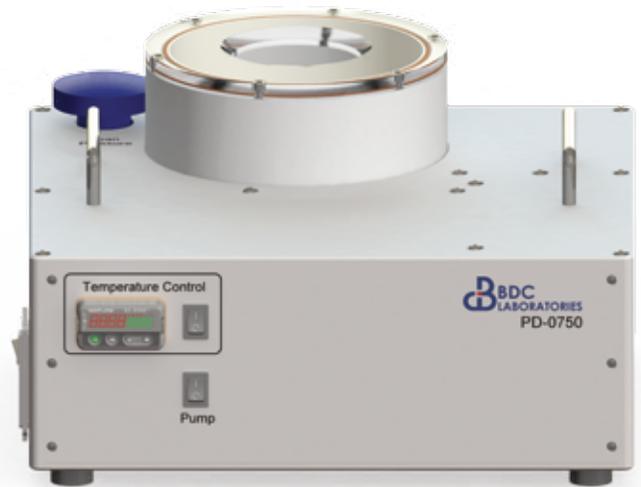
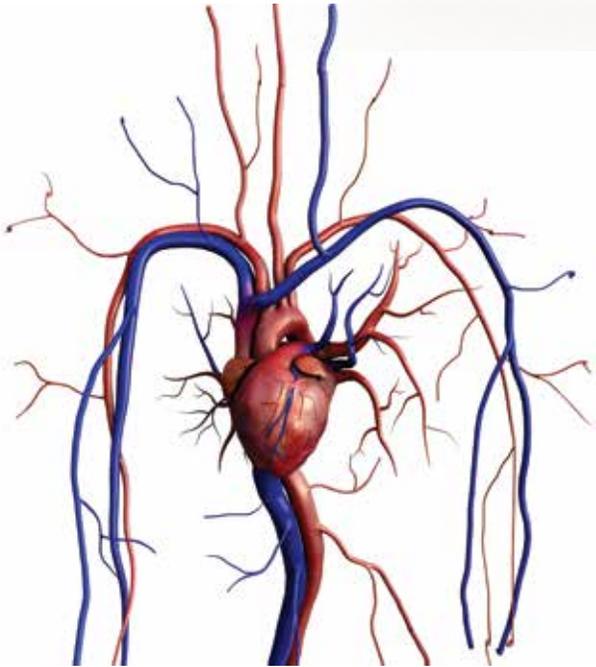


Versatile

Portable Pulse Duplicators



PD-0500



PD-0750

At the **heart** of your Mock Circulatory Loop™



Medical Device Testing & Equipment • Simulation Platforms • Silicone Vessels

At BDC Labs, we know that the pulse duplicator is at the heart of the cardiovascular flow loop. With over 40 years of experience in designing and implementing cardiovascular test systems, BDC Labs has developed two of the most versatile, efficient, easy to use and portable pulse duplicators: the PD-0500 and the PD-0750.

The PD-0500 is designed to drive endovascular and vascular technology simulated use systems, while the PD-0750 drives simulated use systems that incorporate heart valve technologies. Both pulse duplicators can be conveniently integrated with silicone cardiovascular anatomies or simulated use systems designed for an extensive array of applications including device or delivery system testing, marketing demonstrations and surgeon training.



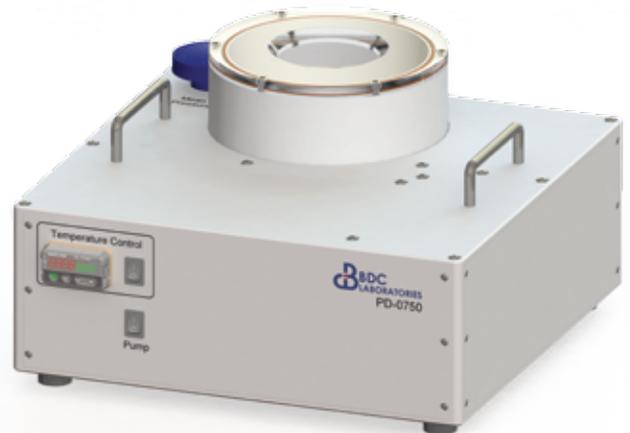
PD-0500

Application:

Driver for endovascular and vascular technologies.

Key benefits:

- Compliance chamber with sight glass
- Pressure gauge
- Temperature control
- Mean Pressure Control to adjust Systemic Vascular Resistance
- Quiet running
- Quick setup/breakdown



PD-0750

Application:

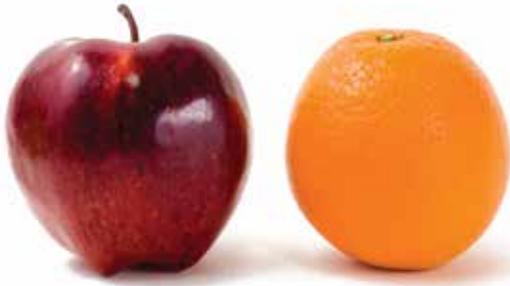
Driver for heart valve technologies.

Key benefits:

- Aortic or Mitral configuration
- Compliance chamber (w/mitral configuration)
- Pressure gauge (w/mitral configuration)
- Temperature control
- Mean Pressure Control to adjust Systemic Vascular Resistance
- Quiet running
- Quick setup/breakdown

Pulsatile Pumps vs. Pulse Duplicators

Comparing pulsatile pumps to pulse duplicators is like comparing apples to oranges:



pulsatile pumps are only able to develop pulsatile flow in a fluid loop. A pulse duplicator on the other hand is a complete cardiovascular flow source that has the ability to provide hemodynamically accurate pulsatile flow through integrated compliance, temperature, and systemic vascular resistance.

The PD-0500 and PD-0750 from BDC Labs are the most versatile and portable pulse duplicators available. If you're looking to model in vivo flow conditions in your Mock Circulatory Loop (MCL), choose a pulse duplicator from BDC Labs.

BDC Labs offers pulse duplicators, Mock Circulatory Loops and turn-key simulated use solutions.

Why purchase a pulse duplicator from BDC Labs?

BDC Labs not only manufactures pulse duplicators, but we also fabricate silicone patient anatomies and mock vasculatures that are routinely used to interface with the pulse duplicator as part of a complete MCL solution.

To build a complete MCL simulated use solution, you also need:

- Hemostatic valves
- Pressure monitoring & on-screen display
- Data logging
- Acrylic tank/drip tray to support the anatomy
- Backlighting to promote visualization

BDC Labs offers all of the above systems and accessories that together allow you to create the *perfect, custom turn-key simulated use solution* that best meets your requirements.



Portable Pulse Duplicators: The Perfect Marketing and Training Tools

The low weight and ease of use of the PD-0500 and PD-0750 make them the perfect hemodynamic drivers for demonstrating the deliverability of your endovascular or cardiac device technology (simulate advancement, deployment and retraction) for training and evaluation.

BDC Labs' portable pulse duplicators are easy to setup, configure and start: just connect your MCL, add water or PBS, and you're ready to demonstrate your technology in mere minutes! Advantage? You can meet more customers and close more deals than with any other unit on the market.

Everything you need in one portable system – just add water!



Big Machine Performance in a Compact Footprint

The PD-0500 and PD-0750 were designed to:

- be portable,
- contain everything needed from temperature control to systemic vascular resistance to drive a MCL, and
- fit into a rugged shipping case.

BDC Labs' portable pulse duplicators feature electronics that are carefully designed and mounted to offer resistance to shock and vibration. No matter how many times you check your unit as baggage in its shipping case, you can be confident that you can plug in the unit at your destination and make your demonstration successfully.



Accessories

BDC offers specialized accessories that extend the capabilities and maximize the return on investment of your portable pulse duplicator.

Flow Rate Adjustment

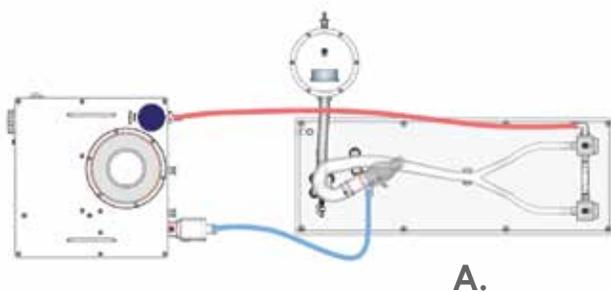
The Flow Rate Adjustment features a drive head with three selectable *user-defined* flow rate slots (e.g. 2, 3 and 5 L/min) allowing you to choose the flow rate you need for your MCL.

Shipping Case

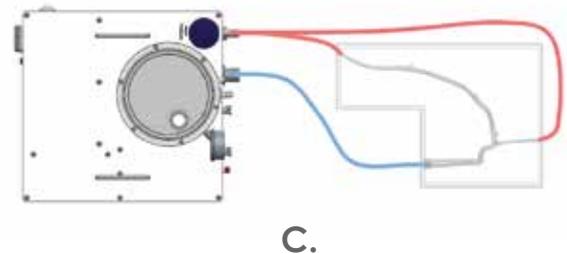
The Shipping Case for the PD-0500 and PD-0750 is a customized, rugged container with a fully padded foam interior that is watertight, crushproof and dustproof. It features an extendable handle and four wheels and can be checked as airline luggage with little risk of damage to its contents.

Mock Circulatory Loops (MCL)

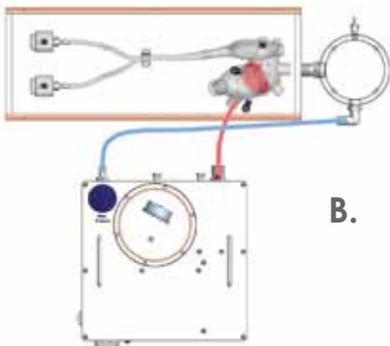
BDC Labs offers a wide range of compliant silicone mock vessels and silicone anatomies as part of a *complete* MCL solution. Anatomies are based on our library of standard healthy and diseased patient data files, or can be made from your patient data. All mock vessels and anatomies are available with BDC Labs' proprietary SLIC™ friction reduction coating that substantially reduces friction and tackiness of luminal silicone surfaces to promote smooth advancement, tracking, deployment and retraction of transcatheter devices.



A.



C.



B.

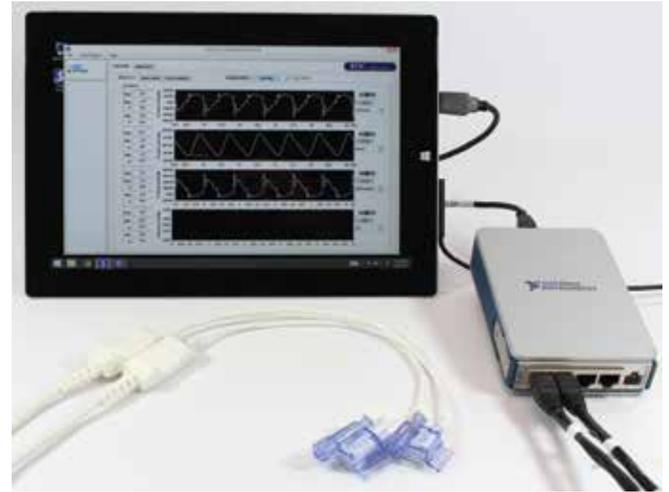
- A. PD-0750 with MCL setup, in aortic configuration.
 - B. PD-0750 with MCL setup, in mitral configuration.
 - C. PD-0500 with MCL setup, in vascular application.
- Blue lines indicate MCL inflow, red indicates outflow.

Diastolic Pressure Control

The Diastolic Pressure Control (patent pending) on the PD-0750 features a tunable element to control a cardiac flow network's diastolic filling pressure, resulting in a more clinically relevant pressure environment for prosthetic valve applications.

Statys® Portable Pressure Monitoring System

BDC Labs' pulse duplicators can be interfaced with our Statys Pressure Monitor tablet, featuring the Statys Pressure Monitoring and Data Logging software package, a Data Acquisition Controller and up to four pressure transducers. Aortic, ventricular and other pressure data can be displayed on screen.



PD-0500 Specifications

Frequency	60-90 bpm ¹
Test fluid	Water, PBS
Flow rate	1.5-5 L/min
Max. pressure	200 mm Hg
Temperature	up to 40 °C
Compliance	included, with sight glass
Chamber	glass
Pressure gauge	included
Mean Pressure	included
Control	
Regulatory Compliance	Complies with all applicable European Union directives and standards for safety and EMC. CE marked.

¹Other frequencies are available upon request.

PD-0750 Specifications

Frequency	60-90 bpm ¹
Test fluid	Water, PBS
Flow rate	1.5-5 L/min
Max. pressure	200 mm Hg
Temperature	up to 40 °C
Compliance	included ²
Chamber	
Pressure gauge	included ²
Mean Pressure	included
Control	
Configuration	Aortic or Mitral
Regulatory Compliance	Complies with all applicable European Union directives and standards for safety and EMC. CE marked.

¹Other frequencies are available upon request.

²With Mitral configuration.



Medical Device Testing & Equipment •
Simulation Platforms • Silicone Vessels

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