

链轮孔径

确认选定的链轮孔径与传动轴配合。如果选定的链轮与传动轴不配合，选择不同的齿数。如果无法改变链轮齿数，核实传动轴的直径和最大孔径。采用下列公式计算得出最大孔径：

$$\text{最大孔径} = P \left(\cot \frac{180}{N} - 1 \right) - 0.76$$

P=链条节距, N=齿数

固弦齿作用产生的链速变化

咬合链轮的滚子链构成一个多边形。链条(位置)升降，链速发生变化。齿数越多，链速变化越小。当小链轮齿数增加时，链速变化减小。当齿数如下所示超过25时，速度变化减小。

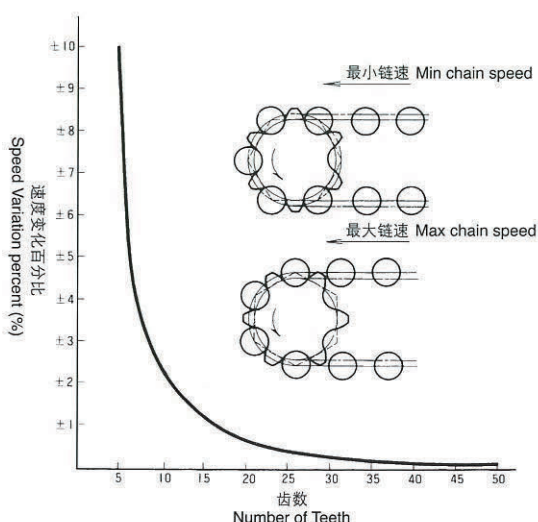
工作系数

正常传输时，采用表4工作系数。但在下列运行条件下，应提高工作系数以达到良好传输效果。

- 频繁起动、停止
- 润滑不足
- 轴中心距短
- 传动布置为立式，小链轮设在下方。
- 从动链轮为两个以上
- 反转
- 载荷定期变化

链条的链节数与连接链节

我们推荐使用节距为偶数的链条长度，以免使用过渡链节。对于12页中所示的有关低速链条的选择，建议使用环形链条，无需使用连接链节或过渡链节。连接链节或过渡链节的疲劳强度(容许载荷)要低于普通链条。



链条长度

根据滚子链传动装置的选择方法确定链条和链轮型式，并确定轴中心距，然后通过下列公式和表K的系数计算出所需链条长度。

$$L = \frac{N+n}{2} + 2C + \frac{K}{C}$$

Sprocket Bore Diameter

Make sure the bore capacity of the sprocket selected will accommodate the shaft. If the sprocket selected does not accommodate the shaft, select a different number of teeth. If you can not change the number of teeth in the sprocket, review the shaft dia. and max. bore. The max bore is obtained using the formula.

$$\text{Max. bore} = P \left(\cot \frac{180}{N} - 1 \right) - 0.76$$

P = Chain pitch

N = Number of teeth

Variation in Chain Speed due to Chordal Action

A roller chain that engages a sprocket forms a polygon. The (position) chain rises and falls, and a variation in chain speed occurs. The greater the number of teeth, the less will be the speed variation. The speed variation is reduced as the number of teeth on a small sprocket increases. A less speed variation is obtained as the number of teeth exceeds 25 as shown below.

Service Factor

For normal transmission, service factor Table 4 is used. However, under the following operating conditions, increase the service factors for better transmission.

- Frequent starts and stops
- Insufficient lubrication
- Shaft center distance is short
- A drive arrangement is vertical with a small sprocket located below
- Driven sprockets are more than two
- Reversing
- Load periodically varies

Number of Links of Chain and Connecting Link

We recommend that you use a chain length with an even number of pitches in order not to use an offset link. For low speed as shown in page 12 on low speed chain selection, we suggest chain endless is used without the use of a connecting or offset link. The fatigue strength (allowable load) of a connecting link and an offset link is lower than that of plain chain.

Length of Chain

If the type of chain and sprockets are determined on the basis of the selection method of roller chain drives and the shaft center distance is decided, the required length of chain is computed using the following formula and Table K factors.

$$L = \frac{N+n}{2} + 2C + \frac{K}{C}$$

L = CHAIN LENGTH, PITCHES

N = NUMBER OF TEETH IN LARGE SPROCKET

n = NUMBER OF TEETH IN SMALL SPROCKET

C = SHAFT CENTER, PITCHES

K = DETERMINE THE VALUE N-n, AND OBTAIN K FROM TABLE 6 K FACTORS