



Accurate and repeatable pressure control  
for critical testing and automation.

**TESCOM™ ER5000 Series Electropneumatic Controller**

Microprocessor-based PID controller for precise algorithmic pressure control in a wide range of applications.



# Your system process is giving you undesirable results and you're not sure how to fix it.

It can be frustrating when system fluctuations create inconsistent flow or pressure control impacting the quality of your production or testing environment. Fluctuating pressures and temperatures, for example, can alter the state of the gases or liquids in your processes, leading to inaccurate results or possibly, safety concerns. Getting accurate and repeatable parameters in place can be a challenge. You know it may be time to implement or improve the automation of your system but don't know where to begin.

"Our testing applications use extremely high pressure and we worry about the potential for our operators to be exposed to a leak. Ramping and monitoring test pressures from a distance or enclosure would ensure their safety."  
-Oil and Gas Control System Test Lead



"It's not cost effective to move assemblies around for testing during construction or to disassemble after a leaking part is found. Portable test automation would save my team extra work later."  
-Large Scale Fabricator



"We need to work with minimum setup time. My group is under constant cost pressure to maintain their status as the least cost option and can't waste time interpreting screens."  
-Aerospace Service Manager



The automation of testing applications or processes that require precise, accurate and most importantly repeatable parameters ensures your data is true and meets your stringent quality specifications.



## Mechanical meets automation

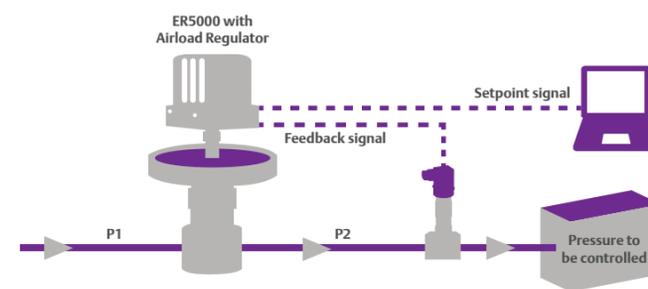
In a mechanical world, introducing or updating system automation doesn't have to be hard. Once implemented, you gain a multitude of benefits that come from putting automation to work for you.

- Do your system pressures or conditions fluctuate? Automation can eliminate the error involved in manual adjustments and make the changes quickly.
- Is your application in a potentially hazardous location? Controlling your automated system remotely prevents operator exposure to these conditions.

A closed-loop system with software-managed pressure control makes it easier than ever to incorporate a desirable level of automation and at the same time, ensure personnel safety.

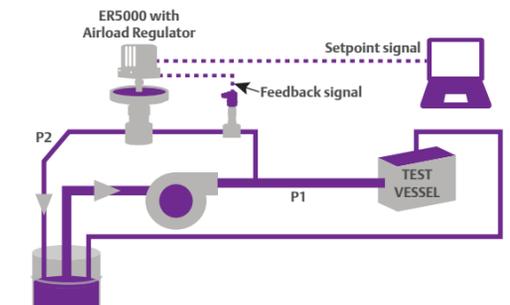
## Achieve safety and process efficiency through a closed-loop system

### Typical pressure reducing application



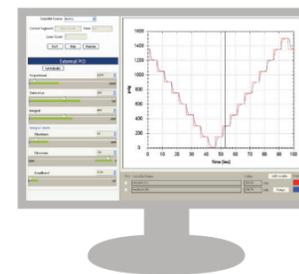
For a true closed-loop system, utilize the ER5000 Series electropneumatic PID controller, along with a regulator and transducer, to create an active feedback loop between the controller and computer or PLC. Control process parameters quickly, consistently and from a location suitable for your application.

### Typical back pressure application



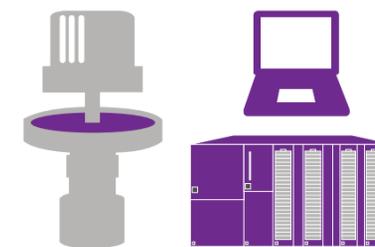
## Take control of your process

### Fast PID control



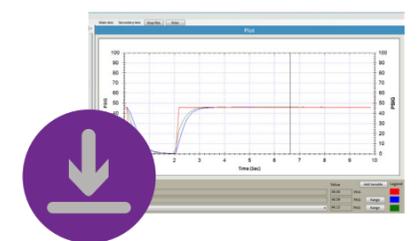
Communications between controller and computer or PLC will adjust for system fluctuations every 25 ms to an accuracy of 0.1% setpoint pressure. Set alarms to monitor performance outliers and be aware of issues quickly.

### Remote capabilities



Accommodate challenging application conditions such as weather, hazards or proximity with off-site control. Automation that works with your environment and enhances safety and efficiency of personnel.

### ERTune™ software



Included proprietary software puts you in control of your pressure and flow requirements with no extra programming. Set the parameters and let the ER5000 do the work for you.

## Robust pressure control designed for your application

### Built tough



Hazardous locations approval on the ER5050 and optional casings and manifolds allow for automation in a wide variety of demanding applications and conditions.

### Extensive compatibility



Pair with a wide range of TESCOM™ dome or air actuated regulators or valves or choose a pre-assembled kit for pressure control automation versatility in varying applications across many industries.

# The pressure you want is the pressure you get

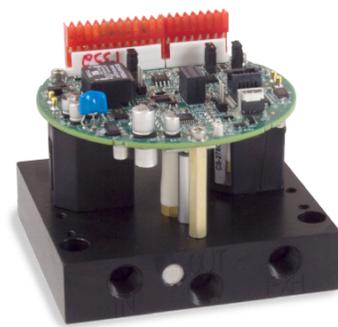


## Product overview

The ER5000 Series is a microprocessor based PID (Proportional, Integral, Derivative) controller that brings precise algorithmic pressure control to a wide range of applications. It can be used as a standalone unit to control the pressure of clean, dry inert gases from 0 to 100 psig / 0 to 6.9 bar or be connected to any pneumatically actuated regulator or valve. Used with TESCOM™ regulators, the ER5000 provides pressure control of gases and liquids from vacuum to 30,000 psig / 2068 bar, with a  $C_v$  of up to 20. Whether piloting a mechanical regulator or used as a standalone, it provides true closed-loop control with exceptional accuracy and response time. The ER5050 is designed for Hazardous Location use.

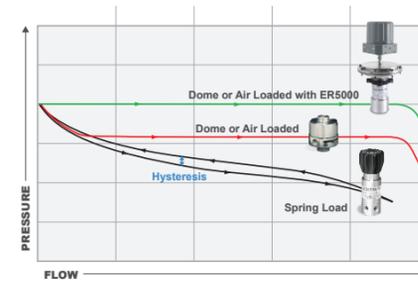
## Typical applications

- Test equipment
- Calibration stands
- Proof and burst testing
- Production equipment
- Metal or plastic forming/molding
- Hydraulic Power Units
- Chemical Injection Units
- Super plastic molding
- Lamination and composite material curing
- Tire molding
- Chromatography capillary inlet pressure
- Spray coating
- Water jet cutting
- Bottle filling
- High pressure gas or liquid injection
- Replacement for valve positioners and I/Ps
- Spot welding pressure control
- Remote natural gas setpoint control



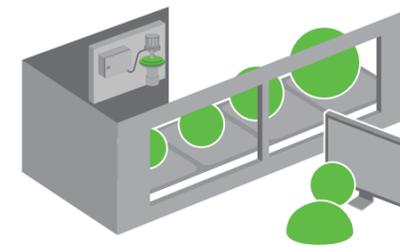
## World-class performance helps you get consistent results

### Accurate pressure



The pressure you want is the pressure you get. Eliminate pressure droop, hysteresis and dead-band in pneumatic and hydraulic applications.

### Portable capabilities



Create a portable flow control solution producing accurate, relevant conditions at a home lab or on the go. Control it remotely and from a safe distance to keep operators out of danger.

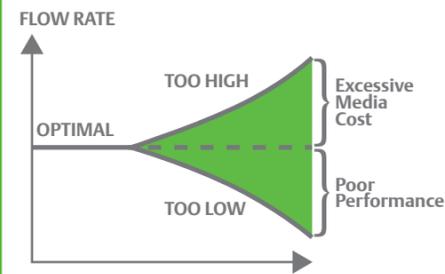
### Repeatable cycles



Use programmable profiles to create repeatable parameters for reducing defective products or producing repeatable filling rates.

## Make the best use of the limited resources you have

### Optimize your process



Keep process costs down by controlling use of expensive medias while optimizing performance.

### Comprehensive data acquisition



Collect and document as much data as you want with included ERTune, use your existing DAQS or set the parameters and forget it. You choose your implementation strategy.

### Drop-in automation



Use the gases you already have in your facility or process. Solutions can be customized to work with different media including natural gas.

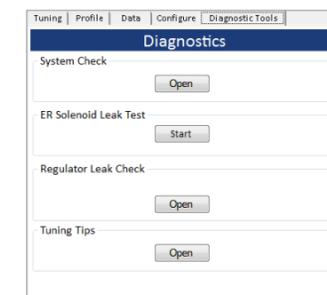
## We take it a step further

### Global standards



IECEx, CSA and ATEX approvals to ensure the ER5000 can be used in many locations. We call it quality reassurance.

### Troubleshooting guide



Step through easy to use diagnostics to check for system, solenoid and regulator leaks along with tuning tips.

### We do our homework



Our experts review your pressure control requirements to provide the best solution, whether it's a single point solution, customized kit or larger system.

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**TESCOM™**

Our distribution network offers a full complement of sales and support staff and more than 2000 technical experts strategically located across nearly 200 locations.

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