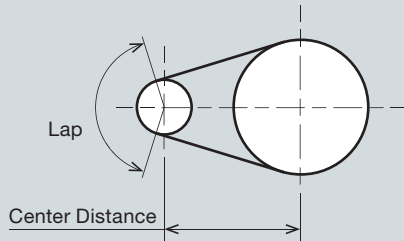


Installation and Arrangement

INSTALLATION AND ARRANGEMENT

To design excellent chain drives, chains and sprockets should be properly arranged and installed.



CENTER DISTANCE AND CHAIN LAP

Chain lap on the small sprocket must be at least 120 degrees.

Sprockets can be spaced at any distance as long as their teeth do not touch. Optimum distance is 30 to 50 times of pitch of the chain used except when there is a pulsating load. In case of pulsating drive, distance of less than 20 chain pitches is adequate.

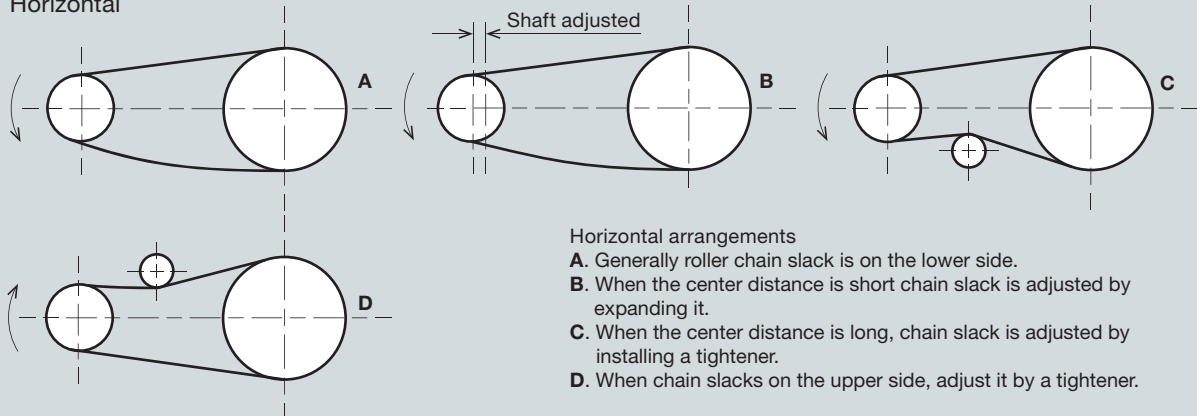
TENSION AND SLACK

Proper amount of chain tension should be maintained. Inadequate tension will step up wear, while excessive sag will result in pulsating impact, stranding and breakage. Adequate slack is 4% of the span for normal drives. In the following cases, the slack should be about 2% of the span.

- 1) Vertical position or near to vertical position.
- 2) Center distance exceeding 1 meter.
- 3) Heavy load application with frequent starts and stops.
- 4) Application with sudden reverse motions.

DRIVE POSITIONS

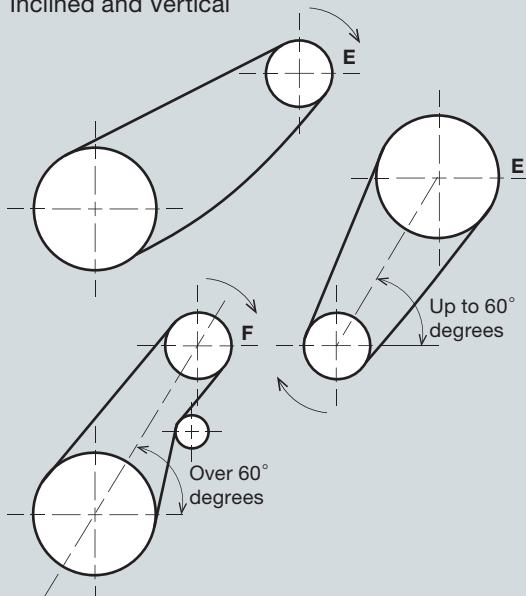
Horizontal



Horizontal arrangements

- A. Generally roller chain slack is on the lower side.
- B. When the center distance is short chain slack is adjusted by expanding it.
- C. When the center distance is long, chain slack is adjusted by installing a tightener.
- D. When chain slacks on the upper side, adjust it by a tightener.

Inclined and Vertical



Inclined arrangements :

- E. Inclined operation should be within 60°, possible.
- F. Too much slack will cause chain to ride up on the lower sprocket or come off. It should be adjusted by a tightener.

Vertical arrangements :

G, H
Excessive chain sag should be automatically adjusted by a tightener. It is mandatory when the driving shaft (small sprocket) is placed on the bottom side.

