

# Vacuum Roller Cellulite Reduction Unit - Official Clinical Overview & Technical Datasheet

DEVICE IDENTIFICATION: VACUUM ROLLER CELLULITE REDUCTION UNIT

PRODUCT CODE: VR-CRU-24X / VRC-7 PRO

INTENDED USE: NON-INVASIVE CELLULITE REDUCTION, LOCALIZED FAT METABOLISM ACTIVATION, AND DERMAL REMODELING VIA MECHANICAL VACUUM AND ROLLER MASSAGE.



## INTERNAL HARDWARE TOPOLOGY

The Vacuum Roller Cellulite Reduction Unit integrates a dual-action therapeutic head combining negative pressure vacuum suction (adjustable -200 to -450 mmHg) with a bi-directional motor-driven roller array (4 to 12 RPM). The

system comprises:

- DIGITAL VACUUM PUMP MODULE (brushless DC, noise-optimized <65 dBA)
- HIGH-TORQUE STEPPER MOTOR FOR ROLLER ASSEMBLY
- TOUCHSCREEN UI WITH 7" TFT LCD, 1024x600 RESOLUTION
- REDUNDANT SAFETY SHUTOFF (pressure + temperature sensors)
- INTERNAL AIR FILTRATION SYSTEM (HEPA H13, serviceable every 500 hrs)

#### EPIDERMAL PROTECTION MECHANISMS

Multi-layer safety architecture includes: real-time vacuum leak detection, automatic pressure release upon skin pinching, roller stall detection, and an integrated skin temperature monitor (range 32°C–42°C). The handpiece tip is constructed of hypoallergenic ABS with a smooth, contoured edge to prevent petechiae formation.

#### TREATMENT ADVANTAGES

- Stimulates lipolysis via mechanical shear stress on adipose septae
- Enhances local microcirculation (up to 300% increase per 20 min session)
- Reduces edema and improves dermal density via fibroblast activation
- Pain-free (<2/10 on VAS) with no required anesthetic
- Zero consumables; reusable silicon roller covers (autoclavable)

## SPECIFICATION MATRIX

| <b>Parameter</b>           | <b>Specification</b>                           |
|----------------------------|--|
| Vacuum Pressure Range      | -200 to -450 mmHg ( $\pm 5\%$ )                |
| Roller Speed               | 4 to 12 RPM (bidirectional)                    |
| Roller Material            | Medical grade silicone (autoclavable at 121°C) |
| Treatment Head Active Area | 55 x 35 mm elliptical contact zone             |
| Power Source               | 100–240V AC, 50/60Hz, 150W max                 |
| Dimensions (Base Unit)     | 380mm (W) x 420mm (D) x 910mm (H)              |
| Weight (Main Unit)         | 14.5 kg  |
| Display                    | 7" TFT capacitive touchscreen                  |
| Operational Noise          | <65 dBA @ 1m                                   |
| Safety Certifications      | CE (MDR), FDA 510(k), IEC 60601 series         |

## REGULATORY COMPLIANCE

CE MDR (EU) 2017/745 – Class IIa

FDA 510(k) CLEARANCE K211523 (EQUIVALENT)

IEC 60601-1 (ELECTRICAL SAFETY)

IEC 60601-1-2 (EMC)

ROHS 3 COMPLIANT

REACH SVHC COMPLIANT

ISO 13485:2016 MANUFACTURING



## RECOMMENDED CLINICAL PROTOCOL SUMMARY

TREATMENT AREA: THIGHS, BUTTOCKS, ABDOMEN, UPPER ARMS

FREQUENCY: 2x WEEKLY FOR 6 WEEKS, THEN MONTHLY MAINTENANCE

SESSION DURATION: 20–30 MIN PER ZONE

PRESSURE SETTINGS: START -250 mmHg, INCREASE TO -400 mmHg AS TOLERATED

ROLLER DIRECTION: ALTERNATING CYCLE (45 sec CW / 45 sec CCW)

POST-TREATMENT: HYDRATION, AVOID NSAIDS FOR 24 HRS

EXPECTED RESULTS: 1.5–3.0 cm REDUCTION IN THIGH CIRCUMFERENCE AFTER  
8 SESSIONS