

Designing a good air flow system is a necessity for projects involving office buildings, schools, hospitals, and more, so choosing the right equipment for each unique project might not be as simple as it first appears.

Venturi valves are commonly given early consideration for a variety of applications, but perhaps they shouldn't be the first choice.

You might select Venturis for their turndown, pressure independence, and speed, but sometimes a review of the specific application reveals other options that may offer greater energy efficiency, lower noise, higher accuracy and even lower cost.

For example, when designing a laboratory that should be negatively pressurized, more air should be exhausted than goes in. If little air is needed when the room is not in use, a Venturi valve may be a great choice for its turndown. But, an air flow station or pressure controller with a damper could also work. Such measuring devices provide excellent accuracy and therefore can provide great turndown, but may be less expensive. Which is better for this particular application?



Now, consider this - a Venturi valve is accurate at $\pm 5\%$ but a VAV box is accurate at $\pm 3\%$, and an electronic air flow station is $\pm 2\%$. If accuracy's important to the application, a VAV box or flow station might be the better choice. Of course, a Venturi can get more turndown than a VAV. But, if the application does not require more turndown, a VAV is a much less expensive option.

Are you willing to pay as much 6 times as much for less accuracy when turndown isn't required?

[Please review the diagram to see how Venturi valves and their alternatives compare in accuracy](#), turndown, minimum flow, cost, sound, and more. Looking for other equipment ideas? Visit [Air Flow](#) online.

If you are interested in talking in more detail about measured air devices and their applications, perhaps for a current project, please call me directly at (414) 351-7744 or by email at tom@airflowinc.biz. Have a topic you'd like to see discussed in the next newsletter? Please let me know.

Regards,
Tom Gelin
Air Flow, Inc.
(414) 351-7744 Direct
tom@airflowinc.biz