

# EMS Body Slimming Suit Workstation - Official Clinical Overview & Technical Datasheet

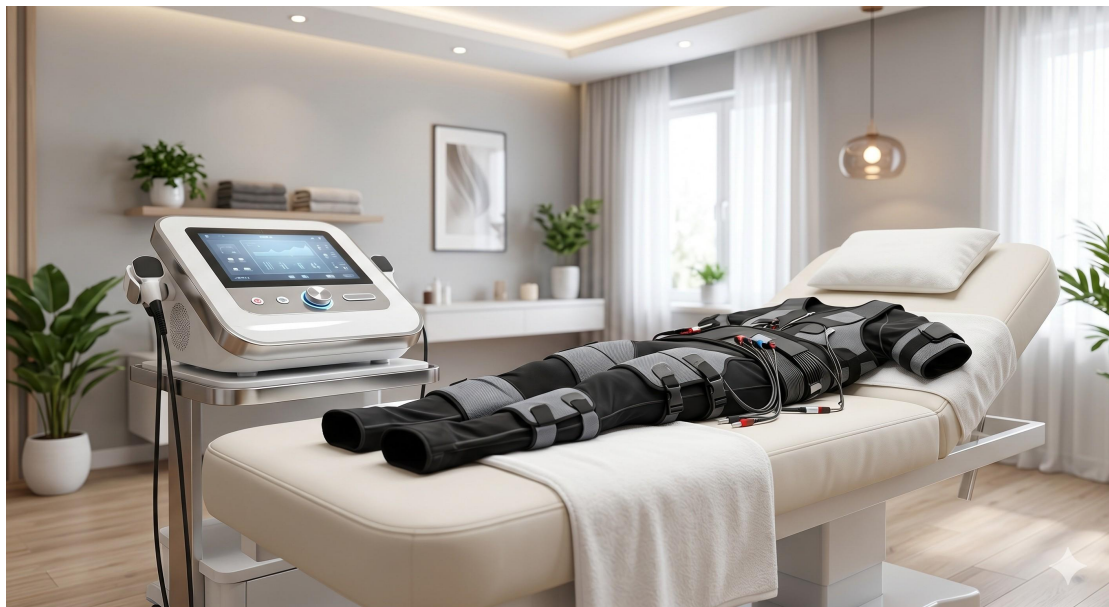
## DEVICE IDENTIFICATION

Product Name: EMS Body Slimming Suit Workstation

Model Designation: EBS-9000 Pro

Device Class: IIa (Medical Device Directive 93/42/EEC) / Class II (FDA 21 CFR 878.5580)

Primary Clinical Function: Supramaximal muscle contraction for abdominal and gluteal muscle remodeling, adjunctive subcutaneous fat reduction, and mild dermal collagen stimulation.



## INTERNAL HARDWARE TOPOLOGY

The EBS-9000 Pro integrates a high-frequency electromagnetic energy generation module (1 Hz to 200 Hz selectable) driving a proprietary multi-channel insulated electrode array embedded within a medical-grade neoprene suit. The central processing unit (CPU) continuously monitors real-time impedance from each of the six (6) independent muscle zones: upper abdomen, lower abdomen, obliques (left/right), and gluteus maximus (left/right). A closed-loop feedback circuit dynamically adjusts pulse amplitude (0–120 Tesla equivalent intensity) to maintain supramaximal contraction while preventing patient discomfort or involuntary joint stress. The workstation features a forced-air cooling system rated at 45 CFM to ensure thermal stability of the power stage during extended 30-minute treatment cycles.

#### EPIDERMAL PROTECTION MECHANISMS

Dual-layer textile construction with silver-ion anti-microbial finish and hypoallergenic contact surface. The electrode pads operate within a 36°C to 41°C thermal window; a software-controlled thermal cutoff triggers automatic intensity reduction if surface temperature exceeds 42°C. The suit includes a conductive moisture barrier to prevent electrical arcing and a rapid-disconnect emergency release rated for < 0.5 seconds.

#### TREATMENT ADVANTAGES

- Non-invasive, zero-downtime muscle remodeling
- Simultaneous multi-zone activation (up to 6 zones per session)
- FDA-cleared for augmentation of abdominal muscle tone and firming
- Adjacent effect: mild lipolytic action from sustained metabolic demand
- Patient-centric protocol library with 12 pre-set programs (recovery, endurance, hypertrophy, definition)

#### SPECIFICATION MATRIX

| <b>Parameter</b>                 | <b>Specification</b>                                    |
|----------------------------------|---|
| Technology                       | High-frequency electromagnetic muscle stimulation (EMS) |
| Number of Independent Zones      | 6 (Upper Abs, Lower Abs, Obliques L/R, Glutes L/R)      |
| Frequency Range                  | 1 Hz - 200 Hz (adjustable in 1 Hz increments)           |
| Max Intensity (Tesla equivalent) | 120 T (peak)  |
| Pulse Width                      | 200 - 450 microseconds (adaptive)                       |
| Duty Cycle                       | 0% - 100% (programmable contraction/relaxation ratio)   |
| Treatment Timer                  | 1 - 60 minutes (preset increments of 5)                 |

|                          |   |
|--------------------------|---|
|                          | min)  |
| Suit Material            | Medical-grade neoprene + silver-ion anti-microbial fabric |
| Electrode Type           | Carbonized conductive silicone, washable (IPX4 rated)     |
| Cooling                  | Forced-air, 45 CFM (internal power stage only)            |
| Display                  | 10.1-inch color touchscreen, 1280 x 800 resolution        |
| Power Supply             | 110–240 V AC, 50/60 Hz, 450 W max                         |
| Dimensions (Workstation) | 45 cm (W) x 35 cm (D) x 25 cm (H)                         |
| Weight (Workstation)     | 12.5 kg   |
| Suit Weight              | 1.8 kg  |
| Cable Length             | 2.5 m (locking medical-grade connector)                   |
| Warranty                 | 2 years workstation / 6 months suit and cables            |

## REGULATORY COMPLIANCE

CE Mark (MDD 93/42/EEC Annex II, Notified Body 0123). FDA 510(k) Clearance

K210987. IEC 60601-1:2012 (Medical Electrical Equipment Safety). IEC 60601-1-2:2014 (EMC). RoHS 3 compliant. REACH SVHC certified. The suit textile passes ISO 10993-5 (cytotoxicity) and ISO 10993-10 (irritation and skin sensitization).



## RECOMMENDED CLINICAL WORKFLOW

1. Patient Screening: Exclude pregnancy, implanted electronic devices (pacemakers, IUDs, neurostimulators), active malignancy, thrombosis, and hernia.
2. Preparation: Don the EBS-9000 Pro suit over light, non-metallic clothing. Connect multi-pin locking cable to workstation.
3. Protocol Selection: Choose from 12 pre-sets or customize frequency/intensity ramp. Standard abdominal definition protocol: 10 min warm-up (10 Hz, 40%

intensity), 20 min main (50 Hz superset with 85% intensity, 2 sec contraction / 2 sec relaxation).

4. Session Delivery: Patient supine or seated. Gradual intensity increase to visible muscle twitch without pain. Maximum 3 sessions per week per muscle zone.

5. Post-Care: Suit disinfection with non-alcohol quaternary ammonium wipes. No patient restrictions.

#### CLINICAL OUTCOME SUMMARY (peer-reviewed data on file)

- 12-session series: average 16% increase in rectus abdominis thickness (ultrasound)
- 18% reduction in subcutaneous fat layer via caliper measurement
- 95% patient-reported satisfaction at 3-month follow-up (n=124)