

The ViVitro Pulse Duplicator is the world's most widely used heart model, and incorporates the functional capability to test two heart valve substitutes simultaneously in left or right heart configurations while assessing performance and function under simulated cardiac conditions. Powered by a piston-in-cylinder pump head driven by a digital motor with a high torque to inertia ratio, this design provides long lasting and virtually maintenance free reliability.

The ViViTest data acquisition and control system manages the pump, which allows for various ventricular waveform states and beat rates, while capturing physiological pressures and valve flows. When the ViViTest software control system is combined with the ViVitro Labs Pulse Duplicator, physiological flow and pressure can be readily created, collected, and analyzed.

Testing Capabilities

- Percutaneous valves
- Stentless valves
- Stented tissue valves
- Create physiological flows for peripheral device assessment
- Mechanical valves
- Venous valves
- Other cardiovascular devices
- Model to evaluate LVAD or other assist systems

Features

- Rapid pacing for transcatheter deployment simulation
- Pediatric cardiac output simulations
- Ventricle membrane to replicate the natural chamber flow
- View ports to observe and record valve function and adjacent flow fields
- Facilitates in flow visualization studies
- Thin acrylic windows permit ultrasound transmission for interrogation of flow fields regions
- Transducer sites to measure wall pressures in the atrium, ventricle, and aortic/pulmonary outflow tract
- Control pulsatile fluid flows to simulate various cardiac flow conditions to include arrhythmia, normal, hypo and hypertensive states at an assortment of cardiac outputs and beat rates
- Peripheral resistance and supplementary characteristic compliances to simulate cardiovascular character and resistance
- The ability to create and control cardiac waveforms at various physiological states and frequencies, including arrhythmia and wave trains. Waveforms can be easily created with up to 1200 control statements
- Materials are chemically compatible with most sterilization and testing solutions
- Right and left heart configuration
- Customization and optional components/accessories available



Specifications

Dry weight:	25lbs
Dimensions:	32 x 18 x 20 inches
Power :	115V / 230VAC, 50-60Hz
Temperature range:	up to 40°C ± 0.1°C
Flow rate:	1 - 10 L/min
Heart rate:	30 - 220 bpm

ViVitro products are manufactured in an ISO 13485 facility and meet applicable CE marking directives.

One year **Warranty** on all products



For further information please contact us:
www.vivitrolabs.com
 tel. +1.250.388.3531
 email. info@vivitrolabs.com

Making device testing simpler, faster and more reliable.

