



pneumatic solutions

for OXYGEN MIXING & BLENDING

The terms mixers, blenders and proportioners are synonymous when it comes to mixing two gases. Mixers are used in many applications across many industries; medical, welding, heat treating and food packaging to name a few.

In the medical industry, O₂ mixers are used to mix oxygen with other gases, including ambient air, for patient treatment. The mixers allow the doctor to go from a mixture of oxygen, typically from 21% to 100%. Most manufacturers are accomplishing this with modified needle valves that they manufacture.

easy replacement needle valves

Clippard has been manufacturing and supplying needle valves for a wide variety of applications for over 50 years. We now offer a cartridge style needle valve—the **GNV Series**—that is especially well-suited for these types of mixing applications. The standard GNV stem will allow knobs to be put onto the end, and added mounting features make it an easy replacement in most situations.



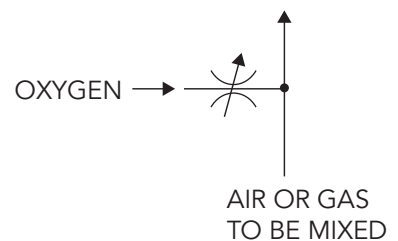
Need help incorporating a Clippard needle into your product? Since we're the manufacturer, modifications are no problem.

proportional control for advanced mixing

For more advanced mixing, Clippard offers two electronic proportional valves. The **EVP Series** is a #10-32 ported valve and is small in size. The EVP provides air or gas flow control and varies the output flow based on the current input to the solenoid. The consistent gain of the valve provides a high degree of control for mixing applications. The typical flow capabilities for this valve are 0 bubble tight to a maximum flow of about 23 l/min, based on pressures up to 100 psig.

controllability and value

Controllability and overall value are the main features of the **EVP Proportional Series** valves. The EVP Proportional valve may be controlled by using DC current, open or closed-loop control and even PWM (pulse with modulation).



For higher flow applications we have developed an innovative stepper-controlled needle valve, the **SCPV Series**. The flow of this valve is again 0 bubble tight to 300 l/min based on 100 psig inlet pressure. The flow resolution is 0.56 slpm per step, with a position resolution of 0.001 per step.

Clippard products related to...

OXYGEN MIXING & BLENDING



GNV Series

Clippard's GNV needle valves are used to control the rate of flow in a pneumatic system by allowing flow in both directions. Needle valves can be used to reverse the flow of a system or to maintain a constant flow rate. Available with multiple port sizes, flow rates, mounting options and adjustment styles.



EV Series

Clippard's EV Series valves convert low voltage, low current signals into high pressure (100 psig) pneumatic outputs. EV valves are precision-built 2-way and 3-way control valves utilizing Clippard's unique, patented valving principle with no sliding parts. Complete poppet travel is a mere 0.007", resulting in low power consumption and exceptionally long life.



EVP Series

Clippard's EVP Series proportional control valves combine the features of the EV Series with the additional capability of proportional control. EVP valves provide air or gas flow control, and vary the output based on the current input to the solenoid. The consistent gain provides a high degree of control for advanced gas mixing.



SCPV Series

Utilizing the industry's most robust and powerful linear actuator, the high flow SCPV Series stepper-controlled proportional valves outperform the competition in performance and durability. The SCPV valve is ideal in critical applications such as gas mixing and delivery, where high resolution, high flow and low hysteresis are required.



Toggle Valves

Clippard offers a wide variety of toggle valves, including: momentary, multiple position, small and heavy duty toggles, Normally Open or Normally Closed, poppet or spool, momentary or detented, and metal or plastic toggles. Clippard toggle valves are also available with special barb fittings, special body configurations and special porting configurations.



Flow Controls

Clippard precision flow control valves are miniature in size and available with a variety of tapered needles for proper flow control for your application. Precision flow control valves are ideal for use with a cylinder providing a slow extend stroke while allowing a fast retract stroke. Flow controls are also used in delay functions when using air piloted valves.