

An Introduction to Air Operated Valves

As suppliers of a wide range of air operated valves, [MGA Controls](#) has decided to answer some of your frequently asked questions, explaining how different **air operated valves function**.

What is an air operated valve?

You may be wondering, **what is an air operated valve**. An air operated valve, also known as an angle seat valve is a vital component for any pneumatic circuit. The valve works to direct or block airflow, controlling the speed or sequence of operations, promoting the effective functionality of a component or piece of machinery.

Air operated valves are available as either a normally open or normally closed valve, the components work to control the process of media through a valve. An air operated valve uses air pressure against either a piston or diaphragm in order to produce power in the form of linear or circular movements. In turn these movements operate a valve and assist the overall functionality of the component.

An air operated valve is available in three different functionality specifications, including 2-way, 3-way and 4-way. An air operated valve with over three ports will most probably require a pilot valve in order to function effectively.



How does an air operated valve work?

An **air operated valve's function** depends on the size of the valve and the number of ports available.

- Two-way, two-position valves

Two-way **air operated valve's function** via an electrically activated solenoid which shifts the valve spool to direct flow. The two way, two position valve consists of two ports that are connected by a passage which can be opened or blocked in order to control the flow through a valve.

- Three-way, two-position valves

Three-way **air operated valves function** through three ports and can be used in pairs to operate a double acting cylinder, eliminating the need for a four-way valve. The ports are connected through passages within a valve body and the valves pressurise and exhaust one outlet port to control a single-acting cylinder.

- Four-way, two-position valves

Four-way **air operated valves function** through four inlet ports and only two outlet positions. These valves have two distinct flow paths in each position in order to actuate and reverse cylinders, rotary actuators or bidirectional motors. The valve will direct a flow of media from a pressure port, while the other actuator port exhausts to atmosphere.

For more information on our complete range of air operated valves, contact the technical team at [MGA Controls](#) today on **01704 898980** or email store@mgacontrols.co.uk.