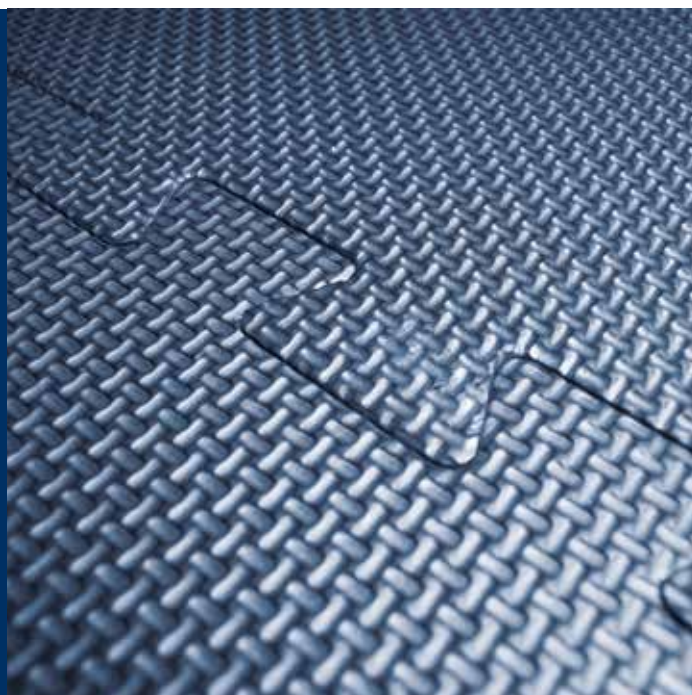
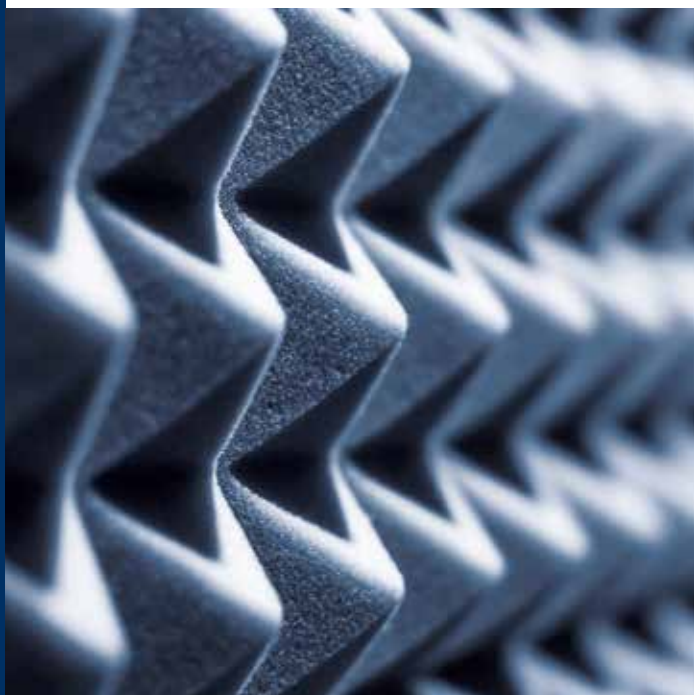


tecnocut waterspeedy s

Waterjet cutting 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 centres employing more than 4,000 workers and operating in all 5 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 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 Metal Technology is the brand dedicated to the production of metalworking machines and technical articles offering a wide range of complete water-jet cutting systems, pressure intensifiers and dry or wet deburring and satin finishing machines. Since the 90's, thanks to the acquisition of Tecnocut and constant internal developments, **CMS Metal Technology** has been able to gain high international prestige, boasting more than 1,500 installations worldwide. **CMS Metal Technology** is the reliable partner of leading industries in various sectors such as automotive, aerospace, machining, furniture and industrial architecture.

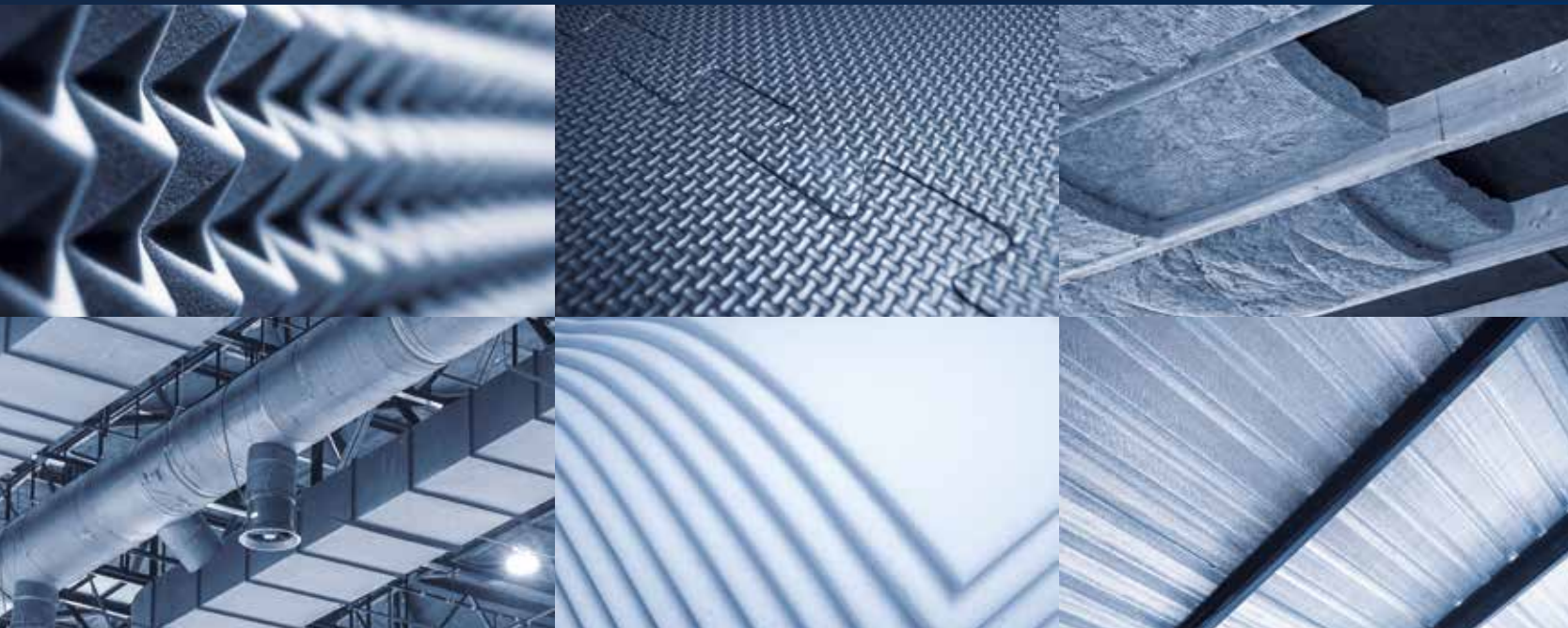


tecnocut waterspeedy s

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APPLICATIONS



duct ventilation | acoustic insulation | furniture upholstery | foam carpets | thermal insulation



sealing gaskets | storage box protection | automotive noise and vibration protection

Unparalleled.

New.

Innovative.

Quality.

Ultra.

Effective solutions.

The **UNIQUE** waterjet cutting machines.

Waterjet cutting machine

TECNOCUT WATERSPEEDY S

TECHNOLOGICAL BENEFITS



Tecnocut Waterspeedy S is a system suitable for soft materials cutting as plastic, foams, rubbers, composites, multilayer materials, gaskets and technical materials. Its extremely high dynamic, together with the possibility to work with several cutting heads and its automatic pallet change system, assures very high productivity and competitive costs when compared to conventional systems. Tecnocut Waterspeedy S is the result of a careful design for the satisfaction of customer's requirements and it tends to reach the highest safety standards.

KEY BUYER BENEFITS

- + Shorter programming and contouring times: The avoidance of repositioning and extensive capabilities of the CX5 working unit allow for a 15% reduction in cutting and programming times.
- + **Shorter programming and contouring times:** The avoidance of repositioning and extensive capabilities of the CX5 working unit allow for a 15% reduction in cutting and programming times.
- + **Soundproof cabin for cutting area protection, to prevent any contact with** moving parts and dust and moisture leakage during cutting.
- + Soundproof cabin for cutting area protection, to prevent any contact with **moving parts and dust and moisture leakage during cutting. scarico.** Entrambi i pallets sono costituiti da un piano a nido d'ape in acciaio inossidabile.



TECNOCUT WATERSPEEDY S

TECHNOLOGICAL BENEFITS



MOTION

High precision and performance helical racks and pinions.



WORKTABLE

Honeycomb stainless steel grid for plastic materials cutting.
Optional: stainless steel net conveyor to cut roll material.

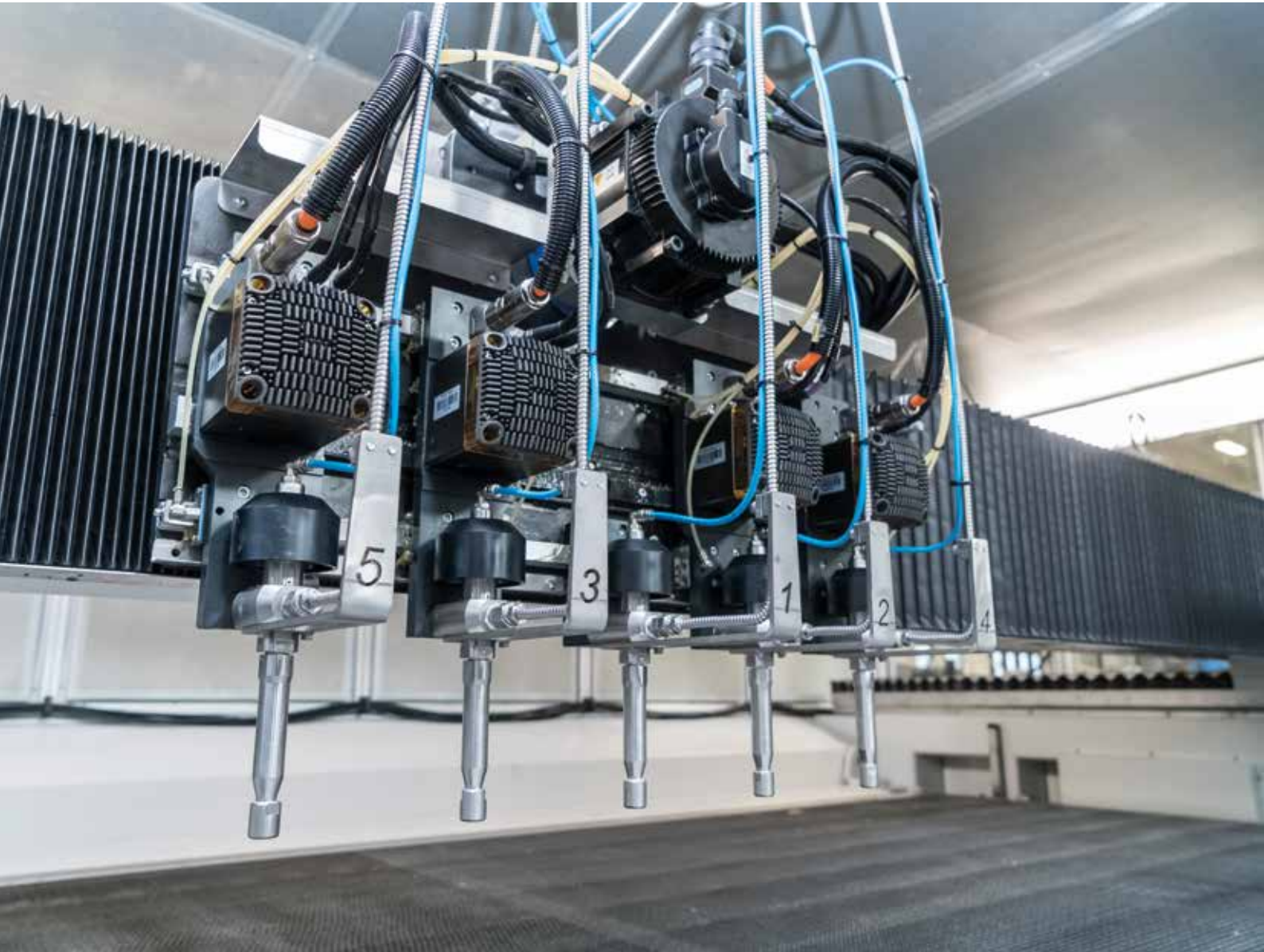


AUTOMATIC PALLET CHANGE SYSTEM

Separated loading and unloading zones with automatic servomotor driven pallet shuttle.

TECNOCUT WATERSPEEDY S

TECHNOLOGICAL BENEFITS



MULTIPLE HEADS
 Additonal pure waterjet cutting heads composed of trolleys with 3 or 5 heads with automatic distance adjustment to get high performances during the cutting process. Distance between heads is CNC controlled.
 Optional: double carriage for the highest productivity.

TECHNICAL DETAILS HEAD DISTANCE				
	NR. 3 3-AXIS HEADS		NR. 5 3-AXIS HEADS	
	STANDARD CARRIAGE	LARGE CARRIAGE	STANDARD CARRIAGE	LARGE CARRIAGE
Minimum distance	85	100	85	100
Maximum distance	340	800	170	400

STEAM SUCTION
 Suction system for steam discharge with HEPA 99.997% absolute filter, positioned on the side of the machine.



AUTOMATIC TANK CLEANING SYSTEM
 A set of nozzles inside the tank wash away the cutting debris to the external waste water filtering system.



WASTE WATER FILTERING SYSTEM
 An automatic system leads scraps on the rear side of the machine where a paper filter with a collection tank cleans discharge water.



SIDE DOORS TO CLEAN THE TANK

TECNOCUT JETPOWER EVO

TECHNOLOGICAL BENEFITS



PRESSURE INTENSIFIER ENTIRELY MADE BY CMS

CMS brought about a new concept in ultrahigh pressure intensifiers, enriched with technological contents especially designed to satisfy the needs of the most demanding users. The new technological concept foresees several pressure multipliers for the intensifier: independent, parallel and electronically-synchronized. This innovative solution made it possible to obtain an ever-constant pressure levels, avoiding any pressure drops typical of traditional opposed-cylinder intensifiers.

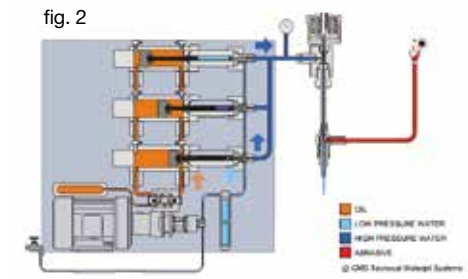
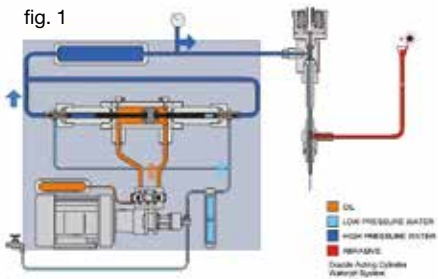
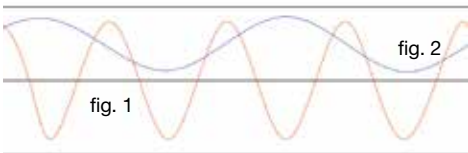
KEY BUYER BENEFITS

- + Hydraulic intensifier with 2 or 3 **independent and electronically synchronized** parallel cylinders to guarantee a constant **signal of output pressure without** the use of attenuator.
- + The technology with 3 independent cylinders allows **the bypass of a single cylinder that needs maintenance, while the machine is working, avoiding unnecessary downtime.**
- + The parallel cylinders architecture is designed for a low cycle frequency that reduce the high pressure components wear and **consequently the maintenance costs.**
- + **Reduction of oil consumption and operating costs:** Water flow rate up to 5 l/min to satisfy a wide range of cutting applications, adapting the oil consumption thanks to an independent variable flow pump for hydraulic circuit.

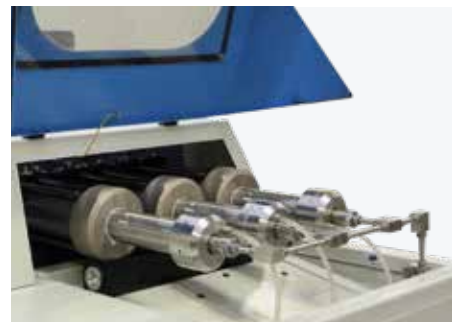
fig. 1 Traditional opposing-cylinders intensifier

fig. 2 CMS parallel cylinders intensifier

Pressure



Software-based electronic control of cutting pressure



Pressure multipliers



Hydraulic unit



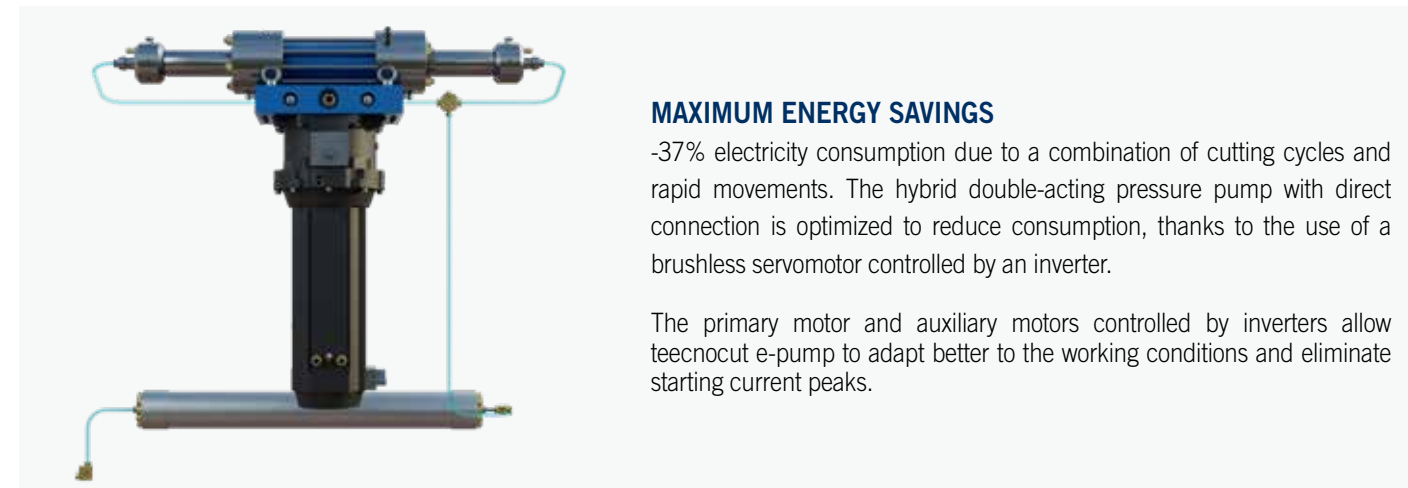
Oil/air heat exchanger

TECNOCUT E-PUMP

TECHNOLOGICAL BENEFITS

HYBRID INTENSIFIER

is the latest innovation in the range of CMS Metal Technology intensifiers created as a continuation of the quest by CMS for efficiency, performance, energy consumption and low environmental impact in the world of pressure intensifiers for waterjet cutting applications. This new project was carried out entirely in the CMS engineering department and has given rise to an innovative product that combines the power density of a hydraulic pump with the energy efficiency of a direct-drive mechanical architecture. The simplicity of the system translates into a significant reduction in components: up to 95% compared to a conventional hydraulic intensifier. Tecnocut E-pump exploits an electrohydrostatic unit connected directly to long-stroke pressure multiplier cylinders, achieving an operating efficiency of more than 31% compared to hydraulic intensifiers. The intensifier has an on-board intelligence with portable tablet (Wi-Fi) and touch display for monitoring and controlling operating parameters and performing diagnostics on hydraulic and high-pressure components. Tecnocut e-pump can be installed on any cutting table, even third-party ones.



KEY BUYER BENEFITS

- + High efficiency level: up to 31% more than conventional intensifiers.
- + Low maintenance, thanks to the use of 95% fewer hydraulic components.
- + Minimal use of hydraulic oil: -91% compared to conventional systems, with the benefit of lower environmental impact
- + Electricity consumption up to 37% lower due to a combination of cutting cycles and fast, closed-head movements



WI-FI TABLET WITH WEB HMI

The intensifier is controlled by an industrial PLC in the electrical cabinet in order to interface with CMS cutting tables, as well as third party ones.

The HMI control interface is accessible from the 10.4" Wi-Fi tablet and offers:

- remote diagnostics
- power management and control
- management and control of the cycle number per cylinder
- electronic cutting pressure control



CENTRAL SEAL LEAKAGE COLLECTION SYSTEM

An external manifold to collect leaks from HP seals, for easy and quick diagnostics without the need to open the covers. Depending on the location of the leak, it is possible to identify on which side it is and whether it is from static or dynamic seals. Two status green leds identify the running multiplier.



BOOSTER PUMP

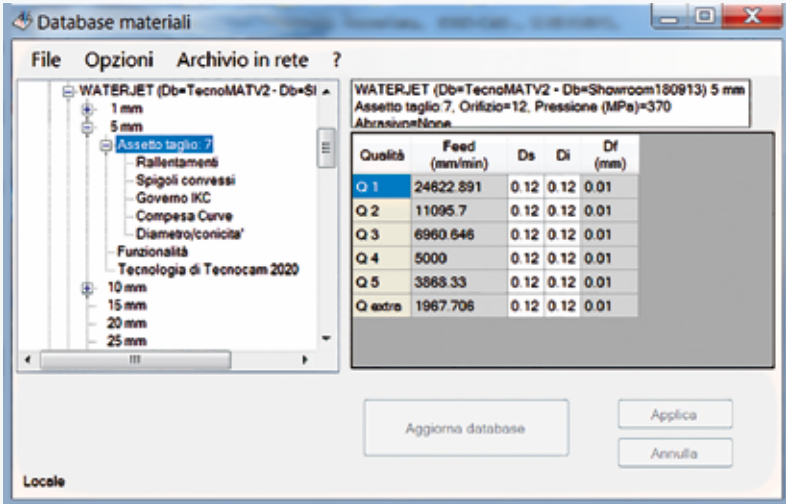
Inverter-powered booster pump for the inlet water supply, to optimize consumption by adapting to the mains water flow and pressure as well as to the cutting cycle (open/closed head). It is compatible with frequencies of 50 Hz and 60 Hz.

EASY TO USE AND EFFICIENT SOFTWARE

TC2020 is a CAM software which allows to fully manage a waterjet cutting system. Developed in Windows® environment, it originates and grows out of CMS wide experience in this industry. TC2020 is suited to work with most design software packages available on the market.

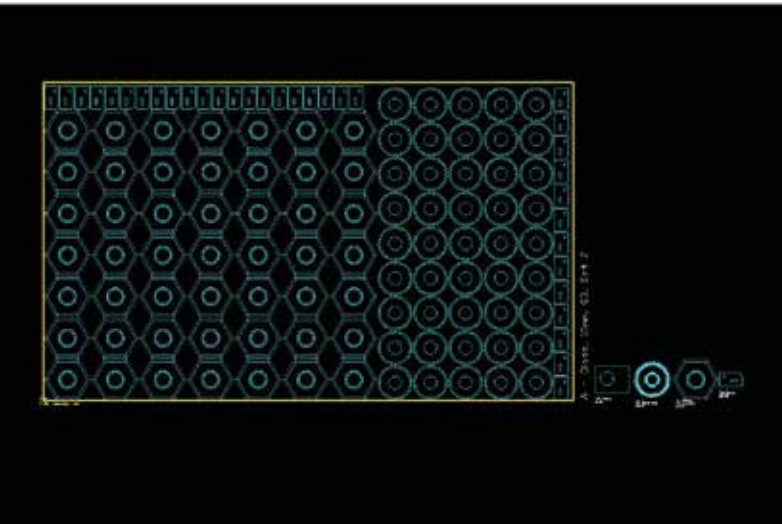
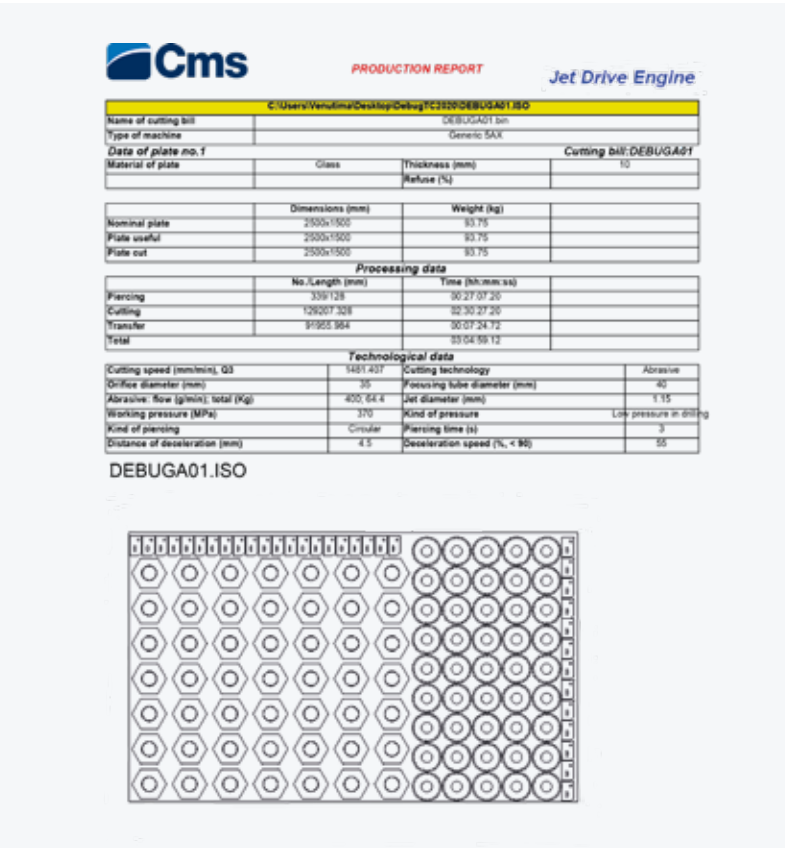
MATERIALS DATABASE

The software package is completed by a database containing the most commonly used technological parameters in waterjet cutting and it can also be customized to address specific requirements. The technical characteristics of any profiles that make up the imported shapes can be changed, in order to optimize the cutting sequence and machining.



MANAGEMENT OF CUTTING LISTS AND ESTIMATES

The cutting list management is supervised by a user-friendly interface that provides information on the positioning data by means of a graphic view of the slab, on the cutting parameters and a production report, divided into cutting and material costs. After generating the ISO, the cutting path accuracy can be checked by reproducing the cutting machine CNC.



OPTIMIZATION OF SLABS (NESTING FUNCTION)

The advanced nesting algorithm is able to optimize the use of the material, while managing different sheet sizes and scraps.

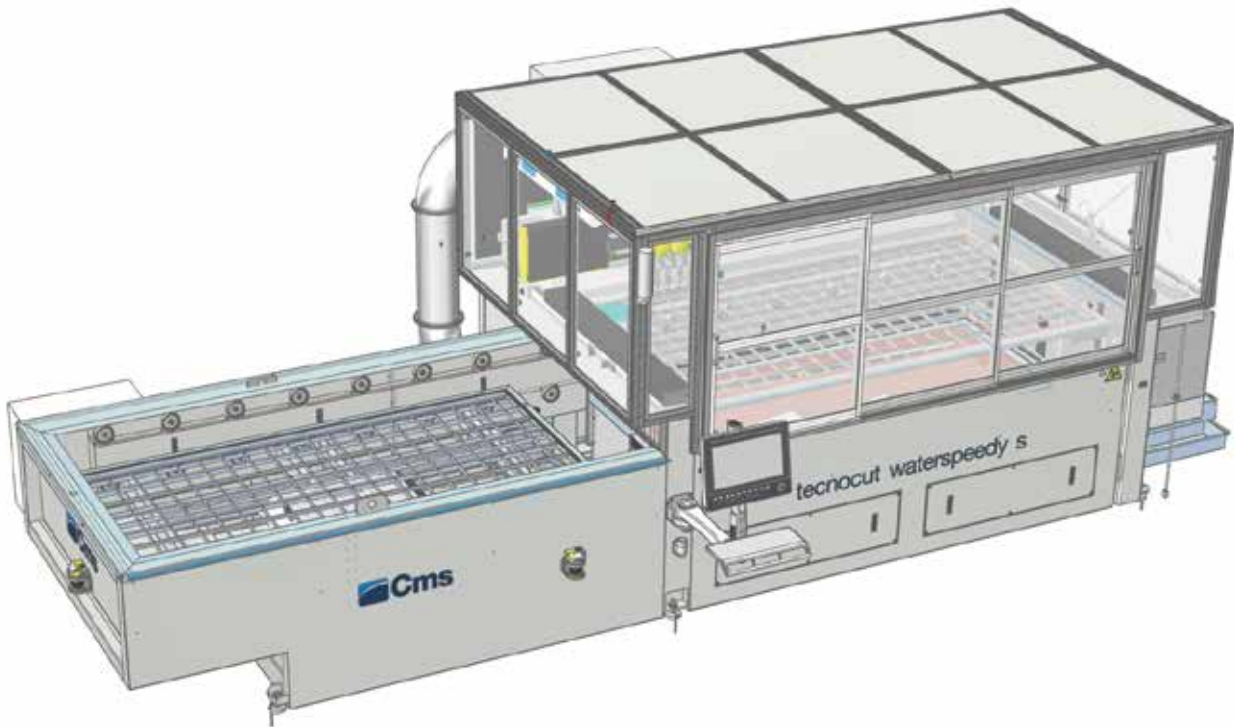


ISO PROGRAM CREATION

Starting from a drawing and the cutting parameters employed, TC2020 is able to create - by means of a specific module (JDE) - an ISO code for 3-axis with advanced features like the common cutting.

TECNOCUT WATERSPEEDY S

OVERALL DIMENSIONS AND TECHNICAL DATA



TECNOCUT WATERSPEEDY S 1630: TECHNICAL DATA	
X AXIS	3000 mm / 118 in
Y AXIS	1600 mm / 63 in
Z AXIS	200 mm / 8 in
WORKTABLE	1630 x 3080 mm / 64x121 in
OVERALL DIMENSIONS	10150 x 4910 x 2800 mm / 400 x 193 x 110 in

- Support plane max capacity: 150 kg/mq
- Max speed: 2755.9 ipm
- PC panel with 21" LCD monitor, keyboard, mouse and manual control device
- External port for USB key interface
- Connection to the computer network: RJ45 10/100 Mb connector



PRESSURE INTENSIFIERS

TECHNICAL DATA

TECNOCUT JETPOWER EVO: TECHNICAL DATA		
MODEL	40 HP	60 HP
POWER	30 kW / 40 HP	45 kW / 60 HP
MULTIPLIERS	2	3
MAX WATER PRESSURE	4150 bar	4150 bar
MAX WATER PRESSURE	2,7 L/min	5 L/min
MAX DIAMETER ORIFICES	0,3 mm	0,40 mm
VOLTAGE	400V +/- 5% 50-60 Hz (Different voltages and frequencies on request)	

TECNOCUT E-PUMP: TECHNICAL DATA *	
POWER CONSUMPTION (0.38 ORIFICE AT 3800 BAR)	30 Kw / 40 HP
MAXIMUM POWER CONSUMPTION WITH CLOSED HEAD	2,4 Kw / 3 HP
MAXIMUM OPERATING PRESSURE	4130 bar
MAXIMUM WATER FLOW RATE AT 3700 BAR	5 l/min
MAXIMUM ORIFICE DIAMETER AT 3700 BAR	0,40 mm
OVERALL DIMENSIONS L X W X H	1666x906x1529 mm 65x36x60 in
WEIGHT	1400 Kg / 3086 lb
VOLTAGE (THREE-PHASE)	400,60 hz
OIL TANK CAPACITY	13 L
PRESSURE ATTENUATOR CAPACITY	1.15 L
CYLINDER STROKE	200 mm / 8 in
REQUIRED INLET WATER TEMPERATURE (ACCEPTABLE MIN – MAX)	5 - 25 °C
NOMINAL ENVIRONMENT TEMPERATURE (ACCEPTABLE MIN – MAX)	5 - 40 °C
NOMINAL NOISE	70 db

* BFT Technology. The technical data may vary with different configurations

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.

THE RANGE OF CMS METAL TECHNOLOGY

FOR METAL AND TECHNICAL ARTICLES PROCESSING

WATERJET CUTTING MACHINES



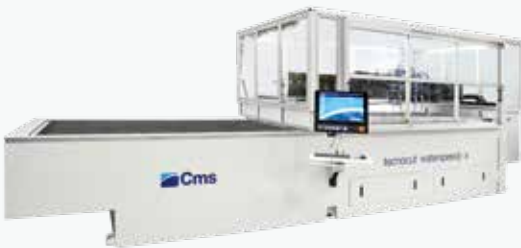
TECNOCUT SMARTLINE



TECNOCUT PROLINE



TECNOCUT AQUATEC



TECNOCUT WATERSPEEDY S

PRESSURE INTENSIFIERS



TECNOCUT EASYPUMP



TECNOCUT JETPOWER EVO



TECNOCUT E-PUMP

DRY DEBURRING-FINISHING MACHINES



DMC M950



DMC EUROSYSTEM



DMC METALSYSTEM

WET DEBURRING-FINISHING MACHINES



DMC M950 WET



DMC TOP METAL



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