

[Home](#) > State law of gearing.

---

State law of gearing.

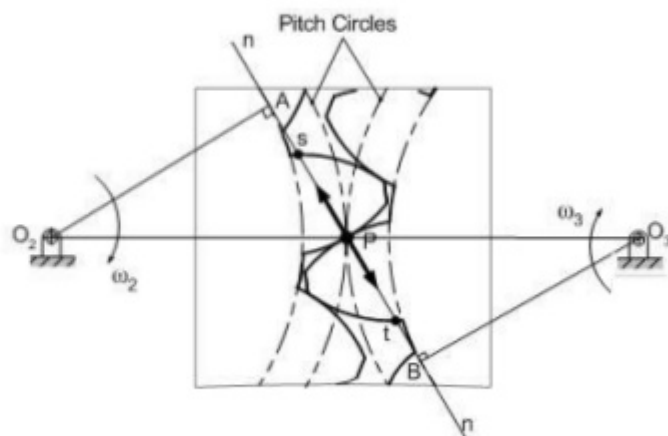
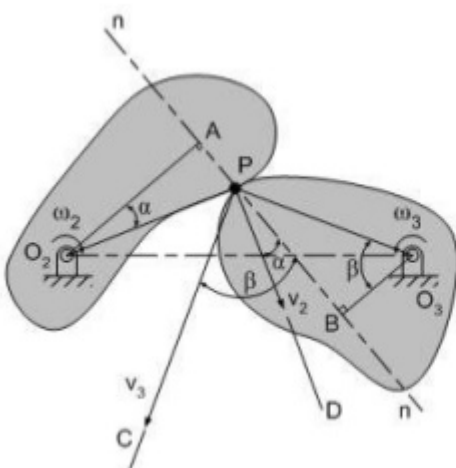
**Question:**

State law of gearing.

**Answer:**

Gearing law (Law of gearing) :

*Gearing law states that, "The law of gearing states that the angular velocity ratio of all Gears of a meshed gear system must remain constant also the common normal at the point of contact must pass through the pitch point."*



## Gearing law illustration

As illustrated in above animation the common normal at the point of contact passes through the pitch point. Gearing law must be followed in order to two gears transmit motion from one to another.

In order to have a constant angular velocity ratio for all positions of the wheels, it is must that the point P must be the fixed point (called pitch point) for the two wheels. In other words it can be said that , the common normal at the point of contact between a pair of teeth should always pass through the pitch point for proper working.

This is the fundamental condition which must be satisfied while designing the profiles for the teeth of gear wheels, it is also known as the **law of gearing**.

## Gearing law explanation with diagram

---