

POCKET EMAVIT



USER MANUAL

Instructions

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**ATTENTION: READ CAREFULLY THE
INSTRUCTIONS BEFORE USE**

Cap.1 – PRESENTATION

POCKET EMAVIT belongs to a new generation of electromedical instruments for physiotherapy. Its main characteristics are its reduced dimensions, its ease of use and its versatility.

1.1 – What is POCKET EMAVIT

Thanks to the constant investigation and research we created a new system for magnetotherapy, our POCKET EMAVIT. Through the preset programs and its innovative software, magnetic fields are created for therapeutic purpose and for the treatment of common pathologies (lesions, accidents, illnesses). It's an extremely innovative product thanks to its technological features and its ease of use.

1.2 – What is POCKET EMAVIT for?

With POCKET EMAVIT it is possible to apply magnetic fields with beneficial effects on the reconstruction of the bone tissue and, in general, on the regeneration of damaged tissues. Also, it can be used to obtain analgesic, anti-inflammatory and anti-edema effects.

1.3 – Who can use POCKET EMAVIT?

POCKET EMAVIT expresses its own potential in the medical field (physiotherapy particularly). Nevertheless, thanks to its ease of use and versatility, it can be used not only by physicians and therapists, but also from whoever desires to use it at home.

Do not use the product in high-temperature and humid environments.

Follow your doctor's indications for using the device at home.

Cap.2 –INDICATIONS and CONTRAINDICATIONS

2.1 – Indications

The magnetic fields can treat the most common pathologies, mainly the ones related to the bone system and joints. They are especially suitable in the treatment of:

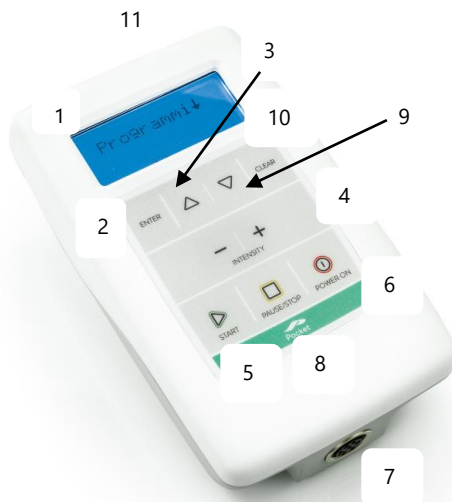
- Recent fractures;
- Pseudarthrosis, arthrosis, arthritis;
- Inflammatory and degenerative arthropathies;
- Osteoporosis;
- Cicatrizations, bedsores;
- Edemas, arteropathies
- Psoriasis

2.2– Contraindications

The side effects of the magnetic fields are the same as the ones of physical therapies that act with the endogenous production of heat:

- presence of metallic fragments;
- neoplasms (tumors);
- tuberculosis
- acute inflammation;
- cutaneous lesions;
- sensitivity alteration;
- pace-maker;
- pregnancy;

Cap.3 – OPERATION



- | | |
|--------------------------------------|------------------------------|
| 1 - Display LCD | 7 - Cable Output |
| 2 - ENTER: selection confirmation | 8 - PAUSE STOP: interruption |
| 3 - Cursor up | 9 - Cursor down |
| 4 - (+)/(-) : intensity regulation | 10 - CLEAR: delete / go back |
| 5 - START: begin the program | 11 - Output for power supply |
| 6 - (I) = ON/OFF: turn on / turn off | |

NOTE: before applying the magnetotherapy, check the side effects and consult a physician.

3.1 – Connection and application of solenoids

Connect the cable of the solenoids to the output of the device. Insert, rotate and tighten the connector into the output. Solenoids must be placed on the area to be treated (they can be applied on the top of stockings or cloths) and can be fixed with the elastic straps (please refer to last page on the manual for pictures).

NOTE: the plain blue side on the solenoids must be placed in contact with the area to be treated. Application with pillow and mattress (extra accessories): just lay the area to treat on them, making contact with the area to treat (ej. head, shoulders, back, basin, feet, etc.); Application with the band (extra accessory): if folded, it can be used to treat joints; if unfolded, just lay the area to treat on it

3.2 – Turning on the device

The device can be used with battery or with power supply (230V). To turn on POCKET EMAVIT, press the key (I) - ON/OFF. The display shows the version of the device and the Selection Menu.

3.3 – Program selection

Use the keys ARROW UP / ARROW DOWN to choose the type of program:

- **Programs** (preset programs ready for use);
- **Free Programs** (free programs to set and save with customised parameters).

Press ENTER to confirm the choice and go to next Menu.

3.3.1 - Preset programs

From **Programs** you can get to preset programs Menu; select the program with ARROW DOWN/UP and confirm with ENTER. You can check the preset programs in chapter 4.1

3.3.2 - Free Programs

Select **Free Program** from the main Menu and press ENTER. To select a new free program, chose the icon “-----“ and press ENTER

You can check the free programs in chapter 5.

3.4 – Start of the therapy

When the display shows the message ">START<", press START to begin the therapy; the intensity of stimulation (G) is already set but can be manually changed with the (+)/(-) keys.

NOTE: if you press START when the solenoid is not inserted, the stimulation stops and the display shows the message "SOLENOID"; once the solenoid is connected, the therapy starts automatically.

3.5 – Setting the intensity

The intensity can be set by the keys (+)(-) to reach the desired one. The minimum increase of intensity is 1 G and the maximum intensity that can be set depends on the applicator used.

NOTE: in case of pain or higher temperatures in the area, lower the intensity with (-) or stop the therapy with PAUSE STOP.

3.6 – Setting timing

It is possible to increase the duration of the program (timer) to perform a longer treatment (few hours or night time, for a maximum of 8 hours). To set the time, press ARROW DOWN/UP of channel 2; each pressing increases or decreases time by 5 minutes.

NOTE: we recommend using the power supply if the device is used for 2-3 hours sessions

3.7 – End or interruption of the session

If you want to stop the device before the program ends, press the key **PAUSE STOP**: once for a break (to continue press **START**); twice to stop the program and to get back to selection Menu.

3.8 – Turning off the device

To turn off the instrument press and hold the key **(I) ON/OFF** for some seconds. After the end of a program, if the device is not used again, it automatically turns off after a few minutes.

3.9 – Symbols on display



Error: wrong operation



Battery supply and charge level



Power supply connected



Connected solenoid



Rectangular magnetic field



Sinusoidal magnetic field

Cap.4 – PRESET PROGRAMS

4.1 – Preset programs' list

POCKET EMAVIT has 25 different preset programs and offers the possibility to set and save up to 5 free programs. The programs are listed in the following chart and can be selected as described in the Chap. OPERATIONS.

N.	NAME	TIME (min)	INTENS. G
1	Fracture	75	96
2	Osteoporosis	90	84
3	Joints	60	104
4	Edemas	40	72
5	Tears	30	102
6	Tendonitis	45	120
7	Lumbago	60	108
8	Blood circulation	60	96
9	Acute pain	60	120
10	Chronic pain	90	96
11	Arthritis	35	48
12	Periarthritis	25	96
13	Artropat.	45	84
14	Small joint osteoarthritis	35	48
15	Large joint osteoarthritis	50	48
16	Coxoarthrosis	40	60
17	Dislocation	60	120
18	Widespread contracture	60	86
19	Contracture	40	62
20	Myositis	60	84
21	Bursitis	40	108
22	Tennis Elbow	40	96
23	Foot tendonitis	30	108
24	Cervical pain	50	48
25	Sciatica	60	120

Cap.5 – FREE PROGRAMS

The free programs can be used for the creation of new therapies or aesthetic treatments (up to 5) with the parameters desired by the consumer.

5.1 – Setting

Select **Free Program** from the main Menu and press ENTER. To select a new free program, chose the icon “-----“ and press ENTER.

Select one Phase with the keys ARROW UP / ARROW DOWN (always begin from Phase 1) and confirm with ENTER to access to the setting of the selected phase. Every parameter can be selected with ARROW UP / ARROW DOWN. Option are selected with ARROW UP / ARROW DOWN and the desired value with the keys (+)/(-). The available values for the parameters of the free programs are in the following chart.

NAME ON DISPLAY	PARAMETER	AVAILABLE VALUES
Emis.	Impulse wave form	Sin. (sinusoidal) Rett (rectangular)
Freq.	Frequency	1-100 step 1 Hz
Mod.	Frequency modulation	CONT./1/2, 1/5, 1/10
Inten	Preset intensity	1-100 (%=0,5 to 60 Gauss)
Time	Program Duration	1-60 minutes
Stop	Phase interruption	YES/NO

To help you choosing the setting in the free programs, please check the guidelines below: in the first column you find the available parameters with the corresponding values, while in the second column you find the corresponding type of application

Wave form (Emiss.)	Usage
Ret. (rectangular)	Short and localised applications
Sin. (sinusoidal)	Long and diffuse applications
Frequency (Freq.)	Effect
1-30 Hz	Over heating/Relaxing/Antistress*
30-60 Hz	Vascular/Restore of altered functions*
60-80 Hz	Analgesic
80-100 Hz	Regenerating
Modulation frequency (F.Mod.)	Reference
0-5 (optional)	Acute Pathologies
6-10 (optional)	Chronic Pathologies
Program Duration (Time)	Goal
Up to 30 min	Analgesic, relaxing effect
30 – 60 min	Regenerating effect
Over 60 min (in more phases)	Consolidation/Osteoporosis/Pseudoarthrosis

* Analgesic or regenerating effect in longer applications (2-4 hours).

NOTE: to realize longer therapies (few hours), please set several phases in order to reach the desired time (max 60 minutes per 4 Phases = 4 hours).

See the following examples for most common applications:

ANALGESIC/ANTINFLAMMATORY

Emiss. – Sin.
Freq. – 80
Mod. – CONT
Inten - 80
Time – 45
Stop – NO

REGENERATING

Emiss. – Sin.
Freq. – 100
Mod. – CONT
Inten - 80
Time – 60
Stop – NO

The last option of the setting Menu is **End**. To save the setting of parameters, please confirm with **ENTER**. You are now back to the phase menu, where you can set the following phase or press **ARROW DOWN** and the enter on one of the options below:

- **Save** - to save the program and digit the desired name (up to 10 characters). Letters can be chosen with the keys + and - and moving the cursor on the following letter with the keys Arrow On / Arrow Down'. At the end press **ENTER** to save the set parameters;
- **Start + ENTER** – to begin the program;
- **Quit + ENTER** – to exit from a free program without saving.

5.2 – Use and modify a free program

A memorized free program can be used as a normal preset program and afterwards it can be modified or cancelled. To access the free memorised programs, go to the selection Menu and press **ENTER** on **Free Prog**. Choose the program using the keys **ARROW UP / ARROW DOWN** and confirm with **ENTER**.

From the operating Menu you can choose one the following:

- **START**: to start the program
- **EDIT**: to change the parameters
- **DELETE**: to cancel the program.

Cap.6 – APPLICATIONS

Always perform the magnetotherapy following your medical prescription. At the end of the manual, you can find some pictures with examples of possible applications; **read carefully the contraindications before using the therapy.**

6.1 – Therapy planning

You can perform the therapy every day, following your medical prescription, until improvement is reached. You can perform the therapy two or three times per day, with 2-3 hours of break between sessions. If the problem persists, please consult your doctor.

6.2 – Position during the sessions

Maintain a relaxed position during each session. Depending on the area of application, the body is lying supine or prone. The position must be maintained during the whole session to facilitate the effects produced by the magnetic field.

Cap.7 – POWER SUPPLY

POCKET EMAVIT can be powered from AC mains with the endowed power supply or from the internal rechargeable battery Ni-Mh 6V - 1,8Ah, with an autonomy of some hours under normal use conditions. The guaranteed autonomy may change depending on the program, intensity and time of application.



For the correct identification of battery and power supply, consult the Chap. "Technical features". Neither the power supply nor the battery must be replaced from not experienced staff. Do not use spare parts which are not provided or approved by the manufacturer.

7.1 – Charge indication

When POCKET EMAVIT is powered by the internal rechargeable battery, the symbol displayed on the display is: "■".

■ - battery charged

□ - empty battery

"▣" – mid charge battery

When the empty battery icon is displayed, please charge the device. If not, the device will emit acoustically a sound to notify the state of battery, and then will automatically turn off.

7.2 – Battery recharge

To recharge the battery of POCKET EMAVIT:

- Turn off the device
- Plug the device in with the power supply.
- Leave the device charging (on the display the battery icon will blink while charging). When full charge is completed (approx. 3 hours), the battery charged icon will appear (Once in a while we recommend leaving the device charging for 8-10 hours)
- Disconnect the power supply

Important points to note:

1. When the battery is presenting low level of charge, but is not completely discharged yet and the battery power indicator shows ‘mid charge battery’ sign, the device should be plugged into the AC mains to recharge. The user can continue using the device, whilst the battery is recharging.
2. If the battery is completely discharged and the battery power indicator shows ‘empty battery’ sign, the device will not work even when plugged into the AC mains. The user must not use the device until the battery is charged up.


7.3 – Battery maintenance

The life of a rechargeable battery depends on the number and type of cycles of charge / discharge. If POCKET EMAVIT is not used, it must be RECHARGED AT LEAST ONCE PER MONTH, under penalty of forfeiture of the guarantee on the battery.

To prolong the life of the battery we recommend discharging it completely (see empty battery symbol) before the recharging.

7.4 – Battery replacement

When the battery's life is significantly lower than it used to be, we recommend replacing it. For this, please refer to an authorized Centre of Assistance

 Never reverse the polarity of the connections of the battery, not to cause the destruction of the electronic circuits.

7.5 – Precautions for use

- (1) Do not throw the exhausted battery with the ordinary wastes. Please take them to the corresponding collection site.
- (2) Do not manipulate/ throw the battery into a fire.
- (3) Do not short-circuit the terminals.
- (4) Avoid sparks or flames, above or around the battery.
- (5) in case of direct contact with liquid leaking from the battery, wash immediately with water.
- (6) In case of direct contact with eyes, wash abundantly with water and consult immediately a doctor.

Cap.8 – SYMBOLS



ATTENTION, CONSULT THE ATTACHED DOCUMENTATION



BF TYPE DEVICE



ATTENTION, CONSULT THE ATTACHED DOCUMENTATION



0476

CE MARKED FOLLOWING THE CEE DIREC. 93/42



WASTE DISPOSAL FOLOWING THE CEE DIRECTIVE 2002/96
AND 2003/108

Cap.9 – MAINTENANCE

9.1 – Solenoids

The connection's cable must be periodically revised to check the possible presence of cracks, possible cause of dispersion of the magnetic fields. Clean the solenoids with a damp cloth.

9.2 – Device and power supply

We recommended cleaning the device and power supply with a damp cloth. Don't use in any liquid, because these devices are not liquid proof (IP20).



9.3 – Power supply replacement

Check periodically the level of wear of the power supply before connecting it. If it's damaged, also only partially, replace immediately the power supply.

9.4 – Immediate maintenance

Immediate maintenance must be performed by New Age Italia or authorized staff if one of the followings occurs:

- external mechanical stress (eg. serious falls);
- strong overheating (eg. if the device has been left close to sources of intense heat);
- some liquids may have been penetrating the device;
- the power supply, or other parts of the device are damaged, broken or missing;
- the functionality of the instrument seems altered.

- | |
|--|
| <p> Use the device with the endowed accessories only</p> <p> Run every year a secur-tester to check the device following the legislation EN60601-1. The useful life of the device is guaranteed only if such maintenance is regularly performed.</p> |
|--|

PLEASE NOTE: we recommend having the device checked by New Age Italia directly or through the authorized retailer where the product has been purchased.

Assistance:

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Cap.10 – WARNINGS

- Pay attention and use carefully the device with solenoids, not to compromise the effectiveness of the treatment.
- Make sure that the electric system is in conformity with the actual safety norms.
- The instrument has degree of protection IP20 (see Chap. "Technical features"). Do not use it close to liquids, because it's not liquid proof.
- Do not use close to cellular telephones (maintain at least one meter of distance).
- The stability of the emission can be affected when operating close (less than 1 meter) to an instrument with short waves therapy or microwaves.
- Do not use with the presence of devices to monitor the patient's vitals
- Do not connect simultaneously the patient with the POCKET EMAVIT and with a surgical instrument High Frequency, to avoid dangers for the patient and for the instrument.
- The device works accordingly to its specifications if the environment is maintained to a temperature between the 5° and the 40° C and with humidity inferior to the 80%. The same conditions must be maintained during transportation and the storage.
- In case of malfunctioning, do not use and request service of reparation.
- Do not operate in proximity of inflammable substances.
- Use only gels and accessory that are endowed with the device.
- It's important to inform the patient on the type of sensation they will experience during the therapy. In case the patient perceive a different sensation, it is important to stop the treatment and to remove the solenoids.
- If the intensity is causing overheating or pain in the treated zone, it is necessary to reduce immediately the intensity of stimulation or eventually interrupt the treatment.
- Keep away from children.

Cap.11 – TECHNICAL FEATURES

11.1 – Power supply

Power supply: Ktec KSAD1200 140W 1EU

PRI: 230V~ 50Hz SEC: 12V- 1.4A

Battery: rechargeable battery Ni-MH 6V-2 Ah

11.2 – Output features

Max intensity of magnetic induction (B): 60 Gauss x 2 (2 solenoids side by side)

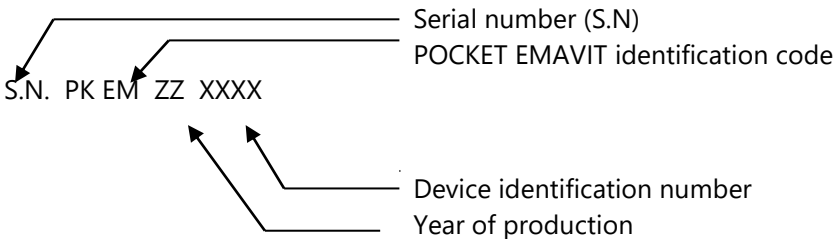
Frequency (f): 1-100 Hz

11.3 – Other features

- Dimensions: 175x105x40h [mm]
- Weight: 400 [g]
- Class: IIa Type: BF
- Liquid Ingress protection code: IP20
- Safety in presence of flammable anaesthetic gas: it's not AP or APG category
- Type of operation of the device: continuous

Built according to the rules:

- EN 60601-1 (1998) – Electromedical devices: Safety General rules
- EN 60601-1-2 (1998) – Collateral norm: Electromagnetic compatibility - Prescriptions and tests
- EN 60601-1-4 (1997): Collateral rule: electromedical programmable systems
- EN 60601-2-5 (2001) – Electromedical devices: particular rules for the safety of the equipments of magnetotherapy
- IEC 601-2-10 (1987) – Electromedical devices: particular rules for the safety of neuromuscular stimulators.
- CEI 62-84 (1997) – Symbols for electromedical devices
- EN60601-1-1 (2002): Collateral rule: Safety prescriptions for electromedical systems.



Cap.12 – BASIC ENDOWMENT / ACCESSORIES

12.1 – Endowment of base

Device

Power supply

N.1 couple of solenoids

N.2 elastic bands

Instructions

Carrying case

12.2 – Accessories and consumables

Couple of solenoids

Elastic bands

Cap.13 – BIBLIOGRAPHY

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MAGNETOTHERAPY APPLICATIONS

EXAMPLES OF APPLICATIONS WITH SOLENOIDS



Fig.1: toothache / trigeminous neuralgia



Fig.2: cervical / headache / arthrosis



Fig.3: shoulder pain



Fig.4: periarthritis / shoulder pain



Fig.5: pectoral pains – asthma / bronchitis



Fig.6: intercostal pains



Fig.7: epicondylitis / tennis elbow



Fig.8: wrist pain / arthrosis



Fig.9: prickle / cold-hot hands



Fig.10: fingers arthrosis-fractures



Fig.11: abdominal-menstrual pains



Fig.12: back pain



Fig.13: lumbago / low back pain



Fig.14: sciatica



Fig.15: lower back pain



Fig.16: cellulitis / skin fat scars



Fig.17: knee sprains / traumas



Fig.18: knee arthrosis / pains / swelling



Fig.19: leg fractures / periostitis



Fig.20: ankle sprains / fractures



Fig.21: metatarsalgia / foot fractures



Fig.22: heel pain / fractures