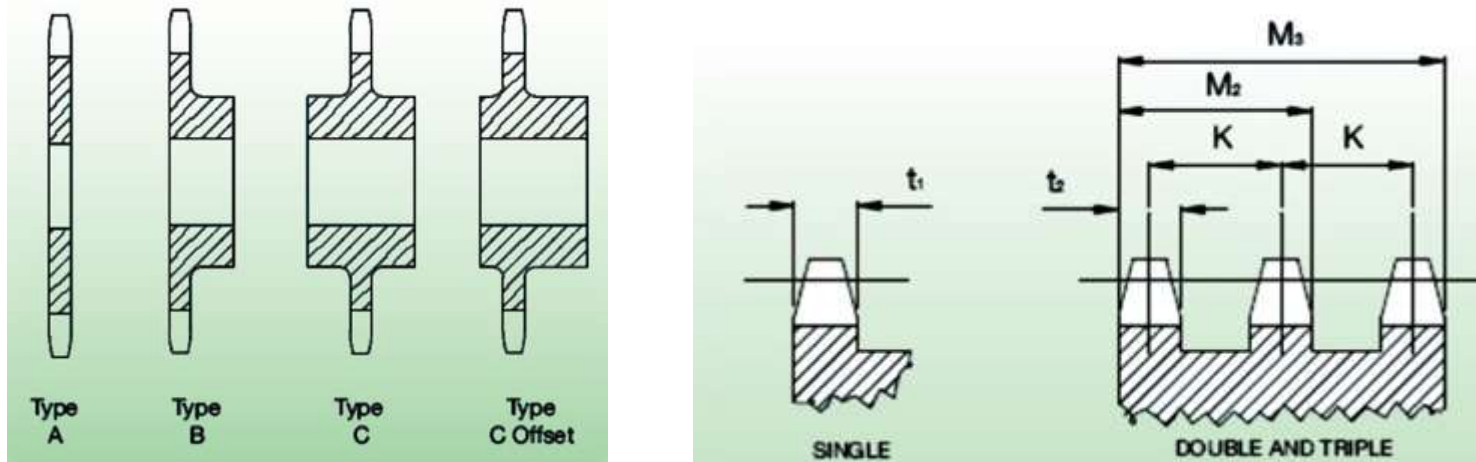


Sprocket identification & terminology

Step #1. Chain type and pitch. . . Sprockets are designed for use with a specific chain. All chains are made to a given standard—with ANSI being the most common in the U.S. Each chain is identified by “pitch,” which refers to the measurement from one roller-pin center to the next roller-pin center of a given chain. ANSI chain pitch is always measured in 1/8” increments. Refer to Fig. 1 for how to measure chain pitch, then see Table I for ANSI Standard Chain pitch sizes.

Standard Roller Chain			
Number	Pitch "P"	Number	Pitch "P"
25	1/4"	100	1-1/4"
35	3/8"	120	1-1/2"
40	1/2"	140	1-3/4"
41	1/2"	160	2"
50	5/8"	180	2-1/4"
60	3/4"	200	2-1/2"
80	1"	240	3"

Step #2. Sprocket hub style. . . While there are unlimited arrangements, a vast majority of roller chain sprockets fall into one of these major styles: no hub (A-style); a hub projection from one side (B-style); or hub projections from both sides of the sprocket (C-style). (See Fig. 3.)



Bushed sprockets: At times, a bushed sprocket is used in applications where higher working loads are prevalent. Sprockets with tapered bushings will fall into the QD®, Split-Taper or Taper-Lock® families. QD and Split-Taper bushings are flanged and commonly utilize large anchor bolts around the circumference of the flange to retain itself to the sprocket (Fig. 7). Taper-Lock bushings are similar in that they incorporate a split through the taper to provide a true clamp on the shaft. These bushings are retained to the sprocket with a series of set screws on the OD of the bushing (parallel to the shaft [Fig. 8]).

Steel split sprockets: These sprockets (Fig. 9) are cut through the entire diameter for ease of installation and removal. The sprocket halves are held together by bolts on either side of the hub. This particular style is normally available in chain pitch sizes of 40 through 240, and bore diameters of 3/4" through 6", depending on chain pitch selected.

Double single sprockets: This type of sprocket (Fig. 10) is used in applications where two or more items are powered by a common drive shaft. The space between the sprocket plates is wider than a multi-strand sprocket, and allows two independent strands of chain to engage without contacting each other. With this type of sprocket, each strand of chain may exit in a different direction than the other—*i.e., one strand exiting toward the ceiling and the other running parallel to the floor.*

Idler sprockets, chain tensioner: These types of components are used in applications where the drive chain may experience slack due to long lengths, non-adjustability of the driven shaft or where the chain has to be guided around an obstruction. They prevent chain whipping and uneven distribution of load. This type of sprocket can also be used in applications where the drive chain may be reversed in direction and the idler sprocket is mounted to the outside of the chain to prevent whipping. See Fig. 11 for an illustration of a ball-bearing idler sprocket and bronze bushing.



Fig. 7. OD sprocket and bushing



Fig. 8. Taper-LOCK sprocket and bushing



Fig. 9. Split sprocket



Fig. 10. Double-single sprocket



Fig. 11. Ball-bearing idler sprocket

ROLLER CHAIN AND SPROCKET GUIDE

Different Types Of Industrial Chain Links

Standard Roller Chain



Double Pitch Roller Chain



Heavy Series Roller Chain



Standard Roller Chain with Attachments



Standard Double Pitch Roller Chain w/ Attachments

