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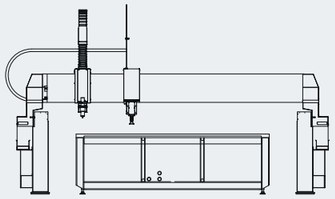
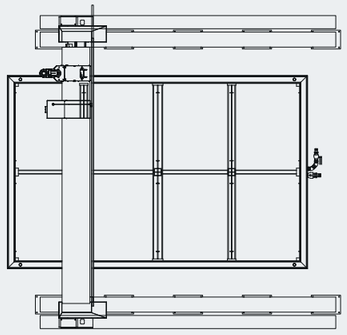




MODEL	OPAL WATERJET COMBO
Drives	Servo AC
Cutting width	1500 - 6000 mm
Basic working length	1000 - 12000 mm
Cutting thickness - Waterjet 2D	0,5 - 250 mm
Cutting thickness - Waterjet 3D	0,5 - 150 mm
Cutting thickness - Plasma	Depends on the offered plasma source
Positioning speed	25000 mm/min
Positioning accuracy	±0,025 mm
Safety standard	EN 13850

ADDITIONAL EQUIPMENT

- PRO-X 3D head
- ESR System
- Galvanized steel water table
- Dynamic water level
- Punch marking
- Plasma marking
- Drilling
- Abrasive cutting
- Scratch conveyor
- Water softening system
- Fleece Filter
- Cascade filter
- Light grid for water tank
- Light barriers

WATER
PLASMA

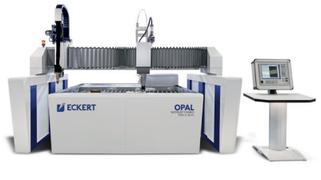
World fastest waterjet!

SOFTWARE

CAD CAM ECKERT CAD/CAM · IGEMS · lantek · And many more...

OPAL WATERJET COMBO

Innovation, accuracy and cost efficiency
Patented combination of waterjet and plasma



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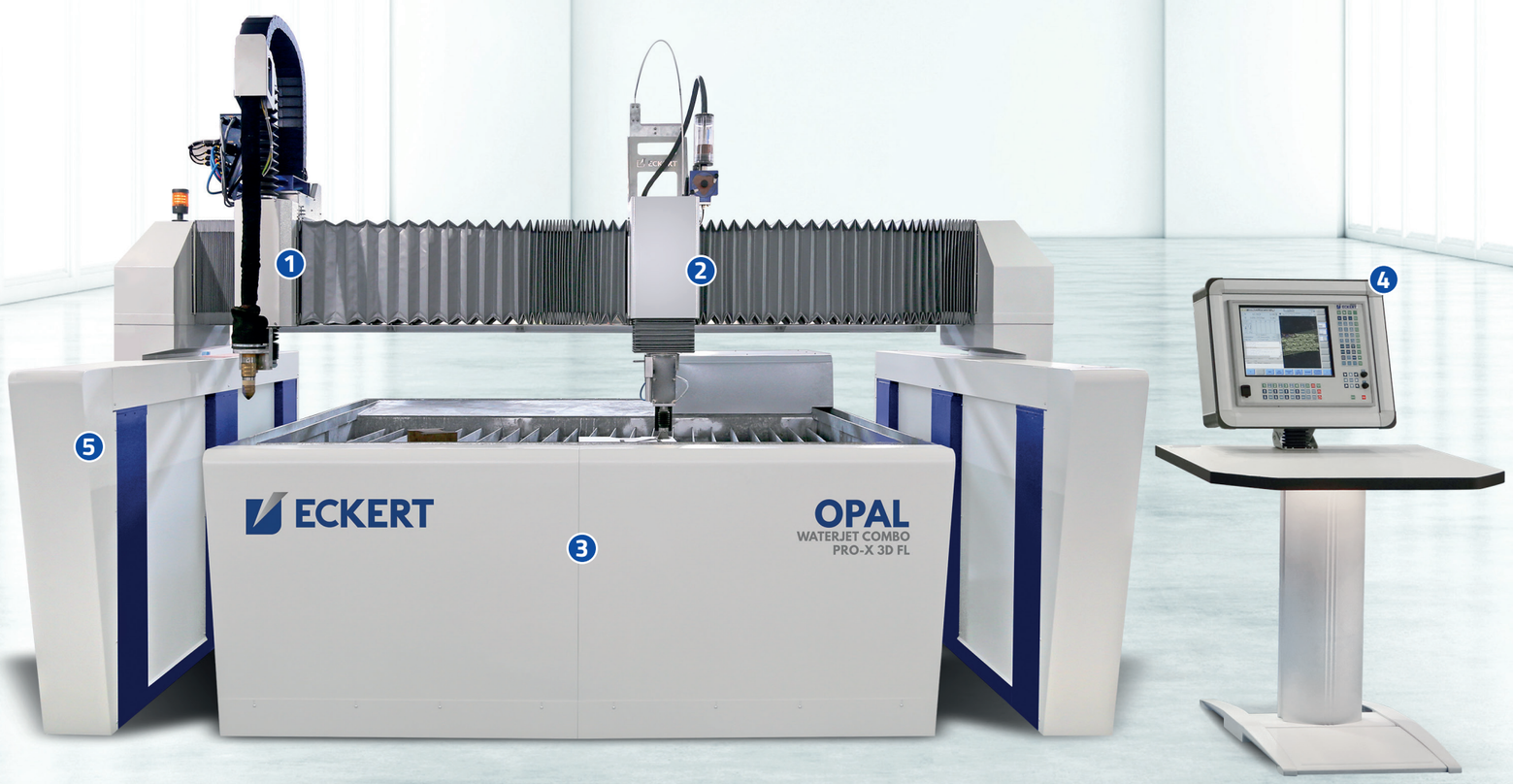
The manufacturer reserves the right to make changes and/or improvements without notice.

WATER
PLASMA

OPAL WATERJET COMBO



CHARACTERISTICS

Patented Opal Waterjet Combo is able to combine the advantages of quick plasma cutting with precision of water jet. Synergistic effect of combining two different technologies allows the cutting machine to exploit both assets. The cutting machine offers versatility and flexibility for a wide range of users form small to big companies.

MAIN FEATURES

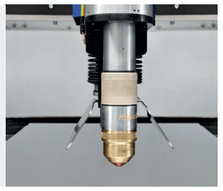
- Innovative, patent protected technology of integrating waterjet and plasma allows automatic cutting utilizing both of them
- Fully automated cutting process with two different cutting technologies
- The reduction of production costs even by 70% with comparison to standard waterjet machines
- Universal cutting tool for every material
- Possibility of installing PRO-X3D head
- Ability to apply any required technology during edge cutting of a single element
- Robust construction and reliability

Presented machine is supplied with additional equipment.

1

HD3000 HEAD

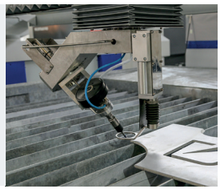
HD3000 enables full utilisation of the state of the art plasma torches. Application of the ball screw gear and high torque servomotor is the unique drive and support leading in Z axes resolution, which allows for more dynamic and increased accuracy in the torch control. This guarantees the perfect distance between the cutting head and the material for maximum cutting quality. HD3000 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

PRO-X 3D HEAD

5-axis Pro-X 3D head provides a very high level of efficiency and insures the achievement of maximum 3-dimensional precision. The maximum cutting angle +/- 60 and automatic angle compensation ensure great precision and practically zero angle on the cutting edge. Perfect tool to minimize post processing.

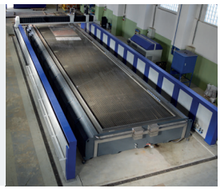


3

WATER TABLE

Opal Waterjet cutting machine is equipped with the robust water table with double grid system. Steel, fully tinned* construction insures durability and corrosion resistance. The detached table construction ensures maximum stability and smooth running operations.

*additional option



4

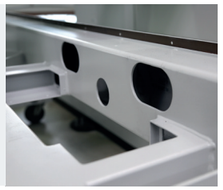
CNC CONTROLLER

The most modern i-Vision Controller is the high quality industry machine has Corning® Gorilla® Glass's touchscreen. Efficient parts and the strong construction ensures reliability Onyx working. Many functions of own software and simple controller's interface let to use all of machine's possibilities. Standalone controller delivers the unique comfort and safety of machines operator. It make also possible to watching the cutting process and controller's using at the same moment.

5

CONSTRUCTION

Opal Waterjet Combo has gantry construction. The machine is made from steel closed profiles which ensure great stability. Rail elements where protected against harmful influence of water with protective bellows or covered by aluminium parts. Relatively low weight of the gantry and specially grounded racks furnishes our Opal Waterjet Combo with excellent dynamics and high precision motors boosts accurate positioning.



STANDARD PLASMA SOURCES / HIGH PRESSURE PUMPS

Kjellberg	Max piercing	Max from the edge
SmartFocus 300	40 mm	80 mm
SmartFocus 400	50 mm	100 mm
HiFocus 161i Neo	30 mm	50 mm
HiFocus 280i Neo	40 mm	70 mm
HiFocus 360i Neo	50 mm	80 mm
HiFocus 440i Neo	50 mm	120 mm

Hypertherm	Max piercing	Max from the edge
XPR 300	50 mm	80 mm

BFT	ECOTRON 40.22	ECOTRON 40.30	ECOTRON 40.37	ECOTRON 40.45+	SERVOTRON 40.37	SERVOTRON 40.45+
Power [kW]	22	30	37	45	37	45
Max. flow [l/min]	2,3	3,4	3,8	4,3	3,8	4,6
Pressure [bar]	4000	4000	4000	4000	4000	4000

KMT	TL-I 30	NL-I 40	JL-I 50	SL-VI 30 PLUS	SL-VI 50 STD	SL-VI 60 PRO-III
Power [kW]	22	29	37	22	37	45
Max. flow [l/min]	3,1	2,7	3,8	2,6	4,3	6,0
Pressure [bar]	3800	3800	3800	4136	3800	6200

UHDE ThyssenKrupp	HPS 4022	HPS 4037 HPD 4037	HPD 4055	HPD 4075	HPS 6045 HPD 6045	HPD 6090
Power [kW]	22	37	55	75	45	90
Max. flow [l/min]	2,3	3,8	5,7	7,6	2,8	5,4
Pressure [bar]	3800	3800	3800	3800	6000	6000

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.