

POWERTWIST

TECHNICAL DATA FOR LIVE ROLLER CONVEYORS





**POWERTWIST
ROLLER DRIVE®**

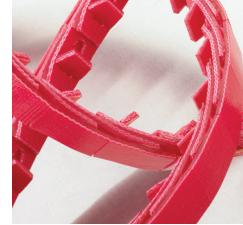


POWERTWIST™

Roller Drive and Ground Round

Upgrade live roller conveyors with the longer-lasting, easy-to-install V-belt

- Drop-in replacements for B/5L/17 V-belts and 9/16" round belts
- Engineered to last longer than rubber V-belts, especially on powered roller curves
- Fast, easy installation without dismantling components
- Make to any length by hand

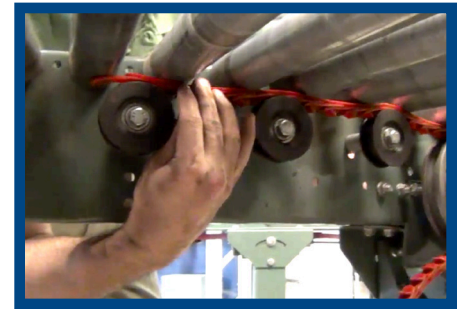


POWERWIST® Roller Drive



POWERWIST MOVE® Round

Product	Cross Section	Part Number				Minimum Pulley Ø		Max Product Weight w/Idlers	
		25'	100'/30.5m	10m	30m	(in)	(mm)	(lbs)	(kg)
POWERWIST Roller Drive	B/5L/17	0410300-25	0410300	0411301	0411300	5.0	127	275	125
POWERWIST MOVE Round	9/16"	0470425	—	0470433	—	5.5	140	450	204



Case Study:

Fortune 500 Food Manufacturing and Processing Company

Application: Powered Roller Curves

Annual Cost Savings: **\$211,050**

- 24% savings in operating costs
- 92% reduced lost production
- 61% reduced labor costs due to quicker install

Problem

1. Current belts required replacing every four months due to wear and flex fatigue.
2. Excessive time tearing down the conveyor system to replace belts, causing over 30 minutes of expensive downtime.

Solution: POWERWIST Roller Drive

1. Belt life has increased to 2 years. Improved durability under load resulted in increased V-belt longevity.
2. Easier installation without dismantling idler pulley systems. Belt replacement time was reduced to under 15 minutes.

Added Value of POWERWIST Roller Drive	Current Belt	POWERWIST Roller Drive	Difference
Operation Cost Savings			
Cost of belt used per year	\$148	\$117	\$31
Less freight costs for fewer LF belt ordered	\$8	\$1	\$7
Conveying/Production – Less Downtime			
Production loss due to belt changes	\$4,500	\$375	\$4,125
Labor Cost Savings			
Less purchasing/stocking time of belts	\$68	\$34	\$34
Less labor to change belts	\$26	\$2	\$24
Cost Savings per unit per year			\$4,221
Total Savings for 50 units with POWERWIST Roller Drive			\$211,050



Installation Guidelines

Note: All conveyors are slightly different, so it is critically important to pay particular attention to ride height and subsequent belt snub.

Conveyor Selection

1. What types of conveyors are recommended for POWERWIST®?

Any roller conveyors that are driven by V or round belts.

2. Can POWERWIST run on a “push” conveyor?

It is possible, but initial set up is extremely difficult, therefore, push conveyors are generally not recommended.

3. Is there a maximum conveyor length or load to be considered?

The length of the conveyor has little relevance, however, the max load is important. POWERWIST Roller Drive is capable of 275 lbs max, and POWERWIST MOVE® Round is capable of 450 lbs max on the conveyor at any one time.



Belt Types

4. What types of belts is POWERWIST designed to replace?

POWERWIST Roller Drive is a drop-in replacement for endless B/5L/17 section V-belts. POWERWIST MOVE Round is a drop-in replacement for 9/16” round belts.

5. Can POWERWIST Roller Drive be used to replace 9/16” round belts?

If noise/vibration is a concern then POWERWIST Roller Drive can be used to replace 9/16” round belts instead of POWERWIST MOVE Round. Extra care should be given to pulley arrangement. See #6 below.



Pulleys

6. Can POWERWIST Roller Drive run on round belt pulleys supporting the belt in the backbend?

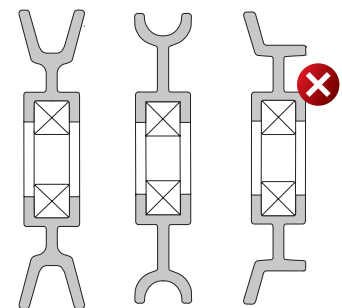
This is not recommended, but it is possible in certain cases. Ideally the belt will travel through the system so the bottom of the belt runs in the pulleys. Since the top of the belt is flat and wider than the pulley groove it will not fit properly. It is suggested to replace any backbend rollers in this situation with flat belt idlers.

7. Can POWERWIST run on single flange snub pulleys?

Yes. However, it is possible there may be more noise and vibration due to the tabs running along the flat surface. Replacing with standard V pulleys will help this, but is not required.

8. What idler pulleys are recommended for POWERWIST Roller Drive?

PowerMax VA2506 – 2.5” B-section Idler Pulley



Tension

9. How does one determine if it's on tight enough or too tight? How does one test for proper tension?

Make sure the take ups are adjusted so the belt is on its shortest path. Hand fit the belt and remove 1-2%. (E.g. On a 20' belt this is about 3-5"). With a little bit of effort you should be able to snap the belt on at this tension. Over the next 10-15 min it could elongate by the same amount. You can tell by looking at the belt to see if there is loose belt flapping. You can then remove more belt or adjust the take up to accommodate.

The belt is moving, but won't spin the rollers.

The snubber pulleys should be adjusted. The idea is to support the roller with the belt without excessively pushing up on the roller. You can check this by the following methods. If the belt is running you should be able to stop the rollers from moving by using light force with the palm of your hand. If it's not running you should be able to turn the rollers with the palm of your hand.

The belt jumps off the drive pulley

Check to see if the belt is pushing rather than pulling. Too severe entry or exit angle to the pulley can also cause this, which is generally caused by the path of the belt into the tensioning system. In general, if the angle was sufficient for the previous belt to work it should be sufficient for POWERWIST®. Make sure the belt path is the same as it was with the previous belt.

The drive pulley spins, but the belt won't move

Lack of belt tension. See #9 on previous page for proper tensioning.

The belt is pulling apart

Tabs are not turned fully 90 degrees or the tab was only put through one hole.

