



Air Track Inc

Energy Efficient - Intelligent HVAC/R Solutions

VD-2300 LINKAGE - LESS CONTROL

BULLETIN V3.0



The VD-2300 Linkage-less control system reduces emissions, increases burner turndown, and provides combustion reliability all in an easy-to-install and cost-effective system.

Our VD-2300 Fuel Air Ratio Control System is a microprocessor-based control for full modulation power burners that simultaneously controls the position of AIR and FUEL valves using two actuators.

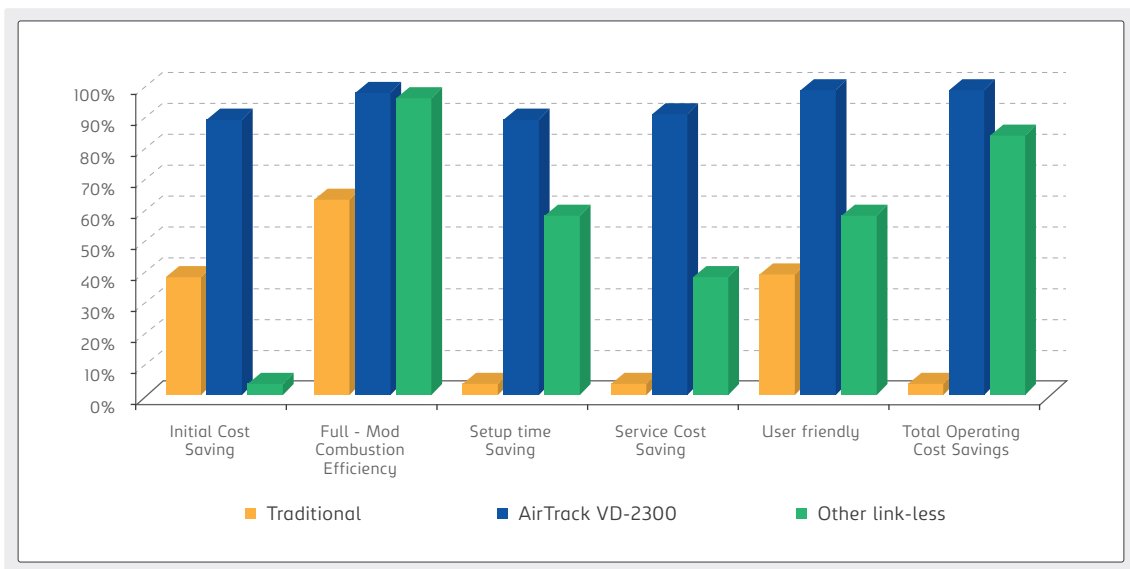
GO LINKAGE-LESS AND GAIN EFFICIENCY. DON'T SUFFER WITH OLD MECHANICAL CAM LINKAGES

Mechanical linkage systems used to control the fuel-air ratio of a fully modulating power burner represent a great disadvantage to the equipment operator in regard to fuel usage, burner efficiency, and burner turndown. Because mechanical linkage systems have one actuator and a fixed-ratio linkage to control both the air and the fuel at the same time, the result is unable to function optimally to maintain combustion and efficiency.

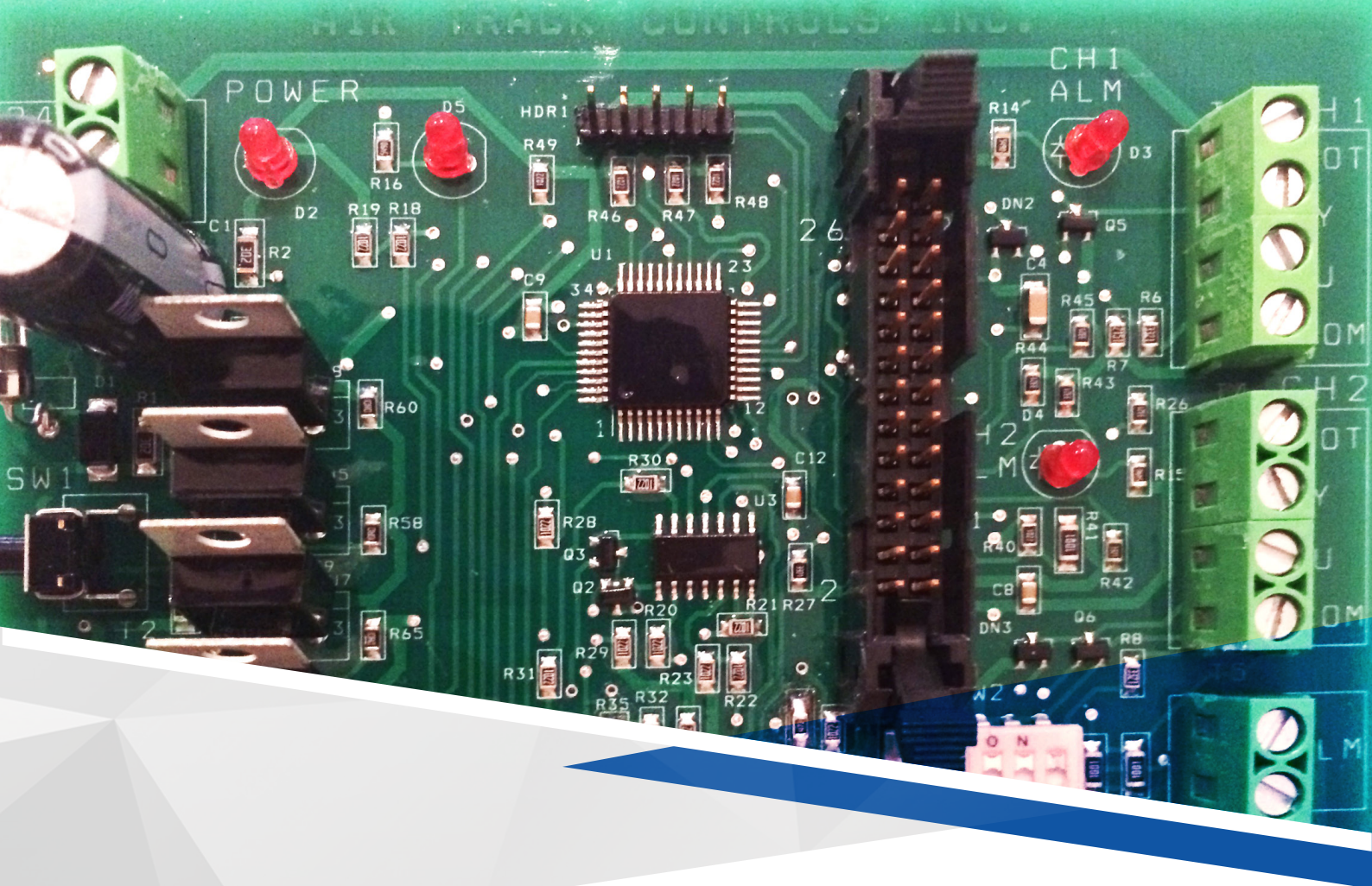
Typically mechanically linked systems, as with any mechanical system, lose precision over time due to component wear and shifting, equating to erosion of the fuel-air ratio and non-optimal performance. This leads to unnecessary fuel costs and maintenance issues.

The VD-2300 Fuel Air Ratio Control System overcomes this problem by using separate drive motors for each air and fuel valve, permitting position correction at any point of the input combustion curve. A microprocessor monitors the damper position feedback, and provides a control output to ensure the proper relative position of fuel valve and air damper.

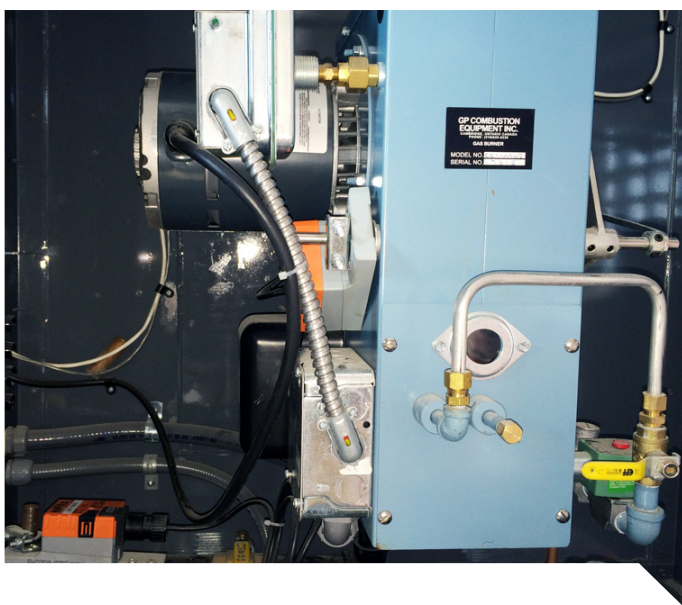
For accuracy, the range of travel is divided into nine control segments, so that the volume of the air and fuel can be matched to ensure the proper combustion ratio. Actuator positions are automatically calculated for positions between these points.



- Customize your valve or damper flow curve.
- Increase maximum burner efficiency.
- Achieve maximum modulating capability.
- Each actuator can be programmed independently.
- One control signal controls both actuators.
- Reliable actuators with built-in monitoring system.
- Built-in override function can be activated for easy purging.
- Easy plug-in keypad for programming.
- Dynamic self check mode.
- L.E.D status indicators.
- Two different fluids can be pre-programmed easily.
- With linkage-less technology maximize efficiency to your application.



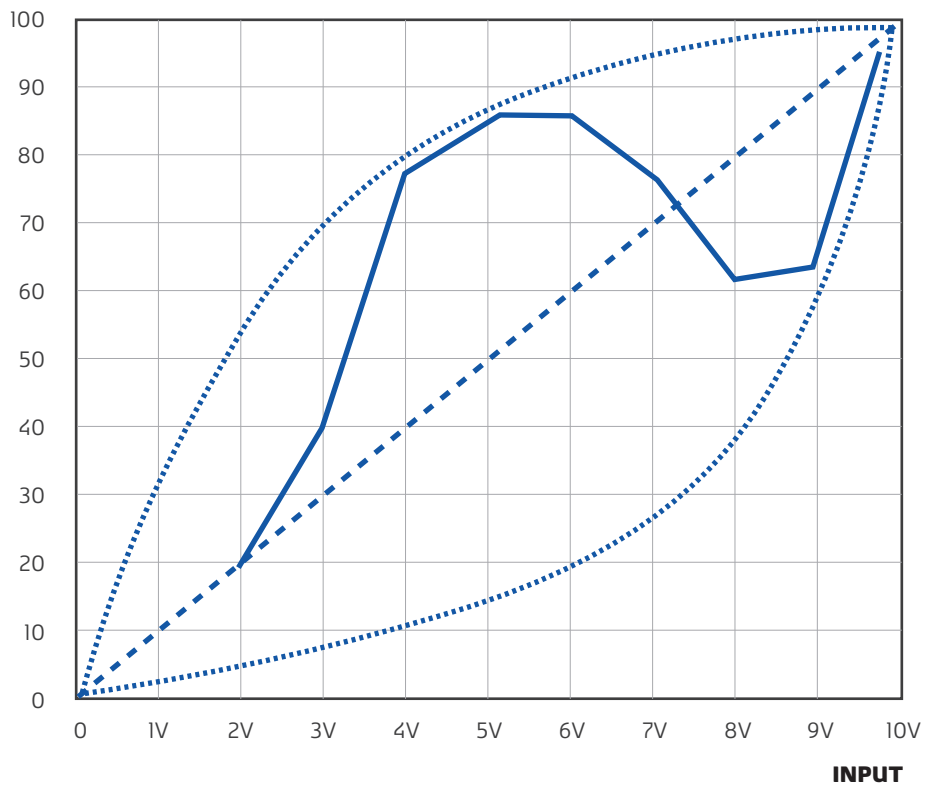
The VD-2300 system controls the output of the combustion by separately controlling the ratio of Air and Fuel. Burner system must still be provided with controls to maintain safety of the burner.



The main function of the VD-2300 Controller Board is to convert linear control input (2-10VDC) voltage provided by external System into two independent programmable outputs(2-10VDC or 4-20mA.)

CUSTOM CURVE CREATOR FOR VALUE AND DAMPER

OUTPUT



..... Standard valve/damper curve

- - - - - Linear curve

———— Customs Damper/Valve curve

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