



# Gear Drive Train

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Course name: THEORY OF MACHINE B.



# Gear Drive Train

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What are gears ?

Applications of gears.

# Main TOPICS

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what is gear box?

How do they work ?

What is in a Gearbox ?

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**What are gears ?**

**Applications of gears.**

**what is gear box?**

**How do they work ?**

**What is in a Gearbox ?**

**Design of gear box.**

**Parts of gear box**

**Real project**



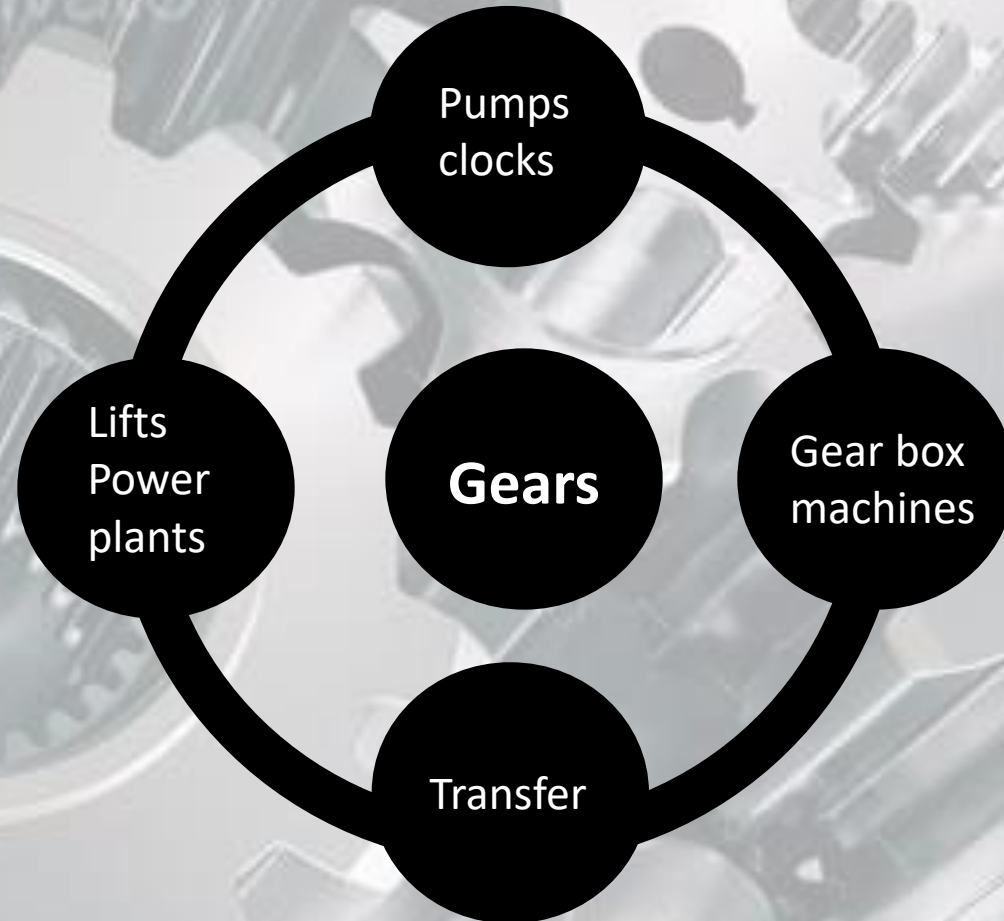


# ➔ What are gears ?

- ✦ A gear is a wheel with teeth that meshes with another similar gear that is typically larger or smaller .
- ✦ Gears come in various sizes and types , depending on the situation .
- ✦ And one gear may work better than another.

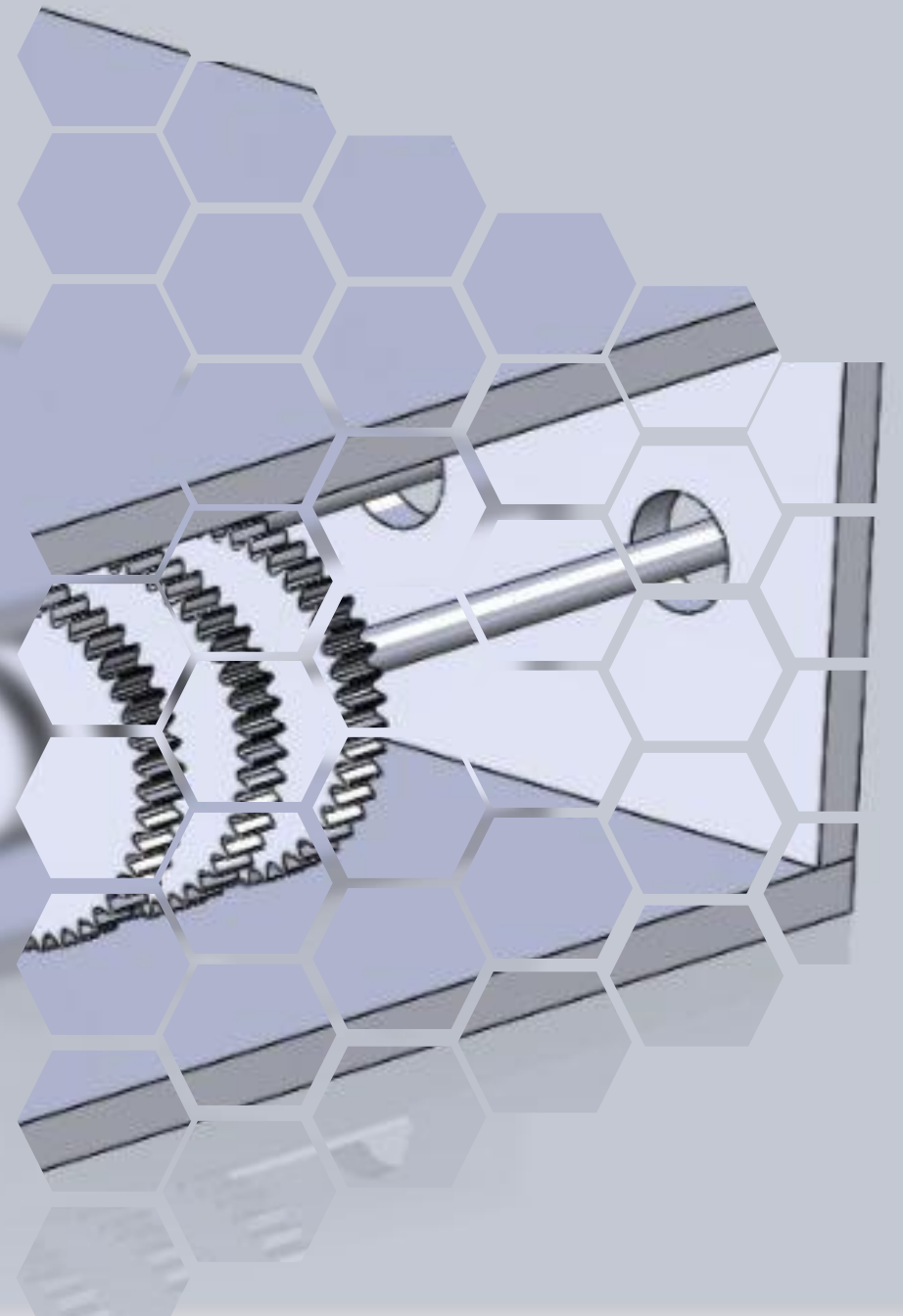
# ➔ Application of gears :

Gears have a wide range of applicants .



# ➔ What is Gearbox?

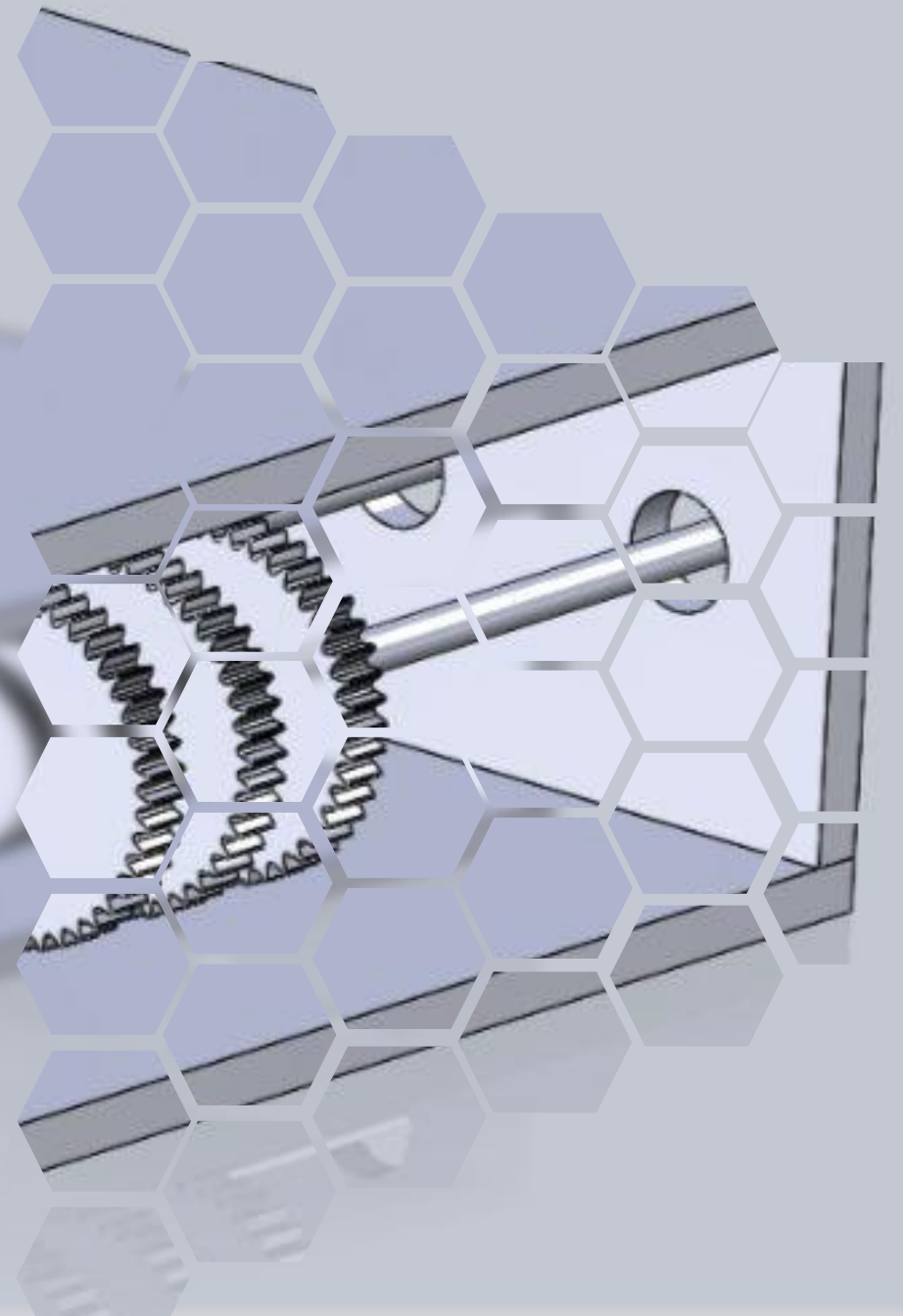
The gearbox is a mechanical device used to increase the output torque or to change the speed (RPM) of a motor. The shaft of the motor is connected to one end of the gearbox and through the internal configuration of gears of a gearbox, provides a given output torque and gear ratio. speed determined by the gear ratio.





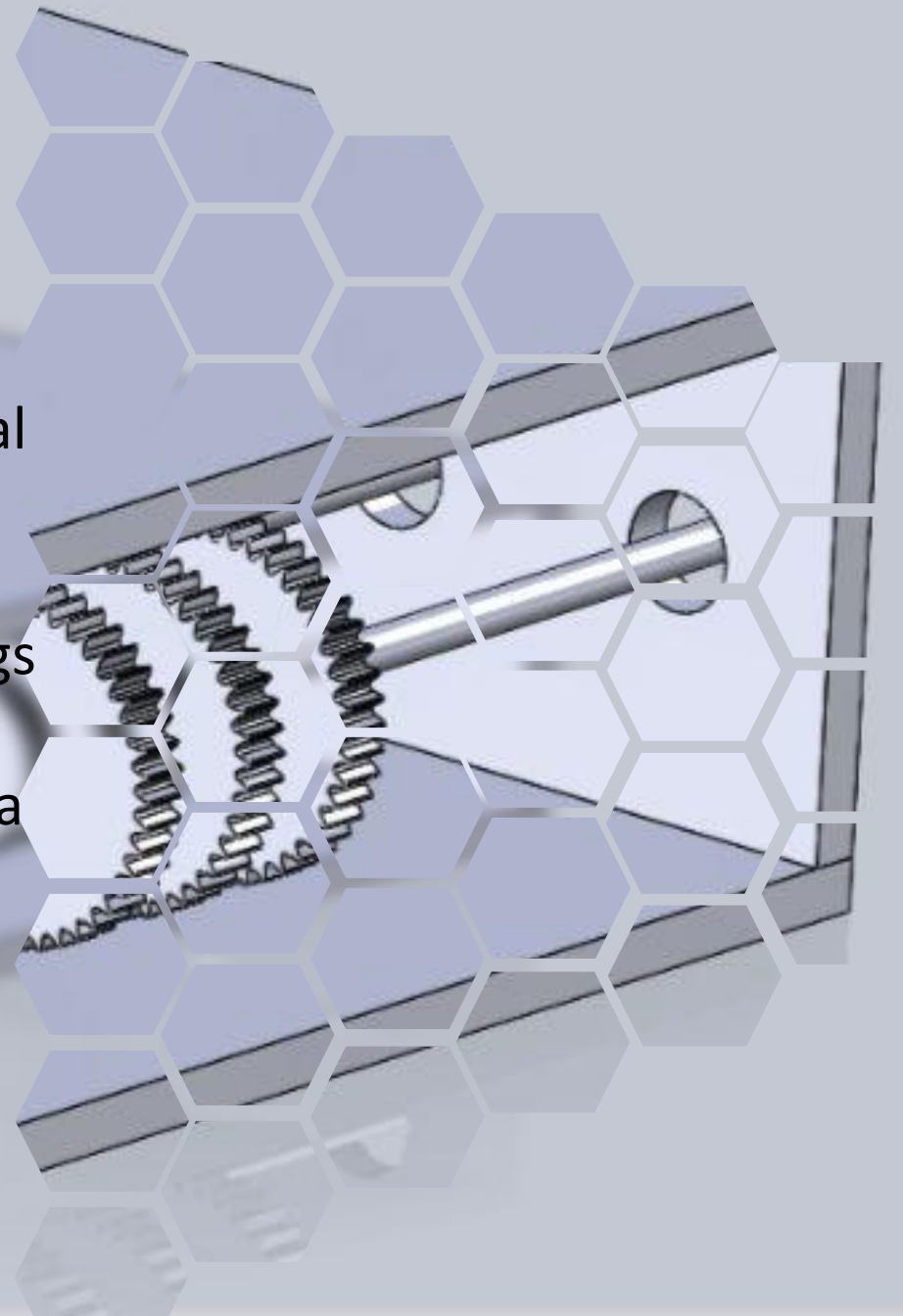
# ➔ How do they work ?

An electric or hydraulic motor is applied to one end of the gearbox, while the energy is converted into low speed drive torque at the other end. Inside the box, the materials used have a long service life, which supports enormous strength.

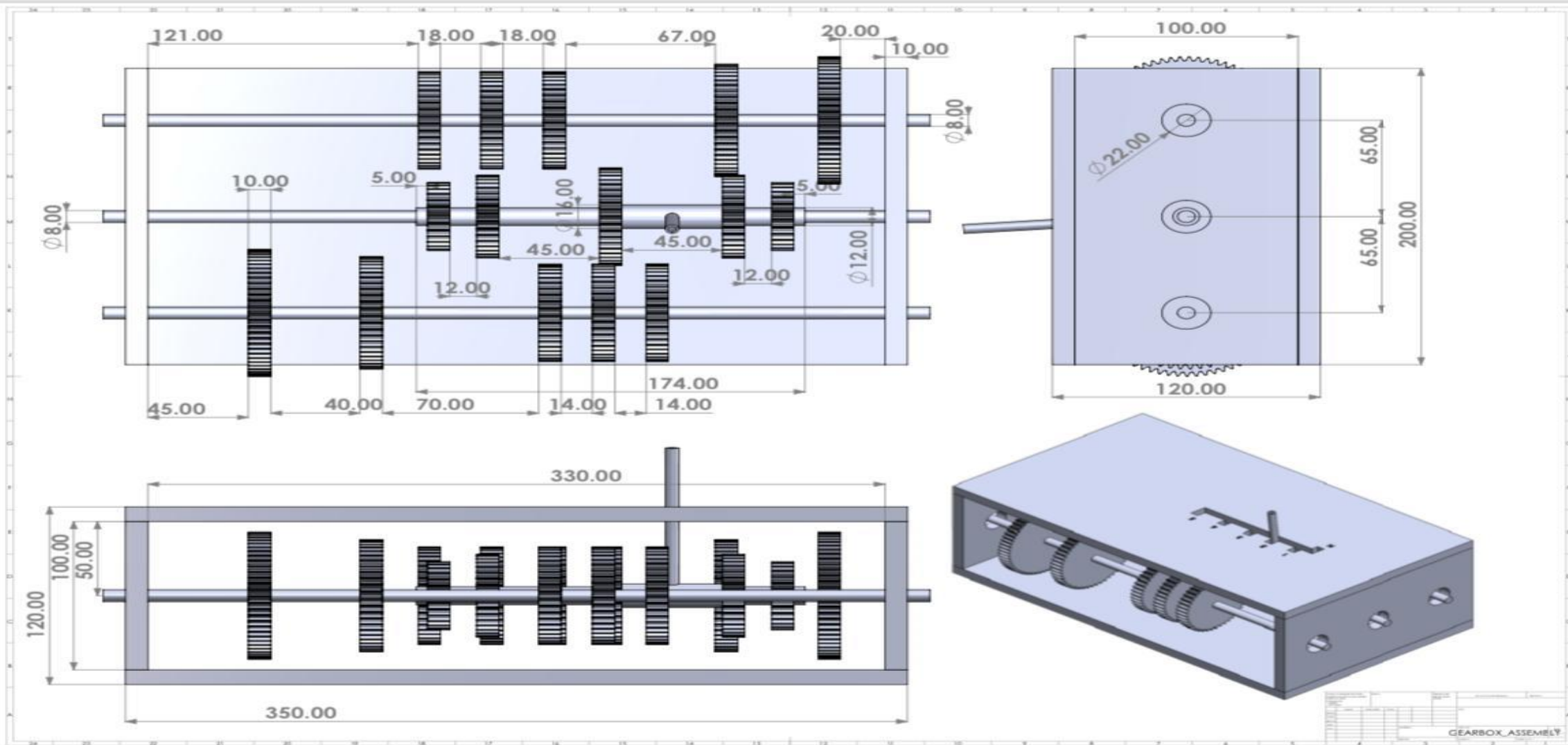


# ➔ What is in a Gearbox ?

gearbox is always a fully integrated mechanical component consisting of a series of mating gears contained in a housing with shafts and bearings (to support and resolve loads) and in many cases a flange for motor mounting.

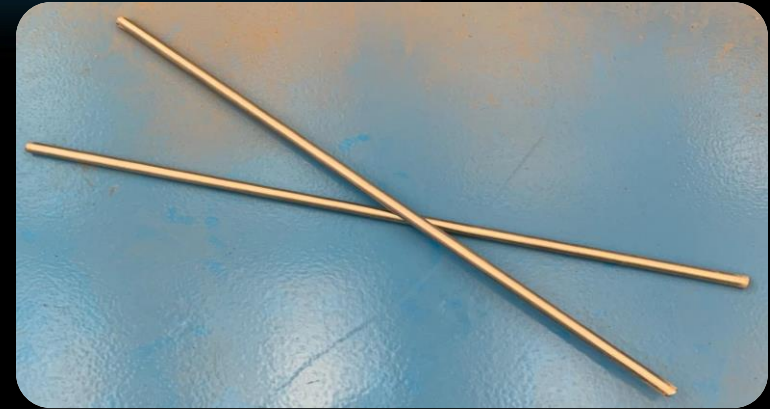
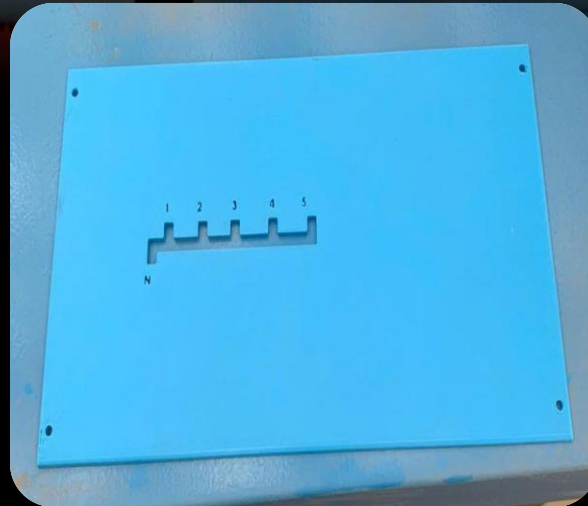
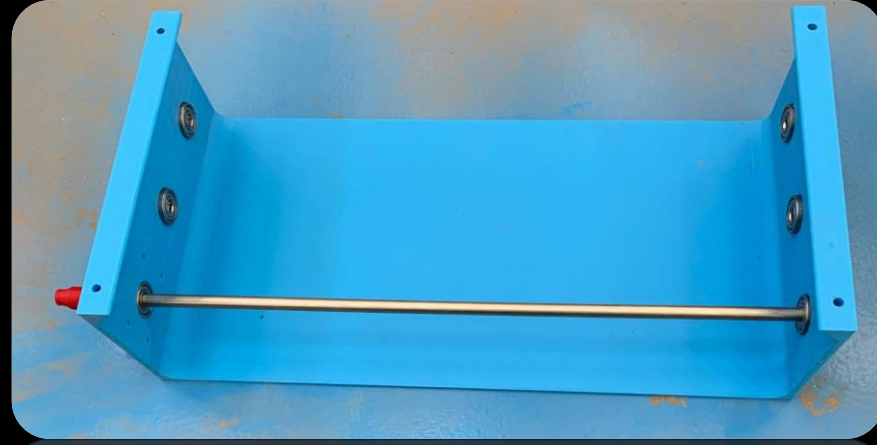


➔ **Design of gear box.**





# ➔ Parts of gear box.



# ➔ Real project

