

DESIGN CONSIDERATION OF CNC

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DESIGN CONSIDERATION OF CNC MACHINE

1-Design considerations for structure of CNC machine tool.

- Best stiffness to weight ratio
- Damping to take care of vibrations
- Ribs at strategic locations
- Use of welded steel structure

2-Spindle design

- Consideration for deflection due to large cutting force
- Heat dissipation
- Positioning of gearbox, spindle motor etc

3-Spindle drives and feed drives

- ◉ Speed control
- ◉ Constant torque supply

4-Actuation systems

- ◉ Lead screw
- ◉ Slideways

5-Feedback devices

- ◉ Encoders
- ◉ Linear scales