

Belt Drive Issues

Contributed by Administrator
Wednesday, 11 June 2008

Flat-Flex belts are designed to be positively-driven by sprockets to eliminate the tracking and slipping problems that commonly occur with other types of belts. Whenever possible, the drive should be placed so that the loaded portion of the belt is pulled (not pushed). For best results, the drive shaft should be located as close to the discharge end of the conveyor as practical. The drive sprockets positioned on the shaft assembly should engage the belt along 120° to 180° of the sprocket circumference. (This is sometimes referred to as “sprocket wrap.”)

Flat-Flex belts are designed to be positively-driven by sprockets to eliminate the tracking and slipping problems that commonly occur with other types of belts. Whenever possible, the drive should be placed so that the loaded portion of the belt is pulled (not pushed). For best results, the drive shaft should be located as close to the discharge end of the conveyor as practical. The drive sprockets positioned on the shaft assembly should engage the belt along 120° to 180° of the sprocket circumference. (This is sometimes referred to as “sprocket wrap.”)

Sprockets are typically placed in every other space across the belt. What is absolutely critical is that the sprocket teeth be aligned across the width of the belt. If one tooth is positioned slightly forward, the entire pulling action force will be concentrated at that point. As a result, the belt will break prematurely at this point. You can facilitate proper alignment by designing in a keyed drive shaft. This ensures an even pull across the belt, with the same tooth on each sprocket pulling the same wire strand.

In most applications, only one powered drive shaft should be used per belt circuit to avoid problems caused by the normal variations of pitch throughout the belt. However, there may be a time when a twin drive or other drive configuration may be a practical solution. Contact Technical Services to discuss these application-specific exceptions.

