



# METAL TECHNOLOGY



## THE WIDEST RANGE OF SYSTEMS FOR WATERJET CUTTING AND DEBURRING-SATIN FINISHING MACHINES FOR THE PROCESSING OF METAL AND SOFT MATERIALS

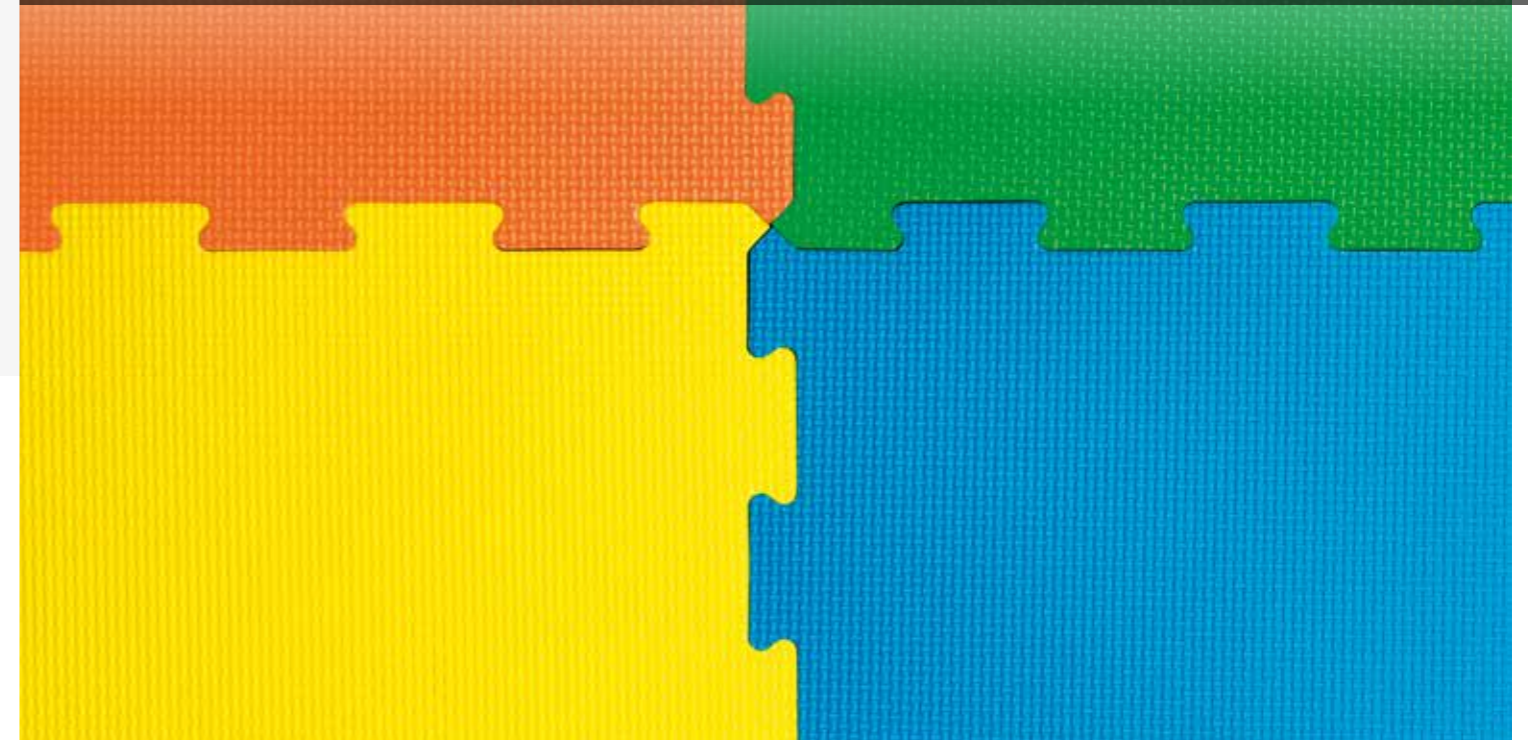
CMS Metal Technology is the brand dedicated to the production of machines for the processing of metal and technical articles, offering a wide range of **complete waterjet cutting systems**, **pressure intensifiers** and **wet or dry deburring** and **satin finishing machines**.

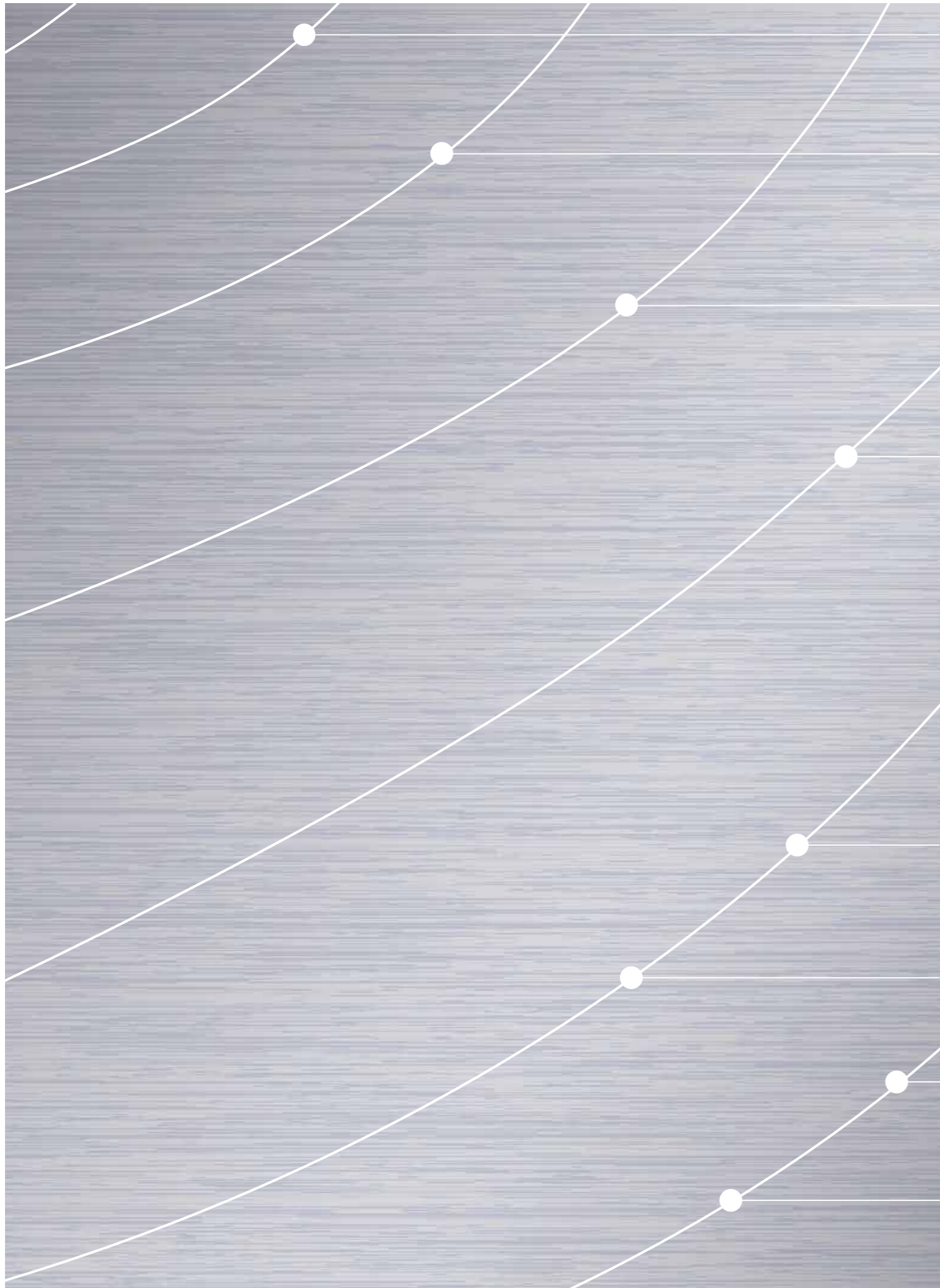
Since the 1990s CMS Metal Technology, thanks to the acquisition of Tecnocut and continuous internal development, has been able to gain considerable international prestige, boasting over 1,500 installations worldwide. CMS Metal Technology is the reliable partner of leading industries in various sectors such as **automotive**, **aerospace**, **naval**, **furniture**, and **mechanical processing**.



*"The machine is not important;  
it's the customer's needs that matter"*

*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.

## 2011

CMS acquires Tecnocut srl, a leading company in the **production of machinery with waterjet cutting technology**.

## 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.

## 2016

The new range of **deburring** and **satin finishing machines** for the processing sheet metal and metal is launched.

**FOR CMS, THE FUTURE IS THE DESTINATION OF A CONTINUOUS JOURNEY WHICH BEGAN IN 1969 AND IS BASED ON TWO CRUCIAL 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.**

## 2017

CMS **doubles its production capacity** with the opening of a **new production center, PLANT Z**, located in Zogno (Bergamo).

## 2018

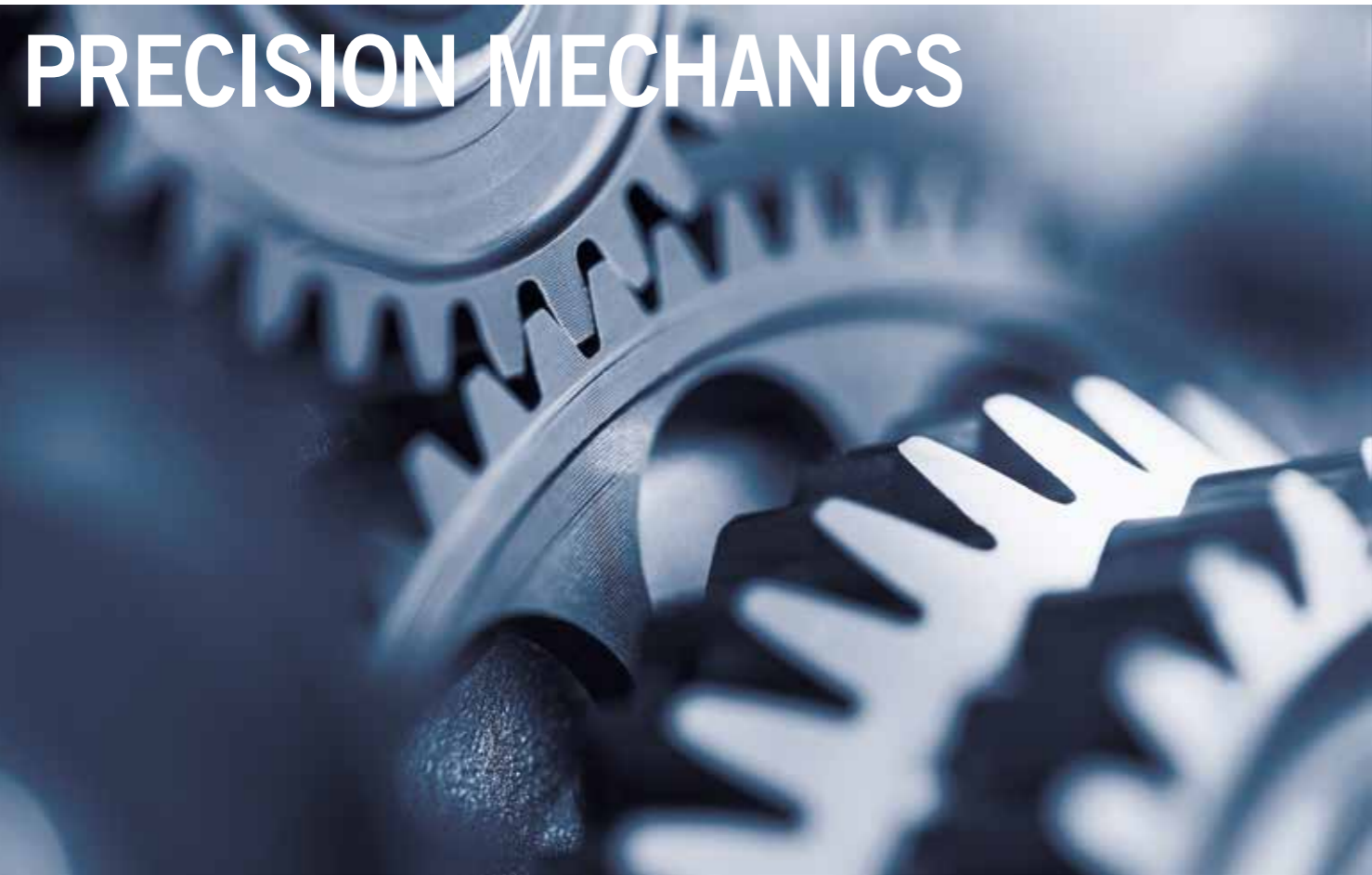
CMS acquires the American **Diversified Machine Systems (DMS)**.

## 2020

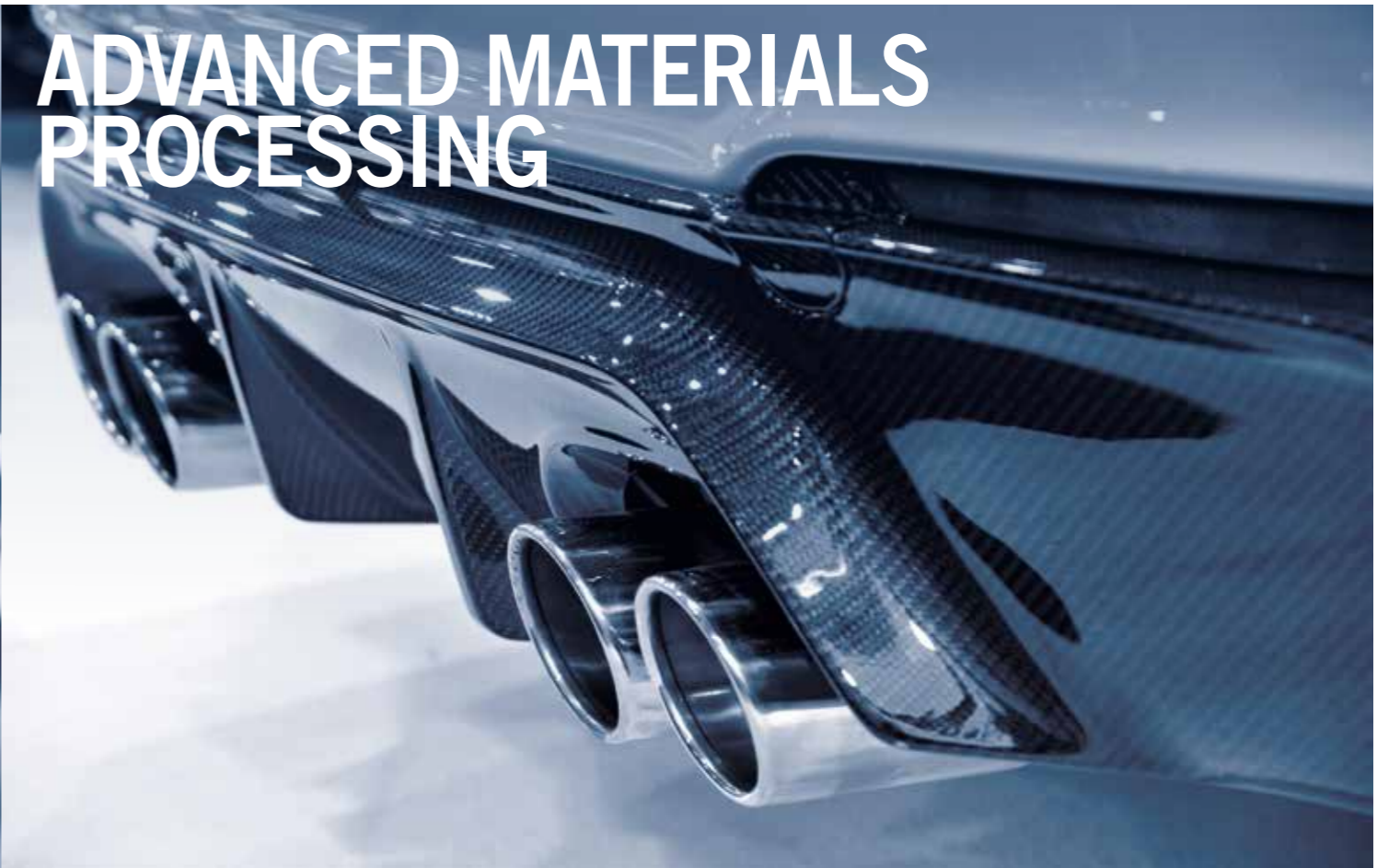
The **new technology center** is inaugurated in Zogno (Bergamo).

## 2021

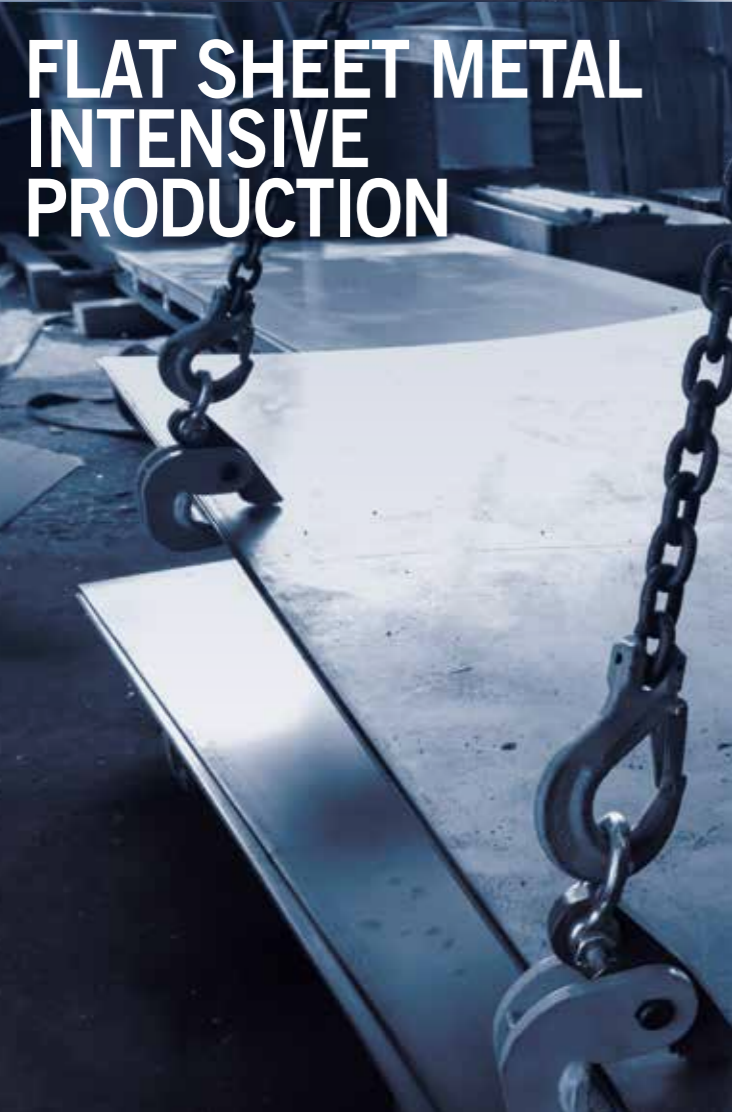
Sale forces of **CMS North America** and **Diversified Machine Systems** merge in a single organization for the US market.



# PRECISION MECHANICS



# ADVANCED MATERIALS PROCESSING



# FLAT SHEET METAL INTENSIVE PRODUCTION



# SOFT MATERIAL PROCESSING

## UNIQUE SOLUTIONS FOR ANY NEED

**CMS Metal Technology** collaborates with companies and research centers operating in sectors where efficiency, versatility and high quality performance are essential requirements. CMS Metal Technology machines make it easier to continuously respond to the increasingly complex processing requirements of extremely demanding sectors such as **automotive, aerospace**, and the **mechanical processing sector**, the **cutting of soft materials** and **many others**.



# CUTTING OF MATERIALS and SPECIAL ALLOYS

## CMS METAL TECHNOLOGIES

Highly specialized **machines with waterjet cutting technology and pressure intensifiers**, designed for the processing of metal and soft materials. **Dry and wet deburring and satin finishing systems** that can be configured with the most suitable operating units and optional devices to meet the different process requirements after cutting flat sheet metal. Its wide range of machines ensures CMS Metal Technology the possibility to meet the needs of all of its customers.

### CMS METAL TECHNOLOGIES

A. WATERJET CUTTING SYSTEMS

B. PRESSURE INTENSIFIERS

C. DEBURRING AND SATIN FINISHING MACHINES

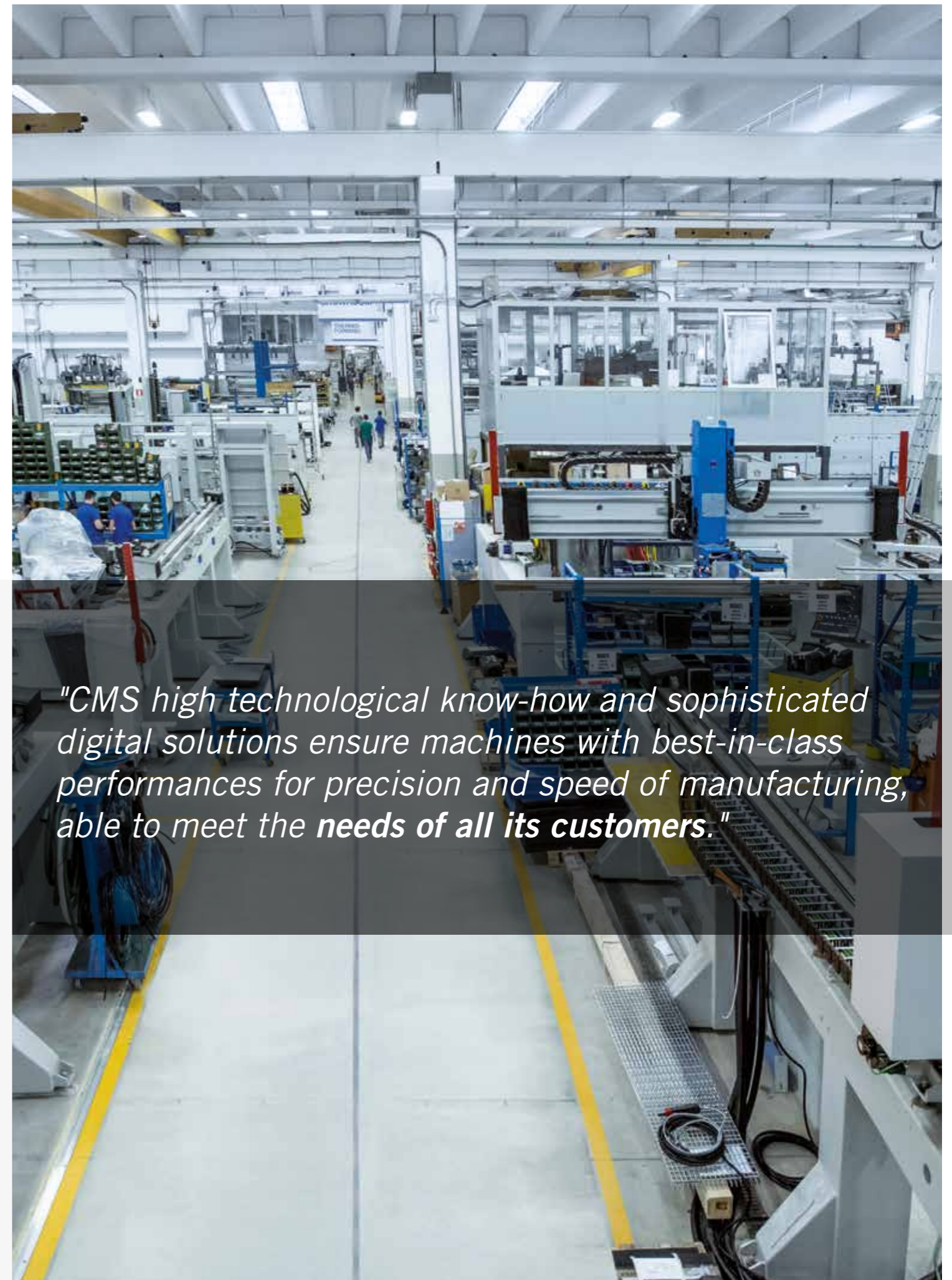
## CMS DIGITAL SYSTEMS

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. WATERJET CUTTING SYSTEMS

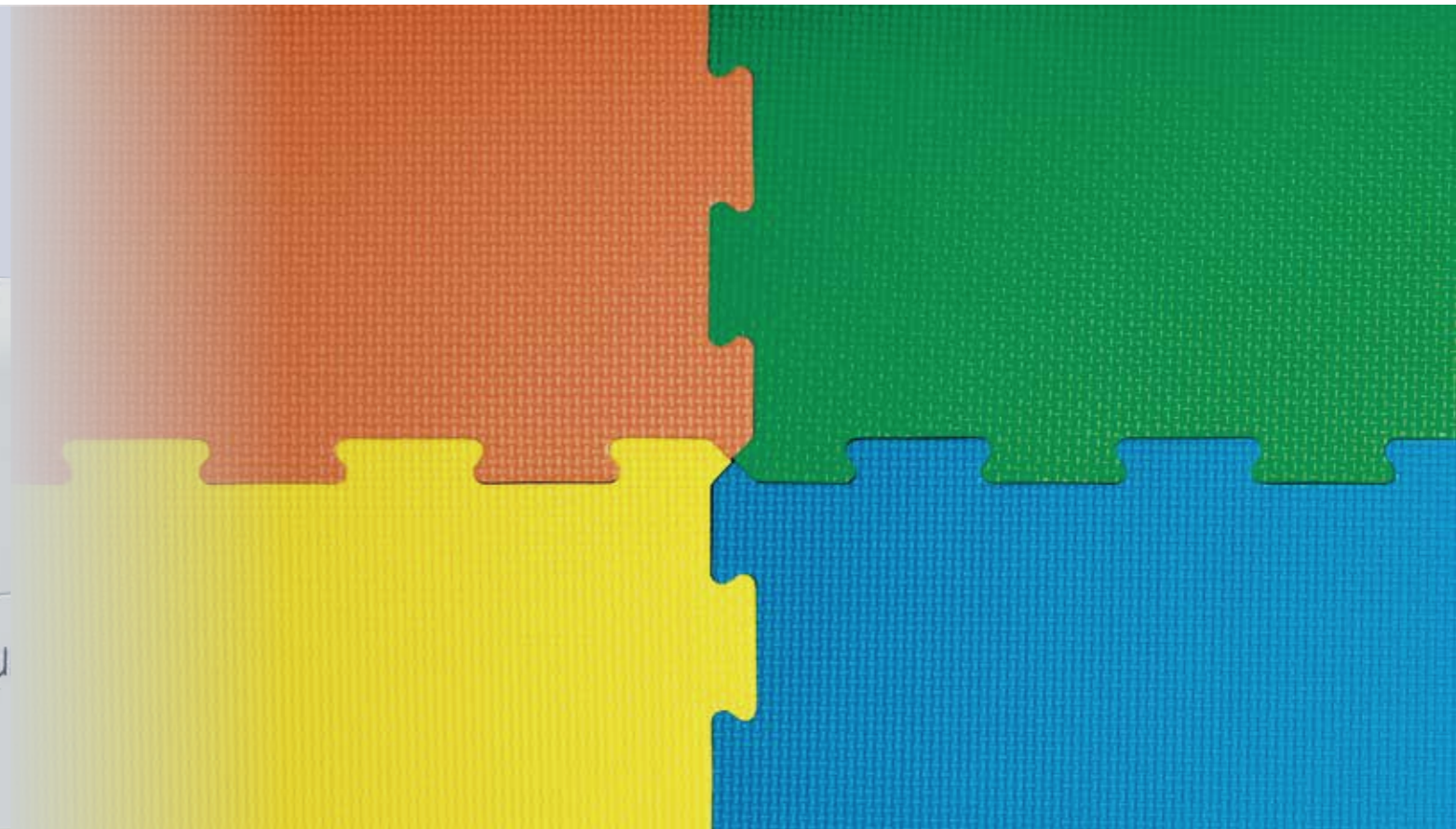
CMS Metal Technology offers a wide range of **complete waterjet cutting systems and pressure intensifiers**. Thanks to the **know-how** of CMS Tecnocut in this technology, the machines offered represent the perfect solution for a wide range of applications. These solutions combine at best **the cutting power of the high-pressure waterjet with the reliability of sturdy, modular structures with large work surfaces** that can guarantee unique positioning accuracy and repeatability.



**INFINITE OPPORTUNITY: SAVING UP TO 33% OF CYCLE TIME**  
Infinitely rotating cutting heads that provide a 33% reduction in the cutting cycle, eliminating the need to recover C-axis revolutions to align cables and pipes.

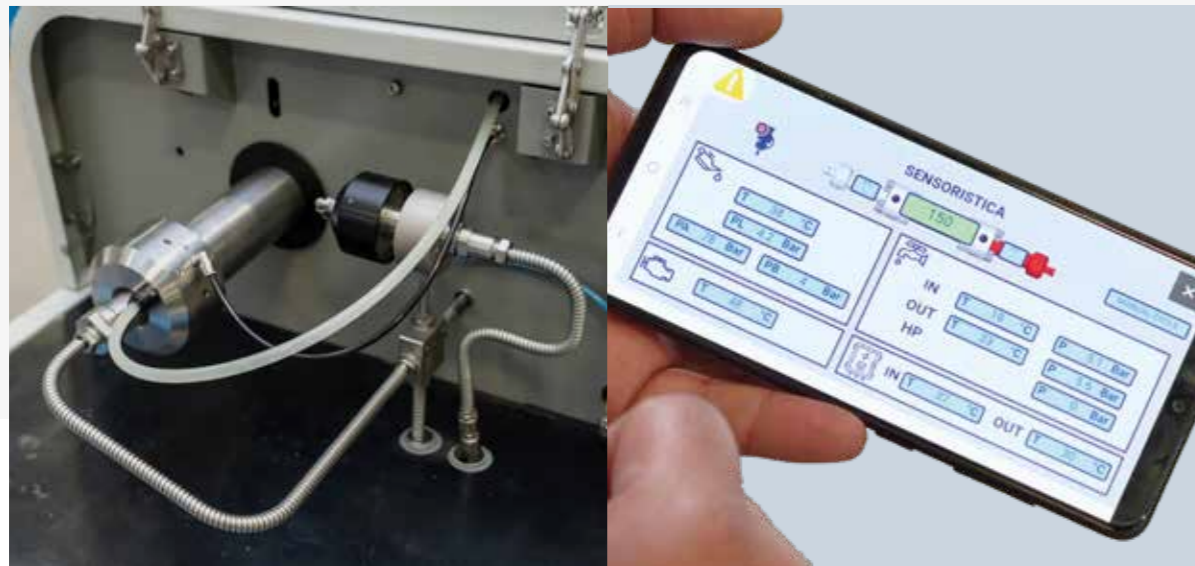
**INCREASED PRODUCTIVITY**  
The versatility of the waterjet allows a wide range of materials to be processed. Ad hoc solutions, such as the **pendulum cycle and the configuration of up to 4 independent 3-axis heads**, allow productivity to be increased by up to 75%.

**LOAD ERGONOMICS: SMART OPERATION**  
Maximum load ergonomics, compact monolithic structures and open frames to simplify the loading and unloading of machined parts.



## B. PRESSURE INTENSIFIERS

CMS has created a **new concept in high pressure intensifiers**, enriched with technological content to meet the needs of the most demanding users. CMS offers a very wide range, from the traditional **hydraulic intensifier with up to 3 electronically synchronized independent parallel cylinders**, the only one on the market, to the **innovative hybrid intensifier based on a high-efficiency electro-hydrostatic pump** with low environmental impact.



### TECNOCUT E-PUMP BENEFITS

#### LOW MAINTENANCE

Low maintenance, -95% of hydraulic components

#### LOW ENVIRONMENTAL IMPACT: GREEN ENVIRONMENT

Low environmental impact: it uses only 15 liters of hydraulic oil

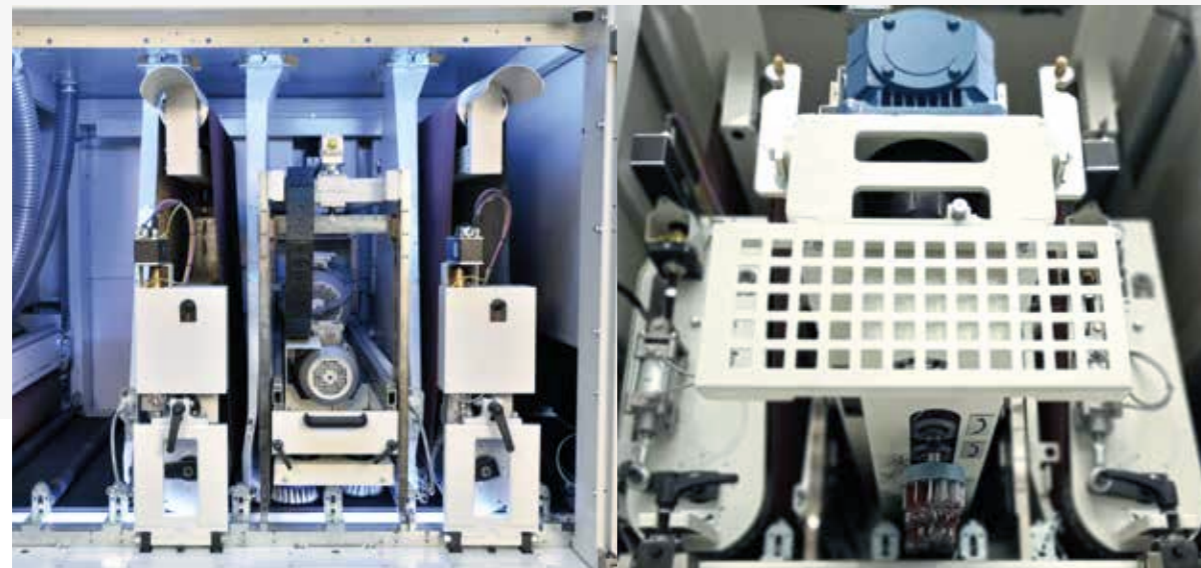
#### LOW CONSUMPTION

Low energy consumption: the primary and the auxiliary motors driven by inverter



## C. DEBURRING AND SATIN FINISHING MACHINES

These machines have been designed to perfectly satisfy **any requirements for deburring and satin finishing of metal surfaces, even in the most severe conditions of use.** They are the ideal solution for customers who require high quality finishing and precision. Thanks to the countless configuration possibilities and to the technical characteristics of the operating units, they satisfy every request in the best way. The range offers a wide choice of both dry and wet technologies to ensure the best possible solution.



**25% INCREASE IN PRODUCTIVITY**  
Contact rollers up to 320 mm in diameter offer a bigger contact area and dampening of the abrasive belt joint, **guaranteeing a 25% increase in productivity.**

**SHINE FINISHING: THE BEST FINISH FOR UNIFORMITY AND QUALITY**  
Battery of 17 inlet and outlet nozzles to each operating unit, to guarantee an **optimal cooling of the work area**: this means finishes up to P2000 grit and a longer life of the abrasive belts.

**SOFT TOUCH: OUTPUT GROUPS TO IMPROVE THE QUALITY OF MACHINED PARTS**  
The side-swinging abrasive cloth roll with 200-mm diameter allows you to soften rough ridges for a **more even finish across the entire surface.** The group of timed rotary blowers allows for **optimal cleaning of the machined parts.**





## 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.



## 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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