

# TECHNOLOGY



Waterjet is the cutting technology of the future.

The Waterjet technology is obviously quite different from any other cutting technology due to the wide variety of the materials that can be applied and off course due to the 100% non-pollutant and the most important non-thermal process.

The process (cutting of materials) is taking place through an ultra thin water string (diameter 0,5mm-1,2mm) with or without the addition of abrasive particles (e.g. garnet, a sand-like dust) depending on the material to be cut. The water pressure at the head may vary from 500 to about 6.200bars (100.000psi).


The Waterjet cutting technology as known today, started around the middle of 80's even though the principle of high pressure jet was known from the beginning of 20th century. In the 90's the big expansion of the technology took place, once it became more popular and affordable to the industry.

Due to the flexibility of the process there is almost no restriction regarding the thickness or the variety of the materials to be cut. It is also very accurate regardless the complexity of the geometry.

Access to such a flexible high-end technology is a must for the industries which desire to be technologically updated and therefore competitive.

MATERIAL \ TECHNOLOGY	Steel	St. Steel	Aluminium	Copper	Bronze	Paper	Ceramics	Corian	Food	Glass	Wood	Plastics	Marble
Waterjet	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut
Laser	Good Cut	Good Cut	Bearable Cut	Good Cut	Good Cut	Bearable Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut
EDM	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut
Plasma	Good Cut	Good Cut	Bearable Cut	Bearable Cut	Bearable Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut
Oxygas	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut
Punching	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut

THICKNESS (mm) \ TECHNOLOGY	1	3	5	20	50	100	150	200	>
Waterjet	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut
Laser	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut
EDM	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Bearable Cut
Plasma	Bearable Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Bearable Cut	Good Cut	Good Cut
Oxygas	Good Cut	Bearable Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut
Punching	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut	Good Cut

 Good Cut  
 Bearable Cut



# PRODUCTS



Our fully and fine equipped Vega series includes five different models covering many requirements. Every system we design is carefully equipped with the best available components from leading manufacturers such as KMT, ITT, BOSCH-REXROTH, ITEM, PHOENIX, CONTACT. The models are categorized depending on some basic characteristics and the additional equipment with more than 50 options.

	MODEL				
FEATURES	ULB	BDG	AVG	VNG	XXW
Beam Length (X max) (m)	2	2	4	6	12
Table Length (Y max) (m)	3	6	No Limit	No Limit	No Limit
Z Axis (mm)	100	100	200	200	250
High Pressure Pump (HP)	30	50	100	200	200

In Hydrocut we are proud to be innovators in combining the relevant technologies to waterjet in a single machine. Therefore, we can provide you with a complete solution unique to your requirements, combining technologies such as Plasma, Router, Marking, Drilling and Tapping in the same machine. We can therefore fulfill the requirements of your production line, no matter how complicated it is.

The most commercial application that combines different technologies is the COMBO series of products, which combines Waterjet and Plasma technology. Combining these technologies in one machine we achieved to decrease remarkably the required space, the cost of a cutting system and the operational costs when cutting metals along with other materials. The advanced software of the controller has several options of working independently with each technology or even combine both of the technologies in the same part resulting to the ultimate productivity and flexibility. Last but not least, the operational cost of such processes is at the lowest possible level.

The VEGA Waterjet series and its exceptionally user friendly interface which is available in more than 20 languages would set the pace for the next intelligent investment for your enterprise, which will lead you to an elevated technological future.

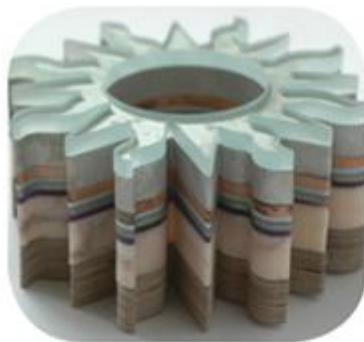


# APPLICATIONS

In today's competitive globalized market, access to high-end technologies and new materials is the key to keep your organization competitive.

Waterjet cutting technology provides unique solutions that can be applied in many materials such as:

- Stainless Steel
- Aluminums
- Plexiglas
- Alloys
- Etalbon
- Corian
- Rubber
- Bronze
- Copper
- Glass
- PVC
- Marble
- Granite
- PVC
- Plastics
- Wood



# COMPANY



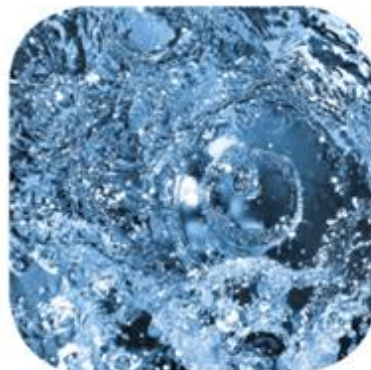
In Hydrocut, for more than ten years now, our main objective is the production of reliable, innovative, high-end profiling machinery. This is accomplished through a highly skilled research and development team, equipped with high end instrumentation. To continuously design better products, we keep investing in cutting-edge technologies for hardware and software.



Hydrocut's highest priority is the excellent after sales service and technical support. Our experienced engineers achieve their certification through theoretical, technical and practical training by both our suppliers and the internal educational courses. We believe that keeping our customers satisfied, is very important. Working in this direction, we have developed an extensive after sales support program.

In technical level we search continuously for the most advanced components and materials, considering the overall machine compatibility. Additionally we always comply with the strictest construction rules and International specifications. We are building systems with unique HMI (Human Machine Interface) environment to unleash a magical world of interaction, effectiveness and redefine functionality in CNC profiling. Our aim is to fulfill the dream of machines operators.

In commercial level, our success is based to the extensive research that we conduct in order to find high skilled partners with whom we share the same level of commitment in perfection and build strong and healthy relationships. As for the success of our products in the markets, value for money is our compass and the warranty of a fruitful and profitable future.



6 Plasma source. Productivity increase and space saving solution. Combo technology including waterjet and plasma technology in a single machine. Innovation of Hydrocut

5 High pressure pump integrated to operational and diagnostic functions

1 100% stainless steel cutting table, which is independent from the power transmission system. Innovation of Hydrocut

2 Bridge made of Aluminum alloy, which is light and totally rigid

4 Abrasive feeder for continuous garnet feeding. Capacity of 300kg-1000kg. Innovation of Hydrocut

3 Ergonomic design of cutting station (Waterjet head or/and Plasma head), ensuring easy access for visual control and cleaning. Innovation of Hydrocut

7 CNC main control panel including a touch screen monitor.

- 1 Robust structure
- Easily replaceable bars for placing the sheets to be cut
- Underwater cut capability
- Maximum loading weight 0.5 t / m<sup>2</sup>
- 2 Special Aluminum alloy profile with internal ribs which ensures high stiffness
- Protective covers
- Maximum bridge length can be up to 6m
- 3 Z axis motion on linear system
- Available pre-installation option of Plasma technology
- Abrasive metering system of high accuracy
- 4 Capability of feeding two cutting stations at the same time
- Working pressure 5 bars
- Full control from the main control panel

- 5 Maximum pressure 6.200 / 4.200 bar
- Reliable and durable
- Integrated diagnostic tools for safe operation

- 6 High density plasma
- Drilling up to 25 mm and cut up to 50 mm
- Automatic or manual gas adjustment
- Capability of cutting with air instead of other expensive inert gases

- 7 Easy to learn (16 languages available)
- Load files via USB stick or wireless network
- Compatible with CNC and DXF files
- Button panel (IP 67)
- Remote access via the web

8 Drafting, modeling and prototyping of all products based on ISO and CE certifications

- 8 The visualization of 3D design - modeling (which is the beginning of a good product) and the applications is a milestone for Hydrocut which leads to the continuous development of products



Member of



27th km of National Road Athens-Lamia  
19014, Afidnes, Attica, Greece  
T: +30 22950 29050 • F: +30 22950 29051  
[www.hydrocut.gr](http://www.hydrocut.gr) • [info@hydrocut.gr](mailto:info@hydrocut.gr)