

Paarth Sahoo
2K20/B17/33

Fitting Shop

Tuesday 10

Tools & Devices.

* Marketing & Measuring Tools.

- Used for taking measurements
- Made of stainless steel or Spring steel.
- Scale of 300 mm is mainly used in practice.

Surface Plate

- Used for marketing out work & for testing flatness or trueness of work.
- Made of Grey cast iron.

Scribes

- Pointed out at once or both ends
- Used to scratch lines on given surface.

Universal Surface Gauge

- Used to scribe parallel lines at desired height from a plane surface

9) It consists of a cast iron base, perfectly machined & placed at the top, bottom & all sides.

Parth Jha
2K20/B17/33

Punch.

- It is used for making out work & locating centers in a permanent manner.
- They are made of hardened steel and may be classified in two types such as Prick or Dot punch or Centre Punch.
- The centre punch has an inclined angle of 60° .

V-Block.

- It is a block of steel with V-shaped grooves for marking or drilling on a cylindrical workpiece, it serves as a useful support to the workpiece.

Stry-Square.

It is used to check the trueness of mutually normally surfaces or in other words we can say to check 90° angle b/w two adjacent surfaces.

In the absence of surface plate, flatness of any surface may also be checked by it.

PARTH JOHRI
2K20/B17/33

Callipers

The main function of callipers is to transfer and compare a dimension from an surface to another or from a part to scale or micrometer where the measurement cannot be in m.

i) Outside calliper

ii) Inside calliper

iii) Hermaphrodite or odd leg caliper.

Vernier caliper & Vernier height Gauge.

1) Vernier callipers can measure internal dimension & external dimensions.

2) Vernier gauge is used for measuring the height's components.

Micrometer

Instrument for making precise linear measurement of dimensions such as diameters, thickness & lengths of solid bodies.

Holding & Supporting tools

Parth Jahan
2K20/B17/33

→ Bench Vice

1) The bench vice is a device commonly used for holding the work pieces.

2) It is firmly fixed to the fitter's bench with the help of nuts & bolts & also known as fitter's vice.

→ Pipe Vice

1) It consists of a cast iron frame & base.

2) It is used for holding the ~~so~~ round section metal like pipes & tubes, etc.

3) In this case screw is vertical & the moveable jaw works vertically.

Hand vice

This type of vice is usually employed for gripping very small jobs.

Pin-Vice.

It is used for holding round jobs of small diameter such as pins & wires etc.

Tools Maker's Vice.

Useful for holding small size of jobs which require filing or drilling etc. It is made of mild-steel.

Cutting, Filing & Scraping tools

→ Chisels

For cutting & chipping away pieces of metal

→ Flat chisel

Its cutting edge is given a slight curve so as to prevent corners from digging away the metal.

→ Cross-cut Chisel

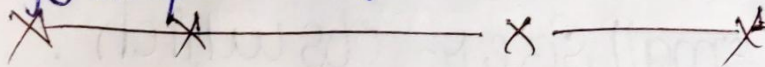
Used for cutting grooves in large surfaces & keyways in shafts or wheels.

→ Round Nose Chisel.

Used in cutting oil grooves in bearings, pulleys etc.

Diamond point chisel

One end of this chisel is drawn to a small square and this end is ground off at an angle producing "Diamond" shape.



Parth Jokeu
2K20/B17/33
Workshop