



EGZO Tech
Luna **EMG**



NEUROREHABILITATION ROBOTS FOR YOUR CLINIC

SUPERIOR, AUTOMATED NEUROREHABILITATION



10x more effective for patients

Luna EMG uses **reactive electromyography** to train the **sensorimotor cortex**. The patient's movement is active - based on bioelectrical signals (EMG) acquired from the patient's muscles. It is especially **effective with clinical weakness patients, allowing 10x more motor unit recruitment** during muscle flexion than manual treatment.



Less manual labour Documentation on the go

- » Thanks to Luna's personalized and automatic training programs, your **patients are engaged, and you do less physical labour**.
- » With **training reports created on the go** you can focus on your patient's recovery instead of working manually.



Up to 4x more revenue Expand your market

- » Luna automates the therapy at your clinic. Bundle up to 4 units and **allow a single therapist to work with 4 patients at the same time!**
- » Luna also expands your market allowing the treatment and diagnosis of severe neurological patients.

REVOLUTION IN NEUROREHABILITATION AND ORTHOPAEDIC THERAPY



Her main indications are:

- » Increase of muscle strength
- » Increase of range of motion
- » Increase of coordination

That means that she is **especially useful with the following patients:**

- » Brain strokes
- » Incomplete spinal cord injuries, spina bifida
- » Multiple sclerosis, ALS
- » Duchenne's, Spinal muscular atrophy
- » Any partial innervation neurological disorders
- » Pelvic floor (incontinence)
- » Bone fractures
- » Post-surgical recovery
- » **and more ...**



„My head almost exploded with happiness! **After so many years, my body had suddenly begun listening to me.**”

Michał Pabian from Krakow,
after 1st treatment on Luna EMG (SMA)



„When my son picked up his rattle, I started crying my heart out. **He wasn't able to do that in 6 months.**”

Agata Czuj with her son Radek,
after 5th treatment on Luna EMG (SMA)

Every patient needs personalized care!
With Luna EMG's exchangeable extensions
**you will be able to provide the best care
possible in various settings!**
Explore the possibilities.

ALL IN ONE SOLUTION FOR KINESIOTHERAPY

Elbow flexion / extension

»» 5 pronation / supination positions available





**Elbow pronation /
supination**



**Shoulder flexion /
extension**



**Shoulder internal /
external rotation**

**Knee flexion / extension –
sitting**



**Knee flexion / extension –
prone lying**



Hip flexion / extension

- » Maximal torque restriction
- » Available while standing



LOWER LIMB THERAPY



Hip abduction / adduction – side lying

- »» Maximal torque restriction apply
- »» Available while standing



Wrist deviation

» Available in 4 sizes



Steering wheel – closed kinematic loop



Pouring water from a cup

Lateral bending



Single arm row



Single arm press



UPPER LIMB AND HAND THERAPY



Also supported:

- »» Wrist curl
- »» Finger flexion
- »» Screwdriver – two sizes

Key

»» Available in two sizes

TREATMENT THROUGH ALL STAGES OF RECOVERY

EMG CONTROLLED EXERCISES FOR CLINICALLY WEAK PATIENTS

With Luna, you can now start an **active-assistive training for every innervated patient**, even when the contraction is only visible on the EMG and not palpable. Thanks to the movement being controlled by the electromyogram, the **action-reaction pattern of the sensorimotor cortex is strengthened** considerably.

Use different extensions and surface muscles for:

- »» Trigger and hold single channel concentric and eccentric exercises
- »» Trigger and release single channel concentric and eccentric exercises

FORCE CONTROLLED AND DYNAMICALLY CHANGING RESISTANCE FOR EARLY AND LATE STAGE RECOVERY

With force sensitive trainings, you'll **facilitate all patients, starting with weight relieve and up to 60 Nm** of resistance. You can use the following exercises:

- »» **Isokinetic** with fixed maximal velocity: **dynamic antagonist reversal, proprioception**
- »» **Isotonic** with fixed one directional torque
- »» **Isometric** with fixed limb position
- »» **Elastic** simulation acting as a spring or band

PASSIVE MOVEMENT FOR PARALYSIS AND STRETCHING

Don't hesitate to use Luna's passive movement capabilities for **stretching** and for patients with **spasticity** or **rigidity**. You can use:

- »» Continuous passive movement with constant torque
- »» Progressive passive movement with incremental range of motion

EMG BIOFEEDBACK

Utilize the integrated electromyography to **train any surface or pelvic floor muscles**, even **without extensions**. You can focus and **train all motor units: fast-fatigable, fatigue-resistant and slow**.

10 sec to insert an extension and repeat a training

4 standard extensions for major joints

9 extensions for occupational therapy



NEVER AGAIN WILL THERAPY BE BORING!

Forget about hard times treating children!
Use Luna's **built in rehabilitation games to enhance the experience** of physical therapy and **spike your patient's involvement**. Works perfectly for both kids and adults.



Luna's **Space Shooter** and **Bubbles** games can be used with:

- »» **Concentric, isokinetic exercises** with any extension and any limb
- »» **EMG Biofeedback exercises** with surface or pelvic floor electrodes

EXPAND YOUR DIAGNOSTIC SERVICES

With Luna EMG you can now supply your patients with **objective, data driven diagnosis**.

With the built in 6 channel electromyogram, integrated torque sensor and position measurements, Luna will allow you to provide specialized, clinical evaluations:

- »» **Innervation diagnosis** and **motor unit recruitment** through surface and pelvic floor electromyography
- »» **Dynamometric strength** measurements - maximal torque
- »» Range of motion measurements (passive, assisted and active)
- »» **Quantifiable spasticity and rigidity** during passive movement
- »» Coordination (during proprioception and games)
- »» Muscle activation sequence and compensation

Luna generates **PDF reports** and **CSV exports** (comma separated values) from training sessions, that can be used as the patient's history file. With it, you can provide the healthcare insurance companies or national healthcare systems with the **evidence that you and your clinic delivers the results they are paying for**.



Luna EMG

INCONTINENCE TRAINING WITH PELVIC FLOOR EMG

Adult 2 lead vaginal electrode

- » Excellent for movement
- » Compatible with 3rd party electrostimulation



Thanks to the integrated EMG functionality you can use Luna EMG to help patients suffering from **incontinence** using special **pelvic floor electrodes!** It will expand your services to patients with **incomplete spinal cord injuries** as well as **women after childbirth** and the **elderly.**

Adult 3 lead vaginal electrode

- » Doesn't require a surface EMG electrode
- » Compatible with 3rd party electrostimulation



Pediatric 2 lead vaginal electrode

- » Compatible with 3rd party electrostimulation



Adult 2 lead anal electrode

- » Excellent for movement
- » Compatible with 3rd party electrostimulation



Adult 3 lead anal electrode

- » Doesn't require a reference surface EMG electrode
- » Compatible with 3rd party electrostimulation



TECHNICAL SPECIFICATION_N

REGISTRATION SPECS

Protection class against electric current	class I
93/42/EEC medical device classification	class IIa
European Union EC/CE certifying Notified Body	TÜV NORD Polska Sp. z o.o. (CE 2274)

SIZE SPECS

Total Length	420 mm
Total Width	600 mm
Total Height	1135 - 1485 mm
Weight (exc. Extensions)	max 90 kg
Maximal applied weight (per extension)	30 kg
Base Height	97.5 - 122 mm
Wheel diameter	Ø 75 mm
Lifting column stroke length	350 mm
Head's rotation axis height	720 - 1070 mm

MECHANICAL SPECS

Head's rotation limits	-270 - 270 °
Head's rotation position accuracy	± 2 °
Maximal Head's rotation torque	60 Nm
Torque measurement accuracy	± 0.2 Nm
Head's rotation speed (no load)	10 - 50 °/s
Lifting column stroke accuracy	± 1 mm
Maximal Lifting column's speed (no load)	10 mm/s
Operation type	continuous, software controlled

ENVIRONMENTAL SPECS

Usage temperature	10 - 40 °C
Maximal temperature variation in 12h	20 °C
Usage humidity	5 - 95 % RH, not condensed
Cooling	convictional
Maximal usage altitude	3000 m a.s.l.
Liquid ingress and solid particle protection	IPO

ELECTRICAL SPECS

Power supply	200 - 240V ~ 50 Hz grounded
Current required	max 2.5 A at 240 VAC, exc. tablet
Bioelectric accuracy	± 1 µV
Applied part types	B, BF
Fuses used	4 A

Luna EMG is **required by warranty to have continuous Internet connection** for automatic software updates and maintenance, especially related to safety, as well as for customers support.

Use the software for personalisation and automatic record keeping

Diversify exercises with different extensions

Adjust the height to fit your patients

Use with most physiotherapy seats and beds





GET AHEAD OF THE COMPETITION!

SCHEDULE A LUNA EMG DEMO TODAY AT EGZOTECH.COM

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