

Spiral Woven Belts

Tracking of Friction Driven Mesh Belts

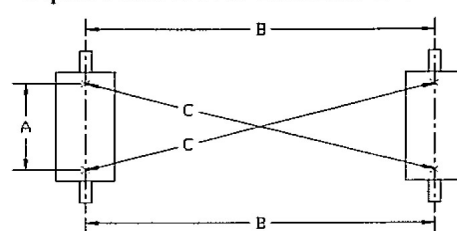
Belt track off is one of the major causes of belt failure. Incorrect tracking will lead to edge damage and early failure of the belt.

The recognised principle is that a friction driven belt will always track perpendicular to the roller over which it passes. This principle holds good for all rollers in the system.

The conveyor should be set up to run with all rollers parallel and level to each other.

- As a general rule if the end rollers are not parallel the belt will track off to the short side.
- Make sure all support beds are level and symmetrical about the centre line of the conveyor.
- Ensure that the conveyor framework runs straight between the idle infeed and the discharge (drive) roller.
- Ensure belt support surfaces are free from obstructions (e.g. protruding framework)
- Do not use crowned rollers to support or drive the belt at any position in the circuit.

Square and Level Terminal Shafts



Caution: Incorrect installation may result in permanent damage to your belt.

Before installing the belt it is important that the conveyor structure is set up as per the above instructions in a proper aligned and level condition.

For belt installation please refer to the “Installation Guidelines”. Once the belt is installed and set to run in the slow speed mode careful attention should be paid to ensure straight tracking of the belt. If the belt tracks off to one edge then the following procedure for true tracking should be

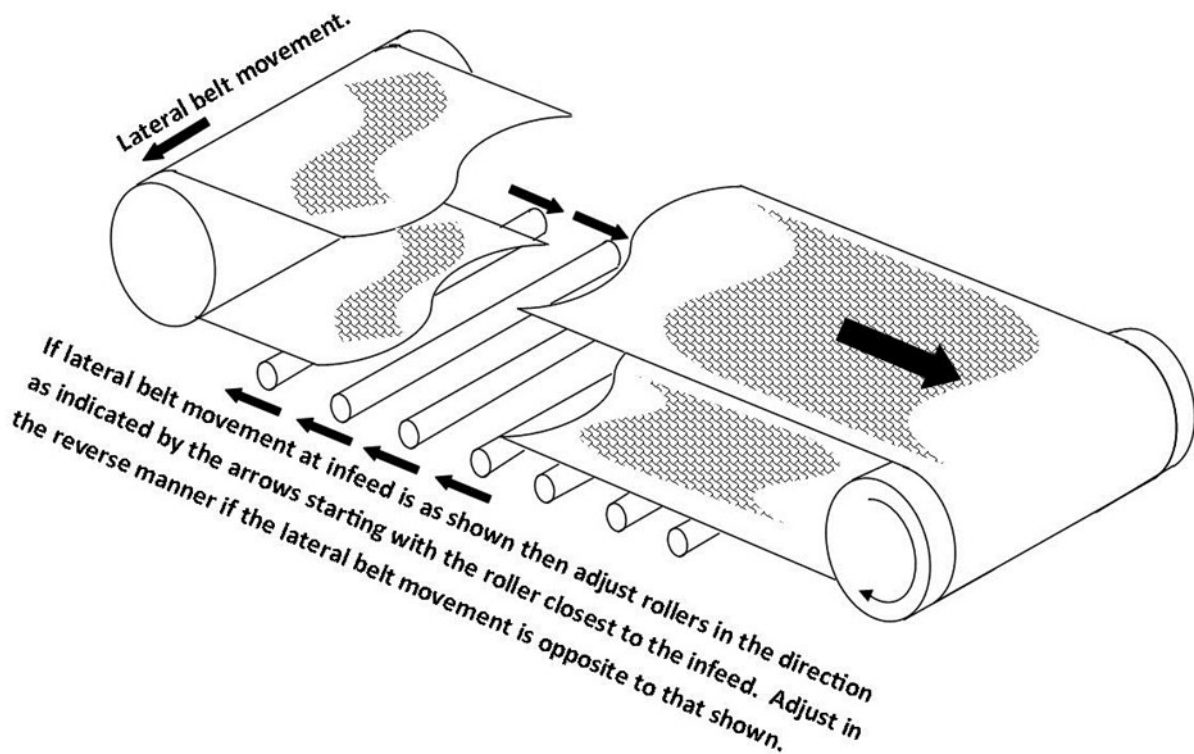
During the procedure of belt tracking **DO NOT** alter the end roller positions once they have been checked and set according to the instructions above. It is important that they run parallel and level.

used which generally means adjusting horizontally the position of the belt support rollers.

The following are guidelines for the proper tracking of woven steel beltings:

1. To check for proper tracking first mark the belt at several positions down the length at an equal position in from the edge of the belt. The edge of the belt can also be used if free and clear of any covers or guards.

2. The belt should now be run for several complete revolutions at slow speed to allow for settling out of the belt to its running position. Once the belt has settled to position then measure any track off by means of the belt mark or belt edge relative to a point on the conveyor frame at the infeed end. This will then indicate the direction and amount of belt track off.
3. To adjust the belt tracking please refer to the sketch below and adjust the return support rollers as per indicated in the instructions.
4. As a general guideline the roller closest to the infeed should be set at approximately $1\frac{3}{4}$ times the belt width away from the idle infeed roller. Adjusting this roller may be sufficient however if you need additional tracking then adjust each roller in turn working away from the infeed. *TIP: For large amounts of belt tracking correction it is more effective to move many rollers a small amount rather than say one or two rollers a large amount.* If the conveyor has a full wrap snub roller in the return way then adjustment of that roller may be more effective as the full wrap of belt on this roller will produce more lateral belt movement for any given amount of adjustment.



5. At each stage of adjustment check the lateral belt movement against the previously set reference point at the infeed. Once the belt lateral movement is stable the belt is then tracked and the rollers should be firmly secured in position.
6. As final check move to the discharge and check for any lateral belt movement. If there is movement of the belt at this point then adjust any carry way rollers in a similar fashion to previously. Adjusting rollers closest to the discharge first and then moving back down the conveyor if further adjustment is required. In general however if the belt is supported on a symmetrical chevron pattern of wear strips then the belt should self-track at the discharge.

Various other methods of belt tracking can be used under limited circumstances:-

- Steel angle edge plates, which may be faced with low friction plastic contact surfaces.
- Vertical edge rollers. These have only a single point of contact with the belt and should be used in multiples to help alleviate high pressure contact on the belt edge.
- Hyperbolic edge rollers which offer a straight line of contact with the belt edge over the length of the roller when set at the designed angle of operation.

Any of the above can be used as a temporary measure until the belt can be re-tracked as described in the main text above. They can also be used where the normal method of tracking is not possible or the conveyor is short with light loading, low tension and low speed.

There are 6 golden rules when tracking the belt:

1. Always operate the belt with minimum of belt tension to ensure slip free drive.
2. Always operate the belt with the minimum belt speed.
3. Do NOT push the belt edges with excessive force to guide the belt.
4. Any type of belt tracking should start at the point of least belt tension. Normally at the in-feed end return way.
5. Under no circumstances should flanged or crowned rollers be used in an attempt to track the belt. Both will permanently damage the belt.
6. The starting point for any edge guides should be no closer than 2 x the belt width from either the drive or infeed idle roller or any other roller where the belt contact is in excess of 30°.

Note: For Rolled Baking Belts edge roller or guides are NOT recommended. Only safety trip rollers or photo-electric cells can be used to stop the conveyor should excessive belt wander be encountered. These should be set at least 10mm from the normal belt edge running position.