

Belt Life

Factors that Reduce Belt Life:

- › Misalignment of pulleys/shafts
- › Improper tension
- › Elevated environmental temperature
- › Small pulleys or backside idlers
- › Hard stops/starts
- › Damaged or worn pulleys
- › Variable 'Center-to-Center' distance
- › Dirt/debris between belt and/or pulleys
- › Mechanical interference with belt and/or pulleys
- › Improper belt vibration
- › Belt dressing



Storage of Power Transmission Belts

- › Under favorable storage conditions, good quality belts retain their initial serviceability and dimensions. Conversely, unfavorable conditions can adversely affect performance and cause dimensional change. Good storage facilities and practices will allow the user to achieve the most value from belt products.
- › Power transmission belts should be stored in a cool and dry environment with no direct sunlight. When stacked on shelves, the stacks should be small enough to avoid excess weight on the bottom belts which may cause distortion. When stored in containers, the container size and contents should be sufficiently limited to avoid distortion, particularly to those belts at the bottom of the container.

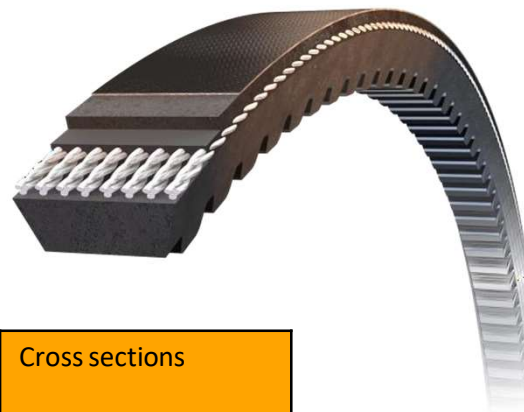
Some things to avoid:

- › Do not store belts on floors unless a suitable container is provided. They may be susceptible to water leaks or moisture or otherwise damaged due to traffic.
- › Do not store belts near windows which may permit exposure to sunlight or moisture. Do not store belts near radiators, heaters or in the air flow from heating devices.
- › Do not store belts in the vicinity of transformers, electric motors, or other electrical devices that may generate ozone. Also, avoid areas where evaporating solvents or other chemicals are present in the atmosphere.
- › Do not store belts in a configuration that would result in bend diameters less than the minimum recommended pulley diameter for normal bends and not less than 1.3 times the minimum recommended diameters for reverse bends. (Refer to appropriate ARPM/MPTA standards for minimum recommended diameters)

Methods of Storage

V-Belts

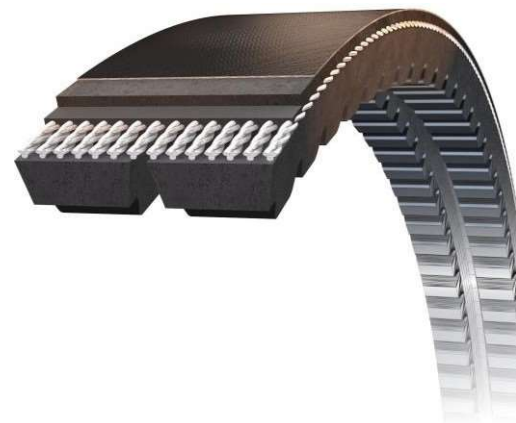
- › A common method of storing belts is to hang them on pegs or pin racks. Longer belts stored this way should use sufficiently large pins or crescent shaped “saddles” to prevent their weight from causing distortion. Long V-belts may be “coiled” in loops for easy distortion-free storage. The following is a guide to the maximum number of coils for extended storage time:



Belt Cross Section	Coils	Cross sections
Under 64"	0	A thru D
64" to 190"	3	A thru C
190" to 314"	5	A thru D
315" to 539"	7	A thru D
540" to 599"	9	A thru D
600" +	11	A thru D

Joined V-Belts, Synchronous Belts, V-Ribbed Belts

- › Like V-belts, these belts may be stored on pins or saddles with precautions taken to avoid distortion. However, belts of this type up to approximately 120 inches (3000 mm) are normally shipped in a “nested” configuration and it is recommended that the belts be stored in this manner as well. Nests are formed by laying a belt on its side on a flat surface and placing as many belts inside the first belt as possible without undue force. When the nests are tight and are stacked with each rotated 180° from the one below, they may be stacked without damage.
- › Belts of this type over approximately 120 inches (3000 mm) may be “rolled up” and tied for shipment. These rolls may be stacked for easy storage. Care should be taken to avoid small bend radius which could damage the belts.



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Methods of Storage

Variable Speed Belts

- › Variable speed belts are more sensitive to distortion than most other belts and it is **not** recommended that these belts be hung from pins or racks. They should be stored on shelves. A common method during packaging for shipment is the use of a “sleeve” slipped over the belt. Variable speed belts should be stored in these sleeves and may conveniently be stacked on shelves with the aid of the sleeves.



Effects of Storage:

- › The quality of belts has not been found to change significantly within seven years of proper storage at temperatures less than 85° F (30° C) and relative humidity below 70 percent. Also, there must be no exposure to direct sunlight.
- › If the storage temperature is increased beyond 85° F (30° C), then the storage limit for normal service expectancy should be reduced. From a base of seven years at 85° F (30° C), the storage limit should be reduced by one-half for each 18° F (10° C) increase in temperature. Under no circumstances should belts be exposed to storage temperatures above 115° F (46° C).
- › With a significant increase in humidity, it is possible for fungus or mildew to form on stored belts. This does not appear to cause serious belt damage but should be avoided if possible.
- › Equipment using belts is sometimes stored for prolonged periods (six months or more) before it is put in service or during other periods when it is idle. It is recommended that the tension on the belts be relaxed during such periods and that equipment storage conditions should be consistent with the guidelines for belt storage. If this is not possible, the belts should be removed and stored separately.

