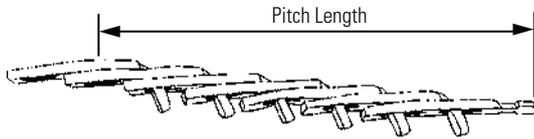


## PowerTwist PLUS Belts

### 1. How to Measure



#### Correct way to measure:

PowerTwist Plus – end of tab to first empty holes (right to left, above). Determine the required pitch length of the belt. Measure PowerTwist Plus from the second empty hole on the last link to the end tab. Subtract one link in every 24 for Z, A, B sections, one link in every 20 for C section. For the number of links in the initial belt and make additional belts the same number multiple belt drives, count of links. Lay the original belt on a table and lay the additional belts side by side to ensure the correct length and matched sets.

### 2. Assembly - PowerTwist PLUS



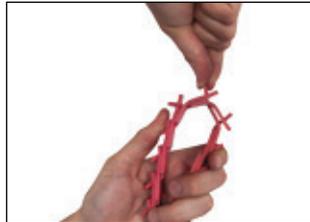
Always work with the belt inside out, tabs pointing outward



Place end tab through two links at once.



Flex belt further and insert second tab through end link by twisting tab with thumb.



Ensure tab returns to position across belt. Reverse belt so tabs run inside.

### 3. Installation

**Make PowerTwist Plus belts to the correct pitch length and then install them as you would an endless belt.**

1. Move motor to reduce centre distance.
2. Place all belts in correct position. Where it is necessary to thread belts through confined spaces, or around shafts without moving bearings, it is possible to make the belts "in site". Some reduction in pulley centre distance is still necessary for ease of assembly.
3. Move motor back into position, applying correct tension.
4. Secure motor tightly.

#### Method of Belt tensioning using Fenner Belt Tension Indicator

1. Calculate the deflection distance in mm on a basis of 16mm per metre of span.

$$\text{Centre Distance (m)} \times 16 = \text{Deflection (mm)}$$

2. Set the lower marker ring at the deflection distance required in mm on the lower scale.

3. Set the upper marker ring against the bottom edge of the top tube.
4. Place the belt tension indicator on top of the belt at the centre of span, and apply a force at right angles to the belt deflecting it to the point where the lower marker ring is level with the top of an adjacent belt\*.
5. Read off the force value indicated by the top edge of the upper marker ring.
6. Compare this force to the kgf value shown in the table opposite. If a Fenner Belt Tension Indicator is not available, a spring balance and rule will suffice.

#### CAUTION

When properly installed, initial tension may appear excessive. Tension drops to normal when drive begins to run.

### 4. Retensioning

It is important to retension all drives after an initial run-in period. On fixed centre drives, it may be necessary to remove a link from each belt for proper retensioning.

Belt Section	Force required to deflect belt 16mm per metre of span		
	Small Pulley Diameter (mm)	Newton (N)	Kilogram-force (kgf)
Z	56 to 90	10 to 15	1.0 to 1.5
A	80 to 140	15 to 20	1.5 to 2.0
B	125 to 200	25 to 35	2.6 to 3.6
C	200 to 400	45 to 65	4.6 to 6.6

**\*NOTE:** For single belt drives a straight edge should be placed across the two pulleys to act as a datum for measuring the amount of deflection. If the measured force falls within the values given, the drive should be satisfactory. A measured force below the lower value indicates under-tensioning. A new drive should be tensioned to the higher value to allow for the normal drop in tension during the running-in period. After the drive has been running for 30 minutes, the tension should be checked and re-adjusted to the higher value, if necessary.

### 5. Disassembly - PowerTwist PLUS



Turn belt inside out with tabs pointing outwards. Bend back as far as possible; hold with one hand. Twist one tab 90° parallel with slot.



Pull end of link over tab.



Rotate belt end with tab at 90° to line of belt.



Pull belt end through two links.