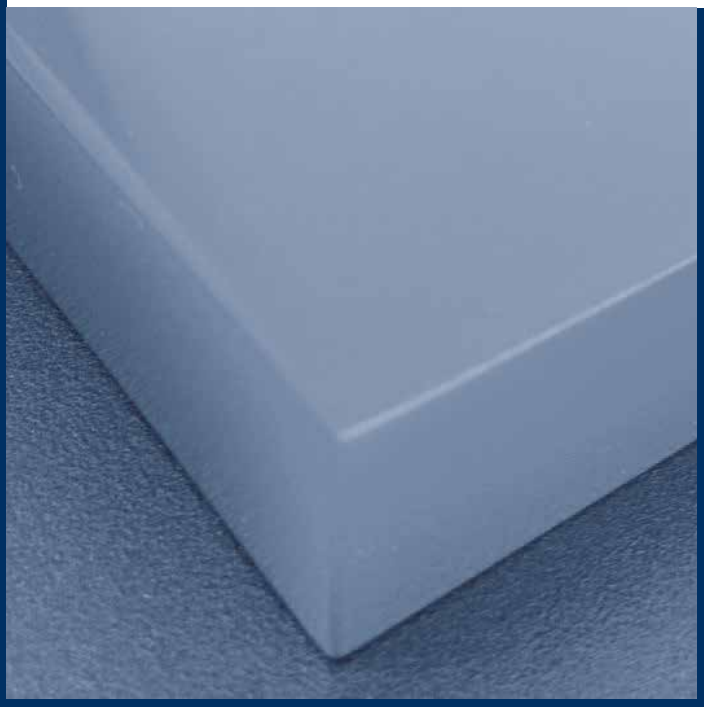
PLASTIC

cms range helix

beam saws









Cms
plastic technology

CMS is part of the SCM Group, a world leader in technologies for processing a wide range of materials: wood, plastics, glass, stone, metal and composite materials. The companies of the Group are the reliable partners of established industries operating worldwide in various trade sectors: from furniture to building, from automotive to aerospace, from boating to plastic materials. Scm Group coordinates, supports and develops a system of industrial outstanding realities, organized into 3 large highly-specialized production sites in Italy, with over 4,000 employees and a direct presence in the 5 continents.
SCM Group represents the most advanced skills in the design and construction of machines and components for industrial processing worldwide.

CMS SpA manufactures machinery and systems for the machining of composite materials, carbon fibre, aluminium, light alloys, plastic, glass, stone and metals. It was established in 1969 by Mr Pietro Aceti with the aim of offering customized and state-of-the-art solutions, based on the in-depth understanding of the customer's production needs. Significant technological innovations, originating from substantial investments in research and development and take-overs of premium companies, have enabled constant growth in the various sectors of reference.

Cms plastic technology

CMS Plastic Technology produces numerically-controlled machining centres and thermoforming machines for the working of plastic materials, offering technologically advanced solutions. The brand originates from the winning synergy between the technical-industrial expertise in thermoforming of the historical company Villa, established in 1973, and CMS' historical know-how in milling. Thanks to constant investments in research and innovation, CMS Plastic Technology is recognzied as unique partner for the whole process: from thermoforming to trimming to the realization of models and moulds, ensuring maximum productivity.

CMS Plastic Technology is in the forefront of manifold sectors, such as: automotive, aerospace, earth-moving machinery, caravans, buses, railway industry, production of bathtubs, engineering parts, visual communication, mechanical components and packing.

scm group
Industrial Machinery and Components

Cms your technology partner





cms range helix

OVERVIEW OF TECHNICAL SPECIFICATIONS HELIX 75I *4-5*

OVERVIEW OF TECHNICAL SPECIFICATIONS HELIX 90m / 110m *6-7*

OVERVIEW OF TECHNICAL SPECIFICATIONS HELIX 130h *8-9*

OVERVIEW OF TECHNICAL SPECIFICATIONS HELIX 130k / 165k *10-11*

DIGITAL SERVICES *12-13*

CMS PLASTIC TECHNOLOGY RANGE *14-15*

a company of scm group

OVERVIEW OF TECHNICAL SPECIFICATIONS

TECHNOLOGICAL ADVANTAGES

KEY BUYER BENEFITS

+ Single-blade beam saw managed by PC/PLC control dedicated to cutting plastic sheets; **high performance, essential and flexible**, with **advanced technical solutions** and an incomparable **performance/price ratio.** Average **3% reduction** on purchasing price calculated on cutting phase, compared with the standard saws on the market.
+ **Ideal for small companies** or as an auxiliary machine for other plastic material processing technologies.
+ The beam saw can be **easily integrated with an automatic** horizontal magazine of plastic sheets (available on request).



Selective air curtain: indispensabile tool
The possibility of enabling/ disabling the air curtain on each work surface thanks to the 4 independent motors ensures smoothness only where necessary and prevents the accidental falling of sheet portions temporarily laid on the work surfaces.





Floating collets: guarantee of excellent results
The special shape of the collets allows the safe gripping of plastic sheets and panels, at maximum speed and with perfect parallelism even on surfaces that are not perfectly flat.



Carriage with blade unit and independent ascending engraver *(optional)*



Automatic pusher bar: accuracy in transversal cutting
The sliding device on linear recirculating ball bearing guides always ensures perfect cutting of the plastic sheets.

TECHNICAL SPECIFICATIONS		helix 75l
CUTTING DIMENSIONS	mm	3300 x 2100 3300 x 3200 3800 x 3200 3800 x 3800 4300 x 3200 4300 x 4300
Blade projection	mm	70
Main blade / engraver blade diameter	mm	320/160
Maximum blade carriage speed	m/min	60 (opt. 100)
Max plunger speed	m/min	60 (opz. 70)
Blade motor power c/inverter (optional compulsory)	kW	9
Engraver motor power	kW	1,3
Engraver rotation speed (50 Hz)	rpm	5800
Blade rotation speed c/Inverter	rpm	1.600/5.000
Number of single-claw collets	std	5

OVERVIEW OF TECHNICAL SPECIFICATIONS

TECHNOLOGICAL ADVANTAGES

KEY BUYER BENEFITS

+ Single-blade beam saw **specifically designed for cutting plastic materials**.
Capable of meeting all the **specific needs** of companies that process **plastic, acrylic and synthetic panels**.

+ Direct control of specific cutting parameters for **maximum flexibility in cutting plastic materials.**
Directly available from control board: blade speed adjustment, optimized blade ascent, main blade cooling and tool lubrication.

+ **Selective air curtain work surfaces** dedicated to plastic materials. Capable of ensuring **excellent sliding of the sheets**, only where needed. A substantial help to the operator in the management of semi-finished sheets. Less than **9% of time** in sheet management.



Presser dedicated to plastic materials
The sturdy structure of the presser equipped with an aluminium bottom plate prevents thin materials from vibrating during cutting operations, so as to guarantee maximum precision and finishing quality. The enhanced suction capability ensures total cleanliness of the worktable.





Floating collets: guarantee of excellent results
The special shape of the collets allows the safe gripping of plastic sheets and panels, at maximum speed and with perfect parallelism even on surfaces that are not perfectly flat.



Blade cooling and lubrication
Optimization of cutting quality and possibility to choose from the control whether to cool the blade or spray an air/oil mist.

TECHNICAL SPECIFICATIONS		helix 90m	helix 110m
CUTTING DIMENSIONS	mm	3200x2100 3200x3200 3800x3200 3800x3800 4500x3200 4500x4300	
Blade projection	mm	95	115
Main blade / engraver blade diameter	mm	380/200	400/200
Maximum blade carriage speed	m/min	135	
Max plunger speed	m/min	70	
Blade motor power c/inverter (optional compulsory)	kW	11, 15, 18	
Engraver motor power	kW	1,8	
Engraver rotation speed (50 Hz)	rpm	4500	
Blade rotation speed c/Inverter	rpm	1.200/3.800	
Number of double-claw collets	std	7	8

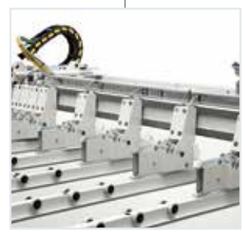
OVERVIEW OF TECHNICAL SPECIFICATIONS

TECHNOLOGICAL ADVANTAGES



Presser: manifold qualities in a single structure
The structure guarantees uniform pressure, ideal for plastic sheets, and optimal suction of chips with the triple dust conveyor system (one above on the press bar, one below on the blade holder carriage and one on a side support).
Absence of maintenance thanks to the movement of the presser on prismatic guides.





Brushless motor plunger: consistently high performance
The best quality and maximum working speed owing to to the plunger stroke on ground round guides.
Machine worktable made of sturdy tubular steel with castor wheels, ideal solution to handle even the heaviest plastic sheets without any damage.



Inverter: no compromise in plastics processing
The possibility to adjust the speed of the main blade is the fundamental condition that allows obtaining a superior cutting quality in the processing of plastic materials.

KEY BUYER BENEFITS

+ Superior cutting carriage technology thanks to the "**HI TRONIC Vertical stroke DEVICE**". The complete electronic control of the blades provides incomparable standards of finish and speed in the work cycles **when cutting plastic materials**.
+ **Fast and easy tool change**.
  In few seconds the "SAW-SET" device performs a **quick and precise tool setting** thanks to the electronic adjustment and enables easy machine operations and increase in productibity. Less than **15% of time** in setting operations.
+ **Maximum working cleanliness** thanks to the automatic closing of the cutting line in order to prevent trimmings from falling into the machine compartment.

TECHNICAL SPECIFICATIONS		helix 130h
CUTTING DIMENSIONS	mm	3200x3200 3800x3800 4500x4300
Blade projection	mm	128
Main blade / engraver blade diameter	mm	430/200
Maximum blade carriage speed	m/min	150 (opz. 170)
Max plunger speed	m/min	70
Blade motor power c/inverter (optional compulsory)	kW	15 (opz. 18)
Engraver motor power	kW	1,8
Engraver rotation speed (50 Hz)	rpm	4.800
Blade rotation speed c/Inverter	rpm	1.200/3.800
Number of double-claw collets	std	8

OVERVIEW OF TECHNICAL SPECIFICATIONS

TECHNOLOGICAL ADVANTAGES

KEY BUYER BENEFITS

+ Single-blade beam saw managed by PC/PLC control dedicated to the cutting of plastic sheets and characterized by an especially **rigid and stable** structure, **+19% on thickness** of workable pieces.
Ideal solution in state-of-the-art industrial environments and for the toughest applications.
+ Main blade motor available with powers **up to 37kW**.
+ **Best-in-class plunger,** characterized by maximum **linearity, precision and cyclic speed** thanks to the high return speed (up to 135 m/min).



Presser: manifold qualities in a single structure
The mechanical structure ensures a higher and more uniform pressure with optimal chips suction and easy maintenance.
Particularly useful conditions in the processing of sheets made of plastic and advanced materials, even of high thickness.





Floating double-claw collets:
Safe gripping at maximum speed on the square side, also with non-perfectly flat sheets of plastic material.



Sturdy blade carriage with independent pneumatic lifting *of the main blade and engraver on ball recirculation prismatic guides.*

TECHNICAL SPECIFICATIONS		helix 130k	helix 165k
CUTTING DIMENSIONS	mm	3200x3200 3800x3800 4500x4300	
Blade projection	mm	130	165
Main blade / engraver blade diameter	mm	430/200	530/200
Maximum blade carriage speed	m/min	170	
Max plunger speed	m/min	135	
Blade motor power c/inverter (optional compulsory)	kW	15 (opz. 18, 22, 30, 37)	18 (opz. 22, 30, 37)
Engraver motor power	kW	1,8	
Engraver rotation speed (50 Hz)	rpm	4800	
Blade rotation speed c/Inverter	rpm	1.200/3.800	1.000/2.950
Number of colletsstd	std	double claw	First 4 double-claw, then single-claw



OPTIMIZERS FOR LINEAR CUTTING

In the office, “**Maestro** ottimo cut” and “**Maestro** pattern office” offer support at the design and optimization stage.
“**Maestro** pattern office” is the basic optimizer software to be used in the office for the simple and effective implementation of cutting programs.
“**Maestro** ottimo cut” is the linear cutting optimizer software developed for production planning in the office. It enables the automatic generation of cutting drawings, picking out the best solution among several proposals, according to user-selected parameters.

SOFTWARE

Office

ADDITIONAL FUNCTIONS

Maestro pattern office

Maestro pattern office è la versione da ufficio dell’ottimizzatore di base per le macchine SCM Group. Maestro pattern office deriva dall’integrazione di Maestro pattern – l’ottimizzatore di serie installato su tutti i controlli delle sezionatrici SCM Group - con Maestro pattern import.

Maestro ottimo cut

“Maestro ottimo cut” is the professional optimizer offered by SCM Group for the control of its beam saws.
It enables the following functions:

- Management of (longitudinal and transversal) grain-patterned panels
- Management of warehouses for materials, parts and borders
- Estimate computation of costs and throughput times
- Customized report printing with statistical production data
- Labels with embedded graphic editor
- Delivery of cutting programs inclusive of beam saw-controlled labelling data

Maestro ottimo import

“Maestro ottimo cut” supplementary module in Excel environment which enables exporting to “Maestro ottimo cut”:

- 10 workpiece description fields (length, width, quantity, grain pattern…);
- 36 information import fields for labelling machine;

Maestro converter cut

“Maestro converter cut” the module that enables integrating any cutting optimizer with SCM Group beam saws through a PTX file (minimum version 1.14).



Maestro active cut

“Maestro active” is the new operator’s interface. The same operator can easily control different machines as the “Maestro active”interfaces maintain the same look&feel, icons and iteration approach.

EASY OF USE
The new interface has been especially developed and optimized to be immediately used via touch screen. Graphics and icons have been redesigned for user-friendly and comfortable navigation.

ZERO ERRORS
Improved productivity thanks to the embedded help and reset procedures that reduce the occurrence of operator’s errors.

SOFTWARE

Factory

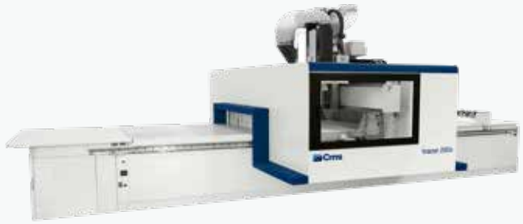


CONSOLLE EYE-M

CMS PLASTIC TECHNOLOGY RANGE

FOR THE PROCESSING OF PLASTIC MATERIALS

3/5-AXIS CNC MACHINING CENTERS (passage in Z up to 500 mm)



TRACER



TIME



EVOTECH

5-AXIS CNC MACHINING CENTERS (passage in Z from 500 mm)



ATHENA



ANTARES



ARES



MX5

BEAM SAWS



HELIX

SAWS



T-MAXI

THERMOFORMING MACHINES



BR5



BR5 CS



BR5 S



BR5 HP



BR5 SPECIAL SPA



MASTERFORM

PPHELIX00-0520E

Technical data are not binding and may be changed by CMS without notice.

C.M.S. SPA
via A. Locatelli, 123 - 24019 Zogno (BG) - IT
Tel. +39 0345 64111
info@cms.it
cms.it

a company of scmgroup