APPLICATION TIPS

Breweries, Wineries, & Food Processing
Ensure us with life's most delicious moments

For over 60 years, Griswold Controls has provided stainless steel automatic flow control valves to breweries and food processing plants to maintain constant flowrate helping them make food and beverages, as well as help clean equipment.

Controlling the Flowrate

Controlling the flowrate (gallons per minute) in any piping system can be a challenge if the system experiences pressure changes due to valves opening, closing, or modulating to different loads. System pressure changes mean the flowrate fluctuates and in food processing applications flowrate changes can lead to food waste or equipment malfunctions.

Since 1960, Griswold Controls has made automatic flow limiting (automatic balancing) valves for the hydronic HVAC industry. The same stainless steel flow limiting cartridge can also be installed in our ALL 316 stainless steel housing and has been used for decades in breweries, wineries, orange juice processing plants, and water bottling facilities. The automatic flow limiting cartridge maintains a constant flowrate (+/-5%) in spite of pressure changes in the system by varying the open area in a stainless steel, spring loaded cup. The simply elegant design is free of electronics while the stainless steel ported cup is self-cleaning as it moves up and down in a stainless steel housing, protecting the cartridge from clogging if the process media has granules or higher viscosity.

Our stainless steel line of valves are available with threaded, flanged, or tri-clover end connections with flowrates from 0.33 GPM to 1,200 GPM.

GRISWOLD® CONTROLS
A FlowCon International/Griswold Controls LLC. Company

How does an Automatic Flow Limiting Valve Maintain Design Flow?

Griswold Controls designed the first balance valve in the market in 1960, years before the first manual balance valve was designed and manufactured. The all stainless steel flow limiting cartridge is a standard in the industry because of its simply elegant design.

When the differential pressure across the cartridge falls below its control range (pink colored area in Figure 4), the cup will come all the way out, exposing the maximum orifice area. Similarly, if the differential pressure across the cartridge rises.

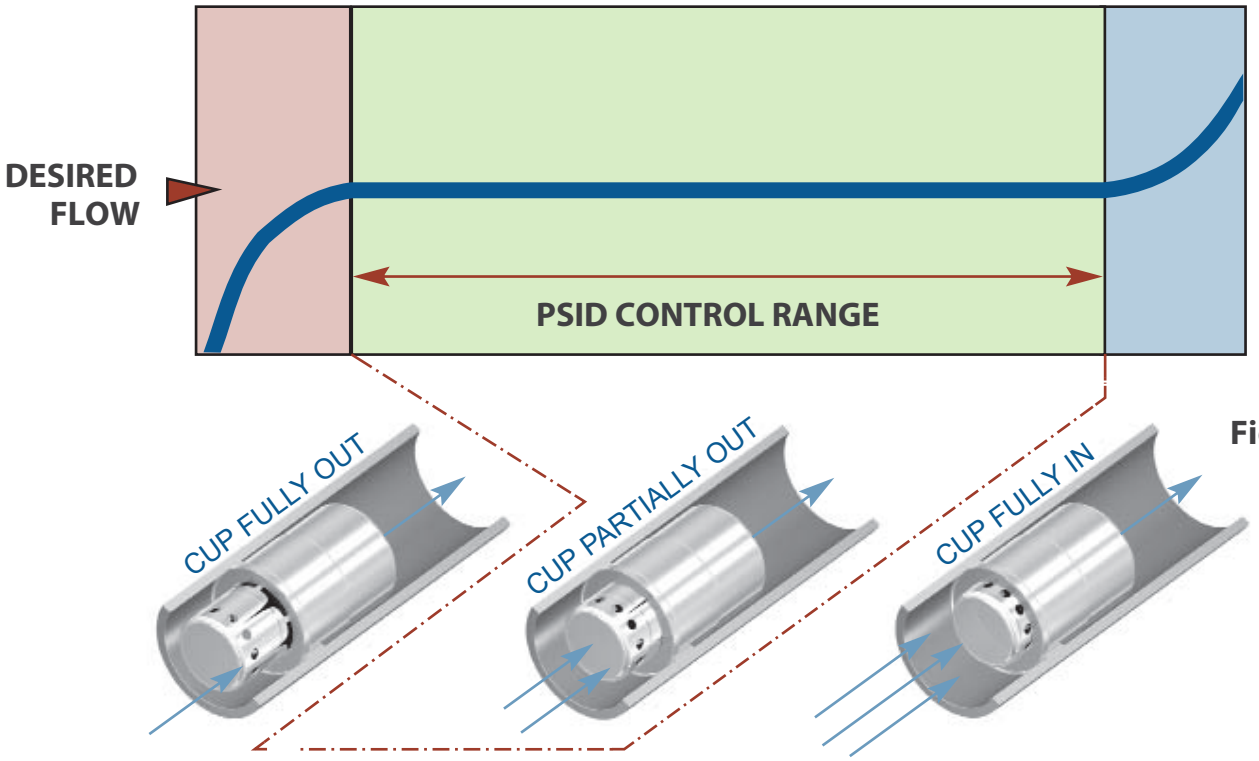

Figure 4.

Below the control range, the cartridge acts as a variable flow device, allowing flow to vary below the rated amount.

Within the wide control range, the cartridge modulates in response to pressure differential changes to maintain a fixed flow rate within ±5% accuracy.

Above the control range, the cartridge acts as a variable control device, allowing flow to vary above the rated amount.

Above its control range (blue colored area in Figure 4), the cup will move all the way in, exposing the minimum orifice area. In both cases, the cartridge will now act as a fixed orifice device, varying flow based on the out-of-range differential pressure.

You do not have to worry about the cartridge ever shutting off the flow completely because a minimum orifice area is always open.