These mechanisms used with air blast circuit breakers usually open and close pneumatically and in some cases, there is only a pneumatic rather than a solid link between the mechanism and the contacts. Other pneumatic mechanisms use an air piston to drive the closing linkage and to charge a set of opening springs. Fig shows a typical pneumatic mechanism used in HV air blast CB.

**Closing sequence:**

Air is supplied through a filter in the air-inlet block 1 to the inlet manifold and main valve block 2, and through a connecting pipe to the pilot valve block 4. Under normal conditions with all valves closed, there is no pressure on the main body of the unit. In closing operation energizes the solenoid 5 and the pilot valve is opened. Air under pressure enters the body 3 and forces down a servo-piston on to the bell crank which through the toggle mechanism 7 raises the main valve stem 6, there by opening the main valve. This allows air to pass to the CB closing cylinder. Once the movement has been initiated, it must be completed, and by means of a one-way ball valve, the main valve is kept open until the completion of the CB mechanism stroke, independently of the electrical control.

source: [https://switchgearcontent.com](https://switchgearcontent.com)