



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

## **PA-S45 W, PA-S70 W**

**Plasma Cutting from 3 to 70 mm**



Made in Germany

**Cutting and Plasma Gouging with Hand or Machine Torch**

[www.kjellberg.de](http://www.kjellberg.de)

## Simple and inexpensive Technology for every Cutting Range

The plasma cutting systems of the PA-S series are suitable for manual and mechanised cutting of material thicknesses in the range from 3 to 70 mm. The use of a range of different plasma gases and gas mixtures allows the clean cutting and gouging of electrically conductive materials.

As portable systems, they can be used in workshops, training centres and on construction sites.



PA-S70 W, PA-S45 W

The systems in the PA-S series can handle contour cuts, straight cuts and bevel cuts up to 60°.

### Advantages

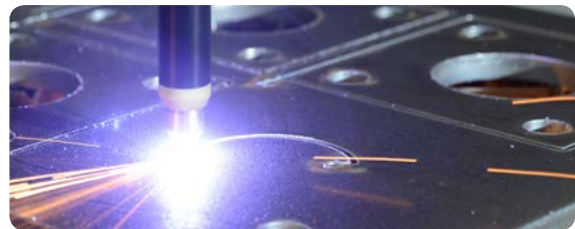
- Attractive price-performance ratio
- Optional use of hand or machine torch
- Suitable for 2D and 3D guiding systems
- Robust and simple design
- Portable systems for mobile use
- Reliable even under challenging production conditions
- Simple operation and maintenance with a service and diagnostic system
- Cutting current with three settings
- Fluid cooling of plasma torch for long consumable life
- Quick switch from cutting to plasma gouging
- Angled torch heads and special shaft designs for optimised cutting of 3D parts

### Application Areas

- Metal construction and engineering
- Plant and tank construction
- Pipeline engineering
- Scrap cutting
- Dismantling



Manual cutting with PB-S45 WH



Mechanised cutting with PB-S45 W



Bevel cutting

### Cutting Ranges

Cutting current	Material thickness in mm			
	20	40	60	80
130 A	PA-S45 W			
240 A	PA-S70 W			

Recommended cutting range <sup>(1)</sup>
 Max. cutting range <sup>(2)</sup>  
 Piercing <sup>(1), (2)</sup>

<sup>(1)</sup> These data are depending on the materials to be cut and their compositions.

<sup>(2)</sup> Observe piercing capability.

## Greater Versatility with optional Equipment

### Liquid-cooled Plasma Torch



Machine torches PB-S44 W, PB-S45 W, PB-S70 W

An essential requirement for the quality of cut surfaces is the proven design of the torch's cathode and nozzle. The liquid cooling of the plasma fine-jet torch guarantees longer consumable life. Plasma cutting with the systems in the PA-S series is more efficient by increasing the productivity of the user. For the cutting of mild steel with the PA-S45W, a swirl gas torch allows more frequent piercing.

### Plasma Gouging



Plasma gouging with hand torch

Both the machine and hand torches can be quickly converted for plasma gouging. All you need to do is exchange the nozzles and fit the ceramic cap (with protector where necessary). The use of a range of different plasma gases and gas mixtures allows the machining of all electrically conductive materials, such as mild steel and stainless steel, aluminium and brass.

Plasma gouging is ideal for eliminating welding defects, cracks, cavities and inclusions, and for preparing for backwelding.

#### Advantages

- Higher productivity (disposal rate)
- No carbonisation of the material
- No finish grinding required
- Low heat input
- Good monitoring of process management
- Reduction of noise and smoke levels

### Accessories

- Nozzles, spacers and caps for template cutting
- Nozzles and ceramic caps for plasma gouging
- Wheel guide for cutting with scribers
- Beveling cap and bevel cutting attachment with selectable angle setting for bevel cutting for weld seam preparation or for trimming
- Circle cutting attachment in combination with magnetic or suction holders for continuous cutting of arcs without setting down or changing grip

For manual cutting tasks, a wide range of easy-to-handle accessories is available for each type of torch.



Wheel guide



Circle cutting attachment



Bevel cap



Bevel cutting attachment



Protector for plasma gouging



Template cutting

## Technical Data

Power source	PA-S45 W	PA-S70 W
Mains voltage <sup>(1)</sup>	3 x 400 V, 50 Hz	3 x 400 V, 50 Hz
Fuse, slow	63 A	125 A
Connected load, max.	38 kVA	76 kVA
Cutting current	45 A at 100 % d. c. 85 A at 100 % d. c. 130 A at 60 % d. c.	80 A at 100 % d. c. 160 A at 100 % d. c. 240 A at 80 % d. c.
Dimensions (L x W x H)	1025 x 711 x 970 mm	1380 x 870 x 1080 mm
Mass	240 kg	460 kg

<sup>(1)</sup> Other voltages and frequencies on request.

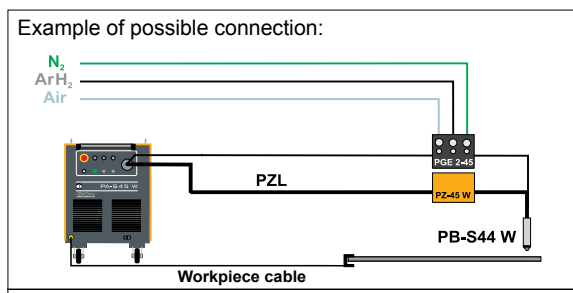
Plasma torch	PB-S44 W	PB-S45 W	PB-S70 W
Cutting current 100 % d. c.	130 A	130 A	250 A
Cutting range	up to 40 mm	up to 45 mm	up to 70 mm
Plasma gas	Air, Ar/H <sub>2</sub> mixture	Air, Ar, H <sub>2</sub>	Air, Ar/H <sub>2</sub> mixture
Swirl gas	Air, N <sub>2</sub>	–	–
Torch cooling			„Kjellfrost“

## Operating Data (extract) <sup>(2)</sup>

PA-S45 W	Mild steel		Stainless steel		Aluminium	
	Cutting current (A)	Cutting speed (mm/min)	Cutting current (A)	Cutting speed (mm/min)	Cutting current (A)	Cutting speed (mm/min)
3	45	2000	–	–	–	–
5	85	2500	85	2500	85	3400
10	130	2000	130	2150	130	3000
15	130	1300	130	1700	130	2100
20	130	800	130	1000	130	1300
25	130	500	130	700	130	900
40	130	200	130	200	130	300
45	130	200	130	200	130	150

<sup>(2)</sup> Listed cutting speeds are depending on material characteristics, gas parameters, guiding system as well as proper consumables. According to the quality requirements of the cutting task, the user may change the cutting speed.

PA-S70 W	Mild steel		Stainless steel		Aluminium	
	Cutting current (A)	Cutting speed (mm/min)	Cutting current (A)	Cutting speed (mm/min)	Cutting current (A)	Cutting speed (mm/min)
4	160	3000	160	2630	–	–
6	160	3150	160	2200	160	3500
8	160	2500	160	1750	160	3000
10	240	2600	160	1500	160	2000
15	240	1300	160	1000	160	1700
20	240	1100	240	1050	240	1750
30	240	800	240	530	240	1250
40	240	500	240	500	240	1000
50	240	230	240	350	240	600
60	240	200	240	200	240	350
70	240	125	–	–	240	250



### Kjellberg Finsterwalde Group

Welding Electrodes  
Welding Equipment  
Cutting Equipment  
Mechanical Engineering

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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 cannot be derived from this brochure.

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