magstim®

Stimulating Coils

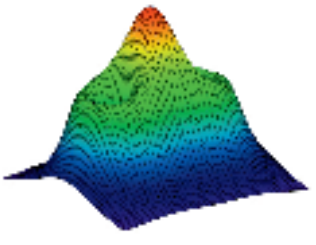
PIONEERS IN NERVE STIMULATION AND MONITORING

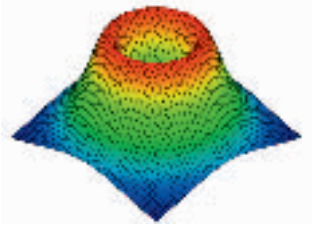
Magstim Stimulating Coils

a variety of coils are recommended to stimulate specific neural pathways

The discharge of current through a stimulating coil generates a high intensity magnetic pulse. When the coil is applied to a conductive medium, such as human tissue, eddy currents are produced by electromagnetic induction, which causes stimulation of the tissue. Induced tissue current is determined more by coil geometry and coupling to the intended site of stimulation than by the strength of the magnetic field alone.

Magstim produce a variety of differing types of stimulating coil offering the greatest levels of flexibility and ensuring that there is an appropriate coil configuration to meet the varying needs in both clinical and research arenas. All Magstim stimulating coils are designed to be used in conjunction with the range of Magstim stimulators, specification and suggested applications highlighted.





Circular Coils

For Cortical and Peripheral Stimulation

Small 50mm Coil
P/N 9999-00

Applications include:

- Facial nerve
- Superficial peripheral nerves

The 50mm coils are focal and effective for nerves 5-15mm deep.

Medium 70mm Coil
P/N 9762-00

Applications include:

- Peripheral nerves
- Motor cortex

The 70mm Coil is designed for Paediatric and Infant use.

High Power 90mm Coil
P/N 9784-00

Applications include:

- Motor cortex
- Cervical nerve roots
- Lumbosacral nerve roots
- Phrenic nerve roots

The High Power 90mm Coil can be used for central motor conduction studies. The design of the coil allows 145 stimuli at the maximum power level.

Double Coils

For Focal Stimulation

Double Small 25mm Coil
P/N 1165-00

Applications include:

- Facial nerve
- Median nerve
- Ulnar nerve
- Somatosensory evoked potentials
- F-Wave and reflexes

The double small coil has been designed for enhanced positional accuracy in peripheral stimulation.

Double 70mm Coil
P/N 9925-00

Applications include:

- Excitation of spinal roots
- Motor cortex
- Peripheral nerves

The Double 70mm Coil is capable of accurate stimulation of cortical areas and spinal nerve roots.

Double Cone Coil
P/N 9902-00

Applications include:

- Central motor disorders
- Spinal Injuries
- O.R. monitoring
- Urology

The Double Cone Coil elicits responses from relaxed muscles of the lower pelvic floor and lower limbs.

Magstim '2nd Generation' Remote Coils

This new generation of coils, specifically designed to compliment the 2nd Generation of Magstim magnetic stimulators, provides the user with the convenience of single handed operation.

This remote operation offers the ability to configure Magstim stimulation equipment through the stimulating coil and is achieved by integrating pulse strength selection (▲▼), parameter display, trigger and stop buttons into the coil handgrip to facilitate total system control via the coil.

Remote Coils are available in Double 70mm and High Power 90mm configurations and can only be used in combination with the new range of 2nd Generation Magstim stimulators Magstim 200², 220² and BiStim².

Magstim Custom Coils

A unique service provided by Magstim is the ability to design and manufacture prototype coils to the customer's design and specification both in configuration and geometry. These coils are developed and used within specialist clinical/research applications.

Custom coils are ordinarily polyurethane coated, and are not covered by a plastic enclosure. The removal of this casing is considered by many users as a distinct advantage, allowing the stimulating coil to come into closer proximity to the targeted site of stimulation - resulting in an increase in the stimulating efficiency achieved.

Magstim Placebo Coil

One of the problems encountered within TMS research is the ability to determine whether the effect of magnetic stimulation is real or imagined. Designed to replicate the appearance and operation of the Standard Double 70mm Coil - 9925-00, the Placebo Coil provides slight sensory stimulation and discharge noise without stimulating cortical tissue. This facility to imitate treatment enables the determination of the placebo effect of the treatment. This coil is widely used in research fields, typically in the areas of psychiatry and psychology.

Magstim Cooled Coil

Magstim has developed a forced air-cooled coil for use with the range of Rapid™ magnetic stimulators. The Cooled Coil is available in the Double 70mm configuration and can be run for extended periods of time without overheating thus removing the need to replace coils during protocols of stimulation.

TECHNICAL SPECIFICATIONS

Coil Type	Average Inductance	Maximum magnetic field strength	Maximum number of Stimulations at 100% Power	Weight
'2nd Generation' 90mm Coil - Std. - 3193-00 Remote - 3192-00	23.47µH	2.0T	145	1.75kg
Std. HP 90mm 9784-00	23.30µH	2.0T	143	1.4kg
70mm 9762-00	16.25µH	2.6T	63	1.28kg
50mm 9999-00	13.50µH	3.6T	65	1.14kg
'2nd Generation' Double 70mm Coil - Std. - 3191-00 Remote - 3190-00	15.50µH	2.2T	60	1.8kg
Std. Double 70mm 9925-00	16.35µH	2.2T	56	1.6kg
Double Cone 110mm 9902-00	17.85µH	1.4T	584	2kg
Double 25mm 1165-00	10.11µH	4.0T	40	1.15kg
Placebo Coil	2.55µH	0.2T	984	1.15kg

The "Maximum number of Stimulations" column relates to the number of stimulations that can be achieved with a Magstim 200 / 200², at an ambient temperature of 20°C, before the coil exceeds its permitted operating temperature.

All Coils are fitted with a 2m cable as standard.

For further information on Clinical applications or product specifications please contact your local distributor or Magstim direct at info@magstim.com

All products carry the CE mark and comply with Medical Device Directive 93/42/EEC and are manufactured under a Quality System certified to **ISO 13485 : 1996**

Cortical Magnetic Stimulation is currently considered investigational in the USA

Distributor

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