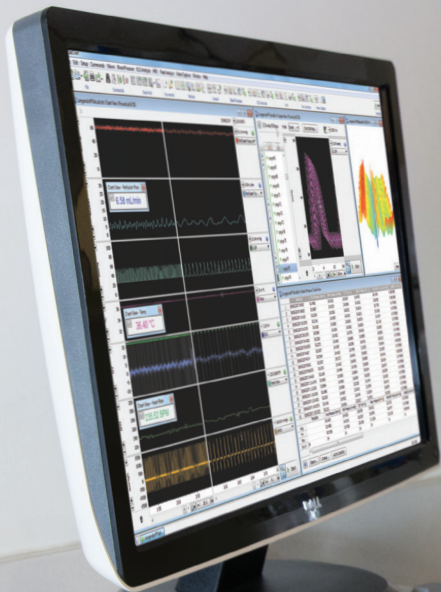


Isolated Perfused Heart



ADInstruments
Langendorff System

An integrated solution for isolated hearts

Enhance your cardiovascular research with an ADInstruments Langendorff System. The robust Panlab apparatus is ideal for small animal hearts, such as mouse and rat, and allows you to measure cardiac contractile strength (inotropic effects), heart rate (chronotropic effects) and vascular effects, without influence of neuronal and hormonal factors.

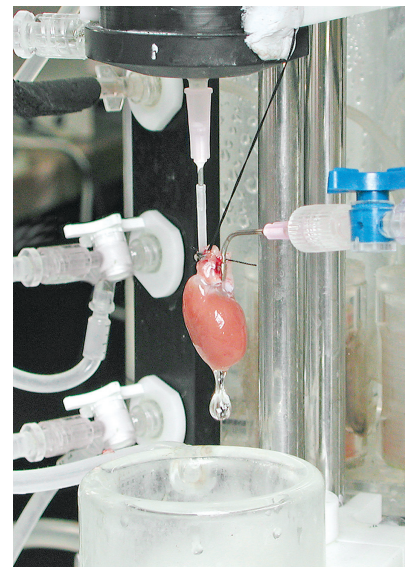
Our compact, comprehensive system maintains the heart in a temperature-controlled organ chamber, while perfusing the coronary arteries with a nutrient solution, allowing evaluation under conditions of constant perfusion flow or constant perfusion pressure.

Highlights

- Easy to set up, complete system saves time and increases productivity
- Waterjacket maintains constant temperature
- Simple switching between constant perfusion flow and perfusion pressure modes at the push of a button
- Monitors, records and displays coronary artery function and perfusion pressure
- Records and analyses in real time
- Compact system saves benchspace

Typical applications include:

- Ischaemic reperfusion injury
- Diabetes
- Cardiomyopathies
- Hypertension



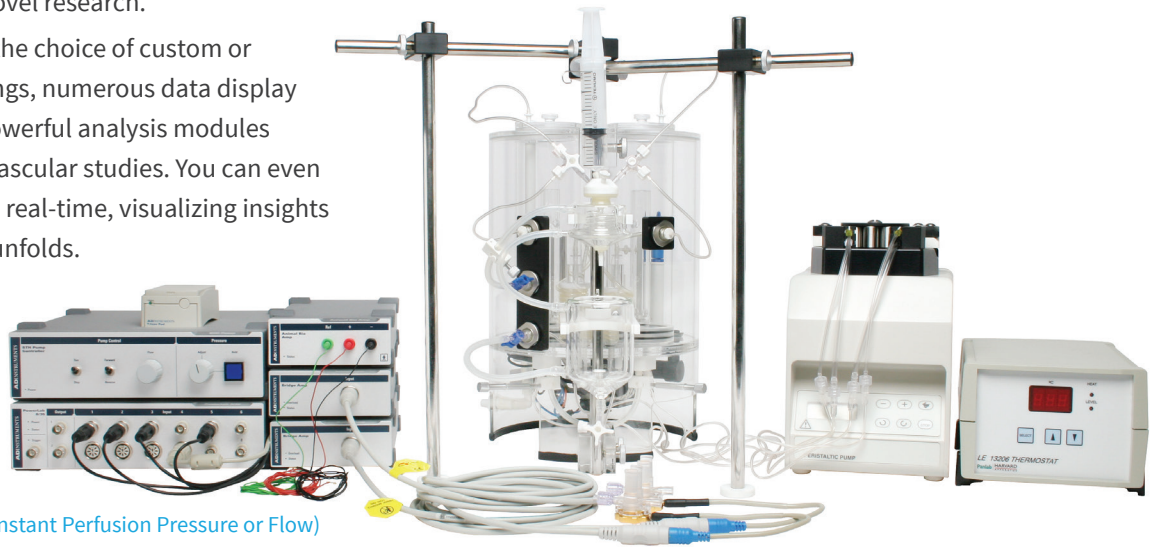
An isolated rat heart perfused via the aorta.

A complete system for Langendorff research

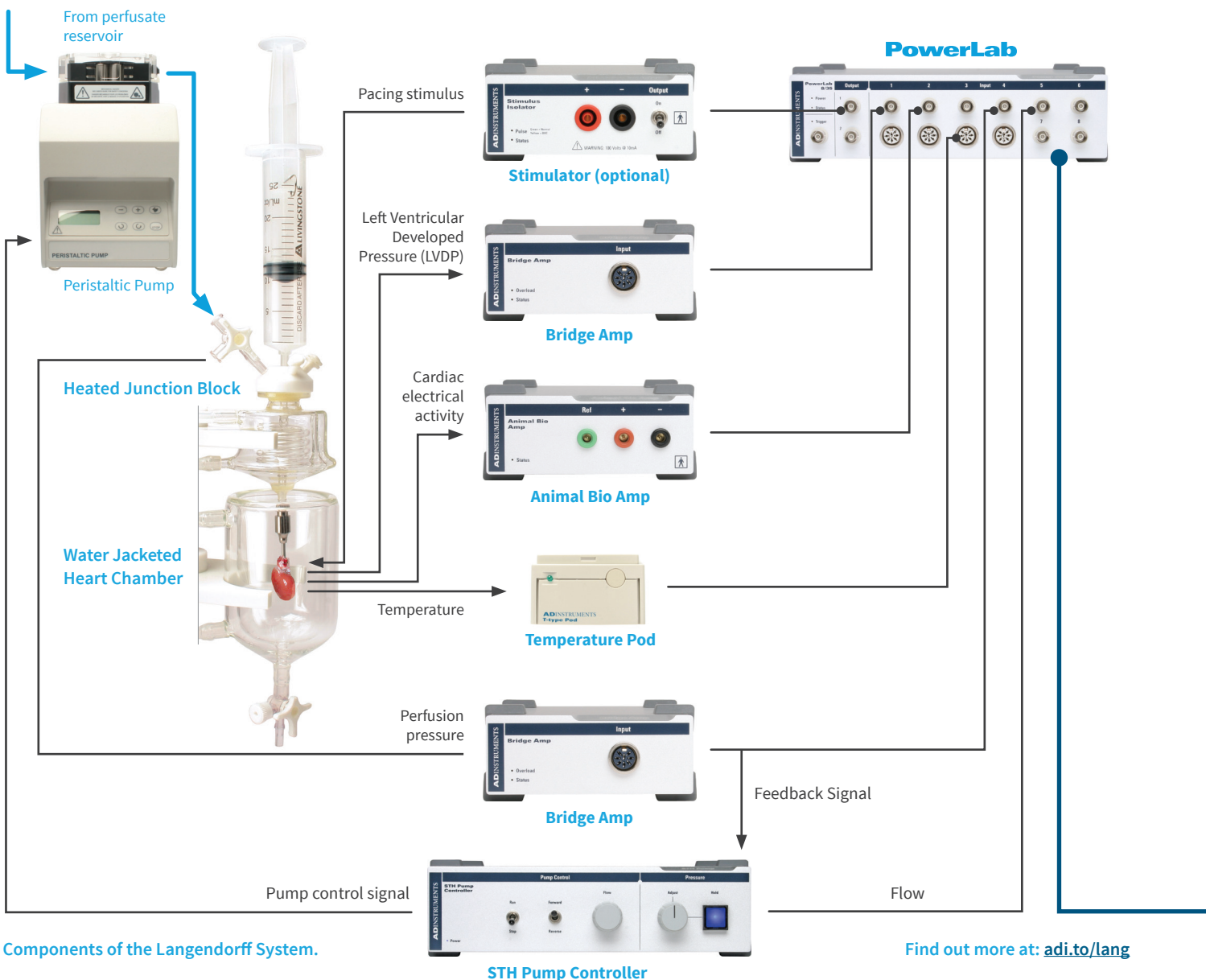
Combining robust and well-designed Langendorff apparatus from Panlab with PowerLab and LabChart gives you a reliable and future-proof system that can be adapted as your research advances.

PowerLab data acquisition lets you simultaneously record up to 32 channels of data, simplifying complex experimental design and allowing truly novel research.

LabChart Pro offers the choice of custom or pre-configured settings, numerous data display options as well as powerful analysis modules designed for cardiovascular studies. You can even apply calculations in real-time, visualizing insights as your experiment unfolds.



Langendorff System (Constant Perfusion Pressure or Flow)



Components of the Langendorff System.

Find out more at: adi.to/lang

Great quality for great science

The ADInstruments Langendorff System components are selected for their high performance and superior quality. A range of accessories adds extra options for research.

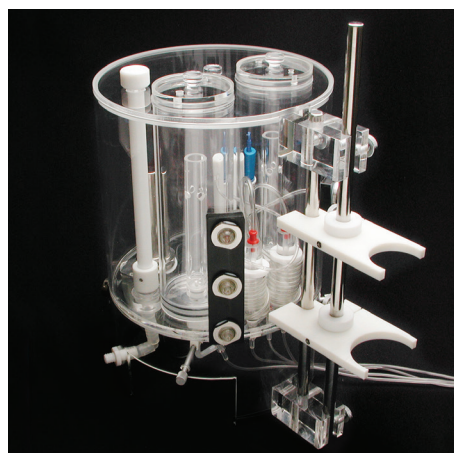


Accurate Pressure Measurements

Piezo-resistive Physiological Pressure Transducers are highly accurate and robust. Easy-to-fill domes connect to transducers quickly and easily, without leakage. The software-controlled, Bridge Amp amplifies pressure signals with low drift.

Easy-to-use Langendorff Apparatus

The Langendorff Apparatus by Panlab is an easy to setup, self-contained and thermostatically-controlled unit. Water-jacketing ensures constant temperature for the perfusate and the heart. The water bath and reservoirs are made from perspex for robustness and easy cleaning.



Dual Reservoirs are continually oxygenated and thermostatically controlled, allowing for quick changes to perfusion or perfusate type and preventing air bubble formation.



Sensitive temperature and water level sensors provide accurate temperature maintenance.

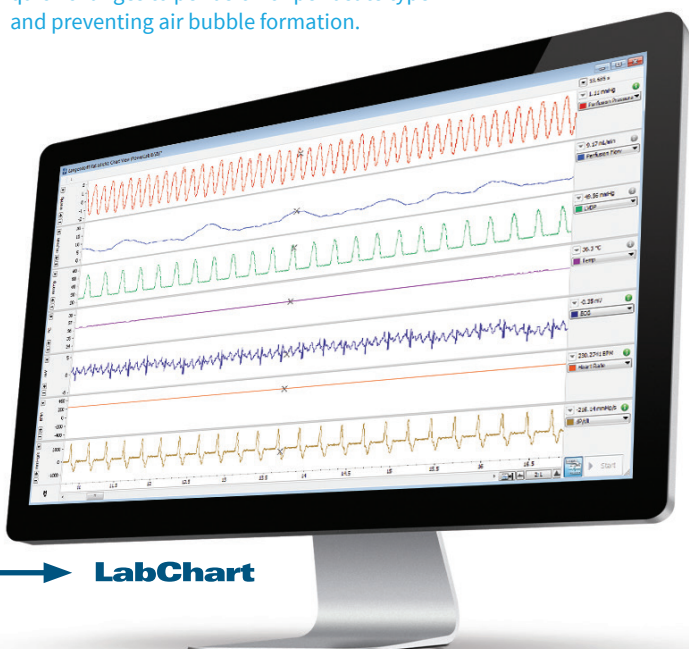
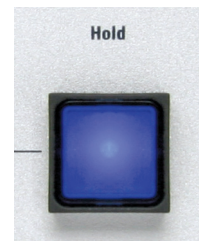


Additional ports on the Junction Block allow easy introduction of experimental drugs.

Innovative Pump Controller

The STH Pump Controller constantly monitors perfusion pressure, measures and controls the perfusion flow rate without requiring an additional cost of a flowmeter. Once set, the pressure can be held at a constant value, removing the need for elevated pressure apparatus.

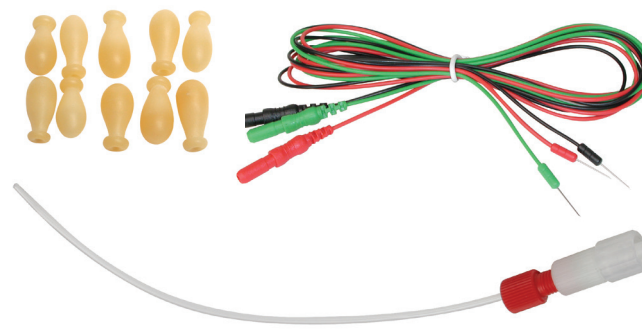
Easily switch between constant perfusion flow and constant perfusate pressure with the touch of a button (right), minimising timing delays.



LabChart

Customise your Langendorff system with accessories

Choose from a range of accessories including fluid-filled, balloon-tipped catheter to monitor LVDP in rats, needle electrodes for cardiac potential measurements and a pressure gauge for calibration.

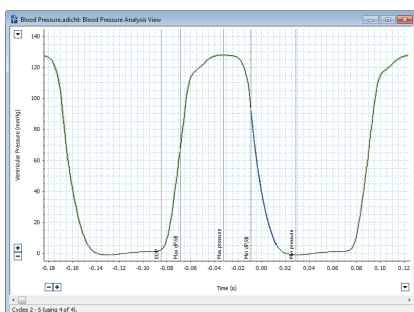


Powerful analysis for better results



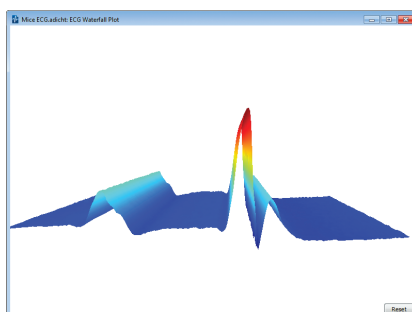
LabChart Pro software, supplied with the Langendorff System, simultaneously displays and analyzes up to 32 channels of data. It is easy to perform data analysis in real-time or post-acquisition. A multitude of flexible features allow a range of views and graphing.

Add-Ons supplied with LabChart Pro automate flow volume analysis. These include Blood Pressure, ECG, HRV, Peak Analysis, Dose Response and Video Capture Modules.



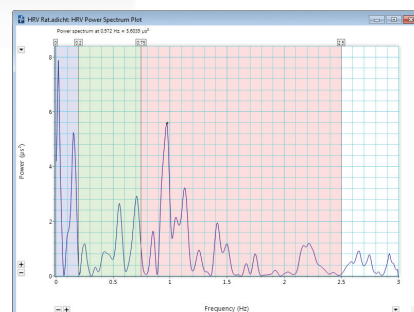
Blood Pressure

Automatically detects, analyzes and presents cardiovascular parameters from arterial or ventricular pressure signals in real-time or offline.



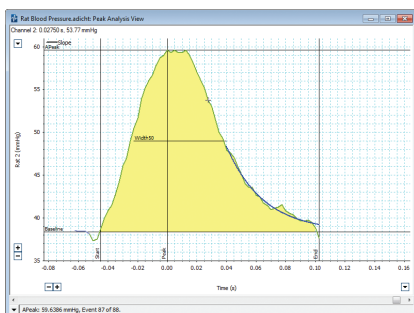
ECG

Automatically detects, analyzes and reports PQRST onset, amplitude and intervals. ECG plots including QT vs RR, QT vs Time, RR vs Time and Waterfall plots.



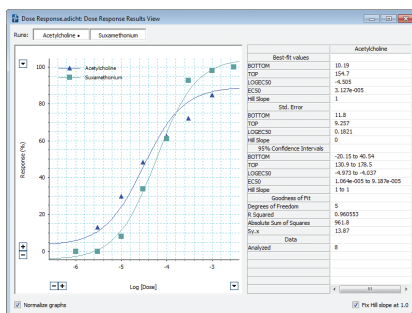
HRV

Analyzes beat-to-beat interval variations, automatically classify beats as normal or ectopic, generates Poincaré plots, Period and Delta NN Histograms and more.



Peak Analysis

Automatically detects and analyzes multiple, non-overlapping signal peaks in real-time or offline. Select from one of several analysis settings available for general waveforms and specific signal types.



Dose Response

Easy identification of response markers for automated generation of dose response curves. Provides quick parameter calculations including EC₅₀ values and Hill slopes.



Video Capture

Simultaneously records and synchronizes video in your LabChart data file. Replay to observe video and physiological data together.

For more information contact your local representative at info@animalab.eu or visit www.animalab.eu