

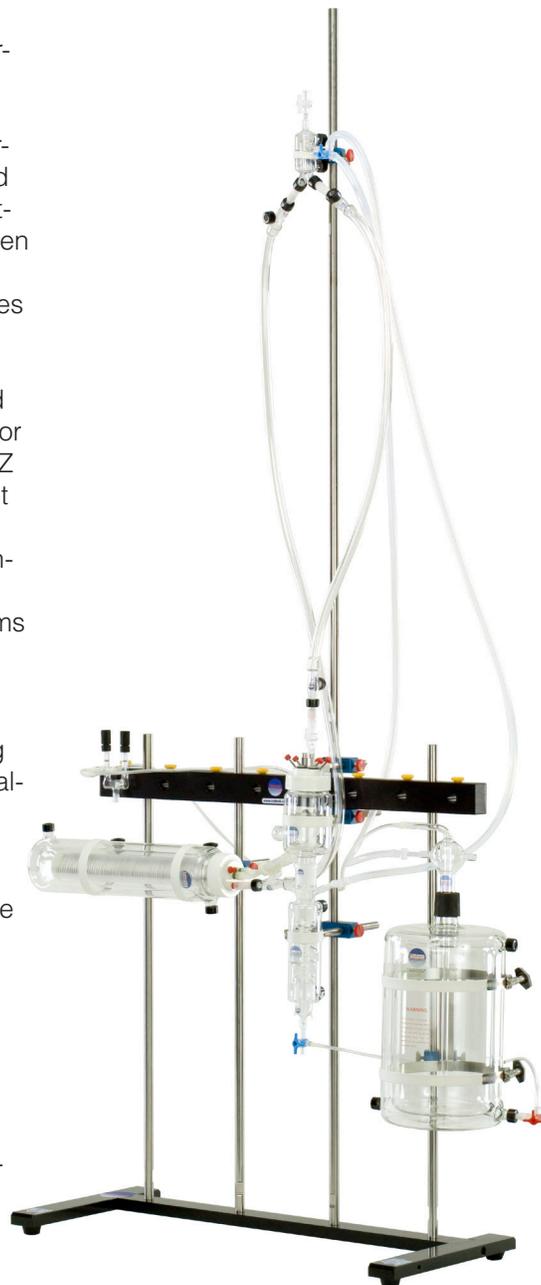
The Radnoti Langendorff Constant Pressure re-circulating 130102EZ permits the researcher to create a constant pressure re-circulating Langendorff preparation for Mouse and Rat. The heart may be paced (see Radnoti Part number 140157 Pacing Electrode) or spontaneously beating. The system can be instrumented to measure left ventricular pressure (Scisense FT111B Ultra-Miniature Pressure Catheter recommended), apical force using the built-in pulley system in combination with a Isometric Force Transducer and coronary resistance. This version of the constant pressure Langendorff system uses a peristaltic pump to perfuse the heart. Since pressure is held constant, changes in coronary resistance are detected as changes in Flow. By using multiple reservoirs or a syringe pump, different solutions or drug concentrations can be delivered to the heart and washed out. 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 heart chamber via a second water jacketed flex tube assembly. Radnoti water jacketed flex tube assemblies use a teflon inner tubing to prevent degassing of the perfusate during low flow experiments. Effluent from the heart is directed to waste or directed to the Membrane Oxygenator 130144 where gas is exchanged and perfusate can be routed back to the circulation loop for the heart (for non re-circulating systems please see Radnoti 130105EZ and 130103EZ isolated mouse heart systems). As the system is configured for constant pressure, changes in resistance from the heart will result in flow rate variations that can be monitored via an accessory Flow-meter (\*Transonics Flow Meters Recommended). For experimentation that requires the heart to autoregulate Pressure, please see Radnoti constant flow systems 130103EZ and 130106EZ.

The Radnoti 130102EZ Constant Pressure re-circulating Mouse Heart 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 120102EZ-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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