

UAB "....."

Plazminio pjovimo staklės

Techninė specifikacija



Plazminio pjovimo staklės 1500 x 3000 HPR CUTFIRE100




Kjellberg[®]
FINSTERWALDE

| Staklių komponentai | IPK Serijos PLAZMA komponentai |
|----------------------|--|
| Varikliai | X,Z ašys 1 vnt , Y ašis 2 vnt Synchronous Mitsubishi |
| Krumplaračių dėžė | 3 vnt Eisele |
| Liniuotės | NTN-SNR,INA,ATLANTA |
| CNC | 1 vnt EURUSOFT |
| Programa | 1 vnt EUROSOFT |
| Plazmos generatorius | 1 vnt KJELLBERG |
| Lanko valdymas | 1 vnt THC |
| Staklių tiltas | 1 vnt INANMAK |
| Pjovimo stalas | 1 vnt INANMAK |



1.2 PLASMA SOURCE CUTFIRE100 CUTTING CAPACITY

ANLAGEN UNITS

Plasmaschneiden mit Luft von 1 - 40 mm

Plasma Cutting with Air from 1 - 40 mm



Vorteile
Einfache Bedienung
Geringe Verschleißkosten
Luft als Plasmagas
Schräg- und Konturschnitte

Advantages
Easy to use
Low consumable costs
Air as plasma gas
Bevel and contour cuts

Fasenschnneiden bis 30° ✓
Bevel cutting up to 30°

Markieren mit 15 A ✓
Marking with 15 A

Einstechen ✓
Piercing

Lochschnneiden ✓
Hole cutting

Feinschnneiden ✓
Precision cutting

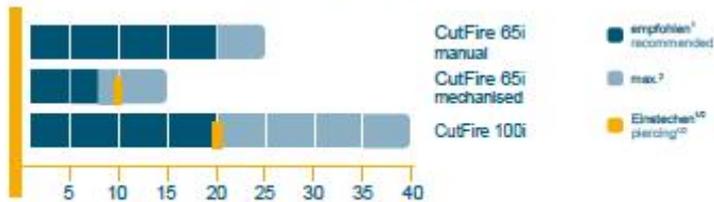
Wirtschaftlich schneiden mit Luft

Die luftgekühlten Plasmaschneidinverter der CutFire-Reihe schneiden elektrisch leitfähige Werkstoffe von 1 bis 40 mm mit dem Plasmagas Luft. Die Anlagen eignen sich bevorzugt für einfache, automatisierte Schneidanwendungen. Dafür werden sie einfach und unkompliziert an CNC-Führungsmaschinen und andere maschinelle Führungssysteme adaptiert.

Cost-efficient cutting with air

The air-cooled plasma cutting inverters of the CutFire series cut electrically conductive materials with thicknesses from 1 to 40 mm using air as plasma gas. These plasma cutting units are particularly suited for simple, automatized cutting tasks. Therefore they can easily be adapted to CNC-guided and other mechanical guiding systems.

Schneidbereich mm | Cutting range mm



¹abhängig vom Material | depending on material
²Einstechregime beachten | observe piercing capability

Einsatzgebiete

Heizungs-, Lüftungs- & Klimabau
Schaltschranksbau
Rohrleitungsbau

Application areas

Construction of heating,
ventilation & air condition systems
Switch cabinet construction
Pipeline construction



1.3 PLASMA SOURCE CUTFIRE100 TECHNICAL DETAIL



Schweißen Verschleißschutz Anlagenbau

MANUELL & MECHANISIERT SCHNEIDEN

CUTFIRE

| Technische Daten Technical data | | CutFire 65i | CutFire 100i |
|---|--|-------------------------|--------------------|
| Netzspannung Mains voltage ¹ | 3 x 400 V, 50 Hz/60Hz | | |
| Sicherung, träge Fuse, slow | 16 A | | |
| Anschlussleistung Connected load | 11,3 kVA | | |
| Schneidstrom Cutting current | 15 - 65 A | | |
| Markierstrom Marking current | - | | |
| Plasmabrenner Plasma torch | KjetCut 70 | Flash 100 | Flash 101 |
| Einschaltdauer Duty cycle ² | 35 % - 65 A 60 % - 60 A 100 % - 50 A | | 100 % |
| Schneidbereich Cutting range E max. E empfohlen recommended | 25 mm | 15 mm | 40 mm |
| | 20 mm | 8 mm | 20 mm |
| Plasmagas Plasma gas | Air | | |
| Wirbelgas Swirl gas | - | | |
| Druck Pressure | 5 bar | 5 bar 6,5 bar | 5,5 bar |
| Luftverbrauch Air consumption | 140 NI/min | 195 NI/min 265 NI/min | 220 NI/min |
| Abmessung (LxBxH) Dimensions (LxWxH) | 470 x 180 x 270 mm | | 710 x 280 x 590 mm |
| Masse Mass | 17 kg | | 50 kg |

¹ andere Spannungen und Frequenzen auf Anfrage | other voltages and frequencies on request
² Umgebungstemperatur 40 °C | ambient temperature 40 °C

05|09|18

Auszug Schneiddaten | Extract operating data

| CutFire 65i (Flash 100) | | | | | CutFire 100i (Flash 101) | | | | |
|-------------------------|----|------------------------|--------------------------------|-----------|--------------------------|-----|------------------------|--------------------------------|-----------|
| mm | A | Baustahl Mild steel | Edestahl Stainless steel | Aluminium | mm | A | Baustahl Mild steel | Edestahl Stainless steel | Aluminium |
| | | mm/min | mm/min | mm/min | | | mm/min | mm/min | mm/min |
| 1 | 35 | 10000 | 6500 | 5500 | 1 | 35 | 4000 | 6000 | 5000 |
| 2 | 35 | 3000 | 3000 | 4200 | 2 | 45 | 5500 | 5000 | 8000 |
| 3 | 50 | 5000 | 4000 | 4000 | 4 | 45 | 2100 | 2000 | 4500 |
| 4 | 50 | 4000 | 3000 | 3400 | 6 | 65 | 3300 | 3000 | 3000 |
| 5 | 65 | 3500 | 3100 | 3000 | 8 | 65 | 2300 | 2000 | 3000 |
| 6 | 65 | 2500 | 2500 | 2500 | 10 | 100 | 2700 | 3000 | 3500 |
| 8 | 65 | 2000 | 1800 | 2000 | 12 | 100 | 2300 | 2000 | 2500 |
| 10 | 65 | 1400 | 1000 | 1700 | 16 | 100 | 1400 | 1200 | 1800 |
| 12 | 65 | 1000 | 700 | - | 20 | 100 | 950 | 900 | 1400 |
| 15 | 65 | 600 | 400 | - | 30 | 100 | 400 | 450 | 600 |
| | | | | | 40 | 100 | 200 | - | - |

Kontakt | Contact

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 Mail: vertrieb@kjellberg.de | Copyright © 2018 Kjellberg Finsterwalde



kjellberg.de

CNC CONTROLLER ECP 1000 (ITALY)

Easy and flexible operation by graphic user interface and soft motion technology.

Industrial PC.

Touch screen display designed especially for industry.

Strong and reliable processor.

17-inch LCD display. (Touch screen)

Standard PC power supply.

Manual and automatic command during oxy cutting.

USB input to load shapes.

Possibly to follow cutting process from the screen.

Pipe-Tube Cutting Option.



Solid State Disk (SSD) :

An SSD has no moving parts, so it is more likely to keep your data safe in the even that your system is shaken about by a vibration while it's operating. Most hard drives park their read/write heads when the system is off, but they are flying over the drive platter at hundreds of miles an hour when they are in operation. Besides, even parking brakes have limits. If you're rough on your equipment, an SSD is recommended

| | |
|------------------------|---|
| Application Software | Euro Soft |
| Operating System | Linux |
| Hard Disk Type | Solid State Disk (SSD) |
| Software Utilities | Part Program Support (PPS), Remote Help, Networking, Auto gas Support, DXF Import, Simple Shape Nesting |
| Axis Control | 2 - 6 |
| Inputs | 12 Negative Logic Inputs |
| Outputs | 12 Negative Logic Outputs |
| Sensor THC Interface | 0 - 2 |
| ArcGlide THC Interface | 0 - 4 via Hypernet |
| Wireless Networking | Optional |

Specialized I/O CARD

The **ECP1000** system can use a wide choice of commercial I/O terminals; Eurosoft, as a member of the **Ethercat** consortium, develops specialized I/O terminals with excellent price/performance ratio.

I/O system is based on an Ethercat bus coupler (ETC-BUS) that implements a local bus for I/O expansions (up to 3 modules: 16 IN / 16 OUT) up to a total of 56 IN, 56 OUT. ETC-BUS has 8 IN + 8 OUT and is enough to make simple machines.

ETC-BUS has a fiber optic connection to which the ETC-VA special board can be securely connected.

Multiple **ETC-BUS** systems can be connected to the same CN system (this is useful for creating systems with multiple ETC-VA cards).

The ETC-VA card allows the interfacing of plasma generators of any brand in a simple and safe way:
Arc voltage input for protected height control for direct or split voltage

Analogic protect input for ohmic contact and collision (possibility to set trigger level as a cnc parameter, without any installation of resistor based voltage dividers)

Dry contacts outputs compliant to plasma standards certification

4 dry contacts outputs configurable for plasma controls

4 dry contacts outputs reading plasma state

Serial communication protocols RS422 and RS485 for connection to the generator; it is important to note that using this card you do not have to use a CN serial port, nor you must link CN to generator.

ETC-VA can be connected to ETC-BUS, in addition to optic fiber (useful for positioning within the plasma generator), also directly on the BUS (internal frame installation).



Plasma unit

1.5 SERVO MOTORS AND DRIVERS



Motor and Drivers

Using the ethercat fieldbus allows you to choose a wide range of motors and drivers. Being able to interact between a large and growing number of suppliers allows us to choose among the cheaper options.

The use of Ethercat offers enormous advantages over proprietary protocols and those that are not very suitable for motion.

It is very important to emphasize that it is possible to mix between different brands of engines and drives even on the same machine.

Typical is the case of different choices for Z axis motorization over the main axes.



1.6 PROGRAMMING SOFTWARE



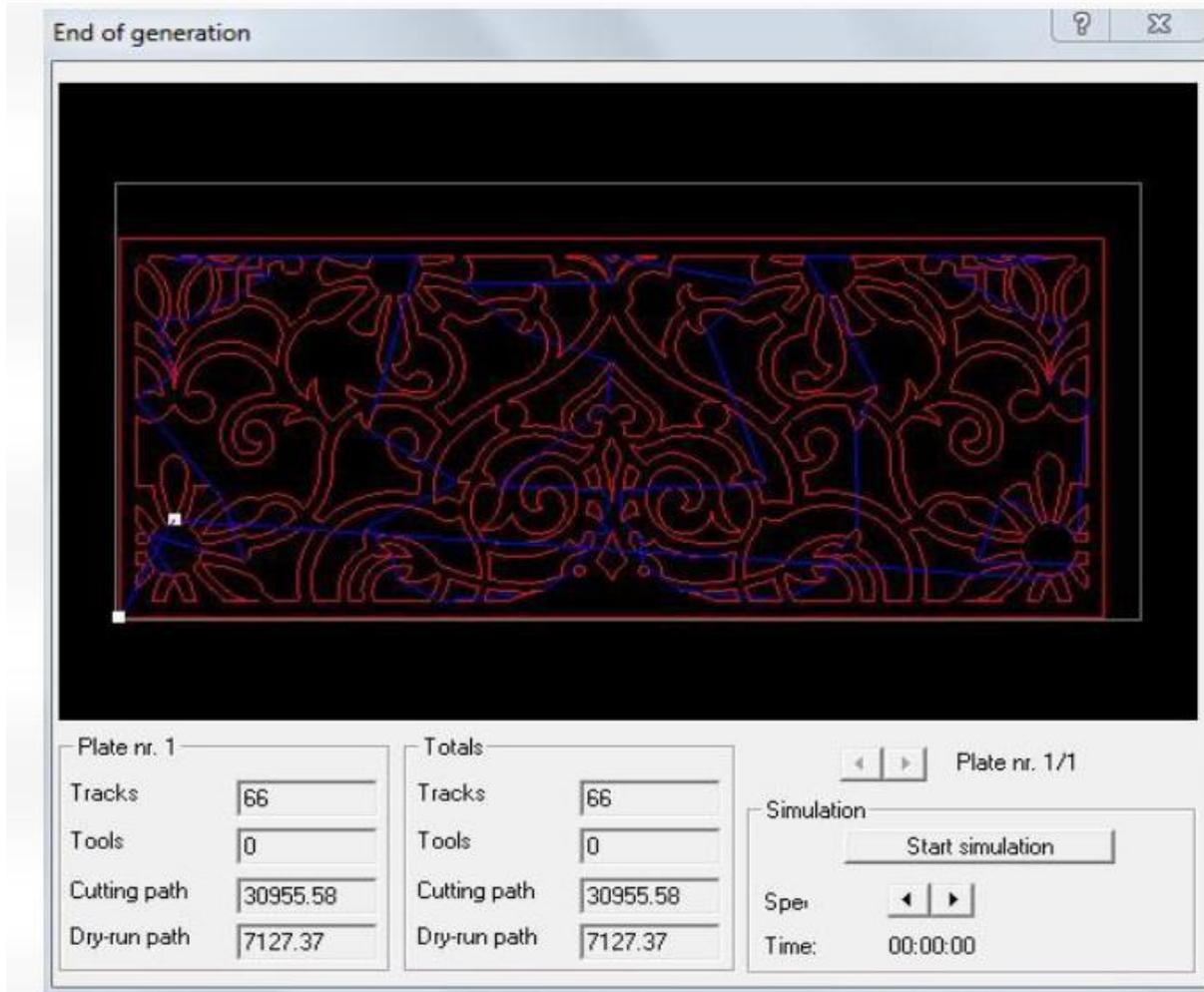
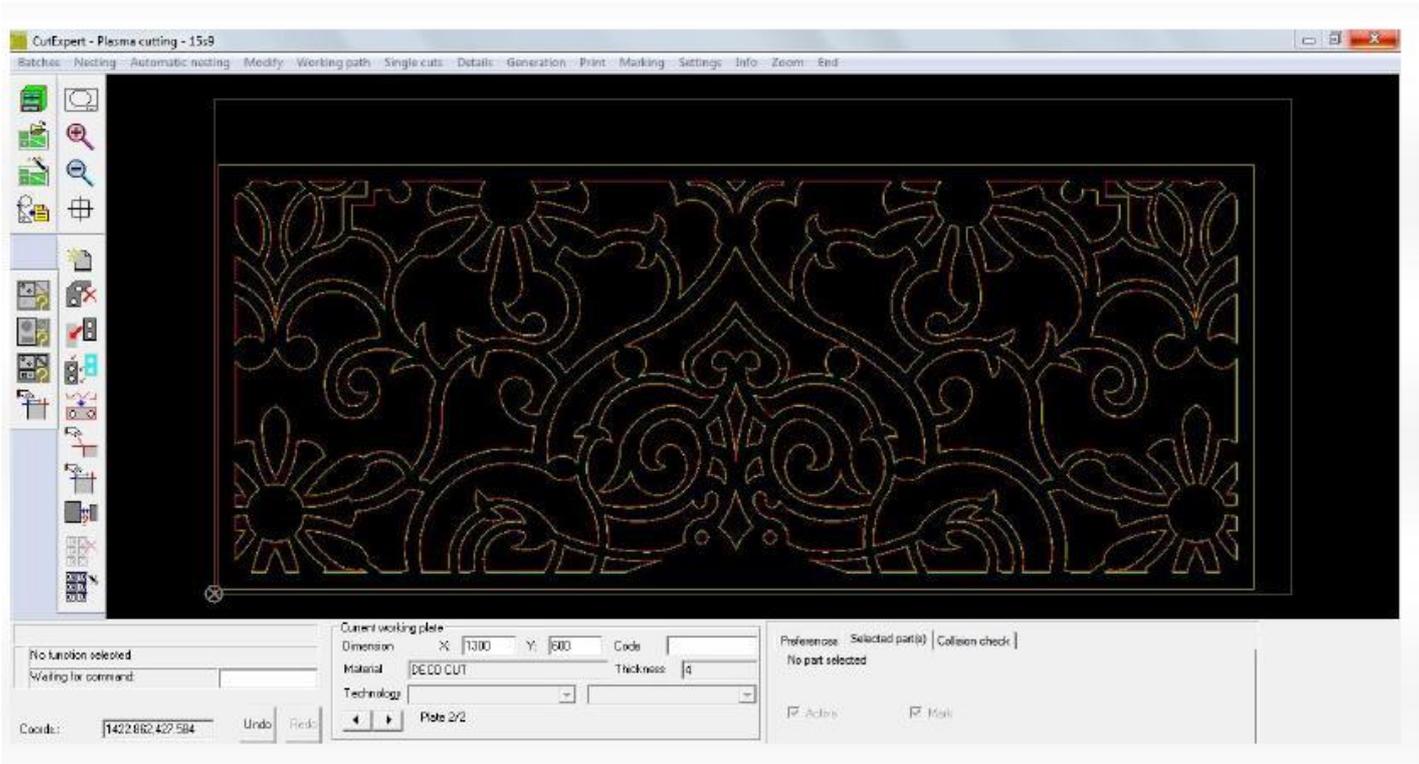
Maximizing the product for any given quantity of raw materials is a must for every enterprise, in order to maximize the profitability.

It is a common opinion that only a human operator can achieve the best savings on raw materials. While this opinion can have a solid base for certain aspects of production planning, every year the continued enhancement of computers is making it easier to use software programs to search and evaluate a huge number of combinations for the placement of the workpieces over a sheet, achieving a great efficiency in material saving within acceptable elaboration times. Of course, the automatic placement of the workpieces must not preclude the possibility of manual interventions, for example in order to

delete from a certain sheet some pieces that were mistakenly allotted on that sheet. But also, the automatic procedure must be able to continue the job of workpiece allocation after that part of this job has been modified manually.

Moreover, in order to achieve the highest efficiency, it must be possible to allocate workpieces coming from different orders on the same sheet, so that the savings of the material improves. Of course, after the cut has been done it must be easy to remember which sheet had included part X of job Y.

This is why the integration of job management with nesting operations is so important.



Pjovimo stalias



Integruota su UNIMOTION CNC sprendimais, Sensor™ degiklio aukščio valdymo sistema

X RAILS

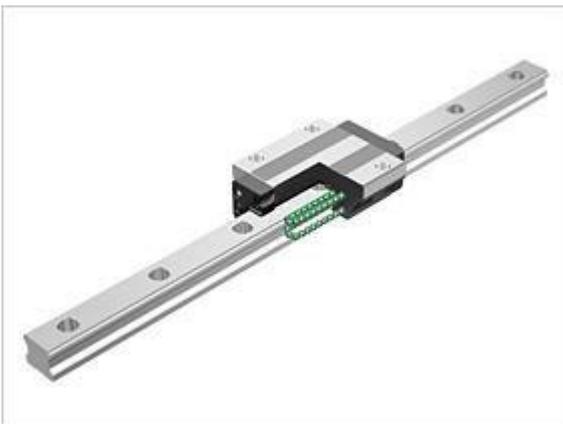
Steel shaft on aluminum body in X (transverse) axis INA brands (GERMAN) rails are used.

- Double-sided rails loads coming from every direction is met rigidly.
- The ball carriage rail both wraps around the front without any gaps.
- Two tracks precision machined
- sweepers to protect dust from double sides of rail
- Continues to operate without maintenance for a long time.
- No lubrication required



Y RAILS

Ball type on Y (longitudinal) axis steel liner rails STAFF brand (25mm) are used.



- It is resistant to heavy duty work and load.
- Induction hardened and grinded.
- Mounted on the highly sensitive machined surfaces.
- Against slags coming from working environment It is protected by sheet covers.
- Racking gears are mounted vertically on both rails.
- Both axes are available in two variants, mechanical and electronic

There are limit protections in the form.

- In case of operator error, multiply the machine's rail limits, such as the emergence of negativity.

LINEER GUIDE WAYS & PINION & RACK DRIVE SYSTEM

- Hardened and ground precision **NTN-SNR,INA,ATLANTA** pinions are used.
- Single machined in 2m length rack gear mechanisms are used.
- Thanks to the working system, pinion and rack without a gap.
- Gear mechanism meets high loads the possibility of motion without vibration and precision .
- Maintenance-free, long-lasting.



GEARBOX

EISELE (GERMANY) brand gear box is used.

- Works without gap.
- High load carrying capacity.
- Thanks to its thermal compensation feature, can work in climate condition.
- Maintenance is not required.
- Coupling without gap in inlet and outlet assembly and I use a camouflage system.



MOTORS

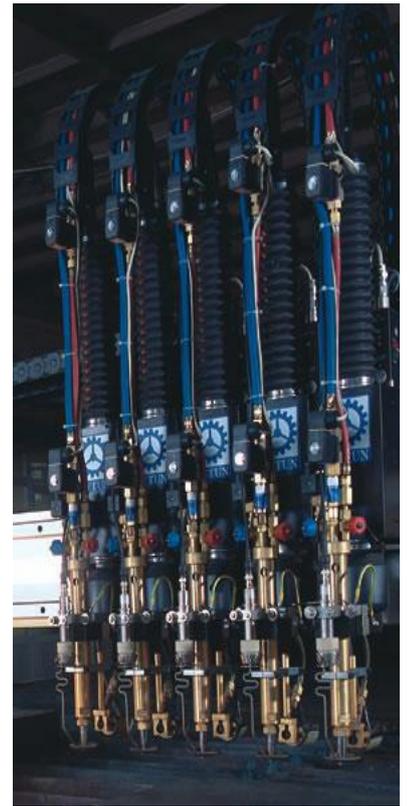
In both axes (x-y) **MITSHUBISHI (JAPAN)** engines are used.

- 2 synchronized motors on Y axis
- Synchronized driving ensures precise and vibration-free motion
- Servo motors Fed by PWM drivers.
- Precise positioning ensures high acceleration.



Deguonies pjovimo prietaisas (pasirinktinai)

- Deguonis degiklio komplektas ir išoriniai antgaliai 3-300mm
- apsauginiai vožtuvai
- dujinių žarnų tiekimas
- automatinis uždegimas
- selenoidinių vožtuvų rinkinys, leidžiantis pasirinkti deguonį
- automatinis aukščio valdymas ir automatinis elektrinis uždegimas.
- deguonies tiekimo sistema



Hoses and Carrier System

- All hoses on machine can meet pressures up to 20 bars.
- No burning.
- They have universal color codes.
- They are manufactured in world standards.
- They work in any season condition.
- Active all hoses and cables are moved by plastic chain cable carriers.
- Big radius carriers are used
- To protect cable, and hoses.



Drives

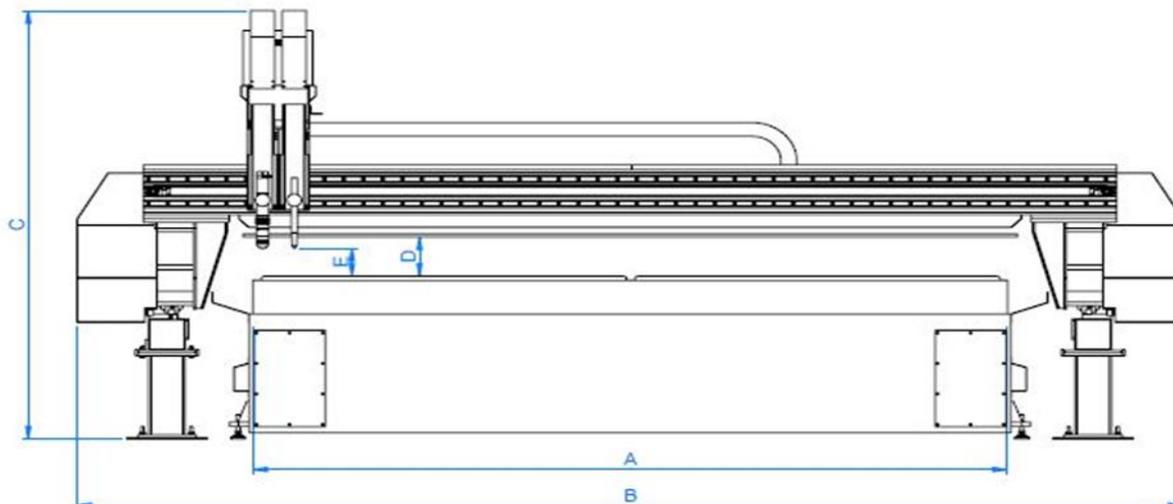
- On both axes, servo drives are used.
- On Y axis, there are 2 synchronized drives.
- Synchronized drive gives smooth and without vibration motion.
- Servo drives are controlled by Mitsubishi servo driver.
- Accurate positioning with high acceleration.
- No maintenance is required.
- Long Life.



Cutting Torches and Tips

- It can cut 10mm to 200mm.
- Tip mixing type cutting torches are used.
- Preheat gases are mixed in tip.
- By changing cutting tip it is possible to use acetylene or propane. There is no change the torch.
- Backflash risk is much lower than the other types.
- By safety valves it was prevented.
- Any backflash event just damages the tip.
- Gives the better cutting surfaces.
- Gas consumption is low
- Long life.





| | | | |
|---|----------|---------------|----------------------|
| <i>Bendras plotis</i> | <i>B</i> | <i>mm</i> | 3000 |
| <i>Bendras aukštis</i> | <i>C</i> | <i>mm</i> | 1500 |
| <i>Deglo atstumas</i> | <i>E</i> | <i>mm</i> | 200 |
| <i>Pjovimo ilgis</i> | | <i>mm</i> | 3100 |
| <i>Pjovimo plotis</i> | <i>A</i> | <i>mm</i> | 1600 |
| <i>Stalo aukštis</i> | | <i>mm</i> | 780 |
| <i>Greitis</i> | | <i>mm/min</i> | 20000 |
| <i>Staklių ašys</i> | | - | X , Y1 , Y2 |
| <i>Varikliai X , Y1 , Y2 servo tipo</i> | | | MITSUBISHI |
| <i>CNC valdymas</i> | | | EUROSOFT CNC |
| <i>CAD/CAM programa</i> | | | EURONEST PRONEST |
| <i>Plazmos pjovimo dlokas</i> | | | KJELBERG CUTFIRE100 |
| <i>Deglo aukščio kontrolė</i> | | | UNIMOTION THC |
| <i>Švelnus plienas (plazma maks. pjovimo galia)</i> | | <i>mm</i> | 1 - 40 |
| <i>Švelnus plienas (plazma pradūrimo galia)</i> | | <i>mm</i> | 1 - 20 |
| <i>Pjovimo kampo klasė</i> | | ISO 9013 | 2 - 4 |
| <i>Energija</i> | | | 400V, 50Hz, 6bar air |
| <i>Svoris</i> | | <i>kg</i> | 1800 |
| <i>Išmatavimai (WXHXL)</i> | | <i>mm</i> | 3550 x 1500 x 4500 |

Plazma pjovimo staklės 1500x3000

Staklių konfigūracija

| | |
|--|-----------|
| Stalas 1.5 X 3 MT su stalo sistema | įtrauktas |
| EUROSOFT CNC | įtrauktas |
| KJELBERG CUTFIRE100 PLAZSMA | įtrauktas |
| UNIMOTION THC deglo valdymo blokas | įtrauktas |
| Grįžimo funkcija | įtrauktas |
| 3 ašys (X, Y1, Y2) AC servo variklio sistema 1 plazma | įtrauktas |
| EURONEST perėjimo programa | įtrauktas |
| Automatinio pjovimo aukščio koregavimo sistemos programa | įtrauktas |
| 400 V 50 HZ | įtrauktas |
| Automatinis aukščio padėties nustatymas | įtrauktas |
| Metrinė ir colinė sistemos | įtrauktas |
| Etherneto ir tinklo sąsajos, USB | įtrauktas |

Darbo zona:

- **Aplinkos temp.** : 0°C + 50°C / mažiau nei 1,1°C kaitaliojimas per min.
- **Drėgmė** : Mažiau nei 75 %
- **Vibravimas** : mažiau nei 0,05G, 5µm amplitudė
- **Aplinka** : Be dulkių ir lakiųjų garų (aplink stakles ir kompresorių neturi būti nei chemikalų, nei tokio pobūdžio produktų).
- **Grindis** : Turėtų būti paruoštas taip, kaip nurodyta pridedamame išdėstymo plane.

| Staklės | Kaina (EUR) be PVM |
|--|--------------------|
| IPL 1500 X 3000 MM KJELBERG CUTFIRE100 PLAZMA PJOVIMO STAKLĖS SU STANDARTINE ĮRANGA | |
| EURONEST CAM PROGRAMA | |
| DEGUONIES PJOVIMO GALVA | |

Kainos FCA Vilnius sąlygom