

# ARGON-HELIUM CRYOABLATION

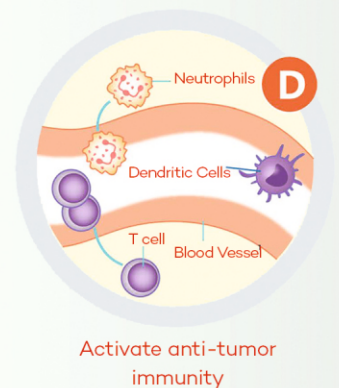




Under imaging guidance, single-use sterile cryoablation probe is precisely inserted into the target area. Based on the Joule-Thomson principle, high-pressure argon gas flows through a small aperture, creating a throttling effect that rapidly lowers the temperature in the cryoablation area. Within 15-30s, the tumor tissue is quickly freezing to below -150 C. After the freezing process lasting 10-20min, the high - pressure helium system is activated for thawing (20 C-40C), The tumor cells are fully destroyed after 2-3 freezing-thawing cycles.

Diagram illustrating the role of crystal formation in T cell activation and death:

- Apoptosis:** T cells (TCs) undergo apoptosis when they interact with an Antigen Presenting Cell (APC) via MHC1 and TCR, resulting in "No Co - Stimulation".
- Necrosis:** T cells (TCs) undergo necrosis when they interact with an APC via MHC1 and TCR, resulting in "Co - Stimulation". This pathway leads to "T cell activation and proliferation".



Precise Iceball Formation  
Intuitive User Interface  
Compact System Design

Touch Screen Display  
To Guide Procedural Efficiency

## Its your choice

AR Photonics proudly introduces advanced, minimally invasive cryoablation treatment options for managing benign and malignant tumors, revolutionizing care in our entire health and interventional oncology.

Pluse - Cryo is advanced minimally invasive cryoablation treatment options for benign and malignant tumors & interventional oncology.

## Pluse Cryo™ System Advantages

- \* **Easy-to-operate** : Refil Multi cryoprobe system
- \* **Argon Helium** : no gas lines or on-site technician
- \* **Large lethal zone** : rapid & stable temperature drop to  $-155^{\circ} \pm 40^{\circ}\text{C}$
- \* **User-friendly** : touch screen interface

## Choose the Power of Argon-helium - Pluse - Cryo

Pluse Cryo offer safe cryoablation procedures with minimal pain and rapid recovery time, helping patients avoid the risks of general surgery. Pluse Cryo generates ultra-cold temperatures using Argon - Helium to quickly create large lethal zones for maximum efficacy in tumor destruction.



**No pre-cooling required**

Ready to use upon startup

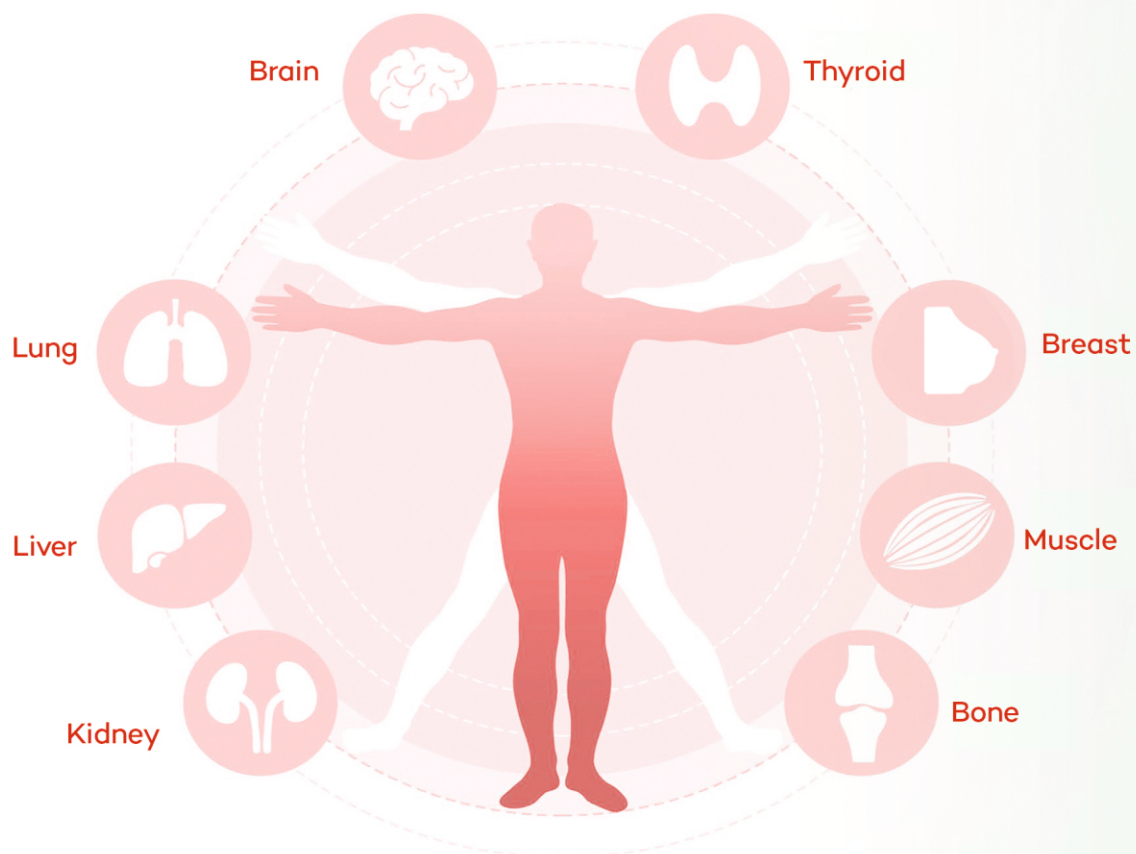
Capable of supporting consecutive surgeries

### Cryosurgical system

This system uses argon as the refrigerant and helium as the heat medium. The system has the functions of real-time monitoring of argon-helium working pressure and temperature of cryoablation probe, and freezing power adjustment. Together with the single-use sterile cryoablation probe, it enables the function of rapid cooling and thawing and then ablate the target tissue.

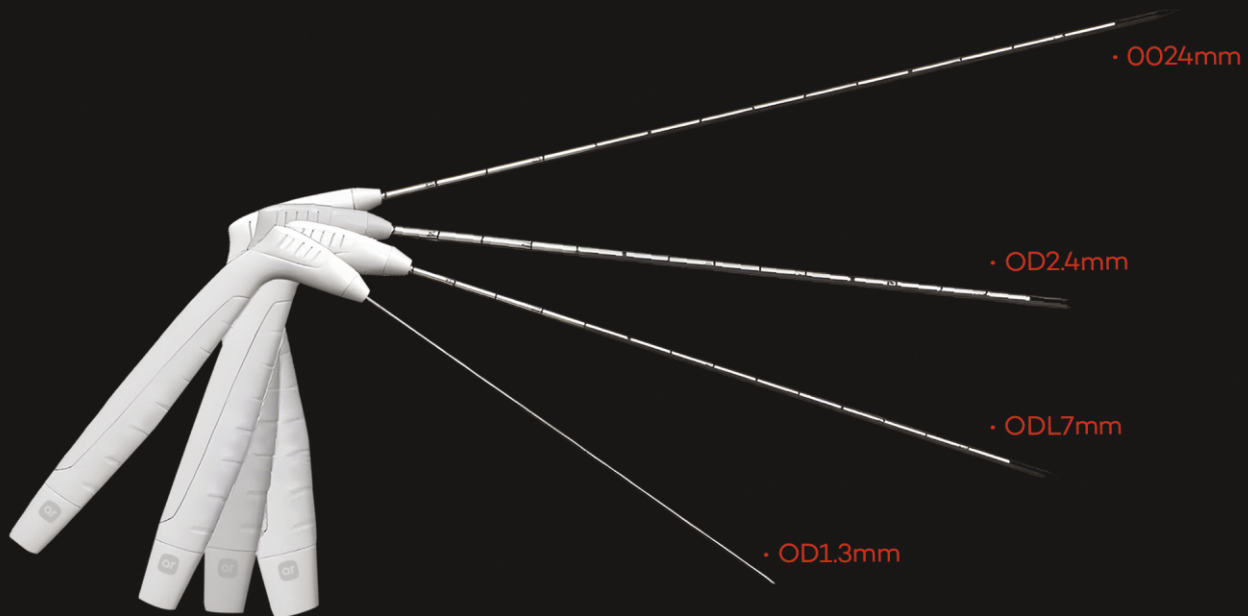
### Indication for application

Cryosurgical system is intended for use in open, minimally invasive or endoscopic surgical procedures in the areas of general surgery, oncology, urology, gynecology, neurology, dermatology, ENT, orthopedics, pulmonary surgery and thoracic surgery etc. The system is used for freezing/ablating all benign and malignant lesions of solid organs by the application of extreme low temperatures



## PRODUCT DISPLAY

CRYOABLATION SYSTEM INTEGRATED,  
PORTABLE AND EASY TO USE



### Pluse Cryo

Channels	Two-Channels
Screen	Touchscreen Display
Refrigerant UPS Systems	Plug and Play
Multiple Constant Voltage System	Energy Saving, Safe and Reliable
Stick Function	One-Click Precise Fixed Control Function
Rated Voltage and Frequency	220V, 50HZ
Weight	20kg



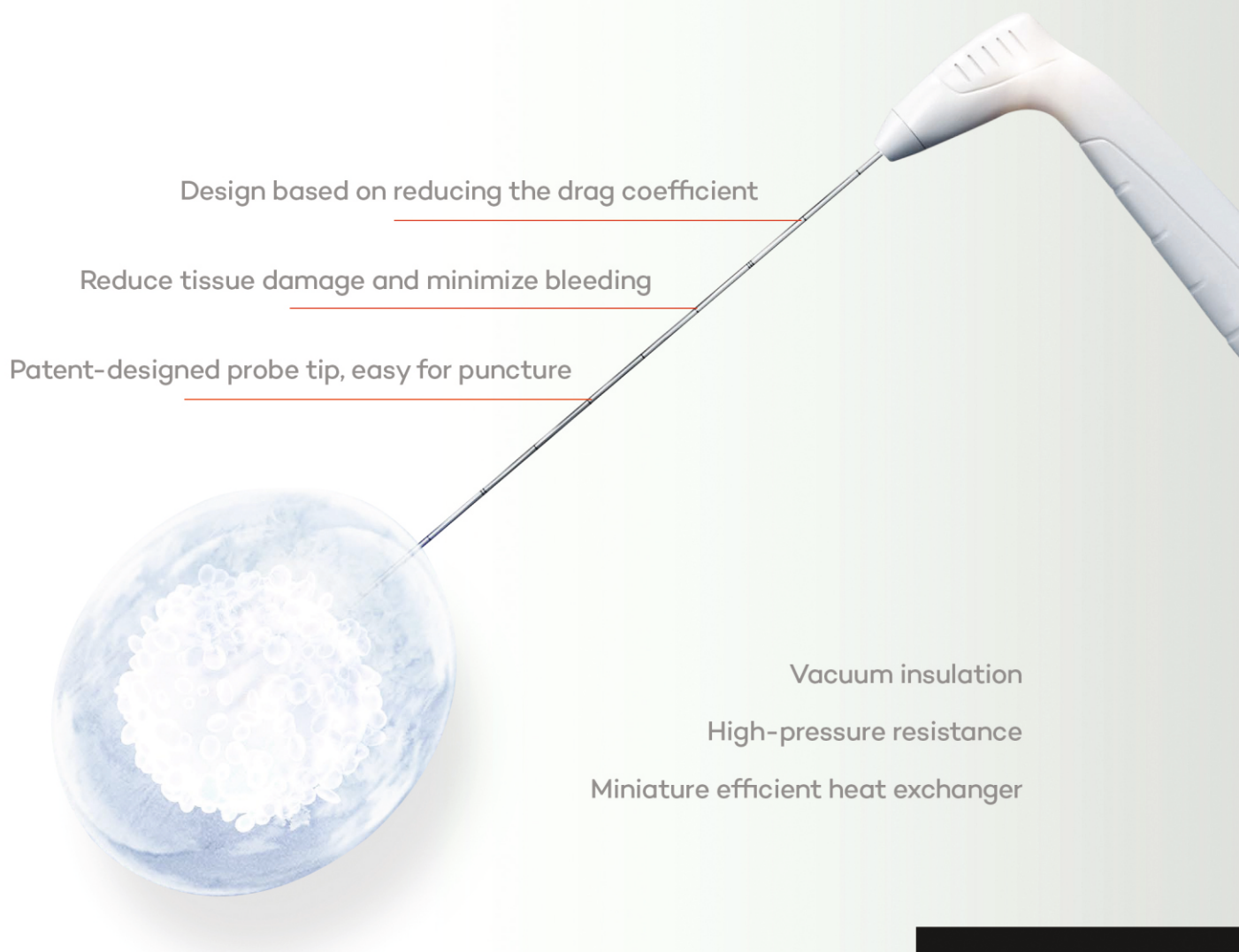
### Compact Design

- Smaller footprint and weight allows for mobilization of the console.
- Mobile cart offers a center storage area for accessory bag or 4 needle boxes.

### Intuitive User Interface

- Simplified procedural interface offers equivalent iceball performance as larger cryoablation systems.
- Large timers allow visualization of case progression from a distance.
- Icons and system wizards guide procedural actions.

# Single-use sterile cryoablation probe

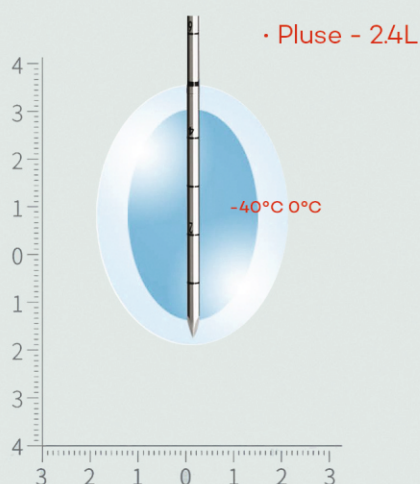
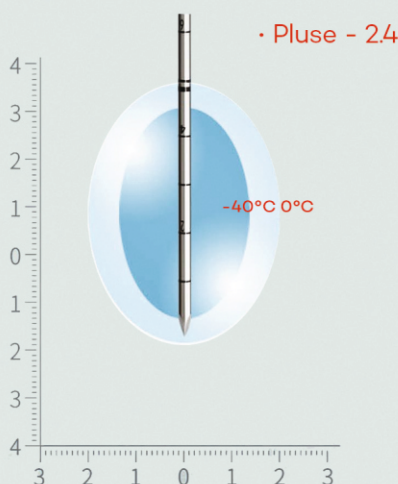
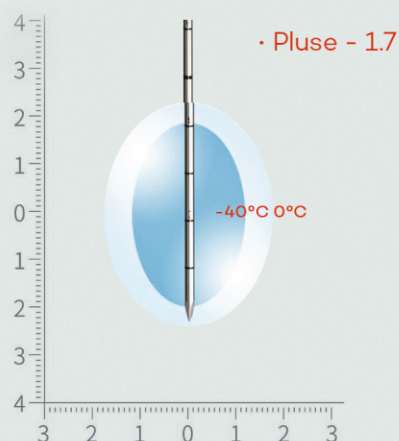
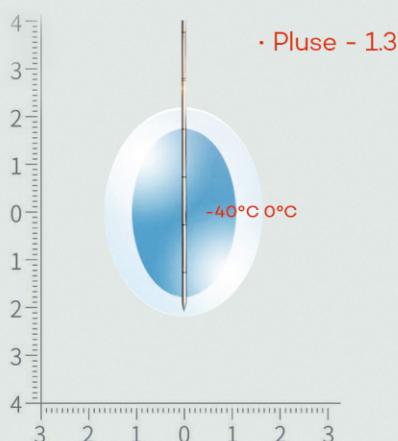


**The thinnest probe with an  
outer diameter of only 1.3mm**

## Indications for use

The product is for single use and is designed to be used in conjunction with specific cryosurgical systems for cryoablation treatment. It is intended for freezing/ablating benign and malignant lesions of solid organs by the application of extreme low temperature.

# MODELS OF SINGLE-USE STERILE CRYOABLATION PROBE



MODEL	DIAMETER(MM)	EFFECTIVE WORKING LENGTH (MM)	MAXIMUM DIAMETER OF ICE BALL (MM)	MAXIMUM LENGTH OF ICE BALL (MM)
· Pluse - 1.3	13	125±10	30±3	40±3
· Pluse - 1.7	17	155±10	36±3	47±3
· Pluse - 2.4	24	155±10	43±3	55±3
· Pluse - 2.4L	24L	210±10	44±3	55±3

**Note :** The above data is observed under simulated conditions (100% freezing power, frozen for 15 minutes) in lab, for clinic reference only.

The actual cryogenic range, that is, ice ball size should be based on intraoperative imaging observation result.



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