DURMA

PLASMA LASER CUTTING SYSTEMS

PL SERIES

BETTER PARTS >>> BETTER PROFITS

THE COMPANY

As a total supplier for sheet metal manufacturing with almost 60 years of experience, Durma understands and recognizes the challenges, requirements and expectations of the industry.

We strive to satisfy the ever higher demands of our customers by continuously improving our products and processes while researching and implementing the latest of technologies.

HEADQUARTERS I BURSA TURKEY

In our three production plants with a total of 1.5 million square feet, we dedicate 1,000 employees to delivering high quality manufacturing solutions at the best performance-to-price ratio in the market.

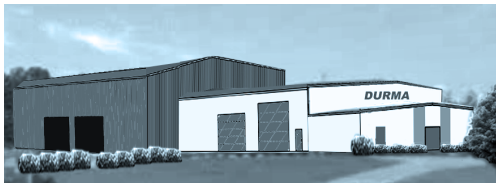
From the innovations developed at the Research & Development Center to the technical support given by our worldwide distributors, we all have one common mission: to be your preferred partner.

DURMAZLAR HOLDİNG

R&D CENTER

BASKÖY FACTORY

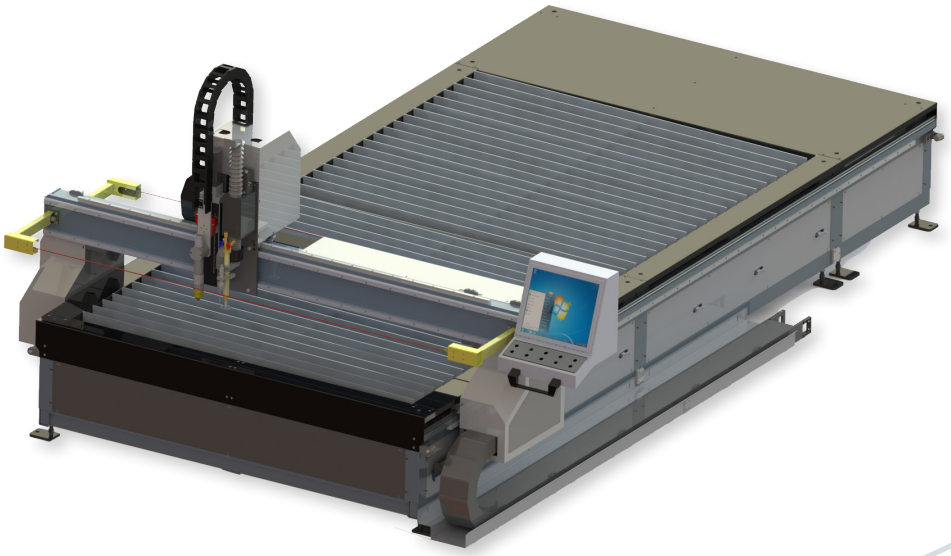
usa DURMA



CHARLOTTE NC

PL SERIES

PLASMA CUTTING



5' - 13' Widths	10' - 40' Lengths

AVAILABLE CONFIGURATIONS

PL	BEVEL CUTTING (CNC 5 AXIS)
PL + DRILLING	BEVEL CUTTING + DRILLING
PL + PIPE & PROFILE CUTTING	BEVEL CUTTING + PIPE & PROFILE CUTTING
PL + DRILLING + PIPE & PROFILE CUTTING	BEVEL CUTTING + DRILLING + PIPE & PROFILE CUTTING
PL + OXY	BEVEL CUTTING + OXY
PL + OXY + DRILLING	BEVEL CUTTING + OXY + DRILLING
PL + OXY + PIPE & PROFILE CUTTING	BEVEL CUTTING + OXY + PIPE & PROFILE CUTTING
PL + OXY + DRILLING + PIPE & PROFILE CUTTING	BEVEL CUTTING + OXY + DRILLING + PIPE & PROFILE CUTTING

STANDARD FEATURES	
CNC Control	s
Automatic Nesting & Graphic Programming	s
Remote Diagnostics Via Ethernet	s
Independent Zoned & Partitioned Table	s
THC (torch height control w/dual linear guides and ball screw)	s
Laser Locator (auto plate position locator)	s
Y1,Y2 Dual Side Motion Control System	s
AC Digital Servomotors	s
Marking System	s
CNC Control Input/Outputs for Filtration System	s
Speed Control Device	s
Welded Steel Construction	s
Plasma + Oxygen Cutting	o

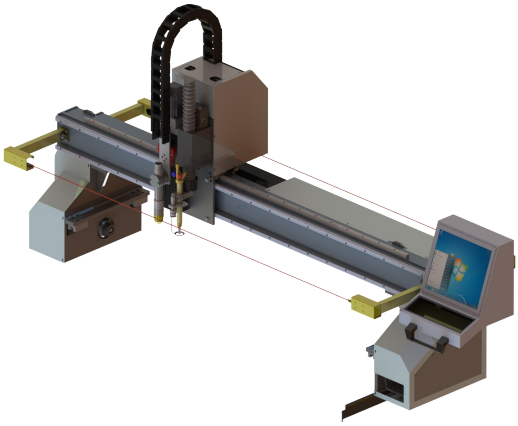
(S) STANDARD (O) OPTIONAL (-) NOT AVAILABLE

STANDARD

FEATURES

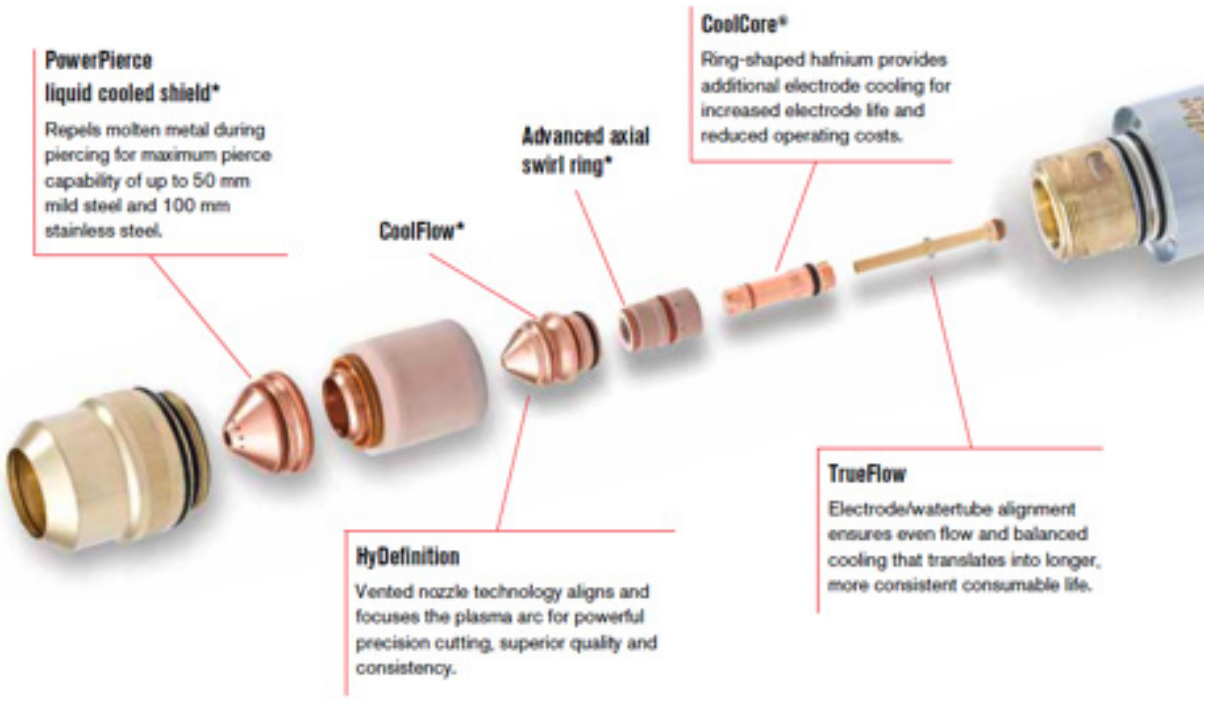
Plasma Production Facility

Manufactured in Durma's 1,350,000-square-foot laser factory, the PL Series is built as a true precision machine tool. These high performance plasma cutting machines are designed to cut a wide range of mild steel, stainless steel and aluminum.

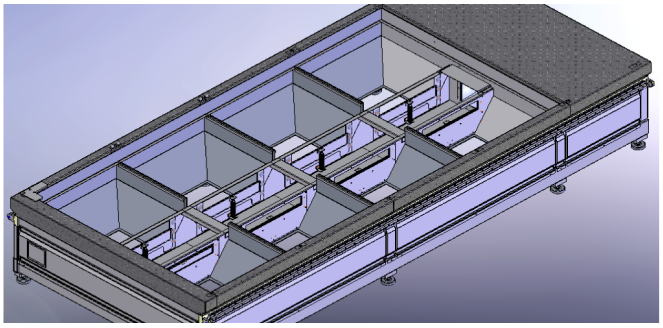


Automatic Plate Position Locator

The PL Series is equipped with a laser device for automatically locating the exact position of the plate on the table. This allows fast, accurate and easy location of the plate with respect to the programs and parts to be cut.

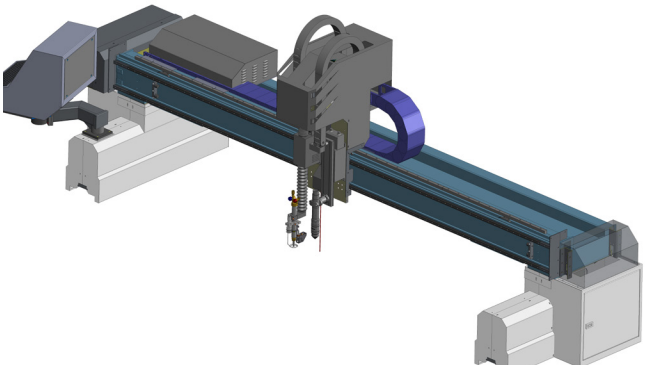


STANDARD FEATURES



Zoned & Partitioned Table

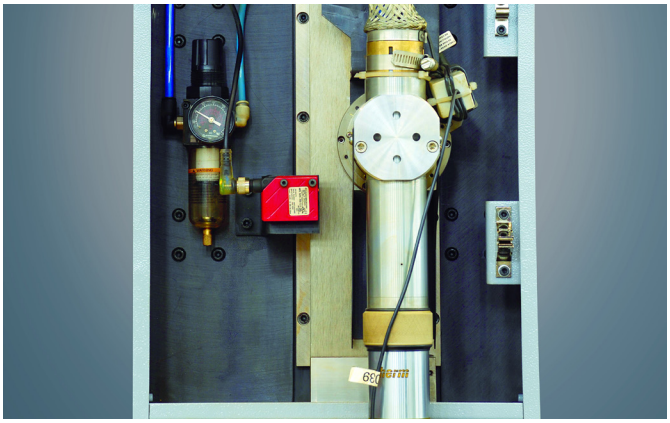
In the fume extraction process the control is automatically signaled as to which zone it is cutting over, instead of having to extract over the full area of the table at once. **The system efficiency reduces capacity requirements of the fume extraction unit, reducing costs.**



Gantry & Guiding System

All three axes are well guided to assure fast and accurate acceleration, deceleration and positioning. A combination of rack and pinion, linear guides, and planetary gears provide for fast acceleration and deceleration speeds as well as quick and accurate positioning.

- Dual Side Motion Control
- Oversized Linear Guides
- Rack & Pinion with Planetary Gears
- Fast Positioning



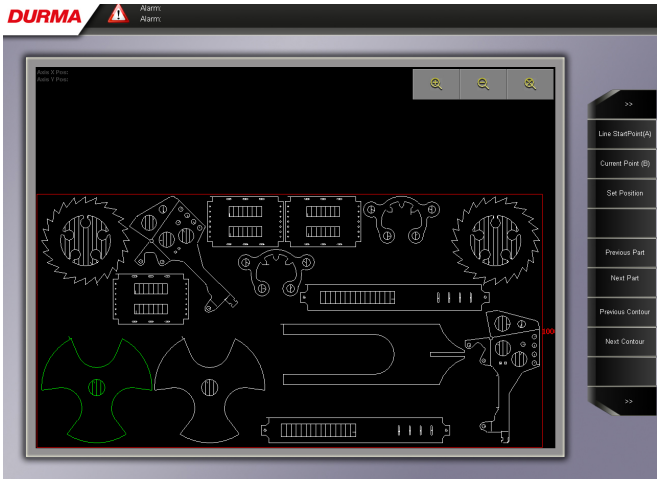
Torch Height Control

A microprocessor-based torch height control system accurately sets the initial piercing height and controls the ” torch to work” distance of the torch during cutting operations. The system uses the plasma arc voltage to control the physical stand-off (distance) between the torch and work piece during plasma arc cutting. Initial height sensing (IHS) is accomplished by ohmic contact sensing or by a limited force stall detection method. In effect the THC along with the CNC Control provide for automatic height adjustment of the cutting head according to the sheet thickness. This increases the cut quality by keeping the distance between the nozzle and the plate at the optimum position for high quality cutting. Durma also includes as standard equipment a water-cooled break away head for crash protection.

CONTROL + SOFTWARE

Control Unit

Durma laser machines achieve the highest dynamics and the fastest laser processing cycle times thanks to the combination of rigid mechanics and a state-of-the-art numerical control and drive system. The graphical user interface ensures an easy operation of the machine and the on-board libraries of reference cutting parameters for various materials and thicknesses allow the operator to achieve optimal cutting results in a minimum amount of time. Programs can be loaded easily into the machine with a USB stick or over a fast Ethernet connection with the company network.



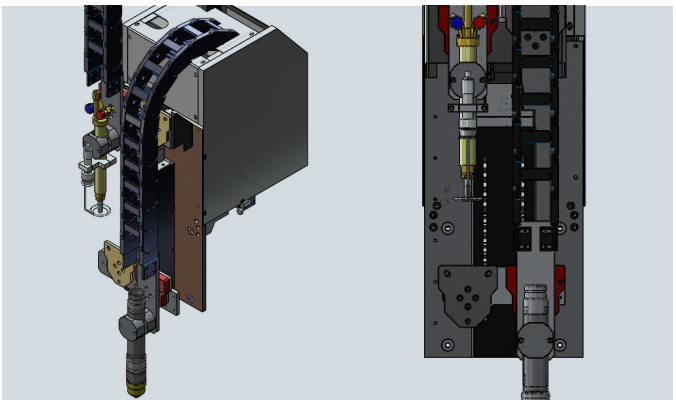
CADCAM Nesting Software

Nesting software is available and includes; parametric macro shapes, direct CAD – DXF input, true automatic nesting and re-nesting, remnant tracking bridging and chain, to reduce multiple pierces, real time statistics, remote control. A user-friendly design can be used effectively even with inexperience operators. Parameter adjustments, programming, and programs are easily stored and ready to be used. The memory capacity is virtually unlimited and popular material types and thicknesses, as well as cutting methods, are loaded by default. Advanced technology combines Design, Nesting, efficient NC Generation, Graphic Simulation, and detailed Data Reports. Laser Cutting Technology supports:

- Part Library for Standard Shapes
- Automatic Cutting with Corner Treatment
- Contour Check and Correction
- Beam Width definition and Auto Compensation
- Corner Loops and Corner Slow Down
- Open Contour Cutting
- Rapid Tool-Path Crash Avoidance
- Tool-Path Optimization with Auto Entry Point
- Marking Before Cutting options
- True-Type Font cutting and engraving
- Common Line cutting
- Automatic Cutting Direction (CW/CCW)

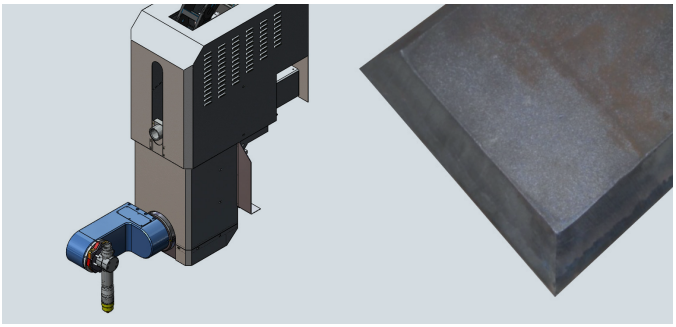
OPTIONAL

FEATURES



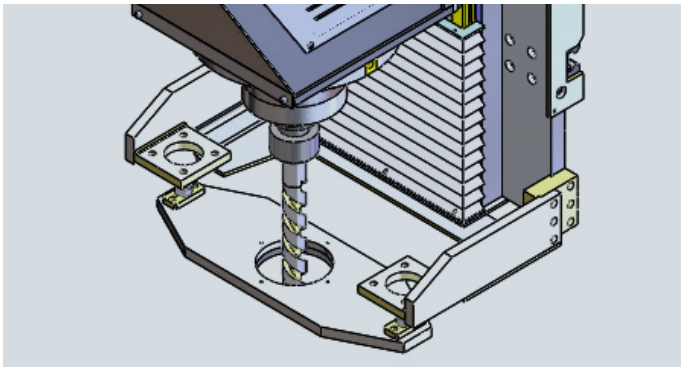
Plasma + Oxy Cut

Single height control, compact cutting head settings for plasma torch and oxy torch. Easy change over from plasma to oxy cut head via magnetic attachment and removal.



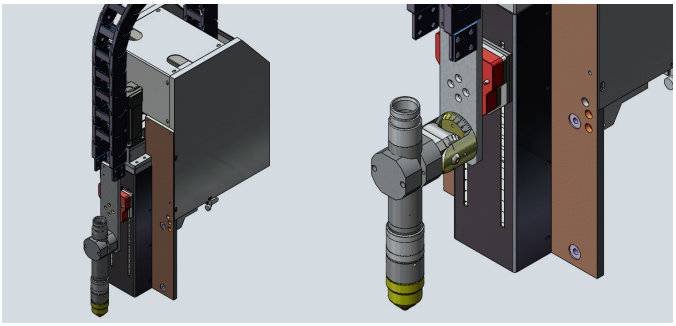
CNC Controlled 5 Axis Bevel Cut Head

A five-axis programmable cutting head for total versatility.



Single Drilling Head

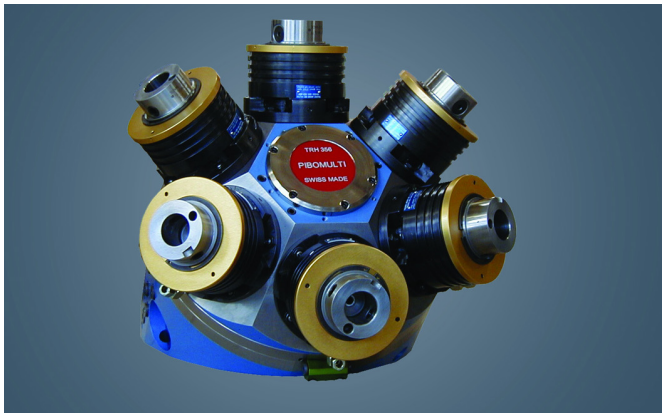
Drilling capacity: ø20mm (ø0.787”)
Tapping: M16
Tool Holder: BT40



Manual Bevel Head

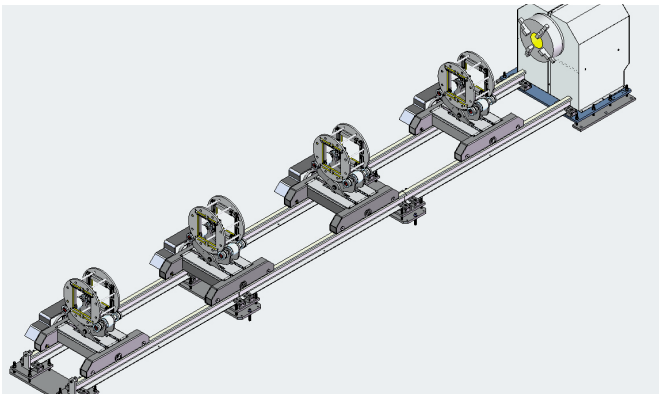
Durma’s manual bevel head achieves cutting angles of ±45° (right-left, front-back).

OPTIONAL FEATURES



1-6 Drilling Head

Single height control.
Drilling capacity: ø20mm (ø0.787")
Tapping: M16
Tool Holder: BT40



Profile Cutting Unit

Support system every 3m (118"). Box profile support system.

ø50-250mm	ø1.9-9.8"
ø50-400mm	ø1.9-15.7"
ø50-600mm	ø1.9-23.6"

Hypertherm Source

DURMA uses the highly-reputed HPR Hypertherm high performance source. The HPR contains circuitry to ignite a torch and heat exchanger as well as a pump to cool the torch. The power supply has a serial interface to provide communication with the CNC controller. The system also provides high quality cutting for stainless steel and aluminum. The modern torch design, which incorporates programmable torch height suitable gas parameters, increases the cut quality.

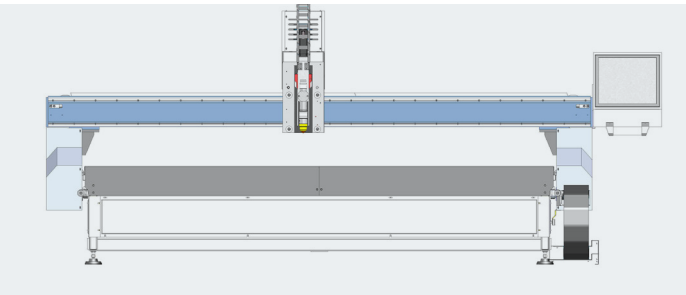
Material Type	Mild Steel	Stainless	Aluminum
XPR 130 Dross Free	0.625"		
XPR 130 Production Piercing	1.25"	0.75"	0.75"
XPR 130 Severance Piercing	1.5"	1"	1"
XPR 260 Dross Free	1.25"		
XPR 260 Production Piercing	1.5"	1.25"	1.25"
XPR 260 Severance Piercing	2.5"	2"	2"
XPR 400 Dross Free	1.5"		
XPR 400 Production Piercing	2"	1.75"	1.75"
XPR 400 Severance Piercing	3.2"	3.2"	3.2"
XPR 800 Dross Free	1.5"		
XPR 800 Production Piercing	2"	3"	3"
XPR 800 Severance Piercing	3.2"	4"	4"

Automatic Gas Console

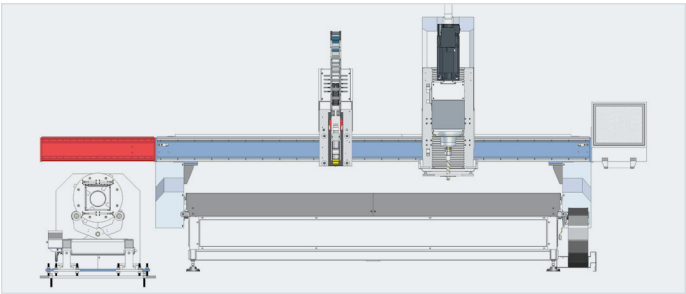
Controls all of the plasma system settings from the CNC. Coupled with an intuitive CNC interface it reduces the time it takes to train new operators and set up new jobs. Automatically changes processes on the fly to enable rapid switching between cutting and marking. Automatically adjusts for variations in incoming gas pressure to produce the most consistent cutting performance. The auto gas console is required to enable "True Hole" technology.

AVAILABLE

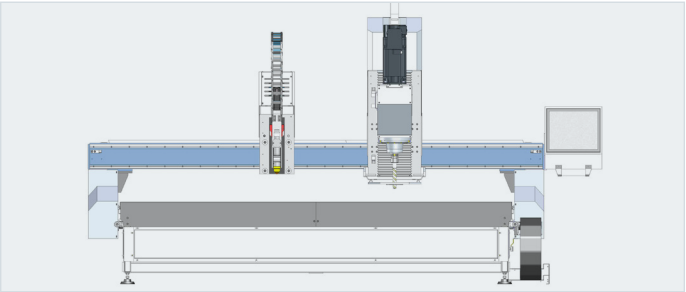
CONFIGURATIONS



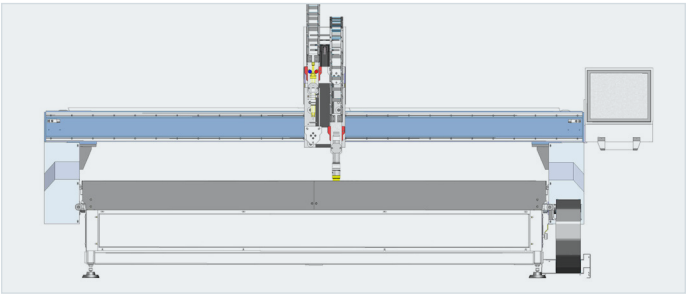
Plasma Cutting



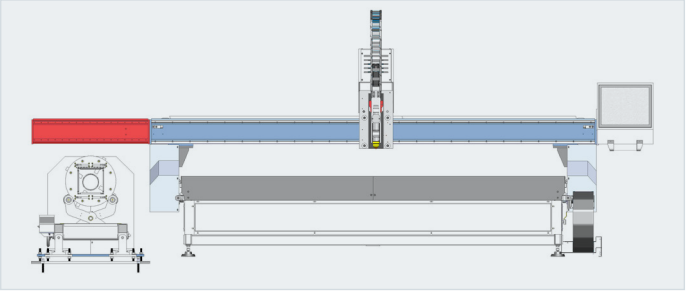
Plasma Cutting + Drilling + Pipe & Profile Cutting



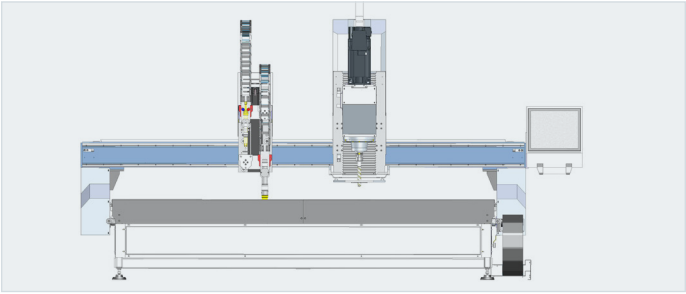
Plasma Cutting + Drilling



Plasma Cutting + Oxy Cutting

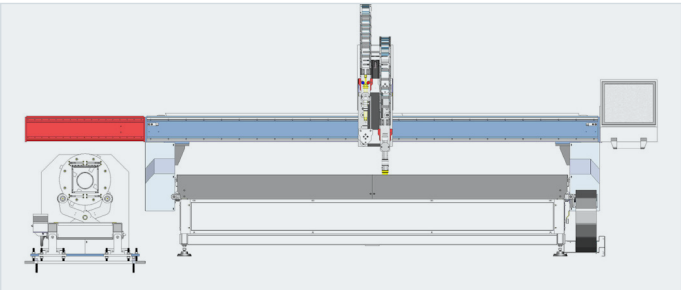


Plasma Cutting + Pipe & Profile Cutting

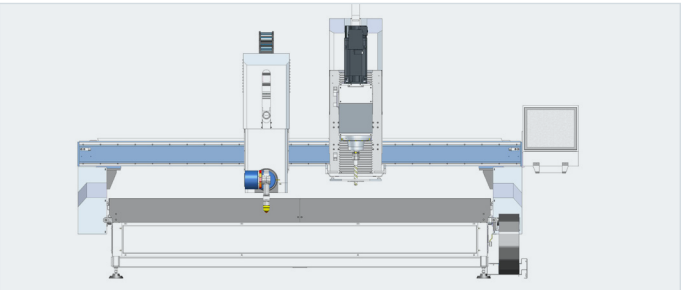


Plasma Cutting + Oxy Cutting + Drilling

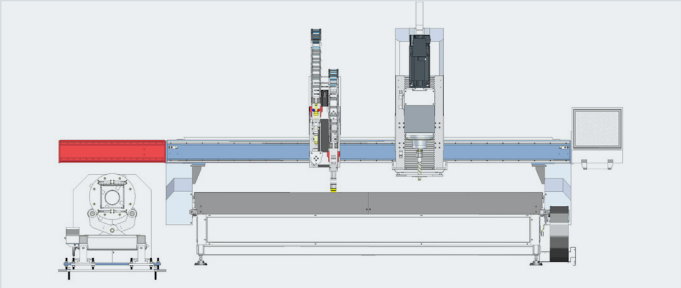
AVAILABLE CONFIGURATIONS



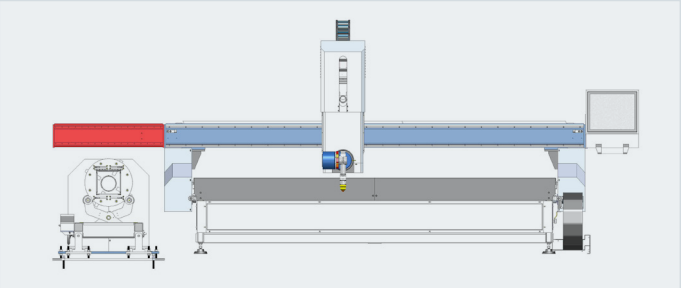
Plasma Cutting + Oxy Cutting + Pipe & Profile Cutting



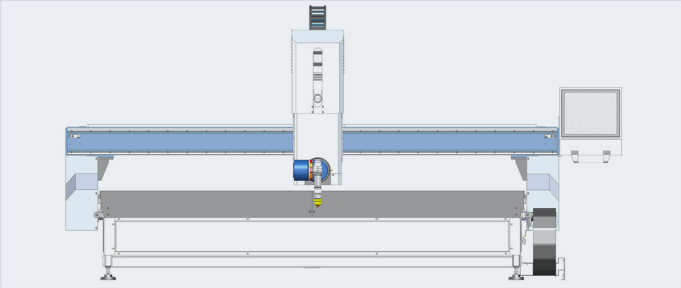
Bevel Cutting + Drilling



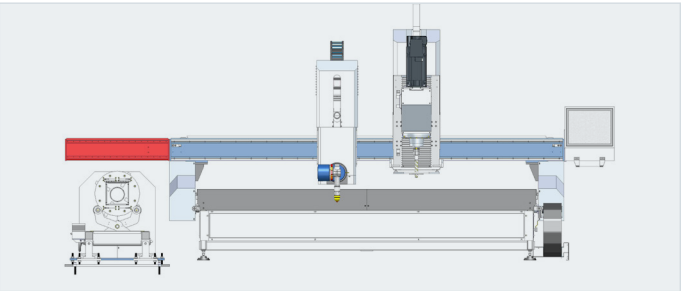
Plasma Cutting + Oxy Cutting + Pipe & Profile Cutting + Drilling



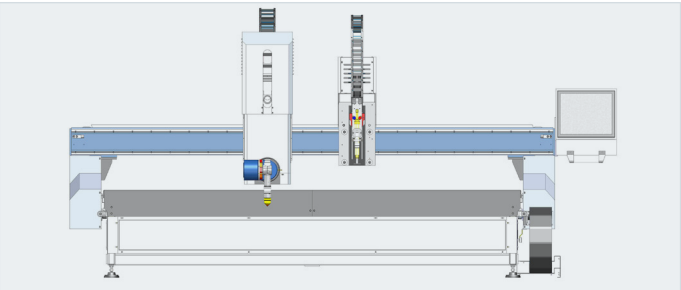
Bevel Cutting + Pipe & Profile Cutting



Bevel Cutting (5 Axis)



Bevel Cutting + Drilling + Pipe & Profile Cutting



Bevel Cutting + Oxy Cutting

LARGE FORMAT

AUTOMATION

Loading & Unloading