



PRODUCT APPLICATION NOTES

Volume 56, No. 4
April 2009

Poly Chain[®] GT[®] Carbon[®] Belt Power Rating Increase

Poly Chain GT Carbon belt power ratings in North America increased on April 1, 2009. The purpose of this PA Note is to provide background information and to explain this change.

15% Increase in Poly Chain GT Carbon Belt Power Ratings

Poly Chain GT Carbon belts were introduced in July of 2007 with 15% higher power ratings than previous Poly Chain[®] GT[®]2 power ratings. However, field performance indicated that the belt's full capability was not being used. In January of 2008, Poly Chain GT Carbon power ratings increased in Europe by an additional 15% with very positive results. The USA has now adopted this additional 15% power rating increase in order to maintain consistent global power ratings.

Poly Chain GT2 Sprocket Load Capacity

It is possible for the new Poly Chain GT Carbon belt power ratings to exceed bushing capacities at low operating speeds in some sprocket sizes. For this reason, bushing capacities are checked within Design Flex[®] Pro[™] drive design software.

In order to prevent catalog drive designs from exceeding bushing ratings, belt power ratings below 87.5 rpm are not shown in the catalog power rating tables. Instead, notes within the tables refer designers to use Design Flex Pro drive design software for drive design applications within this operating speed range. The 87.5 rpm represents the output speed of a 20:1 speed reducer driven by a 1750 rpm motor.

Low Speed Service Factors Eliminated

Low speed Poly Chain service factors, previously published in the Design Manuals and used in the Design Flex drive design software, have been eliminated. These service factors were used to calculate design horsepower for operating speeds below 500 rpm. Low speed service factors did not prove to be of strong benefit to designers, and were not globally adopted. Standard service factors are now applied in their place. Eliminating low speed service factors maintains technical alignment with Europe and provides a globally consistent drive selection process.

Conclusion

Poly Chain GT Carbon belts represent many years of research and are a crowning achievement in the continually improving line of Poly Chain products exclusive to the Gates Corporation. Poly Chain GT Carbon belt drive system performance is unmatched in the Industrial Power Transmission Market.

