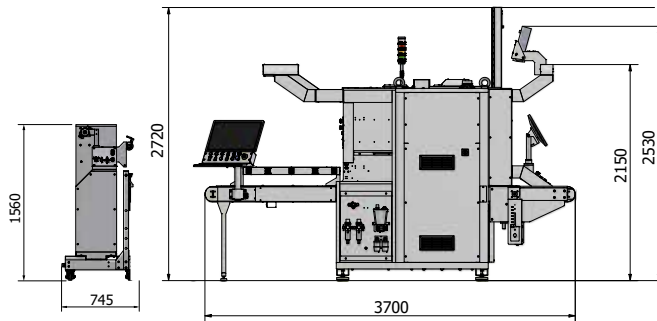


TECHNICAL DATA

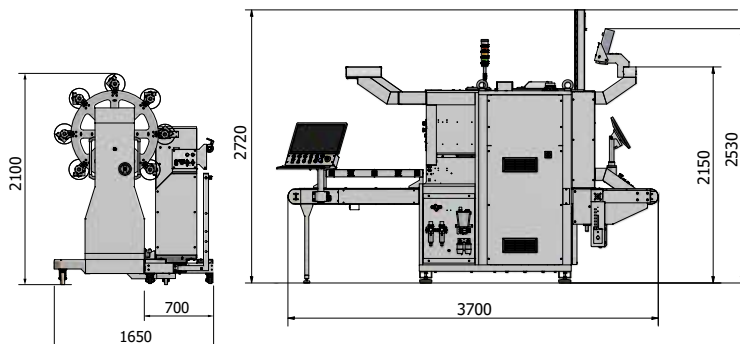
Cut Area	1900 x 900 mm
Cut speed (Max)	60 m/min
Max punching frequency	600 p/min
Air consumption	100 NL/min a 6 bar
Power supply	3 fasi 400V - 50/60 Hz 220V - 50/60 Hz (optional)
Max power consumption	20 KVA



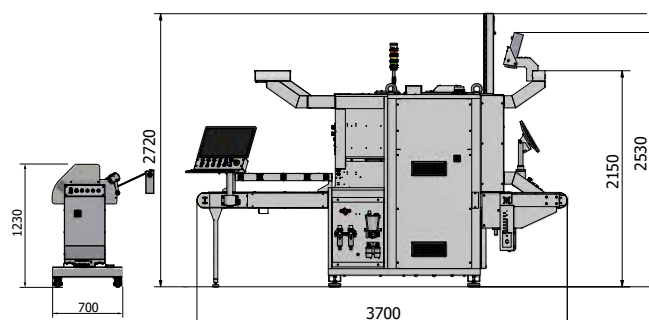
RA



RR + RA



RD



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