

Lathe Accessories

- Divided into two categories
 - Work-holding, -supporting, and –driving devices
 - Lathe centers, chucks, faceplates
 - Mandrels, steady and follower rests
 - Lathe dogs, drive plates
 - Cutting-tool-holding devices
 - Straight and offset toolholders
 - Threading toolholders, boring bars
 - Turret-type toolposts

Work holding Devices

- Various work holding attachments such as three jaw chucks, collets, and centers can be held in the spindle.
- Work is held in the lathe with a number of methods,
- Between two centres. The work piece is driven by a device called a dog; this method is suitable for parts with high length-to-diameter ratio.
- A 3 jaw self-centering chuck is used for most operations on cylindrical work-parts. For parts with high length-to-diameter ratio the part is supported by center on the other end.
- Collet consists of tubular bushing with longitudinal slits. Collets are used to grasp and hold bar stock. A collet of exact diameter is required to match any bar stock diameter.
- A face plate is a device used to grasp parts with irregular shapes.

Mandrels

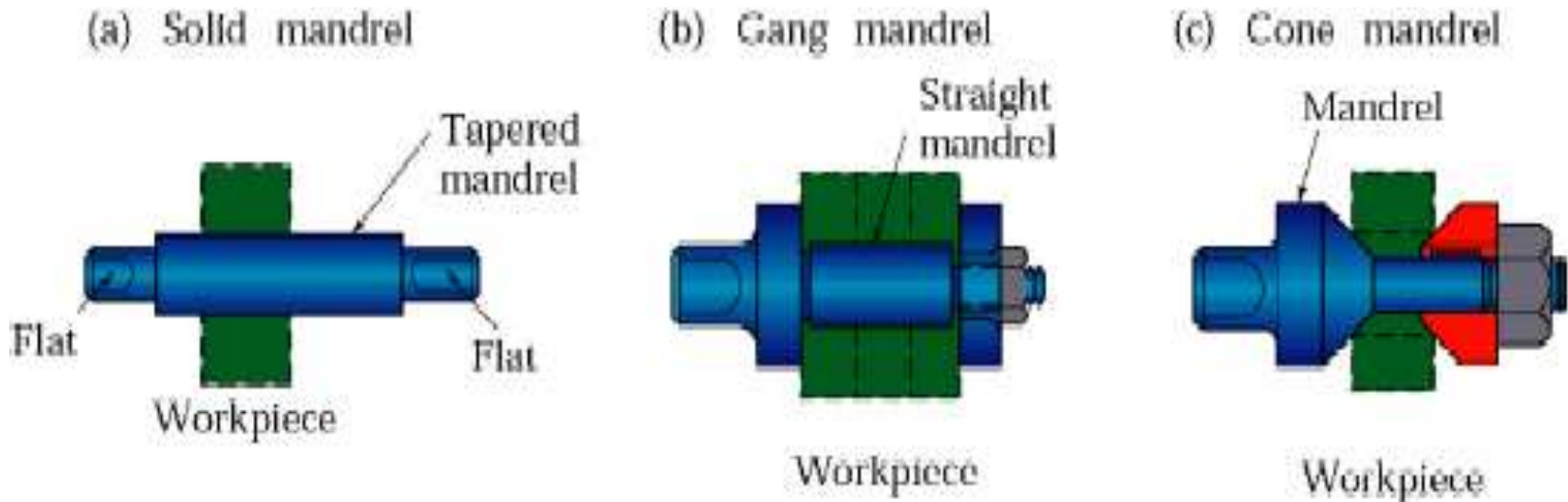


Fig : Various types of mandrels to hold work pieces for turning. These mandrels are usually mounted between centers on a lathe. Note that in (a) both the cylindrical and the end faces of the workpiece can be machined, whereas in (b) and (c) only the cylindrical surfaces can be machined.

Lathe Centers

- Work to be turned between centers must have center hole drilled in each end
 - Provides bearing surface
- Support during cutting
- Most common have solid Morse taper shank
- 60° centers, steel with carbide tips
- Care to adjust and lubricate occasionally



Chucks

- Used extensively for holding work for machining operations
 - Work large or unusual shape
- Most commonly used lathe chucks
 - Three-jaw universal
 - Four-jaw independent
 - Collet chuck

Types of Lathe Dogs

- Standard bent-tail lathe dog
 - Most commonly used for round workpieces
 - Available with square-head setscrews of headless setscrews
- Straight-tail lathe dog
 - Driven by stud in drive plate
 - Used in precision turning



Types of Lathe Dogs



- Safety clamp lathe dog
 - Used to hold variety of work
 - Wide range of adjustment

- Clamp lathe dog
 - Wider range than others
 - Used on all shapes



Left-Hand Offset Toolholder

- Offset to the right
- Designed for machining work close to chuck or faceplate and cutting right to left
- Designated by letter L



Right-Hand Offset Toolholder

- Offset to the left
- Designed for machining work close to the tailstock and cutting left to right
 - Also for facing operations
- Designated by letter R



Straight Toolholder

- General-purpose type
- Used for taking cuts in either direction and for general machining operations
- Designated by letter S



Straight Tool holder

- General-purpose type
- Used for taking cuts in either direction and for general machining operations
- Designated by letter S

