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› STAHLWERK CUT 50 P Digital Plasma Cutter Instruction Manual

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Model: CUT 50 P Digital (Reference: 6930)

1. INTRODUCTION

The STAHLWERK CUT 50 P Digital is a compact IGBT inverter plasma cutter designed for precise cutting of conductive metals. This manual provides essential information for the safe and efficient operation, setup, maintenance, and troubleshooting of your device. Please read it thoroughly before initial use.



Image 1.1: The STAHLWERK CUT 50 P Digital Plasma Cutter with its included torch and various accessories.

Key features include a continuously adjustable cutting current from 15 to 50 A, HF pilot arc ignition for non-contact starting, and a THC interface for CNC height control. It is suitable for cutting steel, stainless steel, aluminum, copper, and titanium.



Image 1.2: Overview of the plasma cutter's main features and capabilities.



Image 1.3: The IGBT technology ensures increased efficiency with reduced power consumption.

2. SAFETY INSTRUCTIONS

Operating plasma cutting equipment involves inherent risks. Always prioritize safety to prevent injury or damage.

- Wear appropriate personal protective equipment (PPE), including welding helmet, gloves, and protective clothing.
- Ensure adequate ventilation in the work area to disperse fumes.
- Never operate the device in wet conditions or near flammable materials.
- Disconnect power before performing any maintenance or changing consumables.
- Refer to the official safety document for comprehensive guidelines: [Safety Information \(PDF\)](#).

3. PACKAGE CONTENTS

Upon unpacking, verify that all the following components are included:

- 1 x STAHLWERK CUT 50 P Plasma Cutter
- 1 x Professional Plasma Hose Kit 3 meters with NS65 Torch
- 1 x THC Controller Cable
- 1 x 4-piece Plasma Accessory Kit (pre-assembled on the plasma torch):
 - 1 x Plasma Nozzle
 - 1 x Plasma Electrode
 - 1 x Torch Cap
 - 1 x Spacer
- 1 x 3-meter Ground Cable
- 1 x Protective Cover
- 1 x Teflon Tape
- 1 x Water Separator with Manometer and Snap-on Quick Connectors (device to water separator), including 4-piece connection kit
- 1 x Air Connection Hose with Snap-on Quick Connector 5 meters



Image 3.1: All components included with the STAHLWERK CUT 50 P Digital Plasma Cutter.

4. SETUP INSTRUCTIONS

Follow these steps to set up your plasma cutter for operation:

1. **Connect the Air Supply:** Attach the water separator to the air inlet on the rear of the device. Connect your compressed air supply to the water separator using the provided air connection hose. Ensure the air pressure is set correctly (refer to specifications).
2. **Connect the Plasma Torch:** Attach the professional plasma hose kit with the NS65 torch to the designated connection points on the front panel.
3. **Connect the Ground Cable:** Attach the ground clamp to the workpiece. Connect the ground cable to the negative (-) terminal on the front panel of the plasma cutter.
4. **Connect the THC Controller (Optional):** If using with a CNC table, connect the THC controller cable to the dedicated THC interface on the device.
5. **Power Connection:** Ensure the device is switched off. Connect the power cable to a suitable power outlet.



Image 4.1: Clearly accessible connection points on the front panel for comfortable operation.

5. OPERATING THE PLASMA CUTTER

This section details the steps for operating your STAHLWERK CUT 50 P Digital plasma cutter.

1. **Power On:** Switch on the plasma cutter. The digital display will illuminate.
2. **Adjust Cutting Current:** Use the control knob to set the desired cutting current, continuously adjustable from 15 to 50 A.
3. **Monitor Air Pressure:** The digital display shows the air pressure, which can be switched between PSI, BAR, KPA, and kg/cm². Ensure the pressure is optimal for your cutting task.
4. **Ignition Method:**
 - **HF Pilot Arc:** For non-contact starting, ideal for painted or slightly rusted surfaces.
 - **Contact Start:** An alternative ignition method.
5. **Cutting Process:** Position the torch over the workpiece. Activate the torch to initiate the plasma arc and begin cutting. Maintain a

steady travel speed for clean cuts.

6. **Post-Gas Function:** The adjustable post-gas feature ensures proper cooling of the torch after cutting, extending consumable life.



The image shows a black and silver Stahlwerk CUT 50 P Digital plasma cutter. It has a digital display showing '50.0' and '0.0', a rotary dial, and various control buttons. The brand name 'STAHLWERK' is visible on the side. The device is shown in a rugged environment with sparks and rain, emphasizing its durability.

Boîtier ST-Guard
Un boîtier extrêmement robuste protège de manière fiable contre les influences extérieures

Refroidissement intelligent
Durée de fonctionnement maximale grâce à une Refroidissement haute performance

Protégé contre les éclaboussures
Des résultats de soudage de première qualité, même dans des conditions défavorables

Construction compacte
Poids réduit garanti un transport sans effort

Image 5.1: The clear and intuitive digital display for current and pressure settings.

Découvrez nos ACCESSOIRES POUR DÉCOUPE PLASMA !

The image displays a comprehensive set of Stahlwerk plasma cutting accessories. In the center is the CUT-100P IGBT power unit, featuring a digital display showing 42.5, 100, and 30. To the left is a black metal cutting table with a grid top. To the right is a black tool chest with multiple drawers. In the foreground, there are two plasma cutting torches, several cables, a pair of black gloves, a black helmet with a clear visor, and various nozzles and connectors. The background is a dark blue sky with a large, glowing orange and yellow plasma arc.

Regular maintenance ensures the longevity and optimal performance of your plasma cutter.

- **Consumables:** Regularly inspect and replace the plasma nozzle, electrode, torch cap, and spacer as they wear out. Worn consumables can affect cut quality and torch performance.
- **Water Separator:** Periodically drain any accumulated moisture from the water separator to ensure clean, dry air supply to the torch.
- **Cooling System:** The intelligent cooling system helps maintain optimal operating temperature. Ensure the air vents are clear of obstructions to allow proper airflow.
- **Cleaning:** Keep the device clean and free from dust and debris. Use a dry cloth for cleaning.

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Coupeur plasma CUT

Pour couper tous les métaux conducteurs tels que l'acier, l'acier inoxydable, l'aluminium, le cuivre et le titane

Haute performance de coupe

Convient également pour la coupe puissante de tôles laquées et de la rouille superficielle

Brûleur NS65

Brûleur à allumage par retour de flamme et arc pilote

Suivi automatique de l'air

Refroidit la buse et protège le brûleur contre une usure inutile



Image 6.1: The robust ST-Guard casing and high-performance cooling system contribute to durability.

7. TROUBLESHOOTING

If you encounter issues, consult this section before contacting support.

Problem	Possible Cause	Solution
No plasma arc	No power, ground clamp not connected, worn consumables, insufficient air pressure.	Check power supply, ensure ground clamp is secure, replace consumables, verify air pressure.
Poor cut quality	Worn consumables, incorrect cutting speed, incorrect current setting, improper air pressure.	Replace consumables, adjust cutting speed, adjust current, check air pressure.
Overheating indicator active	Extended use at high current, blocked air vents.	Allow the machine to cool down, ensure proper ventilation and clear air vents.

For further assistance, please contact STAHLWERK customer support.

8. TECHNICAL SPECIFICATIONS

Feature	Detail
Model	CUT 50 P Digital (Reference: 6930)
Cutting Current	15 - 50 A (continuously adjustable)
Cutting Capacity (Steel ST37)	Up to 20 mm
Cutting Capacity (Stainless Steel V2A/V4A)	Up to 8 mm
Cutting Capacity (Aluminum)	Up to 5 mm
Ignition	HF Pilot Arc / Contact Start
Interface	THC for CNC control
Dimensions (L x W x H)	44 x 20 x 35 cm
Weight	9.5 kg
Material	Metal and Rigid Plastic
Protection Class	IP21S



Image 8.1: Dimensions of the STAHLWERK CUT 50 P Digital Plasma Cutter.

9. WARRANTY AND SUPPORT

STAHLWERK provides comprehensive support and warranty services for your plasma cutter.

- **Warranty:** This product comes with a **7-year warranty**, reflecting STAHLWERK's commitment to quality and durability.
- **Customer Service:** Support is available on-site, by phone, and via email for any inquiries or technical assistance.
- **Repair Service:** An in-house workshop ensures quick and efficient repairs.



Image 9.1: STAHLWERK's commitment to extended warranty and comprehensive service.

For more information or to contact support, please visit the official STAHLWERK store: [STAHLWERK Brand Store](#).

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ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question