

**Kjellberg**<sup>®</sup>  
**FINSTERWALDE**

the  
**FINE FOCUS**<sup>™</sup>  
company

**NEW!**

**Plasma cutting inverter**

# **CutFire 100i**

**With air-cooled cutting technique  
for the automated application**



**powerful - economical - flexible**

## **CutFire 100i - inverters for automated applications**

Kjellberg Finsterwalde worldwide known as plasma technology leader with its HiFocus and FineFocus products enters with CutFire 100i a new market segment. These experiences of mentioned high end products and technologies helped to develop the new CutFire 100i, an efficient plasma system for mechanised cutting applications, more than just a cost alternative. Partners and customers worldwide asked for such a product, easy handling and low investments mainly for the sheet metal industry and handcraft. The answer CutFire 100i, with 100% duty cycle and low weight, is perfect for simple CNC applications.

### **Reliable cutting engineering**

In connection with the machine torch Flash 100, the new **inverter power source CutFire 100i**, which is provided with the latest primary switched power electronic and controls, is characterised by

- high reliability and power potential (up to max. 100 A)
- high operating efficiency of 92%
- soft-switch-inverter made in Germany with **duty cycle of 100%**
- high flexibility through the low weight
- dust protection through inbuilt filters
- comfortable operation by
  - clearly arranged control panel
  - current pre-adjustment for optimum operation, large digital display
  - easy pressure adjustment and monitoring
  - LED-display for process monitoring
  - remote control for cutting preparation



The inverter delivers good cutting quality properties at high productivity in a wide range of thickness and at various metallic materials, galvanised steel plates included. The **plasma machine torch Flash 100** ensures cost-saving and reliable operation by

- using the low-price plasma gas Air
- lowest cost of consumables because of high life for nozzles, cathodes and effective spatter protection at piercing operations
- low air consumption for plasma gas and cooling
- accurate high-voltage ignition and piercing properties
- plasma torch with central connector ensures quick torch change

## **Arc voltage depending height control and torch guiding system**

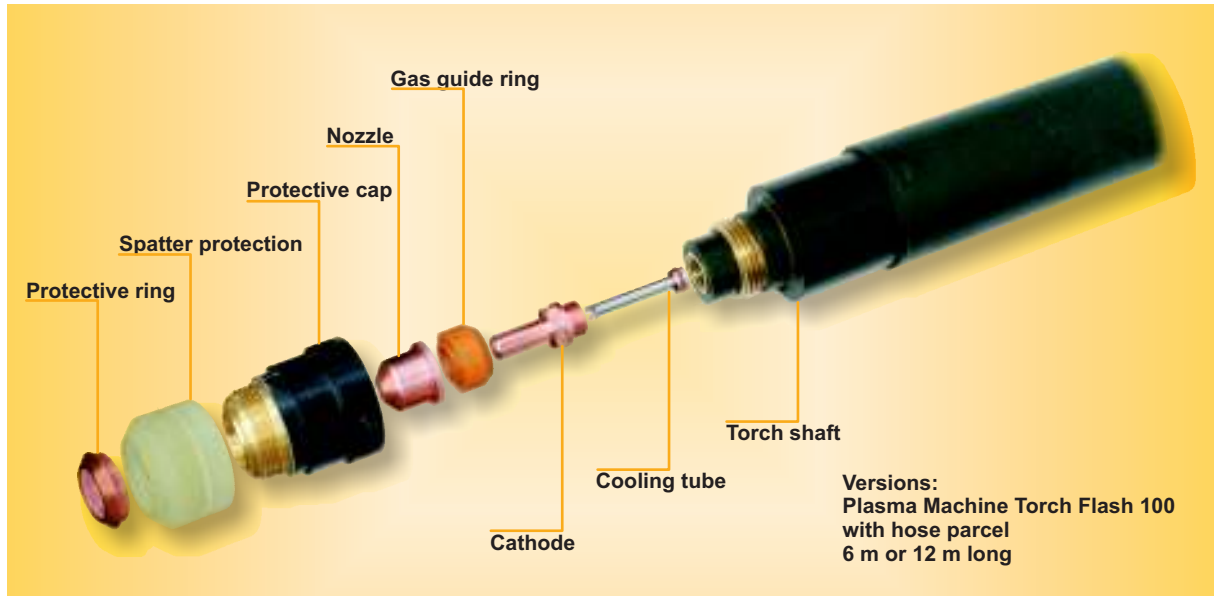
A safe plasma process and a high cutting quality can be achieved only, if the torch distance to the workpiece surface always is constant, and if the torch is lifted up when piercing starts.

The arc voltage depending height control C1000 ensures process stability and constant good cutting quality, and furthermore it is offering a number of **cost-saving effects** (increase of lifetime of consumables, material saving by better plate utilisation, accuracy of the cut, collision protection, etc.).

The torch guiding system FE 1 is suitable for straight and circle cutting.

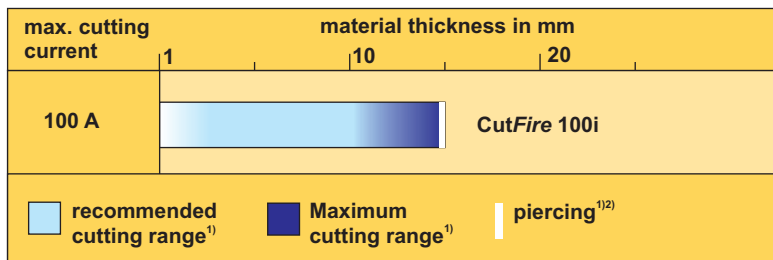


**Air-cooled torch technique -  
competitive due to high operation time and low gas consumption**



**Technological parameters**

**Range of application**



1) These data are depending on the materials to be cut and their compositions  
 2) Piercing capability is dependent on material, thickness as well as performance of THC and CNC. Please refer to operation manual

**Operating data (extract)**

material		mild steel		stainless steel		aluminium	
max. cutting speed <sup>3)</sup>		cutting current (A)	speed (mm/min)	cutting current (A)	speed (mm/min)	cutting current (A)	speed (mm/min)
material thickness (mm)	1	35	10200	50	12000	50	8000
	2	50	7000	50	6000	50	5500
	5	90	5000	90	4000		
	6	100	4300			90	4000
	8	100	3200	100	3000	100	3000
	10	100	2000	100	1900	100	2200
	12	100	1800	100	1300	100	1700
	15	100	1200	100	700	100	1400

3) 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.

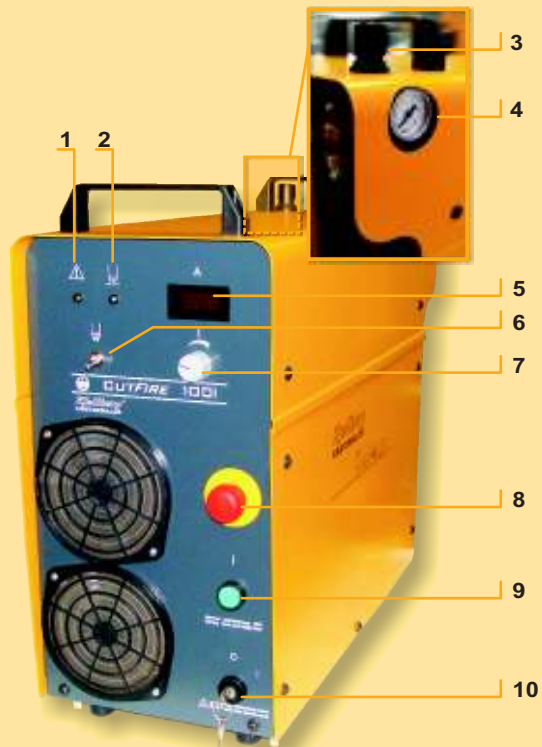
## Technical data

Power source	CutFire 100i
Mains voltage	3x 400 V, 50 Hz
Connection load, max.	16.6 kVA
Fuse, slow	25 A
Open circuit voltage	330 V
Cutting current at 100% d.c.	20 - 100 A
Cutting voltage	max. 130 V
Cutting power	13 kW
Protection class	IP 21
Dimensions (L x W x H)	710 x 280 x 590 mm
Weight	50 kg
Plasma torch	Flash 100

Plasma torch	Flash 100
Max. cutting current	100 A
Duty cycle (d.c.)	100%
Max. cutting range	up to 15 mm
Plasma gas	Air
Torch cooling	air cooled
Air consumption	195 l/min
Pressure	5.0 bar/ 0.5 MPa
Torch shaft diameter	36 mm

### Control and display elements

- 1 - Signal lamp, yellow "error"
- 2 - Signal lamp, white "plasma torch ON"
- 3 - Pressure regulator "plasma gas"
- 4 - Pressure gauge "plasma gas"
- 5 - Digital display "cutting current"
- 6 - Tumbler switch "gas purge / torch operation"
- 7 - Potentiometer "cutting current", stepless
- 8 - Emergency OFF
- 9 - Illuminated button, green „stand-by“
- 10 - Key switch "mains ON"



### CNC interface

Exchange of the following signals:

- Torch ON
- Main arc ON
- Pilot arc ON
- Emergency stop
- Cathode potential for height control

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 standards and instructions: 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.

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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