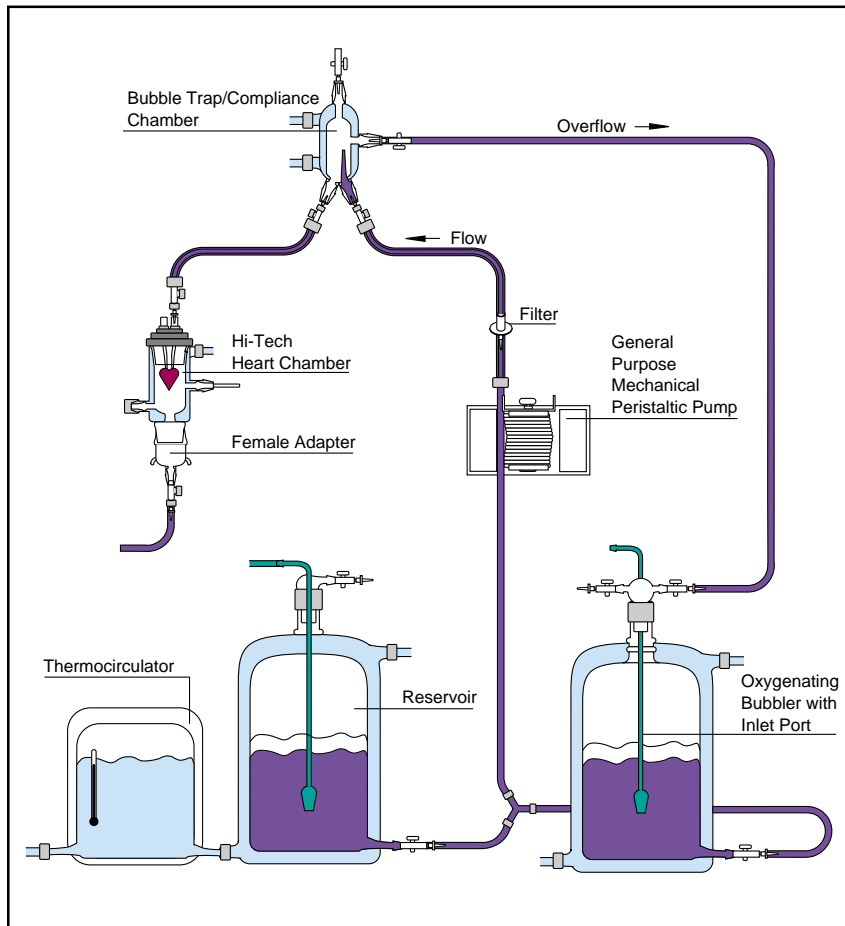


Isolated Organ and Tissue

Radnoti Langendorff, Constant Pressure, Non-Recirculating System (Model V)



- Complete with Harvard Constant Temperature Thermocirculator and General Purpose Mechanical Peristaltic Pump

Catalog No. Product

CGS 8940.73	Radnoti Langendorff, Constant Pressure, Non-Recirculating System (Model V), 115 VAC, 60 Hz
CGS 8941.73	Radnoti Langendorff, Constant Pressure, Non-Recirculating System (Model V), 230 VAC, 50 Hz

System Components

Descontinuado CGS 8942.73	Water-Jacketed 2 L Reservoir
CGS 8943.73	Standard Oxygenating Bubbler for 2 L Reservoir
Descontinuado CGS 8944.73	Oxygenating Bubbler with Fluid Inlet Port for 2 L Reservoir
CGS 8945.73	High-Tech Heart Chamber, Medium
CGS 8946.73	In-Line Injection Ports with Septa
CGS 8947.73	Bubble Trap (Compliance Chamber)
CGS 8948.73	Adapter, 24 mm, Female

Thermocirculator

CGS 8949.73	115 VAC, 60 Hz, or
CGS 8950.73	230 VAC, 50 Hz
CGS 8951.73	Thermocirculator Tubing Adapters
CGS 8952.73	General Purpose Mechanical Peristaltic Pump, 115/230 VAC, 50/60 Hz
CGS 8953.73	Four-Bar Stand Kit for Heart Perfusion System (Model V)
CGS 8953.73	Hardware Kit for Heart Perfusion System (Model V)

Application Note: Heart Perfusion System — Perfusion of Heart

Once mounted on the cannula, the heart should begin to beat strongly within seconds of reperfusion, and the pressure of the perfusate, if a constant flow system is used, should be carefully monitored to avoid under or over perfusion. Perfusion rates are about 3 to 15 ml/gram heart weight for constant flow systems using Tyrode's etc., and for both constant pressure and constant flow systems the initial pressure should be about 50 to 60 mmHg for most mammalian hearts. Physiologically normal perfusion pressures of 80 to 100 mmHg as in blood perfused hearts are not used in saline perfused hearts due to enhanced edema and potential valve damage.

The heart will stabilize rapidly, and most experiments can begin within 10 to 15 minutes after preparation has been mounted. The heart should be functional for several hours. Preparations will suffer edema if uncompensated by a plasma expander concomitant with protein loss from the heart.

In the Working Heart preparation, the left atria must be cannulated after the heart is being perfused through the aorta. The security of the cannula is tested by the opening of the atrial reservoir prior to switching from aortic perfusion. Once secured, the atrial pressure head is adjusted (normally 2 to 5 mmHg) and then the perfusate switched from the aorta to the atrial. Aortic pressure development can be monitored via a pressure transducer inserted to a t-connection from the aortic cannula. The aortic compliance is adjusted via adjusting the amount of air in the compliance chamber. Afterload is also adjusted via the height of the outflow of the aortic cannula (60 to 70 mmHg or more).