MicroStep®

NEW

WaterCut

Highly productive 2D and 3D waterjet cutting

WaterCut

WaterCut is a highly productive and reliable CNC cutting machine designed for 2D and 3D waterjet cutting with or without abrasive. The machine represents an optimal balance of quality, performance and investment costs.

Fine contours and high-precision cuts

The machine's low-set gantry, AC servo drives and precise, stainless linear guides translate to its outstanding dynamics in all axes. WaterCut can cut a variety of materials including metals, hard stone, marble, armored glass, ceramics, plastics, corrugated cardboard, foam or composite materials.

Thanks to its optimized design with a dual-drive gantry, the machine achieves excellent cutting quality, sharp angles and corners as well as high contour fidelity.

See online:

Features

Durable high-precision components

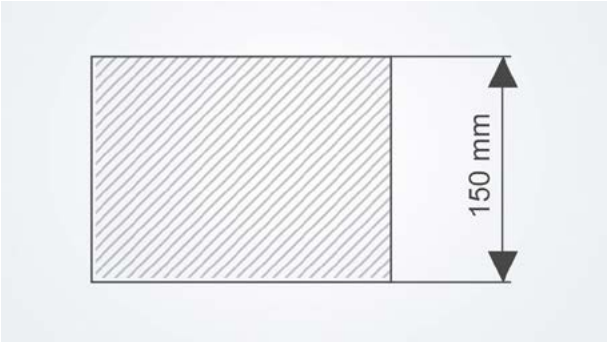
Rustproof chrome plating of linear guidelines helps to protect them against wear caused by abrasive and corrosion. In addition, bellows on all axes seal the guidelines against dust and humidity, substantially increasing their lifespan.

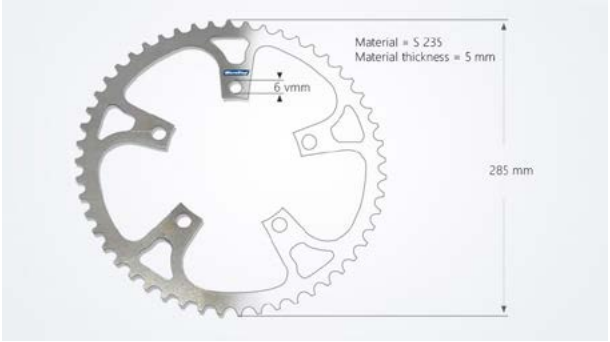
Versatile configuration options

WaterCut can be equipped with two 2D cutting heads and water level control for efficient parallel cutting, or with a 3D cutting tool station to cut precise bevels. Optionally, the machine can be fitted with a multi-tool station with an outer span of 1 200 mm, carrying up to 4 cutting heads on a single Z axis, or with a small drilling unit for piercing of sandwich materials.

Fine contours and highly precise cuts up to 150 mm

The WaterCut series enables cutting of the finest contours with a precision in the range of hundredths of a millimeter – and with no heat-affected zone to worry about. Thanks to the high pressure up to 6 200 bar, almost any material can be cut: stone, steel, glass, rubber, wood, sandwich panels.





Innovative software solutions for intuitive and easy operation

To allow you to fully concentrate on your production, our innovative software solutions help you to intuitively transform drawings and cutting plans into finished parts.

Technical data

Dimensions	
Effective length of the working area	1 500 mm / 2 000 mm
Effective width of the working area*	1 500 mm / 3 000 mm / 4 000 mm
* In a configuration with 1 cutting head	
Tool stations	
Max. number of tool stations	2
Available cutting technologies	waterjet
Max. number of bevel cutting tool stations	1
Max. material thickness for waterjet cutting	up to 150 mm, according to pump power
Precision	
Positioning speed (XY)	up to 56 000 mm/min
Positioning accuracy	compliant with DIN 28206 / depending on configuration down to the range of hundredths of a millimeter
X, Y axes	linear guides, bilateral drives and precision racks
Z axis	ball screw
Control & software	
Control	iMSNC®
Main control console	17" screen with keyboard and mouse, stand-alone
Operating system	Windows 11™ Pro (64-bit)
Additional control panels	1 control panel on gantry

All information subject to change

Options

2D cutting

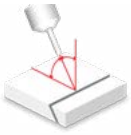
2D waterjet cutting head

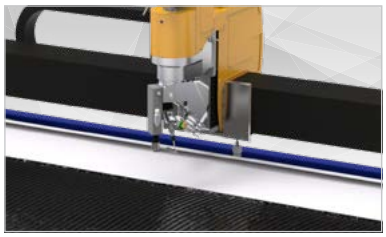
- very small kerf
- no thermal stress
- no hardening when processing mild steel, stainless steel and aluminum
- able to cut the smallest parts
- suitable for non-conductive materials

Multi-tool station for parallel cutting

- increased efficiency
- cost-effective solution
- quick setup

3D cutting





3D waterjet cutting head

- cutting bevels up to 45°
- automatic bevel angle compensation
- easy programming and operation thanks to intuitive software solutions

ACTG® – Auto-calibration of Tool Geometry

- time-efficient tool set-up
- maximum precision at all times thanks to auto-calibration
- consistent quality of cut contours

Automation

Abrasive removal system for cleaning the water tank

MicroStep relies on an abrasive removal system with Big Bag that provides automatic continuous cleaning of the water tank. The water circulates between the water tank and a sedimentation pot where particles of used abrasive and cut material settle to the bottom. Several options and sizes for different dimensions of the water tank are available.

Control system

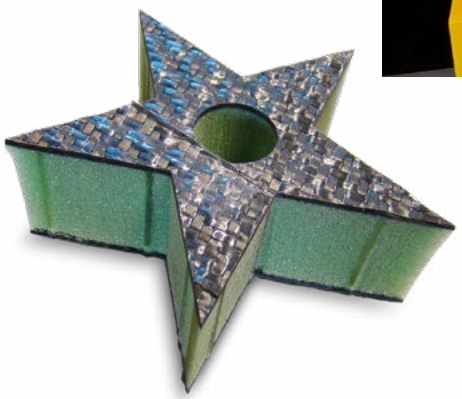
Handle even the most complex cutting tasks with **iMSNC® control system**

iMSNC® from MicroStep is one of the most advanced control systems for CNC cutting machines. It was developed to easily, reliably, and efficiently turn cutting plans into finished parts with the help of a clear and modern user interface.

The system's hardware consists of a stand-alone control console with a TFT touchscreen and a control panel with an LCD display mounted on the gantry. In order to achieve maximum utilization and flexibility of our machines, the ergonomic control console offers the opportunity to nest new cutting programs and generate new CNC codes during an ongoing cutting process. As the iMSNC® control system and all CAM software solutions come from our company, the software with its versatile modules can be individually customized for your production. Parameter databases for individual technologies enable consistency and high quality under various circumstances. iMSNC® comes with multiple efficient evaluation tools for production process optimization. These provide you with the much-needed overview of current cutting orders, cutting times, cost calculations and machine utilization in day-to-day production.

Important parameters at a glance:

- 17'' touchscreen (optionally 24'')
- efficient management of tool data
- pre-sets for 5 cutting qualities to match your cutting purpose
- very short programming times
- fast data transfer
- flexible and easy to use
- simple and clear display
- advanced cutting simulation for better work safety
- convenient contextual help



Software

MicroStep in-house developed software solutions for cutting processes

So that you can fully concentrate on your production, our MicroStep® software solutions help you intuitively convert drawings and cutting plans into finished components. The product range also includes automation solutions for streamlining your entire cutting process.

Asper® Basic - 2D CAM Software

MicroStep's 2D CAM software Asper® is the ideal tool for easy and fast creation of CNC programs. Even in its basic version, Asper® offers powerful functionalities for 2D cutting that can be further extended by a variety of specialized modules (e.g. bevel cutting module, multi-torch cutting module and more).

Asper® Nesting

Intuitively and efficiently nest component drawings into cutting plans. Follow your own requirements: whether you need to prevent material overheating, minimize the number of piercings or just to save as much material as possible, Asper® Nesting makes your work easy!

MPM® Production management

MPM® is the foundation of automated and efficient cutting operations. In combination with the CAM software Asper® or mCAM® it can automatically nest complex cutting orders and projects on the right material and distribute the cutting plans to the right cutting machines for processing. Combined with automated material storage and material manipulation, MPM® can even take care of automatic material handling. In short, MPM® makes planning and coordination of your cutting operations easier and reduces your costs.

MicroStep®

Your Partner for Cutting and Automation

Complex & Multi-functional

There is hardly any other CNC system with such a variety of technologies provided by a single machine for such a variety of materials: sheets, pipes, profiles, beams and domes. MicroStep is offering such versatile and efficient solutions by nature.

Our machines enable complex bevel cutting jobs with all technologies – plasma, laser, oxyfuel and waterjet along with marking, drilling, tapping, countersinking and milling operations. And we do not stop just there – we integrate the machines with material handling systems and provide added value through automation and digitalization.

Contact the MicroStep representative in your area!

For more information visit: www.microstep.eu/dealers

Product Catalog

Information on all MicroStep cutting systems can be found in our current product catalog.

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