

## SECTION 18 DOUBLE-SIDED BELT TOLERANCES

This type of belt was introduced briefly in **Section 5.1**, page T-10. As previously described, this type of belt has teeth on both sides to provide synchronization from both driving surfaces. This special feature makes possible unique drive designs, such as multipoint drives, rotation reversal with one belt, serpentine drives, etc. It may also provide solutions to other difficult design problems.

Double-Sided Belts are similar in construction to regular synchronous belts, including nylon-faced teeth on both sides. This construction uses essentially the same design parameters as standard synchronous belts. Their torque ratings are the same as conventional PowerGrip Belts of identical pitch and width.

Double-Sided Belts are available in MXL, XL, L, 3 and 5 mm HTD and T5 and T10 pitches from stock. See "Timing Belts and Pulleys Locator Charts" in the product section.

### Double-Sided Construction

Tensile members of the PowerGrip Double-Sided Belt are helically-wound fiberglass cords providing the same load-carrying capacity as single sided PowerGrip belts. The body is Neoprene rubber providing oil and weather resistance and protection for the fiberglass cords. Both sides of the belt have a specially treated nylon tooth facing that provides a tough wear-resistant surface with minimal friction.

### Double-Sided Tolerances

Since Double-Sided Belts are manufactured and cut to the required width by the same method as standard PowerGrip belts, the same manufacturing tolerances apply, except for the thickness and center distance tolerances listed in **Tables 38** and **39**.

Overall thickness, opposing teeth symmetry and pitch line symmetry are closely controlled during Double-Sided Belt manufacture.

### Specifying Double-Sided Belts

The available Double-Sided Belts and other double-sided belts from stock can be found from the Timing Belt Locator Chart, on page 1-2 of the product section.

### Double-Sided Drive Selection

Double-Sided Belts can transmit 100% of their maximum rated load from either side of the belt or in combination where the sum of the loads exerted on both sides does not exceed the maximum rating of the belt. For example, a Double-Sided Belt rated at 6 lb-in could be used with 50% of the maximum rated on one side, and 50% on the other; or 90% on one side, and 10% on the other.



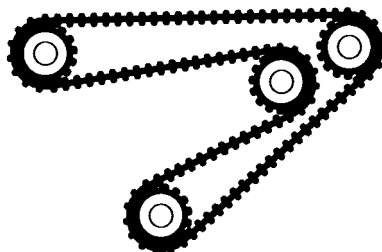
**Fig. 37 Double-Sided Belt Tolerances**

**Table 38 Belt Thickness Tolerances**

Belt	T (in)	W (in) Ref.
XL (.200")	.120 ± .007	.020
3 mm HTD	.126 ± .006	.030
5 mm HTD	.209 ± .007	.045
MXL	.060 ± .004	.020
L	.180 ± .012	.030
T5	.130 ± .010	.035
T10	.268 ± .014	.071

**Table 39 Center Distance Tolerances**

Belt Length (in)	Center Distance Tolerances (in)
15 to 20	± .020
20.01 to 30	± .024
30.01 to 40	± .026
40.01 to 50	± .030
50.01 to 60	± .032
60.01 to 70	± .034
over 70	To be specified



**Fig. 38 Double-Sided Belt Application**