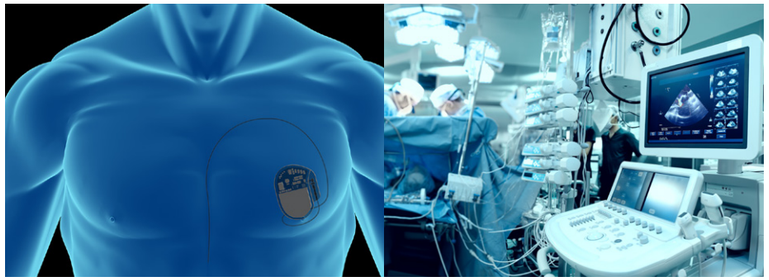


MAGNETIC DEVICES FOR MEDICAL APPLICATIONS INCLUDE:

- Antenna/telemetry coils for implantable and programming devices
- Primary/secondary coils for wireless charging of implants
- 3-axis transmit and receive coils for surgical navigation
- High voltage transformers and inductors for implantable defibrillators
- High frequency transformers/inductors for ablation equipment
- Send/receive coils for base to device communication
- RF sensing coils for arthroscopic navigation instruments
- Isolation transformers for medical devices and power supplies
- EMI components for signal conditioning
- Value-add assemblies

OTHER MEDICAL RELATED APPLICATIONS WHERE OUR DEVICES ARE USED, INCLUDE:

Sterilization equipment

Laser surgical equipment

Diagnostic imaging (ultrasound and computerized tomography)

Scans and CRT monitors

TT Electronics

MEDICAL ELECTRONICS
DESIGN AND MANUFACTURING

Advanced Surgical Devices

Imaging and Direct Patient Care

Laboratory Automation and Diagnostics

800.749.3677 1700 FREEWAY BLVD MINNEAPOLIS, MN 55430 WWW.TTELECTRONICS.COM

TT Electronics

Engineering Smarter Solutions Together

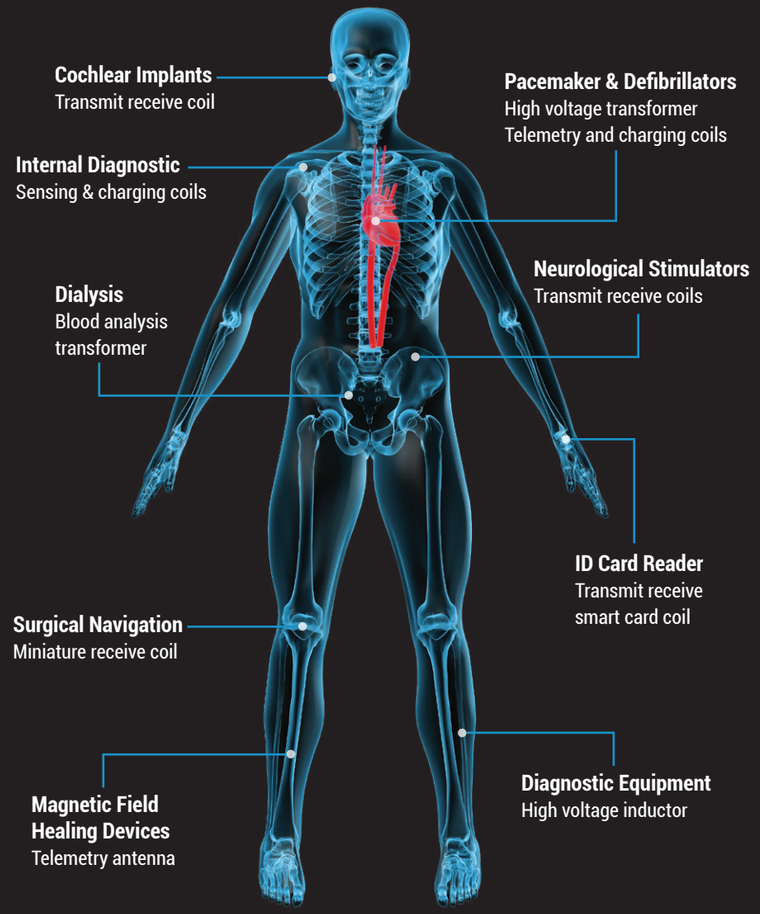
REGISTERED ISO 13485

Medical Industry

Medical electromagnetics for a wide variety of applications and processes that meet **ISO 13485** and clean room requirements

Electromagnetics for Implantable and External Applications

Designed & manufactured by TT Electronics



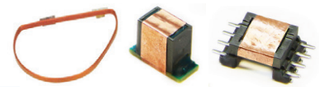
Our electromagnetics provide high reliability for power and communications in implantable or external medical devices. Applications that utilize our devices, include: external defibrillators, implantable defibrillators, kidney dialysis equipment, ablation therapy systems, sleep apnea equipment, RF programming devices, hearing aids and a variety of diagnostic and testing equipment.

TT Electronics is regularly involved in the development of new devices for invasive and non-invasive products.

WHO WE ARE

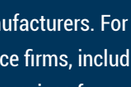
Cost containment and speed to market are key objectives for medical device manufacturers. For over 30 years, TT Electronics has worked globally with medical device firms, including start-up companies, and has provided a wide range of products and services for a vast array of medical device technologies.

Our engineers work from the early idea stage of product definition through production. With the use of simulation software and continued research, TT Electronics has developed miniature coil manufacturing capabilities for navigation technologies. These assemblies feature ultra-fine 58 AWG wire winding and a wide variety of configurations (including unique-in-the-industry angular winding configurations) that allow for enhanced position sensing.



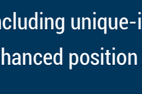
Pacemakers & Defibrillators

- Internal telemetry coil
- Inductive charging coil
- High voltage transformer
- Inductor



Neuro Implants

- Internal telemetry (communications) antenna
- Telemetry transmit/receive
- Wireless charging coils

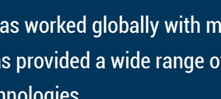


Cochlear Implants

- Telemetry coil
- Inductive charging coil
- Inductor

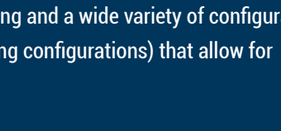
Surgical Navigation

- Positioning reference probes
- Miniature receive coils
- 3-axis transmit coil assembly
- Field generation coils



Internal Diagnostic Position

- Three coils in the x, y and z axis
- Electromagnetic filed generation & detection coils
- Value-add assemblies



Implant Programmers & Chargers

- Antenna coil with resistor
- Telemetry coils and assemblies
- Flexible recharge coil assembly

Trans-cranial Magnetic Stimulation (TMS)

- Field generation coils and assemblies
- Bone healing
- Migraine treatment
- Drug addiction

Diagnostic Equipment – Internal/External

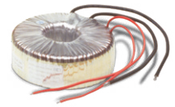
- 60601 isolation transformer
- High frequency power supply magnetics
- Specialty current sense magnetics
- Patient connect isolation magnetics

Dialysis

- Specialty electromagnetics
- Ionic sensing device

Current Boost Application

- Ultra thin power inductor



Power Applications

- Toroidal isolation transformer

Instrumentation

- WIFI transmit receive antenna