

Cordis Distributor Training



Clippard Instrument Laboratory
www.clippard.com

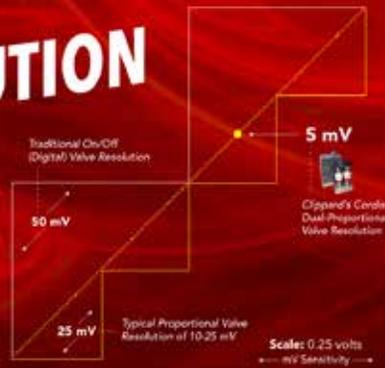
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WHY CORDIS IS BETTER THAN EXISTING SOLUTIONS

- Resolution
- Adjustability
- Digital vs. Analog
- Superior Communications & Monitoring

RESOLUTION



The pressure control industry is made up of digital and proportional control devices. Typical digital (on and off valve) solutions are around the 50 mV while proportional solutions vary from 10 to 25 mV. Cordis has **5 mV** resolution for those applications where sensitivity cannot be compromised.

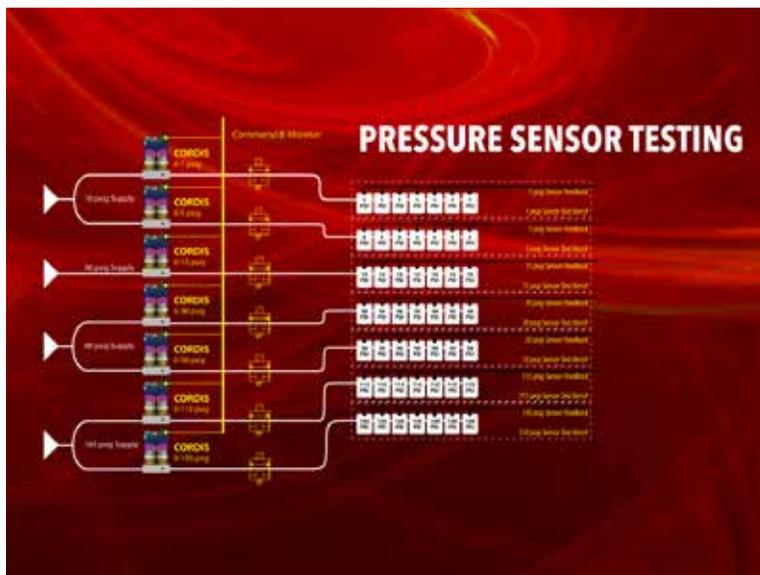
ADJUSTABILITY

- Customer can **adjust & tune** PID setting
- Makes unit **easy to experiment** with
- Can **customize** with **optimal settings**
- Provides **real-time control**

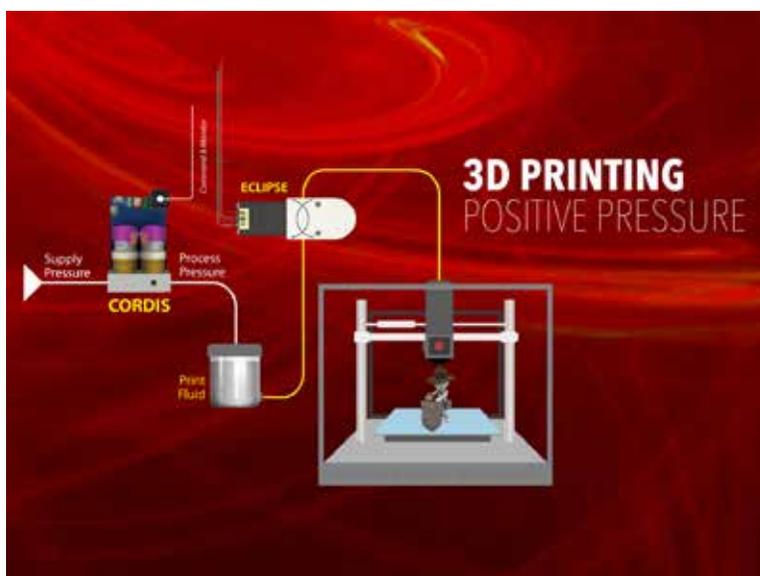


Cordis products allow not only Clippard to adjust and tune the PID setting, but the customer as well. Using the 3.3 V serial makes adjusting and fine tuning a snap around those hard applications details. Cordis' control makes the unit easy to experiment with, customize with optimal settings, and provides you with real-time control. Cordis removes the need to ship the unit back to the factory just for PID changes.

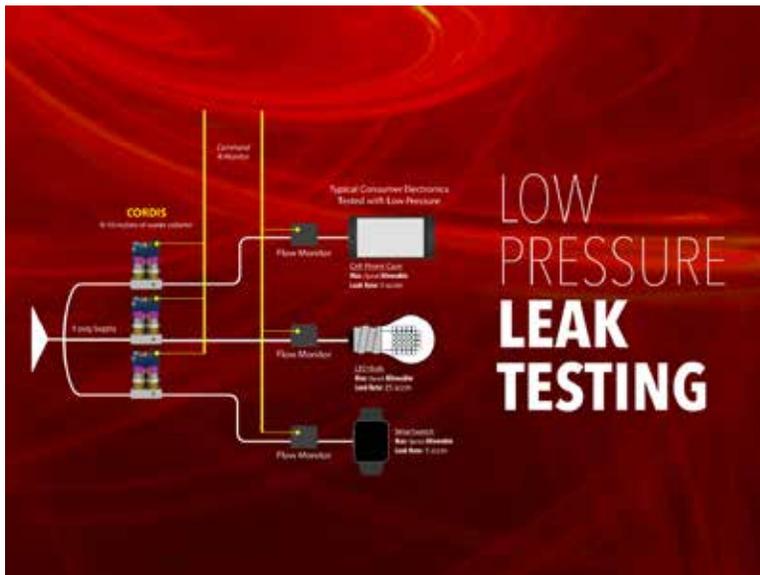
APPLICATIONS



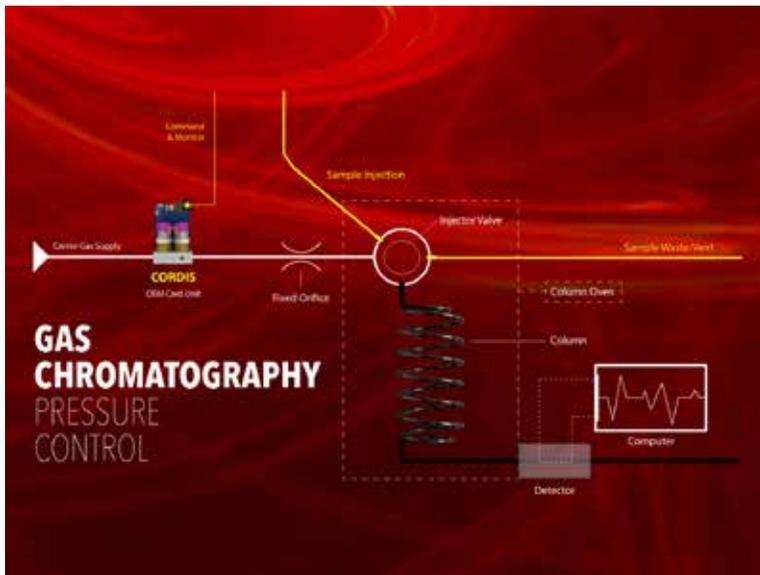
Precise pressure control for pressure sensor manufacturing and quality testing is required. Multiple sensor ranges dictate multiple Cordis units be used to provide the best resolution and repeatability. This application mandates the Cordis units produce the necessary accuracy and resolution demanded when varying test pressures to “pressure” transducers for both production calibrations and quality checks. Multiple Cordis units are used to achieve the best accuracy and repeatability for each sensor range on the bench. Accuracy, resolution, and repeatability are represented as a percentage of full-scale calibration. The high-resolution and excellent repeatability of the Cordis units provide customers with more precise data and stability.



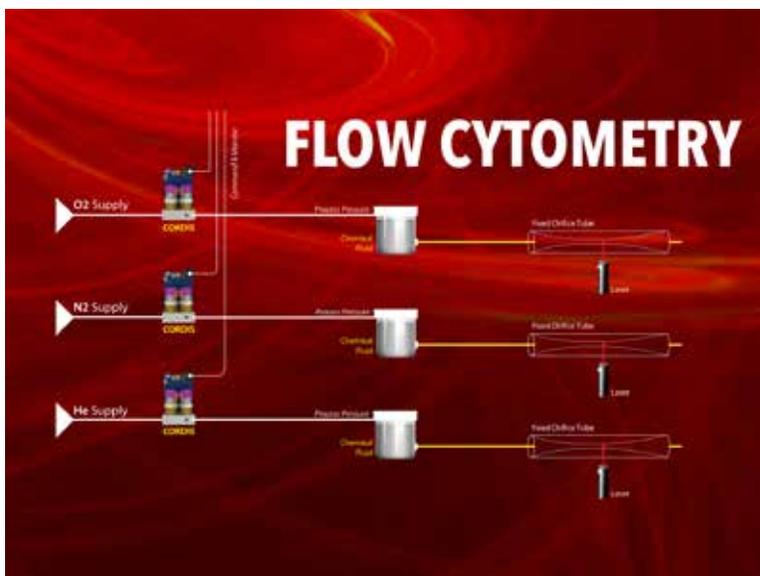
Depending on the media used for printing, positive pressure can be used to dispense fluid to a 3D printer. Here, Clippard’s Cordis controls compressed air above the print fluid—then the rate of flow is varied and controlled from Clippard’s Eclipse to the print head. This process is under constant flow and therefore requires very stable and repeatable pressure control to maintain consistent fluid pressure at the inlet of the Eclipse valve.



Many popular consumer electronic products require strict leak testing to ensure protection from water ingress. Often, these devices are tested at very low pressures. All three of the products in this drawing are pressurized to less than 10 Inches of water column (0.36 psig). The pressure is maintained in the DUT while the flow rate is measured if the flow is anything but zero, the DUT leaks. Most products have a max allowable leak rate, so some flow is acceptable.



Gas chromatographs can be found in labs all over the world. They are designed to identify compound based on the measured speed each takes to reach the detector. All gas chromatographs require stable flow control to ensure valid measurement & identification. In this drawing, precise pressure is controlled to a known and fixed orifice. If pressure remains stable to the orifice, flow remains stable throughout the process. The compound sample is injected into the injector valve and then flows through the column while being heated. This process requires excellent resolution and accuracy to ensure stable flow.



Flow cytometry employs pressure control of various gases to dispense different chemical fluids through a fixed orifice tube. Based on the rate of fluid flow, lasers mark cells and color code them for precise identification. Because the Cordis unit has superior resolution without the bleed typical in high-resolution electronic regulators, selective grades of gases can be used within the system to dispense the various chemicals. The Cordis unit applies the correct pressure to the chemical/sample vessels so that the chemicals/samples flow through the calibration laser nozzle for molecular identification. The speed of "flow-through" maintained (based on the controlled pressure) ensures accurate identification.

