



Product

TB Series Tension Brake and CBC Control

Application

Power Transmission Belt Trimmer

Highlights

- Brakes are designed for tension applications
- Max. dynamic torque rating of 88 lb.ft. (119 Nm)
- Max. speed rating of 2,400 RPM
- Manually adjustable controls

A Mid-Atlantic manufacturer of power transmission belts needed to improve the tension control within their belt width trimming system. As belts are fed into the trimmer, a mechanical tension device was used to apply drag on the belts so they would present a consistent profile to the trimming knives.

The problem was that the simple tension system would wear, which changed its performance levels. This required ongoing monitoring and adjustment by machine operators to maintain belt width consistency.

To correct the situation, a 90 VDC hybrid Warner Electric TB-1000 friction brake was installed along with a CBC-300 manually adjusted controller. Typically, TB Series brakes are a 24 VDC system. However, by incorporating a 90 VDC brake magnet with LK facing material, the OEM was able to use a simpler control while still capturing the long slip life needed in the application. While LK facings have a lower torque rating than standard facing materials, they last longer in high slip applications such as this. LK facing material will maintain consistent performance throughout the life of the brake, eliminating the need for constant adjustments.

Belts are tensioned as they pass over a fixed diameter sheave before they enter the trim area of the machine. Since more than one belt size is run through the trimmer, the CBC-300 controller is used to adjust the brake pressure higher or lower depending upon the tension needs of each belt family. With the new system, tension is held consistent once a setting is established.

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