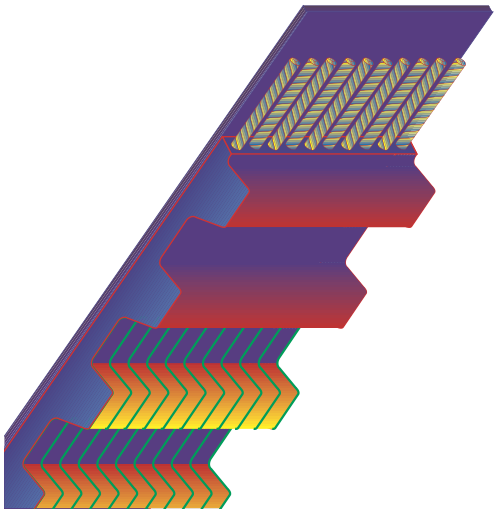
1 POWERGRIP® CLASSICAL SYNCHRONOUS BELT COMPONENTS AND BENEFITS

Gates classical synchronous PowerGrip® belts offer a maintenance-free and economical alternative to conventional drives like chains and gears. Applications range from minimum drives (printers) to heavy-duty machinery (oil pumps, etc).



FEATURES

- Trapezoidal tooth profile.
- Accurately spaced elastomeric teeth ensure smooth engagement with the pulley grooves.
- Fibreglass tensile cords provide strength, excellent flex life and high resistance to elongation.
- Durable backing protects against environmental pollution. It also protects against frictional wear if power is transmitted from the back of the belt.
- Tough nylon facing protects the tooth surface. This facing, after long service, becomes highly polished.

BENEFITS

- Power transmission of up to 150 kW and speeds of up to 10000 rpm (up to 20000 rpm for MXL pitch).
- Positive slip-proof engagement.
- Constant angular velocity.
- Low bearing load because of freedom of high tension.
- Maintenance-free continuity of operation.
- Wide range of load capacities and speed ratios.
- Economical operation.

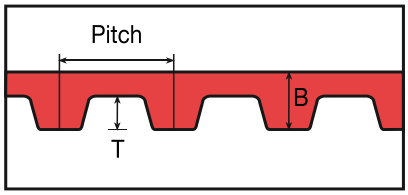
POWERGRIP® BELT DIMENSIONS

The three principal dimensions of a PowerGrip® belt are
- pitch;
- pitch length;
- width.

Belt pitch is the distance in inches between two adjacent tooth centres as measured on the pitch line of the belt. Belt pitch length is the total length (circumference) as measured along the pitch line. The theoretical pitch line of a PowerGrip® belt lies within the tensile member.
Gates PowerGrip® classical belts are made in six pitches according to ISO 5296: MXL, XL, L, H, XH and XXH.

REFERENCE DIMENSIONS

	Pitch inch	T mm	B mm
MXL	0.08	0.51	1.14
XL	1/5	1.27	2.3
L	3/8	1.91	3.5
H	1/2	2.29	4.0
XH	7/8	6.35	11.4
XXH	1 1/4	9.53	15.2



Gates PowerGrip® timing belt sizes are listed on pages 18-20. These tables list the belt lengths & pitch designation, pitch lengths and number of teeth. On these pages you will also find the standard widths. Using these tables, you will have all the information to complete the PowerGrip® timing belt ordering code.

Example: 600 H 200
600 ..... Pitch length 60" (1524.0 mm)
H..... Pitch 1/2" (12.7 mm)
200 ..... Belt width 2.0" (50.8 mm)

POWERGRIP® PULLEY DIMENSIONS

The three principal dimensions of a pulley are
- pitch;
- number of grooves;
- belt width.

On the pulley, pitch is the distance between groove centres and is measured on the pulley's pitch circle. The pitch circle of the pulley coincides with the pitch line of the belt engaging with it. The pulley's pitch diameter is always greater than its outside diameter.

A given PowerGrip® timing belt must be run on pulleys of the same pitch, so pulleys for PowerGrip® belts are made in MXL, XL, L, H, XH and XXH pitches. Standard pulley diameters are listed on pages 152-155. These tables list the number of grooves, the flange diameter and the outside diameter. On these pages you will also find the belt and pulley widths. Using these tables, you will have all the information to complete the pulley ordering code.

Example: P12-XL-050
P12 ..... Pulley designation (P) and number of grooves (12)
XL ..... Pitch 1/5"
050 ..... Belt width 1/2"