

Roller Chain Basic Application

Guide Lines*

Number of teeth for small sprockets

The recommended minimum number of teeth for the small sprocket varies with operating conditions. The recommended minimums are:

- Very slow speed drives..... 12 teeth
- Slow speed drives..... 17 teeth
- Moderate speed drives..... 21 teeth
- High speed drives..... 25 teeth

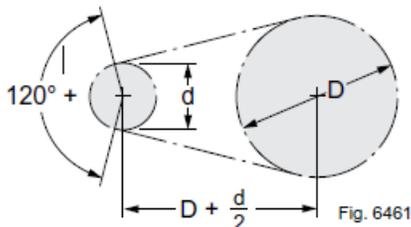
Hardened teeth

It is good practice to harden sprockets with 25 teeth or less when applied to:

- Very low speed, heavily loaded drives
- High speed drives
- Large ratio drives
- Abrasive or corrosive conditions

Center distance Sprocket centers must be more than ½ the sum of the sprocket outside diameters to avoid tooth interference.

A suggested minimum center distance would equal the diameter of the large sprocket plus half the diameter of the small sprocket. Drives so proportioned also assure the minimum suggested chain wrap of 120° on the small sprocket.



Idler sprocket: should have a minimum of 17 teeth and should be located adjacent to the driving sprocket so that at least 3 teeth are in full engagement with the non-load-carrying span of chain.

If possible, provide enough adjustment of the chain tightener to permit removal of two pitches of chain.

Drive ratio: The drive ratio is determined by the speeds of the driving and driven shafts. Properly engineered, drives with ratios up to 10:1

More than 3:1 will have special requirements!



Project Ref, Name or #:

Basic Drive selection info needed to select chain drive.

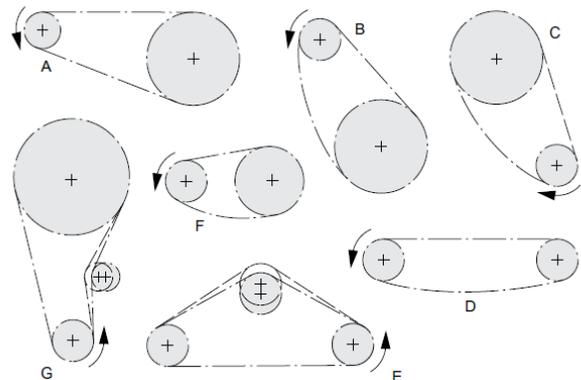
Horsepower **Hp** _____
 Driver: RPM **DR** _____ RPM
 Driver Shaft Diameter **DR** _____"
 Driven Shaft Diameter **DN dia** _____"
 Final RPM _____ RPM + _____ - _____
 Approximate C.D. Range **CD** _____ to _____"
 Space Limitation on Diameters **DR** _____" **DN** _____"

Reversing **Y, N**

Idler sprocket **Y, N**

Service Factor **1.0 1.4 2.0**

Position **A, B, C, D, E, F, G,**



Lubrication

Bath lubrication

Manual or drip

Factory Prelubrication Chain

B,M,P _____

Temperature of atmosphere surrounding drive, degrees Fahrenheit	S.A.E. viscosity number
-20 to 40	20
40 to 100	30
100 to 120	40
120 to 140	50

Further info may be required to quote.