

Belt or Chain?

Mechanical Engineering

The trade between a forgiving drive and an exact one.

V-belt drive

- Quiet, tolerates misalignment
- Slips, so it protects the machine
- Needs no lubrication
- Slip means the ratio is not exact

Roller chain

- Positive drive, exact ratio
- More power in the same width
- Needs lubrication and tensioning
- Noisier, and it stretches as it wears

THE DIFFERENCE THAT MATTERS

Exact timing needs chain or a toothed belt. Quiet and forgiving needs V-belts.

Both need correct tension. Over-tensioning is the usual cause of early bearing failure on either drive.