

MODEL	SAPHIRE
Drives	Servo AC
Cutting width	2000-7000 mm
Basic working length	Any length from 1500 mm
Positioning speed	25000 mm/min
Cutting thickness	to 200 mm
Cutting quality	EN ISO 9013
Positioning accuracy	EN 28206
Safety standard	EN 13850

#### ADDITIONAL EQUIPMENT

- |                   |                                    |  |             |
|-------------------|------------------------------------|--|-------------|
| Gantry extension  | ESR System                         | Filtration                               | Ventilation |
| Plasma marking    | Drilling                           | Punch marking                            | Inkjet      |
| Heat shields      | Light barriers                     | Compressor                               | Air Booster |
| Remote controller | Suction table                      | Automatic pallet table                   | Water table |
| Vortex 3D head    | Autocalibration for Vortex 3D head | Autopositioning sheet for Vortex 3D head |             |



The manufacturer reserves the right to make changes and/or improvements without notice.

#### SOFTWARE



And many more...



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# SAPHIRE

Robust construction and high productivity for production in perfection  
One of the most awarded CNC cutting machine in it's class

OXYGEN  
PLASMA

# SAPPHIRE



## 1 VORTEX 3D FL CUTTING HEAD

The fully automated plasma cutting head enables very precise bevelling and chamfering in a single sheet cutting process. Angle of rotation +/- 540° and head angle deflection +/- 47°, makes our cutting machine a universal tool able to work in three dimensions together with preparing welding phases on Y, V and K. Vortex 3D cutting head is equipped with sensors: anti-collision, electrical/mechanical touch and height sensor. This allows using technologies such as: Contour Cut®, Contour Cut Speed®, Diameter Pro® and True Hole®.



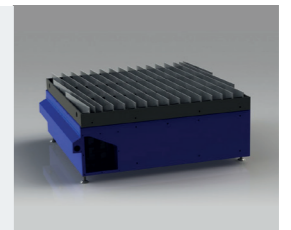
## 2 OXYGEN TORCH HARRIS

Oxygen torch is the cutting solution destined to cut structural low-carbon and low-alloy steel. It is capable of processing wide range of material thickness. The torch was fitted out the height sensor, automatic ignition and possibility of manual angle setting.



## 3 SUCTION TABLE

Modular section tables grant efficient elimination of dust during the cutting process. The cutting machine was implemented with the self-supporting construction as the base for the frame with replaceable grids. Such construction offers safe and the best possible safety and performance of the table. The cutting table is provided with intelligent system of dust discharge from the cutting area. Each segment consists of supporting structure with discharge channels, diagonal grid, scrap tank and pneumatic controlled channels.



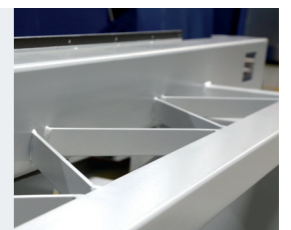
## 4 CNC CONTROLLER

ECS872 centre is a high quality industrial device, equipped with touch screen. Efficient components and construction resistant to extreme production conditions guarantee failure free operation. Unsurpassed functionality of proprietary software and intuitive drive interface enable full exploitation of the machine's capacity.



## 5 CONSTRUCTION

Gantry construction is based on welded steel beams which thanks to stress relief is characterised by high rigidity while maintaining relatively small mass. Applied construction solutions assure stability of the machine geometry which is not prone to maladjustment during large mass or thermal loads. This ensures high process safety also for three shift working companies.



## CHARACTERISTICS

Sapphire cutting machine is dedicated to work in the most severe production conditions. It is suitable for three shift work system and guarantees high quality processing to meet your needs while keeping efficiency at a substantial level. Sapphire is defined by a stable construction and numerous outstanding technological solutions, which guarantee failure-free use.

Sapphire, as optimal solution for the heavy industry, is popular among the machine production plants, shipyard, and among those who value efficiency and reliability. Considering a broad scope of applications (plasma and oxygen cutting, plasma marking, punch marking, drilling) the machine is a versatile tool created to meet even the most demanding customers' expectations. Sapphire cutting machine has been utilized more than 400 industrial plants where it is proving its excellence.

## MAIN FEATURES

- ▶ Highly dynamic and precise in automated 2D/3D cutting of sheets, tubes, beams
- ▶ Capability of processing plates up to 200 mm thickness
- ▶ Expanded base of predefined cutting parameters
- ▶ Unlimited possibility of increasing the length of the working area
- ▶ Machine with Kjellberg® Contour Cut™ technology and Hypertherm® True Hole™ certificate
- ▶ Remote management of the machine usage
- ▶ Machine maintenance schedule assistant

## STANDARD PLASMA POWER SUPPLIES

Hypertherm	Max piercing	Max from the edge	Kjellberg	Max piercing	Max from the edge
Powermax 65	16 mm	32 mm	PA-S45W	20 mm	45 mm
Powermax 85	20 mm	38 mm	HiFocus 80i	15 mm	25 mm
Powermax 105	22 mm	50 mm	HiFocus 130	25 mm	40 mm
Powermax 125	25 mm	57 mm	HiFocus 16ti Neo	30 mm	50 mm
MaxPRO 200	32 mm	75 mm	HiFocus 280i Neo	40 mm	70 mm
HPR 400 XD	50 mm	80 mm	HiFocus 360i Neo	50 mm	80 mm
HPR 800 XD	75 mm	160 mm	HiFocus 440i Neo	50 mm	120 mm
XPR 170	40 mm	60 mm	HiFocus 600i Neo	80 mm	160 mm
XPR 300	50 mm	80 mm			



Given data depends on the material involved and its structure.  
The ability to pierce depends on the material, thickness and also height sensor, and drive.