RESPIRATORY MUSCLE TESTING AND TRAINING DEVICES



POWERbreathe®

سپهران

SEPEHRAN

A PIONEER OF INNOVATION IN PHYSIOTHERAPY

How POWERbreathe Respiratory Muscle Training works

In much the same way as you might use weights to increase arm muscle strength, POWERbreathe RMT/IMT devices strengthen lung muscles by creating a resistance against the in-breath

All POWERbreathe RMT/IMT models use the same advanced principles of pressure threshold training. Mechanical models use a calibratedvariable resistance spring. The valve is only released when the patient creates enough pressure to open the valve at the pre-set pressure



Key benefits include

- Simple and easy to use
- Various protocols depending on patient type. 30 breaths, twice a day at 40% of MIP being standard
- Increase in quality of life



The No.1 breathing trainer

POWERbreathe breathing trainers use Inspiratory Muscle Training (IMT) principles, proven by sports scientists and medical professionals to exercise and strengthen the muscles you use to breathe in.

IMT works in the same way as resistance training, but for your breathing muscles. You'll feel the calibrated resistance as you breathe in through your POWER-breathe device making your breathing muscles work harder. This resistance training makes your breathing muscles stronger, reducing fatigue, improving stamina and ultimately your performance – in sports, fitness and everyday living.



As your breathing muscle strength and stamina improves you can simply increase the resistance just as you would with any other form of muscle training. It's very simple and easy.

In scientific tests breathing training

- Improved inspiratory muscle endurance by 27.8%
- Improved inspiratory muscle strength by 30 - 50%
- Accelerated recovery during repeated sprints by up to 7%
- Reduces perceived exertion

POWERbreathe Respiratory Muscle Training Benefits

COPD

The most up to date systematic review on Respiratory Muscle Training from

"IMT improves inspiratory muscle strength and endurance, functional exercise capacity, dyspnoea and quality of life
POWERbreathe IMT has been widely used in patients with COPD as a standalone therapy or for pulmonary rehabilitation

In randomised controlled trials, IMT has also been shown to deliver

- Improvements in quality of life by 21% (Beckerman et al 2005)
- Improvements in dyspnoea by 36% (Beckerman et al 2005)

Asthma

POWERbreathe IMT is clinically proven and beneficial for patients with asthma to help reduce inhaled therapies, for exercise induced asthma and for improvements in exercise. Laboratory studies found:
- Asthma symptoms improved with IMT by up to 75% in 3 weeks (McConnell et al 1998)

Heart Failure

POWERbreathe IMT is clinically proven and beneficial for patients with heart failure and heart disease as a standalone therapy or for cardiac rehabilitation

Because the cardiovascular strain of POWERbreathe training is very low, it is suitable for even the most physically compromised patients, and is particularly helpful in patients who are too ill for rehabilitation.

POWERbreathe for other conditions where dyspnoea is present

Because POWERbreathe IMT influences dyspnoea directly at a cortical level, it is also helpful in managing other conditions where dyspnoea is present, including:
- Elderly people
- Neuromuscular disease
- Parkinson's disease
- Prior-polio
- Spinal cord injury
- Sleep apnea

List of disease effects

- Asthma
- Blood pressure
- COPD
- Covid recovery
- Heart failure and disease
- Neuro muscular disease
- Control stress and anxiety
- Sleep well
- Reduce fatigue and boost vitality



POWERbreathe K-Series - The World's 1st Intelligent Digital Breathing Trainers

Originating from the same breathing training concept as the mechanical series, the innovative and patented electronic POWERbreathe KH-Series delivers superior breathing training experience and results. The KH-Series has been designed specifically

for inspiratory muscle training and assessment in patients with dyspnoea, including patients with asthma, COPD, bronchitis, cystic fibrosis, emphysema, heart disease, neuromuscular disease and Parkinson's disease.

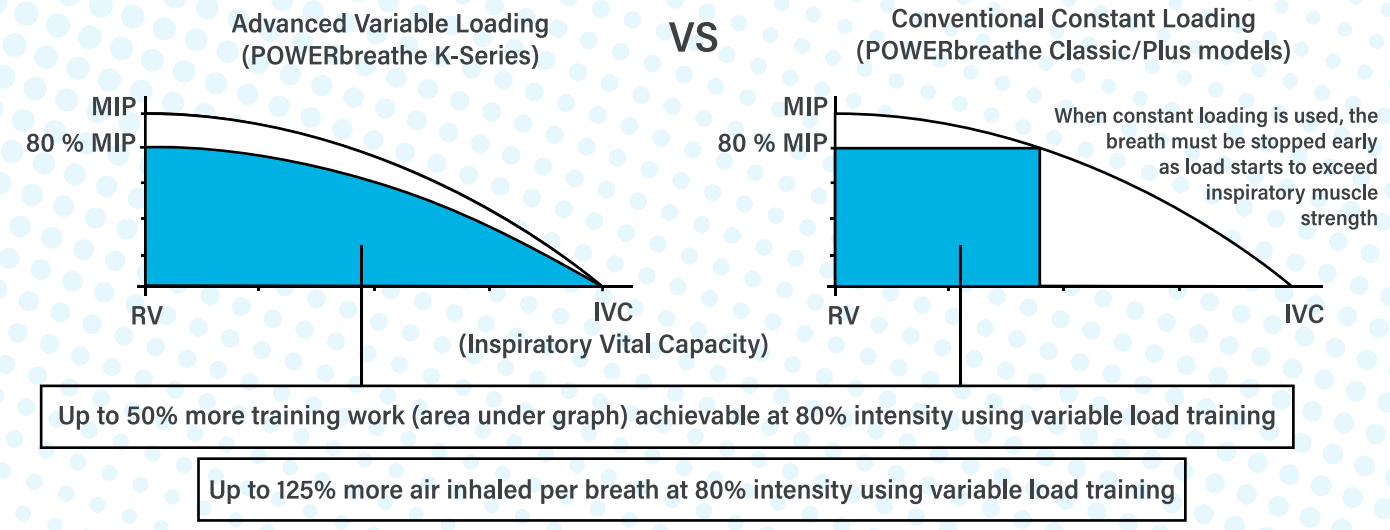
What makes this a world 1st, is that with patented precision electronics you can now perform effective and efficient breathing training; monitor performance, review and analyse training and testing results



The 'Gold Standard'

POWERbreathe K-Series was recognised as providing 'Gold Standard' results in a six nations study carried out by highly respected respiratory professionals that highlighted the quality, accuracy and reliability of these electronic hand-held inspiratory muscle trainers for use by healthcare providers in daily clinical practice

The POWERbreathe K-Series creates a variable load which matches the length tension relationship of the inspiratory muscles allowing more effective training than conventional constant load training.



Up to 50% more training work (area under graph) achievable at 80% intensity using variable load training

Up to 125% more air inhaled per breath at 80% intensity using variable load training

The POWERbreathe K5 is the most advanced hand-held breathing training device on the market, complete with Breathe-Link software for Windows or Mac* that allows you to see every breath during training and then to review, analyse and compare afterwards



The K5 features include:

- Personalised Auto-optimising Inspiratory Muscle Training (IMT) that adapts specifically to users breathing function.
- Training Results: Load (cmH2O); Power (Watts); Volume (Litres); Flow (Litres/second); Energy (Joules)
- Training intensity selector to allow user to create personalised training sessions
- Single Breath Test
- Advanced Breathe-Link performance monitoring software
- Training history for previous 36 sessions can also be reviewed on K5 device
- Warm-up & Cool Down modes
- Integrated pacing metronome, breath counter and end of session indicator.
- "You and I" Multi-User Option
- Easy maintenance and user friendly design
- Portable hand held device powered by rechargeable battery and /or via mains power or PC

POWERbreathe K5 Breathe-Link Live Feedback Software – on screen

The K5 advanced live feedback software allows you to watch your training and track your progress in real-time on your PC using Windows and Mac* via the Breathe-Link Live Feedback Software.
And because the software allows you to store data, you can revisit your results to analyse later. Watching your training results in real time helps you to perfect your technique and harness your breathing's full potential.

The POWERbreathe K5 Breathe-Link Software also allows for up to 30 user profiles and 1200 stored sessions per user, making it an essential biofeedback tool for sports teams, fitness and educational groups, as well as, individuals



K5 Breathe-Link Live Feedback Software - advanced features

Breathe-Link Custom - allows you to create and upload your own personalised breathing training sessionsBreathe-Link Pro-View - use this for advanced, detailed, simultaneous plotting and analysis of all IMT dataBreathe-Link Print Session Detail - print complete records of each session and share training history for detailed analysis Breathe-Link PDF Generator - keep training history in PDF format for detailed analysis- Breathe-Link Import and Export - import and export .ble files between computers to allow data to be shared amongst Breathe Link usersBreathe-Link Graphical View - real-time, live test feedback graphs provide enhanced visual feedback







Training Parameters

- SIndex(cm H_2O)
- FLow(L/S)
- Volume(L)

Test Parameters

- Pressure(cm H_2O)
- Power(W)
- Flow(L/S)
- Energy(Joules)

CLASSIC

There's a Classic for everyone

The tried and tested Classic models: light, medium and heavy resistance offer an adjustable load setting range from 10cmH2O to 250cmH2O, dependent upon the model, making the Classic an ideal, cost effective solution for improving your general wellbeing or improving your level of fitness and sports performance. (See Guide to Resitance Levels.)

Changing the load setting

Adjusting the load setting on your Classic is easy. Remove the handle cover to reveal a scale indicating load settings 1– 9. Rotate the load adjustment knob to increase or decrease the training level on the scale and replace the handle cover. You're now ready to continue training.



LR MR HR

Light Resistance

Introductory level for those who are less active load settings 10-90cmH_2O

Medium Resistance

For those who are moderate to very fit load settings 10-170cmH_2O

Heavy Resistance

Only for those who have reached the maximum loading on a medium resistance model load settings 10-250cmH_2O

PLUS™

The POWERbreathe Plus series offers you the best experience of breathing training out of the two mechanical series of POWERbreathe breathing trainers: Plus and Classic models.

From its comfortable mouthpiece to its simple ergonomic design, the Plus offers a pleasant and effective breathing training experience. The ergonomic design not only makes the Plus an easy product to use, but it also provides a 65% improved airflow compared to the Classic model series

Here's how it works

The Plus uses a mechanical valve system to offer resistance to your in-breath; this is controlled by a precisely calibrated spring and can be adjusted to increase the resistance as your breathing muscles become stronger.
Stronger breathing muscles means improved stamina and less fatigue, resulting in improved performance

Here's how you improve

It's easy to adjust your training level simply by rotating the load adjuster at the base of the unit to increase or decrease the resistance load.
The Plus Series features a scale on it's transparent sleeve indicating training levels of 0 – 10. As the load adjuster is rotated, you can see the internal level-indicator sleeve moving up or down, indicating the training level on the scale

There's a Plus for everyone

The Plus series is available in three variable resistance levels, light, medium and heavy providing an adjustable load setting range from 17cmH2O to 274cmH2O, dependent upon the model. (See Guide to Resistance Levels.)



LR



MR



HR

Light Resistance

Introductory level for those who are less active.
Load settings 17-98cmH2O

Medium Resistance

Medium Resistance For those who are moderate to very fit.
Load settings 23-186cmH2O

Heavy Resistance

Only for those who have reached the maximum loading on a medium resistance model.
Load settings 29-274cmH2O

EX1

What is Expiratory Muscle Training?

Expiratory Muscle Training is a component of Respiratory Muscle Training; a technique that improves the function of the breathing muscles. Expiratory Muscle Training specifically targets the expiratory muscles when exhaling to improve strength and stamina. Stronger expiratory muscles will help to force air out of the lungs. This is beneficial in improving health, relieving symptoms of a medical condition, improving general physical and breathing fitness, as well as, improving sports performance.

Benefits of Expiratory Muscle Training

Everyone who experiences the need to forcefully empty more air from their lungs than is considered 'normal', will benefit from stronger expiratory muscles. POWERbreathe EMT will help you to breathe out forcefully by improving your expiratory muscle strength and expiratory muscle stamina, to improve:

- **Cough function and flow**
- **Swallowing or speaking – because of a medical condition**
- **Singing strength and flexibility**
- **Sports performance – science shows that expiratory muscle fatigue impairs performance**
- **Age-related muscle atrophy**
- **Expiratory pressure and volume in woodwind players**

Why Choose POWERbreathe EMT?

POWERbreathe EMT offers drug-free breathing training and the same quality and accuracy as our Inspiratory Muscle Trainers have become renowned for, worldwide. With the launch of a new POWERbreathe EMT device, expiratory muscle training can be performed independently of inspiratory muscle training. This is advantageous because if EMT and IMT are performed simultaneously, maximal effort cannot be achieved and therefore training responses are impaired.
This is because training both phases of breathing simultaneously within the same breath cycle is difficult and uncomfortable.POWERbreathe EMT provides resistance, or breathing load, to your expiratory muscles as you breathe out through it. You can adjust the load to increase the resistance as your expiratory muscles become stronger. POWERbreathe EMT features a precisely calibrated spring that provides the breathing load to ensure an appropriate and quantifiable training intensity.







EX1-LR™
Light Resistance
load settings 10-90cmH_2O

EX1-MR™
Medium Resistance
load settings 10-170cmH_2O

EX1-HR™
Heavy Resistance
load settings 10-250cmH_2O

Shaker®

Expectoration for adults and children

Shaker® MEDIC PLUS

for Hospitals / Clinics

Simple relief from excessive mucus and its associated problems

- Autoclavable to 134°C (273°F), multi-user, reuseable, easy to use and affordable
- Improved air flow for higher intensity vibrations, produces positive expiratory pressure (PEP) to open the airways
- Increases expectoration, improves lung function and reduces dyspnoea
- For conditions such as COPD, Cystic Fibrosis, bronchiectasis and bronchitis
- Two designs of user friendly mouthpieces included to assist older and younger patients



Shaker® DELUXE

Personal Mucus Clearance Device

- Respiratory device for mobilising pulmonary secretions such as mucus and catarrh
- Can be used for chronic conditions such as COPD,asthma, emphysema and acute problems like chesty coughs, flu and bronchitis
- Uses the latest innovative design technology
- Produces vibrations in the chest cavity to 'shake' stubborn mucus loose
- Aids expectoration, increases lung efficiency, helping to reduce breathlessness and fatigue
- Two designs of user friendly mouthpieces included to assist older and younger users
- Affordable, easy to use single user model which can be used at home or away from home



POWERbreathe® EX1

Smart Adaptor

Compatible with the ActiBreathe® App



Key Features

Standalone Strength Test

The POWERbreathe Smart Adaptor with ActiBreathe® App utilise precision technology and clinically recognised methodology to measure the strength of your breathing muscles, providing an accurate insight into your breathing capabilities.

Personalised Training Plans

The ActiBreathe® App offers a visually intuitive representation of your breathing training and test results. Track improvements and celebrate breathing milestones.

Guidance and Training Plans

Receive expert guidance through the ActiBreathe® App, which offers tailored training plans based on your individual respiratory needs. The ActiBreathe® App adapts to your personal goals, whether you are an athlete, fitness enthusiast, have a medical condition or are simply looking to improve your respiratory health

Visualised Progress

The ActiBreathe® App offers a visually intuitive representation of your breathing training and test results. Track improvements and celebrate breathing milestones

Seamless Integration

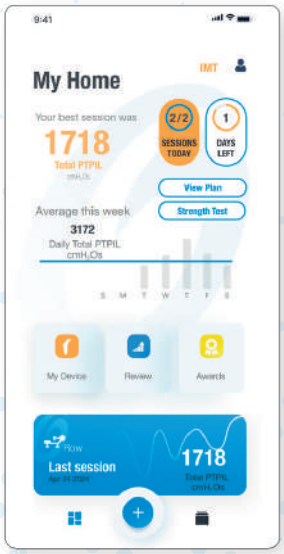
The POWERbreathe Smart Adaptor seamlessly syncs with the ActiBreathe® App. Access your data anytime, anywhere and stay connected to your breathing training journey

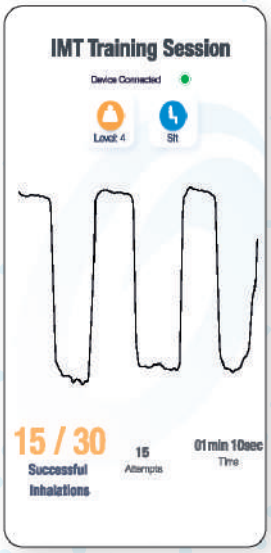
PLUS™

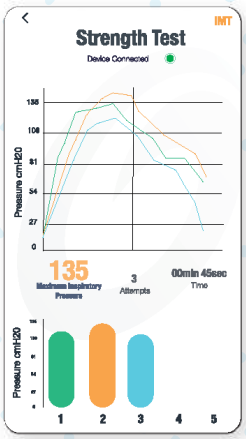


Shaker®







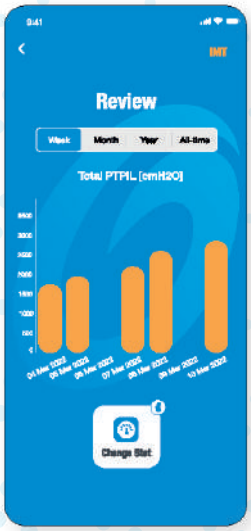


Real-Time Monitoring

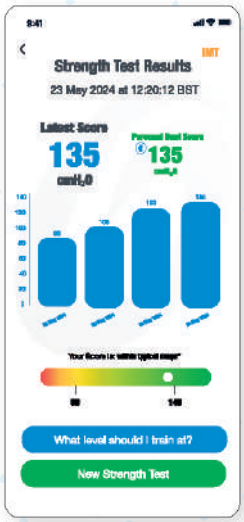
Unlock your full potential with real-time training tracking and training feedback. Improve your breathing performance using the POWERbreathe cutting edge technology and visual guidance

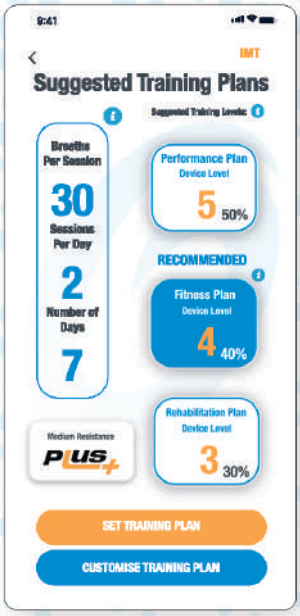
Review, Analyse, Improve

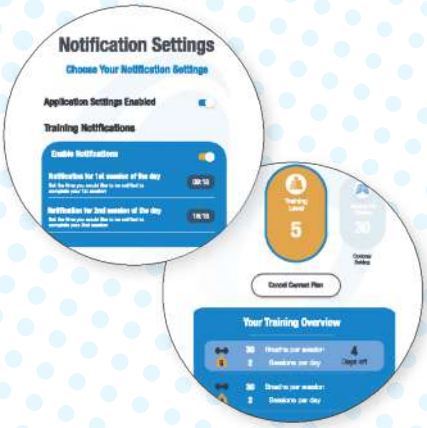
This comprehensive feature allows you to review your previous training performance, allowing you to monitor progress and training efficiency.











Personalise Your Training

POWERbreathe's Smart Adaptor using sophisticated patent pending* technology, combined with the ActiBreathe® App helps create personalised training protocol's that ensures users follow the most effective strategies to achieve optimal results, with positive outcomes.

POWERbreathe K-Series comparison chart

Icon	Features	Explanation of features	K-Series K1	K2	K3	K4	K5
Training Features							
	Advanced variable load training	The electronically controlled resistance valve provides a variable pressure threshold resistance, optimised to match the strength profile of the inspiratory muscles for maximum training effectiveness.	◆	◆	◆	◆	◆
	Auto-optimising IMT technology	The POWERbreathe K-Series Auto-optimising Inspiratory Muscle Training system automatically adapts to your personal training requirements	◆	◆	◆	◆	◆
	Manual training intensity option	The training intensity adjustment option allows resistance to be manually set from 5 to 200cmH2 O to suit your personal training requirements	◆	◆	◆	◆	◆
	Breathing pacing guidance	Buzzer indicates when the user should inhale in order to optimise breathing patterns and prevent hyperventilation	◆	◆	◆	◆	◆
	Current training session breath counter	Displays number of breaths remaining in current training session	◆	◆	◆	◆	◆
	End of training session indicator	Alarm indicates that training session is over	◆	◆	◆	◆	◆
	Warm-up mode	Can be used to warm-up the inspiratory muscles prior to exercise			◆	◆	◆
	Cool-down mode	Can be used to cool-down the respiratory muscles after exercise			◆	◆	◆
	Custom mode	Personalise your training session created using Breathe-Link PC software					◆
Training Feedback and Testing Features							
	Load (cmH_2O)	Measure of the resistance to inhalation and is equivalent to the weight being lifted	◆	◆	◆	◆	◆
	Power - current session average (watts)	Current session average power (watts)	◆	◆	◆	◆	◆
	nhaled volume - average per breath (litres)	Current session average volume (litres)	◆	◆	◆	◆	◆
	PIF/Flow	Peak Inspiratory Flow (litres/sec)		◆	◆	◆	◆
	Volume	Maximum inhaled volume (litres)		◆	◆	◆	◆
	S-Index	Index of inspiratory muscle strength (cmH_2O)		◆	◆	◆	◆
	S-Index Rating (poor, fair, average, good, excellent)	Comparison with population normal values based upon user stats (Age, Height, Weight, Gender)		◆	◆	◆	◆
	Test mode (S-Index - Single breath test)	Measures inspiratory muscle Strength Index		◆	◆	◆	◆
	T-Index - current session (%)	Training Index (%) [Measure of training session effectiveness]		◆	◆		
	T-Index rating (low, med, high)	Rating of training session effectiveness		◆	◆		
	Graphical T-Index history	Graph of previous 36 Training Index results			◆		
	Breathing energy (joules)	Measures the mechanical work of breathing during your breathing training session. (Joules)				◆	◆
	Graphical breathing energy history (last 36 sessions)	Graph of previous 36 Breathing Energy results				◆	◆
	Session number	Number of training sessions completed			◆	◆	◆
MIP PIF	Test mode (PIF/Flow)	Measures Peak Inspiratory Flow		◆	◆	◆	◆
	Test mode (MIP)	Measures Maximal Inspiratory Pressure (highest 1 sec average)					
	Graphical load history (last 36 sessions)	Graph of previous 36 training load results			◆	◆	◆
	Graphical power history (last 36 sessions)	Graph of previous 36 average power results			◆	◆	◆
	Graphical volume history (last 36 sessions)	Graph of previous 36 average volume results			◆	◆	◆
Breathe-Link Features							
	Breathe-Link PC software for real-time breathing measurement and analysis	Real-time breathing measurement & analysis software for PC and Mac. Maximises training & test performance in real-time. Stores results for analysis. Import and Export .ble files allowing data to be shared amongst Breathe-Link users.				◆	◆
	PC graphical view	Easy to understand live test, feedback graphs to monitor each breath, with visual feedback to help improve your performance				◆	◆
	Breathe-Link custom training mode	Allows you to create and upload your own personalised breathing training sessions.					◆
	Training statistics review	Review the details and trends of your Breathe-Link training sessions.				◆	◆
	Breath-Link ProView advanced analytics	For a detailed, simultaneous plotting & analysis of all inspiratory muscle training data					◆
	Print/PDF generator	Keep detailed high resolution records of each session. Share training history for analysis in printed or PDF format.					◆
	Live real-time performance monitoring	See real-time test and training performance live on screen.				◆	◆

◆ Indicates Features Included

◆ 1 Note1: for K2, K3, K4 and K5 models, peak flow result is output following an S-Index test. (Information subject to change due to manufacturers continuous program of development)

POWER® breathe

TRAIN YOUR LUNGS,BOOST YOUR LIFE
EVERY BREATH, A STEP FORWARD



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