# The Tennant Biomodulator® PRO Specification Sheet

#### **Device Specifications – Features and Specifications**

- 1. Increase power using (+) keys, Display screen shows power level.
- 2. Decrease power using (-) keys, Display screen shows power level.
- 3. Change modes using the Mode Navigation keys.
- 4. Display screen shows; mode selected, timer, readings, progress indicators.
- 5. Place the device on the skin such that the onboard electrodes on the back of the devices are firmly touching the skin.
- 6. Power on-off switch.
- 7. Battery compartment
- 8. Accessory jack supports convenient electrode and accessory connection.



## **Technical Specifications**

Size: 114mm x 63mm x31mm

Weight; Approx. 108 grams (3.8 oz)

Power Source; 2 AA size 1.5V DC batteries

Pulse Duration 10-500 uS
Pulse Frequency 4-351 Hz
Output Voltage 20-450 V
Output Current 2-90 uA
Timeout 60 minutes

Waveform; pulsed, damped, bi-phasic sinusoidal

FDA Classification: 882.5890 Neurology, Biofeedback device

Indication for use: for symptomatic relief and management of chronic, intractable pain, and adjunctive

treatment in the management of post-surgical and post-traumatic pain.

**Restriction:** US federal law restricts this device to sale by or on the order of a licensed healthcare professional. A prescription is needed for purchase for a non-licensed healthcare professional. Home users may purchase the Tennant Biomodulator® *PRO* device with a written prescription provided by a physician.

#### Tennant Biomodulator® PRO vs. Conventional TENS

The Tennant Biomodulator® *PRO* devices are FDA-cleared as micro-current, biofeedback TENS devices for the symptomatic relief and management of chronic, intractable pain, and adjunctive treatment in the management of post-surgical and post-traumatic pain.

The output signature of the Tennant Biomodulator® *PRO* devices are unique and is the basis for superior performance. Substitute devices will not have this unique signature and therefore not perform the same as the Tennant Biomodulator.

#### **Technical Comparison**

Tennant Biomodulator® PLUS	Conventional TENS
21st Century Technology	1970s Technology
High Intensity, very low current, burst pulses	Low Intensity, higher current, long duration pulses
Voltage Range: 20-600 volts	Voltage Range: 0-40 volts
Amperage Range: Micro amps (10 <sup>-6</sup> Amps)	Amperage Range: Milliamps (10 <sup>-3</sup> Amps)
Signals in the frequency range of 4 Hz to 351 Hz	Signals in the frequency range of 15 Hz to 351 Hz
Damped asymmetrical biphasic sinusoidal waveform	Square waveform, mono-phasic or biphasic symmetrical or asymmetrical
Signaling always varies based upon changes in impedance of the tissue	Signaling is typically the same continuous pattern
Tennant Biomodulator® <i>PRO</i> forms a somatic biofeedback between the device and the tissue	No biofeedback

### **Performance Comparison**

Tennant Biomodulator® PLUS	Conventional TENS
Somatic biofeedback prevents neurological habituation and accommodation, for more effective pain management	Develops neurological habituation and accommodation, which severely limits effectiveness of pain management
Effectiveness lasts several hours after treatment	Effectiveness often stops when treatment ends

- Precision medical instrument indicated in the use for symptomatic relief and management of chronic, intractable pain, and adjunctive treatment in the management of post-surgical and post- traumatic pain.
- Treatment is gentle and easy
- Non-invasive and drug free therapy
- May be used as a complement to standard drug and therapy treatments provided by healthcare practitioners.
- After treatment, there are usually no physical limitations imposed. Normal activities may be resumed immediately.
- May be used in combination with other treatments, subject to healthcare professional direction.

