

Kjellberg[®]
FINSTERWALDE

the
FINE FOCUS[™]
company

Plasma Cutting System

HiFocus 161i

**Cutting and Marking
with the latest Technology**



**Plasma cutting
from 0.5 mm up to 50 mm**

made in Germany

Plasma Cutting with the Latest Technology

Plasma cutting is one of the thermal cutting methods with the fastest technical progress. Equipped with the new plasma cutting technology Contour Cut, our plasma cutting systems of the HiFocus series determine the state of the art.

The HiFocus 161i with the latest soft-switch-inverter provides manifold possibilities for cutting and marking of carbon steels, alloyed steels and aluminium as well as other electroconductive materials in the range from 0.5 mm up to 50 mm thickness. The HiFocus 161i meets the high demands of metal and container construction, the automotive industry and many other applications.

Contour Cut - Precision in Detail

Contour Cut is a new plasma cutting technology for cutting mild steel. It has been developed on basis of the HiFocus technology which has already been successfully established.

For cutting of fine inner and outer contours, especially small holes and narrow webs, the quality could be improved considerably with respect to contour accuracy, angularity and surface quality. The result is an excellent quality without time-consuming after-treatment at low costs.

- Holes with angular deviations ranging between 2 and 4 according to DIN EN ISO 9013
- High cut quality and contour accuracy
- Minimal perpendicularity tolerances
- Very high repeatability and dimension accuracy
- High productivity at low costs
- Improved quality of cut surfaces

Optimal gas mixtures

The Composition and the volume flow rate of the plasma and swirl gases have a decisive influence on the cutting result. The HiFocus 161i is available either with a manual gas console or with the automatic gas console FlowControl.

The FlowControl contains all cutting data required for the cutting process and controls the volume flow rates and the timing of the different process gases. The safe dosage even of the smallest amounts of gas and the exact compliance to the gas parameters guarantee highest reproducibility of the gases.

The settings can be accessed from the ready made database and simply optimised. The modified data can then be stored in a special customer database.



10 mm Mild steel



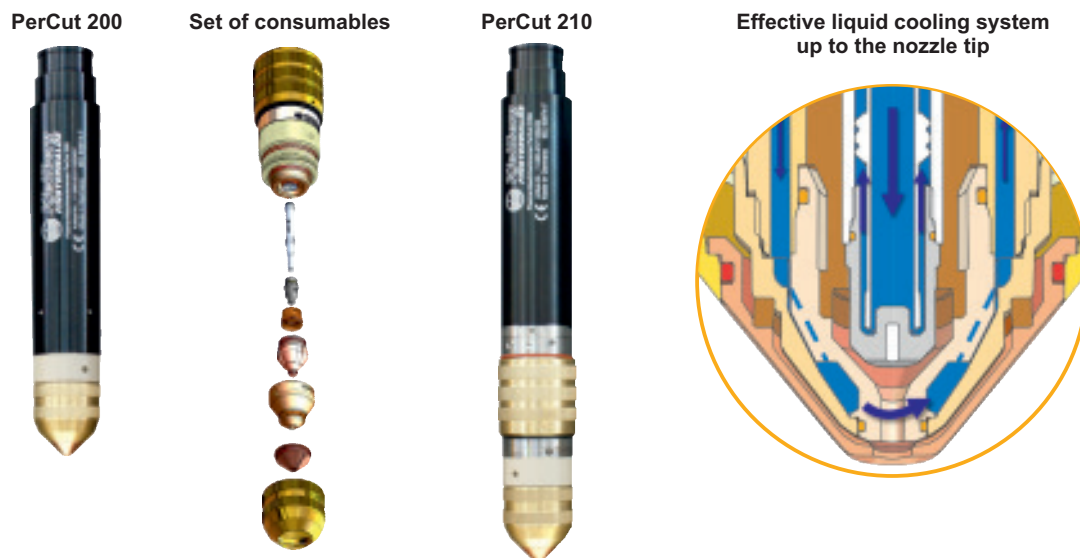
FlowControl

Plasma Torches from the PerCut Series

The HiFocus 161i is equipped with the plasma torch PerCut 200/210. Torches of the PerCut series are fabricated by taking into account the highest demands in respect of their technology, simplicity and user-friendliness. Their main feature is the increased constriction of the plasma arc by using smaller nozzle diameters and swirl gases and by increasing the gas rotation.

Both torches are operated with the same consumables. The standard consumables are also suited for 3D cutting and bevel cutting of up to 50 degrees. The torches also can be used for marking without changing of the consumables.

The PerCut 200 is suited for standard applications as well as for high-precision bevel cutting. Thanks to the quick change system of the PerCut 210, the installation of the torch head is quick and handy.



The plasma torches offer highest precision and comfortable handling.

- Higher cutting speeds reduce cutting meter costs
- Longer consumable life saves resources
- Narrower cutting kerfs and, therefore, less emissions and waste
- Significantly lower gas consumption than competitive products due to more effective liquid cooling system
- Due to lower gas consumption comparatively low noise level
- Lower diversity of consumables
- Bevel cutting up to 50 degrees with standard consumables
- Cutting and marking with the same consumables

Fields of application

Material thickness	10 mm	20 mm	30 mm	40 mm	50 mm
The maximum values depend on the material	Piercing with hole piercing sequence				
	Recommended cutting range for production				
	Maximum cutting range				

Technical Data

Power source	HiFocus 161i
Mains voltage	3x 400 V, 50 Hz
Connected load, max.	28 kVA
Fuse, slow	50 A
Cross section mains	4 x 10 mm ²
Open circuit voltage	330 V
Cutting current	10 - 160 A (100 % d. c.)
Marking current	5 - 25 A (100 % d. c.)
Cutting voltage	160 V
Cutting power	max. 25,6 kW
Protection class	IP 22
Dimensions H x W x D	1140 x 570 x 985 mm
Weight	206 kg

Plasma torch	PerCut 200/ 210
Standard version	PerCut 200
Quick change system	PerCut 210
Max. cutting current	200 A
Duty cycle	100 %
Max. cutting range with HiFocus 161i	60 mm (200 A) 50 mm (160 A)
Clamping diameter	50,8 mm
Plasma gas	O ₂ , Ar/H ₂ , N ₂
Marking gas	Ar
Swirl gas	O ₂ , N ₂ , Air, F5 ^{*)}
Cooling	Coolant "Kjellfrost"

*) Forming gas F5 consisting of 95 % N₂, 5 % H₂

Operating data (extract)²⁾

Material thickness (mm)	Mild steel		Stainless steel		Aluminium	
	Cutting current (A)	Cutting speed (mm/min)	Cutting strom (A)	Cutting speed (mm/min)	Cutting current (A)	Cutting speed (mm/min)
0,5	20	8000				
1	20	5500	60	6000	35	3800
4	60	5000	80	3200	50	1400
6	60	3500	130	1900	130	3000
10	130	3800	130	1100	130	1500
15	130	2300	160	850	160	1300
20	130	1400	160	750	160	1000
25	160	1200	160	550	160	800
30	160	900	160	350	160	600
40	160	450	160	200	160	250
50	160	200	160	100	160	100


Kjellberg plasma cutting units are CE-conform and correspond with the valid guidelines and instructions of the European Union. They are developed and fabricated on basis of the standard EN 60974 (VDE 0544). The plasma cutting units are labelled with the S-sign and therefore applicable to environments with increased hazard of electric shock. The fabrication takes place according to DIN EN ISO 9001. The factory-owned quality assurance comprises piece and cutting performance tests, documented by test certificate.

Our products represent a high level of quality and reliability. We reserve the rights to change design and/or technical specification during the series fabrication. Claims of any kind can not be derived from this brochure.

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