

Steam Regulators

Proportion-Air > Steam Regulators

Let's Talk 877-749-8548

Steam Regulators Provide Exact Temperature Control

Tires. Hoses for automobile engines. Hoses for hydraulic systems. All of these are rubber items that are cured using heat.

Heat Curing Choices

The best choice for heat curing is saturated steam. Why? Because it's controllable and easy to generate. And the reason saturated, moist water vapor is easy to control is because the temperature of saturated steam is directly proportional to pressure. (The exception to this is when you need super-heated steam for a high pressure steam application, as with a steam locomotive.)

Other heat processes require temperatures of up to 450 degrees. Moist heat stays warm for much longer periods and is therefore more efficient. (Consider the cost difference between electric and radiator heat in a home.)

The Curing Process

With curing, you need to be able to control the rate of temperature going into the system. You start at a lower temperature, gradually increase over time, then shut the system down, purge the moisture out of the system, take the part out of the mold, and start again.

Often people manage that process by using a manual valve. Valves are made to control the flow by allowing it (on), modulating it (increase/decrease), or stopping it (off).

Valve and Pressure Gauge Teetering

For example, let's say you want to use a valve knob to turn up to 50 psi. If you're not watching the gauge very carefully, you won't have precise control.

With a valve to control temperature, you're working with a valve, a temperature sensor, and a computer. The computer says the valve will stay open until you see 50 psi. You turn the knob on the regulator while your eyes watch pressure until it gets to 50 - or just over, as it often turns out. Now the valve has to start throttling back, varying back and forth until the exact measurement is reached. This process wastes energy, and is obviously not very efficient.

Regulators to the Rescue

Added control means added efficiency - and that's what you get with regulators.

With a regulator, you give the command signal to go to 50 psi, and it regulates pressure at 50 psi. It doesn't care how much moisture falls out of the steam - it compensates for that automatically. It has a set of eyes already built in, so to speak, and they are always accurate.

Saving Time Means Saving Money

In one customer example when using a valve, reaching the correct curing temperature took 45 minutes. With a Proportion-Air steam regulator, reaching the correct curing temperature only took 10 minutes."

If you do the simple math - that's a savings of 35 minutes of site time. For one client who molds rubber parts for the aerospace industry, this meant not having to buy additional equipment.

Using a regulator to control the pressure saturated steam eliminates all programmer requirements - eliminates all

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the variance from the human error that can creep in through the various steps necessary to get to the proper curing temperature.

This sounds too good to be true – but it’s not! [Contact Proportion-Air](#) to learn more about consistent temperature control using a regulator with your steam pressure curing process.



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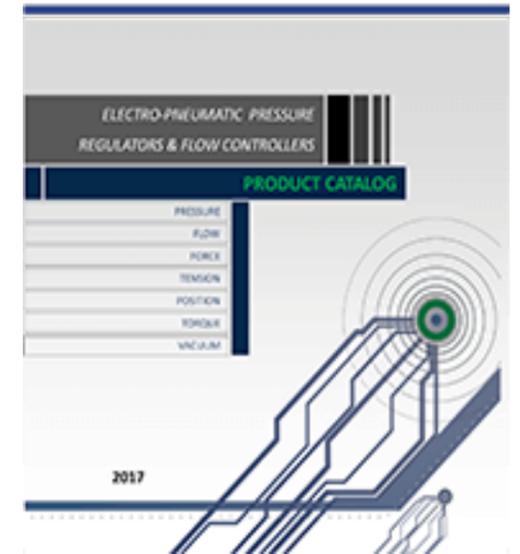
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About Proportion Air

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