



# SYNCHRONOUS BELTS

**GOODYEAR**  
**synchronous**  
**drive products**

Synchronous or Positive Drive Belts are a relatively new concept in power transmission belting evolution. These belts combine the advantages of chain and gear with the advantages of V-belts, but without the limitations usually associated with these conventional types of drives. There is no stretch, no metal-to-metal contact, and no constant lubrication. Synchronous belts are amazingly versatile with possible applications on drives up to 600 hp and from speeds under 100 feet per minute to over 6,000 feet per minute.

Positive Drive, or Pd™, is the term applied by Goodyear to synchronous belts and their method of power transmission. As the

name indicates, Positive Drive belts make possible power transmission that is efficient and accurate to a precise degree.

Positive Drive Belts also make possible important savings in weight, space and construction without the sacrifice of efficiency. They are adaptable to almost any type of power transmission drive from electric typewriters to heavy industrial milling machines and grinders.

Engineered and manufactured with extreme care with pitch, tooth depth, width and other measurements accurate to a precise degree, Positive Drive Belts are highly engineered products. The materials used in these remarkable belts consist of high strength tension members, specially compounded rubber and proven synthetic fabrics. The belts are designed to eliminate excessive heat build-up and operate efficiently.

SYNCHRONOUS

## THE EVOLUTION OF THE GOODYEAR Pd® BELT LINE

Goodyear manufactures four distinctly different designs. Some are available as open-end constructions and some are available in dual-sided constructions.

**Positive Drive Pd™** is Goodyear's trademark line of trapezoidal tooth profile synchronous belts. These belts were the first profile types developed in the continual evolution of synchronous drive belts. Goodyear's Positive Drive product line includes a stock selection of MXL, XL, L, H, XH, XXH and Metric T pitches. Trapezoidal belts make an excellent means for transmitting power; however, time and technological advances have led to the more advanced product lines mentioned below.

**SuperTorque Pd™** represents the next evolution in synchronous drive belt development from Goodyear. The SuperTorque Pd belt has a unique modified round tooth design that minimizes tooth shear and operates quieter than traditional trapezoidal tooth profiles. Super-Torque tooth pitches include S3M, S4.5M, S5M, S8M, and S14M and are available as special manufacture parts with minimal runs.

**Hi-Performance Pd™ Plus**, Goodyear's universal round tooth belt, is interchangeable with other round tooth sprockets making for easy replacement of competitive belts. The difference between HPPD Plus and other round tooth products is the patented parabolic tooth profile which lends itself to reduced tooth stress, noise, and backlash. The Hi-Performance Pd Plus product line includes a wide stock selection of 3M, 5M, 8M, 14M and 20M pitches.

**Eagle Pd™ Belts and Sprockets** are Goodyear's latest technological breakthrough. A patented H.O.T. (Helical Offset Tooth) design provides for continuous rolling tooth engagement, allowing the Eagle Pd System to run quieter with less vibration than any other synchronous belt available today. With specialized materials the Eagle Pd belt allows for a reduction in drive width allowing for a more compact, lighter

drive design. And best of all, no flanges are required, translating into additional weight savings for your system.

Eagle Pd™ Belts and Sprockets come in a wide variety of stock sizes with custom manufactured sizes being available for specialty drive requirements.

**WhiteHawk Pd™**, with its strength and unique construction of Hibrex® and Plioguard® facing, is a line of curvilinear, synchronous belts that offers universal performance that stands alone. Designed to fit virtually every high capacity synchronous application, WhiteHawk Pd belts fulfill existing drive requirements, matching industrial standards of belt width and length. With the Universal Profile Design (UPD) profile, WhiteHawk Pd performs in the GT and HTD profiles, replacing Gates PowerGrip GT and PowerGrip GT2 belts. In addition, WhiteHawk Pd replaces Dayco RPP and RPP Plus belts, running in RPP sprockets. The UPD is a simple solution in satisfying the multitude of belt and sprocket combinations in the market. For ease of ordering, the WhiteHawk Pd part number closely matches that of other belt part numbers, making it easy to replace its counterparts. Take universal performance to a higher level with WhiteHawk Pd.

**BlackHawk Pd™** is a high-performance, curvilinear belt that offers maximum performance in your 8mm and 14mm synchronous applications. Featuring both Hibrex and Flexten® tensile member, BlackHawk Pd is precisely designed and manufactured to replace existing Dayco Panther, Browning Panther and TB Wood's QT PowerChain belts, matching competitive offerings of belt width and length. Dynamic testing of BlackHawk Pd has shown this durable belt actually lasts 3 to 4 times longer than Dayco RPP Panther. Maximize the performance of your timing belt application with BlackHawk Pd, designed to deliver longer life and less maintenance. Choose the belt that takes performance to greater heights—BlackHawk Pd.