SINE BAR

A **sine bar** is a angular measuring instrument. Which is used to measure angle of surface very accurately and high precision.

- It is made high carbon, high chromium
- It is corrosion resistant material
- High hardness
- Its have two cylinders are attached at ends with axes to each other.
- Distance between two cylinders (rollers) range is 100mm-300mm

CLASSIFICATION OF SINE BAR

- (i) According to accuracy

  Grade A LC = 0.01mm

Grade B LC = 0.02mm

(ii) According to availability of designs

Type 1

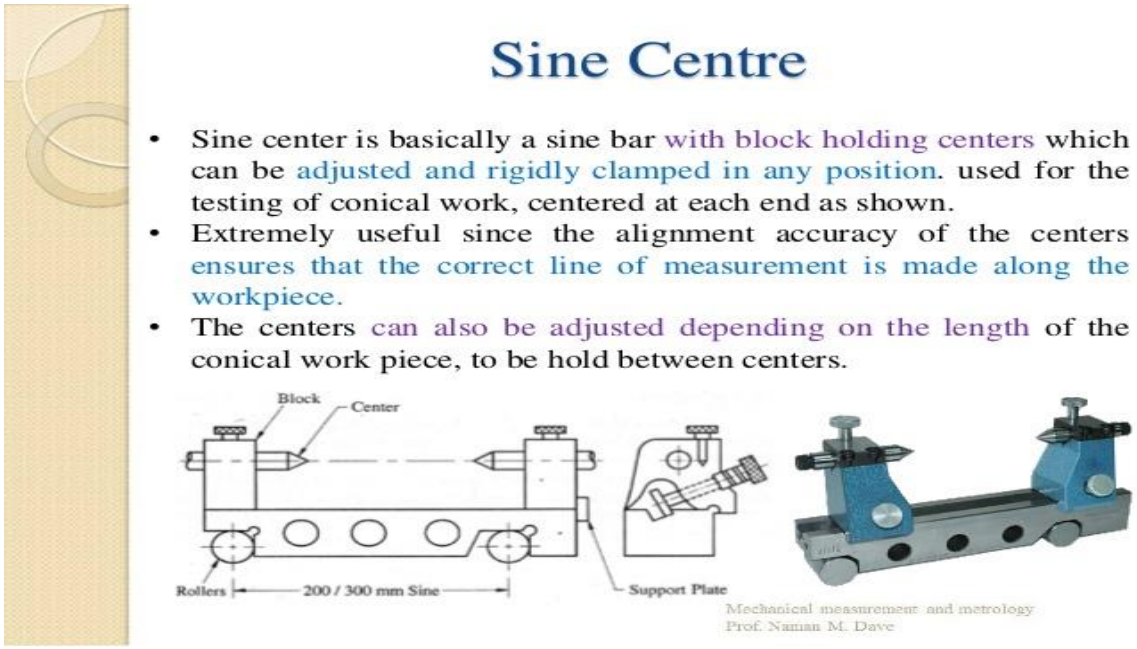
Type 2

Type 3

Type 4

MODIFICATION OF SINE BAR

- Sine centre
- Sine table



LIMITATIONS OF SINE BAR

- Devices operating on the sine principle are fairly reliable at angles less than 15° become increasingly inaccurate as the angle increases.

Sine bars inherently become increasingly impractical and inaccurate as the angle exceeds 45°.

— The sine bar is physically clumsy to hold in position.
— The body of the sine bar obstructs the gauge block stack, even if relieved.
— Slight errors of the sine bar cause large angular errors.
— Long gauge stacks are not nearly as accurate as shorter gauge blocks.
— Temperature variation becomes more critical.

— The size of gauges, instruments or parts that a sine bar can inspect is limited, since it is not designed to support large or heavy objects.