

# DuoMAG<sup>®</sup> MP

MAGNETIC | STIMULATION



## CLINICAL & RESEARCH TMS SYSTEM

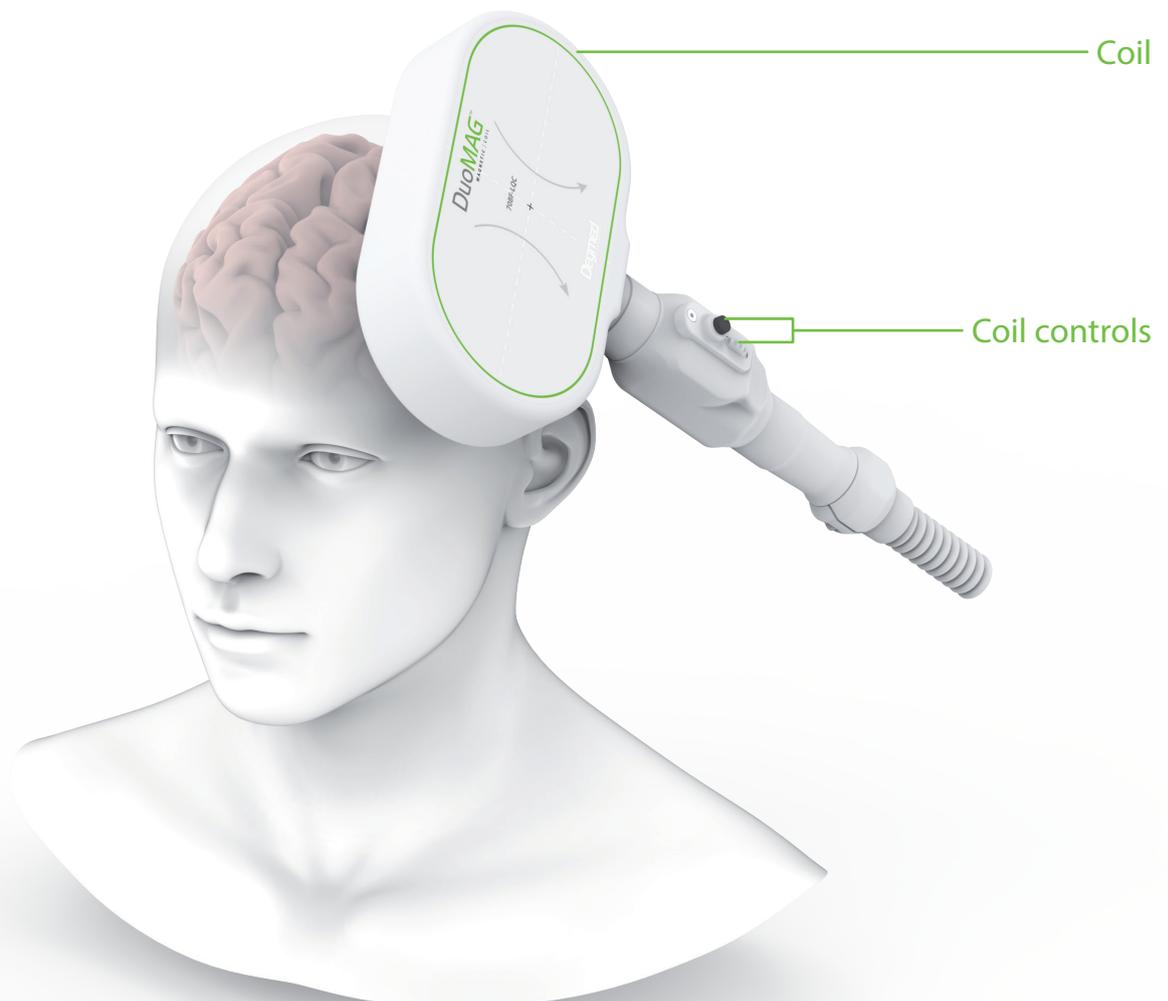
**Deymed**  
DIAGNOSTIC



## What is TMS?

Transcranial Magnetic Stimulation (TMS) can be used by neuroscientists to measure the activity and function of specific brain circuits in humans. Through the placement of an electromagnetic coil on a patient's head, the TMS system can generate a very strong magnetic field that passes through the scalp and into the individual's targeted brain regions in order to induce action potentials in the subject.

The most robust and widely accepted use of TMS is in the measurement of the connections between the primary motor cortex and a muscle to evaluate damage in patients suffering from neurological diseases and conditions such as stroke, multiple sclerosis, amyotrophic lateral sclerosis, movement disorders, motor neurone disease, migraine, and other injuries and disorders that affect the facial and cranial nerves and the spinal cord.





## Advantages of DuoMAG TMS

Deymed manufactures reliable and high-quality neurodiagnostic and neurocare systems. Our goal is to advance the Neurology and Neurophysiology fields to new heights with bold engineering innovations. All Deymed neurocare systems are designed for ease-of-use and durability with advanced features intended to optimise and simplify your workflow.



### Intelligent Charging **NEW**

Deymed's new ultra-low capacitance induction charging technology guarantees the highest quality EMG signal possible for sensitive neurophysiological tests, while also keeping the system's batteries full.



### Session and Patient Report **NEW**

PDF reports can be generated for specific patients or sessions. 'Patient Report' shows a list of performed sessions, while 'Session Report' shows detailed information on performed stimulation protocols or MEP.



### Powerful System

Capable to deliver intensive monophasic pulse with repetition rate up to 0.5 Hz at 100% intensity with single unit, up to 1.0 Hz with MP-Dual and up to 2.0 Hz with QPS at 95% intensity.



### Counter-balanced Coil Holder

The MagTower cart with its counter-weight balanced positioning arm and auto-locking position greatly reduces the effort required to find and secure the placement of coils.



### Multi-system Integration

Integration with Deymed's clinical EMG and EEG amplifiers allows multiple configurations of EMG/MEP or EEG signals to be displayed. Deymed amplifiers are designed to eliminate TMS stimulation artefacts.



### Cooled Coil

Deymed coils with double air-cooled fans or liquid-based systems allow for even the most intense TBS protocols to be used for extended periods without over-heating the system.



### Touch-Screen Interface

Combined with intuitive software for ease of use. Built on a Windows platform, allowing full integration for third-parties products such as; neuro-navigation.



### Custom Protocol Editor

The Custom Protocol Editor allows the user to save any conceivable protocol design, including customisable stimulation trains and changing stimulation intensities.



## User-friendly Coil Controls

Built-in controls allow full control over stimulation and intensity settings through the coil handle, removing the need for the user to divert their attention to external panels or triggers, and allowing the system to be used by a single operator.

## Touch-Screen Interface

Combined with intuitive software for ease of use. Built on a Windows platform, allowing full integration for third-party products such as neuro-navigation.

## Combine with EMG/EEG

The DuoMAG family of stimulators can be integrated seamlessly with other Deymed systems, such as the TruScan EEG and TruTrace EMG/MEP systems.

## Intelligent Charger

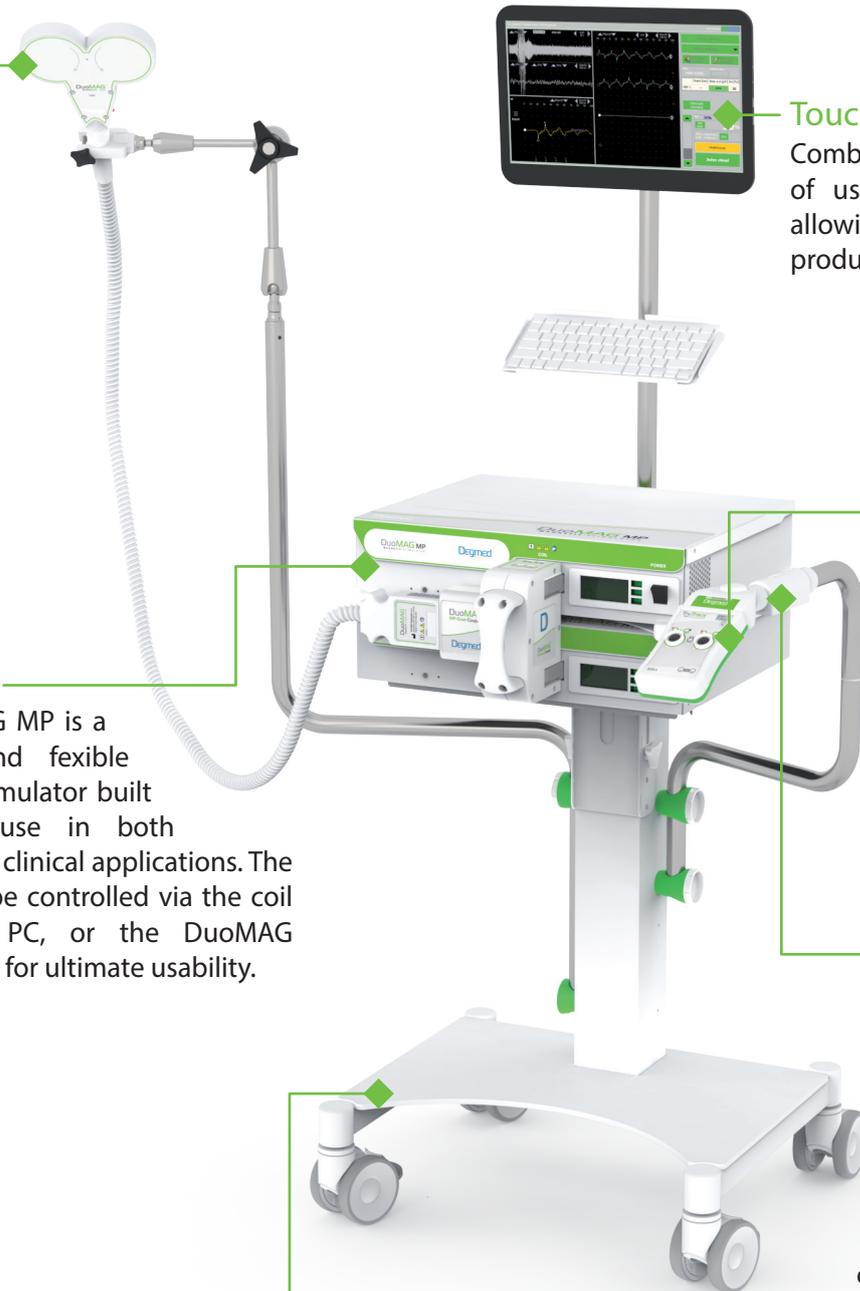
Built in to the rotating metal arm that holds the EMG amplifier, the DuoMAG Intelligent Charger uses inductive charging technology to keep the headbox batteries at full capacity. This method of charging also maintains the optical isolation and safety benefits of battery-operated EMG for sensitive neurophysiological tests.

## Stimulator

The DuoMAG MP is a powerful and flexible magnetic stimulator built for ease-of-use in both research and clinical applications. The system can be controlled via the coil controls, a PC, or the DuoMAG touch-screen for ultimate usability.

## Special developed Cart

Designed with robustness and space in mind, the carts small overall footprint, integral coil arm and large easy roll wheels means the DuoMAG XT is to fit into the most demanding of environments.





## COMPACT

The DuoMAG MP or DuoMAG MP-Dual can be placed on a desktop or similar surface in this compact space saving configuration.



## MagCart

The MagCart configuration is an easy to move configuration that takes up minimal space. An articulating arm allows the coils to be quickly locked into place after positioning.

## MagCart MP-Dual

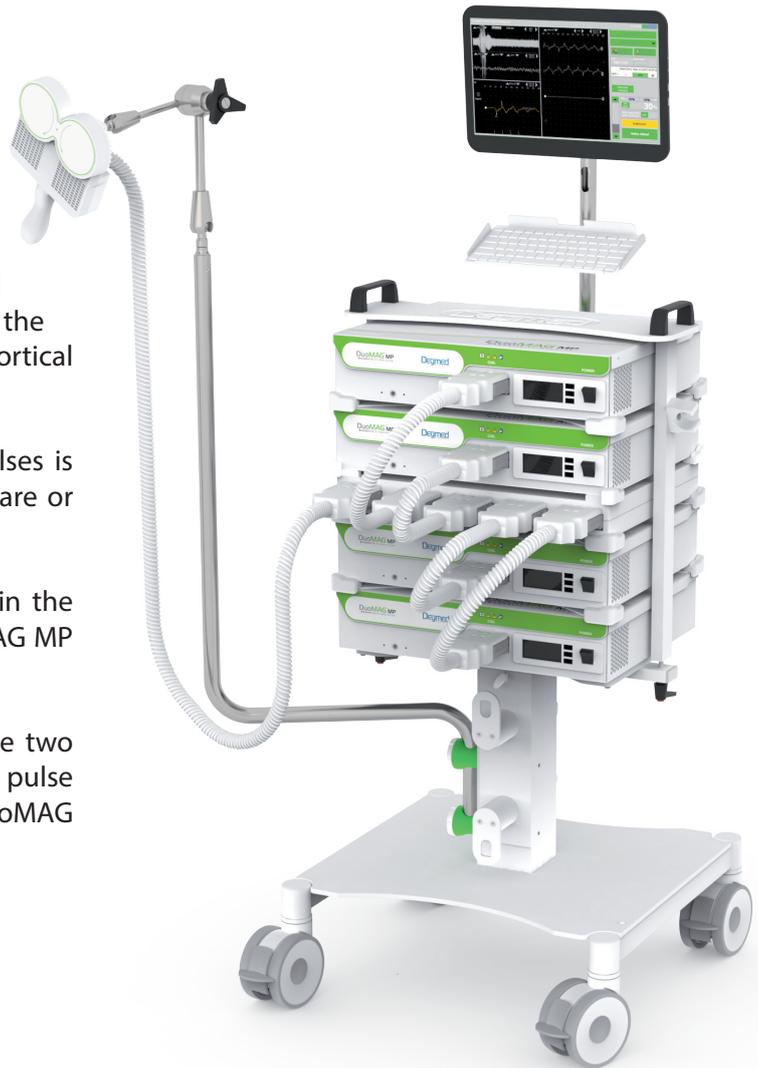
The MP-Dual with Cart is a flexible configuration for advanced research and clinical uses of two Deymed's Mono-phasic stimulators. This configuration allows the user to easily move the system from room-to-room and perform dual-pulse mono-phasic stimulation with full control of all stimulation parameters at the touch of the screen.





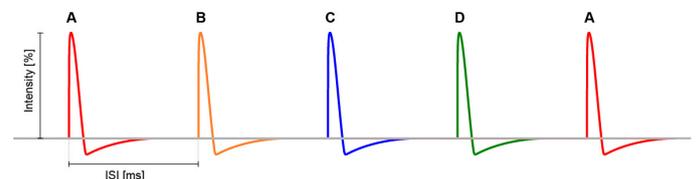
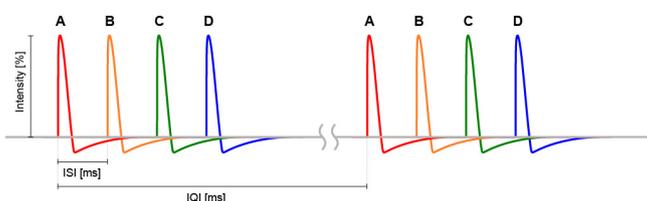
## DuoMAG QPS

- The DuoMAG QPS combines four DuoMAG MP units to provide fully programmable quadro-pulse stimulation through a single stimulation coil.
- The DuoMAG QPS can also be used with four separate coils to carry out interhemispheric (quadrolateral) stimulation.
- By controlling the pulse intervals and power level of each DuoMAG MP, it is possible to provide precise sub- and supra-threshold conditioning and test pulses. This is useful for the investigation of Inter-Cortical and Intra-Cortical Inhibition and Facilitation.
- The Inter-stimulus interval (ISI) for the four pulses is adjustable either in the supplied control software or external control via TTL inputs.
- Each DuoMAG MP can be run independently in the QPS control software or as a standalone DuoMAG MP magnetic stimulator.
- The DuoMAG QPS allows users to combine the two stimulator pulses into a single pulse providing a pulse amplitude that equates to 140% of a single DuoMAG MP output.



### Fully Programmable Quadro-pulse Stimulation

- ISI from 1 ms to 800 ms
- IQI from 500 ms (2 s at maximum output)
- Configurable intensity for each A, B, C and D stimuli.
- Up to 8 Hz continuous repetition rate (2 Hz at maximum output)





**70BF-LQC / 60BF-LQC**  
 Butterfly Coil 70mm and 60mm with liquid cooling  
 Typical use:  
 Focused long-term cortical stimulation, mainly for rTMS.



**120BFVT**  
 Butterfly V Cone Coil 120 mm with 100° angled surface  
 Typical use:  
 Deep spinal stimulation.



**70BFX-LQC**  
 Butterfly Overlapping Coil 70mm  
 Typical use:  
 Focused long-term cortical stimulation, mainly for rTMS. More comfort for the patient, due to coil design.



**50BFT**  
 Butterfly T-shaped Coil 50mm  
 Typical use:  
 Precisely focused stimulation, for rTMS.



**90BFVT-LQC**  
 Butterfly V Cone Coil 90mm and 120° angled surface  
 Typical use:  
 Deep stimulation.



**30BFT**  
 Butterfly T-shaped Coil 30mm  
 Typical use:  
 Precisely focused stimulation.



**70BF - Cool**  
 Butterfly Coil 70mm with cooling fans  
 Typical use:  
 Focused long-term cortical stimulation, mainly for rTMS. Active cooling is not available with MP and MP-Dual.



**100R**  
 Round Coil 100mm  
 Typical use:  
 Stimulation of peripheral nerves or cortical stimulation.



**70BF**  
 Butterfly Coil 70mm  
 Typical use:  
 Focused stimulation, mainly for rTMS.



**125R**  
 Round Coil 125mm  
 Typical use:  
 Spinal stimulation.



**50BF**  
 Butterfly Coil 50mm  
 Typical use:  
 Precision focused stimulation, mainly for rTMS.



### LIQUID COOLING

Requires liquid-cooling unit

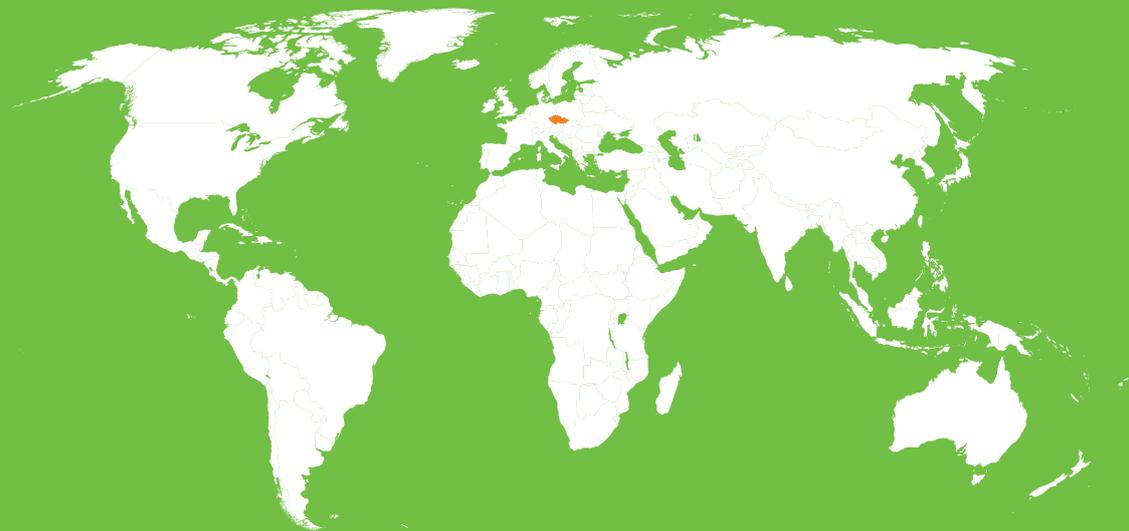


### AIR COOLING



### OPTION AS PLACEBO

+ All coils have controls of intensity and stimulation



# Deymed

DIAGNOSTIC



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Neurophysiology  
EMG



Epileptology  
EEG



Magnetic stimulators  
TMS



Somnography  
PSG



Neurofeedback  
BFB / qEEG