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Knife Cutting for Leather and Synthetic Materials (CM44)

With its dual cutting heads and continuous vacuum conveyor combined with manual nesting with laser projection, the CM44-CN offers both high productivity and manufacturing flexibility.



Features

Features

- Modular Cutting Head – Includes an electric cutting head, punch tool, and pen marking tool.
Designed in a modular way for easy maintenance.
- Punching – Punching unit with 5 tool slots. Tool size ranges from 0 (pin or prick tool) to 5 mm.
The punch rotates as it penetrates the material for clean cuts.
- Pen Marking – For marking stitching lines, part sizes, part numbers, etc.
- Cutting Knives – Five pieces of standard 2 mm tip specially processed steel cutting blades are included with the machine.
- Vacuum Under Cutting Surface – The vacuum holds the material down as it is cut. There are many vacuum sectors, automatically controlled by the machine, in order to focus vacuum strength where it is needed. The vacuum system includes a muffler and vertical exhaust tube.
- Laser Projection – The laser projection system projects a sharp green laser light onto the cutting surface and is visible in bright and low light conditions across almost all materials. Laser projection is used for cut part placement during manual nesting.

Advantages

- Eliminates Tooling Costs - Knife cutting technology means you never have to buy dies again.
Patterns can be loaded directly from CAD programs, so production can begin immediately.
- Dual Cutting Heads - Two cutting heads work in unison to share the cutting load for maximum operation optimization. Tool change is viable thanks to complete rotation of the cutting heads.
The cutting heads feature an oscillating knife, marking pen, four cutting-dies and a punch revolver located in a convenient and visible frontal position.
- Cutting Surface Vacuum - The material is held in place by a vacuum to ensure cutting accuracy.
- Continuous Real-Time Interactive Nesting or Pre-Nested Cutting - Without pause or change of workplace, the operator can maintain full focus and concentration on nesting cut parts on the material carried by the conveyor belt. For synthetic materials, in one or more layers, the automatic nesting function can perform fast piece positioning. Therefore, the cutting heads are well exploited and the operator, freed from nesting operations, can fully focus on the collection of the cut pieces.
- Laser Projection on Work Area - A laser beam projects bright and ergonomic piece shapes on the operator's work area in order to show cut part's position and orientation. The laser projection is sharp on almost any type or color of material. With the coordination of the conveyor belt, materials as wide as 1.5 meters (~60 inches) and unlimited length can be fed, positioned and cut in sequence under full control of the operator.
- Independent Removal - The rear table collects large amounts of cut parts enabling the removal of cut parts without constant attention.
- Link To CAD - The direct transfer of patterns from CALIGOLA or other CAD systems (in DXF or HPGL exchange format) allows the user to start production immediately, communicating by means of any data support, local area network (LAN), or internet.

Range of applications

- Die-Less knife cutting for a wide range of materials. The reciprocating knife can cut materials that vary greatly in thickness and in stiffness. This machine can cut very intricate shapes. Machine operation is separated into three separate areas: Cut piece nesting, cutting, and cut piece removal.

Options

Machine Options

- Continuous Cutting Surface Conveyor – The cutting conveyor transports material from the nesting area to the cutting area and to the collection area. The conveyor is separated into two layers. The harder lower belt is used to mount a consumable softer upper belt. The harder lower belt contains a Velcro seam to mount the soft upper belt to.
- Roll Material Feeding Cradle – The roll material cradle is located in the front of the machine below the nesting area. Once the material is placed on the conveyor belt, the CM-44CN's vacuum system will feed the material across the cutting area and through to the collection area.
- Power Transformer – Converts American 220V input voltage to 380V used by the machine for North American installations.
- Digitizing Tablet, A3 Size (400 mm x 290 mm, 16" x 11.5") – Used in conjunction with CAD software to input/design parts. Includes two 4-button wireless pucks, one for drawing and one for tracing.
- Setup/In House Training – Five days setup and training in house. All aspects of machine use, installation, and troubleshooting will be covered. CAD/Digitizing training is also included.

Specifications

Cutting Speed	2 x 166 ft/min (2 x 50 m/min)
Height	66" (1680 mm)
Length	128" (3240 mm)
Number Of Cutting Heads	2
Pneumatic Supply	7 bar
Power Consumption	10 KW
Power Supply	220V - 60Hz 400V - 50Hz
Punching Frequency	2 x 300 holes/min
Resolution	0.00098" (0.025 mm)
Width	79" (2000 mm)
Work Area Length	Unlimited
Work Area Width	59" (1500 mm)

Industries

Designated Industries

- [Aircraft](#)
- [Automotive](#)
- [Clothing](#)
- [Footwear](#)
- [Gasket](#)
- [General Die Cutting](#)
- [Home Furnishings](#)
- [Leather and Fancy Goods](#)
- [Miscellaneous](#)
- [Packaging and Stationary](#)
- [Rubber](#)

Applications

Designated Applications

- [Automatic die cutting \(rolls\)](#)
- [Automatic die cutting \(sheets\)](#)
- [Die-less cutting systems](#)