

## DESIGN AND FABRICATION OF AUTOMATIC 2,3 POINT DRILL MACHINE

### ABSTRACT

Any industry's has its own desire to maintain their ability to provide safe and secure drilling of their customer's hazardous materials. Addressing these challenges is a important task and the efficient delivery of their cargo, play a vital Role in the economy of the country.

This system provides the safety and accurately, sensing the wood plates the automatic drilling machine comes to the target position through the automatic lift system. The drilling machine drills the particular position and moving up direction then , The wood plate will rotate for next position. The drilling machine drills the next position also like this the machine will drills the no of wood plates and different positions also.

### MECHANISM

Drilling Machine is very simple machine. Job or work piece is fixed on work table. Tool rotating at high speed, is fed into work piece for operation.

It consist of drill machine which is connected to DC motor , drill machine can be moved up and down automatically . This system provides the safety and accurately, sensing the wood plates the automatic drilling machine comes to the target position through the automatic lift system. The drilling machine drills the particular position and moving up direction then , The wood plate will rotate for next position. The drilling machine drills the next position also like this the machine will drills the no of wood plates and different positions also.

## USES

A drilling machine, called a drill press, is used to cut holes into or through metal, wood, or other materials. Drilling machines use a drilling tool that has cutting edges at its point. This cutting tool is held in the drill press by a chuck or Morse taper and is rotated and fed into the work at variable speeds. Drilling machines may be used to perform other operations. They can perform countersinking, boring, counterboring, spot facing, reaming, and tapping. Drill press operators must know how to set up the work, set speed and feed, and provide for coolant to get an acceptable finished product. The size or capacity of the drilling machine is usually determined by the largest piece of stock that can be center-drilled. For instance, a 15-inch drilling machine can center-drill a 30-inch-diameter piece of stock.

Other ways to determine the size of the drill press are by the largest hole that can be drilled, the distance between the spindle and column, and the vertical distance between the worktable and spindle.

## SAFETY PRECAUTIONS:

### DRILLING MACHINE SAFETY

- Do not support the workpieces by hand.
- Never make any adjustments while the machine is operating. Drilling machines are one of the most dangerous hand operated pieces of equipment in the shop area. Following
- Never clean away chips with your hand. Use a brush. safety procedures during drilling operations will help eliminate accidents, loss of time, and materials.

- Keep all loose clothing away from turning tools.
- Make sure that the cutting tools are running straight before starting the operation.
- Never place tools or equipment on the drilling tables.
- Keep all guards in place while operating
- Ease up on the feed as the drill breaks through the work
- to avoid damaged tools or workplaces.
- Remove all chuck keys and wrenches before operating
- Always wear eye protection while operating any drilling machine

## ADVANTAGES

- To achieve mass production
- To reduce man power
- To increase the efficiency of the plant
- To reduce the work load
- To reduce the production cost
- To reduce the production time
- To reduce the material handling
- To reduce the fatigue of workers
- To achieve good product quality
- Less Maintenance