Published on *Mechanical Engg Simple Notes*, *Solved problems and Videos* (<a href="https://mechdiploma.com">https://mechdiploma.com</a>)

<u>Home</u> > What are the advantages of 'V' belt drive over flat belt drive?

What are the advantages of 'V' belt drive over flat belt drive?

## **Question:**

What are the advantages of 'V' belt drive over flat belt drive?

## **Answer:**

## Advantages of V-belt drive over flat belt drive:

- 1. The V-belt drive gives compactness due to the small distance between the centres of pulleys.
- 2. The drive is positive, because the slip between the belt and the pulley groove is negligible.
- 3. Since the V-belts are made endless and there is no joint trouble, therefore the drive is smooth.
- 4. It provides longer life, 3 to 5 years.
- 5. It can be easily installed and removed.
- 6. The operation of the belt and pulley is quiet.
- 7. The belts have the ability to cushion the shock when machines are started.

- 8. The high velocity ratio (maximum 10) may be obtained.
- 9. The wedging action of the belt in the groove gives high value of limiting ratio of tensions. Therefore the power transmitted by V-belts is more than flat belts for the same coefficient of friction, arc of contact and allowable tension in the belts.
- 10. The V-belt may be operated in either direction with tight side of the belt at the top or bottom. The centre line may be horizontal, vertical or inclined.