

USER MANUAL

Arc 127



BEFORE YOU BEGIN

USER MANUAL

Thank you for purchasing this product.

This manual provides an introduction to the equipment, installation instructions, basic operation guidelines, safety precautions, and basic troubleshooting procedures. Please read this manual carefully before operating the machine for the first time.

Preface

The Arc 136 intelligent high-speed digital cutting system is designed for high-speed contour cutting and irregular-shape cutting of non-metallic flexible materials. The machine is capable of performing full cutting, kiss cutting, creasing, marking, and related processing operations automatically and with high precision.

It is widely used in industries such as advertising, electronics, PVC/TPU/PET/DTF film processing, automotive decoration, labeling, apparel, and home furnishing. The system helps improve production efficiency and reduce manual labor across multiple workflows.

To ensure proper operation, this manual covers equipment introduction, installation, basic operation, precautions, and simple troubleshooting. Please read this manual thoroughly before using the machine for the first time to ensure safe, stable, and efficient performance.

Keep this manual in a safe place for future reference. If you are unfamiliar with the machine or encounter a system malfunction, this manual can assist you in performing basic checks and operational review.

Depending on the shipping distance, the equipment may be transported by dedicated vehicle or packed in an international-standard wooden crate for logistics transport.

During transportation, protect the machine from strong vibration, shock, and collision.

Use a forklift or crane for loading and unloading. Rough handling, dropping, dragging, or forced unloading is strictly prohibited.

Handle the equipment with care and follow the directional arrows and handling marks on the outer packaging to ensure proper orientation and placement.

Do not place unopened equipment in standing water, damp areas, or any environment that may cause moisture damage.

Reserve sufficient space around the machine to allow for safe operation and maintenance. Install the equipment on level ground in a clean and stable environment.

Do not install the machine in areas containing corrosive gases or liquids, water droplets, steam, oily dust, flammable or explosive gases, airborne dust, or metal particles.

Recommended ambient temperature: 20–28 °C. Recommended ambient humidity: 40%–60% RH. Keep the machine away from heat sources, static electricity, strong magnetic fields, intense light, and direct sunlight, as these conditions may interfere with signal transmission or shorten the machine's service life.

The machine operates on a standard 220 V / 110 V $\pm 10\%$, 50 Hz power supply (110 V is optional and depends on the actual configuration). The air pump uses a two-phase 220 V $\pm 10\%$ power supply. Ensure that the power supply is stable before operation.

If the power supply is unstable or the single-phase voltage fluctuation exceeds the specified range, install a voltage stabilizer. Do not share the same power supply with high-power equipment or devices that may cause electrical interference.

The machine must be equipped with an air switch rated at no less than 16 A. The power input must be properly grounded and must meet the machine's requirements. The vacuum pump must be connected to the air switch and controlled by the console switch.

A small air compressor must be provided by the user. The required pressure is 0.7 MPa, and the air storage tank capacity must be greater than 8 L.

Insert the machine power plug into a suitable power outlet. (Refer to the power connection reference diagram.)

Turn on the air compressor. Pull up the round red switch, set the air valve to the open position, and insert the 8 mm air tube into the inlet of the oil-water separator. Confirm that the pressure gauge activates and builds pressure normally.

Toggle the air switch upward to the ON position. (Refer to the air switch ON position diagram.)

Turn on the power to the operation console. (Refer to the operation console diagram.)

Power on the air compressor. Pull up the round red switch, set the air valve to the ventilation position, and insert the 8 mm air tube into the inlet of the oil-water separator. Confirm that the pressure gauge starts and pressure builds normally.

RESET: Restarts the touchscreen.

Red switch: Emergency stop switch. Before powering on, release it by turning the knob in the direction indicated.

Metal switch: Press down to power on the machine.

Once the machine is powered on, it will automatically return to the mechanical origin. After the reset is complete, wait approximately 10 seconds until the camera icon in the lower-left corner of the touchscreen starts successfully.

Use the direction keys to move the carriage to the material processing area. Install the blade holder and cutting blade. Press the TEST button on the touchscreen and adjust the cutting pressure and blade tip extension length according to the test results.

To adjust equipment parameters, select ADVANCED SETTING on the main screen to enter the submenu.

Blade holder and blade adjustment reference

Adjust the blade holder and blade extension length according to the material thickness and cutting requirements. (Refer to the blade holder and blade adjustment reference diagram.)

The blade tip should extend only as much as necessary to cut through the material properly. Excessive blade extension may damage the material, the cutting mat, or the blade holder.

The following interfaces are available on the side of the machine control box: USB flash drive port (for USB drive file transfer), USB port (for connection to a computer), and Ethernet port (for network connection). (Refer to the interface location reference diagram.)

Interface location reference

The accessory box includes: blade holder, engraving blade, USB flash drive, USB data cable, fiber optic cable, pen holder, and creasing tool.

Accessory box reference

Note: Due to continuous product upgrades, machine parameters are subject to change without prior notice. The actual machine configuration shall prevail.

1. Equipment Parameters	
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NOTICE

The copyright of this manual belongs to the manufacturer. Product specifications and manual contents are subject to change without prior notice due to equipment upgrades. In the event of any discrepancy, the actual equipment configuration shall prevail.

ITEM	SPECIFICATION
Machine model	Arc 127
Basic cutting mode/ blind cut	Cutting area: 680 mm × 880 mm; U-shaped roll feeding with automatic extension; Work mode: 0 (Blind Cut)
Contour cutting mode/roll to roll cut	Cutting area: 680 mm × 880 mm; U-shaped roll feeding with automatic extension; Work mode: 1 (Vision)
Sheet contour cutting mode/sheet cut	Cutting area: 680 mm × 800 mm; U-shaped roll feeding disabled; Work mode: 2 (Single Sheet)
Air pump power	1.5 kW
Total rated power	2.5 kW
Maximum cutting speed	1,000 mm/s
Maximum cutting thickness	0.1–1 mm (special materials may require optional tooling)
Supported software	SingMaster, CorelDRAW, Adobe Illustrator, CAD, Flexi, CADlink, Photoprint, PrintFactory, NeoStampa
Working environment	Temperature: 20–28 °C; Humidity: 40%–60% RH
Transmission system	Servo motor drive, imported-grade linear guide, precision bearings, and steel-wire belt
Working voltage	AC 220 V ±10%, 50 Hz
Transmission ports	USB, USB flash drive, Ethernet
Material fixing method	Vacuum adsorption
Operating interface	4.3-inch touch screen + computer
Feeding method	Automatic roll feeding
Main tools	Blade holder, blade, pen holder, creasing tool
Applicable cutting materials	DTF film/UV DTF film, TPU, PET, PVC, photo paper, car stickers, PP backing, reflective film, cardboard, stickers, self-adhesive film, super-clear film, single-hole clear film, magnetic stickers, and similar flexible materials.

MAINTENANCE

Drain water from the oil-water separator regularly, at least once per month. Prolonged failure to drain the separator may increase cylinder resistance and could damage pneumatic components.

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FUNCTION / PARAMETER	DESCRIPTION
Pull Offset X	Default value: 0.
Pull Offset Y	Default value: 0.
Blowing Delay	Default: 1.0 s. Adjust according to material thickness; a higher value increases upward blowing time and is used in conjunction with material pulling.
Pull Speed	Default: 1. A higher value increases the material pull speed. Adjust according to the material.
Work Mode	0 – Blind Cut mode (camera disabled, pull-feeding enabled); 1 – Vision mode (camera enabled, pull-feeding enabled); 2 – Single Sheet mode (camera enabled, pull-feeding disabled).
Air Pump Switch	Tests the vacuum pump's downward suction capability.
Clamp Switch	Tests the cylinder clamping force.
Blow Switch	Tests the vacuum pump's reverse / upward blowing capability (under vacuum conditions).
Pull Test	Move the machine to Y+400–450 mm and start the test. The machine will automatically check the pull, blow, and clamp signals.

FUNCTION / PARAMETER	DESCRIPTION
Restore factory parameters	Select "No." The machine has already been configured at the factory.
Optimization 0/1/2/3	Processing efficiency setting. A smaller value results in faster processing speed (0 = fastest, 3 = slowest).
Voice	Voice setting.
About this machine	Select the upper-right corner on the main screen to view machine information. (Refer to the About Machine screen diagram.)
Machine ID	Displays the machine identification/serial number.
Machine model	Displays the machine model.
Limit stroke	The software limit of the machine's processing movement stroke.
Firmware version	Displays the machine's firmware version.

WARRANTY NOTICE

Unauthorized modification of the machine may void the warranty service.

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