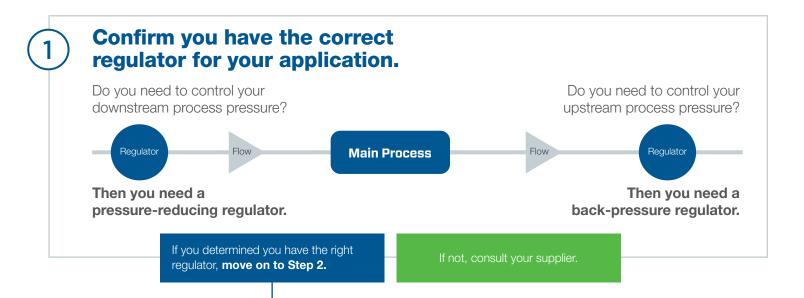
## Troubleshooting Regulators: A Quick Guide

Experiencing pressure control issues? Use this step-by-step guide to troubleshoot some of the most common problems associated with pressure regulators.



(2) Identify your issue.

Is pressure **dropping** below target pressure?



Is pressure **rising** beyond target pressure?

Unwanted pressure drop (or **droop**) is commonly caused by one of two things:

- An undersized regulator
- Incorrectly set pressure spring and range

## Supply Pressure Effect (SPE)

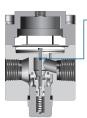
is a change in outlet pressure due to a change in inlet pressure. If inlet pressure decreases, a corresponding outlet pressure increase will occur.

**Creep** happens when contamination creates a small gap between the regulator's seat and poppet. This results in unwanted pressure increase.

3) Explore your options.

If you have identified **droop** as your potential issue:

- Select a set pressure range closer to the required set pressure
- A regulator with a larger flow coefficient can help prevent unwanted outlet pressure drop



 A dome-loaded regulator may be a better option. This type is more resistant to flow changes and can help better maintain pressure in applications where flow varies. If you have identified **SPE** as your issue:



- A balanced poppet design can help minimize the area where high inlet pressure can have an impact, mitigating SPE
- Installing two single-stage regulators in a series or combining two regulators into one assembly can mitigate SPE in most applications

## If you have identified **creep** as your issue:

- Installing an inline filter upstream of the regulator can reduce contamination
  - Installing a relief valve can protect downstream processes from damaging overpressurization

Have you determined an alternate regulator may help in your application?

Contact your supplier. At Swagelok, our regulator specialists can help guide you toward the right solution.

SPEAK WITH PRESSURE REGULATOR SPECIALISTS.

