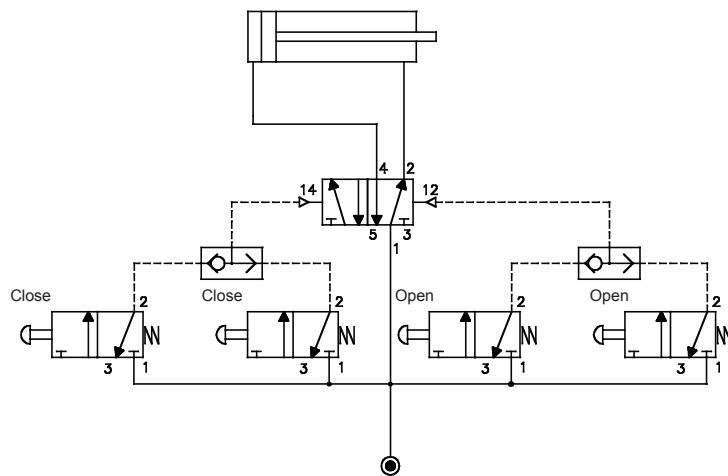




The equivalent electro-pneumatic signal includes a double-acting cylinder controlled by a 5/2 double-solenoid electro valve. Two electric buttons shall substitute the two 3/2 valves.

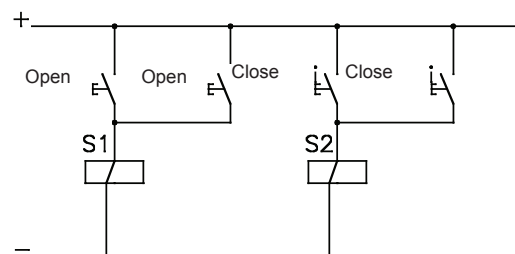
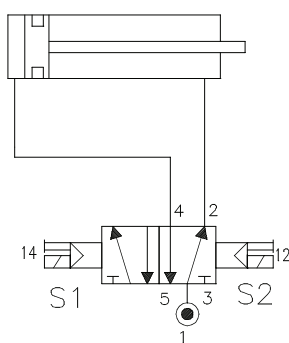
If the control points which sent the same order to the cylinder are more than one, the valves which send the same order in parallel must be necessarily connected.

The outlet signal of each of them shall be sent later to the inputs of a circuit selector switch that shall select one of the signals in order to control the cylinder's power valve. Using the selector switch prevents the compressed air from flowing directly from the outlet of one of the control valves toward the exhaust of the one placed in parallel.



Let's suppose that we must close and open a gateway from two different points. As we can see in the diagram, the points "open" and "closed" are placed respectively on the right and on the left side, in order to help reading the diagram.

Actually, they are crossed at the two port slopes with an "open" and a "closed" position. In the electro-pneumatic version, the selector switch is not necessary because we do not have to worry about constraining the discharge in the presence of electric signals.



Electric buttons are simply connected in parallel.

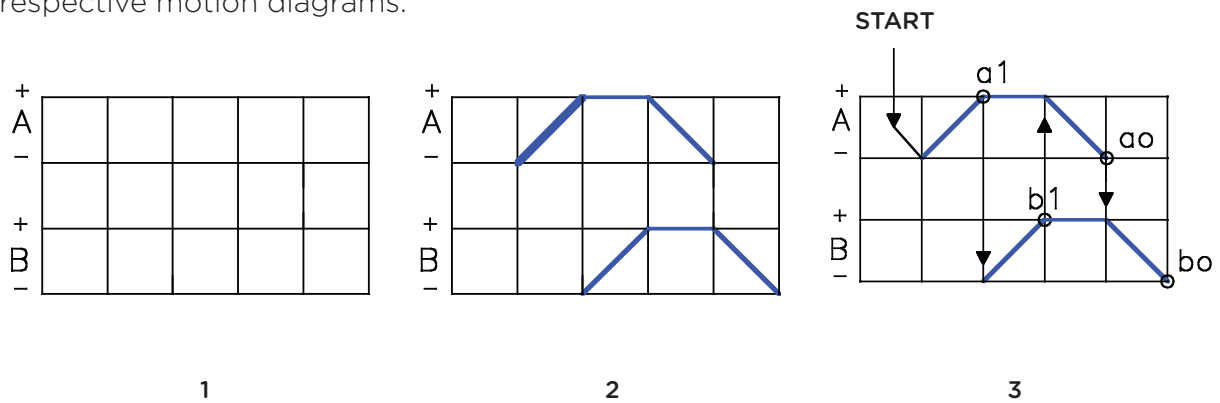
Also, in this case the permanence of one among the controls constrains the opposite signal in both the pneumatic and electric versions.



Now let's try to draw the diagram of the motion and of the phases of two cylinders, A and B, which move according to the sequence:

A+ / B+ / A- / B-

We should start designing two spaces in column and spaced each other (1), for their respective motion diagrams.



Then we will describe the shown literal sequence (2) graphically, and finally we will insert the control signals which govern it (3). The cycle in its different phases is thus defined.

Please read:

- Phase 1: Start causes A+
- Phase 2: a_1 causes B+
- Phase 3: b_1 causes A-
- Phase 4: a_0 causes B-
- Phase 5: b_0 causes the cycle stop or its automatic reset.

