



Instruction Manual Art.-No. 100863-V08



schwa-medico
HOLISTIC HEALTH

TENstem eco basic

TRANSCUTANEOUS
NERVE AND MUSCLE STIMULATOR

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General Information

Intended use

The TENStem eco basic has been designed for the generation of the transcutaneous electrical nerve and muscle stimulation and may not be used for any other purposes.

Attention: Pain might indicate a serious disease and have to be examined by a physician. Even though the use of TENStem eco basic might show good results and bring a relief of pain, it usually has nothing in common with the healing of the actual cause.

To ensure safe usage of the product

Please read the instructions for use carefully prior to using the product!

- 1 The TENStem eco basic may only be used with original accessories.
- 2 Keep TENStem eco basic away from water and other liquids.
- 3 Never use the TENStem eco basic if it functions incorrectly or has been damaged.
- 4 Advice that stimulation should not be applied across or through the head, directly on the eyes, covering the mouth, on the front of the neck, (especially the carotid sinus), or from electrodes placed on the chest and the upper back or crossing over the heart.
- 5 The used electrodes must not be smaller than 2 cm².
- 6 Any electrodes that have current densities exceeding 2 mA/cm² may require the special attention of the operator.
- 7 It is only allowed to connect up the TENStem eco basic to one person.
- 8 It is not allowed to use the TENStem eco basic during operating machines or during operations which needs elevated concentration. Pay attention particularly at road traffic.
- 9 Do not allow TENStem eco basic to be dropped, handled incorrectly, exposed to extreme temperatures or high humidity (only use at temperatures between 10 °C and 40 °C and a relative humidity of less than 90 %).
- 10 Care must be taken when the TENStem eco basic is used on or in the proximity of children.
- 11 Store the TENStem eco basic in the original packaging after use to protect it against damage and soiling.

Warning!

» Do not use the TENStem eco basic simultaneously with a high frequency device like a mobile phone. It could cause mutual reaction between the electromagnetic field of the device and the TENStem eco basic and lead to increased output current.

- » Simultaneous connection of a patient to a high frequency surgical ME (medical electrical) equipment may lead to burns beneath the electrodes and it may damage to the TENStem eco basic.
- » Operation in the vicinity (e.g. 1m) of a short wave or microwave ME (medical electrical) device may cause fluctuations in the output value of the TENStem eco basic.
- » Application of electrodes near the thorax may increase the risk of cardiac fibrillation.

Contraindications

In which cases shall a patient not use the device – or if – only with consultation of a medical practitioner?

- » Patients with implanted electronic devices (pace maker, pumps etc.)
- » Patients with cardiac dysrhythmia
- » Patients with seizure disorder (epilepsy)
- » Patients with skin irritations in the area of the electrode application
- » Patients with malignant diseases (tumours) in the area of the application

Contraindications TENS/EMS in pregnancy

In addition to the general contraindications of TENS/EMS applies:

- » The use of TENS during pregnancy should always be coordinated with the attending physician and the midwife, taking into account the benefits and the risks.
- » Patients who have experienced miscarriage or preterm delivery, should not use TENS during pregnancy.
- » Patients with preterm labour should not use TENS during pregnancy.
- » TENS should not be used during the first three months of pregnancy or only after a careful risk assessment. In particular, stimulation in the area of the uterus should be avoided.
- » From the 4th month of pregnancy onwards TENS should not be applied near the uterus. This applies to all electrode placements in the area of the abdomen, pelvis and lower back.
- » The use of TENS is permissible during childbirth.

Side Effects

- » Pain aggravation: After extensive and intense session, pain aggravation can occur. Shorten the treatment time (not more than 30 minutes) and choose a low intensity of stimulation during the first treatment sessions to avoid pain aggravation.
- » Skin intolerance: Skin intolerance can result from the electrodes, the electrode gel or the electric current impulses. A physician should be consulted in cases of longer lasting

reddening, burning, itching or blistering under the electrodes or in the vicinity of the electrodes following the stimulation. Slight skin reddening of short duration in the area of the electrodes following stimulation is quite normal because blood circulation has been improved by the effects of the stimulation.

- » Muscular pain: After extensive and intense muscle stimulation session muscular aches in terms of sore muscle can occur. Shorten the treatment time and choose a low intensity of stimulation during the first treatment sessions to avoid pain aggravation.
- » Muscle contraction: During high frequency stimulation (above approx. 15 Hz) persistent muscle contractions can occur. Electrode placement in the thorax area may lead to respiratory troubles during the stimulation. If the applied area is near or on the chest, sometimes breathing irritations might appear.

Symbols



Attention: Read accompanying documents, especially user manual!



Type BF applied part



Manufacturer



Date of manufacture



Catalogue number



Serial number



Environment

Do not dispose of the appliance with the normal household waste at the end of its life, but hand it in at an official collection point for recycling. By doing this you will help to protect the environment.

- CE0482 By labelling with CE mark, the manufacturer asserts that the product fulfills all relevant requirements of the respective EC Directives. A conformation assessment process has been successfully completed. The identification number in respect of the conformation assessment process is given in accordance with the CE labelling of the relevant notified body.



Follow instructions for use

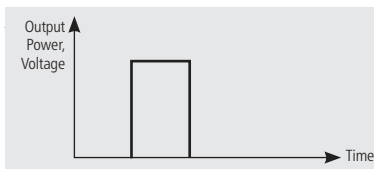
Technical data

2-channel nerve and muscle stimulator with electrically insulated channels, 12 integrated constant current characteristic programs and from series C 3 user programs for own settings.

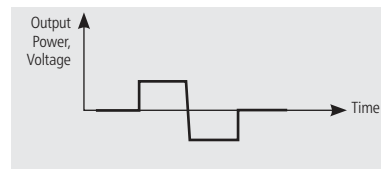
Power supply	6.0 V (4 x 1.5 V battery AAA type micro e. g. LR03) or 4.8 V (4 x 1.2 V rechargeable battery AAA)
Output current	Max. 100 mA (therapy) approx. 60 μ A (power down)
Dimensions	Approx. 140 mm x 64 mm x 28 mm
Weight	Approx. 96 g (without batteries)
Output current	0 - 60 mA (with 1 k Ω load)
Pulse form (Serie A-K)	biphasic rectangle with neg. part
Pulse form (from Serie L)	biphasic rectangle impulse
Frequency range	1-120 Hz
Pulse width	75-300 μ s
Operating conditions	Temperature range: 10 $^{\circ}$ C to 40 $^{\circ}$ C Relative humidity: 30 % to 90 %
Storage conditions	Temperature range: -10 $^{\circ}$ C to 55 $^{\circ}$ C Relative humidity: 10 % to 90 %

Pulse forms

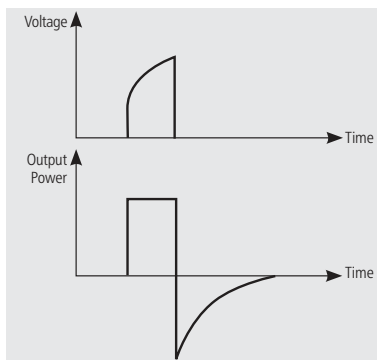
With 1 k Ω load



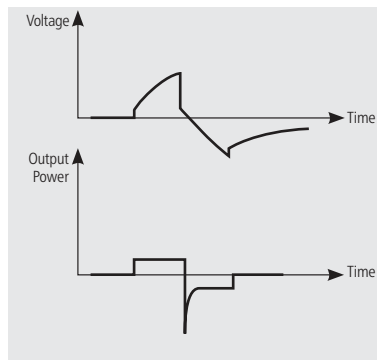
from Serie L



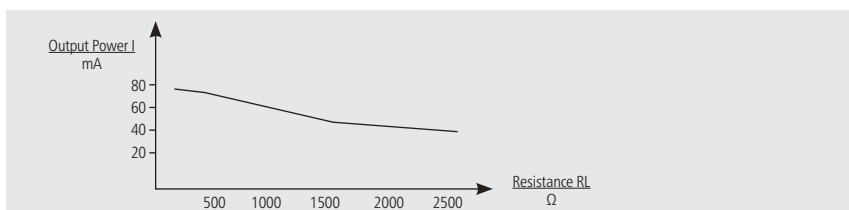
With ANSI/AAMI standard load



from Serie L



Change in output current depending on load



Features

- » 16 programs (12 pre-set, 4 for own settings)
- » Large LCD that shows:
 - Selected program
 - Therapy time
 - Intensity (two separated channels)
 - Frequency
 - Pulse width
- » Automatic cut-off after 2 minutes of no use.
- » Easy handling via keypad
- » Battery level control (battery symbol appears when voltage gets under 3.7 V)
- » Electrode recognition: the intensity is reduced to 0 if no electrodes are connected or not properly connected.
- » The selected program can be interlocked.
- » Saving and read-out of operating parameters.

Description

All parameters can be adjusted via the keypad and are indicated on the large display.

1. Display
2. Menu keys
3. Modification keys to adjust parameters and intensities
4. ON/OFF key
5. Battery compartment
6. Output sockets for the cables



Keypad

- ⊙ to switch the device on and off and to stop stimulation
- P** to select a program
- E** to set the parameters
- ▲ to increase the intensity (left for channel 1, right for channel 2)
- ▼ to decrease the intensity (left for channel 1, right for channel 2)

Operating the TENStem eco basic

Starting the device

Insert the batteries into the battery compartment (no. 5). Please also read the chapter "Battery change" for more information. All symbols appear automatically on the display. An acoustic signal indicates that the unit is ready for use.

Connecting electrodes and cables

First connect the 2 mm diameter male connectors of the cables (red and white connector on each cable) to the black female connectors of the electrodes (always 2 electrodes per cable).



Connecting the cables to the TENStem eco basic

Connect the white plug at the other end of the cable to the sockets on the upper front face of the TENStem eco basic (no. 6). You may use the device with one or two cables depending on the therapy.



Switching ON the TENStem eco basic

Press **⊙** to switch ON the TENStem eco basic. A double beep sounds. The display indicates the selected program, the therapy time, the frequency, the pulse width and the intensity.

Selecting a program

Press **P** until you have selected the program of your choice. Once you have reached P16 you will return to P1.

Starting the stimulation / setting the intensities

Press the left **▲** key to increase the intensity of channel 1.
 Press the right **▲** key to increase the intensity of channel 2.
 Press the left **▼** key to reduce the intensity of channel 1.
 Press the right **▼** key to reduce the intensity of channel 2.

It is not possible to adjust the intensity of both channels at the same time.

Stopping the stimulation

The stimulation stops automatically at the end of each program. You can stop the stimulation manually at any time by pressing the **P** key or the **⊙** key.

Switching OFF the device

Press the **⊙** key to switch OFF the device. A single beep sounds. The TENStem eco basic switches OFF automatically after 2 minutes if no key pressed.

Setting date and time

Before you can use the memory query mode you need to set the date and time. Pressing and holding the **E** key for about 3 seconds leads you to the date/time mode. In date/time mode the LCD shows two figures: The left figure indicates the date, the right figure indicates the time. Pressing the left **▲** key increases the date by one day (max. 30). Pressing the left **▼** key decreases the date by one day (min. 1).



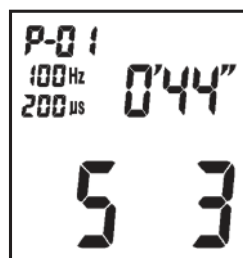
Pressing the right ▲ key increases the time by one hour (max. 23). Pressing the right ▼ key decreases the time by one hour (min. 0).

Press the Ⓞ key to save all parameters and to leave the date/time mode again. Date and time are continuously updated.

The TENStem eco basic switches OFF automatically after two minutes if no key is pressed. In this case none of the adjusted parameters are saved.

Memory query mode

First set the date and time (see above). The memory query mode is used to read out saved therapy data from patients. By pressing and holding the left ▼ and E key for about 3 seconds you enter the memory query mode. If no values are saved, the display shows "null" for about 2 seconds and the device returns to standby mode automatically. If you have saved therapy data, the display shows the parameters of the last therapy session as shown below:




- » Used program = P01
- » Frequency = 100 Hz
- » Pulse width = 200 µs
- » Therapy duration = 0 min 44 s
- » Day of therapy = 5 (fifth day)
- » Therapy session no. = 3

You can save up to 90 therapy sessions respectively the first 3 of each day. With the left ▼ key you can return to the values of the previous day (until you reach the first recorded day). The left ▲ key lets you proceed to the next day (until you reach the current day). The right ▼ key brings you to the parameters of the last therapy session of the respective day (until you reach the first session of the respective day). The right ▲ key shows you the parameters of the next therapy session (until you reach the last session of the respective day).

Resetting the memory

Pressing and holding the E button for about 5 seconds will delete all saved data. The display shows "Clr" for about 2 seconds and the device can be used for stimulation again. The TENStem eco basic switches OFF automatically after two minutes if no key is pressed.

Battery change

If the battery voltage is less than 3.7 V, the battery symbol  appears in the display and it is necessary to insert in 4 new 1.5 V batteries (AAA, e.g. LR03).

To change batteries:


- » Switch OFF the device.
- » Open the battery compartment on the back side of the device by sliding out the cover.
 - Remove the old batteries.
 - Insert the new batteries (check polarity).
 - Close the battery compartment.

Attention! From series E-devices: Please close the battery box cover firmly. If the battery box cover is not completely closed, the device does not turn on.

If you do not use the device for a longer period of time, always remove the batteries. In case you use rechargeable batteries, please follow the instructions of the charging unit.

Please dispose old batteries properly!

Reference sheet for battery retraction and disposal

In connection with the sales of products which contain batteries or rechargeable batteries, we are obliged by law (battery law § 18, section 1) to advise you of the following: The dustbin symbol  marks batteries with hazardous substances as well as the circumstance that batteries must not be disposed of in the household waste but professionally. The chemical term of the hazardous substance is below the dustbin symbol.

You are obliged by law to return used batteries.

You may render used batteries at municipal collecting points or in local trade. We are also obliged to take back used batteries, whereat our obligation restricts to those which are or were part of our product range.

Therefore, you may send back used batteries to us adequately stamped by mail or render these at our warehouse free of charge at the following address:

schwa-medico GmbH, Wetzlarer Str. 41-43, 35630 Ehringshausen, Germany

Please refer to the following figures to see the respective symbols of batteries with hazardous substances:



Battery contains more than 0.002 % cadmium



Battery contains more than 0.0005 % quicksilver



Battery contains more than 0.004 % plumb

Overview of key combinations

Locking/Unlocking a program	Simultaneously press left ▼ and P key for 3 seconds
Changing stimulation time (From series C)	Press E key
Setting own programs (From series C)	Select P13 - P16, press E key
Entering date/time mode (From series C)	Press E key for 3 seconds
Entering memory query mode (From series C)	Simultaneously press left ▼ and E key for 3 seconds
Switching ON/OFF the sound (From series D)	Simultaneously press E key and right ▼ for 3 seconds. Press E to change between sound on/off.

Pre-set programs

Program 1: Gate control 1

Both channels work with the same frequency and pulse width.

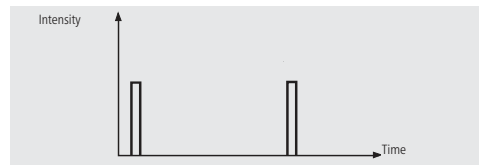
Frequency: 100 Hz

Pulse width: 200 μ s

Therapy time: 30 min (10 to 90 min)

Indications: Acute nerve or joint pain

This program is used to treat acute neuropathic and joint pain. The effect is immediate.



Program 2: Gate control 2

Both channels work with the same frequency and pulse width (see illustration Program 1).

Frequency: 80 Hz

Pulse width: 150 μ s

Therapy time: 30 min (10 to 90 min)

Indications: Acute nerve or joint pain

Program 2 is similar to program 1 but works with a lower frequency and may therefore be considered as more pleasant.

Program 3: Low frequency

Both channels work with the same frequency and pulse width (see illustration Program 1).

Frequency: 2 Hz

Pulse width: 250 μ s

Therapy time: 30 min (10 to 90 min)

Indications: Diffuse nerve, joint or muscle pain, spasms, lower back pain, neck pain, fibromyalgia, chronic pain. This program is used to relax painful muscles and to achieve an endorphin release. Endorphins have an analgesic effect that lasts beyond stimulation, but you need to run program P3 to the end (30 min). To achieve particularly good effects use kaada electrodes placement (on the hand).

Program 4: Gate control & low frequency

The channels work with different frequencies but with the same pulse width.

Therapy time 30 min (10 to 90 min)

Channel 1:

Frequency: 100 Hz

Pulse width: 200 μ s

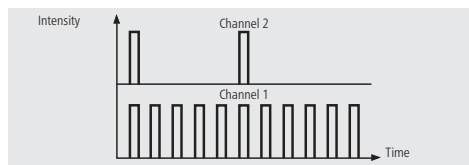
Indication: Joint pain

This program combines the effects of program 1 and 3, in case the analgesic effect off program 3 is not strong enough.

Channel 2:

Frequency: 2 Hz

Pulse width: 200 μ s



Program 5: Adaptation

After phase 1 the program changes automatically to phase 2.

Therapy time: 30 min (10 to 90 min)

Phase 1:

Frequency: 100 Hz

Pulse width: 150 μ s

Duration: 10 min

Phase 2:

Frequency: 2 Hz

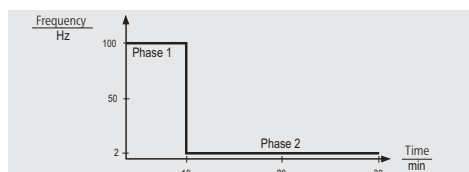
Pulse width: 200 μ s

Duration: 20 min

Indications: Especially for lower back pain and sciatic pain syndrome

Program 5 starts with high frequency stimulation for 10 minutes, to give you immediate pain relief. After 10 minutes it automatically changes to a 20 minutes low frequency stimulation with acupuncture type impulses to release endorphins and to retain the analgesic effect even beyond stimulation.

The duration of phase 1 and 2 is adjusted in the ratio 3/8 to 5/8.



Program 6: HAN stimulation

» The device continuously changes between phase 1 and phase 2.

Therapy time: 30 min (10 to 90 min)

Phase 1:

Frequency: 100 Hz

Pulse width: 150 μ s

Duration: 3 s

Phase 2:

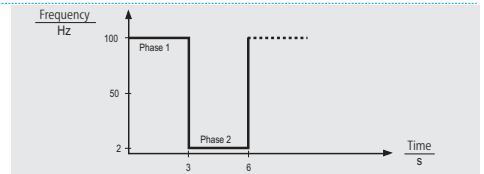
Frequency: 2 Hz

Pulse width: 200 μ s

Duration: 3 s

Indications: All kinds of pain

This program combines the analgesic effect of high frequency stimulation with endorphin release caused by low frequency stimulation. Every 3 seconds it changes between a "pins and needles" stimulation and a pulsing stimulation.

**Program 7: Burst**

This generates pulse packages (Burst).

Frequency: 100 Hz

Pulse width: 150 μ s

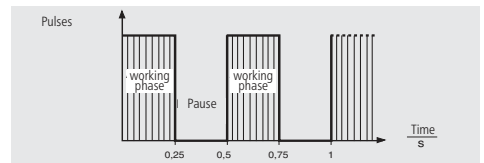
Modulation: Burst 0.5 s (0.25 s + 0.25 s)

Therapy time: 30 min (10 to 90 min)

Indications: Diffuse nerve, joint or

muscle pain, spasms, lower back pain, neck pain, fibromyalgia.

This program covers the same indications as program 3, but the stimulation is often considered as more comfortable and pleasant than the normal low frequency stimulation.

**Program 8: Modulation**

The frequency continuously changes within the frequency limits.

The pulse width adapts accordingly.

Minimal frequency: 2 Hz (Pulse width: 200 μ s)

Maximal frequency: 80 Hz (Pulse width: 100 μ s)

Modulation duration: 7.5 s (2 Hz \rightarrow 80 Hz)

Therapy time: 30 min (10 to 90 min)

Indications: Acute nerve or joint pain (as an alternative to P1 and P2)

If you feel that the analgesic effect of program 1 or 2 is decreasing, change to program 8. With frequency modulation the body does not become accustomed to the stimulation.

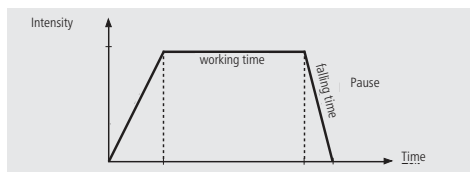
Program 9: Muscle stimulation

The intensity continuously changes according to the indicated parameters.

Frequency:	50 Hz	Pulse width:	250 μ s
Rising ramp:	2 s	Working phase:	5 s
Falling ramp:	1 s	Pause:	12 s
Therapy time:	30 min (10 to 90 min)		

Indications: Prevention of muscular atrophy, muscle strengthening

This program is suitable to maintain the muscle volume, e.g. during injury or recovery, or to avoid muscle atrophy. In case of muscle atrophy, do not stimulate more than once a day for the first month. Certainly program 9 can also be used to strengthen a healthy muscle.



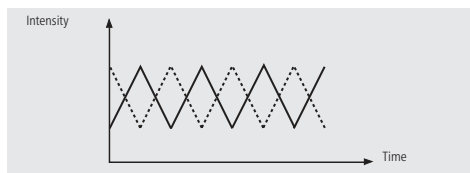
Program 10: Gate control dynamic 1

The intensity continuously changes and the two channels operate alternately (massage effect).

Frequency:	80 Hz
Pulse width:	150 μ s
Intensity modulation:	1 s rise, 1 s fall
Therapy time:	30 min (10 to 90 min)

Indications: Especially for acute back pain, lower back pain, sciatic pain

This program is recommended for the treatment of back pain. The massage effect provides a comfortable and pleasant stimulation. The so called Gate Control reflex which is achieved through this kind of stimulation is a natural reflex that you achieve e.g. by rubbing a painful area with your hands to calm acute pain. To achieve the massage effect it is essential to use both channels of the TENStem eco basic.



Program 11: Gate control dynamic 2

The intensity continuously changes two channels operate alternately (massage effect). See illustration program 10.

Frequency: 80 Hz

Pulse width: 150 μ s

Intensity modulation: 0.25 s rise, 0.25 s fall

Therapy time: 30 min (10 to 90 min)

Indications: Heavy legs (venous return)

Program 11 is similar to program 10, but the movement of the massage waves is faster. It is used to improve the venous return for patients who suffer from heavy legs. To achieve the massage effect it is essential to use both channels of the TENStem eco basic.

Program 12: Deep TENS

Program 12 works just like program 1. However, instead of just one pulse, four short pulses are generated.

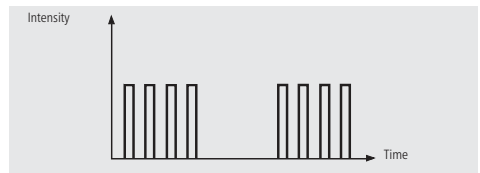
Frequency: 100 Hz

Pulse width: 75 μ s

Modulation: four pulses in a group, duration of periods 275 μ s

Therapy time: 30 min (10 to 90 min)

This program could be called the last recourse if none of the other programs give analgesic effect. However, because of the high frequency this program is often felt as less pleasant. Furthermore, high frequency stimulation needs more battery power.

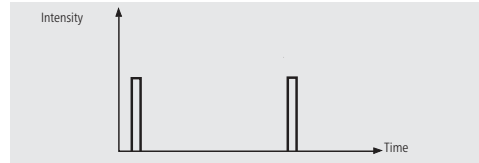


User programs for own settings

Program 13: Gate control

Both channels work with the same frequency and pulse width.

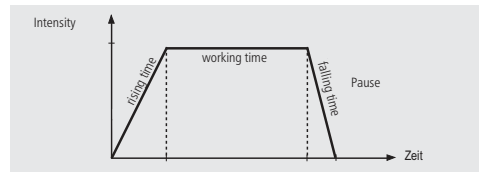
Frequency:	1 - 120 Hz
Pulse width:	75 - 300 μ s
Therapy time:	10 - 90 min



Program 14: Muscle stimulation

The intensity continuously changes according to the indicated parameters.

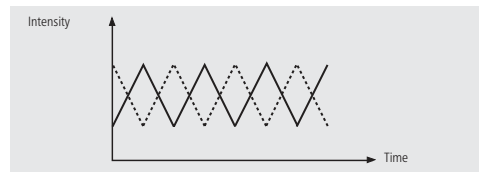
Frequency:	1 - 120 Hz
Pulse width:	75 - 300 μ s
Rising ramp:	2 s
Working phase:	5 s
Falling ramp:	1 s
Pause:	12 s
Therapy time:	10 - 90 min



Program 15: Gate control dynamic

The intensity continuously changes and the two channels operate alternately (massage effect).

Frequency:	1 - 120 Hz
Pulse width:	75 - 300 μ s
Intensity modulation:	1 s rise, 1 s fall
Therapy time:	10 - 90 min



Program 16: Iontophoresis, Nerv block (from series E)

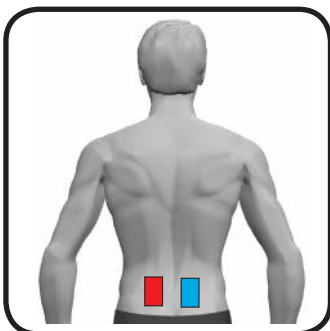
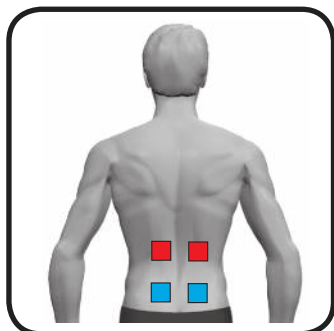
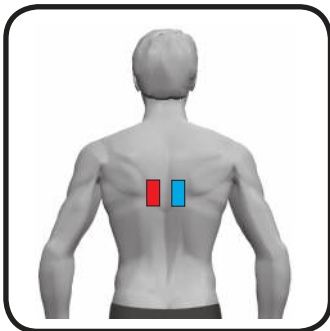
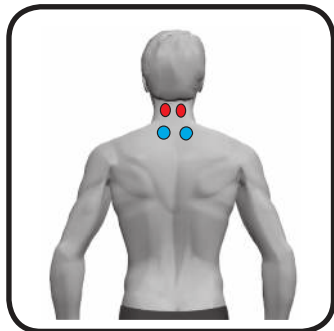
Both channels work with the same frequency and pulse width. The current is monophasic.

We do not recommend to use P16 for more than 20 minutes. Check the skin underneath the electrodes after the stimulation.

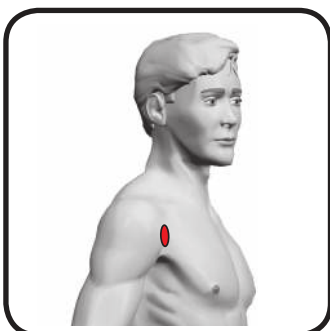
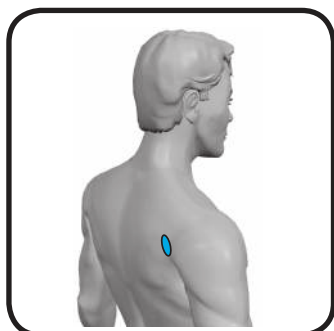
Frequency:	1 - 120 Hz
Pulse width:	75 - 300 μ s
Therapy time:	20 min

Electrode placements for pain programs

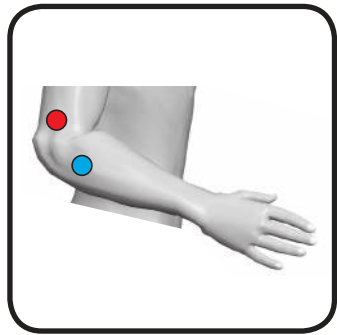
Back pain



Shoulder pain



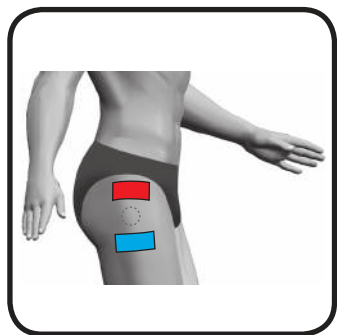
Epicondylitis radialis



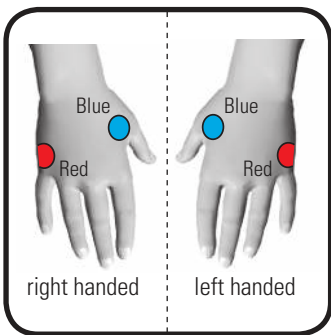
Epicondylitis ulnaris



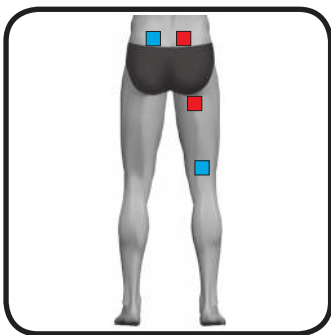
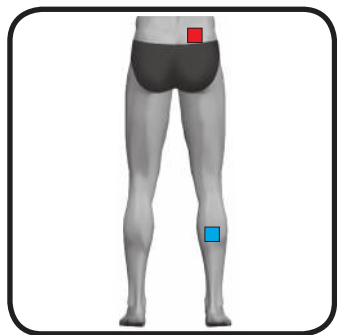
Arthrosis (hip)



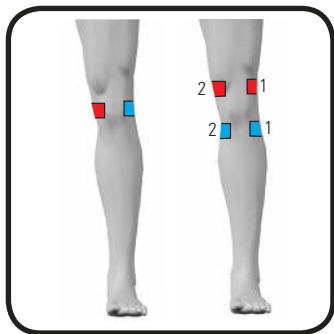
Kaada stimulation (1 channel only)



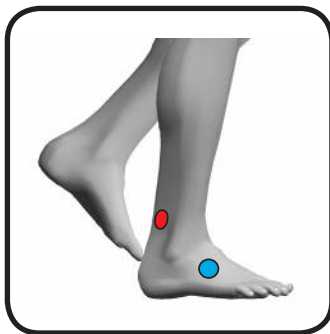
Sciatic pain



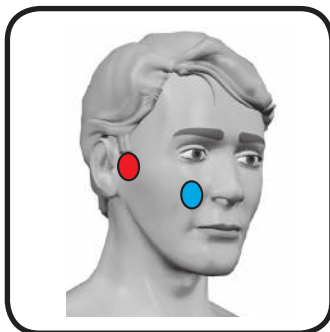
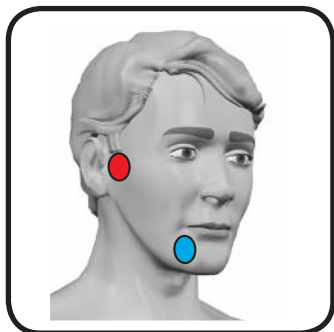
Gonarthrosis/knee pain



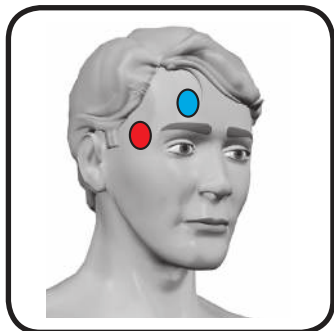
Ankle joint pain



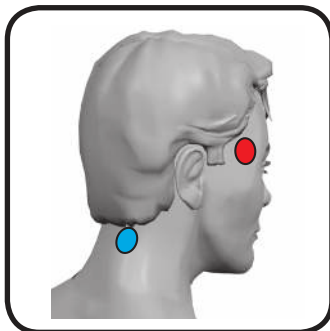
Trigeminus neuralgia



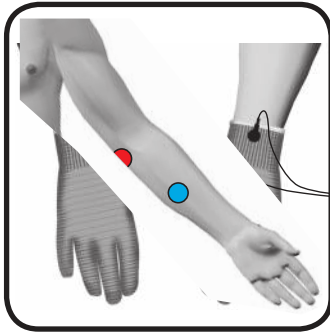
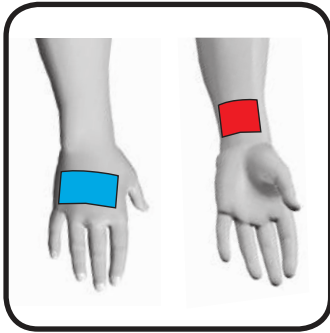
Migraine



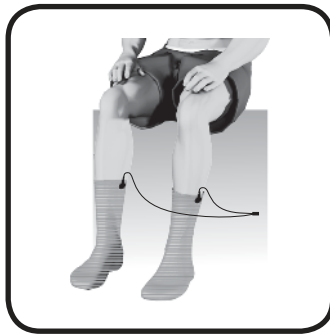
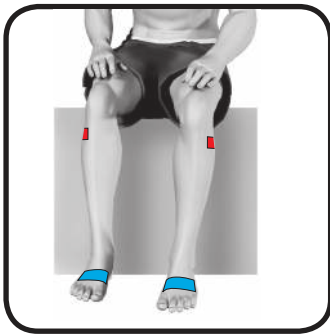
Tension headache



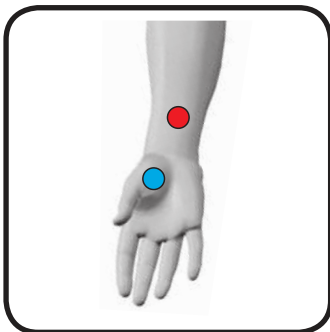
Polyarthritis



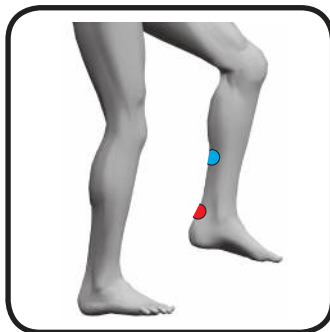
Polyneuropathy



Carpal tunnel syndrome



Pain of achilles tendon/heel pain

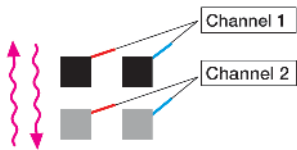


Electrode placement for dynamic stimulation (P10, P11, P15)

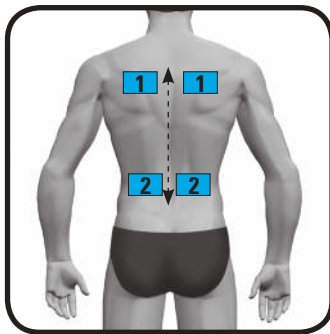
The stimulation is not administered simultaneously on both channels. The current flows from one electrode to the other just like a wave undulating on the body. This kind of stimulation is far more comfortable than traditional neuro-muscular stimulation. Dynamic stimulation can be used with high frequency parameters for a improved pain control or with low frequency parameters for optimized muscle stimulation. This treatment method also has an enhanced effect on lymphatic drainage stimulation.

The placement of electrodes for dynamic stimulation depends on the direction of stimulation (rising/falling stimulation or sideways stimulation)

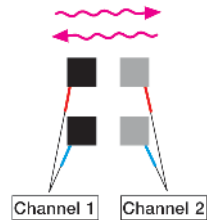
Rising or falling stimulation for back or legs



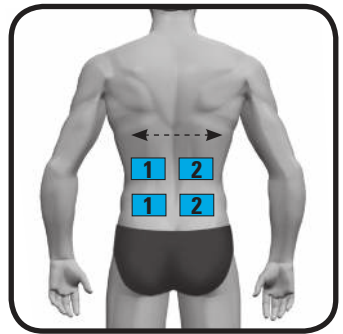
Rising and falling wave:



Sideways stimulation for gluteus or stomach muscle



Right left wave:



General

Classification

The TENStem eco basic is classified as a Class IIa medical device in accordance with Annex IX of the EU Directive 93/42/EEC for Medical Products.

Settings, modifications and repairs

The manufacturer is only responsible for the safety and performance of the TENStem eco basic when settings, modifications and repairs are carried out by authorised persons, and when TENStem eco basic is used in accordance with the operating instructions.

Warranty

Legal right of warranty is applied according to German Civil Code.

Guarantee

The manufacturer issues a guarantee of 12 months from the date of purchase.

The guarantee does not apply in the following cases:

- » For wearing parts and consumable supplies like, for instance, electrodes, batteries and cables
- » Damage due to improper handling
- » Defects the customer is aware of on the date of purchase
- » Damage caused by the customer.

Maintenance and cleaning

No special cleaning or care agents are required for the TENStem eco basic. Clean the unit with a soft, fluff-free cloth. Please ensure that no moisture permeates the unit. If moisture does permeate the unit, a technical check must be carried out before re-use.

Delivery content

Quantity	Article	Art.-No.
1	TENStem eco basic	104041
1	Cable type 7 (1 pair)	104741
1	Stimex self-adhesive electrodes 50 x 50 mm (4 pieces)	283400
4	1.5 V battery LR03micro (AAA)	604000
1	Operating Manual	100863

Description of the device



Frequently asked questions

How many times a day can I use the TENStem eco basic?

We recommend to use the device 3 times a day. The pre-set therapy time of 30 minutes per program should not be extended. After a therapy session, wait for several hours before using the unit again.

What intensity should I use?

Do not try to increase the intensity beyond the level which is comfortable. You will either feel pins and needles or pulses depending on the program or frequency used. You will notice that the intensity often feels different even if you stimulate the same area at different times of the day. This is normal. Do not hesitate to adjust the intensity to achieve a stronger but still pleasant stimulation.

The intensity of my TENS unit cannot be increased to exceed 6/8 mA. Is my TENS unit defective?

The TENStem eco basic is not defective. Check if the cables are connected correctly to the TENS and if the electrodes are connected correctly to the cables. Try to use new electrodes. The device is equipped with a special electrodes recognition function that prevents the increase of the intensity of improperly connected electrodes to the skin and also if electrodes are worn-out or if cables are defective.

I have been using my TENStem eco basic for 2 months and I feel that the stimulation is less effective.

This could be due to the following reasons:

- » The electrodes need to be changed.
- » Your body has adapted to the repeated stimulation. We recommend to change the program or the placement of the electrodes.

Can electrodes adhere to hairy skin?

In case of strong hair growth we recommend to shave the skin before placing the electrodes, but usually this is not necessary.

Accessories

The following accessories can be combined with the TENStem eco basic.

Stimex self-adhesive electrodes

Art. No.	Article	Pieces
281000	Stimex 32 mm round	4
282000	Stimex 50 mm round	4
281055	Stimex 32x32 mm	4
283400	Stimex 50x50 mm	4
283600	Stimex 50x90 mm	2
283000	Stimex 50x130 mm	2
283100	Stimex 80x130 mm	2
281027	Stimex sensitive 50x50 mm	4




Silicone electrodes (to be used with contact gel)

Art. No.	Article	Pieces
107090	Silicone electrode 20 mm round	2
107060	Silicone electrode 25 mm round	2
107075	Silicone electrode 40x28 mm	2
107035	Silicone electrode 56x28 mm	2
107020	Silicone electrode 75x30 mm	2
107055	Silicone electrode 90x35 mm	2
107011	Silicone electrode 38x45 mm	2
107010	Silicone electrode 48x48 mm	2
107050	Silicone electrode 70x65 mm	2
107070	Silicone electrode 70x140 mm	2
108000	Contact gel for silicone electrodes (60 g)	1



MedicoBack: for the treatment of low back pain

Low back support bandage with pelotte and integrated electrodes to be used with pain management programs of the TENStem eco basic.

MedicoBack P-type offers patients lumbar vertebrae stabilization and support as well as easy stimulation provided by the integrated electrodes. The pelotte with its massage nubs enhances the pain relieving effect. MedicoBack P-type may be used for slight or acute pain as well as for chronic pain in the lower back area.



Art. No.	Article	Size	Length
107034	MedicoBack P-type	S	80 - 90 cm
107036	MedicoBack P-type	M	90 - 100 cm
107037	MedicoBack P-type	L	100 - 110 cm
107038	MedicoBack P-type	XL	110 - 120 cm
107039	MedicoBack P-type	XXL	120 - 130 cm

Stimex garment electrodes: gloves and socks

The gloves and socks used in combination with the TENStem eco basic provide stimulation of the entire hand and/or foot and ankle and avoid the sometimes tiresome attachment of self-adhesive electrodes on the hand or the foot.

Gloves

Art. No.	Article	Size	Pair
107014	Stimulation gloves	S	1
107021	Stimulation gloves	M	1
107022	Stimulation gloves	L	1



Socks

Art. No.	Article	Size	Pair
107023	Stimulation socks	M	1
107024	Stimulation socks	L	1



Program No.	Program name	Indication
1	Gate control 1	Nociceptive pain, acute pain, neuropatic pain
2	Gate control 2	Alternative to program 1
3	Low frequency	Chronic nociceptive pain, improvement of blood circulation, Kaada stimulation
4	Gate control + low frequency	Combination of high and low frequency stimulation
5	Adaptation	Muscular pain
6	HAN	Suitable for almost all kinds of pain program
7	Burst	Alternative to program 3 (more comfortable)
8	Modulation	Alternative to the other programs in case of therapy resistance
9	Muscle stimulation	Atrophy prophylaxis, muscle strengthening
10	Gate control dynamic 1	Muscle relaxation
11	Gate control dynamic 2	Muscle relaxation, venous return
12	Deep TENS	Muscular pain, deep seated pain
User programs		
13	TENS stimulation	Pain treatment (see programs 1-3)
14	Muscle stimulation	Muscular pain, deep seated pain
15	Gate control dynamic	Muscle relaxation
16	Monophasic	Iontophoresis, nerv block, Jenkner block (stellate ganglion block)

Description	Frequency/Hz	Pulse width/ μ s	Time/min
Both channels	100	200	30
Both channels	80	150	30
Both channels	2	250	30
Channel 1: 100 Hz Channel 2: 2 Hz	Channel 1: 100 Channel 2: 2	200	30
First 10 min 100 Hz, then 20 min with 2 Hz	100/2	150/200	10/20
3 s 100 Hz, then 3 s 2 Hz etc.	100/2	150/200	30
100 Hz for 0.25 s	100	150	30
Automatic frequency run from 2 Hz to 80 Hz within 7.5 s	2 - 80	200 - 100	30
Increase 2 s, working time 5 s, decrease 1 s, pause 12 s, automatic intensity adaption	50	250	30
Intensity within 1 s to maximum, then within 1 s reduced to 50%. Both channels in alternating operation	80	150	30
Intensity within 0.25 s to maximum, then within 0.25 s reduced to 50%. Both channels in alternating operation	80	150	30
Impuls packages of 4 impulses. 200 μ s between each impuls	100	75	30
Both channels	1-120	75-300	10-90
Increase 2 s, working time 5 s, decrease 1 s, pause 12 s (automatic intensity adaption)	1-120	75-300	10-90
Intensity within 1 s to maximum, then within 1 s reduced to 50%. Both channels in alternating operation	1-120	75-300	10-90
Both channels with monophasic current	1-120	75-300	20



schwa-medico

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