Kjellberg
FINSTERWALDE

the FINE FOCUS company

With HiFOCUS PLUS Technology

Plasma Cutting Unit

Hi*Focus* 80i

Sophisticated Plasma Technology
for cutting of material from 0.5 to 20 (25) mm
with oxygen-containing plasma gases

Soft-Switch-Inverter - Made in Germany

Hi*Focus* 80i - unit of function and design

The request of our customers for a plasma cutting unit with **Hi*Focus*^{PLUS} technology** for materials from 0.5 to 20 (25) mm was the reason for our enterprise for a new development. Additionally the rising demand of the automobile industry and their suppliers calls for a future-orientated and up-to-date Hi*Focus* unit, covering its technical capabilities, especially for the robot operation, and meeting all requirements on the local and international market.

Hi*Focus* 80i

Based on the approved Soft-Switch-Inverter technology now the **Hi*Focus* 80i** with the microprocessor controlled power source is at disposal for a cutting range up to 80 A at 100 % duty cycle. In connection with the powerful **plasma torch PerCut 80** quality cutting in a wide range is granted. That means **laserlike quality cuts** with nearly no dross adherence, lowest straightness tolerances and very clean cutting surfaces.

The high performance capacity of the plasma torch PerCut 80 ensures in connection with the heavy duty **XL-Life-Time system** and its longevity of cathodes and nozzles (up to 1,200 piercings with edge squareness still below 3°) **lowest costs on consumables** and **minimized downtimes**. The technical conditions for the high productivity of the plasma cutting process are optimized operational parts of the beam generation system interacting with microprocessor controlled sequences.


Consumables XL-Life-Time System


Bevel cutting
on a 3-D workpiece with robot

For the moment this unique plasma cutting unit with **Hi*Focus*^{PLUS} technology** will be offered in this performance class for the plasma gases oxygen and air. Because of the outstanding price-performance ratio especially the medium seized industry now is in the position to compete on the market with high-class cutting work.

The flexible installation configuration will be offered as a complete package with hose parcel extensions up to 15 m, sufficient for thin sheet cutting with small 2-D guiding systems with approximately 2.5 x 4.0 m table size, and for robot applications as well.

For advanced robot applications the separate system specification **Hi*Focus* 80i-Robo** is available. With newly developed 3-D consumables for **bevel cutting up to 45°** the unit particularly is recommended for bevelling units and robots, also in connection with particular torches.

Versatile torch technology - basis for quality and flexibility

To meet the enhanced requirements of the Hi*Focus* technology the new PerCut torch generation was developed. Increased arc constriction due to smaller orifices, optimized gas rotation as well as the use of swirl gas are the main features of those torches. For the three-dimensional cutting separate 3-D consumables are used, covering the full range of application.

Special variations of the **plasma torches PerCut 80** and **PerCut 90** ensure cutting operations under different conditions. Especially for robot applications torches with 60° and 90° head inclination and strengthened shaft can be offered. Those are ideal prerequisites for 3-D cutting operations, typical also for the automobile industry.

The new plasma cutting unit is available on request with the plasma torch **PerCut 90**, furnished **with a quick-change head**, which ensures easy handling and reduces downtimes.

The advantages are:

- Quick technology conversion for changing cutting jobs
- Rapid power adaptation to different thicknesses of material
- Fast replacement of consumables with prepared torch heads

Quick-change torch PerCut 90

High productivity by Hi*Focus* technology

Operational range of the HiFocus 80i	Mild steel thickness (mm)	Hi*Focus* technology		Hi*Focus*^{PLUS} technology	
		Cutting current (A)	Cutting speed (mm/min)	Cutting current (A)	Cutting speed (mm/min)
	0,5	20	5 000		
	1	20	3 500		
	2	50	2 600		
	3	50	2 200		
Dross free cut and piercing with arc depending height control	4	50	950	50	2 800
	5	50	800	50	2 400
	6	50	750	80	2 400
	8			80	2 000
	10			80	1 800
	12			80	1 400
	15			80	1 000
Recomm. range for application	20			80	450
Maximum cutting range	(25)			(80)	(200)

(State: 10/2004)

The cutting speed is valid for the **highest cut quality**. In case of reduced demands on the cut quality cutting with up to 2.5-fold speed is possible. The cutting speed depends on kind of material, gas pressure, cutting and swirl gas and the used nozzle/cathode system as well.

Technical data

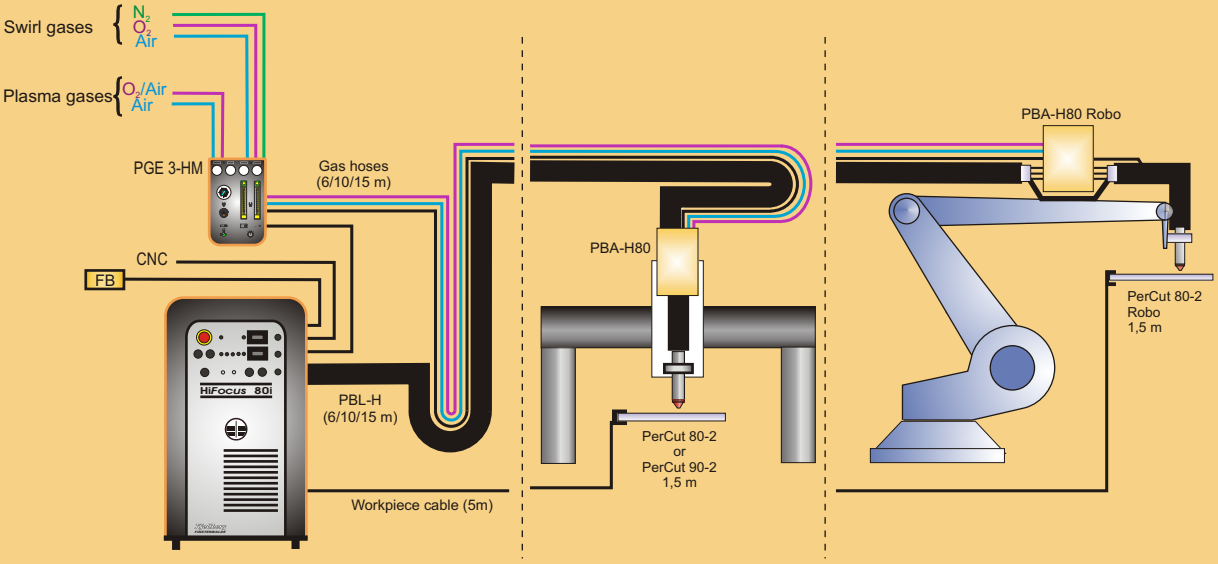
	HiFocus 80i
Power source	Soft-Switch-Inverter
Cutting current	10 - 80 A (100 % d.c.)
Mains connection	3x 400 V, 50 Hz
Mains fuse	25 A “C”
Connecting load	17 kVA
Open circuit voltage	400 V
Ignition	High tension
Protection class	IP 22
Insulation class	F
Dimensions (L x B x H)	970 x 510 x 970 mm
Weight	161 kg

	Plasma Torch
Plasma machine torch	PerCut 80
Quick-change torch	PerCut 90
Cutting current (100% d.c.)	max. 100 A
Standard lengths	
Torch hose parcel	1.5 m
Cable set for PBA	6, 10, 15 m
Clamping diameter	
PerCut 80	44 mm
PerCut 90	50 mm
Weight (with 1,5 m hose parcel)	3.8 kg
Cooling	direct circulation
Plasma gases	Oxygen, Air
Swirl gases	Oxygen, Nitrogen, Air

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 following standards and instructions: EN 60974-1 (VDE 0544, part 1) and BGV D1. 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.

System configuration for the cutting of mild steel with robots or guiding systems

PGE3-HM Plasma gas adjustment unit
PBA-H80 Plasma torch connection unit
FB Remote control
PBL-H Cable set for PBA



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 whatever kind can't derived from this prospectus.

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