

NOT GATE

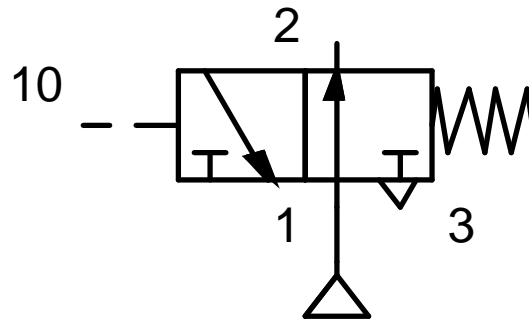


Figure 5.9 Not Gate

Not Gate is generally used to invert the signal status i. e. to negate the signal. For example a normally closed timer or counter can be converted to normally open and vice versa

It is essentially a normally open 3/2 way, pilot operated directional control valve
Input signal is applied at pilot port 10 and out put is taken from port 2.

Grouping of Set and Reset Signals

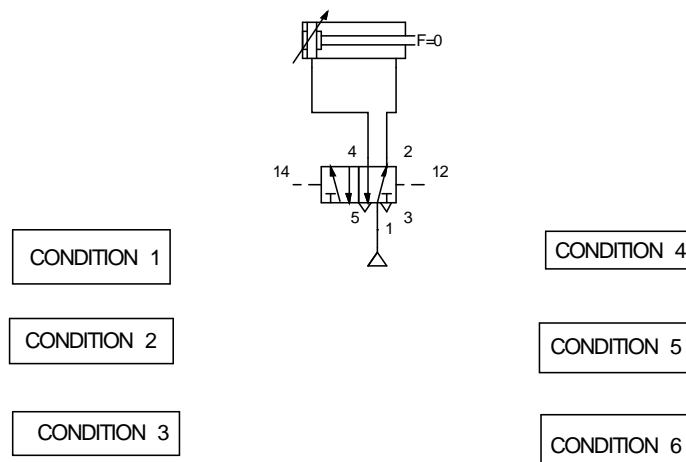


Figure 5.10 Grouping of Set and Reset Signals

Example 5.1 Clamping Device

The Clamping of workpiece must be possible slowly by manual control from two positions.

Unclamping must be carried out quickly and initiated by a further manual push button

Clamping must be possible only when the work pieces has been inserted

Unclamping must not be possible during the drilling operation.

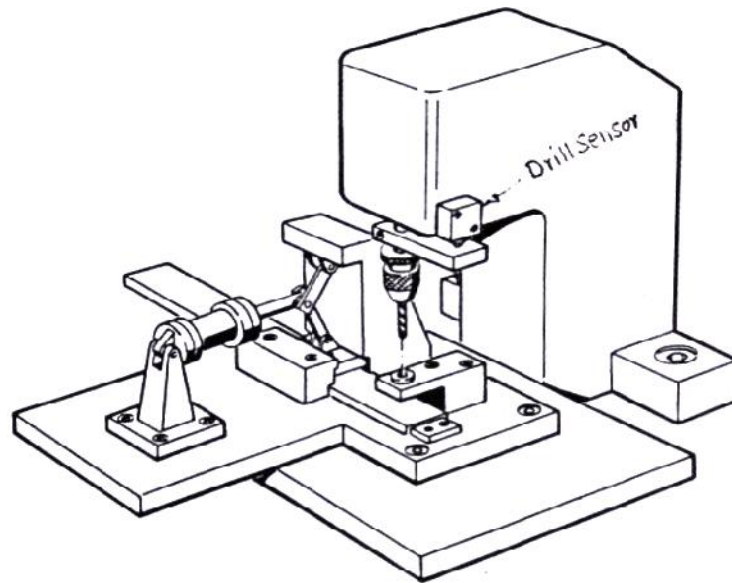


Figure 5.11 Clamping Device

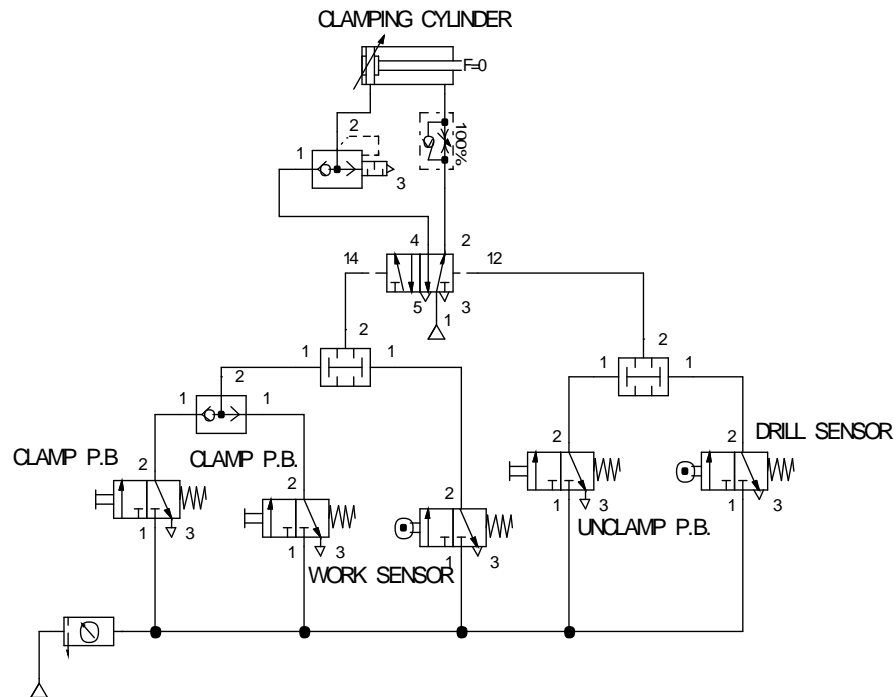


Figure 5.12 Clamping Device –Control Circuit

Example 2: Distribution of Balls

Billiards balls are distributed from a gravity magazine via distributor shafts by two packing stations for individual packing. The signal for the return stroke must be capable of being given by the machine operator by means of either a manual push button or a foot-operated valve. The advance stroke of the piston is triggered by the piston rod when the rearmost end of position is reached.

The piston must execute a return stroke only when balls are present in the gravity magazine.

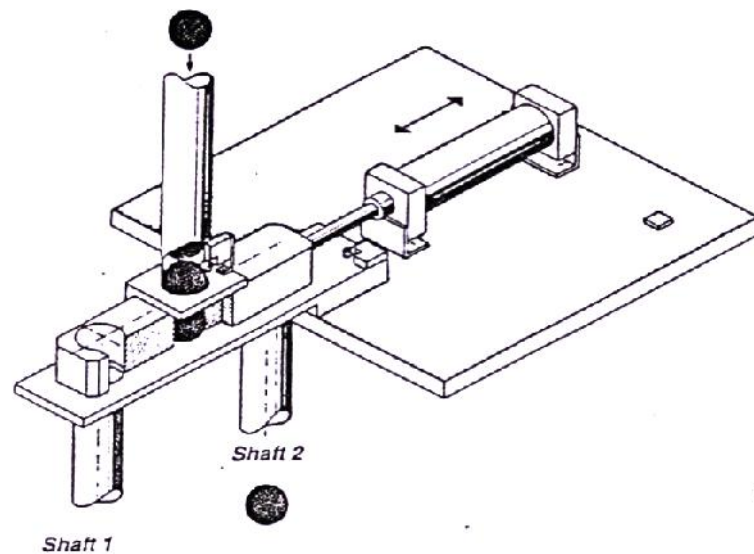


Figure 5.13 Distributions of Balls

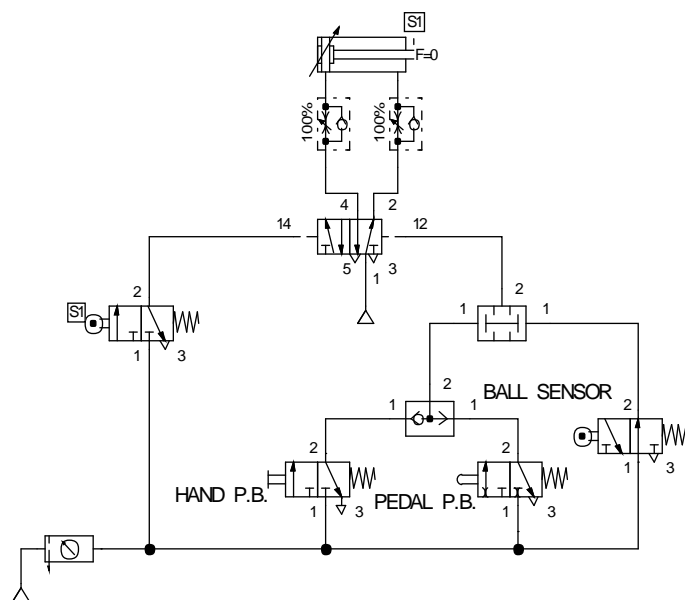


Figure 5.14 Distributions of Balls