

Electrical Stimulation System Specifications

Background

The Minneapolis VAHCS provides a variety of clinical services. The Physical Therapy department at the Minneapolis VAHCS remediates injuries and promotes an improvement of quality of life through diagnoses and therapies. Various pieces of medical equipment is utilized by Physical Therapy, one specifically utilizes electrical stimulation.

Scope

The Minneapolis VAHCS is procuring two (2) electrical stimulation systems for the Physical Therapy department.

Equipment Requirements

A quantity of two (2) electrical stimulation systems is being requested for the Minneapolis VAHCS Physical Therapy department.

The electrical stimulation systems shall have the following requirements

- Clinical Requirements
 - o Multi-modality capability
 - Patterned Electrical Neuromuscular Stimulation (PENS) waveform for neuromuscular re-education
 - Asymmetric Biphasic Square Wave waveform
 - 50 or 100 Hz pulse rate
 - 40-100 μ sec phase duration
 - Biphasic and Triphasic Upper Extremity, Triphasic Lower Extremity, Cycle and hand controlled Walk EMG patterns.
 - Interferential Current (IFC) Stimulation with varied and full-field frequency protocol capability for management of pain and nerve blocking
 - Bipolar Square Wave at a 2,000, 2,500, 4,000, 5,000 and 10,000 Hz carrier frequency waveform
 - 0-250 Hz frequency difference modulation rate
 - 0-250 Hz full field burst rate
 - Adjustable 0-20 second rate scan time
 - Medium Frequency Alternating Current (MFAC) for muscle strengthening, disuse atrophy treatment, and spasm reduction
 - Bipolar Square Wave at a 2,000, 2,500, 4,000, 5,000 and 10,000 Hz carrier frequency waveform
 - 0-250 Hz adjustable burst frequency
 - Adjustable 0-20 second rate scan time
 - Fully adjustable on/off times & ramps
 - Low Voltage Pulsed Current (LVPC) for muscle re-education
 - Asymmetric Biphasic Square waveform
 - 0-250 Hz pulse rate
 - 40-300 μ sec phase duration
 - Phase \pm 20% in 8 seconds modulation
 - Fully adjustable on/off times & ramps
 - o Condition specific protocols
 - o Must be capable of treatment of the following patient conditions
 - RSD/CRPS
 - Incontinence
 - Muscle Disuse Atrophy
 - Torticollis
 - Spasticity
 - Spinal Cord Injury
 - Lower Back Spasms

- Post-Stroke Rehabilitation
 - Post-Surgical Joint Rehabilitation
 - Patello-Femoral Dysfunction
 - Neuromuscular Diseases
- Pre-programmed treatment protocols that can be utilized
- Hand control
 - Activation of stimulation when button is pushed and off when the button is released
- Output levels reset to zero at start and completion of treatment
- Lead wire tester
 - Provide indication of make or break of lead wire
- Meets AAMI, CE, FDA and TES standards
- Physical Requirements
 - Integrated carrying handle
 - Color coded output controls
 - Two separate generators
 - Two isolated output circuits with individual intensity control
 - Hand control/remote feature for therapists
 - Line power indicator light
 - 4-line LCD display
 - Weight no greater than 4.5lbs (including batteries)
 - 100-240 Volts AC, 47-63 Hz, 50 Watts
 - Rechargeable batteries

Delivery

Contractor shall have the equipment delivered to the Minneapolis VAHCS, One Veterans Drive, Minneapolis, MN 55417.