

tecnocut proline

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 proline

| | |
|--|-------|
| APPLICATIONS | 4-5 |
| TECNOCUT PROLINE TECHNOLOGICAL BENEFITS | 6-7 |
| WHAT'S NEW | 8-11 |
| SAFETY AND THE WORK ENVIRONMENT | 12 |
| CLEANING ACCESSORIES | 13 |
| CUTTING CONTROL | 14-15 |
| OPTIONALS | 16-21 |
| TECNOCUT GREENJET EVO | 22-23 |
| SOFTWARE | 24-25 |
| TECHNICAL DATA | 26-27 |
| CMS CONNECT | 28 |
| CMS ACTIVE | 29 |
| THE RANGE | 30-31 |

APPLICATIONS



precision mechanics | advanced materials processing | soft materials



intensive production of flat sheet metal | cutting of special materials and alloys

Unparalleled.

New.

Innovative.

Quality.

Ultra.

Effective solutions.

The **UNIQUE** waterjet cutting machines.

Waterjet cutting machines

TECNOCUT PROLINE

TECHNOLOGICAL BENEFITS

HYDRO-ABRASIVE WATERJET CUTTING SYSTEM

A **genuine machining center**, conceived and designed with advanced technical solutions for the waterjet cutting technology, in order to achieve unmatched performance.

Tecnocut Proline is built around a stainless-steel frame ready for integration with the “dredge”, a fully automated and maintenance free abrasive removal system, an automatic water level control and rotating axes for pipes processing. This innovative, easy configurable concept has not only the abrasive bulk hopper installed on-board, but also the electric servodriven high-pressure pump is integrated with the machine frame, a big saving in terms of overall layout.

The gantry structure can guarantee maximum reliability over the years, thanks to tempered and ground racks and spiral pinions combined with gearbox that have a **backlash of less than 1 arcmin**.

The racks and sliding guides on the axes are protected by CMS' revolutionary “Powder-Free” system that is an engineering masterpiece of an impenetrable labyrinth of casings that guarantee full protection against water and dust.

- **more versatile:** endless standard arrangements to adapt to new production requirements
- **faster:** NC and digital drivers to speed up the programming of the machine and its accessories
- **more compact:** all the accessories are built into the base structure for fast and easy installation
- **simpler:** reduced installation times and re-commissioning

KEY BUYER BENEFITS

- + - **35% of layout** with respect to previous models, thanks to the integration of the abrasive bulk hopper and high-pressure pump.
- + It can be fitted with up to **2 electric and servo-driven pumps**, 4150 or 6200 bar available pressure, with the aim to achieve the highest throughput and cutting versatility also when working especially hard or thick materials.
- + **Machine is ready for easy integration with optional** such as the chain dredge system, the rotary option and the water level control for submerged cutting, to accommodate specific applications and the most demanding production requirements.
- + **± 0.035 mm of positioning accuracy** and **± 0.025 mm** of repeatability to guarantee cutting quality and accuracy



TECNOCUT PROLINE

WHAT'S NEW

READY FOR EXHAUSTED ABRASIVE REMOVAL

The structure has been designed to be ready for installation of the exhausted abrasive system using a dredging chain. In its more advanced version, it has an automatic weight detection system of the abrasive material extracted and monitoring system of the current absorption.



READY FOR PIPE AXIS SPINDLE

At the rear of the machine structure, it's foreseen the necessary machining to install the pipe axis spindle and tailstock to process circular cut pipes. The flange with ASA4 attachment is also compatible with the installation of a self-centering jaw chuck.



READY FOR AUTOMATIC WATER LEVEL

To improve working conditions both in terms of noise when cutting and cleaning around the machine, a pneumatic system can be installed in the base to automatically raise and lower the level of water in the main tank, submerging the piece to be processed.



AUTOMATIC TCP DETECTION

Automatic **laser detection system** of the cutting head alignment with respect to the rotation center of the C axis and B axis with the aim of:

- compensating the misalignment of the cutting head in the event of a collision
- accurately calculating the XY positions of the focusing device before carrying out processing work with particularly strict tolerance requirements. The device is incorporated into the base and installed on a pop-up tray
- load the same ISO program on several 5-axis machines

TECNOCUT PROLINE

WHAT'S NEW

MONOBLOCK DESIGN AND STAINLESS-STEEL TANK

The Gantry design (master/slave) with high guides, thanks to the rigid construction and an improved integrated structure, allows a unique compromise to be achieved in terms of machine tolerance and performance. The system is designed and assembled to reduce vibrations to a minimum, allowing for best in class acceleration.



STAINLESS-STEEL TANK

The catch tank is produced in stainless-steel with a V structure that can support a maximum load of 1000 kg/m² (version with load up to 1800 kg/m² available on request). Over time, the stainless-steel walls guarantee maximum resistance to corrosion, that prevents the structure from weakening.



PRESSURIZED ABRASIVE FEEDING SYSTEM 330 KG

Pressurized abrasive feeding system with two 330 kg double stage tanks. The structure anchored to the base eliminates positioning and installation problems guaranteeing a constant and stable feeding of abrasive garnet into the electronic mini hopper. The double stage configuration allows for the main tank to be filled while the machine is processing.



INTENSIFIER ON REMOVABLE CART

In the innovative base structure can accommodate up to two high pressure 4150 bar and 6200 bar electric actuators which dramatically reduces installation times and loss of pressure typical of high-pressure traces located on the ground. The cart can be fully removed and fitted with internal lighting to make it easier to carry out maintenance work on the high-pressure circuit. Furthermore, the presence of a control panel with touch display allows for fast and instant on-board diagnostics.

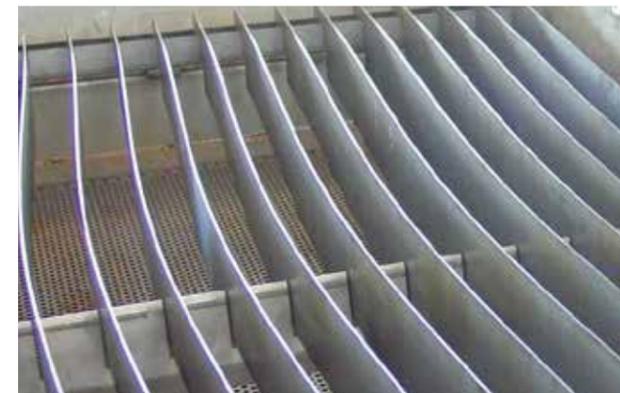


TABLE WITH SLATS

Cutting table with galvanized steel plates arranged at 70 mm (or 35 mm) with maximum capacity of up to 1000 kg/m². The structure allows for high planarity of the surface on the entire work area. The profile of the slat avoids water back-splashes that can damage the surface of the material.

HELICAL RACK AND PINIONS

The X and Y axes have tempered and ground racks and helical pinions to guarantee high dynamic performance while maintaining high precision positioning standards and repeatability. In combination with the absolute encoders, they allow the machine to start up without the need to reset axes and to restore the axes from the last cutting position.



LUBRICATION

Forced injection CNC controlled automatic lubrication of the main axes X, Y and Z numerically controlled at pre-set intervals, without manual intervention and without machine down time. The presence of sensors allows for the pressure to be controlled and the tank's minimum level to be noted.

TECNOCUT PROLINE

SAFETY AND THE WORK ENVIRONMENT

AUTOMATIC SAFETY DOORS

Front and rear doors with pneumatic movement to protect the cutting area and reduce the water and abrasive back-splashes. This ensures a cleaner, quieter and safer work environment for the operator. The large transparent polycarbonate panels allow the cutting process to be monitored safely.



BELLOWS VS CASINGS

POWDER-FREE LABYRINTHS

The linear guides and kinetic transmission are incorporated into the machine's structure and are protected by a folded sheet metal labyrinth system known as Powder-Free. This system provides the highest level of protection against external contamination like dampness, dirt and abrasive material that can come into contact with the handling system. Furthermore, it prevents typical problems of wear on the bellows and makes the implementation of configurations easier with more independent cutting heads, thanks to a reduced interaxis between them.

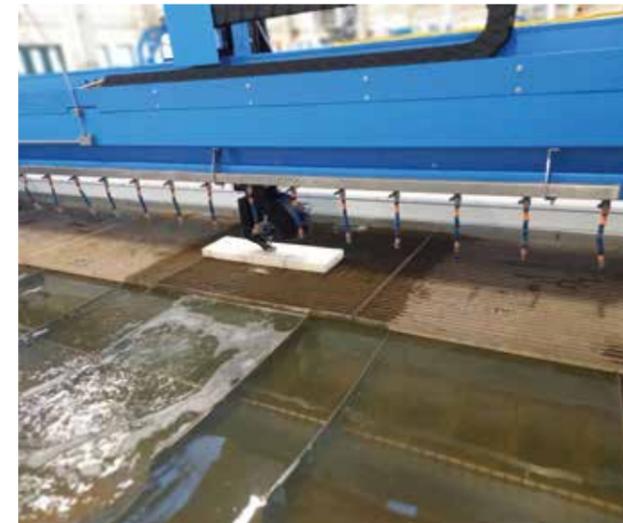


TECNOCUT PROLINE

CLEANING ACCESSORIES

AIR AND WATER REELS

Air and water reels, useful for cleaning at the end of the material cutting cycle.



SURFACE WASHING SYSTEM

The purpose of the washing system is to automatically remove the abrasive garnet settled on the surface when cutting. A washing cycle is planned after processing so that the abrasive garnet does not interfere with the handling and sheet securing operations. The area affected by the washing can be manually divided up into zones, excluding the calibrated nozzles singularly.

AREA CLEANING DEVICE

Washing system of the surface of the material. The water, drawn out of the tank using a re-circulation pump, is sprayed on the cutting area, removing any possible fragments of cut material. The water reduces the chances of scratching the surface of the piece and allows the touch feeler to work properly.



TECNOCUT PROLINE

CUTTING CONTROL



CONTROL PANEL

The waterjet cutting system control hardware and software have been designed to offer the operator a simple and intuitive interface that allows all the system functions to be controlled, including the taper compensation (JDC) for the 5-axes machines.

The following configurations that maximize the waterjet machine's functioning are foreseen:

- Single 21.5" industrial PC Panel with touch display and HMI CMS Active interface
- Secondary PC Panel to show the work area from the monitoring cameras (optional)
- Master/slave pc panel on the rear of the machine to easily program the cutting of pipes (optional)



PC Panel slave (optional)



MACHINE DASHBOARD

Real time display of all the machine's parameters like consumption, electronic flow adjustment of the abrasive garnet, dredge status and consumables, monitoring of the multiplier operating conditions (both greenjet and jetpower evo)



SURFACE TOUCH FOLLOWER

The phased or continuous probe detection can automatically adjust the height of the cutting head by keeping it at an even distance from the surface of the piece being processed (even in the event of planarity variations on the piece itself). It is available both for 3-axis and 5-axis cutting heads and has an automatic stop system in the event of a collision (optional).

ELECTRONIC ABRASIVE MINI HOPPER

Abrasive garnet feeding device with adjustable flow in a range of 100 and 1400 g/min.

The presence of a digital vacuum sensor allows the monitoring of the conditions of the cutting head (opening, focusing device, mixing chambers) and detect any clogging of the abrasive garnet.



BULK ABRASIVE HOPPER

Depending on the production volumes requested, CMS has two pressurized abrasive feeding systems for storing the abrasive garnet: 330 kg (standard) and 2000 kg (optional). Both propulsors are fitted with a double stage tank (the first for loading, the second pressurized) with level detection sensors. Thanks to this solution, it is possible to fill the abrasive garnet tank while the machine is processing.

TECNOCUT PROLINE

JD5 CUTTING HEAD

TRANSPORT OF CO-AXIAL ABRASIVE GARNET WITH HIGH PRESSURE

CMS has developed a unique solution for transporting abrasive garnet in the Z axis from the mini hopper to the cutting head avoiding maintenance costs and machine downtimes when replacing the plastic pipe typically used on standard solutions. (Patent pending)

PROTECTIVE CASING

All the sensitive parts of the Z axis and cutting head are protected against water and abrasive back-splashes via sealed stainless-steel casings and 3D printing covers.

BUILT-IN ANTI-COLLISION

The loading cells built into the feeler unit detect any collisions when cutting. This results in fewer machine downtimes to restore the cutting head and possible damage to the processed piece. The addition of a feeler presence sensor prevents possible programming errors with the advantage of greater process reliability.



ROTATING JOINTS

Pneumatic joint to collect all the electric signals emitted by the cutting head and electric joint to allow the infinite rotation of the axis.

READY FOR CCD CAMERA AND CROSS LASER

The Z axis is ready for the installation of the starting point acquisition system using a cross laser (standard) or the innovative system with digital camera.

DIRECT DRIVE MOTOR

The CMS designed motors, both for endless rotation and cutting head tilting, are direct drive and are extremely compact. This solution guarantees excellent performance and position accuracy on the entire work area.

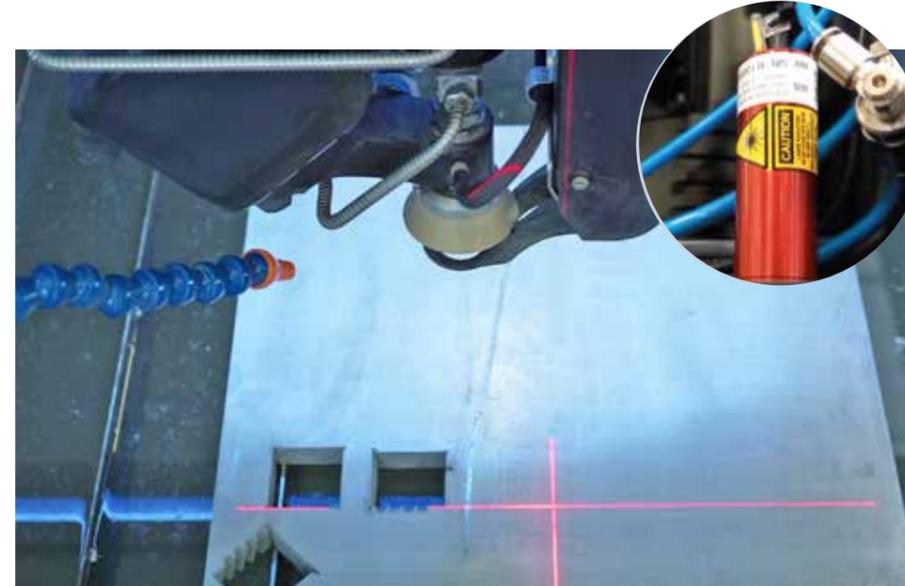
TECNOCUT PROLINE

SAFETY AND PERFORMANCE OPTIONALS



DRILLING UNIT

Pneumatic unit controlled by NC with maximum rotation of 25,000 rpm (free speed) to deal with composite and multi-layered materials, that easily delaminate when piercing with a high-pressure water jet. The high rotations allow for a reduction in drilling times without damaging the material, by optimizing the cutting cycle in combination with the processing strategies that can be set using our software.



CROSS LASER FOR ORIGIN ACQUISITION

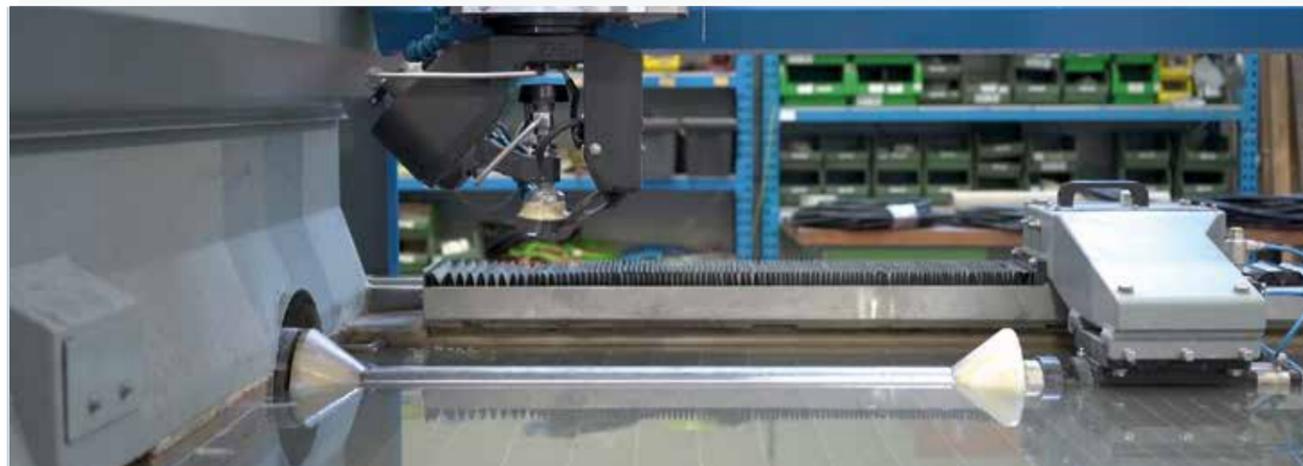
Cross laser device to set one or more origin points on the material to cut.

ROTATING AXIS FOR PIPE PROCESSING

Adjustable tailstock and rotating spindle to process round section pipes. The combination with Easyjet DDX software allows for easy programming of different cutting types such as:

- cut for projection
- cut for adhesion
- header for cutting

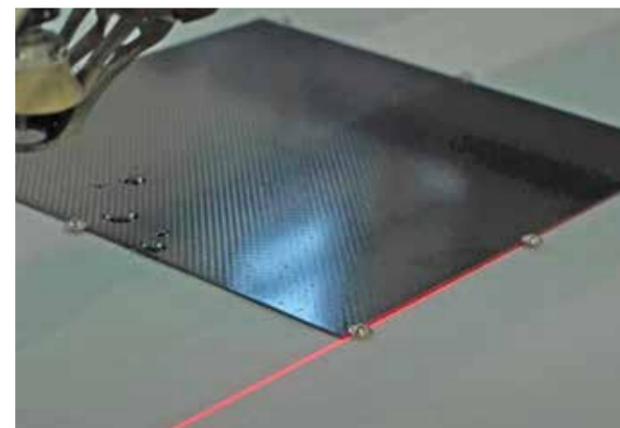
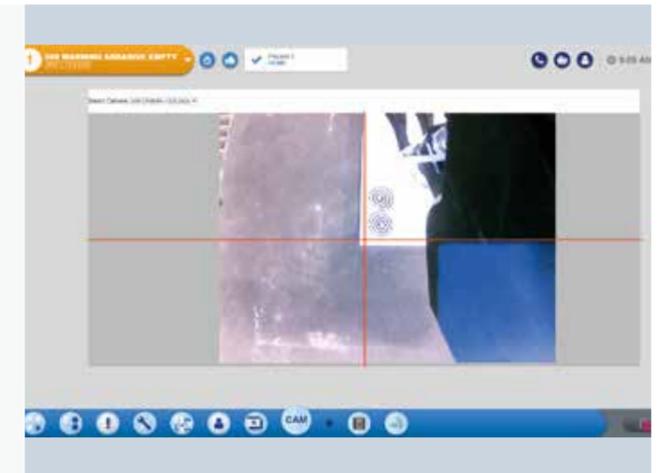
The ASA4 attachment is compatible with the self-centering jaw chuck installation to enhance the machine's cutting capability.



| | MINIMUM INTERNAL DIAMETER | MAXIMUM INTERNAL DIAMETER | MAXIMUM WEIGHT WITH TAILSTOCK | MAX OVERHANGING WEIGHT |
|-----------------|---------------------------|---------------------------|-------------------------------|------------------------|
| STANDARD | 42 mm | 400 mm | 200 kg | - |
| WITH JAW | 42 mm | 250 mm | 200 kg | 80 kg |

CCD CAMERA FOR ORIGIN ACQUISITION

The innovative system featuring a camera built into the Z axis, allows the work area to be framed and acquire one or more origins on the material to cut. This allows the operator to perform all the cutting preparation and programming operations without ever moving from the control panel.



ALIGNMENT LASER PROJECTOR

Optional device to project a laser line onto the work surface that helps the operator to position and align the material before cutting.

TECNOCUT PROLINE

OPTIONALS FOR THE WORKING ENVIRONMENT

CHAIN DREDGE

Stainless-steel catch tank ready to install the exhausted abrasive removal system performed by chain dredge. This solution is fully automatic and at defined time interval managed by the NC. Thanks to the innovative "maintenance-free" design (patent pending), it eliminates the machine's downtimes to clean the tank and cut the maintenance costs by 90% compared to traditional hydrocyclone technology. The exhausted abrasive extraction system in the tank is protected both by the baskets for collecting the processing scraps and by a metal cage.



EXCLUSIVE ADVANTAGES

- + -81% drop in maintenance costs per year calculated across 2000 operating hours.
- + +75% longer lifetime before first replacement of the entire chain compared to a hydrocyclone
- + The best solution on the market for guaranteeing a clean tank, keeping the work environment clean, safe and comfortable

TECHNICAL SPECIFICATIONS

- + Steel chain with electrolytic zinc plating
- + CN controlled operating interval
- + Monitoring of the operating hours
- + Patented chain head

FLOOR PALLET SCALE FOR EXHAUSTED ABRASIVE GARNET

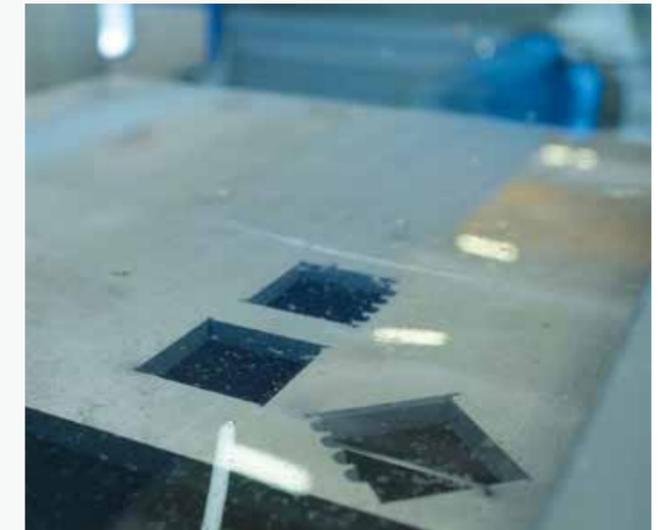
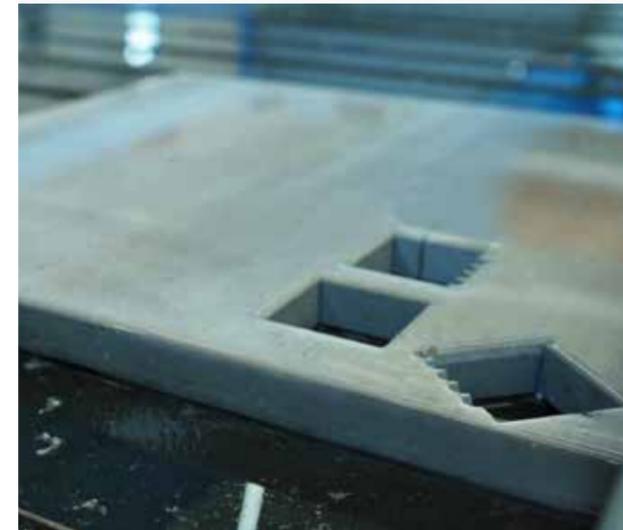
Together with the dredging-chain system for the exhausted abrasive garnet removal, the floor pallet scale, connected to the NC, guarantees a more efficient control of the operating intervals and 5 times less wear of the dredging-chain components. In the machine dashboard is shown the amount of the extracted garnet inside the external bag.



AUTOMATIC WATER LEVEL

Secondary tank, built into the structure and pressurized, to automatically (by NC) raise and lower the water level in the catch tank (up to 50 mm). This solution allows you to:

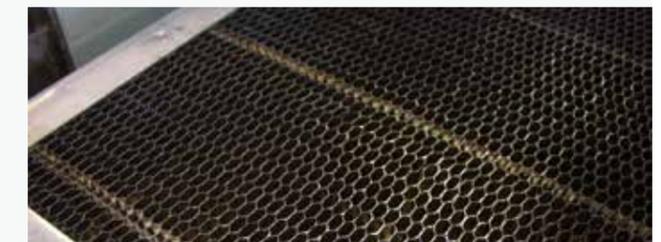
- submerge the material to reduce the noise level generated when cutting
- keep the work area clean
- eliminate external tanks that increase the space taken up on the floor



WORKING TABLE

STAINLESS-STEEL HONEYCOMB

Stainless-steel honeycomb support surface specific for water only cutting. Thanks to its alveolar structure, it offers perfect support to the soft materials, reducing water back splashes when cutting.



PLASTIC HONEYCOMB

40 mm thick panel for cutting of very thin or brittle material, avoiding the direct contact with the galvanized slats.



SLATS FOR THICK SLABS

Plates with increased height and thickness arranged at a distance of 35 mm to guarantee a maximum load of 1800 kg/m² for cutting applications with very high thickness. Thanks to this solution, the lifespan of the slats can be increased, avoiding the replacement of the entire cutting table after each processing.



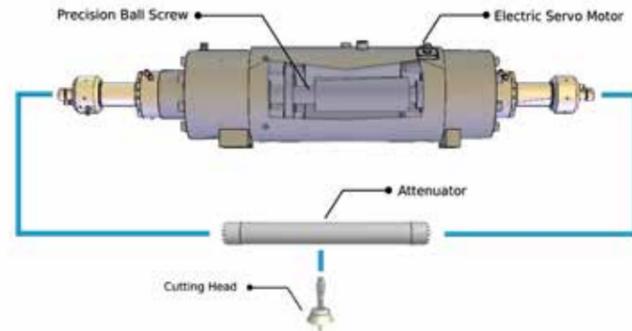
TECNOCUT GREENJET EVO

TECHNOLOGICAL BENEFITS

THE HIGHEST LEVEL OF EFFICIENCY WITH MAXIMUM SAVING

Tecnocut Greenjet Evo is the revolutionary high performance electric pump; thanks to an extremely efficient servomotor torque, the pressure signal is extremely high, eliminating the hydraulic control unit and reducing its components by 80% compared to a more traditional hydraulic intensifier.

Tecnocut Greenjet Evo has been designed with the use of an electric driver actuator and two opposing high pressure cylinders. The electric driver technical solution guarantees an extremely steady pressure signal, a pressurisation cycle monitoring and an operating efficiency that is at least 30% higher compared to the hydraulic intensifiers.



Double-acting pressure multipliers, electrically driven, manufactured with materials highly resistant against mechanical stress and corrosion.



SERVOMOTOR

The high pressure is generated by the movement of a recirculating screw driven by a female screw directly keyed on a direct drive torque motor controlled by an inverter for less wear and greater performance.

KEY BUYER BENEFITS

- + Electric pump actuated by a brushless servomotor capable of generating a constant pressure signal with an **efficiency greater than 35% compared to traditional hydraulic intensifiers.**
- + **Reduced environmental impact:** The electric actuator generate the high pressure without the hydraulic components with the advantage to avoid the disposal of the exhausted oil typically 200 liters every 2000 h.
- + Less than 81% of hydraulic and mechanic components and 73% less intensifying cycle than a direct drive pump, with consequently **less maintenance costs and machine downtime.**
- + **33% less power consumption** than a traditional hydraulic intensifier thanks to precise power control of the motor when required and setting down near to zero when the cutting head is closed.



CONTROL PANEL

Near the electric pressure intensifiers it's available a 4.3" touch panel to set the running parameters during service operations and hydraulic and high pressure diagnostic.



HEAT EXCHANGER

Air/oil heat exchanger for working environments with a temperature up to 30°C. The solution allows for the consumption of water typical of water/oil cooling systems to be reduced, keeping noise levels down while operating.

HIGH PRESSURE INTERFACE

Thanks to the mobile cart built into the base specifically for the intensifier, there is a insignificant pressure and water flow drop and an optimization of the high-pressure transport circuit. The maximum installation height of the high pressure whip is 3900 mm and optionally 2980 mm in case of low ceiling.

The high-pressure filter, located before the entry to the cutting head, prevents impurities entering the water caused by pipe wear and guaranteeing a longer lifespan to high-pressure components. The high-pressure interface can be configured to meet the different processing needs and according to the number of multipliers installed on the machine or belonging to third-parties:

- double interface for intense flows in the presence of one or more multipliers connected in parallel to maximize the water flow
- UHP interface both with 4000 bar multipliers (to guarantee greater resistance against wear), and 6200 bar multipliers.
- redundancy of the high-pressure circuit in case of a double pump, guaranteeing the machine's functioning even in the event of a stop/fault/maintenance on one of the two.

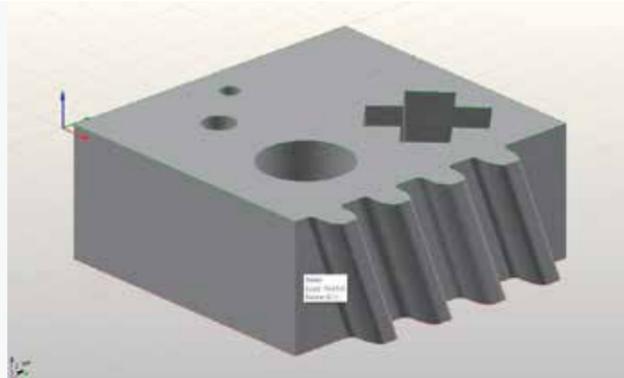


EASYJET DDX SOFTWARE

Easyjet is a complete CAD/CAM suite for all-round management of every aspect of the 3 and 5-axis waterjet machining, that eliminates purchasing costs, maintenance and training of further third-party software products.

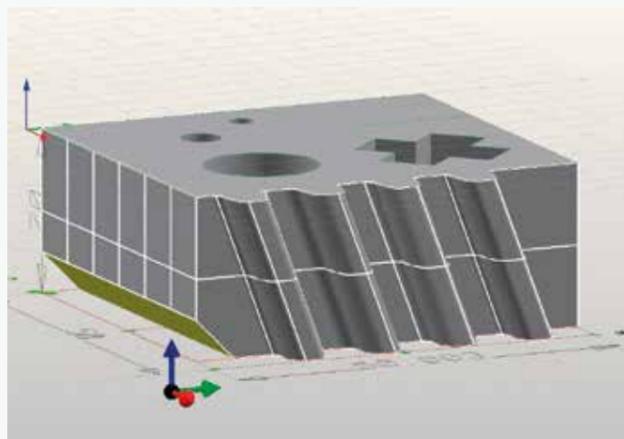
THE GENERAL FUNCTIONS INCLUDE:

- Graphic management of the zoom and shift tools
- 3D and photo-realistic rendering of the project
- Functions to measure the profile and analysis of the individual entities
- Functions to delete and reset the most recent operations
- Option to configure the parameters database on-line to share it with numerous software stations
- Automatic e-mail management to request assistance
- Python Module and Scl included to customise software and interface with other systems



THE CAD FUNCTIONS INCLUDE:

- Free drawing of geometrical entities like arches, lines, polylines, rectangles, squares, ellipses, circles, regular polygons, radii, clip-pings, nurbs, etc..
- Advanced surface drawing (loft, swept, polimesh, gordon) curve grid surface drawing
- PNT importing
- Definition of the surface using a point file elaborated by a laser scan
- Interactive change of surfaces, even complex ones, to insert chamfers, trimmings, insertion of sloping sides etc
- Definition of construction tables
- Associating different colours to each tool path
- Change and elaboration of projects (shearing, extension, sub-division, union, interpolation, duplicate, symmetrical, rotation, deletion, etc.)
- Importing DXF, ISO, IGES, STEP, PARASOLID, 3DM and STL files
- Dimensioning

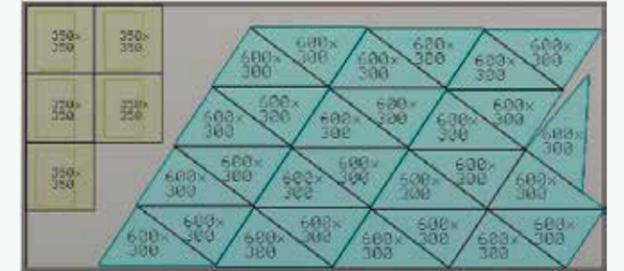


THE CAM FUNCTIONS INCLUDE:

- Automatic generating of cutting paths with WaterJet head
- Automatic generation of input and output paths, boring included with interactive graphic change (optional)
- Continuous automatic management of the feeling cycles, at the start of the profile or the sole detection of the plate thickness
- Projection cutting management, adhesion and development for pipe machining.
- Interpolated 5-axis control + 1
- Estimating project times and costs.
- Production of the ISO program optimised for the CNC
- Cutting management in common with the different algorithms to optimise the tool path
- Cutting with semi-automatic technology in the space.
- Automatic and/or custom-designed optimisation of the machining sequence to reduce cycle times.
- Automatic and/or manual management of the micro-joints and bridges.
- Cam-Auto module to automatically and intelligently create machining technology 18



In addition, the Easyjet software has powerful, fast multiple nesting algorithms in the work area, even with entities that differ from one another, with the possibility of graphically changing the arrangement of the objects and defining customised points of origin.



The JDE plug-in is included in the package to manage the cutting technologies archived in a complete materials database. The machine program is automatically generated on the basis of the selection of the cutting quality required out of 5 options (Q1, Q2, Q3, Q4 and Q5) that establish the speed advancement and acceleration settings in the internal/external corners. The ISO program can then be transferred to the machine using the local network or via USB drive.

The correct setting of the machining parameters can be checked in advance thanks to the 3D simulation of the machining process using a 3D graphic model of the CNC that reproduces the table, handling axes, tool and pieces arranged on the table.



TECNOCUT PROLINE

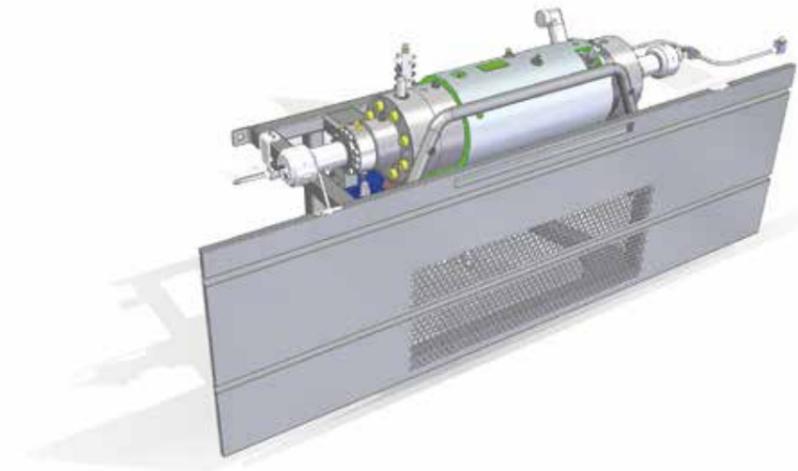
TECHNICAL DATA



| MODEL | 1730 | 2040 |
|-----------------------------|---|---|
| X AXIS STROKE (1 HEAD) | 3250 mm / 10.6 ft | 4250 mm / 13.9 ft |
| Y AXIS STROKE | 1700 mm / 5.5 ft | 2000 mm / 6.5 ft |
| Z AXIS STROKE (3-AXIS HEAD) | 300 mm / 12 in | 300 mm / 12 in |
| Z AXIS STROKE (5-AXIS HEAD) | 200 mm / 9 in | 200 mm / 9 in |
| C AXIS (5 AXIS ONLY) | Infinite | Infinite |
| B AXIS (5 AXIS ONLY) | +/- 62° | +/- 62° |
| XY AXIS RAPID SPEED | 40000 mm/min / 131 ft/min | 40000 mm/min / 131 ft/min |
| WORKTABLE SIZE | 3820 x 1920 mm / 12.5 x 6.3 ft | 4820 x 2220 mm / 15.8 x 7.8 ft |
| WORKTABLE LOAD CAPACITY | 1000 kg/m2 | 1000 kg/m2 |
| POSITION ACCURACY | +/- 0,035 mm | +/- 0,035 mm |
| POSITION REPEATABILITY | +/- 0,025 mm | +/- 0,025 mm |
| INSTALLED POWER | 6 kW / 8 HP | 6 kW / 8 HP |
| FOOTPRINT LXPXH | 6930 x 3180 x 3900 mm / 20.9 x 10.4 x 12.7 ft | 7290 x 3480 x 3900 mm / 23.9 x 11.4 x 12.7 ft |
| WEIGHT MAX (EMPTY) | 6500 kg / 14330 lb | 8000 kg / 17600 lb |

TECNOCUT GREENJET EVO

TECHNICAL DATA



| TECNOCUT GREENJET EVO: TECHNICAL DATA | | |
|---------------------------------------|--|--|
| | TECNOCUT GREENJET EVO 4139 | TECNOCUT GREENJET EVO 6200 |
| POWER | 34 Kw / 45 HP | 34 Kw / 45 HP |
| MULTIPLIERS | 2 | 2 |
| MAX FLOW PRESSURE | 4139 bar / 60.000 psi | 6200 bar / 90.000 psi |
| MAX WATER PRESSURE | 5 L/min / 1,32 gpm | 2,61 L/min / 0,32 gpm |
| MAX ORIFICES DIAMETER | 0,4 mm / 0,016 in | 0,25 mm / 0,098 in |
| VOLTAGE | 400V +/- 5% 50-60 Hz (Different voltages and frequencies on request) | 400V +/- 5% 50-60 Hz (Different voltages and frequencies on request) |

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 to 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 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

- ✓ Ottimizzazione delle performance produttive
- ✓ Diagnostica a supporto dell'ottimizzazione della garanzia dei componenti
- ✓ Aumento della produttività e riduzione dei fermi macchina
- ✓ Miglioramento del controllo della qualità
- ✓ Riduzione dei costi di manutenzione

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 center (e.g.: operator, maintenance man, administrator, ...). It is also possible to define the work shifts on the machining center 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 RANGE OF CMS METAL TECHNOLOGY

FOR METAL AND TECHNICAL ARTICLES PROCESSING

WATERJET CUTTING MACHINES



TECNO CUT SMARTLINE



TECNO CUT PROLINE



TECNO CUT AQUATEC



TECNO CUT WATERSPEEDY S

PRESSURE INTENSIFIERS



TECNO CUT EASYPUMP



TECNO CUT JETPOWER EVO



TECNO CUT GREENJET EVO

DRY DEBURRING - FINISHING MACHINES



DMC M950



DMC EUROSYSTEM



DMC METALSYSTEM

WET DEBURRING - FINISHING MACHINES



DMC M950 WET



DMC TOP METAL



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