



Types of Lathe



Workshop Practices
20CSE1030



Bench Lathe

- A bench lathe is a material reduction machine built into a bench or worktable
- A lathe takes a solid block of a material and reduces it to create a symmetrical item. Using a bench lathe, you can cut, knurl, drill, or sand material down to create a new object
- Attached to the bench lathe is a spindle. This hollow bar runs parallel to the bed and is used to attach accessories. These accessories secure the workpiece in place.
- On a bench lathe, the spindle moves the block of material with either an electric motor or foot power.

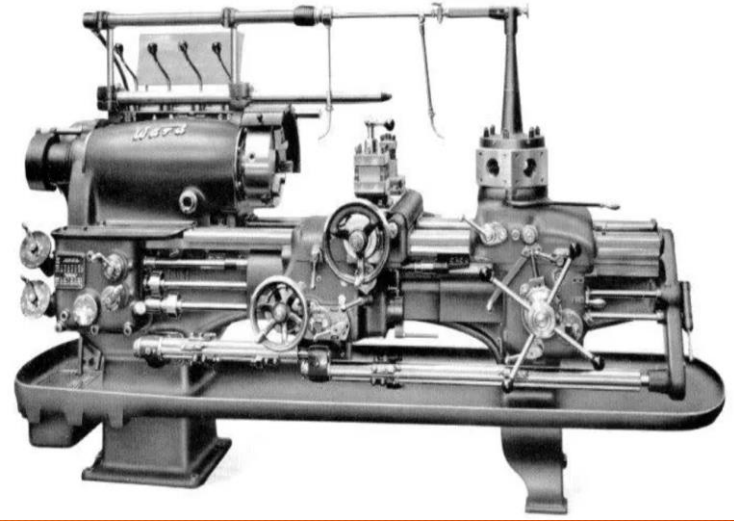




Tool Room Lathe



- A tool room lathe is generally a high precision lathe having a gearbox in the headstock offering a extended range of thread pitches and feeds.
- It has a low spindle runout and precision guideway and leadscrews offering high stability, low clearances and backlash
- It is used for making precision components in the tool room.



Turret Lathe

- The turret head is directly mounted on the saddle and the saddle slides over the bed ways.
- Turret Lathe is a heavy weight machine and the saddle is moved along with the turret head during machining.
- Power operated Jaw chucks are used to hold the work piece.
- Turret lathe is used for the mass production of large size equal parts.

Turret & Capstan Lathe



Capstan Lathe

- The Turret tool head is mounted over the ram and the ram is mounted on the saddle.
- Capstan lathe is a light weight machine and the saddle is fixed during machining.
- Hand operated collect chucks are used to hold the work piece.
- Capstan lathe is used in the mass production of small size equal part.



Special Purpose Lathe Machine



- These lathes are used for **special purposes** such as heavy-duty production of identical parts.
- In addition, these **lathes** also perform **specific** functions that cannot be performed by the standard **lathes**
- Few of the special purpose lathe are:
- Precision Lath; Facing Lathe; Frontal Lathe; Vertical Lathe; Crankshaft Lathe; Production Lathe; Duplicate Lathe; Screw cutting Lathe
- They are more efficient and effective in what they do.

Automatic Lathe



- An **Automatic lathe** is a **lathe** with an **automatically** controlled cutting process.
- **Automatic lathes** perform all operating cycles **automatically**. They are **used** for the mass production of simple workpieces such as bolts, screws, nuts and bushings
- All movements of cutting tools, their sequence of operations, applications, feeding of raw materials, parting off, unloading of finished parts are all done on machine.
- This lathe is also known for its high accuracy.



Thank You