

## Installation

1. Clean sheaves/pulleys, and remove dust, dirt and oil.
2. Check for worn grooves using sheave gauge.
3. Use correct belt for sheave size
4. Never "roll" or "pry" the belts into the sheave grooves.  
Move the driver unit to allow belt to slip on easily.
5. Check alignment. Drive shafts must be parallel.
6. Rotate each sheave to check for wobble or bent drive shaft.
7. Tighten the belt take-up and then run the belt 10 minutes.  
Recheck and adjust tension, using tables on reverse.

## Warning

When servicing a drive, be certain machinery is SHUT OFF and properly prevented from accidentally starting. Do not wear loose clothing, jewelry, etc. Keep guards on machinery when it is operating.

## Rapid Belt Failure

| SYMPTOM                         | CORRECTION                                     |
|---------------------------------|--|
| Belt cover wears rapidly        | Replace sheaves                                |
| Slip burns-shiny sheave grooves | Increase tension                               |
| Belt hard and cracked           | Heat condition; Ventilate drive; Check tension |
| Belt sticky or soft             | Eliminate oil                                  |

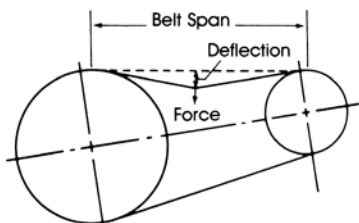
## Belt Tensioning

STEP 1: After measuring the belt span (see sketch) use a belt tension tester and apply perpendicular force to any ONE of the belts at the span mid-point. Measure the force required to deflect any of the belts 1/64 inch for every inch of span length. EXAMPLE: A 32" span deflection would be 1/64 inch x 32 or 1/2 inch.

Note: When new belts are installed on a drive, the tension will drop rapidly during the first few hours. Thus, for new belts, multiply the maximum deflection force shown in the tensioning tables by 1.33. Check tension frequently during the first 24 hours of operation. Subsequent retensioning should fall between the minimum and maximum forces shown in the tables. STEP 2: Compare Step 1 deflection force reading with range of force in the following tensioning tables. If the force is below the minimum after any adjustment per above note, then the belts are too loose.

If the force is greater than the maximum after any adjustment per above note, then the belts are too tight.

Readjust measured drive tension until the deflection force is between the maximum and minimum values shown in or calculated from the respective tensioning tables.



## Classical V-Belt Tensioning Table

| Belt | Small Sheave Dia. Range (inches) | Small Sheave RPM Range | Speed Ratio Range | Belt Deflection Force in Lbs. |      |                  |      |
|------|----------------------------------|------------------------|-------------------|-------------------------------|------|------------------|------|
|      |                                  |                        |                   | Classical                     |      | Classical Cogged |      |
|      |                                  |                        |                   | Min.                          | Max. | Min.             | Max. |
| A*   | 2.2                              | 1750 to 3600           | 2.0 to 4.0        | NR                            | NR   | 3.8              | 5.4  |
|      | 3.2                              |                        |                   | 3.1                           | 4.5  | 3.9              | 5.6  |
|      | 3.4-3.6                          |                        |                   | 3.5                           | 5.0  | 4.1              | 5.9  |
|      | 3.8-4.2                          |                        |                   | 3.8                           | 5.4  | 4.3              | 6.3  |
| B*   | 4.0                              | 1160 to 1800           | 2.0 to 4.0        | NR                            | NR   | 7.1              | 10   |
|      | 5.0-5.2                          |                        |                   | NR                            | NR   | 7.3              | 11   |
|      | 5.4-5.6                          |                        |                   | 6.0                           | 8.8  | 7.4              | 11   |
|      | 6.0-6.8                          |                        |                   | 6.6                           | 9.6  | 7.7              | 11   |
| C*   | 7.4-9.4                          | 870 to 1800            | 2.0 to 4.0        | 7.4                           | 11   | 7.9              | 12   |
|      | 6.8                              |                        |                   | NR                            | NR   | 12               | 18   |
|      | 7.5                              |                        |                   | NR                            | NR   | 12               | 18   |
|      | 8.0-8.5                          |                        |                   | NR                            | NR   | 13               | 18   |
| D*   | 9.0-10.5                         | 690 to 1200            | 2.0 to 4.0        | 12                            | 17   | 13               | 19   |
|      | 11.0-16.0                        |                        |                   | 13                            | 20   | 13               | 19   |
|      | 13.0                             |                        |                   | 20                            | 29   | -                | -    |
|      | 13.5-15.5                        |                        |                   | 22                            | 33   | -                | -    |
| E*   | 16.0-22.0                        | 435 to 900             | 2.0 to 4.0        | 25                            | 37   | -                | -    |
|      | 21.6                             |                        |                   | 33                            | 48   | -                | -    |
|      | 24.0                             |                        |                   | 33                            | 48   | -                | -    |
|      |                                  |                        |                   |                               |      |                  |      |

\* For Classical banded belts multiply the force in the table by the number of belts in the band.

## Narrow V-Belt Tensioning Table

| Belt | Small Sheave Dia. Range (inches) | Small Sheave RPM Range | Speed Ratio Range | Belt Deflection Force in Lbs. |      |               |      |
|------|----------------------------------|------------------------|-------------------|-------------------------------|------|---------------|------|
|      |                                  |                        |                   | Narrow                        |      | Narrow Cogged |      |
|      |                                  |                        |                   | Min.                          | Max. | Min.          | Max. |
| 3V*  | 2.20                             | 1200-3600              | 2.00 to 4.00      | NR                            | NR   | 2.8           | 4.1  |
|      | 2.35-2.50                        |                        |                   | NR                            | NR   | 3.2           | 4.7  |
|      | 2.65-2.80                        |                        |                   | 3.2                           | 4.7  | 3.5           | 5.1  |
|      | 3.00-3.15                        |                        |                   | 3.6                           | 5.3  | 3.8           | 5.5  |
|      | 3.35-3.65                        |                        |                   | 4.1                           | 5.9  | 4.1           | 6.0  |
|      | 4.12-5.00                        |                        |                   | 4.7                           | 6.8  | 4.8           | 7.1  |
| 5V*  | 5.30-6.90                        | 1200-3600              | 2.00 to 4.00      | 5.2                           | 7.6  | 5.8           | 8.6  |
|      | 4.40-4.65                        |                        |                   | NR                            | NR   | 9.0           | 13   |
|      | 4.90-5.50                        |                        |                   | NR                            | NR   | 10            | 15   |
|      | 5.90-6.70                        |                        |                   | NR                            | NR   | 11            | 17   |
|      | 7.10-8.00                        |                        |                   | 11                            | 17   | 13            | 19   |
|      | 8.50-10.90                       |                        |                   | 13                            | 19   | 14            | 20   |
| 8V*  | 11.80-16.00                      | 600-1200               | 2.00 to 4.00      | 15                            | 22   | 15            | 23   |
|      | 12.50-17.00                      |                        |                   | 31                            | 45   | -             | -    |
|      | 18.00-24.00                      | 400-900                | 4.00              | 36                            | 53   | -             | -    |

NR - Not Recommended

\* For Narrow banded belts, multiply the force in the table by the number of belts in the band.

The deflection forces in these tables apply only to the listed belts currently being manufactured.