Leak and Functional Testing for Medical Devices
Over the years, CTS has earned a strong reputation for developing leak test and assembly verification solutions for a variety of markets, including the medical device field. Our proven track record of delivering winning solutions for our clients’ challenges has helped us become an industry leader.

Relying on our uncompromising product design and outstanding manufacturing capabilities, CTS clients possess a high level of confidence in our superior products and services. Our facilities and capabilities allow for development of custom applications that are second-to-none.

In today’s competitive marketplace, medical device manufacturers adhere to stringent regulatory demands to make sure these devices function properly and are built to the highest quality. That’s why we work closely with our customers to develop cost-effective solutions that satisfy those requirements and provide uncompromising reliability and functionality.

Medical Device Applications

- Balloon & drainage catheters
- Blood bags, separators, dialyzers, filters
- Bottles, tubes and flasks
- Cardiac pacemakers
- Cassettes
- Catch bags & cavity drains
- Drug delivery systems
- Fiber-optic scopes
- Hermetically sealed devices
- Implantable devices
- Infusion bags
- Intravenous sets
- Catheters, multi-lumen & single lumen
- Pumps
- Syringes
- Tubing sets
- Valves
CTS Products and Test Types

Test Method Applications

- Pressure decay leak test
- Pressure gain leak test
- Pressure differential leak test
- Sealed component leak test
- Inter-lumen leak test
- Vacuum decay leak test
- Inflation and deflation confirmation
- Mass flow test
- Mass flow differential test
- Tracer gas detection (RGA)
- Helium mass spectrometer leak test
- Creep test
- Proof test
- Burst test
- Check valve cracking test
- Occlusion (blockage) test
- Multiple test linking
- Functional testing
- Assembly monitoring & verification
- …and other custom test solutions

Blackbelt™ Bench Mount

Blackbelt offers poka-yoke verification of rejected parts, failed parts are locked in the fixture.

Optional external leak standard port allows for easy calibration with multiple leak standards.

CTS Connect™ Luer type connectors are designed with removable front ends for quick part changeover without tools.

providing world-class leak test and assembly verification solutions
Sentinel™ leak test instruments and accessories

**Sentinel I-24**
The Sentinel I-24 is the most technologically advanced single-station leak test instrument configurable for a complete range of pressure and mass flow test types.

**Sentinel M-24**
The Sentinel M-24 is our advanced pressure decay leak test instrument, featuring expanded capabilities control of up to four independent stations.

**Sentinel C-20**
The Sentinel C-20 is an economical, high-performance, quality pressure decay leak detection instrument with advanced standard features.

**Sentinel C-28**
The Sentinel C-28 offers an unbeatable combination of advanced features, graphic interface and value in a compact, single-station package.

**Blackbelt**
The Blackbelt is a precision benchtop leak test instrument designed for maximum performance and minimal space requirements. Cincinnati Test Systems' Blackbelt instrument utilizes advanced algorithms derived from over 30 years of proven leak test experience to produce the fast and accurate results required by the most demanding customers.

**Air Actuated & Manual Seal Connectors**
CTS offers a complete range of sealing connectors for virtually every part sealing requirement, including specialized medical luer-type connectors.