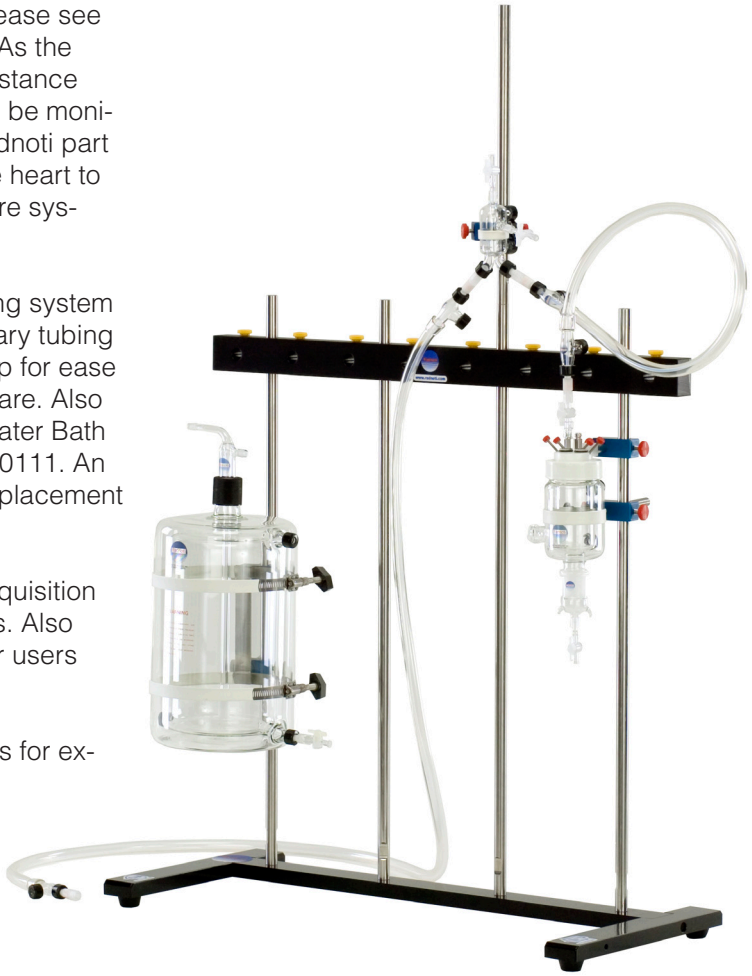
# Radnoti

## Radnoti Langendorff Constant Flow Non Re-Circulating Heart System for Mouse:
#130103EZ

The Radnoti Langendorff Constant Flow Non- re-circulating 130103EZ system permits the researcher to create a constant flow non re-circulating Langendorff preparation for Mouse and Rat (For Larger donors see 120 series heart systems or Porcine Heart systems.) The heart may be paced (see Radnoti Part number 140157 Pacing Electrode) or spontaneously beating. The system can be instrumented to measure left ventricular pressure (Scisense FT111B Ultra-Miniature Pressure Catheter recomended), apical force using the built-in pulley system in combination with a Isometric Force Transducer and coronary resistance. This version of the constant flow Langendorff system for mouse uses a peristaltic pump to perfuse the heart. Since flow is held constant, changes in coronary resistance are detected as changes in pressure. By using multiple reservoirs or a syringe pump, different solutions or drug concentrations can be delivered to the heart and washed out. Since flow is constant, it is easy to titrate drugs into the heart using a syringe pump. However, the heart will not be able to autoregulate coronary flow, so production of ischemia or increases in work may result in a more severe insult than with a constant pressure system. This type of system is often used for dose response studies in pharmacology. The heart chamber, components, and key perfusate lines are water-jacketed for superb temperature control.

The system uses a water-jacketed reservoir to maintain and gas the perfusion solution or buffer. A peristaltic pump draws from the reservoir and drives the solution up to a water-jacketed bubble trap via a water jacketed flex tube assembly, where bubbles are relieved from the flow, and then down to the aortic cannula into the mouse heart chamber via a second water jacketed flex tube assembly. The water jacketed flex tube assemblies use a teflon inner tubing to retain gas levels during low flow perfusion rates. Effluent from the heart is directed to waste or collected for evaluation (For re-circulating of the buffer please see Radnoti 130106 and 130102 isolated heart systems.). As the system is configured for constant flow, changes in resistance from the heart will result in pressure variations that can be monitored via an accessory micro pressure transducer (Radnoti part number 159905). For experimentation that requires the heart to autoregulate flow, please see Radnoti constant pressure systems 130102EZ and 130105EZ.



The Radnoti 130103EZ Constant Flow Non re-circulating system comes complete with Lab Stand Assembly, all necessary tubing cut to size and pre-assembled and packaged by group for ease of installation, glassware and associated clamp hardware. Also included is the Radnoti 170051A Thermal Circulator Water Bath and a Peristaltic pump and pump head 170100-50, 170111. An accessory Tubing Connector Kit is also included for replacement connectors or minor variations to the system.

The system may be purchased with or without data acquisition packages depending on your current laboratory needs. Also available in a No-Pump configuration 120103EZ-NP for users with access to existing equipment.

As with all Radnoti systems the, modular design allows for extreme flexibility and system reconfigurations.

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