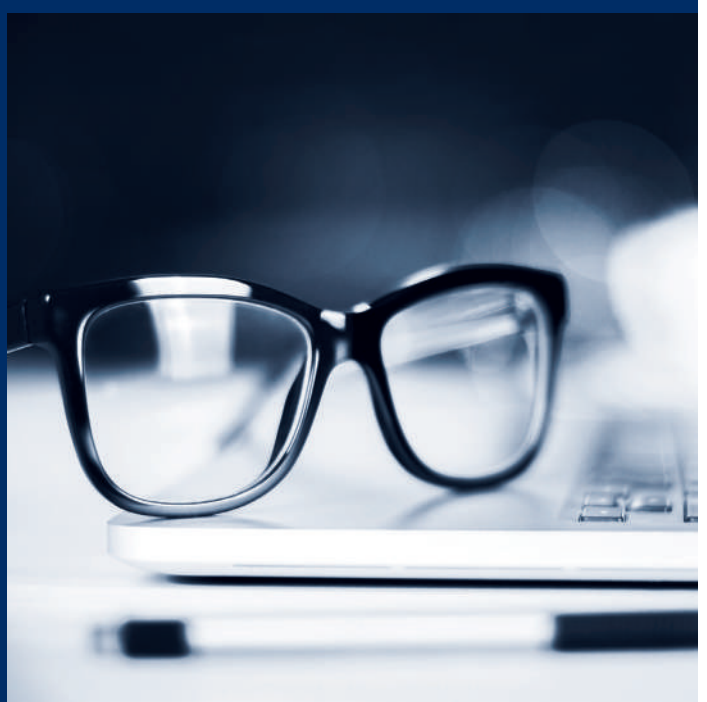


monofast

CNC machining centres for the eyeglass industry



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 three large, highly specialized production centers employing more than 4,000 workers and operating in five continents. SCM Group: the most advanced skills and know-how in the fields of industrial machinery and components.

CMS SpA manufactures machinery and systems for the machining of composite materials, carbon fiber, aluminum, light alloys, plastic, glass, stone, and metals. It was established in 1969 by Mr Pietro Aceti with a vision 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 Advanced Materials Technology is a leader in the field of numerically controlled machining centers for the working of advanced materials: composites, carbon fiber, aluminum, and light alloys. Substantial investments in research and development have allowed the brand to always be on the forefront of cutting-edge design, with machines that ensure best-in-class performance in terms of accuracy, speed of execution, and reliability; meeting the needs of customers operating in the most demanding divisions.

Since the early 2000's, **CMS Advanced Materials Technology** has established itself as a technology partner in areas of excellence such as aerospace, aviation, automotive, race boating, Formula 1, and the most advanced railway industry.

monofast

APPLICATIONS	4-5
MONOFAST TECHNOLOGICAL BENEFITS	6-7
MONOFAST TECHNOLOGICAL ADVANTAGES	8-9
MONOFAST OVERALL DIMENSIONS AND TECHNICAL DATA	10-11
CMS CONNECT	12
CMS ACTIVE	13
THE RANGE	14-15



APPLICATIONS



eyewear industry | eyewear industry | eyewear industry | eyewear industry | eyewear industry | eyewear industry



MONOFAST

TECHNOLOGICAL BENEFITS

Monofast is the evolution of CMS monoposto, the exclusive CMS system for the production of acetate and light alloy spectacle frames, designed and built specifically for the eyewear industry and used by the most important optical manufacturers.

With its improved flexibility, ease of use and productivity, monofast is able to automatically generate and start unattended production of a new model in only four hours, from a drawing or a sample. monofast is the most powerful tool for the manufacturer that wants to respond quickly and adapt its collections to constant changes in the market.

KEY BUYER BENEFITS

- + **Fully automated.** All is worked out in detail! The high level of automation and HW - SW integration makes Monofast the winning solution. Blank magazines with automatic loading and unloading, automatic tilting of the glass frame to machine the 6 faces with extreme ease. Maximum ergonomics and safety for the operator in a small space.
- + **The most advanced revolver on the market.** Owing to powerful spindles and a 16-station zero time tool changer, flexibility and productivity are guaranteed. The possibility of managing angular transmissions makes it possible to carry out machining operations that are impossible with traditional tools.
- + **Only one click, or rather, one touch!** The innovative CMS Active interface, with an eye-catching touch screen, makes machine utilization increasingly easy for even the most inexperienced operator. Compatibility with all CAD systems, web diagnostics and daily reports on productivity complete the package.

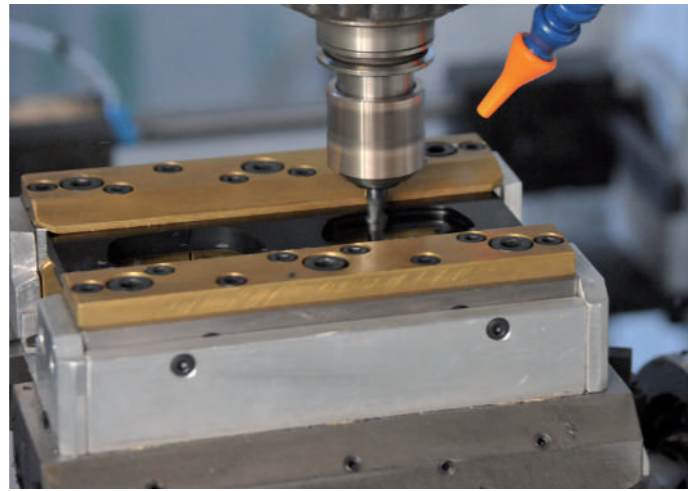


MONOFAST

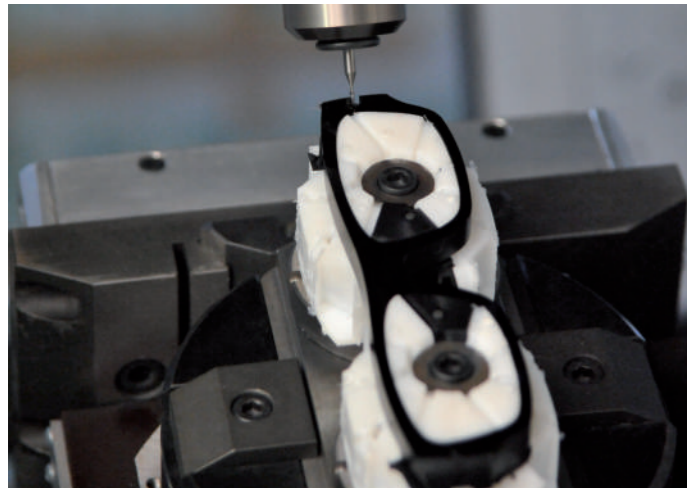
TECHNOLOGICAL ADVANTAGES



Checking tool with laser



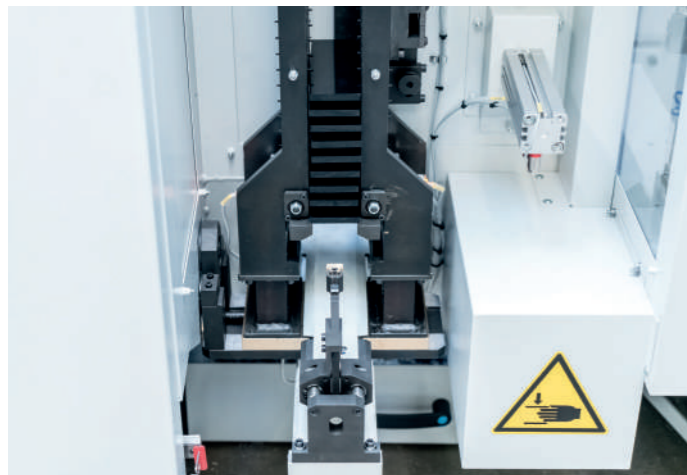
Machining of internal parts



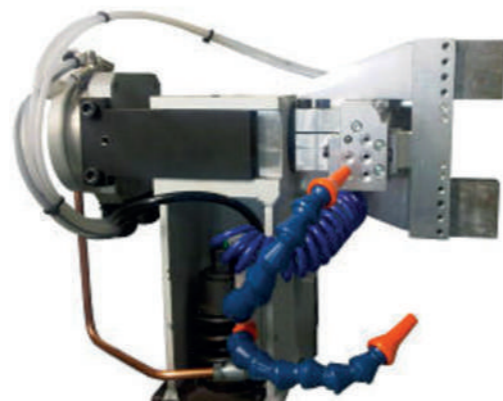
Machining of external parts



Mask machining



Magazine for bent strips

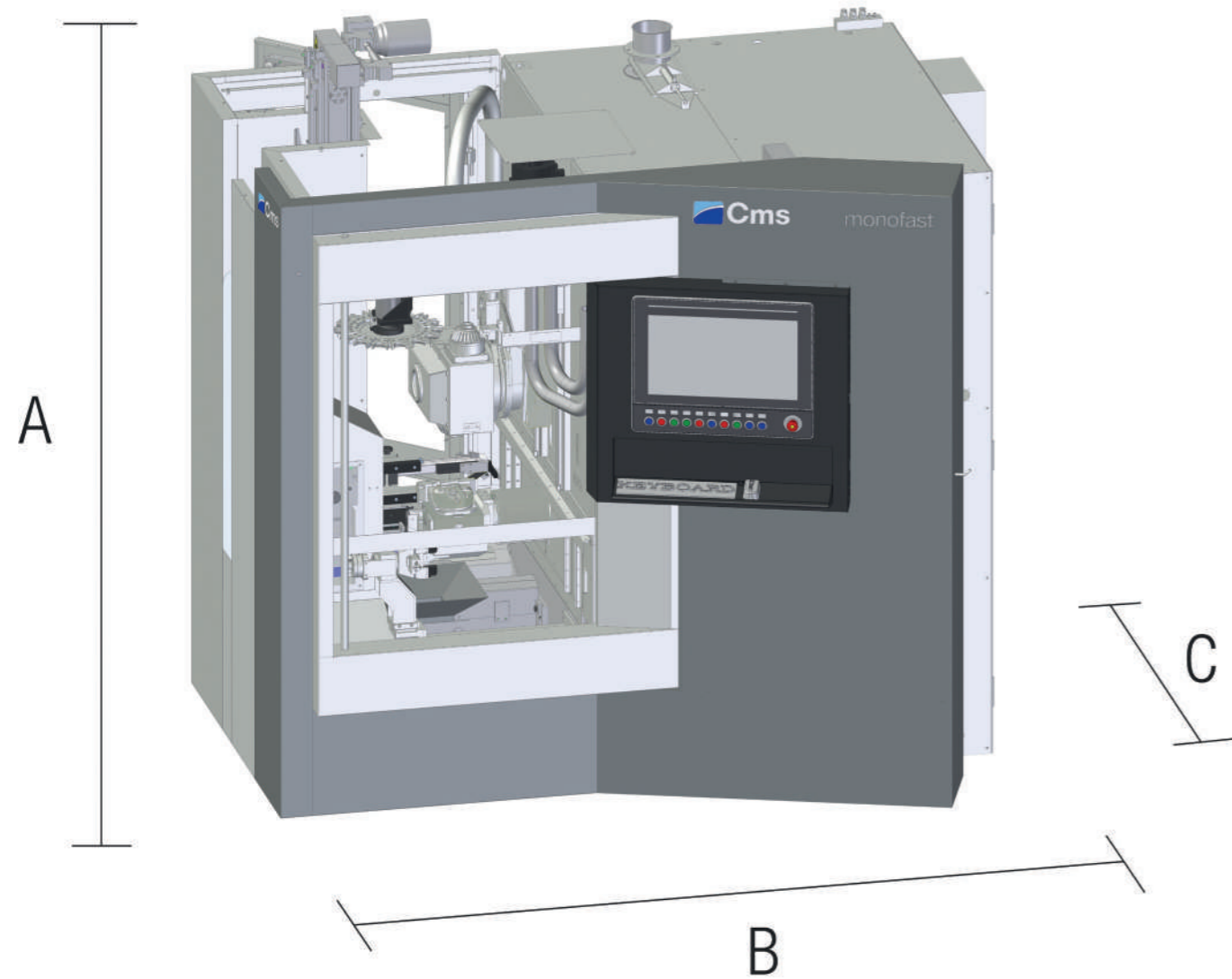


Clamping device for piece rotation



MONOFAST

OVERALL DIMENSIONS & TECHNICAL DATA



DIMENSIONS OF BLANK STRIPS THAT ARE AUTOMATICALLY LOADED

Length	Min 130 mm - Max 210 mm
Width	Min 30 mm - Max 80 mm
Thickness	Min 3 mm - Max 16 mm

MONOFAST: TECHNICAL DATA

AXES STROKE	LINEAR	X	LENGTHWISE TABLE MOTION	- 225 MM / + 235 MM
		Y	CROSSWISE TABLE MOTION	- 140 MM / + 150 MM
		Z	VERTICAL REVOLVER MOTION	230 MM
	ROTATING	V	SWIVEL HEAD	+ 120° / - 180°
		W	FRAME CHUCKING EXPANSIBLE DEVICES	± 360° IN CONTINUOUS
	B	TOOL MAGAZINES		
AXES SPEED	UP TO	30 M/1'		
BLANK FEEDER	HEIGHT	1500 MM		
	OPERATING RANGE AT FULL LOAD	4 H		
		SELF-CENTERING DEVICE AUTOMATIC CYCLE STOP WHEN BLANK FEEDER IS EMPTY		
REVOLVER	NO. OF ELECTROSPINDLES	2 ELECTROSPINDLES CONTROLLED BY 2 INDEPENDENT CONVERTERS		
ELECTROSPINDLES	POWER (S1)	2 KW		
	PROGRAMMABLE ROTATION	1800 ÷ 30000 RPM		
NUMERICAL CONTROL		OSAI OPEN - PC OFFICE S510I		
ELECTRICAL CABINET	PROTECTION DEGREE	IP 55 WITH AIR CONDITIONER		
SIZE AND WEIGHT	WIDTH (B)	2600 MM		
	DEPTH (C)	2100 MM		
	HEIGHT (A)	2300 MM		
	WEIGHT	~ 3000 KG		

CMS connect the IoT platform perfectly integrated with the latest-generation CMS machines

CMS Connect is able to offer customised 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 platform displays, analyses and monitors all data from connected machines. The data collected by the machines in real time become useful information increase machine productivity, reduce operating and maintenance costs and cut energy costs.



CMS active a revolutionary interaction with your CMS machine

Cms active is our new interface. The same operator can easily control different machines as the “CMS Active interfaces maintain the same look&feel, icons and iteration approach.



APPLICATIONS

SMART MACHINE: Section designed for the continuous monitoring of machine operation, with information on:

Status: machine status overviews. The representations provided allow machine availability to be checked - to identify possible bottlenecks in the production flow;

Monitoring: instantaneous, live display of the operation of the machine and its components, of currently running programs and potentiometers;

Production: list of machine programs run within a given timeframe 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 machine components indicate a potentially critical state associated with reaching a certain threshold. In this way, it is possible to take action and schedule maintenance services, without any down-time.

SMART MANAGEMENT

Section designed for KPI presentation for all the machines connected to the platform. The indicators provided assess of the availability, productivity and. The indicators provided assess of the availability,

productivity and efficiency of the machine and the quality of the product.

MAXIMISED SECURITY

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

ADVANTAGES

- ✓ Optimisation of production performance
- ✓ Diagnostics to support components warranty optimisation
- ✓ Productivity increase and downtime reduction
- ✓ Improvement of quality control
- ✓ Maintenance costs down

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.

ADVANCED ORGANIZATION OF PRODUCTION

Cms Active enables configuring different users with different roles and responsibilities according to the operation mode of the machining centre (e.g.: operator, maintenance man, administrator, ...).

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

ABSOLUTE QUALITY OF THE FINISHED WORKPIECE

With CMS aActive 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.

CMS ADVANCED MATERIALS TECHNOLOGY RANGE OF MACHINES

FOR COMPOSITE MATERIALS, ALUMINUM AND METAL PROCESSING

MONOBLOC CNC MACHING CENTERS FOR VERTICAL MILLING



ARES



ANTARES



ANTARES K



VM 30



ETHOS K

GANTRY CNC MACHING CENTERS FOR LARGE-SIZE WORK AREAS



MX5



POSEIDON



ETHOS



CONCEPT

HYBRID ADDITIVE MANUFACTURING AND MILLING SYSTEMS



KREATOR ARES

MONOBLOC CNC MACHING CENTERS FOR HORIZONTAL MILLING



IKON

FIXED AND MOBILE BRIDGE CNC MACHING CENTERS



FXB



AVANT

CNC MACHING CENTER FOR THE EYEWEAR INDUSTRY



MONOFAST



EOS

WIND BLADE WORKING SYSTEMS

CNC MACHING CENTERS FOR GUNSTOCKS PROCESSING



MULTILATHE



MONOFAST



KARAT

WATERJET CUTTING SYSTEMS



TECNOCUT PROLINE



TECNOCUT SMARTLINE



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

a company of **scm**group