CDT-5 Stent Tester



CDT-5: The affordable durability tester for coated stents

The modular design of the patented¹ CDT-5 Coating Durability Tester from Dynatek Labs, Inc. offers durability testing and real-time particle counts from coated and bare metal stents in a compact footprint. The CDT-5 is an affordable durability tester for up to five stent samples in straight, curved or bifurcated mock vessels, with the capability to count particles being shed by these stents in real time. The CDT-5's linear motor produces an adjustable bellows compression which allows for stent loading conditions from physiological to accelerated testing rates of up to 150Hz. Samples can be tested at precisely controlled test parameters, and samples are easily accessed at all times for visual inspection or high speed photography. Ideally suited for screening sample candidates in early stage stent research, the CDT-5 offers unmatched flexibility. By allowing you to upgrade with an optional laser micrometer and optional particle-capturing filters, the CDT-5 offers you the same technology as the workhorse CDT-20, Dynatek's 20-sample Coating Durability Tester, but with a significantly lower upfront investment. This machine has a master file located at the USFDA.

1 US Patent # 7,621,192 B2

The perfect low-to-medium throughput platform

The CDT-5 features the technology of the CDT-20 while meeting the need for a low-to-medium throughput. For young companies looking to rapidly screen stent candidates, or established labs validating new stent designs, the CDT-5 provides the most cost-effective solution. Dynatek knows what's important to you: affordability, flexibility and cutting-edge science and engineering. With the CDT-5, you get them all.





Five stent samples in straight, curved or bifurcated mock vessels

Validate your stent design easily

The CDT-5 allows you to count particles in real time, as they are being shed by your stents. The particle counter detects and logs particle size and quantity, displaying the counts on screen. Real time particle counting is a critical tool in your stent design toolbox, helping you understand your stent's particle-shedding behavior.



Tremendous flexibility in a modular system

Dynatek's CDT-5 was designed from the ground up to be a modular system that can be upgraded to keep pace with your testing needs. Up to five straight, curved or bifurcated tube configurations can be tested under physiological to accelerated conditions produced by compressible bellows driven by our proven linear motor. Designed to support your lab's current and future demands, the CDT-5's modular system allows for an upgrade with an optional laser micrometer for accurate measurements of tube deflection. Looking to characterize particles shed by your stent? The CDT-5 can also be upgraded with an optional system that features an individual filter for every tubing sample, allowing you to capture particles shed by each stent in real time.



Shut-offs for each sample makes individual removal easy

"...knowing that we could upgrade the CDT-5 to meet our changing needs was an important factor in our decision to acquire it..."

CDT-5 with adaptors for particle injections



Newly designed UC Controller



Newly designed 5 Sensor Particle Counter

True deflection metrics – in real time

An optional laser micrometer on the CDT-5 monitors the realtime outer diameter of the selected mock vessel as it undergoes deflection. However, we know seeing is believing, and for the most accurate visualization of stent deflection, we recommend the optional high-speed camera. Two user-chosen points on the stent are mapped throughout each cycle resulting in a very accurate determination of stent deflection. With this tester, you will be compliant with the requirements of upcoming regulations that mandate observation of actual stent deflection. Only the CDT-5 and its sibling the CDT-20 Coating Durability Testers offer the optional high-speed camera upgrade.

Cutting-edge science with convenient operation

The CDT-5 offers a powerful solution to stent testing challenges, while remaining an easy instrument to operate. Case in point: you can hot-swap samples on the CDT-5 in minutes with the optional isolation valve system and spike wrench. Dynatek believes that powerful technology should be easy to use and the CDT-5 exemplifies this belief.

Dedicated software gets you results faster

The CDT-5's software package is easy to use right out of the box. Intuitive menus with large, easy-to-read 'dial type' readouts on screen allow you to conveniently set up, monitor and control instrument status. Data from your tests are logged into TDMS files that can be accessed by Excel, DIAdem and Matlab programs.

"...for a start-up like ours, the CDT-5 gave us the technological muscle to quickly screen our stent candidates and zero in on those designs that had the greatest potential, at a price that we could afford..."

Unmatched support provides peace of mind

The technology, quality and reliability of our instruments have made Dynatek the undisputed world leader in durability testing. When you invest in the CDT-5, our world-class support is included, from training your staff to ensuring maximum instrument uptime.



Dynatek Labs Model CDT-5 Product Specification

Description

Number of test samples Mock vessel configuration Mock vessel length (straight) Mock vessel inner diameter Typical mock vessel compliance Testing rate Testing fluid Fluid temperature Flow rate Test control parameters

Laser micrometer

Pressure transducer range System fluid filter Particle capture filters Particle capture pore size

Controller

Software

Capacitance tank

Specification

5 test samples Straight, curved, or bifurcated Adjustable to ≤ 250 mm ≈1.5 mm to ≤ 10 mm 5% to 7% per 100 mmHg 1.2 to 150Hz PBS or distilled water Ambient to ≤ 45°C 100 mL/min per sample Stent deflection (with high speed camera), Tube deflection (with laser micrometer), Tube pressure (with pressure transducer) Solid-state laser diode (optional; 780 nm) 0-10 psig 0.2 micron 5 (optional) 5 micron (optional, other pore sizes available) Universal Controller, featuring the NI[™] Single-Board RIO platform Dynatek DAQ software based on LabVIEW architecture 1.5 gal

Additional Information

Additional special configurations upon request

Other specifications available upon request

Other testing solutions possible

1 common or 5 individual

Dynatek Labs Particle Counter Product Specifications

Description Number of particle counter modules Particle size range		Specifications 5 5-900 micron		Additional Information Individual modules for each sample lane Size and count up to 100 micron Count up to 900 micron
Max. particle concentration Particle bin range		15,000 p/mL @ 10 micron 2-6 bins		5 bins of 5-100 micron 1 bin for 100-900 micron
Particle counter calibration standard Sizing resolution		USP <788>, ASTM F658 5-50 micron: +/- 1 micron 50-100 micron: +/- 5 micron		
Module	Dimensions		Power	Weight
CDT-5 (base unit)	14 ¾" W X 20"D X	55"H	5.0 A	95 lbs

*Specifications are subject to change without notice.

To receive a customized proposal, contact us today at:

Dynatek Labs, Inc.

105 East 4th Street Galena, MO 65656 800.325.8252 1.417.357.6155 www.dynateklabs.com salesdd@dynateklabs.com



