

MEDICAL TECHNOLOGY SPOTLIGHT

The Medical Technology Industry in the United States

The United States remains the largest medical device market in the world, with a market size of around \$156 billion, and it represented about 40 percent of the global medical device market in 2017. U.S. exports of medical devices in key product categories identified by the Department of Commerce (DOC) exceeded \$41 billion in that year.

The medical technology industry (commonly referred to as medical devices) consist of articles, instruments, apparatuses, or machines that are used in the prevention, diagnosis or treatment of illness or disease, or for detecting, measuring, restoring, correcting, or modifying the structure or function of the body for some health purpose. Typically, the purpose of a medical device is not achieved by pharmacological, immunological, or metabolic means.

The industry is responsible for almost 2 million jobs in the United States, including both direct and indirect employment. Medical technology directly accounts for well over 500,000 of these jobs. More than 80 percent of

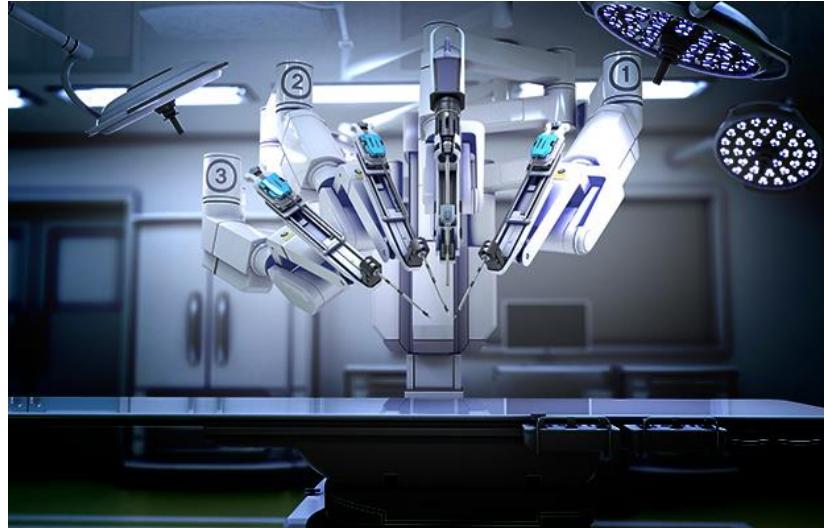
medical device companies in the United States consist of fewer than 50 employees, and many (notably start-up companies) have little or no sales revenue. The medical technology industry employs people in all 50 states.

U.S. medical device companies are highly regarded globally for their innovative and high technology products. R&D spending continues to represent a high percentage of medical device industry expenditures, averaging 7 percent of revenue. Compared to several other industries including automotive, defense, and telecommunications, the medical



device industry invests a higher percentage of yearly revenues into product innovation, reflecting the competitive nature of the industry and constant innovation and improvement of existing technologies.

The medical device industry relies on several industries where the United States holds a competitive advantage, including microelectronics, telecommunications, instrumentation, biotechnology, and software development.



Collaborations have led to recent advances including neuro-stimulators, stent technologies, biomarkers, robotic assistance, and implantable electronic devices.

Since innovation fuels the medical device sector's ongoing quest for better ways to treat and diagnose medical conditions, when coupled with patient life expectancy increasing and aging populations globally, the medical device sector should continue growing at a positive rate in the future.



INDUSTRY SUBSECTORS

Dental equipment and supplies: Include equipment, instruments, and supplies used by dentists, dental hygienists, and laboratories. Specific products include dental hand instruments, plaster, drills, amalgams, cements, sterilizers, and dental chairs.

Electro-medical equipment: Includes a variety of powered devices, such as pacemakers, patient-monitoring systems, MRI machines, diagnostic imaging equipment (including informatics equipment), and ultrasonic scanning devices.

In-Vitro diagnostics: Includes chemical, biological or radioactive substances used for diagnostic tests performed in test tubes, Petri dishes, machines, and other diagnostic test-type devices.



Irradiation apparatuses: Includes X-ray devices and other diagnostic imaging, as well as computed tomography equipment.

Surgical and medical instruments: Includes anesthesia apparatuses, orthopedic instruments, optical diagnostic apparatuses, blood transfusion devices, syringes, hypodermic needles, and catheters.

Surgical appliances and supplies: Include artificial joints and limbs, stents, orthopedic appliances, surgical dressings, disposable surgical drapes, hydrotherapy appliances, surgical kits, rubber medical and surgical gloves, and wheelchairs.