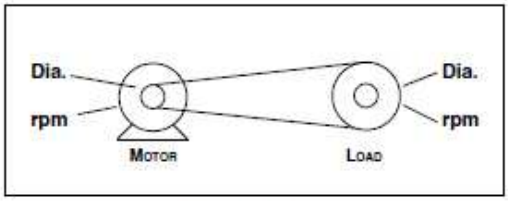
FORMULAS FOR CALCULATING PULLEY DIAMETERS AND SPEEDS



$$\text{Driven rpm} = \frac{\text{Motor pulley dia.}}{\text{Driven pulley dia.}} \times \text{Motor rpm}$$

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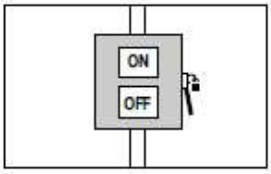
Pulley diameter equals pitch diameter.

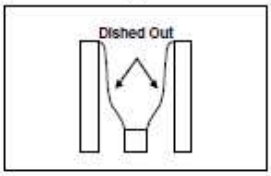
Note: When gears and sprockets are used in place of pulleys, the number of teeth may be substituted for pitch diameter.

BELT INSTALLATION

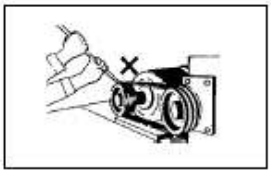
Make sure the power is locked out and tagged out.



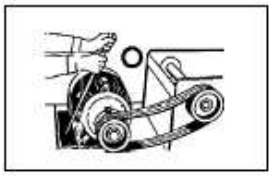
Replace sheaves that show more than 1/16" (1.5 mm) wear along one side of groove.



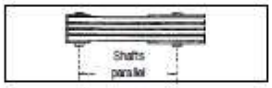
Don't pry belts over the sheave groove like this.



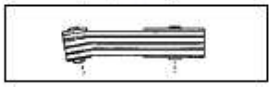
Remove belts this way.



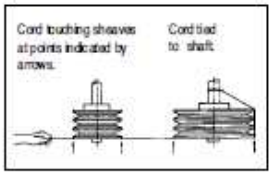
Align sheave groove like this.



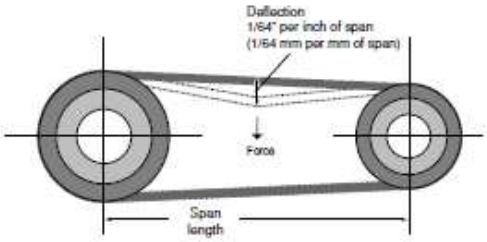
Not like this.



Alignment checking using a cord. When the sheaves are correctly aligned, the cord will be in contact with the outside faces of both sheaves, without a gap between them.



BELT TENSIONING



Step 1. Calculate the deflection amount (D_A).

$$D_A = \frac{L_S}{64}$$

Where: D_A = deflection amount (inches or mm)

L_S = span length (inches or mm)

Step 2. At midspan, deflect the belt to the required deflection amount (D_A) and record the force required.

Step 3. Check force required for above deflection. Refer to table on the next page, and if force is too high, reduce to the recommended level.

$$D_A \text{ (in or mm)} = \frac{L_S \text{ (in or mm)}}{64}$$

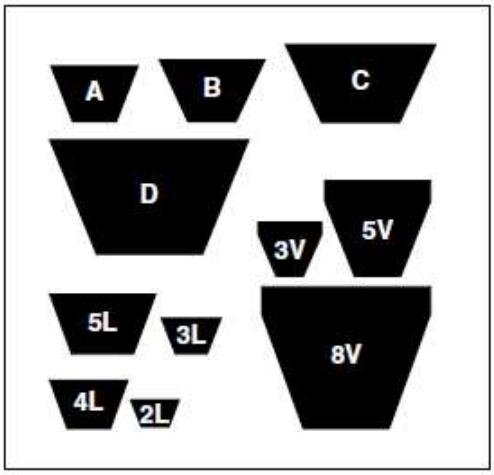
BELT DEFLECTION FORCE AND ELONGATION RATIO

V-BELT TYPE	V-BELT CROSS SECTION	SMALL SHEAVE DIAMETER RANGE (in)	RECOMMENDED DEFLECTION FORCE (lbs) MINIMUM	NEW BELT	RETENSION
CONVENTIONAL V-BELT AND CONVENTIONAL BANDED V-BELT	A	– 3.0	2.4	3.6	3.1
		3.1 – 4.0	2.8	4.2	3.6
		4.1 – 5.0	3.5	5.2	4.6
		5.1 –	4.1	6.1	5.3
	B	– 4.6	4.9	7.3	6.4
		4.7 – 5.6	5.8	8.7	7.5
		5.7 – 7.0	6.2	9.3	8.1
		7.1 –	6.8	10.0	8.8
	C	– 7.0	8.2	12.5	10.7
		7.1 – 9.0	10.0	15.0	13.0
		9.1 – 12.0	12.5	18.0	16.3
		12.1 –	13.0	19.5	16.9
	D	12.0 – 13.0	17.0	25.5*	22.1
		13.1 – 15.5	20.0	30.0*	26.0*
		15.6 – 22.0	21.5	32.0*	28.0*
RAWEDGE COGGED BELT	AX	– 3.0	3.4	5.1	4.4
		3.1 – 4.0	3.7	5.5	4.8
		4.1 – 5.0	4.0	6.0	5.2
		5.1 –	4.5	6.7	5.9
	BX	– 4.6	6.7	10.0	8.7
		4.7 – 5.6	7.3	11.0	9.5
		5.7 – 7.0	7.6	11.5	9.9
		7.1 –	7.8	12.0	10.1
	CX	– 7.0	12.0	18.0	15.6
		7.1 – 9.0	13.0	19.5	16.9
		9.1 – 12.0	13.5	20.0	17.6
		12.1 –	14.0	21.0	18.2
WEDGE V-BELT	3V	2.65 – 3.35	3.1	4.6	4.0
		3.65 – 4.50	3.7	5.5	4.8
		4.75 – 6.0	4.3	6.4	5.6
		6.5 – 10.6	4.9	7.3	6.4
	5V	7.1 – 10.3	11.0	16.5	14.3
		10.9 – 11.8	13.0	19.5	16.9
		12.5 – 16.0	14.0	21.0	18.2
	8V	12.5 – 16.0	26.0*	39.0*	33.8*
		17.0 – 20.0	30.0*	45.0*	39.0*
		21.2 – 22.4	34.0*	51.0*	44.2*
RAWEDGE COGGED BELT	3VX	2.2 – 2.5	3.2	4.8	4.2
		2.65 – 4.75	3.8	5.7	4.9
		5.0 – 6.5	4.8	7.2	6.2
		6.9 –	5.8	8.7	7.5
	5VX	– 5.5	10.0	15.0	13.0
		5.9 – 8.0	13.0	19.0	16.9
		8.5 – 10.9	14.0	21.0	18.2
		11.8 –	15.0	22.0	19.5

* 1/2 of this deflection force can be used, but substitute deflection amount as follows:

$$D_A \text{ (inches)} = \frac{L_S \text{ (inches)}}{128}$$

STANDARD V-BELT PROFILES



BELT	WIDTH (in)		HEIGHT (in)
2L	1/4	x	5/32
3L	3/8	x	7/32
4L	1/2	x	5/16
5L	21/32	x	3/8
A	1/2	x	5/16
B	21/32	x	13/32
C	7/8	x	17/32
D	1 1/4	x	3/4
3V	3/8	x	5/16
5V	5/8	x	17/32
8V	1	x	7/8