# FLEXCUT® 45

## PLASMA CUTTER

## CLEAR CUT PERFORMANCE

The FlexCut™ 45 delivers dependable cutting performance with steady power, high-duty cycles, and continuous output, so you can work without interruptions. Built for professionals, it combines precision, portability, and durability, maintaining consistent performance even during long cutting sessions. Designed to run cooler and longer, it's ideal for demanding applications and cuts through mild steel, aluminum, stainless steel, and grating with ease. Compatible with our FlexConnect™ Torch System giving you the flexibility to switch between torch heads or cables in seconds..

**Processes »**
Plasma Cutting, Grid cutting, Gouging & Marking

**Applications »**
On-site maintenance, Small construction sites, Air ducting installation (HVAC), Demolition work, & Rental

**Output »**
DC

**Input »**
1 PHASE, 60 Hz, 120V, 230V

**Product Numbers »**
K5823-H HANDHELD ASSEMBLY
K5823-M MECHANIZED ASSEMBLY
K5823-PS POWER SOURCE ONLY

**Cut Performance - Mild Steel»**

| Recommended | Maximum | Severance |
|---|---|---|
| 5/8 in (16 mm) | 7/8 in (22 mm) | 1 in (25 mm) |

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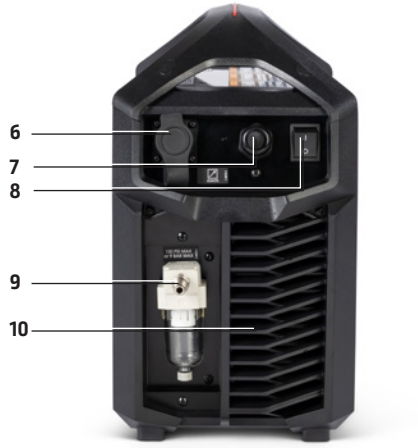
## VALUE-ADDED FEATURES

- **45 Amps of Cutting Power:** Tackle thicker materials with confidence and precision.
- **High Duty Cycle:** Built for demanding applications without overheating or slowing down.
- **LCD Display:** Bright, easy-to-read screen with simple controls for quick and precise adjustments.
- **Dual Voltage Flexibility:** Plug into 120V or 230V power sources.
- **Plug-and-Play CNC Integration:** Built-in ports for easy setup - no extra kits required.
- **Multi-Process Capability:** Drag cutting, fine cutting, gouging, and marking with one machine for maximum versatility.
- **Portable Yet Rugged:** Portable design without compromising strength—easy to move, hard to damage.
- **Industrial IP23 Protection:** Resists dust and water spray for dependable performance in challenging conditions.

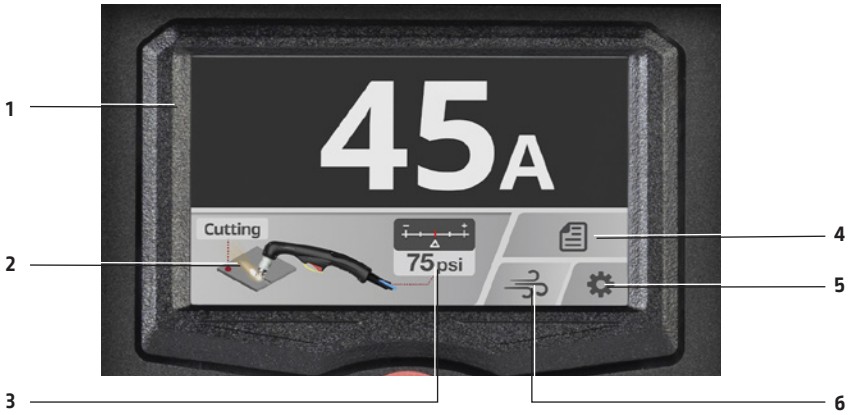
## KEY CONTROLS

1. Handle
2. User Interface
3. Main Control Knob
4. Torch Connection
5. Work Connection
6. Remote Connection (14-pin)
7. Input Power Cable
8. On/Off Switch
9. Air Inlet
10. Cooling Fan




## USER INTERFACE

1. Amperage
2. Process
3. Adjust Air Pressure
4. Guided Cutting Setup
5. Advanced Settings
6. Gas Purge



## GUIDED CUTTING SETUP

**From power-on to precision cutting in seconds**

Don't waste time with complicated setup. With FlexCut™, you're ready to cut in seconds.

1. Adjust machine amperage to recommended setting
2. **Select the Cutting Guide** icon on the main user interface.
3. **Enter your material type and thickness.**
4. **View the recommended cutting amperage**—automatically calculated for clean, precise results.

## FLEXCUT PRO™ TORCH WITH FLEXCONNECT™

### One Torch. Endless Flexibility.

**Patented FlexConnect™ Torch System:** Switch between torch heads or cables in seconds—no tools required.

**Customizable Options:** Choose from multiple torch heads and cable lengths to fit your application.

**Universal Machine Compatibility:** Use one torch across the entire FlexCut™ machine lineup—no need for separate torches for different systems

**Lower Repair Costs:** Replace only the damaged part—head or cable—without buying a whole new torch.

## MORE CUTS. LESS COST. ZERO HASSLE.

**Long-Life Consumables:** Advanced electrode design and optimized airflow deliver more cuts per consumable, reducing replacement frequency and lowering operating costs.

**Threadless Electrode Connection:** No more seized threads—just smooth, quick changes every time.

**Snap-In Installation:** Tool-free design means you can replace consumables in seconds.

## CUTTING SPECIFICATIONS

| | |
|---|---|
| Recommended Cut Thickness / Speed | 5/8 in / 16 ipm |
| Maximum Cut Thickness / Speed | 7/8 in / 7 ipm |
| Severance Cut Thickness / Speed | 1 in / 5 ipm |
| Pierce Thickness | 1/2 in |
| Gouge Rate | 7.5 lbs/hr |

## WHAT'S INCLUDED

| | | Handheld Package K5823-H | Mechanized Package K5823-M | Power Source Only K5823-PS |
|---|---|---|---|---|
| FlexCut® 45 Plasma Cutter | N/A | ● | ● | ● |
| FlexCut® PRO FlexConnect® Handheld Torch 25 ft | KP5850-25 | ● | | |
| FlexCut® PRO FlexConnect® Mechanized Torch 25 ft | KP5852-25 | | ● | |
| Air Filter | KP5844-1 | ● | ● | ● |
| Work Clamp & Cable | KP6035-1 | ● | ● | ● |
| Input Power Cord | N/A | ● | ● | ● |
| Shoulder Strap | KP6012-1 | ● | ● | ● |
| Complete Consumable Kit - Handheld | KP5829-45 | ● | | |
| Complete Consumable Kit - Mechanized | KP5830-45 | | ● | |
| 120V Input Adapter | KP6034-1 | ● | ● | ● |

## RECOMMENDED ACCESSORIES

**Plasma Circle Cutting Guide Kit**
For cutting circles 3-33in in diameter. Works with all Lincoln Electric FlexCut PRO torches
**Order KP5916-1**

**Plasma Straight & Angle Cutting Kit**
Guide for making straight cuts with any plasma cutting torch
**Order KP5917-1**

**OMNIShield™ Face Shield**
Shade 5 IR lens provides infrared light protection for plasma cutting applications
**Order K3754-1**

**FlexCut PRO FlexConnect Torch**
Includes 25 ft torch cable and Lincoln Electric's patented handheld FlexConnect torch head
**Order KP5850-25**

**FlexCut PRO Mechanized FlexConnect Torch**
Includes 25 ft torch cable and Lincoln Electric's patented mechanized FlexConnect torch head
**Order KP5852-25**

**45A Drag Cutting Consumable Kit**
Full consumable kit for handheld plasma cutting at 45A
**Order KP5829-45A**

## PRODUCT SPECIFICATIONS

| Product Name | Product Number | Package Type | Input Power Voltage/Phase/ Hertz | Rated Output Current/Voltage/ Duty Cycle | Recommended Circuit Breaker | Output Range | Engine Drive Auxiliary Power Requirement | Gas Pressure Required | Dimensions H x W x D in (mm) | Net Weight lb (kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| FlexCut 45 | K5823-H | Handheld | 120/1/50/60<br>240/1/50/60 | 50% @ 45A (230V)<br>60% @ 41A (230V)<br>100% @ 32A (230V)<br>20% @ 27A (120V) | 30A | 15-45A | 10kW for 45A | 90-130 psi | 18.4 [468]<br>8.1 [205]<br>14.1 [359] | 26.8 [12.2] |
| | K5823-M | Mechanized | | | | | | | | |
| | K5823-PS | Power Source Only | | | | | | | | |

For best cutting results with Lincoln Electric® equipment, always use Lincoln Electric consumables. Visit www.lincolnelectric.com for more details.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