

Product Note, PN 424, Rev 3

AP, AZ & AK 3510 & 4510 Valve Models

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The AP, AZ & AK 3510 & 4510 are unique dual function valves providing both open closed control and elementary pressure relief. The device is a normally closed (NC) pneumatically actuated valve.

The valve's actuator is adjusted such that when a nominal 150 psig (10 bar) to 200 psig (14 bar) pressure is applied to the traditional outlet side of the valve (port connected to the cavity below the diaphragm) the resulting force from the gas pressure will be greater than the downward force from the actuator. The diaphragm will lift due to the force from the gas pressure allowing gas to vent to the traditional inlet side of the valve (port connected to the cavity below the seat). The amount the diaphragm lifts is a function of the pressure – the higher the pressure, the higher the lift and resulting Cv.

Due to the forces involved with a NC valve and the operation of the venting feature, the cracking pressure is a nominal value with a broad opening range.

The proper application of this valve is to use as a low pressure vent valve with traditional inlet port connected to vent side of the valve. This enables the relief function to work properly and the gas to safely vent.

This is a dual mode valve. The operating pressure rating for open closed control is 100 psig (7 bar) to provide a safety factor for the 150 psig (10 bar) elementary pressure relief mode. The valve can safely contain 3,000 psig (207 bar) in the latter mode.

The AZ 3510 is only available in PW configuration. Forged body, P, is not available.

