HAIDER®
BIOSWING

BIOSWING

Sensorimotor therapy systems

BIOSWING

Sensorimotor therapy systems

Dear colleagues, welcome!

Pain in the musculoskeletal system, particularly in the back and the peripheral joints, is the most common reason people visit us in our neuro-orthopaedic practices. But organic damage caused by inflammation or tissue modification is rarely the cause of the pain. In most cases, the pain and restricted mobility are caused by faulty muscle tone and muscle tension based on sensorimotor deficits resulting from a lack of movement. More than 80% of patients experiencing pain suffer from these disorders of the nervous and muscular system!

In more than 80% of patients experiencing pain, there is a functional cause!

Such disorders require targeted therapy, as a musculoskeletal system is only as good as the central nervous system controlling it. This determines the quality of the system made up of musculoskeletal system and nervous system, referred to as a locomotor system. And this locomotor system is highly complex: over 400 muscles that support the skeleton (i.e. that stabilise the bone system in the gravitational field) must be controlled by the central nervous system with the right intensity and at the right time. Controlling means not only that the muscle needs to be contracted but also that it must undergo the correct type and amount of contraction in harmony with all other muscles.

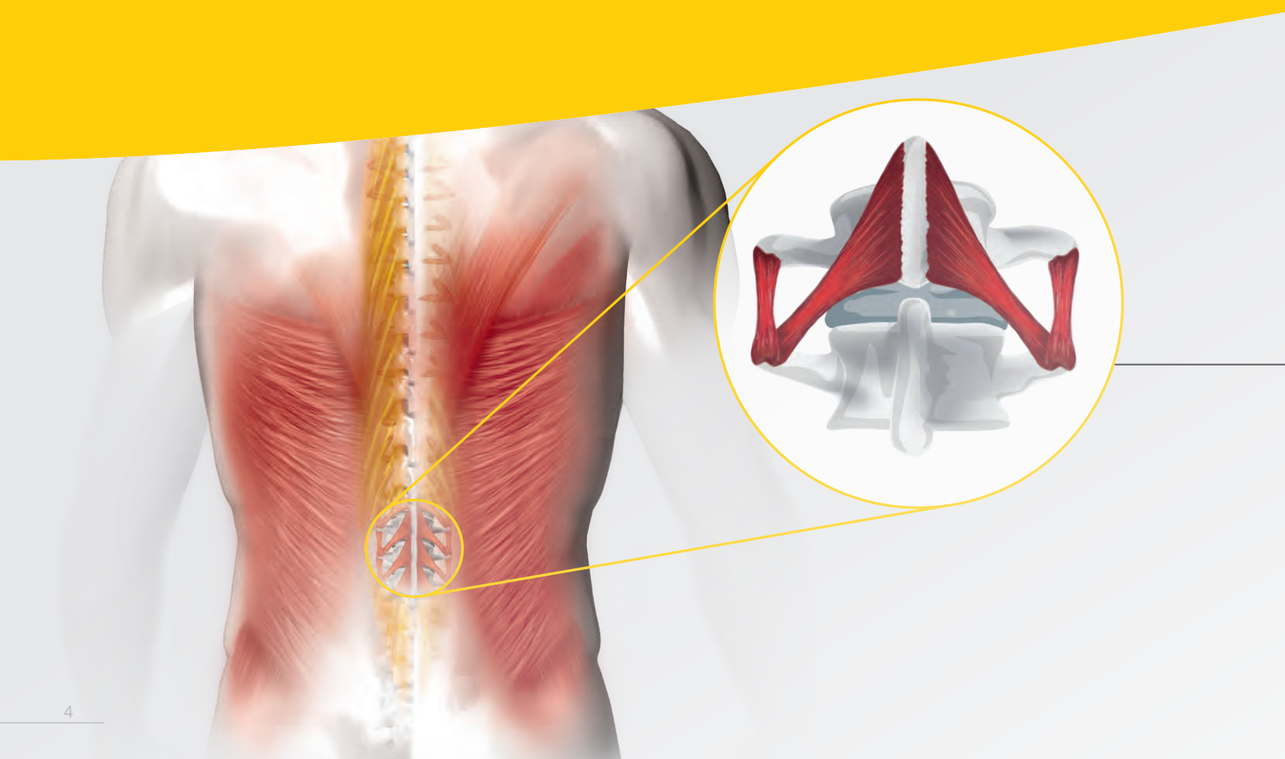
To better explain and understand these interrelationships, we will draw on two specific motor functions: the postural and phasic functions.

- The postural function serves to maintain one's posture in space without uneconomical irregular movements; it is the body stabilisation function.
- The phasic function is the change of one's position in space – in other words, the body movement function.

The two functions necessarily complement each other, as every movement requires targeted stabilisation from the postural function before an externally visible movement can be performed. And every movement – even that of stabilising a particular posture in the gravitational field – supplies information from the receptors of our musculoskeletal system to our central nervous system. This input is processed and modified centrally and results in an output being sent to the corresponding muscles. This creates a control loop in which information circulates and any changes in the system are continuously updated.

Our brain works like a high-performance computer. In milliseconds, countless data is produced, evaluated and entered into stored program structures. Without this data, our central nervous system would not be able to function, and central motor control would be impossible.

Example of a control loop in training with the BIOSWING Propriomed®. The control loop is a sequence of actions in which a controller – i.e. our central nervous system – continuously corrects deviations from nominal values as specified in the movement programs.



Our locomotor system is highly complex. A clear example of this is the layers of muscle in the human torso. The various muscle layers perform different tasks (stabilisation and coordination of the segments at a deep level, movement of the torso at surface level) and require correspondingly complex open-loop and closed-loop control.

Our central nervous system requires a constant flow of data from our various receptors!

This imposes tough requirements on a therapy process and means that two conditions have to be fulfilled:

- The therapist must have a high level of expertise.
- The therapy system must demonstrate excellent system quality.

Several thousand hospitals, practices and rehabilitation facilities have opted for the BIOSWING® therapy system, with its targeted damping of instabilities, and are using it to provide sustainable and highly successful therapy. Our MicroSwing measurement system can be used to provide an objective record of your patients' coordinative abilities at any time and allows you to document the progress of your therapy!

Our therapy solutions are designed not only with the well-being of your patients in mind, but also your own well-being: our BIOSWING® Foxter therapy stool contributes in no small part to a healthy working environment. We have incorporated the BIOSWING operating principle into the stool, allowing you to experience a constant fine stimulus to the deep core stability muscles of your torso as you provide therapeutic services. Incredible comfort!

I hope you enjoy using our sensorimotor therapy systems and will gladly provide advice and support as needed!

Yours, Christof Otte

Graduate sports scientist &
alternative practitioner, pain therapist
Motion scientific management of
HAIDER BIOSWING GmbH

BIOSWING

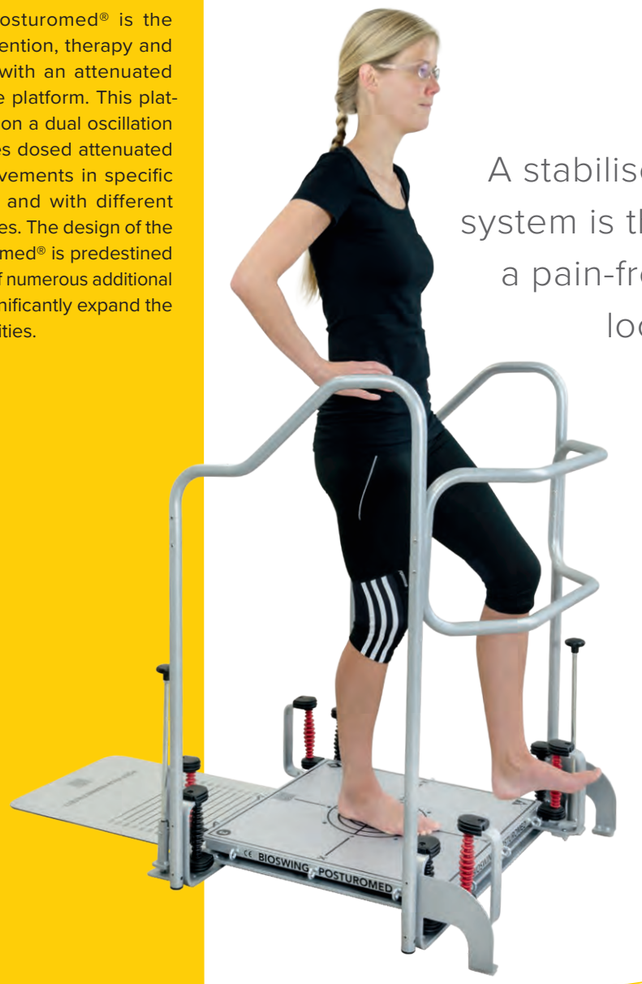
Posturomed®

stable movement patterns

24 YEARS
POSTUROMED
1995 - 2019

The BIOSWING Posturomed®

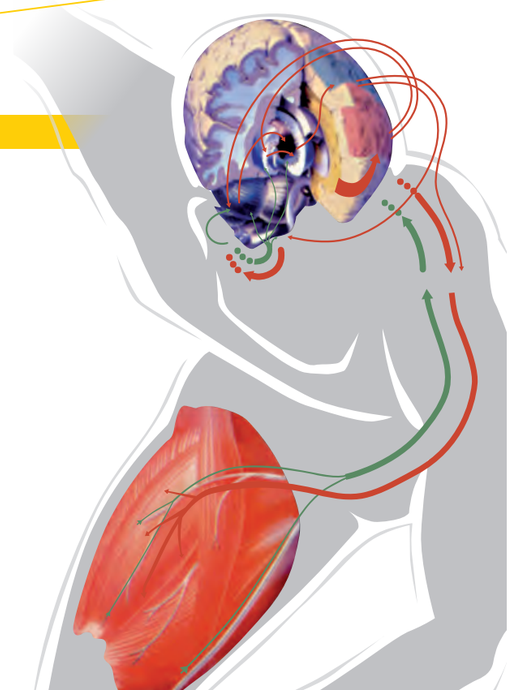
The BIOSWING Posturomed® is the sensorimotor prevention, therapy and diagnosis device with an attenuated oscillating unstable platform. This platform is suspended on a dual oscillation system that enables dosed attenuated compensation movements in specific frequency ranges and with different oscillation amplitudes. The design of the BIOSWING Posturomed® is predestined for the connection of numerous additional modules, which significantly expand the application possibilities.



A stabilised sensorimotor system is the foundation of a pain-free and powerful locomotor system.

The effect

With the dosed provocation of the sensorimotor control and regulation in a closed chain of movements on the BIOSWING Posturomed®, postural actions and reactions can be optimally developed. This activation of the segmental, sectoral and polysegmental coordination stabilises the supporting joints and the spine. A stabilised sensorimotor system is the foundation of a painfree and powerful locomotor system.



The BIOSWING Posturomed® models

For stationary use:

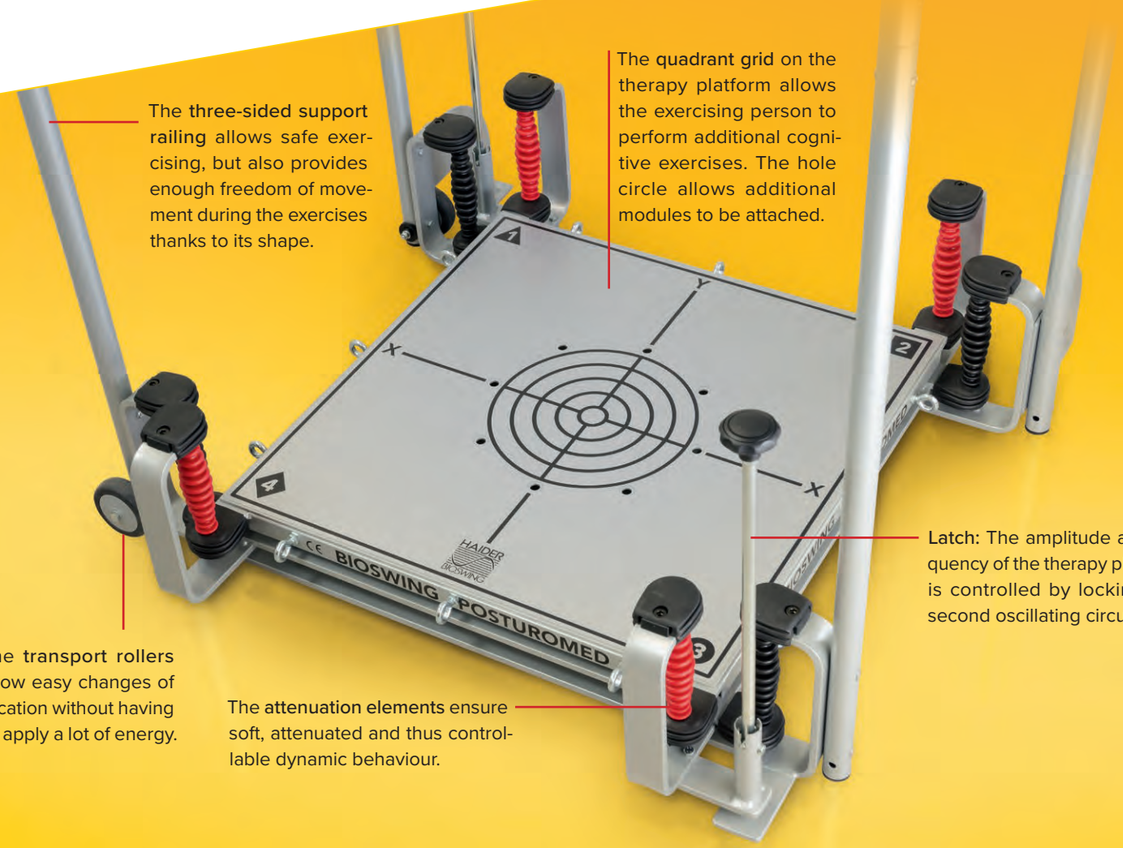
BIOSWING POSTUROMED® 202

The BIOSWING Posturomed® 202 with a therapy platform of 60 x 60 cm, a three-sided railing with transport rollers, latch extensions and an intervention pull with 12 screw-on eyelets. Approved Class 1 medical product (EU).

For mobile use:

BIOSWING POSTUROMED® compact

The Posturomed® compact with a therapy platform of 40 x 40 cm and a fold-down railing on one side with carrier handle, adjustable feet and large transport rollers. Approved Class 1 medical product (EU).



The **three-sided support railing** allows safe exercising, but also provides enough freedom of movement during the exercises thanks to its shape.

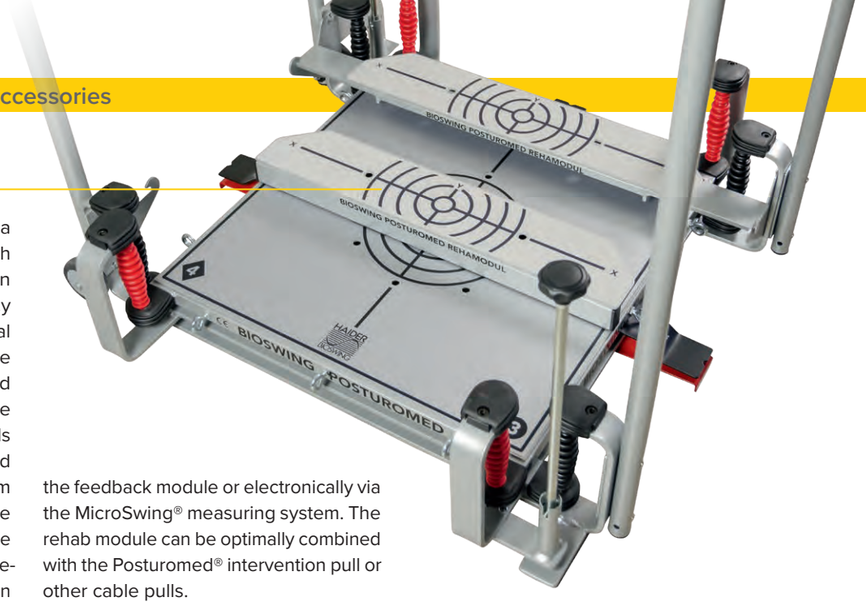
The **quadrant grid** on the therapy platform allows the exercising person to perform additional cognitive exercises. The hole circle allows additional modules to be attached.

Latch: The amplitude and frequency of the therapy platform is controlled by locking the second oscillating circuit.

The **transport rollers** allow easy changes of location without having to apply a lot of energy.

The **attenuation elements** ensure soft, attenuated and thus controllable dynamic behaviour.

The BIOSWING Posturomed® accessories



The rehab module

Stabilisation exercises that focus on a certain direction can be performed with the rehab module in a closed chain of movement in the higher frequency muscle synergism. Thanks to the partial relief of the lower extremities, the rehab module can already be applied at an early stage of the postoperative rehabilitation phase. The patient stands with one leg on a stably supported fixed element above the therapy platform of the Posturomed® 202, and with the other leg on the unstably supported slide element. Visual feedback on the maintenance of the correct movement direction is required for optimum application of the rehab module: either mechanically via the feedback module or electronically via the MicroSwing® measuring system. The rehab module can be optimally combined with the Posturomed® intervention pull or other cable pulls.

Device connection: Posturomed® 202

The contact module

The contact module supports the quality of motion in your patients. Rubber bands of various lengths are attached at a variety of heights and in various orientations, offering your patients tactile stimuli for highlighting or restricting deflections in movement.

Device connection: Posturomed® 202

The step mat

The step mat, originally developed for the Posturo-CyberneticsTest with the MicroSwing measurement system, is used for the standardised performance of all exercises that start with the patient positioned in front of the BIOSWING Posturomed®. It enables, for example, all mounting motions to be performed with a constant and reproducible stride length.

Device connection: Posturomed® 202 (wide mat) and compact (narrow mat).

The OSG module

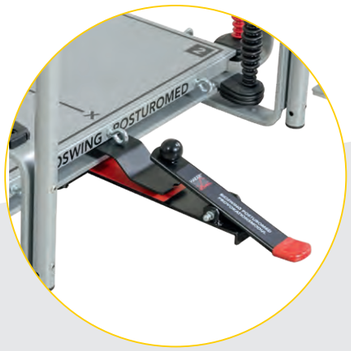
With the OSG module, the sensorimotor stimulating movement impulses of the BIOSWING® training and therapy platform are also used outside of the horizontal level. The stabilisation capacity of the ankle joints is provoked around a tilt axis that can be locked at 45° angles. To avoid contraindicated movement deflections, the tilt of the 32 cm large platform can be limited to 7°, 10°, 15° or 20°, both symmetrically and asymmetrically.

Device connection: Posturomed® 202 and compact

The seat module

The seat module, which can be continuously adjusted in height from 38 to 51 cm, supplements the BIOSWING Posturomed® with the option to perform torso and legstabilising exercises while seated. It can be used in traumatology and orthopaedics, geriatrics and neurology, amongst other medical disciplines. Especially in early postoperative phases of the lower extremities, in which the supporting joints may not be put under any strain or can only be partially strained, synergistic co-activations of the torso can already be worked out with the seat module.

Device connection: Posturomed® 202 and compact



The provocation module

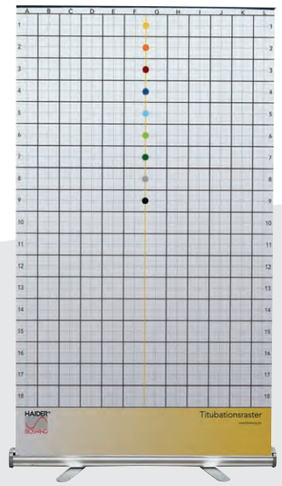
The provocation module is used for the standardised deflection of the Posturomed® therapy platform for direct feedback training. The provocation module deflects the therapy platform by 10, 20 or 30 mm and maintains this until released by the therapist's foot. With its colour design, the provocation module can also be used as a feedback module.

Device connection: Posturomed® 202 and compact

The feedback module

The mechanical feedback module gives the patient as well as the therapist better control of the motions of the BIOSWING Posturomed® platform with prescribed and to-be-maintained movement directions. This extension is especially expedient when installed on cable pulls or in the therapy with the rehab or seat module.

Device connection: Posturomed® 202 and compact



The titubation grid

For safe assessment of the exercising person's (partial) body sways („titubation"), the titubation grid (120 x 208 cm) is installed behind the BIOSWING Posturomed®. When using the MicroSwing® Posturo-CyberneticsTest or other measuring methods, the titubation grid ensures correct maintenance of the direction of movement thanks to the standardised alignment of the coloured dots. Also ideal for photo documentation. The titubation grid is also available as a suspended wall panel.

MUDr./Univ. Prag
Eugen Rašev

Specialist physician for rehabilitation and physical medicine – invented, and lectures in, the concept of postural pain therapy

„The BIOSWING Posturomed and postural pain therapy have become indispensable parts of physiotherapy. Since the mid-1990s, several thousand practices and rehab centres have used the BIOSWING Posturomed for stabilisation, pain treatment and rehab with great success. The crucial factor is the pulses from the swinging platform, which can be administered with accuracy and thus make the therapy more efficient and targeted.“

Overview of the BIOSWING Posturomed® module connections:

	Posturomed® 202	Posturomed® compact
Rehab module	✓	
OSG module	✓	✓
Seat module	✓	✓
Contact module	✓	
Step mat	✓	✓
Provocation module	✓	✓
Feedback module	✓	✓
Titubation grid	✓	✓

MPG-certified:

The BIOSWING Posturomed® 202 and the BIOSWING Posturomed® compact along with all add-on modules are Class I medicinal devices and can be disinfected by wiping with all standard disinfectants in accordance with the VAH (Association for Applied Hygiene) list – for your safety and that of your patients.

More information on the BIOSWING Posturomed® can be found at

www.bioswing.de/therapiesysteme

In-depth therapy instructions can also be downloaded from this link.

BIOSWING

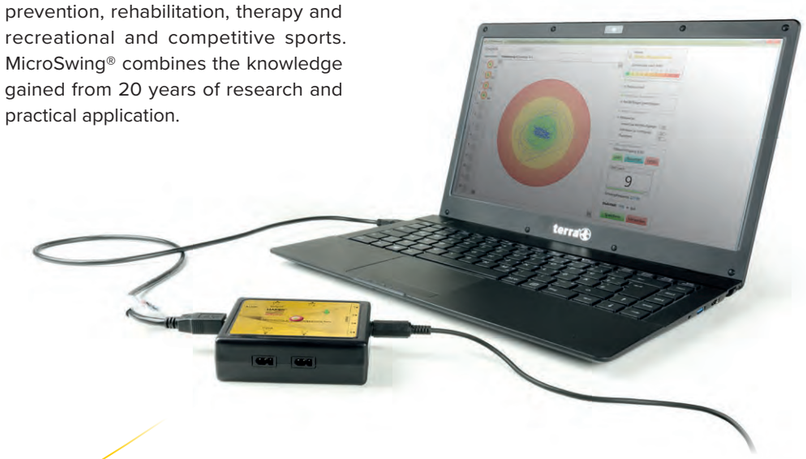
MicroSwing®

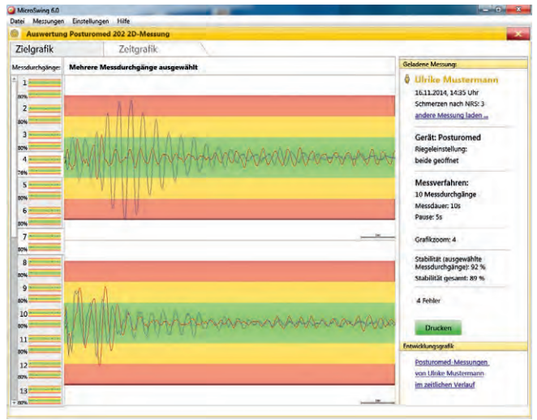
evaluation & training

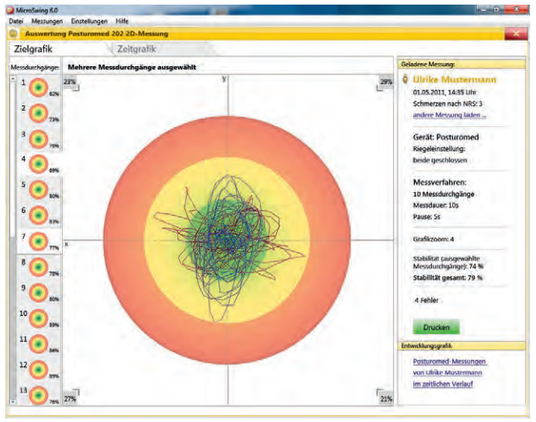
20 YEARS MICROSWING 1999 - 2019

The measurement system

The software and hardware of the MicroSwing® measurement system form a highly sensitive measuring unit for the BIOSWING Posturomed 202 and compact. The unit allows accelerations of the therapy platform to be measured, recorded, assessed and exported. The Class I medicinal device includes accessible measurement and training programmes and scientifically evaluated standardised test procedures for indirect quantitative and qualitative assessment of motor skills of people involved in prevention, rehabilitation, therapy and recreational and competitive sports. MicroSwing® combines the knowledge gained from 20 years of research and practical application.







The MicroSwing software

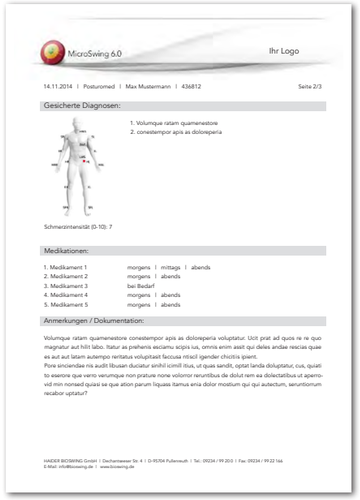
The software UI is clear with a logical structure, so it can be navigated by the user intuitively – the widespread acceptance in day-to-day clinical practice is testimony to this.

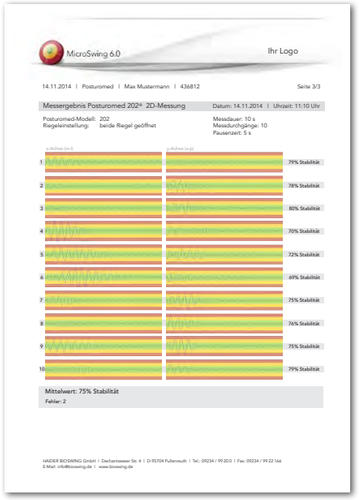
When entering your patients into the MicroSwing® software for the first time, you have many options to choose from for storing patient data. In addition to retrieving the main personal data, medications and pain intensities, you can call up specific information such as sensorimotor deficits.

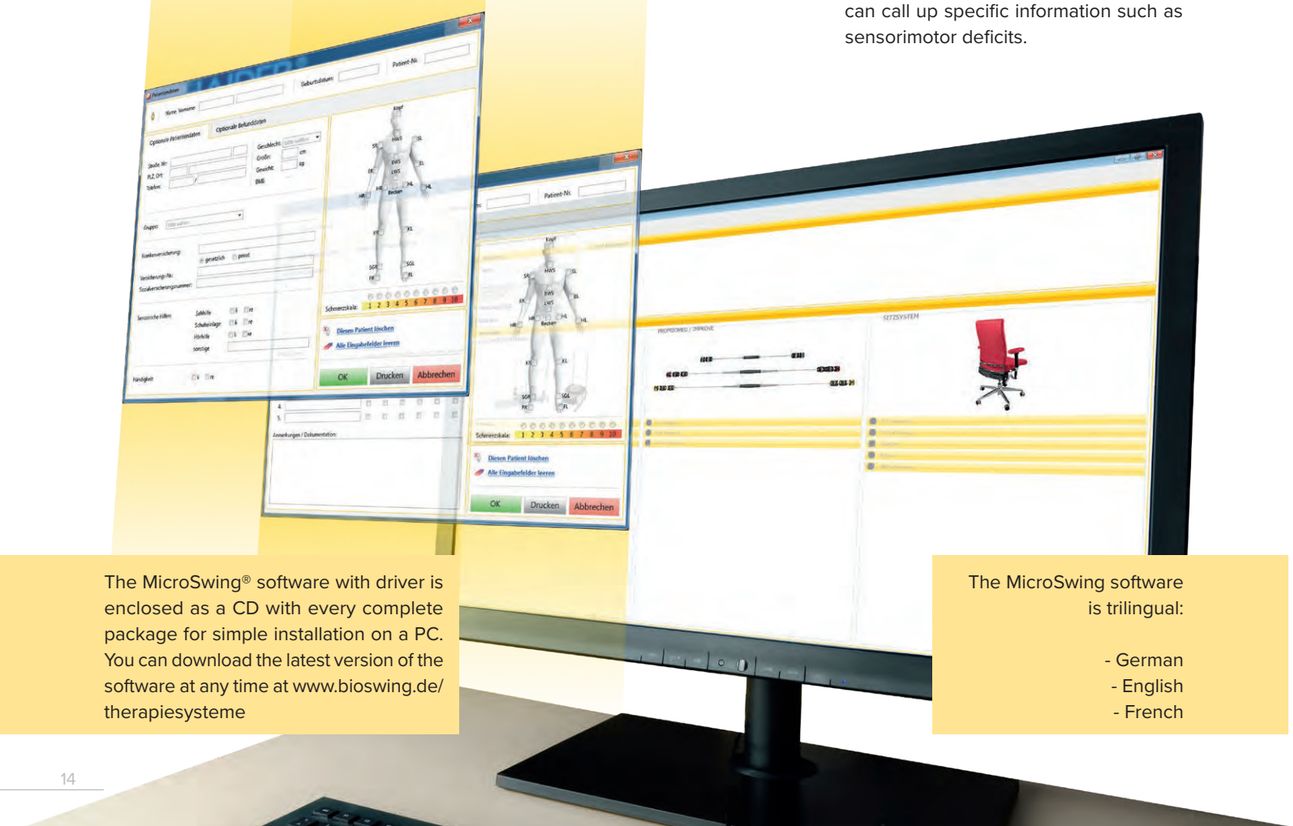
All saved measurements are provided in graphic and numerical form to enable you to assess the findings. For the numerical assessment, you are given a stability percentage which has been processed mathematically, and for export to other formats or statistics programs, you have the choice between raw data that is unprocessed and raw data processed in accelerations. A GDT interface enables data export to other EDP systems.

In addition to the assessments of the individual measurements, chronological progress documentation including a pain curve gives you an overview of your patients' therapy progress.

All data and measurements can be printed out for you and your patients.







The MicroSwing® software with driver is enclosed as a CD with every complete package for simple installation on a PC. You can download the latest version of the software at any time at www.bioswing.de/therapiesysteme

The MicroSwing software is trilingual:

- German
- English
- French

The MicroSwing Posturomed complete package

Fig. Example of measuring station: The complete package does not include the Posturomed®, titubation grid, PC, PC desk or stool.

This complete package is made up of the hardware and software components needed for the measurement processes with the Posturomed®. The individual components:

- MicroSwing® measuring box 6.0
- Wired MicroSwing® sensor 6.0
- MicroSwing® sensor holder
- MicroSwing® cable protector 100 cm
- MicroSwing® step mat

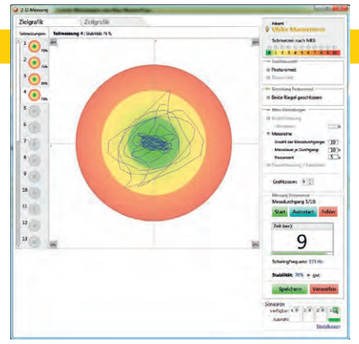
Dr. Klaus Weiß

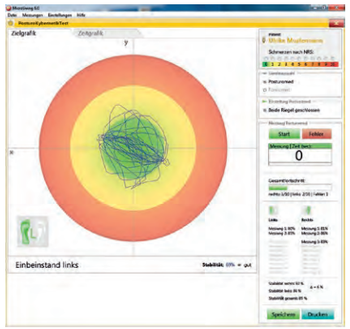
Research assistant at the University of Heidelberg, teaching and research in movement therapy in the areas of prevention and rehabilitation

„The MicroSwing measurement system makes it possible for me to evaluate dynamic standing stability on the Posturomed and has proved its worth over many years in both my scientific and my practical work. Thanks to the included interface, data export to external analysis software is quick and easy. With its visual feedback training function, MicroSwing is also in constant use in therapy and training with the Posturomed.“

The measurement processes

Two measurement programs are available for the Posturomed®: firstly, **2D measurement as an open measurement program** for implementing your own measuring methods. In this program, you can specify the number of measurements, the measuring period, the pause times and other parameters.

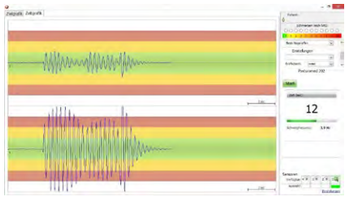




Secondly, the **Posturo-CyberneticsTest (PKT)** provides a standardised and scientifically evaluated measurement process for indirect assessment of the stability skills of your patients.

The feedback training

Alongside the measurement programs, MicroSwing provides the option of visual feedback training. In this case, the patient has to make the therapy platform swing in a particular direction with a specified type and number of swings, rather than stopping the therapy platform from moving and keeping it still. The graphical representations can be used to track and check the quality and quantity of the training in real time. The MicroSwing feedback training is particularly suitable for work with the Posturomed rehab module, but also for the sitting and OSG modules.



MPG-certified:

The BIOSWING® MicroSwing® measuring system is a Class I medicinal device – for your safety and that of your patients.

More information on the MicroSwing® measuring system can be found at

www.bioswing.de/therapiesysteme

Our in-depth user manual can also be downloaded from this link.

BIOSWING

Propriomed®

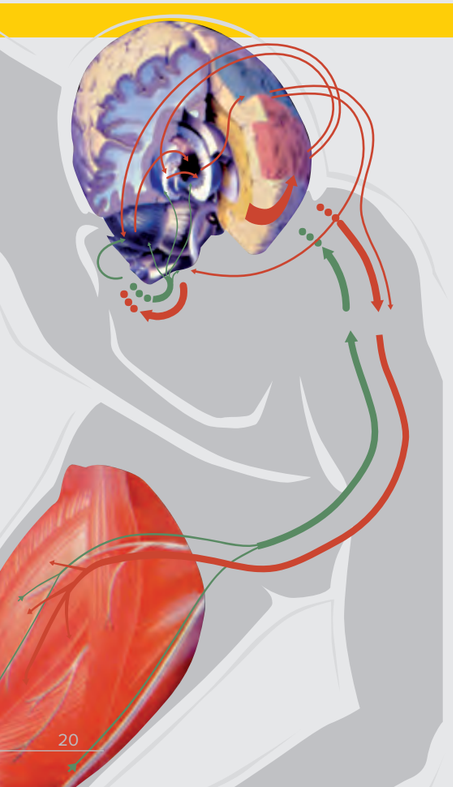
coordinated movement patterns

The BIOSWING Propriomed®

The Propriomed® is the sensorimotor vibrating rod with attenuation elements and easy-to-adjust frequency controllers. The vibration frequencies and thus the degree of difficulty of the exercises can be adjusted individually and continuously symmetrically as well as asymmetrically.

The BIOSWING Propriomed® –
Your practice partner
in sensorimotor therapy

The effect



Vibrations with the Propriomed® lead to adjustment effects in several body systems. The dosed rhythmic stimulations dynamically activate the muscle synergism and improve the neuromuscular response time. The function of the muscles in the arms, shoulder girdle, in the entire torso and in the pelvic girdle are stimulated. Longer-term exercise can not only improve motor control and the general body posture, but also normalise the elasticity of the connective tissue and the regulation of the vegetative nervous system. The training intensity is influenced, amongst other things, by the vibration frequency, the vibration level and the duration of vibration.

The BIOSWING Propriomed® models

The BIOSWING Propriomed® 1

With its frequency spectrum from 3.0 to 4.0 Hz, the therapeutic beginner's rod covers the relevant frequencies for most patients undergoing neuro-orthopaedic rehabilitation. The multi-refined spring steel rod is 190 cm long and features two continuously adjustable frequency controllers on each end. Yellow colour marking, Class 1 medical product (EU).

The BIOSWING Propriomed® 2

The therapeutically more demanding vibrating rod covers the relevant frequencies for patients with a good motor coordination with its frequency spectrum from 4.0 to 5.2 Hz. The multi-refined spring steel rod is 165 cm long and features two continuously adjustable frequency controllers on each end. Red colour marking, Class 1 medical product (EU).

The BIOSWING Propriomed® 100

The special vibrating rod for hand, elbow, shoulder and cervical spine rehabilitation. Designed for low vibration amplitudes with a frequency spectrum from 4.8 to 6.0 Hz, this lightweight model features a frequency controller on each side and three multi-refined spring wires wrapped around each other. This spring-wire wrapping ensures attenuated vibration behaviour through the generated friction, which allows for this model to be applied in an early stage of the rehabilitation phase. It can also be used in the rehabilitation of children thanks to its low weight and its rod length of only 100 cm. Grey colour marking, Class 1 medical product (EU).

Device details

Removable, robust and soft **safety end caps**

The easily adjustable **frequency controller** makes it possible to change the vibration frequencies and to make the rod vibrate symmetrically as well as asymmetrically.

The multi-refined **spring steel** ensures calm, non-whipping vibration behaviour.

The **attenuation elements** guarantee smooth and even vibrating without extreme load peaks at the reversal points.

The high-quality, anti-allergenic **grip that can be disinfected by wiping** allows for comfortable one- and two-handed gripping.

Priv.-Doz.
Dr. phil. Christian Puta

Graduate sports scientist and head of research at the department for sports medicine and health promotion at Friedrich Schiller University Jena, Germany

„Research at Jena University has shown that impaired coordination is a main cause of chronic back pain. This results in certain requirements for the devices used in diagnosis and therapy: specificity, sensitivity, control. The BIOSWING Propriomed makes it possible to identify disorders specifically and also to design efficient, sensitive and adjustable therapy.“

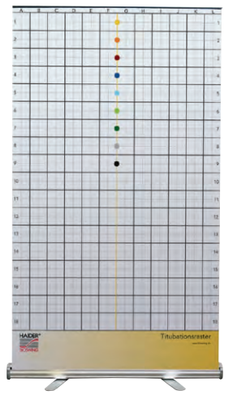
The BIOSWING Propriomed® accessories

The rack

For optimum suspended storage for up to 20 Propriomed®. The rack made of coated steel is movable and can be locked with a bayonet catch and a padlock for safeguarding of the rods (not part of the delivery).

The wall mounts

For optimum suspended storage for up to four Propriomed®. The wall mount made of coated steel is available in a single and in a four-rod version.



The exercise chart

This textile exercise chart (DIN-A1 format with aluminium strips and suspension attachment) illustrates the large variety of exercises and the physical device properties of the three vibrating rod models. The displayed exercise modules show how you can vary and combine the exercises using the BIOSWING Propriomed® with large methodical diversity. This ensures almost unlimited variants of your therapy exercises!

The titubation grid

The titubation grid (120 x 208 cm) assists you with the assessment of the titubation and asymmetries of the body or body parts of the patients standing in front of you in a clinically better and safer way. Also ideal for photo documentation. The titubation grid is available as either a free-standing roll-up or a hanging wall panel.

MPG-certified:

The BIOSWING Propriomed® are Class I medicinal devices and can be disinfected by wiping with all standard disinfectants in accordance with the VAH (Association for Applied Hygiene) list – for your safety and that of your patients.

More information on the BIOSWING Propriomed® can be found at

www.bioswing.de/therapiesysteme

In-depth therapy instructions can also be downloaded from this link.

BIOSWING

Foxter®

your personal health coach
while therapy is in progress

The BIOSWING Foxter®

The BIOSWING® Foxter is the sensorimotor therapist stool with an attenuated pendulum seat. The seat rests on a seating system that enables dosed attenuated compensating movements in a specific frequency and amplitude range. This BIOSWING® 3D seating system® gives you a steady hand for your therapy and provides dynamic training of your pelvic and torso coordination at the same time.

The **ergonomically shaped seat** offers comfortable support, and its upholstery is neither too hard nor too soft. The artificial leather seat cover meets all requirements for medical use.

The **attenuation elements** ensure soft, attenuated and thus unconsciously controllable oscillating behaviour of the seat.

The 49 cm small **five star base** allows substantial agility when rolling and enables working at a close distance to the therapy table.

Thanks to the texture of their rolling surfaces, the smooth-running 6.5 cm **wheels** that brake when load is taken off are ideally suited for all smooth and short-fibre textile floors in the health care sector.

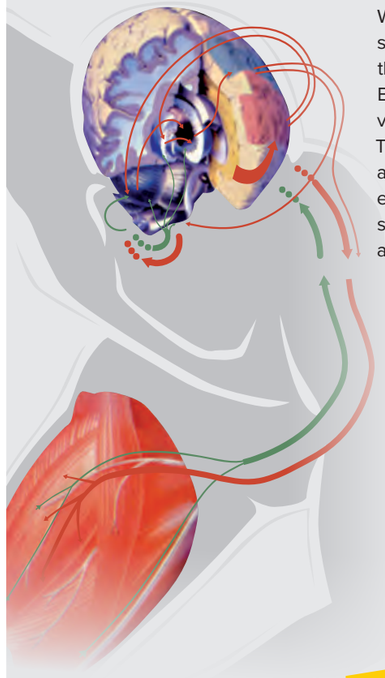
The equipment

- 3D seating system®
- Ergonomically shaped seat with stabilising upholstery
- Seat height continuously adjustable from 44 to 57 cm (measurement in accordance with DIN standard/ loaded)
- Aluminium-silver five star base, 49 cm
- Wheels with brake function when not seated, grey, soft, 6.5 cm
- Artificial leather upholstery cover in different colours with the following characteristics:

Long service life
Lightfast
Tear-proof
Easy-care

Complies with the medical products law DIN EN ISO 10993-5+10
Resistant to disinfectants
Resistant to abrasion DIN EN ISO 5470-2: > 50,000 Martindale

The effect



With the dosed provocation of the sensorimotor control and regulation through even the slightest motion on the BIOSWING® Foxter, you can optimally develop your postural actions and reactions. This activation of the segmental, sectoral and polysegmental coordination stabilises your spine. A stabilised sensorimotor system is the foundation of a pain-free and powerful locomotor system.

Uschi Baier-Wolf

Physiotherapist, alternative practitioner, osteopath, first chairperson and head of the Department of Training at the International College of Applied Kinesiology Germany (ICAK-D)

„For over 25 years, I've been sitting on HAIDER BIOSWING stools in my practice. The system's harmoniously reverberating oscillations give me the best possible support in any posture and position as I treat my patients. Even ultra-fine palpations, in connection with craniosacral therapy, for example, are enabled with ease, as the integrated seat mechanism gently absorbs the vibrations of my body and balances them out effectively. You could say that I've become a real fan of the BIOSWING.“

The colours

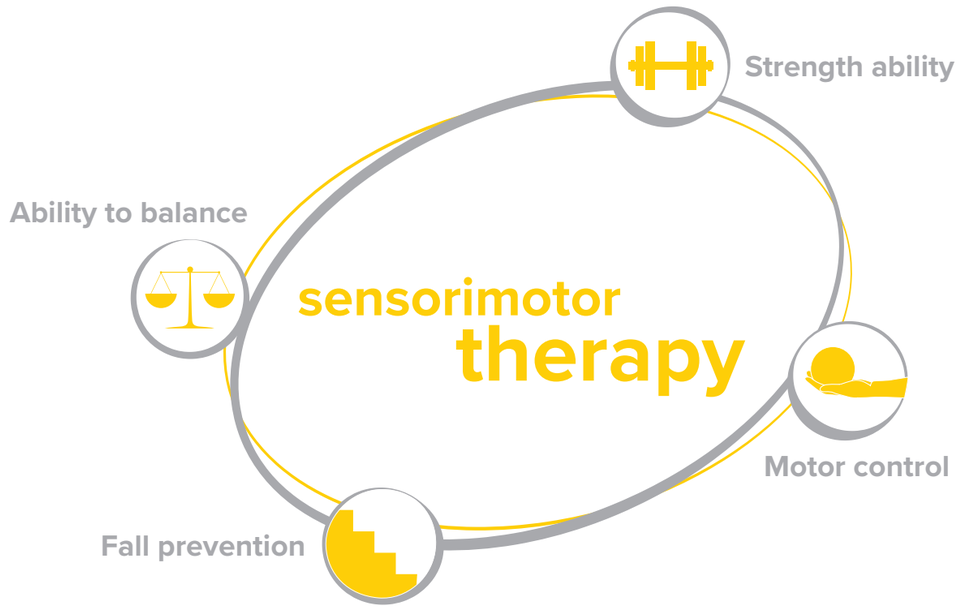
schwarz KL1195	weiss KL1198	beige KL1636		
creme KL1210	sand KL1230	mais KL1457	limonade KL1343	apricot KL1458
mango KL1607	safran KL1542	orange KL1556	karneol KL1557	feuer KL1454
kirsche KL1199	limone KL1543	apfelgrün KL1723	smaragd KL1455	agave KL1273
pistazio KL1610	mint KL1495	aqua KL1456	türkis KL1338	dolphin KL1609
stone KL1608	bleu KL1496	sky KL1581	atoll KL1453	royal KL1196
ocean KL1204	schoko KL1357	cyclame KL1381	violett KL1356	orchidee KL1354
bordeaux KL1350	perle KL1288	chrom KL1205	anthrazit KL1197	silber KL1550

For additional information see www.bioswing.de/therapiesysteme

BIOSWING

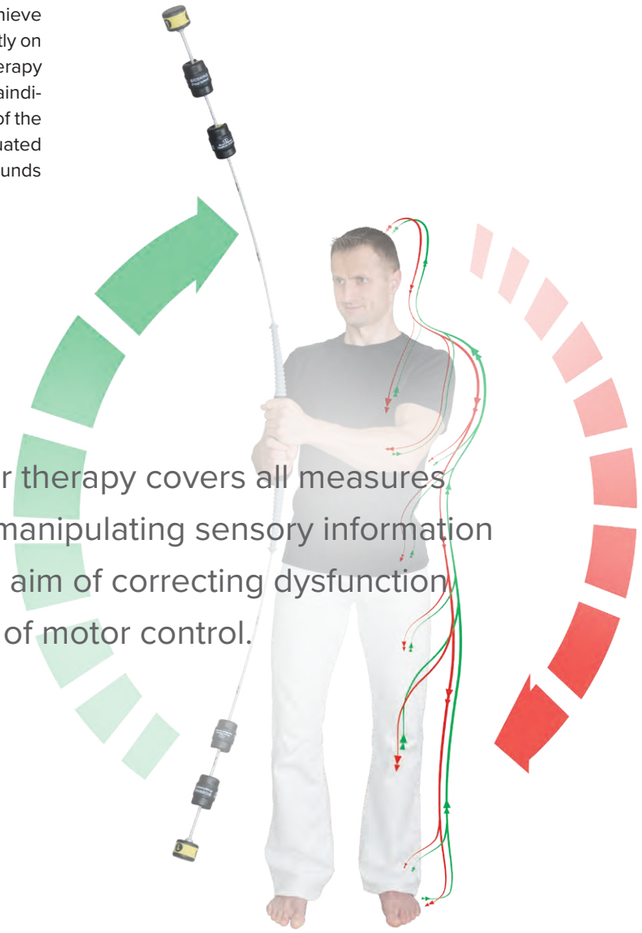
Seminar

theory and practice of sensorimotor therapy



Topics covered in the seminar

This theory and practice seminar will show you how to achieve success in sensorimotor therapy in day-to-day practice, partly on the basis of Posturomed and Propriomed sensorimotor therapy devices. The methodical approach, indications and contraindications are explained to the target audience on the basis of the latest research findings. The use of the scientifically evaluated MicroSwing measurement system in day-to-day practice rounds off the seminar.



Sensorimotor therapy covers all measures
for generating and manipulating sensory information
with the aim of correcting dysfunction
in the field of motor control.

Aim of the seminar

The participants learn the basic theoretical and practical principles behind the methodical and indication-based use of various sensorimotor therapy devices.

Participants

The seminar is aimed as physio-, occupational and sports therapists. Furthermore, sports scientists, PE teachers, doctors and other specialists are also welcome! Knowledge of functional anatomy and neurophysiology is required.

Venue

We offer the BIOSWING seminar as an in-house event on your premises. Our seminar leader visits your facility to train you and your employees and colleagues in person on the subject of sensorimotor therapy with the BIOSWING therapy systems, in accordance with your needs.
Please contact us if you would like support in planning your BIOSWING in-house seminar.

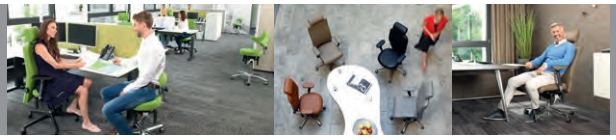
Recognition and certificate

The seminar corresponds to the general recommendations of the top associations of the participating health insurance funds in Germany and the top organisations of healthcare professionals at national German level. Its subject matter is geared towards the healthcare areas of physiotherapy and occupational therapy, and in Germany it is rewarded with educational credits (depending on the scope) and with a certificate of attendance.

BIOSWING therapy systems

The tried-and-tested BIOSWING principle is now available as an office chair: BIOSWING seating systems

Information on BIOSWING seating systems available at www.bioswing.de



Engineered and manufactured
in Germany / Bavaria

More information, instructions and research publications available at www.bioswing.de/therapiesysteme

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