User Manual
CO2 Portable Shock Cryo Therapy Device
Model：CO_2-PRO

English

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1. Safety Information and Precautions

1.1 Instructions

Thank you for using the CO2 Portable Shock Cryo Therapy Device. Please read this instruction manual carefully before using the product to ensure proper operation. The manufacturer assumes no legal responsibility for any personal injury or device damage resulting from failure to follow the instructions in this manual. After reading, please keep this manual in a safe place for future reference.

Upon receipt of this product, carefully inspect the integrity of the outer packaging. Check the product components and their quantities against the packing list. If the packaging is damaged, the device is defective, or any components are missing, please contact our after-sales service personnel or distributor promptly for replacement.

1.2 Warnings and Precautions

- To ensure the safety of both the user and the patient, please operate the device according to this instruction manual.
- In medical institutions, such as hospitals, this device should be used under the supervision of healthcare professionals. It is intended for use by qualified personnel, including physicians, nurses, and trained clinical practitioners；
- The handpiece contains precision electronic components. Dropping, impact, or collision may cause severe damage. When not in use, it should be properly stored and maintained. The manufacturer is not responsible for any damage resulting from dropping, misuse, or negligence；
- The handpiece is not waterproof. Do not use it in humid environments. When performing routine maintenance, take care to prevent liquids from entering the device；
- No one except the manufacturer’s technical personnel is allowed to service or adjust the internal components of the device, including the treatment handpiece.

2. Basic Information

2.1 Intended Use

The CO2 Portable Shock Cryo Therapy Device is designed to assist in the treatment of acute or chronic musculoskeletal disorders through rapid cold airflow therapy, helping to relieve pain and stiffness.

Applicable Population: This device is intended for individuals requiring treatment for injuries (such as bleeding or swelling) and for the relief of muscle spasms.

2.2 Contraindications

The following individuals should not use this product:

（1）**Raynaud’s Phenomenon** (Peripheral Arterial Vasospasm with Cyanosis and Necrosis) – A condition characterized by vasospasm of small blood vessels in the extremities, leading to cyanosis and tissue necrosis. Exposure of the affected area to a cold environment during cryotherapy may aggravate the symptoms.

（2）**Cold Urticaria** – A type of urticaria in which exposure to cold, followed by rewarming, triggers histamine release in the body, leading to redness, itching, and wheals on the skin.

（3）**Cold Erythema** – A red, pruritic skin rash induced by exposure to a cold environment. It may cause severe pain and muscle spasms.

（4）**Cold Hemoglobinuria** – A condition in which exposure to cold causes destruction of red blood cells, leading to the release of intracellular hemoglobin into the bloodstream and resulting in hemolysis. Free hemoglobin cannot bind to plasma proteins, causing dark red or port-wine–colored urine.

（5）**Sensory Impairment** – In cases of local skin numbness or reduced sensation, patients cannot perceive pain or cold intensity; cryotherapy is generally not recommended.

Precautions： Patients with cardiac diseases (e.g., arrhythmia, angina pectoris, coronary heart disease) and hypertension (vasoconstriction may elevate blood pressure) should not use this device. Ice packs should not be applied near superficial nerves, and cryotherapy should not be performed on fresh, unhealed wounds.

3. Product Overview

The CO2 Portable Shock Cryo Therapy Device utilizes rapid cold airflow therapy to quickly lower the temperature of the treatment area. Through the "thermal shock" effect, blood vessels constrict, thereby assisting in the treatment of acute or chronic musculoskeletal disorders, relieving pain and stiffness, and providing anti-inflammatory and analgesic effects.

3.1 Product Structure

As shown in Figure 3.1: Product Structure and Figure 3.2: Handpiece Structure：

1. Handpiece: The application part of the device, which emits CO2 for treatment.
2. Air Tube: Transports CO2 from the gas cylinder.
3. Air Tube–Cylinder Connector: Connects the air tube to the gas cylinder.
4. Cylinder Valve: Controls the opening and closing of the gas cylinder.
5. Gas Cylinder: Stores CO2.

Figure 3.1 Product Structure

Figure 3.2 Handpiece Structure

6. Air Outlet: CO2 outlet.

7. Infrared Temperature Sensor: Monitors temperature.

8. USB Charging Port: Connects to accessory USB charging cables and USB chargers to charge the handpiece.

9. Ambient Light – Blue: Indicator light.

10. Distance Measuring Light – Red: Measures the distance between the air outlet and the patient.

11. Display Screen: Shows device status and treatment parameters.

12. Buttons: Control the operating status of the handpiece.

13. Power Switch: Controls the power on/off of the therapy device.

3.2 Technical Specifications

Charging Voltage	DC5V，1A		
Gas Cylinder	2.5L、20L	Outer Dimensions of the Flight Case	425*350*160mm
Net Weight of Handpiece	0.76kg	Minimum Temperature	-50℃
Laser Wavelength	650nm±10nm	Maximum Output Power of the Laser Terminal	5mW

4. Installation

①**Unpacking:** After opening the packaging, take out the gas cylinder, handpiece (with air tube already installed), and accessory pack (USB charging cable, certificate of conformity, warranty card), as shown in the figure below:

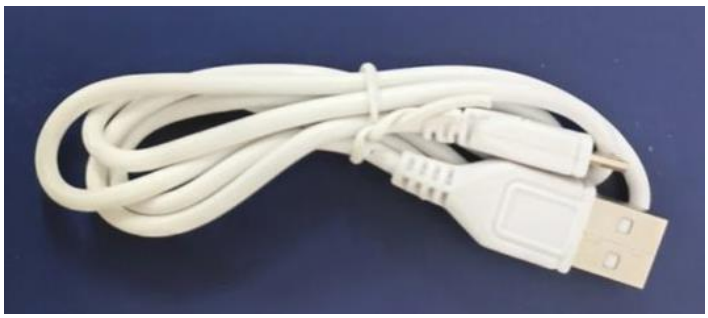

Figure 4.1 USB Charging Cable

②**Product Installation:** As shown in the figure below, lift the air tube connector, align it with the groove of the gas cylinder connector, and turn it clockwise to tighten.

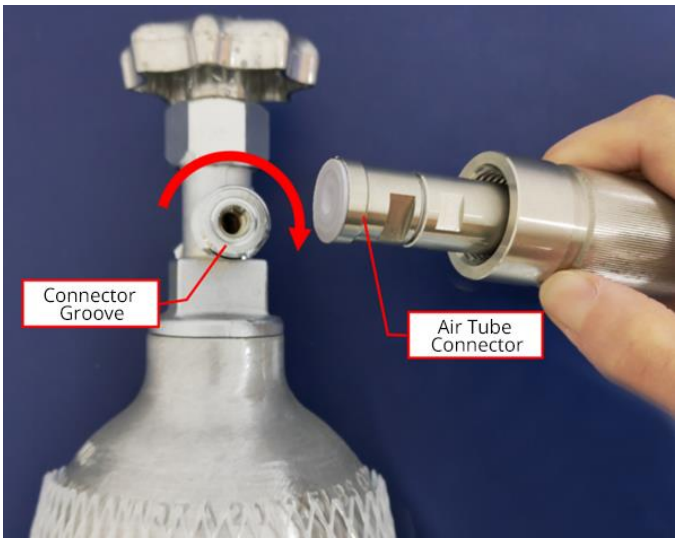

Figure 4.2 Installation Diagram of the Air Tube and Gas Cylinder

5. Power On

Rotate the cylinder valve counterclockwise following the arrow direction indicated by the "OPEN" marking on the valve. Pick up the handpiece and press and hold the power switch below the display screen for 3 seconds to turn on the device. After the startup animation finishes, the main interface will appear.

The device has six operating modes:

[30 SEC] Mode: Press the power switch once. The solenoid valve opens, and the device operates continuously for 30 seconds before automatically closing the solenoid valve.

[60 SEC] Mode: Similar to [30 SEC] Mode, the device operates continuously for 60 seconds before automatically closing the solenoid valve.

[90 SEC] Mode: Similar to [30 SEC] Mode, the device operates continuously for 90 seconds before automatically closing the solenoid valve.

[CW] Mode: Similar to [30 SEC] Mode, continuous operation with no time limit.

[FOG] Mode: The laser distance measurement function is disabled, and the display shows “OFF.” In this mode, the treatment distance restriction does not apply, and the device can operate continuously without time limitation.

[MASSAGE] Mode: The laser distance measurement function is disabled, and the display shows “OFF.” In this mode, the device operates for 3 seconds and then automatically stops. Press the power switch again to operate for another 3 seconds, and it will automatically stop.

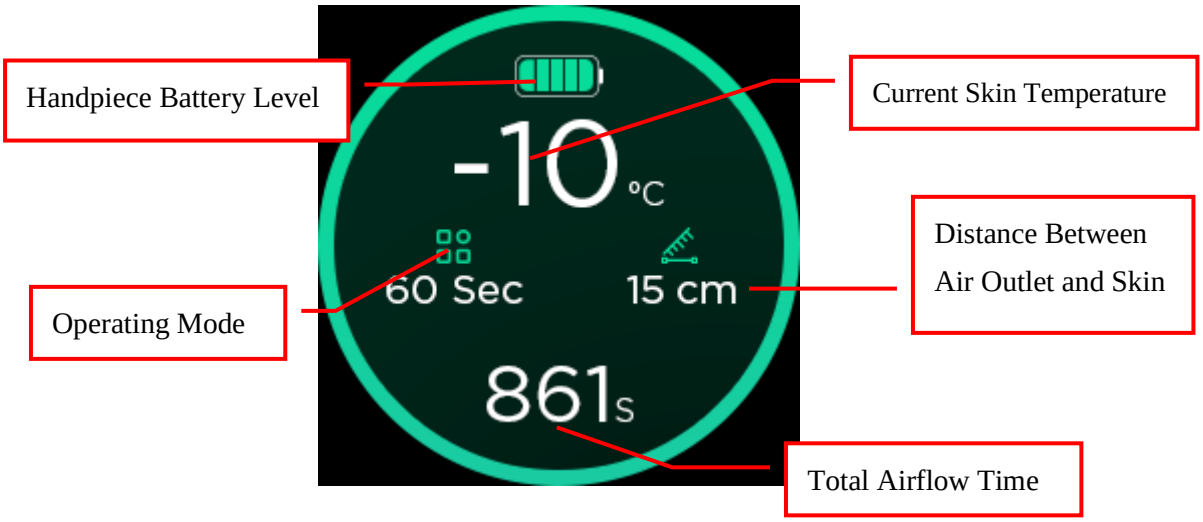

Figure 5.1 Main Interface

Note:

(1) Adjusting the Optimal Distance Between Air Outlet and Skin According to the Blue Light Status:

When the skin surface temperature is 4 °C < T < 15 °C:

Distance L > 15 cm: Blue light flashes slowly – treatment can proceed normally;

Distance 10 cm ≤ L ≤ 15 cm: Blue light remains steady – treatment can proceed normally;

Distance L < 10 cm: Blue light flashes rapidly – treatment can proceed normally.

(2) Low Temperature Protection Function:

When the skin surface temperature T < 2 °C, the red light remains on as an alarm. The device automatically stops operating after 3 seconds, regardless of the distance between the air outlet and the skin.

(3) Transitional State:

When the skin surface temperature is 2 ° C ≤ T ≤ 4 ° C, the red light flashes as a warning. The device can operate normally, and the distance between the air outlet and the skin does not affect operation.

(4) Skin Temperature Too High, Treatment Effect May Be Reduced:

When the skin surface temperature T > 15 °C, no indicator light is displayed. The device can operate normally, and the distance between the air outlet and the skin does not affect operation.

6. Start Treatment

Align the air outlet with the treatment area. Adjust the optimal distance between the air outlet and the skin according to the blue light status. Press the power switch once to start airflow from the treatment head and begin treatment.

Precautions for Use：

(1) During device operation, press the power switch to stop the device.

(2) During treatment, local cryotherapy is generally maintained for 3–5 minutes (depending on the area of injury). Based on the actual condition, treatment may be continued or repeated every 2–3 hours. To avoid frostbite, do not direct airflow at a single spot for an extended period, as skin and subcutaneous tissues (muscles, nerves, and fat) may be damaged. Certain areas, such as the elbow and knee joints, have thinner subcutaneous tissue and nerves close to the skin. Cryotherapy in these areas requires careful time control to prevent nerve injury.

(3) During use, avoid inhalation through the mouth or nose and contact with the eyes. When moving the gas cylinder, prevent rolling or impact to avoid gas leakage. Keep the device away from heat sources and open flames.

7. Product Cleaning, Maintenance, and Care

The service life of this device is 3 years. After this period, it should be returned to the manufacturer for recycling or disposed of by the user in accordance with local regulations.

Replaceable Components: Handpiece and Gas Cylinder

7.1 Product Cleaning

（1）Do not rinse the device with water or any other liquids.

（2）Do not disassemble the device for cleaning; only the exterior casing may be cleaned.

（3）Do not use banana oil, gasoline, scouring powder, hard brushes, or similar materials for cleaning.

（4）Wipe the device with a wrung-out, disinfected soft cloth.

7.2 Product Maintenance

（1）Handle the device with care during transportation and storage to prevent heavy pressure, direct sunlight, and exposure to rain or snow.

（2）Store the device indoors in a cool, well-ventilated area free of corrosive gases, and keep it away from heat sources and open flames (e.g., sunlight, heaters, stoves).

（3）The device has a one-year warranty.

（4）Do not switch the device on and off frequently. The interval between two power-on operations should not be less than 3 minutes.

7.3 Replacement of Replaceable Components

The service life of replaceable components is 3 years, and the device has a one-year warranty. During this period, if the handpiece is damaged, please contact the manufacturer for return and repair, and when the gas cylinder is empty, please contact the manufacturer to arrange refilling.

8. Transportation and Storage Requirements

8.1 Transportation and Storage Conditions

Ambient Temperature: 0 °C to 40 °C

Relative Humidity: ≤ 80 %

Atmospheric Pressure: 500 hPa to 1060 hPa

8.2 Operating Environment Conditions

Ambient Temperature: 5 °C to 40 °C

Relative Humidity: 30 % to 80 %

Atmospheric Pressure: 760 hPa to 1060 hPa

9. Troubleshooting

Symptom	Possible Cause	Solution
No Display on the Handpiece Screen	Handpiece Battery Depleted	Charge the Handpiece Using the USB Charging Cable Provided in the Accessory Pack
No Response When Pressing the Handpiece Buttons After Power On	Internal Component Damage	Please Contact the Manufacturer's Service Department
	CO2 Cylinder Empty	