

eidos se

thermoforming machine



CMS is part of SCM Group, a technological world leader in processing a wide range of materials: wood, plastic, glass, stone, metal and composites. The Group companies operating throughout the world are reliable partners of leading manufacturing industries in various market sectors, including the furniture, construction, automotive, aerospace, ship-building, and plastic processing industries. SCM Group coordinates, supports and develops a system of industrial excellence in 3 large highly specialized production centers employing more than 4,000 workers and operating in all 5 continents. SCM Group can offer the most advanced expertise worldwide in the design and construction of machinery and components for industrial processing.

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



CMS Plastic Technology produces CNC machining centers, panel saws and thermoforming machines for processing plastic materials, offering technologically advanced solutions. The brand was established thanks to the winning synergy between the technical and industrial experience in thermoforming of the long-standing company Villa, founded in 1973, and the well-established know-how of CMS in milling. Thanks to constant investments in research and innovation, CMS Plastic Technology is recognized as a single partner for the entire process: from thermoforming to trimming, up to the production of models and molds, to guarantee maximum productivity.

CMS Plastic Technology is a leader in several sectors such as automotive, aerospace, earthmoving machines, caravans, buses, railway industry, bathtub production, technical articles, visual communication, mechanical components and packaging.

eidos se

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APPLICATIONS



mass transport | electro-medical and aesthetics | caravans | sanitary products



marketing and distribution | automotive | refrigeration



Innovative.
Designed.
Efficient.
Aadjustable.
Lean solutions.

The **IDEAL** thermoforming machines.

Thermoforming machines

EIDOS SE

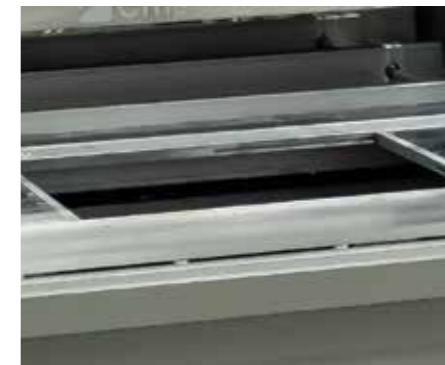
TECHNOLOGICAL BENEFITS

Derived from the market benchmark model, EIDOS, the style and performance of which it retains, **EIDOS SE is the new CMS thermoforming machine that effectively meets the most demanding requirements of modern thermoforming applications.** Its main features are **ease of use and effectiveness.** In fact, its **innovative software** ensures that it retains the highest product usability together with extreme ease of use.

- **Frame and counter-mold movement with 2 electrically coupled brushless motors (gantry).** Transmission is via low-maintenance toothed columns.
- **Movable nozzles installed on the counter-mold structure**
- **Quick formant change** with a fully automatic window plate and clamping frame
- **New 25 mm window plate** to ensure maximum compatibility with molds for old generation machines
- **Mold table with PC-controlled brushless movement** and the possibility of saving speeds and dimensions
- **Complete cabin** to minimize issues due to dust and climatic changes in the environment.



New CMS ThermoActive HMI software specifically designed for the thermoforming process. The timeline and unique dashboard make both production supervision and process control immediate and easy to interpret.



New thin automatic window plate of just 25mm in order to use molds from old generation machines. An adapter can bring it up to 40mm for compatibility with standard machines.



New sheet centering system with floating frame for faster loading. This system offers greater tolerance to initial misalignment.

KEY BUYER BENEFITS

- + **-30% time required to set up a new production run** thanks to the unique **CMS ThermoActive** software with features specifically for the thermoforming process. Allows access to the cloud resources provided by CMS Connect.
- + **High productivity:** the new ventilation system with programmable moving nozzles **reduces the cooling time for formed parts by up to 31%.** La funzione di "tilting" permette una distribuzione regolare dell'effetto refrigerante.
- + **+40% pallet positioning tolerance in the automatic loading station** with the new floating plate collection system. The new system allows all centering operations to be carried out in masked time for each individual sheet, leaving the pallet at ground level for a quick and safe changeover.

ACCESSORIES



New halogen heating system with seamless real-time power control to adapt better to the thermal characteristics of the material. Choice of high or low specific power in two different infrared frequency variations.



Electronic sheet drawing system: the drawing function is performed by an electronically controlled fan. The drawing height control is performed using a laser, infrared or ultrasonic sensor.

Sheet cleaning system with ionized air: removes the electrostatic charges from each sheet and from the pallet installed in the loading area. It is the best in terms of thermoforming quality and safety.



Automatic 25mm reduction plate: diaphragm system to adapt the machine size to the mold, minimizing material waste without the need for specific tooling.



Optical pyrometers: the sheet heating cycle and the workpiece cooling cycle are controlled in real time with high-performance optical pyrometers.

Energy reading system: device to measure the energy in each machine cycle. The energy is saved in the production control system for rapid costing of the batches produced.

3.5 kWatt potenza	HEATING TIME	VACUUM	NET CYCLE TIME
	0'9"	0 bar	0'12"
2	HEATING TIME	VACUUM	NET CYCLE TIME
	0'5"	0 bar	1'1"
COOLING TIME	GROSS CYCLE TIME		
	0'27"	1'12"	
MOULD T.	MATERIAL T. END-HEATING	MATERIAL T. END-COOLING	
0°C	128°C	21°C	



Automatic clamping frame: fully automatic adjustment system with telescopic crossbars. It can cover all sizes without any manual tooling, while always ensuring that the sheet is clamped securely.

CMS connect is the IoT platform for perfect integration with the latest generation of CMS machines

CMS Connect offers customized micro services through the use of IoT Apps that support the daily activities of industry operators - improving the availability and use of machines or systems. The data collected by the machines in real time can be used to **increase machine productivity, reduce operating and maintenance costs and cut energy costs.**



CMS active: revolutionary interaction with your CMS machine

CMS active is our new interface. An operator can easily control different machines as the CMS Active interfaces maintain the same look&feel, icons and approach to interaction.



APPLICATIONS

SMART MACHINE: continuous monitoring of machine operation, with information on:

Status: machine status overviews. These can be used to verify machine availability and identify possible bottlenecks in the production flow.

Monitoring: real-time live display of the operation of the machine, its components, running programs and potentiometers;

Production: list of machine programs run within a given time frame with best time and average running time;

Alarms: active and logged warnings.

SMART MAINTENANCE

This section provides an **initial approach to predictive maintenance** by sending notifications when machine components indicate a potentially critical state on reaching a specific threshold. This makes it possible to **take action and schedule maintenance work without any production downtime.**

SMART MANAGEMENT

Section that presents the KPIs for all machines connected to the platform.

The indicators provided can be used to assess machine availability, productivity and efficiency, as well as product quality.

UTMOST SECURITY

CMS Connect uses the standard OPC UA communication protocol, which guarantees data encryption at the Edge interface level. The Cloud and DataLake levels meet all of the latest cyber-security requirements. Customer data is encrypted and authenticated to ensure full protection of sensitive information.

BENEFITS

- ✓ Production performance optimization
- ✓ Diagnostics to support component warranty optimization
- ✓ Productivity increase and machine downtime reduction
- ✓ Improvement of quality control
- ✓ Lower maintenance costs

EASE OF USE

The new interface has been specially designed and optimized for immediate use via a touch screen. Graphics and icons have been redesigned to make navigation simple and comfortable.

ADVANCED PRODUCTION ORGANIZATION

Cms active can configure different users with different roles and responsibilities depending on how they use the machine (e.g. operator, maintenance technician, administrator, ...).

It is also possible to define work shifts on the machine and then measure the activities, productivity and events that occurred during each shift.

ABSOLUTE FINISHED PART QUALITY

With Cms active, the quality of the finished part is no longer jeopardized by worn tools. The new Tool Life Determination System in Cms active sends notification messages as the end of tool service life approaches, and recommends replacement at the most opportune time.

TOOLING? NO PROBLEM!

Cms active guides the operator through tool magazine set-up, taking the programs to be executed into account.



THE MOST ADVANCED SKILLS AND KNOW-HOW IN THE FIELDS OF MACHINERY AND INDUSTRIAL COMPONENTS

World leader in processing a wide range of materials: wood, plastic, glass, stone, metal, and composites. The Group companies operating throughout the world are reliable partners of leading manufacturing industries in various market sectors, including the furniture, construction, automotive, aerospace, ship-building, and plastic processing industries

SCM Group coordinates, supports, and develops a system of industrial excellence in three large, highly specialized production centers employing more than 4,000 workers and operating in five continents.

INDUSTRIAL MACHINES

Standalone machines, integrated systems and services designed for processing a wide range of materials.



Technologies for wood processing



Technologies for composites, carbon fiber, aluminum, light alloys, plastic, glass, stone and metal processing
Carpentry and mechanical machining.

INDUSTRIAL COMPONENTS

Technological components for machines and systems of the Group, third parties and the mechanical industry.



Electrospindles and technological components



Electrical panels



Carpentry and mechanical machining



Iron castings

SCM GROUP IN A NUTSHELL

850
Million Euro
of consolidated
revenue

+ 4,000
people
in Italy and abroad

3 main
production
hubs

5 continents
with direct and
widespread presence

7%
of turnover
invested in R&D

THE CMS RANGE PLASTIC TECHNOLOGY

FOR PROCESSING PLASTICS

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



TRACER



TIME



EVOTECH

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



ATHENA



ANTARES



ARES



GENESI

PANEL SAWS



HELIX

SAWS



T-MAXI

THERMOFORMING MACHINES



EIDOS



EIDOS SE



BR5 SPECIAL SPA



MASTERFORM

WATERJET CUTTING SYSTEMS



TECNO CUT PROLINE



TECNO CUT SMARTLINE



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