MACHMART
ALL ABOUT MACHINERY

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A unique value propositions

Everything you need with a top-notch user experience.

Our family of products works seamlessly together - giving you the ability to leverage your business to build the ecosystem that your experts deserve.

With a modern and elegant technical design, our framework is unique. It allows us and our partners to provide **top-notch usability that scales with the ecosystem**

Kjellberg FINSTERWALDE | HYPERTHERM | Eckelmann | iht automation | Schneider Electric Telemecanique | GCE Gas Control Equipment

KOLLMORGEN

INA | HIWIN | COMTOP | TBI | NTN SNR

ATLANTA DRIVE SYSTEMS

Eisele

GENERAL FEATURES

MPL Series CNC plasma & oxy cutter is configured with heavy-duty components to deliver decades of unmatched cutting performance.
This CNC plasma machine is designed for customers who require a unitized industrial quality plasma table.
Mpl X has a unique cutting table design. MPL-X Series plasma machines coming with PC based CNC control, heavy-wall steel frame and gantry beam, precision ground linear rails on both the X & Y axis, powerful AC servo motors and low back-lash planetary gear boxes.
The gantry beam and cross axis carriage ride on precision ground linear tracks to deliver premium motion control and accuracy.

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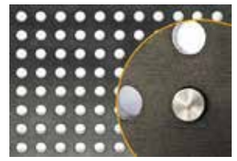
MPL X SERIES



STANDART EQUIPMENT

- Kjellberg Plasma Power Source
- Eckelmann CNC unit
- 21,5" Touch Screen
- Kjellberg Auto Gas Console PGV300
- Servo Motor and Drives on all axsis
- Planetery Type Gearboxes
- Linear Guidaway and Bearings
- Helical Rack and Pinion
- Automatic Torch height control
- Strong and high mechanical accuracy 0,1 mm.
- Axis positioning seed max. 20 m/min.
- Axis positioning accuracy 0,02mm.
- Torch protection system for any crash.
- Remote assistance
- Laser pointer for plate alignment
- Automatic dust and fume extraction system

OPTIONS

- OXY Fuel Cutting System
- BEVEL Cutting System
- Professional Automatic Nesting Software

Eckelmann **CNC Cutting** Solutions
CNC controller for cutting machines

© Kjellberg Finsterwalde Plasma and Maschinen GmbH

Plasma and **oxy-fuel** cutting

For **plasma cutting**, the sheets are cut using a conductive gas (plasma), which is generated by an electric light arc.

For **oxy-fuel** or **flame cutting**, the metal sheet containing carbon is first heated to ignition temperature and then burned in the oxygen jet.

- Frequently, both technologies, plasma and oxy-fuel, are used at a single machine.
  Our controller is able to perform both cutting processes and supports possible additional units:
- Drilling and thread cutting heads with or without automatic tool change
  Marking devices with pin marker, inkjet printer or plasma marker
- Lateral rotary axle on flatbed machines for tube cutting

- Universal **functions** for all cutting applications:
- Sheet position detection and calculation
- Kerf compensation with automatic overcut
- Reverse travel and returning to the contour
- Throttle control at the extraction table
- Wear part monitoring
- Operating data acquisition and order management
- Error log

- Operation **with multi torch carriages:**
- Individually motor-driven, with automatic band clamping or both on one machine bridge
- 2 or more bridges on one track are possible thanks to multichannel CNC and collision monitoring

Plasma cutting

Basic quality features and control requirements for plasma cutting are:

- Burr-free cut
- No or only minimal wave formation in the cross section
- Rectangular cutting edges
- Plasma power sources and automatic gas consoles of the most important manufacturers such as
- Kjellberg
- Hypertherm
- Thermal Dynamics
  are supported. For an automatic communication, the associated databases of the manufacturers are integrated together with the plasma power source into the CNC controller.
  The distance between the plasma torches and the metal sheet surface can be adjusted using external
- height control systems, for example from IHT Automation, Kjellberg
  CNC-integrated height control by applying arc-voltage;
- with corner signal and other special functions.
  Virtually any TCP- as well as non-TCP- oriented kinematics for 3D processing (bevel cutting)
- Several bevel cutting units possible for one machine, also coupled with rotary axes for circular and special section tube cutting

Oxy-fuel cutting

- Technology tables for oxy-fuel cutting
- Configurable speed reduction at cutting start and end
- Variable control of the gas technology depending on valve arrangement and valve type:
- Switching valves
- Proportional valves with pressure rise ramps
- Distance control of the oxy-fuel torches using external height control systems or CNC-integrated height control through recording and linearization of a capacitive measuring signal
- Bevel cutting with 3 torches configuration:
- Automatic motorised torches angle and lateral adjustment
  Several oxy-fuel bevel cutting units possible at one machine
-

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Embedded Controller – **E°EXC 89**

Special Functional and Performance Features
The compact E°EXC 89e controller with up to 32 NC and 64 motion axes, which can be used in combination, has the following features:

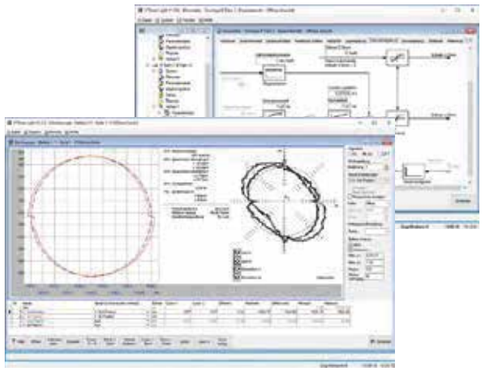
- Suitable for PLC/NC and motion applications
- Up to 32 NC and 64 motion axes (combinable)
- CODESYS® V3 run time system
- CNC core with large instruction set
- Direct connection of fast I/O modules from the E°UBM family
- OPC UA server for Industry 4.0 connection
- Versatile technology specific functions (from circular/eccentricity grinding to flame cutting)
- Simple configuration through automatic detection of supported drives and powerful engineering tool
- Customizing possibility

E°Darc K: The allround controller

The model E°Darc K offers a perfectly tuned solution for the lower and middle power range of 200 W to 4 kW. This compact drive controller comes with a 230 V supply and an EtherCAT® as well as a CANopen® DS402 interface. Absolute encoders can also be used.

E°Motor: The compact drive

The servo motors are characterised by their very high power density and the widely usable speed range of 8,000 rpm.
The motors are available in different sizes of up to 80 Nm and with different moments of inertia according to your requirements.



E°Tools Drive: The highperformance commissioning tool

The E°Tools Drive is a service tool for our complete drive controller range. The user-friendly software is used to easily commission and diagnose the controllers.
To optimise your machine, an 8-channel online tracer and a ballbar analysis are available among others. Unwanted resonance frequencies may be suppressed by using a notch filter.

Kjellberg® FINSTERWALDE

Q 1500
Cutting range mild steel
0.5 - 60 mm
piercing
up to 50 mm

Smart Focus 200
Cutting range mild steel
1 - 40 mm
piercing
30 mm

contour cut

Q 3000
Cutting range mild steel
0.5 - 80 mm
Piercing
up to 80 mm

silent CUT

Smart Focus 300
Cutting range mild steel
1 - 60mm
Piercing
40 mm

ProPierce

contour cut SPEED

Q 4500
Cutting range mild steel
0.5 - 120 mm
Piercing
up to 50 mm

Smart Focus 400
Cutting range mild steel
1 - 70 mm
Piercing
50 mm

Kjellberg® FINSTERWALDE

Mechanized Air Plasma Power Sources

Cutting Power Options

Plasma Source: Kjellberg

Power source	Cutting range	Piercing up to	Cutting current at 100% duty cycle*
CutFire 100i	1 - 40 mm	20 mm	35-100 Amps

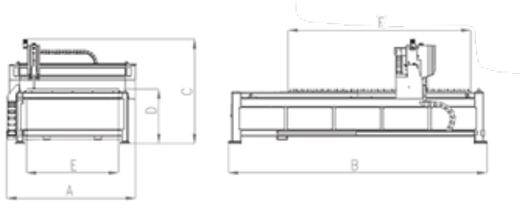
* in combination with torch Flash 101 G/L: 100 A at 75 % d. c.

STANDART EQUIPMENT

- Powermax Series Air Plasma Power Source
- CutFire 100i Air Plasma Power Source
- Eurosoft & Esa CNC unit
- Touch Screen
- Servo Motor and Drives on all axsis
- Automatic Torch height control
- Strong and high mechanical accuracy 0,1 mm.
- Axis positioning seed max. 20 m/min.
- Axis positioning accuracy 0,02mm.
- Torch protection system for any crash.

OPTIONS

- Water Cutting Table
- Pipe Cutting Unit
- Professional Automatic Nesting Software



DIMENSIONS

Model	Table Width E (mm)	Table Lenght F (mm)	Torch Height (mm)	Width A (mm)	Lenght B (mm)	Height C (mm)	Table Height D (mm)	X Axis E (mm)	Y Axis F (mm)	Weight (Kg)
MPL-S 10/20	1100	3300	150	900	850	2000	1050	1400	2050	2000
MPL-S 15/30	2100	4300	150	900	850	2000	1050	1900	3050	3000
MPL-S 15/60	2600	5300	150	900	850	2000	1050	2400	6050	4000

*Custom lengths can be produced by request

HYPERTHERM® A Hypertherm Associates Brand

Mechanized Air Plasma Power Sources

POWERMAX SYCN Series - / 65 / 85 / 105 / 125

• MAXPRO200

Cutting Power Options

Plasma Source: Hypertherm

Max pierce capacity	Mild steel	Stainless steel	Aluminium	Duty cycle	100% duty cycle
Powermax 65	16mm	12mm	12mm	50%	46 Amps
Powermax 85	19mm	16mm	16mm	60%	66 Amps
Powermax 105	22mm	20mm low use	20mm	80%	94 Amps
Powermax 125	25mm	20mm	25mm	100%	125 Amps
MAXPRO200	30mm	25mm	25mm	100%	200 Amps

* single phase

		XPR170	XPR300
Maximum output power		35,7 kW	66,5 kW
100% duty arc voltage		210 V	222 V
Cut chart thickness		mm	
Pierce capacity	Mild steel (argon-assist)	40	50
	Mild steel (standard O_2)	35	45
	Stainless steel	22	38
	Aluminum	25	38
Severance capacity	Mild steel	60	80
	Stainless steel	38	75
	Aluminum	38	50
	ISO 9013 range	2-4	2-4

HYPERTHERM AUTOMATED GAS CONSOLES

Gas-connect console gases/fluids			
	Core	Vented Water Injection (VWI)	OptiMix
O_2/N_2/Air	●	●	●
$F_5/Ar/H_2O$		●	●
H_2-N_2-Ar mixing			●