

Kjellberg[®]
FINSTERWALDE

the
FINE FOCUS[™]
company

Plasma Cutting System

HiFocus 80i

**Sophisticated Plasma Technology
for cutting of material from 0.5 to 18 (25) mm**



Soft-Switch-Inverter - Made in Germany

HiFocus 80i - system of function and design

The request of our customers for a plasma cutting unit with **HiFocus^{PLUS}** technology for materials from 0.5 to 18 (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 HiFocus system, covering its technical capabilities, especially for the robot operation, and meeting all requirements on the local and international market.



HiFocus 80i

Based on the approved Soft-Switch-Inverter technology now the **HiFocus 80i** with the micro-processor 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 **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

This unique plasma cutting system with **HiFocus^{PLUS}**



Bevel cutting
on a 3-D workpiece with robot

technology will be offered in this performance class for the plasma gases oxygen, nitrogen and air. Because of the outstanding price-performance ratio especially the medium sized 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 **HiFocus 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 HiFocus 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 of the PerCut series

High productivity by HiFocus technology

Thickness	10 mm	20 mm	30 mm	40 mm	50 mm
(Material depending)	Piercing with height control up 15 mm				
	Recommended cutting range: 1,0 - 18 mm				
	Maximum cutting range: up 25 mm				

Material		Mild steel		Stainless steel		Aluminium	
Max. speed ¹⁾		Cutting current (A)	Speed (mm/min)	Cutting current (A)	Speed (mm/min)	Cutting current (A)	Speed (mm/min)
Material thickness (mm)	0,5	20	5000			35	3800
	1	20	3500	30	5000	35	2600
	2	50	2600	55	4000	35	2300
	3	50	2200	55	2600	35	1500
	4	50	4500	60	2200	50	1400
	5	50	3500	60	2000	50	1300
	6	80	3200	60	1800	50	1300
	8	80	2600			50	1300
	10	80	2300				
	12	80	1700				
	15	80	1200				
	20	80	600				
25	80	200					

¹⁾ Listed cutting speeds are depending on material characteristics, gas parameters, guiding system as well as proper consumables. According to quality requirements cutting speeds may differ.

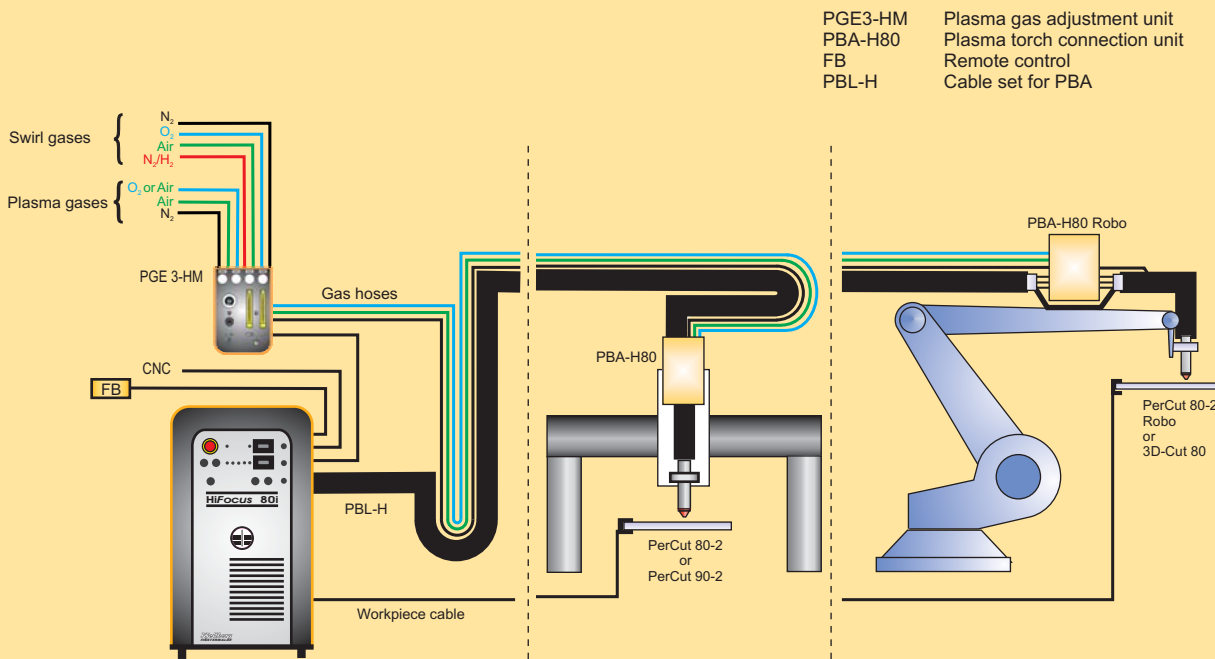
Technical data

Power source	HiFocus 80i
Mains voltage	3x 400 V, 50 Hz
Connected load	17 kVA
Fuse, slow	25 A
Cross section mains cable, Cu	4 x 4 mm ²
Open circuit voltage	400 V
Cutting current at 100% d.c.	10 - 80 A
Cutting voltage	160 V
Cutting power	12,8 kW
Protection class	IP 22
Dimensions (L x B x H)	970 x 510 x 970 mm
Weight	161 kg
Plasma torch	PerCut 80/ PerCut 90/ PerCut 160/ 3D-Cut 80

Plasma Torch	PerCut 80/PerCut 90/ PerCut 160
Plasma machine torch	PerCut 80
Quick-change torch	PerCut 90
Robot torch	PerCut 160 Robo
Robot torch	3D-Cut 80
Cutting range	0.5 - 25 mm
Plasma gases	O ₂ , Air, N ₂
Swirl gases	O ₂ , Air, N ₂ , purging gas F5
Torch cooling	coolant "Kjellfrost"

Kjellberg-plasma cutting systems are CE-conform and correspond with the valid guidelines and instructions of the European Union. They are developed and fabricated on basis of following standard: EN 60974 (VDE 0544). The plasma cutting systems 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



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 prospectus.

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