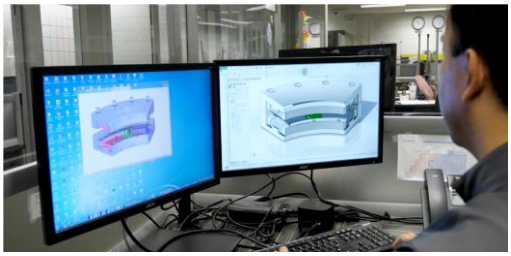
Developing Magnetic Solutions that Take Healthcare to the Next Level

A History of Magnetic Innovation

Dexter is a recognized leader in magnetic solutions for medical uses. Our 30+ years of experience serving the medical market gives us the deep knowledge needed to understand the highly specialized requirements medical device manufacturers face in gaining FDA, MDR or CE approval.

Dexter is the premier provider of permanent magnets and assemblies for cardiac assist, implantable devices, immune-diagnostic, life sciences, surgical and therapeutical products, as well as many other class I, II and III medical solutions.

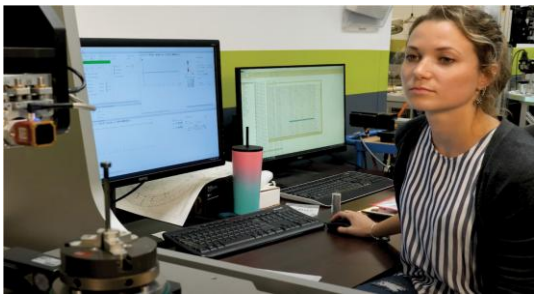
Our knowledge of magnet performance in extreme conditions and biocompatibility helps our customers create products that meet the most stringent requirements.



Why Choose Dexter?

Magnetic design is our core competency. Our goal is to enable you to take technology farther, apply advanced magnetic solutions and to take healthcare to the next level. Dexter supports you as a strategic partner for mutual success and growth.

Our dedicated teams work with you throughout your entire project, helping you define needs, validating system specifications and manufacturing optimized solutions.



- ISO 13485 Certified
- Magnetic design integrity
- Project and product awareness
- Robust magnetic assemblies
- Clean room Class 10,000 (ISO 7)
- Component-level traceability
- Flexible manufacturing
- Precision machining capabilities
- Sourcing expertise
- Prototype to production options
- Biocompatible solutions
- Product life cycle planning

Biocompatible Encapsulation

Biocompatible coatings are critical in the medical device world, especially in

implantable applications. Dexter has developed its own process for coating NdFeB magnets with BarrierMax Parylene C, which provides superior performance.

Parylene C is a thin, pin-hole free, conformal coating that has ideal barrier and corrosion resistant properties required for medical applications.

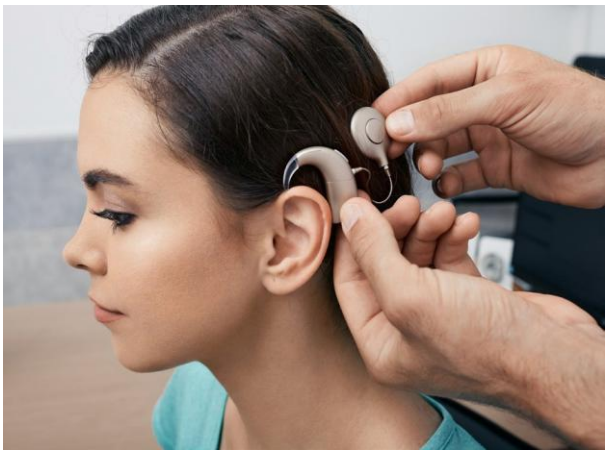
Dexter's BarrierMaxTM has been successfully deposited onto a Class III implantable device that has met the device's durability and biocompatibility requirements in accordance with ISO 10933-5.

Dexter also offers: Gold plating and welded titanium encapsulation.

Implantable Devices

Magnetics are incorporated in several implantable devices. An implantable medical device is either partly or totally introduced, surgically or medically, into the human body and is intended to remain there after the procedure. 8-10% of the American population and 5-6% of individuals in industrialized countries have had a procedure involving an implanted medical device.

Miniaturization, biocompatibility, reliability, traceability, and safety are a few of the key requirements for implantable products.



Applications include:

- Artificial Heart
- Ventricle Assist Device
- Cochlear
- Defibrillator and Pacemakers
- Magnetic valve
- Neural Stimulator
- Neuromodulation
- Retinal implant system
- Drug pumps

Surgical Devices

Dexter has evolved into the magnetic assembly expert for various surgical instruments and applications, including:

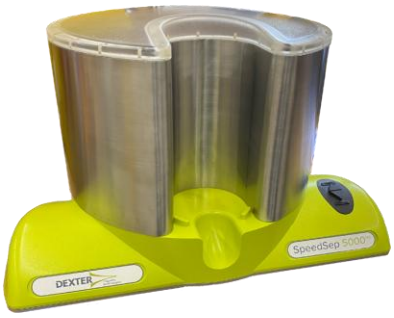
- Excimer Lasers
- Laparoscopic Surgery
- Magnetic Catheters
- Magnetic Guided Surgery
- Robotic Surgery
- Surgical Drills and Saws
- Torque limiters
- Sensors and Encoders

Magnetic Separators for In-Vitro Diagnostics

Dexter is a provider of custom magnetic separators in many of the top IVD platforms. We work with our customers to optimize separation and retention of the magnetic beads.

In-Vitro Diagnostics (IVD) are defined as:

- Any device, reagent, material, or system designed for use in the laboratory diagnosis of disease or health status. The term also refers to a general category of entities that are specifically regulated by the U.S. Food and Drug Administration and other regulatory bodies.
- The laboratory analysis of body substances for specific analytes indicative of disease.



Dexter LifeSep® magnetic bead separators and products are designed to work with most commercially available superparamagnetic beads, roughly 0.8 micron and above. For beads in the nanometer range, we can provide extremely high-gradient, custom separation solutions achieving efficient collection that might otherwise only be possible with matrix-based technology.

- Dexter LifeSep® designs are superior due to an intricate magnetic circuit which maximizes speed, particle retention, distribution, and more.
- High performance magnet plates to meet all your magnetic bead-based application needs.
- Standard range of single vessel from 1.5ul to 5L.
- Large production scale 5L SpeedSep system.
- Custom branded solutions available