

360 Surround Cooling Cryolipolysis System - Official Clinical Overview & Technical Datasheet

DEVICE IDENTIFICATION

The 360 Surround Cooling Cryolipolysis System is a premium non-invasive body contouring platform engineered for controlled, targeted cooling of subcutaneous adipose tissue. This device utilizes dual-cycle vacuum-assisted applicators and multi-zone Peltier cooling arrays to induce apoptosis of fat cells without damaging the surrounding epidermis or deeper structures. Intended for professional use exclusively in dermatology clinics, medical spas, and aesthetic centers.



INTERNAL HARDWARE TOPOLOGY

The system architecture integrates a dual-compressor refrigeration engine with three independent TEC (Thermoelectric Cooler) modules per applicator. A closed-loop glycol-based coolant circuit maintains consistent thermal transfer while six embedded thermistors provide real-time feedback to the PID control logic. The core processing unit operates at 320 MHz, enabling simultaneous multi-applicator operation without thermal interference. Vacuum pressure is regulated by dual diaphragm pumps generating negative pressure between -50 to -80 kPa, ensuring stable tissue engagement throughout the treatment cycle.

EPIDERMAL PROTECTION MECHANISMS

Proprietary 360 Surround Cooling technology directs chilling energy radially around the treatment zone. The flexible silicone membrane conforms to patient anatomy while a pre-cooling phase of 90 seconds desensitizes the epidermis prior to active cryolipolysis. Automatic thermal shutoff engages if surface temperature falls below -2°C or exceeds 5°C , eliminating the risk of cold burns or paradoxical adipose hyperplasia. An integrated gel-free interface eliminates chemical sensitization risks, making the device suitable for repeated patient use.

TREATMENT ADVANTAGES

- Non-invasive fat reduction without needles, incisions, or downtime
- Average adipose layer thickness reduction of 22-27% per single 60-minute cycle (clinical study pending peer review)
- 360-degree circumferential cooling for uniform results on abdomen, flanks, thighs, submental area, and bra fat
- Simultaneous dual-applicator operation reduces total treatment time by up to 40%
- Patient-reported pain scores average 2.1/10 during procedure (visual analogue scale)
- Visible results typically appear within 3-6 weeks, with optimal outcomes at 12 weeks

SPECIFICATION MATRIX

Parameter	Specification
Cooling Technology	Dual-cycle Peltier TEC modules + closed-loop glycol cooling
Applicator Count	2 independent applicators (expandable to 4 via hub)
Applicator Shapes	Flat, curved, and submental (3 sizes each)
Cooling Temperature Range	-11 ° C to +5 ° C (adjustable in 1 ° C

	increments)
Treatment Duration Presets	35, 45, 60, 75 minutes
Vacuum Pressure	-50 to -80 kPa, regulated ± 3 kPa
Cooling Power per Applicator	96 Watts (max continuous)
Display Interface	10.1-inch capacitive touchscreen, 1280x800 resolution
Dimensions (Main Console)	620mm (H) x 480mm (W) x 550mm (D)
Weight (Main Console)	48 kg (106 lbs)
Power Requirements	AC 110-240V, 50/60Hz, 1500VA
Operating Environment	+10 ° C to +32 ° C, 30-75% relative humidity (non-condensing)
Data Logging	Integrated patient log for up to 10,000 treatment records
Warm-up Time	< 5 minutes to reach therapeutic temperature

REGULATORY COMPLIANCE

The 360 Surround Cooling Cryolipolysis System is manufactured in an ISO 13485:2016 certified facility. Device has received CE marking under Medical Device Regulation (EU) 2017/745 as a Class IIa device. FDA 510(k) clearance is

pending (submission reference K240012). Electrical safety complies with IEC 60601-1, IEC 60601-2-22, and IEC 60601-1-11 for home healthcare environments (clinic use only). Electromagnetic compatibility meets IEC 60601-1-2:2014 Group 1, Class B requirements. RoHS 3 compliant (Directive 2015/863/EU).

