



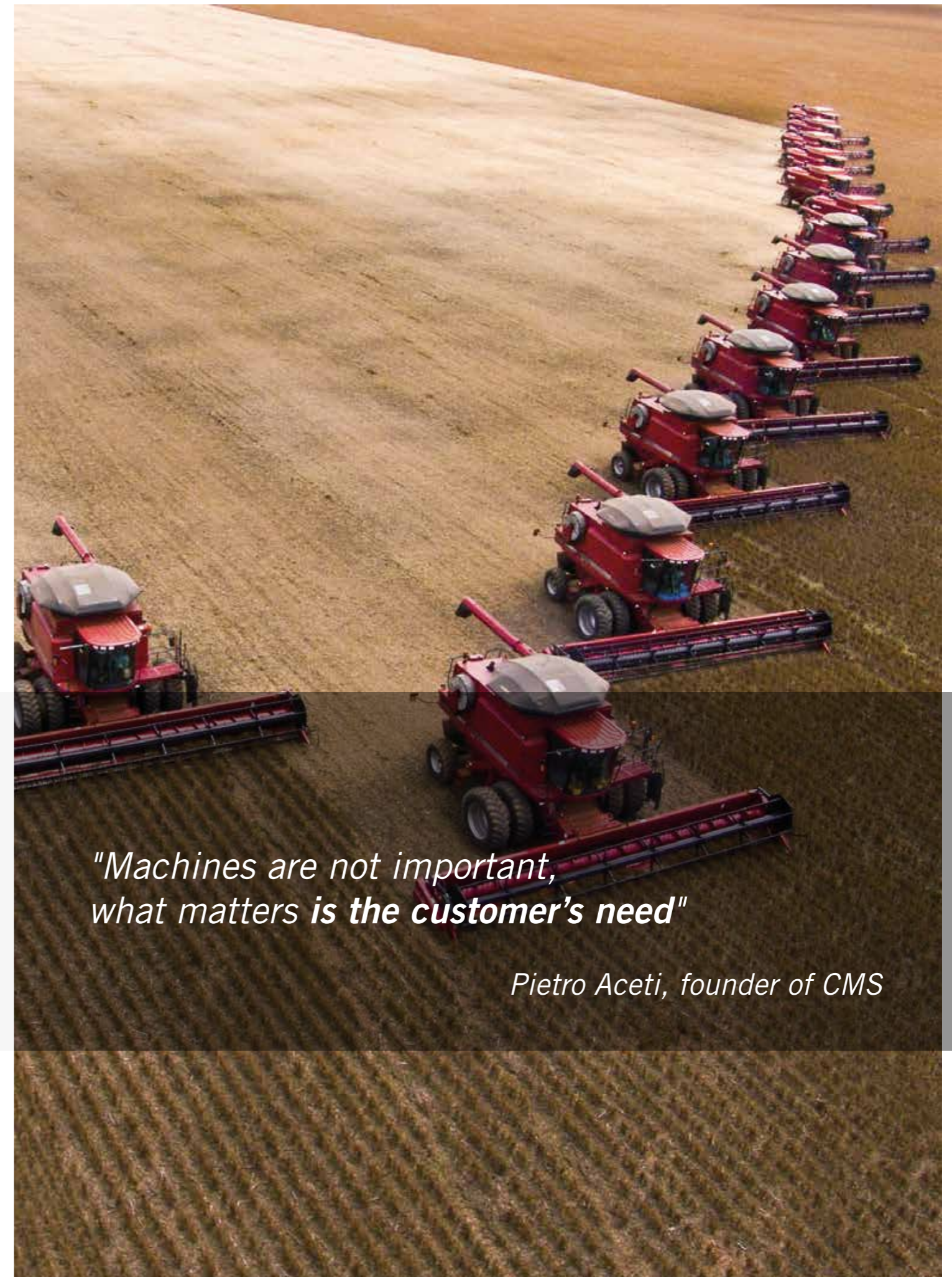
PLASTIC TECHNOLOGY



THE UNIQUE PROVIDER OF THE BEST MACHINES FOR PLASTIC PROCESSING SINCE 1973

CMS Plastic Technology realizes numerical-control machining centers, panel saws and thermoforming machines for processing **plastic materials**, offering technologically advanced solutions. The brand was born from the winning synergy between the technical-industrial experience in thermoforming of the historical company Villa, founded in 1973, and the historical know-how of CMS in milling.

Thanks to the constant investments in research and innovation, **CMS Plastic Technology is recognized as unique partner for the entire process: from thermoforming to trimming, up to the realization of models and molds**, guaranteeing maximum productivity.



*"Machines are not important,
what matters is the customer's need"*

Pietro Aceti, founder of CMS

1969 CMS is established. CMS is the acronym for **Costruzione Macchine Speciali (Special Machines Manufacturing)**. The company introduces itself to the market as a manufacturer of traditional machine tools, powered by mechanical, pneumatic or hydraulic systems.

1973 Villa's IMP is established. The company produces thermoforming machines for packaging and automotive. In 1975 the first automatic machine is produced, a few years after the **first thermoforming machine with twin sheet technology**. The company changes its name and becomes Villa Srl.

1991 CMS produces the **first machine specific for plastic processing**.

2000 - 2005 With the acquisition of Villa Srl and Masnada Macchine (company producing machines for cutting plastic and thermoformed products), **CMS is placed on the market with a complete machine portfolio**.

FOR CMS, THE FUTURE IS THE DESTINATION OF A CONTINUOUS JOURNEY WHICH BEGAN IN 1969. IT IS BASED UPON TWO FUNDAMENTAL ELEMENTS: IN-DEPTH UNDERSTANDING OF THE CUSTOMER'S NEEDS AND HIGH LEVEL OF SPECIALIZATION, TO PROVIDE UNIQUE ADDED VALUE TO THE CUSTOMER'S MANUFACTURING PROCESSES.

2015 **SCM Group**, which had already acquired 51% of CMS in 2002, takes over the remaining shares. **CMS therefore becomes 100% part of the Group**, which guarantees international solidity and capillarity.

2017 SCM Group acquires 51% of **HG Grimme**, a German company specialized in the manufacturing of machining centers for plastic processing. This strategic partnership will allow the strengthening of the global leadership in the field of the production of technological solutions for the processing of plastic and composite materials. In the same year, CMS **doubles its production capacity** with the opening of a **new production center**, PLANT Z, located in Zogno (Bergamo).

2020 **CMS Plastic Technology** offer spreads even further thanks to the introduction of machines for **flat plastic** processing. In the same year, the **new technology center** in Zogno (Bergamo) is inaugurated.

2021 Opening of the new **Flat Plastic Lab**. An exclusive space dedicated to machines for flat plastic processing.

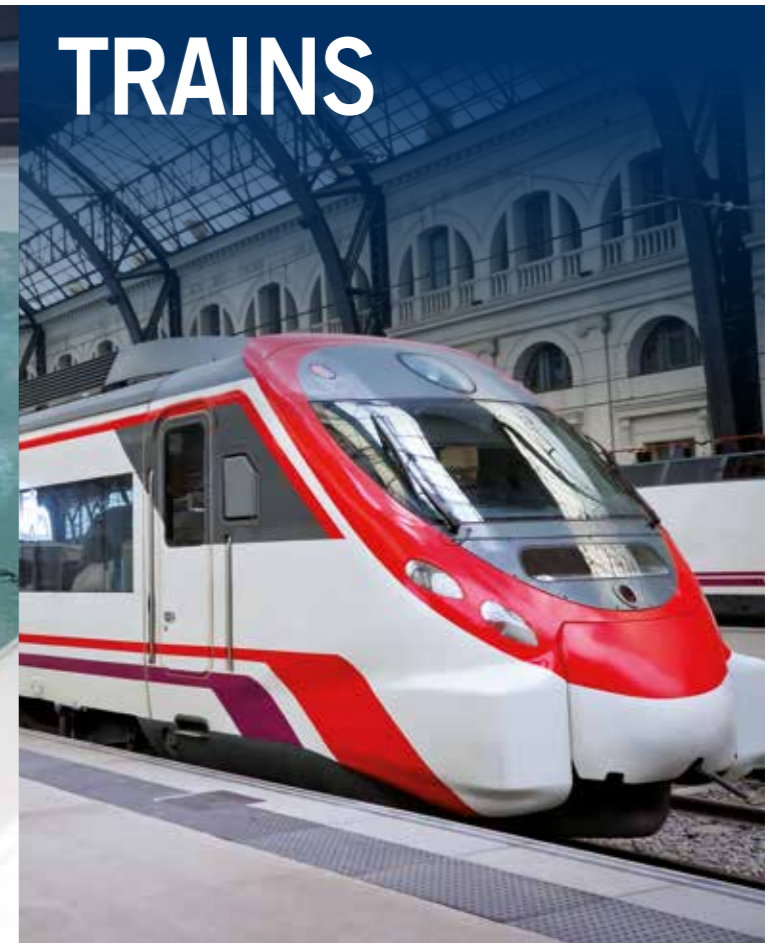
AUTOMOTIVE



BATH TUBS



TRAINS



EARTHMOVING MACHINES



AEROSPACE



CARAVANS



BUSES



UNIQUE SOLUTIONS FOR ANY NEED

CMS Plastic Technology machines guarantee **processing precision and accuracy**. Experience and know-how in the sector make CMS the ideal partner for the most innovative companies: thanks to the knowledge of the customer's process, we always manage to offer the best technical solution, ensuring maximum reliability, top-level performances and patented technologies.

CMS Plastic Technology is a protagonist in several sectors, such as **automotive, aerospace, earthmoving machines, caravans, buses, railway industry, signing and production of bath tubs**.

CMS PLASTIC TECHNOLOGIES

Thermoforming machines, 3- and 5-axis machining centers and highly selected panel saws, specifically studied for **the processing of plastic materials**. Its wide range of machines ensures CMS Plastic Technology the possibility to meet the needs of all of its customers.

TECHNOLOGIES FOR PLASTIC PROCESSING

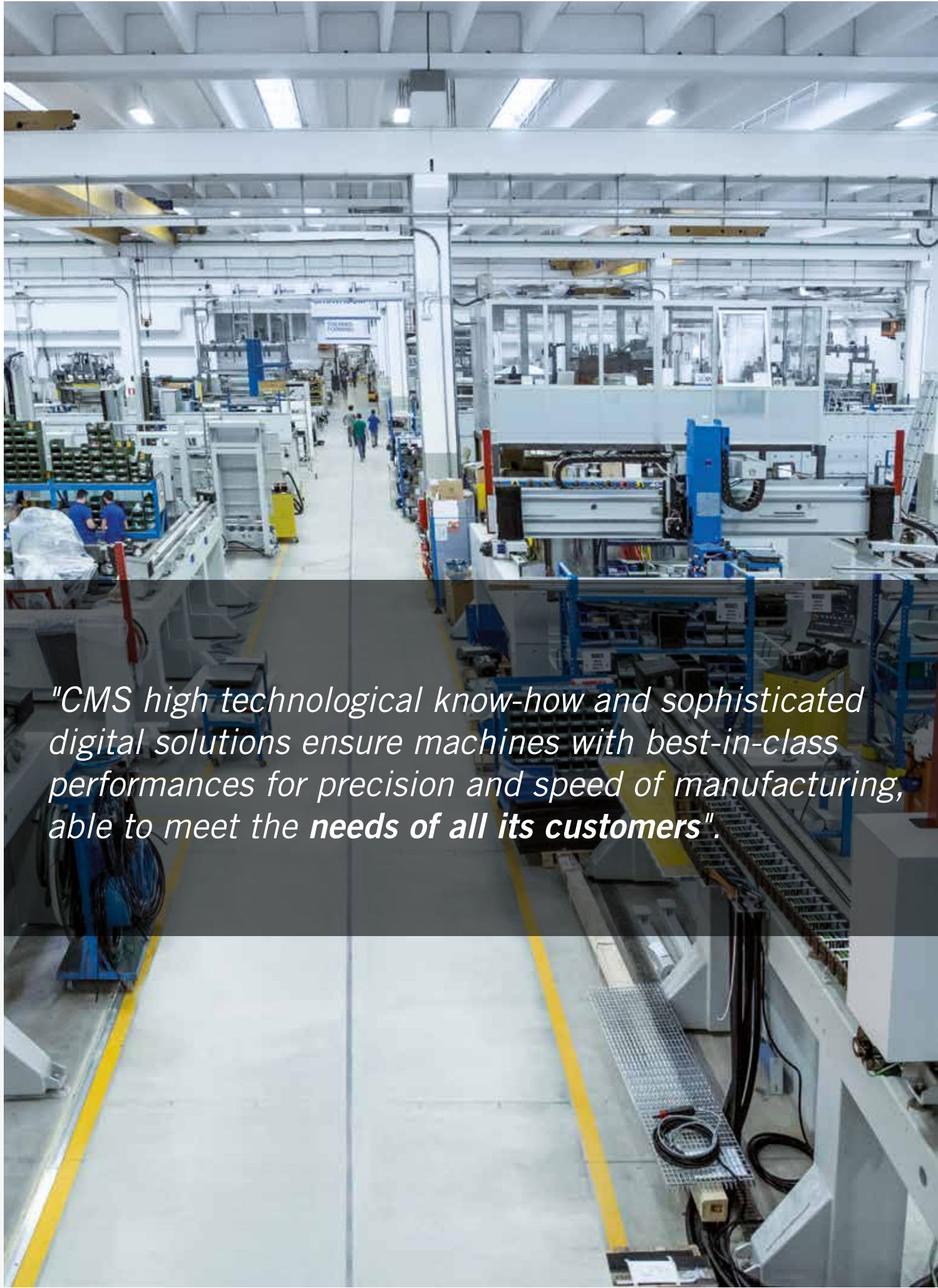
- A. 5-AXIS CNC MACHINING CENTERS WITH 500-MM Z-PASSAGE
- B. 3/5-AXIS CNC MACHINING CENTERS WITH UP TO 500-MM Z-PASSAGE
- C. THERMOFORMING MACHINES
- D. PANEL SAWS
- E. SAWING MACHINES
- F. AUTOMATIC WAREHOUSES
- G. WATERJET CUTTING SYSTEMS

CMS DIGITAL SYSTEMS

CMS accompanies its customers through the whole production process, combining **machines with software solutions** and digital services, with a constant attention to **performance improvement** in order to optimize the company productivity. CMS software solutions are developed to allow their integrability with the company pre-existing software, in order to **optimize the machine use** and the whole process.

DIGITAL SOLUTIONS

- 1. CMS CONNECT
- 2. CMS ACTIVE



*"CMS high technological know-how and sophisticated digital solutions ensure machines with best-in-class performances for precision and speed of manufacturing, able to meet the **needs of all its customers**".*

- A. 5-axis CNC machining centers with 500-mm Z-passage
- B. 3/5-axis CNC machining centers with up to 500-mm Z-passage
- C. Thermoforming machines
- D. Panel saws
- E. Sawing machines
- F. Automatic warehouses
- G. Waterjet cutting systems



A. 5-AXIS CNC MACHINING CENTERS WITH 500-MM Z-PASSAGE

Mobile portal machining centers specifically studied for high-speed processing of **plastic materials** capable of offering **exceptional movement dynamics to ensure high productivity**. These machine typologies are built using technologically sophisticated solutions to ensure **rigidity, precision over time, speed and flexibility, to guarantee exceptional levels of finishing and an incomparable accuracy**.

Equipped with large-size work areas, they guarantee **maximum production freedom**. They are also **extremely customizable**, to adapt to any production need.



NO-LIMIT CONFIGURABILITY

These machining centers feature **large-size work areas**, to offer maximum freedom and new production opportunities. In many models, this configuration flexibility is expressed through the possibility of **pendular working** and the availability of **configurations with extractable (APC) and rotating (TR) tables**, in order to obtain the highest production flexibility.

THE POWER OF INNOVATION

All the **electrospindles** are **fully designed and manufactured within the group**, and represent the result of 30 years of experience and continuous innovation. The extensive range allows our customers to always have the electrospindle with the ideal torque, power and rpm features for their processing, **maximizing the productivity of the machine**.

IDLE TIMES? NONE!

The **maximum accessibility** to the work areas for loading and unloading the pieces, including with automated systems, **makes the production simple, comfortable and fast**.

TECHNOLOGIES FOR THE PROCESSING OF PLASTIC MATERIALS

A. 5-axis CNC machining centers with 500-mm Z-passage

B. 3/5-axis CNC machining centers with up to 500-mm Z-passage

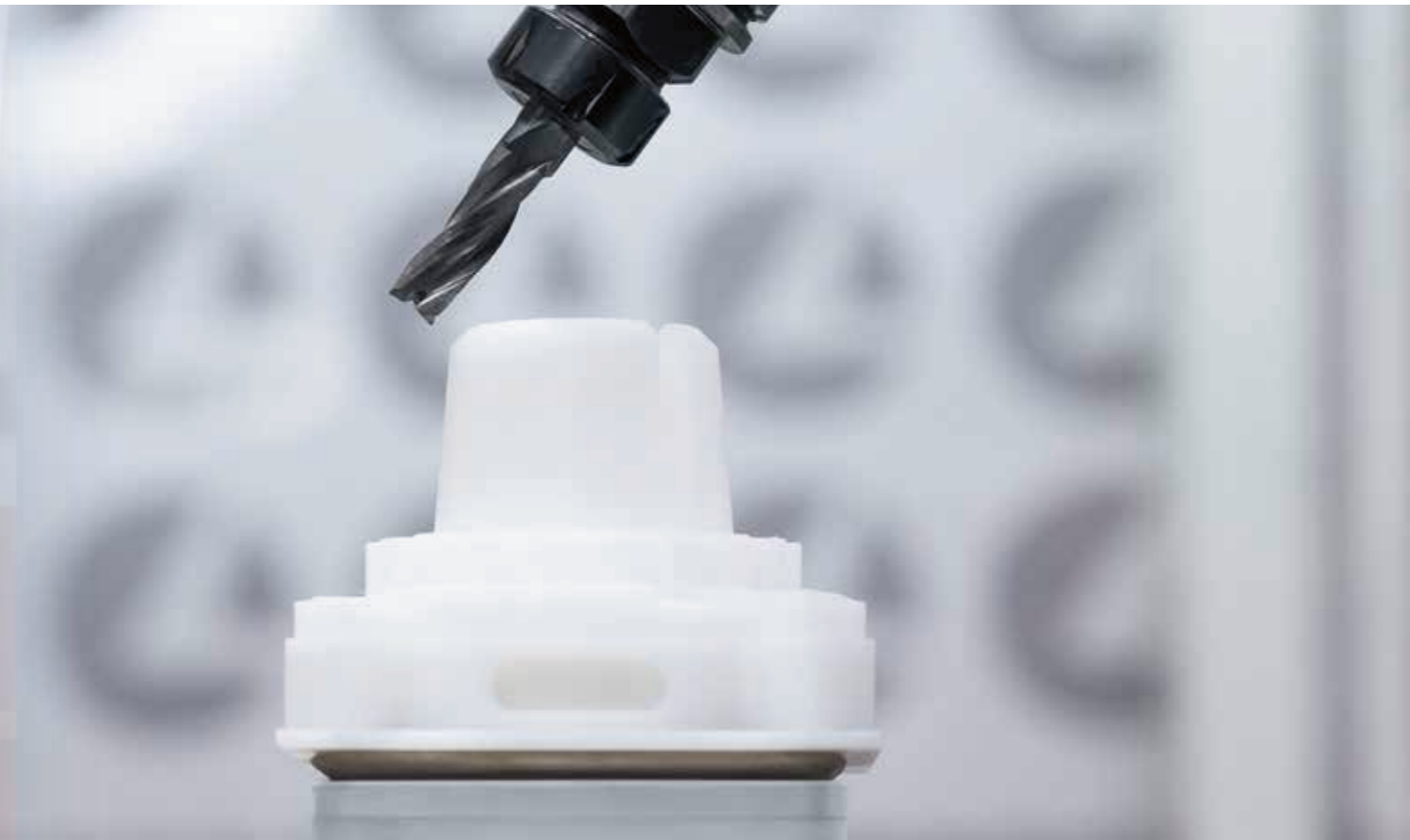
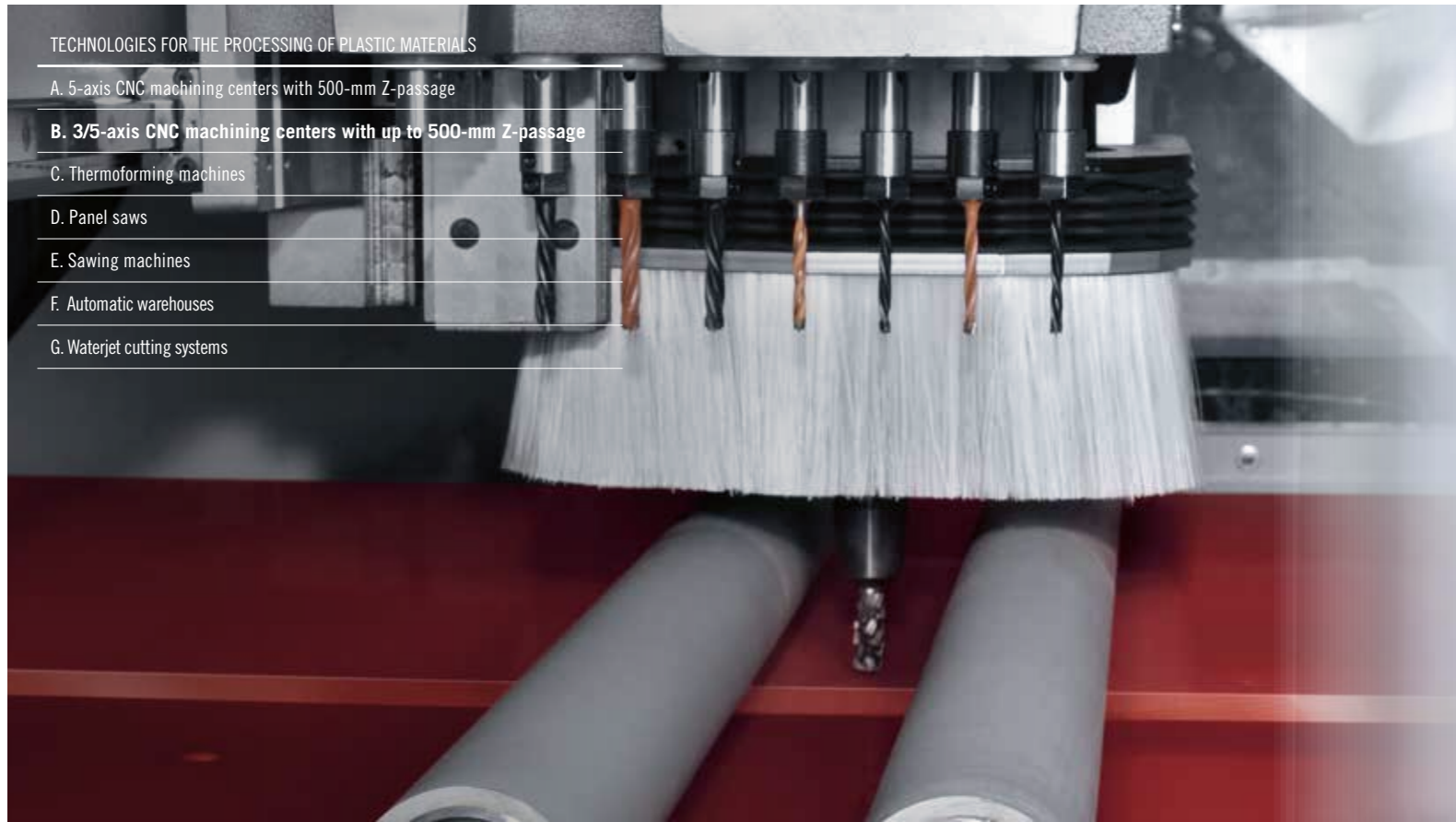
C. Thermoforming machines

D. Panel saws

E. Sawing machines

F. Automatic warehouses

G. Waterjet cutting systems

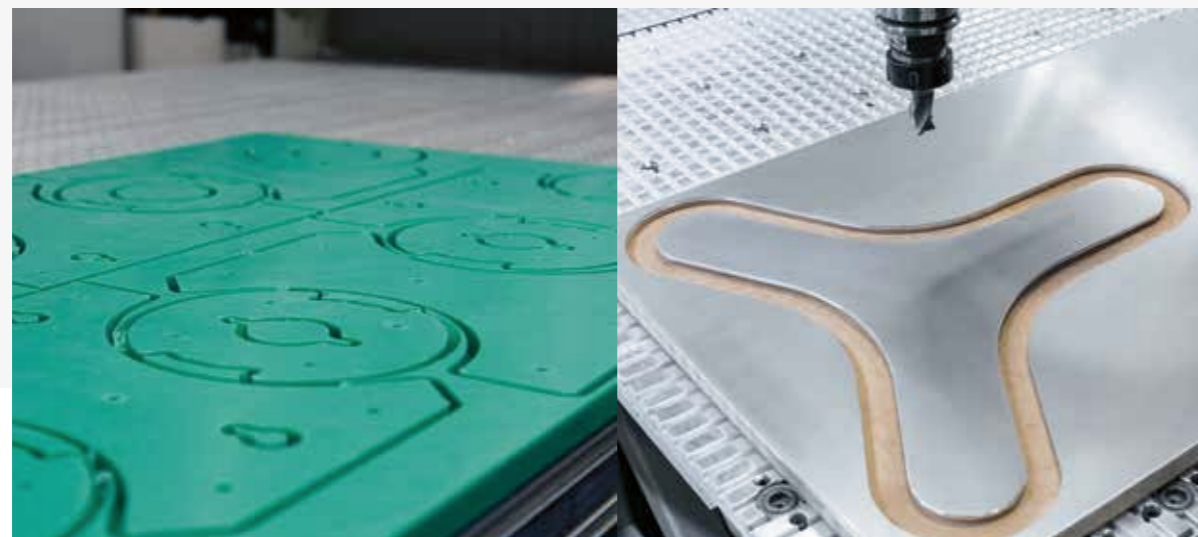


B. 3/5-AXIS CNC MACHINING CENTERS WITH UP TO 500-MM Z-PASSAGE

"All in one" 3- and 5-axis machining centers equipped with high-tech solutions for **the processing of plastic materials.**

All the necessary to give the best response to the most diversified processing requests: **from nesting technical items to cutting low-drawing thermoformed products**, without compromising.

The structure of these machines guarantees **maximum reliability and performance consistency over time.**



CUTTING PERFORMANCES SPECIFIC FOR PLASTIC MATERIALS

Maximum performances in the processing of plastic materials thanks to the operating units optimized for this type of machining. **Total absence of vibrations** both during the removal processes and during the high-speed trimming of thermoformed parts.

EVERY SECOND SAVED IS A SECOND EARNED!

Work cycles **on average 9% faster** thanks to the rack magazines inside the mobile cabins. The tools are always available in the front part of the operating unit for **changes in less than 15 seconds.**

MINIMUM VOLUME, MAXIMUM FREEDOM OF ACCESS

Thanks to the "pro-space" protections, the loading areas are completely free to **minimize the space they take up.** The absence of perimetral protections allows to access the work plane from all sides of the machine, **saving on average 15% of the work surface taken up.**

A. 5-axis CNC machining centers with 500-mm Z-passage

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C. THERMOFORMING MACHINES

More than **40 years of experience** and continuous investments in research and development make CMS a **reference point for the world of thermoforming** of plastic materials with solutions including machines with **vacuum-seal, pressure forming and twin sheet forming technology**. CMS thermoforming machines have been developed with extremely refined and high-tech mechanical solutions to **guarantee maximum performances**. The use of **innovative software** allows a total availability of the product with the maximum user-friendliness.



MAXIMUM CONTROL

Thanks to **CMS ThermoActive**, the parametrization of the thermoforming process is immediate. A guided system makes the probability of error almost null highlighting errors and incongruities. The visual representation of the cycle makes the software clear and immediate, with **learning times reduced by up to 53%**. With **CMS ThermoProphet**, it is possible to guarantee maximum heating stability even in presence of variables external to the thermoforming machine. **Maximum quality from the very first piece produced!**

OPTIMIZED PROCESS

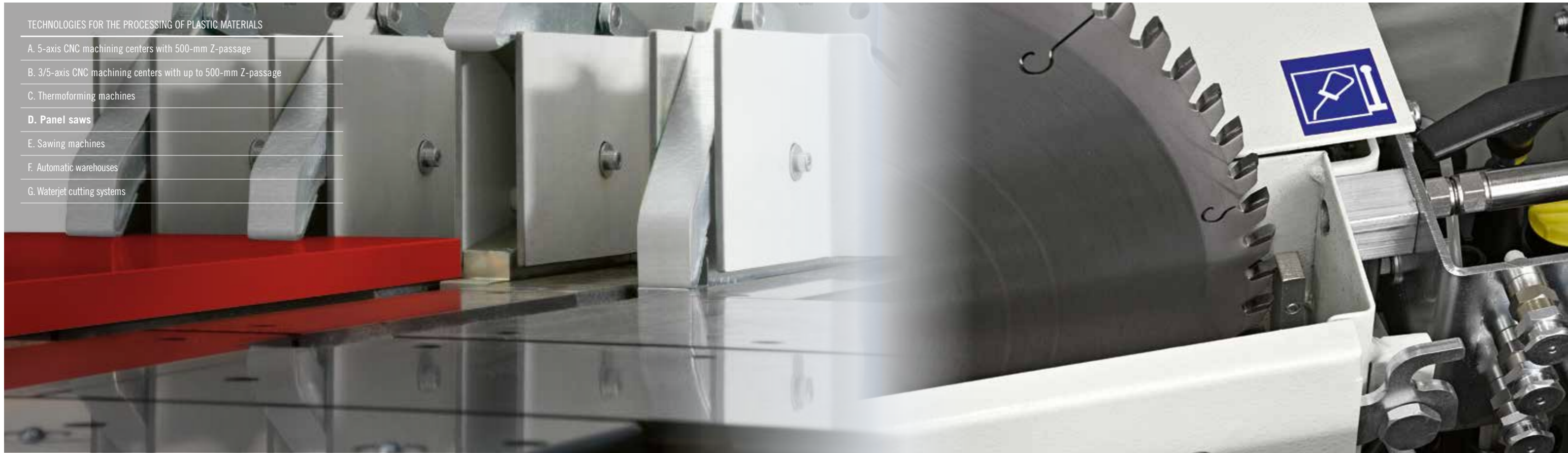
The new mold cooling systems provided with the "tilting" function **reduce the time necessary to cool down the mold by up to 31%**. The heating systems with the tilting function guarantee **maximum effectiveness** next to the sheet presser. **Maximum quality with minimum heating cycle time!**

SPECIFIC MACHINES

CMS offers thermoforming machines with every technology type: **vacuum-seal, pressure forming and twin sheet forming**. CMS thermoforming machines with **twin sheet** technology are specifically developed for **thermoforming long-fiber composite materials**. They act with a thrust of up to 100 tons, ensuring the **best molding accuracy** even in case of complex shapes and narrow curves.

TECHNOLOGIES FOR THE PROCESSING OF PLASTIC MATERIALS

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D. PANEL SAWS

The best technology for cutting plastic materials in terms of **processing quality and speed**. Provided with technological solutions deriving from CMS broad experience in the field of panel sawing, they are **capable of satisfying all the specific needs of the companies that process plastic, acrylic and synthetic panels**.

The **high cutting quality** and the **high processing speeds** are ensured by the regulation of the speed of the blades, the optimization of the upward movement, the cooling of the blades, and the lubrication of the tools.



TAILOR MADE
Panel saws explicitly conceived for **sawing plastic materials**. These machines are capable of **satisfying all the specific needs** of the companies that process **plastic, acrylic and synthetic panels**.

MAXIMUM SAWING FLEXIBILITY
Direct control of the cutting parameters specific for **maximum flexibility in the sawing of plastic materials**. Available directly from the console: regulation of the blade speed, optimized blade upward movement, primary blade cooling and tool lubrication.

UNMATCHED FINISHING AND SPEED
The **complete electronic control of the blades** guarantees **unmatched finishing and speed standards in the work cycles** in the sawing of plastic materials.

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E. SAWING MACHINES

The t-maxi horizontal sawing machine represents the **essential solution downstream of the thermoforming process**, characterized by top quality, cutting speed and production capability. This machine guarantees **ideal cutting parameters in all conditions**, saving on average 15% of the time to separate the figure from the base sheet. The electronic regulation allows to quickly find the ideal cutting speed for every shape, size, thickness and material of the thermoformed product.



SAFETY WITHOUT COMPROMISE

Maximum safety for the operator throughout the work cycle. **Simple load cycles and total safety** throughout the cutting phases thanks to the "anti-fall" tilting plane.

NO SHAPE LIMITS AND MAXIMUM ADHERENCE

Maximum adherence between belt and piece in all shape conditions. The adjustable pressure arms, provided with tilting multiple wheels, are capable of **adapting to a wide variety of thermoformed shapes, both single and multi-imprint.**

QUALITY, CUTTING SPEED AND PRODUCTION CAPACITY ALWAYS AT THE TOP

Ideal cutting parameters in all conditions, **saving on average 15% of the time to separate** the figure from the base sheet, thanks to the belt speed adjustable through the inverter.

F. AUTOMATIC WAREHOUSES

3-axis automatic warehouses for the optimized management of **plastic sheets**, which can be integrated into cells for nesting and/or cutting operations. They ensure a **significant increase in productivity** and **reduction of management costs** of the warehouse. They manage both **homogeneous stacks and mixed stacks** with sheets of different material, size and color.



FULL TRACEABILITY

The warehouse is equipped with a **dedicated software** for the management of semi-finished sheets and finished pieces according to the most **advanced and efficient storing functions.**

Automatic labeling performed in accordance with the cutting pattern, before the latter is processed by the operating machine.

HIGH PRODUCTIVITY AND RELIABILITY

Robust **steel structure** which allows the achievement of **high performance** (up to 65 cycles / hour) and the handling of sheets of **large dimensions** (2,200 x 5,600) even in cases of **high density and weight** (350 kg).

HIGHEST QUALITY

Accurate and precise handling of multiple formats thanks to the **dedicated gripping surface**, capable of handling plastic sheets in the best possible way even in cases of **sensitive and/or delicate gripping surfaces.**

TECHNOLOGIES FOR THE PROCESSING OF PLASTIC MATERIALS

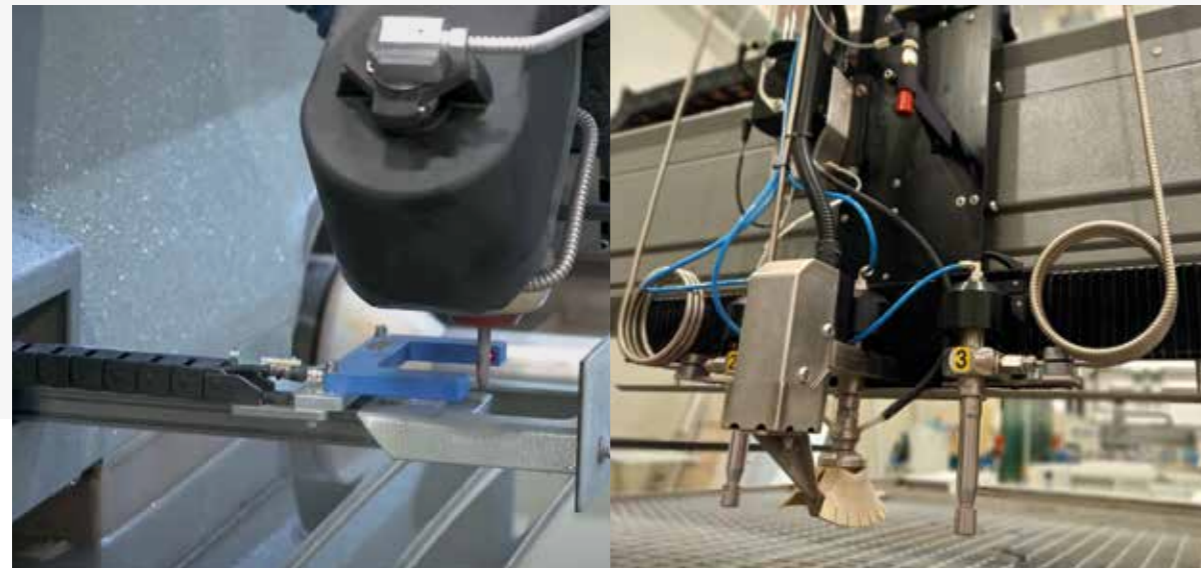
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G. WATERJET CUTTING SYSTEMS

CMS Plastic Technology offers a wide range of **complete waterjet cutting systems and pressure intensifiers**. Thanks to CMS Tecnocut's **know-how** in this technology, the machines offered are the perfect solution for a wide range of applications.

These solutions perfectly combine the **power of high-pressure waterjet cutting with the reliability of sturdy, modular structures, with large worktables** capable of guaranteeing unique positioning precisions and repeatability.



**LIMITLESS OPPORTUNITIES:
SAVING OF UP TO 33% IN CYCLE TIME**

Cutting heads with limitless rotation that guarantee a 33% reduction in the cutting cycle, by eliminating the need to recover C-axis rotations to align wires and pipes.

**INCREASE
IN PRODUCTIVITY**

A wide range of materials can be processed thanks to the versatility of the waterjet technology. Customized solutions, like the one for pendular working and configuration of up to 4 independent 3-axes heads, mean production can be increased up to 75%.

**LOADING ERGONOMICS:
SMART OPERATION**

Maximum loading ergonomics, compact monolithic and open frame structures simplify workpiece loading and unloading.



1. CMS CONNECT IS THE IOT PLATFORM PERFECTLY INTEGRATED WITH THE LATEST-GENERATION CMS MACHINES

CMS Connect is able to offer 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. Real-time data collected by the machines become useful information to **increase machine productivity, reduce operational and maintenance costs and cut energy costs.**

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

STATUS: machine status overview. It allows to check the machine availability, in order to identify potential bottlenecks in the production flow;

MONITORING: instantaneous, live display of the operation of the machine and its components, currently 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 historical warnings.

SMART MAINTENANCE

This section provides a first approach to predictive maintenance, by sending notifications when the machine components report a potentially critical state associated with reaching a certain threshold. This way, it will be possible to intervene and schedule maintenance interventions without stopping the production.

SMART MANAGEMENT

Section dedicated to KPI presentation for all the machines connected to the platform.

The indicators provided assess the availability, productivity and efficiency of the machine and the product quality.

MAXIMUM SECURITY

Use of the standard OPC UA communication protocol, which guarantees the encryption of data at Edge interface level. Cloud and DataLake levels meet all the state-of-the-art cyber-security requirements. Customer data are encrypted and authenticated, to ensure total protection of sensitive information.

ADVANTAGES

- Optimization of production performances
- Diagnostics to support the optimization of component warranty
- Productivity increase and downtime reduction
- Improvement of quality control
- Maintenance costs cut down

2. CMS ACTIVE A REVOLUTIONARY INTERACTION WITH YOUR CMS MACHINE

CMS Active is our new interface. The operator can easily manage different machines, as the CMS Active interface software maintain the same look&feel, icons and interaction approach.

EASE OF USE

The new interface has been especially designed and optimized to be immediately used via touch screen. Graphics and icons have been redesigned for an easy and comfortable navigation.

ADVANCED ORGANIZATION OF PRODUCTION

CMS Active allows to configure different users with different roles and responsibilities according to the use of the machine (e.g.: operator, maintenance man, administrator...).

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

ABSOLUTE QUALITY OF THE FINISHED WORKPIECE








With CMS Active, the quality of the finished workpiece is no longer jeopardized by worn-out tools. The new Tool Life Determination system of CMS Active sends warning messages when the tool life is running out and recommends its replacement at the most appropriate time.

TOOL SET-UP? NO PROBLEM!

CMS Active guides the operator during the tool magazine set-up phase, also allowing for the programs to be run.



CUSTOMER SERVICE OUR TECHNICIANS BY YOUR SIDE AROUND THE WORLD

-  Training
-  Installation
-  Remote Customer Care (RCC)
-  On-site support
-  Check up, preventive maintenance and calibrations
-  Changes and retrofitting
-  Spare parts

WORLDWIDE PRESENCE AND DEDICATED WAREHOUSES AT THE SERVICE OF EVERY CUSTOMER

- 36,000 different codes to serve machines of all ages
- 1 central warehouse in Zogno and other 6 fully equipped warehouses in the world, in order to ensure shipping optimization and cut waiting times
- 98% of orders available in stock
- spare parts guaranteed by a scrupulous control process and validated by our in-house quality laboratory
- availability to prepare lists of recommended spare parts based on the customer's needs, in order to minimize downtime risk



THE MOST ADVANCED EXPERTISE IN INDUSTRIAL MACHINES AND COMPONENTS

World leader in the field of technologies for the processing of a wide range of materials: wood, plastic, glass, stone, metal and composite materials. The Group companies around the world are reliable partners of well-known companies working in several product sectors: from the furniture, construction, automotive industry

to aerospace, boating and plastic materials processing. SCM Group coordinates, supports and develops a system of industrial excellence, organized in 3 highly specialized production centers, with 4,000 employees and a direct presence in 5 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



INDUSTRIAL COMPONENTS

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



Electrospindles and technological components



Electrical panels



Carpentry and mechanical machining



Iron castings

SCM GROUP IN A NUTSHELL

+700
Million/EUR
of consolidated turnover

+4000
employees
in Italy and abroad

3 main
production
centers

5 continents
with direct and
widespread presence

7%
of turnover
invested in
R&D



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a brand of **scm**group