POLY CHAIN® GT®
CARBON™ Belt Drive Systems
#17595
6/07

DRIVE DESIGN MANUAL
Design your drives online at www.gates.com/drivedesign

Table of Contents

Table of Contents

Foreword

Synchronous belts are being used more extensively than ever before in the industry where synchronization of one shaft speed to another is of primary importance. Gates Corporation has prepared this complete Poly Chain GT Carbon Belt Drive Design Manual to handle these exacting applications. Poly Chain drives also eliminate maintenance and noise problems associated with chain drives and reduce maintenance required on other problem power transmission drives.

Stock Belt Drives are presented in this manual for your convenience. If your drive requirements (Speed, Ratio, Center Distance, Space, Horsepower) are not met, contact your local Gates representative.

A **Tomkins** Company

New!

Poly Chain® GT® Carbon™ Belt

Nothing Tougher

Gates new Poly Chain® GT® Carbon™ belt is part of a powerful synchronous belt drive system that outperforms roller chain in even the most demanding high-torque applications.

Gates Poly Chain GT Carbon belt offers enhancements that exceed the current market-leading Poly Chain GT®2 belt, including:

- better performance
- more flexibility for use with back-side idlers
- greater resistance to moisture

Why carbon?

In today's high-performance driven world, parts that need to be incredibly strong and lightweight aren't made of steel. They're made of premium grade carbon fiber.

Gates is the first to apply these premium grade carbon fibers in a patented dynamic application, providing the Poly Chain GT Carbon belt with exceptionally high power transmission capacity, strength, flexibility and durability.

Poly Chain GT Carbon drives pack a lot of power into a small space, matching the capacity of roller chain drives width-for-width in most pitch sizes.

The Ideal Roller Chain Alternative

- maintenance-free drive
- outlasts roller chain 3-to-1
- accommodates the use of backside idlers
- compact drive components provide versatility to drive designers
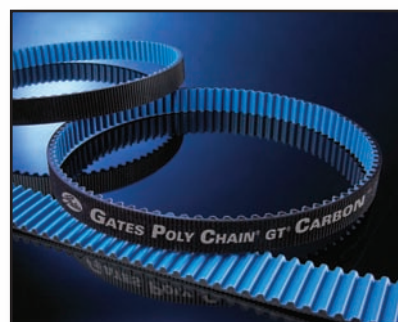
Gates new Poly Chain® GT® Carbon™ belt offers performance enhancements that exceed the current market-leading Poly Chain® GT®2 belt.

Online Drive Design and Engineering Tools at www.gates.com/drivedesign

Fast and easy resources for selecting and maintaining Gates belt drive systems.

- quickly find the product information you need
- get answers, solve problems and develop solutions
- create drive designs in minutes
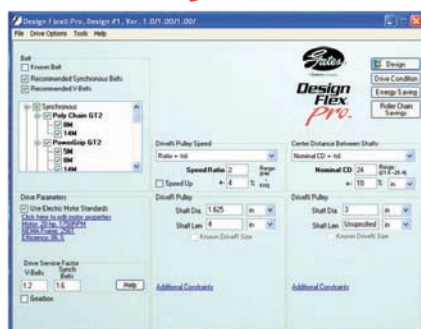
Design Flex® Pro™

If you currently design 2-point drives using manuals, then you know how long it can take and that you only get one solution. With Gates Design Flex® Pro™ program, you can design a drive in minutes, and get every possible drive solution that fits your design parameters. Plus, you can print, email and create a PDF of the design specifications. Use Design Flex Pro to:

- convert rollerchain drives to Poly Chain® GT® Carbon™ belt drive systems
- quickly and correctly design 2-point drives
- get multiple design solutions
- see both V-belt and synchronous options
- design using different languages for customers outside the US
- save time and money

Drive Design Manuals, Catalogs and Charts and more

View and download PDF versions of Gates Power Transmission Systems Catalog, Belt Number & Identification Chart and Drive Design Manuals.
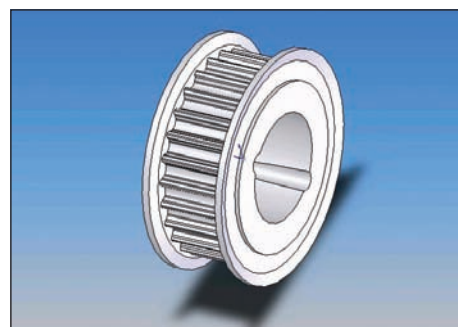
Design View®

This software program offers a faster, easier way to obtain complete dimensions, CAD drawings and 3D solid models of Gates synchronous belt hardware. 2-D sprocket drawings can be downloaded in AutoCAD, Word, Generic or Web formats, and 3-D solid models can be saved as native Pro/e files. You can also generate detailed information sheets for belts in a PDF format.
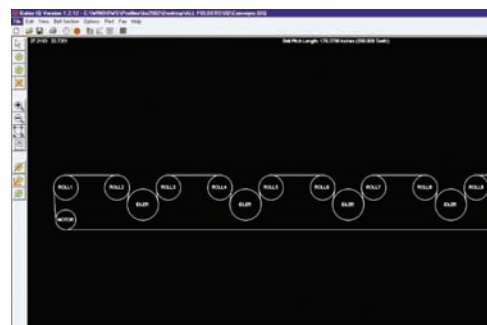
Design IQ™

This program provides a blank slate for designing multi-point and complex serpentine belt drives. Utilizing a specific Gates product that you have identified, as well as your drive specifications, the software will calculate belt tension, shaft load, belt length and more.

SAFETY POLICY

WARNING! Be Safe! Gates belt drive systems are very reliable when used safely and within Gates application recommendations. However, there are specific **USES THAT MUST BE AVOIDED** due to the risk of serious injury or death. These prohibited misuses include:

Primary In-Flight Aircraft Systems

Do not use Gates belts, pulleys or sprockets on aircraft, propeller or rotor drive systems or in-flight accessory drives. Gates belt drive systems are not intended for aircraft use.

Lift Systems

Do not use Gates belts, pulleys or sprockets in applications that depend solely upon the belt to raise/lower, support or sustain a mass without an independent safety backup system. Gates belt drive systems are not intended for use in applications requiring special "Lift" or "Proof" type chains with minimum tensile strength or certified/test tensile strength requirements.

Braking Systems

Do not use Gates belts, pulleys or sprockets in applications that depend solely upon the belt to slow or stop a mass, or to act as a brake without an independent safety backup system. Gates belt drive systems are not intended to function as a braking device in "emergency stop" systems.

DRIVE DESIGN SOFTWARE

Drive design software can be found at www.gates.com/drivedesign.

This software assists designers in quickly selecting optimum drive solutions.

Poly Chain® GT® Carbon™ Low-Speed Design Load Calculations

For use when designing Poly Chain GT Carbon belt drives for gear reducer output shafts and general roller chain conversions.

When designing Poly Chain GT Carbon belt drives to be used in low-speed applications (generally 500 rpm and less), traditional drive design procedures may yield drives with greater-than-needed capacity. These design load calculations are intended primarily for applications on the output side of gear reducers, and will yield Poly Chain GT Carbon belt drives competitive in both cost and performance with roller chain and superior to other belt drives.

A recent power transmission industry publication estimated that half of all U.S. motors operate at less than 60 percent of their rated load and one third operate at below 50 percent of their rated load. Significant power losses can also occur in speed reducers, further reducing the actual torque loads carried by belt drives.

In order to prevent over sizing belt drives for these low speed applications, the design should be based upon the actual system running load. Because the actual running load may or may not be known, the following three approaches are recommended to assist the designer in determining the appropriate design load:

I. Actual Operating Loads Known

In those cases where the actual operating load is known, design the belt drive for the actual operating load rather than for a load based upon the motor name plate. Use Formula 1 to calculate the proper drive design load based upon motor load (name plate or measured) when the belt drive will be installed on the reducer output shaft.

Design Load

Formula 1

DesignLoad = (MotorLoad) x ServiceFactor x (% Reducer Efficiency/100)

Motor Load: From user/OEM

Service Factor: From Table 1

% Efficiency: From Speed Reducer Catalog (also refer to the Reference Data Section)

Table 1—Service Factors for Low-Speed Roller Chain Drive Conversions
For Drive Selections With Shaft Speeds Less Than 500 rpm

DriveN Machine	Typical driveRs are electric motors, hydraulic motors, or internal combustion engines with hydraulic couplings/torque converters.		
Select a driveN load category whose characteristics most closely represent those of the actual equipment	Intermittent Service	Normal Service	Continuous Service
	3-5 Hours Daily	8-10 Hours Daily	16-24 Hours Daily
Uniform Load: **Agitators & Mixers:** liquid and semi-liquid **Conveyors:** light package, oven, ore, sand, salt **Food Equipment:** bottling machinery, kettles, cookers, food handling machinery **Line shafts:** light or normal service **Paper Industry:** agitators, bleachers, calendars, dryer machinery **Printing Machinery:** cutters, rotary, embossing & flatbed presses, linotype, folders	1.0	1.2	1.3
Moderate Shock Load: **Agitator Mixers:** dough, heavy syrups **Brick & Clay Machinery:** auger, brick machines **Conveyors:** apron, bucket, pan, elevator **Cranes & Hoists:** hoists, elevators **Line Shafts:** moderate, heavy service **Paper Industry**: yankee dryer, winder drums **Printing Machinery:** magazine & newspaper printing presses **Rubber & Plastics Machinery:** calendars, rolls, tubers, extruders	1.3	1.4	1.5
Heavy Shock Loads: **Brick & Clay Machinery:** mixers, pug mills, rolls **Conveyors:** screw, flight **Crushing Machinery:** ball mills, jaw crushers, roll crushers **Mills:** rotary, ball, pebble, rod, tube **Mixers:** concrete **Rubber & Plastics Machinery:** mixers, sheeters	1.5	1.6	1.7

Additional Guidelines

There are many driveN machines using, or potentially designed to use, roller chain drive systems.
When converting these to Poly Chain® GT® Carbon™ drives, consider the following additional guidelines.

- Do not overlook the torque multiplying effect of belt drives and speed reducers when calculating with torque loads.
- Engineering judgment should be used in determining a design load for non-standard motors with high starting loads (NEMA C, NEMA D, Direct Current, etc.).
- See the Reference Data Section for guidance in calculating speed reducer efficiency.
- For guidance in calculating speed reducer efficiency, refer to Speed Reducer Efficiency on Page 10.

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II. Actual Operating Loads Unknown — With Measurements

When the actual system running load is unknown, it must be estimated. This can be done with reasonable accuracy by measuring the average electrical amperage draw from the motor while under load, and calculating a motor horsepower output. Speed reducer efficiency can also be calculated and applied as well.

Use Formulas 2-4 for the most accurate results if all of the needed formula values are available.

Because values for motor efficiency and power factor may not be readily available, a common industry accepted practice is to proportion the motor name plate horsepower rating with the motor name plate amperage rating and actual measured amperage value. Use Formula 5 for a reasonable estimate of actual motor horsepower load.

D.C. Motors

Formula 2

$$Horsepower^* = \frac{(Amps) \times (Volts) \times (Eff)}{746}$$

Amps: as measured
Volts: as measured
Eff: % Eff/100 (from Motor Catalog or Motor Nameplate)

Single Phase A.C. Motor

Formula 3

$$Horsepower^* = \frac{(Amps) \times (Volts) \times (Eff) \times (PF)}{746}$$

Amps: as measured
Volts: as measured
Eff: % Eff/100 (from Motor Catalog or Motor Nameplate)
Power Factor: as measured or from Motor Catalog

Three Phase A.C. Motors

Formula 4

$$Horsepower^* = \frac{1.73 \times (Amps) \times (Volts) \times (Eff) \times (PF)}{746}$$

Amps: as measured (average of 3 phases)
Volts: as measured
Eff: % Eff/100 (from Motor Catalog or Motor Nameplate)
Power Factor: as measured or from Motor Catalog

(Note: Refer to Power Factor on page 4 for general power factor and efficiency values.)

Alternative Approach

Formula 5

$$Horsepower = \frac{(Nameplate\ hp)(Measured\ Amps)}{(Nameplate\ Amps)}$$

Nameplate hp: maximum rated motor horsepower
(Motor Nameplate or Motor Catalog)
Measured Amps: as measured
(if 3 phase; average of 3 phases)
Nameplate Amps: maximum rated motor amps
(Motor Nameplate or Motor Catalog)

Now with a good estimate of the actual motor horsepower load, use Formula 6 to calculate the proper drive design load (when the belt drive will be installed on the reducer output shaft).

Formula 6

$$Design\ Load = (Estimated\ Motor\ Load) \times (Service\ Factor)$$

$$x\frac{\%\ Reducer\ Efficiency}{100}$$

Estimated Motor Load: From Formulas 2-5
Service Factor: From Table 1
% Efficiency: from Speed Reducer Catalog
(also refer to Speed Reducer Efficiency on page 4.

*With an estimate of actual motor load, and the belt drive connected directly to a speed reducer output shaft, use Formula 1 to calculate the drive design load.

III. Actual Operating Loads Unknown — Without Measurements

It is not always possible to determine actual motor operating loads, as it may not be possible to take amperage draw measurements from the motor. In those cases, the following guidelines should be used with caution, as they may not yield successful results in every case. They should, however, yield at least comparable, if not improved, service compared to the old roller chain drive.

The procedures which follow in Table 2 should yield at least comparable, if not improved, service compared to the old roller chain drive.

Table 2

Situation	Conclusion	Recommendation
Properly lubricated. Provides more than four months of continuous service	System is either properly designed or lightly loaded.	Base belt drive design load on the roller chain drive horsepower rating.
Properly lubricated. Provides less than four months of continuous service.	System may have less than adequate load capacity.	Belt drive design load based on roller chain drive horsepower rating may result in a poorly performing system. Exercise good engineering judgment.
Unlubricated. Provides more than four months continuous service.	System is lightly loaded.**	Base belt drive design load on roller chain drive horsepower rating.
Unlubricated. Provides less than four months continuous service.	It is difficult to conclude whether the system has been designed with adequate load capacity.**	Base belt drive design load on roller chain power rating but exercise good engineering judgment.

**Unlubricated roller chain drives do not typically provide more than three to four months of service regardless of design capacity.

Poly Chain® GT® Carbon™ Low-Speed Design Load Calculations – continued

In those cases where the belt drive design load is based upon the power rating of the existing roller chain drive, use Formula 7 along with good engineering judgment to calculate the proper drive design load.

Formula 7

Design Load = (Roller Chain Power Rating) x Service Factor

Roller Chain Power Rating: from Roller Chain Manufacturer's
Catalog
Service Factor: from Table 1

Drive Selection Procedure

Having used one of the previous three approaches to determine a belt drive design horsepower load, proceed to step 2 of the Belt Drive Selection Procedure on page 16.

Reference Information

Speed Reducer Efficiency

If the efficiency of a speed reducer is not published, it can be calculated indirectly from the catalog data. Speed reducer manufacturers generally publish rated input horsepower and rated output torque for each speed reducer unit in their product line. In order to calculate speed reducer efficiency, either the rated output torque must be converted to output horsepower or the rated input horsepower must be converted to input torque. The torque/horsepower conversion formulas are as follows:

$$(hp) = \frac{Q \times (rpm)}{63025}$$

hp = horsepower
Q = torque (lb-in)
rpm = shaft revolutions/min

$$Q = \frac{hp \times 63025}{rpm}$$

Q = torque (lb-in)
hp = horsepower
rpm = shaft revolutions/min.

Reducer efficiency is then calculated as follows:

$$Reducer\ Efficiency = \frac{Output\ hp\ or\ Q}{Input\ hp\ or\ Q}$$

A general comparison of speed reducer efficiency is included in Table 3.

Motor Data

Motor efficiency and power factor data may not be readily available, Actual values vary and are motor dependent. If catalog data are not available, typical values are as follows:

Power Factor
Standard Motor: 0.80 typical (range from 0.55 to 0.90)
High Efficiency Motor: 0.85 typical (range from 0.73 to 0.88)

Efficiency
Standard Motor: 80% typical (range from 70% to 87%)
High Efficiency Motor: 88% typical (range from 84% to 93%)

Belt Tensioning

Adequate belt installation tension is critical in preventing belt ratcheting under peak motor starting loads. To calculate proper belt installation tension values for Poly Chain GT Carbon belts, follow the procedures starting on page 108.

Table 3

Reducer Type	Ratio Range	Reduction	Approx. Efficiency, (%)
Straight Bevel Reducer	1:1 - 4:1	Single	97.0%
Spiral Bevel Reducer	1:1 - 5:1	Single	97.0%
Helical Reducer	1.2:1 - 6:1	Single	97.0%
	to 30:1	Double	94.1%
	to 200:1	Triple	91.3%
Planetary Reducer	3.5:1 - 6:1	Single	97.5%
	to 30:1	Double	95.1%
	to 200:1	Triple	92.7%
	to 1800:1	Quadruple	90.4%
Cycloidal Reducer	6:1 - 119:1	Single	92.5%
	to 7,500:1	Double	85.6%
	to 658,000:1	Triple	79.1%
Worm Gear Reducer	5:1 - 75:1	Single	45%-94%
	to 6,000:1	Double	28%-65%

Note: Speed ratio ranges and efficiency values are approximate and vary with each manufacturer.

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Poly Chain® GT® Carbon™ Low-Speed Design Load Calculations – continued

Copy and use this worksheet to estimate actual belt drive operating loads
based upon the Low-Speed Drive Design Procedure

Drive Design Load Worksheet for Low-Speed Poly Chain GT Carbon Drives

To Find ▼	Known Values									Direct Current	Alternating Current	
	Amps	Volts	Motor %Eff/100	Power Factor	hp Load	Motor rpm	Reducer Ratio	Reducer %Eff/100	Motor Torque		Single Phase	Three Phase
Motor Amps										$\dfrac{(hp)\,(746)}{(V)\,(Eff)}$	$\dfrac{(hp)\,(746)}{(V)\,(Eff)\,(PF)}$	$\dfrac{(hp)\,(746)}{(173)\,(V)\,(Eff)\,(PF)}$
Motor hp										$\dfrac{(Amp)\,(V)\,(Eff)}{746}$	$\dfrac{(Amp)\,(V)\,(Eff)\,(PF)}{746}$	$\dfrac{(173)\,(Amp)\,(V)\,(Eff)\,(PF)}{746}$
Motor Torque (lb-in)										$\dfrac{(hpLoad)\,(63025)}{(Motor\ rpm)}$		
Reducer Output Torque										$(Motor\ Torque)\,(Reducer\ Speed\ Ratio)\,(Reducer\ Efficiency)$		
Reducer Output Torque										$\dfrac{(hp\ Load)\,(Reducer\ Speed\ Ratio)\,(Reducer\ Efficiency)\,(63025)}{(Motor\ rpm)}$		

Notes:

1. Amperage measurements should be made under normal operating conditions, or recorded continuously as a function of time.

2. In three phase systems, the formula amperage value is determined by averaging the three individual phase measurements together.

See Low-Speed Drive Design Information Sheet on page 11
for assistance in collecting drive design information.

Low-Speed Poly Chain® GT® Carbon™ Belt Drive Selection Procedure
For drive selections with shaft speeds less than 500 rpm

Selection of a Stock Poly Chain GT Carbon belt drive system involves these eight steps:

1. Calculate the Design Horsepower
2. Select the Belt Pitch
3. Select the Sprockets and Belt Length
4. Select the Proper Belt Width
5. Check and Specify Stock Drive Components
6. Installation and Take-up
7. Calculate Belt Tensioning Requirements
8. Verify Speed Reducer Overhung Load

Sample Drive Selection Problem

A blank Low-Speed Drive Design Information Sheet can be found on page 11. This form provides a convenient method for collecting data to properly design or convert to a Poly Chain GT Carbon belt drive.

In this example, an ore conveyor is powered by an electric motor directly connected to a speed reducer. A Poly Chain GT Carbon belt drive is needed to transmit power from the speed reducer output shaft to the conveyor shaft. The motor is a 5 horsepower, 1750 rpm normal torque AC motor. The speed reducer is a worm gear type unit with a 50 to 1 speed ratio. The ore conveyor is to be driven at 17.5 ± 5% rpm and operates 24 hours per day 7 days a week. The center distance between shafts is 50.0 inches, but can be altered ± 3.0 inches, if necessary. The speed reducer output shaft has a 1.500 inch diameter and the conveyor shaft has a 2.000 inch diameter.

Step 1 Calculate The Design Horsepower

The Design Horsepower should be calculated as follows:

**Design Horsepower =
(Motor Load) x (Low-Speed Service Factor) x (Reducer Efficiency)**

Procedure

A. The motor load can be determined by several methods as explained in the Low-Speed Drive Load Calculations section on pages 8-10. The method used for determining motor load will depend on how much information is available on the application. A worksheet is provided on page 11 to help choose which method is most appropriate given the information known.

Example

This example demonstrates the Proportioned Amperage Rating approach described in Formula 5 on page 3.

Motor = 5.00 hp (nameplate rating)
Nameplate Amps= 70.
Measured Amps: Phase 1 = 4.1
Phase 2 = 4.4
Phase 3 = 4.2

$$Average\ Measured\ Amps = \frac{Phase\ 1 + Phase\ 2 + Phase\ 3}{3}$$

$$= \frac{4.1\ amps + 4.4\ amps + 4.2\ amps}{3}$$

Average Measured Amps = 4.2 amps

$$Motor\ Load = \frac{(Nameplate\ hp)\ (Average\ Measured\ Amps)}{(Nameplate\ Amps)}$$

$$= \frac{5\ hp\ x\ 4.2\ amps}{7.0\ amps}$$

Motor Load= 3.00 hp

Procedure

B. The proper Low-Speed Service Factor is selected from Table 1 – Service Factors For Low-Speed Roller Chain Drive Conversions. The selection is based on the category of machinery being driven and the number of service hours per day.

Example

An Ore Conveyor is found in the Uniform Load drive group. Reading across to the right, the column heading for 16-24 hours daily service shows that a **1.3 Service Factor** is recommended.

Procedure

C. The Reducer Efficiency is available from the speed reducer name plate or manufacturers' catalogs. Often the speed reducer efficiency is not provided directly in manufacturer's catalog. In such cases the reducer efficiency must be calculated as described on page 10.

Example - Speed Reducer Efficiency Calculation

Speed Reducer Rated Input Load hp = .65
Speed Reducer Rated Output Torque = lb-in. 6210
Speed Reducer Rated Output Speed rpm = 35
RatedOutput hp

$$= \frac{(Rated\ Output\ Torque)\ x\ (Output\ Speed)}{63025}$$

$$= \frac{(6210\ lb\ -in)\ x\ (35\ rpm)}{63025}$$

Rated Output hp = 3.4

$$Reducer\ Efficiency = \frac{Rated\ Output\ Power}{Rated\ Input\ Power}$$

$$= \frac{3.4\ hp}{6.5\ hp}$$

Reducer Efficiency = 0.53 or 53%

Procedure

D. The Design Horsepower can now be determined by multiplying these three values together.

Example - Design Horsepower Calculation

Motor Load = **3.00 hp**
*Low-Speed Service Factor =***1.3**
Reducer Efficiency = 53%
Horsepower = (Motorload)(Reducer Eff)
Horsepower = (3.00)(0.53) = 1.59
Design Horsepower = (HP)(Low Speed Service Factor)
Design Horsepower = (1.59)(1.3)
Design Horsepower = 2.07

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Low-Speed Poly Chain® GT® Carbon™ Belt Drive Selection Procedure – Continued

Procedure

Using the Design Horsepower and the output speed of the speed reducer, select the belt pitch from the Belt Pitch Selection Guide Chart on page 19.

> ### Example
> Design Horsepower = **2.07 hp**
>
> Reducer Output Speed = **35 rpm**
> Locate 35 rpm on the "RPM of Faster Shaft" scale on the left side of the chart and move over to where the 2.07 Design Horsepower line intersects. The intersection falls within the **8mm pitch** section, but a **14mm pitch** belt could also be used.

Step 3 Select The Sprockets and Belt Length

Procedure

A. **Determine the belt drive speed ratio:** The speed ratio can be calculated by dividing the speed (rpm) of the faster shaft by the speed (rpm) of the slower shaft.

> ### Example
> Reducer Output Speed = 35 rpm
>
> Ore Conveyor Speed = 17.5 rpm
>
> $$Speed\ Ratio = \frac{rpm\ of\ faster\ shaft}{rpm\ of\ slower\ shaft} = \frac{35}{17.5} = 2.00$$

B. Select the sprocket combination and belt length: Referring to the Stock Drive Selection Tables, find the proper set of tables for the belt pitch (8mm or 14mm) found in Step 2. Looking down the speed ratio column, find the value which most closely matches the belt drive speed ratio required. Reading across the selected speed ratio line, find the stock DriveR and DriveN sprocket combination available. Reading further across, locate the belt drive center distance which most closely matches the target center distance specified. The belt sizes are listed across the top of the table for each corresponding center distance.

Multiple sprocket combinations will often be available for a given speed ratio. In such cases, selection of the proper drive combination will depend on the center distance required, minimum or maximum required sprocket diameters and speed reducer overhung load requirements. After selecting possible sprocket combinations and center distances, record the belt length (top of column) and the length factor (bottom of column).

> ### Example
> Belt pitch = 14mm
>
> Belt Drive Speed Ratio = 2.000
>
> Center Distance = 50.00 ± 3.00 in. (from the problem statement)

Refer to the 14mm Pitch Stock Drive Selection Tables on pages 38–51. Reading down the Speed Ratio Column locate 2.000. In this case, there are five different drive combinations available for a 2.000 Speed Ratio. Checking the center distance values for each combination, the 50.10 inch value is the closest to the 50.00 inch target. So, the 28 groove DriveR sprocket, 56 groove DriveN sprocket, and 14MGT-3136 (224 teeth) belt combination is selected. Also note that the Belt Length Correction Factor is 1.12 with a center distance of 50.10 inches.

Step 4 Select The Proper Belt Width

Procedure

Horsepower Rating Tables are located on pages 52-64 for standard belt pitches and stock belt widths. The base horsepower rating is given in the upper table as a function of the speed (rpm) of the faster shaft and diameter of the small sprocket. The speed of the faster shaft is located in the left hand column. Across the top are various stock sprocket sizes. The base horsepower rating of a given sprocket, at a specific speed, is the point at which the "rpm" row and the "sprocket size" column intersect.

This basic horsepower rating must be corrected for speed down speed ratios, and for the belt length selected. The following formula should be used to calculate the total drive horsepower rating:

> *Rated Drive Horsepower = [Rated Base Horsepower*
> *+ Added Horsepower for Speed Ratio]*
> *x (Belt Length Correction Factor)*

Referring to the Speed Ratio Add-On Factor Table, select a value based upon the drive operating speed and the speed ratio. This value should be added to the basic horsepower rating. Multiply the corrected rating by the applicable Belt Length Correction Factor determined in Step 3B or from the Belt Length Correction Factor Table. The corrected horsepower rating must equal or exceed design horsepower.

Where there are several choices, space limitations may control the selection. In addition, the following guidelines should be considered:

1. Larger sprockets result in reduced belt width.

2. Larger sprockets yield longer drive service life.

3. Avoid drives where the belt width exceeds the smaller sprocket diameter.

4. Avoid drives where center distance is greater than 8 times the diameter of the smaller sprocket. Refer to Engineering Section I-10 on page 103 for additional details.

Example
Referring to the 14mm pitch Horsepower Rating Table for 20mm Wide belts on page 60. Read down the left hand column for "RPM of Faster Shaft" and locate 35 rpm. Read the sprocket sizes listed across the top of the table and locate the 28 groove, 4.912 inch P.D. column. Read across the "RPM" row and down the sprocket size column until the two intersect at a **Rated Base Horsepower of 2.53 HP.**

Next, referencing the Speed Ratio Add-On Correction Table, find the listing for a 2.000 speed ratio. An **add-on factor of 0.11 hp** is listed. Then, referencing the Belt Length Correction Factor Table, find the listing for a 14MGT-3136 belt. **A correction factor of 1.12** is listed.

Low-Speed Poly Chain® GT® Carbon™ Belt Drive Selection Procedure – Continued

Calculate the Corrected Horsepower Rating:

Rated Drive Horsepower =
[*Rated Base Horsepower + Added HP for Speed Ratio*] x
(*Belt Length Correction Factor*) = [2.53 *hp*+ 0.11 *hp*] x (1.12)

Rated Drive Horsepower 2.96 hp

The Corrected Horsepower Rating of 2.96 hp exceeds
the Design Horsepower target of 2.07 hp. So, a **belt width
of 20mm** is acceptable.

Step 5   **Check and Specify Stock Drive Components**

Procedure

**A. Check the sprockets selected against any special design
requirements** using the dimensions provided in the Sprocket
Specifications Tables on pages 66-75. Use flange diameters when
checking against maximum diameter requirements.

**B. Determine the bushing size required for each sprocket and
check bore sizes** by using the Sprocket Specification Tables. From
the Stock Bushing tables on page 79, check the bore range and key-
way dimensions against the design requirements.

Example
Also from the sprocket data on page 70 we note that the **14MX-28S-
20 sprocket requires a 2012 bushing** and the **14MX-56S-20
sprocket requires a 3525 bushing**. On page 79 in the bushing data
table, a **2012 bushing has a bore range of 1/2 to 2-1/8 inches**,
which includes the 1-1/2 inch bore required for the driveR shaft. **The
3525 bushing has a bore range from 1-3/16 to 3-15/16 inches**,
which includes the 2 inch bore required for the driveN shaft.

C. Specify stock drive components using proper designations.

Example
Stock drive components are as follows:

1 ea. – 14MGT-3136-20 Poly Chain GT Carbon belt
1 ea. – 14MX-28S-20 driveR sprocket
1 ea. – 2012 Bushing with a 1-1/2 in. bore
1 ea. – 14MX-56S-20 driveN sprocket
1 ea. – 3525 Bushing with a 2 in. bore

Step 6   **Installation and Take-up**

Procedure

Because of its high resistance to elongation (stretch), there is no need to
re-tension and take-up a Poly Chain GT Carbon belt drive. However, some
adjustment must be provided when installing synchronous belt drives, as
with nearly all power transmission systems, due to manufacturing and
assembly tolerances and initial tensioning requirements. Table 11 on page
110 lists the standard installation and take-up requirements for a given belt
length. Additional center distance adjustment is needed when installing the
belt over flanged sprockets (see Table 11 on page 110.)

Example
As can be seen in the Sprocket Specifications Table on page 70, both
of the sprockets are flanged. Therefore, an additional allowance will
be needed for installation over flanged sprockets. The total installa-
tion and tensioning allowances, are shown below.

Installation Allowance = 0.16 in. + 1.97 in. = 2.13 in.
Tensioning Allowance = 0.05 in.

Subtracting this from the nominal center distance value gives a mini-
mum center distance necessary for belt installation of (50.10 inch -
2.13 inch) = 47.97 inches. From the problem statement, the center
distance can be reduced down to 47.0 in. if needed. So, there is suf-
ficient center distance adjustment to easily install the belt.

Step 7   **Calculate Belt Tensioning Requirements**

Procedure

A. Calculate base static tension using Formula 14 on page 108.
The m value is listed in Table 10 on page 108.

Example
Belt Pitch = 14mm
Belt Size = 14MGT-3136, 224 teeth (123.46 in. P.L.)
Belt Width = 20mm
DriveR Sprocket = 28 grooves (4.912 in. P.D.)
DriveR Shaft Speed = 35 rpm
DriveN Sprocket = 56 grooves (9.825 in. P.D.)
Actual Center Distance = 50.10 in.
Design Horsepower = 2.07 hp
Horsepower = 1.59 hp

$$T_{st} = \frac{20\ DHP}{S} + mS^2,\ pounds$$

where:
DHP = Design Horsepower = **1.59 hp**
  m = **0.92**, constant for 14mm pitch, 20mm wide belt
      from Table 10 on page 116.
  S = (Sprocket Diameter) x (Shaft Speed) / 3820
    = (4.912 in.) x (35 rpm) / 3820
  S = 0.05

$$T_{st} = \frac{20\ (1.59)}{0.05} + (0.92)(0.05)^2$$

T_{st} = 636.00 + 0.002 *lb.*

T_{st} = 636.00 *lb.*

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Low-Speed Poly Chain® GT® Carbon™ Belt Drive Selection Procedure – Continued

Calculate Belt Tensioning Requirements

Procedure — continued

B. Calculate minimum and maximum deflection forces using Formulas 15 and 16 on page 109. The Y value is listed in Table 10.

Example
a. Calculate the belt span length

$$t = \sqrt{C^2 - \left(\frac{D - d}{2}\right)^2}$$

where:
t = Span Length, inches
C = Center Distance = **50.10 in.**
D = diameter of larger sprocket = **9.825 in. P.D.**
d = diameter of smaller sprocket = **4.912 in. P.D.**

$$t = \sqrt{50.10^2 - \left(\frac{9.825 - 4.912}{2}\right)^2}$$

t = 50.04 in.
b. Calculate Minimum and Maximum belt deflection forces referring to Formulas 15 and 16 on page 109:

$$Min\ Deflection\ Force = \frac{1.1_{ST} + \left(\frac{t}{L}\right)Y}{16},\ pounds$$

where:
T_{ST} = **636.0** pounds static tension as calculated above
t = **50.04** inches span length as calculated above
L = **123.46** inches belt length
Y = **230** (constant for Y, Table 10 on page 108)

$$Min\ Deflection\ Force = \frac{1.1(636.0) + \left(\frac{50.04}{123.46}\right)(230)}{16}$$

Min. Deflection Force = 49.5 lb.

$$Max\ Deflection\ Force = \frac{1.2T_{ST} + \left(\frac{t}{L}\right)Y}{16},\ pounds$$

$$Max\ Deflection\ Force = \frac{1.2(636.0) + \left(\frac{50.04}{123.46}\right)(230)}{16}$$

Max. Deflection Force = 53.5 lb.

C. Determine the deflection distance using 1/64" per inch of span length.

NOTE: Deflection forces must be applied evenly across the entire belt width.

Example

$$DeflectionDistance = \frac{t}{64},\ inches$$

$$DeflectionDistance = \frac{50.04}{64}$$

Deflection Distance = 0.78

D. Applying The Tension:

At the center of span (t), apply a force perpendicular to the belt span large enough to deflect the belt 0.78 inch from its normal free position. Be sure that the force is applied evenly across the entire belt width. Note that one sprocket should be free to rotate during the belt tensioning process.

Compare the measured deflection force with the range of minimum to maximum deflection forces calculated previously.

1. If the measured deflection force is less than the minimum recommended deflection force, the belt should be tightened.

2. If the measured deflection force is greater than the maximum recommended deflection force, the belt should be loosened.

Example
When the Ore Conveyer belt drive is properly tensioned, a belt span deflection of 0.78 in. should require a deflection force within the range of 49.5 to 53.5 lb.

Verify Speed Reducer Overhung Load

Procedure

An Overhung Load calculation verifies that the belt drive system will not overload the speed reducer shaft and bearings. The Overhung Load calculation for speed reducers varies from manufacturer to manufacturer. Please refer to speed reducer catalogs or contact the speed reducer manufacturer for further assistance.

Low-Speed Poly Chain® GT® Carbon™ Belt Drive Selection Procedure – Continued

Advantages of the Low-Speed Drive Design Procedure

Having read through the Low-Speed Drive Design Procedure and example, some may wonder if the extra steps required are really worth the effort. Absolutely! Using the low-speed drive design techniques for drives operating at speeds less than 500 rpm can result in a much smaller drive package at a lower cost. Outlined below is a comparison of the Low-Speed Drive Design Procedure with the traditional drive design procedure. The benefits of designing with a Low Speed Service Factor, Actual Horsepower Load, and Speed Reducer Efficiency are demonstrated. Combining these techniques can result in a substantially narrower belt drive width which saves space and reduces cost.

Comparison 1 — Traditional Drive Design Procedure

The traditional drive design procedure is outlined on pages 16-19 and should still be used for belt drives operating at speeds greater than 500 rpm. In the past this procedure was used to select all Poly Chain belt drives. The new "Low-Speed Drive Design Procedure" results in belt drive systems better sized for low speed power transmission system that typically utilize speed reducers and roller chain.

Using the traditional design procedure to select the belt drive system for the Ore Conveyor example would result in a much wider belt. The traditional design procedure does not account for a low-speed service factor, the actual operating load of the motor, or speed reducer efficiency. Rather, the belt selection is based purely on the name plate horsepower rating of the motor with a standard service factor. For the Ore Conveyor example this would mean a 5 hp name plate rating and a 1.7 service factor resulting in a Design Horsepower for the belt drive of (5.00 hp) x (1.7) = 8.50 hp. This is over 4 times the Design Horsepower of 2.07 hp determined using the Low-Speed Drive Design Procedure. Referring to the Horsepower Rating Tables on pages 54-64, **a belt width of 68mm is required for this higher 8.50 Design Horsepower Load using the Traditional Design Method compared to a belt width of only 20mm for the 2.07 Design Horsepower Load using the Low-Speed Design Method.**

Comparison 2 — Benefit of Low-Speed Service Factor

Using a low-speed service factor can reduce the required belt width compared to a standard service factor value. The reason for this is directly related to belt drive operating speeds. Detrimental effects such as belt tensile cord fatigue and belt wear both occur during belt drive operation, but accumulate in direct proportion to the operating speed. Lower operating speeds result in less belt damage over time allowing the use of less severe service factors in the belt drive selection process. Service factors especially for belt drives operating at low speeds (500 rpm and less; includes many roller chain applications) are provided in Table 1—Service Factors For Low-Speed Roller Chain Drive Conversions on page 2.

Referring to the Ore Conveyor Example, a low-speed service factor of 1.3 is recommended for this application. Substituting the reduced 1.3 low-speed service factor: Design Horsepower = (5.00 hp) x (1.3) = 6.50 hp. Referring to the Horsepower Rating Tables on pages 52-64, **the belt width required for 6.50 Design Horsepower is 68mm.**

Comparison 3—Benefit of Designing with Actual Motor Load

Typical belt drive selections are based upon motor nameplate horsepower ratings. However, industry surveys estimate that half of all U.S. motors operate at less than 60 percent of their rated load, and one third operate at below 50 percent of their rated load. So, sizing belt drives based on true operating loads can result in a more compact sized belt drive system.

Continuing with the Ore Conveyor Example, the Proportioned Amperage Rating approach was used to calculate a Motor Load of 3.00 hp. Substituting the reduced 3.00 hp motor load: Design Horsepower = (3.00 hp) x (1.3) = 3.90 hp. Referring to the Horsepower Rating Tables on pages 52-64, **the belt width required for 3.90 Design Horsepower is only 37mm compared to the 68mm belt width required in Comparison 2.**

Comparison 4—Benefit of Adjusting for Speed Reducer Efficiency

Due to gear meshing, bearing friction, oil viscosity, etc. power losses within speed reducers result in heat generation. So, not all the power applied to the input shaft of a speed reducer is transmitted through to the output shaft. A speed reducer's efficiency rating defines how much power loss occurs from within. Typical speed reducer efficiencies can range as high as 97% for well designed helical gear type reducers to as low as 28% for some worm gear type units (see Table 3 on page 4.) When a belt drive system is powered by the output shaft of a speed reducer, the actual horsepower load carried by the belt is less due to the reducer power losses. Accounting for this reduced horsepower load when selecting a belt drive system can result in a narrower belt width.

For the Ore Conveyor Example, the speed reducer efficiency was calculated to be 53%. Accounting for this 53% efficiency: Design Horsepower = (3.00 hp) x (1.3) x (53/100) = 2.07 hp. Referring to the Horsepower Rating Tables on pages 52-64, **the belt width required for 2.07 Design Horsepower is only 20mm compared to the 37mm belt width required in Comparison 3.**

Summary

Belt width using the Traditional Drive Design Procedure = 68mm.

Belt width using the Low-Speed Drive Design Procedure = 20mm.

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For Drive Selections with Shaft Speeds Less Than 500 rpm

Distributor _____

Customer: _____

Drive Identification (location, number, etc.) _____

DriveR Information:
Motor Nameplate Data

Rated Horsepower =_____   Rated RPM =_____   Efficiency =_____

Rated Voltage =_____   Rated Amps =_____   Rated Torque =_____

Actual Motor Load =_____

Motor Type: AC ❑   DC ❑   Gear Motor ❑

Output Speed: Constant ❑   Variable ❑

Reducer Information:
Reducer Type (worm, right angle helical, cycloidal, etc):

Reducer Efficiency =_____Output RPM =_____Reducer Ratio =_____

Rated Input HP/Torque =_____Rated Output HP/Torque =_____

Existing Drive Information:

Drive Type: Chain ❑   V-Belt ❑   Synchronous Belt ❑

If chain, type; 2/#60. #80, etc.   Lubed ❑   Unlubed ❑

Current Drive Service Life =_____

DriveR Sprocket/Sheave =_____ (teeth/OD)_____DriveR Shaft Diameter =_____

DriveN Sprocket/Sheave =_____ (teeth/OD)_____ DriveN Shaft Diameter =_____

Center Distance =_____   + _____   - _____

Type of Center Distance Adjustment: _____

Idler used: Yes ❑   No ❑   Inside ❑   Backside ❑

DriveN Information:

Type of Equipment:_____Actual Horsepower Required =_____

DriveN RPM =_____

Hours/Day = _____   Days/Week =_____   Weeks/Year =_____

Special Requirements:
Space Limitations:

Maximum DriveR Dia. =_____   Maximim DriveN Dia =_____

Maximum DriveR Width =_____   Maximum DriveN Width =_____

Environmental Conditions:

Temperature Range =_____Belt Conductivity Required ❑

Oil Mist ❑   Oil Splash ❑   Moisture ❑   Abrasives ❑

Drive Layout

(check one)

❑ **Motor Reducer Belt Drive Driven**
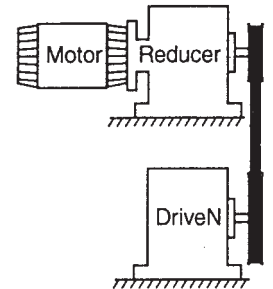
Belt Drive on Reducer Output Shaft

❑ **Motor Belt Drive Reducer Driven**
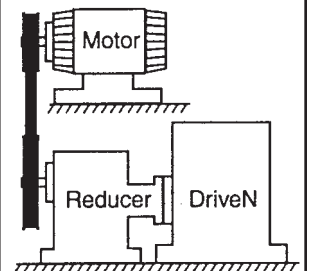
Belt Drive on Reducer Input Shaft

High-Speed Drive Survey and Energy Savings Worksheet

Customer Information

Company: _____ Distributor:_____

Address: _____ Phone:_____ Fax:_____

_____ E-mail:_____

Drive Information

I.D. of Drive (location, number, etc.) _____

Description of DriveN Equipment _____

Manufacturer of DriveN Equipment _____

Horsepower rating of Motor _____ DriveN HP Load (Peak)_____
(Normal)_____

Motor Frame Size_____ Motor Shaft Dia. _____ DriveN Shaft Dia_____

Speed:

DriveR RPM_____ RPM Measured with Contact or Strobe Tachometer ❏ Yes ❏ No

DriveN RPM_____ RPM Measured with Contact or Strobe Tachometer ❏ Yes ❏ No

Speed Ratio_____ Speed Up_____ or Speed Down_____

Center Distance: Minimum _____ Normal _____Maximum_____

Existing Drive Components: DriveR _____ DriveN_____

Belts_____ Belt Manufacturer_____

Ambient Conditions:

Temperature_____ Moisture_____ Oil, etc._____

Abrasives _____ Shock Load_____

Static Conductivity Required? ❏ Yes ❏ No

Maximum Sprocket Diameter (OD) and Width Limitations (for guard clearance):

DriveR: Max. OD_____Max. Width _____ **DriveN**: Max. OD _____ Max Width_____

Guard Description _____

Motor Mount:

Double Screw Base? ❏ Yes ❏ No Motor Mounted on Sheet Metal? ❏ Yes ❏ No

Adequate Structure? ❏ Yes ❏ No Floating/Pivot Motor Base? ❏ Yes ❏ No

Start Up Load:

% Motor Rating at Start Up_____ AC Inverter ❏ Yes ❏ No Soft Start? ❏ Yes ❏ No

Duty Cycle:

Number of Starts/Stops_____times per _____ (hour, day, week, etc.)

Energy Savings Information

Energy Cost per KW-Hour_____

Hours of Operation_____ Hours per Day _____ Days per Week_____Weeks per Year_____

Gates Corporation

Customer Information

Company: _____ Distributor:_____

Address: _____ Phone:_____ Fax:_____

_____ E-mail:_____

Application Summary

General Description:_____

Product Type: _____ Production Volume:_____

Design Parameters

DriveR:

Motor Type & Description: _____(Servo, Stepper, DC, AC, etc.)   Reversing: _____(Y/N)

Nominal Motor Torque/Power Output: _____   RPM: _____

Max/Peak Motor Torque/Power Output: _____   RPM: _____

Motor Stall Torque (If applicable): _____ Driver Rotation: _____ (CW / CCW / Rev)

DriveN's/Idlers: (Specify appropriate units for each field; in, mm / hp, kw / lb-ft, lb-in, N-m, etc.)

Description	X	Y	Pulley Diameter	Pitch	Sprocket Grooves	Inside/ Outside	rpm	Load (driveN)	Units	Conditions		Shaft Diameter
										#	% Time	
DriveR												

Note: For complex drive layouts use additional pages as needed

Drive Sketch

Idler Details

Slot Movement:

Min Position		Max Position	
X	Y	X	Y

Spring: [   ]

Pivoting Movement:

Pivot Point		Movement Angle	
X	Y	Min Deg	Max Deg

Spring: [   ]

Pivot Arm Radius: (in/mm):

Special Requirements

Product Design Life: _____ Belt Life: _____ Hours/Day: _____ Hours/Year:_____

Pulley Materials:

Prototype _____ Production_____

Ambient Conditions:

Temperature:_____ Moisture: _____ Oil: _____ Static Dissipation: _____ Abrasives:_____

Special Requirements:

Note: This worksheet may be used to survey multipoint drives. For more information on specifying shaft locations in multipoint drive layouts, see Engineering Section I-13 on page 104

Page _____   Of_____

Gates Poly Chain® GT® Carbon™ Belt System Specifications

To satisfy a wide range of loads, speeds and applications, Poly Chain GT Carbon Belts and Sprockets are made in a selection of sizes, capacities and dimensions.

The three principal dimensions of a belt are:

pitch   pitch length   width

Belt pitch is the distance in millimeters between two adjacent tooth centers as measured on the pitch line of the belt. Belt pitch length is the total length (circumference) in millimeters as measured along the pitch line. The theoretical pitch line of a Poly Chain GT Carbon Belt lies within the tensile member.

The three principal dimensions of a sprocket are:

pitch   number of sprocket grooves   width

On the sprocket, pitch is the distance between groove centers and is measured on the sprocket's pitch circle. See illustration at right. The pitch circle of the sprocket coincides with the pitch line of the belt mating with it. The sprocket's pitch diameter is always greater than its outside diameter.

Any Poly Chain GT Carbon Belt must be run with Poly Chain GT2 sprockets of the same pitch.

Gates Poly Chain GT Carbon belts are made in 8mm and 14mm pitches. Standard belt sizes are listed in the stock Poly Chain GT Carbon Belt Tables on page 15. Specifications for the 8mm and 14mm pitch belts list the belt pitch lengths, number of teeth, stock widths and appropriate weights. Using the information from these tables, a code for ordering a specific belt can be determined as shown in the following examples:

Belt Pitch (mm)	Belt Pitch Length (mm)	Belt Width (mm)
8MGT	640	12
14MGT	1190	37

Sprockets for Poly Chain GT Carbon belts are also made in 8mm and 14mm pitches. Standard sprocket sizes are listed in the Sprocket Specification Tables on Pages 66 through 75. For each Poly Chain GT Carbon Belt width, there is a table listing the sprocket code symbol, the applicable bushing style and pertinent dimensional information. The sprocket code symbol components are determined by using the following examples:

Pitch (mm)	Sprocket Designation & No. of Grooves	Width (mm)
8MX	48S*	12
14MX	36S*	37

*The "S" is used after the number of grooves to help identify it is a sprocket and avoid any confusion with the belt code.

The Bushing style to be used with a specific sprocket is listed in the Sprocket Specifications Tables. Reference to the Stock Bushings for Poly Chain GT2 plus Bore and Keyseat information will give you the data needed to order the proper bushing. For example,

Style 2517 Bushing with a 2-inch bore

Pitch (circular pitch)
Belt Pitch Line
Pitch Diameter
Outside Diameter
Sprocket Pitch Circle

8mm Pitch — Reference Dimensions

8mm (.315 in)
3.4mm (.134 in)
5.9mm (.232 in)
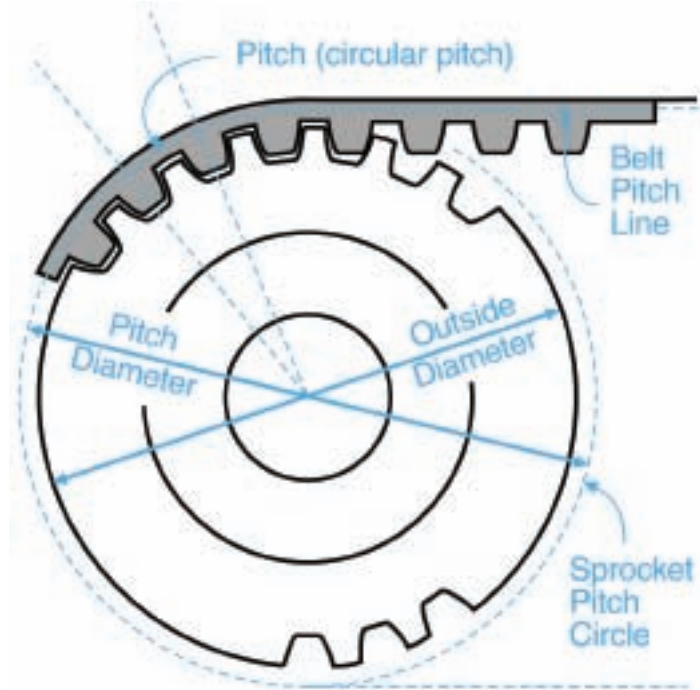
14mm Pitch — Reference Dimensions

14mm (.551 in)
6.0mm (.236 in)
10.2mm (.401 in)
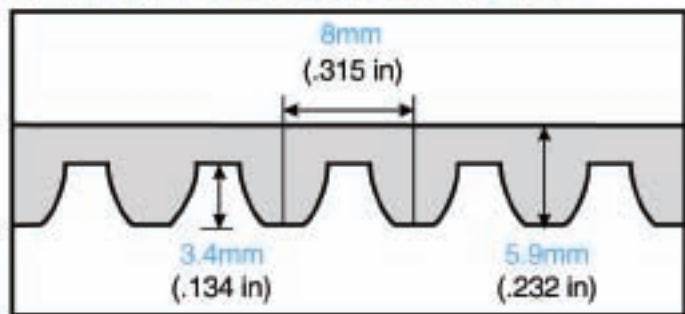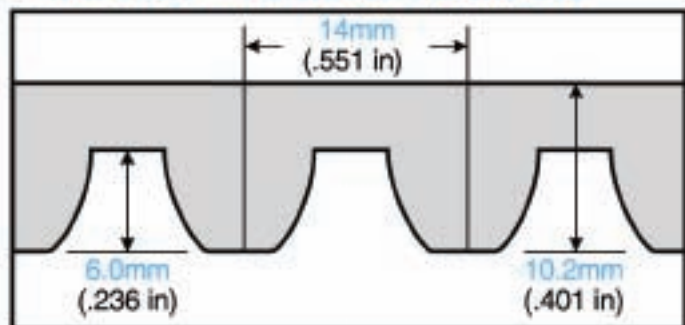
Gates Poly Chain® GT® Carbon™ Belt Standard Line

Stock Sizes

8mm Pitch Lengths

Description	No. of Teeth	Length	
		mm	in
8MGT-640	80	640	25.20
8MGT-720	90	720	28.35
8MGT-800	100	800	31.50
8MGT-896	112	896	35.28
8MGT-960	120	960	37.80
8MGT-1000	125	1000	39.37
8MGT-1040	130	1040	40.95
8MGT-1120	140	1120	44.09
8MGT-1200	150	1200	47.24
8MGT-1224	153	1224	48.19
8MGT-1280	160	1280	50.39
8MGT-1440	180	1440	56.69
8MGT-1600	200	1600	62.99
8MGT-1760	220	1760	69.29
8MGT-1792	224	1792	70.55
8MGT-2000	250	2000	78.74
8MGT-2200	275	2200	86.61
8MGT-2240	280	2240	88.19
8MGT-2400	300	2400	94.49
8MGT-2520	315	2520	99.21
8MGT-2600	325	2600	102.36
8MGT-2800	350	2800	110.24
8MGT-2840	355	2840	111.81
8MGT-3048	381	3048	120.00
8MGT-3200	400	3200	125.98
8MGT-3280	410	3280	129.13
8MGT-3600	450	3600	141.73
8MGT-4000	500	4000	157.48
8MGT-4400	550	4400	173.23
8MGT-4480	560	4480	176.38

14mm Pitch Lengths

Description	No. of Teeth	Length	
		mm	in
14MGT-994	71	994	39.13
14MGT-1120	80	1120	44.09
14MGT-1190	85	1190	46.85
14MGT-1260	90	1260	49.61
14MGT-1400	100	1400	55.12
14MGT-1568	112	1568	61.73
14MGT-1610	115	1610	63.84
14MGT-1750	125	1750	68.90
14MGT-1890	135	1890	74.41
14MGT-1960	140	1960	77.17
14MGT-2100	150	2100	82.68
14MGT-2240	160	2240	88.19
14MGT-2310	165	2310	90.95
14MGT-2380	170	2380	93.70
14MGT-2450	175	2450	96.46
14MGT-2520	180	2520	99.21
14MGT-2590	185	2590	101.97
14MGT-2660	190	2660	104.72
14MGT-2800	200	2800	110.24
14MGT-3136	224	3136	123.46
14MGT-3304	236	3304	130.08
14MGT-3360	240	3360	132.28
14MGT-3500	250	3500	137.80
14MGT-3850	275	3850	151.58
14MGT-3920	280	3920	154.33
14MGT-4326	309	4326	170.32
14MGT-4410	315	4410	173.62

8mm Widths

12mm (.47 in.)	21mm (.83 in.)	36mm (1.42 in.)	62mm (2.44 in.)

14mm Widths

20mm (.79 in.)	37mm (1.46 in.)	68mm (2.68 in.)	90mm (3.54 in.)	125mm (4.92 in.)

Long Length Poly Chain GT2 Belting Stock Widths

8mm Pitch Widths			14mm Pitch Widths	
12mm	21mm	36mm	20mm	37mm

Special widths available upon request.

Dimensions are given in inches and millimeters. Inches are shown in black type. Millimeters are shown in blue type.

Poly Chain® GT® Carbon™ Belt Drive Selection Procedure

Selection of a stock Poly Chain GT Carbon Belt Drive System involves these seven steps:

1. Calculate the Design Horsepower
2. Select the Belt Pitch
3. Select the Sprockets And Belt Length
4. Select the Proper Belt Width
5. Check and Specify Stock Drive Component
6. Installation and Take-up
7. Calculate Belt Tensioning Requirements

Sample Drive Selection Problem

A gear pump is to be driven by a 30 hp normal torque electric motor with an output speed of 1160 rpm. The gear pump is to be driven at 580 rpm ±5%. The center distance is to be approximately 30 inches, but can be altered ±3 inches, if necessary. The motor shaft has a 2 1/8 inch O.D. and the pump shaft has a 3 inch O.D. The pump will operate 16 hours a day, five days a week. The pump sprocket is limited to a maximum of 18 inches O.D. There are no unusual drive conditions. Design using Poly Chain GT Carbon.

Step 1 Calculate The Design Horsepower

Procedure

To calculate the design horsepower, first determine the relative severity, then select a service factor for the drive. Average hours per day of service also should be considered. Locate the power source and the driveN unit in the Service Factor Table on page 21. The design hp then is determined by multiplying the rated hp (usually the nameplate rating) by the service factor determined above.

> *Example*
> Using the Service Factor Table, the driveR can be found in the first group. Since the pump will run 16 hours per day, follow the continuous service column down to the driveN machines group for gear pumps. The recommended Service Factor is 1.7.
> *Design Horsepower = (Motor Load) x (Service Factor)*
> = (30) x (1.7)
> **Design Horsepower = 51 hp**

Step 2 Select The Belt Pitch

Procedure

Using the design hp and the rpm of the smaller sprocket, select the belt pitch from the Belt Pitch Selection Guide on page 19.

> *Example*
> Design Horsepower = **51 hp**
> Motor Speed = **1160 rpm**
>
> Locate 1160 rpm on the "RPM of Faster Shaft" scale on the left side of the chart and move over to where the 51 Design Horsepower line intersects. The intersection falls within the 8mm pitch range, but near the 14mm pitch area. Both 8mm and 14mm pitch drives should be considered.

Step 3 Select The Sprockets and Belt Length

Procedure

A. **Determine the speed ratio:** The speed ratio can be calculated by dividing the rpm of the faster shaft by the rpm of the slower shaft.

> *Example*
> Motor Speed = 1160 rpm
> Gear Pump Speed = 580 rpm
>
> $$Speed\ Ratio = \frac{rpm\ of\ faster\ shaft}{rpm\ of\ slower\ shaft} = \frac{1160}{580} = 2.00$$

B. Select the sprocket combination and belt length: Referring to the Stock Drive Selection Tables on pages 22-51, find the proper set of tables for the belt pitch (8mm or 14mm) found in Step 2. Looking down the speed ratio column, find the value which most closely matches the belt drive speed ratio required. Reading across the selected speed ratio line, find the stock DriveR and DriveN sprocket combination available. Reading further across, locate the belt drive center distance which most closely matches the target center distance specified. The belt sizes are listed across the top of the table for each corresponding center distance.

Multiple sprocket combinations will often be available for a given speed ratio. In such cases, selection of the proper drive combination will depend on the center distance required, minimum or maximum required sprocket diameters and the recommended minimum sprocket diameter for electric motors (see Table 4 on page 20).

After selecting possible sprocket combinations and center distances, record the belt length (top of column) and the length factor (bottom of column).

> *Example*
> Belt pitch = **8mm and 14mm**
> Belt Drive Speed Ratio = **2.00**
> Center Distance = **30.00 ±3.00 in.**

First, refer to the 8mm Pitch Stock Drive Selection Tables on pages 22-37. Reading down the Speed Ratio column locate 2.00 on page 32. There are six various sprocket combinations within the allowable center distance range. Of these, two are closest to the desired 30 inches. These are 25 to 50 groove, and 40 to 80 groove sprocket combinations. The minimum sprocket diameter of 6.1 inches for a 30 hp motor at 1160 rpm (See Table 4 on page 20) eliminates the 25 to 50 and 40 to 80 groove sprocket combinations. Therefore, an 8mm pitch drive will not be utilized for this drive system.

Now refer to the 14mm Pitch Stock Drive Selection Tables on pages 38-51. Reading down the Speed Ratio Column locate 2.00 on page 46 and 47. Several combinations are shown which will meet the 30 ± 3 inch center distance requirement. The maximum O.D. limit of 18 inches on the driveN sprocket eliminates the 56 to 112 groove combination. The preference for a center distance close to 30 inches would favor the 40 to 80 and 28 to 56 groove combinations. However, the 4.912 inch pitch diameter of the 28 groove sprocket is less than the recommended minimum diameter of 6.1 inches for the electric motor. So the **40 groove DriveR sprocket, 80 groove DriveN sprocket, and 14MGT-2380 (170 Tooth) belt** combination is selected. Also note that the **Belt Length Correction Factor is 1.01** with a **center distance of 30.11 inches.**

C. Check the belt speed. Do not exceed 6500 fpm (feet per minute) with stock sprockets. Belt Speed can be calculated using the following formula:

$$V \text{ (fpm)} = PD \text{ (inches)} \times \frac{\text{Speed (rpm)}}{3.82}$$

Example

14mm Pitch Drive with 40 groove driveR:

$$V = \frac{7.018 \times 1160}{3.82} = 2131.1 \text{ fpm}$$

Calculating the belt speed for the drive system being considered shows that the belt speed does not exceed 6500 fpm and can be considered further.

| Step 4 | Select The Proper Belt Width

Procedure

Horsepower Rating Tables are located on Pages 52-64 for standard belt pitches and stock belt widths. The base horsepower rating is given in the upper table as a function of the speed (rpm) of the faster shaft and diameter of the small sprocket. The speed of the faster shaft is located in the left hand column. Across the top are various stock sprocket sizes. The base horsepower rating of a given sprocket, at a specific speed, is the point at which the "rpm" row and the "sprocket size" column intersect.

This base horsepower rating must be corrected for speed down speed ratios, and for the belt length selected. The following formula should be used to calculate the total drive horsepower rating:

> ***Rated Drive Horsepower = [Rated Base Horsepower***
> ***+ Additional Horsepower for Speed Ratio]***
> ***x (Belt Length Correction Factor)***

Referring to the Additional Horsepower for Speed Ratio Factor Table, select a value based upon the drive operating speed and the speed ratio. This value should be added to the base horsepower rating. Multiply the corrected rating by the applicable Belt Length Correction Factor determined in Step 3B or from the Belt Length Correction Factor Table. The drive horsepower rating must equal or exceed design horsepower.

Where there are several choices, space limitations may control the selection. In addition, the following guidelines should be considered:

1. Larger sprockets result in reduced belt width.
2. Larger sprockets yield longer drive service life.
3. Avoid drives where the belt width exceeds the smaller sprocket diameter.
4. Avoid drives where center distance is greater than 8 times the diameter of the smaller sprocket. Refer to Engineering Section I-10 on page 103 for additional details.

Example
Refer to the 14mm pitch Horsepower Rating Table for 20mm Wide belts on page 60. Read down the left hand column for "RPM of Faster Shaft" and locate 1160 rpm. Read the sprocket sizes listed across the top of the table and locate the 40 groove, 5.614 inch P.D. column. Read across the "RPM" row and down the sprocket size column until the two intersect at a **Rated Base Horsepower of 67.0 hp**.

Next, referencing the Additional Horsepower for Speed Ratio Factor Table, find the listing for a 2.00 speed ratio. An **add-on factor of 3.53 hp** is listed. Then, referencing the Belt Length Correction Factor Table, find the listing for a 14MGT-2380 belt. A c**orrection factor of 1.01** is listed.

Calculate the Corrected Horsepower Rating:
Rated Drive Horsepower =
[Rated Base Horsepower + Added HP for Speed Ratio] x
(Belt Length Correction Factor) = [67.0 hp + 3.53 hp] x
(1.01)

Rated Drive Horsepower = 71.24 hp

The Drive Horsepower Rating of 71.24 hp exceeds the Design Horsepower target of 51 hp. So, a **belt width of 20mm** is acceptable.

| Step 5 | Check and Specify Stock Drive Components

Procedure

A. Check the sprockets selected in Steps 3 and 4 against the design requirements using the dimensions provided in the Sprocket Specification Tables on pages 66 through 75. Use flange diameters when checking against maximum diameter requirements.

Example
From the table on page 70, we find the 14MX-80S-20 driveN Sprocket has an overall flange diameter of 14.620 inches, which is less than the 18 inch maximum diameter specified.

B. Determine the bushing size required for each sprocket and check bore sizes by using the Sprocket Specification Tables. From the Stock Bushing tables on page 80, check the bore range and keyway dimensions against the design requirements.

Example
Also from the sprocket data on page 70 we note that the **14MX-40S-20 sprocket requires a 2517 bushing** and the **14MX-80S-20 sprocket requires a 3525 bushing**. In the bushing table on page 80, a **2517 bushing has a bore range of ½ to 2¹¹⁄₁₆ inches**, which includes the 2⅛ inch bore required for the driveR shaft. **The 3525 bushing has a bore range from 1⅜ to 3¹⁵⁄₁₆ inches**, which includes the 3 inch bore required for the driveN shaft.

C. Specify stock drive components using proper designations.

Example
Stock drive components are as follows:
1 ea. 14MGT-2380-20 Poly Chain GT Carbon belt
1 ea. 14MX-40S-20 driveR sprocket
1 ea. 2517 Bushing with a 2-1/8 in. bore
1 ea. 14MX-80S-20 driveN sprocket
1 ea. 3525 Bushing with a 3 in. bore

Poly Chain® GT® Carbon™ Belt Drive Selection Procedure (continued)

Step 6 Installation and Takeup

Procedure

Because of its high resistance to elongation (stretch), there is no need to re-tension and take up a Poly Chain GT Carbon belt drive. However, some adjustment must be provided when installing synchronous belt drives, as with nearly all power transmission systems, to account for manufacturing and assembly tolerances and initial tensioning requirements. Table 11 on page 110 lists the standard installation and take-up requirements for a given belt length. Additional center distance adjustment is needed when installing the belt over flanged sprockets (see Table 11 on page 110.)

Example
As can be seen in the Sprocket Specifications Table on page 70, both of the sprockets are flanged. Therefore, an additional allowance will be needed for installation over flanged sprockets. The total installation and tensioning allowances, are shown below.

Installation Allowance = 0.13 in. + 1.97 in. = 2.10 in.

Tensioning Allowance = 0.04 in.

Subtracting this from the nominal center distance value gives a minimum center distance necessary for belt installation of (30.11 inch – 2.10 inch) = 28.10 inches. From the problem statement, the center distance can be reduced down to 27.0 in. if necessary. So, **there is sufficient center distance adjustment to easily install the belt.**

Step 7 Calculate Belt Tensioning Requirements

Procedure

A. Calculate base static tension using appropriate Formula 14 on page 108. The m value is listed in Table 10 on page 108.

Example
Belt Pitch = 14mm
Belt Size = 14MGT-2380, 170 teeth (93.70 in. P.L.)
Belt Width = 20mm
DriveR Sprocket = 40 grooves (7.018 in. P.D.)
DriveR Shaft Speed = 1160 rpm
DriveN Sprocket = 80 grooves (14.036 in. P.D.)
Actual Center Distance = 30.11 in.
Design Horsepower = 51 hp

$$T_{ST} = \frac{20\ HP}{S} + mS^2,\ pounds$$

Where:

HP = Horsepower = **30 hp**

m = **0.92**, constant for 14mm pitch, 20mm wide belt from Table 10 on page 108

S = (Sprocket Diameter) x (Shaft Speed) / 3822.76

= (7.018 in.) x (1160 rpm) / 3822.76

S = **2.13**

$$T_{ST} = \frac{20\ (30)}{213} + (0.92)(2.13)^2$$

T_{ST} = 281.69 + 4.17 *lb.*

T_{ST} = 285.86 *lb.*

B. Calculate minimum and maximum deflection forces using Formulas 15 and 16 on page 117. The Y value is listed in Table 10.

Example
a. Calculate the belt span length

$$t = \sqrt{C^2 - \left(\frac{D - d}{2}\right)^2}$$

where:

t = Span Length, inches
C = Center Distance = **30.11 in.**
D = diameter of larger sprocket = **14.036 in. P.D.**
d = diameter of smaller sprocket = **7.018 in. P.D.**

$$t = \sqrt{30.11^2 - \left(\frac{14.036 - 7.018}{2}\right)^2}$$

t = 29.90 in.

b. Calculate Minimum and Maximum belt deflection forces referring to Formulas 15 and 16 on page 117:

$$Min\ Deflection\ Force = \frac{1.1T_{ST} + \left(\frac{t}{L}\right)Y}{16}$$

where:

T_{ST} = **285.86** pounds static tension as calculated before
t = **29.90** inches span length as calculated before
L = **93.70** inches belt length
Y = **230** (constant for Table 10 on page 108)

$$Min\ Deflection\ Force = \frac{1.1(285.86) + \left(\frac{29.90}{93.70}\right)(230)}{16}$$

Min. Deflection Force = 24.24 lb.

$$Max\ Deflection\ Force = \frac{1.2T_{ST} + \left(\frac{t}{L}\right)Y}{16}$$

$$Max\ Deflection\ Force = \frac{1.2(285.86) + \left(\frac{29.90}{93.70}\right)(230)}{16}$$

Max. Deflection Force = 26.03 lb.

Poly Chain® GT® Carbon™ Belt Drive Selection Procedure (continued)

Calculate Belt Tensioning Requirements

Procedure - continued

C. Determine the deflection distance using $^1/_{64}$" per inch of span length.

> **NOTE: Deflection forces must be applied evenly across the entire belt width.**
>
> *Example*
>
> $Deflection\ Distance = \dfrac{t}{64}$, *inches*
>
> $Deflection\ Distance = \dfrac{29.9}{64}$
>
> **Deflection Distance = 0.47 in.**

D. Applying The Tension:

At the center of span (t), apply a measured force perpendicular to the belt span large enough to deflect the belt 0.47 inch from its normal free position. Be sure that the force is applied evenly across the entire belt width. Note that one sprocket should be free to rotate during the belt tensioning process.

Compare the measured deflection force with the range of minimum to maximum deflection forces calculated before.

1. If the measured deflection force is less than the minimum recommended deflection force, the belt should be tightened.

2. If the measured deflection force is greater than the maximum recommended deflection force, the belt should be loosened.

> *Example*
> When the Gear Pump belt drive is properly tensioned,
> a belt span deflection of 0.47 in. should require a deflection
> force within the range of 22.34 to 24.12 lb.

Belt Pitch Selection Guide

RPM of Faster Shaft vs. Design Horsepower — 8mm PolyChain GT Carbon, 14mm PolyChain GT Carbon, Nonstandard
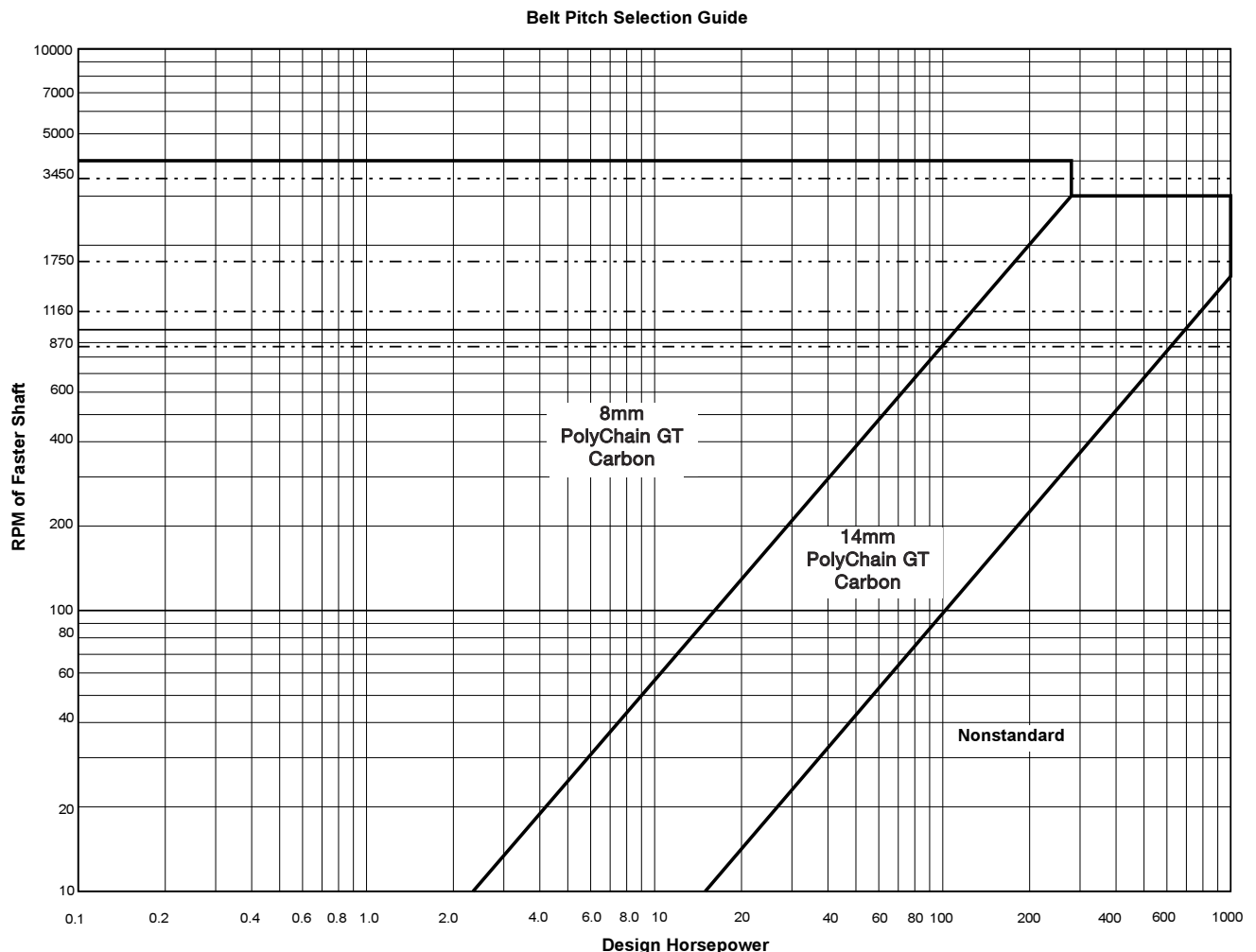
Table No. 4

Minimum Recommended Sprocket Pitch Diameters
for General Purpose Electric Motors

Synchronous Belt Drives

For a given motor horsepower and speed, the total belt pull is related to the motor sprocket size. As this size decreases, the total belt pull increases. Therefore, to limit the resultant load on motor shaft and bearings, NEMA lists minimum sprocket sizes for the various motors. The sprocket on the motor (DriveR sheave) should be at least as large as the diameter specified in Table No. 4.

Motor Horsepower	Motor RPM (60 Cycle and 50 Cycle Electric Motors)						Motor Horsepower
	575 485*	690 575*	870 725*	1160 950*	1750 1425*	3450 2850*	
½	—	—	2.0	—	—	—	½
¾	—	—	2.2	2.0	—	—	¾
1	2.7	2.3	2.2	2.2	2.0	—	1
1½	2.7	2.7	2.2	2.2	2.2	2.0	1½
2	3.4	2.7	2.7	2.2	2.2	2.2	2
3	4.1	3.4	2.7	2.7	2.2	2.2	3
5	4.1	4.1	3.4	2.7	2.7	2.2	5
7½	4.7	4.1	4.0	3.4	2.7	2.7	7½
10	5.4	4.7	4.0	4.0	3.4	2.7	10
15	6.1	5.4	4.7	4.0	4.0	4.0	15
20	7.4	6.1	5.4	4.7	4.0	2.2	20
25	8.1	7.4	6.1	5.4	4.0	4.0	25
30	9.0	8.1	6.1	6.1	4.7	—	30
40	9.0	9.0	7.4	6.1	5.4	—	40
50	9.9	9.0	7.6	7.4	6.1	—	50
60	10.8	9.9	9.0	7.2	6.7	—	60
75	12.6	11.7	8.6	9.0	7.7	—	75
100	16.2	13.5	10.8	9.0	7.7	—	100
125	18.0	16.2	13.5	10.8	9.5#	—	125
150	19.8	18.0	16.2	11.7	9.5	—	150
200	19.8	19.8	19.8	—	11.9	—	200
250	19.8	19.8	—	—	—	—	250
300	24.3	24.3	—	—	—	—	300

* These RPM are for 50 cycle electric motors.

\# Use 8.6 for Frame Number 444 T only.

Data in the white area of Table No. 4 are from NEMA Standard MG-1-14-42, June, 1972. Data in the gray area are from MG-1-14-43, January, 1968. The **blue** area is a composite of electric motor manufacturers data. They are generally conservative, and specific motors and bearings may permit the use of a smaller motor sprocket. Consult the motor manufacturer. See Engineering Section I-3 page 109.

Poly Chain® GT® Carbon™ Service Factors

DriveN Machine	DriveR					
The driveN machines listed below are representative samples only. Select a driveN machine whose load characteristics most closely approximate those of the machine being considered.	AC Motors: Normal Torque, Squirrel Cage, Synchronous, Split Phase, Inverter Controlled DC Motors: Shunt Wound, Stepper Motors Engines: Multiple Cylinder Internal Combustion.			AC Motors: High Torque, High Slip, Repulsion-Induction, Single Phase, Series Wound, Slip Ring. DC Motors: Series Wound, Compound Wound, Servo Motors. Engines: Single Cylinder Internal Combustion. Line shafts Clutches		
	Intermittent Service	Normal Service	Continuous Service	Intermittent Service	Normal Service	Continuous Service
	Up to 8 Hours Daily or Seasonal	8-16 Hours Daily	16-24 Hours Daily	Up to 8 Hours Daily or Seasonal	8-16 Hours Daily	16-24 Hours Daily
Display, Dispensing Equipment Instrumentation Measuring Equipment Medical Equipment Office, Projection Equipment	1.0	1.2	1.4	1.2	1.4	1.6
Appliances, Sweepers, Sewing Machines Screens, Oven Screens, Drum, Conical Woodworking Equipment: (Light) Band Saws, Drills, Lathes	1.1	1.3	1.5	1.3	1.5	1.7
Agitators for Liquids Conveyors: Belt, Light Package Drill Press, Lathes, Saws Laundry Machinery Woodworking Equipment: (Heavy) Circular Saws, Joiners, Planers	1.2	1.4	1.6	1.6	1.8	2.0
Agitators: Semi-liquid Compressors: Centrifugal Conveyor Belt: Coal, Ore, Sand Dough Mixers Line Shafts Machine Tools: Grinder, Shaper Boring Mill, Milling Machines Paper Machinery (except Pulpers) Presses, Punches, Shears Printing Machinery Pumps: Centrifugal, Gear Screens: Revolving, Vibratory	1.3	1.5	1.7	1.6	1.8	2.0
Brick Machinery (except Pug Mills) Conveyor: Apron, Pan, Bucket, Elevator Extractors, Washers Fans, Centrifugal Blowers Generators & Exciters Hoists Rubber Calendar, Mills, Extruders	1.4	1.6	1.8	1.8	2.0	2.2
Centrifuges Screw Conveyors Hammer Mills Paper Pulpers Textile Machinery	1.5	1.7	1.9	1.9	2.1	2.3
Blowers: Positive Displacement Mine Fans Pulverizers	1.6	1.8	2.0	2.0	2.2	2.4
Compressors, Reciprocating Crushers: Gyratory, Jaw, Roll Mills: Ball, Rod, Pebble, etc. Pumps, Reciprocating Saw Mill Equipment	1.7	1.9	2.1	2.1	2.3	2.5

Drive Selection Table

8mm Pitch Poly Chain® GT® Carbon™ Belts

DriveR No. of Grooves	DriveR Pitch Diameter (Inches)	DriveN No. of Grooves	DriveN Pitch Diameter (Inches)	Speed Ratio	8MGT-640 PL 25.20 80 Teeth	8MGT-720 PL 28.35 90 Teeth	8MGT-800 PL 31.50 100 Teeth	8MGT-896 PL 35.28 112 Teeth	8MGT-960 PL 37.80 120 Teeth	8MGT-1000 PL 39.37 125 Teeth	8MGT-1040 PL 40.94 130 Teeth	8MGT-1120 PL 44.09 140 Teeth	8MGT-1200 PL 47.24 150 Teeth	8MGT-1224 PL 48.19 153 Teeth	8MGT-1280 PL 50.39 160 Teeth	8MGT-1440 PL 56.69 180 Teeth	8MGT-1600 PL 62.99 200 Teeth	8MGT-1760 PL 69.29 220 Teeth
22	2.206	22	2.206	1.000	9.13	10.71	12.28	14.17	15.43	16.22	17.00	18.58	20.15	20.63	21.73	24.88	28.03	31.18
25	2.506	25	2.506	1.000	8.66	10.24	11.81	13.70	14.96	15.75	16.53	18.11	19.68	20.16	21.26	24.41	27.56	30.71
26	2.607	26	2.607	1.000	8.50	10.08	11.65	13.54	14.80	15.59	16.37	17.95	19.52	20.00	21.10	24.25	27.40	30.55
27	2.707	27	2.707	1.000	8.35	9.92	11.50	13.39	14.65	15.43	16.22	17.79	19.37	19.84	20.94	24.09	27.24	30.39
28	2.807	28	2.807	1.000	8.19	9.77	11.34	13.23	14.49	15.28	16.06	17.64	19.21	19.69	20.79	23.94	27.09	30.24
29	2.907	29	2.907	1.000	8.03	9.61	11.18	13.07	14.33	15.12	15.90	17.48	19.05	19.53	20.63	23.78	26.93	30.08
30	3.008	30	3.008	1.000	7.88	9.45	11.03	12.92	14.18	14.96	15.75	17.32	18.90	19.37	20.47	23.62	26.77	29.92
31	3.108	31	3.108	1.000	7.72	9.29	10.87	12.76	14.02	14.80	15.59	17.16	18.74	19.21	20.31	23.46	26.61	29.76
32	3.208	32	3.208	1.000	7.56	9.14	10.71	12.60	13.86	14.65	15.43	17.01	18.58	19.06	20.16	23.31	26.46	29.61
33	3.308	33	3.308	1.000	7.40	8.98	10.55	12.44	13.70	14.49	15.27	16.85	18.42	18.90	20.00	23.15	26.30	29.45
34	3.409	34	3.409	1.000	7.25	8.82	10.40	12.29	13.55	14.33	15.12	16.69	18.27	18.74	19.84	22.99	26.14	29.29
35	3.509	35	3.509	1.000	7.09	8.66	10.24	12.13	13.39	14.17	14.96	16.53	18.11	18.58	19.68	22.83	25.98	29.13
36	3.609	36	3.609	1.000	6.93	8.51	10.08	11.97	13.23	14.02	14.80	16.38	17.95	18.43	19.53	22.68	25.83	28.98
37	3.709	37	3.709	1.000	6.77	8.35	9.92	11.81	13.07	13.86	14.64	16.22	17.79	18.27	19.37	22.52	25.67	28.82
38	3.810	38	3.810	1.000	6.62	8.19	9.77	11.66	12.92	13.70	14.49	16.06	17.64	18.11	19.21	22.36	25.51	28.66
39	3.910	39	3.910	1.000	6.46	8.03	9.61	11.50	12.76	13.54	14.33	15.90	17.48	17.95	19.05	22.20	25.35	28.50
40	4.010	40	4.010	1.000	6.30	7.88	9.45	11.34	12.60	13.39	14.17	15.75	17.32	17.80	18.90	22.05	25.20	28.35
41	4.110	41	4.110	1.000	6.14	7.72	9.29	11.18	12.44	13.23	14.01	15.59	17.16	17.64	18.74	21.89	25.04	28.19
42	4.211	42	4.211	1.000	5.99	7.56	9.14	11.03	12.29	13.07	13.86	15.43	17.01	17.48	18.58	21.73	24.88	28.03
45	4.511	45	4.511	1.000	5.51	7.09	8.66	10.55	11.81	12.60	13.38	14.96	16.53	17.01	18.11	21.26	24.41	27.56
48	4.812	48	4.812	1.000		6.62	8.19	10.08	11.34	12.13	12.91	14.49	16.06	16.54	17.64	20.79	23.94	27.09
50	5.013	50	5.013	1.000		6.30	7.88	9.77	11.03	11.81	12.60	14.17	15.75	16.22	17.32	20.47	23.62	26.77
53	5.314	53	5.314	1.000		5.83	7.40	9.29	10.55	11.34	12.12	13.70	15.27	15.75	16.85	20.00	23.15	26.30
56	5.614	56	5.614	1.000			6.93	8.82	10.08	10.87	11.65	13.23	14.80	15.28	16.38	19.53	22.68	25.83
60	6.015	60	6.015	1.000				8.19	9.45	10.24	11.02	12.60	14.17	14.65	15.75	18.90	22.05	25.20
63	6.316	63	6.316	1.000				7.72	8.98	9.76	10.55	12.12	13.70	14.17	15.27	18.42	21.57	24.72
67	6.717	67	6.717	1.000					8.35	9.13	9.92	11.49	13.07	13.54	14.64	17.79	20.94	24.09
71	7.118	71	7.118	1.000					7.72	8.50	9.29	10.86	12.44	12.91	14.01	17.16	20.31	23.46
75	7.519	75	7.519	1.000							8.66	10.23	11.81	12.28	13.38	16.53	19.68	22.83
80	8.020	80	8.020	1.000								9.45	11.02	11.50	12.60	15.75	18.90	22.05
41	4.110	42	4.211	1.024	6.06	7.64	9.21	11.10	12.36	13.15	13.93	15.51	17.08	17.56	18.66	21.81	24.96	28.11
40	4.010	41	4.110	1.025	6.22	7.80	9.37	11.26	12.52	13.31	14.09	15.67	17.24	17.72	18.82	21.97	25.12	28.27
38	3.810	39	3.910	1.026	6.54	8.11	9.69	11.58	12.84	13.62	14.41	15.98	17.56	18.03	19.13	22.28	25.43	28.58
39	3.910	40	4.010	1.026	6.38	7.95	9.53	11.42	12.68	13.46	14.25	15.82	17.40	17.87	18.97	22.12	25.27	28.42
37	3.709	38	3.810	1.027	6.69	8.27	9.84	11.73	12.99	13.78	14.56	16.14	17.71	18.19	19.29	22.44	25.59	28.74
36	3.609	37	3.709	1.028	6.85	8.43	10.00	11.89	13.15	13.94	14.72	16.30	17.87	18.35	19.45	22.60	25.75	28.90
34	3.409	35	3.509	1.029	7.17	8.74	10.32	12.21	13.47	14.25	15.04	16.61	18.19	18.66	19.76	22.91	26.06	29.21
35	3.509	36	3.609	1.029	7.01	8.58	10.16	12.05	13.31	14.09	14.88	16.45	18.03	18.50	19.60	22.75	25.90	29.05
33	3.308	34	3.409	1.030	7.32	8.90	10.47	12.36	13.62	14.41	15.19	16.77	18.34	18.82	19.92	23.07	26.22	29.37
32	3.208	33	3.308	1.031	7.48	9.06	10.63	12.52	13.78	14.57	15.35	16.93	18.50	18.98	20.08	23.23	26.38	29.53
31	3.108	32	3.208	1.032	7.64	9.21	10.79	12.68	13.94	14.72	15.51	17.08	18.66	19.13	20.23	23.38	26.53	29.68
30	3.008	31	3.108	1.033	7.80	9.37	10.95	12.84	14.10	14.88	15.67	17.24	18.82	19.29	20.39	23.54	26.69	29.84
29	2.907	30	3.008	1.034	7.95	9.53	11.10	12.99	14.25	15.04	15.82	17.40	18.97	19.45	20.55	23.70	26.85	30.00
28	2.807	29	2.907	1.036	8.11	9.69	11.26	13.15	14.41	15.20	15.98	17.56	19.13	19.61	20.71	23.86	27.01	30.16
27	2.707	28	2.807	1.037	8.27	9.84	11.42	13.31	14.57	15.35	16.14	17.71	19.29	19.76	20.86	24.01	27.16	30.31
26	2.607	27	2.707	1.038	8.43	10.00	11.58	13.47	14.73	15.51	16.30	17.87	19.45	19.92	21.02	24.17	27.32	30.47
25	2.506	26	2.607	1.040	8.58	10.16	11.73	13.62	14.88	15.67	16.45	18.03	19.60	20.08	21.18	24.33	27.48	30.63
48	4.812	50	5.013	1.042		6.46	8.03	9.92	11.18	11.97	12.75	14.33	15.90	16.38	17.48	20.63	23.78	26.93
40	4.010	42	4.211	1.050	6.14	7.72	9.29	11.18	12.44	13.23	14.01	15.59	17.16	17.64	18.74	21.89	25.04	28.19
60	6.015	63	6.316	1.050				7.95	9.21	10.00	10.78	12.36	13.93	14.41	15.51	18.66	21.81	24.96
39	3.910	41	4.110	1.051	6.30	7.88	9.45	11.34	12.60	13.39	14.17	15.75	17.32	17.80	18.90	22.05	25.20	28.35
38	3.810	40	4.010	1.053	6.46	8.03	9.61	11.50	12.76	13.54	14.33	15.90	17.48	17.95	19.05	22.20	25.35	28.50
37	3.709	39	3.910	1.054	6.62	8.19	9.77	11.66	12.92	13.70	14.49	16.06	17.64	18.11	19.21	22.36	25.51	28.66
36	3.609	38	3.810	1.056	6.77	8.35	9.92	11.81	13.07	13.86	14.64	16.22	17.79	18.27	19.37	22.52	25.67	28.82
71	7.118	75	7.519	1.056						8.19	8.97	10.55	12.12	12.60	13.70	16.85	20.00	23.15
35	3.509	37	3.709	1.057	6.93	8.51	10.08	11.97	13.23	14.02	14.80	16.38	17.95	18.43	19.53	22.68	25.83	28.98
53	5.314	56	5.614	1.057			7.17	9.06	10.32	11.10	11.89	13.46	15.04	15.51	16.61	19.76	22.91	26.06
34	3.409	36	3.609	1.059	7.09	8.66	10.24	12.13	13.39	14.17	14.96	16.53	18.11	18.58	19.68	22.83	25.98	29.13
50	5.013	53	5.314	1.060		6.06	7.64	9.53	10.79	11.57	12.36	13.93	15.51	15.98	17.08	20.23	23.38	26.53
67	6.717	71	7.118	1.060					8.03	8.82	9.60	11.18	12.75	13.23	14.33	17.48	20.63	23.78
33	3.308	35	3.509	1.061	7.25	8.82	10.40	12.29	13.55	14.33	15.12	16.69	18.27	18.74	19.84	22.99	26.14	29.29
32	3.208	34	3.409	1.063	7.40	8.98	10.55	12.44	13.70	14.49	15.27	16.85	18.42	18.90	20.00	23.15	26.30	29.45
63	6.316	67	6.717	1.063				7.40	8.66	9.45	10.23	11.81	13.38	13.86	14.96	18.11	21.26	24.41
31	3.108	33	3.308	1.065	7.56	9.14	10.71	12.60	13.86	14.65	15.43	17.01	18.58	19.06	20.16	23.31	26.46	29.61
30	3.008	32	3.208	1.067	7.72	9.29	10.87	12.76	14.02	14.80	15.59	17.16	18.74	19.21	20.31	23.46	26.61	29.76
45	4.511	48	4.812	1.067	5.28	6.85	8.43	10.32	11.58	12.36	13.15	14.72	16.30	16.77	17.87	21.02	24.17	27.32
75	7.519	80	8.020	1.067								9.84	11.41	11.89	12.99	16.14	19.29	22.44
29	2.907	31	3.108	1.069	7.88	9.45	11.03	12.92	14.18	14.96	15.75	17.32	18.90	19.37	20.47	23.62	26.77	29.92
28	2.807	30	3.008	1.071	8.03	9.61	11.18	13.07	14.33	15.12	15.90	17.48	19.05	19.53	20.63	23.78	26.93	30.08
42	4.211	45	4.511	1.071	5.75	7.32	8.90	10.79	12.05	12.83	13.62	15.19	16.77	17.24	18.34	21.49	24.64	27.79
56	5.614	60	6.015	1.071			6.61	8.50	9.76	10.55	11.33	12.91	14.49	14.96	16.06	19.21	22.36	25.51
27	2.707	29	2.907	1.074	8.19	9.77	11.34	13.23	14.49	15.28	16.06	17.64	19.21	19.69	20.79	23.94	27.09	30.24
26	2.607	28	2.807	1.077	8.35	9.92	11.50	13.39	14.65	15.43	16.22	17.79	19.37	19.84	20.94	24.09	27.24	30.39
39	3.910	42	4.211	1.077	6.22	7.80	9.37	11.26	12.52	13.31	14.09	15.67	17.24	17.72	18.82	21.97	25.12	28.27
38	3.810	41	4.110	1.079	6.38	7.95	9.53	11.42	12.68	13.46	14.25	15.82	17.40	17.87	18.97	22.12	25.27	28.42
25	2.506	27	2.707	1.080	8.51	10.08	11.66	13.55	14.81	15.59	16.38	17.95	19.53	20.00	21.10	24.25	27.40	30.55
37	3.709	40	4.010	1.081	6.54	8.11	9.69	11.58	12.84	13.62	14.41	15.98	17.56	18.03	19.13	22.28	25.43	28.58
				Length Factor*	0.79	0.83	0.87	0.91	0.94	0.96	0.97	1.00	1.03	1.03	1.05	1.10	1.14	1.17

Note: 26, 27, 29 and 31 groove sprockets are only available as stock products in 12 and 21 mm widths. 33, 35, 37, 39 and 41 groove sprockets are only available as stock products in 12, 21, and 36 mm widths.
Check sprocket specification tables on pages 74 and 75 for stainless steel and nickel plated sprocket availability.
* This length factor must be used to determine the proper belt width.

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8MGT-1792 PL 70.55 224 Teeth	8MGT-2000 PL 78.74 250 Teeth	8MGT-2200 PL 86.61 275 Teeth	8MGT-2240 PL 88.19 280 Teeth	8MGT-2400 PL 94.49 300 Teeth	8MGT-2520 PL 99.21 315 Teeth	8MGT-2600 PL 102.36 325 Teeth	8MGT-2800 PL 110.24 350 Teeth	8MGT-2840 PL 111.81 355 Teeth	8MGT-3048 PL 120.00 381 Teeth	8MGT-3200 PL 125.98 400 Teeth	8MGT-3280 PL 129.13 410 Teeth	8MGT-3600 PL 141.73 450 Teeth	8MGT-4000 PL 157.48 500 Teeth	8MGT-4400 PL 173.23 550 Teeth	8MGT-4480 PL 176.38 560 Teeth	Speed Ratio	DriveR Number of Grooves	DriveN Number of Grooves
31.81	35.90	39.84	40.63	43.78	46.14	47.71	51.65	52.44	56.53	59.52	61.10	67.40	75.27	83.15	84.72	1.000	22	22
31.34	35.43	39.37	40.16	43.31	45.67	47.24	51.18	51.97	56.06	59.05	60.63	66.93	74.80	82.68	84.25	1.000	25	25
31.18	35.27	39.21	40.00	43.15	45.51	47.08	51.02	51.81	55.90	58.89	60.47	66.77	74.64	82.52	84.09	1.000	26	26
31.02	35.12	39.05	39.84	42.99	45.35	46.93	50.87	51.65	55.75	58.74	60.31	66.61	74.49	82.36	83.94	1.000	27	27
30.87	34.96	38.90	39.69	42.84	45.20	46.77	50.71	51.50	55.59	58.58	60.16	66.46	74.33	82.21	83.78	1.000	28	28
30.71	34.80	38.74	39.53	42.68	45.04	46.61	50.55	51.34	55.43	58.42	60.00	66.30	74.17	82.05	83.62	1.000	29	29
30.55	34.65	38.58	39.37	42.52	44.88	46.46	50.40	51.18	55.28	58.27	59.84	66.14	74.02	81.89	83.47	1.000	30	30
30.39	34.49	38.42	39.21	42.36	44.72	46.30	50.24	51.02	55.12	58.11	59.68	65.98	73.86	81.73	83.31	1.000	31	31
30.24	34.33	38.27	39.06	42.21	44.57	46.14	50.08	50.87	54.96	57.95	59.53	65.83	73.70	81.58	83.15	1.000	32	32
30.08	34.17	38.11	38.90	42.05	44.41	45.98	49.92	50.71	54.80	57.79	59.37	65.67	73.54	81.42	82.99	1.000	33	33
29.92	34.02	37.95	38.74	41.89	44.25	45.83	49.77	50.55	54.65	57.64	59.21	65.51	73.39	81.26	82.84	1.000	34	34
29.76	33.86	37.79	38.58	41.73	44.09	45.67	49.61	50.39	54.49	57.48	59.05	65.35	73.23	81.10	82.68	1.000	35	35
29.61	33.70	37.64	38.43	41.58	43.94	45.51	49.45	50.24	54.33	57.32	58.90	65.20	73.07	80.95	82.52	1.000	36	36
29.45	33.54	37.48	38.27	41.42	43.78	45.35	49.29	50.08	54.17	57.16	58.74	65.04	72.91	80.79	82.36	1.000	37	37
29.29	33.39	37.32	38.11	41.26	43.62	45.20	49.14	49.92	54.02	57.01	58.58	64.88	72.76	80.63	82.21	1.000	38	38
29.13	33.23	37.16	37.95	41.10	43.46	45.04	48.98	49.76	53.86	56.85	58.42	64.72	72.60	80.47	82.05	1.000	39	39
28.98	33.07	37.01	37.80	40.95	43.31	44.88	48.82	49.61	53.70	56.69	58.27	64.57	72.44	80.32	81.89	1.000	40	40
28.82	32.91	36.85	37.64	40.79	43.15	44.72	48.66	49.45	53.54	56.53	58.11	64.41	72.28	80.16	81.73	1.000	41	41
28.66	32.76	36.69	37.48	40.63	42.99	44.57	48.51	49.29	53.39	56.38	57.95	64.25	72.13	80.00	81.58	1.000	42	42
28.19	32.28	36.22	37.01	40.16	42.52	44.09	48.03	48.82	52.91	55.90	57.48	63.78	71.65	79.53	81.10	1.000	45	45
27.72	31.81	35.75	36.54	39.69	42.05	43.62	47.56	48.35	52.44	55.43	57.01	63.31	71.18	79.06	80.63	1.000	48	48
27.40	31.50	35.43	36.22	39.37	41.73	43.31	47.25	48.03	52.13	55.12	56.69	62.99	70.87	78.74	80.32	1.000	50	50
26.93	31.02	34.96	35.75	38.90	41.26	42.83	46.77	47.56	51.65	54.64	56.22	62.52	70.39	78.27	79.84	1.000	53	53
26.46	30.55	34.49	35.28	38.43	40.79	42.36	46.30	47.09	51.18	54.17	55.75	62.05	69.92	77.80	79.37	1.000	56	56
25.83	29.92	33.86	34.65	37.80	40.16	41.73	45.67	46.46	50.55	53.54	55.12	61.42	69.29	77.17	78.74	1.000	60	60
25.35	29.45	33.38	34.17	37.32	39.68	41.26	45.20	45.98	50.08	53.07	54.64	60.94	68.82	76.69	78.27	1.000	63	63
24.72	28.82	32.75	33.54	36.69	39.05	40.63	44.57	45.35	49.45	52.44	54.01	60.31	68.19	76.06	77.64	1.000	67	67
24.09	28.19	32.12	32.91	36.06	38.42	40.00	43.94	44.72	48.82	51.81	53.38	59.68	67.56	75.43	77.01	1.000	71	71
23.46	27.56	31.49	32.28	35.43	37.79	39.37	43.31	44.09	48.19	51.18	52.75	59.05	66.93	74.80	76.38	1.000	75	75
22.68	26.77	30.71	31.50	34.65	37.01	38.58	42.52	43.31	47.40	50.39	51.97	58.27	66.14	74.02	75.59	1.000	80	80
28.74	32.83	36.77	37.56	40.71	43.07	44.64	48.58	49.37	53.46	56.45	58.03	64.33	72.20	80.08	81.65	1.024	41	42
28.90	32.99	36.93	37.72	40.87	43.23	44.80	48.74	49.53	53.62	56.61	58.19	64.49	72.36	80.24	81.81	1.025	40	41
29.21	33.31	37.24	38.03	41.18	43.54	45.12	49.06	49.84	53.94	56.93	58.50	64.80	72.68	80.55	82.13	1.026	38	39
29.05	33.15	37.08	37.87	41.02	43.38	44.96	48.90	49.68	53.78	56.77	58.34	64.64	72.52	80.39	81.97	1.026	39	40
29.37	33.46	37.40	38.19	41.34	43.70	45.27	49.21	50.00	54.09	57.08	58.66	64.96	72.83	80.71	82.28	1.027	37	38
29.53	33.62	37.56	38.35	41.50	43.86	45.43	49.37	50.16	54.25	57.24	58.82	65.12	72.99	80.87	82.44	1.028	36	37
29.84	33.94	37.87	38.66	41.81	44.17	45.75	49.69	50.47	54.57	57.56	59.13	65.43	73.31	81.18	82.76	1.029	34	35
29.68	33.78	37.71	38.50	41.65	44.01	45.59	49.53	50.31	54.41	57.40	58.97	65.27	73.15	81.02	82.60	1.029	35	36
30.00	34.09	38.03	38.82	41.97	44.33	45.90	49.84	50.63	54.72	57.71	59.29	65.59	73.46	81.34	82.91	1.030	33	34
30.16	34.25	38.19	38.98	42.13	44.49	46.06	50.00	50.79	54.88	57.87	59.45	65.75	73.62	81.50	83.07	1.031	32	33
30.31	34.41	38.34	39.13	42.28	44.64	46.22	50.16	50.94	55.04	58.03	59.60	65.90	73.78	81.65	83.23	1.032	31	32
30.47	34.57	38.50	39.29	42.44	44.80	46.38	50.32	51.10	55.20	58.19	59.76	66.06	73.94	81.81	83.39	1.033	30	31
30.63	34.72	38.66	39.45	42.60	44.96	46.53	50.47	51.26	55.35	58.34	59.92	66.22	74.09	81.97	83.54	1.034	29	30
30.79	34.88	38.82	39.61	42.76	45.12	46.69	50.63	51.42	55.51	58.50	60.08	66.38	74.25	82.13	83.70	1.036	28	29
30.94	35.04	38.97	39.76	42.91	45.27	46.85	50.79	51.57	55.67	58.66	60.23	66.53	74.41	82.28	83.86	1.037	27	28
31.10	35.20	39.13	39.92	43.07	45.43	47.01	50.95	51.73	55.83	58.82	60.39	66.69	74.57	82.44	84.02	1.038	26	27
31.26	35.35	39.29	40.08	43.23	45.59	47.16	51.10	51.89	55.98	58.97	60.55	66.85	74.72	82.60	84.17	1.040	25	26
27.56	31.65	35.59	36.38	39.53	41.89	43.46	47.40	48.19	52.28	55.27	56.85	63.15	71.02	78.90	80.47	1.042	48	50
28.82	32.91	36.85	37.64	40.79	43.15	44.72	48.66	49.45	53.54	56.53	58.11	64.41	72.28	80.16	81.73	1.050	40	42
25.59	29.68	33.62	34.41	37.56	39.92	41.49	45.44	46.22	50.32	53.31	54.88	61.18	69.06	76.93	78.51	1.050	60	63
28.98	33.07	37.01	37.80	40.95	43.31	44.88	48.82	49.61	53.70	56.69	58.27	64.57	72.44	80.32	81.89	1.051	39	41
29.13	33.23	37.16	37.95	41.10	43.46	45.04	48.98	49.76	53.86	56.85	58.42	64.72	72.60	80.47	82.05	1.053	38	40
29.29	33.39	37.32	38.11	41.26	43.62	45.20	49.14	49.92	54.02	57.01	58.58	64.88	72.76	80.63	82.21	1.054	37	39
29.45	33.54	37.48	38.27	41.42	43.78	45.35	49.29	50.08	54.17	57.16	58.74	65.04	72.91	80.79	82.36	1.056	36	38
23.78	27.87	31.81	32.60	35.75	38.11	39.68	43.62	44.41	48.50	51.49	53.07	59.37	67.24	75.12	76.69	1.056	71	75
29.61	33.70	37.64	38.43	41.58	43.94	45.51	49.45	50.24	54.33	57.32	58.90	65.20	73.07	80.95	82.52	1.057	35	37
26.69	30.79	34.72	35.51	38.66	41.02	42.60	46.54	47.32	51.42	54.41	55.98	62.28	70.16	78.03	79.61	1.057	53	56
29.76	33.86	37.79	38.58	41.73	44.09	45.67	49.61	50.39	54.49	57.48	59.05	65.35	73.23	81.10	82.68	1.059	34	36
27.16	31.26	35.19	35.98	39.13	41.49	43.07	47.01	47.79	51.89	54.88	56.45	62.75	70.63	78.50	80.08	1.060	50	53
24.41	28.50	32.44	33.23	36.38	38.74	40.31	44.25	45.04	49.13	52.12	53.70	60.00	67.87	75.75	77.32	1.060	67	71
29.92	34.02	37.95	38.74	41.89	44.25	45.83	49.77	50.55	54.65	57.64	59.21	65.51	73.39	81.26	82.84	1.061	33	35
30.08	34.17	38.11	38.90	42.05	44.41	45.98	49.92	50.71	54.80	57.79	59.37	65.67	73.54	81.42	82.99	1.063	32	34
25.04	29.13	33.07	33.86	37.01	39.37	40.94	44.88	45.67	49.76	52.75	54.33	60.63	68.50	76.38	77.95	1.063	63	67
30.24	34.33	38.27	39.06	42.21	44.57	46.14	50.08	50.87	54.96	57.95	59.53	65.83	73.70	81.58	83.15	1.065	31	33
30.39	34.49	38.42	39.21	42.36	44.72	46.30	50.24	51.02	55.12	58.11	59.68	65.98	73.86	81.73	83.31	1.067	30	32
27.95	32.05	35.98	36.77	39.92	42.28	43.86	47.80	48.58	52.68	55.67	57.24	63.54	71.42	79.29	80.87	1.067	45	48
23.07	27.16	31.10	31.89	35.04	37.40	38.97	42.91	43.70	47.80	50.79	52.36	58.66	66.54	74.41	75.99	1.067	75	80
30.55	34.65	38.58	39.37	42.52	44.88	46.46	50.40	51.18	55.28	58.27	59.84	66.14	74.02	81.89	83.47	1.069	29	31
30.71	34.80	38.74	39.53	42.68	45.04	46.61	50.55	51.34	55.43	58.42	60.00	66.30	74.17	82.05	83.62	1.071	28	30
28.42	32.52	36.45	37.24	40.39	42.75	44.33	48.27	49.05	53.15	56.14	57.71	64.01	71.89	79.76	81.34	1.071	42	45
26.14	30.24	34.17	34.96	38.11	40.47	42.05	45.99	46.77	50.87	53.86	55.43	61.73	69.61	77.48	79.06	1.071	56	60
30.87	34.96	38.90	39.69	42.84	45.20	46.77	50.71	51.50	55.59	58.58	60.16	66.46	74.33	82.21	83.78	1.074	27	29
31.02	35.12	39.05	39.84	42.99	45.35	46.93	50.87	51.65	55.75	58.74	60.31	66.61	74.49	82.36	83.94	1.077	26	28
28.90	32.99	36.93	37.72	40.87	43.23	44.80	48.74	49.53	53.62	56.61	58.19	64.49	72.36	80.24	81.81	1.077	39	42
29.05	33.15	37.08	37.87	41.02	43.38	44.96	48.90	49.68	53.78	56.77	58.34	64.64	72.52	80.39	81.97	1.079	38	41
31.18	35.28	39.21	40.00	43.15	45.51	47.09	51.03	51.81	55.91	58.90	60.47	66.77	74.65	82.52	84.10	1.080	25	27
29.21	33.31	37.24	38.03	41.18	43.54	45.12	49.06	49.84	53.94	56.93	58.50	64.80	72.68	80.55	82.13	1.081	37	40
1.18	1.22	1.26	1.26	1.29	1.31	1.32	1.35	1.36	1.38	1.40	1.41	1.45	1.49	1.52	1.53	Length Factor*		

Note: 26, 27, 29 and 31 groove sprockets are only available as stock products in 12 and 21 mm widths. 33, 35, 37, 39 and 41 groove sprockets are only available as stock products in 12, 21, and 36 mm widths. Check sprocket specification tables on pages 74 and 75 for stainless steel and nickel plated sprocket availability.
* This length factor must be used to determine the proper belt width.

Drive Selection Table

8mm Pitch Poly Chain® GT® Carbon™ Belts

DriveR No. of Grooves	DriveR Pitch Dia. (In)	DriveN No. of Grooves	DriveN Pitch Dia. (In)	Speed Ratio	8MGT-640 P.L. 25.20 80 Teeth	8MGT-720 P.L. 28.35 90 Teeth	8MGT-800 P.L. 31.50 100 Teeth	8MGT-896 P.L. 35.28 112 Teeth	8MGT-960 P.L. 37.80 120 Teeth	8MGT-1000 P.L. 39.37 125 Teeth	8MGT-1040 P.L. 40.94 130 Teeth	8MGT-1120 P.L. 44.09 140 Teeth	8MGT-1200 P.L. 47.24 150 Teeth	8MGT-1224 P.L. 48.19 153 Teeth	8MGT-1280 P.L. 50.39 160 Teeth	8MGT-1440 P.L. 56.69 180 Teeth	8MGT-1600 P.L. 62.99 200 Teeth	8MGT-1760 P.L. 69.29 220 Teeth
36	3.609	39	3.910	1.083	6.69	8.27	9.84	11.73	12.99	13.78	14.56	16.14	17.71	18.19	19.29	22.44	25.59	28.74
35	3.509	38	3.810	1.086	6.85	8.43	10.00	11.89	13.15	13.94	14.72	16.30	17.87	18.35	19.45	22.60	25.75	28.90
34	3.409	37	3.709	1.088	7.01	8.58	10.16	12.05	13.31	14.09	14.88	16.45	18.03	18.50	19.60	22.75	25.90	29.05
33	3.308	36	3.609	1.091	7.17	8.74	10.32	12.21	13.47	14.25	15.04	16.61	18.19	18.66	19.76	22.91	26.06	29.21
32	3.208	35	3.509	1.094	7.32	8.90	10.47	12.36	13.62	14.41	15.19	16.77	18.34	18.82	19.92	23.07	26.22	29.37
31	3.108	34	3.409	1.097	7.48	9.06	10.63	12.52	13.78	14.57	15.35	16.93	18.50	18.98	20.08	23.23	26.38	29.53
41	4.110	45	4.511	1.098	5.83	7.40	8.98	10.87	12.13	12.91	13.70	15.27	16.85	17.32	18.42	21.57	24.72	27.87
30	3.008	33	3.308	1.100	7.64	9.21	10.79	12.68	13.94	14.72	15.51	17.08	18.66	19.13	20.23	23.38	26.53	29.68
29	2.907	32	3.208	1.103	7.80	9.37	10.95	12.84	14.10	14.88	15.67	17.24	18.82	19.29	20.39	23.54	26.69	29.84
48	4.812	53	5.314	1.104		6.22	7.79	9.68	10.94	11.73	12.51	14.09	15.67	16.14	17.24	20.39	23.54	26.69
38	3.810	42	4.211	1.105	6.30	7.87	9.45	11.34	12.60	13.38	14.17	15.74	17.32	17.79	18.89	22.04	25.19	28.34
28	2.807	31	3.108	1.107	7.95	9.53	11.10	12.99	14.25	15.04	15.82	17.40	18.97	19.45	20.55	23.70	26.85	30.00
37	3.709	41	4.110	1.108	6.46	8.03	9.61	11.50	12.76	13.54	14.33	15.90	17.48	17.95	19.05	22.20	25.35	28.50
27	2.707	30	3.008	1.111	8.11	9.69	11.26	13.15	14.41	15.20	15.98	17.56	19.13	19.61	20.71	23.86	27.01	30.16
36	3.609	40	4.010	1.111	6.61	8.19	9.76	11.65	12.91	13.70	14.48	16.06	17.63	18.11	19.21	22.36	25.51	28.66
45	4.511	50	5.013	1.111		6.69	8.27	10.16	11.42	12.20	12.99	14.56	16.14	16.61	17.71	20.86	24.01	27.16
35	3.509	39	3.910	1.114	6.77	8.35	9.92	11.81	13.07	13.86	14.64	16.22	17.79	18.27	19.37	22.52	25.67	28.82
26	2.607	29	2.907	1.115	8.27	9.84	11.42	13.31	14.57	15.35	16.14	17.71	19.29	19.76	20.86	24.01	27.16	30.31
60	6.015	67	6.717	1.117				7.63	8.89	9.68	10.46	12.04	13.62	14.09	15.19	18.34	21.49	24.64
34	3.409	38	3.810	1.118	6.93	8.50	10.08	11.97	13.23	14.01	14.80	16.37	17.95	18.42	19.52	22.67	25.82	28.97
67	6.717	75	7.519	1.119					7.71	8.49	9.28	10.86	12.43	12.91	14.01	17.16	20.31	23.46
25	2.506	28	2.807	1.120	8.43	10.00	11.58	13.47	14.73	15.51	16.30	17.87	19.45	19.92	21.02	24.17	27.32	30.47
50	5.013	56	5.614	1.120		5.82	7.40	9.29	10.55	11.33	12.12	13.70	15.27	15.75	16.85	20.00	23.15	26.30
33	3.308	37	3.709	1.121	7.09	8.66	10.24	12.13	13.39	14.17	14.96	16.53	18.11	18.58	19.68	22.83	25.98	29.13
32	3.208	36	3.609	1.125	7.24	8.82	10.39	12.28	13.54	14.33	15.11	16.69	18.26	18.74	19.84	22.99	26.14	29.29
40	4.010	45	4.511	1.125	5.90	7.48	9.05	10.94	12.21	12.99	13.78	15.35	16.93	17.40	18.50	21.65	24.80	27.95
56	5.614	63	6.316	1.125				8.26	9.52	10.31	11.09	12.67	14.25	14.72	15.82	18.97	22.12	25.27
80	8.020	90	9.023	1.125									10.22	10.70	11.80	14.95	18.10	21.25
63	6.316	71	7.118	1.127					8.34	9.13	9.91	11.49	13.06	13.54	14.64	17.79	20.94	24.09
71	7.118	80	8.020	1.127							8.57	10.15	11.72	12.20	13.30	16.45	19.60	22.75
31	3.108	35	3.509	1.129	7.40	8.98	10.55	12.44	13.70	14.49	15.27	16.85	18.42	18.90	20.00	23.15	26.30	29.45
53	5.314	60	6.015	1.132			6.84	8.74	10.00	10.78	11.57	13.14	14.72	15.19	16.29	19.44	22.59	25.74
30	3.008	34	3.409	1.133	7.56	9.13	10.71	12.60	13.86	14.64	15.43	17.00	18.58	19.05	20.15	23.30	26.45	29.60
37	3.709	42	4.211	1.135	6.37	7.95	9.53	11.42	12.68	13.46	14.25	15.82	17.40	17.87	18.97	22.12	25.27	28.42
22	2.206	25	2.506	1.136	8.90	10.47	12.05	13.94	15.20	15.98	16.77	18.34	19.92	20.39	21.49	24.64	27.79	30.94
29	2.907	33	3.308	1.138	7.72	9.29	10.87	12.76	14.02	14.80	15.59	17.16	18.74	19.21	20.31	23.46	26.61	29.76
36	3.609	41	4.110	1.139	6.53	8.11	9.68	11.57	12.84	13.62	14.41	15.98	17.56	18.03	19.13	22.28	25.43	28.58
28	2.807	32	3.208	1.143	7.87	9.45	11.02	12.91	14.17	14.96	15.74	17.32	18.89	19.37	20.47	23.62	26.77	29.92
35	3.509	40	4.010	1.143	6.69	8.27	9.84	11.73	12.99	13.78	14.56	16.14	17.71	18.19	19.29	22.44	25.59	28.74
42	4.211	48	4.812	1.143	5.51	7.08	8.66	10.55	11.81	12.59	13.38	14.96	16.53	17.01	18.11	21.26	24.41	27.56
34	3.409	39	3.910	1.147	6.85	8.42	10.00	11.89	13.15	13.93	14.72	16.29	17.87	18.34	19.45	22.60	25.75	28.90
27	2.707	31	3.108	1.148	8.03	9.61	11.18	13.07	14.33	15.12	15.90	17.48	19.05	19.53	20.63	23.78	26.93	30.08
33	3.308	38	3.810	1.152	7.01	8.58	10.16	12.05	13.31	14.09	14.88	16.45	18.03	18.50	19.60	22.75	25.90	29.05
26	2.607	30	3.008	1.154	8.19	9.76	11.34	13.23	14.49	15.27	16.06	17.63	19.21	19.68	20.78	23.93	27.08	30.23
39	3.910	45	4.511	1.154	5.98	7.56	9.13	11.02	12.28	13.07	13.85	15.43	17.00	17.48	18.58	21.73	24.88	28.03
32	3.208	37	3.709	1.156	7.16	8.74	10.31	12.20	13.47	14.25	15.04	16.61	18.19	18.66	19.76	22.91	26.06	29.21
25	2.506	29	2.907	1.160	8.35	9.92	11.50	13.39	14.65	15.43	16.22	17.79	19.37	19.84	20.94	24.09	27.24	30.39
31	3.108	36	3.609	1.161	7.32	8.90	10.47	12.36	13.62	14.41	15.19	16.77	18.34	18.82	19.92	23.07	26.22	29.37
30	3.008	35	3.509	1.167	7.48	9.05	10.63	12.52	13.78	14.56	15.35	16.92	18.50	18.97	20.07	23.23	26.38	29.53
36	3.609	42	4.211	1.167	6.45	8.03	9.60	11.49	12.75	13.54	14.33	15.90	17.48	17.95	19.05	22.20	25.35	28.50
48	4.812	56	5.614	1.167		5.97	7.55	9.44	10.70	11.49	12.27	13.85	15.43	15.90	17.00	20.15	23.30	26.45
35	3.509	41	4.110	1.171	6.61	8.19	9.76	11.65	12.91	13.70	14.48	16.06	17.63	18.11	19.21	22.36	25.51	28.66
41	4.110	48	4.812	1.171	5.58	7.16	8.74	10.63	11.89	12.67	13.46	15.03	16.61	17.08	18.18	21.33	24.49	27.64
29	2.907	34	3.409	1.172	7.64	9.21	10.79	12.68	13.94	14.72	15.51	17.08	18.66	19.13	20.23	23.38	26.53	29.68
34	3.409	40	4.010	1.176	6.77	8.34	9.92	11.81	13.07	13.85	14.64	16.22	17.79	18.27	19.37	22.52	25.67	28.82
45	4.511	53	5.314	1.178		6.45	8.02	9.92	11.18	11.96	12.75	14.32	15.90	16.37	17.47	20.62	23.78	26.93
28	2.807	33	3.308	1.179	7.79	9.37	10.94	12.83	14.10	14.88	15.67	17.24	18.82	19.29	20.39	23.54	26.69	29.84
22	2.206	26	2.607	1.182	8.82	10.39	11.97	13.86	15.12	15.90	16.69	18.26	19.84	20.31	21.41	24.56	27.71	30.86
33	3.308	39	3.910	1.182	6.92	8.50	10.08	11.97	13.23	14.01	14.80	16.37	17.95	18.42	19.52	22.67	25.82	28.97
60	6.015	71	7.118	1.183				7.30	8.57	9.35	10.14	11.72	13.29	13.77	14.87	18.02	21.17	24.32
38	3.810	45	4.511	1.184	6.05	7.63	9.21	11.10	12.36	13.15	13.93	15.51	17.08	17.56	18.66	21.81	24.96	28.11
27	2.707	32	3.208	1.185	7.95	9.53	11.10	12.99	14.25	15.04	15.82	17.40	18.97	19.45	20.55	23.70	26.85	30.00
32	3.208	38	3.810	1.188	7.08	8.66	10.23	12.12	13.38	14.17	14.96	16.53	18.11	18.58	19.68	22.83	25.98	29.13
53	5.314	63	6.316	1.189			6.60	8.49	9.75	10.54	11.32	12.90	14.48	14.95	16.05	19.20	22.36	25.51
42	4.211	50	5.013	1.190	5.34	6.92	8.50	10.39	11.65	12.43	13.22	14.80	16.37	16.85	17.95	21.10	24.25	27.40
63	6.316	75	7.519	1.190					8.01	8.80	9.59	11.16	12.74	13.22	14.32	17.47	20.62	23.77
26	2.607	31	3.108	1.192	8.11	9.68	11.26	13.15	14.41	15.19	15.98	17.55	19.13	19.60	20.70	23.86	27.01	30.16
31	3.108	37	3.709	1.194	7.24	8.82	10.39	12.28	13.54	14.33	15.11	16.69	18.26	18.74	19.84	22.99	26.14	29.29
67	6.717	80	8.020	1.194						8.08	8.87	10.45	12.03	12.50	13.60	16.76	19.91	23.06
56	5.614	67	6.717	1.196				7.94	9.20	9.99	10.77	12.35	13.92	14.40	15.50	18.65	21.80	24.95
25	2.506	30	3.008	1.200	8.27	9.84	11.42	13.31	14.57	15.35	16.14	17.71	19.29	19.76	20.86	24.01	27.16	30.31
30	3.008	36	3.609	1.200	7.40	8.97	10.55	12.44	13.70	14.49	15.27	16.85	18.42	18.90	20.00	23.15	26.30	29.45
35	3.509	42	4.211	1.200	6.53	8.10	9.68	11.57	12.83	13.62	14.40	15.98	17.55	18.03	19.13	22.28	25.43	28.58
40	4.010	48	4.812	1.200	5.66	7.24	8.81	10.70	11.96	12.75	13.54	15.11	16.69	17.16	18.26	21.41	24.56	27.71
50	5.013	60	6.015	1.200			7.07	8.96	10.23	11.01	11.80	13.37	14.95	15.43	16.53	19.68	22.83	25.98
75	7.519	90	9.023	1.200								9.02	10.60	11.08	12.18	15.33	18.49	21.64
34	3.409	41	4.110	1.206	6.69	8.26	9.84	11.73	12.99	13.78	14.56	16.14	17.71	18.19	19.29	22.44	25.59	28.74
				Length Factor*	0.79	0.83	0.87	0.91	0.94	0.96	0.97	1.00	1.03	1.03	1.05	1.10	1.14	1.17

Note: 26, 27, 29 and 31 groove sprockets are only available as stock products in 12 and 21 mm widths. 33, 35, 37, 39 and 41 groove sprockets are only available as stock products in 12, 21, and 36 mm widths.
Check sprocket specification tables on pages 74 and 75 for stainless steel and nickel plated sprocket availability.
* This length factor must be used to determine the proper belt width.

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8MGT-1792 P.L 70.55 224Teeth	8MGT-2000 P.L 78.74 250 Teeth	8MGT-2200 P.L 86.61 275 Teeth	8MGT-2240 P.L 88.19 280 Teeth	8MGT-2400 P.L 94.49 300 Teeth	8MGT-2520 P.L 99.21 315 Teeth	8MGT-2600 P.L 102.36 325 Teeth	8MGT-2800 P.L 110.24 350 Teeth	8MGT-2840 P.L 111.81 355 Teeth	8MGT-3048 P.L 120.00 381 Teeth	8MGT-3200 P.L 125.98 400 Teeth	8MGT-3280 P.L 129.13 410 Teeth	8MGT-3600 P.L 141.73 450 Teeth	8MGT-4000 P.L 157.48 500 Teeth	8MGT-4400 P.L 173.23 550 Teeth	8MGT-4480 P.L 176.38 560 Teeth	Speed Ratio	Number of Grooves (DriveR)	Number of Grooves (DriveN)
29.37	33.46	37.40	38.19	41.34	43.70	45.27	49.21	50.00	54.09	57.08	58.66	64.96	72.83	80.71	82.28	1.083	36	39
29.53	33.62	37.56	38.35	41.50	43.86	45.43	49.37	50.16	54.25	57.24	58.82	65.12	72.99	80.87	82.44	1.086	35	38
29.68	33.78	37.71	38.50	41.65	44.01	45.59	49.53	50.31	54.41	57.40	58.97	65.27	73.15	81.02	82.60	1.088	34	37
29.84	33.94	37.87	38.66	41.81	44.17	45.75	49.69	50.47	54.57	57.56	59.13	65.43	73.31	81.18	82.76	1.091	33	36
30.00	34.09	38.03	38.82	41.97	44.33	45.90	49.84	50.63	54.72	57.71	59.29	65.59	73.46	81.34	82.91	1.094	32	35
30.16	34.25	38.19	38.98	42.13	44.49	46.06	50.00	50.79	54.88	57.87	59.45	65.75	73.62	81.50	83.07	1.097	31	34
28.50	32.60	36.53	37.32	40.47	42.83	44.41	48.35	49.13	53.23	56.22	57.79	64.09	71.97	79.84	81.42	1.098	41	45
30.31	34.41	38.34	39.13	42.28	44.64	46.22	50.16	50.94	55.04	58.03	59.60	65.90	73.78	81.65	83.23	1.100	30	33
30.47	34.57	38.50	39.29	42.44	44.80	46.38	50.32	51.10	55.20	58.19	59.76	66.06	73.94	81.81	83.39	1.103	29	32
27.32	31.42	35.35	36.14	39.29	41.65	43.23	47.17	47.95	52.05	55.04	56.61	62.91	70.79	78.66	80.24	1.104	48	53
28.97	33.07	37.00	37.79	40.94	43.30	44.88	48.82	49.60	53.70	56.69	58.26	64.57	72.44	80.32	81.89	1.105	38	42
30.63	34.72	38.66	39.45	42.60	44.96	46.53	50.47	51.26	55.35	58.34	59.92	66.22	74.09	81.97	83.54	1.107	28	31
29.13	33.23	37.16	37.95	41.10	43.46	45.04	48.98	49.76	53.86	56.85	58.42	64.72	72.60	80.47	82.05	1.108	37	41
30.79	34.88	38.82	39.61	42.76	45.12	46.69	50.63	51.42	55.51	58.50	60.08	66.38	74.25	82.13	83.70	1.111	27	30
29.29	33.39	37.32	38.11	41.26	43.62	45.20	49.14	49.92	54.02	57.01	58.58	64.88	72.76	80.63	82.21	1.111	36	40
27.79	31.89	35.82	36.61	39.76	42.12	43.70	47.64	48.42	52.52	55.51	57.08	63.38	71.26	79.13	80.71	1.111	45	50
29.45	33.54	37.48	38.27	41.42	43.78	45.35	49.29	50.08	54.17	57.16	58.74	65.04	72.91	80.79	82.36	1.114	35	39
30.94	35.04	38.97	39.76	42.91	45.27	46.85	50.79	51.57	55.67	58.66	60.23	66.53	74.41	82.28	83.86	1.115	26	29
25.27	29.37	33.30	34.09	37.24	39.60	41.18	45.12	45.90	50.00	52.99	54.56	60.86	68.74	76.61	78.19	1.117	60	67
29.60	33.70	37.63	38.42	41.57	43.93	45.51	49.45	50.23	54.33	57.32	58.89	65.19	73.07	80.94	82.52	1.118	34	38
24.09	28.19	32.12	32.91	36.06	38.42	40.00	43.94	44.72	48.82	51.81	53.38	59.68	67.56	75.43	77.01	1.119	67	75
31.10	35.20	39.13	39.92	43.07	45.43	47.01	50.95	51.73	55.83	58.82	60.39	66.69	74.57	82.44	84.02	1.120	25	28
26.93	31.02	34.96	35.75	38.90	41.26	42.83	46.77	47.56	51.65	54.64	56.22	62.52	70.39	78.27	79.84	1.120	50	56
29.76	33.86	37.79	38.58	41.73	44.09	45.67	49.61	50.39	54.49	57.48	59.05	65.35	73.23	81.10	82.68	1.121	33	37
29.92	34.02	37.95	38.74	41.89	44.25	45.83	49.77	50.55	54.65	57.64	59.21	65.51	73.39	81.26	82.84	1.125	32	36
28.58	32.68	36.61	37.40	40.55	42.91	44.49	48.43	49.21	53.31	56.30	57.87	64.17	72.05	79.92	81.50	1.125	40	45
25.90	30.00	33.93	34.72	37.87	40.23	41.81	45.75	46.53	50.63	53.62	55.19	61.49	69.37	77.24	78.82	1.125	56	63
21.88	25.98	29.92	30.71	33.86	36.22	37.79	41.73	42.52	46.61	49.60	51.18	57.48	65.35	73.23	74.80	1.125	80	90
24.72	28.82	32.75	33.54	36.69	39.05	40.63	44.57	45.35	49.45	52.44	54.01	60.31	68.19	76.06	77.64	1.127	63	71
23.38	27.48	31.41	32.20	35.35	37.71	39.29	43.23	44.01	48.11	51.10	52.67	58.97	66.85	74.72	76.30	1.127	71	80
30.08	34.17	38.11	38.90	42.05	44.41	45.98	49.92	50.71	54.80	57.79	59.37	65.67	73.54	81.42	82.99	1.129	31	35
26.37	30.47	34.41	35.20	38.35	40.71	42.28	46.22	47.01	51.10	54.09	55.67	61.97	69.84	77.72	79.29	1.132	53	60
30.23	34.33	38.26	39.05	42.20	44.56	46.14	50.08	50.86	54.96	57.95	59.52	65.82	73.70	81.57	83.15	1.133	30	34
29.05	33.15	37.08	37.87	41.02	43.38	44.96	48.90	49.68	53.78	56.77	58.34	64.64	72.52	80.39	81.97	1.135	37	42
31.57	35.67	39.60	40.39	43.54	45.90	47.48	51.42	52.20	56.30	59.29	60.86	67.16	75.04	82.91	84.49	1.136	22	25
30.39	34.49	38.42	39.21	42.36	44.72	46.30	50.24	51.02	55.12	58.11	59.68	65.98	73.86	81.73	83.31	1.138	29	33
29.21	33.31	37.24	38.03	41.18	43.54	45.12	49.06	49.84	53.94	56.93	58.50	64.80	72.68	80.55	82.13	1.139	36	41
30.55	34.65	38.58	39.37	42.52	44.88	46.46	50.40	51.18	55.28	58.27	59.84	66.14	74.02	81.89	83.47	1.143	28	32
29.37	33.46	37.40	38.19	41.34	43.70	45.27	49.21	50.00	54.09	57.08	58.66	64.96	72.83	80.71	82.28	1.143	35	40
28.19	32.28	36.22	37.01	40.16	42.52	44.09	48.03	48.82	52.91	55.90	57.48	63.78	71.65	79.53	81.10	1.143	42	48
29.53	33.62	37.56	38.35	41.50	43.86	45.43	49.37	50.16	54.25	57.24	58.82	65.12	72.99	80.87	82.44	1.147	34	39
30.71	34.80	38.74	39.53	42.68	45.04	46.61	50.55	51.34	55.43	58.42	60.00	66.30	74.17	82.05	83.62	1.148	27	31
29.68	33.78	37.71	38.50	41.65	44.01	45.59	49.53	50.31	54.41	57.40	58.97	65.27	73.15	81.02	82.60	1.152	33	38
30.86	34.96	38.89	39.68	42.83	45.19	46.77	50.71	51.49	55.59	58.58	60.15	66.45	74.33	82.20	83.78	1.154	26	30
28.66	32.75	36.69	37.48	40.63	42.99	44.57	48.51	49.29	53.39	56.38	57.95	64.25	72.13	80.00	81.58	1.154	39	45
29.84	33.94	37.87	38.66	41.81	44.17	45.75	49.69	50.47	54.57	57.56	59.13	65.43	73.31	81.18	82.76	1.156	32	37
31.02	35.12	39.05	39.84	42.99	45.35	46.93	50.87	51.65	55.75	58.74	60.31	66.61	74.49	82.36	83.94	1.160	25	29
30.00	34.09	38.03	38.82	41.97	44.33	45.90	49.84	50.63	54.72	57.71	59.29	65.59	73.46	81.34	82.91	1.161	31	36
30.16	34.25	38.19	38.98	42.13	44.49	46.06	50.00	50.79	54.88	57.87	59.45	65.75	73.62	81.50	83.07	1.167	30	35
29.13	33.23	37.16	37.95	41.10	43.46	45.04	48.98	49.76	53.86	56.85	58.42	64.72	72.60	80.47	82.05	1.167	36	42
27.08	31.18	35.11	35.90	39.05	41.41	42.99	46.93	47.71	51.81	54.80	56.38	62.68	70.55	78.43	80.00	1.167	48	56
29.29	33.38	37.32	38.11	41.26	43.62	45.20	49.14	49.92	54.02	57.01	58.58	64.88	72.76	80.63	82.21	1.171	35	41
28.27	32.36	36.30	37.09	40.24	42.60	44.17	48.11	48.90	52.99	55.98	57.56	63.86	71.73	79.61	81.18	1.171	41	48
30.31	34.41	38.34	39.13	42.28	44.64	46.22	50.16	50.94	55.04	58.03	59.60	65.90	73.78	81.65	83.23	1.172	29	34
29.45	33.54	37.48	38.27	41.42	43.78	45.35	49.29	50.08	54.17	57.16	58.74	65.04	72.91	80.79	82.36	1.176	34	40
27.56	31.65	35.59	36.38	39.53	41.89	43.46	47.40	48.19	52.28	55.27	56.85	63.15	71.02	78.90	80.47	1.178	45	53
30.47	34.57	38.50	39.29	42.44	44.80	46.38	50.32	51.10	55.20	58.19	59.76	66.06	73.94	81.81	83.39	1.179	28	33
31.49	35.59	39.52	40.31	43.46	45.82	47.40	51.34	52.12	56.22	59.21	60.78	67.08	74.96	82.83	84.41	1.182	22	26
29.60	33.70	37.63	38.42	41.57	43.93	45.51	49.45	50.24	54.33	57.32	58.90	65.20	73.07	80.95	82.52	1.182	33	39
24.95	29.05	32.99	33.78	36.93	39.29	40.86	44.80	45.59	49.68	52.67	54.25	60.55	68.42	76.30	77.87	1.183	60	71
28.74	32.83	36.77	37.56	40.71	43.07	44.64	48.58	49.37	53.46	56.45	58.03	64.33	72.20	80.08	81.65	1.184	38	45
30.63	34.72	38.66	39.45	42.60	44.96	46.53	50.47	51.26	55.35	58.34	59.92	66.22	74.09	81.97	83.54	1.185	27	32
29.76	33.86	37.79	38.58	41.73	44.09	45.67	49.61	50.39	54.49	57.48	59.05	65.35	73.23	81.10	82.68	1.188	32	38
26.14	30.23	34.17	34.96	38.11	40.47	42.04	45.98	46.77	50.86	53.85	55.43	61.73	69.60	77.48	79.05	1.189	53	63
28.03	32.12	36.06	36.85	40.00	42.36	43.93	47.87	48.65	52.75	55.74	57.32	63.62	71.49	79.37	80.94	1.190	42	50
24.40	28.50	32.43	33.22	36.37	38.73	40.31	44.25	45.03	49.13	52.12	53.70	60.00	67.87	75.75	77.32	1.190	63	75
30.79	34.88	38.82	39.61	42.76	45.12	46.69	50.63	51.42	55.51	58.50	60.08	66.38	74.25	82.13	83.70	1.192	26	31
29.92	34.01	37.95	38.74	41.89	44.25	45.82	49.77	50.55	54.65	57.64	59.21	65.51	73.39	81.26	82.84	1.194	31	37
23.69	27.79	31.72	32.51	35.66	38.03	39.60	43.54	44.33	48.42	51.41	52.99	59.29	67.16	75.04	76.61	1.194	67	80
25.58	29.68	33.62	34.41	37.56	39.92	41.49	45.43	46.22	50.31	53.30	54.88	61.18	69.05	76.93	78.50	1.196	56	67
30.94	35.04	38.97	39.76	42.91	45.27	46.85	50.79	51.57	55.67	58.66	60.23	66.53	74.41	82.28	83.86	1.200	25	30
30.08	34.17	38.11	38.90	42.05	44.41	45.98	49.92	50.71	54.80	57.79	59.37	65.67	73.54	81.42	82.99	1.200	30	36
29.21	33.30	37.24	38.03	41.18	43.54	45.12	49.06	49.84	53.94	56.93	58.50	64.80	72.68	80.55	82.13	1.200	35	42
28.34	32.44	36.37	37.16	40.31	42.67	44.25	48.19	48.97	53.07	56.06	57.63	63.93	71.81	79.69	81.26	1.200	40	48
26.61	30.70	34.64	35.43	38.58	40.94	42.52	46.46	47.24	51.34	54.33	55.90	62.20	70.08	77.95	79.53	1.200	50	60
22.27	26.37	30.30	31.09	34.24	36.61	38.18	42.12	42.91	47.00	49.99	51.57	57.87	65.74	73.62	75.19	1.200	75	90
29.37	33.46	37.40	38.19	41.34	43.70	45.27	49.21	50.00	54.09	57.08	58.66	64.96	72.83	80.71	82.28	1.206	34	41
1.18	1.22	1.26	1.26	1.29	1.31	1.32	1.35	1.36	1.38	1.40	1.41	1.45	1.49	1.52	1.53	Length Factor*		

Note: 26, 27, 29 and 31 groove sprockets are only available as stock products in 12 and 21 mm widths. 33, 35, 37, 39 and 41 groove sprockets are only available as stock products in 12, 21, and 36 mm widths.
Check sprocket specification tables on pages 74 and 75 for stainless steel and nickel plated sprocket availability.
* This length factor must be used to determine the proper belt width.

Center distance is greater than eight times the small sprocket and the large sprocket is not flanged. See Engineering Section for details.

Drive Selection Table

8mm Pitch Poly Chain® GT® Carbon™ Belts

Sprocket Combinations — DriveR No. of Grooves	DriveR Pitch Diameter (Inches)	DriveN No. of Grooves	DriveN Pitch Diameter (Inches)	Speed Ratio	8MGT-640 P.L. 25.20 80 Teeth	8MGT-720 P.L. 28.35 90 Teeth	8MGT-800 P.L. 31.50 100 Teeth	8MGT-896 P.L. 35.28 112 Teeth	8MGT-960 P.L. 37.80 120 Teeth	8MGT-1000 P.L. 39.37 125 Teeth	8MGT-1040 P.L. 40.94 130 Teeth	8MGT-1120 P.L. 44.09 140 Teeth	8MGT-1200 P.L. 47.24 150 Teeth	8MGT-1224 P.L. 48.19 153 Teeth	8MGT-1280 P.L. 50.39 160 Teeth	8MGT-1440 P.L. 56.69 180 Teeth	8MGT-1600 P.L. 62.99 200 Teeth	8MGT-1760 P.L. 69.29 220 Teeth
29	2.907	35	3.509	1.207	7.55	9.13	10.71	12.6	13.86	14.64	15.43	17	18.58	19.05	20.15	23.3	26.45	29.6
33	3.308	40	4.01	1.212	6.84	8.42	10	11.89	13.15	13.93	14.72	16.29	17.87	18.34	19.44	22.59	25.75	28.9
28	2.807	34	3.409	1.214	7.71	9.29	10.86	12.75	14.01	14.8	15.59	17.16	18.74	19.21	20.31	23.46	26.61	29.76
37	3.709	45	4.511	1.216	6.13	7.71	9.29	11.18	12.44	13.22	14.01	15.58	17.16	17.63	18.73	21.89	25.04	28.19
32	3.208	39	3.91	1.219	7	8.58	10.15	12.04	13.3	14.09	14.88	16.45	18.03	18.5	19.6	22.75	25.9	29.05
41	4.11	50	5.013	1.22	5.42	7	8.57	10.47	11.73	12.51	13.3	14.87	16.45	16.92	18.02	21.17	24.33	27.48
27	2.707	33	3.308	1.222	7.87	9.45	11.02	12.91	14.17	14.96	15.74	17.32	18.89	19.37	20.47	23.62	26.77	29.92
31	3.108	38	3.81	1.226	7.16	8.73	10.31	12.2	13.46	14.25	15.03	16.61	18.18	18.66	19.76	22.91	26.06	29.21
22	2.206	27	2.707	1.227	8.74	10.31	11.89	13.78	15.04	15.82	16.61	18.18	19.76	20.23	21.33	24.49	27.64	30.79
26	2.607	32	3.208	1.231	8.03	9.6	11.18	13.07	14.33	15.11	15.9	17.48	19.05	19.53	20.63	23.78	26.93	30.08
39	3.91	48	4.812	1.231	5.73	7.31	8.89	10.78	12.04	12.83	13.61	15.19	16.76	17.24	18.34	21.49	24.64	27.79
30	3.008	37	3.709	1.233	7.32	8.89	10.47	12.36	13.62	14.41	15.19	16.77	18.34	18.82	19.92	23.07	26.22	29.37
34	3.409	42	4.211	1.235	6.6	8.18	9.76	11.65	12.91	13.69	14.48	16.06	17.63	18.11	19.21	22.36	25.51	28.66
25	2.506	31	3.108	1.24	8.19	9.76	11.34	13.23	14.49	15.27	16.06	17.63	19.21	19.68	20.78	23.93	27.08	30.23
29	2.907	36	3.609	1.241	7.47	9.05	10.63	12.52	13.78	14.56	15.35	16.92	18.5	18.97	20.07	23.22	26.38	29.53
33	3.308	41	4.11	1.242	6.76	8.34	9.92	11.81	13.07	13.85	14.64	16.21	17.79	18.26	19.36	22.52	25.67	28.82
45	4.511	56	5.614	1.244		6.2	7.78	9.67	10.93	11.72	12.51	14.08	15.66	16.13	17.23	20.39	23.54	26.69
28	2.807	35	3.509	1.25	7.63	9.21	10.78	12.67	13.94	14.72	15.51	17.08	18.66	19.13	20.23	23.38	26.53	29.68
32	3.208	40	4.01	1.25	6.92	8.5	10.07	11.96	13.22	14.01	14.8	16.37	17.95	18.42	19.52	22.67	25.82	28.97
36	3.609	45	4.511	1.25	6.21	7.78	9.36	11.25	12.51	13.3	14.09	15.66	17.24	17.71	18.81	21.96	25.11	28.26
40	4.01	50	5.013	1.25	5.49	7.07	8.65	10.54	11.8	12.59	13.37	14.95	16.53	17	18.1	21.25	24.4	27.55
48	4.812	60	6.015	1.25		7.22	9.12	10.38	11.17	11.95	13.53	15.1	15.58	16.68	19.83	22.98	26.13	
60	6.015	75	7.519	1.25				8.24	9.02	9.81	11.39	12.97	13.44	14.55	17.7	20.85	24	
31	3.108	39	3.91	1.258	7.08	8.65	10.23	12.12	13.38	14.17	14.95	16.53	18.1	18.58	19.68	22.83	25.98	29.13
27	2.707	34	3.409	1.259	7.79	9.36	10.94	12.83	14.09	14.88	15.66	17.24	18.81	19.29	20.39	23.54	26.69	29.84
50	5.013	63	6.316	1.26			6.82	8.72	9.98	10.77	11.55	13.13	14.71	15.18	16.28	19.44	22.59	25.74
42	4.211	53	5.314	1.262		6.67	8.25	10.14	11.41	12.19	12.98	14.55	16.13	16.6	17.71	20.86	24.01	27.16
38	3.81	48	4.812	1.263	5.81	7.39	8.96	10.86	12.12	12.9	13.69	15.27	16.84	17.32	18.42	21.57	24.72	27.87
53	5.314	67	6.717	1.264				8.16	9.42	10.21	11	12.58	14.15	14.63	15.73	18.88	22.03	25.19
30	3.008	38	3.81	1.267	7.23	8.81	10.39	12.28	13.54	14.32	15.11	16.69	18.26	18.74	19.84	22.99	26.14	29.29
56	5.614	71	7.118	1.268				7.6	8.87	9.66	10.44	12.02	13.6	14.08	15.18	18.33	21.48	24.63
71	7.118	90	9.023	1.268								9.32	10.9	11.38	12.48	15.64	18.79	21.95
26	2.607	33	3.308	1.269	7.95	9.52	11.1	12.99	14.25	15.04	15.82	17.4	18.97	19.45	20.55	23.7	26.85	30
63	6.316	80	8.02	1.27						8.38	9.17	10.75	12.33	12.81	13.91	17.06	20.22	23.37
22	2.206	28	2.807	1.273	8.66	10.23	11.81	13.7	14.96	15.74	16.53	18.11	19.68	20.16	21.26	24.41	27.56	30.71
33	3.308	42	4.211	1.273	6.68	8.26	9.83	11.73	12.99	13.77	14.56	16.13	17.71	18.18	19.28	22.44	25.59	28.74
29	2.907	37	3.709	1.276	7.39	8.97	10.55	12.44	13.7	14.48	15.27	16.84	18.42	18.89	19.99	23.15	26.3	29.45
25	2.506	32	3.208	1.28	8.1	9.68	11.26	13.15	14.41	15.19	15.98	17.55	19.13	19.6	20.7	23.85	27	30.16
32	3.208	41	4.11	1.281	6.84	8.42	9.99	11.88	13.14	13.93	14.72	16.29	17.87	18.34	19.44	22.59	25.74	28.89
39	3.91	50	5.013	1.282	5.56	7.15	8.72	10.62	11.88	12.66	13.45	15.03	16.6	17.08	18.18	21.33	24.48	27.63
28	2.807	36	3.609	1.286	7.55	9.13	10.7	12.59	13.86	14.64	15.43	17	18.58	19.05	20.15	23.3	26.45	29.6
35	3.509	45	4.511	1.286	6.28	7.86	9.44	11.33	12.59	13.38	14.16	15.74	17.31	17.79	18.89	22.04	25.19	28.34
31	3.108	40	4.01	1.29	6.99	8.57	10.15	12.04	13.3	14.09	14.87	16.45	18.02	18.5	19.6	22.75	25.9	29.05
41	4.11	53	5.314	1.293		6.75	8.33	10.22	11.48	12.27	13.05	14.63	16.21	16.68	17.78	20.93	24.09	27.24
27	2.707	35	3.509	1.296	7.71	9.28	10.86	12.75	14.01	14.8	15.58	17.16	18.73	19.21	20.31	23.46	26.61	29.76
37	3.709	48	4.812	1.297	5.88	7.46	9.04	10.93	12.2	12.98	13.77	15.34	16.92	17.39	18.49	21.65	24.8	27.95
30	3.008	39	3.91	1.3	7.15	8.73	10.31	12.2	13.46	14.24	15.03	16.61	18.18	18.66	19.76	22.91	26.06	29.21
26	2.607	34	3.409	1.308	7.86	9.44	11.02	12.91	14.17	14.95	15.74	17.32	18.89	19.37	20.47	23.62	26.77	29.92
29	2.907	38	3.81	1.31	7.31	8.89	10.46	12.36	13.62	14.4	15.19	16.76	18.34	18.81	19.91	23.07	26.22	29.37
32	3.208	42	4.211	1.313	6.75	8.33	9.91	11.8	13.06	13.85	14.63	16.21	17.79	18.26	19.36	22.51	25.66	28.81
48	4.812	63	6.316	1.313			6.97	8.87	10.13	10.92	11.71	13.28	14.86	15.34	16.44	19.59	22.74	25.89
38	3.81	50	5.013	1.316	5.64	7.22	8.8	10.69	11.96	12.74	13.53	15.1	16.68	17.15	18.26	21.41	24.56	27.71
22	2.206	29	2.907	1.318	8.58	10.15	11.73	13.62	14.88	15.67	16.45	18.03	19.6	20.08	21.18	24.33	27.48	30.63
25	2.506	33	3.308	1.32	8.02	9.6	11.18	13.07	14.33	15.11	15.9	17.47	19.05	19.52	20.62	23.78	26.93	30.08
28	2.807	37	3.709	1.321	7.47	9.05	10.62	12.51	13.77	14.56	15.35	16.92	18.5	18.97	20.07	23.22	26.37	29.52
31	3.108	41	4.11	1.323	6.91	8.49	10.07	11.96	13.22	14.01	14.79	16.37	17.94	18.42	19.52	22.67	25.82	28.97
34	3.409	45	4.511	1.324	6.36	7.94	9.51	11.41	12.67	13.45	14.24	15.82	17.39	17.87	18.97	22.12	25.27	28.42
40	4.01	53	5.314	1.325	5.24	6.82	8.4	10.3	11.56	12.34	13.13	14.71	16.28	16.76	17.86	21.01	24.16	27.31
27	2.707	36	3.609	1.333	7.63	9.2	10.78	12.67	13.93	14.72	15.5	17.08	18.65	19.13	20.23	23.38	26.53	29.68
30	3.008	40	4.01	1.333	7.07	8.65	10.23	12.12	13.38	14.24	14.95	16.53	18.1	18.58	19.68	22.83	25.98	29.13
36	3.609	48	4.812	1.333	5.96	7.54	9.12	11.01	12.27	13.06	13.84	15.42	17	17.47	18.57	21.72	24.87	28.02
42	4.211	56	5.614	1.333		6.42	8	9.9	11.16	11.95	12.73	14.31	15.89	16.36	17.46	20.62	23.77	26.92
45	4.511	60	6.015	1.333		5.86	7.44	9.34	10.61	11.39	12.18	13.76	15.33	15.81	16.91	20.06	23.22	26.37
60	6.015	80	8.02	1.333				7.81	8.6	9.39	10.98	12.56	13.03	14.14	17.29	20.45	23.6	
56	5.614	75	7.519	1.339			7.26	8.53	9.32	10.11	11.69	13.27	13.75	14.85	18.01	21.16	24.31	
50	5.013	67	6.717	1.34			6.48	8.38	9.65	10.44	11.22	12.8	14.38	14.86	15.96	19.11	22.27	25.42
53	5.314	71	7.118	1.34			7.82	9.09	9.88	10.67	12.25	13.83	14.3	15.4	18.56	21.71	24.86	
67	6.717	90	9.023	1.343							9.61	11.2	11.68	12.78	15.94	19.1	22.25	
29	2.907	39	3.91	1.345	7.23	8.81	10.38	12.28	13.54	14.32	15.11	16.68	18.26	18.73	19.83	22.99	26.14	29.29
26	2.607	35	3.509	1.346	7.78	9.36	10.94	12.83	14.09	14.87	15.66	17.24	18.81	19.29	20.39	23.54	26.69	29.84
37	3.709	50	5.013	1.351	5.71	7.3	8.88	10.77	12.03	12.82	13.6	15.18	16.76	17.23	18.33	21.48	24.64	27.79
31	3.108	42	4.211	1.355	6.83	8.41	9.99	11.88	13.14	13.93	14.71	16.29	17.86	18.34	19.44	22.59	25.74	28.89
28	2.807	38	3.81	1.357	7.39	8.96	10.54	12.43	13.69	14.48	15.26	16.84	18.42	18.89	19.99	23.14	26.29	29.44
39	3.91	53	5.314	1.359	5.31	6.89	8.48	10.37	11.63	12.42	13.21	14.78	16.36	16.84	17.94	21.09	24.24	27.39
25	2.506	34	3.409	1.36	7.94	9.52	11.1	12.99	14.25	15.03	15.82	17.39	18.97	19.44	20.54	23.7	26.85	30
22	2.206	30	3.008	1.364	8.5	10.07	11.65	13.54	14.8	15.58	16.37	17.95	19.52	20	21.1	24.25	27.4	30.55
33	3.308	45	4.511	1.364	6.43	8.01	9.59	11.48	12.74	13.53	14.32	15.89	17.47	17.94	19.04	22.2	25.35	28.5
Length Factor*					0.79	0.83	0.87	0.91	0.94	0.96	0.97	1	1.03	1.03	1.05	1.1	1.14	1.17

Note: 26, 27, 29 and 31 groove sprockets are only available as stock products in 12 and 21 mm widths. 33, 35, 37, 39 and 41 groove sprockets are only available as stock products in 12, 21, and 36 mm widths.
Check sprocket specification tables on pages 74 and 75 for stainless steel and nickel plated sprocket availability.
* This length factor must be used to determine the proper belt width.

Gates® Gates Corporation

8MGT-1792 PL 70.55 224 Teeth	8MGT-2000 PL 78.74 250 Teeth	8MGT-2200 PL 86.61 275 Teeth	8MGT-2240 PL 88.19 280 Teeth	8MGT-2400 PL 94.49 300 Teeth	8MGT-2520 PL 99.21 315 Teeth	8MGT-2600 PL 102.36 325 Teeth	8MGT-2800 PL 110.24 350 Teeth	8MGT-2840 PL 111.81 355 Teeth	8MGT-3048 PL 120.00 381 Teeth	8MGT-3200 PL 125.98 400 Teeth	8MGT-3280 PL 129.13 410 Teeth	8MGT-3600 PL 141.73 450 Teeth	8MGT-4000 PL 157.48 500 Teeth	8MGT-4400 PL 173.23 550 Teeth	8MGT-4480 PL 176.38 560 Teeth	Speed Ratio	DriveR Number of Grooves	DriveN Number of Grooves
30.23	34.33	38.26	39.05	42.2	44.56	46.14	50.08	50.86	54.96	57.95	59.53	65.83	73.7	81.58	83.15	1.207	29	35
29.53	33.62	37.56	38.35	41.5	43.86	45.43	49.37	50.16	54.25	57.24	58.82	65.12	72.99	80.87	82.44	1.212	33	40
30.39	34.49	38.42	39.21	42.36	44.72	46.3	50.24	51.02	55.12	58.11	59.68	65.98	73.86	81.73	83.31	1.214	28	34
28.82	32.91	36.85	37.64	40.79	43.15	44.72	48.66	49.45	53.54	56.53	58.11	64.41	72.28	80.16	81.73	1.216	37	45
29.68	33.78	37.71	38.5	41.65	44.01	45.59	49.53	50.31	54.41	57.4	58.97	65.27	73.15	81.02	82.6	1.219	32	39
28.11	32.2	36.14	36.93	40.08	42.44	44.01	47.95	48.74	52.83	55.82	57.4	63.7	71.57	79.45	81.02	1.22	41	50
30.55	34.64	38.58	39.37	42.52	44.88	46.45	50.39	51.18	55.28	58.27	59.84	66.14	74.02	81.89	83.47	1.222	27	33
29.84	33.93	37.87	38.66	41.81	44.17	45.75	49.69	50.47	54.57	57.56	59.13	65.43	73.31	81.18	82.76	1.226	31	38
31.42	35.51	39.45	40.24	43.39	45.75	47.32	51.26	52.05	56.14	59.13	60.71	67.01	74.88	82.76	84.33	1.227	22	27
30.71	34.8	38.74	39.53	42.68	45.04	46.61	50.55	51.34	55.43	58.42	60	66.3	74.17	82.05	83.62	1.231	26	32
28.42	32.52	36.45	37.24	40.39	42.75	44.33	48.27	49.05	53.15	56.14	57.71	64.01	71.89	79.76	81.34	1.231	39	48
30	34.09	38.03	38.82	41.97	44.33	45.9	49.84	50.63	54.72	57.71	59.29	65.59	73.46	81.34	82.91	1.233	30	37
29.29	33.38	37.32	38.11	41.26	43.62	45.19	49.13	49.92	54.01	57	58.58	64.88	72.75	80.63	82.2	1.235	34	42
30.86	34.96	38.89	39.68	42.83	45.19	46.77	50.71	51.49	55.59	58.58	60.16	66.46	74.33	82.21	83.78	1.24	25	31
30.16	34.25	38.19	38.98	42.13	44.49	46.06	50	50.79	54.88	57.87	59.45	65.75	73.62	81.5	83.07	1.241	29	36
29.45	33.54	37.48	38.27	41.42	43.78	45.35	49.29	50.08	54.17	57.16	58.74	65.04	72.91	80.79	82.36	1.242	33	41
27.32	31.41	35.35	36.14	39.29	41.65	43.22	47.16	47.95	52.04	55.04	56.61	62.91	70.79	78.66	80.24	1.244	45	56
30.31	34.41	38.34	39.13	42.28	44.64	46.22	50.16	50.94	55.04	58.03	59.6	65.9	73.78	81.65	83.23	1.25	28	35
29.6	33.7	37.63	38.42	41.57	43.93	45.51	49.45	50.23	54.33	57.32	58.89	65.19	73.07	80.95	82.52	1.25	32	40
28.89	32.99	36.92	37.71	40.87	43.23	44.8	48.74	49.53	53.62	56.61	58.19	64.49	72.36	80.24	81.81	1.25	36	45
28.18	32.28	36.21	37	40.16	42.52	44.09	48.03	48.82	52.91	55.9	57.48	63.78	71.65	79.53	81.1	1.25	40	50
26.76	30.86	34.8	35.59	38.74	41.1	42.67	46.61	47.4	51.49	54.48	56.06	62.36	70.23	78.11	79.68	1.25	48	60
24.63	28.73	32.67	33.46	36.61	38.97	40.54	44.48	45.27	49.36	52.36	53.93	60.23	68.11	75.98	77.56	1.25	60	75
29.76	33.86	37.79	38.58	41.73	44.09	45.67	49.61	50.39	54.49	57.48	59.05	65.35	73.23	81.1	82.68	1.258	31	39
30.47	34.56	38.5	39.29	42.44	44.8	46.38	50.32	51.1	55.2	58.19	59.76	66.06	73.94	81.81	83.39	1.259	27	34
26.37	30.47	34.4	35.19	38.34	40.7	42.28	46.22	47	51.1	54.09	55.66	61.96	69.84	77.71	79.29	1.26	50	63
27.79	31.88	35.82	36.61	39.76	42.12	43.7	47.64	48.42	52.52	55.51	57.08	63.38	71.26	79.13	80.71	1.262	42	53
28.5	32.59	36.53	37.32	40.47	42.83	44.41	48.35	49.13	53.23	56.22	57.79	64.09	71.97	79.84	81.42	1.263	38	48
25.82	29.91	33.85	34.64	37.79	40.15	41.72	45.67	46.45	50.55	53.54	55.11	61.41	69.29	77.16	78.74	1.264	53	67
29.92	34.01	37.95	38.74	41.89	44.25	45.82	49.76	50.55	54.64	57.63	59.21	65.51	73.38	81.26	82.83	1.267	30	38
25.26	29.36	33.3	34.09	37.24	39.6	41.17	45.11	45.9	49.99	52.98	54.56	60.86	68.74	76.61	78.19	1.268	56	71
22.58	26.68	30.61	31.4	34.55	36.92	38.49	42.43	43.22	47.31	50.3	51.88	58.18	66.06	73.93	75.51	1.268	71	90
30.63	34.72	38.66	39.45	42.6	44.96	46.53	50.47	51.26	55.35	58.34	59.92	66.22	74.09	81.97	83.54	1.269	26	33
24	28.1	32.03	32.82	35.98	38.34	39.91	43.85	44.64	48.73	51.72	53.3	59.6	67.48	75.35	76.93	1.27	63	80
31.34	35.43	39.37	40.16	43.31	45.67	47.24	51.18	51.97	56.06	59.05	60.63	66.93	74.8	82.68	84.25	1.273	22	28
29.37	33.46	37.4	38.19	41.34	43.7	45.27	49.21	50	54.09	57.08	58.66	64.96	72.83	80.71	82.28	1.273	33	42
30.08	34.17	38.11	38.9	42.05	44.41	45.98	49.92	50.71	54.8	57.79	59.37	65.67	73.54	81.42	82.99	1.276	29	37
30.79	34.88	38.82	39.61	42.76	45.12	46.69	50.63	51.42	55.51	58.5	60.08	66.38	74.25	82.13	83.7	1.28	25	32
29.52	33.62	37.55	38.34	41.5	43.86	45.43	49.37	50.16	54.25	57.24	58.82	65.12	72.99	80.87	82.44	1.281	32	41
28.26	32.36	36.29	37.08	40.23	42.59	44.17	48.11	48.89	52.99	55.98	57.55	63.85	71.73	79.6	81.18	1.282	39	50
30.23	34.33	38.26	39.05	42.2	44.56	46.14	50.08	50.86	54.96	57.95	59.52	65.82	73.7	81.57	83.15	1.286	28	36
28.97	33.07	37	37.79	40.94	43.3	44.88	48.82	49.6	53.7	56.69	58.26	64.56	72.44	80.31	81.89	1.286	35	45
29.68	33.78	37.71	38.5	41.65	44.01	45.59	49.53	50.31	54.41	57.4	58.97	65.27	73.15	81.02	82.6	1.29	31	40
27.87	31.96	35.9	36.69	39.84	42.2	43.77	47.71	48.5	52.59	55.59	57.16	63.46	71.34	79.21	80.79	1.293	41	53
30.39	34.49	38.42	39.21	42.36	44.72	46.3	50.24	51.02	55.12	58.11	59.68	65.98	73.86	81.73	83.31	1.296	27	35
28.58	32.67	36.61	37.4	40.55	42.91	44.48	48.42	49.21	53.3	56.29	57.87	64.17	72.05	79.92	81.5	1.297	37	48
29.84	33.93	37.87	38.66	41.81	44.17	45.74	49.68	50.47	54.56	57.55	59.13	65.43	73.31	81.18	82.76	1.3	30	39
30.55	34.64	38.58	39.37	42.52	44.88	46.45	50.39	51.18	55.27	58.26	59.84	66.14	74.01	81.89	83.46	1.308	26	34
30	34.09	38.03	38.82	41.97	44.33	45.9	49.84	50.63	54.72	57.71	59.29	65.59	73.46	81.34	82.91	1.31	29	38
29.44	33.54	37.47	38.26	41.42	43.78	45.35	49.29	50.08	54.17	57.16	58.74	65.04	72.91	80.79	82.36	1.313	32	42
26.52	30.62	34.56	35.35	38.5	40.86	42.43	46.37	47.16	51.25	54.24	55.82	62.12	70	77.87	79.45	1.313	48	63
28.34	32.43	36.37	37.16	40.31	42.67	44.25	48.19	48.97	53.07	56.06	57.63	63.93	71.81	79.68	81.26	1.316	38	50
31.26	35.35	39.29	40.08	43.23	45.59	47.16	51.1	51.89	55.98	58.97	60.55	66.85	74.72	82.6	84.17	1.318	22	29
30.71	34.8	38.74	39.53	42.68	45.04	46.61	50.55	51.34	55.43	58.42	60	66.3	74.17	82.05	83.62	1.32	25	33
30.15	34.25	38.18	38.97	42.12	44.49	46.06	50	50.79	54.88	57.87	59.45	65.75	73.62	81.5	83.07	1.321	28	37
29.6	33.7	37.63	38.42	41.57	43.93	45.51	49.45	50.23	54.33	57.32	58.89	65.19	73.07	80.94	82.52	1.323	31	41
29.05	33.15	37.08	37.87	41.02	43.38	44.96	48.9	49.68	53.78	56.77	58.34	64.64	72.52	80.39	81.97	1.324	34	45
27.94	32.04	35.98	36.77	39.92	42.28	43.85	47.79	48.58	52.67	55.66	57.24	63.54	71.41	79.29	80.86	1.325	40	53
30.31	34.41	38.34	39.13	42.28	44.64	46.22	50.16	50.94	55.04	58.03	59.6	65.9	73.78	81.65	83.23	1.333	27	36
29.76	33.85	37.79	38.58	41.73	44.09	45.67	49.61	50.39	54.49	57.48	59.05	65.35	73.23	81.1	82.68	1.333	30	40
28.65	32.75	36.69	37.48	40.63	42.99	44.56	48.5	49.29	53.38	56.37	57.95	64.25	72.12	80	81.57	1.333	36	48
27.55	31.65	35.58	36.37	39.52	41.88	43.46	47.4	48.18	52.28	55.27	56.84	63.14	71.02	78.9	80.47	1.333	42	56
27	31.09	35.03	35.82	38.97	41.33	42.91	46.85	47.63	51.73	54.72	56.29	62.59	70.47	78.34	79.92	1.333	45	60
24.23	28.33	32.27	33.06	36.21	38.57	40.14	44.09	44.87	48.97	51.96	53.53	59.83	67.71	75.59	77.16	1.333	60	80
24.94	29.04	32.98	33.77	36.92	39.28	40.85	44.8	45.58	49.68	52.67	54.24	60.54	68.42	76.29	77.87	1.339	56	75
26.05	30.15	34.08	34.87	38.02	40.38	41.96	45.9	46.68	50.78	53.77	55.35	61.65	69.52	77.4	78.97	1.34	50	67
25.49	29.59	33.53	34.32	37.47	39.83	41.41	45.35	46.13	50.23	53.22	54.79	61.09	68.97	76.85	78.42	1.34	53	71
22.88	26.98	30.92	31.71	34.86	37.22	38.8	42.74	43.53	47.62	50.61	52.19	58.49	66.37	74.24	75.82	1.343	67	90
29.92	34.01	37.95	38.74	41.89	44.25	45.82	49.76	50.55	54.64	57.63	59.21	65.51	73.38	81.26	82.83	1.345	29	39
30.47	34.56	38.5	39.29	42.44	44.8	46.37	50.31	51.1	55.19	58.18	59.76	66.06	73.94	81.81	83.39	1.346	26	35
28.42	32.51	36.45	37.24	40.39	42.75	44.32	48.27	49.05	53.15	56.14	57.71	64.01	71.89	79.76	81.34	1.351	37	50
29.52	33.62	37.55	38.34	41.49	43.85	45.43	49.37	50.15	54.25	57.24	58.81	65.11	72.99	80.86	82.44	1.355	31	42
30.07	34.17	38.1	38.89	42.05	44.41	45.98	49.92	50.71	54.8	57.79	59.37	65.67	73.54	81.42	82.99	1.357	28	38
28.02	32.12	36.05	36.84	39.99	42.35	43.93	47.87	48.66	52.75	55.74	57.32	63.62	71.49	79.37	80.94	1.359	39	53
30.63	34.72	38.66	39.45	42.6	44.96	46.53	50.47	51.26	55.35	58.34	59.92	66.22	74.09	81.97	83.54	1.36	25	34
31.18	35.27	39.21	40	43.15	45.51	47.08	51.02	51.8	55.9	58.89	60.47	66.77	74.64	82.52	84.09	1.364	22	30
29.13	33.22	37.16	37.95	41.1	43.46	45.03	48.98	49.76	53.86	56.85	58.42	64.72	72.6	80.47	82.05	1.364	33	45
1.18	1.22	1.26	1.26	1.29	1.31	1.32	1.35	1.36	1.38	1.4	1.41	1.45	1.49	1.52	1.53	Length Factor*		

Note: 26, 27, 29 and 31 groove sprockets are only available as stock products in 12 and 21 mm widths. 33, 35, 37, 39 and 41 groove sprockets are only available as stock products in 12, 21, and 36 mm widths.
Check sprocket specification tables on pages 74 and 75 for stainless steel and nickel plated sprocket availability.
* This length factor must be used to determine the proper belt width.

Center distance is greater than eight times the small sprocket and the large sprocket is not flanged. See Engineering Section for details.

Drive Selection Table

8mm Pitch Poly Chain® GT® Carbon™ Belts

DriveR: Number of Grooves	DriveR: Pitch Diameter (Inches)	DriveN: Number of Grooves	DriveN: Pitch Diameter (Inches)	Speed Ratio	8MGT-640 PL 25.20 80 Teeth	8MGT-720 PL 28.35 90 Teeth	8MGT-800 PL 31.50 100 Teeth	8MGT-896 PL 35.28 112 Teeth	8MGT-960 PL 37.80 120 Teeth	8MGT-1000 PL 39.37 125 Teeth	8MGT-1040 PL 40.94 130 Teeth	8MGT-1120 PL 44.09 140 Teeth	8MGT-1200 PL 47.24 150 Teeth	8MGT-1224 PL 48.19 153 Teeth	8MGT-1280 PL 50.39 160 Teeth	8MGT-1440 PL 56.69 180 Teeth	8MGT-1600 PL 62.99 200 Teeth	8MGT-1760 PL 69.29 220 Teeth
41	4.11	56	5.614	1.366		6.49	8.08	9.97	11.24	12.02	12.81	14.39	15.97	16.44	17.54	20.69	23.85	27
30	3.008	41	4.11	1.367	6.99	8.57	10.14	12.04	13.3	14.08	14.87	16.45	18.02	18.5	19.6	22.75	25.9	29.05
27	2.707	37	3.709	1.37	7.54	9.12	10.7	12.59	13.85	14.64	15.42	17	18.57	19.05	20.15	23.3	26.45	29.6
35	3.509	48	4.812	1.371	6.03	7.61	9.19	11.09	12.35	13.13	13.92	15.5	17.07	17.55	18.65	21.8	24.95	28.1
29	2.907	40	4.01	1.379	7.15	8.72	10.3	12.3	13.46	14.24	15.03	16.6	18.18	18.65	19.75	22.91	26.06	29.21
26	2.607	36	3.609	1.385	7.7	9.28	10.86	12.75	14.01	14.79	15.58	17.16	18.73	19.21	20.31	23.46	26.61	29.76
36	3.609	50	5.013	1.389	5.79	7.37	8.95	10.85	12.11	12.89	13.68	15.26	16.83	17.31	18.41	21.56	24.71	27.86
28	2.807	39	3.91	1.393	7.3	8.88	10.46	12.35	13.61	14.4	15.18	16.76	18.34	18.81	19.91	23.06	26.21	29.36
38	3.81	53	5.314	1.395	5.38	6.97	8.55	10.45	11.71	12.5	13.28	14.86	16.44	16.91	18.01	21.17	24.32	27.47
48	4.812	67	6.717	1.396			6.63	8.53	9.8	10.59	11.38	12.96	14.53	15.01	16.11	19.27	22.42	25.57
25	2.506	35	3.509	1.4	7.86	9.44	11.01	12.91	14.17	14.95	15.74	17.31	18.89	19.36	20.46	23.62	26.77	29.92
30	3.008	42	4.211	1.4	6.9	8.48	10.06	11.96	13.22	14	14.79	16.36	17.94	18.42	19.52	22.67	25.82	28.97
40	4.01	56	5.614	1.4		6.57	8.15	10.05	11.31	12.1	12.89	14.46	16.04	16.52	17.62	20.77	23.92	27.07
45	4.511	63	6.316	1.4			7.19	9.09	10.36	11.14	11.93	13.51	15.09	15.57	16.67	19.82	22.97	26.13
80	8.02	112	11.229	1.4											9.95	13.13	16.3	19.46
32	3.208	45	4.511	1.406	6.5	8.09	9.67	11.56	12.82	13.61	14.39	15.97	17.55	18.02	19.12	22.27	25.42	28.58
27	2.707	38	3.81	1.407	7.46	9.04	10.62	12.51	13.77	14.56	15.34	16.92	18.49	18.97	20.07	23.22	26.37	29.52
22	2.206	31	3.108	1.409	8.41	9.99	11.57	13.46	14.72	15.5	16.29	17.87	19.44	19.92	21.02	24.17	27.32	30.47
34	3.409	48	4.812	1.412	6.1	7.69	9.27	11.16	12.42	13.21	14	15.57	17.15	17.62	18.73	21.88	25.03	28.18
29	2.907	41	4.11	1.414	7.06	8.64	10.22	12.11	13.38	14.16	14.95	16.52	18.1	18.57	19.67	22.83	25.98	29.13
53	5.314	75	7.519	1.415				7.48	8.75	9.54	10.33	11.91	13.5	13.97	15.08	18.23	21.39	24.54
50	5.013	71	7.118	1.42				8.04	9.31	10.1	10.89	12.47	14.05	14.53	15.63	18.79	21.94	25.1
26	2.607	37	3.709	1.423	7.62	9.2	10.78	12.67	13.93	14.71	15.5	17.08	18.65	19.13	20.23	23.38	26.53	29.68
28	2.807	40	4.01	1.429	7.22	8.8	10.38	12.27	13.53	14.32	15.1	16.68	18.26	18.73	19.83	22.98	26.13	29.28
35	3.509	50	5.013	1.429	5.86	7.44	9.03	10.92	12.18	12.97	13.76	15.33	16.91	17.39	18.49	21.64	24.79	27.94
42	4.211	60	6.015	1.429		6.08	7.67	9.57	10.83	11.62	12.41	13.98	15.56	16.04	17.14	20.29	23.45	26.6
56	5.614	80	8.02	1.429					8.1	8.9	9.69	11.27	12.86	13.33	14.44	17.6	20.75	23.91
63	6.316	90	9.023	1.429							8.31	9.91	11.49	11.97	13.08	16.24	19.4	22.56
37	3.709	53	5.314	1.432	5.45	7.04	8.63	10.52	11.79	12.57	13.36	14.94	16.51	16.99	18.09	21.24	24.4	27.55
39	3.91	56	5.614	1.436		6.64	8.23	10.12	11.39	12.18	12.96	14.54	16.12	16.59	17.69	20.85	24	27.15
25	2.506	36	3.609	1.44	7.78	9.36	10.93	12.83	14.09	14.87	15.66	17.23	18.81	19.28	20.38	23.54	26.69	29.84
27	2.707	39	3.91	1.444	7.38	8.96	10.54	12.43	13.69	14.48	15.26	16.84	18.41	18.89	19.99	23.14	26.29	29.44
29	2.907	42	4.211	1.448	6.98	8.56	10.14	12.03	13.29	14.08	14.87	16.44	18.02	18.49	19.59	22.75	25.9	29.05
31	3.108	45	4.511	1.452	6.58	8.16	9.74	11.63	12.9	13.69	14.47	16.05	17.62	18.1	19.2	22.35	25.5	28.65
22	2.206	32	3.208	1.455	8.33	9.91	11.49	13.38	14.64	15.42	16.21	17.79	19.36	19.84	20.94	24.09	27.24	30.39
33	3.308	48	4.812	1.455	6.18	7.76	9.34	11.24	12.5	13.29	14.07	15.65	17.23	17.7	18.8	21.95	25.11	28.26
26	2.607	38	3.81	1.462	7.54	9.12	10.69	12.59	13.85	14.63	15.42	16.99	18.57	19.05	20.15	23.3	26.45	29.6
41	4.11	60	6.015	1.463		6.15	7.74	9.64	10.91	11.69	12.48	14.06	15.64	16.11	17.22	20.37	23.52	26.68
28	2.807	41	4.11	1.464	7.14	8.72	10.3	12.19	13.45	14.24	15.02	16.6	18.18	18.65	19.75	22.9	26.05	29.21
34	3.409	50	5.013	1.471	5.93	7.52	9.1	11	12.26	13.05	13.83	15.41	16.99	17.46	18.56	21.72	24.87	28.02
36	3.609	53	5.314	1.472	5.53	7.12	8.7	10.6	11.86	12.65	13.43	15.01	16.59	17.07	18.17	21.32	24.47	27.62
38	3.81	56	5.614	1.474		6.71	8.3	10.2	11.46	12.25	13.04	14.62	16.19	16.67	17.77	20.92	24.08	27.23
48	4.812	71	7.118	1.479				8.19	9.46	10.25	11.04	12.62	14.2	14.68	15.78	18.94	22.1	25.25
25	2.506	37	3.709	1.48	7.7	9.27	10.85	12.74	14.01	14.79	15.58	17.15	18.73	19.2	20.3	23.46	26.61	29.76
27	2.707	40	4.01	1.481	7.3	8.88	10.45	12.35	13.61	14.39	15.18	16.76	18.33	18.81	19.91	23.06	26.21	29.36
45	4.511	67	6.717	1.489			6.84	8.75	10.02	10.81	11.6	13.18	14.76	15.24	16.34	19.5	22.65	25.8
75	7.519	112	11.229	1.493											10.3	13.49	16.67	19.83
22	2.206	33	3.308	1.5	8.25	9.83	11.41	13.3	14.56	15.34	16.13	17.71	19.28	19.76	20.86	24.01	27.16	30.31
26	2.607	39	3.91	1.5	7.45	9.03	10.61	12.5	13.77	14.55	15.34	16.91	18.49	18.97	20.07	23.22	26.37	29.52
28	2.807	42	4.211	1.5	7.05	8.63	10.21	12.11	13.37	14.16	14.94	16.52	18.09	18.57	19.67	22.82	25.97	29.12
30	3.008	45	4.511	1.5	6.65	8.24	9.82	11.71	12.97	13.76	14.55	16.12	17.7	18.17	19.27	22.43	25.58	28.73
32	3.208	48	4.812	1.5	6.25	7.84	9.42	11.31	12.58	13.36	14.15	15.73	17.3	17.78	18.88	22.03	25.18	28.33
40	4.01	60	6.015	1.5		6.22	7.81	9.71	10.98	11.77	12.56	14.14	15.71	16.19	17.29	20.45	23.6	26.75
42	4.211	63	6.316	1.5		5.81	7.41	9.31	10.58	11.37	12.16	13.74	15.32	15.79	16.89	20.05	23.2	26.36
50	5.013	75	7.519	1.5				7.7	8.97	9.76	10.55	12.14	13.72	14.2	15.3	18.46	21.62	24.77
60	6.015	90	9.023	1.5							8.53	10.12	11.71	12.19	13.3	16.47	19.63	22.78
53	5.314	80	8.02	1.509					8.32	9.11	9.9	11.49	13.08	13.55	14.66	17.82	20.98	24.13
35	3.509	53	5.314	1.514	5.6	7.19	8.77	10.67	11.94	12.72	13.51	15.09	16.67	17.14	18.24	21.4	24.55	27.7
37	3.709	56	5.614	1.514	5.19	6.79	8.37	10.27	11.54	12.33	13.11	14.69	16.27	16.75	17.85	21	24.15	27.31
33	3.308	50	5.013	1.515	6	7.59	9.18	11.07	12.34	13.12	13.91	15.49	17.06	17.54	18.64	21.79	24.95	28.1
27	2.707	41	4.11	1.519	7.21	8.79	10.37	12.27	13.53	14.31	15.1	16.68	18.25	18.73	19.83	22.98	26.13	29.28
25	2.506	38	3.81	1.52	7.61	9.19	10.77	12.66	13.92	14.71	15.5	17.07	18.65	19.12	20.22	23.38	26.53	29.68
41	4.11	63	6.316	1.537		5.88	7.48	9.39	10.65	11.44	12.23	13.81	15.39	15.87	16.97	20.13	23.28	26.43
26	2.607	40	4.01	1.538	7.37	8.95	10.53	12.42	13.69	14.47	15.26	16.83	18.41	18.88	19.99	23.14	26.29	29.44
39	3.91	60	6.015	1.538		6.29	7.88	9.79	11.05	11.84	12.63	14.21	15.79	16.27	17.37	20.52	23.68	26.83
22	2.206	34	3.409	1.545	8.17	9.75	11.32	13.22	14.48	15.26	16.05	17.62	19.2	19.68	20.78	23.93	27.08	30.23
31	3.108	48	4.812	1.548	6.32	7.91	9.49	11.39	12.65	13.44	14.22	15.8	17.38	17.85	18.96	22.11	25.26	28.41
29	2.907	45	4.511	1.552	6.73	8.31	9.89	11.79	13.05	13.84	14.62	16.2	17.78	18.25	19.35	22.5	25.66	28.81
27	2.707	42	4.211	1.556	7.13	8.71	10.29	12.18	13.45	14.23	15.02	16.59	18.17	18.65	19.75	22.9	26.05	29.2
36	3.609	56	5.614	1.556	5.26	6.86	8.45	10.35	11.61	12.4	13.19	14.77	16.35	16.82	17.92	21.08	24.23	27.38
34	3.409	53	5.314	1.559	5.67	7.26	8.85	10.75	12.01	12.8	13.59	15.16	16.74	17.22	18.32	21.47	24.63	27.78
25	2.506	39	3.91	1.56	7.53	9.11	10.69	12.59	13.85	14.63	15.41	16.99	18.57	19.04	20.14	23.3	26.45	29.6
32	3.208	50	5.013	1.563	6.08	7.67	9.25	11.15	12.41	13.2	13.98	15.56	17.14	17.62	18.72	21.87	25.02	28.17
48	4.812	75	7.519	1.563				7.84	9.11	9.91	10.7	12.29	13.87	14.35	15.45	18.61	21.77	24.92
40	4.01	63	6.316	1.575		5.95	7.55	9.46	10.73	11.52	12.31	13.89	15.47	15.94	17.05	20.2	23.36	26.51
26	2.607	41	4.11	1.577	7.29	8.87	10.45	12.34	13.6	14.39	15.18	16.75	18.33	18.8	19.91	23.06	26.21	29.36
71	7.118	112	11.229	1.577										9.46	10.59	13.78	16.96	20.13
Length Factor*					0.79	0.83	0.87	0.91	0.94	0.96	0.97	1	1.03	1.03	1.05	1.1	1.14	1.17

Note: 26, 27, 29 and 31 groove sprockets are only available as stock products in 12 and 21 mm widths. 33, 35, 37, 39 and 41 groove sprockets are only available as stock products in 12, 21, and 36 mm widths.
Check sprocket specification tables on pages 74 and 75 for stainless steel and nickel plated sprocket availability.
* This length factor must be used to determine the proper belt width.

8MGT-1792 P.L. 70.55 224Teeth	8MGT-2000 P.L. 78.74 250 Teeth	8MGT-2200 P.L. 86.61 275 Teeth	8MGT-2240 P.L. 88.19 280 Teeth	8MGT-2400 P.L. 94.49 300 Teeth	8MGT-2520 P.L. 99.21 315 Teeth	8MGT-2600 P.L. 102.36 325 Teeth	8MGT-2800 P.L. 110.24 350 Teeth	8MGT-2840 P.L. 111.81 355 Teeth	8MGT-3048 P.L. 120.00 381 Teeth	8MGT-3200 P.L. 125.98 400 Teeth	8MGT-3280 P.L. 129.13 410 Teeth	8MGT-3600 P.L. 141.73 450 Teeth	8MGT-4000 P.L. 157.48 500 Teeth	8MGT-4400 P.L. 173.23 550 Teeth	8MGT-4480 P.L. 176.38 560 Teeth	Speed Ratio	DriveR Number of Grooves	DriveN Number of Grooves
										Center Distance, Inches							Sprocket Combinations	
27.63	31.72	35.66	36.45	39.6	41.96	43.54	47.48	48.26	52.2	55.35	56.92	63.22	71.1	78.97	80.55	1.366	41	56
29.68	33.78	37.71	38.5	41.65	44.01	45.59	49.53	50.31	54.25	57.4	58.97	65.27	73.15	81.02	82.6	1.367	30	41
30.23	34.33	38.26	39.05	42.2	44.56	46.14	50.08	50.86	54.8	57.95	59.52	65.82	73.7	81.57	83.15	1.37	27	37
28.73	32.83	36.76	37.55	40.7	43.06	44.64	48.58	49.37	53.3	56.45	58.03	64.33	72.2	80.08	81.65	1.371	35	48
29.84	33.93	37.87	38.66	41.81	44.17	45.74	49.68	50.47	54.4	57.55	59.13	65.43	73.31	81.18	82.76	1.379	29	40
30.39	34.48	38.42	39.21	42.36	44.72	46.3	50.24	51.02	54.96	58.11	59.68	65.98	73.86	81.73	83.31	1.385	26	36
28.49	32.59	36.53	37.32	40.47	42.83	44.4	48.34	49.13	53.06	56.21	57.79	64.09	71.96	79.84	81.42	1.389	36	50
29.99	34.09	38.03	38.82	41.97	44.33	45.9	49.84	50.63	54.56	57.71	59.29	65.59	73.46	81.34	82.91	1.393	28	39
28.1	32.2	36.13	36.92	40.07	42.43	44.01	47.95	48.73	52.67	55.82	57.39	63.69	71.57	79.45	81.02	1.395	38	53
26.2	30.3	34.24	35.03	38.18	40.54	42.11	46.06	46.84	50.78	53.93	55.5	61.8	69.68	77.55	79.13	1.396	48	67
30.55	34.64	38.58	39.37	42.52	44.88	46.45	50.39	51.18	55.11	58.26	59.84	66.14	74.01	81.89	83.46	1.4	25	35
29.6	33.69	37.63	38.42	41.57	43.93	45.51	49.45	50.23	54.17	57.32	58.89	65.19	73.07	80.94	82.52	1.4	30	42
27.7	31.8	35.74	36.53	39.68	42.04	43.61	47.55	48.34	52.28	55.43	57	63.3	71.18	79.05	80.63	1.4	40	56
26.76	30.85	34.79	35.58	38.73	41.09	42.67	46.61	47.39	51.33	54.48	56.05	62.35	70.23	78.11	79.68	1.4	45	63
20.09	24.2	28.14	28.93	32.09	34.45	36.03	39.97	40.76	44.69	47.84	49.42	55.72	63.6	71.48	73.05	1.4	80	112
29.21	33.3	37.24	38.03	41.18	43.54	45.11	49.05	49.84	53.77	56.92	58.5	64.8	72.67	80.55	82.12	1.406	32	45
30.15	34.25	38.18	38.97	42.12	44.48	46.06	50	50.78	54.72	57.87	59.44	65.74	73.62	81.49	83.07	1.407	27	38
31.1	35.19	39.13	39.92	43.07	45.43	47	50.94	51.73	55.66	58.81	60.39	66.69	74.57	82.44	84.02	1.409	22	31
28.81	32.91	36.84	37.63	40.78	43.14	44.72	48.66	49.44	53.38	56.53	58.1	64.4	72.28	80.16	81.73	1.412	34	48
29.76	33.85	37.79	38.58	41.73	44.09	45.66	49.61	50.39	54.33	57.48	59.05	65.35	73.23	81.1	82.68	1.414	29	41
25.17	29.27	33.21	34	37.15	39.51	41.09	45.03	45.81	49.75	52.9	54.47	60.78	68.65	76.53	78.1	1.415	53	75
25.73	29.82	33.76	34.55	37.7	40.06	41.64	45.58	46.37	50.3	53.45	55.03	61.33	69.2	77.08	78.66	1.42	50	71
30.31	34.41	38.34	39.13	42.28	44.64	46.22	50.16	50.94	54.88	58.03	59.6	65.9	73.78	81.65	83.23	1.423	26	37
29.91	34.01	37.95	38.74	41.89	44.25	45.82	49.76	50.55	54.48	57.63	59.21	65.51	73.38	81.26	82.83	1.429	28	40
28.57	32.67	36.6	37.39	40.54	42.91	44.48	48.42	49.21	53.14	56.29	57.87	64.17	72.04	79.92	81.49	1.429	35	50
27.23	31.33	35.26	36.05	39.2	41.56	43.14	47.08	47.87	51.8	54.95	56.53	62.83	70.7	78.58	80.15	1.429	42	60
24.54	28.64	32.57	33.37	36.52	38.88	40.45	44.4	45.18	49.12	52.27	53.84	60.14	68.02	75.9	77.47	1.429	56	80
23.19	27.29	31.23	32.02	35.17	37.53	39.11	43.05	43.84	47.77	50.92	52.5	58.8	66.68	74.56	76.13	1.429	63	90
28.18	32.27	36.21	37	40.15	42.51	44.09	48.03	48.81	52.75	55.9	57.47	63.77	71.65	79.52	81.1	1.432	37	53
27.78	31.88	35.81	36.6	39.76	42.12	43.69	47.63	48.42	52.35	55.5	57.08	63.38	71.25	79.13	80.71	1.436	39	56
30.47	34.56	38.5	39.29	42.44	44.8	46.37	50.31	51.1	55.03	58.18	59.76	66.06	73.94	81.81	83.39	1.44	25	36
30.07	34.17	38.1	38.89	42.04	44.4	45.98	49.92	50.7	54.64	57.79	59.36	65.67	73.54	81.42	82.99	1.444	27	39
29.68	33.77	37.71	38.5	41.65	44.01	45.58	49.53	50.31	54.25	57.4	58.97	65.27	73.15	81.02	82.6	1.448	29	42
29.28	33.38	37.31	38.1	41.26	43.62	45.19	49.13	49.92	53.85	57	58.58	64.88	72.75	80.63	82.2	1.452	31	45
31.02	35.11	39.05	39.84	42.99	45.35	46.93	50.87	51.65	55.59	58.74	60.31	66.61	74.49	82.36	83.94	1.455	22	32
28.89	32.98	36.92	37.71	40.86	43.22	44.8	48.74	49.52	53.46	56.61	58.18	64.48	72.36	80.23	81.81	1.455	33	48
30.23	34.32	38.26	39.05	42.2	44.56	46.14	50.08	50.86	54.8	57.95	59.52	65.82	73.7	81.57	83.15	1.462	26	38
27.31	31.4	35.34	36.13	39.28	41.64	43.22	47.16	47.94	51.88	55.03	56.6	62.91	70.78	78.66	80.23	1.463	41	60
29.84	33.93	37.87	38.66	41.81	44.17	45.74	49.68	50.47	54.4	57.55	59.13	65.43	73.3	81.18	82.75	1.464	28	41
28.65	32.75	36.68	37.47	40.62	42.98	44.56	48.5	49.28	53.22	56.37	57.94	64.25	72.12	80	81.57	1.471	34	50
28.25	32.35	36.29	37.08	40.23	42.59	44.16	48.1	48.89	52.83	55.98	57.55	63.85	71.73	79.6	81.18	1.472	36	53
27.86	31.96	35.89	36.68	39.83	42.19	43.77	47.71	48.5	52.43	55.58	57.16	63.46	71.33	79.21	80.78	1.474	38	56
25.88	29.98	33.92	34.71	37.86	40.22	41.79	45.74	46.52	50.46	53.61	55.18	61.48	69.36	77.24	78.81	1.479	48	71
30.39	34.48	38.42	39.21	42.36	44.72	46.29	50.24	51.02	54.96	58.11	59.68	65.98	73.86	81.73	83.31	1.48	25	37
29.99	34.09	38.02	38.81	41.96	44.32	45.9	49.84	50.63	54.56	57.71	59.29	65.59	73.46	81.34	82.91	1.481	27	40
26.43	30.53	34.47	35.26	38.41	40.77	42.35	46.29	47.07	51.01	54.16	55.74	62.04	69.91	77.79	79.36	1.489	45	67
20.47	24.58	28.52	29.31	32.47	34.83	36.41	40.35	41.14	45.08	48.23	49.81	56.11	63.99	71.87	73.44	1.493	75	112
30.94	35.03	38.97	39.76	42.91	45.27	46.85	50.79	51.57	55.51	58.66	60.23	66.53	74.41	82.28	83.86	1.5	22	33
30.15	34.25	38.18	38.97	42.12	44.48	46.06	50	50.78	54.72	57.87	59.44	65.74	73.62	81.49	83.07	1.5	26	39
29.75	33.85	37.79	38.58	41.73	44.09	45.66	49.6	50.39	54.32	57.47	59.05	65.35	73.22	81.1	82.68	1.5	28	42
29.36	33.46	37.39	38.18	41.33	43.69	45.27	49.21	49.99	53.93	57.08	58.65	64.96	72.83	80.71	82.28	1.5	30	45
28.97	33.06	37	37.79	40.94	43.3	44.87	48.81	49.6	53.54	56.69	58.26	64.56	72.44	80.31	81.89	1.5	32	48
27.38	31.48	35.42	36.21	39.36	41.72	43.29	47.24	48.02	51.96	55.11	56.68	62.98	70.86	78.74	80.31	1.5	40	60
26.99	31.08	35.02	35.81	38.96	41.32	42.9	46.84	47.63	51.56	54.71	56.29	62.59	70.46	78.34	79.92	1.5	42	63
25.4	29.5	33.44	34.23	37.38	39.74	41.32	45.26	46.05	49.98	53.13	54.71	61.01	68.89	76.76	78.34	1.5	50	75
23.42	27.52	31.46	32.25	35.4	37.76	39.34	43.28	44.07	48.01	51.16	52.73	59.04	66.91	74.79	76.36	1.5	60	90
24.77	28.87	32.8	33.6	36.75	39.11	40.69	44.63	45.41	49.35	52.5	54.08	60.38	68.25	76.13	77.71	1.509	53	80
28.33	32.43	36.36	37.15	40.31	42.67	44.24	48.18	48.97	52.9	56.05	57.63	63.93	71.8	79.68	81.26	1.514	35	53
27.94	32.03	35.97	36.76	39.91	42.27	43.85	47.79	48.57	52.51	55.66	57.23	63.54	71.41	79.29	80.86	1.514	37	56
28.73	32.82	36.76	37.55	40.7	43.06	44.64	48.58	49.36	53.3	56.45	58.02	64.32	72.2	80.08	81.65	1.515	33	50
29.91	34.01	37.94	38.73	41.89	44.25	45.82	49.76	50.55	54.48	57.63	59.21	65.51	73.38	81.26	82.83	1.519	27	41
30.31	34.4	38.34	39.13	42.28	44.64	46.21	50.16	50.94	54.88	58.03	59.6	65.9	73.78	81.65	83.23	1.52	25	38
27.06	31.16	35.1	35.89	39.04	41.4	42.98	46.92	47.7	51.64	54.79	56.37	62.67	70.54	78.42	79.99	1.537	41	63
30.07	34.17	38.1	38.89	42.04	44.4	45.98	49.92	50.7	54.64	57.79	59.36	65.66	73.54	81.41	82.99	1.538	26	40
27.46	31.56	35.49	36.28	39.44	41.8	43.37	47.31	48.1	52.03	55.18	56.76	63.06	70.94	78.81	80.39	1.538	39	60
30.86	34.95	38.89	39.68	42.83	45.19	46.77	50.71	51.49	55.43	58.58	60.15	66.45	74.33	82.2	83.78	1.545	22	34
29.04	33.14	37.07	37.87	41.02	43.38	44.95	48.89	49.68	53.61	56.76	58.34	64.64	72.51	80.39	81.97	1.548	31	48
29.44	33.53	37.47	38.26	41.41	43.77	45.35	49.29	50.07	54.01	57.16	58.73	65.03	72.91	80.78	82.36	1.552	29	45
29.83	33.93	37.86	38.65	41.8	44.17	45.74	49.68	50.47	54.4	57.55	59.13	65.43	73.3	81.18	82.75	1.556	27	42
28.01	32.11	36.05	36.84	39.99	42.35	43.92	47.87	48.65	52.59	55.74	57.31	63.61	71.49	79.36	80.94	1.556	36	56
28.41	32.51	36.44	37.23	40.38	42.74	44.32	48.26	49.04	52.98	56.13	57.71	64.01	71.88	79.76	81.33	1.559	34	53
30.23	34.32	38.26	39.05	42.2	44.56	46.14	50.08	50.86	54.8	57.95	59.52	65.82	73.7	81.57	83.15	1.56	25	39
28.8	32.9	36.84	37.63	40.78	43.14	44.71	48.65	49.44	53.38	56.53	58.1	64.4	72.28	80.15	81.73	1.563	32	50
25.55	29.65	33.59	34.38	37.54	39.9	41.47	45.42	46.2	50.14	53.29	54.86	61.17	69.04	76.92	78.49	1.563	48	75
27.14	31.24	35.18	35.97	39.12	41.48	43.05	47	47.78	51.72	54.87	56.44	62.74	70.62	78.5	80.07	1.575	40	63
29.99	34.09	38.02	38.81	41.96	44.32	45.9	49.84	50.63	54.56	57.71	59.28	65.59	73.46	81.34	82.91	1.577	26	41
20.76	24.88	28.82	29.61	32.77	35.14	36.71	40.66	41.44	45.38	48.54	50.11	56.42	64.3	72.18	73.75	1.577	71	112
1.18	1.22	1.26	1.26	1.29	1.31	1.32	1.35	1.36	1.38	1.4	1.41	1.45	1.49	1.52	1.53	Length Factor*		

Note: 26, 27, 29 and 31 groove sprockets are only available as stock products in 12 and 21 mm widths. 33, 35, 37, 39 and 41 groove sprockets are only available as stock products in 12, 21, and 36 mm widths.
Check sprocket specification tables on pages 74 and 75 for stainless steel and nickel plated sprocket availability.
* This length factor must be used to determine the proper belt width.

☐ Center distance is greater than eight times the small sprocket and the large sprocket is not flanged. See Engineering Section for details.

Drive Selection Table

8mm Pitch Poly Chain® GT® Carbon™ Belts

DriveR Grooves	DriveR Pitch Dia. (in)	DriveN Grooves	DriveN Pitch Dia. (in)	Speed Ratio	8MGT-640 PL 25.20 80 Teeth	8MGT-720 PL 28.35 90 Teeth	8MGT-800 PL 31.50 100 Teeth	8MGT-896 PL 35.28 112 Teeth	8MGT-960 PL 37.80 120 Teeth	8MGT-1000 PL 39.37 125 Teeth	8MGT-1040 PL 40.94 130 Teeth	8MGT-1120 PL 44.09 140 Teeth	8MGT-1200 PL 47.24 150 Teeth	8MGT-1224 PL 48.19 153 Teeth	8MGT-1280 PL 50.39 160 Teeth	8MGT-1440 PL 56.69 180 Teeth	8MGT-1600 PL 62.99 200 Teeth	8MGT-1760 PL 69.29 220 Teeth
45	4.511	71	7.118	1.578			6.49	8.41	9.68	10.47	11.26	12.85	14.43	14.9	16.01	19.17	22.32	25.48
38	3.81	60	6.015	1.579		6.36	7.96	9.86	11.13	11.92	12.71	14.29	15.87	16.34	17.44	20.6	23.75	26.91
22	2.206	35	3.509	1.591	8.09	9.66	11.24	13.14	14.4	15.18	15.97	17.54	19.12	19.6	20.7	23.85	27	30.15
42	4.211	67	6.717	1.595			7.06	8.97	10.24	11.03	11.82	13.4	14.98	15.46	16.56	19.72	22.88	26.03
25	2.506	40	4.01	1.6	7.44	9.03	10.61	12.5	13.76	14.55	15.33	16.91	18.49	18.96	20.06	23.22	26.37	29.52
30	3.008	48	4.812	1.6	6.39	7.98	9.57	11.46	12.73	13.51	14.3	15.88	17.45	17.93	19.03	22.18	25.34	28.49
35	3.509	56	5.614	1.6	5.33	6.93	8.52	10.42	11.69	12.48	13.26	14.84	16.42	16.9	18	21.15	24.31	27.46
50	5.013	80	8.02	1.6				7.25	8.53	9.33	10.12	11.71	13.3	13.78	14.88	18.05	21.21	24.36
33	3.308	53	5.314	1.606	5.74	7.33	8.92	10.82	12.09	12.87	13.66	15.24	16.82	17.29	18.4	21.55	24.7	27.86
28	2.807	45	4.511	1.607	6.8	8.38	9.97	11.86	13.12	13.9	14.7	16.28	17.85	18.33	19.43	22.58	25.73	28.88
56	5.614	90	9.023	1.607						8.01	8.81	10.41	12	12.48	13.59	16.76	19.93	23.09
31	3.108	50	5.013	1.613	6.15	7.74	9.32	11.22	12.49	13.27	14.06	15.64	17.22	17.69	18.79	21.95	25.1	28.25
26	2.607	42	4.211	1.615	7.2	8.78	10.36	12.26	13.52	14.31	15.09	16.67	18.25	18.72	19.82	22.98	26.13	29.28
39	3.91	63	6.316	1.615		6.02	7.62	9.53	10.8	11.59	12.38	13.96	15.54	16.02	17.12	20.28	23.43	26.59
37	3.709	60	6.015	1.622		6.43	8.03	9.94	11.2	11.99	12.78	14.36	15.94	16.42	17.52	20.68	23.83	26.98
41	4.11	67	6.717	1.634			7.13	9.04	10.31	11.1	11.9	13.48	15.06	15.54	16.64	19.8	22.95	26.11
22	2.206	36	3.609	1.636	8	9.58	11.16	13.05	14.32	15.1	15.89	17.46	19.04	19.52	20.62	23.77	26.92	30.07
25	2.506	41	4.11	1.64	7.36	8.94	10.52	12.42	13.68	14.47	15.25	16.83	18.41	18.88	19.98	23.13	26.29	29.44
34	3.409	56	5.614	1.647	5.4	7	8.59	10.5	11.76	12.55	13.34	14.92	16.5	16.97	18.07	21.23	24.38	27.54
29	2.907	48	4.812	1.655	6.47	8.06	9.64	11.54	12.8	13.59	14.38	15.95	17.53	18.01	19.11	22.26	25.41	28.57
32	3.208	53	5.314	1.656	5.81	7.41	9	10.9	12.16	12.95	13.74	15.32	16.89	17.37	18.47	21.63	24.78	27.93
38	3.81	63	6.316	1.658		6.09	7.69	9.61	10.87	11.66	12.45	14.04	15.62	16.09	17.2	20.35	23.51	26.66
27	2.707	45	4.511	1.667	6.87	8.46	10.04	11.94	13.2	13.99	14.77	16.35	17.93	18.4	19.51	22.66	25.81	28.96
30	3.008	50	5.013	1.667	6.22	7.81	9.4	11.3	12.56	13.35	14.13	15.71	17.29	17.77	18.87	22.02	25.18	28.33
36	3.609	60	6.015	1.667		6.5	8.1	10.01	11.28	12.07	12.85	14.44	16.02	16.49	17.6	20.75	23.91	27.06
45	4.511	75	7.519	1.667				8.05	9.33	10.12	10.92	12.51	14.09	14.57	15.67	18.84	22	25.15
48	4.812	80	8.02	1.667				7.39	8.67	9.47	10.27	11.86	13.45	13.92	15.03	18.2	21.36	24.51
67	6.717	112	11.229	1.672										9.74	10.87	14.07	17.25	20.43
40	4.01	67	6.717	1.675			7.2	9.11	10.39	11.18	11.97	13.55	15.13	15.61	16.72	19.87	23.03	26.19
25	2.506	42	4.211	1.68	7.27	8.86	10.44	12.34	13.6	14.38	15.17	16.75	18.32	18.8	19.9	23.05	26.21	29.36
22	2.206	37	3.709	1.682	7.92	9.5	11.08	12.97	14.23	15.02	15.81	17.38	18.96	19.43	20.54	23.69	26.84	29.99
42	4.211	71	7.118	1.69			6.69	8.62	9.9	10.69	11.48	13.07	14.65	15.13	16.23	19.39	22.55	25.71
33	3.308	56	5.614	1.697	5.47	7.07	8.67	10.57	11.84	12.62	13.41	14.99	16.57	17.05	18.15	21.31	24.46	27.61
53	5.314	90	9.023	1.698				7.41	8.21	9.02	10.62	12.22	12.7	13.81	16.98	20.15	23.31	
37	3.709	63	6.316	1.703		6.16	7.77	9.68	10.95	11.74	12.53	14.11	15.69	16.17	17.27	20.43	23.59	26.74
31	3.108	53	5.314	1.71	5.88	7.48	9.07	10.97	12.24	13.02	13.81	15.39	16.97	17.45	18.55	21.7	24.86	28.01
28	2.807	48	4.812	1.714	6.54	8.13	9.71	11.61	12.88	13.66	14.45	16.03	17.61	18.08	19.18	22.34	25.49	28.64
35	3.509	60	6.015	1.714		6.58	8.17	10.08	11.35	12.14	12.93	14.51	16.09	16.57	17.67	20.83	23.98	27.14
39	3.91	67	6.717	1.718			7.27	9.19	10.46	11.25	12.04	13.63	15.21	15.69	16.79	19.95	23.11	26.26
29	2.907	50	5.013	1.724	6.29	7.88	9.47	11.37	12.64	13.42	14.21	15.79	17.37	17.84	18.95	22.1	25.25	28.41
22	2.206	38	3.81	1.727	7.83	9.42	11	12.89	14.15	14.94	15.72	17.3	18.88	19.35	20.45	23.61	26.76	29.91
26	2.607	45	4.511	1.731	6.94	8.53	10.11	12.01	13.28	14.06	14.85	16.43	18	18.48	19.58	22.73	25.89	29.04
41	4.11	71	7.118	1.732			6.76	8.69	9.97	10.76	11.55	13.14	14.72	15.2	16.31	19.47	22.63	25.78
32	3.208	56	5.614	1.75	5.54	7.14	8.74	10.64	11.91	12.7	13.49	15.07	16.65	17.12	18.23	21.38	24.54	27.69
36	3.609	63	6.316	1.75		6.23	7.84	9.75	11.02	11.81	12.6	14.19	15.77	16.24	17.35	20.51	23.66	26.82
80	8.02	140	14.036	1.75													13.84	17.06
38	3.81	67	6.717	1.763			7.34	9.26	10.53	11.32	12.11	13.7	15.28	15.76	16.86	20.02	23.18	26.34
34	3.409	60	6.015	1.765		6.65	8.25	10.15	11.42	12.21	13	14.59	16.17	16.64	17.75	20.9	24.06	27.21
30	3.008	53	5.314	1.767	5.95	7.55	9.14	11.04	12.31	13.1	13.89	15.47	17.04	17.52	18.62	21.78	24.93	28.09
22	2.206	39	3.91	1.773	7.75	9.33	10.91	12.81	14.07	14.86	15.64	17.22	18.8	19.27	20.37	23.53	26.68	29.83
40	4.01	71	7.118	1.775			6.83	8.76	10.04	10.83	11.63	13.21	14.8	15.28	16.38	19.54	22.7	25.86
27	2.707	48	4.812	1.778	6.61	8.2	9.79	11.69	12.95	13.74	14.53	16.11	17.68	18.16	19.26	22.41	25.57	28.72
45	4.511	80	8.02	1.778			7.59	8.88	9.68	10.48	12.08	13.67	14.14	15.25	18.42	21.58	24.74	
63	6.316	112	11.229	1.778									9.52	10.01	11.14	14.35	17.54	20.72
28	2.807	50	5.013	1.786	6.36	7.96	9.54	11.44	12.71	13.5	14.29	15.86	17.44	17.92	19.02	22.18	25.33	28.48
42	4.211	75	7.519	1.786				8.26	9.54	10.34	11.13	12.72	14.31	14.79	15.9	19.06	22.22	25.38
25	2.506	45	4.511	1.8	7.02	8.61	10.19	12.09	13.35	14.14	14.93	16.5	18.08	18.56	19.66	22.81	25.96	29.12
35	3.509	63	6.316	1.8		6.3	7.91	9.82	11.09	11.89	12.68	14.26	15.84	16.32	17.42	20.58	23.74	26.89
50	5.013	90	9.023	1.8				7.61	8.42	9.23	10.84	12.43	12.92	14.03	17.2	20.37	23.54	
31	3.108	56	5.614	1.806	5.61	7.22	8.81	10.72	11.98	12.77	13.56	15.14	16.72	17.2	18.3	21.46	24.61	27.77
37	3.709	67	6.717	1.811		5.79	7.41	9.33	10.6	11.4	12.19	13.77	15.36	15.83	16.94	20.1	23.26	26.41
22	2.206	40	4.01	1.818	7.66	9.25	10.83	12.73	13.99	14.78	15.56	17.14	18.72	19.19	20.29	23.45	26.6	29.75
33	3.308	60	6.015	1.818		6.72	8.32	10.23	11.5	12.29	13.08	14.66	16.24	16.72	17.82	20.98	24.13	27.29
39	3.91	71	7.118	1.821			6.9	8.83	10.11	10.91	11.7	13.29	14.87	15.35	16.46	19.62	22.78	25.93
29	2.907	53	5.314	1.828	6.02	7.62	9.21	11.12	12.38	13.17	13.96	15.54	17.12	17.6	18.7	21.86	25.01	28.16
41	4.11	75	7.519	1.829			6.39	8.33	9.62	10.41	11.21	12.8	14.39	14.86	15.97	19.14	22.3	25.45
26	2.607	48	4.812	1.846	6.68	8.27	9.86	11.76	13.03	13.81	14.6	16.18	17.76	18.23	19.34	22.49	25.64	28.8
27	2.707	50	5.013	1.852	6.43	8.03	9.62	11.52	12.78	13.57	14.36	15.94	17.52	17.99	19.1	22.25	25.41	28.56
34	3.409	63	6.316	1.853		6.37	7.98	9.9	11.17	11.96	12.75	14.33	15.92	16.39	17.5	20.66	23.81	26.97
36	3.609	67	6.717	1.861		5.86	7.48	9.4	10.68	11.47	12.26	13.85	15.43	15.91	17.01	20.18	23.33	26.49
22	2.206	41	4.11	1.864	7.58	9.16	10.75	12.64	13.91	14.69	15.48	17.06	18.64	19.11	20.21	23.37	26.52	29.67
30	3.008	56	5.614	1.867	5.68	7.29	8.88	10.79	12.06	12.85	13.64	15.22	16.8	17.27	18.38	21.53	24.69	27.84
60	6.015	112	11.229	1.867									9.73	10.22	11.35	14.57	17.76	20.94
75	7.519	140	14.036	1.867													14.19	17.41
38	3.81	71	7.118	1.868			6.97	8.9	10.18	10.98	11.77	13.36	14.95	15.42	16.53	19.69	22.85	26.01
32	3.208	60	6.015	1.875	5.16	6.79	8.39	10.3	11.57	12.36	13.15	14.73	16.32	16.79	17.9	21.05	24.21	27.37
40	4.01	75	7.519	1.875			6.46	8.4	9.69	10.48	11.28	12.87	14.46	14.94	16.04	19.21	22.37	25.53
48	4.812	90	9.023	1.875				7.75	8.56	9.37	10.98	12.58	13.06	14.17	17.35	20.52	23.69	
				Length Factor*	0.79	0.83	0.87	0.91	0.94	0.96	0.97	1	1.03	1.03	1.05	1.1	1.14	1.17

Note: 26, 27, 29 and 31 groove sprockets are only available as stock products in 12 and 21 mm widths. 33, 35, 37, 39 and 41 groove sprockets are only available as stock products in 12, 21, and 36 mm widths.
Check sprocket specification tables on pages 74 and 75 for stainless steel and nickel plated sprocket availability.
* This length factor must be used to determine the proper belt width.

8MGT-1792 PL 70.55 224 Teeth	8MGT-2000 PL 78.74 250 Teeth	8MGT-2200 PL 86.61 275 Teeth	8MGT-2240 PL 88.19 280 Teeth	8MGT-2400 PL 94.49 300 Teeth	8MGT-2520 PL 99.21 315 Teeth	8MGT-2600 PL 102.36 325 Teeth	8MGT-2800 PL 110.24 350 Teeth	8MGT-2840 PL 111.81 355 Teeth	8MGT-3048 PL 120.00 381 Teeth	8MGT-3200 PL 125.98 400 Teeth	8MGT-3280 PL 129.13 410 Teeth	8MGT-3600 PL 141.73 450 Teeth	8MGT-4000 PL 157.48 500 Teeth	8MGT-4400 PL 173.23 550 Teeth	8MGT-4480 PL 176.38 560 Teeth	Speed Ratio	DriveR Number of Grooves	DriveN Number of Grooves
26.11	30.21	34.15	34.94	38.09	40.45	42.03	45.97	46.75	50.85	53.84	55.42	61.72	69.59	77.47	79.05	1.578	45	71
27.54	31.63	35.57	36.36	39.51	41.87	43.45	47.39	48.18	52.27	55.26	56.84	63.14	71.01	78.89	80.47	1.579	38	60
30.78	34.88	38.81	39.6	42.75	45.11	46.69	50.63	51.41	55.51	58.5	60.07	66.37	74.25	82.12	83.7	1.591	22	35
26.66	30.76	34.7	35.49	38.64	41	42.58	46.52	47.31	51.4	54.39	55.97	62.27	70.15	78.02	79.6	1.595	42	67
30.15	34.24	38.18	38.97	42.12	44.48	46.06	50	50.78	54.88	57.87	59.44	65.74	73.62	81.49	83.07	1.6	25	40
29.12	33.22	37.15	37.94	41.09	43.45	45.03	48.97	49.76	53.85	56.84	58.42	64.72	72.59	80.47	82.04	1.6	30	48
28.09	32.19	36.12	36.91	40.07	42.43	44	47.94	48.73	52.82	55.81	57.39	63.69	71.57	79.44	81.02	1.6	35	56
24.99	29.1	33.03	33.83	36.98	39.34	40.92	44.86	45.64	49.74	52.73	54.31	60.61	68.49	76.36	77.94	1.6	50	80
28.49	32.58	36.52	37.31	40.46	42.82	44.4	48.34	49.12	53.22	56.21	57.78	64.09	71.96	79.84	81.41	1.606	33	53
29.52	33.61	37.55	38.34	41.49	43.85	45.42	49.37	50.15	54.25	57.24	58.81	65.11	72.99	80.86	82.44	1.607	28	45
23.72	27.82	31.76	32.55	35.71	38.07	39.65	43.59	44.38	48.47	51.47	53.04	59.34	67.22	75.1	76.68	1.607	56	90
28.88	32.98	36.91	37.7	40.86	43.22	44.79	48.73	49.52	53.61	56.6	58.18	64.48	72.36	80.23	81.81	1.613	31	50
29.91	34.01	37.94	38.73	41.88	44.24	45.82	49.76	50.54	54.64	57.63	59.2	65.51	73.38	81.26	82.83	1.615	26	42
27.22	31.32	35.25	36.04	39.2	41.56	43.13	47.07	47.86	51.95	54.95	56.52	62.82	70.7	78.57	80.15	1.615	39	63
27.61	31.71	35.65	36.44	39.59	41.95	43.53	47.47	48.25	52.35	55.34	56.92	63.22	71.09	78.97	80.54	1.622	37	60
26.74	30.84	34.78	35.57	38.72	41.08	42.66	46.6	47.38	51.48	54.47	56.05	62.35	70.22	78.1	79.68	1.634	41	67
30.7	34.8	38.73	39.52	42.67	45.03	46.61	50.55	51.33	55.43	58.42	59.99	66.29	74.17	82.04	83.62	1.636	22	36
30.07	34.16	38.1	38.89	42.04	44.4	45.98	49.92	50.7	54.8	57.79	59.36	65.66	73.54	81.41	82.99	1.64	25	41
28.17	32.26	36.2	36.99	40.14	42.5	44.08	48.02	48.81	52.9	55.89	57.47	63.77	71.64	79.52	81.1	1.647	34	56
29.2	33.29	37.23	38.02	41.17	43.53	45.11	49.05	49.83	53.93	56.92	58.49	64.8	72.67	80.55	82.12	1.655	29	48
28.56	32.66	36.6	37.39	40.54	42.9	44.47	48.42	49.2	53.3	56.29	57.86	64.16	72.04	79.91	81.49	1.656	32	53
27.29	31.39	35.33	36.12	39.27	41.63	43.21	47.15	47.94	52.03	55.02	56.6	62.9	70.78	78.65	80.23	1.658	38	63
29.59	33.69	37.63	38.42	41.57	43.93	45.5	49.44	50.23	54.32	57.31	58.89	65.19	73.07	80.94	82.52	1.667	27	45
28.96	33.06	36.99	37.78	40.93	43.29	44.87	48.81	49.6	53.69	56.68	58.26	64.56	72.43	80.31	81.88	1.667	30	50
27.69	31.79	35.73	36.52	39.67	42.03	43.6	47.55	48.33	52.43	55.42	56.99	63.29	71.17	79.05	80.62	1.667	36	60
25.78	29.88	33.82	34.61	37.77	40.13	41.7	45.65	46.43	50.53	53.52	55.1	61.4	69.28	77.15	78.73	1.667	45	75
25.15	29.25	33.19	33.98	37.13	39.49	41.07	45.01	45.8	49.9	52.89	54.46	60.77	68.64	76.52	78.1	1.667	48	80
21.06	25.17	29.12	29.92	33.07	35.44	37.02	40.96	41.75	45.85	48.84	50.42	56.73	64.61	72.49	74.06	1.672	67	112
26.82	30.92	34.85	35.64	38.8	41.16	42.73	46.68	47.46	51.56	54.55	56.12	62.43	70.3	78.18	79.75	1.675	40	67
29.99	34.08	38.02	38.81	41.96	44.32	45.9	49.84	50.62	54.72	57.71	59.28	65.58	73.46	81.34	82.91	1.68	25	42
30.62	34.72	38.65	39.44	42.59	44.95	46.53	50.47	51.25	55.35	58.34	59.91	66.22	74.09	81.97	83.54	1.682	22	37
26.34	30.44	34.38	35.17	38.32	40.68	42.26	46.2	46.98	51.08	54.07	55.65	61.95	69.83	77.7	79.28	1.69	42	71
28.24	32.34	36.28	37.07	40.22	42.58	44.16	48.1	48.88	52.98	55.97	57.55	63.85	71.72	79.6	81.17	1.697	33	56
23.94	28.05	31.99	32.78	35.94	38.3	39.88	43.82	44.61	48.7	51.7	53.27	59.58	67.45	75.33	76.91	1.698	53	90
27.37	31.47	35.41	36.2	39.35	41.71	43.29	47.23	48.01	52.11	55.1	56.68	62.98	70.85	78.73	80.31	1.703	37	63
28.64	32.74	36.67	37.46	40.62	42.98	44.55	48.49	49.28	53.37	56.36	57.94	64.24	72.12	79.99	81.57	1.71	31	53
29.27	33.37	37.31	38.1	41.25	43.61	45.18	49.13	49.91	54.01	57	58.57	64.87	72.75	80.62	82.2	1.714	28	48
27.77	31.87	35.8	36.59	39.75	42.11	43.68	47.62	48.41	52.5	55.5	57.07	63.37	71.25	79.12	80.7	1.714	35	60
26.89	30.99	34.93	35.72	38.87	41.23	42.81	46.75	47.54	51.63	54.63	56.2	62.5	70.38	78.26	79.83	1.718	39	67
29.04	33.13	37.07	37.86	41.01	43.37	44.95	48.89	49.67	53.77	56.76	58.34	64.64	72.51	80.39	81.96	1.724	29	50
30.54	34.64	38.57	39.36	42.51	44.87	46.45	50.39	51.17	55.27	58.26	59.83	66.14	74.01	81.89	83.46	1.727	22	38
29.67	33.77	37.7	38.49	41.64	44	45.58	49.52	50.31	54.4	57.39	58.97	65.27	73.14	81.02	82.59	1.731	26	45
26.41	30.51	34.45	35.24	38.4	40.76	42.33	46.28	47.06	51.16	54.15	55.73	62.03	69.91	77.78	79.36	1.732	41	71
28.32	32.42	36.36	37.15	40.3	42.66	44.23	48.18	48.96	53.06	56.05	57.62	63.92	71.8	79.68	81.25	1.75	32	56
27.45	31.55	35.48	36.27	39.43	41.79	43.36	47.31	48.09	52.19	55.18	56.75	63.06	70.93	78.81	80.38	1.75	36	63
17.7	21.84	25.81	26.6	29.77	32.14	33.72	37.68	38.46	42.57	45.57	47.15	53.46	61.34	69.23	70.8	1.75	80	140
26.97	31.07	35.01	35.8	38.95	41.31	42.89	46.83	47.61	51.71	54.7	56.28	62.58	70.46	78.33	79.91	1.763	38	67
27.84	31.94	35.88	36.67	39.82	42.18	43.76	47.7	48.49	52.58	55.57	57.15	63.45	71.33	79.2	80.78	1.765	34	60
28.72	32.81	36.75	37.54	40.69	43.05	44.63	48.57	49.36	53.45	56.44	58.02	64.32	72.19	80.07	81.65	1.767	30	53
30.46	34.56	38.49	39.28	42.43	44.79	46.37	50.31	51.09	55.19	58.18	59.76	66.06	73.93	81.81	83.38	1.773	22	39
26.49	30.59	34.53	35.32	38.47	40.84	42.41	46.35	47.14	51.24	54.23	55.8	62.11	69.98	77.86	79.43	1.775	40	71
29.35	33.45	37.38	38.18	41.33	43.69	45.26	49.2	49.99	54.08	57.07	58.65	64.95	72.83	80.7	82.28	1.778	27	48
25.37	29.48	33.42	34.21	37.36	39.72	41.3	45.24	46.03	50.13	53.12	54.7	61	68.88	76.75	78.33	1.778	45	80
21.35	25.47	29.42	30.22	33.37	35.74	37.32	41.27	42.05	46.15	49.15	50.73	57.03	64.91	72.79	74.37	1.778	63	112
29.11	33.21	37.15	37.94	41.09	43.45	45.02	48.97	49.75	53.85	56.84	58.41	64.71	72.59	80.47	82.04	1.786	28	50
26.01	30.11	34.05	34.84	38	40.36	41.93	45.88	46.66	50.76	53.75	55.33	61.63	69.51	77.38	78.96	1.786	42	75
29.75	33.84	37.78	38.57	41.72	44.08	45.66	49.6	50.38	54.48	57.47	59.05	65.35	73.22	81.1	82.67	1.8	25	45
27.52	31.62	35.56	36.35	39.5	41.86	43.44	47.38	48.17	52.26	55.26	56.83	63.13	71.01	78.89	80.46	1.8	35	63
24.17	28.28	32.22	33.01	36.17	38.53	40.11	44.05	44.84	48.94	51.93	53.5	59.81	67.69	75.56	77.14	1.8	50	90
28.4	32.5	36.43	37.22	40.38	42.74	44.31	48.25	49.04	53.13	56.13	57.7	64	71.88	79.75	81.33	1.806	31	56
27.04	31.15	35.08	35.87	39.03	41.39	42.97	46.91	47.69	51.79	54.78	56.36	62.66	70.54	78.41	79.99	1.811	37	67
30.38	34.48	38.41	39.2	42.35	44.71	46.29	50.23	51.01	55.11	58.1	59.68	65.98	73.85	81.73	83.3	1.818	22	40
27.92	32.02	35.96	36.75	39.9	42.26	43.84	47.78	48.56	52.66	55.65	57.23	63.53	71.4	79.28	80.86	1.818	33	60
26.57	30.67	34.61	35.4	38.55	40.91	42.49	46.43	47.22	51.31	54.3	55.88	62.18	70.06	77.94	79.51	1.821	39	71
28.79	32.89	36.83	37.62	40.77	43.13	44.71	48.65	49.43	53.53	56.52	58.1	64.4	72.27	80.15	81.72	1.828	29	53
26.09	30.19	34.13	34.92	38.07	40.44	42.01	45.95	46.74	50.84	53.83	55.41	61.71	69.59	77.46	79.04	1.829	41	75
29.43	33.53	37.46	38.25	41.4	43.76	45.34	49.28	50.07	54.16	57.15	58.73	65.03	72.9	80.78	82.36	1.846	26	48
29.19	33.29	37.22	38.01	41.17	43.53	45.1	49.04	49.83	53.92	56.92	58.49	64.79	72.67	80.54	82.12	1.852	27	50
27.6	31.7	35.64	36.43	39.58	41.94	43.52	47.46	48.25	52.34	55.33	56.91	63.21	71.09	78.96	80.54	1.853	34	63
27.12	31.22	35.16	35.95	39.1	41.47	43.04	46.98	47.77	51.87	54.86	56.43	62.74	70.61	78.49	80.06	1.861	36	67
30.3	34.4	38.33	39.12	42.27	44.63	46.21	50.15	50.94	55.03	58.02	59.6	65.9	73.77	81.65	83.22	1.864	22	41
28.47	32.57	36.51	37.3	40.45	42.81	44.39	48.33	49.12	53.21	56.2	57.78	64.08	71.96	79.83	81.41	1.867	30	56
21.57	25.69	29.65	30.44	33.6	35.97	37.55	41.49	42.28	46.38	49.38	50.95	57.26	65.14	73.03	74.6	1.867	60	112
18.05	22.2	26.17	26.97	30.14	32.51	34.09	38.05	38.84	42.95	45.95	47.52	53.84	61.72	69.61	71.19	1.867	75	140
26.64	30.74	34.68	35.47	38.63	40.99	42.57	46.51	47.29	51.39	54.38	55.96	62.26	70.14	78.01	79.59	1.868	38	71
28	32.1	36.03	36.82	39.98	42.34	43.91	47.86	48.64	52.74	55.73	57.3	63.61	71.48	79.36	80.93	1.875	32	60
26.16	30.26	34.21	35	38.15	40.51	42.09	46.03	46.82	50.91	53.91	55.48	61.79	69.66	77.54	79.12	1.875	40	75
24.32	28.43	32.37	33.16	36.32	38.68	40.26	44.2	44.99	49.09	52.08	53.66	59.96	67.84	75.72	77.3	1.875	48	90
1.18	1.22	1.26	1.26	1.29	1.31	1.32	1.35	1.36	1.38	1.4	1.41	1.45	1.49	1.52	1.53	Length Factor*		

Note: 26, 27, 29 and 31 groove sprockets are only available as stock products in 12 and 21 mm widths. 33, 35, 37, 39 and 41 groove sprockets are only available as stock products in 12, 21, and 36 mm widths. Check sprocket specification tables on pages 74 and 75 for stainless steel and nickel plated sprocket availability.
* This length factor must be used to determine the proper belt width.

Center distance is greater than eight times the small sprocket and the large sprocket is not flanged. See Engineering Section for details.

Drive Selection Table

8mm Pitch Poly Chain® GT® Carbon™ Belts

DriveR No. of Grooves	DriveR Pitch Dia. (in)	DriveN No. of Grooves	DriveN Pitch Dia. (in)	Speed Ratio	8MGT-640 PL 25.20 80T	8MGT-720 PL 28.35 90T	8MGT-800 PL 31.50 100T	8MGT-896 PL 35.28 112T	8MGT-960 PL 37.80 120T	8MGT-1000 PL 39.37 125T	8MGT-1040 PL 40.94 130T	8MGT-1120 PL 44.09 140T	8MGT-1200 PL 47.24 150T	8MGT-1224 PL 48.19 153T	8MGT-1280 PL 50.39 160T	8MGT-1440 PL 56.69 180T	8MGT-1600 PL 62.99 200T	8MGT-1760 PL 69.29 220T
28	2.807	53	5.314	1.893	6.09	7.69	9.29	11.19	12.46	13.25	14.04	15.62	17.20	17.67	18.77	21.93	25.09	28.24
42	4.211	80	8.020	1.905				7.80	9.09	9.89	10.69	12.29	13.88	14.36	15.47	18.64	21.81	24.97
22	2.206	42	4.211	1.909	7.49	9.08	10.66	12.56	13.82	14.61	15.40	16.98	18.55	19.03	20.13	23.28	26.44	29.59
33	3.308	63	6.316	1.909		6.44	8.05	9.97	11.24	12.03	12.82	14.41	15.99	16.47	17.57	20.73	23.89	27.04
35	3.509	67	6.717	1.914		5.93	7.55	9.47	10.75	11.54	12.33	13.92	15.51	15.98	17.09	20.25	23.41	26.57
37	3.709	71	7.118	1.919			7.04	8.97	10.25	11.05	11.84	13.43	15.02	15.50	16.60	19.77	22.93	26.09
25	2.506	48	4.812	1.920	6.75	8.35	9.94	11.84	13.10	13.89	14.68	16.26	17.84	18.31	19.41	22.57	25.72	28.87
26	2.607	50	5.013	1.923	6.50	8.10	9.69	11.59	12.86	13.65	14.44	16.02	17.59	18.07	19.17	22.33	25.48	28.63
39	3.910	75	7.519	1.923			6.52	8.47	9.76	10.55	11.35	12.94	14.53	15.01	16.12	19.28	22.45	25.61
29	2.907	56	5.614	1.931	5.75	7.36	8.96	10.86	12.13	12.92	13.71	15.29	16.87	17.35	18.45	21.61	24.77	27.92
31	3.108	60	6.015	1.935	5.23	6.86	8.46	10.37	11.64	12.43	13.22	14.81	16.39	16.87	17.97	21.13	24.29	27.44
41	4.110	80	8.020	1.951				7.87	9.16	9.97	10.77	12.36	13.96	14.44	15.55	18.72	21.88	25.04
27	2.707	53	5.314	1.963	6.16	7.77	9.36	11.26	12.53	13.32	14.11	15.69	17.27	17.75	18.85	22.01	25.16	28.32
32	3.208	63	6.316	1.969		6.51	8.12	10.04	11.31	12.10	12.90	14.48	16.06	16.54	17.65	20.81	23.96	27.12
34	3.409	67	6.717	1.971		5.99	7.62	9.54	10.82	11.61	12.41	13.99	15.58	16.06	17.16	20.32	23.48	26.64
36	3.609	71	7.118	1.972			7.11	9.04	10.33	11.12	11.92	13.51	15.09	15.57	16.68	19.84	23.00	26.16
71	7.118	140	14.036	1.972												11.19	14.47	17.69
38	3.810	75	7.519	1.974			6.59	8.54	9.83	10.62	11.42	13.01	14.60	15.08	16.19	19.36	22.52	25.68
25	2.506	50	5.013	2.000	6.57	8.17	9.76	11.67	12.93	13.72	14.51	16.09	17.67	18.15	19.25	22.40	25.56	28.71
28	2.807	56	5.614	2.000	5.82	7.43	9.03	10.94	12.21	13.00	13.78	15.37	16.95	17.42	18.53	21.69	24.84	28.00
30	3.008	60	6.015	2.000	5.30	6.92	8.53	10.44	11.72	12.51	13.30	14.88	16.46	16.94	18.05	21.21	24.36	27.52
40	4.010	80	8.020	2.000				7.94	9.23	10.04	10.84	12.43	14.03	14.51	15.62	18.79	21.96	25.12
45	4.511	90	9.023	2.000					7.95	8.76	9.57	11.19	12.79	13.27	14.39	17.57	20.74	23.91
56	5.614	112	11.229	2.000									9.99	10.49	11.63	14.85	18.05	21.23
37	3.709	75	7.519	2.027			6.66	8.61	9.90	10.70	11.49	13.09	14.68	15.16	16.26	19.43	22.60	25.76
35	3.509	71	7.118	2.029			7.18	9.11	10.40	11.19	11.99	13.58	15.17	15.64	16.75	19.92	23.08	26.24
33	3.308	67	6.717	2.030		6.06	7.69	9.61	10.89	11.69	12.48	14.07	15.65	16.13	17.24	20.40	23.56	26.72
31	3.108	63	6.316	2.032		6.58	8.19	10.11	11.39	12.18	12.97	14.55	16.14	16.62	17.72	20.88	24.04	27.20
26	2.607	53	5.314	2.038	6.23	7.84	9.43	11.34	12.61	13.40	14.18	15.77	17.35	17.82	18.93	22.08	25.24	28.39
22	2.206	45	4.511	2.045	7.23	8.82	10.41	12.31	13.58	14.36	15.15	16.73	18.31	18.78	19.89	23.04	26.19	29.35
39	3.910	80	8.020	2.051				8.00	9.30	10.11	10.91	12.51	14.10	14.58	15.69	18.86	22.03	25.19
29	2.907	60	6.015	2.069	5.37	6.99	8.60	10.52	11.79	12.58	13.37	14.96	16.54	17.02	18.12	21.28	24.44	27.59
27	2.707	56	5.614	2.074	5.88	7.50	9.10	11.01	12.28	13.07	13.86	15.44	17.02	17.50	18.60	21.76	24.92	28.07
36	3.609	75	7.519	2.083			6.72	8.68	9.97	10.77	11.56	13.16	14.75	15.23	16.34	19.51	22.67	25.83
34	3.409	71	7.118	2.088			7.24	9.18	10.47	11.26	12.06	13.65	15.24	15.72	16.82	19.99	23.15	26.31
67	6.717	140	14.036	2.090												11.46	14.74	17.97
32	3.208	67	6.717	2.094		6.13	7.76	9.69	10.96	11.76	12.55	14.14	15.73	16.20	17.31	20.47	23.63	26.79
30	3.008	63	6.316	2.100		6.65	8.26	10.18	11.46	12.25	13.04	14.63	16.21	16.69	17.80	20.96	24.12	27.27
38	3.810	80	8.020	2.105				8.07	9.37	10.18	10.98	12.58	14.17	14.65	15.76	18.94	22.10	25.27
53	5.314	112	11.229	2.113									10.20	10.69	11.83	15.06	18.26	21.45
25	2.506	53	5.314	2.120	6.30	7.91	9.50	11.41	12.68	13.47	14.26	15.84	17.42	17.90	19.00	22.16	25.31	28.47
28	2.807	60	6.015	2.143	5.43	7.06	8.67	10.59	11.86		13.45	15.03	16.61	17.09	18.20	21.36	24.51	27.67
35	3.509	75	7.519	2.143			6.79	8.75	10.04	10.84	11.64	13.23	14.82	15.30	16.41	19.58	22.75	25.91
42	4.211	90	9.023	2.143					8.15	8.97	9.78	11.40	13.00	13.49	14.60	17.79	20.96	24.13
33	3.308	71	7.118	2.152			7.31	9.25	10.54	11.34	12.13	13.72	15.31	15.79	16.90	20.07	23.23	26.39
26	2.607	56	5.614	2.154	5.95	7.57	9.17	11.08	12.35	13.14	13.93	15.52	17.10	17.57	18.68	21.84	24.99	28.15
31	3.108	67	6.717	2.161		6.19	7.82	9.76	11.04	11.83	12.62	14.21	15.80	16.28	17.38	20.55	23.71	26.87
37	3.709	80	8.020	2.162				8.14	9.44	10.25	11.05	12.65	14.24	14.73	15.84	19.01	22.18	25.34
29	2.907	63	6.316	2.172		6.71	8.33	10.25	11.53	12.32	13.12	14.70	16.29	16.76	17.87	21.03	24.19	27.35
22	2.206	48	4.812	2.182	6.97	8.56	10.15	12.06	13.32	14.11	14.90	16.48	18.06	18.54	19.64	22.80	25.95	29.10
41	4.110	90	9.023	2.195				6.88	8.22	9.03	9.85	11.47	13.07	13.56	14.67	17.86	21.04	24.21
34	3.409	75	7.519	2.206			6.86	8.82	10.11	10.91	11.71	13.30	14.90	15.37	16.48	19.65	22.82	25.98
32	3.208	71	7.118	2.219		5.73	7.38	9.32	10.61	11.41	12.20	13.80	15.39	15.86	16.97	20.14	23.30	26.46
27	2.707	60	6.015	2.222	5.50	7.13	8.74	10.66	11.93	12.73	13.52	15.10	16.69	17.17	18.27	21.43	24.59	27.75
36	3.609	80	8.020	2.222				8.21	9.51	10.31	11.12	12.72	14.32	14.80	15.91	19.08	22.25	25.42
63	6.316	140	14.036	2.222												11.72	15.01	18.25
30	3.008	67	6.717	2.233		6.26	7.89	9.83	11.11	11.90	12.70	14.29	15.87	16.35	17.46	20.62	23.78	26.94
25	2.506	56	5.614	2.240	6.02	7.64	9.24	11.15	12.43	13.22	14.01	15.59	17.17	17.65	18.75	21.91	25.07	28.22
50	5.013	112	11.229	2.240								8.73	10.40	10.89	12.03	15.27	18.48	21.67
28	2.807	63	6.316	2.250	5.13	6.78	8.40	10.33	11.60	12.40	13.19	14.78	16.36	16.84	17.94	21.11	24.27	27.42
40	4.010	90	9.023	2.250				6.95	8.28	9.10	9.92	11.54	13.14	13.63	14.75	17.93	21.11	24.28
80	8.020	180	18.046	2.250														
22	2.206	50	5.013	2.273	6.78	8.39	9.98	11.89	13.16	13.94	14.73	16.31	17.90	18.37	19.47	22.63	25.79	28.94
33	3.308	75	7.519	2.273			6.92	8.89	10.18	10.98	11.78	13.38	14.97	15.45	16.56	19.73	22.89	26.06
35	3.509	80	8.020	2.286			6.29	8.28	9.58	10.38	11.19	12.79	14.39	14.87	15.98	19.16	22.33	25.49
31	3.108	71	7.118	2.290		5.79	7.45	9.39	10.68	11.48	12.27	13.87	15.46	15.94	17.05	20.21	23.38	26.54
26	2.607	60	6.015	2.308	5.57	7.20	8.81	10.73	12.01	12.80	13.59	15.18	16.76	17.24	18.34	21.51	24.66	27.82
39	3.910	90	9.023	2.308				7.01	8.35	9.17	9.98	11.60	13.21	13.70	14.82	18.01	21.18	24.35
29	2.907	67	6.717	2.310		6.33	7.96	9.90	11.18	11.97	12.77	14.36	15.95	16.43	17.53	20.70	23.86	27.02
27	2.707	63	6.316	2.333	5.20	6.85	8.47	10.40	11.67	12.47	13.26	14.85	16.43	16.91	18.02	21.18	24.34	27.50
48	4.812	112	11.229	2.333								8.86	10.53	11.03	12.17	15.41	18.62	21.81
60	6.015	140	14.036	2.333												11.92	15.22	18.46
32	3.208	75	7.519	2.344			6.99	8.95	10.25	11.05	11.85	13.45	15.04	15.52	16.63	19.80	22.97	26.13
34	3.409	80	8.020	2.353			6.35	8.34	9.65	10.45	11.26	12.86	14.46	14.94	16.05	19.23	22.40	25.56
30	3.008	71	7.118	2.367		5.86	7.51	9.46	10.75	11.55	12.35	13.94	15.53	16.01	17.12	20.29	23.45	26.61
38	3.810	90	9.023	2.368				7.08	8.41	9.24	10.05	11.67	13.28	13.77	14.89	18.08	21.26	24.43
28	2.807	67	6.717	2.393		6.39	8.03	9.97	11.25	12.05	12.84	14.43	16.02	16.50	17.61	20.77	23.93	27.09
Length Factor*					0.79	0.83	0.87	0.91	0.94	0.96	0.97	1.00	1.03	1.03	1.05	1.10	1.14	1.17

Note: 26, 27, 29 and 31 groove sprockets are only available as stock products in 12 and 21 mm widths. 33, 35, 37, 39 and 41 groove sprockets are only available as stock products in 12, 21, and 36 mm widths.
Check sprocket specification tables on pages 74 and 75 for stainless steel and nickel plated sprocket availability.
* This length factor must be used to determine the proper belt width.

Gates® Gates Corporation

8MGT-1792 P.L 70.55 224Teeth	8MGT-2000 P.L 78.74 250 Teeth	8MGT-2200 P.L 86.61 275 Teeth	8MGT-2240 P.L 88.19 280 Teeth	8MGT-2400 P.L 94.49 300 Teeth	8MGT-2520 P.L 99.21 315 Teeth	8MGT-2600 P.L 102.36 325 Teeth	8MGT-2800 P.L 110.24 350 Teeth	8MGT-2840 P.L 111.81 355 Teeth	8MGT-3048 P.L 120.00 381 Teeth	8MGT-3200 P.L 125.98 400 Teeth	8MGT-3280 P.L 129.13 410 Teeth	8MGT-3600 P.L 141.73 450 Teeth	8MGT-4000 P.L 157.48 500 Teeth	8MGT-4400 P.L 173.23 550 Teeth	8MGT-4480 P.L 176.38 560 Teeth	Speed Ratio	DriveR Number of Grooves	DriveN Number of Grooves
28.87	32.97	36.91	37.70	40.85	43.21	44.78	48.73	49.51	53.61	56.60	58.17	64.47	72.35	80.23	81.80	1.893	28	53
25.60	29.70	33.64	34.44	37.59	39.95	41.53	45.47	46.26	50.36	53.35	54.93	61.23	69.11	76.99	78.56	1.905	42	80
30.22	34.32	38.25	39.04	42.19	44.55	46.13	50.07	50.86	54.95	57.94	59.52	65.82	73.69	81.57	83.14	1.909	22	42
27.68	31.78	35.71	36.51	39.66	42.02	43.60	47.54	48.32	52.42	55.41	56.99	63.29	71.17	79.04	80.62	1.909	33	63
27.20	31.30	35.24	36.03	39.18	41.54	43.12	47.06	47.85	51.94	54.94	56.51	62.81	70.69	78.57	80.14	1.914	35	67
26.72	30.82	34.76	35.55	38.70	41.07	42.64	46.59	47.37	51.47	54.46	56.04	62.34	70.22	78.09	79.67	1.919	37	71
29.50	33.60	37.54	38.33	41.48	43.84	45.42	49.36	50.14	54.24	57.23	58.81	65.11	72.98	80.86	82.43	1.920	25	48
29.27	33.36	37.30	38.09	41.24	43.60	45.18	49.12	49.91	54.00	56.99	58.57	64.87	72.75	80.62	82.20	1.923	26	50
26.24	30.34	34.28	35.07	38.23	40.59	42.17	46.11	46.89	50.99	53.98	55.56	61.86	69.74	77.62	79.19	1.923	39	75
28.55	32.65	36.59	37.38	40.53	42.89	44.47	48.41	49.19	53.29	56.28	57.86	64.16	72.03	79.91	81.49	1.931	29	56
28.07	32.17	36.11	36.90	40.05	42.41	43.99	47.93	48.72	52.81	55.81	57.38	63.68	71.56	79.44	81.01	1.935	31	60
25.67	29.78	33.72	34.51	37.67	40.03	41.61	45.55	46.34	50.44	53.43	55.00	61.31	69.19	77.06	78.64	1.951	41	80
28.95	33.04	36.98	37.77	40.92	43.29	44.86	48.80	49.59	53.68	56.68	58.25	64.55	72.43	80.30	81.88	1.963	27	53
27.75	31.85	35.79	36.58	39.73	42.10	43.67	47.61	48.40	52.50	55.49	57.06	63.37	71.24	79.12	80.69	1.969	32	63
27.27	31.37	35.31	36.10	39.26	41.62	43.20	47.14	47.92	52.02	55.01	56.59	62.89	70.77	78.64	80.22	1.971	34	67
26.79	30.90	34.84	35.63	38.78	41.14	42.72	46.66	47.45	51.55	54.54	56.11	62.42	70.29	78.17	79.75	1.972	36	71
18.33	22.49	26.46	27.26	30.43	32.81	34.39	38.35	39.14	43.25	46.25	47.83	54.14	62.03	69.92	71.49	1.972	71	140
26.31	30.42	34.36	35.15	38.30	40.66	42.24	46.18	46.97	51.07	54.06	55.64	61.94	69.82	77.70	79.27	1.974	38	75
29.34	33.44	37.38	38.17	41.32	43.68	45.26	49.20	49.98	54.08	57.07	58.65	64.95	72.82	80.70	82.28	2.000	25	50
28.63	32.73	36.66	37.45	40.61	42.97	44.54	48.49	49.27	53.37	56.36	57.93	64.24	72.11	79.99	81.56	2.000	28	56
28.15	32.25	36.19	36.98	40.13	42.49	44.07	48.01	48.80	52.89	55.88	57.46	63.76	71.64	79.51	81.09	2.000	30	60
25.75	29.85	33.80	34.59	37.74	40.11	41.68	45.63	46.41	50.51	53.50	55.08	61.38	69.26	77.14	78.72	2.000	40	80
24.54	28.65	32.60	33.39	36.55	38.91	40.49	44.43	45.22	49.32	52.31	53.89	60.19	68.07	75.95	77.53	2.000	45	90
21.87	25.99	29.94	30.74	33.90	36.27	37.85	41.80	42.58	46.69	49.68	51.26	57.57	65.45	73.33	74.91	2.000	56	112
26.39	30.49	34.43	35.23	38.38	40.74	42.32	46.26	47.05	51.15	54.14	55.71	62.02	69.90	77.77	79.35	2.027	37	75
26.87	30.97	34.91	35.70	38.86	41.22	42.80	46.74	47.52	51.62	54.61	56.19	62.49	70.37	78.25	79.82	2.029	35	71
27.35	31.45	35.39	36.18	39.33	41.70	43.27	47.22	48.00	52.10	55.09	56.67	62.97	70.85	78.72	80.30	2.030	33	67
27.83	31.93	35.87	36.66	39.81	42.17	43.75	47.69	48.48	52.57	55.57	57.14	63.44	71.32	79.20	80.77	2.032	31	63
29.02	33.12	37.06	37.85	41.00	43.36	44.94	48.88	49.67	53.76	56.75	58.33	64.63	72.51	80.38	81.96	2.038	26	53
29.98	34.07	38.01	38.80	41.95	44.31	45.89	49.83	50.62	54.71	57.70	59.28	65.58	73.46	81.33	82.91	2.045	22	45
25.82	29.93	33.87	34.66	37.82	40.18	41.76	45.70	46.49	50.59	53.58	55.16	61.46	69.34	77.22	78.79	2.051	39	80
28.22	32.33	36.26	37.06	40.21	42.57	44.15	48.09	48.87	52.97	55.96	57.54	63.84	71.72	79.59	81.17	2.069	29	60
28.70	32.80	36.74	37.53	40.68	43.05	44.62	48.56	49.35	53.44	56.44	58.01	64.31	72.19	80.07	81.64	2.074	27	56
26.46	30.57	34.51	35.30	38.46	40.82	42.40	46.34	47.12	51.22	54.21	55.79	62.09	69.97	77.85	79.43	2.083	36	75
26.94	31.05	34.99	35.78	38.93	41.30	42.87	46.82	47.60	51.70	54.69	56.27	62.57	70.45	78.33	79.90	2.088	34	71
18.61	22.78	26.75	27.55	30.73	33.10	34.69	38.65	39.44	43.55	46.55	48.13	54.44	62.33	70.22	71.80	2.090	67	140
27.42	31.53	35.47	36.26	39.41	41.77	43.35	47.29	48.08	52.18	55.17	56.74	63.05	70.92	78.80	80.38	2.094	32	67
27.90	32.00	35.94	36.73	39.89	42.25	43.83	47.77	48.55	52.65	55.64	57.22	63.52	71.40	79.27	80.85	2.100	30	63
25.90	30.00	33.95	34.74	37.90	40.26	41.84	45.78	46.57	50.67	53.66	55.23	61.54	69.42	77.30	78.87	2.105	38	80
22.08	26.21	30.17	30.96	34.12	36.49	38.07	42.02	42.81	46.91	49.91	51.49	57.80	65.68	73.56	75.14	2.113	53	112
29.10	33.20	37.14	37.93	41.08	43.44	45.02	48.96	49.74	53.84	56.83	58.41	64.71	72.58	80.46	82.04	2.120	25	53
28.30	32.40	36.34	37.13	40.28	42.65	44.22	48.16	48.95	53.05	56.04	57.61	63.92	71.79	79.67	81.25	2.143	28	60
26.54	30.64	34.59	35.38	38.53	40.89	42.47	46.42	47.20	51.30	54.29	55.87	62.17	70.05	77.93	79.50	2.143	35	75
24.76	28.88	32.82	33.61	36.77	39.14	40.71	44.66	45.45	49.55	52.54	54.12	60.42	68.30	76.18	77.76	2.143	42	90
27.02	31.12	35.06	35.86	39.01	41.37	42.95	46.89	47.68	51.78	54.77	56.34	62.65	70.53	78.40	79.98	2.152	33	71
28.78	32.88	36.82	37.61	40.76	43.12	44.70	48.64	49.43	53.52	56.51	58.09	64.39	72.27	80.14	81.72	2.154	26	56
27.50	31.60	35.54	36.33	39.49	41.85	43.43	47.37	48.15	52.25	55.24	56.82	63.12	71.00	78.88	80.45	2.161	31	67
25.97	30.08	34.02	34.82	37.97	40.34	41.91	45.86	46.64	50.74	53.73	55.31	61.62	69.49	77.37	78.95	2.162	37	80
27.98	32.08	36.02	36.81	39.96	42.33	43.90	47.85	48.63	52.73	55.72	57.30	63.60	71.48	79.35	80.93	2.172	29	63
29.73	33.83	37.77	38.56	41.71	44.07	45.65	49.59	50.38	54.47	57.46	59.04	65.34	73.22	81.09	82.67	2.182	22	48
24.84	28.95	32.90	33.69	36.85	39.21	40.79	44.74	45.52	49.62	52.62	54.19	60.50	68.38	76.26	77.84	2.195	41	90
26.61	30.72	34.66	35.45	38.61	40.97	42.55	46.49	47.28	51.38	54.37	55.94	62.25	70.13	78.01	79.58	2.206	34	75
27.09	31.20	35.14	35.93	39.09	41.45	43.03	46.97	47.75	51.85	54.85	56.42	62.72	70.60	78.48	80.06	2.219	32	71
28.38	32.48	36.42	37.21	40.36	42.72	44.30	48.24	49.03	53.12	56.12	57.69	63.99	71.87	79.75	81.32	2.222	27	60
26.05	30.16	34.10	34.89	38.05	40.41	41.99	45.93	46.72	50.82	53.81	55.39	61.69	69.57	77.45	79.03	2.222	36	80
18.89	23.06	27.04	27.84	31.02	33.40	34.98	38.94	39.73	43.85	46.85	48.43	54.74	62.64	70.52	72.10	2.222	63	140
27.57	31.68	35.62	36.41	39.56	41.93	43.50	47.45	48.23	52.33	55.32	56.90	63.20	71.08	78.96	80.53	2.233	30	67
28.86	32.96	36.89	37.69	40.84	43.20	44.78	48.72	49.50	53.60	56.59	58.17	64.47	72.35	80.22	81.80	2.240	25	56
22.30	26.43	30.39	31.18	34.35	36.72	38.30	42.25	43.04	47.14	50.14	51.72	58.03	65.91	73.79	75.37	2.240	50	112
28.05	32.16	36.10	36.89	40.04	42.40	43.98	47.92	48.71	52.81	55.80	57.37	63.68	71.55	79.43	81.01	2.250	28	63
24.91	29.03	32.97	33.77	36.92	39.29	40.87	44.81	45.59	49.70	52.69	54.27	60.58	68.46	76.34	77.91	2.250	40	90
13.89	18.20	22.27	23.08	26.29	28.69	30.29	34.28	35.07	39.21	42.22	43.81	50.14	58.05	65.95	67.53	2.250	80	180
29.57	33.67	37.61	38.40	41.55	43.91	45.49	49.43	50.22	54.31	57.30	58.88	65.18	73.06	80.93	82.51	2.273	22	50
26.69	30.79	34.74	35.53	38.68	41.05	42.62	46.57	47.35	51.45	54.45	56.02	62.33	70.20	78.08	79.66	2.273	33	75
26.12	30.23	34.18	34.97	38.12	40.49	42.06	46.01	46.80	50.90	53.89	55.46	61.77	69.65	77.53	79.10	2.286	35	80
27.17	31.27	35.22	36.01	39.16	41.53	43.10	47.05	47.83	51.93	54.92	56.50	62.80	70.68	78.56	80.13	2.290	31	71
28.45	32.55	36.49	37.28	40.44	42.80	44.38	48.32	49.10	53.20	56.19	57.77	64.07	71.95	79.83	81.40	2.308	26	60
24.99	29.10	33.05	33.84	37.00	39.36	40.94	44.89	45.68	49.78	52.77	54.35	60.65	68.53	76.41	77.99	2.308	39	90
27.65	31.75	35.70	36.49	39.64	42.00	43.58	47.52	48.31	52.41	55.40	56.97	63.28	71.16	79.03	80.61	2.310	29	67
28.13	32.23	36.17	36.96	40.12	42.48	44.06	48.00	48.78	52.88	55.87	57.45	63.75	71.63	79.51	81.08	2.333	27	63
22.45	26.58	30.54	31.33	34.50	36.87	38.45	42.40	43.19	47.29	50.29	51.87	58.18	66.06	73.95	75.52	2.333	48	112
19.10	23.28	27.26	28.06	31.24	33.62	35.20	39.17	39.96	44.07	47.07	48.65	54.97	62.86	70.75	72.33	2.333	60	140
26.76	30.87	34.81	35.60	38.76	41.12	42.70	46.65	47.43	51.53	54.52	56.10	62.40	70.28	78.16	79.74	2.344	32	75
26.20	30.31	34.25	35.04	38.20	40.56	42.14	46.09	46.87	50.97	53.96	55.54	61.85	69.73	77.60	79.18	2.353	34	80
27.24	31.35	35.29	36.08	39.24	41.60	43.18	47.12	47.91	52.01	55.00	56.57	62.88	70.76	78.64	80.21	2.367	30	71
25.06	29.17	33.12	33.92	37.07	39.44	41.02	44.97	45.75	49.85	52.85	54.42	60.73	68.61	76.49	78.07	2.368	38	90
27.73	31.83	35.77	36.56	39.72	42.08	43.66	47.60	48.39	52.48	55.48	57.05	63.35	71.23	79.11	80.69	2.393	28	67
1.18	1.22	1.26	1.26	1.29	1.31	1.32	1.35	1.36	1.38	1.40	1.41	1.45	1.49	1.52	1.53	Length Factor*		

Note: 26, 27, 29 and 31 groove sprockets are only available as stock products in 12 and 21 mm widths. 33, 35, 37, 39 and 41 groove sprockets are only available as stock products in 12, 21, and 36 mm widths. Check sprocket specification tables on pages 74 and 75 for stainless steel and nickel plated sprocket availability.

* This length factor must be used to determine the proper belt width.

Center distance is greater than eight times the small sprocket and the large sprocket is not flanged. See Engineering Section for details.

Drive Selection Table

8mm Pitch Poly Chain® GT® Carbon™ Belts

DriveR Grooves	DriveR Pitch Dia. (in)	DriveN Grooves	DriveN Pitch Dia. (in)	Speed Ratio	8MGT-640 PL 25.20 80T	8MGT-720 PL 28.35 90T	8MGT-800 PL 31.50 100T	8MGT-896 PL 35.28 112T	8MGT-960 PL 37.80 120T	8MGT-1000 PL 39.37 125T	8MGT-1040 PL 40.94 130T	8MGT-1120 PL 44.09 140T	8MGT-1200 PL 47.24 150T	8MGT-1224 PL 48.19 153T	8MGT-1280 PL 50.39 160T	8MGT-1440 PL 56.69 180T	8MGT-1600 PL 62.99 200T	8MGT-1760 PL 69.29 220T
25	2.506	60	6.015	2.400	5.63	7.27	8.88	10.80	12.08	12.87	13.66	15.25	16.84	17.31	18.42	21.58	24.74	27.90
75	7.519	180	18.046	2.400														13.53
22	2.206	53	5.314	2.409	6.51	8.12	9.72	11.63	12.90	13.69	14.48	16.06	17.65	18.12	19.23	22.38	25.54	28.70
31	3.108	75	7.519	2.419			7.06	9.02	10.32	11.12	11.92	13.52	15.11	15.59	16.70	19.88	23.04	26.21
26	2.607	63	6.316	2.423	5.26	6.92	8.54	10.47	11.75	12.54	13.33	14.92	16.51	16.99	18.09	21.26	24.42	27.57
33	3.308	80	8.020	2.424			6.42	8.41	9.72	10.52	11.33	12.93	14.53	15.01	16.13	19.30	22.47	25.64
37	3.709	90	9.023	2.432				7.14	8.48	9.30	10.12	11.74	13.36	13.84	14.96	18.15	21.33	24.50
29	2.907	71	7.118	2.448		5.92	7.58	9.53	10.82	11.62	12.42	14.01	15.60	16.08	17.19	20.36	23.53	26.69
27	2.707	67	6.717	2.481		6.46	8.10	10.04	11.32	12.12	12.91	14.50	16.09	16.57	17.68	20.85	24.01	27.17
45	4.511	112	11.229	2.489								9.05	10.73	11.23	12.37	15.62	18.83	22.03
30	3.008	75	7.519	2.500			7.12	9.09	10.39	11.19	11.99	13.59	15.18	15.66	16.78	19.95	23.12	26.28
32	3.208	80	8.020	2.500			6.48	8.48	9.78	10.59	11.40	13.00	14.60	15.08	16.20	19.38	22.55	25.71
36	3.609	90	9.023	2.500				7.20	8.55	9.37	10.19	11.81	13.43	13.91	15.03	18.22	21.40	24.57
56	5.614	140	14.036	2.500												12.18	15.49	18.74
25	2.506	63	6.316	2.520	5.33	6.98	8.61	10.54	11.82	12.61	13.41	15.00	16.58	17.06	18.17	21.33	24.49	27.65
71	7.118	180	18.046	2.535														13.78
28	2.807	71	7.118	2.536		5.99	7.65	9.60	10.89	11.69	12.49	14.08	15.68	16.16	17.27	20.44	23.60	26.76
22	2.206	56	5.614	2.545	6.22	7.85	9.45	11.37	12.64	13.43	14.23	15.81	17.39	17.87	18.98	22.14	25.30	28.45
35	3.509	90	9.023	2.571				7.27	8.61	9.44	10.25	11.88	13.49	13.98	15.10	18.29	21.48	24.65
26	2.607	67	6.717	2.577		6.53	8.17	10.11	11.39	12.19	12.98	14.58	16.17	16.64	17.75	20.92	24.08	27.24
31	3.108	80	8.020	2.581			6.54	8.54	9.85	10.66	11.47	13.07	14.67	15.16	16.27	19.45	22.62	25.79
29	2.907	75	7.519	2.586			7.19	9.16	10.46	11.26	12.06	13.66	15.26	15.74	16.85	20.02	23.19	26.36
27	2.707	71	7.118	2.630		6.05	7.72	9.67	10.96	11.76	12.56	14.16	15.75	16.23	17.34	20.51	23.68	26.84
53	5.314	140	14.036	2.642												12.37	15.69	18.94
34	3.409	90	9.023	2.647				7.33	8.68	9.50	10.32	11.95	13.56	14.05	15.17	18.37	21.55	24.72
30	3.008	80	8.020	2.667			6.61	8.61	9.92	10.73	11.54	13.14	14.75	15.23	16.34	19.52	22.70	25.86
42	4.211	112	11.229	2.667								9.24	10.92	11.43	12.58	15.83	19.04	22.24
28	2.807	75	7.519	2.679			7.25	9.23	10.53	11.33	12.13	13.73	15.33	15.81	16.92	20.10	23.27	26.43
25	2.506	67	6.717	2.680		6.59	8.24	10.18	11.46	12.26	13.06	14.65	16.24	16.72	17.83	21.00	24.16	27.32
67	6.717	180	18.046	2.687														14.04
22	2.206	60	6.015	2.727	5.83	7.47	9.09	11.02	12.30	13.09	13.88	15.47	17.06	17.53	18.64	21.81	24.97	28.12
33	3.308	90	9.023	2.727				7.40	8.74	9.57	10.39	12.02	13.63	14.12	15.24	18.44	21.62	24.80
26	2.607	71	7.118	2.731		6.12	7.78	9.74	11.03	11.83	12.63	14.23	15.82	16.30	17.41	20.58	23.75	26.91
41	4.110	112	11.229	2.732								9.31	10.99	11.49	12.64	15.90	19.12	22.31
29	2.907	80	8.020	2.759			6.67	8.68	9.99	10.80	11.61	13.21	14.82	15.30	16.41	19.60	22.77	25.94
27	2.707	75	7.519	2.778		5.62	7.32	9.30	10.59	11.40	12.20	13.80	15.40	15.88	16.99	20.17	23.34	26.50
40	4.010	112	11.229	2.800								9.37	11.06	11.56	12.71	15.97	19.19	22.38
50	5.013	140	14.036	2.800												12.56	15.89	19.15
80	8.020	224	22.457	2.800														
32	3.208	90	9.023	2.813				7.46	8.81	9.64	10.46	12.09	13.70	14.19	15.31	18.51	21.69	24.87
25	2.506	71	7.118	2.840		6.18	7.85	9.81	11.10	11.90	12.70	14.30	15.89	16.37	17.48	20.66	23.82	26.99
28	2.807	80	8.020	2.857			6.74	8.75	10.06	10.87	11.67	13.28	14.89	15.37	16.49	19.67	22.84	26.01
63	6.316	180	18.046	2.857														14.29
22	2.206	63	6.316	2.864	5.52	7.19	8.82	10.75	12.03	12.83	13.62	15.21	16.80	17.28	18.39	21.55	24.72	27.88
39	3.910	112	11.229	2.872								9.44	11.12	11.62	12.78	16.04	19.26	22.46
26	2.607	75	7.519	2.885		5.68	7.38	9.36	10.66	11.47	12.27	13.87	15.47	15.95	17.07	20.24	23.41	26.58
31	3.108	90	9.023	2.903				7.52	8.87	9.70	10.52	12.16	13.77	14.26	15.38	18.58	21.77	24.94
48	4.812	140	14.036	2.917												12.69	16.02	19.29
38	3.810	112	11.229	2.947								9.50	11.19	11.69	12.84	16.10	19.33	22.53
27	2.707	80	8.020	2.963			6.80	8.81	10.12	10.94	11.74	13.35	14.96	15.44	16.56	19.74	22.92	26.08
75	7.519	224	22.457	2.987														
25	2.506	75	7.519	3.000		5.75	7.45	9.43	10.73	11.54	12.34	13.95	15.54	16.02	17.14	20.32	23.49	26.65
30	3.008	90	9.023	3.000				7.59	8.94	9.77	10.59	12.22	13.84	14.33	15.45	18.65	21.84	25.01
60	6.015	180	18.046	3.000														14.48
37	3.709	112	11.229	3.027							7.81	9.56	11.25	11.76	12.91	16.17	19.40	22.60
22	2.206	67	6.717	3.045	5.08	6.79	8.44	10.39	11.67	12.47	13.27	14.87	16.46	16.94	18.05	21.22	24.38	27.54
26	2.607	80	8.020	3.077			6.86	8.88	10.19	11.00	11.81	13.42	15.03	15.51	16.63	19.81	22.99	26.16
29	2.907	90	9.023	3.103				7.65	9.01	9.84	10.66	12.29	13.91	14.40	15.52	18.72	21.91	25.09
36	3.609	112	11.229	3.111							7.88	9.63	11.32	11.82	12.98	16.24	19.47	22.67
45	4.511	140	14.036	3.111												12.89	16.22	19.49
71	7.118	224	22.457	3.155														
25	2.506	80	8.020	3.200			6.93	8.94	10.26	11.07	11.88	13.50	15.10	15.58	16.70	19.89	23.06	26.23
35	3.509	112	11.229	3.200							7.94	9.69	11.38	11.89	13.04	16.31	19.54	22.74
28	2.807	90	9.023	3.214				7.71	9.07	9.90	10.73	12.36	13.98	14.47	15.59	18.80	21.98	25.16
56	5.614	180	18.046	3.214														14.73
22	2.206	71	7.118	3.227		6.37	8.05	10.01	11.31	12.11	12.91	14.51	16.11	16.59	17.70	20.88	24.05	27.21
34	3.409	112	11.229	3.294							8.00	9.75	11.45	11.95	13.11	16.38	19.61	22.81
27	2.707	90	9.023	3.333				7.78	9.14	9.97	10.79	12.43	14.05	14.54	15.66	18.87	22.06	25.23
42	4.211	140	14.036	3.333											9.57	13.08	16.42	19.70
67	6.717	224	22.457	3.343														
33	3.308	112	11.229	3.394							8.06	9.82	11.51	12.02	13.18	16.45	19.68	22.88
53	5.314	180	18.046	3.396														14.92
22	2.206	75	7.519	3.409		5.93	7.65	9.63	10.94	11.75	12.55	14.16	15.76	16.24	17.35	20.53	23.71	26.88
41	4.110	140	14.036	3.415											9.63	13.14	16.49	19.77
26	2.607	90	9.023	3.462				7.84	9.20	10.03	10.86	12.50	14.12	14.61	15.73	18.94	22.13	25.31
32	3.208	112	11.229	3.500							8.12	9.88	11.58	12.08	13.24	16.52	19.75	22.95
40	4.010	140	14.036	3.500											9.69	13.21	16.56	19.83
Length Factor*					0.79	0.83	0.87	0.91	0.94	0.96	0.97	1.00	1.03	1.03	1.05	1.10	1.14	1.17

Note: 26, 27, 29 and 31 groove sprockets are only available as stock products in 12 and 21 mm widths. 33, 35, 37, 39 and 41 groove sprockets are only available as stock products in 12, 21, and 36 mm widths. Check sprocket specification tables on pages 74 and 75 for stainless steel and nickel plated sprocket availability.

* This length factor must be used to determine the proper belt width.

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Center Distance, Inches — **Sprocket Combinations**

8MGT-1792 PL 70.55 224Teeth	8MGT-2000 PL 78.74 250 Teeth	8MGT-2200 PL 86.61 275 Teeth	8MGT-2240 PL 88.19 280 Teeth	8MGT-2400 PL 94.49 300 Teeth	8MGT-2520 PL 99.21 315 Teeth	8MGT-2600 PL 102.36 325 Teeth	8MGT-2800 PL 110.24 350 Teeth	8MGT-2840 PL 111.81 355 Teeth	8MGT-3048 PL 120.00 381 Teeth	8MGT-3200 PL 125.98 400 Teeth	8MGT-3280 PL 129.13 410 Teeth	8MGT-3600 PL 141.73 450 Teeth	8MGT-4000 PL 157.48 500 Teeth	8MGT-4400 PL 173.23 550 Teeth	8MGT-4480 PL 176.38 560 Teeth	Speed Ratio	DriveR Number of Grooves	DriveN Number of Grooves
28.53	32.63	36.57	37.36	40.51	42.88	44.45	48.40	49.18	53.28	56.27	57.85	64.15	72.03	79.90	81.48	2.400	25	60
14.21	18.54	22.61	23.42	26.64	29.05	30.65	34.64	35.43	39.57	42.59	44.17	50.51	58.42	66.33	67.91	2.400	75	180
29.33	33.43	37.37	38.16	41.31	43.67	45.25	49.19	49.97	54.07	57.06	58.64	64.94	72.82	80.69	82.27	2.409	22	53
26.84	30.94	34.89	35.68	38.84	41.20	42.78	46.72	47.51	51.61	54.60	56.18	62.48	70.36	78.24	79.81	2.419	31	75
28.21	32.31	36.25	37.04	40.19	42.56	44.13	48.08	48.86	52.96	55.95	57.53	63.83	71.71	79.59	81.16	2.423	26	63
26.27	30.38	34.33	35.12	38.28	40.64	42.22	46.16	46.95	51.05	54.04	55.62	61.92	69.80	77.68	79.26	2.424	33	80
25.13	29.25	33.20	33.99	37.15	39.52	41.09	45.04	45.83	49.93	52.92	54.50	60.81	68.69	76.57	78.15	2.432	37	90
27.32	31.43	35.37	36.16	39.32	41.68	43.26	47.20	47.99	52.08	55.08	56.65	62.96	70.84	78.71	80.29	2.448	29	71
27.80	31.91	35.85	36.64	39.79	42.16	43.73	47.68	48.46	52.56	55.55	57.13	63.43	71.31	79.19	80.76	2.481	27	67
22.66	26.80	30.76	31.55	34.72	37.09	38.67	42.63	43.41	47.52	50.52	52.09	58.41	66.29	74.18	75.75	2.489	45	112
26.91	31.02	34.96	35.76	38.91	41.28	42.85	46.80	47.58	51.68	54.68	56.25	62.56	70.44	78.31	79.89	2.500	30	75
26.35	30.46	34.40	35.19	38.35	40.72	42.29	46.24	47.02	51.12	54.12	55.69	62.00	69.88	77.76	79.34	2.500	32	80
25.21	29.32	33.27	34.07	37.23	39.59	41.17	45.12	45.90	50.01	53.00	54.58	60.88	68.77	76.65	78.22	2.500	36	90
19.38	23.56	27.55	28.35	31.53	33.91	35.50	39.46	40.25	44.37	47.37	48.95	55.27	63.17	71.06	72.63	2.500	56	140
28.28	32.39	36.33	37.12	40.27	42.63	44.21	48.15	48.94	53.04	56.03	57.60	63.91	71.79	79.66	81.24	2.520	25	63
14.47	18.81	22.89	23.70	26.92	29.33	30.93	34.93	35.72	39.86	42.88	44.47	50.81	58.72	66.63	68.21	2.535	71	180
27.40	31.50	35.44	36.24	39.39	41.75	43.33	47.28	48.06	52.16	55.15	56.73	63.03	70.91	78.79	80.37	2.536	28	71
29.08	33.18	37.12	37.91	41.07	43.43	45.01	48.95	49.73	53.83	56.82	58.40	64.70	72.58	80.46	82.03	2.545	22	56
25.28	29.40	33.35	34.14	37.30	39.67	41.25	45.19	45.98	50.08	53.08	54.65	60.96	68.84	76.72	78.30	2.571	35	90
27.88	31.98	35.92	36.71	39.87	42.23	43.81	47.75	48.54	52.64	55.63	57.21	63.51	71.39	79.27	80.84	2.577	26	67
26.42	30.53	34.48	35.27	38.43	40.79	42.37	46.31	47.10	51.20	54.19	55.77	62.08	69.96	77.84	79.41	2.581	31	80
26.99	31.10	35.04	35.83	38.99	41.35	42.93	46.87	47.66	51.76	54.75	56.33	62.63	70.51	78.39	79.97	2.586	29	75
27.47	31.58	35.52	36.31	39.47	41.83	43.41	47.35	48.14	52.24	55.23	56.81	63.11	70.99	78.87	80.44	2.630	27	71
19.59	23.77	27.76	28.56	31.75	34.13	35.72	39.68	40.47	44.59	47.59	49.17	55.50	63.39	71.28	72.86	2.642	53	140
25.36	29.47	33.42	34.22	37.38	39.74	41.32	45.27	46.06	50.16	53.15	54.73	61.04	68.92	76.80	78.38	2.647	34	90
26.50	30.61	34.55	35.34	38.50	40.87	42.44	46.39	47.18	51.28	54.27	55.85	62.15	70.03	77.91	79.49	2.667	30	80
22.88	27.02	30.98	31.77	34.94	37.31	38.90	42.85	43.64	47.74	50.74	52.32	58.63	66.52	74.41	75.98	2.667	42	112
27.06	31.17	35.12	35.91	39.06	41.43	43.01	46.95	47.74	51.84	54.83	56.41	62.71	70.59	78.47	80.05	2.679	25	75
27.95	32.06	36.00	36.79	39.95	42.31	43.89	47.83	48.62	52.71	55.71	57.28	63.59	71.47	79.34	80.92	2.680	25	67
14.72	19.07	23.16	23.97	27.20	29.61	31.22	35.21	36.01	40.15	43.17	44.76	51.10	59.02	66.93	68.51	2.687	67	180
28.76	32.86	36.80	37.59	40.74	43.11	44.68	48.63	49.41	53.51	56.50	58.08	64.38	72.26	80.14	81.71	2.727	22	60
25.43	29.55	33.50	34.29	37.45	39.82	41.40	45.35	46.13	50.23	53.23	54.81	61.11	69.00	76.88	78.45	2.727	33	90
27.54	31.65	35.60	36.39	39.54	41.91	43.48	47.43	48.21	52.31	55.31	56.88	63.19	71.07	78.94	80.52	2.731	26	71
22.95	27.09	31.05	31.85	35.02	37.39	38.97	42.93	43.71	47.82	50.82	52.40	58.71	66.60	74.48	76.06	2.732	41	112
26.57	30.68	34.63	35.42	38.58	40.94	42.52	46.47	47.25	51.35	54.35	55.92	62.23	70.11	77.99	79.57	2.759	29	80
27.14	31.25	35.19	35.98	39.14	41.50	43.08	47.03	47.81	51.91	54.91	56.48	62.79	70.67	78.55	80.12	2.778	27	75
23.02	27.16	31.13	31.92	35.09	37.46	39.04	43.00	43.79	47.90	50.89	52.47	58.79	66.67	74.56	76.14	2.800	40	112
19.80	23.98	27.98	28.78	31.97	34.35	35.94	39.90	40.69	44.81	47.82	49.40	55.72	63.62	71.51	73.09	2.800	50	140
		17.89	18.75	22.12	24.60	26.24	30.32	31.13	35.32	38.37	39.97	46.37	54.32	62.26	63.84	2.800	80	224
25.50	29.62	33.57	34.37	37.53	39.89	41.47	45.42	46.21	50.31	53.30	54.88	61.19	69.07	76.95	78.53	2.813	32	90
27.62	31.73	35.67	36.46	39.62	41.98	43.56	47.51	48.29	52.39	55.38	56.96	63.26	71.14	79.02	80.60	2.840	25	71
26.64	30.76	34.70	35.50	38.65	41.02	42.60	46.54	47.33	51.43	54.42	56.00	62.31	70.19	78.07	79.64	2.857	28	80
14.98	19.34	23.43	24.25	27.48	29.89	31.50	35.50	36.30	40.44	43.46	45.05	51.40	59.32	67.23	68.81	2.857	63	180
28.51	32.61	36.55	37.35	40.50	42.86	44.44	48.38	49.17	53.27	56.26	57.84	64.14	72.02	79.90	81.47	2.864	22	63
23.09	27.23	31.20	32.00	35.16	37.54	39.12	43.07	43.86	47.97	50.97	52.55	58.86	66.75	74.64	76.21	2.872	39	112
27.21	31.32	35.27	36.06	39.22	41.58	43.16	47.10	47.89	51.99	54.98	56.56	62.86	70.74	78.62	80.20	2.885	26	75
25.58	29.69	33.65	34.44	37.60	39.97	41.55	45.50	46.28	50.39	53.38	54.96	61.27	69.15	77.03	78.61	2.903	31	90
19.94	24.12	28.12	28.92	32.11	34.49	36.08	40.05	40.84	44.96	47.96	49.55	55.87	63.77	71.66	73.24	2.917	48	140
23.17	27.31	31.27	32.07	35.24	37.61	39.19	43.15	43.94	48.05	51.04	52.62	58.94	66.83	74.71	76.29	2.947	38	112
26.72	30.83	34.78	35.57	38.73	41.09	42.67	46.62	47.41	51.51	54.50	56.08	62.38	70.26	78.14	79.72	2.963	27	80
		18.21	19.07	22.45	24.93	26.58	30.66	31.47	35.67	38.72	40.33	46.72	54.69	62.63	64.21	2.987	75	224
27.29	31.40	35.34	36.13	39.29	41.66	43.23	47.18	47.97	52.07	55.06	56.64	62.94	70.82	78.70	80.28	3.000	25	75
25.65	29.77	33.72	34.51	37.68	40.04	41.62	45.57	46.36	50.46	53.46	55.03	61.34	69.23	77.11	78.68	3.000	30	90
15.17	19.54	23.64	24.45	27.69	30.10	31.71	35.71	36.51	40.66	43.68	45.27	51.62	59.54	67.45	69.03	3.000	60	180
23.24	27.38	31.35	32.14	35.31	37.68	39.27	43.22	44.01	48.12	51.12	52.70	59.01	66.90	74.79	76.37	3.027	37	112
28.18	32.28	36.23	37.02	40.17	42.54	44.11	48.06	48.84	52.94	55.94	57.51	63.82	71.70	79.57	81.15	3.045	22	67
26.79	30.90	34.85	35.65	38.80	41.17	42.75	46.70	47.48	51.58	54.58	56.15	62.46	70.34	78.22	79.80	3.077	26	80
25.72	29.84	33.80	34.59	37.75	40.12	41.70	45.65	46.43	50.54	53.53	55.11	61.42	69.30	77.18	78.76	3.103	29	90
23.31	27.45	31.42	32.22	35.39	37.76	39.34	43.30	44.09	48.20	51.19	52.77	59.09	66.98	74.86	76.44	3.111	36	112
20.14	24.34	28.34	29.14	32.33	34.71	36.30	40.27	41.06	45.18	48.19	49.77	56.10	64.00	71.89	73.47	3.111	45	140
		18.46	19.32	22.71	25.20	26.85	30.94	31.75	35.95	39.01	40.61	47.01	54.98	62.92	64.51	3.155	71	224
26.87	30.98	34.93	35.72	38.88	41.25	42.82	46.77	47.56	51.66	54.65	56.23	62.54	70.42	78.30	79.88	3.200	25	80
23.38	27.52	31.49	32.29	35.46	37.83	39.42	43.37	44.16	48.27	51.27	52.85	59.16	67.05	74.94	76.52	3.200	35	112
25.80	29.92	33.87	34.66	37.83	40.19	41.77	45.72	46.51	50.61	53.61	55.19	61.50	69.38	77.26	78.84	3.214	28	90
15.42	19.80	23.91	24.73	27.97	30.38	31.99	36.00	36.80	40.94	43.97	45.56	51.91	59.83	67.75	69.33	3.214	56	180
27.84	31.95	35.90	36.69	39.85	42.21	43.79	47.73	48.52	52.62	55.61	57.19	63.49	71.37	79.25	80.83	3.227	22	71
23.45	27.60	31.57	32.36	35.53	37.91	39.49	43.45	44.24	48.35	51.34	52.92	59.24	67.13	75.02	76.59	3.294	34	112
25.87	29.99	33.95	34.74	37.90	40.27	41.85	45.80	46.59	50.69	53.68	55.26	61.57	69.46	77.34	78.91	3.333	27	90
20.35	24.55	28.55	29.35	32.54	34.93	36.52	40.49	41.28	45.40	48.41	49.99	56.32	64.22	72.12	73.70	3.333	42	140
		18.71	19.58	22.97	25.47	27.12	31.21	31.92	36.23	39.29	40.89	47.30	55.27	63.21	64.80	3.343	67	224
23.52	27.67	31.64	32.44	35.61	37.98	39.56	43.52	44.31	48.42	51.42	53.00	59.32	67.21	75.09	76.67	3.394	33	112
15.61	20.00	24.11	24.93	28.18	30.59	32.20	36.21	37.01	41.16	44.18	45.77	52.13	60.06	67.97	69.55	3.396	53	180
27.51	31.62	35.57	36.36	39.52	41.88	43.46	47.41	48.19	52.29	55.29	56.86	63.17	71.05	78.93	80.51	3.409	22	75
20.42	24.62	28.62	29.42	32.61	35.00	36.59	40.56	41.36	45.48	48.48	50.07	56.39	64.29	72.19	73.77	3.415	41	140
25.94	30.06	34.02	34.81	37.98	40.34	41.92	45.87	46.66	50.76	53.76	55.34	61.65	69.53	77.41	78.99	3.462	26	90
23.59	27.74	31.71	32.51	35.68	38.05	39.64	43.60	44.38	48.50	51.49	53.07	59.39	67.28	75.17	76.75	3.500	32	112
20.49	24.69	28.69	29.49	32.69	35.07	36.66	40.64	41.43	45.55	48.56	50.14	56.47	64.37	72.27	73.85	3.500	40	140
1.18	1.22	1.26	1.26	1.29	1.31	1.32	1.35	1.36	1.38	1.40	1.41	1.45	1.49	1.52	1.53	Length Factor*		

Note: 26, 27, 29 and 31 groove sprockets are only available as stock products in 12 and 21 mm widths. 33, 35, 37, 39 and 41 groove sprockets are only available as stock products in 12, 21, and 36 mm widths. Check sprocket specification tables on pages 74 and 75 for stainless steel and nickel plated sprocket availability.

* This length factor must be used to determine the proper belt width.

Center distance is greater than eight times the small sprocket and the large sprocket is not flanged. See Engineering Section for details.

Drive Selection Table

Number of Grooves (DriveR)	Pitch Diameter (Inches) (DriveR)	Number of Grooves (DriveN)	Pitch Diameter (Inches) (DriveN)	Speed Ratio	8MGT-640 P.L. 25.20 80 Teeth	8MGT-720 P.L. 28.35 90 Teeth	8MGT-800 P.L. 31.50 100 Teeth	8MGT-896 P.L. 35.28 112 Teeth	8MGT-960 P.L. 37.80 120 Teeth	8MGT-1000 P.L. 39.37 125 Teeth	8MGT-1040 P.L. 40.94 130 Teeth	8MGT-1120 P.L. 44.09 140 Teeth	8MGT-1200 P.L. 47.24 150 Teeth	8MGT-1224 P.L. 48.19 153 Teeth	8MGT-1280 P.L. 50.39 160 Teeth	8MGT-1440 P.L. 56.69 180 Teeth	8MGT-1600 P.L. 62.99 200Teeth	8MGT-1760 P.L. 69.29 220 Teeth
63	6.316	224	22.457	3.556														
39	3.910	140	14.036	3.590											9.75	13.27	16.62	19.90
25	2.506	90	9.023	3.600				7.90	9.27	10.10	10.93	12.57	14.19	14.68	15.80	19.01	22.20	25.38
50	5.013	180	18.046	3.600														15.11
31	3.108	112	11.229	3.613							8.18	9.94	11.64	12.15	13.31	16.59	19.82	23.03
22	2.206	80	8.020	3.636			7.12	9.14	10.46	11.28	12.09	13.70	15.31	15.80	16.91	20.10	23.28	26.45
38	3.810	140	14.036	3.684											9.81	13.34	16.69	19.97
30	3.008	112	11.229	3.733							8.24	10.01	11.71	12.21	13.38	16.65	19.89	23.10
60	6.015	224	22.457	3.733														
48	4.812	180	18.046	3.750														15.23
37	3.709	140	14.036	3.784											9.87	13.40	16.76	20.04
29	2.907	112	11.229	3.862						7.37	8.30	10.07	11.77	12.28	13.44	16.72	19.96	23.17
36	3.609	140	14.036	3.889											9.93	13.46	16.82	20.11
28	2.807	112	11.229	4.000						7.43	8.36	10.13	11.84	12.35	13.51	16.79	20.03	23.24
35	3.509	140	14.036	4.000											9.99	13.53	16.89	20.17
45	4.511	180	18.046	4.000													11.77	15.42
56	5.614	224	22.457	4.000														
22	2.206	90	9.023	4.091			5.92	8.09	9.46	10.30	11.12	12.77	14.40	14.88	16.01	19.22	22.42	25.60
34	3.409	140	14.036	4.118											10.05	13.59	16.95	20.24
27	2.707	112	11.229	4.148						7.49	8.42	10.20	11.90	12.41	13.58	16.86	20.10	23.31
53	5.314	224	22.457	4.226														
33	3.308	140	14.036	4.242											10.11	13.66	17.02	20.31
42	4.211	180	18.046	4.286													11.95	15.60
26	2.607	112	11.229	4.308						7.55	8.48	10.26	11.97	12.48	13.64	16.93	20.17	23.38
32	3.208	140	14.036	4.375											10.17	13.72	17.09	20.38
41	4.110	180	18.046	4.390													12.01	15.67
25	2.506	112	11.229	4.480						7.61	8.54	10.32	12.03	12.54	13.71	16.99	20.24	23.45
50	5.013	224	22.457	4.480														
40	4.010	180	18.046	4.500													12.07	15.73
31	3.108	140	14.036	4.516										8.89	10.23	13.78	17.15	20.45
39	3.910	180	18.046	4.615													12.13	15.79
30	3.008	140	14.036	4.667										8.95	10.29	13.85	17.22	20.51
48	4.812	224	22.457	4.667														
38	3.810	180	18.046	4.737													12.18	15.85
29	2.907	140	14.036	4.828										9.01	10.35	13.91	17.28	20.58
37	3.709	180	18.046	4.865													12.24	15.92
45	4.511	224	22.457	4.978														
28	2.807	140	14.036	5.000										9.06	10.41	13.97	17.35	20.65
36	3.609	180	18.046	5.000													12.30	15.98
22	2.206	112	11.229	5.091						7.78	8.72	10.51	12.23	12.74	13.90	17.20	20.44	23.66
35	3.509	180	18.046	5.143													12.36	16.04
27	2.707	140	14.036	5.185										9.12	10.47	14.04	17.42	20.72
34	3.409	180	18.046	5.294													12.42	16.10
42	4.211	224	22.457	5.333														
26	2.607	140	14.036	5.385										9.18	10.53	14.10	17.48	20.78
33	3.308	180	18.046	5.455													12.48	16.16
41	4.110	224	22.457	5.463														
25	2.506	140	14.036	5.600									8.61	9.24	10.59	14.16	17.55	20.85
40	4.010	224	22.457	5.600														
32	3.208	180	18.046	5.625													12.53	16.22
39	3.910	224	22.457	5.744														
31	3.108	180	18.046	5.806													12.59	16.29
38	3.810	224	22.457	5.895														
30	3.008	180	18.046	6.000													12.65	16.35
37	3.709	224	22.457	6.054														
29	2.907	180	18.046	6.207													12.71	16.41
36	3.609	224	22.457	6.222														
22	2.206	140	14.036	6.364									8.78	9.41	10.77	14.35	17.74	21.05
35	3.509	224	22.457	6.400														
28	2.807	180	18.046	6.429													12.77	16.47
34	3.409	224	22.457	6.588														
27	2.707	180	18.046	6.667													12.83	16.53
33	3.308	224	22.457	6.788														
26	2.607	180	18.046	6.923													12.88	16.59
32	3.208	224	22.457	7.000														
25	2.506	180	18.046	7.200													12.94	16.66
31	3.108	224	22.457	7.226														
30	3.008	224	22.457	7.467														
29	2.907	224	22.457	7.724														
28	2.807	224	22.457	8.000														
22	2.206	180	18.046	8.182													13.12	16.84
27	2.707	224	22.457	8.296														
26	2.607	224	22.457	8.615														
25	2.506	224	22.457	8.960														
22	2.206	224	22.457	10.182														
				Length Factor*	0.79	0.83	0.87	0.91	0.94	0.96	0.97	1.00	1.03	1.03	1.05	1.10	1.14	1.17

Note: 26, 27, 29 and 31 groove sprockets are only available as stock products in 12 and 21 mm widths. 33, 35, 37, 39 and 41 groove sprockets are only available as stock products in 12, 21, and 36 mm widths.
Check sprocket specification tables on pages 74 and 75 for stainless steel and nickel plated sprocket availability.

* This length factor must be used to determine the proper belt width

    Center distance is greater than eight times the small sprocket and the large sprocket is not flanged. See Engineering Section for details.

Gates® Gates Corporation

8MGT-1792 P.L. 70.55 224 Teeth	8MGT-2000 P.L. 78.74 250 Teeth	8MGT-2200 P.L. 86.61 275 Teeth	8MGT-2240 P.L. 88.19 280 Teeth	8MGT-2400 P.L. 94.49 300 Teeth	8MGT-2520 P.L. 99.21 315 Teeth	8MGT-2600 P.L. 102.36 325 Teeth	8MGT-2800 P.L. 110.24 350 Teeth	8MGT-2840 P.L. 111.81 355 Teeth	8MGT-3048 P.L. 120.00 381 Teeth	8MGT-3200 P.L. 125.98 400 Teeth	8MGT-3280 P.L. 129.13 410 Teeth	8MGT-3600 P.L. 141.73 450 Teeth	8MGT-4000 P.L. 157.48 500 Teeth	8MGT-4400 P.L. 173.23 550 Teeth	8MGT-4480 P.L. 176.38 560 Teeth	Speed Ratio	DriveR Number of Grooves	DriveN Number of Grooves
		18.96	19.83	23.23	25.73	27.38	31.48	32.29	36.51	39.57	41.17	47.58	55.55	63.50	65.09	3.556	63	224
20.55	24.76	28.76	29.57	32.76	35.14	36.74	40.71	41.50	45.62	48.63	50.21	56.54	64.45	72.34	73.92	3.590	39	140
26.02	30.14	34.09	34.89	38.05	40.42	42.00	45.95	46.74	50.84	53.84	55.41	61.72	69.61	77.49	79.07	3.600	25	90
15.80	20.20	24.32	25.13	28.38	30.80	32.41	36.43	37.22	41.38	44.40	45.99	52.35	60.28	68.19	69.77	3.600	50	180
23.67	27.81	31.79	32.58	35.75	38.13	39.71	43.67	44.46	48.57	51.57	53.15	59.47	67.36	75.25	76.82	3.613	31	112
27.09	31.20	35.15	35.95	39.11	41.47	43.05	47.00	47.79	51.89	54.88	56.46	62.77	70.65	78.53	80.11	3.636	22	80
20.62	24.83	28.83	29.64	32.83	35.22	36.81	40.78	41.57	45.70	48.71	50.29	56.62	64.52	72.42	74.00	3.684	38	140
23.74	27.88	31.86	32.65	35.83	38.20	39.79	43.75	44.53	48.64	51.64	53.22	59.54	67.43	75.32	76.90	3.733	30	112
	14.63	19.15	20.02	23.43	25.93	27.58	31.69	32.50	36.71	39.78	41.38	47.79	55.77	63.72	65.31	3.733	60	224
15.93	20.33	24.45	25.27	28.52	30.94	32.55	36.57	37.36	41.52	44.55	46.14	52.49	60.42	68.34	69.92	3.750	48	180
20.69	24.90	28.91	29.71	32.90	35.29	36.88	40.86	41.65	45.77	48.78	50.36	56.69	64.60	72.49	74.07	3.784	37	140
23.81	27.96	31.93	32.73	35.90	38.28	39.86	43.82	44.61	48.72	51.72	53.30	59.62	67.51	75.40	76.98	3.862	29	112
20.76	24.97	28.98	29.78	32.97	35.36	36.95	40.93	41.72	45.84	48.85	50.44	56.77	64.67	72.57	74.15	3.889	36	140
23.88	28.03	32.00	32.80	35.97	38.35	39.93	43.89	44.68	48.79	51.79	53.37	59.69	67.58	75.47	77.05	4.000	28	112
20.83	25.03	29.05	29.85	33.05	35.43	37.03	41.00	41.79	45.92	48.93	50.51	56.84	64.75	72.64	74.22	4.000	35	140
16.12	20.53	24.65	25.47	28.73	31.15	32.76	36.78	37.58	41.73	44.76	46.35	52.71	60.65	68.56	70.15	4.000	45	180
	14.87	19.40	20.27	23.68	26.19	27.85	31.96	32.77	36.99	40.05	41.66	48.08	56.06	64.01	65.60	4.000	56	224
26.23	30.36	34.32	35.11	38.27	40.64	42.22	46.17	46.96	51.07	54.06	55.64	61.95	69.84	77.72	79.30	4.091	22	90
20.89	25.10	29.12	29.92	33.12	35.51	37.10	41.07	41.87	45.99	49.00	50.58	56.92	64.82	72.72	74.30	4.118	34	140
23.95	28.10	32.08	32.87	36.05	38.42	40.01	43.97	44.76	48.87	51.87	53.45	59.77	67.66	75.55	77.13	4.148	27	112
	15.04	19.59	20.46	23.88	26.39	28.05	32.16	32.97	37.20	40.26	41.87	48.29	56.27	64.23	65.82	4.226	53	224
20.96	25.17	29.19	29.99	33.19	35.58	37.17	41.15	41.94	46.07	49.07	50.66	56.99	64.90	72.80	74.37	4.242	33	140
16.30	20.72	24.86	25.68	28.93	31.36	32.97	36.99	37.79	41.95	44.98	46.57	52.93	60.87	68.79	70.37	4.286	42	180
24.02	28.17	32.15	32.95	36.12	38.50	40.08	44.04	44.83	48.94	51.94	53.52	59.84	67.74	75.63	77.20	4.308	26	112
21.03	25.24	29.26	30.06	33.26	35.65	37.24	41.22	42.01	46.14	49.15	50.73	57.06	64.97	72.87	74.45	4.375	32	140
16.37	20.79	24.92	25.74	29.00	31.43	33.04	37.06	37.86	42.02	45.05	46.64	53.01	60.94	68.86	70.44	4.390	41	180
24.09	28.25	32.22	33.02	36.19	38.57	40.16	44.12	44.91	49.02	52.02	53.60	59.92	67.81	75.70	77.28	4.480	25	112
	15.22	19.77	20.65	24.07	26.59	28.25	32.36	33.18	37.40	40.47	42.08	48.50	56.49	64.45	66.04	4.480	50	224
16.43	20.85	24.99	25.81	29.07	31.50	33.11	37.13	37.93	42.09	45.12	46.71	53.08	61.01	68.93	70.52	4.500	40	180
21.10	25.31	29.33	30.13	33.33	35.72	37.31	41.29	42.08	46.21	49.22	50.81	57.14	65.05	72.95	74.52	4.516	31	140
16.49	20.92	25.06	25.88	29.14	31.57	33.18	37.20	38.00	42.16	45.19	46.79	53.15	61.09	69.01	70.59	4.615	39	180
21.17	25.38	29.40	30.20	33.40	35.79	37.39	41.37	42.16	46.28	49.29	50.88	57.21	65.12	73.02	74.60	4.667	30	140
	15.34	19.90	20.77	24.20	26.72	28.38	32.50	33.31	37.54	40.61	42.22	48.65	56.63	64.59	66.18	4.667	48	224
16.55	20.99	25.12	25.95	29.21	31.64	33.25	37.27	38.07	42.23	45.26	46.86	53.22	61.16	69.08	70.67	4.737	38	180
21.23	25.45	29.47	30.28	33.47	35.87	37.46	41.44	42.23	46.36	49.37	50.95	57.29	65.20	73.10	74.68	4.828	29	140
16.62	21.05	25.19	26.01	29.28	31.70	33.32	37.34	38.14	42.30	45.34	46.93	53.30	61.23	69.16	70.74	4.865	37	180
	15.51	20.08	20.96	24.39	26.91	28.58	32.70	33.52	37.75	40.82	42.43	48.86	56.85	64.81	66.40	4.978	45	224
21.30	25.52	29.54	30.35	33.55	35.94	37.53	41.51	42.30	46.43	49.44	51.03	57.36	65.27	73.17	74.75	5.000	28	140
16.68	21.12	25.26	26.08	29.34	31.77	33.39	37.41	38.21	42.38	45.41	47.00	53.37	61.31	69.23	70.81	5.000	36	180
24.30	28.46	32.44	33.24	36.41	38.79	40.38	44.34	45.13	49.24	52.24	53.82	60.14	68.04	75.93	77.51	5.091	22	112
16.74	21.18	25.33	26.15	29.41	31.84	33.46	37.48	38.28	42.45	45.48	47.07	53.44	61.38	69.30	70.89	5.143	35	180
21.37	25.59	29.61	30.42	33.62	36.01	37.60	41.58	42.38	46.50	49.52	51.10	57.44	65.34	73.25	74.83	5.185	27	140
16.80	21.25	25.39	26.22	29.48	31.91	33.53	37.55	38.35	42.52	45.55	47.15	53.51	61.45	69.38	70.96	5.294	34	180
	15.69	20.27	21.15	24.59	27.11	28.78	32.90	33.72	37.95	41.03	42.64	49.07	57.06	65.03	66.62	5.333	42	224
21.44	25.66	29.68	30.49	33.69	36.08	37.67	41.66	42.45	46.58	49.59	51.17	57.51	65.42	73.32	74.90	5.385	26	140
16.87	21.31	25.46	26.28	29.55	31.98	33.60	37.62	38.42	42.59	45.62	47.22	53.59	61.53	69.45	71.04	5.455	33	180
	15.75	20.33	21.21	24.65	27.18	28.84	32.97	33.79	38.02	41.10	42.71	49.14	57.14	65.10	66.69	5.463	41	224
21.51	25.73	29.75	30.56	33.76	36.15	37.75	41.73	42.52	46.65	49.66	51.25	57.58	65.49	73.40	74.98	5.600	25	140
	15.81	20.39	21.28	24.72	27.24	28.91	33.04	33.85	38.09	41.17	42.78	49.21	57.21	65.17	66.76	5.600	40	224
16.93	21.38	25.53	26.35	29.62	32.05	33.67	37.69	38.49	42.66	45.69	47.29	53.66	61.60	69.53	71.11	5.625	32	180
	15.86	20.46	21.34	24.78	27.31	28.97	33.10	33.92	38.16	41.23	42.85	49.28	57.28	65.25	66.84	5.744	31	224
16.99	21.44	25.59	26.42	29.69	32.12	33.74	37.76	38.57	42.73	45.76	47.36	53.73	61.67	69.60	71.18	5.806	31	180
	15.92	20.52	21.40	24.84	27.37	29.04	33.17	33.99	38.23	41.30	42.92	49.35	57.35	65.32	66.91	5.895	38	224
17.05	21.51	25.66	26.48	29.75	32.19	33.80	37.83	38.64	42.80	45.84	47.43	53.80	61.75	69.67	71.26	6.000	30	180
	15.98	20.58	21.46	24.91	27.44	29.11	33.24	34.06	38.30	41.37	42.99	49.42	57.42	65.39	66.98	6.054	37	224
17.12	21.57	25.73	26.55	29.82	32.26	33.87	37.91	38.71	42.87	45.91	47.50	53.88	61.82	69.75	71.33	6.207	29	180
	16.04	20.64	21.52	24.97	27.50	29.17	33.31	34.12	38.36	41.44	43.06	49.49	57.49	65.46	67.05	6.222	36	224
21.71	25.94	29.96	30.77	33.97	36.37	37.96	41.95	42.74	46.87	49.88	51.47	57.81	65.72	73.62	75.20	6.364	22	140
	16.10	20.70	21.59	25.04	27.57	29.24	33.37	34.19	38.43	41.51	43.13	49.56	57.56	65.54	67.13	6.400	35	224
17.18	21.64	25.79	26.62	29.89	32.32	33.94	37.98	38.78	42.94	45.98	47.58	53.95	61.89	69.82	71.41	6.429	28	180
	16.16	20.76	21.65	25.10	27.63	29.30	33.44	34.26	38.50	41.58	43.20	49.63	57.64	65.61	67.20	6.588	34	224
17.24	21.70	25.86	26.69	29.96	32.39	34.01	38.04	38.85	43.02	46.05	47.65	54.02	61.97	69.89	71.48	6.667	27	180
	16.22	20.83	21.71	25.16	27.70	29.37	33.51	34.33	38.57	41.65	43.27	49.70	57.71	65.68	67.27	6.788	33	224
17.30	21.77	25.93	26.75	30.03	32.46	34.08	38.11	38.92	43.09	46.12	47.72	54.09	62.04	69.97	71.55	6.923	26	180
	16.27	20.89	21.77	25.23	27.76	29.43	33.57	34.39	38.64	41.72	43.33	49.77	57.78	65.75	67.34	7.000	32	224
17.36	21.83	25.99	26.82	30.09	32.53	34.15	38.19	38.99	43.16	46.19	47.79	54.17	62.11	70.04	71.63	7.200	25	180
	16.33	20.95	21.84	25.29	27.83	29.50	33.64	34.46	38.71	41.79	43.40	49.84	57.85	65.82	67.42	7.226	31	224
	16.39	21.01	21.90	25.36	27.89	29.57	33.71	34.53	38.77	41.85	43.47	49.91	57.92	65.90	67.49	7.467	30	224
	16.45	21.07	21.96	25.42	27.96	29.63	33.77	34.59	38.84	41.92	43.54	49.99	57.99	65.97	67.56	7.724	29	224
	16.51	21.13	22.02	25.48	28.02	29.70	33.84	34.66	38.91	41.99	43.61	50.06	58.06	66.04	67.63	8.000	28	224
17.55	22.02	26.19	27.02	30.30	32.74	34.36	38.39	39.20	43.37	46.41	48.00	54.38	62.33	70.26	71.85	8.182	22	180
	16.56	21.20	22.08	25.55	28.09	29.76	33.91	34.73	38.98	42.06	43.68	50.13	58.14	66.11	67.70	8.296	27	224
	16.62	21.26	22.15	25.61	28.15	29.83	33.97	34.79	39.05	42.13	43.75	50.20	58.21	66.18	67.78	8.615	26	224
	16.68	21.32	22.21	25.68	28.22	29.89	34.04	34.86	39.12	42.20	43.82	50.27	58.28	66.26	67.85	8.960	25	224
	16.85	21.50	22.39	25.87	28.41	30.09	34.24	35.06	39.32	42.40	44.03	50.48	58.49	66.47	68.07	10.182	22	224
1.18	1.22	1.26	1.26	1.29	1.31	1.32	1.35	1.36	1.38	1.40	1.41	1.45	1.49	1.52	1.53	Length Factor*		

Center Distance, Inches — *Sprocket Combinations*

* This length factor must be used to determine the proper belt width

Center distance is greater than eight times the small sprocket and the large sprocket is not flanged. See Engineering Section for details.

Drive Selection Table

14mm Pitch Poly Chain® GT® Carbon™ Belts

Number of Grooves (DriveR)	Pitch Diameter (Inches)	Number of Grooves (DriveN)	Pitch Diameter (Inches)	Speed Ratio	14MGT-994 P.L. 39.13 71 Teeth	14MGT-1120 P.L. 44.09 80 Teeth	14MGT-1190 P.L. 46.85 85 Teeth	14MGT-1260 P.L. 49.61 90 Teeth	14MGT-1400 P.L. 55.12 100 Teeth	14MGT-1568 P.L. 61.73 112 Teeth	14MGT-1610 P.L. 63.39 115 Teeth	14MGT-1750 P.L. 68.90 125 Teeth	14MGT-1890 P.L. 74.41 135 Teeth	14MGT-1960 P.L. 77.17 140 Teeth	14MGT-2100 P.L. 82.68 150 Teeth	14MGT-2240 P.L. 88.19 160 Teeth	14MGT-2310 P.L. 90.94 165 Teeth
28	4.912	28	4.912	1.000	11.85	14.33	15.71	17.09	19.84	23.15	23.98	26.73	29.49	30.87	33.62	36.38	37.75
29	5.088	29	5.088	1.000	11.57	14.05	15.43	16.81	19.57	22.87	23.70	26.46	29.21	30.59	33.35	36.10	37.48
30	5.263	30	5.263	1.000	11.30	13.78	15.16	16.54	19.29	22.60	23.43	26.18	28.94	30.32	33.07	35.83	37.20
31	5.439	31	5.439	1.000	11.02	13.50	14.88	16.26	19.02	22.32	23.15	25.91	28.66	30.04	32.80	35.55	36.93
32	5.614	32	5.614	1.000	10.75	13.23	14.61	15.99	18.74	22.05	22.88	25.63	28.39	29.77	32.52	35.28	36.65
33	5.790	33	5.790	1.000	10.47	12.95	14.33	15.71	18.47	21.77	22.60	25.36	28.11	29.49	32.25	35.00	36.38
34	5.965	34	5.965	1.000	10.20	12.68	14.06	15.44	18.19	21.50	22.33	25.08	27.84	29.22	31.97	34.73	36.10
35	6.141	35	6.141	1.000	9.92	12.40	13.78	15.16	17.91	21.22	22.05	24.80	27.56	28.94	31.69	34.45	35.82
36	6.316	36	6.316	1.000	9.64	12.12	13.50	14.88	17.64	20.94	21.77	24.53	27.28	28.66	31.42	34.17	35.55
37	6.492	37	6.492	1.000	9.37	11.85	13.23	14.61	17.36	20.67	21.50	24.25	27.01	28.39	31.14	33.90	35.27
38	6.667	38	6.667	1.000	9.09	11.57	12.95	14.33	17.09	20.39	21.22	23.98	26.73	28.11	30.87	33.62	35.00
39	6.842	39	6.842	1.000	8.82	11.30	12.68	14.06	16.81	20.12	20.95	23.70	26.46	27.84	30.59	33.35	34.72
40	7.018	40	7.018	1.000	8.54	11.02	12.40	13.78	16.54	19.84	20.67	23.43	26.18	27.56	30.32	33.07	34.45
43	7.544	43	7.544	1.000		10.19	11.57	12.95	15.71	19.01	19.84	22.60	25.35	26.73	29.49	32.24	33.62
45	7.895	45	7.895	1.000		9.64	11.02	12.40	15.16	18.46	19.29	22.05	24.80	26.18	28.94	31.69	33.07
48	8.421	48	8.421	1.000			10.20	11.58	14.33	17.64	18.47	21.22	23.98	25.36	28.11	30.87	32.24
50	8.772	50	8.772	1.000			9.65	11.03	13.78	17.09	17.92	20.67	23.43	24.81	27.56	30.32	31.69
53	9.299	53	9.299	1.000				10.20	12.95	16.26	17.09	19.84	22.60	23.98	26.73	29.49	30.86
56	9.825	56	9.825	1.000					12.13	15.43	16.26	19.02	21.77	23.15	25.91	28.66	30.04
60	10.527	60	10.527	1.000						14.33	15.16	17.91	20.67	22.05	24.80	27.56	28.93
63	11.053	63	11.053	1.000						13.50	14.33	17.09	19.84	21.22	23.98	26.73	28.11
67	11.755	67	11.755	1.000							13.23	15.99	18.74	20.12	22.88	25.63	27.01
71	12.457	71	12.457	1.000								14.88	17.64	19.02	21.77	24.53	25.90
75	13.158	75	13.158	1.000									16.54	17.92	20.67	23.43	24.80
80	14.036	80	14.036	1.000									15.16	16.54	19.29	22.05	23.42
38	6.667	39	6.842	1.026	8.95	11.43	12.81	14.19	16.95	20.25	21.08	23.84	26.59	27.97	30.73	33.48	34.86
39	6.842	40	7.018	1.026	8.68	11.16	12.54	13.92	16.67	19.98	20.81	23.56	26.32	27.70	30.45	33.21	34.58
37	6.492	38	6.667	1.027	9.23	11.71	13.09	14.47	17.22	20.53	21.36	24.11	26.87	28.25	31.00	33.76	35.13
36	6.316	37	6.492	1.028	9.51	11.99	13.37	14.75	17.50	20.81	21.64	24.39	27.15	28.53	31.28	34.04	35.41
34	5.965	35	6.141	1.029	10.06	12.54	13.92	15.30	18.05	21.36	22.19	24.94	27.70	29.08	31.83	34.59	35.96
35	6.141	36	6.316	1.029	9.78	12.26	13.64	15.02	17.78	21.08	21.91	24.67	27.42	28.80	31.56	34.31	35.69
33	5.790	34	5.965	1.030	10.33	12.81	14.19	15.57	18.33	21.63	22.46	25.22	27.97	29.35	32.11	34.86	36.24
32	5.614	33	5.790	1.031	10.61	13.09	14.47	15.85	18.60	21.91	22.74	25.49	28.25	29.63	32.38	35.14	36.51
31	5.439	32	5.614	1.032	10.88	13.36	14.74	16.12	18.88	22.18	23.01	25.77	28.52	29.90	32.66	35.41	36.79
30	5.263	31	5.439	1.033	11.16	13.64	15.02	16.40	19.15	22.46	23.29	26.04	28.80	30.18	32.93	35.69	37.06
29	5.088	30	5.263	1.034	11.44	13.92	15.30	16.68	19.43	22.74	23.57	26.32	29.08	30.46	33.21	35.97	37.34
28	4.912	29	5.088	1.036	11.71	14.19	15.57	16.95	19.71	23.01	23.84	26.60	29.35	30.73	33.49	36.24	37.62
48	8.421	50	8.772	1.042			9.92	11.30	14.06	17.36	18.19	20.95	23.70	25.08	27.84	30.59	31.97
43	7.544	45	7.895	1.047		9.92	11.30	12.68	15.43	18.74	19.57	22.32	25.08	26.46	29.21	31.97	33.34
60	10.527	63	11.053	1.050						13.91	14.74	17.50	20.25	21.63	24.39	27.14	28.52
38	6.667	40	7.018	1.053	8.82	11.30	12.68	14.06	16.81	20.12	20.95	23.70	26.46	27.84	30.59	33.35	34.72
37	6.492	39	6.842	1.054	9.09	11.57	12.95	14.33	17.09	20.39	21.22	23.98	26.73	28.11	30.87	33.62	35.00
36	6.316	38	6.667	1.056	9.37	11.85	13.23	14.61	17.36	20.67	21.50	24.25	27.01	28.39	31.14	33.90	35.27
71	12.457	75	13.158	1.056								14.33	17.08	18.46	21.22	23.97	25.35
35	6.141	37	6.492	1.057	9.64	12.12	13.50	14.88	17.64	20.94	21.77	24.53	27.28	28.66	31.42	34.17	35.55
53	9.299	56	9.825	1.057					12.54	15.84	16.67	19.43	22.18	23.56	26.32	29.07	30.45
34	5.965	36	6.316	1.059	9.92	12.40	13.78	15.16	17.91	21.22	22.05	24.80	27.56	28.94	31.69	34.45	35.82
50	8.772	53	9.299	1.060				10.61	13.36	16.67	17.50	20.26	23.01	24.39	27.15	29.90	31.28
67	11.755	71	12.457	1.060								15.43	18.19	19.57	22.32	25.08	26.45
33	5.790	35	6.141	1.061	10.19	12.67	14.05	15.43	18.19	21.49	22.32	25.08	27.83	29.21	31.97	34.72	36.10
32	5.614	34	5.965	1.063	10.47	12.95	14.33	15.71	18.47	21.77	22.60	25.36	28.11	29.49	32.25	35.00	36.38
63	11.053	67	11.755	1.063						12.95	13.78	16.53	19.29	20.67	23.42	26.18	27.55
31	5.439	33	5.790	1.065	10.74	13.22	14.60	15.98	18.74	22.05	22.88	25.63	28.39	29.77	32.52	35.28	36.65
30	5.263	32	5.614	1.067	11.02	13.50	14.88	16.26	19.02	22.32	23.15	25.91	28.66	30.04	32.80	35.55	36.93
45	7.895	48	8.421	1.067		9.23	10.61	11.99	14.74	18.05	18.88	21.63	24.39	25.77	28.52	31.28	32.65
75	13.158	80	14.036	1.067									15.84	17.22	19.98	22.73	24.11
29	5.088	31	5.439	1.069	11.30	13.78	15.16	16.54	19.29	22.60	23.43	26.18	28.94	30.32	33.07	35.83	37.20
28	4.912	30	5.263	1.071	11.57	14.05	15.43	16.81	19.57	22.87	23.70	26.46	29.21	30.59	33.35	36.10	37.48
56	9.825	60	10.527	1.071					11.57	14.88	15.71	18.46	21.22	22.60	25.35	28.11	29.48
40	7.018	43	7.544	1.075	8.12	10.60	11.99	13.37	16.12	19.43	20.26	23.01	25.77	27.15	29.90	32.66	34.03
37	6.492	40	7.018	1.081	8.95	11.43	12.81	14.19	16.95	20.25	21.08	23.84	26.59	27.97	30.73	33.48	34.86
36	6.316	39	6.842	1.083	9.23	11.71	13.09	14.47	17.22	20.53	21.36	24.11	26.87	28.25	31.00	33.76	35.13
35	6.141	38	6.667	1.086	9.50	11.98	13.36	14.74	17.50	20.80	21.63	24.39	27.14	28.52	31.28	34.03	35.41
34	5.965	37	6.492	1.088	9.78	12.26	13.64	15.02	17.77	21.08	21.91	24.66	27.42	28.80	31.56	34.31	35.69
33	5.790	36	6.316	1.091	10.05	12.53	13.91	15.29	18.05	21.36	22.19	24.94	27.70	29.08	31.83	34.59	35.96
32	5.614	35	6.141	1.094	10.33	12.81	14.19	15.57	18.33	21.63	22.46	25.22	27.97	29.35	32.11	34.86	36.24
31	5.439	34	5.965	1.097	10.61	13.09	14.47	15.85	18.60	21.91	22.74	25.49	28.25	29.63	32.38	35.14	36.51
30	5.263	33	5.790	1.100	10.88	13.36	14.74	16.12	18.88	22.18	23.01	25.77	28.52	29.90	32.66	35.41	36.79
29	5.088	32	5.614	1.103	11.16	13.64	15.02	16.40	19.15	22.46	23.29	26.04	28.80	30.18	32.93	35.69	37.06
39	6.842	43	7.544	1.103	8.26	10.74	12.12	13.50	16.26	19.56	20.39	23.15	25.90	27.28	30.04	32.79	34.17
48	8.421	53	9.299	1.104				10.88	13.64	16.94	17.77	20.53	23.28	24.66	27.42	30.17	31.55
				Length Factor*	0.68	0.73	0.75	0.77	0.81	0.85	0.86	0.89	0.92	0.94	0.96	0.99	1.00

Note: Check Sprocket Specification table on page 78 for Nickel Plated sprocket availability.

* This length factor must be used to determine the proper belt width.

14MGT-2380 PL 93.70 170 Teeth	14MGT-2450 PL 96.46 175 Teeth	14MGT-2520 PL 99.21 180 Teeth	14MGT-2590 PL 101.97 185 Teeth	14MGT-2660 PL 104.72 190 Teeth	14MGT-2800 PL 110.24 200 Teeth	14MGT-3136 PL 123.46 224 Teeth	14MGT-3304 PL 130.08 236 Teeth	14MGT-3360 PL 132.28 240 Teeth	14MGT-3500 PL 137.79 250 Teeth	14MGT-3850 PL 151.57 275 Teeth	14MGT-3920 PL 154.33 280 Teeth	14MGT-4326 PL 170.31 309 Teeth	14MGT-4410 PL 173.62 315 Teeth	Speed Ratio	DriveR Number of Grooves	DriveN Number of Grooves
39.13	40.51	41.89	43.27	44.64	47.40	54.01	57.32	58.42	61.18	68.07	69.45	77.44	79.09	1.000	28	28
38.86	40.24	41.61	42.99	44.37	47.13	53.74	57.05	58.15	60.90	67.79	69.17	77.16	78.82	1.000	29	29
38.58	39.96	41.34	42.72	44.09	46.85	53.46	56.77	57.87	60.63	67.52	68.90	76.89	78.54	1.000	30	30
38.31	39.69	41.06	42.44	43.82	46.58	53.19	56.50	57.60	60.35	67.24	68.62	76.61	78.27	1.000	31	31
38.03	39.41	40.79	42.17	43.54	46.30	52.91	56.22	57.32	60.08	66.97	68.35	76.34	77.99	1.000	32	32
37.76	39.14	40.51	41.89	43.27	46.03	52.64	55.95	57.05	59.80	66.69	68.07	76.06	77.72	1.000	33	33
37.48	38.86	40.24	41.62	42.99	45.75	52.36	55.67	56.77	59.53	66.42	67.80	75.79	77.44	1.000	34	34
37.20	38.58	39.96	41.34	42.71	45.47	52.08	55.39	56.49	59.25	66.14	67.52	75.51	77.16	1.000	35	35
36.93	38.31	39.68	41.06	42.44	45.20	51.81	55.12	56.22	58.97	65.86	67.24	75.23	76.89	1.000	36	36
36.65	38.03	39.41	40.79	42.16	44.92	51.53	54.84	55.94	58.70	65.59	66.97	74.96	76.61	1.000	37	37
36.38	37.76	39.13	40.51	41.89	44.65	51.26	54.57	55.67	58.42	65.31	66.69	74.68	76.34	1.000	38	38
36.10	37.48	38.86	40.24	41.61	44.37	50.98	54.29	55.39	58.15	65.04	66.42	74.41	76.06	1.000	39	39
35.83	37.21	38.58	39.96	41.34	44.10	50.71	54.02	55.12	57.87	64.76	66.14	74.13	75.79	1.000	40	40
35.00	36.38	37.75	39.13	40.51	43.27	49.88	53.19	54.29	57.04	63.93	65.31	73.30	74.96	1.000	43	43
34.45	35.83	37.20	38.58	39.96	42.72	49.33	52.64	53.74	56.49	63.38	64.76	72.75	74.41	1.000	45	45
33.62	35.00	36.38	37.76	39.13	41.89	48.50	51.81	52.91	55.67	62.56	63.94	71.93	73.58	1.000	48	48
33.07	34.45	35.83	37.21	38.58	41.34	47.95	51.26	52.36	55.12	62.01	63.39	71.38	73.03	1.000	50	50
32.24	33.62	35.00	36.38	37.75	40.51	47.12	50.43	51.53	54.29	61.18	62.56	70.55	72.20	1.000	53	53
31.42	32.80	34.17	35.55	36.93	39.69	46.30	49.61	50.71	53.46	60.35	61.73	69.72	71.38	1.000	56	56
30.31	31.69	33.07	34.45	35.82	38.58	45.19	48.50	49.60	52.36	59.25	60.63	68.62	70.27	1.000	60	60
29.49	30.87	32.24	33.62	35.00	37.76	44.37	47.68	48.78	51.53	58.42	59.80	67.79	69.45	1.000	63	63
28.39	29.77	31.14	32.52	33.90	36.66	43.27	46.58	47.68	50.43	57.32	58.70	66.69	68.35	1.000	67	67
27.28	28.66	30.04	31.42	32.79	35.55	42.16	45.47	46.57	49.33	56.22	57.60	65.59	67.24	1.000	71	71
26.18	27.56	28.94	30.32	31.69	34.45	41.06	44.37	45.47	48.23	55.12	56.50	64.49	66.14	1.000	75	75
24.80	26.18	27.56	28.94	30.31	33.07	39.68	42.99	44.09	46.85	53.74	55.12	63.11	64.76	1.000	80	80
36.24	37.62	38.99	40.37	41.75	44.51	51.12	54.43	55.53	58.28	65.17	66.55	74.55	76.20	1.026	38	39
35.96	37.34	38.72	40.10	41.47	44.23	50.84	54.15	55.25	58.01	64.90	66.28	74.27	75.92	1.026	39	40
36.51	37.89	39.27	40.65	42.02	44.78	51.39	54.70	55.80	58.56	65.45	66.83	74.82	76.47	1.027	37	38
36.79	38.17	39.55	40.93	42.30	45.06	51.67	54.98	56.08	58.84	65.73	67.11	75.10	76.75	1.028	36	37
37.34	38.72	40.10	41.48	42.85	45.61	52.22	55.53	56.63	59.39	66.28	67.66	75.65	77.30	1.029	34	35
37.07	38.45	39.82	41.20	42.58	45.34	51.95	55.26	56.36	59.11	66.00	67.38	75.37	77.03	1.029	35	36
37.62	39.00	40.37	41.75	43.13	45.89	52.50	55.81	56.91	59.66	66.55	67.93	75.92	77.58	1.030	33	34
37.89	39.27	40.65	42.03	43.40	46.16	52.77	56.08	57.18	59.94	66.83	68.21	76.20	77.85	1.031	32	33
38.17	39.55	40.92	42.30	43.68	46.44	53.05	56.36	57.46	60.21	67.10	68.48	76.47	78.13	1.032	31	32
38.44	39.82	41.20	42.58	43.95	46.71	53.32	56.63	57.73	60.49	67.38	68.76	76.75	78.40	1.033	30	31
38.72	40.10	41.48	42.86	44.23	46.99	53.60	56.91	58.01	60.77	67.66	69.04	77.03	78.68	1.034	29	30
39.00	40.38	41.75	43.13	44.51	47.27	53.88	57.19	58.29	61.04	67.93	69.31	77.30	78.96	1.036	28	29
33.35	34.73	36.10	37.48	38.86	41.62	48.23	51.54	52.64	55.39	62.28	63.66	71.65	73.31	1.042	48	50
34.72	36.10	37.48	38.86	40.23	42.99	49.60	52.91	54.01	56.77	63.66	65.04	73.03	74.68	1.047	43	45
29.90	31.28	32.66	34.04	35.41	38.17	44.78	48.09	49.19	51.95	58.84	60.22	68.21	69.86	1.050	60	63
36.10	37.48	38.86	40.24	41.61	44.37	50.98	54.29	55.39	58.15	65.04	66.42	74.41	76.06	1.053	38	40
36.38	37.76	39.13	40.51	41.89	44.65	51.26	54.57	55.67	58.42	65.31	66.69	74.68	76.34	1.054	37	39
36.65	38.03	39.41	40.79	42.16	44.92	51.53	54.84	55.94	58.70	65.59	66.97	74.96	76.61	1.056	36	38
26.73	28.11	29.48	30.87	32.24	35.00	41.61	44.92	46.02	48.78	55.67	57.05	65.04	66.69	1.056	71	75
36.93	38.31	39.68	41.06	42.44	45.20	51.81	55.12	56.22	58.97	65.86	67.24	75.23	76.89	1.057	35	37
31.83	33.21	34.58	35.96	37.34	40.10	46.71	50.02	51.12	53.87	60.76	62.14	70.13	71.79	1.057	53	56
37.20	38.58	39.96	41.34	42.71	45.47	52.08	55.39	56.49	59.25	66.14	67.52	75.51	77.16	1.059	34	36
32.66	34.04	35.41	36.79	38.17	40.93	47.54	50.85	51.95	54.70	61.59	62.97	70.96	72.62	1.060	50	53
27.83	29.21	30.59	31.97	33.34	36.10	42.71	46.02	47.12	49.88	56.77	58.15	66.14	67.79	1.060	67	71
37.48	38.86	40.23	41.61	42.99	45.75	52.36	55.67	56.77	59.52	66.41	67.79	75.78	77.44	1.061	33	35
37.76	39.14	40.51	41.89	43.27	46.03	52.64	55.95	57.05	59.80	66.69	68.07	76.06	77.72	1.063	32	34
28.93	30.31	31.69	33.07	34.44	37.20	43.82	47.13	48.23	50.98	57.87	59.25	67.24	68.90	1.063	63	67
38.03	39.41	40.79	42.17	43.54	46.30	52.91	56.22	57.32	60.08	66.97	68.35	76.34	77.99	1.065	31	33
38.31	39.69	41.06	42.44	43.82	46.58	53.19	56.50	57.60	60.35	67.24	68.62	76.61	78.27	1.067	30	32
34.03	35.41	36.79	38.17	39.54	42.30	48.91	52.22	53.32	56.08	62.97	64.35	72.34	73.99	1.067	45	48
25.49	26.87	28.24	29.62	31.00	33.76	40.37	43.68	44.78	47.53	54.43	55.81	63.80	65.45	1.067	75	80
38.58	39.96	41.34	42.72	44.09	46.85	53.46	56.77	57.87	60.63	67.52	68.90	76.89	78.54	1.069	29	31
38.86	40.24	41.61	42.99	44.37	47.13	53.74	57.05	58.15	60.90	67.79	69.17	77.16	78.82	1.071	28	30
30.86	32.24	33.62	35.00	36.37	39.13	45.74	49.05	50.15	52.91	59.80	61.18	69.17	70.82	1.071	56	60
35.41	36.79	38.17	39.55	40.92	43.68	50.29	53.60	54.70	57.46	64.35	65.73	73.72	75.37	1.075	40	43
36.24	37.62	38.99	40.37	41.75	44.51	51.12	54.43	55.53	58.28	65.17	66.55	74.54	76.20	1.081	37	40
36.51	37.89	39.27	40.65	42.02	44.78	51.40	54.71	55.81	58.56	65.45	66.83	74.82	76.48	1.083	36	39
36.79	38.17	39.54	40.92	42.30	45.06	51.67	54.98	56.08	58.84	65.73	67.11	75.10	76.75	1.086	35	38
37.07	38.45	39.82	41.20	42.58	45.34	51.95	55.26	56.36	59.11	66.00	67.38	75.37	77.03	1.088	34	37
37.34	38.72	40.10	41.48	42.85	45.61	52.22	55.53	56.63	59.39	66.28	67.66	75.65	77.30	1.091	33	36
37.62	39.00	40.37	41.75	43.13	45.89	52.50	55.81	56.91	59.66	66.55	67.93	75.92	77.58	1.094	32	35
37.89	39.27	40.65	42.03	43.40	46.16	52.77	56.08	57.18	59.94	66.83	68.21	76.20	77.85	1.097	31	34
38.17	39.55	40.92	42.30	43.68	46.44	53.05	56.36	57.46	60.21	67.10	68.48	76.47	78.13	1.100	30	33
38.44	39.82	41.20	42.58	43.95	46.71	53.32	56.63	57.73	60.49	67.38	68.76	76.75	78.40	1.103	29	32
35.55	36.93	38.30	39.68	41.06	43.82	50.43	53.74	54.84	57.60	64.49	65.87	73.86	75.51	1.103	39	43
32.93	34.31	35.69	37.07	38.44	41.20	47.81	51.12	52.22	54.98	61.87	63.25	71.24	72.89	1.104	48	53
1.01	1.02	1.03	1.04	1.05	1.07	1.12	1.14	1.14	1.16	1.19	1.20	1.24	1.25	Length Factor*		

Note: Check Sprocket Specification table on page 78 for Nickel Plated sprocket availability.

* This length factor must be used to determine the proper belt width.

14mm Pitch Poly Chain® GT® Carbon™ Belts — Drive Selection Table

DriveR No. of Grooves	DriveR Pitch Diameter (Inches)	DriveN No. of Grooves	DriveN Pitch Diameter (Inches)	Speed Ratio	14MGT-994 PL 39.13 71 Teeth	14MGT-1120 PL 44.09 80 Teeth	14MGT-1190 PL 46.85 85 Teeth	14MGT-1260 PL 49.61 90 Teeth	14MGT-1400 PL 55.12 100 Teeth	14MGT-1568 PL 61.73 112 Teeth	14MGT-1610 PL 63.39 115 Teeth	14MGT-1750 PL 68.90 125 Teeth	14MGT-1890 PL 74.41 135 Teeth	14MGT-1960 PL 77.17 140 Teeth	14MGT-2100 PL 82.68 150 Teeth	14MGT-2240 PL 88.19 160 Teeth	14MGT-2310 PL 90.94 165 Teeth
28	4.912	31	5.439	1.107	11.43	13.91	15.29	16.67	19.43	22.73	23.56	26.32	29.07	30.45	33.21	35.96	37.34
36	6.316	40	7.018	1.111	9.09	11.57	12.95	14.33	17.08	20.39	21.22	23.97	26.73	28.11	30.87	33.62	35.00
45	7.895	50	8.772	1.111			10.33	11.71	14.46	17.77	18.60	21.36	24.11	25.49	28.25	31.00	32.38
35	6.141	39	6.842	1.114	9.36	11.84	13.22	14.60	17.36	20.67	21.50	24.25	27.01	28.39	31.14	33.90	35.27
43	7.544	48	8.421	1.116		9.50	10.88	12.26	15.01	18.32	19.15	21.91	24.66	26.04	28.80	31.55	32.93
60	10.527	67	11.755	1.117						13.35	14.18	16.94	19.70	21.08	23.83	26.59	27.96
34	5.965	38	6.667	1.118	9.64	12.12	13.50	14.88	17.64	20.94	21.77	24.53	27.28	28.66	31.42	34.17	35.55
67	11.755	75	13.158	1.119								14.87	17.62	19.01	21.76	24.52	25.89
50	8.772	56	9.825	1.120				10.19	12.94	16.25	17.08	19.84	22.59	23.97	26.73	29.48	30.86
33	5.790	37	6.492	1.121	9.91	12.39	13.77	15.15	17.91	21.22	22.05	24.80	27.56	28.94	31.69	34.45	35.82
32	5.614	36	6.316	1.125	10.19	12.67	14.05	15.43	18.19	21.49	22.32	25.08	27.83	29.21	31.97	34.72	36.10
40	7.018	45	7.895	1.125		10.32	11.70	13.09	15.84	19.15	19.98	22.73	25.49	26.87	29.62	32.38	33.75
56	9.825	63	11.053	1.125					11.15	14.45	15.29	18.04	20.80	22.18	24.93	27.69	29.07
80	14.036	90	15.790	1.125											17.89	20.65	22.03
63	11.053	71	12.457	1.127							13.21	15.97	18.73	20.11	22.86	25.62	27.00
71	12.457	80	14.036	1.127									16.38	17.76	20.52	23.27	24.65
31	5.439	35	6.141	1.129	10.46	12.95	14.33	15.71	18.46	21.77	22.60	25.35	28.11	29.49	32.24	35.00	36.37
38	6.667	43	7.544	1.132	8.39	10.87	12.26	13.64	16.39	19.70	20.53	23.28	26.04	27.42	30.18	32.93	34.31
53	9.299	60	10.527	1.132					11.97	15.28	16.11	18.87	21.62	23.01	25.76	28.52	29.89
30	5.263	34	5.965	1.133	10.74	13.22	14.60	15.98	18.74	22.04	22.87	25.63	28.38	29.76	32.52	35.27	36.65
29	5.088	33	5.790	1.138	11.02	13.50	14.88	16.26	19.01	22.32	23.15	25.90	28.66	30.04	32.79	35.55	36.92
28	4.912	32	5.614	1.143	11.29	13.77	15.15	16.53	19.29	22.60	23.43	26.18	28.94	30.32	33.07	35.83	37.20
35	6.141	40	7.018	1.143	9.22	11.70	13.08	14.46	17.22	20.53	21.36	24.11	26.87	28.25	31.00	33.76	35.13
34	5.965	39	6.842	1.147	9.50	11.98	13.36	14.74	17.50	20.80	21.63	24.39	27.14	28.52	31.28	34.03	35.41
33	5.790	38	6.667	1.152	9.77	12.25	13.63	15.01	17.77	21.08	21.91	24.66	27.42	28.80	31.55	34.31	35.68
39	6.842	45	7.895	1.154		10.46	11.84	13.22	15.98	19.28	20.11	22.87	25.63	27.01	29.76	32.52	33.89
32	5.614	37	6.492	1.156	10.05	12.53	13.91	15.29	18.05	21.35	22.18	24.94	27.69	29.07	31.83	34.58	35.96
31	5.439	36	6.316	1.161	10.32	12.81	14.19	15.57	18.32	21.63	22.46	25.21	27.97	29.35	32.10	34.86	36.23
37	6.492	43	7.544	1.162	8.52	11.01	12.39	13.77	16.53	19.83	20.66	23.42	26.18	27.56	30.31	33.07	34.44
43	7.544	50	8.772	1.163		9.21	10.59	11.97	14.73	18.04	18.87	21.63	24.38	25.76	28.52	31.27	32.65
30	5.263	35	6.141	1.167	10.60	13.08	14.46	15.84	18.60	21.90	22.73	25.49	28.24	29.63	32.38	35.14	36.51
48	8.421	56	9.825	1.167					13.21	16.52	17.35	20.11	22.86	24.24	27.00	29.76	31.13
29	5.088	34	5.965	1.172	10.88	13.36	14.74	16.12	18.87	22.18	23.01	25.77	28.52	29.90	32.66	35.41	36.79
34	5.965	40	7.018	1.176	9.35	11.84	13.22	14.60	17.36	20.66	21.49	24.25	27.00	28.38	31.14	33.89	35.27
45	7.895	53	9.299	1.178			9.90	11.28	14.04	17.35	18.18	20.93	23.69	25.07	27.83	30.58	31.96
28	4.912	33	5.790	1.179	11.15	13.63	15.01	16.39	19.15	22.46	23.29	26.04	28.80	30.18	32.93	35.69	37.06
33	5.790	39	6.842	1.182	9.63	12.11	13.49	14.87	17.63	20.94	21.77	24.52	27.28	28.66	31.41	34.17	35.54
60	10.527	71	12.457	1.183						12.78	13.61	16.37	19.13	20.51	23.27	26.03	27.40
38	6.667	45	7.895	1.184	8.10	10.59	11.97	13.35	16.11	19.42	20.25	23.00	25.76	27.14	29.90	32.65	34.03
32	5.614	38	6.667	1.188	9.91	12.39	13.77	15.15	17.91	21.21	22.04	24.80	27.55	28.93	31.69	34.45	35.82
53	9.299	63	11.053	1.189					11.54	14.85	15.69	18.44	21.20	22.58	25.34	28.10	29.47
63	11.053	75	13.158	1.190								15.40	18.16	19.54	22.30	25.06	26.43
31	5.439	37	6.492	1.194	10.18	12.66	14.04	15.43	18.18	21.49	22.32	25.07	27.83	29.21	31.97	34.72	36.10
36	6.316	43	7.544	1.194	8.66	11.14	12.52	13.91	16.66	19.97	20.80	23.56	26.31	27.69	30.45	33.20	34.58
67	11.755	80	14.036	1.194								14.15	16.91	18.29	21.05	23.81	25.19
56	9.825	67	11.755	1.196						13.88	14.71	17.47	20.23	21.61	24.37	27.13	28.50
30	5.263	36	6.316	1.200	10.46	12.94	14.32	15.70	18.46	21.76	22.59	25.35	28.11	29.49	32.24	35.00	36.37
40	7.018	48	8.421	1.200		9.89	11.28	12.66	15.42	18.73	19.56	22.31	25.07	26.45	29.21	31.96	33.34
50	8.772	60	10.527	1.200					12.37	15.68	16.51	19.27	22.03	23.41	26.17	28.92	30.30
75	13.158	90	15.790	1.200										15.79	18.56	21.32	22.70
29	5.088	35	6.141	1.207	10.73	13.22	14.60	15.98	18.73	22.04	22.87	25.63	28.38	29.76	32.52	35.27	36.65
33	5.790	40	7.018	1.212	9.49	11.97	13.35	14.73	17.49	20.80	21.63	24.38	27.14	28.52	31.27	34.03	35.41
28	4.912	34	5.965	1.214	11.01	13.49	14.87	16.25	19.01	22.32	23.15	25.90	28.66	30.04	32.79	35.55	36.92
37	6.492	45	7.895	1.216	8.24	10.72	12.11	13.49	16.25	19.55	20.38	23.14	25.90	27.28	30.03	32.79	34.16
32	5.614	39	6.842	1.219	9.76	12.25	13.63	15.01	17.77	21.07	21.90	24.66	27.42	28.80	31.55	34.31	35.68
31	5.439	38	6.667	1.226	10.04	12.52	13.90	15.28	18.04	21.35	22.18	24.93	27.69	29.07	31.83	34.58	35.96
35	6.141	43	7.544	1.229	8.79	11.28	12.66	14.04	16.80	20.10	20.94	23.69	26.45	27.83	30.58	33.34	34.71
39	6.842	48	8.421	1.231		10.03	11.41	12.79	15.55	18.86	19.69	22.45	25.21	26.59	29.34	32.10	33.47
30	5.263	37	6.492	1.233	10.31	12.80	14.18	15.56	18.32	21.62	22.45	25.21	27.97	29.35	32.10	34.86	36.23
43	7.544	53	9.299	1.233			10.16	11.54	14.30	17.61	18.45	21.20	23.96	25.34	28.10	30.85	32.23
29	5.088	36	6.316	1.241	10.59	13.07	14.46	15.84	18.59	21.90	22.73	25.49	28.24	29.62	32.38	35.13	36.51
45	7.895	56	9.825	1.244				10.84	13.61	16.92	17.75	20.51	23.27	24.65	27.41	30.16	31.54
28	4.912	35	6.141	1.250	10.87	13.35	14.73	16.11	18.87	22.18	23.01	25.76	28.52	29.90	32.65	35.41	36.78
32	5.614	40	7.018	1.250	9.62	12.10	13.49	14.87	17.62	20.93	21.76	24.52	27.27	28.66	31.41	34.17	35.54
36	6.316	45	7.895	1.250	8.37	10.85	12.24	13.62	16.38	19.69	20.52	23.28	26.03	27.41	30.17	32.92	34.30
40	7.018	50	8.772	1.250		9.60	10.99	12.37	15.13	18.44	19.27	22.03	24.79	26.17	28.93	31.68	33.06
48	8.421	60	10.527	1.250					12.63	15.95	16.78	19.54	22.30	23.68	26.44	29.19	30.57
60	10.527	75	13.158	1.250							13.03	15.79	18.56	19.94	22.70	25.46	26.84
31	5.439	39	6.842	1.258	9.89	12.38	13.76	15.14	17.90	21.21	22.04	24.79	27.55	28.93	31.69	34.44	35.82
50	8.772	63	11.053	1.260					11.93	15.25	16.08	18.84	21.60	22.99	25.74	28.50	29.88
38	6.667	48	8.421	1.263		10.16	11.54	12.93	15.69	18.99	19.83	22.58	25.34	26.72	29.48	32.23	33.61
Length Factor*					0.68	0.73	0.75	0.77	0.81	0.85	0.86	0.89	0.92	0.94	0.96	0.99	1.00

Note: Check Sprocket Specification table on page 78 for Nickel Plated sprocket availability.

* This length factor must be used to determine the proper belt width.

Gates Corporation

14MGT-2380 P.L. 93.70 170 Teeth	14MGT-2450 P.L. 96.46 175 Teeth	14MGT-2520 P.L. 99.21 180 Teeth	14MGT-2590 P.L. 101.97 185 Teeth	14MGT-2660 P.L. 104.72 190 Teeth	14MGT-2800 P.L. 110.24 200 Teeth	14MGT-3136 P.L. 123.46 224 Teeth	14MGT-3304 P.L. 130.08 236 Teeth	14MGT-3360 P.L. 132.28 240 Teeth	14MGT-3500 P.L. 137.79 250 Teeth	14MGT-3850 P.L. 151.57 275 Teeth	14MGT-3920 P.L. 154.33 280 Teeth	14MGT-4326 P.L. 170.31 309 Teeth	14MGT-4410 P.L. 173.62 315 Teeth	Speed Ratio	DriveR Number of Grooves	DriveN Number of Grooves
38.72	40.10	41.47	42.85	44.23	46.99	53.60	56.91	58.01	60.76	67.65	69.03	77.02	78.68	1.107	28	31
36.38	37.76	39.13	40.51	41.89	44.65	51.26	54.57	55.67	58.42	65.31	66.69	74.68	76.34	1.111	36	40
33.76	35.14	36.51	37.89	39.27	42.03	48.64	51.95	53.05	55.80	62.69	64.07	72.06	73.72	1.111	45	50
36.65	38.03	39.41	40.79	42.16	44.92	51.53	54.84	55.94	58.70	65.59	66.97	74.96	76.61	1.114	35	39
34.31	35.69	37.06	38.44	39.82	42.58	49.19	52.50	53.60	56.35	63.24	64.62	72.61	74.27	1.116	43	48
29.34	30.72	32.10	33.48	34.85	37.61	44.23	47.54	48.64	51.39	58.28	59.66	67.65	69.31	1.117	60	67
36.93	38.31	39.68	41.06	42.44	45.20	51.81	55.12	56.22	58.97	65.86	67.24	75.23	76.89	1.118	34	38
27.27	28.65	30.03	31.41	32.79	35.55	42.16	45.47	46.57	49.32	56.21	57.59	65.58	67.24	1.119	67	75
32.24	33.62	34.99	36.38	37.75	40.51	47.12	50.43	51.53	54.29	61.18	62.56	70.55	72.20	1.120	50	56
37.20	38.58	39.96	41.34	42.71	45.47	52.08	55.39	56.49	59.25	66.14	67.52	75.51	77.16	1.121	33	37
37.48	38.86	40.23	41.61	42.99	45.75	52.36	55.67	56.77	59.52	66.41	67.79	75.78	77.44	1.125	32	36
35.13	36.51	37.89	39.27	40.64	43.41	50.02	53.33	54.43	57.18	64.07	65.45	73.44	75.10	1.125	40	45
30.45	31.83	33.20	34.58	35.96	38.72	45.33	48.64	49.74	52.49	59.38	60.76	68.75	70.41	1.125	56	63
23.41	24.79	26.17	27.55	28.92	31.68	38.29	41.61	42.71	45.46	52.35	53.73	61.72	63.38	1.125	80	90
28.38	29.76	31.13	32.51	33.89	36.65	43.26	46.57	47.67	50.43	57.32	58.70	66.69	68.34	1.127	63	71
26.03	27.41	28.79	30.17	31.54	34.30	40.91	44.23	45.33	48.08	54.97	56.35	64.34	66.00	1.127	71	80
37.75	39.13	40.51	41.89	43.26	46.02	52.63	55.94	57.04	59.80	66.69	68.07	76.06	77.71	1.129	31	35
35.69	37.07	38.44	39.82	41.20	43.96	50.57	53.88	54.98	57.73	64.62	66.00	73.99	75.65	1.132	38	43
31.27	32.65	34.03	35.41	36.78	39.54	46.15	49.46	50.56	53.32	60.21	61.59	69.58	71.24	1.132	53	60
38.03	39.41	40.79	42.17	43.54	46.30	52.91	56.22	57.32	60.08	66.97	68.35	76.34	77.99	1.133	30	34
38.30	39.68	41.06	42.44	43.82	46.58	53.19	56.50	57.60	60.35	67.24	68.62	76.61	78.27	1.138	29	33
38.58	39.96	41.34	42.72	44.09	46.85	53.46	56.77	57.87	60.63	67.52	68.90	76.89	78.54	1.143	28	32
36.51	37.89	39.27	40.65	42.02	44.78	51.39	54.70	55.80	58.56	65.45	66.83	74.82	76.47	1.143	35	40
36.79	38.17	39.54	40.92	42.30	45.06	51.67	54.98	56.08	58.83	65.72	67.10	75.10	76.75	1.147	34	39
37.06	38.44	39.82	41.20	42.57	45.33	51.94	55.25	56.35	59.11	66.00	67.38	75.37	77.03	1.152	33	38
35.27	36.65	38.03	39.41	40.78	43.54	50.15	53.46	54.56	57.32	64.21	65.59	73.58	75.23	1.154	39	45
37.34	38.72	40.09	41.47	42.85	45.61	52.22	55.53	56.63	59.39	66.28	67.66	75.65	77.30	1.156	32	37
37.62	39.00	40.37	41.75	43.13	45.89	52.50	55.81	56.91	59.66	66.55	67.93	75.92	77.58	1.161	31	36
35.82	37.20	38.58	39.96	41.33	44.09	50.70	54.01	55.11	57.87	64.76	66.14	74.13	75.78	1.162	37	43
34.03	35.41	36.79	38.17	39.54	42.30	48.91	52.22	53.32	56.08	62.97	64.35	72.34	73.99	1.163	43	50
37.89	39.27	40.65	42.03	43.40	46.16	52.77	56.08	57.18	59.94	66.83	68.21	76.20	77.85	1.167	30	35
32.51	33.89	35.27	36.65	38.02	40.78	47.39	50.70	51.80	54.56	61.45	62.83	70.82	72.48	1.167	48	56
38.17	39.55	40.92	42.30	43.68	46.44	53.05	56.36	57.46	60.21	67.10	68.48	76.47	78.13	1.172	29	34
36.65	38.03	39.40	40.78	42.16	44.92	51.53	54.84	55.94	58.70	65.59	66.97	74.96	76.61	1.176	34	40
33.34	34.72	36.09	37.47	38.85	41.61	48.22	51.53	52.63	55.39	62.28	63.66	71.65	73.30	1.178	45	53
38.44	39.82	41.20	42.58	43.95	46.71	53.32	56.63	57.73	60.49	67.38	68.76	76.75	78.40	1.179	28	33
36.93	38.31	39.68	41.06	42.44	45.20	51.81	55.12	56.22	58.97	65.86	67.24	75.23	76.89	1.182	33	39
28.78	30.16	31.54	32.92	34.29	37.06	43.67	46.98	48.08	50.83	57.73	59.11	67.10	68.75	1.183	60	71
35.41	36.79	38.16	39.54	40.92	43.68	50.29	53.60	54.70	57.45	64.35	65.73	73.72	75.37	1.184	38	45
37.20	38.58	39.96	41.34	42.71	45.47	52.08	55.39	56.49	59.25	66.14	67.52	75.51	77.16	1.188	32	38
30.85	32.23	33.61	34.99	36.37	39.13	45.74	49.05	50.15	52.90	59.79	61.17	69.17	70.82	1.189	53	63
27.81	29.20	30.57	31.95	33.33	36.09	42.70	46.01	47.11	49.87	56.76	58.14	66.13	67.79	1.190	63	75
37.48	38.86	40.23	41.61	42.99	45.75	52.36	55.67	56.77	59.52	66.41	67.79	75.78	77.44	1.194	31	37
35.96	37.34	38.71	40.09	41.47	44.23	50.84	54.15	55.25	58.01	64.90	66.28	74.27	75.92	1.194	36	43
26.57	27.95	29.33	30.71	32.08	34.85	41.46	44.77	45.87	48.63	55.52	56.90	64.89	66.54	1.194	67	80
29.89	31.27	32.64	34.02	35.40	38.16	44.77	48.08	49.18	51.94	58.83	60.21	68.20	69.85	1.196	56	67
37.75	39.13	40.51	41.89	43.26	46.02	52.63	55.94	57.04	59.80	66.69	68.07	76.06	77.71	1.200	30	36
34.72	36.10	37.47	38.85	40.23	42.99	49.60	52.91	54.01	56.76	63.66	65.04	73.03	74.68	1.200	40	48
31.68	33.06	34.44	35.82	37.19	39.95	46.56	49.87	50.98	53.73	60.62	62.00	69.99	71.65	1.200	50	60
24.08	25.46	26.84	28.22	29.60	32.36	38.97	42.28	43.38	46.14	53.03	54.41	62.41	64.06	1.200	75	90
38.03	39.41	40.78	42.16	43.54	46.30	52.91	56.22	57.32	60.07	66.96	68.34	76.33	77.99	1.207	29	35
36.79	38.17	39.54	40.92	42.30	45.06	51.67	54.98	56.08	58.83	65.72	67.10	75.09	76.75	1.212	33	40
38.30	39.68	41.06	42.44	43.81	46.57	53.18	56.49	57.59	60.35	67.24	68.62	76.61	78.27	1.214	28	34
35.54	36.92	38.30	39.68	41.05	43.81	50.43	53.74	54.84	57.59	64.48	65.86	73.85	75.51	1.216	37	45
37.06	38.44	39.82	41.20	42.57	45.33	51.94	55.25	56.35	59.11	66.00	67.38	75.37	77.02	1.219	32	39
37.34	38.72	40.09	41.47	42.85	45.61	52.22	55.53	56.63	59.38	66.27	67.65	75.64	77.30	1.226	31	38
36.10	37.48	38.85	40.23	41.61	44.37	50.98	54.29	55.39	58.14	65.03	66.41	74.40	76.06	1.229	35	43
34.85	36.23	37.61	38.99	40.36	43.13	49.74	53.05	54.15	56.90	63.79	65.17	73.16	74.82	1.231	39	48
37.61	38.99	40.37	41.75	43.12	45.88	52.49	55.80	56.90	59.66	66.55	67.93	75.92	77.58	1.233	30	37
33.61	34.99	36.37	37.75	39.12	41.88	48.49	51.80	52.90	55.66	62.55	63.93	71.92	73.58	1.233	43	53
37.89	39.27	40.64	42.02	43.40	46.16	52.77	56.08	57.18	59.94	66.83	68.21	76.20	77.85	1.241	29	36
32.92	34.30	35.67	37.06	38.43	41.19	47.80	51.11	52.21	54.97	61.86	63.24	71.23	72.89	1.244	45	56
38.16	39.54	40.92	42.30	43.67	46.43	53.05	56.36	57.46	60.21	67.10	68.48	76.47	78.13	1.250	28	35
36.92	38.30	39.68	41.06	42.43	45.19	51.80	55.11	56.21	58.97	65.86	67.24	75.23	76.89	1.250	32	40
35.68	37.06	38.44	39.82	41.19	43.95	50.56	53.87	54.97	57.73	64.62	66.00	73.99	75.64	1.250	36	45
34.44	35.82	37.19	38.57	39.95	42.71	49.32	52.63	53.73	56.49	63.38	64.76	72.75	74.40	1.250	40	50
31.95	33.33	34.71	36.09	37.46	40.22	46.84	50.15	51.25	54.00	60.89	62.27	70.27	71.92	1.250	48	60
28.22	29.60	30.97	32.36	33.73	36.49	43.11	46.42	47.52	50.28	57.17	58.55	66.54	68.20	1.250	60	75
37.20	38.58	39.95	41.33	42.71	45.47	52.08	55.39	56.49	59.25	66.14	67.52	75.51	77.16	1.258	31	39
31.26	32.64	34.02	35.40	36.77	39.53	46.15	49.46	50.56	53.31	60.20	61.58	69.58	71.23	1.260	50	63
34.99	36.37	37.74	39.13	40.50	43.26	49.87	53.18	54.28	57.04	63.93	65.31	73.30	74.95	1.263	38	48
1.01	1.02	1.03	1.04	1.05	1.07	1.12	1.14	1.14	1.16	1.19	1.20	1.24	1.25	Length Factor*		

Note: Check Sprocket Specification table on page 78 for Nickel Plated sprocket availability.

* This length factor must be used to determine the proper belt width.

Drive Selection Table

14mm Pitch Poly Chain® GT® Carbon™ Belts

DriveR — Number of Grooves	DriveR — Pitch Diameter (Inches)	DriveN — Number of Grooves	DriveN — Pitch Diameter (Inches)	Speed Ratio	14MGT-994 P.L. 39.13 71 Teeth	14MGT-1120 P.L. 44.09 80 Teeth	14MGT-1190 P.L. 46.85 85 Teeth	14MGT-1260 P.L. 49.61 90 Teeth	14MGT-1400 P.L. 55.12 100 Teeth	14MGT-1568 P.L. 61.73 112 Teeth	14MGT-1610 P.L. 63.39 115 Teeth	14MGT-1750 P.L. 68.90 125 Teeth	14MGT-1890 P.L. 74.41 135 Teeth	14MGT-1960 P.L. 77.17 140 Teeth	14MGT-2100 P.L. 82.68 150 Teeth	14MGT-2240 P.L. 88.19 160 Teeth	14MGT-2310 P.L. 90.94 165 Teeth
53	9.299	67	11.755	1.264						14.28	15.11	17.87	20.63	22.01	24.77	27.53	28.91
34	5.965	43	7.544	1.265	8.92	11.41	12.79	14.17	16.93	20.24	21.07	23.83	26.58	27.96	30.72	33.48	34.85
30	5.263	38	6.667	1.267	10.17	12.66	14.04	15.42	18.18	21.48	22.31	25.07	27.83	29.21	31.96	34.72	36.09
56	9.825	71	12.457	1.268						13.30	14.13	16.90	19.66	21.04	23.80	26.56	27.94
71	12.457	90	15.790	1.268									14.93	16.31	19.08	21.85	23.23
63	11.053	80	14.036	1.270								14.67	17.44	18.82	21.58	24.34	25.72
29	5.088	37	6.492	1.276	10.45	12.93	14.31	15.69	18.45	21.76	22.59	25.35	28.10	29.48	32.24	34.99	36.37
39	6.842	50	8.772	1.282		9.73	11.12	12.50	15.27	18.58	19.41	22.17	24.92	26.30	29.06	31.82	33.19
28	4.912	36	6.316	1.286	10.72	13.21	14.59	15.97	18.73	22.04	22.87	25.62	28.38	29.76	32.51	35.27	36.64
35	6.141	45	7.895	1.286	8.50	10.99	12.37	13.75	16.51	19.82	20.65	23.41	26.17	27.55	30.30	33.06	34.43
31	5.439	40	7.018	1.290	9.75	12.24	13.62	15.00	17.76	21.07	21.90	24.65	27.41	28.79	31.55	34.30	35.68
37	6.492	48	8.421	1.297		10.29	11.67	13.06	15.82	19.13	19.96	22.72	25.47	26.86	29.61	32.37	33.74
30	5.263	39	6.842	1.300	10.03	12.51	13.90	15.28	18.04	21.34	22.17	24.93	27.69	29.07	31.82	34.58	35.95
43	7.544	56	9.825	1.302			9.72	11.10	13.87	17.19	18.02	20.78	23.54	24.92	27.67	30.43	31.81
33	5.790	43	7.544	1.303	9.05	11.54	12.92	14.31	17.06	20.37	21.20	23.96	26.72	28.10	30.86	33.61	34.99
29	5.088	38	6.667	1.310	10.30	12.79	14.17	15.55	18.31	21.62	22.45	25.21	27.96	29.34	32.10	34.85	36.23
48	8.421	63	11.053	1.313					12.19	15.51	16.35	19.11	21.87	23.25	26.01	28.77	30.15
38	6.667	50	8.772	1.316		9.86	11.25	12.64	15.40	18.71	19.54	22.30	25.06	26.44	29.20	31.95	33.33
28	4.912	37	6.492	1.321	10.58	13.06	14.45	15.83	18.59	21.89	22.72	25.48	28.24	29.62	32.37	35.13	36.50
34	5.965	45	7.895	1.324	8.63	11.12	12.50	13.89	16.65	19.96	20.79	23.54	26.30	27.68	30.44	33.20	34.57
40	7.018	53	9.299	1.325		9.16	10.55	11.94	14.70	18.01	18.85	21.60	24.36	25.74	28.50	31.26	32.63
30	5.263	40	7.018	1.333	9.88	12.37	13.75	15.13	17.89	21.20	22.03	24.79	27.55	28.93	31.68	34.44	35.81
36	6.316	48	8.421	1.333		10.42	11.80	13.19	15.95	19.26	20.09	22.85	25.61	26.99	29.75	32.50	33.88
45	7.895	60	10.527	1.333				10.25	13.02	16.34	17.18	19.94	22.70	24.08	26.84	29.60	30.97
60	10.527	80	14.036	1.333								15.06	17.83	19.21	21.98	24.74	26.12
56	9.825	75	13.158	1.339						12.70	13.54	16.31	19.08	20.47	23.23	25.99	27.37
50	8.772	67	11.755	1.340					11.34	14.67	15.50	18.27	21.03	22.41	25.17	27.93	29.31
53	9.299	71	12.457	1.340						13.69	14.52	17.29	20.06	21.44	24.20	26.96	28.34
67	11.755	90	15.790	1.343									15.44	16.83	19.60	22.37	23.75
32	5.614	43	7.544	1.344	9.18	11.67	13.06	14.44	17.20	20.51	21.34	24.10	26.85	28.23	30.99	33.75	35.12
29	5.088	39	6.842	1.345	10.16	12.64	14.03	15.41	18.17	21.48	22.31	25.06	27.82	29.20	31.96	34.71	36.09
37	6.492	50	8.772	1.351		9.99	11.38	12.77	15.53	18.84	19.67	22.43	25.19	26.57	29.33	32.09	33.46
28	4.912	38	6.667	1.357	10.43	12.92	14.30	15.69	18.45	21.75	22.58	25.34	28.10	29.48	32.23	34.99	36.37
39	6.842	53	9.299	1.359		9.29	10.68	12.07	14.83	18.15	18.98	21.74	24.50	25.88	28.64	31.39	32.77
33	5.790	45	7.895	1.364	8.75	11.25	12.63	14.02	16.78	20.09	20.92	23.68	26.44	27.82	30.57	33.33	34.71
35	6.141	48	8.421	1.371	8.05	10.55	11.93	13.32	16.08	19.39	20.23	22.98	25.74	27.12	29.88	32.64	34.01
29	5.088	40	7.018	1.379	10.01	12.50	13.88	15.27	18.03	21.34	22.17	24.92	27.68	29.06	31.82	34.57	35.95
31	5.439	43	7.544	1.387	9.31	11.80	13.19	14.57	17.33	20.64	21.47	24.23	26.99	28.37	31.13	33.88	35.26
36	6.316	50	8.772	1.389		10.12	11.51	12.90	15.66	18.98	19.81	22.57	25.33	26.71	29.46	32.22	33.60
28	4.912	39	6.842	1.393	10.29	12.78	14.16	15.54	18.30	21.61	22.44	25.20	27.96	29.34	32.09	34.85	36.23
38	6.667	53	9.299	1.395		9.41	10.81	12.19	14.96	18.28	19.11	21.87	24.63	26.01	28.77	31.53	32.90
43	7.544	60	10.527	1.395				10.51	13.28	16.61	17.44	20.20	22.96	24.35	27.11	29.86	31.24
48	8.421	67	11.755	1.396					11.59	14.93	15.76	18.53	21.29	22.68	25.44	28.20	29.58
40	7.018	56	9.825	1.400			10.10	11.49	14.26	17.58	18.41	21.18	23.94	25.32	28.08	30.83	32.21
45	7.895	63	11.053	1.400					12.58	15.90	16.74	19.50	22.27	23.65	26.41	29.17	30.55
80	14.036	112	19.650	1.400												17.41	18.80
32	5.614	45	7.895	1.406	8.88	11.38	12.76	14.15	16.91	20.22	21.05	23.81	26.57	27.95	30.71	33.47	34.84
34	5.965	48	8.421	1.412	8.17	10.68	12.06	13.45	16.21	19.53	20.36	23.12	25.88	27.26	30.02	32.77	34.15
53	9.299	75	13.158	1.415						13.08	13.92	16.70	19.47	20.86	23.62	26.39	27.77
50	8.772	71	12.457	1.420						14.07	14.91	17.68	20.45	21.83	24.60	27.36	28.74
28	4.912	40	7.018	1.429	10.14	12.63	14.02	15.40	18.16	21.47	22.30	25.06	27.82	29.20	31.95	34.71	36.08
35	6.141	50	8.772	1.429		10.25	11.64	13.03	15.79	19.11	19.94	22.70	25.46	26.84	29.60	32.36	33.73
56	9.825	80	14.036	1.429							12.78	15.57	18.34	19.73	22.50	25.27	26.65
63	11.053	90	15.790	1.429									15.95	17.34	20.12	22.89	24.27
37	6.492	53	9.299	1.432		9.54	10.93	12.32	15.09	18.41	19.24	22.00	24.76	26.15	28.90	31.66	33.04
30	5.263	43	7.544	1.433	9.44	11.93	13.32	14.70	17.46	20.78	21.61	24.36	27.12	28.50	31.26	34.02	35.39
39	6.842	56	9.825	1.436			10.23	11.62	14.39	17.71	18.54	21.31	24.07	25.45	28.21	30.97	32.35
31	5.439	45	7.895	1.452	9.01	11.51	12.89	14.28	17.04	20.36	21.19	23.95	26.70	28.09	30.84	33.60	34.98
33	5.790	48	8.421	1.455	8.30	10.80	12.19	13.58	16.35	19.66	20.49	23.25	26.01	27.39	30.15	32.91	34.28
43	7.544	63	11.053	1.465				10.05	12.83	16.16	17.00	19.77	22.53	23.91	26.68	29.44	30.81
34	5.965	50	8.772	1.471		10.38	11.77	13.16	15.92	19.24	20.07	22.83	25.59	26.97	29.73	32.49	33.87
36	6.316	53	9.299	1.472		9.67	11.06	12.45	15.22	18.54	19.37	22.14	24.90	26.28	29.04	31.80	33.17
38	6.667	56	9.825	1.474		8.95	10.35	11.75	14.52	17.84	18.68	21.44	24.20	25.58	28.34	31.10	32.48
48	8.421	71	12.457	1.479						14.33	15.16	17.94	20.71	22.10	24.86	27.62	29.00
29	5.088	43	7.544	1.483	9.56	12.06	13.45	14.83	17.60	20.91	21.74	24.50	27.26	28.64	31.39	34.15	35.53
45	7.895	67	11.755	1.489					11.97	15.31	16.15	18.92	21.69	23.07	25.83	28.60	29.97
75	13.158	112	19.650	1.493												18.03	19.43
30	5.263	45	7.895	1.500	9.14	11.64	13.02	14.41	17.18	20.49	21.32	24.08	26.84	28.22	30.98	33.74	35.11
32	5.614	48	8.421	1.500	8.42	10.93	12.32	13.71	16.48	19.79	20.62	23.38	26.14	27.53	30.28	33.04	34.42
40	7.018	60	10.527	1.500			9.48	10.88	13.67	16.99	17.83	20.60	23.36	24.74	27.50	30.26	31.64
50	8.772	75	13.158	1.500						13.46	14.30	17.09	19.86	21.25	24.02	26.78	28.16
60	10.527	90	15.790	1.500								13.52	16.32	17.72	20.50	23.28	24.66
Length Factor*					0.68	0.73	0.75	0.77	0.81	0.85	0.86	0.89	0.92	0.94	0.96	0.99	1.00

Note: Check Sprocket Specification table on page 78 for Nickel Plated sprocket availability.

* This length factor must be used to determine the proper belt width.

Gates Corporation

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14MGT-2380 P.L. 93.70 170 Teeth	14MGT-2450 P.L. 96.46 175 Teeth	14MGT-2520 P.L. 99.21 180 Teeth	14MGT-2590 P.L. 101.97 185 Teeth	14MGT-2660 P.L. 104.72 190 Teeth	14MGT-2800 P.L. 110.24 200 Teeth	14MGT-3136 P.L. 123.46 224 Teeth	14MGT-3304 P.L. 130.08 236 Teeth	14MGT-3360 P.L. 132.28 240 Teeth	14MGT-3500 P.L. 137.79 250 Teeth	14MGT-3850 P.L. 151.57 275 Teeth	14MGT-3920 P.L. 154.33 280 Teeth	14MGT-4326 P.L. 170.31 309 Teeth	14MGT-4410 P.L. 173.62 315 Teeth	Speed Ratio	DriveR Number of Grooves	DriveN Number of Grooves
30.29	31.67	33.05	34.43	35.80	38.56	45.18	48.49	49.59	52.34	59.24	60.62	68.61	70.26	1.264	53	67
36.23	37.61	38.99	40.37	41.74	44.50	51.11	54.42	55.52	58.28	65.17	66.55	74.54	76.20	1.265	34	43
37.47	38.85	40.23	41.61	42.98	45.74	52.36	55.67	56.77	59.52	66.41	67.79	75.78	77.44	1.267	30	38
29.32	30.70	32.08	33.46	34.83	37.60	44.21	47.52	48.62	51.38	58.27	59.65	67.64	69.30	1.268	56	71
24.61	25.99	27.37	28.75	30.13	32.89	39.51	42.82	43.92	46.68	53.57	54.95	62.95	64.60	1.268	71	90
27.10	28.49	29.86	31.24	32.62	35.38	42.00	45.31	46.41	49.17	56.06	57.44	65.43	67.09	1.270	63	80
37.75	39.13	40.50	41.88	43.26	46.02	52.63	55.94	57.04	59.80	66.69	68.07	76.06	77.71	1.276	29	37
34.57	35.95	37.33	38.71	40.09	42.85	49.46	52.77	53.87	56.62	63.51	64.89	72.89	74.54	1.282	39	50
38.03	39.41	40.78	42.16	43.54	46.30	52.91	56.22	57.32	60.07	66.96	68.34	76.33	77.99	1.286	28	36
35.82	37.20	38.57	39.95	41.33	44.09	50.70	54.01	55.11	57.86	64.76	66.14	74.13	75.78	1.286	35	45
37.06	38.44	39.81	41.19	42.57	45.33	51.94	55.25	56.35	59.11	66.00	67.38	75.37	77.02	1.290	31	40
35.12	36.50	37.88	39.26	40.64	43.40	50.01	53.32	54.42	57.17	64.07	65.45	73.44	75.09	1.297	37	48
37.33	38.71	40.09	41.47	42.85	45.61	52.22	55.53	56.63	59.38	66.27	67.65	75.64	77.30	1.300	30	39
33.19	34.57	35.95	37.33	38.70	41.46	48.07	51.39	52.49	55.24	62.13	63.51	71.50	73.16	1.302	43	56
36.37	37.75	39.12	40.50	41.88	44.64	51.25	54.56	55.66	58.42	65.31	66.69	74.68	76.33	1.303	33	43
37.61	38.99	40.36	41.75	43.12	45.88	52.49	55.80	56.90	59.66	66.55	67.93	75.92	77.57	1.310	29	38
31.53	32.91	34.28	35.67	37.04	39.80	46.42	49.73	50.83	53.58	60.48	61.86	69.85	71.50	1.313	48	63
34.71	36.09	37.46	38.84	40.22	42.98	49.59	52.90	54.00	56.76	63.65	65.03	73.02	74.68	1.316	38	50
37.89	39.27	40.64	42.02	43.40	46.16	52.77	56.08	57.18	59.93	66.82	68.20	76.19	77.85	1.321	28	37
35.95	37.33	38.71	40.09	41.46	44.22	50.84	54.15	55.25	58.00	64.89	66.27	74.26	75.92	1.324	34	45
34.02	35.40	36.77	38.15	39.53	42.29	48.90	52.21	53.31	56.07	62.96	64.34	72.33	73.99	1.325	40	53
37.19	38.57	39.95	41.33	42.71	45.47	52.08	55.39	56.49	59.24	66.13	67.51	75.50	77.16	1.333	30	40
35.26	36.64	38.02	39.40	40.77	43.53	50.14	53.46	54.56	57.31	64.20	65.58	73.57	75.23	1.333	36	48
32.35	33.74	35.11	36.49	37.87	40.63	47.24	50.55	51.65	54.41	61.30	62.68	70.67	72.33	1.333	45	60
27.50	28.88	30.26	31.64	33.02	35.79	42.40	45.71	46.82	49.57	56.47	57.85	65.84	67.50	1.333	60	80
28.75	30.13	31.51	32.89	34.27	37.03	43.65	46.96	48.06	50.82	57.71	59.09	67.08	68.74	1.339	56	75
30.69	32.07	33.45	34.83	36.21	38.97	45.58	48.90	50.00	52.75	59.64	61.02	69.02	70.67	1.340	50	67
29.72	31.10	32.48	33.86	35.24	38.00	44.61	47.93	49.03	51.78	58.68	60.06	68.05	69.70	1.340	53	71
25.14	26.52	27.90	29.28	30.66	33.43	40.05	43.36	44.46	47.22	54.11	55.49	63.49	65.14	1.343	67	90
36.50	37.88	39.26	40.64	42.01	44.78	51.39	54.70	55.80	58.55	65.44	66.82	74.81	76.47	1.344	32	43
37.47	38.85	40.23	41.61	42.98	45.74	52.35	55.66	56.76	59.52	66.41	67.79	75.78	77.44	1.345	29	39
34.84	36.22	37.60	38.98	40.36	43.12	49.73	53.04	54.14	56.90	63.79	65.17	73.16	74.81	1.351	37	50
37.75	39.13	40.50	41.88	43.26	46.02	52.63	55.94	57.04	59.79	66.69	68.07	76.06	77.71	1.357	28	38
34.15	35.53	36.91	38.29	39.66	42.43	49.04	52.35	53.45	56.20	63.10	64.48	72.47	74.12	1.359	39	53
36.09	37.47	38.84	40.22	41.60	44.36	50.97	54.28	55.38	58.14	65.03	66.41	74.40	76.05	1.364	33	45
35.39	36.78	38.15	39.53	40.91	43.67	50.28	53.59	54.69	57.45	64.34	65.72	73.71	75.36	1.371	35	48
37.33	38.71	40.09	41.47	42.84	45.60	52.21	55.52	56.62	59.38	66.27	67.65	75.64	77.30	1.379	29	40
36.64	38.02	39.39	40.77	42.15	44.91	51.52	54.83	55.93	58.69	65.58	66.96	74.95	76.61	1.387	31	43
34.98	36.36	37.73	39.12	40.49	43.25	49.86	53.18	54.28	57.03	63.92	65.30	73.29	74.95	1.389	36	50
37.61	38.99	40.36	41.74	43.12	45.88	52.49	55.80	56.90	59.66	66.55	67.93	75.92	77.57	1.393	28	39
34.29	35.67	37.04	38.42	39.80	42.56	49.17	52.48	53.58	56.34	63.23	64.61	72.60	74.26	1.395	38	53
32.62	34.00	35.38	36.76	38.14	40.90	47.51	50.83	51.93	54.68	61.57	62.95	70.95	72.60	1.395	43	60
30.96	32.34	33.72	35.10	36.48	39.24	45.85	49.17	50.27	53.02	59.92	61.30	69.29	70.94	1.396	48	67
33.59	34.97	36.35	37.73	39.11	41.87	48.48	51.79	52.89	55.65	62.54	63.92	71.91	73.57	1.400	40	56
31.93	33.31	34.69	36.07	37.44	40.21	46.82	50.13	51.23	53.99	60.88	62.26	70.26	71.91	1.400	45	63
20.20	21.59	22.98	24.37	25.75	28.52	35.16	38.48	39.58	42.35	49.25	50.63	58.63	60.29	1.400	80	112
36.22	37.60	38.98	40.36	41.73	44.50	51.11	54.42	55.52	58.27	65.17	66.55	74.54	76.19	1.406	32	45
35.53	36.91	38.29	39.67	41.04	43.80	50.42	53.73	54.83	57.58	64.47	65.85	73.85	75.50	1.412	34	48
29.15	30.53	31.91	33.29	34.67	37.43	44.05	47.36	48.46	51.22	58.12	59.50	67.49	69.15	1.415	53	75
30.12	31.50	32.88	34.26	35.64	38.40	45.02	48.33	49.43	52.19	59.08	60.46	68.46	70.11	1.420	50	71
37.47	38.85	40.22	41.60	42.98	45.74	52.35	55.66	56.76	59.52	66.41	67.79	75.78	77.43	1.429	28	40
35.11	36.49	37.87	39.25	40.63	43.39	50.00	53.31	54.41	57.17	64.06	65.44	73.43	75.09	1.429	35	50
28.03	29.41	30.79	32.18	33.55	36.32	42.94	46.25	47.35	50.11	57.01	58.39	66.38	68.04	1.429	56	80
25.66	27.04	28.42	29.81	31.19	33.95	40.58	43.89	45.00	47.75	54.65	56.03	64.03	65.68	1.429	63	90
34.42	35.80	37.18	38.56	39.93	42.69	49.31	52.62	53.72	56.48	63.37	64.75	72.74	74.39	1.432	37	53
36.77	38.15	39.53	40.91	42.29	45.05	51.66	54.97	56.07	58.83	65.72	67.10	75.09	76.74	1.433	30	43
33.73	35.11	36.48	37.87	39.24	42.00	48.62	51.93	53.03	55.78	62.68	64.06	72.05	73.70	1.436	39	56
36.36	37.74	39.11	40.49	41.87	44.63	51.24	54.55	55.65	58.41	65.30	66.68	74.67	76.33	1.452	31	45
35.66	37.05	38.42	39.80	41.18	43.94	50.55	53.86	54.96	57.72	64.61	65.99	73.98	75.64	1.455	33	48
32.20	33.58	34.95	36.34	37.71	40.48	47.09	50.40	51.50	54.26	61.15	62.53	70.53	72.18	1.465	43	63
35.25	36.63	38.00	39.39	40.76	43.52	50.14	53.45	54.55	57.30	64.20	65.58	73.57	75.22	1.471	34	50
34.55	35.94	37.31	38.69	40.07	42.83	49.44	52.75	53.86	56.61	63.50	64.88	72.88	74.53	1.472	36	53
33.86	35.24	36.62	38.00	39.38	42.14	48.75	52.06	53.16	55.92	62.81	64.19	72.18	73.84	1.474	38	56
30.39	31.77	33.15	34.53	35.91	38.67	45.29	48.60	49.70	52.46	59.35	60.73	68.73	70.38	1.479	48	71
36.91	38.29	39.66	41.05	42.42	45.18	51.79	55.11	56.21	58.96	65.85	67.23	75.22	76.88	1.483	29	43
31.36	32.74	34.12	35.50	36.88	39.64	46.26	49.57	50.67	53.43	60.32	61.70	69.70	71.35	1.489	45	67
20.83	22.23	23.61	25.01	26.39	29.17	35.82	39.14	40.24	43.01	49.91	51.29	59.30	60.96	1.493	75	112
36.49	37.87	39.25	40.63	42.01	44.77	51.38	54.69	55.79	58.55	65.44	66.82	74.81	76.46	1.500	30	45
35.80	37.18	38.56	39.94	41.31	44.07	50.69	54.00	55.10	57.85	64.75	66.13	74.12	75.77	1.500	32	48
33.02	34.41	35.78	37.16	38.54	41.30	47.92	51.23	52.33	55.09	61.98	63.36	71.35	73.01	1.500	40	60
29.54	30.93	32.31	33.69	35.07	37.83	44.45	47.77	48.87	51.62	58.52	59.90	67.90	69.55	1.500	50	75
26.05	27.43	28.82	30.20	31.58	34.35	40.98	44.29	45.39	48.15	55.05	56.43	64.43	66.09	1.500	60	90
1.01	1.02	1.03	1.04	1.05	1.07	1.12	1.14	1.14	1.16	1.19	1.20	1.24	1.25	Length Factor*		

Note: Check Sprocket Specification table on page 78 for Nickel Plated sprocket availability.

* This length factor must be used to determine the proper belt width.

14mm Pitch Poly Chain® GT® Carbon™ Belts — Drive Selection Table

Number of Grooves (DriveR)	Pitch Diameter (Inches)	Number of Grooves (DriveN)	Pitch Diameter (Inches)	Speed Ratio	14MGT-994 PL 39.13 71 Teeth	14MGT-1120 PL 44.09 80 Teeth	14MGT-1190 PL 46.85 85 Teeth	14MGT-1260 PL 49.61 90 Teeth	14MGT-1400 PL 55.12 100 Teeth	14MGT-1568 PL 61.73 112 Teeth	14MGT-1610 PL 63.39 115 Teeth	14MGT-1750 PL 68.90 125 Teeth	14MGT-1890 PL 74.41 135 Teeth	14MGT-1960 PL 77.17 140 Teeth	14MGT-2100 PL 82.68 150 Teeth	14MGT-2240 PL 88.19 160 Teeth	14MGT-2310 PL 90.94 165 Teeth
53	9.299	80	14.036	1.509							13.15	15.95	18.73	20.12	22.89	25.66	27.04
35	6.141	53	9.299	1.514		9.79	11.19	12.58	15.35	18.67	19.50	22.27	25.03	26.41	29.17	31.93	33.31
37	6.492	56	9.825	1.514		9.08	10.48	11.87	14.65	17.97	18.81	21.57	24.33	25.72	28.48	31.24	32.61
33	5.790	50	8.772	1.515	7.99	10.50	11.89	13.28	16.05	19.37	20.20	22.96	25.72	27.11	29.87	32.62	34.00
28	4.912	43	7.544	1.536	9.69	12.19	13.58	14.96	17.73	21.04	21.87	24.63	27.39	28.77	31.53	34.29	35.66
39	6.842	60	10.527	1.538			9.61	11.01	13.80	17.12	17.96	20.73	23.49	24.88	27.64	30.40	31.78
31	5.439	48	8.421	1.548	8.55	11.06	12.45	13.84	16.61	19.92	20.76	23.52	26.28	27.66	30.42	33.18	34.55
29	5.088	45	7.895	1.552	9.26	11.76	13.15	14.54	17.31	20.62	21.45	24.21	26.97	28.35	31.11	33.87	35.25
36	6.316	56	9.825	1.556		9.20	10.60	12.00	14.78	18.10	18.94	21.70	24.46	25.85	28.61	31.37	32.75
43	7.544	67	11.755	1.558					12.22	15.56	16.40	19.18	21.95	23.33	26.10	28.86	30.24
34	5.965	53	9.299	1.559		9.92	11.31	12.71	15.48	18.80	19.64	22.40	25.16	26.54	29.30	32.06	33.44
32	5.614	50	8.772	1.563	8.11	10.63	12.02	13.41	16.18	19.50	20.33	23.10	25.86	27.24	30.00	32.76	34.13
48	8.421	75	13.158	1.563						13.71	14.55	17.34	20.12	21.51	24.28	27.04	28.42
40	7.018	63	11.053	1.575				10.42	13.21	16.55	17.38	20.16	22.92	24.31	27.07	29.83	31.21
71	12.457	112	19.650	1.577												18.53	19.93
45	7.895	71	12.457	1.578					11.35	14.70	15.54	18.32	21.10	22.48	25.25	28.02	29.40
38	6.667	60	10.527	1.579			9.73	11.13	13.92	17.25	18.09	20.86	23.62	25.01	27.77	30.53	31.91
30	5.263	48	8.421	1.600	8.67	11.19	12.58	13.97	16.74	20.06	20.89	23.65	26.41	27.79	30.55	33.31	34.69
35	6.141	56	9.825	1.600		9.32	10.73	12.13	14.91	18.23	19.07	21.83	24.60	25.98	28.74	31.50	32.88
50	8.772	80	14.036	1.600						12.68	13.52	16.32	19.11	20.50	23.28	26.05	27.43
33	5.790	53	9.299	1.606		10.04	11.44	12.83	15.61	18.93	19.77	22.53	25.29	26.68	29.44	32.20	33.57
28	4.912	45	7.895	1.607	9.39	11.89	13.28	14.67	17.44	20.75	21.58	24.35	27.11	28.49	31.25	34.00	35.38
56	9.825	90	15.790	1.607								14.01	16.82	18.22	21.01	23.79	25.18
31	5.439	50	8.772	1.613	8.23	10.75	12.15	13.54	16.31	19.63	20.47	23.23	25.99	27.37	30.13	32.89	34.27
39	6.842	63	11.053	1.615				10.54	13.34	16.68	17.51	20.29	23.05	24.44	27.20	29.97	31.34
37	6.492	60	10.527	1.622			9.85	11.26	14.05	17.38	18.22	20.99	23.75	25.14	27.90	30.66	32.04
34	5.965	56	9.825	1.647		9.45	10.85	12.25	15.03	18.36	19.20	21.96	24.73	26.11	28.87	31.63	33.01
43	7.544	71	12.457	1.651					11.59	14.95	15.79	18.58	21.35	22.74	25.51	28.28	29.66
29	5.088	48	8.421	1.655	8.80	11.31	12.71	14.10	16.87	20.19	21.02	23.78	26.54	27.93	30.68	33.44	34.82
32	5.614	53	9.299	1.656		10.16	11.57	12.96	15.74	19.06	19.90	22.66	25.43	26.81	29.57	32.33	33.71
38	6.667	63	11.053	1.658				10.66	13.46	16.80	17.64	20.41	23.18	24.57	27.33	30.10	31.48
30	5.263	50	8.772	1.667	8.36	10.88	12.28	13.67	16.44	19.76	20.60	23.36	26.12	27.51	30.27	33.03	34.40
36	6.316	60	10.527	1.667			9.97	11.38	14.17	17.51	18.35	21.12	23.88	25.27	28.03	30.79	32.17
45	7.895	75	13.158	1.667						14.08	14.93	17.72	20.50	21.89	24.66	27.43	28.81
48	8.421	80	14.036	1.667						12.92	13.77	16.57	19.36	20.76	23.53	26.31	27.69
67	11.755	112	19.650	1.672											16.19	19.02	20.42
40	7.018	67	11.755	1.675					12.59	15.94	16.78	19.56	22.34	23.72	26.49	29.25	30.63
33	5.790	56	9.825	1.697		9.57	10.98	12.38	15.16	18.49	19.33	22.09	24.86	26.24	29.01	31.77	33.14
53	9.299	90	15.790	1.698								14.38	17.19	18.60	21.39	24.17	25.56
37	6.492	63	11.053	1.703				10.78	13.59	16.93	17.77	20.23	23.01	24.70	27.47	30.23	31.61
31	5.439	53	9.299	1.710		10.29	11.69	13.09	15.87	19.19	20.03	22.79	25.56	26.94	29.70	32.46	33.84
28	4.912	48	8.421	1.714	8.92	11.44	12.83	14.22	17.00	20.32	21.15	23.91	26.68	28.06	30.82	33.58	34.95
35	6.141	60	10.527	1.714			10.09	11.50	14.30	17.64	18.47	21.25	24.01	25.40	28.16	30.93	32.30
39	6.842	67	11.755	1.718					12.72	16.07	16.91	19.69	22.46	23.85	26.62	29.39	30.77
29	5.088	50	8.772	1.724	8.48	11.00	12.40	13.80	16.57	19.89	20.73	23.49	26.25	27.64	30.40	33.16	34.54
43	7.544	75	13.158	1.744						14.33	15.18	17.97	20.76	22.15	24.92	27.69	29.08
32	5.614	56	9.825	1.750		9.69	11.10	12.50	15.29	18.62	19.46	22.22	24.99	26.38	29.14	31.90	33.28
36	6.316	63	11.053	1.750			9.49	10.91	13.71	17.06	17.90	20.67	23.44	24.83	27.60	30.36	31.74
80	14.036	140	24.562	1.750													
38	6.667	67	11.755	1.763				10.01	12.84	16.20	17.04	19.82	22.59	23.98	26.75	29.52	30.90
34	5.965	60	10.527	1.765			10.22	11.63	14.43	17.77	18.60	21.38	24.14	25.53	28.30	31.06	32.44
30	5.263	53	9.299	1.767		10.41	11.82	13.21	16.00	19.32	20.16	22.92	25.69	27.07	29.83	32.60	33.97
40	7.018	71	12.457	1.775					11.95	15.33	16.17	18.96	21.74	23.13	25.90	28.67	30.05
45	7.895	80	14.036	1.778						13.28	14.14	16.95	19.74	21.14	23.92	26.69	28.08
63	11.053	112	19.650	1.778											16.67	19.51	20.91
28	4.912	50	8.772	1.786	8.60	11.13	12.53	13.92	16.70	20.02	20.86	23.62	26.39	27.77	30.53	33.29	34.67
35	6.141	63	11.053	1.800			9.61	11.03	13.84	17.19	18.02	20.80	23.57	24.96	27.73	30.49	31.87
50	8.772	90	15.790	1.800								14.74	17.56	18.97	21.77	24.55	25.94
31	5.439	56	9.825	1.806		9.81	11.22	12.63	15.42	18.75	19.58	22.35	25.12	26.51	29.27	32.03	33.41
37	6.492	67	11.755	1.811				10.13	12.96	16.32	17.16	19.94	22.72	24.11	26.88	29.65	31.03
33	5.790	60	10.527	1.818		8.91	10.34	11.75	14.55	17.89	18.73	21.50	24.27	25.66	28.43	31.19	32.57
39	6.842	71	12.457	1.821					12.07	15.45	16.30	19.09	21.87	23.26	26.03	28.80	30.18
29	5.088	53	9.299	1.828	7.99	10.53	11.94	13.34	16.12	19.45	20.29	23.05	25.82	27.20	29.97	32.73	34.11
34	5.965	63	11.053	1.853			9.72	11.15	13.96	17.31	18.15	20.93	23.70	25.09	27.86	30.62	32.00
43	7.544	80	14.036	1.860						13.52	14.38	17.19	19.99	21.39	24.17	26.95	28.33
36	6.316	67	11.755	1.861				10.25	13.08	16.45	17.29	20.07	22.85	24.24	27.01	29.78	31.16
30	5.263	56	9.825	1.867		9.93	11.34	12.75	15.54	18.88	19.71	22.48	25.25	26.64	29.40	32.16	33.54
60	10.527	112	19.650	1.867											17.02	19.87	21.28
75	13.158	140	24.562	1.867													
38	6.667	71	12.457	1.868					12.19	15.58	16.42	19.21	21.99	23.39	26.16	28.93	30.31
				Length Factor*	0.68	0.73	0.75	0.77	0.81	0.85	0.86	0.89	0.92	0.94	0.96	0.99	1.00

Note: Check Sprocket Specification table on page 78 for Nickel Plated sprocket availability.

* This length factor must be used to determine the proper belt width.

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14MGT-2380 P.L. 93.70 170 Teeth	14MGT-2450 P.L. 96.46 175 Teeth	14MGT-2520 P.L. 99.21 180 Teeth	14MGT-2590 P.L. 101.97 185 Teeth	14MGT-2660 P.L. 104.72 190 Teeth	14MGT-2800 P.L. 110.24 200 Teeth	14MGT-3136 P.L. 123.46 224 Teeth	14MGT-3304 P.L. 130.08 236 Teeth	14MGT-3360 P.L. 132.28 240 Teeth	14MGT-3500 P.L. 137.79 250 Teeth	14MGT-3850 P.L. 151.57 275 Teeth	14MGT-3920 P.L. 154.33 280 Teeth	14MGT-4326 P.L. 170.31 309 Teeth	14MGT-4410 P.L. 173.62 315 Teeth	Speed Ratio	DriveR Number of Grooves	DriveN Number of Grooves
28.42	29.81	31.19	32.57	33.95	36.72	43.34	46.65	47.75	50.51	57.41	58.79	66.79	68.44	1.509	53	80
34.69	36.07	37.45	38.83	40.20	42.96	49.58	52.89	53.99	56.75	63.64	65.02	73.01	74.67	1.514	35	53
33.99	35.38	36.75	38.13	39.51	42.27	48.89	52.20	53.30	56.05	62.95	64.33	72.32	73.98	1.514	37	56
35.38	36.76	38.14	39.52	40.90	43.66	50.27	53.58	54.68	57.44	64.33	65.71	73.70	75.36	1.515	33	50
37.04	38.42	39.80	41.18	42.56	45.32	51.93	55.24	56.34	59.10	65.99	67.37	75.36	77.02	1.536	28	43
33.16	34.54	35.92	37.30	38.67	41.44	48.05	51.37	52.47	55.22	62.12	63.50	71.49	73.15	1.538	39	60
35.93	37.31	38.69	40.07	41.45	44.21	50.82	54.13	55.23	57.99	64.88	66.26	74.25	75.91	1.548	31	48
36.63	38.01	39.38	40.76	42.14	44.90	51.51	54.83	55.93	58.68	65.57	66.95	74.95	76.60	1.552	29	45
34.13	35.51	36.89	38.27	39.64	42.41	49.02	52.33	53.43	56.19	63.08	64.46	72.46	74.11	1.556	36	56
31.62	33.01	34.38	35.77	37.14	39.91	46.52	49.84	50.94	53.70	60.59	61.97	69.97	71.62	1.558	43	67
34.82	36.20	37.58	38.96	40.34	43.10	49.71	53.03	54.13	56.88	63.77	65.16	73.15	74.80	1.559	34	53
35.52	36.90	38.27	39.65	41.03	43.79	50.41	53.72	54.82	57.57	64.47	65.85	73.84	75.49	1.563	32	50
29.81	31.19	32.57	33.95	35.33	38.10	44.72	48.03	49.13	51.89	58.79	60.17	68.17	69.82	1.563	48	75
32.59	33.98	35.35	36.74	38.11	40.88	47.49	50.81	51.91	54.66	61.56	62.94	70.93	72.59	1.575	40	63
21.33	22.73	24.12	25.51	26.90	29.69	36.34	39.66	40.76	43.53	50.44	51.82	59.83	61.49	1.577	71	112
30.78	32.16	33.54	34.93	36.30	39.07	45.69	49.00	50.10	52.86	59.76	61.14	69.13	70.79	1.578	45	71
33.29	34.67	36.05	37.43	38.81	41.57	48.19	51.50	52.60	55.36	62.25	63.63	71.62	73.28	1.579	38	60
36.07	37.45	38.83	40.21	41.58	44.34	50.96	54.27	55.37	58.13	65.02	66.40	74.39	76.05	1.600	30	48
34.26	35.64	37.02	38.40	39.78	42.54	49.16	52.47	53.57	56.33	63.22	64.60	72.59	74.25	1.600	35	56
28.82	30.20	31.58	32.97	34.35	37.11	43.74	47.05	48.15	50.91	57.81	59.19	67.19	68.85	1.600	50	80
34.96	36.34	37.71	39.09	40.47	43.23	49.85	53.16	54.26	57.02	63.91	65.29	73.28	74.94	1.606	33	53
36.76	38.14	39.52	40.90	42.28	45.04	51.65	54.96	56.06	58.82	65.71	67.09	75.08	76.74	1.607	28	45
26.56	27.95	29.34	30.72	32.10	34.87	41.50	44.82	45.93	48.69	55.59	56.97	64.97	66.63	1.607	56	90
35.65	37.03	38.41	39.79	41.16	43.93	50.54	53.85	54.95	57.71	64.60	65.98	73.97	75.63	1.613	31	50
32.73	34.11	35.49	36.87	38.25	41.01	47.63	50.94	52.04	54.80	61.69	63.08	71.07	72.72	1.615	39	63
33.42	34.80	36.18	37.56	38.94	41.70	48.32	51.63	52.73	55.49	62.39	63.77	71.76	73.42	1.622	37	60
34.39	35.78	37.15	38.54	39.91	42.67	49.29	52.60	53.70	56.46	63.35	64.73	72.73	74.38	1.647	34	56
31.04	32.43	33.81	35.19	36.57	39.33	45.96	49.27	50.37	53.13	60.03	61.41	69.40	71.06	1.651	43	71
36.20	37.58	38.96	40.34	41.72	44.48	51.09	54.40	55.51	58.26	65.15	66.53	74.53	76.18	1.655	29	48
35.09	36.47	37.85	39.23	40.61	43.37	49.98	53.30	54.40	57.15	64.05	65.43	73.42	75.07	1.656	32	53
32.86	34.24	35.62	37.00	38.38	41.14	47.76	51.08	52.18	54.93	61.83	63.21	71.20	72.86	1.658	38	63
35.78	37.17	38.54	39.92	41.30	44.06	50.68	53.99	55.09	57.85	64.74	66.12	74.11	75.77	1.667	30	50
33.56	34.94	36.32	37.70	39.07	41.84	48.46	51.77	52.87	55.63	62.52	63.90	71.90	73.55	1.667	36	60
30.20	31.59	32.96	34.35	35.73	38.50	45.12	48.43	49.54	52.29	59.19	60.57	68.57	70.23	1.667	45	75
29.08	30.46	31.84	33.23	34.61	37.38	44.00	47.32	48.42	51.18	58.08	59.46	67.46	69.12	1.667	48	80
21.83	23.23	24.62	26.02	27.41	30.20	36.85	40.18	41.29	44.05	50.97	52.35	60.36	62.02	1.672	67	112
32.02	33.40	34.78	36.16	37.54	40.31	46.93	50.24	51.34	54.10	60.99	62.38	70.37	72.03	1.675	40	67
34.53	35.91	37.29	38.67	40.05	42.81	49.42	52.74	53.84	56.60	63.49	64.87	72.86	74.52	1.697	33	56
26.95	28.34	29.72	31.11	32.49	35.27	41.90	45.22	46.32	49.08	55.99	57.37	65.37	67.03	1.698	53	90
32.99	34.37	35.75	37.14	38.51	41.28	47.90	51.21	52.31	55.07	61.96	63.34	71.34	72.99	1.703	37	63
35.22	36.60	37.98	39.36	40.74	43.50	50.12	53.43	54.53	57.29	64.18	65.56	73.55	75.21	1.710	31	53
36.34	37.72	39.09	40.48	41.85	44.61	51.23	54.54	55.64	58.40	65.29	66.67	74.66	76.32	1.714	28	48
33.69	35.07	36.45	37.83	39.21	41.97	48.59	51.90	53.00	55.76	62.66	64.04	72.03	73.69	1.714	35	60
32.15	33.53	34.91	36.30	37.67	40.44	47.06	50.37	51.48	54.23	61.13	62.51	70.51	72.16	1.718	39	67
35.92	37.30	38.68	40.06	41.43	44.20	50.81	54.12	55.22	57.98	64.87	66.25	74.25	75.90	1.724	29	50
30.46	31.85	33.23	34.61	35.99	38.76	45.38	48.70	49.80	52.56	59.46	60.84	68.84	70.49	1.744	43	75
34.66	36.04	37.42	38.80	40.18	42.94	49.56	52.87	53.97	56.73	63.62	65.01	73.00	74.65	1.750	32	56
33.12	34.51	35.89	37.27	38.65	41.41	48.03	51.34	52.44	55.20	62.10	63.48	71.47	73.13	1.750	36	63
			19.97	21.39	24.23	30.97	34.32	35.43	38.22	45.16	46.55	54.59	56.25	1.750	80	140
32.28	33.67	35.04	36.43	37.81	40.57	47.19	50.51	51.61	54.37	61.26	62.64	70.64	72.30	1.763	38	67
33.82	35.20	36.58	37.96	39.34	42.11	48.72	52.04	53.14	55.90	62.79	64.17	72.17	73.82	1.765	34	60
35.36	36.74	38.11	39.50	40.87	43.64	50.25	53.57	54.67	57.42	64.32	65.70	73.69	75.35	1.767	30	53
31.44	32.82	34.20	35.59	36.96	39.73	46.35	49.67	50.77	53.53	60.43	61.81	69.81	71.46	1.775	40	71
29.47	30.85	32.23	33.62	35.00	37.77	44.40	47.72	48.82	51.58	58.48	59.86	67.86	69.52	1.778	45	80
22.32	23.73	25.12	26.52	27.91	30.70	37.37	40.70	41.80	44.57	51.49	52.88	60.89	62.55	1.778	63	112
36.05	37.43	38.81	40.19	41.57	44.33	50.95	54.26	55.36	58.12	65.01	66.39	74.38	76.04	1.786	28	50
33.26	34.64	36.02	37.40	38.78	41.54	48.16	51.48	52.58	55.34	62.23	63.61	71.61	73.26	1.800	35	63
27.33	28.72	30.11	31.50	32.88	35.66	42.29	45.61	46.72	49.48	56.38	57.77	65.77	67.43	1.800	50	90
34.79	36.18	37.55	38.93	40.31	43.08	49.69	53.01	54.11	56.86	63.76	65.14	73.13	74.79	1.806	31	56
32.41	33.80	35.18	36.56	37.94	40.70	47.33	50.64	51.74	54.50	61.40	62.78	70.77	72.43	1.811	37	67
33.95	35.34	36.71	38.10	39.47	42.24	48.86	52.17	53.27	56.03	62.93	64.31	72.30	73.96	1.818	33	60
31.57	32.95	34.33	35.72	37.10	39.86	46.49	49.80	50.91	53.66	60.56	61.94	69.94	71.60	1.821	39	71
35.49	36.87	38.25	39.63	41.01	43.77	50.39	53.70	54.80	57.56	64.45	65.83	73.83	75.48	1.828	29	53
33.39	34.77	36.15	37.53	38.91	41.68	48.30	51.61	52.71	55.47	62.37	63.75	71.74	73.40	1.853	34	63
29.72	31.11	32.49	33.88	35.26	38.03	44.66	47.98	49.08	51.84	58.75	60.13	68.13	69.79	1.860	43	80
32.54	33.93	35.31	36.69	38.07	40.84	47.46	50.77	51.88	54.63	61.53	62.91	70.91	72.57	1.861	36	67
34.93	36.31	37.69	39.07	40.45	43.21	49.83	53.14	54.24	57.00	63.89	65.28	73.27	74.93	1.867	30	56
22.69	24.10	25.49	26.90	28.29	31.08	37.75	41.09	42.19	44.96	51.88	53.27	61.28	62.94	1.867	60	112
			20.56	21.99	24.84	31.59	34.95	36.06	38.85	45.80	47.19	55.24	56.90	1.867	75	140
31.70	33.08	34.46	35.85	37.23	40.00	46.62	49.94	51.04	53.80	60.70	62.08	70.08	71.73	1.868	38	71
1.01	1.02	1.03	1.04	1.05	1.07	1.12	1.14	1.14	1.16	1.19	1.20	1.24	1.25	Length Factor*		

Note: Check Sprocket Specification table on page 78 for Nickel Plated sprocket availability.

* This length factor must be used to determine the proper belt width.

Drive Selection Table

Number of Grooves (DriveR)	Pitch Diameter (Inches) (DriveR)	Number of Grooves (DriveN)	Pitch Diameter (Inches) (DriveN)	Speed Ratio	14MGT-994 PL.39.13 71 Teeth	14MGT-1120 PL.44.09 80 Teeth	14MGT-1190 PL.46.85 85 Teeth	14MGT-1260 PL.49.61 90 Teeth	14MGT-1400 PL.55.12 100 Teeth	14MGT-1568 PL.61.73 112 Teeth	14MGT-1610 PL.63.39 115 Teeth	14MGT-1750 PL.68.90 125 Teeth	14MGT-1890 PL.74.41 135 Teeth	14MGT-1960 PL.77.17 140 Teeth	14MGT-2100 PL.82.68 150 Teeth	14MGT-2240 PL.88.19 160 Teeth	14MGT-2310 PL.90.94 165 Teeth
32	5.614	60	10.527	1.875		9.03	10.46	11.87	14.68	18.02	18.86	21.63	24.40	25.79	28.56	31.32	32.70
40	7.018	75	13.158	1.875					11.29	14.70	15.54	18.35	21.14	22.53	25.31	28.08	29.46
48	8.421	90	15.790	1.875								14.98	17.81	19.22	22.02	24.81	26.20
28	4.912	53	9.299	1.893	8.11	10.66	12.06	13.46	16.25	19.58	20.42	23.18	25.95	27.34	30.10	32.86	34.24
33	5.790	63	11.053	1.909			9.84	11.27	14.09	17.44	18.28	21.06	23.83	25.22	27.99	30.75	32.13
35	6.141	67	11.755	1.914				10.37	13.21	16.57	17.41	20.20	22.98	24.37	27.14	29.91	31.29
37	6.492	71	12.457	1.919					12.31	15.70	16.54	19.34	22.12	23.51	26.29	29.06	30.44
39	6.842	75	13.158	1.923					11.41	14.82	15.67	18.47	21.26	22.66	25.44	28.21	29.59
29	5.088	56	9.825	1.931		10.05	11.47	12.87	15.67	19.00	19.84	22.61	25.38	26.77	29.53	32.30	33.67
31	5.439	60	10.527	1.935		9.15	10.58	11.99	14.80	18.15	18.98	21.76	24.53	25.92	28.69	31.45	32.83
32	5.614	63	11.053	1.969			9.96	11.39	14.21	17.56	18.40	21.18	23.96	25.35	28.12	30.88	32.27
34	5.965	67	11.755	1.971				10.49	13.33	16.70	17.54	20.33	23.11	24.50	27.27	30.04	31.42
36	6.316	71	12.457	1.972					12.43	15.82	16.67	19.46	22.25	23.64	26.42	29.19	30.57
71	12.457	140	24.562	1.972													
38	6.667	75	13.158	1.974					11.53	14.94	15.79	18.60	21.39	22.78	25.56	28.34	29.72
28	4.912	56	9.825	2.000		10.17	11.59	13.00	15.79	19.13	19.97	22.74	25.51	26.90	29.66	32.43	33.81
30	5.263	60	10.527	2.000		9.27	10.70	12.12	14.93	18.27	19.11	21.89	24.66	26.05	28.82	31.58	32.96
40	7.018	80	14.036	2.000						13.88	14.74	17.56	20.37	21.77	24.55	27.33	28.72
45	7.895	90	15.790	2.000							12.46	15.34	18.17	19.58	22.39	25.18	26.57
56	9.825	112	19.650	2.000											17.50	20.35	21.76
37	6.492	75	13.158	2.027					11.65	15.06	15.91	18.72	21.51	22.91	25.69	28.47	29.85
35	6.141	71	12.457	2.029					12.55	15.94	16.79	19.59	22.37	23.77	26.55	29.32	30.70
33	5.790	67	11.755	2.030				10.60	13.45	16.82	17.66	20.45	23.23	24.62	27.40	30.17	31.55
31	5.439	63	11.053	2.032			10.08	11.51	14.33	17.69	18.53	21.31	24.09	25.48	28.25	31.02	32.40
39	6.842	80	14.036	2.051						14.00	14.86	17.69	20.49	21.89	24.68	27.46	28.85
29	5.088	60	10.527	2.069		9.38	10.82	12.24	15.05	18.40	19.24	22.02	24.79	26.18	28.95	31.71	33.09
36	6.316	75	13.158	2.083					11.76	15.18	16.03	18.84	21.64	23.04	25.82	28.60	29.98
34	5.965	71	12.457	2.088					12.67	16.07	16.91	19.71	22.50	23.90	26.67	29.45	30.83
67	11.755	140	24.562	2.090													
43	7.544	90	15.790	2.093							12.69	15.57	18.42	19.83	22.64	25.43	26.83
32	5.614	67	11.755	2.094				10.72	13.57	16.94	17.79	20.58	23.36	24.75	27.53	30.30	31.68
30	5.263	63	11.053	2.100			10.20	11.63	14.45	17.81	18.66	21.44	24.22	25.61	28.38	31.15	32.53
80	14.036	168	29.475	2.100													
38	6.667	80	14.036	2.105						14.12	14.98	17.81	20.61	22.02	24.81	27.59	28.98
53	9.299	112	19.650	2.113										14.94	17.85	20.71	22.13
28	4.912	60	10.527	2.143		9.50	10.94	12.36	15.17	18.53	19.37	22.15	24.92	26.31	29.08	31.85	33.23
35	6.141	75	13.158	2.143					11.88	15.30	16.16	18.97	21.76	23.16	25.95	28.72	30.11
33	5.790	71	12.457	2.152				9.91	12.79	16.19	17.04	19.84	22.63	24.02	26.80	29.58	30.96
31	5.439	67	11.755	2.161			9.38	10.84	13.69	17.07	17.91	20.70	23.49	24.88	27.66	30.43	31.81
37	6.492	80	14.036	2.162						14.24	15.10	17.93	20.74	22.14	24.93	27.72	29.10
29	5.088	63	11.053	2.172		8.86	10.31	11.75	14.58	17.94	18.78	21.57	24.34	25.73	28.51	31.28	32.66
34	5.965	75	13.158	2.206					12.00	15.42	16.28	19.09	21.89	23.29	26.07	28.85	30.24
32	5.614	71	12.457	2.219				10.02	12.91	16.31	17.16	19.96	22.75	24.15	26.93	29.70	31.09
36	6.316	80	14.036	2.222					10.88	14.36	15.22	18.05	20.86	22.27	25.06	27.84	29.23
63	11.053	140	24.562	2.222													
30	5.263	67	11.755	2.233			9.50	10.95	13.81	17.19	18.04	20.83	23.62	25.01	27.78	30.56	31.94
50	8.772	112	19.650	2.240										15.28	18.20	21.07	22.49
75	13.158	168	29.475	2.240													
28	4.912	63	11.053	2.250		8.98	10.43	11.87	14.70	18.06	18.91	21.69	24.47	25.86	28.64	31.41	32.79
40	7.018	90	15.790	2.250						12.15	13.04	15.93	18.78	20.19	23.01	25.81	27.20
80	14.036	180	31.580	2.250													
33	5.790	75	13.158	2.273					12.11	15.54	16.40	19.21	22.01	23.41	26.20	28.98	30.36
35	6.141	80	14.036	2.286					11.00	14.48	15.34	18.17	20.99	22.39	25.18	27.97	29.36
31	5.439	71	12.457	2.290				10.14	13.03	16.43	17.28	20.09	22.88	24.28	27.06	29.83	31.22
39	6.842	90	15.790	2.308						12.26	13.15	16.05	18.90	20.32	23.13	25.93	27.33
29	5.088	67	11.755	2.310			9.61	11.07	13.93	17.31	18.16	20.96	23.74	25.14	27.91	30.69	32.07
48	8.421	112	19.650	2.333										15.51	18.43	21.30	22.73
60	10.527	140	24.562	2.333													
32	5.614	75	13.158	2.344					12.23	15.67	16.52	19.34	22.14	23.54	26.33	29.11	30.49
34	5.965	80	14.036	2.353					11.11	14.59	15.46	18.29	21.11	22.51	25.31	28.10	29.48
71	12.457	168	29.475	2.366													
30	5.263	71	12.457	2.367				10.25	13.15	16.56	17.40	20.21	23.01	24.40	27.18	29.96	31.35
38	6.667	90	15.790	2.368						12.38	13.27	16.16	19.02	20.44	23.25	26.06	27.45
28	4.912	67	11.755	2.393			9.73	11.19	14.05	17.44	18.28	21.08	23.87	25.26	28.04	30.81	32.20
75	13.158	180	31.580	2.400													
31	5.439	75	13.158	2.419					12.35	15.78	16.64	19.46	22.26	23.66	26.45	29.23	30.62
33	5.790	80	14.036	2.424					11.22	14.71	15.57	18.42	21.23	22.64	25.43	28.22	29.61
37	6.492	90	15.790	2.432						12.49	13.38	16.28	19.14	20.56	23.38	26.18	27.58
29	5.088	71	12.457	2.448				10.36	13.27	16.68	17.53	20.34	23.13	24.53	27.31	30.09	31.47
45	7.895	112	19.650	2.489									14.35	15.85	18.78	21.66	23.08
30	5.263	75	13.158	2.500					12.46	15.90	16.76	19.58	22.39	23.79	26.58	29.36	30.75
32	5.614	80	14.036	2.500					11.34	14.83	15.69	18.54	21.36	22.76	25.56	28.35	29.74
36	6.316	90	15.790	2.500						12.60	13.49	16.40	19.26	20.68	23.50	26.31	27.70
56	9.825	140	24.562	2.500													
80	14.036	200	35.089	2.500													
Length Factor*					0.68	0.73	0.75	0.77	0.81	0.85	0.86	0.89	0.92	0.94	0.96	0.99	1.00

Note: Check Sprocket Specification table on page 78 for Nickel Plated sprocket availability.

* This length factor must be used to determine the proper belt width.

Gates Corporation

Center Distance, Inches — **Sprocket Combinations**

14MGT-2380 P.L. 93.70 170 Teeth	14MGT-2450 P.L. 96.46 175 Teeth	14MGT-2520 P.L. 99.21 180 Teeth	14MGT-2590 P.L. 101.97 185 Teeth	14MGT-2660 P.L. 104.72 190 Teeth	14MGT-2800 P.L. 110.24 200 Teeth	14MGT-3136 P.L. 123.46 224 Teeth	14MGT-3304 P.L. 130.08 236 Teeth	14MGT-3360 P.L. 132.28 240 Teeth	14MGT-3500 P.L. 137.79 250 Teeth	14MGT-3850 P.L. 151.57 275 Teeth	14MGT-3920 P.L. 154.33 280 Teeth	14MGT-4326 P.L. 170.31 309 Teeth	14MGT-4410 P.L. 173.62 315 Teeth	Speed Ratio	DriveR Number of Grooves	DriveN Number of Grooves
34.08	35.47	36.85	38.23	39.61	42.37	48.99	52.31	53.41	56.16	63.06	64.44	72.44	74.09	1.875	32	60
30.85	32.24	33.62	35.00	36.38	39.15	45.78	49.10	50.20	52.96	59.86	61.24	69.24	70.90	1.875	40	75
27.59	28.98	30.37	31.76	33.14	35.92	42.56	45.88	46.98	49.74	56.65	58.03	66.04	67.69	1.875	48	90
35.62	37.00	38.38	39.76	41.14	43.90	50.52	53.83	54.93	57.69	64.59	65.97	73.96	75.62	1.893	28	53
33.52	34.90	36.28	37.66	39.04	41.81	48.43	51.74	52.85	55.60	62.50	63.88	71.88	73.53	1.909	33	63
32.67	34.06	35.44	36.82	38.20	40.97	47.59	50.91	52.01	54.77	61.67	63.05	71.04	72.70	1.914	35	67
31.83	33.21	34.59	35.98	37.36	40.13	46.75	50.07	51.17	53.93	60.83	62.21	70.21	71.87	1.919	37	71
30.98	32.37	33.75	35.14	36.52	39.29	45.91	49.23	50.33	53.09	59.99	61.38	69.38	71.03	1.923	39	75
35.06	36.44	37.82	39.20	40.58	43.34	49.96	53.27	54.38	57.13	64.03	65.41	73.40	75.06	1.931	29	56
34.22	35.60	36.98	38.36	39.74	42.50	49.12	52.44	53.54	56.30	63.19	64.58	72.57	74.23	1.935	31	60
33.65	35.03	36.41	37.80	39.18	41.94	48.56	51.88	52.98	55.74	62.64	64.02	72.01	73.67	1.969	32	63
32.80	34.19	35.57	36.95	38.33	41.10	47.72	51.04	52.14	54.90	61.80	63.18	71.18	72.84	1.971	34	67
31.96	33.34	34.72	36.11	37.49	40.26	46.89	50.20	51.30	54.06	60.96	62.35	70.34	72.00	1.972	36	71
		19.59	21.03	22.46	25.32	32.08	35.45	36.56	39.35	46.31	47.71	55.75	57.42	1.972	71	140
31.11	32.50	33.88	35.27	36.65	39.42	46.05	49.36	50.47	53.23	60.13	61.51	69.51	71.17	1.974	38	75
35.19	36.57	37.95	39.33	40.71	43.48	50.10	53.41	54.51	57.27	64.16	65.54	73.54	75.20	2.000	28	56
34.35	35.73	37.11	38.49	39.87	42.64	49.26	52.57	53.67	56.43	63.33	64.71	72.71	74.36	2.000	30	60
30.11	31.50	32.88	34.27	35.65	38.42	45.06	48.38	49.48	52.24	59.15	60.53	68.53	70.19	2.000	40	80
27.97	29.36	30.75	32.14	33.53	36.30	42.95	46.27	47.37	50.14	57.05	58.43	66.44	68.09	2.000	45	90
23.18	24.59	25.99	27.39	28.79	31.59	38.26	41.60	42.71	45.48	52.40	53.79	61.81	63.47	2.000	56	112
31.24	32.63	34.01	35.39	36.78	39.55	46.18	49.49	50.60	53.36	60.26	61.64	69.64	71.30	2.027	37	75
32.09	33.47	34.86	36.24	37.62	40.39	47.02	50.33	51.44	54.20	61.10	62.48	70.48	72.13	2.029	35	71
32.94	34.32	35.70	37.09	38.46	41.23	47.86	51.17	52.28	55.03	61.93	63.31	71.31	72.97	2.030	33	67
33.78	35.17	36.54	37.93	39.31	42.07	48.70	52.01	53.11	55.87	62.77	64.15	72.15	73.80	2.032	31	63
30.24	31.63	33.01	34.40	35.78	38.55	45.19	48.51	49.61	52.37	59.28	60.66	68.66	70.32	2.051	39	80
34.48	35.86	37.24	38.63	40.00	42.77	49.39	52.71	53.81	56.57	63.46	64.84	72.84	74.50	2.069	29	60
31.37	32.76	34.14	35.53	36.91	39.68	46.31	49.63	50.73	53.49	60.39	61.78	69.78	71.43	2.083	36	75
32.22	33.60	34.99	36.37	37.75	40.52	47.15	50.47	51.57	54.33	61.23	62.61	70.61	72.27	2.088	34	71
	18.59	20.05	21.50	22.94	25.80	32.58	35.94	37.06	39.86	46.82	48.22	56.27	57.93	2.090	67	140
28.22	29.62	31.00	32.40	33.78	36.56	43.21	46.53	47.63	50.40	57.31	58.69	66.70	68.36	2.093	43	90
33.07	34.45	35.83	37.22	38.60	41.36	47.99	51.31	52.41	55.17	62.07	63.45	71.45	73.10	2.094	32	67
33.91	35.30	36.68	38.06	39.44	42.21	48.83	52.15	53.25	56.01	62.90	64.29	72.28	73.94	2.100	30	63
						26.42	29.86	31.00	33.84	40.88	42.28	50.39	52.06	2.100	80	168
30.37	31.76	33.14	34.53	35.91	38.68	45.32	48.64	49.74	52.51	59.41	60.79	68.80	70.45	2.105	38	80
23.54	24.95	26.36	27.76	29.16	31.96	38.65	41.98	43.09	45.87	52.79	54.18	62.20	63.86	2.113	53	112
34.61	35.99	37.37	38.76	40.14	42.90	49.52	52.84	53.94	56.70	63.60	64.98	72.98	74.63	2.143	28	60
31.50	32.89	34.27	35.65	37.04	39.81	46.44	49.76	50.86	53.62	60.53	61.91	69.91	71.57	2.143	35	75
32.35	33.73	35.12	36.50	37.88	40.65	47.28	50.60	51.70	54.46	61.36	62.75	70.75	72.40	2.152	33	71
33.20	34.58	35.96	37.35	38.73	41.50	48.12	51.44	52.54	55.30	62.20	63.58	71.58	73.24	2.161	31	67
30.49	31.88	33.27	34.66	36.04	38.81	45.45	48.77	49.87	52.64	59.54	60.93	68.93	70.59	2.162	37	80
34.04	35.43	36.81	38.19	39.57	42.34	48.96	52.28	53.38	56.14	63.04	64.42	72.42	74.07	2.172	29	63
31.63	33.01	34.40	35.78	37.17	39.94	46.57	49.89	50.99	53.76	60.66	62.04	70.04	71.70	2.206	34	75
32.48	33.86	35.25	36.63	38.01	40.78	47.41	50.73	51.83	54.59	61.50	62.88	70.88	72.54	2.219	32	71
30.62	32.01	33.40	34.79	36.17	38.94	45.58	48.90	50.01	52.77	59.68	61.06	69.06	70.72	2.222	36	80
	19.05	20.51	21.97	23.41	26.27	33.07	36.44	37.56	40.36	47.33	48.72	56.78	58.45	2.222	63	140
33.33	34.71	36.09	37.48	38.86	41.63	48.25	51.57	52.67	55.43	62.33	63.72	71.72	73.37	2.233	30	67
23.91	25.32	26.73	28.14	29.54	32.34	39.03	42.37	43.48	46.25	53.18	54.57	62.60	64.26	2.240	50	112
						27.00	30.46	31.60	34.44	41.50	42.90	51.02	52.69	2.240	75	168
34.17	35.56	36.94	38.32	39.70	42.47	49.10	52.41	53.51	56.27	63.17	64.55	72.55	74.21	2.250	28	63
28.60	30.00	31.38	32.78	34.16	36.95	43.60	46.92	48.03	50.79	57.70	59.09	67.10	68.76	2.250	40	90
						24.30	27.82	28.98	31.85	38.97	40.38	48.53	50.22	2.250	80	180
31.75	33.14	34.53	35.91	37.30	40.07	46.70	50.02	51.13	53.89	60.79	62.17	70.18	71.83	2.273	33	75
30.75	32.14	33.53	34.91	36.30	39.07	45.71	49.03	50.14	52.90	59.81	61.19	69.20	70.85	2.286	35	80
32.61	33.99	35.38	36.76	38.14	40.91	47.54	50.86	51.97	54.73	61.63	63.01	71.01	72.67	2.290	31	71
28.73	30.12	31.51	32.91	34.29	37.07	43.73	47.05	48.16	50.92	57.84	59.22	67.23	68.89	2.308	39	90
33.46	34.84	36.22	37.61	38.99	41.76	48.39	51.70	52.81	55.57	62.47	63.85	71.85	73.51	2.310	29	67
24.15	25.56	26.97	28.38	29.78	32.59	39.28	42.62	43.73	46.51	53.44	54.83	62.86	64.52	2.333	48	112
	19.39	20.85	22.31	23.76	26.63	33.43	36.81	37.93	40.73	47.71	49.10	57.16	58.83	2.333	60	140
31.88	33.27	34.66	36.04	37.43	40.20	46.83	50.15	51.26	54.02	60.92	62.31	70.31	71.97	2.344	32	75
30.88	32.27	33.65	35.04	36.43	39.20	45.84	49.17	50.27	53.03	59.94	61.32	69.33	70.99	2.353	34	80
						27.47	30.93	32.07	34.92	41.99	43.39	51.52	53.19	2.366	71	168
32.73	34.12	35.51	36.89	38.27	41.05	47.68	51.00	52.10	54.86	61.76	63.15	71.15	72.80	2.367	30	71
28.85	30.25	31.64	33.03	34.42	37.20	43.85	47.18	48.29	51.05	57.97	59.35	67.36	69.02	2.368	38	90
33.59	34.97	36.35	37.74	39.12	41.89	48.52	51.84	52.94	55.70	62.60	63.98	71.98	73.64	2.393	28	67
						24.87	28.40	29.56	32.44	39.57	40.99	49.15	50.84	2.400	75	180
32.01	33.40	34.78	36.17	37.56	40.33	46.97	50.29	51.39	54.15	61.06	62.44	70.44	72.10	2.419	31	75
31.00	32.40	33.78	35.17	36.56	39.33	45.97	49.30	50.40	53.16	60.07	61.46	69.46	71.12	2.424	33	80
28.98	30.37	31.76	33.16	34.55	37.33	43.98	47.31	48.42	51.18	58.10	59.48	67.49	69.15	2.432	37	90
32.86	34.25	35.63	37.02	38.40	41.18	47.81	51.13	52.23	54.99	61.90	63.28	71.28	72.94	2.448	29	71
24.51	25.93	27.34	28.75	30.15	32.96	39.66	43.00	44.11	46.89	53.83	55.22	63.25	64.91	2.489	45	112
32.14	33.53	34.91	36.30	37.69	40.46	47.10	50.42	51.52	54.28	61.19	62.57	70.58	72.23	2.500	30	75
31.13	32.52	33.91	35.30	36.68	39.46	46.10	49.43	50.53	53.30	60.20	61.59	69.59	71.25	2.500	32	80
29.10	30.50	31.89	33.29	34.67	37.46	44.11	47.44	48.55	51.31	58.23	59.61	67.63	69.29	2.500	36	90
18.34	19.84	21.31	22.77	24.22	27.10	33.92	37.30	38.42	41.23	48.21	49.61	57.68	59.34	2.500	56	140
								25.34	28.33	35.64	37.08	45.34	47.04	2.500	80	200
1.01	1.02	1.03	1.04	1.05	1.07	1.12	1.14	1.14	1.16	1.19	1.20	1.24	1.25	Length Factor*		

Note: Check Sprocket Specification table on page 78 for Nickel Plated sprocket availability.

* This length factor must be used to determine the proper belt width.

Center distance is greater than eight times the small sprocket and the large sprocket is not flanged. See Engineering Section for details.

Drive Selection Table

Number of Grooves (DriveR)	Pitch Diameter (Inches) (DriveR)	Number of Grooves (DriveN)	Pitch Diameter (Inches) (DriveN)	Speed Ratio	14MGT-994 PL 39.13 71 Teeth	14MGT-1120 PL 44.09 80 Teeth	14MGT-1190 PL 46.85 85 Teeth	14MGT-1260 PL 49.61 90 Teeth	14MGT-1400 PL 55.12 100 Teeth	14MGT-1568 PL 61.73 112 Teeth	14MGT-1610 PL 63.39 115 Teeth	14MGT-1750 PL 68.90 125 Teeth	14MGT-1890 PL 74.41 135 Teeth	14MGT-1960 PL 77.17 140 Teeth	14MGT-2100 PL 82.68 150 Teeth	14MGT-2240 PL 88.19 160 Teeth	14MGT-2310 PL 90.94 165 Teeth
67	11.755	168	29.475	2.507													
71	12.457	180	31.580	2.535													
28	4.912	71	12.457	2.536				10.48	13.38	16.80	17.65	20.46	23.26	24.65	27.44	30.22	31.60
35	6.141	90	15.790	2.571						12.71	13.61	16.52	19.38	20.80	23.62	26.43	27.83
31	5.439	80	14.036	2.581					11.45	14.95	15.81	18.66	21.48	22.88	25.68	28.47	29.86
29	5.088	75	13.158	2.586					12.58	16.02	16.88	19.71	22.51	23.91	26.70	29.49	30.88
43	7.544	112	19.650	2.605									14.57	16.07	19.01	21.89	23.32
53	9.299	140	24.562	2.642													
34	5.965	90	15.790	2.647						12.83	13.72	16.63	19.50	20.92	23.74	26.55	27.95
30	5.263	80	14.036	2.667					11.56	15.06	15.93	18.78	21.60	23.01	25.81	28.60	29.99
63	11.053	168	29.475	2.667													
75	13.158	200	35.089	2.667													
28	4.912	75	13.158	2.679					12.69	16.14	17.00	19.83	22.64	24.04	26.83	29.62	31.00
67	11.755	180	31.580	2.687													
33	5.790	90	15.790	2.727						12.94	13.83	16.75	19.62	21.04	23.87	26.68	28.07
29	5.088	80	14.036	2.759					11.67	15.18	16.05	18.90	21.72	23.13	25.93	28.73	30.12
40	7.018	112	19.650	2.800									14.90	16.41	19.36	22.25	23.68
50	8.772	140	24.562	2.800													17.47
60	10.527	168	29.475	2.800													
80	14.036	224	39.300	2.800													
32	5.614	90	15.790	2.813						13.05	13.95	16.87	19.73	21.16	23.99	26.80	28.20
71	12.457	200	35.089	2.817													
28	4.912	80	14.036	2.857					11.78	15.30	16.17	19.02	21.85	23.25	26.06	28.85	30.24
63	11.053	180	31.580	2.857													
39	6.842	112	19.650	2.872									15.01	16.52	19.47	22.36	23.80
31	5.439	90	15.790	2.903						13.16	14.06	16.98	19.85	21.28	24.11	26.92	28.32
48	8.421	140	24.562	2.917													17.69
38	6.667	112	19.650	2.947									15.12	16.63	19.58	22.48	23.91
67	11.755	200	35.089	2.985													
75	13.158	224	39.300	2.987													
30	5.263	90	15.790	3.000						13.27	14.17	17.10	19.97	21.40	24.23	27.05	28.45
56	9.825	168	29.475	3.000													
60	10.527	180	31.580	3.000													
37	6.492	112	19.650	3.027									15.23	16.74	19.70	22.60	24.03
29	5.088	90	15.790	3.103						13.38	14.28	17.21	20.09	21.52	24.35	27.17	28.57
36	6.316	112	19.650	3.111									15.34	16.85	19.81	22.72	24.15
45	7.895	140	24.562	3.111													18.01
71	12.457	224	39.300	3.155													
53	9.299	168	29.475	3.170													
63	11.053	200	35.089	3.175													
35	6.141	112	19.650	3.200									15.45	16.97	19.93	22.83	24.27
28	4.912	90	15.790	3.214						13.49	14.40	17.33	20.21	21.64	24.47	27.29	28.69
56	9.825	180	31.580	3.214													
43	7.544	140	24.562	3.256												16.65	18.23
34	5.965	112	19.650	3.294									15.56	17.08	20.04	22.95	24.39
60	10.527	200	35.089	3.333													
67	11.755	224	39.300	3.343													
50	8.772	168	29.475	3.360													
33	5.790	112	19.650	3.394									15.66	17.19	20.16	23.07	24.50
53	9.299	180	31.580	3.396													
32	5.614	112	19.650	3.500									15.77	17.30	20.27	23.18	24.62
40	7.018	140	24.562	3.500												16.97	18.55
48	8.421	168	29.475	3.500													
63	11.053	224	39.300	3.556													
56	9.825	200	35.089	3.571													
39	6.842	140	24.562	3.590												17.08	18.66
50	8.772	180	31.580	3.600													
31	5.439	112	19.650	3.613									15.88	17.41	20.38	23.30	24.74
38	6.667	140	24.562	3.684												17.18	18.77
30	5.263	112	19.650	3.733									15.99	17.52	20.50	23.41	24.85
45	7.895	168	29.475	3.733													
60	10.527	224	39.300	3.733													
48	8.421	180	31.580	3.750													
53	9.299	200	35.089	3.774													
37	6.492	140	24.562	3.784												17.29	18.87
29	5.088	112	19.650	3.862								12.91	16.10	17.63	20.61	23.53	24.97
36	6.316	140	24.562	3.889												17.39	18.98
43	7.544	168	29.475	3.907													
28	4.912	112	19.650	4.000								13.01	16.21	17.74	20.72	23.65	25.09
35	6.141	140	24.562	4.000												17.50	19.09
45	7.895	180	31.580	4.000													
50	8.772	200	35.089	4.000													
56	9.825	224	39.300	4.000													
Length Factor*					0.68	0.73	0.75	0.77	0.81	0.85	0.86	0.89	0.92	0.94	0.96	0.99	1.00

Note: Check Sprocket Specification table on page 78 for Nickel Plated sprocket availability.

* This length factor must be used to determine the proper belt width.

Center Distance, Inches | **Sprocket Combinations** (DriveR / DriveN)

14MGT-2380 P.L. 93.70 170 Teeth	14MGT-2450 P.L. 96.46 175 Teeth	14MGT-2520 P.L. 99.21 180 Teeth	14MGT-2590 P.L. 101.97 185 Teeth	14MGT-2660 P.L. 104.72 190 Teeth	14MGT-2800 P.L. 110.24 200 Teeth	14MGT-3136 P.L. 123.46 224 Teeth	14MGT-3304 P.L. 130.08 236 Teeth	14MGT-3360 P.L. 132.28 240 Teeth	14MGT-3500 P.L. 137.79 250 Teeth	14MGT-3850 P.L. 151.57 275 Teeth	14MGT-3920 P.L. 154.33 280 Teeth	14MGT-4326 P.L. 170.31 309 Teeth	14MGT-4410 P.L. 173.62 315 Teeth	Speed Ratio	Number of Grooves (DriveR)	Number of Grooves (DriveN)
						27.93	31.40	32.54	35.40	42.48	43.89	52.02	53.70	2.507	67	168
						25.32	28.85	30.02	32.91	40.05	41.47	49.64	51.33	2.535	71	180
32.99	34.38	35.76	37.15	38.53	41.31	47.94	51.26	52.36	55.12	62.03	63.41	71.41	73.07	2.536	28	71
29.23	30.62	32.02	33.41	34.80	37.59	44.24	47.57	48.68	51.44	58.36	59.75	67.76	69.42	2.571	35	90
31.26	32.65	34.04	35.43	36.81	39.59	46.23	49.56	50.66	53.43	60.34	61.72	69.73	71.38	2.581	31	80
32.27	33.66	35.04	36.43	37.81	40.59	47.23	50.55	51.65	54.41	61.32	62.70	70.71	72.37	2.586	29	75
24.75	26.17	27.58	28.99	30.40	33.21	39.91	43.26	44.37	47.15	54.09	55.48	63.51	65.17	2.605	43	112
18.67	20.17	21.65	23.12	24.57	27.46	34.28	37.67	38.79	41.60	48.59	49.99	58.06	59.73	2.642	53	140
29.35	30.75	32.14	33.54	34.93	37.71	44.37	47.70	48.81	51.57	58.49	59.88	67.89	69.55	2.647	34	90
31.39	32.78	34.17	35.56	36.94	39.72	46.36	49.69	50.79	53.56	60.47	61.85	69.86	71.52	2.667	30	80
					21.26	28.39	31.87	33.02	35.88	42.96	44.37	52.51	54.19	2.667	63	168
							24.67	25.89	28.90	36.22	37.66	45.95	47.65	2.667	75	200
32.40	33.79	35.17	36.56	37.94	40.72	47.36	50.68	51.78	54.55	61.45	62.84	70.84	72.50	2.679	28	75
						25.76	29.31	30.48	33.38	40.53	41.95	50.14	51.82	2.687	67	180
29.48	30.88	32.27	33.66	35.05	37.84	44.50	47.83	48.94	51.70	58.62	60.01	68.02	69.68	2.727	33	90
31.51	32.91	34.29	35.68	37.07	39.85	46.49	49.82	50.92	53.69	60.60	61.98	69.99	71.65	2.759	29	80
25.11	26.53	27.94	29.36	30.76	33.58	40.29	43.64	44.75	47.53	54.47	55.86	63.90	65.56	2.800	40	112
19.00	20.51	21.99	23.46	24.92	27.81	34.65	38.04	39.16	41.97	48.97	50.36	58.44	60.11	2.800	50	140
					21.59	28.74	32.22	33.37	36.23	43.33	44.74	52.89	54.57	2.800	60	168
										31.31	32.81	41.32	43.05	2.800	80	224
29.60	31.00	32.39	33.79	35.18	37.97	44.63	47.96	49.07	51.83	58.75	60.14	68.15	69.81	2.813	32	90
							25.10	26.33	29.34	36.68	38.13	46.43	48.13	2.817	71	200
31.64	33.03	34.42	35.81	37.20	39.98	46.62	49.95	51.05	53.82	60.73	62.12	70.12	71.78	2.857	28	80
						26.21	29.77	30.94	33.84	41.01	42.43	50.63	52.32	2.857	63	180
25.23	26.65	28.06	29.48	30.89	33.70	40.41	43.76	44.88	47.66	54.60	55.99	64.03	65.69	2.872	39	112
29.73	31.13	32.52	33.92	35.31	38.09	44.76	48.09	49.19	51.96	58.88	60.27	68.29	69.95	2.903	31	90
19.22	20.73	22.22	23.69	25.15	28.05	34.89	38.28	39.41	42.22	49.22	50.62	58.69	60.36	2.917	48	140
25.34	26.77	28.18	29.60	31.01	33.83	40.54	43.89	45.00	47.78	54.73	56.12	64.16	65.82	2.947	38	112
							25.53	26.76	29.79	37.15	38.60	46.91	48.61	2.985	67	200
										31.86	33.37	41.90	43.64	2.987	75	224
29.85	31.25	32.64	34.04	35.43	38.22	44.89	48.22	49.32	52.09	59.02	60.40	68.42	70.08	3.000	30	90
					22.02	29.19	32.69	33.84	36.71	43.81	45.23	53.38	55.06	3.000	56	168
						26.54	30.11	31.28	34.19	41.37	42.79	50.99	52.68	3.000	60	180
25.46	26.89	28.31	29.72	31.13	33.95	40.66	44.02	45.13	47.91	54.86	56.25	64.29	65.95	3.027	37	112
29.97	31.38	32.77	34.17	35.56	38.35	45.01	48.35	49.45	52.22	59.15	60.53	68.55	70.21	3.103	29	90
25.58	27.01	28.43	29.84	31.25	34.07	40.79	44.14	45.25	48.04	54.99	56.38	64.42	66.08	3.111	36	112
19.55	21.07	22.56	24.03	25.49	28.40	35.25	38.65	39.77	42.59	49.59	50.99	59.07	60.75	3.111	45	140
										32.30	33.81	42.36	44.10	3.155	71	224
					22.35	29.54	33.03	34.19	37.06	44.18	45.59	53.75	55.44	3.170	53	168
							25.97	27.20	30.23	37.61	39.06	47.38	49.09	3.175	63	200
25.70	27.13	28.55	29.96	31.37	34.19	40.91	44.27	45.38	48.16	55.11	56.50	64.55	66.21	3.200	35	112
30.10	31.50	32.90	34.29	35.69	38.48	45.14	48.48	49.58	52.35	59.28	60.66	68.68	70.34	3.214	28	90
						26.99	30.56	31.74	34.65	41.84	43.27	51.48	53.17	3.214	56	180
19.77	21.29	22.78	24.26	25.72	28.63	35.49	38.89	40.02	42.83	49.84	51.24	59.33	61.00	3.256	43	140
25.82	27.25	28.67	30.09	31.50	34.32	41.04	44.39	45.51	48.29	55.24	56.63	64.67	66.34	3.294	34	112
							26.29	27.53	30.57	37.95	39.41	47.74	49.45	3.333	60	200
										32.74	34.26	42.82	44.57	3.343	67	224
					22.67	29.88	33.38	34.54	37.41	44.54	45.96	54.12	55.81	3.360	50	168
25.94	27.37	28.79	30.21	31.62	34.44	41.16	44.52	45.63	48.42	55.37	56.76	64.80	66.47	3.394	33	112
						27.32	30.90	32.08	35.00	42.20	43.63	51.85	53.54	3.396	53	180
26.06	27.49	28.91	30.33	31.74	34.56	41.29	44.64	45.76	48.54	55.50	56.89	64.93	66.60	3.500	32	112
20.10	21.62	23.12	24.60	26.07	28.98	35.85	39.25	40.38	43.20	50.21	51.61	59.71	61.38	3.500	40	140
				19.71	22.89	30.11	33.61	34.77	37.65	44.78	46.20	54.37	56.06	3.500	48	168
										33.18	34.70	43.28	45.03	3.556	63	224
						22.87	26.72	27.96	31.01	38.41	39.87	48.22	49.93	3.571	56	200
20.21	21.73	23.23	24.71	26.18	29.10	35.97	39.37	40.50	43.32	50.34	51.74	59.83	61.51	3.590	39	140
						27.65	31.24	32.42	35.35	42.56	43.99	52.21	53.91	3.600	50	180
26.17	27.61	29.03	30.45	31.86	34.68	41.41	44.77	45.88	48.67	55.63	57.02	65.06	66.73	3.613	31	112
20.32	21.84	23.34	24.83	26.30	29.21	36.09	39.49	40.62	43.44	50.46	51.86	59.96	61.63	3.684	38	140
26.29	27.72	29.15	30.57	31.98	34.81	41.54	44.90	46.01	48.80	55.75	57.15	65.19	66.86	3.733	30	112
				20.03	23.21	30.45	33.96	35.12	38.00	45.14	46.56	54.74	56.42	3.733	45	168
									25.60	33.51	35.03	43.63	45.38	3.733	60	224
						27.87	31.47	32.65	35.58	42.79	44.22	52.45	54.15	3.750	48	180
						23.18	27.04	28.28	31.34	38.76	40.22	48.57	50.29	3.774	53	200
20.43	21.95	23.45	24.94	26.41	29.33	36.21	39.62	40.74	43.56	50.59	51.99	60.08	61.76	3.784	37	140
26.41	27.84	29.27	30.69	32.10	34.93	41.66	45.02	46.14	48.92	55.88	57.27	65.32	66.98	3.862	29	112
20.54	22.06	23.56	25.05	26.52	29.44	36.33	39.74	40.87	43.69	50.71	52.11	60.21	61.88	3.889	36	140
				20.23	23.43	30.67	34.19	35.35	38.24	45.38	46.80	54.98	56.67	3.907	43	168
26.53	27.96	29.39	30.81	32.22	35.05	41.79	45.15	46.26	49.05	56.01	57.40	65.45	67.11	4.000	28	112
20.65	22.17	23.68	25.17	26.64	29.56	36.45	39.86	40.99	43.81	50.83	52.24	60.34	62.01	4.000	35	140
					20.61	28.20	31.81	32.99	35.92	43.15	44.58	52.82	54.51	4.000	45	180
						23.49	27.36	28.61	31.67	39.10	40.56	48.93	50.64	4.000	50	200
									26.01	33.95	35.47	44.09	45.84	4.000	56	224
1.01	1.02	1.03	1.04	1.05	1.07	1.12	1.14	1.14	1.16	1.19	1.20	1.24	1.25	Length Factor*		

Note: Check Sprocket Specification table on page 78 for Nickel Plated sprocket availability.

* This length factor must be used to determine the proper belt width.

Center distance is greater than eight times the small sprocket and the large sprocket is not flanged. See Engineering Section for details.

14mm Pitch Poly Chain® GT® Carbon™ Belts — Drive Selection Table

Number of Grooves (DriveR)	Pitch Diameter (Inches) (DriveR)	Number of Grooves (DriveN)	Pitch Diameter (Inches) (DriveN)	Speed Ratio	14MGT-994 PL 39.13 71 Teeth	14MGT-1120 PL 44.09 80 Teeth	14MGT-1190 PL 46.85 85 Teeth	14MGT-1260 PL 49.61 90 Teeth	14MGT-1400 PL 55.12 100 Teeth	14MGT-1568 PL 61.73 112 Teeth	14MGT-1610 PL 63.39 115 Teeth	14MGT-1750 PL 68.90 125 Teeth	14MGT-1890 PL 74.41 135 Teeth	14MGT-1960 PL 77.17 140 Teeth	14MGT-2100 PL 82.68 150 Teeth	14MGT-2240 PL 88.19 160 Teeth	14MGT-2310 PL 90.94 165 Teeth
34	5.965	140	24.562	4.118												17.60	19.19
48	8.421	200	35.089	4.167													
43	7.544	180	31.580	4.186													
40	7.018	168	29.475	4.200													
53	9.299	224	39.300	4.226													
33	5.790	140	24.562	4.242												17.70	19.30
39	6.842	168	29.475	4.308													
32	5.614	140	24.562	4.375												17.81	19.41
38	6.667	168	29.475	4.421													
45	7.895	200	35.089	4.444													
50	8.772	224	39.300	4.480													
40	7.018	180	31.580	4.500													
31	5.439	140	24.562	4.516												17.91	19.51
37	6.492	168	29.475	4.541													
39	6.842	180	31.580	4.615													
43	7.544	200	35.089	4.651													
30	5.263	140	24.562	4.667												18.02	19.62
36	6.316	168	29.475	4.667													
48	8.421	224	39.300	4.667													
38	6.667	180	31.580	4.737													
35	6.141	168	29.475	4.800													
29	5.088	140	24.562	4.828												18.12	19.73
37	6.492	180	31.580	4.865													
34	5.965	168	29.475	4.941													
45	7.895	224	39.300	4.978													
28	4.912	140	24.562	5.000												18.23	19.83
36	6.316	180	31.580	5.000													
40	7.018	200	35.089	5.000													
33	5.790	168	29.475	5.091													
39	6.842	200	35.089	5.128													
35	6.141	180	31.580	5.143													
43	7.544	224	39.300	5.209													
32	5.614	168	29.475	5.250													
38	6.667	200	35.089	5.263													
34	5.965	180	31.580	5.294													
37	6.492	200	35.089	5.405													
31	5.439	168	29.475	5.419													
33	5.790	180	31.580	5.455													
36	6.316	200	35.089	5.556													
30	5.263	168	29.475	5.600													
40	7.018	224	39.300	5.600													
32	5.614	180	31.580	5.625													
35	6.141	200	35.089	5.714													
39	6.842	224	39.300	5.744													
29	5.088	168	29.475	5.793													
31	5.439	180	31.580	5.806													
34	5.965	200	35.089	5.882													
38	6.667	224	39.300	5.895													
28	4.912	168	29.475	6.000													
30	5.263	180	31.580	6.000													
37	6.492	224	39.300	6.054													
33	5.790	200	35.089	6.061													
29	5.088	180	31.580	6.207													
36	6.316	224	39.300	6.222													
32	5.614	200	35.089	6.250													
35	6.141	224	39.300	6.400													
28	4.912	180	31.580	6.429													
31	5.439	200	35.089	6.452													
34	5.965	224	39.300	6.588													
30	5.263	200	35.089	6.667													
33	5.790	224	39.300	6.788													
29	5.088	200	35.089	6.897													
32	5.614	224	39.300	7.000													
28	4.912	200	35.089	7.143													
31	5.439	224	39.300	7.226													
30	5.263	224	39.300	7.467													
29	5.088	224	39.300	7.724													
28	4.912	224	39.300	8.000													
				Length Factor*	0.68	0.73	0.75	0.77	0.81	0.85	0.86	0.89	0.92	0.94	0.96	0.99	1.00

Note: Check Sprocket Specification table on page 78 for Nickel Plated sprocket availability.

* This length factor must be used to determine the proper belt width.

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14MGT-2380 PL 93.70 170 Teeth	14MGT-2450 PL 96.46 175 Teeth	14MGT-2520 PL 99.21 180 Teeth	14MGT-2590 PL 101.97 185 Teeth	14MGT-2660 PL 104.72 190 Teeth	14MGT-2800 PL 110.24 200 Teeth	14MGT-3136 PL 123.46 224 Teeth	14MGT-3304 PL 130.08 236 Teeth	14MGT-3360 PL 132.28 240 Teeth	14MGT-3500 PL 137.79 250 Teeth	14MGT-3850 PL 151.57 275 Teeth	14MGT-3920 PL 154.33 280 Teeth	14MGT-4326 PL 170.31 309 Teeth	14MGT-4410 PL 173.62 315 Teeth	Speed Ratio	DriveR No. of Grooves	DriveN No. of Grooves
20.75	22.28	23.79	25.28	26.75	29.68	36.57	39.98	41.11	43.93	50.96	52.36	60.46	62.14	4.118	34	140
						23.70	27.58	28.82	31.89	39.33	40.79	49.16	50.88	4.167	48	200
					20.81	28.42	32.03	33.21	36.15	43.38	44.82	53.06	54.76	4.186	43	180
			18.87	20.55	23.75	31.01	34.54	35.70	38.59	45.74	47.16	55.35	57.04	4.200	40	168
									26.32	34.28	35.80	44.43	46.18	4.226	53	224
20.86	22.39	23.90	25.39	26.86	29.79	36.68	40.10	41.23	44.05	51.08	52.49	60.59	62.26	4.242	33	140
			18.97	20.65	23.86	31.13	34.65	35.81	38.71	45.86	47.28	55.47	57.16	4.308	39	168
20.97	22.50	24.01	25.50	26.98	29.91	36.80	40.22	41.35	44.17	51.21	52.61	60.71	62.39	4.375	32	140
			19.08	20.75	23.97	31.24	34.77	35.93	38.82	45.98	47.40	55.60	57.29	4.421	38	168
						24.01	27.90	29.15	32.22	39.67	41.14	49.52	51.24	4.444	45	200
									26.63	34.60	36.13	44.77	46.53	4.480	50	224
					21.12	28.75	32.37	33.55	36.49	43.73	45.17	53.42	55.12	4.500	40	180
21.08	22.61	24.12	25.62	27.09	30.02	36.92	40.34	41.47	44.30	51.33	52.73	60.84	62.51	4.516	31	140
			19.18	20.86	24.07	31.35	34.88	36.04	38.94	46.10	47.52	55.72	57.41	4.541	37	168
					21.23	28.86	32.48	33.66	36.61	43.85	45.29	53.54	55.24	4.615	39	180
						24.21	28.11	29.36	32.44	39.90	41.37	49.75	51.47	4.651	43	200
21.19	22.72	24.23	25.73	27.21	30.14	37.04	40.46	41.59	44.42	51.45	52.86	60.97	62.64	4.667	30	140
			19.28	20.96	24.18	31.46	35.00	36.16	39.06	46.22	47.64	55.84	57.53	4.667	36	168
									26.84	34.82	36.35	45.00	46.76	4.667	48	224
					21.33	28.97	32.59	33.78	36.72	43.97	45.41	53.66	55.36	4.737	38	180
			19.38	21.06	24.29	31.58	35.11	36.27	39.17	46.34	47.76	55.96	57.65	4.800	35	168
21.30	22.83	24.34	25.84	27.32	30.25	37.16	40.58	41.71	44.54	51.58	52.98	61.09	62.77	4.828	29	140
					21.43	29.08	32.70	33.89	36.84	44.09	45.52	53.78	55.48	4.865	37	180
			19.48	21.17	24.39	31.69	35.23	36.39	39.29	46.46	47.88	56.08	57.78	4.941	34	168
									27.14	35.15	36.68	45.34	47.10	4.978	45	224
21.40	22.94	24.45	25.95	27.43	30.37	37.28	40.70	41.83	44.66	51.70	53.10	61.22	62.89	5.000	28	140
					21.53	29.19	32.81	34.00	36.95	44.20	45.64	53.90	55.61	5.000	36	180
						24.52	28.43	29.68	32.77	40.24	41.71	50.11	51.83	5.000	40	200
			19.58	21.27	24.50	31.80	35.34	36.50	39.40	46.57	48.00	56.21	57.90	5.091	33	168
						24.62	28.53	29.79	32.88	40.35	41.82	50.22	51.95	5.128	39	200
					21.63	29.30	32.93	34.11	37.06	44.32	45.76	54.02	55.73	5.143	35	180
									27.35	35.37	36.90	45.57	47.33	5.209	43	224
			19.69	21.38	24.61	31.91	35.45	36.62	39.52	46.69	48.12	56.33	58.02	5.250	32	168
						24.73	28.64	29.90	32.99	40.47	41.94	50.34	52.06	5.263	38	200
					21.74	29.41	33.04	34.23	37.18	44.44	45.88	54.15	55.85	5.294	34	180
						24.83	28.75	30.01	33.10	40.58	42.05	50.46	52.18	5.405	37	200
		18.00	19.79	21.48	24.71	32.03	35.57	36.73	39.64	46.81	48.24	56.45	58.14	5.419	31	168
					21.84	29.52	33.15	34.34	37.29	44.56	45.99	54.27	55.97	5.455	33	180
						24.93	28.85	30.11	33.21	40.70	42.17	50.58	52.30	5.556	36	200
		18.10	19.89	21.58	24.82	32.14	35.68	36.85	39.75	46.93	48.36	56.57	58.26	5.600	30	168
								24.13	27.66	35.69	37.23	45.91	47.67	5.600	40	224
					21.94	29.62	33.26	34.45	37.41	44.67	46.11	54.39	56.09	5.625	32	180
						25.03	28.96	30.22	33.32	40.81	42.28	50.69	52.42	5.714	35	200
								24.23	27.76	35.80	37.34	46.02	47.79	5.744	39	224
		18.19	19.99	21.69	24.93	32.25	35.80	36.96	39.87	47.05	48.48	56.69	58.39	5.793	29	168
					22.04	29.73	33.37	34.56	37.52	44.79	46.23	54.51	56.21	5.806	31	180
						25.14	29.07	30.33	33.43	40.92	42.39	50.81	52.53	5.882	34	200
								24.32	27.86	35.91	37.45	46.14	47.90	5.895	38	224
		18.29	20.09	21.79	25.03	32.36	35.91	37.08	39.99	47.17	48.60	56.81	58.51	6.000	28	168
					22.14	29.84	33.48	34.68	37.63	44.91	46.35	54.63	56.33	6.000	30	180
								24.42	27.96	36.02	37.56	46.25	48.01	6.054	37	224
						25.24	29.17	30.43	33.53	41.03	42.51	50.93	52.65	6.061	33	200
					22.25	29.95	33.59	34.79	37.75	45.02	46.46	54.75	56.45	6.207	29	180
								24.52	28.07	36.12	37.67	46.36	48.13	6.222	36	224
						25.34	29.28	30.54	33.64	41.15	42.62	51.04	52.77	6.250	32	200
								24.62	28.17	36.23	37.78	46.48	48.24	6.400	35	224
				18.70	22.35	30.06	33.71	34.90	37.86	45.14	46.58	54.87	56.57	6.429	28	180
						25.44	29.38	30.65	33.75	41.26	42.74	51.16	52.89	6.452	31	200
							23.19	24.72	28.27	36.34	37.88	46.59	48.36	6.588	34	224
						25.55	29.49	30.76	33.86	41.37	42.85	51.28	53.01	6.667	30	200
							23.28	24.82	28.37	36.45	37.99	46.70	48.47	6.788	33	224
						25.65	29.59	30.86	33.97	41.49	42.96	51.40	53.12	6.897	29	200
							23.38	24.92	28.47	36.56	38.10	46.82	48.58	7.000	32	224
						25.75	29.70	30.97	34.08	41.60	43.08	51.51	53.24	7.143	28	200
							23.48	25.02	28.58	36.66	38.21	46.93	48.70	7.226	31	224
							23.58	25.11	28.68	36.77	38.32	47.04	48.81	7.467	30	224
							23.67	25.21	28.78	36.88	38.43	47.15	48.93	7.724	29	224
							23.77	25.31	28.88	36.99	38.54	47.27	49.04	8.000	28	224
1.01	1.02	1.03	1.04	1.05	1.07	1.12	1.14	1.14	1.16	1.19	1.20	1.24	1.25	Length Factor*		

Center Distance, Inches

Sprocket Combinations — DriveR / DriveN

Note: Check Sprocket Specification table on page 78 for Nickel Plated sprocket availability.

* This length factor must be used to determine the proper belt width.

Center distance is greater than eight times the small sprocket and the large sprocket is not flanged. See Engineering Section for details.

Horsepower Rating for 12mm Wide
8mm Pitch POLY CHAIN® GT® CARBON™ BELTS

Rated Horsepower for Small Sprocket (Number of Grooves and Pitch Diameter, Inches)

RPM OF FASTER SHAFT	22 2.206	25 2.506	26 2.607	27 2.707	28 2.807	29 2.907	30 3.008	31 3.108	32 3.208	33 3.308	34 3.409	35 3.509	36 3.609	37 3.709	38 3.810	39 3.910	40 4.010	41 4.110	42 4.211	45 4.511
10	0.14	0.17	0.18	0.19	0.19	0.20	0.21	0.22	0.23	0.24	0.24	0.25	0.26	0.27	0.28	0.29	0.30	0.30	0.31	0.34
20	0.22	0.26	0.27	0.29	0.30	0.31	0.33	0.34	0.36	0.37	0.38	0.40	0.41	0.42	0.44	0.45	0.46	0.48	0.49	0.53
35	0.32	0.38	0.40	0.43	0.45	0.47	0.49	0.51	0.53	0.55	0.58	0.60	0.62	0.64	0.66	0.68	0.70	0.72	0.74	0.81
44	0.38	0.45	0.48	0.51	0.53	0.56	0.58	0.61	0.63	0.66	0.69	0.71	0.74	0.76	0.79	0.81	0.84	0.86	0.89	0.96
58	0.46	0.56	0.59	0.63	0.66	0.69	0.72	0.76	0.79	0.82	0.85	0.89	0.92	0.95	0.98	1.01	1.04	1.08	1.11	1.20
70	0.54	0.65	0.69	0.73	0.77	0.80	0.84	0.88	0.92	0.96	0.99	1.03	1.07	1.11	1.14	1.18	1.22	1.26	1.29	1.40
88	0.64	0.78	0.83	0.88	0.92	0.97	1.01	1.06	1.11	1.15	1.20	1.24	1.29	1.34	1.38	1.43	1.47	1.52	1.56	1.70
100	0.71	0.87	0.92	0.97	1.02	1.08	1.13	1.18	1.23	1.28	1.33	1.38	1.44	1.49	1.54	1.59	1.64	1.69	1.74	1.89
117	0.81	0.99	1.05	1.11	1.17	1.22	1.28	1.34	1.40	1.46	1.52	1.58	1.64	1.70	1.76	1.81	1.87	1.93	1.99	2.16
175	1.12	1.38	1.46	1.55	1.63	1.72	1.81	1.89	1.97	2.06	2.14	2.23	2.31	2.39	2.48	2.56	2.65	2.73	2.81	3.06
200	1.25	1.54	1.64	1.74	1.83	1.93	2.02	2.12	2.21	2.31	2.40	2.50	2.59	2.69	2.78	2.88	2.97	3.06	3.16	3.44
233	1.42	1.75	1.87	1.98	2.09	2.20	2.31	2.42	2.53	2.63	2.74	2.85	2.96	3.07	3.18	3.29	3.39	3.50	3.61	3.93
300	1.76	2.18	2.32	2.45	2.59	2.73	2.87	3.01	3.14	3.28	3.42	3.56	3.69	3.83	3.96	4.10	4.23	4.37	4.51	4.91
350	2.00	2.48	2.64	2.80	2.96	3.12	3.28	3.44	3.60	3.75	3.91	4.07	4.23	4.38	4.54	4.69	4.85	5.01	5.16	5.62
400	2.24	2.78	2.96	3.14	3.32	3.50	3.68	3.86	4.04	4.22	4.40	4.57	4.75	4.93	5.11	5.28	5.46	5.63	5.81	6.33
500	2.70	3.37	3.59	3.81	4.03	4.25	4.48	4.69	4.91	5.13	5.35	5.57	5.78	6.00	6.22	6.43	6.65	6.86	7.08	7.72
575	3.04	3.80	4.05	4.31	4.56	4.81	5.06	5.31	5.55	5.80	6.05	6.30	6.54	6.79	7.04	7.28	7.52	7.77	8.01	8.74
600	3.15	3.94	4.21	4.47	4.73	4.99	5.25	5.51	5.77	6.02	6.28	6.54	6.79	7.05	7.31	7.56	7.81	8.07	8.32	9.08
690	3.55	4.45	4.75	5.04	5.34	5.63	5.93	6.23	6.52	6.81	7.11	7.40	7.69	7.98	8.27	8.56	8.85	9.13	9.42	10.3
700	3.59	4.50	4.81	5.11	5.41	5.71	6.01	6.30	6.60	6.90	7.20	7.49	7.79	8.08	8.38	8.67	8.96	9.25	9.55	10.4
800	4.02	5.05	5.39	5.73	6.07	6.41	6.75	7.09	7.42	7.76	8.10	8.43	8.76	9.09	9.43	9.76	10.1	10.4	10.8	11.7
870	4.32	5.43	5.80	6.17	6.53	6.90	7.27	7.63	7.99	8.35	8.72	9.08	9.44	9.79	10.2	10.5	10.9	11.2	11.6	12.6
900	4.45	5.59	5.97	6.35	6.73	7.11	7.48	7.86	8.23	8.61	8.98	9.35	9.72	10.1	10.5	10.8	11.2	11.6	11.9	13.0
1000	4.86	6.12	6.54	6.96	7.38	7.79	8.21	8.62	9.03	9.44	9.86	10.3	10.7	11.1	11.5	11.9	12.3	12.7	13.1	14.3
1160	5.51	6.96	7.44	7.92	8.39	8.87	9.35	9.82	10.3	10.8	11.2	11.7	12.2	12.6	13.1	13.6	14.0	14.5	15.0	16.3
1750	7.79	9.90	10.6	11.3	12.0	12.7	13.4	14.1	14.8	15.4	16.1	16.8	17.5	18.2	18.9	19.5	20.2	20.9	21.5	23.6
2000	8.72	11.1	11.9	12.7	13.5	14.2	15.0	15.8	16.6	17.4	18.1	18.9	19.7	20.4	21.2	22.0	22.7	23.5	24.2	26.5
3000	12.2	15.7	16.8	17.9	19.1	20.2	21.3	22.5	23.6	24.7	25.8	26.9	28.0	29.1	30.2	31.3	32.4	33.5	34.6	37.8
3450	13.7	17.6	18.9	20.2	21.5	22.8	24.0	25.3	26.6	27.8	29.1	30.3	31.6	32.8	34.1	35.3	36.5	37.8	39.0	42.6
4000	15.4	19.9	21.4	22.9	24.3	25.8	27.2	28.7	30.1	31.6	33.0	34.4	35.8	37.2	38.7	40.1	41.4	42.8	44.2	48.3
4500	17.0	21.9	23.6	25.2	26.8	28.5	30.1	31.7	33.3	34.8	36.4	38.0	39.6	41.1	42.7	44.2	45.8	47.3	48.8	53.3
5000	18.5	23.9	25.7	27.5	29.3	31.0	32.8	34.6	36.3	38.0	39.8	41.5	43.2	44.9	46.6	48.3	49.9	51.6	53.2	58.1
5500	19.9	25.8	27.8	29.7	31.6	33.6	35.5	37.4	39.3	41.1	43.0	44.9	46.7	48.5	50.3	52.2	53.9	55.7	57.5	62.8

Use this sprocket only if required to obtain speed ratio or to meet diameter limitations. See Engineering Section for details.

Poly Chain® GT® Carbon™ Belt Length Correction Factor Table

Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor
8MGT-640	80	0.79	8MGT-1200	150	1.03	8MGT-2200	275	1.26	8MGT-3048	381	1.38
8MGT-720	90	0.83	8MGT-1224	153	1.03	8MGT-2240	280	1.26	8MGT-3200	400	1.40
8MGT-800	100	0.87	8MGT-1280	160	1.05	8MGT-2400	300	1.29	8MGT-3280	410	1.41
8MGT-896	112	0.91	8MGT-1440	180	1.10	8MGT-2520	315	1.31	8MGT-3600	450	1.45
8MGT-960	120	0.94	8MGT-1600	200	1.14	8MGT-2600	325	1.32	8MGT-4000	500	1.49
8MGT-1000	125	0.96	8MGT-1760	220	1.17	8MGT-2800	350	1.35	8MGT-4400	550	1.52
8MGT-1040	130	0.97	8MGT-1792	224	1.18	8MGT-2840	355	1.36	8MGT-4480	560	1.53
8MGT-1120	140	1.00	8MGT-2000	250	1.22						

Gates Corporation

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Horsepower Rating for 12mm Wide
8mm Pitch POLY CHAIN® GT® CARBON™ BELTS

RPM of Faster Shaft	Rated Horsepower for Small Sprocket (Number of Grooves and Pitch Diameter, Inches)										Additional Horsepower per belt for Speed Ratio of Speed-Down Drives									
	48 / 4.812	50 / 5.013	53 / 5.314	56 / 5.614	60 / 6.015	63 / 6.316	67 / 6.717	71 / 7.118	75 / 7.519	80 / 8.020	1.00 to 1.02	1.03 to 1.05	1.06 to 1.10	1.11 to 1.15	1.16 to 1.21	1.22 to 1.30	1.31 to 1.43	1.44 to 1.64	1.65 to 2.15	2.16 and Over
10	0.36	0.38	0.40	0.43	0.46	0.49	0.52	0.55	0.58	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
20	0.57	0.60	0.64	0.68	0.73	0.77	0.83	0.88	0.93	1.00	0.00	0.00	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01
35	0.87	0.91	0.97	1.03	1.12	1.18	1.26	1.34	1.42	1.52	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03
44	1.04	1.09	1.16	1.24	1.34	1.41	1.51	1.61	1.71	1.83	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03
58	1.30	1.36	1.46	1.55	1.67	1.77	1.89	2.01	2.14	2.29	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04
70	1.52	1.59	1.70	1.81	1.96	2.07	2.21	2.36	2.50	2.68	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05
88	1.83	1.92	2.06	2.19	2.37	2.50	2.68	2.86	3.03	3.25	0.00	0.01	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.06
100	2.04	2.14	2.29	2.44	2.64	2.79	2.99	3.19	3.38	3.63	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.06	0.07
117	2.34	2.45	2.62	2.80	3.02	3.19	3.42	3.65	3.87	4.15	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.07	0.08
175	3.31	3.47	3.72	3.96	4.29	4.53	4.86	5.18	5.50	5.90	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.13
200	3.72	3.90	4.18	4.46	4.82	5.10	5.46	5.83	6.19	6.64	0.00	0.02	0.03	0.05	0.06	0.08	0.10	0.11	0.13	0.14
233	4.25	4.46	4.78	5.10	5.52	5.83	6.25	6.67	7.08	7.60	0.00	0.02	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.17
300	5.31	5.58	5.98	6.38	6.90	7.30	7.82	8.35	8.87	9.51	0.00	0.02	0.05	0.07	0.10	0.12	0.14	0.17	0.19	0.21
350	6.09	6.40	6.86	7.31	7.92	8.37	8.98	9.58	10.2	10.9	0.00	0.03	0.06	0.08	0.11	0.14	0.17	0.19	0.22	0.25
400	6.85	7.20	7.72	8.24	8.92	9.43	10.1	10.8	11.5	12.3	0.00	0.03	0.06	0.10	0.13	0.16	0.19	0.22	0.25	0.29
500	8.36	8.79	9.42	10.1	10.9	11.5	12.4	13.2	14.0	15.0	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36
575	9.47	9.95	10.7	11.4	12.3	13.1	14.0	14.9	15.9	17.0	0.00	0.05	0.09	0.14	0.18	0.23	0.27	0.32	0.37	0.41
600	9.84	10.3	11.1	11.8	12.8	13.6	14.5	15.5	16.5	17.7	0.00	0.05	0.10	0.14	0.19	0.24	0.29	0.33	0.38	0.43
690	11.1	11.7	12.6	13.4	14.5	15.4	16.5	17.6	18.7	20.1	0.00	0.06	0.11	0.16	0.22	0.27	0.33	0.38	0.44	0.49
700	11.3	11.9	12.7	13.6	14.7	15.6	16.7	17.8	18.9	20.3	0.00	0.06	0.11	0.17	0.22	0.28	0.33	0.39	0.45	0.50
800	12.7	13.4	14.3	15.3	16.6	17.6	18.8	20.1	21.4	22.9	0.00	0.06	0.13	0.19	0.25	0.32	0.38	0.45	0.51	0.57
870	13.7	14.4	15.5	16.5	17.9	18.9	20.3	21.7	23.0	24.7	0.00	0.07	0.14	0.21	0.28	0.35	0.42	0.48	0.55	0.62
900	14.1	14.9	15.9	17.0	18.4	19.5	20.9	22.3	23.7	25.5	0.00	0.07	0.14	0.22	0.29	0.36	0.43	0.50	0.57	0.64
1000	15.5	16.3	17.5	18.7	20.3	21.4	23.0	24.6	26.1	28.0	0.00	0.08	0.16	0.24	0.32	0.40	0.48	0.56	0.64	0.72
1160	17.7	18.6	20.0	21.4	23.2	24.5	26.3	28.1	29.8	32.0	0.00	0.09	0.18	0.28	0.37	0.46	0.55	0.65	0.74	0.83
1750	25.5	26.9	28.8	30.8	33.4	35.3	37.9	40.5	43.0	46.1	0.00	0.14	0.28	0.42	0.56	0.70	0.84	0.97	1.11	1.25
2000	28.8	30.2	32.5	34.7	37.6	39.8	42.7	45.5	48.3	51.9	0.00	0.16	0.32	0.48	0.64	0.80	0.95	1.11	1.27	1.43
3000	41.0	43.1	46.3	49.4	53.5	56.6	60.6	64.6	68.5	73.3	0.00	0.24	0.48	0.72	0.95	1.19	1.43	1.67	1.91	2.15
3450	46.2	48.6	52.2	55.6	60.3	63.7	68.1				0.00	0.28	0.55	0.82	1.10	1.37	1.65	1.92	2.20	2.47
4000	52.4	55.1	59.1	63.0	68.1						0.00	0.32	0.64	0.96	1.27	1.59	1.91	2.23	2.55	2.86
4500	57.8	60.7	65.1								0.00	0.36	0.72	1.08	1.43	1.79	2.15	2.51	2.87	3.22
5000	63.0	66.1									0.00	0.40	0.79	1.19	1.59	1.99	2.39	2.78	3.18	3.58
5500											0.00	0.44	0.87	1.31	1.75	2.19	2.63	3.06	3.50	3.94

Poly Chain® GT® Carbon™ Belt Length Correction Factor Table

Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor
8MGT-640	80	0.79	8MGT-1200	150	1.03	8MGT-2200	275	1.26	8MGT-3048	381	1.38
8MGT-720	90	0.83	8MGT-1224	153	1.03	8MGT-2240	280	1.26	8MGT-3200	400	1.40
8MGT-800	100	0.87	8MGT-1280	160	1.05	8MGT-2400	300	1.29	8MGT-3280	410	1.41
8MGT-896	112	0.91	8MGT-1440	180	1.10	8MGT-2520	315	1.31	8MGT-3600	450	1.45
8MGT-960	120	0.94	8MGT-1600	200	1.14	8MGT-2600	325	1.32	8MGT-4000	500	1.49
8MGT-1000	125	0.96	8MGT-1760	220	1.17	8MGT-2800	350	1.35	8MGT-4400	550	1.52
8MGT-1040	130	0.97	8MGT-1792	224	1.18	8MGT-2840	355	1.36	8MGT-4480	560	1.53
8MGT-1120	140	1.00	8MGT-2000	250	1.22						

Horsepower Rating for 21mm Wide
8mm Pitch POLY CHAIN® GT® CARBON™ BELTS

RPM OF FASTER SHAFT	Rated Horsepower for Small Sprocket (Number of Grooves and Pitch Diameter, Inches)																			
	22 / 2.206	25 / 2.506	26 / 2.607	27 / 2.707	28 / 2.807	29 / 2.907	30 / 3.008	31 / 3.108	32 / 3.208	33 / 3.308	34 / 3.409	35 / 3.509	36 / 3.609	37 / 3.709	38 / 3.810	39 / 3.910	40 / 4.010	41 / 4.110	42 / 4.211	45 / 4.511
10	0.25	0.30	0.31	0.33	0.34	0.35	0.37	0.38	0.40	0.41	0.43	0.44	0.46	0.47	0.49	0.50	0.52	0.53	0.55	0.59
20	0.38	0.45	0.48	0.50	0.53	0.55	0.57	0.60	0.62	0.65	0.67	0.69	0.72	0.74	0.77	0.79	0.81	0.84	0.86	0.93
35	0.56	0.67	0.71	0.75	0.78	0.82	0.86	0.90	0.93	0.97	1.01	1.04	1.08	1.12	1.15	1.19	1.23	1.26	1.30	1.41
44	0.66	0.80	0.84	0.89	0.93	0.98	1.02	1.07	1.11	1.16	1.20	1.24	1.29	1.33	1.38	1.42	1.47	1.51	1.55	1.69
58	0.81	0.98	1.04	1.10	1.15	1.21	1.27	1.32	1.38	1.44	1.49	1.55	1.60	1.66	1.72	1.77	1.83	1.88	1.94	2.11
70	0.94	1.14	1.21	1.27	1.34	1.41	1.47	1.54	1.61	1.67	1.74	1.80	1.87	1.93	2.00	2.07	2.13	2.20	2.26	2.46
88	1.12	1.37	1.45	1.53	1.61	1.69	1.78	1.86	1.94	2.02	2.10	2.18	2.26	2.34	2.42	2.50	2.58	2.66	2.74	2.97
100	1.24	1.52	1.61	1.70	1.79	1.88	1.97	2.06	2.15	2.24	2.33	2.42	2.51	2.60	2.69	2.78	2.87	2.96	3.05	3.31
117	1.41	1.73	1.83	1.94	2.04	2.14	2.25	2.35	2.45	2.56	2.66	2.76	2.87	2.97	3.07	3.17	3.28	3.38	3.48	3.78
175	1.96	2.41	2.56	2.71	2.86	3.01	3.16	3.31	3.45	3.60	3.75	3.90	4.04	4.19	4.34	4.48	4.63	4.77	4.92	5.36
200	2.19	2.70	2.87	3.04	3.20	3.37	3.54	3.71	3.87	4.04	4.21	4.37	4.54	4.70	4.87	5.03	5.20	5.36	5.53	6.02
233	2.49	3.07	3.27	3.46	3.65	3.84	4.04	4.23	4.42	4.61	4.80	4.99	5.18	5.37	5.56	5.75	5.94	6.13	6.32	6.88
300	3.07	3.81	4.05	4.29	4.54	4.78	5.02	5.26	5.50	5.74	5.98	6.22	6.46	6.70	6.94	7.17	7.41	7.65	7.88	8.59
350	3.50	4.34	4.62	4.90	5.18	5.46	5.74	6.02	6.29	6.57	6.85	7.12	7.39	7.67	7.94	8.22	8.49	8.76	9.03	9.84
400	3.92	4.87	5.19	5.50	5.82	6.13	6.45	6.76	7.07	7.38	7.70	8.01	8.31	8.62	8.93	9.24	9.55	9.86	10.2	11.1
500	4.73	5.90	6.29	6.67	7.06	7.44	7.83	8.22	8.60	8.98	9.36	9.74	10.1	10.5	10.9	11.3	11.6	12.0	12.4	13.5
575	5.32	6.65	7.10	7.53	7.97	8.41	8.85	9.28	9.72	10.2	10.6	11.0	11.5	11.9	12.3	12.7	13.2	13.6	14.0	15.3
600	5.52	6.90	7.36	7.82	8.27	8.73	9.19	9.64	10.1	10.5	11.0	11.4	11.9	12.3	12.8	13.2	13.7	14.1	14.6	15.9
690	6.21	7.78	8.31	8.83	9.34	9.86	10.4	10.9	11.4	11.9	12.4	12.9	13.5	14.0	14.5	15.0	15.5	16.0	16.5	18.0
700	6.29	7.88	8.41	8.94	9.46	9.98	10.5	11.0	11.6	12.1	12.6	13.1	13.6	14.1	14.7	15.2	15.7	16.2	16.7	18.2
800	7.04	8.84	9.44	10.0	10.6	11.2	11.8	12.4	13.0	13.6	14.2	14.8	15.3	15.9	16.5	17.1	17.7	18.2	18.8	20.5
870	7.56	9.50	10.2	10.8	11.4	12.1	12.7	13.4	14.0	14.6	15.3	15.9	16.5	17.1	17.8	18.4	19.0	19.6	20.3	22.1
900	7.78	9.78	10.5	11.1	11.8	12.4	13.1	13.8	14.4	15.1	15.7	16.4	17.0	17.7	18.3	19.0	19.6	20.2	20.9	22.8
1000	8.51	10.7	11.5	12.2	12.9	13.6	14.4	15.1	15.8	16.5	17.2	18.0	18.7	19.4	20.1	20.8	21.5	22.2	22.9	25.1
1160	9.64	12.2	13.0	13.9	14.7	15.5	16.4	17.2	18.0	18.8	19.7	20.5	21.3	22.1	22.9	23.7	24.6	25.4	26.2	28.6
1750	13.6	17.3	18.6	19.8	21.0	22.2	23.4	24.6	25.8	27.0	28.2	29.4	30.6	31.8	33.0	34.2	35.4	36.5	37.7	41.2
2000	15.3	19.4	20.8	22.2	23.6	24.9	26.3	27.7	29.0	30.4	31.7	33.1	34.4	35.8	37.1	38.4	39.8	41.1	42.4	46.4
3000	21.4	27.4	29.4	31.4	33.4	35.3	37.3	39.3	41.2	43.2	45.2	47.1	49.0	50.9	52.9	54.8	56.7	58.6	60.5	66.1
3450	24.0	30.8	33.1	35.3	37.6	39.8	42.1	44.3	46.5	48.7	50.9	53.1	55.3	57.5	59.6	61.8	63.9	66.1	68.2	74.6
4000	27.0	34.8	37.4	40.0	42.6	45.1	47.7	50.2	52.7	55.2	57.8	60.2	62.7	65.2	67.7	70.1	72.5	75.0	77.4	84.6
4500	29.7	38.4	41.3	44.1	47.0	49.8	52.6	55.4	58.2	61.0	63.8	66.5	69.2	72.0	74.7	77.4	80.1	82.7	85.4	93.3
5000	32.3	41.8	45.0	48.1	51.2	54.3	57.4	60.5	63.5	66.6	69.6	72.6	75.6	78.5	81.5	84.5	87.4	90.3	93.2	101.7
5500	34.9	45.2	48.6	52.0	55.4	58.7	62.1	65.4	68.7	72.0	75.3	78.5	81.7	84.9	88.1	91.3	94.4	97.5	100.6	109.8

Poly Chain® GT® Carbon™ Belt Length Correction Factor Table

Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor
8MGT-640	80	0.79	8MGT-1200	150	1.03	8MGT-2200	275	1.26	8MGT-3048	381	1.38
8MGT-720	90	0.83	8MGT-1224	153	1.03	8MGT-2240	280	1.26	8MGT-3200	400	1.40
8MGT-800	100	0.87	8MGT-1280	160	1.05	8MGT-2400	300	1.29	8MGT-3280	410	1.41
8MGT-896	112	0.91	8MGT-1440	180	1.10	8MGT-2520	315	1.31	8MGT-3600	450	1.45
8MGT-960	120	0.94	8MGT-1600	200	1.14	8MGT-2600	325	1.32	8MGT-4000	500	1.49
8MGT-1000	125	0.96	8MGT-1760	220	1.17	8MGT-2800	350	1.35	8MGT-4400	550	1.52
8MGT-1040	130	0.97	8MGT-1792	224	1.18	8MGT-2840	355	1.36	8MGT-4480	560	1.53
8MGT-1120	140	1.00	8MGT-2000	250	1.22						

Use this sprocket only if required to obtain speed ratio or to meet diameter limitations. See Engineering Section for details.

Gates Corporation

Horsepower Rating for 21mm Wide
8mm Pitch POLY CHAIN® GT® CARBON™ BELTS

Rated Horsepower for Small Sprocket (Number of Grooves and Pitch Diameter, Inches)										Additional Horsepower per belt for Speed Ratio of Speed-Down Drives										RPM OF FASTER SHAFT
48 / 4.812	50 / 5.013	53 / 5.314	56 / 5.614	60 / 6.015	63 / 6.316	67 / 6.717	71 / 7.118	75 / 7.519	80 / 8.020	1.00 to 1.02	1.03 to 1.05	1.06 to 1.10	1.11 to 1.15	1.16 to 1.21	1.22 to 1.30	1.31 to 1.43	1.44 to 1.64	1.65 to 2.15	2.16 and Over	
0.63	0.66	0.71	0.75	0.81	0.85	0.91	0.97	1.02	1.09	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	10
1.00	1.05	1.12	1.19	1.28	1.35	1.45	1.54	1.63	1.75	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03	20
1.52	1.59	1.70	1.81	1.95	2.06	2.21	2.35	2.49	2.67	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	35
1.82	1.91	2.04	2.17	2.34	2.47	2.64	2.82	2.99	3.20	0.00	0.01	0.01	0.02	0.02	0.03	0.04	0.04	0.05	0.06	44
2.27	2.38	2.55	2.71	2.93	3.09	3.31	3.53	3.74	4.01	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.06	0.07	58
2.65	2.78	2.97	3.17	3.42	3.61	3.87	4.12	4.38	4.69	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	70
3.21	3.37	3.60	3.84	4.15	4.38	4.69	5.00	5.31	5.69	0.00	0.01	0.02	0.04	0.05	0.06	0.07	0.09	0.10	0.11	88
3.58	3.75	4.02	4.28	4.63	4.89	5.23	5.58	5.92	6.35	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.13	100
4.09	4.29	4.59	4.89	5.29	5.59	5.99	6.38	6.78	7.27	0.00	0.02	0.03	0.05	0.07	0.08	0.10	0.11	0.13	0.15	117
5.79	6.08	6.51	6.94	7.51	7.93	8.50	9.06	9.63	10.3	0.00	0.02	0.05	0.07	0.10	0.12	0.15	0.17	0.19	0.22	175
6.50	6.83	7.32	7.80	8.44	8.92	9.56	10.2	10.8	11.6	0.00	0.03	0.06	0.08	0.11	0.14	0.17	0.19	0.22	0.25	200
7.44	7.81	8.37	8.92	9.66	10.2	10.9	11.7	12.4	13.3	0.00	0.03	0.06	0.10	0.13	0.16	0.19	0.23	0.26	0.29	233
9.29	9.76	10.5	11.2	12.1	12.8	13.7	14.6	15.5	16.6	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.29	0.33	0.38	300
10.7	11.2	12.0	12.8	13.9	14.7	15.7	16.8	17.8	19.1	0.00	0.05	0.10	0.15	0.19	0.24	0.29	0.34	0.39	0.44	350
12.0	12.6	13.5	14.4	15.6	16.5	17.7	18.9	20.1	21.5	0.00	0.06	0.11	0.17	0.22	0.28	0.33	0.39	0.45	0.50	400
14.6	15.4	16.5	17.6	19.1	20.2	21.6	23.1	24.5	26.3	0.00	0.07	0.14	0.21	0.28	0.35	0.42	0.49	0.56	0.63	500
16.6	17.4	18.7	19.9	21.6	22.8	24.5	26.1	27.8	29.8	0.00	0.08	0.16	0.24	0.32	0.40	0.48	0.56	0.64	0.72	575
17.2	18.1	19.4	20.7	22.4	23.7	25.5	27.2	28.9	31.0	0.00	0.08	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75	600
19.5	20.5	22.0	23.5	25.4	26.9	28.9	30.8	32.7	35.1	0.00	0.10	0.19	0.29	0.38	0.48	0.58	0.67	0.77	0.86	690
19.8	20.8	22.3	23.8	25.8	27.3	29.2	31.2	33.2	35.6	0.00	0.10	0.19	0.29	0.39	0.49	0.58	0.68	0.78	0.88	700
22.3	23.4	25.1	26.8	29.0	30.7	33.0	35.2	37.4	40.1	0.00	0.11	0.22	0.33	0.45	0.56	0.67	0.78	0.89	1.00	800
24.0	25.2	27.1	28.9	31.3	33.1	35.5	37.9	40.3	43.3	0.00	0.12	0.24	0.36	0.48	0.61	0.73	0.85	0.97	1.09	870
24.7	26.0	27.9	29.8	32.3	34.2	36.6	39.1	41.6	44.6	0.00	0.13	0.25	0.38	0.50	0.63	0.75	0.88	1.00	1.13	900
27.2	28.6	30.6	32.7	35.5	37.5	40.3	43.0	45.7	49.0	0.00	0.14	0.28	0.42	0.56	0.70	0.84	0.97	1.11	1.25	1000
31.0	32.6	35.0	37.4	40.5	42.9	46.0	49.1	52.2	56.0	0.00	0.16	0.32	0.49	0.65	0.81	0.97	1.13	1.29	1.45	1160
44.7	47.0	50.5	53.9	58.5	61.9	66.3	70.8	75.2	80.7	0.00	0.24	0.49	0.73	0.97	1.22	1.46	1.71	1.95	2.19	1750
50.3	52.9	56.8	60.7	65.8	69.6	74.6	79.6	84.6	90.7	0.00	0.28	0.56	0.84	1.11	1.39	1.67	1.95	2.23	2.51	2000
71.7	75.5	81.0	86.4	93.7	99.0	106.1	113.0	119.9	128.3	0.00	0.42	0.83	1.25	1.67	2.09	2.51	2.92	3.34	3.76	3000
80.9	85.1	91.3	97.4	105.4	111.4	119.3	127.0			0.00	0.48	0.96	1.44	1.92	2.40	2.88	3.36	3.84	4.32	3450
91.7	96.4	103.4	110.2	119.2						0.00	0.56	1.11	1.67	2.23	2.79	3.34	3.90	4.46	5.01	4000
101.1	106.3	113.9								0.00	0.63	1.25	1.88	2.51	3.13	3.76	4.39	5.01	5.64	4500
110.2	115.7									0.00	0.70	1.39	2.09	2.78	3.48	4.18	4.87	5.57	6.27	5000
										0.00	0.77	1.53	2.30	3.06	3.83	4.60	5.36	6.13	6.89	5500

Poly Chain® GT® Carbon™ Belt Length Correction Factor Table

Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor
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8MGT-720	90	0.83	8MGT-1224	153	1.03	8MGT-2240	280	1.26	8MGT-3200	400	1.40
8MGT-800	100	0.87	8MGT-1280	160	1.05	8MGT-2400	300	1.29	8MGT-3280	410	1.41
8MGT-896	112	0.91	8MGT-1440	180	1.10	8MGT-2520	315	1.31	8MGT-3600	450	1.45
8MGT-960	120	0.94	8MGT-1600	200	1.14	8MGT-2600	325	1.32	8MGT-4000	500	1.49
8MGT-1000	125	0.96	8MGT-1760	220	1.17	8MGT-2800	350	1.35	8MGT-4400	550	1.52
8MGT-1040	130	0.97	8MGT-1792	224	1.18	8MGT-2840	355	1.36	8MGT-4480	560	1.53
8MGT-1120	140	1.00	8MGT-2000	250	1.22						

Horsepower Rating for 36mm Wide
8mm Pitch POLY CHAIN® GT® CARBON™ BELTS

Rated Horsepower for Small Sprocket (Number of Grooves and Pitch Diameter, Inches)

RPM OF FASTER SHAFT	22 2.206	25 2.506	28 2.807	30 3.008	32 3.208	33 3.308	34 3.409	35 3.509	36 3.609	37 3.709	38 3.810	39 3.910	40 4.010	41 4.110	42 4.211	45 4.511	48 4.812	50 5.013
10	0.43	0.51	0.58	0.63	0.68	0.71	0.73	0.76	0.78	0.81	0.84	0.86	0.89	0.91	0.94	1.01	1.09	1.14
20	0.65	0.78	0.90	0.98	1.07	1.11	1.15	1.19	1.23	1.27	1.31	1.35	1.39	1.43	1.48	1.60	1.72	1.80
35	0.96	1.15	1.34	1.47	1.60	1.66	1.73	1.79	1.85	1.91	1.98	2.04	2.10	2.17	2.23	2.42	2.61	2.73
44	1.13	1.36	1.60	1.75	1.90	1.98	2.06	2.13	2.21	2.29	2.36	2.44	2.51	2.59	2.67	2.89	3.12	3.27
58	1.39	1.69	1.98	2.17	2.37	2.46	2.56	2.66	2.75	2.85	2.94	3.04	3.13	3.23	3.33	3.61	3.89	4.08
70	1.61	1.95	2.30	2.53	2.75	2.87	2.98	3.09	3.20	3.32	3.43	3.54	3.65	3.77	3.88	4.21	4.55	4.77
88	1.93	2.35	2.76	3.04	3.32	3.46	3.60	3.73	3.87	4.01	4.14	4.28	4.42	4.55	4.69	5.10	5.50	5.77
100	2.13	2.60	3.07	3.38	3.69	3.84	4.00	4.15	4.31	4.46	4.61	4.77	4.92	5.07	5.22	5.68	6.13	6.43
117	2.42	2.96	3.50	3.85	4.21	4.38	4.56	4.74	4.91	5.09	5.27	5.44	5.62	5.79	5.97	6.49	7.01	7.36
175	3.36	4.13	4.90	5.42	5.92	6.17	6.43	6.68	6.93	7.18	7.44	7.69	7.94	8.18	8.44	9.18	9.92	10.4
200	3.76	4.63	5.49	6.07	6.64	6.93	7.21	7.50	7.78	8.06	8.35	8.63	8.91	9.19	9.47	10.3	11.2	11.7
233	4.26	5.26	6.26	6.92	7.58	7.90	8.23	8.56	8.88	9.21	9.53	9.86	10.2	10.5	10.8	11.8	12.7	13.4
300	5.27	6.53	7.78	8.61	9.43	9.84	10.3	10.7	11.1	11.5	11.9	12.3	12.7	13.1	13.5	14.7	15.9	16.7
350	6.00	7.44	8.88	9.84	10.8	11.3	11.7	12.2	12.7	13.1	13.6	14.1	14.5	15.0	15.5	16.9	18.3	19.2
400	6.71	8.35	9.97	11.1	12.1	12.7	13.2	13.7	14.3	14.8	15.3	15.8	16.4	16.9	17.4	19.0	20.6	21.6
500	8.11	10.1	12.1	13.4	14.7	15.4	16.1	16.7	17.4	18.0	18.7	19.3	19.9	20.6	21.2	23.2	25.1	26.4
575	9.12	11.4	13.7	15.2	16.7	17.4	18.2	18.9	19.6	20.4	21.1	21.8	22.6	23.3	24.0	26.2	28.4	29.9
600	9.46	11.8	14.2	15.7	17.3	18.1	18.8	19.6	20.4	21.1	21.9	22.7	23.4	24.2	25.0	27.2	29.5	31.0
690	10.6	13.3	16.0	17.8	19.6	20.4	21.3	22.2	23.1	23.9	24.8	25.7	26.5	27.4	28.3	30.9	33.4	35.1
700	10.8	13.5	16.2	18.0	19.8	20.7	21.6	22.5	23.4	24.2	25.1	26.0	26.9	27.8	28.6	31.3	33.9	35.6
800	12.1	15.2	18.2	20.3	22.3	23.3	24.3	25.3	26.3	27.3	28.3	29.3	30.3	31.3	32.3	35.2	38.1	40.1
870	13.0	16.3	19.6	21.8	24.0	25.1	26.2	27.2	28.3	29.4	30.5	31.5	32.6	33.7	34.8	37.9	41.1	43.2
900	13.3	16.8	20.2	22.5	24.7	25.8	26.9	28.1	29.2	30.3	31.4	32.5	33.6	34.7	35.8	39.1	42.4	44.6
1000	14.6	18.4	22.1	24.6	27.1	28.3	29.6	30.8	32.0	33.2	34.5	35.7	36.9	38.1	39.3	43.0	46.6	49.0
1160	16.5	20.9	25.2	28.0	30.9	32.3	33.7	35.1	36.5	37.9	39.3	40.7	42.1	43.5	44.9	49.0	53.2	55.9
1750	23.4	29.7	36.0	40.2	44.3	46.3	48.4	50.4	52.5	54.5	56.6	58.6	60.6	62.6	64.6	70.7	76.6	80.6
2000	26.1	33.3	40.4	45.1	49.7	52.1	54.4	56.7	59.0	61.3	63.6	65.9	68.2	70.4	72.7	79.5	86.3	90.7
3000	36.6	47.0	57.2	64.0	70.7	74.0	77.4	80.7	84.0	87.3	90.6	93.9	97.2	100.4	103.7	113.4	123.0	129.4
3450	41.1	52.8	64.4	72.1	79.7	83.5	87.3	91.0	94.8	98.5	102.2	105.9	109.6	113.3	117.0	127.9	138.7	145.9
4000	46.3	59.7	73.0	81.7	90.4	94.7	99.0	103.3	107.5	111.7	116.0	120.2	124.3	128.5	132.7	145.0	157.2	165.3
4500	51.0	65.8	80.5	90.2	99.8	104.5	109.3	114.0	118.7	123.4	128.1	132.7	137.3	141.9	146.5	160.0	173.4	182.2
5000	55.4	71.7	87.8	98.5	108.9	114.1	119.3	124.5	129.6	134.6	139.7	144.8	149.8	154.7	159.7	174.4	188.9	198.4
5500		77.5	94.9	106.5	117.8	123.4	129.0	134.6	140.1	145.5	151.0	156.5	161.8	167.2	172.5	188.3		

☐ Use this sprocket only if required to obtain speed ratio or to meet diameter limitations. See Engineering Section for details.

Poly Chain® GT® Carbon™ Belt Length Correction Factor Table

Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor
8MGT-640	80	0.79	8MGT-1200	150	1.03	8MGT-2200	275	1.26	8MGT-3048	381	1.38
8MGT-720	90	0.83	8MGT-1224	153	1.03	8MGT-2240	280	1.26	8MGT-3200	400	1.40
8MGT-800	100	0.87	8MGT-1280	160	1.05	8MGT-2400	300	1.29	8MGT-3280	410	1.41
8MGT-896	112	0.91	8MGT-1440	180	1.10	8MGT-2520	315	1.31	8MGT-3600	450	1.45
8MGT-960	120	0.94	8MGT-1600	200	1.14	8MGT-2600	325	1.32	8MGT-4000	500	1.49
8MGT-1000	125	0.96	8MGT-1760	220	1.17	8MGT-2800	350	1.35	8MGT-4400	550	1.52
8MGT-1040	130	0.97	8MGT-1792	224	1.18	8MGT-2840	355	1.36	8MGT-4480	560	1.53
8MGT-1120	140	1.00	8MGT-2000	250	1.22						

Gates Corporation

Horsepower Rating for 36mm Wide
8mm Pitch POLY CHAIN® GT® CARBON™ BELTS

Rated Horsepower for Small Sprocket (Number of Grooves and Pitch Diameter, Inches)								RPM OF FASTER SHAFT	Additional Horsepower per belt for Speed Ratio of Speed-Down Drives									
53 5.314	56 5.614	60 6.015	63 6.316	67 6.717	71 7.118	75 7.519	80 8.020		1.00 to 1.02	1.03 to 1.05	1.06 to 1.10	1.11 to 1.15	1.16 to 1.21	1.22 to 1.30	1.31 to 1.43	1.44 to 1.64	1.65 to 2.15	2.16 and Over
1.21	1.28	1.38	1.46	1.56	1.65	1.75	1.88	10	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02
1.92	2.04	2.20	2.32	2.48	2.64	2.80	3.00	20	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04
2.92	3.10	3.35	3.53	3.78	4.03	4.27	4.57	35	0.00	0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08
3.49	3.72	4.01	4.24	4.53	4.83	5.12	5.49	44	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
4.37	4.65	5.02	5.30	5.67	6.04	6.41	6.87	58	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.12
5.10	5.43	5.87	6.20	6.63	7.07	7.50	8.04	70	0.00	0.02	0.03	0.05	0.07	0.08	0.10	0.12	0.13	0.15
6.18	6.58	7.11	7.51	8.04	8.57	9.10	9.76	88	0.00	0.02	0.04	0.06	0.08	0.11	0.13	0.15	0.17	0.19
6.88	7.33	7.93	8.38	8.97	9.56	10.1	10.9	100	0.00	0.02	0.05	0.07	0.10	0.12	0.14	0.17	0.19	0.21
7.87	8.39	9.07	9.58	10.3	10.9	11.6	12.5	117	0.00	0.03	0.06	0.08	0.11	0.14	0.17	0.20	0.22	0.25
11.2	11.9	12.9	13.6	14.6	15.5	16.5	17.7	175	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.29	0.33	0.38
12.5	13.4	14.5	15.3	16.4	17.5	18.6	19.9	200	0.00	0.05	0.10	0.14	0.19	0.24	0.29	0.33	0.38	0.43
14.3	15.3	16.6	17.5	18.8	20.0	21.2	22.8	233	0.00	0.06	0.11	0.17	0.22	0.28	0.33	0.39	0.45	0.50
17.9	19.1	20.7	21.9	23.5	25.0	26.6	28.5	300	0.00	0.07	0.14	0.22	0.29	0.36	0.43	0.50	0.57	0.64
20.6	21.9	23.8	25.1	26.9	28.7	30.5	32.8	350	0.00	0.08	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75
23.2	24.7	26.8	28.3	30.3	32.4	34.4	36.9	400	0.00	0.10	0.19	0.29	0.38	0.48	0.57	0.67	0.76	0.86
28.3	30.2	32.7	34.6	37.1	39.5	42.0	45.1	500	0.00	0.12	0.24	0.36	0.48	0.60	0.72	0.84	0.96	1.07
32.0	34.2	37.0	39.2	42.0	44.8	47.6	51.1	575	0.00	0.14	0.27	0.41	0.55	0.69	0.82	0.96	1.10	1.24
33.3	35.5	38.5	40.7	43.6	46.6	49.5	53.1	600	0.00	0.14	0.29	0.43	0.57	0.72	0.86	1.00	1.15	1.29
37.7	40.2	43.6	46.1	49.5	52.8	56.1	60.2	690	0.00	0.17	0.33	0.49	0.66	0.82	0.99	1.15	1.32	1.48
38.2	40.8	44.2	46.7	50.1	53.5	56.8	61.0	700	0.00	0.17	0.33	0.50	0.67	0.84	1.00	1.17	1.34	1.50
43.0	45.9	49.8	52.7	56.5	60.3	64.1	68.8	800	0.00	0.19	0.38	0.57	0.76	0.95	1.15	1.34	1.53	1.72
46.4	49.5	53.7	56.8	60.9	65.0	69.1	74.2	870	0.00	0.21	0.41	0.62	0.83	1.04	1.25	1.45	1.66	1.87
47.8	51.0	55.3	58.5	62.8	67.0	71.2	76.5	900	0.00	0.22	0.43	0.65	0.86	1.07	1.29	1.50	1.72	1.93
52.5	56.1	60.8	64.3	69.0	73.7	78.3	84.1	1000	0.00	0.24	0.48	0.72	0.95	1.19	1.43	1.67	1.91	2.15
60.0	64.1	69.5	73.5	78.8	84.2	89.4	96.0	1160	0.00	0.28	0.55	0.83	1.11	1.38	1.66	1.94	2.22	2.49
86.5	92.4	100.2	106.0	113.7	121.4	129.0	138.4	1750	0.00	0.42	0.83	1.25	1.67	2.09	2.51	2.92	3.34	3.76
97.4	104.0	112.8	119.3	128.0	136.5	145.0	155.6	2000	0.00	0.48	0.95	1.43	1.91	2.39	2.86	3.34	3.82	4.30
138.8	148.2	160.5	169.7	181.8	193.7	205.5	220.0	3000	0.00	0.72	1.43	2.15	2.86	3.58	4.30	5.01	5.73	6.44
156.5	166.9	180.8	191.0	204.4	217.7			3450	0.00	0.83	1.65	2.47	3.29	4.12	4.94	5.76	6.59	7.41
177.2	188.9	204.4						4000	0.00	0.96	1.91	2.87	3.82	4.77	5.73	6.68	7.64	8.59
195.2								4500	0.00	1.08	2.15	3.23	4.30	5.37	6.45	7.52	8.60	9.67
								5000	0.00	1.20	2.38	3.58	4.77	5.97	7.16	8.35	9.55	10.7
								5500	0.00	1.32	2.62	3.94	5.25	6.56	7.88	9.19	10.5	11.8

Poly Chain® GT® Carbon™ Belt Length Correction Factor Table

Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor
8MGT-640	80	0.79	8MGT-1200	150	1.03	8MGT-2200	275	1.26	8MGT-3048	381	1.38
8MGT-720	90	0.83	8MGT-1224	153	1.03	8MGT-2240	280	1.26	8MGT-3200	400	1.40
8MGT-800	100	0.87	8MGT-1280	160	1.05	8MGT-2400	300	1.29	8MGT-3280	410	1.41
8MGT-896	112	0.91	8MGT-1440	180	1.10	8MGT-2520	315	1.31	8MGT-3600	450	1.45
8MGT-960	120	0.94	8MGT-1600	200	1.14	8MGT-2600	325	1.32	8MGT-4000	500	1.49
8MGT-1000	125	0.96	8MGT-1760	220	1.17	8MGT-2800	350	1.35	8MGT-4400	550	1.52
8MGT-1040	130	0.97	8MGT-1792	224	1.18	8MGT-2840	355	1.36	8MGT-4480	560	1.53
8MGT-1120	140	1.00	8MGT-2000	250	1.22						

Horsepower Rating for 62mm Wide
8mm Pitch POLY CHAIN® GT® CARBON™ BELTS

Rated Horsepower for Small Sprocket
(Number of Grooves and Pitch Diameter, Inches)

RPM OF FASTER SHAFT	22 / 2.206	25 / 2.506	28 / 2.807	30 / 3.008	32 / 3.208	34 / 3.409	36 / 3.609	38 / 3.810	40 / 4.010	42 / 4.211	45 / 4.511	48 / 4.812	50 / 5.013	53 / 5.314	56 / 5.614
10	0.74	0.87	1.00	1.09	1.18	1.26	1.35	1.44	1.52	1.61	1.74	1.87	1.96	2.08	2.21
20	1.12	1.34	1.55	1.70	1.84	1.98	2.12	2.26	2.40	2.54	2.75	2.96	3.10	3.31	3.52
35	1.65	1.98	2.31	2.53	2.75	2.97	3.19	3.41	3.62	3.84	4.16	4.49	4.70	5.02	5.34
44	1.95	2.35	2.75	3.01	3.28	3.54	3.81	4.07	4.33	4.59	4.98	5.37	5.63	6.02	6.40
58	2.40	2.90	3.41	3.74	4.07	4.41	4.74	5.07	5.40	5.73	6.22	6.71	7.03	7.52	8.00
70	2.77	3.36	3.96	4.35	4.74	5.13	5.52	5.91	6.29	6.68	7.25	7.83	8.21	8.78	9.35
88	3.32	4.04	4.76	5.24	5.72	6.19	6.66	7.14	7.61	8.08	8.78	9.48	9.94	10.6	11.3
100	3.67	4.48	5.29	5.82	6.36	6.89	7.42	7.94	8.47	8.99	9.78	10.6	11.1	11.9	12.6
117	4.17	5.10	6.02	6.64	7.25	7.86	8.46	9.07	9.67	10.3	11.2	12.1	12.7	13.6	14.4
175	5.79	7.12	8.45	9.33	10.2	11.1	11.9	12.8	13.7	14.5	15.8	17.1	17.9	19.2	20.5
200	6.47	7.97	9.46	10.5	11.4	12.4	13.4	14.4	15.3	16.3	17.8	19.2	20.2	21.6	23.0
233	7.34	9.06	10.8	11.9	13.0	14.2	15.3	16.4	17.5	18.6	20.3	22.0	23.1	24.7	26.3
300	9.07	11.2	13.4	14.8	16.2	17.7	19.1	20.5	21.9	23.3	25.4	27.4	28.8	30.9	32.9
350	10.3	12.8	15.3	16.9	18.6	20.2	21.8	23.5	25.1	26.7	29.1	31.5	33.0	35.4	37.8
400	11.6	14.4	17.2	19.0	20.9	22.7	24.5	26.4	28.2	30.0	32.7	35.4	37.2	39.9	42.5
500	14.0	17.4	20.8	23.1	25.4	27.6	29.9	32.1	34.3	36.6	39.9	43.2	45.4	48.7	51.9
575	15.7	19.6	23.5	26.1	28.7	31.3	33.8	36.4	38.9	41.4	45.2	48.9	51.4	55.1	58.8
600	16.3	20.4	24.4	27.1	29.8	32.5	35.1	37.7	40.4	43.0	46.9	50.8	53.4	57.3	61.1
690	18.3	23.0	27.6	30.6	33.7	36.7	39.7	42.7	45.7	48.7	53.1	57.6	60.5	64.9	69.3
700	18.6	23.3	27.9	31.0	34.1	37.2	40.2	43.3	46.3	49.3	53.8	58.3	61.3	65.8	70.2
800	20.8	26.1	31.4	34.9	38.4	41.8	45.3	48.7	52.1	55.5	60.6	65.7	69.1	74.1	79.1
870	22.3	28.1	33.8	37.5	41.3	45.0	48.8	52.5	56.2	59.9	65.3	70.8	74.5	79.9	85.3
900	23.0	28.9	34.8	38.7	42.5	46.4	50.2	54.1	57.9	61.7	67.3	73.0	76.7	82.3	87.9
1000	25.1	31.6	38.1	42.4	46.7	50.9	55.1	59.4	63.6	67.7	74.0	80.2	84.3	90.5	96.6
1160	28.5	35.9	43.4	48.3	53.2	58.0	62.9	67.7	72.5	77.3	84.4	91.5	96.3	103.3	110.3
1750	40.3	51.1	62.0	69.1	76.2	83.3	90.4	97.4	104.4	111.3	121.7	132.0	138.8	149.0	159.2
2000	45.0	57.3	69.6	77.7	85.7	93.7	101.6	109.6	117.4	125.3	136.9	148.5	156.3	167.8	179.1
3000	63.1	80.9	98.5	110.2	121.8	133.3	144.7	156.1	167.4	178.6	195.3	211.8	222.8	239.1	255.2
3450	70.8	90.9	111.0	124.2	137.3	150.3	163.2	176.1	188.8	201.5	220.2	238.9	251.2	269.5	287.5
4000	79.8	102.9	125.7	140.8	155.7	170.5	185.1	199.7	214.1	228.5	249.7	270.7	284.6	305.2	325.4
4500	87.8	113.4	138.7	155.4	171.9	188.3	204.4	220.5	236.4	252.2	275.5	298.5	313.7	336.2	
5000	95.5	123.5	151.3	169.6	187.6	205.5	223.1	240.7	257.9	275.1	300.4	325.3	341.6		
5500	102.9	133.4	163.5	183.3	202.8	222.2	241.2	260.1	278.7	297.1	324.2				

Poly Chain® GT® Carbon™ Belt Length Correction Factor Table

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8MGT-800	100	0.87	8MGT-1280	160	1.05	8MGT-2400	300	1.29	8MGT-3280	410	1.41
8MGT-896	112	0.91	8MGT-1440	180	1.10	8MGT-2520	315	1.31	8MGT-3600	450	1.45
8MGT-960	120	0.94	8MGT-1600	200	1.14	8MGT-2600	325	1.32	8MGT-4000	500	1.49
8MGT-1000	125	0.96	8MGT-1760	220	1.17	8MGT-2800	350	1.35	8MGT-4400	550	1.52
8MGT-1040	130	0.97	8MGT-1792	224	1.18	8MGT-2840	355	1.36	8MGT-4480	560	1.53
8MGT-1120	140	1.00	8MGT-2000	250	1.22						

Use this sprocket only if required to obtain speed ratio or to meet diameter limitations. See Engineering Section for details.
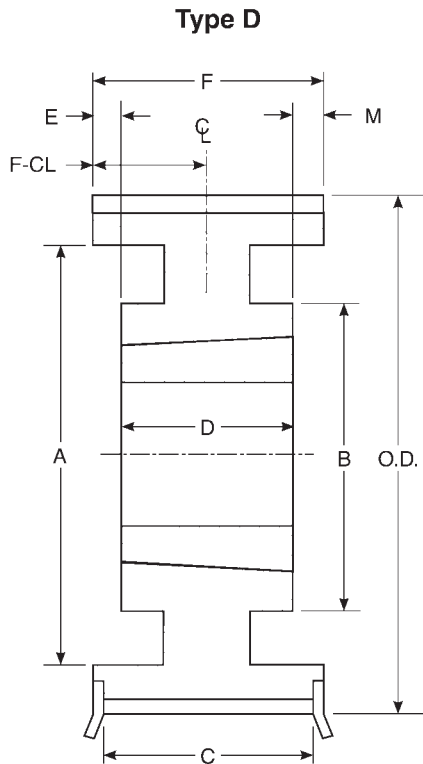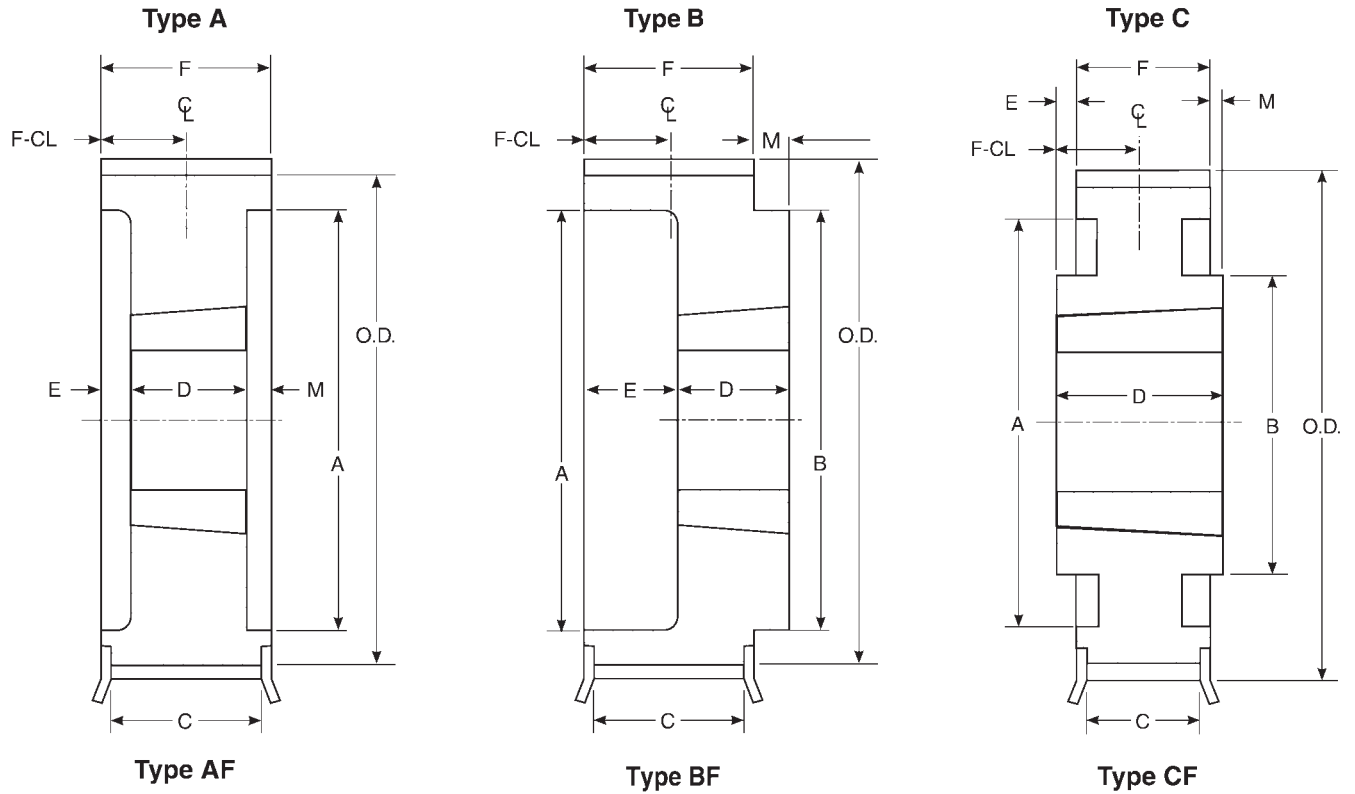
Gates Corporation

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Horsepower Rating for 62mm Wide
8mm Pitch POLY CHAIN® GT® CARBON™ BELTS
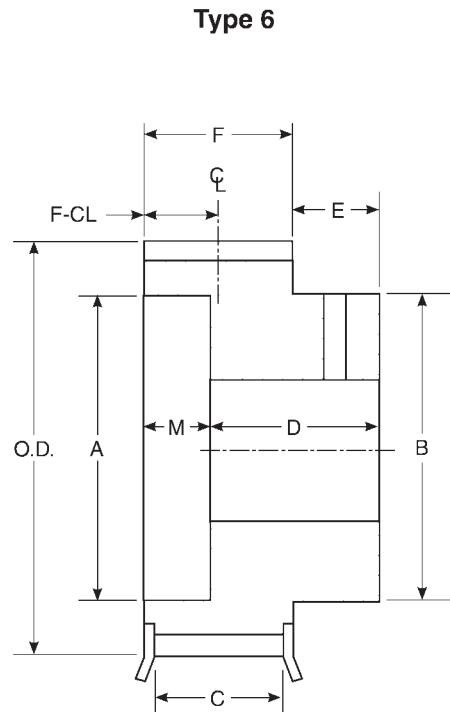
Rated Horsepower for Small Sprocket (Number of Grvs and Pitch Dia, Inches)						Additional Horsepower per belt for Speed Ratio of Speed-Down Drives										RPM OF FASTER SHAFT
60 6.015	63 6.316	67 6.717	71 7.118	75 7.519	80 8.020	1.00 to 1.02	1.03 to 1.05	1.06 to 1.10	1.11 to 1.15	1.16 to 1.21	1.22 to 1.30	1.31 to 1.43	1.44 to 1.64	1.65 to 2.15	2.16 and Over	
2.38	2.51	2.68	2.85	3.02	3.23	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.04	10
3.79	4.00	4.27	4.55	4.82	5.16	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.07	20
5.77	6.09	6.51	6.93	7.35	7.88	0.00	0.01	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.13	35
6.91	7.30	7.81	8.31	8.82	9.45	0.00	0.02	0.04	0.05	0.07	0.09	0.11	0.13	0.14	0.16	44
8.65	9.13	9.77	10.4	11.0	11.8	0.00	0.02	0.05	0.07	0.10	0.12	0.14	0.17	0.19	0.21	58
10.1	10.7	11.4	12.2	12.9	13.8	0.00	0.03	0.06	0.09	0.12	0.14	0.17	0.20	0.23	0.26	70
12.2	12.9	13.9	14.8	15.7	16.8	0.00	0.04	0.07	0.11	0.14	0.18	0.22	0.25	0.29	0.33	88
13.7	14.4	15.4	16.5	17.5	18.7	0.00	0.04	0.08	0.12	0.16	0.21	0.25	0.29	0.33	0.37	100
15.6	16.5	17.7	18.8	20.0	21.5	0.00	0.05	0.10	0.14	0.19	0.24	0.29	0.34	0.38	0.43	117
22.2	23.4	25.1	26.8	28.4	30.5	0.00	0.07	0.14	0.22	0.29	0.36	0.43	0.50	0.58	0.65	175
24.9	26.3	28.2	30.1	32.0	34.3	0.00	0.08	0.16	0.25	0.33	0.41	0.49	0.58	0.66	0.74	200
28.5	30.1	32.3	34.4	36.6	39.3	0.00	0.10	0.19	0.29	0.38	0.48	0.57	0.67	0.77	0.86	233
35.7	37.7	40.4	43.1	45.8	49.2	0.00	0.12	0.25	0.37	0.49	0.62	0.74	0.86	0.99	1.11	300
40.9	43.3	46.4	49.5	52.6	56.4	0.00	0.14	0.29	0.43	0.58	0.72	0.86	1.01	1.15	1.29	350
46.1	48.7	52.2	55.7	59.2	63.6	0.00	0.16	0.33	0.49	0.66	0.82	0.99	1.15	1.32	1.48	400
56.3	59.5	63.8	68.1	72.4	77.7	0.00	0.21	0.41	0.62	0.82	1.03	1.23	1.64	1.64	1.85	500
63.8	67.4	72.3	77.2	82.0	88.0	0.00	0.24	0.47	0.71	0.95	1.18	1.42	1.65	1.89	2.13	575
66.2	70.1	75.1	80.2	85.2	91.5	0.00	0.25	0.49	0.74	0.99	1.23	1.48	1.73	1.97	2.22	600
75.1	79.4	85.2	90.9	96.6	103.7	0.00	0.28	0.57	0.85	1.13	1.42	1.70	1.99	2.27	2.55	690
76.1	80.5	86.3	92.1	97.9	105.1	0.00	0.29	0.57	0.86	1.15	1.44	1.73	2.01	2.30	2.59	700
85.7	90.7	97.3	103.8	110.4	118.5	0.00	0.33	0.66	0.99	1.32	1.64	1.97	2.30	2.63	2.96	800
92.4	97.8	104.9	112.0	119.0	127.8	0.00	0.36	0.71	1.07	1.43	1.79	2.15	2.50	2.86	3.22	870
95.3	100.8	108.1	115.4	122.7	131.7	0.00	0.37	0.74	1.11	1.48	1.85	2.22	2.59	2.96	3.33	900
104.7	110.8	118.9	126.9	134.9	144.8	0.00	0.41	0.82	1.23	1.64	2.06	2.47	2.88	3.29	3.70	1000
119.6	126.6	135.8	144.9	154.0	165.3	0.00	0.48	0.95	1.43	1.91	2.38	2.86	3.34	3.82	4.29	1160
172.6	182.6	195.9	209.0	222.1	238.3	0.00	0.72	1.44	2.16	2.88	3.60	4.32	5.04	5.76	6.47	1750
194.2	205.5	220.4	235.1	249.8	267.9	0.00	0.82	1.64	2.47	3.29	4.11	4.93	5.75	6.58	7.40	2000
276.5	292.3	313.1	333.7	353.9	378.8	0.00	1.24	2.46	3.70	4.93	6.17	7.40	8.63	9.87	11.1	3000
311.3	328.9	352.1	374.8			0.00	1.42	2.83	4.26	5.67	7.09	8.51	9.93	11.3	12.8	3450
351.9						0.00	1.65	3.29	4.94	6.58	8.22	9.87	11.5	13.2	14.8	4000
						0.00	1.85	3.70	5.56	7.40	9.25	11.1	12.9	14.8	16.6	4500
						0.00	2.06	4.11	6.17	8.22	10.3	12.3	14.4	16.4	18.5	5000
						0.00	2.27	4.52	6.79	9.04	11.3	13.6	15.8	18.1	20.3	5500

Poly Chain® GT® Carbon™ Belt Length Correction Factor Table

Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor
8MGT-640	80	0.79	8MGT-1200	150	1.03	8MGT-2200	275	1.26	8MGT-3048	381	1.38
8MGT-720	90	0.83	8MGT-1224	153	1.03	8MGT-2240	280	1.26	8MGT-3200	400	1.40
8MGT-800	100	0.87	8MGT-1280	160	1.05	8MGT-2400	300	1.29	8MGT-3280	410	1.41
8MGT-896	112	0.91	8MGT-1440	180	1.10	8MGT-2520	315	1.31	8MGT-3600	450	1.45
8MGT-960	120	0.94	8MGT-1600	200	1.14	8MGT-2600	325	1.32	8MGT-4000	500	1.49
8MGT-1000	125	0.96	8MGT-1760	220	1.17	8MGT-2800	350	1.35	8MGT-4400	550	1.52
8MGT-1040	130	0.97	8MGT-1792	224	1.18	8MGT-2840	355	1.36	8MGT-4480	560	1.53
8MGT-1120	140	1.00	8MGT-2000	250	1.22						

14mm Pitch POLY CHAIN® GT® CARBON™ BELTS

Rated Horsepower for Small Sprocket (Number of Grooves and Pitch Diameter, Inches)

RPM OF FASTER SHAFT	28 / 4.912	29 / 5.088	30 / 5.263	31 / 5.439	32 / 5.614	33 / 5.790	34 / 5.965	35 / 6.141	36 / 6.316	37 / 6.492	38 / 6.667	39 / 6.842	40 / 7.018	43 / 7.544	45 / 7.895	48 / 8.421	50 / 8.772	53 / 9.299	56 / 9.825	60 / 10.527	63 / 11.053	67 / 11.755	71 / 12.467	75 / 13.158	80 / 14.036
10	1.11	1.15	1.20	1.24	1.28	1.33	1.37	1.41	1.46	1.50	1.54	1.59	1.63	1.76	1.84	1.97	2.06	2.19	2.31	2.48	2.61	2.78	2.95	3.11	3.32
20	1.71	1.78	1.85	1.92	1.99	2.06	2.13	2.19	2.26	2.33	2.40	2.47	2.54	2.74	2.88	3.08	3.21	3.41	3.61	3.88	4.08	4.34	4.61	4.87	5.20
35	2.53	2.64	2.74	2.85	2.95	3.06	3.16	3.27	3.37	3.47	3.57	3.68	3.78	4.09	4.29	4.60	4.80	5.10	5.40	5.80	6.10	6.50	6.90	7.29	7.78
44	3.00	3.13	3.25	3.38	3.50	3.63	3.75	3.88	4.00	4.12	4.25	4.37	4.49	4.86	5.10	5.46	5.71	6.07	6.43	6.90	7.26	7.73	8.21	8.67	9.26
58	3.70	3.86	4.02	4.17	4.33	4.48	4.64	4.79	4.95	5.10	5.25	5.41	5.56	6.02	6.32	6.77	7.07	7.52	7.97	8.56	9.00	9.59	10.2	10.8	11.5
70	4.29	4.47	4.65	4.83	5.02	5.20	5.38	5.56	5.74	5.91	6.09	6.27	6.45	6.98	7.33	7.86	8.21	8.73	9.25	9.94	10.5	11.1	11.8	12.5	13.3
88	5.14	5.36	5.58	5.80	6.02	6.23	6.45	6.67	6.89	7.10	7.32	7.53	7.75	8.39	8.81	9.45	9.87	10.5	11.1	12.0	12.6	13.4	14.2	15.0	16.0
100	5.69	5.94	6.18	6.43	6.67	6.91	7.15	7.39	7.63	7.88	8.11	8.35	8.59	9.30	9.78	10.5	11.0	11.7	12.3	13.3	14.0	14.9	15.8	16.7	17.8
117	6.46	6.74	7.02	7.30	7.57	7.85	8.13	8.40	8.68	8.95	9.22	9.50	9.77	10.6	11.1	11.9	12.5	13.3	14.0	15.1	15.9	16.9	18.0	19.0	20.3
175	8.97	9.37	9.76	10.2	10.5	10.9	11.3	11.7	12.1	12.5	12.9	13.2	13.6	14.8	15.5	16.7	17.4	18.5	19.6	21.1	22.2	23.7	25.1	26.6	28.3
200	10.0	10.5	10.9	11.3	11.8	12.2	12.6	13.1	13.5	13.9	14.4	14.8	15.2	16.5	17.4	18.6	19.5	20.7	22.0	23.6	24.8	26.5	28.1	29.7	31.7
233	11.4	11.9	12.4	12.9	13.4	13.9	14.4	14.9	15.4	15.8	16.3	16.8	17.3	18.8	19.7	21.2	22.1	23.6	25.0	26.9	28.3	30.1	32.0	33.8	36.1
300	14.0	14.7	15.3	15.9	16.5	17.1	17.8	18.4	19.0	19.6	20.2	20.8	21.4	23.2	24.4	26.2	27.4	29.2	30.9	33.3	35.0	37.3	39.6	41.9	44.7
350	15.9	16.7	17.4	18.1	18.8	19.5	20.2	20.9	21.6	22.3	23.0	23.7	24.4	26.5	27.8	29.8	31.2	33.2	35.3	37.9	39.9	42.5	45.1	47.7	50.9
400	17.8	18.6	19.4	20.2	21.0	21.8	22.6	23.4	24.2	25.0	25.8	26.5	27.3	29.6	31.2	33.5	35.0	37.2	39.5	42.5	44.7	47.6	50.6	53.4	57.1
500	21.5	22.5	23.4	24.4	25.4	26.3	27.3	28.2	29.2	30.2	31.1	32.0	33.0	35.8	37.7	40.4	42.3	45.0	47.7	51.3	54.0	57.6	61.1	64.6	69.0
575	24.1	25.2	26.3	27.4	28.5	29.6	30.7	31.8	32.9	33.9	35.0	36.1	37.1	40.3	42.4	45.5	47.6	50.7	53.8	57.8	60.8	64.8	68.8	72.7	77.6
600	25.0	26.2	27.3	28.4	29.6	30.7	31.8	32.9	34.1	35.2	36.3	37.4	38.5	41.8	44.0	47.2	49.3	52.6	55.7	59.9	63.1	67.2	71.3	75.4	80.5
690	28.1	29.4	30.7	32.0	33.2	34.5	35.8	37.1	38.3	39.6	40.8	42.1	43.3	47.0	49.5	53.1	55.5	59.2	62.7	67.5	71.0	75.7	80.3	84.9	90.6
700	28.5	29.8	31.1	32.4	33.7	34.9	36.2	37.5	38.8	40.1	41.3	42.6	43.8	47.6	50.1	53.8	56.2	59.9	63.5	68.3	71.9	76.6	81.3	85.9	91.7
800	31.8	33.3	34.7	36.2	37.6	39.1	40.5	42.0	43.4	44.8	46.2	47.7	49.1	53.3	56.1	60.2	62.9	67.0	71.1	76.5	80.5	85.7	91.0	96.1	102.5
870	34.1	35.7	37.2	38.8	40.4	41.9	43.5	45.1	46.6	48.1	49.6	51.1	52.7	57.2	60.2	64.6	67.6	72.0	76.3	82.1	86.3	92.0	97.6	103.1	110.0
900	35.1	36.7	38.3	39.9	41.5	43.1	44.7	46.3	47.9	49.5	51.1	52.6	54.2	58.8	61.9	66.5	69.5	74.0	78.5	84.4	88.8	94.6	100.4	106.1	113.1
1000	38.3	40.1	41.8	43.6	45.4	47.1	48.9	50.6	52.3	54.1	55.8	57.5	59.2	64.3	67.6	72.6	76.0	80.9	85.8	92.2	97.0	103.4	109.6	115.8	123.5
1160	43.3	45.3	47.3	49.3	51.3	53.3	55.3	57.3	59.2	61.2	63.1	65.1	67.0	72.8	76.6	82.3	86.0	91.6	97.1	104.4	109.8	116.9	123.9	130.9	139.4
1750	60.6	63.5	66.3	69.2	72.0	74.8	77.6	80.4	83.2	85.9	88.7	91.4	94.1	102.2	107.5	115.4	120.6	128.3	135.9	145.9	153.2	162.9	172.3	181.5	192.8
2000	67.5	70.7	73.9	77.1	80.2	83.4	86.5	89.6	92.7	95.8	98.8	101.8	104.9	113.8	119.7	128.4	134.2	142.7	151.0	162.0	170.0	180.5	190.7		
3000	92.9	97.4	101.8	106.1	110.5	114.8	119.0	123.3	127.5	131.6	135.7	139.8	143.9	155.8	163.6										
3450	103.3	108.3	113.1	118.0	122.8	127.5	132.2	136.9	141.4	146.0	150.5	155.0	159.4												
4000	115.2	120.7	126.1	131.4	136.7	141.9	147.0	152.1	157.1																

Additional Horsepower per belt for Speed — Ratio of Speed-Down Drives

RPM OF FASTER SHAFT	1.00 to 1.03	1.04 to 1.10	1.11 to 1.19	1.20 to 1.30	1.31 to 1.45	1.46 to 1.67	1.68 to 2.02	2.03 to 2.69	2.70 to 4.64	4.65 and Over
10	0.00	0.00	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05
20	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
35	0.00	0.01	0.04	0.05	0.07	0.08	0.11	0.12	0.14	0.16
44	0.00	0.02	0.04	0.07	0.09	0.11	0.13	0.16	0.18	0.20
58	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.26
70	0.00	0.04	0.07	0.11	0.14	0.18	0.21	0.25	0.28	0.32
88	0.00	0.04	0.09	0.13	0.18	0.22	0.27	0.31	0.36	0.40
100	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.36	0.41	0.46
117	0.00	0.06	0.12	0.18	0.24	0.30	0.36	0.42	0.47	0.53
175	0.00	0.09	0.18	0.27	0.36	0.44	0.53	0.62	0.71	0.80
200	0.00	0.10	0.20	0.30	0.41	0.51	0.61	0.71	0.81	0.91
233	0.00	0.12	0.24	0.35	0.47	0.59	0.71	0.83	0.95	1.06
300	0.00	0.15	0.30	0.46	0.61	0.76	0.91	1.07	1.22	1.37
350	0.00	0.18	0.36	0.53	0.71	0.89	1.07	1.24	1.42	1.60
400	0.00	0.20	0.41	0.61	0.81	1.02	1.22	1.42	1.62	1.83
500	0.00	0.25	0.51	0.76	1.02	1.27	1.52	1.78	2.03	2.28
575	0.00	0.29	0.58	0.88	1.17	1.46	1.75	2.04	2.33	2.63
600	0.00	0.30	0.61	0.91	1.22	1.52	1.83	2.13	2.44	2.74
690	0.00	0.35	0.70	1.05	1.40	1.75	2.10	2.45	2.80	3.15
700	0.00	0.36	0.71	1.07	1.42	1.78	2.13	2.49	2.84	3.20
800	0.00	0.41	0.81	1.22	1.62	2.03	2.44	2.84	3.25	3.65
870	0.00	0.44	0.88	1.32	1.77	2.21	2.65	3.09	3.53	3.97
900	0.00	0.46	0.91	1.37	1.83	2.28	2.74	3.20	3.65	4.11
1000	0.00	0.51	1.01	1.52	2.03	2.54	3.04	3.55	4.06	4.57
1160	0.00	0.59	1.18	1.77	2.35	2.94	3.53	4.12	4.71	5.30
1750	0.00	0.89	1.78	2.66	3.55	4.44	5.33	6.22	7.10	7.99
2000	0.00	1.02	2.03	3.04	4.06	5.08	6.09	7.10	8.12	9.13
3000	0.00	1.52	3.04	4.57	6.09	7.61	9.13	10.7	12.2	13.7
3450	0.00	1.75	3.50	5.25	7.00	8.75	10.5	12.3	14.0	15.8
4000	0.00	2.03	4.06	6.09	8.12	10.2	12.2	14.2	16.2	18.3

Poly Chain® GT® CARBON™ Belt Length Correction Factor Table

Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor
14MGT-994	71	0.68	14MGT-2520	180	1.03
14MGT-1120	80	0.73	14MGT-2590	185	1.04
14MGT-1190	85	0.75	14MGT-2660	190	1.05
14MGT-1260	90	0.77	14MGT-2800	200	1.07
14MGT-1400	100	0.81	14MGT-3136	224	1.12
14MGT-1568	112	0.85	14MGT-3304	236	1.14
14MGT-1610	115	0.86	14MGT-3360	240	1.14
14MGT-1750	125	0.89	14MGT-3500	250	1.16
14MGT-1890	135	0.92	14MGT-3850	275	1.19
14MGT-1960	140	0.94	14MGT-3920	280	1.20
14MGT-2100	150	0.96	14MGT-4326	309	1.24
14MGT-2240	160	0.99	14MGT-4410	315	1.25
14MGT-2310	165	1.00			
14MGT-2380	170	1.01			
14MGT-2450	175	1.02			

Horsepower Rating for 37mm Wide

14mm Pitch POLY CHAIN® GT® CARBON™ BELTS

Rated Horsepower for Small Sprocket (Number of Grooves and Pitch Diameter, Inches)

RPM OF FASTER SHAFT	28 4.912	29 5.088	30 5.263	31 5.439	32 5.614	33 5.790	34 5.965	35 6.141	36 6.316	37 6.482	38 6.667	39 6.842	40 7.08	43 7.544	45 7.895	48 8.421	50 8.772	53 9.299	56 9.825	60 10.527	63 11.053	67 11.755	71 12.457	75 13.158	80 14.036
10	2.05	2.13	2.21	2.29	2.37	2.45	2.54	2.62	2.70	2.78	2.86	2.94	3.02	3.25	3.41	3.65	3.81	4.04	4.28	4.59	4.83	5.14	5.45	5.76	6.15
20	3.16	3.29	3.42	3.55	3.68	3.80	3.93	4.06	4.19	4.31	4.44	4.57	4.69	5.07	5.32	5.69	5.94	6.31	6.69	7.18	7.55	8.04	8.52	9.01	9.61
35	4.69	4.88	5.08	5.27	5.46	5.66	5.85	6.04	6.23	6.42	6.61	6.80	6.99	7.56	7.94	8.50	8.88	9.44	10.00	10.7	11.3	12.0	12.8	13.5	14.4
44	5.55	5.79	6.02	6.25	6.48	6.71	6.94	7.17	7.40	7.63	7.85	8.08	8.31	8.99	9.44	10.1	10.6	11.2	11.9	12.8	13.4	14.3	15.2	16.0	17.1
58	6.85	7.14	7.43	7.72	8.01	8.30	8.58	8.87	9.15	9.44	9.72	10.0	10.3	11.1	11.7	12.5	13.1	13.9	14.7	15.8	16.7	17.7	18.8	19.9	21.2
70	7.93	8.27	8.61	8.94	9.28	9.61	9.95	10.3	10.6	10.9	11.3	11.6	11.9	12.9	13.6	14.5	15.2	16.2	17.1	18.4	19.3	20.6	21.9	23.1	24.7
88	9.51	9.91	10.3	10.7	11.1	11.5	11.9	12.3	12.7	13.1	13.5	13.9	14.3	15.5	16.3	17.5	18.3	19.4	20.6	22.1	23.3	24.8	26.3	27.8	29.7
100	10.5	11.0	11.4	11.9	12.3	12.8	13.2	13.7	14.1	14.6	15.0	15.5	15.9	17.2	18.1	19.4	20.3	21.6	22.8	24.5	25.8	27.5	29.2	30.9	32.9
117	11.9	12.5	13.0	13.5	14.0	14.5	15.0	15.5	16.1	16.6	17.1	17.6	18.1	19.6	20.6	22.1	23.0	24.5	26.0	27.9	29.4	31.3	33.2	35.1	37.5
175	16.6	17.3	18.1	18.8	19.5	20.2	20.9	21.7	22.4	23.1	23.8	24.5	25.2	27.3	28.7	30.8	32.2	34.3	36.3	39.0	41.1	43.8	46.5	49.1	52.4
200	18.5	19.4	20.2	21.0	21.8	22.6	23.4	24.2	25.0	25.8	26.6	27.4	28.2	30.5	32.1	34.5	36.0	38.3	40.6	43.7	46.0	49.0	52.0	55.0	58.7
233	21.0	22.0	22.9	23.8	24.7	25.7	26.6	27.5	28.4	29.3	30.2	31.1	32.0	34.7	36.5	39.2	40.9	43.6	46.2	49.7	52.3	55.7	59.1	62.5	66.7
300	25.9	27.1	28.3	29.4	30.6	31.7	32.8	34.0	35.1	36.3	37.4	38.5	39.6	43.0	45.2	48.5	50.7	54.0	57.2	61.5	64.7	69.0	73.2	77.4	82.7
350	29.5	30.8	32.2	33.5	34.8	36.1	37.4	38.7	40.0	41.3	42.6	43.9	45.1	49.0	51.5	55.3	57.8	61.5	65.2	70.1	73.8	78.7	83.5	88.3	94.2
400	33.0	34.5	36.0	37.4	38.9	40.4	41.8	43.3	44.7	46.2	47.6	49.1	50.5	54.8	57.7	61.9	64.7	68.9	73.1	78.6	82.7	88.1	93.5	98.9	105.5
500	39.7	41.6	43.3	45.1	46.9	48.7	50.5	52.3	54.0	55.8	57.5	59.3	61.0	66.2	69.7	74.8	78.2	83.3	88.3	95.0	99.9	106.5	113.0	119.5	127.6
575	44.7	46.7	48.7	50.8	52.8	54.8	56.8	58.8	60.8	62.8	64.7	66.7	68.7	74.5	78.4	84.2	88.0	93.8	99.4	107.0	112.5	119.9	127.3	134.6	143.6
600	46.3	48.4	50.5	52.6	54.7	56.8	58.9	60.9	63.0	65.1	67.1	69.2	71.2	77.3	81.3	87.3	91.3	97.2	103.1	110.9	116.7	124.4	132.0	139.5	148.9
690	52.0	54.4	56.8	59.2	61.5	63.9	66.2	68.6	70.9	73.2	75.5	77.8	80.1	87.0	91.5	98.3	102.8	109.4	116.1	124.8	131.3	140.0	148.5	157.0	167.5
700	52.6	55.1	57.5	59.9	62.3	64.6	67.0	69.4	71.7	74.1	76.4	78.8	81.1	88.0	92.6	99.5	104.0	110.8	117.5	126.4	133.0	141.7	150.3	158.9	169.6
800	58.8	61.5	64.2	67.0	69.6	72.3	75.0	77.6	80.3	82.9	85.5	88.2	90.8	98.6	103.7	111.4	116.5	124.0	131.5	141.5	148.8	158.6	168.3	177.8	189.7
870	63.1	66.0	68.9	71.8	74.7	77.6	80.4	83.3	86.1	89.0	91.8	94.6	97.4	105.8	111.3	119.5	125.0	133.1	141.2	151.8	159.7	170.2	180.5	190.8	203.5
900	64.9	67.9	70.9	73.9	76.8	79.8	82.7	85.7	88.6	91.5	94.4	97.3	100.2	108.8	114.5	123.0	128.6	137.0	145.3	156.2	164.3	175.1	185.7	196.3	209.3
1000	70.8	74.1	77.4	80.7	83.9	87.2	90.4	93.6	96.8	100.0	103.2	106.3	109.5	118.9	125.1	134.4	140.5	149.7	158.7	170.6	179.5	191.2	202.8	214.2	228.4
1160	80.1	83.8	87.5	91.2	94.9	98.6	102.3	105.9	109.6	113.2	116.8	120.4	124.0	134.6	141.7	152.2	159.1	169.4	179.6	193.1	203.1	216.3	229.3	242.1	258.0
1750	112.1	117.4	122.7	128.0	133.2	138.4	143.6	148.7	153.8	158.9	164.0	169.1	174.1	189.0	198.9	213.5	223.1	237.4	251.4	269.9	283.4	301.3	318.7	335.8	356.7
2000	124.9	130.8	136.7	142.6	148.4	154.2	160.0	165.8	171.4	177.1	182.8	188.4	194.0	210.6	221.5	237.6	248.2	264.0	279.4	299.6	314.5	333.9	352.8		
3000	171.9	180.1	188.3	196.4	204.4	212.3	220.2	228.0	235.8	243.5	251.1	258.6	266.2	288.3	302.7										
3450	191.1	200.3	209.3	218.3	227.1	235.9	244.5	253.2	261.7	270.1															
4000	213.1	223.2	233.2	243.1	252.8	262.5	272.0	281.4	290.7																

Additional Horsepower per belt for Speed
Ratio of Speed-Down Drives

RPM OF FASTER SHAFT	1.00 to 1.03	1.04 to 1.10	1.11 to 1.19	1.20 to 1.30	1.31 to 1.45	1.46 to 1.67	1.68 to 2.02	2.03 to 2.69	2.70 to 4.64	4.65 and Over
10	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.08
20	0.00	0.02	0.04	0.06	0.08	0.09	0.11	0.13	0.15	0.17
35	0.00	0.03	0.07	0.10	0.13	0.16	0.20	0.23	0.26	0.30
44	0.00	0.04	0.08	0.12	0.17	0.21	0.25	0.29	0.33	0.37
58	0.00	0.05	0.11	0.16	0.22	0.27	0.33	0.38	0.44	0.49
70	0.00	0.07	0.13	0.20	0.26	0.33	0.39	0.46	0.53	0.59
88	0.00	0.08	0.17	0.25	0.33	0.41	0.50	0.58	0.66	0.74
100	0.00	0.08	0.19	0.28	0.38	0.47	0.56	0.66	0.75	0.84
117	0.00	0.11	0.22	0.33	0.44	0.55	0.66	0.77	0.88	0.99
175	0.00	0.16	0.33	0.49	0.66	0.82	0.99	1.15	1.31	1.48
200	0.00	0.19	0.38	0.56	0.75	0.94	1.13	1.31	1.50	1.69
233	0.00	0.22	0.44	0.66	0.88	1.13	1.31	1.53	1.75	1.97
300	0.00	0.28	0.56	0.84	1.13	1.41	1.69	1.97	2.25	2.53
350	0.00	0.33	0.66	0.99	1.31	1.64	1.97	2.30	2.63	2.96
400	0.00	0.38	0.75	1.13	1.50	1.88	2.25	2.63	3.00	3.38
500	0.00	0.47	0.94	1.41	1.88	2.35	2.82	3.29	3.75	4.22
575	0.00	0.54	1.08	1.62	2.16	2.70	3.24	3.78	4.32	4.86
600	0.00	0.56	1.13	1.69	2.25	2.82	3.38	3.94	4.51	5.07
690	0.00	0.65	1.30	1.94	2.59	3.24	3.89	4.53	5.18	5.83
700	0.00	0.66	1.31	1.97	2.63	3.29	3.94	4.60	5.26	5.91
800	0.00	0.75	1.50	2.25	3.00	3.76	4.51	5.26	6.01	6.76
870	0.00	0.82	1.63	2.45	3.27	4.08	4.90	5.72	6.53	7.35
900	0.00	0.85	1.69	2.53	3.38	4.23	5.07	5.91	6.76	7.60
1000	0.00	0.94	1.88	2.82	3.76	4.69	5.63	6.57	7.51	8.45
1160	0.00	1.09	2.18	3.27	4.36	5.45	6.53	7.62	8.71	9.80
1750	0.00	1.64	3.29	4.93	6.57	8.22	9.85	11.5	13.1	14.8
2000	0.00	1.88	3.76	5.63	7.51	9.39	11.3	13.1	15.0	16.9
3000	0.00	2.82	5.63	8.45	11.3	14.1	16.9	19.7	22.5	25.3
3450	0.00	3.24	6.48	9.71	13.0	16.2	19.4	22.7	25.9	29.1
4000	0.00	3.76	7.51	11.3	15.0	18.8	22.5	26.3	30.0	33.8

Poly Chain® GT® CARBON™ Belt Length Correction Factor Table

Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor
14MGT-994	71	0.68	14MGT-2520	180	1.03
14MGT-1120	80	0.73	14MGT-2590	185	1.04
14MGT-1190	85	0.75	14MGT-2660	190	1.05
14MGT-1260	90	0.77	14MGT-2800	200	1.07
14MGT-1400	100	0.81	14MGT-3136	224	1.12
14MGT-1568	112	0.85	14MGT-3304	236	1.14
14MGT-1610	115	0.86	14MGT-3360	240	1.14
14MGT-1750	125	0.89	14MGT-3500	250	1.16
14MGT-1890	135	0.92	14MGT-3850	275	1.19
14MGT-1960	140	0.94	14MGT-3920	280	1.20
14MGT-2100	150	0.96	14MGT-4326	309	1.24
14MGT-2240	160	0.99	14MGT-4410	315	1.25
14MGT-2310	165	1.00			
14MGT-2380	170	1.01			
14MGT-2450	175	1.02			

Horsepower Rating for 68mm Wide

14mm Pitch POLY CHAIN® GT® CARBON™ BELTS

Rated Horsepower for Small Sprocket (Number of Grooves and Pitch Diameter, Inches)

RPM OF FASTER SHAFT	28 / 4.912	29 / 5.088	30 / 5.283	31 / 5.439	32 / 5.614	33 / 5.790	34 / 5.965	35 / 6.141	36 / 6.316	37 / 6.492	38 / 6.667	39 / 6.842	40 / 7.018	43 / 7.544	45 / 7.895	48 / 8.421	50 / 8.772	53 / 9.299	56 / 9.825	60 / 10.527	63 / 11.053	67 / 11.755	71 / 12.457	75 / 13.158	80 / 14.036
10	3.77	3.92	4.07	4.22	4.36	4.51	4.66	4.81	4.95	5.10	5.25	5.39	5.54	5.98	6.27	6.71	7.00	7.43	7.87	8.44	8.87	9.45	10.0	10.6	11.3
20	5.82	6.05	6.29	6.52	6.76	6.99	7.23	7.46	7.69	7.93	8.16	8.39	8.62	9.31	9.78	10.5	10.9	11.6	12.3	13.2	13.9	14.8	15.7	16.6	17.7
35	8.61	8.97	9.33	9.68	10.0	10.4	10.7	11.1	11.5	11.8	12.2	12.5	12.9	13.9	14.6	15.6	16.3	17.3	18.4	19.7	20.8	22.1	23.4	24.8	26.5
44	10.2	10.6	11.1	11.5	11.9	12.3	12.8	13.2	13.6	14.0	14.4	14.9	15.3	16.5	17.3	18.6	19.4	20.6	21.9	23.5	24.7	26.3	27.9	29.5	31.5
58	12.6	13.1	13.7	14.2	14.7	15.2	15.8	16.3	16.8	17.3	17.9	18.4	18.9	20.5	21.5	23.0	24.0	25.6	27.1	29.1	30.6	32.6	34.6	36.6	39.0
70	14.6	15.2	15.8	16.4	17.0	17.7	18.3	18.9	19.5	20.1	20.7	21.3	21.9	23.7	24.9	26.7	27.9	29.7	31.5	33.8	35.5	37.9	40.2	42.5	45.3
88	17.5	18.2	19.0	19.7	20.5	21.2	21.9	22.7	23.4	24.1	24.9	25.6	26.3	28.5	30.0	32.1	33.6	35.7	37.8	40.6	42.8	45.6	48.3	51.1	54.5
100	19.4	20.2	21.0	21.8	22.7	23.5	24.3	25.1	26.0	26.8	27.6	28.4	29.2	31.6	33.2	35.6	37.2	39.6	42.0	45.1	47.5	50.6	53.7	56.7	60.6
117	22.0	22.9	23.9	24.8	25.8	26.7	27.6	28.6	29.5	30.4	31.4	32.3	33.2	36.0	37.8	40.5	42.4	45.1	47.8	51.3	54.0	57.5	61.1	64.6	68.9
175	30.5	31.9	33.2	34.5	35.8	37.2	38.5	39.8	41.1	42.4	43.7	45.0	46.3	50.2	52.8	56.6	59.2	63.0	66.8	71.8	75.5	80.5	85.4	90.3	96.4
200	34.1	35.6	37.1	38.6	40.0	41.5	43.0	44.5	46.0	47.4	48.9	50.3	51.8	56.1	59.0	63.3	66.2	70.4	74.7	80.3	84.5	90.0	95.5	101.0	107.8
233	38.7	40.4	42.1	43.8	45.5	47.2	48.8	50.5	52.2	53.9	55.5	57.2	58.9	63.8	67.1	72.0	75.3	80.1	84.9	91.3	96.1	102.4	108.7	114.9	122.7
300	47.7	49.8	51.9	54.1	56.2	58.3	60.4	62.5	64.5	66.6	68.7	70.8	72.8	79.0	83.1	89.1	93.2	99.2	105.2	113.1	119.0	126.8	134.6	142.3	151.9
350	54.2	56.7	59.1	61.5	63.9	66.3	68.7	71.1	73.5	75.9	78.2	80.6	82.9	90.0	94.6	101.6	106.2	113.0	119.9	128.9	135.6	144.6	153.4	162.2	173.2
400	60.6	63.4	66.1	68.8	71.5	74.2	76.9	79.6	82.2	84.9	87.6	90.2	92.9	100.7	106.0	113.7	118.9	126.6	134.4	144.4	151.9	161.9	171.9	181.7	194.0
500	73.0	76.4	79.7	83.0	86.2	89.5	92.8	96.0	99.3	102.5	105.7	108.9	112.2	121.7	128.0	137.5	143.7	153.0	162.3	174.6	183.7	195.8	207.8	219.7	234.4
575	82.1	85.8	89.6	93.3	97.0	100.7	104.4	108.1	111.7	115.4	119.0	122.6	126.2	137.0	144.1	154.8	161.8	172.3	182.8	196.6	206.8	220.4	233.9	247.3	263.9
600	85.1	89.0	92.8	96.7	100.5	104.4	108.2	112.0	115.8	119.6	123.3	127.1	130.9	142.0	149.4	160.5	167.8	178.7	189.5	203.8	214.4	228.5	242.5	256.4	273.6
690	95.6	100.0	104.3	108.7	113.0	117.4	121.7	126.0	130.3	134.5	138.8	143.0	147.3	159.9	168.2	180.6	188.9	201.1	213.3	229.4	241.4	257.3	273.0	288.6	307.9
700	96.7	101.2	105.6	110.0	114.4	118.8	123.2	127.5	131.8	136.2	140.5	144.8	149.1	161.8	170.3	182.8	191.2	203.6	215.9	232.2	244.4	260.4	276.3	292.1	311.6
800	108.1	113.1	118.1	123.0	128.0	132.9	137.8	142.7	147.5	152.4	157.2	162.0	166.8	181.1	190.6	204.7	214.0	227.9	241.7	260.0	273.5	291.5	309.2	326.8	348.6
870	115.9	121.3	126.6	132.0	137.3	142.6	147.8	153.1	158.3	163.5	168.7	173.9	179.0	194.4	204.6	219.7	229.5	244.7	259.5	279.0	293.5	312.8	331.8	350.6	373.9
900	119.2	124.8	130.3	135.8	141.2	146.7	152.1	157.5	162.9	168.2	173.6	178.9	184.2	200.0	210.5	226.1	236.4	251.7	267.0	287.1	302.0	322.0	341.3	360.7	384.6
1000	130.1	136.2	142.2	148.2	154.2	160.1	166.1	172.0	177.9	183.8	189.6	195.4	201.2	218.5	230.0	247.0	258.3	275.0	291.7	313.6	329.9	351.4	372.7	393.7	419.8
1160	147.1	154.0	160.9	167.7	174.5	181.3	188.0	194.7	201.4	208.0	214.7	221.2	227.7	247.4	260.4	279.7	292.4	311.4	330.1	354.9	373.2	397.4	421.4	445.0	474.1
1750	206.0	215.8	225.5	235.2	244.8	254.4	263.9	273.4	282.7	292.1	301.4	310.7	320.0	347.4	365.5	392.3	410.0	436.2	462.1	496.0	520.9	553.7	585.8	617.2	655.7
2000	229.5	240.4	251.3	262.1	272.8	283.5	294.0	304.6	315.1	325.6	335.9	346.2	356.5	387.0	407.0	436.7	456.2	485.1	513.5	550.7	578.0	613.6	648.4		
3000	315.9	331.1	346.0	360.9	375.6	390.2	404.7	419.1	433.3	447.5	461.5	475.4	489.2	529.8	556.3										
3450	351.3	368.1	384.6	401.1	417.4	433.5	449.5	465.3	480.9	496.5	511.7	526.9	541.9												
4000	391.6	410.3	428.6	446.8	464.7	482.5	499.9	517.3	534.3																

Additional Horsepower per belt for Speed — Ratio of Speed-Down Drives

RPM OF FASTER SHAFT	1.00 to 1.03	1.04 to 1.10	1.11 to 1.19	1.20 to 1.30	1.31 to 1.45	1.46 to 1.67	1.68 to 2.02	2.03 to 2.69	2.70 to 4.64	4.65 and Over
10	0.00	0.02	0.03	0.05	0.07	0.09	0.10	0.12	0.14	0.16
20	0.00	0.03	0.07	0.10	0.14	0.17	0.21	0.24	0.28	0.31
35	0.00	0.06	0.12	0.18	0.24	0.30	0.36	0.42	0.48	0.54
44	0.00	0.08	0.15	0.23	0.30	0.38	0.46	0.53	0.61	0.68
58	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
70	0.00	0.12	0.24	0.36	0.48	0.60	0.72	0.85	0.97	1.09
88	0.00	0.15	0.30	0.46	0.61	0.76	0.91	1.06	1.21	1.37
100	0.00	0.17	0.35	0.52	0.69	0.86	1.03	1.21	1.38	1.55
117	0.00	0.20	0.40	0.61	0.81	1.01	1.21	1.41	1.61	1.82
175	0.00	0.30	0.60	0.91	1.21	1.51	1.81	2.11	2.42	2.72
200	0.00	0.35	0.69	1.03	1.38	1.73	2.07	2.42	2.76	3.11
233	0.00	0.40	0.80	1.21	1.61	2.01	2.41	2.81	3.22	3.62
300	0.00	0.52	1.04	1.55	2.07	2.59	3.10	3.62	4.14	4.66
350	0.00	0.60	1.21	1.81	2.42	3.02	3.62	4.23	4.83	5.43
400	0.00	0.69	1.38	2.07	2.76	3.45	4.14	4.83	5.52	6.21
500	0.00	0.86	1.73	2.59	3.45	4.31	5.17	6.04	6.90	7.76
575	0.00	0.99	1.98	2.98	3.97	4.96	5.95	6.94	7.94	8.93
600	0.00	1.04	2.07	3.10	4.14	5.18	6.21	7.25	8.28	9.32
690	0.00	1.19	2.38	3.57	4.76	5.95	7.14	8.33	9.52	10.7
700	0.00	1.21	2.42	3.62	4.83	6.04	7.24	8.45	9.66	10.9
800	0.00	1.38	2.76	4.14	5.52	6.90	8.28	9.66	11.0	12.4
870	0.00	1.50	3.00	4.50	6.00	7.51	9.00	10.5	12.0	13.5
900	0.00	1.55	3.11	4.66	6.21	7.76	9.31	10.9	12.4	14.0
1000	0.00	1.73	3.45	5.17	6.90	8.63	10.3	12.1	13.8	15.5
1160	0.00	2.00	4.00	6.00	8.01	10.0	12.0	14.0	16.0	18.0
1750	0.00	3.02	6.04	9.05	12.1	15.1	18.1	21.1	24.2	27.2
2000	0.00	3.45	6.90	10.3	13.8	17.3	20.7	24.2	27.6	31.1
3000	0.00	5.18	10.4	15.5	20.7	25.9	31.0	36.2	41.4	46.6
3450	0.00	5.96	11.9	17.9	23.8	29.8	35.7	41.7	47.6	53.6
4000	0.00	6.91	13.8	20.7	27.6	34.5	41.4	48.3	55.2	62.1

Poly Chain® GT® CARBON™ Belt Length Correction Factor Table

Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor
14MGT-994	71	0.68	14MGT-2520	180	1.03
14MGT-1120	80	0.73	14MGT-2590	185	1.04
14MGT-1190	85	0.75	14MGT-2660	190	1.05
14MGT-1260	90	0.77	14MGT-2800	200	1.07
14MGT-1400	100	0.81	14MGT-3136	224	1.12
14MGT-1568	112	0.85	14MGT-3304	236	1.14
14MGT-1610	115	0.86	14MGT-3360	240	1.14
14MGT-1750	125	0.89	14MGT-3500	250	1.16
14MGT-1890	135	0.92	14MGT-3850	275	1.19
14MGT-1960	140	0.94	14MGT-3920	280	1.20
14MGT-2100	150	0.96	14MGT-4326	309	1.24
14MGT-2240	160	0.99	14MGT-4410	315	1.25
14MGT-2310	165	1.00			
14MGT-2380	170	1.01			
14MGT-2450	175	1.02			

Gates Corporation

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Horsepower Rating for 90mm Wide
14mm Pitch POLY CHAIN® GT® CARBON™ BELTS

Rated Horsepower for Small Sprocket (Number of Grooves and Pitch Diameter, Inches)

RPM OF FASTER SHAFT	28 (4.912)	29 (5.088)	30 (5.263)	31 (5.439)	32 (5.614)	33 (5.790)	34 (5.965)	35 (6.141)	36 (6.316)	37 (6.492)	38 (6.667)	39 (6.842)	40 (7.018)	43 (7.544)	45 (7.885)	48 (8.421)	50 (8.772)	53 (9.299)	56 (9.825)	60 (10.527)	63 (11.053)	67 (11.755)	71 (12.457)	75 (13.158)	80 (14.036)
10	4.99	5.19	5.38	5.58	5.77	5.97	6.17	6.36	6.56	6.75	6.95	7.14	7.33	7.92	8.30	8.88	9.26	9.84	10.4	11.2	11.7	12.5	13.3	14.0	15.0
20	7.70	8.01	8.32	8.63	8.94	9.26	9.56	9.87	10.2	10.5	10.8	11.1	11.4	12.3	12.9	13.8	14.5	15.4	16.3	17.5	18.4	19.5	20.7	21.9	23.4
35	11.4	11.9	12.3	12.8	13.3	13.8	14.2	14.7	15.2	15.6	16.1	16.5	17.0	18.4	19.3	20.7	21.6	23.0	24.3	26.1	27.5	29.3	31.0	32.8	35.0
44	13.5	14.1	14.6	15.2	15.8	16.3	16.9	17.4	18.0	18.6	19.1	19.7	20.2	21.9	23.0	24.6	25.7	27.3	28.9	31.1	32.7	34.8	36.9	39.0	41.7
58	16.7	17.4	18.1	18.8	19.5	20.2	20.9	21.6	22.3	23.0	23.6	24.3	25.0	27.1	28.4	30.5	31.8	33.8	35.9	38.5	40.5	43.2	45.8	48.4	51.7
70	19.3	20.1	20.9	21.8	22.6	23.4	24.2	25.0	25.8	26.6	27.4	28.2	29.0	31.4	33.0	35.4	36.9	39.3	41.6	44.7	47.0	50.1	53.2	56.2	60.0
88	23.1	24.1	25.1	26.1	27.1	28.1	29.0	30.0	31.0	32.0	32.9	33.9	34.9	37.7	39.7	42.5	44.4	47.2	50.1	53.8	56.6	60.3	64.0	67.6	72.2
100	25.6	26.7	27.8	28.9	30.0	31.1	32.2	33.3	34.4	35.4	36.5	37.6	38.7	41.9	44.0	47.2	49.3	52.4	55.6	59.7	62.8	66.9	71.0	75.1	80.1
117	29.1	30.3	31.6	32.8	34.1	35.3	36.6	37.8	39.0	40.3	41.5	42.7	44.0	47.6	50.0	53.6	56.1	59.6	63.2	67.9	71.5	76.2	80.8	85.4	91.2
175	40.4	42.2	43.9	45.7	47.4	49.2	50.9	52.7	54.4	56.2	57.9	59.6	61.3	66.5	69.9	74.9	78.3	83.3	88.4	95.0	99.9	106.5	113.0	119.5	127.5
200	45.1	47.1	49.1	51.0	53.0	55.0	56.9	58.9	60.8	62.8	64.7	66.6	68.6	74.3	78.1	83.8	87.6	93.2	98.8	106.3	111.8	119.1	126.4	133.7	142.7
233	51.2	53.4	55.7	57.9	60.2	62.4	64.7	66.9	69.1	71.3	73.5	75.7	77.9	84.5	88.8	95.3	99.6	106.0	112.4	120.9	127.2	135.5	143.8	152.1	162.3
300	63.1	65.9	68.7	71.6	74.3	77.1	79.9	82.7	85.4	88.2	90.9	93.7	96.4	104.5	109.9	118.0	123.3	131.3	139.2	149.7	157.5	167.9	178.2	188.4	201.1
350	71.8	75.0	78.2	81.4	84.6	87.8	91.0	94.1	97.3	100.4	103.5	106.7	109.8	119.1	125.2	134.4	140.5	149.6	158.7	170.6	179.5	191.3	203.1	214.7	229.2
400	80.2	83.9	87.5	91.1	94.6	98.2	101.8	105.3	108.9	112.4	115.9	119.4	123.0	133.3	140.2	150.5	157.4	167.6	178.1	191.1	201.1	214.3	227.5	240.5	256.7
500	96.7	101.1	105.4	109.8	114.2	118.5	122.8	127.1	131.4	135.7	139.9	144.2	148.4	161.1	169.5	181.9	190.2	202.6	214.8	231.0	243.1	259.1	275.0	290.7	310.3
575	108.6	113.6	118.5	123.5	128.4	133.3	138.1	143.0	147.8	152.7	157.5	162.3	167.1	181.3	190.8	204.8	214.2	228.1	241.9	260.2	273.8	291.8	309.6	327.3	349.3
600	112.6	117.7	122.9	128.0	133.1	138.1	143.2	148.2	153.2	158.3	163.2	168.2	173.2	188.0	197.8	212.4	222.0	236.5	250.8	269.7	283.8	302.5	321.0	339.3	362.1
690	126.5	132.3	138.1	143.9	149.6	155.4	161.0	166.8	172.4	178.1	183.7	189.3	194.9	211.6	222.6	239.1	250.0	266.2	282.3	303.7	319.5	340.5	361.3	381.9	407.5
700	128.0	133.9	139.8	145.6	151.4	157.2	163.0	168.8	174.5	180.2	185.9	191.6	197.3	214.2	225.3	242.0	253.0	269.5	285.8	307.4	323.4	344.7	365.7	386.6	412.5
800	143.1	149.7	156.3	162.9	169.4	175.9	182.4	188.8	195.3	201.7	208.1	214.4	220.8	239.7	252.3	270.9	283.3	301.7	320.0	344.1	362.0	385.6	409.3	432.6	461.4
870	153.4	160.6	167.6	174.7	181.7	188.7	195.7	202.6	209.5	216.4	223.3	230.1	237.0	257.3	270.8	290.8	304.0	323.8	353.3	369.3	388.5	414.0	439.1	464.0	494.9
900	157.8	165.2	172.4	179.7	186.9	194.1	201.3	208.5	215.6	222.7	229.7	236.8	243.8	264.7	278.6	299.2	312.8	333.2	353.3	380.0	399.7	425.9	451.8	477.4	509.1
1000	172.2	180.3	188.2	196.2	204.1	212.0	219.8	227.7	235.5	243.2	251.0	258.7	266.4	289.2	304.4	326.9	341.8	364.0	386.0	415.1	436.6	465.1	493.3	521.1	555.6
1160	194.7	203.9	212.9	222.0	230.9	239.9	248.8	257.7	266.5	275.4	284.1	292.8	301.6	327.5	344.6	370.1	387.0	412.1	436.9	469.7	494.0	526.0	557.7	588.9	627.5
1750	272.7	285.7	298.5	311.3	324.0	336.7	349.2	361.8	374.2	386.7	399.0	411.2	423.5	459.8	483.8	519.2	542.6	577.4	611.5	656.4	689.5	732.8	775.3	816.9	867.8
2000	303.8	318.2	332.6	346.9	361.0	375.2	389.2	403.2	417.0	430.9	444.6	458.2	471.9	512.2	538.7	578.0	603.8	642.1	679.7	728.8	765.0	812.2	858.2		
3000	418.2	438.2	457.9	477.7	497.1	516.5	535.6	554.7	573.5	592.3	610.8	629.1	647.4	701.2	736.2										
3450	464.9	487.2	509.1	530.9	552.4	573.8	594.9	615.9	636.5	657.1	677.3														
4000	518.3	543.0	567.3	591.4	615.0	638.6	661.7	684.6	707.2																

Additional Horsepower per belt for Speed

RPM OF FASTER SHAFT	Ratio of Speed-Down Drives									
	1.00 to 1.03	1.04 to 1.10	1.11 to 1.19	1.20 to 1.30	1.31 to 1.45	1.46 to 1.67	1.68 to 2.02	2.03 to 2.69	2.70 to 4.64	4.65 and Over
10	0.00	0.02	0.05	0.07	0.09	0.11	0.14	0.16	0.18	0.21
20	0.00	0.05	0.09	0.14	0.18	0.23	0.27	0.32	0.37	0.41
35	0.00	0.08	0.16	0.24	0.32	0.40	0.48	0.56	0.64	0.72
44	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
58	0.00	0.13	0.26	0.40	0.53	0.66	0.79	0.93	1.06	1.19
70	0.00	0.16	0.32	0.48	0.64	0.80	0.96	1.12	1.28	1.44
88	0.00	0.20	0.40	0.60	0.80	1.00	1.21	1.41	1.61	1.81
100	0.00	0.23	0.46	0.68	0.91	1.14	1.37	1.60	1.83	2.05
117	0.00	0.27	0.53	0.80	1.07	1.34	1.60	1.87	2.14	2.40
175	0.00	0.40	0.80	1.20	1.60	2.00	2.40	2.80	3.20	3.60
200	0.00	0.46	0.91	1.37	1.83	2.28	2.74	3.20	3.65	4.11
233	0.00	0.53	1.06	1.60	2.13	2.66	3.19	3.72	4.26	4.79
300	0.00	0.69	1.37	2.05	2.74	3.43	4.11	4.79	5.48	6.16
350	0.00	0.80	1.60	2.40	3.20	4.00	4.79	5.59	6.39	7.19
400	0.00	0.91	1.83	2.74	3.65	4.57	5.48	6.39	7.31	8.22
500	0.00	1.14	2.28	3.42	4.57	5.71	6.85	7.99	9.13	10.3
575	0.00	1.31	2.63	3.94	5.25	6.57	7.88	9.19	10.5	11.8
600	0.00	1.37	2.74	4.11	5.48	6.85	8.22	9.59	11.0	12.3
690	0.00	1.58	3.15	4.73	6.30	7.88	9.45	11.0	12.6	14.2
700	0.00	1.60	3.20	4.79	6.39	7.99	9.59	11.2	12.8	14.4
800	0.00	1.83	3.65	5.48	7.31	9.14	11.0	12.8	14.6	16.4
870	0.00	1.99	3.97	5.96	7.95	9.93	11.9	13.9	15.9	17.9
900	0.00	2.06	4.11	6.16	8.22	10.3	12.3	14.4	16.4	18.5
1000	0.00	2.29	4.57	6.85	9.14	11.4	13.7	16.0	18.3	20.5
1160	0.00	2.65	5.30	7.94	10.6	13.2	15.9	18.5	21.2	23.8
1750	0.00	4.00	7.99	12.0	16.0	20.0	24.0	28.0	32.0	36.0
2000	0.00	4.57	9.13	13.7	18.3	22.8	27.4	32.0	36.5	41.1
3000	0.00	6.86	13.7	20.5	27.4	34.3	41.1	47.9	54.8	61.6
3450	0.00	7.88	15.8	23.6	31.5	39.4	47.3	55.1	63.0	70.9
4000	0.00	9.14	18.3	27.4	36.5	45.7	54.8	63.9	73.1	82.2

Poly Chain® GT® CARBON™ Belt Length Correction Factor Table

Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor
14MGT-994	71	0.68	14MGT-2520	180	1.03
14MGT-1120	80	0.73	14MGT-2590	185	1.04
14MGT-1190	85	0.75	14MGT-2660	190	1.05
14MGT-1260	90	0.77	14MGT-2800	200	1.07
14MGT-1400	100	0.81	14MGT-3136	224	1.12
14MGT-1568	112	0.85	14MGT-3304	236	1.14
14MGT-1610	115	0.86	14MGT-3360	240	1.14
14MGT-1750	125	0.89	14MGT-3500	250	1.16
14MGT-1890	135	0.92	14MGT-3850	275	1.19
14MGT-1960	140	0.94	14MGT-3920	280	1.20
14MGT-2100	150	0.96	14MGT-4326	309	1.24
14MGT-2240	160	0.99	14MGT-4410	315	1.25
14MGT-2310	165	1.00			
14MGT-2380	170	1.01			
14MGT-2450	175	1.02			

Gates — The Driving Force in Power Transmission.

Horsepower Rating for 125mm Wide

14mm Pitch POLY CHAIN® GT® CARBON™ BELTS

Rated Horsepower for Small Sprocket
(Number of Grooves and Pitch Diameter, Inches)

RPM OF FASTER SHAFT	28 / 4.912	29 / 5.088	30 / 5.263	31 / 5.439	32 / 5.614	33 / 5.790	34 / 5.965	35 / 6.141	36 / 6.316	37 / 6.492	38 / 6.667	39 / 6.842	40 / 7.018	43 / 7.544	45 / 7.895	48 / 8.421	50 / 8.772	53 / 9.299	56 / 9.825	60 / 10.527	63 / 11.053	67 / 11.755	71 / 12.457	75 / 13.158	80 / 14.036
10	6.93	7.20	7.48	7.75	8.02	8.29	8.56	8.84	9.11	9.38	9.65	9.92	10.2	11.0	11.5	12.3	12.9	13.7	14.5	15.5	16.3	17.4	18.4	19.5	20.8
20	10.7	11.1	11.6	12.0	12.4	12.9	13.3	13.7	14.1	14.6	15.0	15.4	15.8	17.1	18.0	19.2	20.1	21.3	22.6	24.3	25.5	27.1	28.8	30.4	32.5
35	15.8	16.5	17.1	17.8	18.5	19.1	19.8	20.4	21.1	21.7	22.3	23.0	23.6	25.6	26.8	28.7	30.0	31.9	33.8	36.3	38.1	40.6	43.1	45.6	48.6
44	18.8	19.5	20.3	21.1	21.9	22.7	23.4	24.2	25.0	25.8	26.5	27.3	28.1	30.4	31.9	34.2	35.7	37.9	40.2	43.2	45.4	48.3	51.3	54.2	57.9
58	23.2	24.1	25.1	26.1	27.1	28.0	29.0	30.0	30.9	31.9	32.8	33.8	34.7	37.6	39.5	42.3	44.2	47.0	49.8	53.5	56.3	59.9	63.6	67.2	71.8
70	26.8	27.9	29.1	30.2	31.3	32.5	33.6	34.7	35.8	37.0	38.1	39.2	40.3	43.6	45.8	49.1	51.3	54.6	57.8	62.1	65.3	69.6	73.9	78.1	83.3
88	32.1	33.5	34.9	36.2	37.6	39.0	40.3	41.7	43.0	44.4	45.7	47.1	48.4	52.4	55.1	59.0	61.7	65.6	69.5	74.7	78.6	83.7	88.9	93.9	100.3
100	35.6	37.1	38.6	40.2	41.7	43.2	44.7	46.2	47.7	49.2	50.7	52.2	53.7	58.2	61.1	65.5	68.4	72.8	77.2	82.9	87.2	92.9	98.6	104.3	111.3
117	40.4	42.1	43.9	45.6	47.3	49.1	50.8	52.5	54.2	55.9	57.6	59.3	61.0	66.1	69.5	74.5	77.8	82.8	87.8	94.4	99.3	105.8	112.2	118.7	126.7
175	56.1	58.6	61.0	63.5	65.9	68.3	70.7	73.2	75.6	78.0	80.4	82.8	85.2	92.3	97.0	104.1	108.8	115.8	122.7	131.9	138.8	147.9	157.0	166.0	177.2
200	62.6	65.4	68.1	70.9	73.6	76.3	79.1	81.8	84.5	87.2	89.9	92.5	95.2	103.2	108.5	116.4	121.6	129.5	137.3	147.6	155.3	165.5	175.6	185.7	198.2
233	71.1	74.2	77.3	80.5	83.6	86.7	89.8	92.9	96.0	99.1	102.1	105.2	108.2	117.3	123.4	132.4	138.3	147.3	156.1	167.9	176.6	188.2	199.8	211.2	225.5
300	87.7	91.6	95.5	99.4	103.2	107.1	111.0	114.8	118.6	122.5	126.3	130.1	133.9	145.2	152.7	163.8	171.3	182.3	193.3	207.9	218.7	233.1	247.4	261.6	279.3
350	99.7	104.2	108.6	113.1	117.5	121.9	126.3	130.7	135.1	139.5	143.8	148.1	152.5	165.4	173.9	186.7	195.2	207.8	220.3	237.0	249.3	265.7	282.0	298.2	318.3
400	111.4	116.5	121.5	126.5	131.4	136.4	141.3	146.3	151.2	156.1	161.0	165.8	170.7	185.2	194.8	209.1	218.6	232.7	246.5	265.4	279.3	315.9	334.0	356.6	—
500	134.3	140.4	146.4	152.5	158.5	164.6	170.6	176.6	182.5	188.5	194.4	200.3	206.2	223.7	235.4	252.7	264.2	281.3	298.3	320.9	337.6	359.9	381.9	403.8	431.0
575	150.9	157.8	164.6	171.5	178.3	185.1	191.9	198.6	205.3	212.1	218.7	225.4	232.0	251.8	265.0	284.5	297.4	316.8	336.0	361.3	380.2	405.2	430.0	454.6	485.2
600	156.4	163.5	170.6	177.7	184.8	191.9	198.8	205.9	212.8	219.8	226.7	233.6	240.5	261.1	274.7	294.9	308.4	328.4	348.3	374.6	394.2	420.1	445.8	471.3	502.9
690	175.7	183.8	191.8	199.8	207.8	215.8	223.7	231.6	239.4	247.3	255.1	263.0	270.7	293.8	309.2	332.0	347.2	369.7	392.1	421.7	443.7	472.9	501.8	530.4	565.9
700	177.8	186.0	194.1	202.3	210.3	218.4	226.4	234.4	242.4	250.3	258.2	266.1	274.0	297.4	313.0	336.1	351.4	374.3	396.9	426.9	449.2	478.7	507.9	536.9	572.8
800	198.7	207.9	217.1	226.2	235.2	244.3	253.3	262.3	271.2	280.1	289.0	297.8	306.7	332.9	350.4	376.3	393.4	419.0	444.4	477.9	502.8	535.8	568.4	600.8	640.8
870	213.1	223.0	232.8	242.6	252.3	262.1	271.7	281.4	291.0	300.6	310.1	319.6	329.1	357.3	376.0	403.8	422.3	449.7	476.9	512.9	539.6	574.9	609.9	644.5	687.4
900	219.2	229.4	239.5	249.6	259.6	269.6	279.6	289.5	299.4	309.3	319.1	328.8	338.6	367.7	386.9	415.5	434.5	462.8	490.7	527.7	555.2	591.5	627.5	663.0	707.1
1000	239.2	250.4	261.4	272.5	283.5	294.4	305.3	316.2	327.0	337.8	348.6	359.2	369.9	401.7	422.8	454.0	474.7	505.6	536.1	576.5	606.4	646.0	685.1	723.8	771.6
1160	270.5	283.1	295.7	308.3	320.7	333.2	345.5	357.9	370.2	382.4	394.6	406.7	418.8	454.8	478.7	514.1	537.5	572.4	606.8	652.3	686.1	730.6	774.6	817.9	871.5
1750	378.8	396.7	414.5	432.3	450.0	467.6	485.0	502.5	519.7	537.0	554.1	571.1	588.2	638.6	671.9	721.1	753.6	801.9	849.3	911.7	957.6	1018	1077	1135	1205
2000	421.9	442.0	461.9	481.8	501.4	521.1	540.5	560.0	579.2	598.4	617.5	636.4	655.3	711.3	748.2	802.7	838.6	891.8	944.0	1012	1062	1128	1192		
3000	580.8	608.6	636.0	663.4	690.4	717.3	743.9	770.4	796.5	822.6	848.3	873.8	899.2	973.8	1023										
3450	645.7	676.6	707.0	737.3	767.2	796.9	826.2	855.3	884.0	912.6	940.7	968.5	996.2												
4000	719.9	754.2	787.8	821.3	854.2	886.9	919.0	950.8	982.1																

Additional Horsepower per belt for Speed
Ratio of Speed-Down Drives

RPM OF FASTER SHAFT	1.00 to 1.03	1.04 to 1.10	1.11 to 1.19	1.20 to 1.30	1.31 to 1.45	1.46 to 1.67	1.68 to 2.02	2.03 to 2.69	2.70 to 4.64	4.65 and Over
10	0.00	0.03	0.06	0.10	0.13	0.16	0.19	0.22	0.25	0.29
20	0.00	0.06	0.13	0.19	0.25	0.32	0.38	0.44	0.51	0.57
35	0.00	0.11	0.22	0.33	0.44	0.56	0.67	0.78	0.89	1.00
44	0.00	0.14	0.28	0.42	0.56	0.70	0.84	0.98	1.12	1.26
58	0.00	0.18	0.37	0.55	0.74	0.92	1.10	1.29	1.47	1.66
70	0.00	0.22	0.44	0.67	0.89	1.11	1.33	1.55	1.78	2.00
88	0.00	0.28	0.56	0.84	1.12	1.40	1.67	1.95	2.23	2.51
100	0.00	0.32	0.63	0.95	1.27	1.59	1.90	2.22	2.54	2.85
117	0.00	0.37	0.74	1.11	1.48	1.86	2.23	2.60	2.97	3.34
175	0.00	0.56	1.11	1.66	2.22	2.78	3.33	3.88	4.44	4.99
200	0.00	0.63	1.27	1.90	2.54	3.17	3.81	4.44	5.07	5.71
233	0.00	0.74	1.48	2.22	2.96	3.70	4.43	5.17	5.91	6.65
300	0.00	0.95	1.90	2.85	3.81	4.76	5.71	6.66	7.61	8.56
350	0.00	1.11	2.22	3.33	4.44	5.55	6.66	7.77	8.88	9.99
400	0.00	1.27	2.54	3.80	5.08	6.34	7.61	8.88	10.1	11.4
500	0.00	1.59	3.17	4.76	6.34	7.93	9.51	11.1	12.7	14.3
575	0.00	1.82	3.65	5.47	7.30	9.12	10.9	12.8	14.6	16.4
600	0.00	1.90	3.81	5.71	7.61	9.52	11.4	13.3	15.2	17.1
690	0.00	2.19	4.38	6.56	8.75	10.9	13.1	15.3	17.5	19.7
700	0.00	2.22	4.44	6.66	8.88	11.1	13.3	15.5	17.8	20.0
800	0.00	2.54	5.07	7.61	10.2	12.7	15.2	17.8	20.3	22.8
870	0.00	2.76	5.52	8.28	11.0	13.8	16.6	19.3	22.1	24.8
900	0.00	2.86	5.71	8.56	11.4	14.3	17.1	20.0	22.8	25.7
1000	0.00	3.17	6.34	9.51	12.7	15.9	19.0	22.2	25.4	28.5
1160	0.00	3.68	7.36	11.0	14.7	18.4	22.1	25.8	29.4	33.1
1750	0.00	5.55	11.1	16.6	22.2	27.8	33.3	38.8	44.4	49.9
2000	0.00	6.35	12.7	19.0	25.4	31.7	38.1	44.4	50.7	57.1
3000	0.00	9.52	19.0	28.5	38.1	47.6	57.1	66.1	76.1	85.6
3450	0.00	10.9	21.9	32.8	43.8	54.7	65.6	76.6	87.5	98.5
4000	0.00	12.7	25.4	38.0	50.8	63.4	76.1	88.8	101.5	114.2

Poly Chain® GT® CARBON™ Belt Length Correction Factor Table

Pitch/Length Designation	Number of Teeth	Correction Factor	Pitch/Length Designation	Number of Teeth	Correction Factor
14MGT-994	71	0.68	14MGT-2520	180	1.03
14MGT-1120	80	0.73	14MGT-2590	185	1.04
14MGT-1190	85	0.75	14MGT-2660	190	1.05
14MGT-1260	90	0.77	14MGT-2800	200	1.07
14MGT-1400	100	0.81	14MGT-3136	224	1.12
14MGT-1568	112	0.85	14MGT-3304	236	1.14
14MGT-1610	115	0.86	14MGT-3360	240	1.14
14MGT-1750	125	0.89	14MGT-3500	250	1.16
14MGT-1890	135	0.92	14MGT-3850	275	1.19
14MGT-1960	140	0.94	14MGT-3920	280	1.20
14MGT-2100	150	0.96	14MGT-4326	309	1.24
14MGT-2240	160	0.99	14MGT-4410	315	1.25
14MGT-2310	165	1.00			
14MGT-2380	170	1.01			
14MGT-2450	175	1.02			

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Gates Poly Chain® GT®2 Sprocket Specifications

Type A

Type AF

Type B

Type BF

Type C

Type CF

Type D

Type DF

Type 6

Type 6F

2D and 3D Sprocket Drawings are available at www.gates.com/designview

Stock 8mm Gates Poly Chain® GT®2 Sprocket Specifications

| Sprocket Number | Number of Teeth | Diameters (in) | | Flange Ref. | Design Type | Dimensions (in) | | | | | | | | Bushing Size | Bore Sizes | | Approx Wt. (lb) | Approx WR² | Matl. Spec |
		Pitch	O.D.			A	B	C	D	E	F	M	F-CL		Min	Max			
8MX-22S-12	22	2.206	2.143	2.610	AF-1	0.00	—	0.60	0.88	—	0.88	0.01	0.44	1008	0.500	1.000	0.4	0.002	DI
PB8MX-22S-12	22	2.206	2.143	2.610	6F-1	—	1.79	0.57	1.31	0.46	0.85	0	0.43	MPB	0.500	1.188	1.0	0.004	DI
8MX-25S-12	25	2.506	2.443	2.910	AF-1	0.00	—	0.60	0.88	—	0.88	0.01	0.44	1108	0.500	1.125	0.6	0.004	GI
PB8MX-25S-12	25	2.506	2.443	2.910	6F-1	—	2.08	0.57	1.31	0.46	0.85	0	0.43	MPB	0.500	1.500	1.4	0.006	DI
8MX-26S-12	26	2.607	2.544	2.906	AF-1	-	-	0.60	0.88	-	0.88	0	0.44	1108	0.500	1.125	0.60	0.005	GI
8MX-27S-12	27	2.707	2.644	3.207	AF-1	-	-	0.60	0.88	-	0.88	0	0.44	1108	0.500	1.125	0.70	0.006	GI
8MX-28S-12	28	2.807	2.744	3.210	AF-1	0.00	—	0.60	0.88	-	0.88	0.01	0.44	1108	0.500	1.125	0.9	0.007	GI, SS
PB8MX-28S-12	28	2.807	2.744	3.210	6F-1	—	2.34	0.57	1.31	0.46	0.85	0	0.43	MPB	0.500	1.750	1.8	0.011	DI, SS
8MX-29S-12	29	2.907	2.844	3.090	AF-1	-	-	0.68	0.88	-	0.88	0	0.44	1108	0.500	1.125	1.10	0.008	GI, SS
8MX-30S-12	30	3.008	2.945	3.410	AF-1	0.00	—	0.60	0.88	-	0.88	0.01	0.44	1108	0.500	1.125	1.1	0.009	GI, SS
PB8MX-30S-12	30	3.008	2.945	3.410	6F-1	—	2.54	0.57	1.42	0.57	0.85	0	0.43	MPB	0.500	1.813	2.2	0.015	DI, SS
8MX-31S-12	31	3.108	3.045	3.328	AF-1	-	-	0.80	1.00	-	1.00	0	0.50	1210	0.500	1.250	1.10	0.012	GI, SS
8MX-32S-12	32	3.208	3.145	3.610	AF-1	-	-	0.72	1.00	-	1.00	0	0.50	1210	0.500	1.250	1.2	0.012	DI, SS
PB8MX-32S-12	32	3.208	3.145	3.610	6F-1	—	2.73	0.57	1.42	0.57	0.85	0	0.43	MPB	0.500	2.000	2.5	0.020	DI, SS
8MX-33S-12	33	3.308	3.245	3.566	AF-1	-	-	0.80	1.00	-	1.00	0	0.50	1610	0.500	1.688	1.10	0.014	DI
8MX-34S-12	34	3.409	3.346	3.810	AF-1	-	-	0.72	1.00	-	1.00	0	0.50	1610	0.500	1.688	1.1	0.014	DI, SS
8MX-35S-12	35	3.509	3.446	3.805	AF-1	-	-	0.80	1.00	-	1.00	0	0.50	1610	0.500	1.688	1.30	0.019	GI
8MX-36S-12	36	3.609	3.546	4.010	AF-1	-	-	0.72	1.00	-	1.00	0	0.50	1610	0.500	1.688	1.4	0.019	GI, SS
8MX-37S-12	37	3.709	3.646	4.044	AF-1	-	-	0.80	1.00	-	1.00	0	0.50	1610	0.500	1.688	1.60	0.024	GI
8MX-38S-12	38	3.810	3.747	4.210	AF-1	-	—	0.72	1.00	-	1.00	0	0.50	1610	0.500	1.688	1.7	0.025	GI
8MX-39S-12	39	3.910	3.847	4.410	AF-1	-	-	0.72	1.00	-	1.00	0	0.50	1610	0.500	1.688	1.90	0.032	GI
8MX-40S-12	40	4.010	3.947	4.410	BF-1	—	3.56	0.57	1.25	—	0.85	0.40	0.43	2012	0.500	2.125	1.7	0.031	DI
8MX-41S-12	41	4.110	4.047	4.520	BF-1	-	3.645	0.65	1.25	—	0.85	0.40	0.43	2012	0.500	2.125	2.30	0.038	DI
8MX-42S-12	42	4.211	4.148	4.910	BF-1	—	3.76	0.57	1.25	—	0.85	0.40	0.43	2012	0.500	2.125	2.1	0.042	GI
8MX-45S-12	45	4.511	4.448	4.910	BF-1	—	3.76	0.57	1.25	—	0.85	0.40	0.43	2012	0.500	2.125	2.6	0.055	GI
8MX-48S-12	48	4.812	4.749	5.210	BF-1	—	3.76	0.57	1.25	—	0.85	0.40	0.43	2012	0.500	2.125	3.4	0.081	GI
8MX-50S-12	50	5.013	4.950	5.410	BF-1	—	3.76	0.57	1.25	—	0.85	0.40	0.43	2012	0.500	2.125	3.7	0.094	GI
8MX-53S-12	53	5.314	5.251	5.500	BF-1	—	3.76	0.57	1.25	—	0.85	0.40	0.43	2012	0.500	2.125	4.7	0.132	GI
8MX-56S-12	56	5.614	5.551	6.010	BF-1	—	3.76	0.57	1.25	—	0.85	0.40	0.43	2012	0.500	2.125	5.4	0.165	GI
8MX-60S-12	60	6.015	5.952	6.410	BF-1	—	3.76	0.57	1.25	—	0.85	0.40	0.43	2012	0.500	2.125	6.3	0.217	GI
8MX-63S-12	63	6.316	6.253	6.720	CF-1	5.71	4.00	0.57	1.25	—	0.85	0.40	0.43	2012	0.500	2.125	4.1	0.140	GI
8MX-67S-12	67	6.717	6.654	6.870	CF-1	6.14	4.00	0.57	1.25	—	0.85	0.40	0.43	2012	0.500	2.125	4.3	0.164	GI
8MX-71S-12	71	7.118	7.055	7.500	CF-1	6.51	4.00	0.57	1.25	—	0.85	0.40	0.43	2012	0.500	2.125	4.7	0.199	GI
8MX-75S-12	75	7.519	7.456	7.920	CF-1	6.90	4.00	0.57	1.25	—	0.85	0.40	0.43	2012	0.500	2.125	5.1	0.239	GI
8MX-80S-12	80	8.020	7.957	8.420	CF-1	7.23	4.00	0.57	1.25	—	0.85	0.40	0.43	2012	0.500	2.125	5.8	0.323	GI
8MX-90S-12	90	9.023	8.960	—	C-2	8.05	4.00	—	1.25	—	0.85	0.40	0.43	2012	0.500	2.125	8.0	0.563	GI
8MX-112S-12	112	11.229	11.166	—	C-2	10.25	4.00	—	1.25	—	0.85	0.40	0.43	2012	0.500	2.125	12.0	1.405	GI
8MX-140S-12	140	14.036	13.973	—	C-3	11.96	4.38	—	1.25	—	0.85	0.40	0.43	2012	0.500	2.125	17.0	3.176	GI
8MX-180S-12	180	18.046	17.983	—	C-3	15.80	4.88	—	1.75	—	0.85	0.90	0.43	2517	0.500	2.688	26.6	8.146	GI
8MX-224S-12	224	22.457	22.394	—	C-3	20.17	4.88	—	1.75	—	0.85	0.90	0.43	2517	0.500	2.688	37.0	17.98	GI

Material Spec : GI - Grey Iron DI - Ductile Iron SS - Stainless Steel   Design Type Suffix: 1 - Solid 2 - Web 3 - Arms

Note: 2D and 3D sprocket drawings are available at www.gates.com/designview

NOTE: •Weights for Minimum Plain Bore (MPB) Sprockets are with minimum bore. •Weights and WR² for Bushed Sprockets do not include bushings. •WR² values have lb-ft² units.

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Stock 8mm Gates Poly Chain® GT®2 Sprocket Specifications—continued

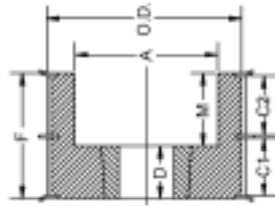| Sprocket Number	Number of Teeth	Diameters (in)			Design Type	Dimensions (in)								Bushing Size	Bore Sizes		Approx Wt. (lb)	Approx WR²	Matl. Spec
		Pitch	O.D.	Flange Ref.		A	B	C	D	E	F	M	F-CL		Min	Max			
8MX-22S-21	22	2.206	2.143	2.610	AF-1	1.63	—	0.92	0.88	—	1.20	0.33	0.60	1008	0.500	1.000	0.6	0.002	DI, NP
P8MX-22S-21	22	2.206	2.143	2.610	6F-1	—	1.79	0.92	1.65	0.45	1.20	0	0.60	MPB	0.500	1.188	1.3	0.005	DI
8MX-25S-21	25	2.506	2.443	2.910	AF-1	1.92	—	0.92	0.88	—	1.20	0.33	0.60	1108	0.500	1.125	0.8	0.005	GI, NP
P8MX-25S-21	25	2.506	2.443	2.910	6F-1	—	2.08	0.92	1.65	0.45	1.2	0	0.60	MPB	0.500	1.500	1.8	0.009	DI
8MX-26S-21	26	2.607	2.544	2.906	AF	1.85	-	0.92	0.88	-	1.2	0.32	0.6	1108	0.500	1.125	0.80	0.006	GI, NP
8MX-27S-21	27	2.707	2.644	3.207	AF	1.95	-	0.92	0.88	-	1.2	0.32	0.6	1108	0.500	1.125	0.90	0.007	GI, NP
8MX-28S-21	28	2.807	2.744	3.210	AF-1	2.18	-	0.92	0.88	-	1.20	0.33	0.60	1108	0.500	1.125	1.0	0.008	G, SS, NP
P8MX-28S-21	28	2.807	2.744	3.210	6F-1	—	2.34	0.92	1.65	0.45	1.20	0	0.60	MPB	0.500	1.750	2.3	0.014	DI, SS
8MX-29S-21	29	2.907	2.844	3.09	AF	2.15	-	0.92	0.88	-	1.2	0.32	0.6	1108	0.500	1.125	1.00	0.010	GI, SS, NP
8MX-30S-21	30	3.008	2.945	3.410	AF-1	2.38	-	0.92	0.88	—	1.20	0.33	0.60	1108	0.500	1.125	1.3	0.011	GI, SS, NP
P8MX-30S-21	30	3.008	2.945	3.410	6F-1	—	2.54	0.92	1.77	0.57	1.20	0	0.60	MPB	0.500	1.813	2.8	0.020	DI, SS
8MX-31S-21	31	3.108	3.045	3.328	AF	2.35	-	0.92	1	-	1.2	0.2	0.6	1210	0.500	1.250	1.10	0.013	GI, SS, NP
8MX-32S-21	32	3.208	3.145	3.610	AF-1	2.58	—	0.92	1.00	—	1.20	0.20	0.60	1210	0.500	1.250	1.4	0.015	DI, SS, NP
P8MX-32S-21	32	3.208	3.145	3.610	6F-1	—	2.73	0.92	1.77	0.57	1.20	0	0.60	MPB	0.500	2.000	3.2	0.026	DI, SS
8MX-33S-21	33	3.308	3.245	3.566	AF	2.6	-	0.92	1	-	1.2	0.2	0.6	1610	0.500	1.688	1.10	0.016	DI, NP
8MX-34S-21	34	3.409	3.346	3.810	AF-1	2.66	—	0.92	1.00	—	1.20	0.20	0.60	1610	0.500	1.688	1.4	0.018	DI, SS, NP
8MX-35S-21	35	3.509	3.446	3.805	AF	2.75	-	0.92	1	-	1.2	0.2	0.6	1610	0.500	1.688	1.30	0.021	GI, NP
8MX-36S-21	36	3.609	3.546	4.010	AF-1	2.96	—	0.92	1.00	—	1.20	0.20	0.60	1610	0.500	1.688	1.66	0.023	DI, SS, NP
8MX-37S-21	37	3.709	3.646	4.044	AF	2.95	-	0.92	1	-	1.2	0.2	0.6	1610	0.500	1.688	1.60	0.028	GI, NP
8MX-38S-21	38	3.810	3.747	4.210	AF-1	3.15	—	0.92	1.00	—	1.20	0.20	0.60	1610	0.500	1.688	1.9	0.030	DI, SS, NP
8MX-39S-21	39	3.910	3.847	4.41	AF	3.14	-	0.92	1	-	1.2	0.2	0.6	1610	0.500	1.688	1.90	0.035	GI, NP
8MX-40S-21	40	4.010	3.947	4.410	AF-1	—	-	0.92	1.25	-	1.25	0.2	0.63	2012	0.500	2.125	2.0	0.037	DI, SS, NP
8MX-41S-21	41	4.110	4.047	4.52	BF	-	3.4	1	-	1.25	1.2	0.05	0.6	2012	0.500	2.125	2.30	0.043	DI, NP
8MX-42S-21	42	4.211	4.148	4.910	AF-1	—	—	0.97	1.25	—	1.25	0	0.63	2012	0.500	2.125	2.4	0.048	GI, SS, NP
8MX-45S-21	45	4.511	4.448	4.910	AF-1	—	—	0.97	1.25	—	1.25	0	0.63	2012	0.500	2.125	3.0	0.067	GI, SS, NP
8MX-48S-21	48	4.812	4.749	5.210	AF-1	—	—	0.97	1.25	—	1.25	0	0.63	2012	0.500	2.125	3.7	0.092	GI, SS, NP
8MX-50S-21	50	5.013	4.950	5.410	AF-1	—	—	0.97	1.25	—	1.25	0	0.63	2012	0.500	2.125	4.2	0.111	GI, SS, NP
8MX-53S-21	53	5.314	5.251	5.500	AF-1	—	—	0.97	1.25	—	1.25	0	0.63	2012	0.500	2.125	5.0	0.145	GI, SS, NP
8MX-56S-21	56	5.614	5.551	6.010	AF-1	—	—	0.97	1.25	—	1.25	0	0.63	2012	0.500	2.125	5.8	0.184	GI, SS, NP
8MX-60S-21	60	6.015	5.952	6.420	AF-1	—	—	0.97	1.25	—	1.25	0	0.63	2012	0.500	2.125	6.9	0.247	GI, SS, NP
8MX-63S-21	63	6.316	6.253	6.720	CF-1	5.71	3.76	0.92	1.25	—	1.20	0.05	0.60	2012	0.500	2.125	4.1	0.154	GI, NP
8MX-67S-21	67	6.717	6.654	6.880	CF-1	6.14	4.50	0.92	1.75	—	1.20	0.55	0.60	2517	0.500	2.688	5.7	0.232	GI, NP
8MX-71S-21	71	7.118	7.055	7.500	CF-1	6.51	4.50	0.92	1.75	—	1.20	0.55	0.60	2517	0.500	2.688	6.1	0.275	GI, NP
8MX-75S-21	75	7.519	7.456	7.920	CF-1	6.90	4.50	0.92	1.75	—	1.20	0.55	0.60	2517	0.500	2.688	6.5	0.323	GI, NP
8MX-80S-21	80	8.020	7.957	8.420	CF-1	7.23	4.50	0.92	1.75	—	1.20	0.55	0.60	2517	0.500	2.688	7.5	0.432	GI, NP
8MX-90S-21	90	9.023	8.960	—	C-2	7.78	4.50	—	1.75	—	1.20	0.55	0.60	2517	0.500	2.688	11.0	0.825	GI, NP
8MX-112S-21	112	11.229	11.166	—	C-2	10.00	4.50	—	1.75	—	1.20	0.55	0.60	2517	0.500	2.688	16.0	1.892	GI, NP
8MX-140S-21	140	14.036	13.973	—	C-3	11.74	4.88	—	1.75	—	1.20	0.55	0.60	2517	0.500	2.688	24.1	4.707	GI, NP
8MX-180S-21	180	18.046	17.983	—	C-3	15.49	6.25	—	2.00	—	1.20	0.80	0.60	3020	0.875	3.250	39.0	12.02	GI, NP
8MX-224S-21	224	22.457	22.394	—	C-3	19.86	6.25	—	2.00	—	1.20	0.80	0.60	3020	0.875	3.250	53.4	26.34	GI, NP

Material Spec : GI - Grey Iron DI - Ductile Iron SS - Stainless Steel   Design Type Suffix: 1 - Solid 2 - Web 3 - Arms
Note: 2D and 3D sprocket drawings are available at www.gates.com/designview
NOTE: •Weights for Minimum Plain Bore (MPB) Sprockets are with minimum bore. •Weights and WR² for Bushed Sprockets do not include bushings. •WR² values have lb-ft² units.

Sprocket Number	Number of Teeth	Diameters (in)			Design Type	Dimensions (in)								Bushing Size	Bore Sizes		Approx Wt. (lb)	Approx WR²	Matl. Spec
		Pitch	O.D.	Flange Ref.		A	B	C	D	E	F	M	F-CL		Min	Max			
PB8MX-22S-36	22	2.206	2.143	2.610	6F-1	—	1.79	1.58	2.44	0.58	1.86	0	0.93	MPB	0.500	1.188	2.0	0.008	DI
PB8MX-25S-36	25	2.506	2.443	2.910	6F-1	—	2.08	1.58	2.44	0.58	1.86	0	0.93	MPB	0.500	1.500	2.7	0.013	DI
PB8MX-28S-36	28	2.807	2.744	3.210	6F-1	—	2.34	1.58	2.44	0.58	1.86	0	0.93	MPB	0.500	1.750	3.4	0.021	DI
PB8MX-30S-36	30	3.008	2.945	3.410	6F-1	—	2.54	1.58	2.44	0.58	1.86	0	0.93	MPB	0.500	1.813	3.9	0.029	DI
8MX-32S-36	32	3.208	3.145	3.610	AF-1	2.58	—	1.58	1.00	—	1.86	0.86	0.93	1210	0.500	1.250	1.7	0.02	DI
PB8MX-32S-36	32	3.208	3.145	3.610	6F-1	—	2.73	1.58	2.44	0.58	1.86	0	0.93	MPB	0.500	2.000	4.5	0.038	DI
8MX-33S-36	33	3.308	3.245	3.566	AF	2.56	-	1.66	1	-	1.86	0.86	0.93	1610	0.500	1.688	3.31	0.022	DI
8MX-34S-36	34	3.409	3.346	3.810	AF-1	2.66	—	1.58	1.00	-	1.86	0.86	0.93	1610	0.500	1.688	1.8	0.026	DI
PB8MX-34S-36	34	3.409	3.346	3.810	6F-1	—	2.82	1.58	2.45	0.59	1.86	0	0.93	MPB	0.500	2.125	5.1	0.047	DI
8MX-35S-36	35	3.509	3.446	3.805	AF	2.76	-	1.66	1	-	1.86	0.86	0.93	1610	0.500	1.688	3.51	0.029	DI
8MX-36S-36	36	3.609	3.546	4.010	AF-1	2.96	—	1.58	1.00	-	1.86	0.86	0.93	1610	0.500	1.688	2.1	0.032	DI
PB8MX-36S-36	36	3.609	3.546	4.010	6F-1	—	3.13	1.58	2.51	0.65	1.86	0	0.93	MPB	0.500	2.313	5.9	0.063	DI
8MX-37S-36	37	3.709	3.646	4.044	AF	2.9	-	1.66	1	-	1.86	0.86	0.93	1610	0.500	1.688	3.78	0.039	GI
8MX-38S-36	38	3.810	3.747	4.210	AF-1	3.15	—	1.58	1.00	-	1.86	0.86	0.93	1610	0.500	1.688	2.4	0.04	DI
PB8MX-38S-36	38	3.810	3.747	4.210	6F-1	—	3.32	1.58	2.51	0.65	1.86	0	0.93	MPB	0.500	2.438	6.7	0.079	DI
8MX-39S-36	39	3.910	3.847	4.41	AF	3.1	-	1.58	1	-	1.86	0.86	0.93	1610	0.500	1.688	3.91	0.048	GI
8MX-40S-36	40	4.010	3.947	4.410	AF-1	3.35	—	1.58	1.25	-	1.86	0.61	0.93	2012	0.500	2.125	2.5	0.049	DI
8MX-41S-36	41	4.110	4.047	4.52	AF	3.36	-	1.66	1	-	1.86	0.51	0.93	2012	0.500	2.125	4.11	0.057	DI
8MX-42S-36	42	4.211	4.148	4.910	AF-1	3.62	—	1.58	1.25	—	1.86	0.61	0.93	2012	0.500	2.125	2.8	0.061	DI
8MX-45S-36	45	4.511	4.448	4.910	AF-1	3.62	—	1.58	1.25	—	1.86	0.61	0.93	2012	0.500	2.125	3.8	0.09	GI
8MX-48S-36	48	4.812	4.749	5.210	AF-1	4.14	—	1.58	1.25	—	1.86	0.61	0.93	2012	0.500	2.125	4.3	0.114	GI
8MX-50S-36	50	5.013	4.950	5.410	AF-1	4.13	—	1.58	1.25	—	1.86	0.61	0.93	2012	0.500	2.125	5.1	0.143	GI
8MX-53S-36	53	5.314	5.251	5.500	AF-1	4.76	—	1.58	1.25	—	1.86	0.61	0.93	2012	0.500	2.125	5.5	0.169	GI
8MX-56S-36	56	5.614	5.551	6.010	AF-1	4.92	—	1.58	1.25	—	1.86	0.61	0.93	2012	0.500	2.125	6.5	0.221	GI
8MX-60S-36	60	6.015	5.952	6.420	AF-1	5.13	—	1.58	1.75	—	1.86	0.11	0.93	2517	0.500	2.688	8.9	0.352	GI
8MX-63S-36	63	6.316	6.253	6.720	AF-1	5.71	—	1.58	1.75	—	1.86	0.11	0.93	2517	0.500	2.688	10.4	0.556	GI
8MX-67S-36	67	6.717	6.654	6.880	DF-1	5.98	4.25	1.58	1.75	—	1.86	0.11	0.93	2517	0.500	2.688	6.5	0.307	GI
8MX-71S-36	71	7.118	7.055	7.500	DF-1	6.39	4.25	1.58	1.75	—	1.86	0.11	0.93	2517	0.500	2.688	7.0	0.365	GI
8MX-75S-36	75	7.519	7.456	7.920	DF-1	6.79	4.25	1.58	1.75	—	1.86	0.11	0.93	2517	0.500	2.688	7.3	0.423	GI
8MX-80S-36	80	8.020	7.957	8.420	BF-1	—	5.75	1.58	2.00	—	1.86	0.14	0.93	3020	0.875	3.250	17.9	1.202	GI
8MX-90S-36	90	9.023	8.960	—	B-1	—	5.75	—	2.00	—	1.86	0.14	0.93	3020	0.875	3.250	24.2	1.982	GI
8MX-112S-36	112	11.229	11.166	—	C-2	9.80	5.75	—	2.00	—	1.86	0.14	0.93	3020	0.875	3.250	22.7	2.768	GI
8MX-140S-36	140	14.036	13.973	—	C-3	11.72	6.25	—	2.00	—	1.86	0.14	0.93	3020	0.875	3.250	36.2	7.29	GI
8MX-180S-36	180	18.046	17.983	—	C-3	15.31	6.25	—	2.00	—	1.86	0.14	0.93	3020	0.875	3.250	54.4	18.67	GI
8MX-224S-36	224	22.457	22.394	—	C-3	19.62	8.75	—	2.50	—	1.86	0.64	0.93	3525	1.188	3.938	91.1	42.40	GI

Material Spec : GI - Grey Iron DI - Ductile Iron SS - Stainless Steel   Design Type Suffix: 1 - Solid 2 - Web 3 - Arms
Note: 2D and 3D sprocket drawings are available at www.gates.com/designview
NOTE: •Weights for Minimum Plain Bore (MPB) Sprockets are with minimum bore. •Weights and WR² for Bushed Sprockets do not include bushings. •WR² values have lb-ft² units.

Stock 8mm Gates Poly Chain® GT®2 Sprocket Specifications—continued

Sprocket Number	Number of Teeth	Diameters (in)			Design Type	Dimensions (in)								Bushing Size	Bore Sizes		Approx Wt. (lb)	Approx WR²	Matl. Spec
		Pitch	O.D.	Flange Ref.		A	B	C	D	E	F	M	F-CL		Min	Max			
PB8MX-22S-62	22	2.206	2.143	2.610	6F-1	—	1.79	2.63	3.56	0.65	2.91	0	1.46	MPB	1.000	1.188	2.4	0.011	DI
PB8MX-25S-62	25	2.506	2.443	2.910	6F-1	—	2.08	2.63	3.56	0.65	2.91	0	1.46	MPB	1.000	1.500	3.4	0.019	DI
PB8MX-28S-62	28	2.807	2.744	3.210	6F-1	—	2.34	2.63	3.56	0.65	2.91	0	1.46	MPB	1.000	1.750	4.5	0.032	DI
PB8MX-30S-62	30	3.008	2.945	3.410	6F-1	—	2.54	2.63	3.50	0.58	2.92	0	1.46	MPB	1.000	1.813	5.2	0.042	DI
PB8MX-32S-62	32	3.208	3.145	3.610	6F-1	—	2.73	2.63	3.50	0.59	2.91	0	1.46	MPB	1.000	2.000	6.1	0.055	DI
8MX-34S-62	34	3.409	3.346	3.810	AF-1	2.66	—	2.63	1.00	—	2.91	1.91	1.46	1610	0.500	1.688	2.6	0.038	DI
PB8MX-34S-62	34	3.409	3.346	3.810	6F-1	—	2.82	2.63	3.50	0.59	2.91	0	1.46	MPB	1.000	2.125	6.9	0.070	DI
8MX-36S-62	36	3.609	3.546	4.010	AF-1	2.96	—	2.63	1.00	—	2.91	1.91	1.46	1610	0.500	1.688	2.8	0.045	DI
PB8MX-36S-62	36	3.609	3.546	4.010	6F-1	—	3.13	2.63	3.56	0.65	2.91	0	1.46	MPB	1.000	2.313	8.0	0.092	DI
8MX-38S-62	38	3.810	3.747	4.210	AF-1	3.15	—	2.63	1.00	—	2.91	1.91	1.46	1610	0.500	1.688	3.1	0.056	DI
PB8MX-38S-62	38	3.810	3.747	4.210	6F-1	—	3.32	2.63	3.56	0.65	2.91	0	1.46	MPB	1.000	2.438	9.1	0.115	DI
8MX-40S-62	40	4.010	3.947	4.410	AF-1	3.35	—	2.63	1.25	—	2.91	1.66	1.46	2012	0.500	2.125	3.3	0.067	DI
PB8MX-40S-62	40	4.010	3.947	4.410	6F-1	—	3.52	2.63	3.63	0.72	2.91	0	1.46	MPB	1.000	2.563	10.3	0.144	DI
8MX-42S-62	42	4.211	4.148	4.910	AF-1	3.62	—	2.63	1.25	—	2.91	1.66	1.46	2012	0.500	2.125	3.6	0.079	DI
PB8MX-42S-62	42	4.211	4.148	4.910	6F-1	—	3.79	2.63	3.63	0.72	2.91	0	1.46	MPB	1.000	2.750	11.6	0.178	DI
8MX-45S-62	45	4.511	4.448	4.910	AF-1	3.62	—	2.63	1.25	—	2.91	1.66	1.46	2012	0.500	2.125	5.1	0.126	DI
PB8MX-45S-62	45	4.511	4.448	4.910	6F-1	—	3.79	2.63	3.63	0.72	2.91	0	1.46	MPB	1.000	2.750	13.1	0.227	DI
8MX-48S-62	48	4.812	4.749	5.210	AF-1	4.14	—	2.63	1.75	—	2.91	1.16	1.46	2517	0.500	2.688	5.1	0.15	GI
8MX-50S-62	50	5.013	4.950	5.410	AF-1	4.13	—	2.63	1.75	—	2.91	1.16	1.46	2517	0.500	2.688	6.3	0.196	GI
8MX-53S-62	53	5.314	5.251	5.500	AF-1	4.76	—	2.63	1.75	—	2.91	1.16	1.46	2517	0.500	2.688	6.7	0.229	GI
8MX-56S-62	56	5.614	5.551	6.010	AF-1	4.92	—	2.63	1.75	—	2.91	1.16	1.46	2517	0.500	2.688	8.3	0.307	GI
8MX-60S-62	60	6.015	5.952	6.420	AF-1	5.13	—	2.63	2.00	—	2.91	0.91	1.46	3020	0.875	3.250	8.9	0.407	GI
8MX-63S-62	63	6.316	6.253	6.720	AF-1	5.71	—	2.63	2.00	—	2.91	0.91	1.46	3020	0.875	3.250	9.9	0.483	GI
8MX-67S-62	67	6.717	6.654	6.880	AF-1	6.14	—	2.63	2.00	—	2.91	0.91	1.46	3020	0.875	3.250	12.0	0.64	GI
8MX-71S-62	71	7.118	7.055	7.500	AF-1	6.51	—	2.63	2.00	—	2.91	0.91	1.46	3020	0.875	3.250	14.4	0.837	GI
8MX-75S-62	75	7.519	7.456	7.920	AF-1	6.90	—	2.63	2.00	—	2.91	0.91	1.46	3020	0.875	3.250	16.8	1.067	GI
8MX-80S-62	80	8.020	7.957	8.420	AF-1	7.23	—	2.63	2.00	—	2.91	0.91	1.46	3020	0.875	3.250	20.5	1.45	GI
8MX-90S-62	90	9.023	8.960	—	D-1	7.39	5.42	—	2.00	—	2.91	0.91	1.46	3020	0.875	3.250	30.1	2.631	GI
8MX-112S-62	112	11.229	11.166	—	D-2	9.60	5.42	—	2.00	—	2.91	0.91	1.46	3020	0.875	3.250	31.0	4.255	GI
8MX-140S-62	140	14.036	13.973	—	D-2	12.40	8.75	—	2.50	—	2.91	0.41	1.46	3525	1.188	3.938	62.8	10.91	GI
8MX-180S-62	180	18.046	17.983	—	D-3	15.33	8.75	—	2.50	—	2.91	0.41	1.46	3525	1.188	3.938	91.6	29.51	GI
8MX-224S-62	224	22.457	22.394	—	D-3	19.38	8.75	—	2.50	—	2.91	0.41	1.46	3525	1.188	3.938	127.1	67.42	GI

Material Spec : GI - Grey Iron DI - Ductile Iron SS - Stainless Steel   Design Type Suffix: 1 - Solid 2 - Web 3 - Arms
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NOTE: •Weights for Minimum Plain Bore (MPB) Sprockets are with minimum bore. •Weights and WR² for Bushed Sprockets do not include bushings. •WR² values have lb-ft² units.

Stock 14mm Gates Poly Chain® GT®2 Sprocket Specifications

Sprocket Number	Number of Teeth	Diameters (in)			Design Type	Dimensions (in)								Bushing Size	Bore Sizes		Approx t. WR²	Approx Wr²	Matl. Spec
		Pitch	O.D.	Flange Ref.		A	B	C	D	E	F	M	F-CL		Min	Max			
14MX-28S-20	28	4.912	4.802	5.400	A1-F	3.61	—	1.04	1.25	—	1.36	0.11	0.68	2012	0.500	2.125	3.9	0.105	GI, NP
14MX-29S-20	29	5.088	4.978	5.760	A1-F	3.99	—	1.04	1.25	—	1.36	0.11	0.68	2012	0.500	2.125	4.3	0.122	GI, NP
14MX-30S-20	30	5.263	5.153	5.760	A1-F	3.99	—	1.04	1.25	—	1.36	0.11	0.68	2012	0.500	2.125	4.8	0.143	GI, NP
14MX-31S-20	31	5.439	5.329	6.110	A1-F	4.22	—	1.04	1.25	—	1.36	0.11	0.68	2012	0.500	2.125	5.3	0.165	GI, NP
14MX-32S-20	32	5.614	5.504	6.110	A1-F	4.22	—	1.04	1.25	—	1.36	0.11	0.68	2012	0.500	2.125	5.8	0.191	GI, NP
14MX-33S-20	33	5.790	5.680	6.460	A1-F	4.53	—	1.04	1.25	—	1.36	0.11	0.68	2012	0.500	2.125	6.3	0.217	GI, NP
14MX-34S-20	34	5.965	5.855	6.460	A1-F	4.53	—	1.04	1.25	—	1.36	0.11	0.68	2012	0.500	2.125	6.8	0.248	GI, NP
14MX-35S-20	35	6.141	6.031	6.820	A1-F	4.95	—	1.04	1.25	—	1.36	0.11	0.68	2012	0.500	2.125	7.3	0.279	GI, NP
14MX-36S-20	36	6.316	6.206	6.820	BF-1	—	4.25	1.04	1.75	—	1.36	0.39	0.68	2517	0.500	2.688	8.4	0.346	GI, NP
14MX-37S-20	37	6.492	6.382	7.170	BF-1	—	4.25	1.04	1.75	—	1.36	0.39	0.68	2517	0.500	2.688	9.3	0.398	GI, NP
14MX-38S-20	38	6.667	6.557	7.170	BF-1	—	4.25	1.04	1.75	—	1.36	0.39	0.68	2517	0.500	2.688	9.9	0.443	GI, NP
14MX-39S-20	39	6.842	6.732	7.520	BF-1	—	4.25	1.04	1.75	—	1.36	0.39	0.68	2517	0.500	2.688	10.7	0.502	GI, NP
14MX-40S-20	40	7.018	6.908	7.520	BF-1	—	4.25	1.04	1.75	—	1.36	0.39	0.68	2517	0.500	2.688	11.4	0.554	GI, NP
14MX-43S-20	43	7.544	7.434	8.040	BF-1	—	4.25	1.04	1.75	—	1.36	0.39	0.68	2517	0.500	2.688	14.0	0.770	GI, NP
14MX-45S-20	45	7.895	7.785	8.400	BF-1	—	5.41	1.04	2.00	—	1.36	0.64	0.68	3020	0.875	3.250	15.0	0.948	GI, NP
14MX-48S-20	48	8.421	8.311	8.940	BF-1	—	5.75	1.04	2.00	—	1.36	0.64	0.68	3020	0.875	3.250	18.2	1.277	GI, NP
14MX-50S-20	50	8.772	8.662	9.290	BF-1	—	5.75	1.04	2.00	—	1.36	0.64	0.68	3020	0.875	3.250	20.8	1.561	GI, NP
14MX-53S-20	53	9.299	9.189	9.690	BF-1	—	5.75	1.04	2.00	—	1.36	0.64	0.68	3020	0.875	3.250	24.1	1.992	GI, NP
14MX-56S-20	56	9.825	9.715	10.360	BF-1	—	8.70	1.04	2.50	—	1.36	1.14	0.68	3525	1.188	3.938	30.2	2.834	GI, NP
14MX-60S-20	60	10.527	10.417	11.070	BF-1	—	8.75	1.04	2.50	—	1.36	1.14	0.68	3525	1.188	3.938	36.9	3.888	GI, NP
14MX-63S-20	63	11.053	10.943	11.590	BF-1	—	8.75	1.04	2.50	—	1.36	1.14	0.68	3525	1.188	3.938	42.3	4.837	GI, NP
14MX-67S-20	67	11.755	11.645	12.500	BF-1	—	8.75	1.04	2.50	—	1.36	1.14	0.68	3525	1.188	3.938	50.3	6.428	GI, NP
14MX-71S-20	71	12.457	12.347	13.070	CF-1	11.05	8.75	1.04	2.50	—	1.36	1.14	0.68	3525	1.188	3.938	40.6	4.832	GI, NP
14MX-75S-20	75	13.158	13.048	13.730	CF-1	11.68	8.75	1.04	2.50	—	1.36	1.14	0.68	3525	1.188	3.938	42.3	5.260	GI, NP
14MX-80S-20	80	14.036	13.926	14.620	CF-2	12.56	8.75	1.04	2.50	—	1.36	1.14	0.68	3525	1.188	3.938	48.0	6.573	GI, NP
14MX-90S-20	90	15.790	15.680	—	C-2	14.26	8.75	—	2.50	—	1.36	1.14	0.68	3525	1.188	3.938	53.8	9.215	GI, NP
14MX-112S-20	112	19.650	19.540	—	C-3	16.47	8.75	—	2.50	—	1.36	1.14	0.68	3525	1.188	3.938	70.1	21.11	GI, NP
14MX-140S-20	140	24.562	24.452	—	C-3	21.04	8.75	—	2.50	—	1.36	1.14	0.68	3525	1.188	3.938	94.8	48.06	GI, NP
14MX-168S-20	168	29.475	29.365	—	C-3	25.90	8.75	—	2.50	—	1.36	1.14	0.68	3525	1.188	3.938	120.8	91.40	GI, NP
14MX-180S-20	180	31.580	31.470	—	C-3	27.99	8.75	—	2.50	—	1.36	1.14	0.68	3525	1.188	3.938	134.6	118.6	GI, NP
14MX-200S-20	200	35.089	34.979	—	C-3	31.46	8.75	—	2.50	—	1.36	1.14	0.68	3525	1.188	3.938	158.1	176.5	GI, NP
14MX-224S-20	224	39.300	39.190	—	C-3	35.63	10.00	—	3.00	—	1.36	1.64	0.68	4030	1.438	4.438	201.1	271.7	GI, NP

Material Spec : GI - Grey Iron DI - Ductile Iron SS - Stainless Steel   Design Type Suffix: 1 - Solid 2 - Web 3 - Arms
Note: 2D and 3D sprocket drawings are available at www.gates.com/designview
NOTE: •Weights for Minimum Plain Bore (MPB) Sprockets are with minimum bore. •Weights and WR² for Bushed Sprockets do not include bushings. •WR² values have lb-ft² units.

Gates Corporation

Stock 14mm Gates Poly Chain® GT®2 Sprocket Specifications—continued

Sprocket Number	Number of Teeth	Diameters (in)			Design Type	Dimensions (in)								Bushing Size	Bore Sizes		Approx Wt. WR‡	Approx Wr.²	Matl. Spec
		Pitch	O.D.	Flange Ref.		A	B	C	D	E	F	M	F-CL		Min	Max			
14MX-28S-37	28	4.912	4.802	5.400	6F-1	—	3.97	1.74	2.86	0.80	2.06	0	1.03	MPB	1.000	2.938	11.7	0.228	DI
14MX-28S-37	28	4.912	4.802	5.400	AF-1	3.61	—	1.74	1.25	—	2.06	0.81	1.03	2012	0.500	2.125	5.2	0.145	GI
14MX-29S-37	29	5.088	4.978	5.760	AF-1	3.99	—	1.74	1.75	—	2.06	0.31	1.03	2517	0.500	2.688	5.1	0.16	GI
14MX-30S-37	30	5.263	5.153	5.760	AF-1	3.99	—	1.74	1.75	—	2.06	0.31	1.03	2517	0.500	2.688	5.8	0.192	GI
14MX-31S-37	31	5.439	5.329	6.110	AF-1	4.22	—	1.74	1.75	—	2.06	0.31	1.03	2517	0.500	2.688	6.4	0.223	GI
14MX-32S-37	32	5.614	5.504	6.110	AF-1	4.22	—	1.74	1.75	—	2.06	0.31	1.03	2517	0.500	2.688	7.2	0.262	GI
14MX-33S-37	33	5.790	5.680	6.460	AF-1	4.53	—	1.74	1.75	—	2.06	0.31	1.03	2517	0.500	2.688	7.8	0.299	GI
14MX-34S-37	34	5.965	5.855	6.460	AF-1	4.53	—	1.74	1.75	—	2.06	0.31	1.03	2517	0.500	2.688	8.7	0.346	GI
14MX-35S-37	35	6.141	6.031	6.820	AF-1	4.95	—	1.74	1.75	—	2.06	0.31	1.03	2517	0.500	2.688	9.3	0.388	GI
14MX-36S-37	36	6.316	6.206	6.820	AF-1	4.95	—	1.74	1.75	—	2.06	0.31	1.03	2517	0.500	2.688	10.2	0.444	GI
14MX-37S-37	37	6.492	6.382	7.170	AF-1	5.27	—	1.74	1.75	—	2.06	0.31	1.03	2517	0.500	2.688	10.8	0.496	GI
14MX-38S-37	38	6.667	6.557	7.170	AF-1	5.27	—	1.74	2.00	—	2.06	0.06	1.03	3020	0.875	3.250	10.3	0.687	GI
14MX-39S-37	39	6.842	6.732	7.520	AF-1	5.54	—	1.74	2.00	—	2.06	0.06	1.03	3020	0.875	3.250	11.3	0.757	GI
14MX-40S-37	40	7.018	6.908	7.520	AF-1	5.54	—	1.74	2.00	—	2.06	0.06	1.03	3020	0.875	3.250	12.3	0.862	GI
14MX-43S-37	43	7.544	7.434	8.040	AF-1	6.16	—	1.74	2.00	—	2.06	0.06	1.03	3020	0.875	3.250	15.6	1.148	GI
14MX-45S-37	45	7.895	7.785	8.400	AF-1	6.42	—	1.74	2.00	—	2.06	0.06	1.03	3020	0.875	3.250	18.0	1.394	GI
14MX-48S-37	48	8.421	8.311	8.940	AF-1	6.96	—	1.74	2.00	—	2.06	0.06	1.03	3020	0.875	3.250	21.5	1.802	GI
14MX-50S-37	50	8.772	8.662	9.290	AF-1	7.44	—	1.74	2.00	—	2.06	0.06	1.03	3020	0.875	3.250	24.1	2.102	GI
14MX-53S-37	53	9.299	9.189	9.690	AF-1	7.84	—	1.74	2.00	—	2.06	0.06	1.03	3020	0.875	3.250	28.3	2.694	GI
14MX-56S-37	56	9.825	9.715	10.360	BF-1	—	8.70	1.74	2.50	—	2.06	0.44	1.03	3525	1.188	3.938	33.0	3.247	GI
14MX-60S-37	60	10.527	10.417	11.070	BF-1	—	8.75	1.74	2.50	—	2.06	0.44	1.03	3525	1.188	3.938	40.6	4.499	GI
14MX-63S-37	63	11.053	10.943	11.590	BF-1	—	8.75	1.74	2.50	—	2.06	0.44	1.03	3525	1.188	3.938	46.7	5.631	GI
14MX-67S-37	67	11.755	11.645	12.500	BF-1	—	8.75	1.74	2.50	—	2.06	0.44	1.03	3525	1.188	3.938	55.6	7.476	GI
14MX-71S-37	71	12.457	12.347	13.070	BF-1	—	8.75	1.74	2.50	—	2.06	0.44	1.03	3525	1.188	3.938	61.2	8.443	GI
14MX-75S-37	75	13.158	13.048	13.730	CF-1	11.68	8.75	1.74	2.50	—	2.06	0.44	1.03	3525	1.188	3.938	46.9	6.468	GI
14MX-80S-37	80	14.036	13.926	14.620	CF-2	12.56	8.75	1.74	2.50	—	2.06	0.44	1.03	3525	1.188	3.938	52.5	7.891	GI
14MX-90S-37	90	15.790	15.680	—	C-2	14.26	8.75	—	2.50	—	2.06	0.44	1.03	3525	1.188	3.938	61.5	11.78	GI
14MX-112S-37	112	19.650	19.540	—	C-3	16.39	8.75	—	2.50	—	2.06	0.44	1.03	3525	1.188	3.938	89.1	30.71	GI
14MX-140S-37	140	24.562	24.452	—	C-3	20.84	8.75	—	2.50	—	2.06	0.44	1.03	3525	1.188	3.938	125.5	72.00	GI
14MX-168S-37	168	29.475	29.365	—	C-3	25.51	10.00	—	3.00	—	2.06	0.94	1.03	4030	1.438	4.438	175.1	139.8	GI
14MX-180S-37	180	31.580	31.470	—	C-3	27.59	10.00	—	3.00	—	2.06	0.94	1.03	4030	1.438	4.438	191.4	176.8	GI
14MX-200S-37	200	35.089	34.979	—	C-3	31.07	10.00	—	3.00	—	2.06	0.94	1.03	4030	1.438	4.438	224.9	261.6	GI
14MX-224S-37	224	39.300	39.190	—	C-3	35.24	10.00	—	3.00	—	2.06	0.94	1.03	4030	1.438	4.438	267.7	397.9	GI

Material Spec : GI - Grey Iron DI - Ductile Iron SS - Stainless Steel   Design Type Suffix: 1 - Solid 2 - Web 3 - Arms
Note: 2D and 3D sprocket drawings are available at www.gates.com/designview
NOTE: •Weights for Minimum Plain Bore (MPB) Sprockets are with minimum bore. •Weights and WR² for Bushed Sprockets do not include bushings. •WR² values have lb-ft² units.

Stock 14mm Gates Poly Chain® GT®2 Sprocket Specifications—continued

Sprocket Number	Number of Teeth	Diameters (in)			Design Type	Dimensions (in)								Bushing Size	Bore Sizes		A) Approx WR²	Approx WR²	Matl. Spec
		Pitch	O.D.	Flange Ref.		A	B	C	D	E	F	M	F-CL.		Min	Max			
PB14MX-28S-68	28	4.912	4.802	5.400	6F-1	—	3.97	3.01	4.13	0.80	3.33	0	1.67	MPB	1.000	2.938	17.4	0.348	DI
14MX-29S-68	29	5.088	4.978	5.760	AF-1	3.99	—	3.01	1.75	—	3.33	1.58	1.67	2517	0.500	2.688	7.0	0.23	GI
PB14MX-29S-68	29	5.088	4.978	5.760	6F-1	—	4.35	3.01	4.13	0.80	3.33	0	1.67	MPB	1.000	3.188	19.1	0.412	DI
14MX-30S-68	30	5.263	5.153	5.760	AF-1	3.99	—	3.01	1.75	—	3.33	1.58	1.67	2517	0.500	2.688	8.2	0.281	GI
PB14MX-30S-68	30	5.263	5.153	5.760	6F-1	—	4.35	3.01	4.13	0.80	3.33	0	1.67	MPB	1.000	3.188	20.3	0.466	DI
14MX-31S-68	31	5.439	5.329	6.110	AF-1	4.22	—	3.01	1.75	—	3.33	1.58	1.67	2517	0.500	2.688	8.8	0.32	GI
PB14MX-31S-68	31	5.439	5.329	6.110	6F-1	—	4.57	3.01	4.13	0.80	3.33	0	1.67	MPB	1.000	3.438	21.9	0.537	DI
14MX-32S-68	32	5.614	5.504	6.110	AF-1	4.22	—	3.01	1.75	—	3.33	1.58	1.67	2517	0.500	2.688	10.0	0.383	GI
PB14MX-32S-68	32	5.614	5.504	6.110	6F-1	—	4.57	3.01	4.13	0.80	3.33	0	1.67	MPB	1.000	3.438	23.2	0.603	DI
14MX-33S-68	33	5.790	5.680	6.460	AF-1	4.53	—	3.01	1.75	—	3.33	1.58	1.67	2517	0.500	2.688	10.5	0.422	GI
PB14MX-33S-68	33	5.790	5.680	6.470	6F-1	—	4.89	3.01	4.33	1.00	3.33	0	1.67	MPB	1.000	3.500	25.9	0.714	DI
14MX-34S-68	34	5.965	5.855	6.460	AF-1	4.53	—	3.01	1.75	—	3.33	1.58	1.67	2517	0.500	2.688	11.8	0.498	GI
PB14MX-34S-68	34	5.965	5.855	6.470	6F-1	—	4.89	3.01	4.33	1.00	3.33	0	1.67	MPB	1.000	3.500	27.3	0.794	DI
14MX-35S-68	35	6.141	6.031	6.820	AF-1	4.95	—	3.01	2.00	—	3.33	1.33	1.67	3020	0.875	3.250	10.3	0.498	GI
14MX-36S-68	36	6.316	6.206	6.820	AF-1	4.95	—	3.01	2.00	—	3.33	1.33	1.67	3020	0.875	3.250	11.7	0.589	GI
14MX-37S-68	37	6.492	6.382	7.170	AF-1	5.27	—	3.01	2.00	—	3.33	1.33	1.67	3020	0.875	3.250	12.3	0.646	GI
14MX-38S-68	38	6.667	6.557	7.170	AF-1	5.27	—	3.01	2.00	—	3.33	1.33	1.67	3020	0.875	3.250	13.8	0.754	GI
14MX-39S-68	39	6.842	6.732	7.520	AF-1	5.54	—	3.01	2.00	—	3.33	1.33	1.67	3020	0.875	3.250	14.6	0.831	GI
14MX-40S-68	40	7.018	6.908	7.520	AF-1	5.54	—	3.01	2.00	—	3.33	1.33	1.67	3020	0.875	3.250	16.2	0.957	GI
14MX-43S-68	43	7.544	7.434	8.040	AF-1	6.16	—	3.01	2.00	—	3.33	1.33	1.67	3020	0.875	3.250	18.4	1.22	GI
14MX-45S-68	45	7.895	7.785	8.390	AF-1	6.42	—	3.01	2.00	—	3.33	1.33	1.67	3020	0.875	3.250	21.9	1.571	GI
14MX-48S-68	48	8.421	8.311	8.940	AF-1	6.96	—	3.01	2.50	—	3.33	0.83	1.67	3525	1.188	3.938	25.7	2.123	DI
14MX-50S-68	50	8.772	8.662	9.290	AF-1	7.44	—	3.01	2.50	—	3.33	0.83	1.67	3525	1.188	3.938	28.5	2.506	GI
14MX-53S-68	53	9.299	9.189	9.690	AF-1	7.84	—	3.01	2.50	—	3.33	0.83	1.67	3525	1.188	3.938	33.7	3.26	GI
14MX-56S-68	56	9.825	9.715	10.360	AF-1	8.35	—	3.01	2.50	—	3.33	0.83	1.67	3525	1.188	3.938	39.0	4.119	GI
14MX-60S-68	60	10.527	10.417	11.070	AF-1	9.06	—	3.01	2.50	—	3.33	0.83	1.67	3525	1.188	3.938	46.4	5.489	GI
14MX-63S-68	63	11.053	10.943	11.590	AF-1	9.59	—	3.01	2.50	—	3.33	0.83	1.67	3525	1.188	3.938	52.3	6.713	GI
14MX-67S-68	67	11.755	11.645	12.500	DF-1	10.36	8.75	3.01	2.50	—	3.33	0.83	1.67	3525	1.188	3.938	56.4	7.452	GI
14MX-71S-68	71	12.457	12.347	13.070	DF-1	11.05	8.75	3.01	2.50	—	3.33	0.83	1.67	3525	1.188	3.938	64.1	9.377	GI
14MX-75S-68	75	13.158	13.048	13.730	DF-1	11.68	8.75	3.01	2.50	—	3.33	0.83	1.67	3525	1.188	3.938	56.9	8.993	GI
14MX-80S-68	80	14.036	13.926	14.620	DF-2	12.56	8.75	3.01	2.50	—	3.33	0.83	1.67	3525	1.188	3.938	62.1	10.39	GI
14MX-90S-68	90	15.790	15.680	—	D-2	14.26	10.00	3.01	3.00	—	3.33	0.33	1.67	4030	1.438	4.438	86.2	17.66	GI
14MX-112S-68	112	19.650	19.540	—	D-3	16.35	10.00	3.01	3.00	—	3.33	0.33	1.67	4030	1.438	4.438	135.1	49.62	GI
14MX-140S-68	140	24.562	24.452	—	D-3	20.78	10.00	3.01	3.00	—	3.33	0.33	1.67	4030	1.438	4.438	189.0	115.1	GI
14MX-168S-68	168	29.475	29.365	—	C-3	25.23	10.50	3.01	3.50	—	3.33	0.17	1.67	4535	1.938	4.938	259.5	228.9	GI
14MX-180S-68	180	31.580	31.470	—	C-3	27.16	10.50	3.01	3.50	—	3.33	0.17	1.67	4535	1.938	4.938	288.6	295.5	GI
14MX-200S-68	200	35.089	34.979	—	C-3	30.65	10.50	3.01	3.50	—	3.33	0.17	1.67	4535	1.938	4.938	331.9	422.1	GI
14MX-224S-68	224	39.300	39.190	—	C-3	34.82	11.00	3.01	4.00	—	3.33	0.67	1.67	5040	2.438	5.000	404.3	644.5	GI
14MX-140S-68	140	24.562	24.452	—	C-3	20.84	8.75	—	2.50	—	2.06	0.44	1.03	3525	1.188	3.938	125.5	72.00	GI
14MX-168S-68	168	29.475	29.365	—	C-3	25.51	10.00	—	3.00	—	2.06	0.94	1.03	4030	1.438	4.438	175.1	139.8	GI
14MX-180S-68	180	31.580	31.470	—	C-3	27.59	10.00	—	3.00	—	2.06	0.94	1.03	4030	1.438	4.438	191.4	176.8	GI
14MX-200S-68	200	35.089	34.979	—	C-3	31.07	10.00	—	3.00	—	2.06	0.94	1.03	4030	1.438	4.438	224.9	261.6	GI
14MX-224S-68	224	39.300	39.190	—	C-3	35.24	10.00	—	3.00	—	2.06	0.94	1.03	4030	1.438	4.438	267.7	397.9	GI

Material Spec : GI - Grey Iron DI - Ductile Iron SS - Stainless Steel   Design Type Suffix: 1 - Solid 2 - Web 3 - Arms

Note: 2D and 3D sprocket drawings are available at www.gates.com/designview

NOTE: •Weights for Minimum Plain Bore (MPB) Sprockets are with minimum bore. •Weights and WR² for Bushed Sprockets do not include bushings. •WR² values have lb-ft² units.

Stock 14mm Gates Poly Chain® GT®2 Sprocket Specifications—continued

Sprocket Number	Number of Teeth	Diameters (in) Pitch	Diameters (in) O.D.	Diameters (in) Flange Ref.	Design Type	A	B	C	D	E	F	M	F-CL	Bushing Size	Bore Sizes Min	Bore Sizes Max	/ Approx \ WR²	Approx WR²	Matl. Spec
PB14MX-28S-90	28	4.912	4.802	5.400	6F-1	—	3.97	3.88	5.14	0.94	4.20	0	2.10	MPB	1.500	2.938	20.4	0.432	D
PB14MX-29S-90	29	5.088	4.978	5.760	6F-1	—	4.35	3.88	5.00	0.80	4.20	0	2.10	MPB	1.500	3.188	22.0	0.503	D
PB14MX-30S-90	30	5.263	5.153	5.760	6F-1	—	4.35	3.88	5.00	0.80	4.20	0	2.10	MPB	1.500	3.188	23.6	0.571	D
PB14MX-31S-90	31	5.439	5.329	6.110	6F-1	—	4.57	3.88	5.00	0.80	4.20	0	2.10	MPB	1.500	3.438	25.5	0.658	D
PB14MX-32S-90	32	5.614	5.504	6.110	6F-1	—	4.57	3.88	5.00	0.80	4.20	0	2.10	MPB	1.500	3.438	27.1	0.741	D
PB14MX-33S-90	33	5.790	5.680	6.470	6F-1	—	4.89	3.88	5.20	1.00	4.20	0	2.10	MPB	1.500	3.500	30.2	0.871	D
PB14MX-34S-90	34	5.965	5.855	6.470	6F-1	—	4.89	3.88	5.20	1.00	4.20	0	2.10	MPB	1.500	3.500	31.9	0.971	D
14MX-35S-90	35	6.141	6.031	6.820	AF-1	4.95	—	3.88	2.00	—	4.20	2.20	2.10	3020	0.875	3.250	12.1	0.602	D
PB14MX-35S-90	35	6.141	6.031	6.820	6F-1	—	5.30	3.88	5.20	1.00	4.20	0	2.10	MPB	1.500	3.813	34.6	1.120	D
14MX-36S-90	36	6.316	6.206	6.820	AF-1	4.95	—	3.88	2.00	—	4.20	2.20	2.10	3020	0.875	3.250	13.9	0.717	D
PB14MX-36S-90	36	6.316	6.206	6.820	6F-1	—	5.30	3.88	5.20	1.00	4.20	0	2.10	MPB	1.500	3.813	36.4	1.240	D
14MX-37S-90	37	6.492	6.382	7.170	AF-1	5.27	—	3.88	2.00	—	4.20	2.20	2.10	3020	0.875	3.250	14.2	0.773	G
PB14MX-37S-90	37	6.492	6.382	7.170	6F-1	—	5.63	3.88	5.20	1.00	4.20	0	2.10	MPB	1.500	4.125	39.0	1.408	D
14MX-38S-90	38	6.667	6.557	7.170	AF-1	5.27	—	3.88	2.00	—	4.20	2.20	2.10	3020	0.875	3.250	16.1	0.909	G
PB14MX-38S-90	38	6.667	6.557	7.170	6F-1	—	5.63	3.88	5.20	1.00	4.20	0	2.10	MPB	1.500	4.125	41.0	1.549	D
14MX-39S-90	39	6.842	6.732	7.520	AF-1	5.54	—	3.88	2.00	—	4.20	2.20	2.10	3020	0.875	3.250	16.8	0.992	G
PB14MX-39S-90	39	6.842	6.732	7.500	6F-1	—	5.89	3.88	5.20	1.00	4.20	0	2.10	MPB	1.500	4.375	43.6	1.737	D
14MX-40S-90	40	7.018	6.908	7.520	AF-1	5.54	—	3.88	2.00	—	4.20	2.20	2.10	3020	0.875	3.250	18.8	1.152	G
PB14MX-40S-90	40	7.018	6.908	7.520	6F-1	—	5.89	3.88	5.20	1.00	4.20	0	2.10	MPB	1.500	4.375	45.6	1.903	D
14MX-43S-90	43	7.544	7.434	8.040	AF-1	6.16	—	3.88	2.50	—	4.20	1.70	2.10	3525	1.188	3.938	20.9	1.51	D
14MX-45S-90	45	7.895	7.785	8.390	AF-1	6.42	—	3.88	2.50	—	4.20	1.70	2.10	3525	1.188	3.938	24.3	1.878	D
14MX-48S-90	48	8.421	8.311	8.940	AF-1	6.96	—	3.88	2.50	—	4.20	1.70	2.10	3525	1.188	3.938	28.9	2.477	D
14MX-50S-90	50	8.772	8.662	9.290	AF-1	7.44	—	3.88	2.50	—	4.20	1.70	2.10	3525	1.188	3.938	31.5	2.877	D
14MX-53S-90	53	9.299	9.189	9.690	AF-1	7.83	—	3.88	2.50	—	4.20	1.70	2.10	3525	1.188	3.938	37.4	3.753	G
14MX-56S-90	56	9.825	9.715	10.360	AF-1	8.35	—	3.88	3.00	—	4.20	1.20	2.10	4030	1.438	4.438	43.2	4.893	G
14MX-60S-90	60	10.527	10.417	11.070	AF-1	9.06	—	3.88	3.00	—	4.20	1.20	2.10	4030	1.438	4.438	52.2	6.574	G
14MX-63S-90	63	11.053	10.943	11.590	AF-1	9.59	—	3.88	3.00	—	4.20	1.20	2.10	4030	1.438	4.438	59.3	8.076	G
14MX-67S-90	67	11.755	11.645	12.500	AF-1	9.88	—	3.88	3.00	—	4.20	1.20	2.10	4030	1.438	4.438	71.3	10.79	G
14MX-71S-90	71	12.457	12.347	13.070	AF-1	10.67	—	3.88	3.00	—	4.20	1.20	2.10	4030	1.438	4.438	81.6	13.58	G
14MX-75S-90	75	13.158	13.048	13.730	AF-1	11.63	—	3.88	3.00	—	4.20	1.20	2.10	4030	1.438	4.438	95.9	16.50	G
14MX-80S-90	80	14.036	13.926	14.620	DF-1	12.56	10.00	3.88	3.00	—	4.20	1.20	2.10	4030	1.438	4.438	94.1	17.78	G
14MX-90S-90	90	15.790	15.680	—	D-2	14.26	10.00	—	3.00	—	4.20	1.20	2.10	4030	1.438	4.438	94.5	20.17	G
14MX-112S-90	112	19.650	19.540	—	D-2	16.35	10.50	—	3.50	—	4.20	0.70	2.10	4535	1.938	4.938	173.7	64.28	G
14MX-140S-90	140	24.562	24.452	—	D-3	20.74	11.00	—	4.00	—	4.20	0.20	2.10	5040	2.438	5.000	245.3	149.3	G
14MX-168S-90	168	29.475	29.365	—	C-3	25.11	15.50	—	5.00	—	4.20	0.80	2.10	6050	4.438	6.000	395.1	321.7	G
14MX-180S-90	180	31.580	31.470	—	C-3	27.06	15.50	—	5.00	—	4.20	0.80	2.10	6050	4.438	6.000	429.4	405.5	G
14MX-200S-90	200	35.089	34.979	—	C-3	30.29	15.50	—	5.00	—	4.20	0.80	2.10	6050	4.438	6.000	493.0	586.1	G
14MX-224S-90	224	39.300	39.190	—	C-3	34.46	15.50	—	5.00	—	4.20	0.80	2.10	6050	4.438	6.000	562.6	849.9	G

Material Spec : GI - Grey Iron DI - Ductile Iron SS - Stainless Steel   Design Type Suffix: 1 - Solid 2 - Web 3 - Arms
Note: 2D and 3D sprocket drawings are available at www.gates.com/designview
NOTE: •Weights for Minimum Plain Bore (MPB) Sprockets are with minimum bore. •Weights and WR² for Bushed Sprockets do not include bushings. •WR² values have lb-ft² units.

Stock 14mm Gates Poly Chain® GT®2 Sprocket Specifications—continued

Sprocket Number	Number of Teeth	Diameters (in)			Design Type	Dimensions (in)								Bushing Size	Bore Sizes		Approx Wt (lb)	Approx WR²	Matl. Spec
		Pitch	O.D.	Flange Ref.		A	B	C	D	E	F	M	F-CL		Min	Max			
PB14MX-28S-125	28	4.912	4.802	5.400	6F-1	—	3.97	5.29	6.50	0.89	5.61	0	2.81	MPB	1.500	2.938	24.8	0.562	DI
PB14MX-29S-125	29	5.088	4.978	5.760	6F-1	—	4.35	5.29	6.50	0.89	5.61	0	2.81	MPB	1.500	3.188	27.2	0.661	DI
PB14MX-30S-125	30	5.263	5.153	5.760	6F-1	—	4.35	5.29	6.50	0.89	5.61	0	2.81	MPB	1.500	3.188	29.2	0.752	DI
PB14MX-31S-125	31	5.439	5.329	6.110	6F-1	—	4.57	5.29	6.50	0.89	5.61	0	2.81	MPB	1.500	3.438	31.6	0.865	DI
PB14MX-32S-125	32	5.614	5.504	6.110	6F-1	—	4.57	5.29	6.50	0.89	5.61	0	2.81	MPB	1.500	3.438	33.8	0.976	DI
PB14MX-33S-125	33	5.790	5.680	6.470	6F-1	—	4.89	5.29	6.69	1.08	5.61	0	2.81	MPB	1.500	3.500	37.3	1.138	DI
PB14MX-34S-125	34	5.965	5.855	6.470	6F-1	—	4.89	5.29	6.69	1.08	5.61	0	2.81	MPB	1.500	3.500	39.6	1.272	DI
PB14MX-35S-125	35	6.141	6.031	6.820	6F-1	—	5.30	5.29	6.69	1.08	5.61	0	2.81	MPB	1.500	3.813	42.9	1.461	DI
PB14MX-36S-125	36	6.316	6.206	6.820	6F-1	—	5.30	5.29	6.69	1.08	5.61	0	2.81	MPB	1.500	3.813	45.3	1.621	DI
PB14MX-37S-125	37	6.492	6.382	7.170	6F-1	—	5.63	5.29	6.69	1.08	5.61	0	2.81	MPB	1.500	4.125	48.5	1.835	DI
PB14MX-38S-125	38	6.667	6.557	7.170	6F-1	—	5.63	5.29	6.69	1.08	5.61	0	2.81	MPB	1.500	4.125	51.1	2.024	DI
PB14MX-39S-125	39	6.842	6.732	7.520	6F-1	—	5.89	5.29	6.69	1.08	5.61	0	2.81	MPB	1.500	4.375	54.3	2.267	DI
PB14MX-40S-125	40	7.018	6.908	7.520	6F-1	—	5.89	5.29	6.69	1.08	5.61	0	2.81	MPB	1.500	4.375	57.0	2.488	DI
PB14MX-43S-125	43	7.544	7.434	8.040	6F-1	—	6.51	5.29	6.81	1.20	5.61	0	2.81	MPB	1.500	4.813	68.2	3.413	DI
PB14MX-45S-125	45	7.895	7.785	8.400	6F-1	—	6.76	5.29	6.81	1.20	5.61	0	2.81	MPB	1.500	5.000	75.0	4.092	DI
PB14MX-48S-125	48	8.421	8.311	8.940	6F-1	—	7.29	5.29	6.81	1.20	5.61	0	2.81	MPB	1.500	5.625	86.3	5.340	DI
14MX-50S-125	50	8.772	8.662	9.290	AF-1	7.44	—	5.29	3.50	—	5.61	2.11	2.81	4535	1.938	4.938	38.0	3.54	DI
14MX-53S-125	53	9.299	9.189	9.690	AF-1	7.83	—	5.29	3.50	—	5.61	2.11	2.81	4535	1.938	4.938	46.0	4.705	DI
14MX-56S-125	56	9.825	9.715	10.360	AF-1	8.35	—	5.29	3.50	—	5.61	2.11	2.81	4535	1.938	4.938	53.6	5.983	DI
14MX-60S-125	60	10.527	10.417	11.070	AF-1	9.06	—	5.29	3.50	—	5.61	2.11	2.81	4535	1.938	4.938	64.3	8.015	GI
14MX-63S-125	63	11.053	10.943	11.590	AF-1	9.59	—	5.29	3.50	—	5.61	2.11	2.81	4535	1.938	4.938	72.8	9.827	GI
14MX-67S-125	67	11.755	11.645	12.500	AF-1	9.88	—	5.29	3.50	—	5.61	2.11	2.81	4535	1.938	4.938	88.2	13.3	GI
14MX-71S-125	71	12.457	12.347	13.070	AF-1	10.67	—	5.29	4.00	—	5.61	1.61	2.81	5040	2.438	5.000	103.0	17.41	GI
14MX-75S-125	75	13.158	13.048	13.730	AF-1	11.63	—	5.29	4.00	—	5.61	1.61	2.81	5040	2.438	5.000	117.0	21.43	GI
14MX-80S-125	80	14.036	13.926	14.620	AF-1	12.59	—	5.29	4.00	—	5.61	1.61	2.81	5040	2.438	5.000	136.0	27.78	GI
14MX-90S-125	90	15.790	15.680	—	D-1	14.26	11.00	—	4.00	—	5.61	1.61	2.81	5040	2.438	5.000	135.0	32.49	GI
14MX-112S-125	112	19.650	19.540	—	A-1	16.35	—	—	5.00	—	5.61	0.61	2.81	6050	4.438	6.000	317.0	127.5	GI
14MX-140S-125	140	24.562	24.452	—	D-3	20.74	15.50	—	5.00	—	5.61	0.61	2.81	6050	4.438	6.000	373.0	225.4	GI
14MX-168S-125	168	29.475	29.365	—	C-3	25.11	17.00	—	6.00	—	5.61	0.39	2.81	7060	4.938	7.000	524.0	419.5	GI
14MX-180S-125	180	31.580	31.470	—	C-3	27.06	17.00	—	6.00	—	5.61	0.39	2.81	7060	4.938	7.000	567.0	525.2	GI
14MX-200S-125	200	35.089	34.979	—	C-3	30.29	17.00	—	6.00	—	5.61	0.39	2.81	7060	4.938	7.000	648.0	753.8	GI
14MX-224S-125	224	39.300	39.190	—	C-3	34.21	17.00	—	6.00	—	5.61	0.39	2.81	7060	4.938	7.000	753.0	1122.	GI

Material Spec : GI - Grey Iron DI - Ductile Iron SS - Stainless Steel   Design Type Suffix: 1 - Solid 2 - Web 3 - Arms

Note: 2D and 3D sprocket drawings are available at www.gates.com/designview

NOTE: •Weights for Minimum Plain Bore (MPB) Sprockets are with minimum bore. •Weights and WR² for Bushed Sprockets do not include bushings. •WR² values have lb-ft² units.

Gates Corporation

Stock 8mm Poly Chain® GT®2 Single-Double Sprocket Specifications

Type SD

Sprocket Number	Number of Teeth	Dimensions (in)				Dimensions (in)							Bore Sizes		Approx Wt (lb)	Matl Spec
		Pitch	OD	Flange Ø	Dsgn Type	A	C1	C2	D	F	M	Bushing Sp	Min	Max		
SS8MX-32S-12-12-SD	32	3.210	3.156	3.610	SD	2.58	0.85	0.85	1.00	2.05	1.05	1210	0.500	1.250	1.50	SS
SS8MX-34S-12-12-SD	34	3.410	3.356	3.810	SD	2.66	0.85	0.85	1.00	2.05	1.05	1610	0.500	1.688	1.60	SS
SS8MX-36S-12-12-SD	36	3.611	3.557	4.010	SD	2.96	0.85	0.85	1.00	2.05	1.05	1610	0.500	1.688	1.75	SS
8MX-32S-12-12-SD	32	3.210	3.156	3.610	SD	2.58	0.85	0.85	1.00	2.05	1.05	1210	0.500	1.250	1.50	DI
8MX-34S-12-12-SD	34	3.410	3.356	3.810	SD	2.66	0.85	0.85	1.00	2.05	1.05	1610	0.500	1.688	1.60	DI
8MX-36S-12-12-SD	36	3.611	3.557	4.010	SD	2.96	0.85	0.85	1.00	2.05	1.05	1610	0.500	1.688	1.75	DI
SS8MX-32S-12-21-SD	32	3.210	3.156	3.610	SD	2.58	0.85	1.17	1.00	2.37	1.37	1210	0.500	1.250	1.80	SS
SS8MX-34S-12-21-SD	34	3.410	3.356	3.810	SD	2.66	0.85	1.17	1.00	2.37	1.37	1610	0.500	1.688	1.90	SS
SS8MX-36S-12-21-SD	36	3.611	3.557	4.010	SD	2.96	0.85	1.17	1.00	2.37	1.37	1610	0.500	1.688	2.10	SS
8MX-32S-12-21-SD	32	3.210	3.156	3.610	SD	2.58	0.85	1.17	1.00	2.37	1.37	1210	0.500	1.250	1.80	DI
8MX-34S-12-21-SD	34	3.410	3.356	3.810	SD	2.66	0.85	1.17	1.00	2.37	1.37	1610	0.500	1.688	1.90	DI
8MX-36S-12-21-SD	36	3.611	3.557	4.010	SD	2.96	0.85	1.17	1.00	2.37	1.37	1610	0.500	1.688	2.10	DI
SS8MX-32S-21-12-SD	32	3.210	3.156	3.610	SD	2.58	1.17	0.85	1.00	2.37	1.37	1210	0.500	1.250	1.80	SS
SS8MX-34S-21-12-SD	34	3.410	3.356	3.810	SD	2.66	1.17	0.85	1.00	2.37	1.37	1610	0.500	1.688	1.90	SS
SS8MX-36S-21-12-SD	36	3.611	3.557	4.010	SD	2.96	1.17	0.85	1.00	2.37	1.37	1610	0.500	1.688	2.10	SS
8MX-32S-21-12-SD	32	3.210	3.156	3.610	SD	2.58	1.17	0.85	1.00	2.37	1.37	1210	0.500	1.250	1.80	DI
8MX-34S-21-12-SD	34	3.410	3.356	3.810	SD	2.66	1.17	0.85	1.00	2.37	1.37	1610	0.500	1.688	1.90	DI
8MX-36S-21-12-SD	36	3.611	3.557	4.010	SD	2.96	1.17	0.85	1.00	2.37	1.37	1610	0.500	1.688	2.10	DI
SS8MX-32S-21-21-SD	32	3.210	3.156	3.610	SD	2.58	1.17	1.17	1.00	2.69	1.69	1210	0.500	1.250	2.10	SS
SS8MX-34S-21-21-SD	34	3.410	3.356	3.810	SD	2.66	1.17	1.17	1.00	2.69	1.69	1610	0.500	1.688	2.10	SS
SS8MX-36S-21-21-SD	36	3.611	3.557	4.010	SD	2.96	1.17	1.17	1.00	2.69	1.69	1610	0.500	1.688	2.25	SS
8MX-32S-21-21-SD	32	3.210	3.156	3.610	SD	2.58	1.17	1.17	1.00	2.69	1.69	1210	0.500	1.250	2.10	DI
8MX-34S-21-21-SD	34	3.410	3.356	3.810	SD	2.66	1.17	1.17	1.00	2.69	1.69	1610	0.500	1.688	2.25	DI
8MX-36S-21-21-SD	36	3.611	3.557	4.010	SD	2.96	1.17	1.17	1.00	2.69	1.69	1610	0.500	1.688	2.40	DI

Material Spec: SS - Stainless Steel DI - Ductile

Sprocket Specifications

Sprocket Tolerance Specifications

Poly Chain® GT®2 sprockets are made to close tolerances. Modifications such as reboring may result in unsatisfactory drive performance. Strict adherence to the standard tolerances (as shown in table below) is highly recommended.

Table 5 - Sprocket Outside Diameter and Pitch

Outside Diameter Range (in)	Outside Diameter Tolerance (in)	Pitch To Pitch Tolerance (in)	
		Adjacent Grooves	Accumulative Over 90 Degrees
Over 2.000 to and including 4.000	+ 0.004 -0.000	±0.001	±0.0045
Over 4.000 to and including 7.000	+ 0.005 -0.000	±0.001	±0.005
Over 7.000 to and including 12.000	+ 0.006 -0.000	±0.001	±0.006
Over 12.000 to and including 20.000	+ 0.007 -0.000	±0.001	±0.0065
Over 20.000	+ 0.008 -0.000	±0.001	±0.0075

Table 6 - Sprocket Runout
Radial Runout*

Outside Diameter (in)	Outside Diameter (mm)	Total Eccentricity Total Indicator Reading (in)	Total Eccentricity Total Indicator Reading (mm)
Over 2 to 4	50 100	0.003	0.08
Over 4 to 8	100 200	0.004	0.10
Over 8	200	.0005 per inch O.D. over 8"	.013 per mm O.D. over 200mm
		(may not exceed face diameter tolerance)	

* Total Indicator Reading

Axial Runout*

For each additional inch of outside diameter up through
10.0 inches, add 0.001 inches
For each additional inch of outside diameter
over 10.0 inches, add 0.0005 inches
* Total Indicator Reading

Table 7 - Sprocket and Bushing Keyseat

Shaft Diameter (in)	Width W$_k$ † (in)	Depth, h$_k$ (in) + 0.015 - 0.000
Up through 7/16 (0.44)	3/32 (0.0938)	3/64 (0.047)
Over 7/16 (0.44) to and incl. 9/16 (0.56)	1/8 (0.125)	1/16 (0.062)
Over 9/16 (0.56) to and incl. 7/8 (0.88)	3/16 (0.1875)	3/32 (0.094)
Over 7/8 (0.88) to and incl. 1 1/4 (1.25)	1/4 (0.250)	1/8 (0.125)
Over 1 1/4 (1.25) to and incl. 1 3/8 (1.38)	5/16 (0.3125)	5/32 (0.156)
Over 1 3/8 1.38) to and incl. 1 3/4 (1.75)	3/8 (0.375)	3/16 (0.188)
Over 1 3/4 (1.75) to and incl. 2 1/4 (2.25)	1/2 (0.500)	1/4 (0.250)
Over 2 1/4 (2.25) to and incl. 2 3/4 (2.75)	5/8 (0.625)	5/16 (0.312)
Over 2 3/4 (2.75) to and incl. 3 1/4 (3.25)	3/4 (0.750)	3/8 (0.375)
Over 3 1/4 (3.25) to and incl. 3 3/4 (3.75)	7/8 (0.875)	7/16 (0.438)
Over 3 3/4 (3.75) to and incl. 4 1/2 (4.50)	1 (1.000)	1/2 (0.500)
Over 4 1/2 (4.50) to and incl. 5 1/2 (5.50)	1 1/4 (1.250)	5/8 (0.625)

† Tolerance on width, W$_k$

For width up through 1/2 (0.500) . . . . + 0.002, 0.000 inches
For width over 1/2 (0.500) up through 1 (1.000) . . + 0.003, 0.000 inches
For width over 1 (1.000). . . . . + 0.004, 0.000 inches
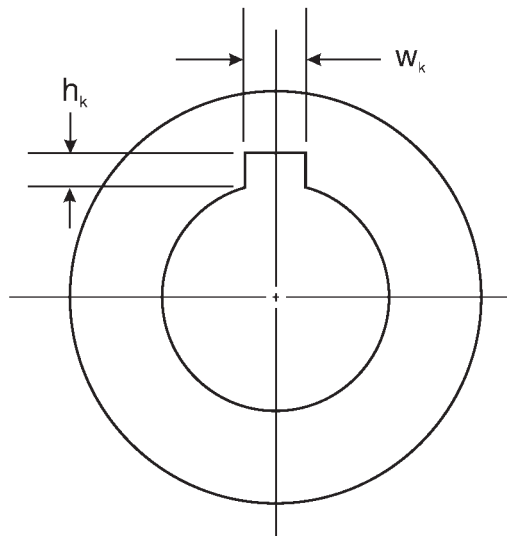
Balancing

Stock Sprockets are statically balanced per MPTA (Mechanical Power Transmission Association) Standard Practice for Pulley Balancing SPB-86 using the weight based on the following two criteria:
1. Balance limit (ounces) = Sprocket Weight (lb) x 0.016; or
2. 0.176 ounce (5 grams), whichever is greater.
Caution: Stock sprockets should not be used on drives where rim surface speeds exceed 6,500 fpm. Sprocket construction and materials will determine the dynamic balancing requirements of the sprocket(s) where rim surface speeds exceed 6,500 fpm.

Sprocket Tooth Profile and Surface Quality

The Poly Chain GT2 sprocket tooth profile was designed and developed exclusively by Gates Corporation to operate with the Gates Poly Chain GT Carbon Belt. See Engineering Section II-3, Tooth Profile, on page 114 for a complete discussion of the performance characteristics of this new tooth profile. The tooth surface should be free of any surface defects and should be 80 microinches finish or better.

Sprocket Blanks

Sprocket blanks can be grooved by Gates for specially designed, made-to-order sprockets. If those sprockets are supplied in blank form, Gates can perform the "grooving" operation. The blank diameter must be 0.050" larger than the finished sprocket O.D. Contact your local Gates Representative for additional details.

Poly Chain® GT2 Bored-To-Size Sprocket Bore Range Listing

8mm Pitch Sprockets

Sprocket Size	Minimum Bore (in)	Full Keyway Bore Range (in)	Shallow Keyway Bore Range (in)
8MX-22S-12	0.500	0.500 - 1.063	1.125 - 1.188
8MX-22S-21	0.500	0.500 - 1.063	1.125 - 1.188
8MX-22S-36	0.500	0.500 - 1.063	1.125 - 1.188
8MX-25S-12	0.500	0.500 - 1.313	1.375 - 1.500
8MX-25S-21	0.500	0.500 - 1.313	1.375 - 1.500
8MX-25S-36	0.500	0.500 - 1.313	1.375 - 1.500
8MX-25S-62	1.000	1.000 - 1.313	1.375 - 1.500
8MX-28S-12	0.500	0.500 - 1.500	1.563 - 1.750
8MX-28S-21	0.500	0.500 - 1.500	1.563 - 1.750
8MX-28S-36	0.500	0.500 - 1.500	1.563 - 1.750
8MX-28S-62	1.000	1.000 - 1.500	1.563 - 1.750
8MX-30S-12	0.500	0.500 - 1.563	1.625 - 1.813
8MX-30S-21	0.500	0.500 - 1.563	1.625 - 1.813
8MX-30S-36	0.500	0.500 - 1.563	1.625 - 1.813
8MX-30S-62	1.000	1.000 - 1.563	1.625 - 1.813
8MX-32S-12	0.500	0.500 - 1.750	1.813 - 2.000
8MX-32S-21	0.500	0.500 - 1.750	1.813 - 2.000
8MX-32S-36	0.500	0.500 - 1.750	1.813 - 2.000
8MX-32S-62	1.000	1.000 - 1.750	1.813 - 2.000
8MX-34S-36	0.500	0.500 - 1.750	1.813 - 2.125
8MX-34S-62	1.000	1.000 - 1.750	1.813 - 2.125
8MX-36S-36	0.500	0.500 - 1.938	2.000 - 2.313
8MX-36S-62	1.000	1.000 - 1.938	2.000 - 2.313
8MX-38S-36	0.500	0.500 - 2.125	2.188 - 2.438
8MX-38S-62	1.000	1.000 - 2.125	2.188 - 2.438
8MX-40S-62	1.000	1.000 - 2.188	2.250 - 2.563
8MX-42S-62	1.000	1.000 - 2.375	2.438 - 2.750
8MX-45S-62	1.000	1.000 - 2.375	2.438 - 2.750

All bored-to-size Sprockets are available through Gates rebore center. Check with your local Gates representative or Customer Service for a quote and delivery.

14mm Pitch Sprockets

Sprocket Size	Minimum Bore (in)	Full Keyway Bore Range (in)	Shallow Keyway Bore Range (in)
14MX-28S-37	1.000	1.000 - 2.500	2.563 - 2.938
14MX-28S-68	1.000	1.000 - 2.500	2.563 - 2.938
14MX-28S-90	1.500	1.500 - 2.500	2.563 - 2.938
14MX-28S-125	1.500	1.500 - 2.500	2.563 - 2.938
14MX-29S-68	1.000	1.000 - 2.750	2.813 - 3.188
14MX-29S-90	1.500	1.500 - 2.750	2.813 - 3.188
14MX-29S-125	1.500	1.500 - 2.750	2.813 - 3.188
14MX-30S-68	1.000	1.000 - 2.750	2.813 - 3.188
14MX-30S-90	1.500	1.500 - 2.750	2.813 - 3.188
14MX-30S-125	1.500	1.500 - 2.750	2.813 - 3.188
14MX-31S-68	1.000	1.000 - 2.875	2.938 - 3.438
14MX-31S-90	1.500	1.500 - 2.875	2.938 - 3.438
14MX-31S-125	1.500	1.500 - 2.875	2.938 - 3.438
14MX-32S-68	1.000	1.000 - 2.875	2.938 - 3.438
14MX-32S-90	1.500	1.500 - 2.875	2.938 - 3.438
14MX-32S-125	1.500	1.500 - 2.875	2.938 - 3.438
14MX-33S-68	1.000	1.000 - 2.938	3.000 - 3.500
14MX-33S-90	1.500	1.500 - 2.938	3.000 - 3.500
14MX-33S-125	1.500	1.500 - 2.938	3.000 - 3.500
14MX-34S-37	1.000	1.000 - 2.938	3.000 - 3.500
14MX-34S-68	1.000	1.000 - 2.938	3.000 - 3.500
14MX-34S-90	1.500	1.500 - 2.938	3.000 - 3.500
14MX-34S-125	1.500	1.500 - 2.938	3.000 - 3.500
14MX-35S-90	1.500	1.500 - 3.250	3.313 - 3.813
14MX-35S-125	1.500	1.500 - 3.250	3.313 - 3.813
14MX-36S-90	1.500	1.500 - 3.250	3.313 - 3.813
14MX-36S-125	1.500	1.500 - 3.250	3.313 - 3.813
14MX-37S-90	1.500	1.500 - 3.563	3.625 - 4.125
14MX-37S-125	1.500	1.500 - 3.563	3.625 - 4.125
14MX-38S-90	1.500	1.500 - 3.563	3.625 - 4.125
14MX-38S-125	1.500	1.500 - 3.563	3.625 - 4.125
14MX-39S-90	1.500	1.500 - 3.750	3.182 - 4.375
14MX-39S-125	1.500	1.500 - 3.750	3.182 - 4.375
14MX-40S-90	1.500	1.500 - 3.750	3.182 - 4.375
14MX-40S-125	1.500	1.500 - 3.750	3.182 - 4.375
14MX-43S-125	1.500	1.500 - 4.125	4.188 - 4.813
14MX-45S-125	1.500	1.500 - 4.375	4.438 - 5.000
14MX-48S-125	1.500	1.500 - 4.688	4.750 - 5.625

All bored-to-size Sprockets are available through Gates rebore center. Check with your local Gates representative or Customer Service for a quote and delivery.

Recommended Re-bore Specifications and Instructions
For Minimum Plain Bore (MPB) Sprockets

When using MPB Poly Chain® GT2 sprockets in power transmission systems, important guidelines should be followed for proper product finishing and application. Due to the high load carrying capacity and high operating tensions often found in Poly Chain GT Carbon belt drive systems, it is imperative to use and adhere to industry standard practices.

When finishing MPB sprockets for high performance belt drive systems, care should be taken to ensure proper functionality and performance. General re-bore instructions and specifications are as follows:

1. Materials used in Poly Chain GT2 sprockets are steel, gray iron, stainless steel and ductile iron. The materials used may vary with the size of the sprocket. See the Sprocket Specification Tables, pages 66 thru 75 for specific materials.
2. The maximum bore diameter specified by the manufacturer for each sprocket size should **NOT** be exceeded, or a keyway used which reduces the hub thickness to less than its minimum allowable value. See the Sprocket Specification Tables for a listing of recommended bore ranges by sprocket size. Bores exceeding the maximum recommended value for a particular sprocket size can adversely affect the structural integrity, thereby reducing their load-carrying capability.

The minimum metal thickness between the keyway and hub O.D. should be no less than the set screw diameter specified for the corresponding sprocket size. See Figure 1. A listing of minimum set screw diameters is included below.

8M-22S thru 28S – 1/4	14M-28S – 7/16
8M-30S thru 34S – 5/16	14M-29S thru 32S – 1/2
8M-36S thru 38S – 3/8	14M-33S thru 40S – 5/8
8M-40S thru 45S – 7/16	14M-43S thru 48S – 3/4
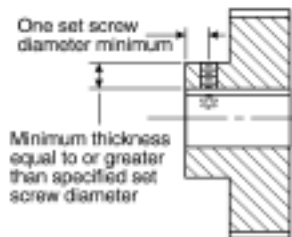
Figure 1 — Minimum Hub Thickness and Set Screw Placement Guidelines

3. The fit between a finished sprocket bore and its mating shaft in a power transmission system must not allow relative movement between the bore and the shaft when the drive is subjected to belt tension and torque loads. This is accomplished, in the case of plain bore sprockets, with the use of set screws and keys and by controlling the fit or clearance between the sprocket bore and its mating shaft. Cyclical, pulsating, or reversing loads may wear the sprocket bore and/or keyway due to the relative movement between the contacting surfaces of the shaft and the bore. The resulting wear may increase the clearance further, if an interference fit is not used.

In order to maximize the performance of high capacity belt drives using plain bore style sprockets, the following for recommendations presented in Table 8 should be followed:

Class 1 Clearance Fits should be used when the transmitted load is smooth in nature. Interference Fits should be used for Poly Chain GT Carbon curvilinear drives transmitting cyclical, pulsating, or reversing loads.

Table 8 - Recommended Shaft / Bore Fits (Inches)

Nominal Bore Range Over - To (Incl.)	Shaft Tol. (minus)	Clearance Fits Class 1- Smooth Load		Interference Fits Cyclical, Pulsating, Reversing Load			
		Bore Tol. (Plus)	Fit Tol. (Plus)	Bore Range (Minus) Tolerance		Fit Tolerance Range (Minus)	
0.4375 - 0.5626	0.0005	0.0010	0.0015	0.0005	0.0010	0.0000	0.0010
0.5625 - 0.8750	0.0005	0.0010	0.0015	0.0005	0.0010	0.0000	0.0010
0.8750 - 1.2500	0.0005	0.0010	0.0015	0.0005	0.0010	0.0000	0.0010
1.2500 - 1.3750	0.0005	0.0010	0.0015	0.0005	0.0010	0.0000	0.0010
1.3750 - 1.500	0.0005	0.0010	0.0015	0.0005	0.0010	0.0000	0.0010
1.5000 - 1.7500	0.0010	0.0010	0.0020	0.0010	0.0020	0.0000	0.0020
1.7500 - 2.0000	0.0010	0.0010	0.0020	0.0010	0.0020	0.0000	0.0020
2.0000 - 2.2500	0.0010	0.0015	0.0025	0.0010	0.0020	0.0000	0.0020
2.2500 - 2.7500	0.0010	0.0015	0.0025	0.0010	0.0020	0.0000	0.0020
2.7500 - 3.0000	0.0010	0.0015	0.0025	0.0010	0.0020	0.0000	0.0020
3.0000 - 3.2500	0.0010	0.0015	0.0025	0.0015	0.0030	0.0005	0.0030
3.2500 - 3.7500	0.0010	0.0015	0.0025	0.0015	0.0030	0.0005	0.0030
3.7500 - 4.0000	0.0010	0.0015	0.0025	0.0015	0.0030	0.0005	0.0030
4.0000 - 4.5000	0.0010	0.0015	0.0025	0.0020	0.0035	0.0010	0.0035
4.5000 - 5.0000	0.0010	0.0015	0.0025	0.0020	0.0035	0.0010	0.0035
5.0000 - 5.5000	0.0010	0.0015	0.0025	0.0025	0.0040	0.0015	0.0040
5.5000 - 6.5000	0.0010	0.0015	0.0025	0.0025	0.0040	0.0015	0.0040

Table 8 was extracted in part from AGMA Standard for Bores and Keyways for Flexible Couplings (Inch Series) AGMA 9002-A86 Table.

4. DO NOT chuck or center the sprocket on guide flanges. Soft jaws should be used when chucking on the sprocket teeth. Center (indicate) the sprocket using the sprocket tooth O.D. If chucked on the Rim I.D. or Hub O.D., the sprocket should be centered with respect to the sprocket tooth O.D. Guide flanges are permanently mounted and should not be removed. If original flanges must be removed, they should be replaced with NEW flanges. New guide flanges should be attached securely with care using mechanical fasteners such as screws. Note: Improper guide flange reassembly may cause serious personal injury and/or mechanical damage.

5. Set screw holes in the sprocket hub must be placed properly for maximum holding strength. For both standard and shallow keyseats, two (2) set screws should be used as illustrated in Figure 2. The total holding strength of the set screws is dependent upon their placement and design. Generally, one screw should be placed directly over the keyway, and the other screw at ninety degrees (90°) from the keyway, or at sixty-five degrees (65°) from the keyway – a more recent practice that improves holding power. Sometimes four set screws (or two pair) are used for increased holding strength.
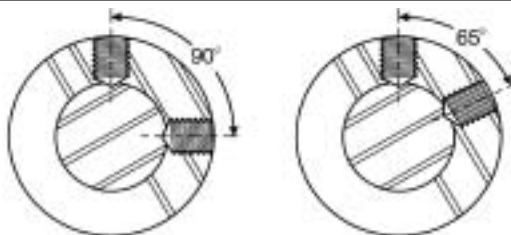
Figure 2 — Set Screw Angles

Each set screw should be placed axially – a minimum of one set screw diameter from the end of the sprocket hub extension. See Figure 1. For recommended set screw tightening torque values see Table 9.

6. After reboring, the sprocket may require rebalancing. Vibration, noise, reduced bearing life, and undue stresses on the mechanical components in the system could result if improper rebalancing practices are used. See Sprocket Specifications, page 76, for recommended sprocket balancing specifications.

Table 9 — Recommended Tightening Torque Values For Set Screws

Set Screw Size	Hex Key Size (in)	Approximate Installation Torque Values (lb-in)
1/4	1/8	80
5/16	5/32	160
3/8	3/16	275
7/16	7/32	430
1/2	1/4	615
5/8	5/16	1315
3/4	3/8	2150
7/8	1/2	5130

7. Standard square or rectangular keys should be used. See page 88 and 89 for standard key dimensions.

Specifications and tolerances for sprocket eccentricity, parallelism, and balancing, etc. are all presented on page 76.

Stock Bushings for Sprockets

Section A-A
1008 thru 3020

Section A-A
3525 thru 5040

Section A-A
6050

7060
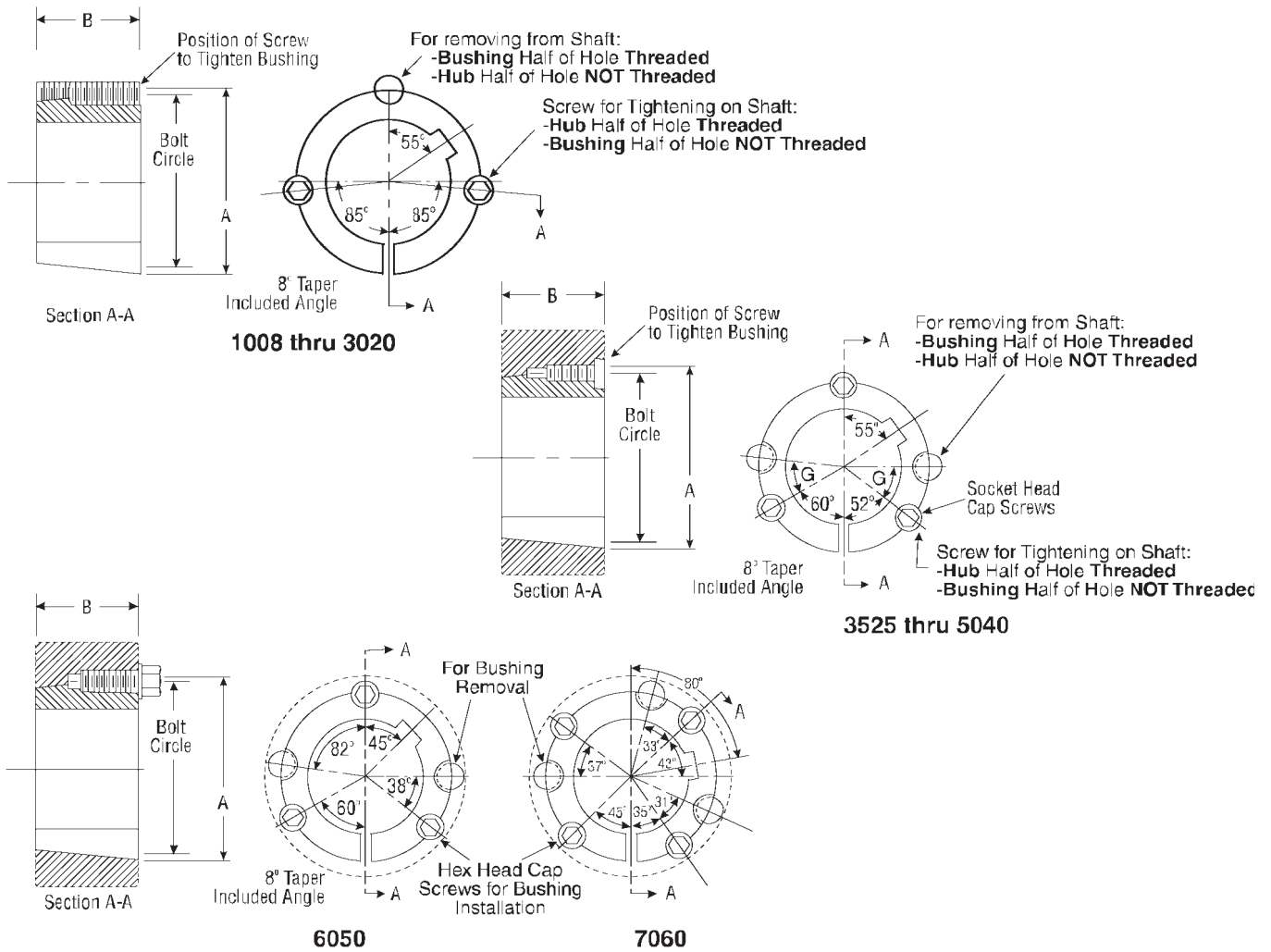
Bushing Size	Torque Capacity (lb-in)	Dimensions		Bolt Circle (in)	Mounting Screws			Bore Range (in)			Weight Range	
								Min. Bore	Max Bore			
		A	B		Qty.	Size	G (deg)		Standard Keyseat***	Shallow Keyseat**	Max Bore	Min. Bore
1008	1,200	1.386	0.875	1.328	2	1/4x1/2	—	0.500	0.875	1.000	0.2	0.3
1108****	1,300	1.511	0.875	1.453	2	1/4x1/2	—	0.500	1.000	1.125	0.1	0.3
1210****	3,600	1.875	1.000	1.750	2	3/8x5/8	—	0.500	1.250	—	0.4	0.6
1610****	4,300	2.250	1.000	2.125	2	3/8x5/8	—	0.500	1.500	1.688	0.5	0.9
1615	4,300	2.25	1.500	2.125	2	3/8x5/8	—	0.500	1.500	1.688	0.6	1.3
2012****	7,150	2.750	1.250	2.625	2	7/16x7/8	—	0.500	1.875	2.125	0.9	1.7
2517	11,600	3.375	1.750	3.250	2	1/2x1	—	0.500	2.250	2.688	1.8	3.7
3020	24,000	4.250	2.000	4.000	2	5/8x1 1/4	—	0.875	2.750	3.250	3.3	6.5
3525	44,800	5.000	2.500	4.830	3	1/2x1 1/2	39	1.188	3.250	3.938	3.7	10.9
3535	44,800	5.000	3.500	4.830	3	1/2x1 1/2	39	1.188	3.250	3.938	5.0	14.8
4030	77,300	5.750	3.000	5.540	3	5/8x1 3/4	40	1.438	3.625	4.438	6.4	17.3
4040	77,300	5.750	4.000	5.540	3	5/8x1 3/4	40	1.438	3.625	4.438	8.2	22.1
4535	110,000	6.375	3.500	6.130	3	3/4x2	40	1.938	4.250	4.938	8.8	23.7
4545	110,000	6.375	4.500	6.130	3	3/4x2	40	1.938	4.250	4.938	11.2	30.3
5040	126,000	7.000	4.000	6.720	3	7/8x2 1/4	37	2.438	4.500	5.000	15.9	31.5
6050	282,000	9.250	5.000	9.000	3	1 1/4x 3 1/2	—	4.438	6.000	—	45.0	57.0
7060	416,000	10.250	6.000	10.000	4	1 1/4x31/2	—	4.938	7.000	—	66.0	87.0

*Taper-Lock® is a trademark of Reliance Electric
**Key is furnished with each bushing having a shallow keyseat.
***Keys are not furnished with bushings having standard keyseats.
****1108, 1210, 1610, 2012 bushings are also available in stainless steel.

Bushing Bore and Keyseat Information

Taper-Lock® Bushings are available from stock with all popular bores within the bore range of each size bushing.

The Taper-Lock Keyseat Dimension charts below list the bore range for each bushing and the appropriate keyseat dimensions.

Where standard keyseats are indicated, refer to the Standard Keyseat Dimensions chart. Where bores do not permit standard depth keyseats, a flat key of the proper dimension is furnished with the bushing.

Taper-Lock Bushing Keyseat Dimensions

Bushing	Bores (in)	Keyseat
1008	0.500 - 0.875	Standard
	0.938 - 1.000	1/4 x 1/16
1108	0.500 - 1.000	Standard
	1.062 - 1.125	1/4 x 1/16
1210	0.500 - 1.250	Standard
1610	0.500 - 1.500	Standard
	1.563 - 1.688	3/8 x 1/8
1615	0.500 - 1.500	Standard
	1.563 - 1.688	3/8 x 1/8
2012	0.500 - 1.875	Standard
	1.938 - 2.125	1/2 x 3/16
2517	0.500 - 2.250	Standard
	2.313 - 2.688	5/8 x 3/16
3020	0.875 - 2.750	Standard
	2.813 - 3.000	3/4 x 1/8
	3.125 - 3.250	3/4 x 1/4
3525	1.188 - 3.250	Standard
	3.313	7/8 x 1/8
	3.375 - 3.500	7/8 x 3/16
	3.625	7/8 x 1/4
	3.688 - 3.750	7/8 x 3/16
	3.875 - 3.938	1 x 1/4
3535	1.188 - 3.250	Standard
	3.313	7/8 x 1/8
	3.375 - 3.500	7/8 x 3/16
	3.625	7/8 x 1/4
	3.688 - 3.750	7/8 x 3/16
	3.875 - 3.938	1 x 1/4
4030	1.438 - 3.625	Standard
	3.688 - 3.750	7/8 x 3/16
	3.875 - 4.438	1 x 1/4
4040	1.438 - 3.625	Standard
	3.688 - 3.750	7/8 x 3/16
	3.875 - 4.438	1 x 1/4
4535	1.938 - 4.250	Standard
	4.375 - 4.500	1 x 1/4
	4.750 - 4.938	1 1/4 x 1/4
4545	1.938 - 4.250	Standard
	4.375 - 4.500	1 x 1/4
	4.750 - 4.938	1 1/4 x 1/4
5040	2.438 - 4.500	Standard
	4.875 - 5.000	1 1/4 x 7/16
6050	4.438 - 6.000	Standard
7060	4.938 - 7.000	Standard

Standard Keyseat Dimensions

Shaft Diameter (In)	Keyseat (in)		Key (in)	
	Width	Depth	Width	Depth
0.313 -0.438	3/32	3/64	3/32	3/32
0.500 -0.563	1/8	1/16	1/8	1/8
0.625 -0.875	3/16	3/32	3/16	3/16
0.938 -1.250	1/4	1/8	1/4	1/4
1.313 -1.375	5/16	5/32	5/16	5/16
1.438 -1.750	3/8	3/16	3/8	3/8
1.813 -2.250	1/2	1/4	1/2	1/2
2.313 -2.750	5/8	5/16	5/8	5/8
2.813 -3.250	3/4	3/8	3/4	3/4
3.313 -3.750	7/8	7/16	7/8	7/8
3.813 -4.500	1	1/2	1	1
4.563 -5.500	1 1/4	5/8	1 1/4	1 1/4
5.563 -6.500	1 1/2	3/4	1 1/2	1 1/2
6.563 -7.500	1 3/4	3/4	1 3/4	1 1/2
7.563 -9.000	2 3/4	2	1	1/2

*Taper-Lock® is a trademark of Reliance Electric

Gates Corporation

Bushing Bore and Keyseat Information

Specifying English and Metric Keyways

Dimensioning and specifying metric keys and keyways varies significantly from the English system. In the English system,it is the standard practice to dimension the keyway, while in the metric system it is common practice to specify the key size. In the English system, the keyway in the hub is dimensioned by the width and depth at the side, but in the metric system the keyway is dimensioned by the width and the depth measured from the radius of the shaft to the center of the keyway. One of the following methods should be used to specify keyways:

English:
W x T_1 Keyway

W x T Key

Metric:
W x T Key

W x h Keyway

Unless otherwise noted, the keyway in the shaft is assumed to be standard. Also, T_1 and T_2 are not necessarily equal. The metric system does not refer to keyseat or keyway dimensions as does the English system. Instead, dimensions are given for the key itself which is rectangular in shape, not square, as in the English system. The correct terminology when ordering metric bored bushings with millimeter key-ways will be either of the following:

      1. Specify "standard keyway"

      2. Customer to specify keysize (keyseat to be standard size in shaft)
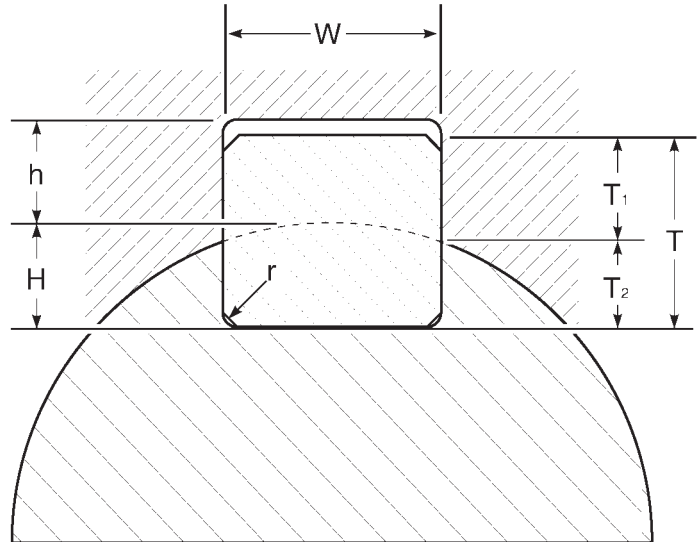
Metric Bore and Key Dimensions for Taper-Lock® Bushings

Bushing	Bore (mm)	Keyway (WxT) (mm)	Key Size (ref.) (mm)
1008	14,16, 18,19,20, 22, 24	5 X 2.3 6 X 2.8 8 X 3.3	5 X 5 6 X 6 8 X 7
1108	14*,16, 18,19,20, 22, 24, 25	5 X 2.3 6 X 2.8 8 X 3.3	5 X 5 6 X 6 8 X 7
1210	14, 16 18, 19, 20, 22*, 24, 25, 28, 30	5 X 2.3 6 X 2.8 8 X 3.3	5 X 5 6 X 6 8 X 7
1610	14*, 16* 18*,19, 20, 22 24, 25, 28, 30, 32, 35, 38, 40	5 X 2.3 6 X 2.8 8 X 3.3 10 X 3.3 12 X 3.3	5 X 5 6 X 6 8 X 7 10 X 8 12 X 8
2012	14,16 18,19, 20, 22 24, 25, 28, 30 32, 35, 38 40, 42 45, 48*	5 X 2.3 6 X 2.8 8 X 3.3 10 X 3.3 12 X 3.3 14 X 3.8	5 X 5 6 X 6 8 X 7 10 X 8 12 X 8 14 X 9
2517	14,16 18,19*,20,22 24,25,28,30 32,35,38 40,42 45,48,50 55, 60, 65*	5 X 2.3 6 X 2.8 8 X 3.3 10 X 3.3 12 X 3.3 14 X 3.8 16 X 4.3 18 X 4.4	5 X 5 6 X 6 8 X 7 10 X 8 12 X 8 14 X 9 16 X 10 18 X 11
3020	24,25,28,30* 24,25,28 40,42* 45,48,50 55 60, 65, 70*,75*	8 X 3.3 10 X 3.3 12 X 3.3 14 X 3.8 16 X 4.3 18 X 4.4 20 X 4.9	8 X 7 10 X 8 12 X 8 14 X 9 16 X 10 18 X 11 20 X 12

**Taper-Lock® is a trademark of Reliance Electric

*Non-stock, made to order bushing

Taper-Lock® Type Sprocket Installation and Removal

1008 to 3020   3525 to 6050   7060

To Install TAPER-LOCK Type Bushings

1. Clean the shaft, bore of bushing, outside of bushing and the sprocket hub bore of all oil, paint and dirt. File away any burrs. **Note:** The use of lubricants can cause sprocket breakage. USE NO LUBRICANTS IN THIS INSTALLATION.

2. Insert the bushing into the sprocket hub. Match the hole pattern, not threaded holes (each complete hole will be threaded on one side only).

3. LIGHTLY oil the set screws and thread them into those half-threaded holes indicated by on the diagram above. Note: Do not lubricate the bushing taper, hub taper, bushing bore, or the shaft. Doing so could result in sprocket breakage.

4. With the key in the shaft keyway, position the assembly onto the shaft allowing for small axial movement of the sprocket which will occur during the tightening process. **Note:** When mounting sprockets on a vertical shaft, precautions must be taken to positively prevent the sprocket and/or bushing from falling during installation.

5. Alternately torque the set screws until the sprocket and bushing tapers are completely seated together (at approximately half of the recommended torque; see table below). **Note:** Do not use worn hex key wrenches. Doing so may result in a loose assembly or may damage screws.

6. Check the alignment and sprocket axial runout (wobble), and correct as necessary.

7. Continue alternate tightening of the cap screws to the recommended torque values specified in the table below.

8. To increase the bushing gripping force, hammer the face of the bushing using a drift or sleeve (do not hit the bushing directly with the hammer).

9. Re-torque the bushing screws after hammering.

10. Recheck all screw torque values after the initial drive run-in, and periodically thereafter. Repeat steps 5 through 9 if loose.

To Remove

1. Loosen and remove all mounting screws.

2. Insert screws into all jack screw holes indicated by • (see figure above).

3. Loosen the bushing by alternately tightening the screws in small but equal increments until the tapered sprocket and bushing surfaces disengage.

Sprocket Installation

Bushing Style	Bolts		Torque Wrench	
	Qty.	Size	lb-ft	lb-in
1008	2	1/4-20 x 1/2	4.6	55
1108	2	1/4-20 x 1/2	4.6	55
1210	2	3/8-16 x 5/8	14.6	175
1610	2	3/8-16 x 5/8	14.6	175
1615	2	3/8-16 x 5/8	14.6	175
2012	2	7/16-14 x 7/8	23.3	280
2517	2	1/2-13 x 1	35.8	430
3020	2	5/8-11 x 1 1/4	66.7	800
3525	3	1/2-13 x 1 1/2	83.3	1000
3535	3	1/2-13 x 1 1/2	83.3	1000
4030	3	5/8-11 x 1 3/4	141.7	1700
4040	3	5/8-11 x 1 3/4	141.7	1700
4535	3	3/4-10 x 2	204.2	2450
4545	3	3/4-10 x 2	204.2	2450
5040	3	7/8-9 x 2 1/4	258.3	3100
6050	3	1 1/4-7 x 3 1/2	651.7	7820
7060	4	1 1/4-7 x 3 1/2	651.7	7820

Caution:Excessive bolt torque can cause sprocket and/or bushing breakage.
Note:To insure proper bushing/sprocket performance, full bushing contact on the shaft is recommended.

*Taper-Lock® is a trademark of Reliance Electric

Belt Drive Tensioners
(Double Adjustable)
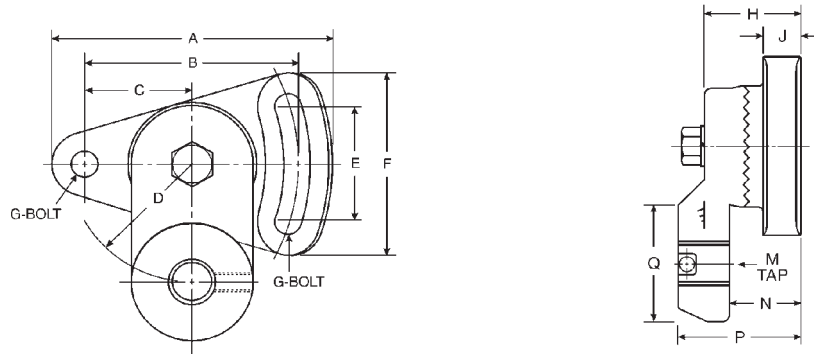
Idler Bracket Specifications

Part No.	Tensioner Part No.	Use With	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	H (in)	J (in)	M (Threads)	N (in)	P (in)	Q (in)	Weight (lb)
05-IDL-BRAK	7720-1005	1610-IDL-BUSH	4.62	3.50	1.75	2.00	2.06	3.06	0.38	1.63	0.62	5/8-18	1.16	2.01	2.00	2.80
10-IDL-BRAK	7720-1010	8mm Pitch Idler Sprockets, 2012-IDL-BUSH, 2517-IDL-BUSH, 20-IDL-BUSH (SK),	4.63	3.50	1.75	2.00	2.06	3.06	0.38	1.50	0.56	3/4-16	1.00	1.88	1.75	3.4
20-IDL-BRAK	7720-1020	14mm Pitch Idler Sprockets, 30-IDL-BUSH (SF), 40-IDL-BUSH (E)	6.94	5.25	2.63	5.00	3.00	4.56	0.63	2.38	1.00	1-14	1.63	2.94	2.75	11.2

Nickel Plated Idler Bracket Specifications

Part No.	Tensioner Part No.	Use With	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	H (in)	J (in)	M (Threads)	N (in)	P (in)	Q (in)	Weight (lb)
NP-10-IDL-BRAK	7720-1011	8mm Pitch Idler Sprockets, 2012-IDL-BUSH 2517-IDL-BUSH, 20-IDL-BUSH (SK)	4.63	3.50	1.75	2.00	2.06	3.06	0.38	1.50	0.56	3/4-16	1.00	1.88	1.75	3.4
NP-20-IDL-BRAK	7720-1061	14mm Pitch Idler Sprockets, 30-IDL-BUSH (SF), 40-IDL-BUSH (E)	6.94	5.25	2.63	5.00	3.00	4.56	0.63	2.38	1.00	1-14	1.63	2.94	2.75	11.2

Idler Sprockets
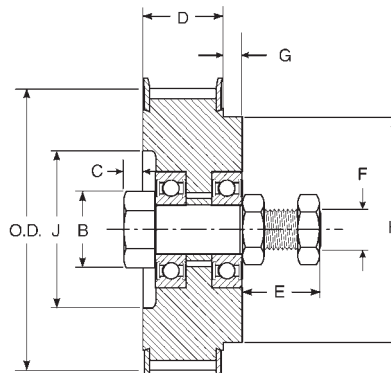
Poly Chain® GT2 Idler Dimensions

Part No.	Product No.	Use With	Size Designation	Belt Width (mm)	No. of Teeth	O.D. (in)	B Ref. (in)	C (in)	D (in)	E Ref. (in)	F (Threads) (in)	G Ref. (in)	H (in)	J (in)	Weight (lb)
12-IDL-SPRK	7720-1500	8mm Pitch Poly Chain GT Carbon	8MX-32S-12	12	32	3.145	1.25	0.50	0.85	1.56	3/4-16	0.94	2.75	-	1.0
21-IDL-SPRK	7720-1510		8MX-32S-21	21	32	3.145	1.25	0.50	1.24	1.56	3/4-16	0.56	2.75	-	1.1
36-IDL-SPRK	7720-1520		8MX-36S-36	36	36	3.546	1.91	0.75	1.86	1.63	3/4-16	-	-	-	2.0
62-IDL-SPRK	7720-1530		8MX-36S-62	62	36	3.546	1.91	0.75	2.91	1.69	3/4-16	0.69	3.13	-	2.1
20-IDL-SPRK	7720-1600	14mm Pitch Poly Chain GT Carbon	14MX-30S-20	20	30	5.153	2.55	1.00	1.36	2.25	1-14	1.00	4.38	-	9.0
37-IDL-SPRK	7720-1610		14MX-30S-37	37	30	5.153	2.55	1.00	2.06	2.25	1-14	0.25	4.38	-	12.0
68-IDL-SPRK	7720-1620		14MX-34S-68	68	34	5.855	3.38	0.56	3.33	2.25	1-14	1.00	4.88	4.34	15.6
90-IDL-SPRK	7720-1640		14MX-34S-90	90	34	5.855	3.38	0.31	4.20	2.25	1-14	1.00	4.88	4.34	16.7
125-IDL-SPRK	7720-1630		14MX-34S-125	125	34	5.855	3.38	0.19	5.63	2.25	1-14	1.09	4.88	4.34	23.1

Nickel Plated Poly Chain GT2 Idler Dimensions

Part No.	Product No.	Use With	Size Designation	Belt Width (mm)	No. of Teeth	O.D. (in)	B Ref. (in)	C (in)	D (in)	E Ref. (in)	F (Threads) (in)	G Ref. (in)	H (in)	J (in)	Weight (lb)
NP-12-IDL-SPRK	7720-1501	8mm Pitch Poly Chain GT Carbon	8MX-32S-12	12	32	3.145	1.25	0.50	0.85	1.56	3/4-16	0.94	2.75	-	1.0
NP-21-IDL-SPRK	7720-1511		8MX-32S-21	21	32	3.145	1.25	0.50	1.24	1.56	3/4-16	0.56	2.75	-	1.1

Belt Drive Tensioners

Idler Bushings
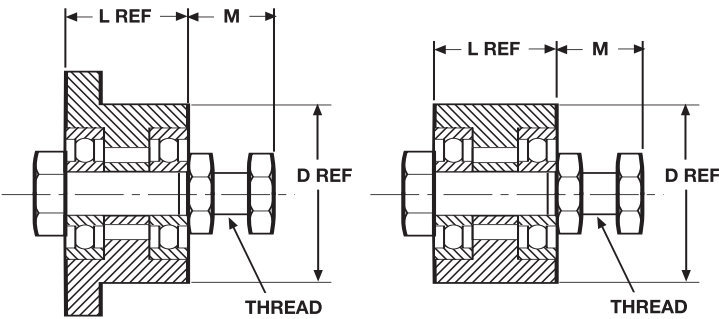
Idler Bushings (Integral Shaft Included)

Product No.	Part No.	Use with Bracket	D (in)	L (in)	M (in)	Threads	Weight (lb)
7720-2610	1610-IDL-BUSH	05-IDL-BRAK	2.25	1.00	1.38	5/8-18	1.30
7720-2012	2012-IDL-BUSH	10-IDL-BRAK	2.75	1.25	1.56	3/4-16	2.30
7720-2517	2517-IDL-BUSH	10-IDL-BRAK	3.38	1.75	1.56	3/4-16	3.90
7720-1120	20-IDL-BUSH	(SK)10-IDL-BRAK	2.81	1.94	1.44	3/4-16	4.10
7720-1130	30-IDL-BUSH	(SF)20-IDL-BRAK	3.13	2.08	2.13	1-14	6.40
7720-1140	40-IDL-BUSH	(E)20-IDL-BRAK	3.83	2.75	2.19	1-14	8.60

Gates Corporation

Poly Chain® GT®2 Sprocket Diameter Table

8mm Pitch Sprocket Diameters

No. of Grooves	PD (mm/in)	OD (mm/in)	No. of Grooves	PD (mm/in)	OD (mm/in)	No. of Grooves	PD (mm/in)	OD (mm/in)	No. of Grooves	PD (mm/in)	OD (mm/in)	No. of Grooves	PD (mm/in)	OD (mm/in)
22	56.02 / 2.206	54.42 / 2.143	51	129.87 / 5.113	128.27 / 5.050	80	203.72 / 8.020	202.12 / 7.957	109	277.57 / 10.928	275.97 / 10.865	138	351.41 / 13.835	349.81 / 13.772
23	58.57 / 2.306	56.97 / 2.243	52	132.42 / 5.213	130.82 / 5.150	81	206.26 / 8.121	204.66 / 8.058	110	280.11 / 11.028	278.51 / 10.965	139	353.96 / 13.935	352.36 / 13.872
24	61.12 / 2.406	59.52 / 2.343	53	134.96 / 5.314	133.36 / 5.251	82	208.81 / 8.221	207.21 / 8.158	111	282.66 / 11.128	281.06 / 11.065	140	356.51 / 14.036	354.91 / 13.973
25	63.66 / 2.506	62.06 / 2.443	54	137.51 / 5.414	135.91 / 5.351	83	211.36 / 8.321	209.76 / 8.258	112	285.21 / 11.229	283.61 / 11.166	141	359.05 / 14.136	357.45 / 14.073
26	66.21 / 2.607	64.61 / 2.544	55	140.06 / 5.514	138.46 / 5.451	84	213.90 / 8.421	212.30 / 8.358	113	287.75 / 11.329	286.15 / 11.266	142	361.60 / 14.236	360.00 / 14.173
27	68.75 / 2.707	67.15 / 2.644	56	142.60 / 5.614	141.00 / 5.551	85	216.45 / 8.522	214.85 / 8.459	114	290.30 / 11.429	288.70 / 11.366	143	364.15 / 14.336	362.55 / 14.273
28	71.30 / 2.807	69.70 / 2.744	57	145.15 / 5.715	143.55 / 5.652	86	219.00 / 8.622	217.40 / 8.559	115	292.85 / 11.529	291.25 / 11.466	144	366.69 / 14.437	365.09 / 14.374
29	73.85 / 2.907	72.25 / 2.844	58	147.70 / 5.815	146.10 / 5.752	87	221.54 / 8.722	219.94 / 8.659	116	295.39 / 11.630	293.79 / 11.567	145	369.24 / 14.537	367.64 / 14.474
30	76.39 / 3.008	74.79 / 2.945	59	150.24 / 5.915	148.64 / 5.852	88	224.09 / 8.822	222.49 / 8.759	117	297.94 / 11.730	296.34 / 11.667	146	371.79 / 14.637	370.19 / 14.574
31	78.94 / 3.108	77.34 / 3.045	60	152.79 / 6.015	151.19 / 5.952	89	226.64 / 8.923	225.04 / 8.860	118	300.48 / 11.830	298.88 / 11.767	147	374.33 / 14.737	372.73 / 14.674
32	81.49 / 3.208	79.89 / 3.145	61	155.34 / 6.116	153.74 / 6.053	90	229.18 / 9.023	227.58 / 8.960	119	303.03 / 11.930	301.43 / 11.867	148	376.88 / 14.838	375.28 / 14.775
33	84.03 / 3.308	82.43 / 3.245	62	157.88 / 6.216	156.28 / 6.153	91	231.73 / 9.123	230.13 / 9.060	120	305.58 / 12.031	303.98 / 11.968	149	379.43 / 14.938	377.83 / 14.875
34	86.58 / 3.409	84.98 / 3.346	63	160.43 / 6.316	158.83 / 6.253	92	234.28 / 9.223	232.68 / 9.160	121	308.12 / 12.131	306.52 / 12.068	150	381.97 / 15.038	380.37 / 14.975
35	89.13 / 3.509	87.53 / 3.446	64	162.97 / 6.416	161.37 / 6.353	93	236.82 / 9.324	235.22 / 9.261	122	310.67 / 12.231	309.07 / 12.168	151	384.52 / 15.139	382.92 / 15.076
36	91.67 / 3.609	90.07 / 3.546	65	165.52 / 6.517	163.92 / 6.454	94	239.37 / 9.424	237.77 / 9.361	123	313.22 / 12.331	311.62 / 12.268	152	387.06 / 15.239	385.46 / 15.176
37	94.22 / 3.709	92.62 / 3.646	66	168.07 / 6.617	166.47 / 6.554	95	241.92 / 9.524	240.32 / 9.461	124	315.76 / 12.432	314.16 / 12.369	153	389.61 / 15.339	388.0 / 15.276
38	96.77 / 3.810	95.17 / 3.747	67	170.61 / 6.717	169.01 / 6.654	96	244.46 / 9.624	242.86 / 9.561	125	318.31 / 12.532	316.71 / 12.469	154	392.16 / 15.439	390.56 / 15.376
39	99.31 / 3.910	97.71 / 3.847	68	173.16 / 6.817	171.56 / 6.754	97	247.01 / 9.725	245.41 / 9.662	126	320.86 / 12.632	319.26 / 12.569	155	394.70 / 15.540	393.10 / 15.477
40	101.86 / 4.010	100.26 / 3.947	69	175.71 / 6.918	174.11 / 6.855	98	249.55 / 9.825	247.95 / 9.762	127	323.40 / 12.732	321.80 / 12.669	156	397.25 / 15.640	395.65 / 15.577
41	104.41 / 4.110	102.81 / 4.047	70	178.25 / 7.018	176.65 / 6.955	99	252.10 / 9.925	250.50 / 9.862	128	325.95 / 12.833	324.35 / 12.770	157	399.80 / 15.740	398.20 / 15.677
42	106.95 / 4.211	105.35 / 4.148	71	180.80 / 7.118	179.20 / 7.055	100	254.65 / 10.026	253.05 / 9.963	129	328.50 / 12.933	326.90 / 12.870	158	402.34 / 15.840	400.74 / 15.777
43	109.50 / 4.311	107.90 / 4.248	72	183.35 / 7.218	181.75 / 7.155	101	257.19 / 10.126	255.59 / 10.063	130	331.04 / 13.033	329.44 / 12.970	159	404.89 / 15.941	403.29 / 15.878
44	112.05 / 4.411	110.45 / 4.348	73	185.89 / 7.319	184.29 / 7.256	102	259.74 / 10.226	258.14 / 10.163	131	333.59 / 13.133	331.99 / 13.070	160	407.44 / 16.041	405.84 / 15.978
45	114.59 / 4.511	112.99 / 4.448	74	188.44 / 7.419	186.84 / 7.356	103	262.29 / 10.326	260.69 / 10.263	132	336.14 / 13.234	334.54 / 13.171	161	409.98 / 16.141	408.38 / 16.078
46	117.14 / 4.612	115.54 / 4.549	75	190.99 / 7.519	189.39 / 7.456	104	264.83 / 10.427	263.23 / 10.364	133	338.68 / 13.334	337.08 / 13.271	162	412.53 / 16.241	410.93 / 16.178
47	119.68 / 4.712	118.08 / 4.649	76	193.53 / 7.619	191.93 / 7.556	105	267.38 / 10.527	265.78 / 10.464	134	341.23 / 13.434	339.63 / 13.371	163	415.08 / 16.342	413.48 / 16.279
48	122.23 / 4.812	120.63 / 4.749	77	196.08 / 7.720	194.48 / 7.657	106	269.93 / 10.627	268.33 / 10.564	135	343.77 / 13.534	342.17 / 13.471	164	417.62 / 16.442	416.02 / 16.379
49	124.78 / 4.912	123.18 / 4.849	78	198.63 / 7.820	197.03 / 7.757	107	272.47 / 10.727	270.87 / 10.664	136	346.32 / 13.635	344.72 / 13.572	165	420.17 / 16.542	418.57 / 16.479
50	127.32 / 5.013	125.72 / 4.950	79	201.17 / 7.920	199.57 / 7.857	108	275.02 / 10.828	273.42 / 10.765	137	348.87 / 13.735	347.27 / 13.672	166	422.72 / 16.642	421.12 / 16.579

* Dimensions are given in inches and millimeters. Inches are shown in black in bold face type.
Millimeters are shown in blue in light face type.
Stock sprockets are shown shaded.

The Driving Force in Power Transmission.

Poly Chain® GT®2 Sprocket Diameter Table

8mm Pitch Sprocket Diameters

No. of Grooves	PD (mm / in)	OD (mm / in)	No. of Grooves	PD (mm / in)	OD (mm / in)	No. of Grooves	PD (mm / in)	OD (mm / in)	No. of Grooves	PD (mm / in)	OD (mm / in)	No. of Grooves	PD (mm / in)	OD (mm / in)
167	425.26 / 16.743	454.22 / 16.680	179	455.82 / 17.946	454.22 / 17.883	191	486.38 / 19.149	484.78 / 19.086	203	516.94 / 20.352	515.34 / 20.289	215	547.49 / 21.555	545.89 / 21.492
168	427.81 / 16.843	426.21 / 16.780	180	458.37 / 18.046	456.77 / 17.983	192	488.92 / 19.249	487.32 / 19.186	204	519.48 / 20.452	517.88 / 20.389	216	550.04 / 21.655	548.44 / 21.592
169	430.35 / 16.943	428.75 / 16.880	181	460.91 / 18.146	459.31 / 18.083	193	491.47 / 19.349	489.87 / 19.286	205	522.03 / 20.552	520.43 / 20.489	217	552.59 / 21.755	550.99 / 21.692
170	432.90 / 17.043	431.30 / 16.980	182	463.46 / 18.246	461.86 / 18.183	194	494.02 / 19.449	492.42 / 19.386	206	524.57 / 20.653	522.97 / 20.590	218	555.13 / 21.856	553.53 / 21.793
171	435.45 / 17.144	433.85 / 17.081	183	466.01 / 18.347	464.41 / 18.284	195	496.56 / 19.550	494.96 / 19.487	207	527.12 / 20.753	525.52 / 20.690	219	557.68 / 21.956	556.08 / 21.893
172	437.99 / 17.244	436.39 / 17.181	184	468.55 / 18.447	466.95 / 18.384	196	499.11 / 19.650	497.51 / 19.587	208	529.67 / 20.853	528.07 / 20.790	220	560.23 / 22.056	558.63 / 21.993
173	440.54 / 17.344	438.94 / 17.281	185	471.10 / 18.547	469.50 / 18.484	197	501.66 / 19.750	500.06 / 19.687	209	532.21 / 20.953	530.61 / 20.890	221	562.77 / 22.156	561.17 / 22.093
174	443.09 / 17.444	441.49 / 17.381	186	473.65 / 18.647	472.05 / 18.584	198	504.20 / 19.851	502.60 / 19.788	210	534.76 / 21.054	533.16 / 20.991	222	565.32 / 22.257	563.72 / 22.194
175	445.63 / 17.545	444.03 / 17.482	187	476.19 / 18.748	474.59 / 18.685	199	506.75 / 19.951	505.15 / 19.888	211	537.31 / 21.154	535.71 / 21.091	223	567.86 / 22.357	566.26 / 22.294
176	448.18 / 17.645	446.58 / 17.582	188	478.74 / 18.848	477.14 / 18.785	200	509.30 / 20.051	507.70 / 19.988	212	539.85 / 21.254	538.25 / 21.191	224	570.41 / 22.457	568.81 / 22.394
177	450.73 / 17.745	449.13 / 17.682	189	481.28 / 18.948	479.68 / 18.885	201	511.84 / 20.151	510.24 / 20.088	213	542.40 / 21.354	540.80 / 21.291			
178	453.27 / 17.845	451.67 / 17.782	190	483.83 / 19.048	482.23 / 18.985	202	514.39 / 20.252	512.79 / 20.189	214	544.95 / 21.455	543.35 / 21.392			

14mm Pitch Sprocket Diameters

No. of Grooves	PD (mm / in)	OD (mm / in)	No. of Grooves	PD (mm / in)	OD (mm / in)	No. of Grooves	PD (mm / in)	OD (mm / in)	No. of Grooves	PD (mm / in)	OD (mm / in)	No. of Grooves	PD (mm / in)	OD (mm / in)
28	124.78 / 4.912	121.98 / 4.802	40	178.25 / 7.018	175.45 / 6.908	52	231.73 / 9.123	228.93 / 9.013	64	285.21 / 11.229	282.41 / 11.119	76	338.68 / 13.334	335.88 / 13.224
29	129.23 / 5.088	126.43 / 4.978	41	182.71 / 7.193	179.91 / 7.0831	53	236.19 / 9.299	233.39 / 9.189	65	289.66 / 11.404	286.86 / 11.294	77	343.14 / 13.509	340.34 / 13.399
30	133.69 / 5.263	130.89 / 5.153	42	187.17 / 7.369	184.371 / 7.259	54	240.64 / 9.474	237.84 / 9.364	66	294.12 / 11.579	291.32 / 11.469	78	347.59 / 13.685	344.79 / 13.575
31	138.15 / 5.439	135.35 / 5.329	43	191.62 / 7.544	188.82 / 7.434	55	245.10 / 9.650	242.30 / 9.540	67	298.57 / 11.755	295.77 / 11.645	79	352.05 / 13.860	349.25 / 13.750
32	142.60 / 5.614	139.80 / 5.504	44	196.08 / 7.720	193.28 / 7.610	56	249.55 / 9.825	246.75 / 9.715	68	303.03 / 11.930	300.23 / 11.820	80	356.51 / 14.036	353.71 / 13.926
33	147.06 / 5.790	144.26 / 5.680	45	200.54 / 7.895	197.74 / 7.785	57	254.01 / 10.000	251.21 / 9.890	69	307.49 / 12.106	304.69 / 11.996	81	360.96 / 14.211	358.16 / 14.101
34	151.52 / 5.965	148.72 / 5.855	46	204.99 / 8.071	202.19 / 7.961	58	258.47 / 10.176	255.67 / 10.066	70	311.94 / 12.281	309.14 / 12.171	82	365.42 / 14.387	362.62 / 14.277
35	155.97 / 6.141	153.17 / 6.031	47	209.45 / 8.246	206.65 / 8.136	59	262.92 / 10.351	260.12 / 10.241	71	316.40 / 12.457	313.60 / 12.347	83	369.88 / 14.562	367.08 / 14.452
35	160.43 / 6.316	157.63 / 6.206	48	213.90 / 8.421	211.10 / 8.311	60	267.38 / 10.527	264.58 / 10.417	72	320.86 / 12.632	318.06 / 12.522	84	374.33 / 14.737	371.53 / 14.627
37	164.88 / 6.492	162.08 / 6.382	49	218.36 / 8.597	215.56 / 8.487	61	271.84 / 10.702	269.04 / 10.592	73	325.31 / 12.808	322.51 / 12.698	85	378.79 / 14.913	375.99 / 14.803
38	169.34 / 6.667	166.54 / 6.557	50	222.82 / 8.772	220.02 / 8.662	62	276.29 / 10.878	273.49 / 10.768	74	329.77 / 12.983	326.97 / 12.873	86	383.25 / 15.088	380.45 / 14.978
39	173.80 / 6.842	171.00 / 6.732	51	227.27 / 8.948	224.47 / 8.838	63	280.75 / 11.053	277.95 / 10.943	75	334.23 / 13.158	331.43 / 13.048	87	387.70 / 15.264	384.90 / 15.154

* Dimensions are given in inches and millimeters. Inches are shown in black in bold face type.
Millimeters are shown in blue in light face type.
Stock sprockets are shown shaded.

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Poly Chain® GT®2 Sprocket Diameter Table

14mm Pitch Sprocket Diameters

No. of Grooves	PD (mm)	PD (in)	OD (mm)	OD (in)
88	392.16	15.439	389.36	15.329
89	396.61	15.615	393.81	15.505
90	401.07	15.790	398.27	15.680
91	405.53	15.966	402.73	15.856
92	409.98	16.141	407.18	16.031
93	414.44	16.317	411.64	16.207
94	418.90	16.492	416.10	16.382
95	423.35	16.667	420.55	16.557
96	427.81	16.843	425.01	16.733
97	432.26	17.018	429.46	16.908
98	436.72	17.194	433.92	17.084
99	441.18	17.369	438.38	17.259
100	445.63	17.545	442.83	17.435
101	450.09	17.720	447.29	17.610
102	454.55	17.896	451.75	17.786
103	459.00	18.071	456.20	17.961
104	463.46	18.246	460.66	18.136
105	467.92	18.422	465.12	18.312
106	472.37	18.597	469.57	18.487
107	476.83	18.773	474.03	18.663
108	481.28	18.948	478.48	18.838
109	485.74	19.124	482.94	19.014
110	490.20	19.299	487.40	19.189
111	494.65	19.475	491.85	19.365
112	499.11	19.650	496.31	19.540
113	503.57	19.825	500.77	19.715
114	508.02	20.001	505.22	19.891
115	512.48	20.176	509.68	20.066
116	516.94	20.352	514.14	20.242
117	521.39	20.527	518.59	20.417
118	525.85	20.703	523.05	20.593
119	530.30	25.791	527.50	25.681
120	534.76	21.054	531.96	20.944
121	539.22	21.229	536.42	21.119
122	543.67	21.404	540.87	21.294
123	548.13	21.580	545.33	21.470
124	552.59	21.755	549.79	21.645
125	557.04	21.931	554.24	21.821
126	561.50	22.106	558.70	21.996
127	565.95	22.282	563.15	22.172
128	570.41	22.457	567.61	22.347
129	574.87	22.633	572.07	22.523
130	579.32	22.808	576.52	22.698
131	583.78	22.983	580.98	22.873
132	588.24	23.159	585.44	23.049
133	592.69	23.334	589.89	23.224
134	597.15	23.510	594.35	23.400
135	601.61	7.018	598.81	6.955
136	606.06	23.861	603.26	23.751
137	610.52	24.036	607.72	23.926
138	614.97	24.212	612.17	24.102
139	619.43	24.387	616.63	24.277
140	623.89	24.562	621.09	24.452
141	628.34	24.738	625.54	24.628
142	632.80	24.913	630.00	24.803
143	637.26	25.089	634.46	24.979
144	641.71	25.264	638.91	25.154
145	646.17	25.440	643.37	25.330
146	650.63	25.615	647.83	25.505
147	655.08	30.703	652.28	30.593
148	659.54	25.966	656.74	25.856
149	663.99	26.142	661.19	26.032
150	668.45	26.317	665.65	26.207
151	672.91	26.492	670.11	26.382
152	677.36	26.668	674.56	26.558
153	681.82	26.843	679.02	26.733
154	686.28	27.019	683.48	26.909
155	690.73	27.194	687.93	27.084
156	695.19	27.370	692.39	27.260
157	699.65	27.545	696.85	27.435
158	704.10	27.721	701.30	27.611
159	708.56	27.896	705.76	27.786
160	713.01	28.071	710.21	27.961
161	717.47	28.247	714.67	28.137
162	721.93	28.422	719.13	28.312
163	726.38	28.598	723.58	28.488
164	730.84	28.773	728.04	28.663
165	735.30	28.949	732.50	28.839
166	739.75	29.124	736.95	29.014
167	744.21	29.300	741.41	29.190
168	748.66	29.475	745.86	29.365
169	753.12	29.650	750.32	29.540
170	757.58	29.826	754.78	29.716
171	762.03	30.001	759.23	29.891
172	766.49	30.177	763.69	30.067
173	770.95	30.352	768.15	30.242
174	775.40	30.528	772.60	30.418
175	779.86	35.616	777.06	35.506
176	784.32	30.879	781.52	30.769
177	788.77	31.054	785.97	30.944
178	793.23	31.229	790.43	31.119
179	797.68	31.405	794.88	31.295
180	802.14	31.580	799.34	31.470
181	806.60	31.756	803.80	31.646
182	811.05	31.931	808.25	31.821
183	815.51	32.107	812.71	31.997
184	819.97	32.282	817.17	32.172
185	824.42	32.458	821.62	32.348
186	828.88	32.633	826.08	32.523
187	833.34	32.808	830.54	32.698
188	837.79	32.984	834.99	32.874
189	842.25	33.159	839.45	33.049
190	846.70	33.335	843.90	33.225
191	851.16	33.510	848.36	33.400
192	855.62	33.686	852.82	33.576
193	860.07	33.861	857.27	33.751
194	864.53	34.037	861.73	33.927
195	868.99	34.212	866.19	34.102
196	873.44	34.387	870.64	34.277
197	877.90	34.563	875.10	34.453
198	882.36	34.738	879.56	34.628
199	886.81	34.914	884.01	34.804
200	891.27	35.089	888.47	34.979
201	895.72	35.265	892.92	35.155
202	900.18	35.440	897.38	35.330
203	904.64	35.616	901.84	35.506
204	909.09	35.791	906.29	35.681
205	913.55	35.967	910.75	35.857
206	918.01	36.142	915.21	36.032
207	922.46	36.317	919.66	36.207
208	926.92	36.493	924.12	36.383
209	931.37	36.668	928.57	36.558
210	935.83	36.844	933.03	36.734
211	940.29	37.019	937.49	36.909
212	944.74	37.195	941.94	37.085
213	949.20	37.370	946.40	37.260
214	953.66	37.546	950.86	37.436
215	958.11	37.721	955.31	37.611
216	962.57	37.896	959.77	37.786
217	967.03	38.072	964.23	37.962
218	971.48	38.247	968.68	38.137
219	975.94	38.423	973.14	38.313
220	980.39	38.598	977.59	38.488
221	984.85	38.774	982.05	38.664
222	989.31	38.949	986.51	38.839
223	993.76	39.125	990.96	39.015
224	998.22	39.300	995.42	39.190

* Dimensions are given in inches and millimeters. Inches are shown in black in bold face type.
Millimeters are shown in blue in light face type.
Stock sprockets are shown shaded.

Gates. The Driving Force in Power Transmission.

Long Length Belting

Introduction
Long Length synchronous belting is a cost effective, low maintenance drive alternative that is especially suited for linear movement and positioning applications. Long Length belting is available in a wide variety of belt pitches and constructions. Applications as diverse as automated door openers, product conveying systems, positioning devices, and office equipment are possible using the different pitches and constructions available.

Long Length Belting Designations
PolyChain® GT®2 long length belting is specified using width and pitch codes, a LL prefix, and omits the length code. For example, 8mm pitch PolyChain GT2 belting, 36mm wide, would be designated LL8MGT036.

Long Length Belting Product Listing
Standard Long Length belting is available in 8mm and 14mm pitch Poly Chain GT2; 2mm, 3mm, 5mm, and 8mm PowerGrip GT2; 3mm, 5mm, 8mm, and 14mm PowerGrip® HTD®; MXL, XL, L, and H PowerGrip® Timing; and T5, T10, AT5, and AT10 Synchro-Power Urethane. Available standard Poly Chain GT2 Long Length belting is listed below.

> Additional Urethane long length belting is also available.
> Refer to Industrial Power Transmission Systems
> Catalog #19993 for available sizes.

Poly Chain® GT®2 Long Length Belting

8mm—14mm Pitch			
Part No.	Product No.	Width (mm)	Net wt./ft (lb)
LL8MGT012	9305-1000	12	0.03
LL8MGT021	9305-1100	21	0.06
LL8MGT036	9305-1200	36	0.11
LL14MGT020	9305-1300	20	0.10
LL14MGT037	9305-1400	37	0.19

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Long Length Belting

Drive Selection
Due to the unique nature of long length applications, special drive design procedures must be followed. Rather than designing a drive based on a single load at a continuous speed, long length application designs typically consider acceleration/deceleration loads generated by the mass being moved and placed, as well as the orientation of the drive (vertical or horizontal). Maximum dynamic drive tensions are then compared to allowable working tensions (Ta) for proper belt width selection. Considering the drive design procedures unique to Long Length belting applications, it is suggested that designers contact Gates Power Transmission Product Application for a drive system analysis.

Belt Clamping Fixtures
Long length applications typically require that the ends of the belt be mechanically fastened to the component being positioned. A common means of attachment is to use a belt clamping fixture, which clamps the ends of the belt between a grooved plate and a flat top plate. Belt clamping fixtures can have a variety of configurations, depending on belt pitch, belt tooth profile, and system attachment requirements. Contact Gates Power Transmission Product Application for groove dimensions that are suitable for use with clamping fixtures. A minimum of six belt teeth should be engaged in the belt clamping fixture to achieve optimum performance. The plates shown have 8 complete belt teeth engaged. Grooved clamp plates should end on the center of the belt tooth tip. As shown below, mechanical fasteners should be placed beyond the belt's top width in order to maintain belt integrity.
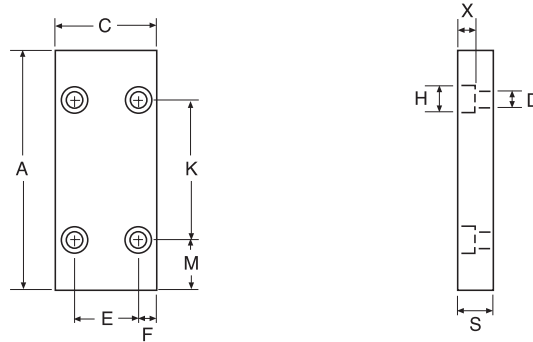
POLY CHAIN® GT®2 FLAT PLATES

Belt width (mm)	A (mm)	C (mm)	d (mm)	E (mm)	F (mm)	H (mm)	K (mm)	M (mm)	S (mm)	X (mm)	Weight (kg)	Part Number
PITCH: 8MGT												
12	72	42.5	9	22.5	10	15	40	16	16	8	0.13	CFP8MGT12
21	72	51.5	9	31.5	10	15	40	16	16	8	0.16	CFP8MGT21
36	72	67	9	47	10	15	40	16	16	8	0.20	CFP8MGT36
PITCH: 14MGT												
20	126	55.5	11	32.5	11.5	18	70	28	20	10	0.37	CFP14MGT20
37	126	73	11	50	11.5	18	70	28	20	10	0.49	CFP14MGT37

Note: Flat plates are 6061T6 aluminum.
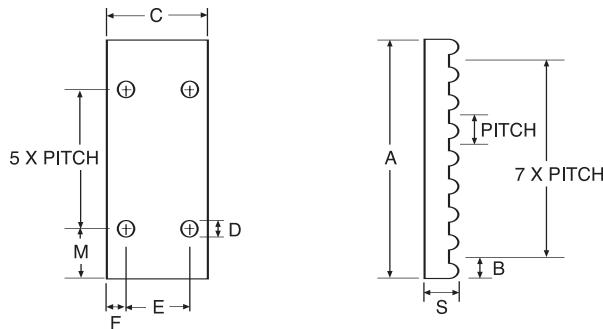
POLY CHAIN® GT®2 GROOVED PLATES

Belt width (mm)	A (mm)	B (mm)	C (mm)	d (mm)	E (mm)	F (mm)	M (mm)	S (mm)	Weight (kg)	Part Number
PITCH: 8MGT										
12	72	8	42.5	9	22.5	10	16	15	0.10	CGP8MGT12
21	72	8	51.5	9	31.5	10	16	15	0.13	CGP8MGT21
36	72	8	67	9	47	10	16	15	0.17	CGP8MGT36
PITCH: 14MGT										
20	126	14	55.5	11	32.5	11.5	28	22	0.34	CGP14MGT20
37	126	14	73	11	50	11.5	28	22	0.45	CGP14MGT37

Note: Grooved plates are 6061T6 aluminum.

Gates Short-Length Poly Chain® GT® Belt Drive Systems

For especially small and compact drive systems that demand utmost robustness, Poly Chain GT belts are available in a series of short lengths. These unique belts are available in 8mm pitch only, and in standard 12mm, 21mm, and 36mm widths.

Short-Length Poly Chain GT belts utilize the same construction as conventional Poly Chain GT belts, that have proven themselves over and over in industry since their introduction in 1986. Because of their unique manufacturing process, these short belts have a smooth back instead of the ribbed back used with conventional Poly Chain GT Carbon belts. They are also fully compatible with standard Poly Chain GT and Poly Chain GT2 sprockets.

Typical Applications

Short-Length Poly Chain GT belts should be considered in any application requiring heavy torque loads or rugged durability in a very compact area. Drives utilizing sprockets as small as 2.5" P.D. with a center distance of 3" are rated for loads in excess of 12 hp at 1800 rpm.

Live roller conveyers are a natural application for Short-Length Poly Chain GT belt drive systems. Live roller conveyers are used for controlled movement of a great variety of both regular and irregular shaped commodities, from light and fragile to heavy and rugged loading.

In the "Roll-to-Roll" conveying arrangement, two sprockets are attached to each roller, and individual loops of roller chain or belts connect pairs of rollers in a staggered pattern along the length of the conveyor. This design is ideal for handling heavy loads and for applications requiring frequent stopping or reversing service. Idler rollers without sprockets are sometimes inserted between the driven rollers. A typical "Roll-to-Roll" conveyer system is illustrated in the photo at left.

Positive driven live roller conveyors are better suited than V-belt or round belt driven units on applications where heat, dirt, oil, water and other contaminants are present.

Comparison To Roller Chain

Short-Length Poly Chain GT belts compete well on a width to width basis with roller chain on both low and high speed applications. The following chart compares 8mm Poly Chain GT with #40 and #50 roller chain.

Horsepower Rating Comparison

□ #40 Roller Chain – 16T sprocket	□ 8mm PCGT – 12mm – 25T Sprocket
■ #50 Roller Chain – 12T Sprocket	□ 8mm PCGT – 21mm – 25T Sprocket
□ #60 Roller Chain – 11T Sprocket	■ 8mm PCGT – 36mm – 25T Sprocket

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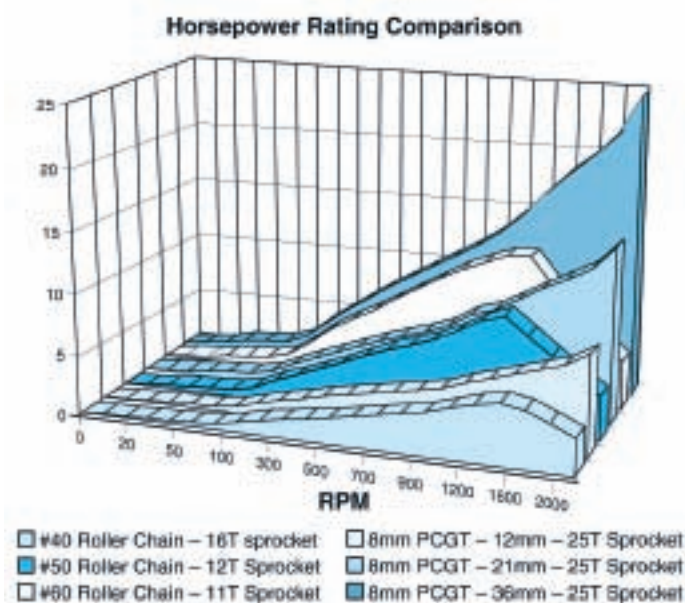
Short-Length 8mm Poly Chain® GT® Belt System Specifications

8mm Pitch Lengths

Designations	No. of Teeth	Length mm In
8M-352	44	352 13.858
8M-416	52	416 16.378
8M-456	57	456 17.953
8M-480	60	480 18.898
8M-544	68	544 21.417
8M-608	76	608 23.937

8mm Widths

12mm .47"	21mm .83"	36mm 1.42"

Dimensions are given in inches and millimeters. Inches are shown in black type. Millimeters are shown in blue type.

Gates Short-Length Poly Chain GT belts are designed to run in Gates Poly Chain GT2 sprockets. See the Sprocket Specification Tables on pages 66-68 for a listing of available sizes, pertinent dimensions, applicable bushing sizes, bore ranges, etc. See page 14 for an explanation for the sprocket code symbol used for Poly Chain GT2 sprockets. When designing Short-Length Poly Chain GT drives refer to either the Low Speed Drive Design Procedure (generally less than 500 rpm) on pages 2-10, or the High Speed Drive Design Procedure on pages 16-18, but substitute tables on pages 92-95 for belt length and center distance selections, and the tables on pages 96-98 for horsepower ratings.

Pitch (circular pitch)

Belt Pitch Line

Pitch Diameter

Outside Diameter

Sprocket Pitch Circle

8mm Pitch — Reference Dimensions

8mm (.315 in)

3.4mm (.134 in)

5.9mm (.232 in)

8mm Pitch Poly Chain® GT® Belts — Drive Selection Table

Number of Grooves (DriveR)	Pitch Diameter (Inches) (DriveR)	Number of Grooves (DriveN)	Pitch Diameter (Inches) (DriveN)	Speed Ratio	8M-352 P.L. 13.86 44 Teeth	8M-416 P.L. 16.38 52 Teeth	8M-456 P.L. 17.95 57 Teeth	8M-480 P.L. 18.90 60 Teeth	8M-544 P.L. 21.42 68 Teeth	8M-608 P.L. 23.94 76 Teeth	Speed Ratio	Number of Grooves (DriveR)	Number of Grooves (DriveN)
22	2.206	22	2.206	1.000	3.46	4.72	5.51	5.98	7.24	8.50	1.000	22	22
25	2.506	25	2.506	1.000	2.99	4.25	5.04	5.51	6.77	8.03	1.000	25	25
26	2.607	26	2.607	1.000		4.09	4.88	5.35	6.61	7.87	1.000	26	26
27	2.707	27	2.707	1.000		3.94	4.72	5.20	6.46	7.72	1.000	27	27
28	2.807	28	2.807	1.000		3.78	4.57	5.04	6.30	7.56	1.000	28	28
29	2.907	29	2.907	1.000		3.62	4.41	4.88	6.14	7.40	1.000	29	29
30	3.008	30	3.008	1.000			4.25	4.73	5.99	7.25	1.000	30	30
31	3.108	31	3.108	1.000			4.09	4.57	5.83	7.09	1.000	31	31
32	3.208	32	3.208	1.000			3.94	4.41	5.67	6.93	1.000	32	32
33	3.308	33	3.308	1.000				4.25	5.51	6.77	1.000	33	33
34	3.409	34	3.409	1.000				4.10	5.36	6.62	1.000	34	34
35	3.509	35	3.509	1.000					5.20	6.46	1.000	35	35
36	3.609	36	3.609	1.000					5.04	6.30	1.000	36	36
37	3.709	37	3.709	1.000					4.88	6.14	1.000	37	37
38	3.810	38	3.810	1.000					4.73	5.99	1.000	38	38
39	3.910	39	3.910	1.000					4.57	5.83	1.000	39	39
40	4.010	40	4.010	1.000						5.67	1.000	40	40
41	4.110	41	4.110	1.000						5.51	1.000	41	41
42	4.211	42	4.211	1.000						5.36	1.000	42	42
41	4.110	42	4.211	1.024						5.43	1.024	41	42
40	4.010	41	4.110	1.025						5.59	1.025	40	41
38	3.810	39	3.910	1.026					4.65	5.91	1.026	38	39
39	3.910	40	4.010	1.026					4.49	5.75	1.026	39	40
37	3.709	38	3.810	1.027					4.80	6.06	1.027	37	38
36	3.609	37	3.709	1.028					4.96	6.22	1.028	36	37
34	3.409	35	3.509	1.029				4.02	5.28	6.54	1.029	34	35
35	3.509	36	3.609	1.029					5.12	6.38	1.029	35	36
33	3.308	34	3.409	1.030				4.17	5.43	6.69	1.030	33	34
32	3.208	33	3.308	1.031			3.86	4.33	5.59	6.85	1.031	32	33
31	3.108	32	3.208	1.032			4.01	4.49	5.75	7.01	1.032	31	32
30	3.008	31	3.108	1.033			4.17	4.65	5.91	7.17	1.033	30	31
29	2.907	30	3.008	1.034		3.54	4.33	4.80	6.06	7.32	1.034	29	30
28	2.807	29	2.907	1.036		3.70	4.49	4.96	6.22	7.48	1.036	28	29
27	2.707	28	2.807	1.037		3.86	4.64	5.12	6.38	7.64	1.037	27	28
26	2.607	27	2.707	1.038		4.02	4.80	5.28	6.54	7.80	1.038	26	27
25	2.506	26	2.607	1.040		4.17	4.96	5.43	6.69	7.95	1.040	25	26
40	4.010	42	4.211	1.050						5.51	1.050	40	42
39	3.910	41	4.110	1.051						5.67	1.051	39	41
38	3.810	40	4.010	1.053					4.57	5.83	1.053	38	40
37	3.709	39	3.910	1.054					4.72	5.99	1.054	37	39
36	3.609	38	3.810	1.056					4.88	6.14	1.056	36	38
35	3.509	37	3.709	1.057					5.04	6.30	1.057	35	37
34	3.409	36	3.609	1.059					5.20	6.46	1.059	34	36
33	3.308	35	3.509	1.061				4.09	5.35	6.62	1.061	33	35
32	3.208	34	3.409	1.063				4.25	5.51	6.77	1.063	32	34
31	3.108	33	3.308	1.065			3.93	4.41	5.67	6.93	1.065	31	33
30	3.008	32	3.208	1.067			4.09	4.57	5.83	7.09	1.067	30	32
29	2.907	31	3.108	1.069			4.25	4.72	5.98	7.25	1.069	29	31
28	2.807	30	3.008	1.071		3.62	4.41	4.88	6.14	7.40	1.071	28	30
42	4.211	45	4.511	1.071						5.12	1.071	42	45
27	2.707	29	2.907	1.074		3.78	4.56	5.04	6.30	7.56	1.074	27	29
26	2.607	28	2.807	1.077		3.94	4.72	5.20	6.46	7.72	1.077	26	28
39	3.910	42	4.211	1.077						5.59	1.077	39	42
38	3.810	41	4.110	1.079					4.49	5.75	1.079	38	41
25	2.506	27	2.707	1.080		4.09	4.88	5.35	6.61	7.88	1.080	25	27
37	3.709	40	4.010	1.081					4.65	5.91	1.081	37	40
36	3.609	39	3.910	1.083					4.80	6.06	1.083	36	39
35	3.509	38	3.810	1.086					4.96	6.22	1.086	35	38
34	3.409	37	3.709	1.088					5.12	6.38	1.088	34	37
33	3.308	36	3.609	1.091				4.01	5.28	6.54	1.091	33	36
32	3.208	35	3.509	1.094				4.17	5.43	6.69	1.094	32	35
31	3.108	34	3.409	1.097			3.85	4.33	5.59	6.85	1.097	31	34
41	4.110	45	4.511	1.098					5.20		1.098	41	45
30	3.008	33	3.308	1.100			4.01	4.49	5.75	7.01	1.100	30	33
29	2.907	32	3.208	1.103			4.17	4.64	5.91	7.17	1.103	29	32
38	3.810	42	4.211	1.105						5.67	1.105	38	42
28	2.807	31	3.108	1.107		3.54	4.33	4.80	6.06	7.32	1.107	28	31
37	3.709	41	4.110	1.108					4.56	5.83	1.108	37	41
	Length Factor*				0.65	0.70	0.73	0.74	0.78	0.81		Length Factor*	

*This length factor must be used to determine the proper belt width.

8mm Pitch Poly Chain® GT® Belts — Drive Selection Table

Sprocket Combinations DriveR — Number of Grooves	DriveR — Pitch Diameter (Inches)	DriveN — Number of Grooves	DriveN — Pitch Diameter (Inches)	Speed Ratio	8M-352 P.L. 13.86 44 Teeth	8M-416 P.L. 16.38 52 Teeth	8M-456 P.L. 17.95 57 Teeth	8M-480 P.L. 18.90 60 Teeth	8M-544 P.L. 21.42 68 Teeth	8M-608 P.L. 23.94 76 Teeth	Speed Ratio	DriveR — Number of Grooves	DriveN — Number of Grooves
27	2.707	30	3.008	1.111		3.70	4.48	4.96	6.22	7.48	1.111	27	30
36	3.609	40	4.010	1.111					4.72	5.98	1.111	36	40
35	3.509	39	3.910	1.114					4.88	6.14	1.114	35	39
26	2.607	29	2.907	1.115		3.86	4.64	5.12	6.38	7.64	1.115	26	29
34	3.409	38	3.810	1.118					5.04	6.30	1.118	34	38
25	2.506	28	2.807	1.120		4.01	4.80	5.28	6.54	7.80	1.120	25	28
33	3.308	37	3.709	1.121					5.19	6.46	1.121	33	37
32	3.208	36	3.609	1.125				4.09	5.35	6.61	1.125	32	36
40	4.010	45	4.511	1.125						5.27	1.125	40	45
31	3.108	35	3.509	1.129				4.25	5.51	6.77	1.129	31	35
30	3.008	34	3.409	1.133			3.93	4.41	5.67	6.93	1.133	30	34
37	3.709	42	4.211	1.135					4.48	5.74	1.135	37	42
22	2.206	25	2.506	1.136	3.23	4.49	5.27	5.75	7.01	8.27	1.136	22	25
29	2.907	33	3.308	1.138			4.09	4.56	5.83	7.09	1.138	29	33
36	3.609	41	4.110	1.139					4.64	5.90	1.139	36	41
28	2.807	32	3.208	1.143			4.25	4.72	5.98	7.24	1.143	28	32
35	3.509	40	4.010	1.143					4.80	6.06	1.143	35	40
42	4.211	48	4.812	1.143						4.87	1.143	42	48
34	3.409	39	3.910	1.147					4.96	6.22	1.147	34	39
27	2.707	31	3.108	1.148		3.62	4.40	4.88	6.14	7.40	1.148	27	31
33	3.308	38	3.810	1.152					5.11	6.37	1.152	33	38
26	2.607	30	3.008	1.154		3.77	4.56	5.04	6.30	7.56	1.154	26	30
39	3.910	45	4.511	1.154						5.35	1.154	39	45
32	3.208	37	3.709	1.156				4.01	5.27	6.53	1.156	32	37
25	2.506	29	2.907	1.160		3.93	4.72	5.19	6.46	7.72	1.160	25	29
31	3.108	36	3.609	1.161				4.17	5.43	6.69	1.161	31	36
30	3.008	35	3.509	1.167			3.85	4.32	5.59	6.85	1.167	30	35
36	3.609	42	4.211	1.167					4.56	5.82	1.167	36	42
35	3.509	41	4.110	1.171					4.72	5.98	1.171	35	41
41	4.110	48	4.812	1.171						4.95	1.171	41	48
29	2.907	34	3.409	1.172			4.01	4.48	5.74	7.00	1.172	29	34
34	3.409	40	4.010	1.176					4.87	6.14	1.176	34	40
28	2.807	33	3.308	1.179			4.16	4.64	5.90	7.16	1.179	28	33
22	2.206	26	2.607	1.182	3.14	4.41	5.19	5.67	6.93	8.19	1.182	22	26
33	3.308	39	3.910	1.182					5.03	6.29	1.182	33	39
38	3.810	45	4.511	1.184						5.42	1.184	38	45
27	2.707	32	3.208	1.185		3.54	4.32	4.80	6.06	7.32	1.185	27	32
32	3.208	38	3.810	1.188					5.19	6.45	1.188	32	38
26	2.607	31	3.108	1.192		3.69	4.48	4.96	6.22	7.48	1.192	26	31
31	3.108	37	3.709	1.194				4.08	5.35	6.61	1.194	31	37
25	2.506	30	3.008	1.200		3.85	4.64	5.11	6.37	7.64	1.200	25	30
30	3.008	36	3.609	1.200				4.24	5.50	6.77	1.200	30	36
35	3.509	42	4.211	1.200					4.63	5.90	1.200	35	42
40	4.010	48	4.812	1.200						5.03	1.200	40	48
34	3.409	41	4.110	1.206					4.79	6.05	1.206	34	41
29	2.907	35	3.509	1.207			3.92	4.40	5.66	6.92	1.207	29	35
33	3.308	40	4.010	1.212					4.95	6.21	1.212	33	40
28	2.807	34	3.409	1.214			4.08	4.56	5.82	7.08	1.214	28	34
37	3.709	45	4.511	1.216						5.50	1.216	37	45
32	3.208	39	3.910	1.219					5.11	6.37	1.219	32	39
27	2.707	33	3.308	1.222			4.24	4.72	5.98	7.24	1.222	27	33
31	3.108	38	3.810	1.226				4.00	5.26	6.53	1.226	31	38
22	2.206	27	2.707	1.227	3.06	4.32	5.11	5.59	6.85	8.11	1.227	22	27
26	2.607	32	3.208	1.231		3.61	4.40	4.87	6.14	7.40	1.231	26	32
39	3.910	48	4.812	1.231						5.10	1.231	39	48
30	3.008	37	3.709	1.233				4.16	5.42	6.69	1.233	30	37
34	3.409	42	4.211	1.235					4.71	5.97	1.235	34	42
25	2.506	31	3.108	1.240		3.77	4.56	5.03	6.29	7.55	1.240	25	31
29	2.907	36	3.609	1.241			3.84	4.32	5.58	6.84	1.241	29	36
33	3.308	41	4.110	1.242					4.87	6.13	1.242	33	41
28	2.807	35	3.509	1.250			4.00	4.48	5.74	7.00	1.250	28	35
32	3.208	40	4.010	1.250					5.02	6.29	1.250	32	40
36	3.609	45	4.511	1.250					4.31	5.57	1.250	36	45
40	4.010	50	5.013	1.250						4.86	1.250	40	50
31	3.108	39	3.910	1.258					5.18	6.45	1.258	31	39
27	2.707	34	3.409	1.259			4.16	4.63	5.90	7.16	1.259	27	34
38	3.810	48	4.812	1.263						5.17	1.263	38	48
30	3.008	38	3.810	1.267				4.08	5.34	6.60	1.267	30	38
26	2.607	33	3.308	1.269		3.53	4.32		6.05	7.32	1.269	26	33
Length Factor*					0.65	0.70	0.73	0.74	0.78	0.81	Length Factor*		

Sprocket Combinations DriveR Number of Grooves	DriveR Pitch Diameter (Inches)	DriveN Number of Grooves	DriveN Pitch Diameter (Inches)	Speed Ratio	8M-352 P.L.13.86 44 Teeth	8M-416 P.L.16.38 52 Teeth	8M-456 P.L.17.95 57 Teeth	8M-480 P.L.18.90 60 Teeth	8M-544 P.L.21.42 68 Teeth	8M-608 P.L.23.94 76 Teeth	Speed Ratio	Sprocket Combinations DriveR Number of Grooves	DriveN Number of Grooves
22	2.206	28	2.807	1.273		4.24	5.03	5.50	6.77	8.03	1.273	22	28
33	3.308	42	4.211	1.273					4.78	6.05	1.273	33	42
29	2.907	37	3.709	1.276				4.23	5.50	6.76	1.276	29	37
25	2.506	32	3.208	1.280		3.69	4.47	4.95	6.21	7.47	1.280	25	32
32	3.208	41	4.110	1.281					4.94	6.21	1.281	32	41
39	3.910	50	5.013	1.282						4.93	1.282	39	50
28	2.807	36	3.609	1.286			3.92	4.39	5.66	6.92	1.286	28	36
35	3.509	45	4.511	1.286					4.38	5.65	1.286	35	45
31	3.108	40	4.010	1.290					5.10	6.36	1.290	31	40
27	2.707	35	3.509	1.296			4.07	4.55	5.81	7.08	1.296	27	35
37	3.709	48	4.812	1.297						5.25	1.297	37	48
30	3.008	39	3.910	1.300				3.99	5.26	6.52	1.300	30	39
26	2.607	34	3.409	1.308			4.23	4.71	5.97	7.23	1.308	26	34
29	2.907	38	3.810	1.310				4.15	5.42	6.68	1.310	29	38
32	3.208	42	4.211	1.313					4.86	6.12	1.313	32	42
38	3.810	50	5.013	1.316						5.00	1.316	38	50
22	2.206	29	2.907	1.318		4.16	4.95	5.42	6.69	7.95	1.318	22	29
25	2.506	33	3.308	1.320		3.60	4.39	4.87	6.13	7.39	1.320	25	33
28	2.807	37	3.709	1.321			3.83	4.31	5.57	6.84	1.321	28	37
31	3.108	41	4.110	1.323					5.02	6.28	1.323	31	41
34	3.409	45	4.511	1.324					4.46	5.72	1.324	34	45
27	2.707	36	3.609	1.333			3.99	4.47	5.73	6.99	1.333	27	36
30	3.008	40	4.010	1.333					5.17	6.44	1.333	30	40
36	3.609	48	4.812	1.333						5.32	1.333	36	48
29	2.907	39	3.910	1.345				4.06	5.33	6.60	1.345	29	39
26	2.607	35	3.509	1.346			4.15	4.62	5.89	7.15	1.346	26	35
37	3.709	50	5.013	1.351						5.08	1.351	37	50
31	3.108	42	4.211	1.355					4.93	6.20	1.355	31	42
28	2.807	38	3.810	1.357				4.22	5.49	6.75	1.357	28	38
25	2.506	34	3.409	1.360		3.52	4.31	4.78	6.05	7.31	1.360	25	34
22	2.206	30	3.008	1.364		4.08	4.86	5.34	6.60	7.86	1.364	22	30
33	3.308	45	4.511	1.364					4.53	5.80	1.364	33	45
30	3.008	41	4.110	1.367					5.09	6.36	1.367	30	41
27	2.707	37	3.709	1.370			3.90	4.38	5.65	6.91	1.370	27	37
35	3.509	48	4.812	1.371						5.40	1.371	35	48
29	2.907	40	4.010	1.379				3.98	5.25	6.51	1.379	29	40
26	2.607	36	3.609	1.385			4.06	4.54	5.81	7.07	1.385	26	36
36	3.609	50	5.013	1.389						5.15	1.389	36	50
28	2.807	39	3.910	1.393				4.14	5.41	6.67	1.393	28	39
25	2.506	35	3.509	1.400			4.22	4.70	5.96	7.23	1.400	25	35
30	3.008	42	4.211	1.400					5.00	6.27	1.400	30	42
32	3.208	45	4.511	1.406					4.60	5.87	1.406	32	45
27	2.707	38	3.810	1.407			3.82	4.30	5.56	6.83	1.407	27	38
22	2.206	31	3.108	1.409		3.99	4.78	5.26	6.52	7.78	1.409	22	31
34	3.409	48	4.812	1.412						5.47	1.412	34	48
29	2.907	41	4.110	1.414					5.16	6.43	1.414	29	41
26	2.607	37	3.709	1.423			3.98	4.46	5.72	6.99	1.423	26	37
28	2.807	40	4.010	1.429				4.05	5.32	6.59	1.429	28	40
35	3.509	50	5.013	1.429						5.22	1.429	35	50
37	3.709	53	5.314	1.432						4.82	1.432	37	53
25	2.506	36	3.609	1.440			4.14	4.61	5.88	7.15	1.440	25	36
27	2.707	39	3.910	1.444				4.21	5.48	6.75	1.444	27	39
29	2.907	42	4.211	1.448					5.08	6.35	1.448	29	42
31	3.108	45	4.511	1.452					4.67	5.94	1.452	31	45
22	2.206	32	3.208	1.455		3.91	4.70	5.17	6.44	7.70	1.455	22	32
33	3.308	48	4.812	1.455						5.54	1.455	33	48
26	2.607	38	3.810	1.462			3.89	4.37	5.64	6.90	1.462	26	38
28	2.807	41	4.110	1.464				3.96	5.24	6.50	1.464	28	41
34	3.409	50	5.013	1.471						5.29	1.471	34	50
36	3.609	53	5.314	1.472						4.89	1.472	36	53
25	2.506	37	3.709	1.480			4.05	4.53	5.80	7.06	1.480	25	37
27	2.707	40	4.010	1.481				4.12	5.40	6.66	1.481	27	40
22	2.206	33	3.308	1.500		3.82	4.61	5.09	6.36	7.62	1.500	22	33
26	2.607	39	3.910	1.500			3.80	4.28	5.55	6.82	1.500	26	39
28	2.807	42	4.211	1.500					5.15	6.42	1.500	28	42
30	3.008	45	4.511	1.500					4.74	6.02	1.500	30	45
32	3.208	48	4.812	1.500					4.34	5.61	1.500	32	48
35	3.509	53	5.314	1.514						4.96	1.514	35	53
33	3.308	50	5.013	1.515						5.37	1.515	33	50
Length Factor*					0.65	0.70	0.73	0.74	0.78	0.81	Length Factor*		

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8mm Pitch Poly Chain® GT® Belts   Drive Selection Table

Sprocket Combinations DriveR — Number of Grooves	DriveR — Pitch Diameter (Inches)	Sprocket Combinations DriveN — Number of Grooves	DriveN — Pitch Diameter (Inches)	Speed Ratio	8M-352 P.L.13.86 44 Teeth	8M-416 P.L.16.38 52 Teeth	8M-456 P.L.17.95 57 Teeth	8M-480 P.L.18.90 60 Teeth	8M-544 P.L.21.42 68 Teeth	8M-608 P.L.23.94 76 Teeth	Speed Ratio	DriveR Number of Grooves	DriveN Number of Grooves
27	2.707	41	4.110	1.519				4.03	5.31	6.58	1.519	27	41
25	2.506	38	3.810	1.520			3.96	4.44	5.71	6.98	1.520	25	38
26	2.607	40	4.010	1.538				4.19	5.47	6.74	1.538	26	40
22	2.206	34	3.409	1.545		3.73	4.52	5.00	6.27	7.54	1.545	22	34
31	3.108	48	4.812	1.548					4.41	5.69	1.548	31	48
29	2.907	45	4.511	1.552					4.82	6.09	1.552	29	45
27	2.707	42	4.211	1.556				3.94	5.22	6.49	1.556	27	42
34	3.409	53	5.314	1.559						5.03	1.559	34	53
25	2.506	39	3.910	1.560			3.87	4.35	5.63	6.90	1.560	25	39
32	3.208	50	5.013	1.563						5.44	1.563	32	50
26	2.607	41	4.110	1.577				4.11	5.38	6.65	1.577	26	41
22	2.206	35	3.509	1.591		3.64	4.44	4.92	6.19	7.45	1.591	22	35
25	2.506	40	4.010	1.600			3.78	4.27	5.54	6.81	1.600	25	40
30	3.008	48	4.812	1.600					4.48	5.76	1.600	30	48
33	3.308	53	5.314	1.606						5.10	1.606	33	53
28	2.807	45	4.511	1.607					4.89	6.16	1.607	28	45
31	3.108	50	5.013	1.613						5.51	1.613	31	50
26	2.607	42	4.211	1.615				4.01	5.29	6.57	1.615	26	42
22	2.206	36	3.609	1.636		3.55	4.35	4.83	6.10	7.37	1.636	22	36
25	2.506	41	4.110	1.640				4.18	5.45	6.73	1.640	25	41
29	2.907	48	4.812	1.655					4.55	5.83	1.655	29	48
32	3.208	53	5.314	1.656						5.17	1.656	32	53
27	2.707	45	4.511	1.667					4.96	6.24	1.667	27	45
30	3.008	50	5.013	1.667					4.29	5.58	1.667	30	50
25	2.506	42	4.211	1.680				4.09	5.37	6.64	1.680	25	42
22	2.206	37	3.709	1.682		3.46	4.26	4.74	6.02	7.29	1.682	22	37
33	3.308	56	5.614	1.697						4.82	1.697	33	56
31	3.108	53	5.314	1.710						5.24	1.710	31	53
28	2.807	48	4.812	1.714					4.62	5.90	1.714	28	48
29	2.907	50	5.013	1.724					4.36	5.65	1.724	29	50
22	2.206	38	3.810	1.727			4.17	4.66	5.93	7.20	1.727	22	38
26	2.607	45	4.511	1.731					5.03	6.31	1.731	26	45
32	3.208	56	5.614	1.750						4.89	1.750	32	56
30	3.008	53	5.314	1.767						5.31	1.767	30	53
22	2.206	39	3.910	1.773			4.08	4.57	5.84	7.12	1.773	22	39
27	2.707	48	4.812	1.778					4.69	5.97	1.778	27	48
28	2.807	50	5.013	1.786					4.43	5.72	1.786	28	50
25	2.506	45	4.511	1.800				3.81	5.10	6.38	1.800	25	45
31	3.108	56	5.614	1.806						4.96	1.806	31	56
22	2.206	40	4.010	1.818			3.99	4.48	5.76	7.03	1.818	22	40
29	2.907	53	5.314	1.828						5.38	1.828	29	53
26	2.607	48	4.812	1.846					4.75	6.04	1.846	26	48
27	2.707	50	5.013	1.852					4.50	5.79	1.852	27	50
22	2.206	41	4.110	1.864			3.90	4.39	5.67	6.94	1.864	22	41
30	3.008	56	5.614	1.867						5.03	1.867	30	56
28	2.807	53	5.314	1.893						5.45	1.893	28	53
22	2.206	42	4.211	1.909			3.80	4.29	5.58	6.86	1.909	22	42
25	2.506	48	4.812	1.920					4.82	6.11	1.920	25	48
26	2.607	50	5.013	1.923					4.57	5.86	1.923	26	50
29	2.907	56	5.614	1.931						5.10	1.931	29	56
27	2.707	53	5.314	1.963						5.52	1.963	27	53
25	2.506	50	5.013	2.000					4.63	5.93	2.000	25	50
28	2.807	56	5.614	2.000						5.16	2.000	28	56
26	2.607	53	5.314	2.038					4.27	5.58	2.038	26	53
22	2.206	45	4.511	2.045				4.01	5.31	6.59	2.045	22	45
27	2.707	56	5.614	2.074						5.23	2.074	27	56
25	2.506	53	5.314	2.120					4.34	5.65	2.120	25	53
28	2.807	60	6.015	2.143						4.77	2.143	28	60
26	2.607	56	5.614	2.154						5.30	2.154	26	56
22	2.206	48	4.812	2.182					5.03	6.32	2.182	22	48
27	2.707	60	6.015	2.222						4.83	2.222	27	60
25	2.506	56	5.614	2.240						5.37	2.240	25	56
22	2.206	50	5.013	2.273					4.84	6.14	2.273	22	50
26	2.607	60	6.015	2.308						4.90	2.308	26	60
25	2.506	60	6.015	2.400						4.96	2.400	25	60
22	2.206	53	5.314	2.409					4.53	5.86	2.409	22	53
22	2.206	56	5.614	2.545					4.22	5.57	2.545	22	56
22	2.206	60	6.015	2.727						5.16	2.727	22	60
22	2.206	63	6.316	2.864						4.83	2.864	22	63
Length Factor*					0.65	0.70	0.73	0.74	0.78	0.81		Length Factor*	

Horsepower Rating for 12mm Wide
8mm Pitch Poly Chain® GT® Belts

RPM OF FASTER SHAFT	Rated Horsepower for Small Sprocket (Number of Grooves and Pitch Diameter, Inches)									
	22 / 2.206	25 / 2.506	26 / 2.607	27 / 2.707	28 / 2.807	29 / 2.907	30 / 3.008	31 / 3.108	32 / 3.208	33 / 3.308
870	3.14	3.68	4.21	4.55	4.90	5.24	5.58	5.9	6.2	6.6
1160	3.96	4.64	5.32	5.8	6.2	6.6	7.1	7.5	7.9	8.3
1750	5.47	6.4	7.4	8.0	8.6	9.2	9.8	10.4	11.0	11.6
3450	9.13	10.8	12.4	13.5	14.5	15.5	16.5	17.5	18.4	19.4
10	0.07	0.08	0.09	0.09	0.10	0.11	0.11	0.12	0.13	0.13
20	0.12	0.14	0.16	0.17	0.19	0.20	0.21	0.22	0.24	0.25
40	0.23	0.26	0.30	0.32	0.35	0.37	0.39	0.42	0.44	0.46
60	0.33	0.38	0.43	0.46	0.50	0.53	0.56	0.60	0.63	0.66
100	0.51	0.59	0.67	0.73	0.78	0.83	0.88	0.93	0.99	1.04
200	0.92	1.07	1.22	1.32	1.42	1.52	1.61	1.71	1.80	1.90
300	1.30	1.52	1.73	1.87	2.01	2.14	2.28	2.42	2.55	2.68
400	1.66	1.93	2.20	2.38	2.56	2.74	2.91	3.09	3.26	3.43
500	1.99	2.33	2.66	2.88	3.09	3.30	3.52	3.73	3.93	4.14
600	2.32	2.71	3.09	3.35	3.60	3.85	4.10	4.34	4.58	4.82
700	2.63	3.08	3.52	3.81	4.09	4.38	4.66	4.94	5.21	5.49
800	2.93	3.43	3.93	4.25	4.57	4.89	5.20	5.51	5.8	6.1
900	3.23	3.78	4.32	4.68	5.04	5.39	5.7	6.1	6.4	6.8
1000	3.51	4.12	4.71	5.10	5.49	5.9	6.3	6.6	7.0	7.4
1200	4.06	4.77	5.46	5.9	6.4	6.8	7.3	7.7	8.1	8.6
1400	4.59	5.39	6.2	6.7	7.2	7.7	8.2	8.7	9.2	9.7
1600	5.10	6.0	6.9	7.5	8.0	8.6	9.1	9.7	10.2	10.8
1800	5.59	6.6	7.6	8.2	8.8	9.4	10.0	10.6	11.2	11.8
2000	6.07	7.1	8.2	8.9	9.6	10.2	10.9	11.6	12.2	12.8
2400	6.97	8.2	9.4	10.2	11.0	11.8	12.6	13.3	14.1	14.8
2800	7.83	9.2	10.6	11.5	12.4	13.3	14.1	15.0	15.8	16.6
3200	8.64	10.2	11.7	12.7	13.7	14.7	15.6	16.5	17.4	18.3
3500	9.23	10.9	12.5	13.6	14.6	15.7	16.7	17.6	18.6	19.6
4000	10.2	12.0	13.8	15.0	16.1	17.2	18.3	19.4	20.4	21.5
4500	11.0	13.0	15.0	16.3	17.5	18.7	19.9	21.0	22.1	23.2
5000	11.8	14.0	16.1	17.5	18.8	20.0	21.3	22.5	23.6	24.8
5500	12.6	14.9	17.2	18.6	20.0	21.3	22.6	23.8	25.0	26.2

RPM OF FASTER SHAFT	Additional Horsepower per belt for Speed Ratio of Speed-Down Drives									
	1.00 to 1.04	1.05 to 1.11	1.12 to 1.19	1.20 to 1.30	1.31 to 1.45	1.46 to 1.65	1.66 to 1.99	2.00 to 2.63	2.64 to 4.47	4.48 and Over
870	0.00	0.04	0.08	0.12	0.16	0.20	0.25	0.29	0.33	0.37
1160	0.00	0.05	0.11	0.16	0.22	0.27	0.33	0.38	0.44	0.49
1750	0.00	0.08	0.16	0.25	0.33	0.41	0.49	0.58	0.66	0.74
3450	0.00	0.16	0.32	0.49	0.65	0.81	0.97	1.13	1.30	1.46
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
40	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02
60	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03
100	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04
200	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.08
300	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.13
400	0.00	0.02	0.04	0.06	0.08	0.09	0.11	0.13	0.15	0.17
500	0.00	0.02	0.05	0.07	0.09	0.12	0.14	0.16	0.19	0.21
600	0.00	0.03	0.06	0.08	0.11	0.14	0.17	0.20	0.23	0.25
700	0.00	0.03	0.07	0.10	0.13	0.16	0.20	0.23	0.26	0.30
800	0.00	0.04	0.08	0.11	0.15	0.19	0.23	0.26	0.30	0.34
900	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.30	0.34	0.38
1000	0.00	0.05	0.09	0.14	0.19	0.23	0.28	0.33	0.38	0.42
1200	0.00	0.06	0.11	0.17	0.23	0.28	0.34	0.39	0.45	0.51
1400	0.00	0.07	0.13	0.20	0.26	0.33	0.39	0.46	0.53	0.59
1600	0.00	0.08	0.15	0.23	0.30	0.38	0.45	0.53	0.60	0.68
1800	0.00	0.08	0.17	0.25	0.34	0.42	0.51	0.59	0.68	0.76
2000	0.00	0.09	0.19	0.28	0.38	0.47	0.56	0.66	0.75	0.85
2400	0.00	0.11	0.23	0.34	0.45	0.56	0.68	0.79	0.90	1.01
2800	0.00	0.13	0.26	0.39	0.53	0.66	0.79	0.92	1.05	1.18
3200	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35
3500	0.00	0.16	0.33	0.49	0.66	0.82	0.99	1.15	1.32	1.48
4000	0.00	0.19	0.38	0.56	0.75	0.94	1.13	1.32	1.50	1.69
4500	0.00	0.21	0.42	0.63	0.85	1.06	1.27	1.48	1.69	1.90
5000	0.00	0.23	0.47	0.70	0.94	1.17	1.41	1.64	1.88	2.11
5500	0.00	0.26	0.52	0.78	1.03	1.29	1.55	1.81	2.07	2.32

Use this sprocket combination only as required to obtain speed ratio or to meet diameter limitations. See Engineering Section II-5 for additional details.

Poly Chain GT Belt Length
Correction Factor Table

Pitch/Length Designation	No. of Teeth	Correction Factor
8M-352	44	0.65
8M-416	52	0.70
8M-456	57	0.73
8M-480	60	0.74
8M-544	68	0.78
8M-608	76	0.81

Rated Drive Horsepower = [Rated Base Horsepower + Additional Horsepower for Speed Ratio] x Belt Length Correction Factor

Gates Corporation

Horsepower Rating for 21mm Wide
8mm Pitch Poly Chain® GT® Belts

RPM OF FASTER SHAFT	Rated Horsepower for Small Sprocket (Number of Grooves and Pitch Diameter, Inches)									
	22 / 2.206	25 / 2.506	28 / 2.807	30 / 3.008	32 / 3.208	34 / 3.409	36 / 3.609	38 / 3.810	40 / 4.010	42 / 4.211
870	5.49	6.43	7.36	7.97	8.57	9.17	9.76	10.3	10.9	11.5
1160	6.92	8.12	9.30	10.1	10.8	11.6	12.3	13.1	13.8	14.6
1750	9.57	11.3	12.9	14.0	15.1	16.1	17.2	18.2	19.2	20.2
3450	16.00	18.9	21.7	23.5	25.3	27.1	28.8	30.6	32.2	33.9
10	0.12	0.13	0.15	0.16	0.18	0.19	0.20	0.21	0.22	0.23
20	0.22	0.25	0.28	0.31	0.33	0.35	0.37	0.39	0.42	0.44
40	0.40	0.46	0.53	0.57	0.61	0.65	0.69	0.73	0.77	0.81
60	0.57	0.66	0.75	0.81	0.87	0.93	0.99	1.04	1.10	1.16
100	0.89	1.03	1.18	1.27	1.36	1.45	1.54	1.64	1.73	1.82
200	1.61	1.88	2.14	2.31	2.48	2.65	2.82	2.99	3.15	3.32
300	2.28	2.65	3.02	3.27	3.51	3.75	3.99	4.23	4.46	4.70
400	2.90	3.38	3.86	4.17	4.48	4.79	5.10	5.40	5.70	6.00
500	3.49	4.07	4.65	5.03	5.41	5.78	6.15	6.52	6.88	7.24
600	4.05	4.74	5.42	5.86	6.30	6.74	7.17	7.60	8.02	8.44
700	4.60	5.38	6.15	6.66	7.16	7.66	8.15	8.64	9.12	9.60
800	5.13	6.01	6.87	7.44	8.00	8.55	9.10	9.65	10.2	10.7
900	5.65	6.61	7.57	8.19	8.81	9.43	10.0	10.6	11.2	11.8
1000	6.15	7.20	8.25	8.93	9.61	10.3	10.9	11.6	12.2	12.9
1200	7.11	8.35	9.56	10.4	11.1	11.9	12.7	13.5	14.2	15.0
1400	8.04	9.44	10.8	11.7	12.6	13.5	14.4	15.2	16.1	16.9
1600	8.93	10.5	12.0	13.0	14.0	15.0	16.0	17.0	17.9	18.9
1800	9.79	11.5	13.2	14.3	15.4	16.5	17.6	18.6	19.7	20.7
2000	10.60	12.5	14.3	15.6	16.7	17.9	19.1	20.2	21.4	22.5
2400	12.20	14.4	16.5	17.9	19.3	20.6	22.0	23.3	24.6	25.9
2800	13.70	16.2	18.6	20.2	21.7	23.2	24.7	26.2	27.7	29.1
3200	15.10	17.9	20.5	22.3	24.0	25.7	27.3	28.9	30.5	32.1
3500	16.10	19.1	21.9	23.8	25.6	27.4	29.2	30.9	32.6	34.2
4000	17.8	21.0	24.2	26.2	28.2	30.1	32.1	33.9	35.8	37.5
4500	19.3	22.8	26.2	28.4	30.6	32.7	34.7	36.8	38.7	40.6
5000	20.7	24.5	28.2	30.6	32.8	35.1	37.2	39.3	41.4	43.4
5500	22.1	26.1	30.0	32.5	34.9	37.3	39.5	41.7	43.8	45.8

RPM OF FASTER SHAFT	Additional Horsepower per belt for Speed Ratio of Speed-Down Drives									
	1.00 to 1.04	1.05 to 1.11	1.12 to 1.19	1.20 to 1.30	1.31 to 1.45	1.46 to 1.65	1.66 to 1.99	2.00 to 2.63	2.64 to 4.47	4.48 and Over
870	0.00	0.07	0.14	0.21	0.29	0.36	0.43	0.50	0.57	0.64
1160	0.00	0.10	0.19	0.29	0.38	0.48	0.57	0.67	0.76	0.86
1750	0.00	0.14	0.29	0.43	0.58	0.72	0.86	1.01	1.15	1.29
3450	0.00	0.28	0.57	0.85	1.13	1.42	1.70	1.99	2.27	2.55
10	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
20	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
40	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03
60	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04
100	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.07
200	0.00	0.02	0.03	0.05	0.07	0.08	0.10	0.12	0.13	0.15
300	0.00	0.02	0.05	0.07	0.10	0.12	0.15	0.17	0.20	0.22
400	0.00	0.03	0.07	0.10	0.13	0.16	0.20	0.23	0.26	0.30
500	0.00	0.04	0.08	0.12	0.16	0.21	0.25	0.29	0.33	0.37
600	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.39	0.44
700	0.00	0.06	0.12	0.17	0.23	0.29	0.35	0.40	0.46	0.52
800	0.00	0.07	0.13	0.20	0.26	0.33	0.39	0.46	0.53	0.59
900	0.00	0.07	0.15	0.22	0.30	0.37	0.44	0.52	0.59	0.67
1000	0.00	0.08	0.16	0.25	0.33	0.41	0.49	0.58	0.66	0.74
1200	0.00	0.10	0.20	0.30	0.39	0.49	0.59	0.69	0.79	0.89
1400	0.00	0.12	0.23	0.35	0.46	0.58	0.69	0.81	0.92	1.04
1600	0.00	0.13	0.26	0.39	0.53	0.66	0.79	0.92	1.05	1.18
1800	0.00	0.15	0.30	0.44	0.59	0.74	0.89	1.04	1.18	1.33
2000	0.00	0.16	0.33	0.49	0.66	0.82	0.99	1.15	1.32	1.48
2400	0.00	0.20	0.39	0.59	0.79	0.99	1.18	1.38	1.58	1.78
2800	0.00	0.23	0.46	0.69	0.92	1.15	1.38	1.61	1.84	2.07
3200	0.00	0.26	0.53	0.79	1.05	1.32	1.58	1.84	2.10	2.37
3500	0.00	0.29	0.58	0.86	1.15	1.44	1.73	2.01	2.30	2.59
4000	0.00	0.33	0.66	0.99	1.32	1.64	1.97	2.30	2.63	2.96
4500	0.00	0.37	0.74	1.11	1.48	1.85	2.22	2.59	2.96	3.33
5000	0.00	0.41	0.82	1.23	1.64	2.05	2.47	2.88	3.29	3.70
5500	0.00	0.45	0.90	1.36	1.81	2.26	2.71	3.16	3.62	4.07

Use this sprocket combination only as required to obtain speed ratio or to meet diameter limitations. See Engineering Section II-5 for additional details.

Poly Chain GT Belt Length Correction Factor Table

Pitch/Length Designation	No. of Teeth	Correction Factor
8M-352	44	0.65
8M-416	52	0.70
8M-456	57	0.73
8M-480	60	0.74
8M-544	68	0.78
8M-608	76	0.81

Rated Drive Horsepower = [Rated Base Horsepower + Additional Horsepower for Speed Ratio] x Belt Length Correction Factor

Horsepower Rating for 36mm Wide
8mm Pitch Poly Chain® GT® Belts

RPM OF FASTER SHAFT	Rated Horsepower for Small Sprocket (Number of Grooves and Pitch Diameter, Inches)									
	22 2.206	25 2.506	28 2.807	30 3.008	32 3.208	34 3.409	36 3.609	38 3.810	40 4.010	42 4.211
870	9.42	11.0	12.6	13.7	14.7	15.7	16.7	17.7	18.7	19.7
1160	11.9	13.9	15.9	17.3	18.6	19.9	21.2	22.4	23.7	24.9
1750	16.4	19.3	22.1	24.0	25.8	27.7	29.4	31.2	33.0	34.7
3450	27.4	32.4	37.2	40.4	43.4	46.5	49.5	52.4	55.2	58.1
10	0.20	0.23	0.26	0.28	0.30	0.32	0.34	0.36	0.38	0.40
20	0.37	0.43	0.49	0.52	0.56	0.60	0.64	0.67	0.71	0.75
40	0.69	0.79	0.90	0.97	1.04	1.11	1.18	1.25	1.32	1.39
60	0.98	1.13	1.29	1.39	1.49	1.59	1.69	1.79	1.89	1.99
100	1.53	1.77	2.01	2.18	2.33	2.49	2.65	2.80	2.96	3.11
200	2.77	3.22	3.67	3.96	4.25	4.55	4.83	5.12	5.40	5.69
300	3.90	4.55	5.18	5.61	6.02	6.43	6.84	7.25	7.65	8.05
400	4.97	5.80	6.61	7.15	7.68	8.21	8.74	9.26	9.77	10.3
500	5.98	6.98	7.98	8.63	9.27	9.91	10.5	11.2	11.8	12.4
600	6.95	8.13	9.28	10.0	10.8	11.5	12.3	13.0	13.7	14.5
700	7.89	9.23	10.5	11.4	12.3	13.1	14.0	14.8	15.6	16.5
800	8.80	10.3	11.8	12.8	13.7	14.7	15.6	16.5	17.5	18.4
900	9.68	11.3	13.0	14.0	15.1	16.2	17.2	18.2	19.3	20.3
1000	10.5	12.4	14.1	15.3	16.5	17.6	18.8	19.9	21.0	22.1
1200	12.2	14.3	16.4	17.8	19.1	20.4	21.8	23.1	24.4	25.6
1400	13.8	16.2	18.5	20.1	21.6	23.1	24.6	26.1	27.6	29.0
1600	15.3	18.0	20.6	22.4	24.1	25.8	27.4	29.1	30.7	32.3
1800	16.8	19.7	22.6	24.6	26.4	28.3	30.1	31.9	33.7	35.5
2000	18.2	21.4	24.6	26.7	28.7	30.7	32.7	34.7	36.6	38.5
2400	20.9	24.7	28.3	30.7	33.1	35.4	37.7	40.0	42.2	44.4
2800	23.5	27.7	31.9	34.6	37.2	39.8	42.4	44.9	47.4	49.9
3200	25.9	30.6	35.2	38.2	41.1	44.0	46.8	49.6	52.3	55.0
3500	27.7	32.7	37.6	40.8	43.9	47.0	50.0	52.9	55.8	58.7
4000	30.5	36.0	41.4	44.9	48.3	51.7	55.0	58.2	61.3	64.4
4500	33.1	39.1	45.0	48.8	52.5	56.1	59.6	63.0	66.3	69.6
5000	35.5	42.0	48.3	52.4	56.3	60.1	63.8	67.4	70.9	74.3
5500	37.8	44.8	51.5	55.7	59.9	63.9	67.7	71.5	75.1	78.6

RPM OF FASTER SHAFT	Additional Horsepower per belt for Speed Ratio of Speed-Down Drives									
	1.00 to 1.04	1.05 to 1.11	1.12 to 1.19	1.20 to 1.30	1.31 to 1.45	1.46 to 1.65	1.66 to 1.99	2.00 to 2.63	2.64 to 4.47	4.48 and Over
870	0.00	0.12	0.25	0.37	0.49	0.61	0.74	0.86	0.98	1.10
1160	0.00	0.16	0.33	0.49	0.65	0.82	0.98	1.14	1.31	1.47
1750	0.00	0.25	0.49	0.74	0.99	1.23	1.48	1.73	1.97	2.22
3450	0.00	0.49	0.97	1.46	1.94	2.43	2.92	3.40	3.89	4.38
10	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
20	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03
40	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.05	0.05
60	0.00	0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08
100	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.13
200	0.00	0.03	0.06	0.08	0.11	0.14	0.17	0.20	0.23	0.25
300	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.30	0.34	0.38
400	0.00	0.06	0.11	0.17	0.23	0.28	0.34	0.39	0.45	0.51
500	0.00	0.07	0.14	0.21	0.28	0.35	0.42	0.49	0.56	0.63
600	0.00	0.08	0.17	0.25	0.34	0.42	0.51	0.59	0.68	0.76
700	0.00	0.10	0.20	0.30	0.39	0.49	0.59	0.69	0.79	0.89
800	0.00	0.11	0.23	0.34	0.45	0.56	0.68	0.79	0.90	1.01
900	0.00	0.13	0.25	0.38	0.51	0.63	0.76	0.89	1.01	1.14
1000	0.00	0.14	0.28	0.42	0.56	0.70	0.85	0.99	1.13	1.27
1200	0.00	0.17	0.34	0.51	0.68	0.85	1.01	1.18	1.35	1.52
1400	0.00	0.20	0.39	0.59	0.79	0.99	1.18	1.38	1.58	1.78
1600	0.00	0.23	0.45	0.68	0.90	1.13	1.35	1.58	1.80	2.03
1800	0.00	0.25	0.51	0.76	1.01	1.27	1.52	1.78	2.03	2.28
2000	0.00	0.28	0.56	0.85	1.13	1.41	1.69	1.97	2.25	2.54
2400	0.00	0.34	0.68	1.01	1.35	1.69	2.03	2.37	2.71	3.04
2800	0.00	0.39	0.79	1.18	1.58	1.97	2.37	2.76	3.16	3.55
3200	0.00	0.45	0.90	1.35	1.80	2.25	2.71	3.16	3.61	4.06
3500	0.00	0.49	0.99	1.48	1.97	2.47	2.96	3.45	3.95	4.44
4000	0.00	0.56	1.13	1.69	2.25	2.82	3.38	3.95	4.51	5.07
4500	0.00	0.63	1.27	1.90	2.54	3.17	3.80	4.44	5.07	5.71
5000	0.00	0.70	1.41	2.11	2.82	3.52	4.23	4.93	5.64	6.34
5500	0.00	0.77	1.55	2.33	3.10	3.87	4.65	5.43	6.20	6.97

Use this sprocket combination only as required to obtain speed ratio or to meet diameter limitations. See Engineering Section II-5 for additional details.

Poly Chain GT Belt Length
Correction Factor Table

Pitch/Length Designation	No. of Teeth	Correction Factor
8M-352	44	0.65
8M-416	52	0.70
8M-456	57	0.73
8M-480	60	0.74
8M-544	68	0.78
8M-608	76	0.81

Rated Drive Horsepower = [Rated Base Horsepower + Additional Horsepower for Speed Ratio] x Belt Length Correction Factor

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ENGINEERING DATA

NOTE: This engineering section provides general engineering information for synchronous belts and sprockets (or pulleys) which are useful in general drive design work. If you need additional information, contact Gates Power Transmission Product Application.

When designing synchronous drives, there are several special circumstances that may require additional consideration:

Section I
Application Design Considerations

When designing synchronous drives, there are several special circumstances that may require additional consideration:

1. **Gear Motors/Speed Reducer Drives**
2. **Electric Motor Frame Dimensions**
3. **Minimum Sprocket Diameter Recommendations for Electric Motors**
4. **High-Driven Inertia**
5. **Air Moving Drives**
6. **Linear Motion Drives**
7. **High Performance Applications**
8. **Belt Drive Registration**
9. **Belt Drive Noise**
10. **Use of Flanged Sprockets**
11. **Fixed (Nonadjustable) Center Distance**
12. **Use of Idlers**
13. **Specifying Shaft Locations in Multipoint Drive Layouts**
14. **Minimum Belt Wrap and Tooth Engagement**
15. **Adverse Operating Environments**

Each of these circumstances and special considerations are reviewed below.

1. Gear Motors/Speed Reducer Drives

When designing a belt drive system to transfer power from the output shaft of a speed reducer to the final driven shaft, the designer must make certain that the belt drive does not exert shaft loads greater than the speed reducing device is rated to carry. Failure to do so can result in premature shaft/bearing failures whether the belt drive has been designed with the appropriate power capacity or not.

This concept is similar to the National Electric Motor Association (NEMA) establishing minimum acceptable sprocket diameters for each of their standardized motor frames. Abiding by these minimum recommended diameters, when designing a belt drive system, prevents the motor bearings from failing prematurely due to excessive shaft loads exerted by the belt drive.

Overhung load is generally defined as a force exerted by a belt or chain drive, that is perpendicular to a speed reducer shaft, and applied beyond its outermost bearing. Calculated overhung load values are intended to serve as an indication of how heavily loaded the shaft and outermost bearing of a speed reducer actually is.
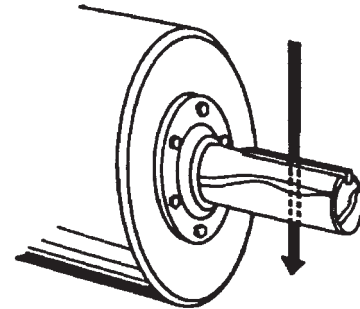
Figure 3 - Overhung Load

Overhung load calculations are generally assumed to apply to the slower output shaft of a speed reducer. It is important to note that these calculations apply to higher speed input shafts as well. Most speed reducer manufacturers publish allowable overhung load values for every model in their product line. This value represents the maximum load that the shaft and bearings can support without negatively impacting the durability of the speed reducer. When the actual overhung load exceeds the published allowable value, premature shaft or bearing failure may occur. In extreme cases, catastrophic failures can occur.

A general formula used to calculate overhung load (OHL) is as follows:

Formula 8

$$OHL = \frac{126{,}000 \times HP \times kLCF \times KSF \times KLLF}{PD \times RPM}$$

Where:

HP = Actual horsepower being transmitted at the gear motor/reducer output shaft with no service factor applied

KLCF = Overhung load connection factor (1.3 for all synchronous belt drives)

KSF = Service factor for the speed reducer (available from the manufacturer)

KLLF = Load location factor for the speed reducer (available from the manufacturer)

PD = Pitch diameter of the speed reducer output shaft sprocket

RPM = RPM of the speed reducer output shaft

Speed reducer manufacturers each publish their own specific formula and constants to calculate overhung load. They also publish specific overhung load ratings for each speed reducer product that they produce. It is very important to use the correct overhung load calculation procedure in conjunction with the manufacturer's accompanying overhung load rating.

If the calculated overhung load for a particular belt drive system does exceed the speed reducer manufacturer's maximum recommended value, consider altering the belt drive design. In order to reduce the calculated overhung load, consider:

- •Increasing sprocket diameters
- •Reducing belt width
- •Mounting the sprocket closer to the speed reducer outboard bearing

Increasing the sprocket diameter not only reduces calculated overhung load, it also potentially reduces the required belt width. Reducing the belt width and mounting the sprocket as close as possible to the outermost bearing of the speed reducer both move the center of the belt load closer to the speed reducer. This also reduces the calculated overhung load. Alterations to the belt drive design should be made until the calculated overhung load is within the speed reducer manufacturer's recommendations.

2. Electric Motor Frame Dimensions

Motor dimensions can be important considerations depending on the application and its requirements. If motor shaft length, motor shaft diameter, or clearance issues are a concern, refer to the motor dimension table on this page. The table lists common general purpose electric motors by frame size.
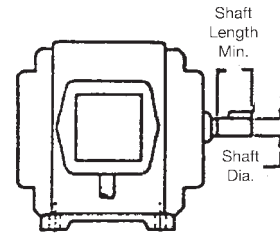
Frame Size	Shaft Dia. (in)	Shaft Length Min. (In)	Key (in)
48	1/2	—	3/64 Flat
56	5/8	—	3/16 x 3/16 x 1-3/8
143T	7/8	2	3/16 x 3/16 x 1-3/8
145T	7/8	2	3/16 x 3/16 x 1-3/8
182	7/8	2	3/16 x 3/16 x 1-3/8
182T	1-1/8	2-1/2	1/4 x 1/4 x 1-3/4
182	7/8	2	3/16 x 3/16 x 1-3/8
182T	1-1/8	2-1/2	1/4 x 1/4 x 1-3/4
213	1-1/8	2-3/4	1/4 x 1/4 x 2
213T	1-3/8	3-1/8	5/16 x 5/16 x 2-3/8
215	1-1/8	2-3/4	1/4 x 1/4 x 2
215T	1-3/8	3-1/8	5/16 x 5/16 x 2-3/8
254U	1-3/8	3-1/2	5/16 x 5/16 x 2-3/4
254T	1-5/8	3-3/4	3/8 x 3/8 x 2-7/8
256U	1-3/8	3-1/2	5/16 x 5/16 x 3-3/4
256T	1-5/8	3-3/4	3/8 x 3/8 x 2-7/8
284U	1-5/8	4-5/8	3/8 x 3/8 x 3-3/4
284T	1-7/8	4-3/8	1/2 x 1/2 x 3-1/4
284TS	1-5/8	3	3/8 x 3/8 x 1-7/8
286U	1-5/8	4-5/8	3/8 x 3/8 x 3-3/4
286T	1-7/8	4-3/8	1/2 x 1/2 x 3-1/4
286TS	1-5/8	3	3/8 x 3/8 x 1-7/8
324U	1-7/8	5-3/8	1/2 x 1/2 x 4-1/4
324T	2-1/8	5	1/2 x 1/2 x 3-7/8
324TS	1-7/8	3-1/2	1/2 x 1/2 x 2
326U	1-7/8	5-3/8	1/2 x 1/2 x 4-1/4
326T	2-1/8	5	1/2 x 1/2 x 3-7/8
326TS	1-7/8	3-1/2	1/2 x 1/2 x 2
364U	2-1/8	6-1/8	1/2 x 1/2 x 5
364US	1-7/8	3-1/2	1/2 x 1/2 x 2
364T	2-3/8	5-5/8	5/8 x 5/8 x 4-1/4
364TS	1-7/8	3-1/2	1/2 x 1/2 x 2
365U	2-1/8	6-1/8	1/2 x 1/2 x 5
365US	1-7/8	3-1/2	1/2 x 1/2 x 2
365T	2-3/8	5-5/8	5/8 x 5/8 x 4-1/4
365TS	1-7/8	3-1/2	1/2 x 1/2 x 2
404U	2-3/8	6-7/8	5/8 x 5/8 x 5-1/2
404US	2-1/8	4	1/2 x 4 x 2-3/4
404T	2-7/8	7	3/4 x 3/4 x 5-5/8
404TS	2-1/8	4	1/2 x 1/2 x 2-3/4
405U	2-3/8	6-7/8	5/8 x 5/8 x 5-1/2
405US	2-1/8	4	1/2 x 1/2 x 2-3/4
405T	2-7/8	7	3/4 x 3/4 x 5-5/8
405TS	2-1/8	4	1/2 x 1/2 x 2-3/4
444U	2-7/8	8-3/8	3/4 x 3/4 x 7
444US	2-1/8	4	1/2 x 1/2 x 2-3/4
444T	3-3/8	8-1/4	7/8 x 7/8 x 6-7/8
444TS	2-3/8	4-1/2	5/8 x 5/8 x 3
445U	2-7/8	8-3/8	3/4 x 3/4 x 7
445US	2-1/8	4	1/2 x 1/2 x 2-3/4
445T	3-3/8	8-1/4	7/8 x 7/8 x 6-7/8
445TS	2-3/8	4-1/2	5/8 x 5/8 x 3
447T	3-3/8	8-1/4	7/8 x 7/8 x 6-7/8
447TS	2-3/8	4-1/2	5/8 x 5/8 x 3
449T	3-3/8	8-1/4	7/8 x 7/8 x 6-7/8
449TS	2-3/8	4-1/2	5/8 x 5/8 x 3

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3. Minimum Sprocket Diameter Recommendations for Electric Motors

Minimum Recommended Sprocket /Sheave Diameters

NEMA (The National Electric Manufacturers Association) publishes recommendations for the minimum diameter of sprockets and sheaves to be used on General Purpose Electric Motors. The purpose of these recommendations is to prevent the use of excessively small sprockets or sheaves. This can result in motor shaft or bearing damage since belt pull increases as the diameter is reduced.

Table data has been compiled from NEMA Standard MG-1-14-42; 11/78, MG-1-14-43; 1/68, and a composite of electric motor manufacturers data. Values are generally conservative, and specific motors may permit the use of a smaller sprocket or sheave. Consult the motor manufacturer.

Motor Frames and Minimum Diameters for 60 Cycle Electric Motors

Motor Frame Code	Shaft Dia.(in)	Horsepower at Synchronous Speed (rpm)				Synchronous Belts
		3600 (3450)	1800 (1750)	1200 (1160)	900 (870)	Min. Pitch Dia. (in)
143T	0.875	1-1/2	1	3/4	1/2	2.0
145T	0.875	2—3	1-1/2—2	1	3/4	2.2
182T	1.125	3	3	1-1/2	1	2.2
182T	1.125	5	—	—	—	2.4
184T	1.125	—	—	2	1-1/2	2.2
184T	1.125	5	—	—	—2.2	2.2
184T	1.125	7-1/2	5	—	—2.7	2.7
213T	1.375	7-1/2—10	7-1/2	3	2	2.7
215T	1.375	10	—	5	3	2.7
215T	1.375	15	10	—	—	3.4
254T	1.625	15	—	7-1/2	5	3.4
254T	1.625	20	15	—	—	4.0
256T	1.625	20—25	—	10	7-1/2	4.0
256T	1.625	—	20	—	—	4.0
284T	1.875	—	—	15	10	4.0
284T	1.875	—	25	—	—	4.0
286T	1.875	—	30	20	15	4.7
324T	2.125	—	40	25	20	5.4
236T	2.125	—	50	30	25	6.1
364T	2.375	—	—	40	30	6.1
364T	2.375	—	60	—	—	6.7
365T	2.375	—	—	50	40	7.4
365T	2.375	—	75	—	—	7.7
404T	2.875	—	—	60	—	7.2
404T	2.875	—	—	—	50	7.6
404T	2.875	—	100	—	—	7.7
405T	2.875	—	—	75	60	9.0
405T	2.875	—	100	—	—	7.7
405T	2.875	—	125	—	—	9.5
444T	3.375	—	—	100	—	9.0
444T	3.375	—	—	—	75	8.6
444T	3.375	—	125	—	—	9.5
444T	3.375	—	150	—	—	9.5
445T	3.375	—	—	125	—	10.8
445T	3.375	—	—	—	100	10.8
445T	3.375	—	150	—	—	9.5
445T	3.375	—	200	—	—	11.9

4. High-Driven Inertia

Many drives, such as piston compressors, punch presses and crushers, depend on the driveN pulley acting as a flywheel. This flywheel effect, or WR[2] is used to help moderate or smooth out fluctuations in driven load and speed. Failure to compensate for this during a redesign can result in premature damage to the prime mover or early belt failures. This can be a consideration when replacing older belt drives with new, higher capacity belts.

When replacing large pulleys or sheaves with sprockets, be careful not to remove a designed-in flywheel effect. Ask questions of the user to make sure there is not a concern for a high WR[2]. If there is a concern, you may have to use a wider sprocket, a larger diameter, or a special made-to-order sprocket designed with added weight and WR[2].

Drives which have a high driveN inertia and are subjected to high acceleration or emergency stop conditions require additional design expertise. Contact Gates Power Transmission Product Application for further engineering assistance.

5. Air Moving Drives

HVAC Equipment Inspection

Many air handling drives have structures that are not particularly rigid, which can create belt tension and drive alignment problems resulting in unusual and premature belt wear. Synchronous belts are sensitive to fluctuations in center distance that can be caused by inadequate bracketry. Under start up conditions, an AC motor can be required to provide 150% to 200% of its rated capacity. Synchronous belts cannot slip, and must transmit the higher start-up torque. Under these conditions, the drive center distance may collapse if the structure is not sufficiently rigid.

With the drive shut off and safely locked out, a simple method to use when inspecting potential drive conversions is to grab the two belt spans and push them together while observing the motor. If any significant relative change in center distance or motor position is noticed, the drive's structural strength is most likely insufficient for a simple conversion. The structure would need to be reinforced to obtain optimum performance from a synchronous belt drive. The best conversion candidates have motors that are mounted solidly on support bracketry that is part of the fan's structural system. When possible, select synchronous drives with diameters similar to existing V-belt sheave diameters. This will maintain similar belt pulls and loads on the shafts and structure.

Air Handling Unit Start-Up Characteristics

Full Load Start Up

Start up loads can be a concern when evaluating potential drives for conversion to synchronous belts. Synchronous belts will transmit all of the start- up torque, where V-belts may slip if the load is excessive. Due to the inertia of the fan, start up loads can potentially be 150% to 200% of the normal operating load. It is important that the start up load be considered by selecting appropriate service factors when designing a belt drive system.

Controlled Start Up

An air handling drive with soft start or variable frequency controller (AC Inverter) is ideal for conversion to synchronous belts. The fan will be ramped up to speed slowly, with a corresponding increase in load as the speed increases. Structural flexing is typically not a concern when designing synchronous belt drives on systems using soft starts or variable frequency controllers.

Fan Speed

The volume of air being transmitted and the required horsepower are both sensitive to changes in the driveN fan speed.If designing a synchronous belt drive for energy savings, it is important that the synchronous belt drive be designed to operate at the proper driveN fan speed. All conversions from existing V-belt drives should have the synchronous belt drive speed ratio based on a measured driveN shaft RPM, and not calculated from the theoretical V-belt speed ratio. This measurement can be made by either using a mechanical contact tachometer or a strobe tachometer.

The horsepower requirement for fans varies with the cube of the fan speed. A small change in the fan speed makes a much larger difference in the actual horsepower and energy required.

<div align="center">**Formula 9**</div>

$$HP_1/HP_2 = (RPM_1/RPM_2)^3$$

Where:
- HP_1 = Initial Horsepower
- HP_2 = New Horsepower @ New Fan RPM
- RPM_1 = Initial Fan RPM
- RPM_2 = New Fan RPM

Air-Cooled Heat Exchanger (ACHE) Applications

Air-cooled heat exchangers are used in Petrochemical, Oil and Gas Production, Power Generation, and Petroleum Refining Industries where process heat must be removed. Electric motors as large as 60 hp commonly drive the cooling fans with either large ratio V-belt or Synchronous belt drives.

According to the American Petroleum Institute **(API 661** - Air-Cooled Heat Exchangers for General Refinery Service), a safety factor of 1.8 must be used in the belt drive design process. Synchronous belt drives typically have higher horsepower capacities than V-belt drives with an equivalent width. This increased capacity results in narrower belt drives and lighter drive hardware. Synchronous belt drive systems are especially beneficial on higher horsepower heat exchanger units, and they are commonly used on new or redesigned units. V-belt drive systems are commonly used on low to medium HP fans because of their relatively low cost and good availability.

Surface rust on sheaves and sprockets is very abrasive, and rapidly wears belts. Sprockets on wet heat exchanger applications (water drawn through heat exchanger coils by fan) such as Cooling Towers, often rust and require the use of electroless nickel plating to prevent excessive corrosion. Cooling Towers are commonly used to cool large buildings (HVAC; Heating-Ventilating -Air Conditioning Systems). Misalignment is a common cause of premature belt failures on ACHE drive systems. Care should be taken to ensure proper sheave/sprocket alignment when installing the belt drive system.

See **Gates Belt Drive Preventative Maintenance and Safety Manual** for detailed information about proper belt drive alignment. Proper belt pretension is necessary to obtain optimum belt performance. This is particularly true for the high inertia start up loads seen in ACHE applications. If belt installation tension is too low, V-belts will be prone to slippage and synchronous belts will be prone to tooth jump or ratcheting. Motor controllers are sometimes used to bring the fan up to speed slowly (soft start), decreasing the chance of synchronous belt ratcheting.

6. Linear Motion Drives

In linear motion drives, such as a rack and pinion application, the belt is not transmitting a load in the conventional rotational manner. The two cut ends of the belt are connected to clamping fixtures and the belt travels back and forth a specified distance while rotating over a sprocket. Because of these characteristics, the drive design process will typically not follow standard catalog design procedures.

The designer will most likely have available a maximum belt load or pull which will need to be related to the belt's allowable working tension. Reasonably sized sprocket diameters are still required to prevent excessive stress fatigue in the belt. In these applications, the designer may either use endless belts and cut them, or use standard long length belting when available. Gates Power Transmission Product Application may be consulted for design assistance.

7. High Performance Vehicle Applications

For special high performance applications, such as motorcycles or race car and boat supercharger drives, the design loads will typically exceed published data. Because of the extremely high loads and speeds (as much as 500 HP and belt speeds exceeding 10,000 fpm), it is necessary for the designer to contact Gates Power Transmission Product Application for additional assistance.

Although special considerations may be involved, it is important to remember that reasonable drive recommendations can be provided to the designer in most cases.

8. Belt Drive Registration

The three primary factors contributing to belt drive registration (or positioning) errors are belt elongation, backlash, and tooth deflection. When evaluating the potential registration capabilities of a synchronous belt drive, the system must first be determined to be either static or dynamic in terms of its registration function and requirements.

Static Registration: A static registration system moves from its initial static position to a secondary static position. During the process the designer is concerned only with how accurately and consistently the drive arrives at its secondary position. Potential registration errors that occur during transport are not considered. Therefore, the primary factor contributing to registration error in a static registration system is backlash. The effects of belt elongation and tooth deflection do not have any influence on the registration accuracy of this type of system.

Dynamic Registration: A dynamic registration system is required to perform a registering function while in motion with torque loads varying as the system operates. In this case, the designer is concerned with the rotational position of the drive sprockets with respect to each other at every point in time. Therefore, belt elongation, backlash, and tooth deflection will all contribute to registrational inaccuracies.

Further discussion about each of the factors contributing to registration error is as follows:

Belt Elongation: Belt elongation, or stretch, occurs naturally when a belt is placed under tension. The total tension exerted within a belt results from installation as well as working loads. The amount of belt elongation is a function of the belt tensile modulus, which is influenced by the type of tensile cord and the belt construction. The standard tensile cord used in rubber synchronous belts is fiberglass. Fiberglass has a high tensile modulus, is dimensionally stable, and has excellent flex-fatigue characteristics. If a higher tensile modulus is needed in a rubber synchronous belt, aramid tensile cords can be considered, although they are generally used to provide resistance to harsh shock and impulse loads. Aramid tensile cords used in rubber synchronous belts generally have only a marginally higher tensile modulus in comparison to fiberglass. When needed, belt tensile modulus data is available from Gates Power Transmission Product Application.

Backlash: Backlash in a synchronous belt drive results from clearance between the belt teeth and the sprocket grooves. This clearance is needed to allow the belt teeth to enter and exit the grooves smoothly with a minimum of interference. The amount of clearance necessary depends upon the belt tooth profile. PowerGrip® Timing Belt Drives are known for having relatively little backlash. PowerGrip® HTD® Drives have improved torque carrying capability and resist ratcheting, but have a significant amount of backlash, PowerGrip® GT®2 and Poly Chain® GT® Carbon™ Drives have considerably improved torque carrying capability, and backlash characteristics in between that of PowerGrip HTD and PowerGrip Timing Drives. In special cases, alterations can be made to drive systems to further decrease backlash. These alterations often result in increased belt wear, increased drive noise and shorter drive life. For additional information contact Gates Power Transmission Product Application.

Tooth Deflection: Tooth deformation in a synchronous belt drive occurs as a torque load is applied to the system, and individual belt teeth are loaded. The amount of belt tooth deformation depends upon the amount of torque loading, sprocket size, installation tension and belt type. Of the three primary contributors to registration error, tooth deflection is the most difficult to quantify. Experimentation with a prototype drive system is the best means of obtaining realistic estimations of belt tooth deflection. Additional guidelines that may be useful in designing registration critical drive systems are as follows:

- Design with large sprockets with more teeth in mesh.
- Keep belts tight, and control tension closely.
- Design frame/shafting to be rigid under load.
- Use high quality machined sprockets to minimize radial run out and lateral wobble.

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9. Belt Drive Noise

V-belt, synchronous belt, roller chain, and gear drives will all generate noise while transmitting power. Each type of system has its own characteristic sound. V-belt drives tend to be the quietest and synchronous belt drives are much quieter than roller chain drives. When noise is an issue, there are several design and maintenance tips that should be followed to minimize belt drive noise.

Noise: Decibel and Frequency

Noise is an unwanted or unpleasant sound that can be described with two criteria – frequency and decibel (dB) levels. Frequency is measured in Hertz. A perfect human ear is capable of distinguishing frequencies typically from 20 to 20,000 Hertz. The human ear does not generally perceive frequencies higher than 20,000 Hertz. The sound pressure level or intensity of noise is measured in terms of decibels (dB). The decibel has become the basic unit of measure since it is an objective measurement that approximately corresponds to the subjective measurement made by the human ear. Since sound is composed of several distinct and measurable parts and the human ear doesn't differentiate between these parts, measuring scales that approximate the human ear's reaction have been adopted. Three scales – A, B, and C – are used to duplicate the ear's response over the scale's ranges. The A scale is most commonly used in industry because of its adoption as the standard in OSHA regulations. Noise described in decibels (dBA -"A" weighting for the human ear) is generally perceived as the loudness or intensity of the noise.

While the human ear can distinguish frequencies over a broad range, the ear is most sensitive in the range of normal speech – 500 to 2000 Hertz.. As a consequence, this is the range most commonly of concern for noise control ("A" weighting gives more weight or emphasis to sounds in the 500 to 2000 hz range). Frequency is most closely related to what the ear hears as pitch. High frequency sounds are perceived as whining or piercing, while low frequency sounds are perceived as rumbling. The combination of sound pressure level (dB) and frequency describes the overall level of loudness perceived by the human ear. One without the other does not adequately describe the loudness potential of the noise. For example, an 85 dBA noise at 3000 Hertz is going to be perceived as being much louder than an 85 dBA noise at 500 Hertz.

Reducing Noise

Following proper installation and maintenance procedures, as well as some simple design alternatives can reduce belt drive noise.

Belt Drive Tension and Alignment

Properly tensioning and aligning a belt drive will allow the belt drive to perform at its quietest level. Improper tension in synchronous belt drives can affect how the belt fits in the sprocket grooves. Proper tension minimizes tooth to groove interference, and thereby reduces belt noise.

Misaligned synchronous belt drives tend to be much noisier than properly aligned drives due to the amount of interference that is created between the belt teeth and the sprocket grooves. Misaligned synchronous belt drives also may cause belt tracking that forces the edge of the belt to ride hard against a sprocket flange. Misalignment causing belt contact with a flange will generate noise that is easily detected.

Noise Barriers and Absorbers

Sometimes, even properly aligned and tensioned belt drives may be too noisy for a work environment. When this occurs, steps can be taken to modify the drive guard to reduce the noise level.

Noise barriers are used to block and reflect noise. Noise barriers do not absorb or deaden the noise; they block the noise and generally reflect most of the noise back towards its point of origin. Good noise barriers are dense, and should not vibrate. A sheet metal belt guard is a noise barrier. The more complete the enclosure is, the more effective it is as a noise barrier. Noise barrier belt guards can be as sophisticated as a completely enclosed case, or as simple as sheet metal covering the front of the guard to prevent direct sound transmission.

Noise absorbers are used to reduce noise reflections and to dissipate noise energy. Noise absorbers should be used in combination with a noise barrier. Noise absorbers are commonly referred to as acoustic insulation. Acoustic insulation (the noise absorber) is used inside of belt guards (the noise barrier) where necessary. A large variety of acoustic insulation manufacturers are available to provide different products for the appropriate situation.

A combination of noise barrier (solid belt guard) and noise absorber (acoustic insulation) will provide the largest reduction in belt drive noise. While the noise reduction cannot be predicted, field experience has shown that noise levels have been reduced by 10 to 20 dBA when using complete belt guards with acoustic insulation.

10. Use of Flanged Sprockets

Guide flanges are needed in order to keep the belt on the sprocket. Due to tracking characteristics, even on the best aligned drives, belts will ride off the edge of the sprockets. Flanges will prevent this belt ride-off.

On all drives using stock or made-to-order sprockets, the following conditions should be considered when selecting flanged sprockets:

1. On all two-sprocket drives, the minimum flanging requirements are two flanges on one sprocket or one flange on each sprocket on opposite sides.
2. On drives where the center distance is more than eight times the diameter of the small sprocket, both sprockets should be flanged on both sides. (See Engineering Section II, Drive Alignment and Belt Installation on Pages 110 and 111.)
3. On vertical shaft drives, one sprocket should be flanged on both sides, and all the other sprockets in the system should be flanged on the bottom side only.
4. On drives with more than two sprockets, the minimum flanging requirements are two flanges on every other sprocket or one flange on every sprocket —on alternating sides around the system.

On made-to-order sprockets, flanges must be securely fastened, such as using mechanical fasteners, welding, shrink-fit or other equivalent methods.

11. Fixed (Nonadjustable) Center Distance

Designers sometimes attempt to design synchronous belt drive systems without any means of belt adjustment or take up. This type of system is called a Fixed Center Drive. While this approach is often viewed as being economical, and is simple for assemblers, it often results in troublesome reliability and performance problems in the long run.

The primary pitfall in a fixed center design approach is failure to consider the affects of system tolerance accumulation. Belts and sprockets are manufactured with industry accepted production tolerances. There are limits to the accuracy that the center distance can be maintained on a production basis as well. The potential effects of this tolerance accumulation is as follows:

Low Tension:
Long Belt with Small Sprockets on a Short Center Distance

High Tension:
Short Belt with Large Sprockets on a Long Center Distance

Belt tension in these two cases can vary by a factor of 3 or more with a standard fiberglass tensile cord, and even more with an aramid tensile cord. This potential variation is great enough to overload bearings and shafting, as well as the belts themselves. The probability of these extremes occurring is a matter of statistics, but however remote the chances seem, they will occur in a production setting. In power transmission drives, the appearance of either extreme is very likely to impact drive system performance in a negative manner.

The most detrimental aspect of fixed center drives is generally the potentially high tension condition. This condition can be avoided by adjusting the design center distance. A common approach in these designs is to reduce the center distance from the exact calculated value by some small fraction. This results in a drive system that is inherently loose, but one that has much less probability of yielding excessively high shaft loads. **NOTE**: This approach should not be used for power transmission drives since the potentially loose operating conditions could result in accelerated wear and belt ratcheting, even under nominal loading.

There are times when fixed center drive designs can't be avoided. In these cases, the following recommendations will maximize the probability of success.

1. Do not use a fixed center design for power transmission drives. Consider using a fixed center design only for lightly loaded or motion transfer applications.
2. Do not use a fixed center design for drives requiring high motion quality or registration precision.
3. When considering a fixed center design, the center distance must be held as accurately as possible, typically within 0.002"— 0.003" (0.05mm — 0.08mm). This accuracy often requires the use of stamped steel framework.
4. Sprockets for fixed center systems should be produced with a machining process for accuracy. Molding and sintering processes are generally not capable of holding the finished O.D. sufficiently accurate for these systems.
5. The performance capabilities of the drive system should be verified by testing belts produced over their full length tolerance range on drive systems representing the full potential center-distance variation. Contact Gates Power Transmission Product Application for further details.
6. Contact Gates Power Transmission Product Application for design center distance recommendations and application assistance.

12. Use of Idlers

Use of idlers should be restricted to those cases in which they are functionally necessary. Idlers are often used as a means of applying tension when the center distance is not adjustable.

Idlers should be located on the slack side span of the belt drive. General size recommendations are listed for inside grooved, inside flat, and backside idlers. In some cases, such as high capacity drives utilizing large sprockets, idlers as large as the smallest loaded sprocket in the system may be more appropriate.

Idler Size Recommendations

Belt	Minimum Inside Idler	Minimum Inside Flat Idler	Minimum Backside Idler
8M Poly Chain® GT® Carbon™	25 grooves	4.00" O.D.	3.00" O.D.
14M Poly Chain GT Carbon	28 grooves	7.00" O.D.	6.50" O.D.

Outside or backside idlers should be flat and uncrowned; flanges may or may not be necessary. Drives with flat inside idlers should be tested, as noise and belt wear may occur.

Idler arc of contact should be held to a minimum. All idlers should be rigidly mounted in place to minimize movement or deflection during drive start-up and operation.

13. Specifying Shaft Locations in Multipoint Drive Layouts

When collecting geometrical layout data for multiple sprocket drive layouts, it is important to use a standard approach that is readily understood and usable for drive design calculations. This is of particular importance when the data will be provided to Gates Power Transmission Product Application for analysis. Drive design software that allows designers to design multipoint drives can also be downloaded at www.gates.com/drivedesign.

Multipoint Drive

When working with a drive system having more than three shafts, the geometrical layout data must be collected in terms of X-Y coordinates for analysis. For those unfamiliar with X-Y coordinates, the X-Y cartesian coordinate system is commonly used in mathematical and engineering calculations and utilizes a horizontal and vertical axis as illustrated in Fig. 4.
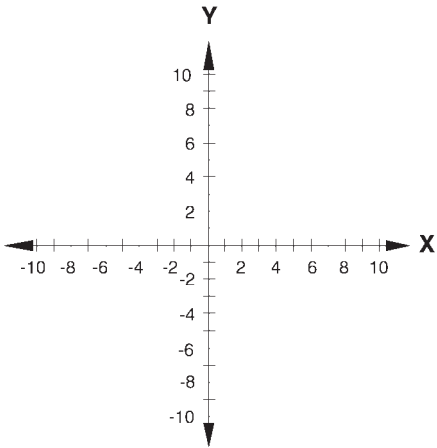
Figure 4

The axes cross at the zero point, or origin. Along the horizontal, or "X" axis, all values to the right of the zero point are positive, and all values to the left of the zero point are negative. Along the vertical, or "Y" axis, all values above the zero point are positive, and all values below the zero point are negative. This is also illustrated in Figure 4. When identifying a shaft center location, each X-Y coordinate is specified with a measurement in the "X" as well as the "Y" direction. This requires a horizontal and vertical measurement for each shaft center in order to establish a complete coordinate. Either English or Metric units of measurement may be used.

A complete coordinate is specified as follows:

(X,Y) where X = measurement along X-axis (horizontal)
Y = measurement along Y-axis (vertical)

In specifying X-Y coordinates for each shaft center, the origin (zero point) must first be chosen as a reference. The driveR shaft most often serves this purpose, but any shaft center can be used. Measurements for all remaining shaft centers must be taken from this origin or reference point. The origin is specified as (0,0).
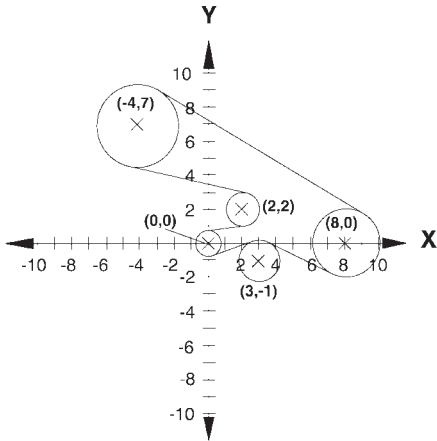
Figure 5

An example layout of a 5-point drive system is illustrated in Figure 5. Here each of the five shaft centers are located and identified on the X-Y coordinate grid. When specifying parameters for the moveable or adjustable shaft (for belt installation and tensioning), the following approaches are generally used:

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Fixed Location: Specify the nominal shaft location coordinate with a movement direction.

Slotted Location: Specify a location coordinate for the beginning of the slot, and a location coordinate for the end of the slot along its path of linear movement.

Pivoted Location: Specify the initial shaft location coordinate along with a pivot point location coordinate and the pivot radius.

Performing belt length and idler movement/positioning calculations by hand can be quite difficult and time consuming. With a complete geometrical drive description, we can make the drive design and layout process quite simple for you. Contact Gates Power Transmission Product Application for computer-aided assistance.

14. Minimum Belt Wrap and Tooth Engagement

Horsepower ratings listed in this catalog are based on a minimum of six teeth in mesh between the belt and the sprocket. The ratings must be corrected for excessive tooth loading if there are less than six teeth in mesh. For non-stock drives not listed in the Drive Selection Tables, the teeth in mesh may be calculated by using this formula:

Formula 10

$$\text{Teeth in Mesh} = \left[0.5 - \left(\frac{D - d}{6C} \right) \right] N_g$$

Where: D = pitch diameter, large sprocket, inches
d = pitch diameter, small sprocket, inches
C = center distance between shafts, inches
N_g = number of grooves in small sprocket

In cases where fewer than six teeth are in full contact, 20% of the horsepower rating must be subtracted for each tooth less than six not in full contact. After computing the teeth in mesh, the belt rating should be multiplied by the appropriate K_{TM} factor shown in the following table.

Teeth In Mesh Correction Factor

Teeth in Mesh	Factor K_{TM}
6 or more	1.00
5	0.80
4	0.60
3	0.40
2	0.20

In addition to the number of teeth in mesh, some drives with more than two shafts may have a greater potential for the belts to ratchet where loaded sprockets have six teeth in mesh, but a small arc of contact. In order to minimize this condition, each loaded sprocket in the drive system should have an arc of contact or belt wrap angle of at least 60 degrees. Non-loaded idler sprockets do not have tooth meshing or wrap angle requirements.

15. Adverse Operating Environments
Debris
Be very careful when using synchronous drives in high debris environments. Debris can be more damaging to the positive belt drive than a V-belt drive, which has a tendency to remove debris from the sheave grooves through drive operation. Entrapment of debris in synchronous drives is a major concern. Debris can be packed into sprocket grooves causing improper belt tooth engagement, reducing belt life and accelerating belt and sprocket wear. Care must be taken to provide adequate shielding to drives in environments where debris is likely. Completely enclosing a synchronous belt drive may be acceptable. Since synchronous belts generate minimal heat during drive operation, air circulation is not critical except where extremely high temperatures already are present. Depending on the type and abrasive characteristics of the debris, excessive wear can be generated on both belt and sprockets.

Temperature
Belt performance is generally unaffected in ambient temperature environments between -30° and 185°F (-34° and 85°C). Temperature extremes beyond these limits should be reviewed by Gates Power Transmission Product Application.

High Humidity/Corrosive Environments
Many industrial applications face problems associated with rusting parts. Numerous applications in the food and beverage industry are located in areas that require periodic washdown. Unless a drive is completely shielded and protected from wash down, rust and corrosion will be rapidly apparent in these types of environments. This is equally true of sprockets when used in very wet or humid environments, such as seen with air moving drives on cooling towers or wood kilns. The constant effects of the wet air surrounding the belt drive can cause excessive rust.

Corrosion attacks sprocket grooves, building up rust deposits. The corrosion will increase over time, building up in the sprocket grooves and non-driving surfaces (flanges, sprocket faces, bushing face). Sprockets with corrosion in the grooves will rapidly wear the belt's teeth and wear through the abrasion resistant tooth fabric, resulting in tooth shear and premature belt failure.

When an application is in a corrosive environment, the designer may elect to use special sprockets and bushings to prevent premature failures. Using special stainless steel sprockets and bushings or electroless nickel-plated sprockets can help eliminate corrosion as a cause of failure on belt drives located in these damaging environments.

Section II
Engineering Design Considerations

All synchronous belt drives require proper installation procedures for optimum performance. In addition, topics such as tooth profile advantages, sprocket rim speed limitations, efficiency, and tolerances are common to all Gates synchronous belt drives.

1. Belt Storage and Handling
2. Center Distance and Belt Length
3. Tooth Profiles
4. Static Conductivity
5. Sprocket Diameter-Speed
6. Efficiency
7. Belt Tolerances
8. Belt Installation Tension
9. Center Distance Allowances for Installation and Tensioning
10. Drive Alignment
11. Belt Installation
12. Belt Pull Calculations
13. Bearing/Shaft Load Calculations
14. Self-Generated Tension

Each of these circumstances and special considerations are reviewed below.

1. Belt Storage and Handling

Storage Recommendations
In order to retain their serviceability and dimensions, proper storage procedures must be followed for synchronous belts. Quite often premature belt failures can be traced to improper belt storage procedures that damaged the belt before it was installed on the drive. By following a few guidelines, these types of belt failures can be avoided.

Recommended
Belts should be stored in a cool and dry environment with no direct sunlight. Ideally, belts should be stored at less than 85°F and with lower than 70% relative humidity.
Belts should be stored in original packaging.

Not Recommended
Belts should not be stored near windows, which may expose the belts to direct sunlight or moisture.

Belts should not be stored near heaters, radiators, or in the direct airflow of heating devices.

Belts should not be stored near any devices that generate ozone such as transformers and electric motors.

Belts should not be stored where they are exposed to solvents or chemicals in the atmosphere.

Do not store belts on the floor unless they are in a protective container. Floor locations are exposed to traffic that may damage the belts.

Do not crimp belts during handling or while being stored. To avoid this, belts must not be bent to diameters smaller than what is recommended (minimum recommended sprocket diameter for inside bends and 1.3 times the minimum recommended sprocket diameter for back side bends). Do not use ties or tape to pull belt spans tightly together near the end of the belt. Do not hang on a small diameter pin that suspends all of the belt weight and bends the belt to a diameter smaller than the minimum recommended sprocket diameter. Improper storage will damage the tensile cord and the belt will fail prematurely. Handle belts carefully when removing from storage and moving to the application.

Storage Effects
Belts may be stored up to six years if properly stored at temperatures less than 85°F and relative humidity less than 70%.

For every 15°F increase in storage temperature above 85°F, the time the belt can be stored without reduced performance decreases by one-half. Belts should never be stored at temperatures above 115°F.

At relative humidity levels above 70%, fungus or mildew may form on stored belts. This has minimal affect on belt performance, but should be avoided if possible. When equipment is stored for prolonged periods of time (over six months), the belt tension should be relaxed so that the belt does not take a set, and the storage environment should meet the 85°F and 70% or less relative humidity condition. If this is not possible, belts should be removed and stored separately in a proper environment.

2. Center Distance and Belt Length
The approximate relationship between a center distance and belt pitch length is given by the following formula:

Formula 11

$$L_p = 2C + 1.57(D + d) + \frac{(D - d)^2}{4C}$$

Where: Lp = belt pitch length, inches
D = diameter of large sprocket, inches
d = diameter of small sprocket, inches
C = center distance, inches

A more precise formula is given below:

Formula 12

$$L_p = 2C \cos \varphi + \frac{\pi (D + d)}{2} + \frac{\pi \varphi (D - d)}{180}$$

Where: Lp = belt pitch length, inches
C = center distance, inches
D = pitch diameter of large sprocket, inches
d = pitch diameter of small sprocket, inches

The approximate center distance can be found by this formula:

$$\varphi = \sin^{-1}\left(\frac{D - d}{2C}\right) \text{ degrees}$$

Formula 13

$$C = \frac{K + \sqrt{K^2 - 32 (D - d)^2}}{16}$$

Where: K = 4 Lp − 6.28 (D+d)
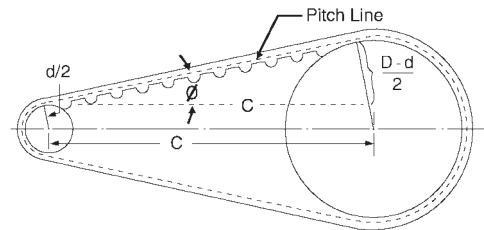
The exact center distance can be calculated using an iterative process between the center distance (Formula 13) and belt length (Formula 12) equations. The exact center distance has been found when the two equations converge. The pitch length increment of a synchronous belt is equal to a multiple of the belt pitch.

3. Tooth Profiles
Conventional trapezoidal belts (MXL, XL, etc.) were the earliest developments of positive drive belts. In more recent years, new curvilinear profiles have entered the market. The most predominant of these profiles is the HTD® system (5mm, 8mm, etc.). While these curvilinear profiles provide many advantages, they also can provide significant disadvantages.

With the development of the Gates GT® tooth profile, the combined advantages of the various curvilinear profiles have now been optimized. Characteristics such as ratcheting resistance, improved load/life and noise reduction were prime factors in the design of the Gates GT profile. Additionally, it allowed optimization in incorporating premium materials into its superior construction.

The GT tooth profile is based on the tractix mathematical function. Engineering handbooks describe this function as a "frictionless" system. This early development by Schiele is described as an involute form of a catenary. With this system, the belt and sprocket teeth move substantially tangentially during entry and exit, thus improving significantly the belts' performance characteristics. This is illustrated in Fig. 6. For information on belt/ sprocket interchangeability between various Gates products as well as interchange with other manufacturers, consult Gates Belt/Sprocket Interchange Guide (12998-B) or contact Power Transmission Product Application.

Figure 6

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4. Static Conductivity

Static discharge can pose a hazard on belt drives that operate in potentially explosive environments. Static discharge can also interfere with radios, electronic instruments, or controls used in a facility. While uncommon, static discharge can also cause bearing pitting if the discharge occurs through the bearing. Static conductivity is a required belt characteristic in these cases in order to prevent static discharge.

The **Rubber Manufacturer's Association** (RMA) has published **Bulletin IP 3-3** for static conductivity. Static conductivity testing involves using an ohmmeter to pass an electrical current with a nominal open circuit 500 volt potential through a belt. The test should be performed with the belt off of the belt drive. The belt's resistance is measured by placing electrodes 8.5 inches apart on the clean driving surface of the belt. A resistance reading of six (6) megohms or more constitutes a test failure. Belts that measure a resistance of 6 megohms or more are considered to be non-conductive. Belts that measure a resistance of less than 6 megohms are considered to be static conductive. A static conductive belt with a resistance of 6 megohms or less has sufficient conductivity to prevent measurable static voltage buildup, thus preventing a static discharge.

When a belt is used in a hazardous environment, additional protection must be employed to assure that there are no accidental static spark discharges. The portion of the belt that contacts the sprocket must be conductive to ensure that static charge is conducted into the drive hardware. Synchronous belts must have a static conductive tooth surface in contact with conductive sprocket grooves. Unusual or excessive debris or contaminant on the belt contact surface or sprocket grooves should be cleaned and removed.

Any belt drive system that operates in a potentially hazardous environment must be properly grounded. A continuous conductive path to ground is necessary to bleed off the static charge. This path includes a static conductive belt, a conductive sprocket, a conductive bushing, a conductive shaft, conductive bearings, and the ground. As an additional measure of protection, a static-conductive brush or similar device should be employed to bleed off any residual static buildup that might remain around the belt. The user must ensure that belt drives operating in potentially hazardous or explosive environments are designed and installed in accordance with existing building codes, OSHA requirements, and/or recognized safety-related organizations.

5. Sprocket Diameter —Speed

Drives shaded in the Belt Width Selection Tables use sprocket diameters that may reduce belt life. The amount of reduction will depend on speed — the higher the speed, the greater the reduction. The drives are included for use where speed ratio or space requirements must be met. Blanks in the lower right-hand portions of the Belt Width Selection Tables occur because sprocket rim speed exceeds 6,500 feet per minute. Centrifugal forces developed beyond this speed may prohibit the use of stock gray cast iron sprockets. For rim speeds above 6,500 feet per minute, contact Gates Power Transmission Product Application for other alternatives.

Sprockets Recommended
For maximum performance, use Gates sprockets

6. Efficiency

When properly designed and applied, PolyChain® GT® Carbon™ belt drive efficiency will be as high as 98%. This high efficiency is primarily due to the positive, no slip characteristic of synchronous belts. Since the belt has a thin profile, it flexes easily, thus resulting in low hysteresis losses as evidenced by low heat buildup in the belt.

Gates synchronous belts are uniquely constructed because they use high performance materials. Optimization of these high-technology features provide maximum performance and efficiency. Synchronous belt drive efficiency can be simply defined as shown in the following equation:

$$\text{Effiicency, percent} = \frac{\text{dN RPM X dN Torque}}{\text{dR RPM X dR Torque}} \text{ X 100}$$

When examining the loss of energy, it is necessary to consider belt losses in terms of shaft torque and shaft speed. Torque losses result from bending stress and friction. Chain drives running unlubricated may generate significant heat build up due to increased friction in the roller joints. Even properly lubricated chains running at higher speeds tend to throw off the oil due to centrifugal forces, making it difficult to maintain proper lubrication at the load bearing surfaces. Consequently, chain drives are typically only 92-98% efficient.

Speed losses result from belt slip and creep. Unlike V-belts, slip is not a factor with synchronous belts. Well maintained V-belt drives are typically in the range of 95-98% efficient. However, on a poorly designed or maintained drive, the efficiency may drop as much as 5% or more. If proper maintenance cannot be scheduled for a V-belt drive or it is located in an inaccessible area, a positive belt drive system should be considered.
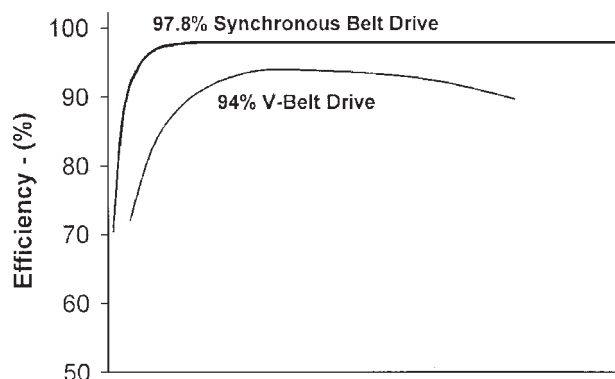
Increasing DriveN Torque

The belt drive is only part of the total system. Motors should be properly sized for the application. They must have sufficient capacity to meet the power needs, yet over designed motors will lead to electrical inefficiencies. DriveN machines also may have inherent inefficiencies which may contribute to overall system efficiency.

7. Belt Tolerances

These tolerances are for reference only. For fixed center drive applications and special tolerances, contact Gates Power Transmission Product Application.

Stock Belt Center Distance Tolerances			
Belt Length	(mm) (in)	**Center Distance Tolerance**	(mm) (in)
over 127 / 5	to 254 / 10	± 0.20 / .008	
over 254 / 10	to 381 / 15	± 0.23 / .009	
over 381 / 15	to 508 / 20	± 0.25 / .010	
over 508 / 20	to 762 / 30	± 0.30 / .012	
over 762 / 30	to 1016 / 40	± 0.33 / .013	
over 1016 / 40	to 1270 / 50	± 0.38 / .015	
over 1270 / 50	to 1524 / 60	± 0.41 / .016	
over 1524 / 60	to 1778 / 70	± 0.43 / .017	
over 1778 / 70	to 2032 / 80	± 0.46 / .018	
over 2032 / 80	to 2286 / 90	± 0.49 / .019	
over 2286 / 90	to 2540 / 100	± 0.52 / .020	
over 2540 / 100	to 2794 / 110	± 0.54 / .021	
over 2794 / 110	to 3048 / 120	± 0.56 / .022	
over 3048 / 120	to 3302 / 130	± 0.58 / .023	
over 3302 / 130	to 3556 / 140	± 0.60 / .024	
over 3556 / 140	to 3810 / 150	± 0.63 / .025	
over 3810 / 150	to 4064 / 160	± 0.66 / .026	
over 4064 / 160	to 4318 / 170	± 0.69 / .027	
over 4318 / 170	to 4572 / 180	± 0.72 / .028	
over 4572 / 180		add ± .03 / .001 for every .254 / 10 increment	

8. Belt Installation Tension

Standard Belt Tensioning Procedure
When installing a Gates belt:

    A. Be sure it is tensioned adequately to prevent tooth jumping (ratcheting) under the most severe load conditions which the drive will encounter during operation.

    B. Avoid extremely high tension which can reduce belt life and possibly damage bearings, shafts and other drive components.

The proper way to check belt tension is to use a tension tester. Gates has a variety of tension testers, ranging from the simple spring scale type tester to the sophisticated Sonic Tension Meter. The spring scale type tester is used by measuring how much force is required to deflect the belt at the center of its span by a specified distance (force deflection method), as shown in the sketch below.
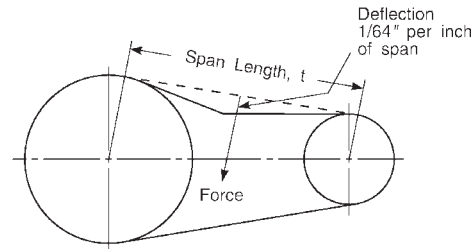
The Sonic Tension Meter measures the vibration of the belt span and instantly converts the vibration frequency into belt static tension (span vibration method).

When you wish to use a numerical method for calculating recommended belt installation tension values, the following procedure may be used.

STEP 1: Calculate the required base static installation tension.

Use Formula 14 to calculate the required base static installation tension.

Formula 14

$$T_{st} = \frac{20HP}{S} + mS^2$$

Where:
    T_{st} = base static installation tension, pounds
    HP = Horsepower
    S = $\dfrac{PD \times RPM}{3820}$
    m = Value from Table 10
    PD = Sprocket Pitch Diameter, inches
    RPM = Revolutions per minute of same sprocket

Table 10

Pitch	Belt Width	m	Y	Minimum T_{st} (lb) per span
8mm	12mm	0.33	65	28
	21mm	0.57	113	49
	36mm	0.97	194	84
	62mm	1.68	335	145
14mm	20mm	0.92	230	119
	37mm	1.69	426	220
	68mm	3.11	782	405
	90mm	4.12	1035	536
	125mm	5.72	1438	744

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Because of the high performance capabilities of Poly Chain® GT® Carbon™ belts, it is possible to design drives that have significantly greater load than are necessary to carry the actual design load. Consequently, Formula 14 can provide Tst values less than are necessary for the belt to operate properly, resulting in poor belt performance and reduced service life. If a more appropriately sized drive cannot be designed, minimum recommended Tst values are provided in Table 10 to assure that the belts function properly when lightly loaded.

Always use the greater T_{st} value; i.e., from T_{st} Formula 14 or Table 10.

NOTE: When applying static belt tension values directly, multiply the required base static installation tension (T_{st}) calculated in Formula 14 by the following factors:

For New Belts:
    Minimum Static Tension = Base Static Tension X 1.1
    Maximum Static Tension = Base Static Tension X 1.2
For Used Belts:
    Minimum Static Tension = Base Static Tension X 0.8
    Maximum Static Tension = Base Static Tension X 0.9

$$t = \sqrt{C^2 - \left(\frac{D-d}{2}\right)^2}$$
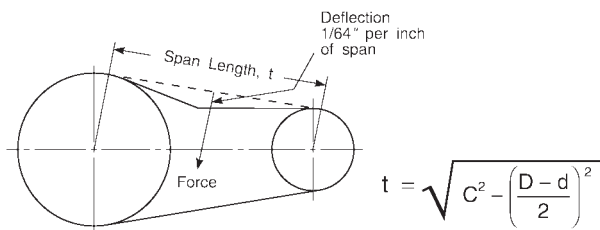
STEP 2: Calculate the minimum and maximum recommended deflection forces.

A. Measure the span length of your drive (see sketch).
B. New belt minimum recommended force:
Formula 15

$$\text{deflection force, Min} = \frac{1.1\ T_{st} + \left(\frac{t}{L}\right)Y}{16}, \text{lb}_f$$

C. New belt maximum recommended force:
Formula 16

$$\text{deflection force, Max.} = \frac{1.2\ T_{st} + \left(\frac{t}{L}\right)Y}{16}, \text{lb}_f$$

Where:
    T_{st} = Base Static tension, lbf
    t = span length, inches
    L = belt pitch length, inches
    Y = constant from Table 10

USED BELT NOTE: For re-installation of a used belt, a recommended tension of 0.8 T_{st} to 0.9 T_{st} value should be used in calculating the deflection forces, instead of the 1.1 T_{st} to 1.2 T_{st} shown for new belts.

STEP 3: Applying the tension.

Force deflection tension method
A. At the center of the span (t) apply a force perpendicular to the span large enough to deflect the belt on the drive 1/64 inch per inch of span length from its normal position. One sprocket should be free to rotate. Be sure the force is applied evenly across the entire belt width. If the belt is a wide synchronous belt, place a piece of steel or angle iron across the belt width and deflect the entire width of the belt evenly.

B. Compare this deflection force with the range of forces calculated in Step 2.
    1. If it is less than the minimum recommended deflection force, the belt should be tightened.
    2. If it is greater than the maximum recommended deflection force, the belt should be loosened.

Span vibration tension method
The Sonic Tension Meter detects the vibration frequency in the belt span, and converts that measurement into the actual static tension in the belt. To use the Sonic Tension Meter, begin by entering the belt unit weight, belt width, and the span length. To measure the span vibration, press the "Measure" button on the meter, tap the belt span, and hold the microphone approximately 1/4" away from the back of the belt. The Sonic Tension Meter will display the static tension, and can also display the span vibration frequency.

The belt unit weights for use with the Gates Sonic Tension Meter are shown in the following table.

Belt Product Family	Belt Cross section	Adjusted Belt Weight (grams/meter)
Poly Chain GT Carbon	8mm	4.7
	14mm	7.9

9. Center Distance Allowances for Installation and Tensioning

Since fixed center drives are not recommended, center distance allowances for a Gates Poly Chain® GT® Carbon™ belt drive are necessary to assure that the belt can be installed without damage and then tensioned correctly. The standard installation allowance is the minimum decrease in center distance required to install a belt when flanged sprockets are removed from their shafts for belt installation. This is shown in the first column of Table 11. This table also lists the minimum increase in center distance required to assure that a belt can be properly tensioned over its normal lifetime. If a belt is to be installed over flanged sprockets without removing them, the additional center distance allowance for installation shown in the second table below must be added to the first table data.

Table 11
Center Distance Allowance For Installation and Tensioning

Length Belt	(mm) (in)	Standard Installation Allowance (Flanged Sprockets Removed For Installation) (mm) (in)	Tension Allowance (All Drives) (mm) (in)
Up to	125 **5**	0.5 **0.02**	0.5 **0.02**
Over **5** 125 to	250 **10**	0.8 **0.03**	0.8 **0.03**
Over **10** 250 to	500 **20**	1.0 **0.04**	0.8 **0.03**
Over **20** 500 to	1000 **40**	1.8 **0.07**	0.8 **0.03**
Over **40** 1000 to	1780 **70**	2.8 **0.10**	0.8 **0.04**
Over **70** 1780 to	2540 **100**	3.3 **0.13**	1.0 **0.04**
Over **100** 2540 to	3300 **130**	4.1 **0.16**	1.3 **0.05**
Over **130** 3300 to	4600 **180**	4.8 **0.19**	1.3 **0.05**
Over **180** 4600 to	6900 **270**	5.6 **0.22**	1.3 **0.05**

Additional Center Distance Allowance For Installation Over Flanged Sprockets*
(Add to Installation Allowance In Table No.11)

Pitch	One Sprocket Flanged (mm) (in)	Both Sprockets Flanged (mm) (in)
8mm	21.8 **0.86**	33.3 **1.31**
14mm	31.2 **1.23**	50.0 **1.97**

*For drives that require installation of the belt over one sprocket at a time, use the value for "Both Sprockets Flanged"

10. Drive Alignment

Provision should be made for center distance adjustment, according to the two tables on this page, or to change the idler position so the belt can be slipped easily onto the drive. When installing a belt, never force it over the flange. This will cause internal damage to the belt tensile member.

Synchronous belts typically are made with high modulus tensile members which provide length stability over the belt life. Consequently, misalignment does not allow equal load distribution across the entire belt top width. In a misaligned drive, the load is being carried by only a small portion of the belt top width, resulting in uneven belt wear and premature tensile failure.

There are two types of misalignment: parallel and angular (See Fig.7). Parallel misalignment is where the driveR and driveN shafts are parallel, but the two sprockets lie in different planes. When the two shafts are not parallel, the drive is angularly misaligned.

A fleeting angle is the angle at which the belt enters and exits the sprocket, and equals the sum of the parallel and angular misalignments.

Any degree of sprocket misalignment will result in some reduction of belt life, which is not accounted for in the normal drive design procedure. Misalignment of all synchronous belt drives should not exceed 1/4° or 1/16" per foot of linear distance. Misalignment should be checked with a good straight edge or by using a laser alignment tool. The straight edge tool should be applied from driveR to driveN, and then from driveN to driveR so that the total effect of parallel and angular misalignment is made visible.

Figure 7

PARALLEL MISALIGNMENT

ANGULAR MISALIGNMENT

FLEETING ANGLE
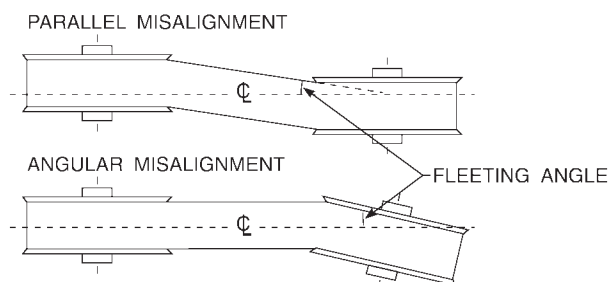
Drive misalignment can also cause belt tracking problems. However, light flange contact by the belt is normal and won't affect performance.

For those drives in which the center distance is greater than eight times the small sprocket diameter, belt tracking can be a problem. In these cases, the parallel position of the two sprockets may need to be adjusted until only one flange guides the belt in the system and the belt tracks fully on all sprockets. Regardless of the drive center distance, the optimum drive performance will occur with the belt lightly contacting one flange in the system. The worst case is for the belt to contact flanges on opposite sides of the system. This traps the belt between opposite flanges and can force the belt into undesirable parallel misalignment.

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Improper installation of the bushing can result in the bushing/sprocket assembly being "cocked" on the shaft. This leads to angular misalignment and sprocket wobble. Be sure to follow the instructions provided with the bushings.

11. Belt Installation

During the belt installation process, it is very important the belt be fully seated in the sprocket grooves before applying final tension. Serpentine drives with multiple sprockets and drives with large sprockets are particularly vulnerable to belt tensioning problems resulting from the belt teeth being only partially engaged in the sprockets during installation. In order to prevent these problems, the belt installation tension should be evenly distributed to all belt spans by rotating the system by hand. After confirming that belt teeth are fully engaged in the sprocket grooves, belt tension should be rechecked and verified. Failure to do this may result in an undertensioned condition with the potential for belt ratcheting.

12. Belt Pull Calculations

When the machine designer requests shaft load calculations from the drive designer, the following procedure can be applied:

A. Calculate Belt Span Tensions

Belt pull is the vector sum of T_T and T_S, the tightside and slackside tensions. T_T and T_S may be calculated using the following formulas:

Formula 17

$$T_T = \frac{144,067 \; HP}{(PD)(RPM)}$$

Formula 18

$$T_S = \frac{18,008 \; HP}{(PD)(RPM)}$$

Where: HP = Horsepower
PD = Sprocket Pitch Diameter (in)
RPM = Sprocket Speed (rev/min)

B. Solution For Both Magnitude and Direction

The vector sum of T_T and T_S can be found so that the direction of belt pull, as well as magnitude, is known. This is necessary if belt pull is to be vectorially added to sprocket weight, shaft weight, etc., to find true bearing loads. In this case, the easiest method of finding the belt pull vector is by graphical addition of T_T and T_S. If only the magnitude of belt pull is needed, numerical methods for vector additions are faster to use.

If both direction and magnitude of belt pull are required, the vector sum of T_T and T_S can be found by graphical vector addition as shown in Fig. 8. T_T and T_S vectors are drawn to a convenient scale and parallel to the tightside and slackside, respectively. Fig. 8 shows vector addition for belt pull on the motor shaft. The same procedures can be used for finding belt pull on the driveN shaft. This method may be used for drives using three or more sprockets or idlers.

For two-sprocket drives, belt pull on the driveR and driveN shafts is equal but opposite in direction. For drives using idlers, both magnitude and direction may be different.

C. Solution For Magnitude Only

If only the magnitude of belt pull is needed, follow the steps below. Use this method for drives with two sprockets. Use the graphical method shown if the drive uses idlers.

1. Add T_T and T_S

2. Using the value of $\frac{D - d}{C}$ for the drive, find the vector sum correction factor using Fig. 9, where:

D = large diameter
d = small diameter
C = center distance

Or, use the arc of contact on the small sprocket if known.

3. Multiply the sum of T_T plus T_S by the vector sum correction factor to find the vector sum of T_T plus T_S.
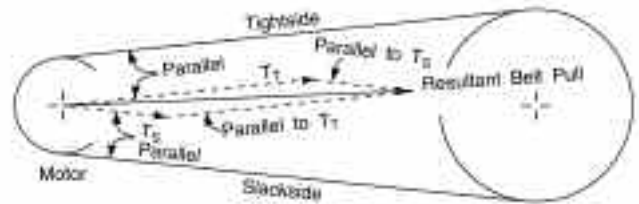
Figure 8
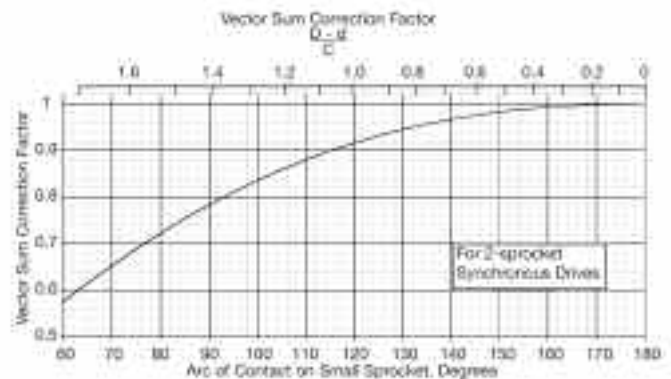
Figure 9

13. Bearing/Shaft Load Calculations

A. Shaft Load Calculations

If true side load on the shaft, including sprocket weight, is desired, the sprocket weight can be added to the belt pull using the same graphical method shown in Fig. 8. The sprocket weight vector is vertical toward the ground. Weights for standard sprockets are shown in the sprocket specification tables.

B. Bearing Load Calculations

In order to find actual bearing loads, it is necessary to know weights of machine components and the value of all other forces contributing to the load. However, it is sometimes desirable to know the bearing load contributed by the synchronous drive alone. Bearing loads resulting from a synchronous belt drive can be calculated knowing bearing placement with respect to the sprocket center and the shaft load as previously calculated. For rough estimates, machine designers sometimes use belt pull alone, ignoring sprocket weight. If accuracy is desired, or if the sprocket is unusually heavy, actual shaft load values including sprocket weight should be used.

C. Overhung Sprocket
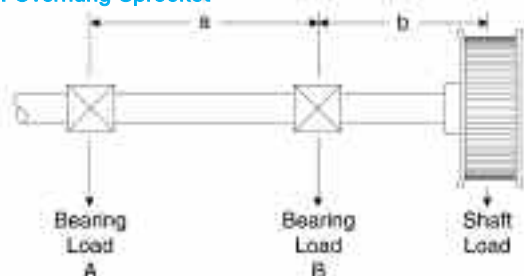
Figure 10

Formula 19

$$\text{Load at B, (lb)} = \frac{\text{Shaft Load} \times (a + b)}{a}$$

Formula 20

$$\text{Load at A, (lb)} = \text{Shaft Load} \times \frac{b}{a}$$

Where: a and b = spacing, (in), per Fig. 10

D. Sprocket Between Bearings
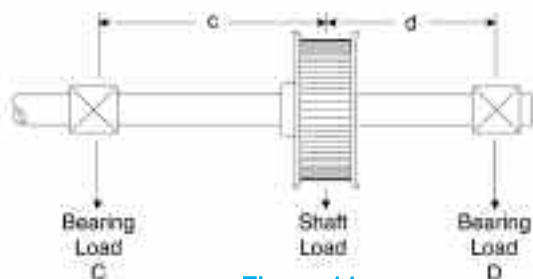
Figure 11

Formula 21

$$\text{Load at D (lb)} = \frac{\text{Shaft Load} \times c}{(c + d)}$$

Formula 22

$$\text{Load at C (lb)} = \frac{\text{Shaft Load} \times d}{(c + d)}$$

Where: c and d = spacing (in), per Fig. 11

14. Self-Generated Tension

All synchronous belt drives exhibit a self-generating or self-tightening characteristic when transmitting a load. Laboratory testing has shown this characteristic to be similar with all tooth profiles. The designer/user should be aware that self-tensioning can result in increased bearing and shaft loads and reduced drive performance; i.e., short belt life. This can be avoided by following proper tensioning procedures.

While belt overtensioning can impose higher bearing and shaft loads and lead to reduced belt life, undertensioning can result in self-tensioning. Properly designed and tensioned drives will not be significantly affected by self-generated tension.

When a belt is too loose for the design load, the self-tensioning characteristic results in the belt teeth climbing out of the sprocket grooves, leading to increased stresses on the belt teeth, accelerated tooth wear and reduced belt life. When a belt is severely undertensioned, this self-tensioning characteristic can result in the belt ratcheting (jumping teeth). When this occurs, significant shaft separation forces are instantaneously developed in the drive, resulting in damage to bearings, shafts, and other drive components including the belt.

NOTE: This is true for all synchronous belts.

Maximum drive performance and belt life are achieved when the belt is properly tensioned for the design load and maintained.

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Troubleshooting

Symptom	Diagnosis	Possible Remedy
Unusual noise	Misaligned drive	Correct alignment
	Too low or high belt tension	Adjust tension to recommended value
	Backside idler	Use inside idler
	Worn sprocket	Replace sprocket
	Bent guide flange	Replace sprocket/flange
	Belt speed too high	Redesign drive
	Incorrect belt profile for the sprocket (i.e., HTD® etc.)	Use proper Gates Poly Chain® GT® Carbon™ belt/sprocket
	Subminimal diameter	Redesign drive using larger diameters
	Excess load	Redesign drive for increased capacity
Tension loss	Weak support structure	Reinforce the structure
	Excessive sprocket wear	Use alternate sprocket material
	Fixed (nonadjustable) centers	Use inside idler for belt adjustment
	Excessive debris	Protect drive
	Excessive load	Redesign drive for increased capacity
	Subminimal diameter	Redesign drive using larger diameters
	Belt, sprockets or shafts running too hot	Check for conductive heat transfer from prime mover
	Unusual belt degradation, such as softening or melting	Reduce ambient drive temperature to 180°F maximum
Belt tracking	Belt running partly off unflanged sprocket	Correct alignment
	Centers exceed 8 times small sprocket	Correct parallel alignment to set belt to track on both sprockets
	Excessive belt edge wear	Correct alignment
Flange failure	Belt forcing flanges off	Correct alignment or properly secure flange to sprocket
Excessive belt edge wear	Damage due to handling	Follow proper handling instructions
	Flange damage	Repair flange or replace sprocket
	Belt too wide	Use proper width sprocket
	Belt tension too low	Adjust tension to recommended value
	Rough flange surface finish	Replace or repair flange (to eliminate abrasive surface)
	Improper tracking	Correct alignment
	Belt hitting drive guard or bracketry	Remove obstruction or use inside idler
Premature tooth wear	Too low or high belt tension	Adjust tension to recommended value
	Belt running partly off unflanged sprocket	Correct alignment
	Misaligned drive	Correct alignment
	Incorrect belt profile for the sprocket (i.e., HTD, etc.)	Use proper Gates Poly Chain® GT® Carbon™ belt/sprocket
	Worn sprocket	Replace sprocket
	Rough sprocket teeth	Replace sprocket
	Damaged sprocket	Replace sprocket
	Sprocket not to dimensional specification	Replace sprocket
	Belt hitting drive bracketry or other structure	Remove obstruction or use inside idler
	Excessive load	Redesign drive for increased capacity
	Insufficient hardness of sprocket material	Use a more wear-resistant material
	Excessive debris	Protect belt
	Cocked bushing/sprocket assembly	Install bushing per instructions

Troubleshooting

Symptom	Diagnosis	Possible Remedy
Tooth shear	Excessive shock loads Less than 6 teeth-in-mesh Extreme sprocket runout Worn sprocket Backside idler Incorrect belt profile for the sprocket (i.e., HTD®, etc.) Misaligned drive Belt undertensioned	Redesign drive for increased capacity Redesign drive Replace sprocket Replace sprocket Use inside idler Use proper Gates Poly Chain® GT® Carbon™ belt/sprocket Correct alignment Adjust tension to recommended value
Tensile break	Excessive shock load Subminimal diameter Improper belt handling and storage prior to installation Debris or foreign object in drive Extreme sprocket runout Sprocket has too little wear resistance (i.e., plastic, aluminum, softer metals)	Redesign drive for increased capacity Redesign drive using larger diameters Follow proper handling and storage procedures Protect drive Replace sprocket Use alternate sprocket material
Belt cracking	Backside idler Extreme low temperature startup Extended exposure to harsh chemicals Cocked bushing/sprocket assembly Misaligned drive Too low or too high belt tension	Use inside idler Preheat drive environment Protect drive Install bushing per instructions Correct alignment Adjust tension to recommended value

Excessive temperature
    (belt, bearing, housing,
    shafts, etc.)
	Incorrect belt profile (i.e. HTD, etc.)
	Incorrect belt profile for the sprocket (i.e. HTD, etc.)
		Use proper Gates Poly Chain® GT® Carbon™ belt/sprocket
		Use proper Gates Poly Chain® GT® Carbon™ belt/sprocket

Vibration	Too low or too high belt tension Bushing or key loose	Adjust tension to recommended value Check and reinstall per instructions

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Standard Calculations

Required	Given	Formula
Speed ratio (R)	Shaft speeds (rpm)	$R = \dfrac{\text{rpm (faster shaft speed)}}{\text{rpm (slower shaft speed)}}$
	Pulley diameter (D & d)	$R = \dfrac{D \text{ (larger pulley diameter)}}{d \text{ (smaller pulley diameter)}}$
	Number of pulley grooves (N & n)	$R = \dfrac{N \text{ (larger pulley groove no.)}}{n \text{ (smaller pulley groove no.)}}$
Horsepower (hp) (33,000 lb-ft/min)	Torque (T) in lb-in Shaft speed (rpm)	$hp = \dfrac{T \times rpm}{63,025}$
	Effective tension (Te) in lb. Shaft speed (rpm)	$hp = \dfrac{Te \times V}{33,000}$
Design horsepower (Dhp)	Rated horsepower (hp) Service factor (SF)	$Dhp = hp \times SF$
Power (kw)	Horsepower (hp)	$kw = .7457 \times hp$
Torque (T) in lb-in	Shaft horsepower (hp) Shaft speed (rpm)	$T = \dfrac{63,025 \times hp}{rpm}$
	Effective tension (Te) in lb. Pulley radius (R) in inches	$T = Te \times R$
Torque (T) in N-mm	Torque (T) in lb-inches	$T = 112.98 \times T$
Belt velocity in ft/min	Pulley pd in inches Pulley speed in rpm	$V = \dfrac{pd \times rpm}{3.82}$
Belt velocity in m/s	Pulley pd in mm Pulley speed in rpm	$V = .0000524 \times pd \times rpm$
Belt pitch length (PL) in inches (approximate)	Center distance (C) in inches Pulley diameters (D & d) in inches	$PL = 2C + [1.57 \times (D + d)] + \dfrac{(D - d)^2}{(4C)}$
Arc of contact on smaller pulley (A/Cs)	Pulley diameters (D & d) in inches Center distance (C) in inches	$A/Cs = 180 - \left[\dfrac{(D - d) \times 60}{(4C)} \right]$
Torque (T) due to flywheel effect (WR2) in lb-inches (accel. and/or decel.)	Final speed (RPM) Initial speed (rpm) Flywheel effect (WR^2) in lb-ft^2 Time (t) in seconds	$T = \dfrac{.039 \times (RPM - rpm) \times WR^2}{t}$
Flywheel effect (WR^2) in lb-ft^2	Face width of rim (F) in inches Material density (Z) in lbs/in^3 Outside rim diameter (D) in inches Inside rim diameter (d) in inches	$WR^2 = \dfrac{F \times Z \times (D^4 - d^4)}{1467}$

Useful Formulas and Calculations

Power Transmission Conversions

FORCE CONVERSION CONSTANTS

Metric to U.S.
Newtons x 3.5969 = Ounces$_f$
Newtons x 0.2248 = Pounds$_f$
Kilograms$_f$ x 2.2046 = Pounds$_f$

U.S. to Metric
Ounces$_f$ x 0.2780 = Newtons
Pounds$_f$ x 4.4482 = Newtons
Pounds$_f$ x 0.4536 = Kilograms$_f$

Metric to Metric
Kilograms$_f$ x 9.8067 = Newtons
Newtons x 0.1020 = Kilograms$_f$

TORQUE CONVERSION CONSTANTS

Metric to U.S.
Newton Meters x 141.6119 = Ounce$_f$ Inches
Newton Meters x 8.8508 = Pound$_f$ Inches
Newton Meters x 0.7376 = Pound$_f$ Feet

U.S. to Metric
Ounce$_f$ Inches x 0.0071 = Newton Meters
Pound$_f$ Inches x 0.1130 = Newton Meters
Pound$_f$ Feet x 1.3558 = Newton Meters

Metric to Metric
Newton Meters x 10.1972 = Kilogram$_f$ Centimeters
Kilogram$_f$ Centimeters x 0.0981 = Newton Meters
Newton Meters x 0.1020 = Kilogram$_f$ Meters
Kilogram$_f$ Meters x 9.8067 = Newton Meters

POWER CONVERSION CONSTANTS

Metric to U.S.
Kilowatt x 1.3410 = Horsepower
Watt x 0.0013 = Horsepower

U.S. to Metric
Horsepower x 745.6999 = Watt
Horsepower x 0.7457 = Kilowatt

LINEAR BELT SPEED CONVERSION CONSTANTS

Metric to U.S.
Meters per second x 196.8504 = Feet per Minute

U.S. to Metric
Feet per Minute x 0.005080 = Meters per Second
Square Miles x 2.5900 = Square Kilometers

U.S. to U.S.
Feet per Second x 60.00 = Feet per Minute
Feet per Minute x 0.0167 = Feet per Second

Other Conversions

LENGTH CONVERSION CONSTANTS

Metric to U.S.
Millimeters x 0.0394 = Inches
Meters x 39.3701 = Inches
Meters x 3.2808 = Feet
Meters x 1.0936 = Yards
Kilometers x 3280.84 = Feet
Kilometers x 0.6214 = Statute Miles
Kilometers x 0.5396 = Nautical Miles

U.S. to Metric
Inches x 25.4000 = Millimeters
Inches x 0.0254 = Meters
Feet x 0.3048 = Meters
Yards x 0.9144 = Meters
Feet x 0.0003048 = Kilometers
Statute Miles x 1.6093 = Kilometers
Nautical Miles x 1.8532 = Kilometers

AREA CONVERSION CONSTANTS

Metric to U.S.
Square Millimeters x 0.0016 = Square Inches
Square Centimeters x 0.1550 = Square Inches
Square Meters x 10.7639 = Square Feet
Square Meters x 1.1960 = Square Yards
Hectares x 2.4711 = Acres
Square Kilometers x 247.105 = Acres
Square Kilometers x 0.3861 = Square Miles

U.S. to Metric
Square Inches x 645.160 = Square Millimeters
Square Inches x 6.4516 = Square Centimeters
Square Feet x 0.0929 = Square Meters
Square Yards x 0.8361 = Square Meters
Acres x 0.4047 = Hectares
Acres x 0.004047 = Square Kilometers
Square Miles x 2.5900 = Square Kilometers

Useful Formulas and Calculations

WEIGHT CONVERSION CONSTANTS

Metric to U.S.

Grams x 15.4324 = Grains

Grams x 0.0353 = Ounces (Avd.)

Grams x 0.0338 = Fluid Ounces (water)

Kilograms x 35.2740 = Ounces (Avd.)

Kilograms x 2.2046 = Pounds (Avd.)

Metric Tons (1000 Kg) x 1.1023 = Net Ton (2000 lbs.)

Metric Tons (1000 Kg) x 0.9842 = Gross Ton (2240 lbs.)

U.S. to Metric

Grains x 0.0648 = Grams

Ounces (Avd.) x 28.3495 = Grams

Fluid Ounces (water) x 29.5735 = Grams

Ounces (Avd.) x 0.0283 = Kilograms

Pounds (Avd.) x 0.4536 = Kilograms

Net Ton (2000 lbs.) x 0.9072 = Metric Tons (1000 Kg)

Gross Ton (2240 lbs.) x 1.0160 = Metric Tons (1000 Kg)

DECIMAL AND MILLIMETER EQUIVALENTS OF FRACTIONS

Inches				Inches		
Fractions		Decimals	Millimeters	Fractions		Decimals	Millimeters
1/64		.015625	.397	33/64		.515625	13.097
	1/32	.03125	.794		17/32	.53125	13.494
3/64		.046875	1.1911	35/64		.546875	13.89
	1/16	.0625	1.588		9/16	.5625	14.288
5/64		.078125	1.984	37/64		.578125	14.684
	3/32	.09375	2.3811		19/32	.59375	15.08
7/64		.109375	2.778	39/64		.609375	15.478
	1/8	.125	3.175		5/8	.625	15.875
9/64		.140625	3.572	41/64		.640625	16.272
	5/32	.15625	3.969		21/32	.65625	16.669
11/64		.171875	4.366	43/64		.671875	17.066
	3/16	.1875	4.763		11/16	.6875	17.463
13/64		.203125	5.159	45/64		.703125	17.859
	7/32	.21875	5.556		23/32	.71875	18.256
15/64		.234375	5.953	47/64		.734375	18.653
	1/4	.250	6.350		3/4	.750	19.050
17/64		.265625	6.7477	49/64		.765625	19.44
	9/32	.28125	7.144		25/32	.78125	19.844
19/64		.296875	7.5411	51/64		.796875	20.24
	5/16	.3125	7.938		13/16	.8125	20.638
21/64		.328125	8.334	53/64		.828125	21.034
	11/32	.34375	8.731		27/32	.84375	21.431
23/64		.359375	9.128	55/64		.859375	21.828
	3/8	.375	9.525		7/8	.875	22.225
25/64		.390625	9.922	57/64		.890625	22.622
	13/32	.40625	10.319		29/32	.90625	23.019
27/64		.421875	10.716	59/64		.921875	23.416
	7/16	.4375	11.113		15/16	.9375	23.813
29/64		.453125	11.509	61/64		.953125	24.209
	15/32	.46875	11.906		31/32	.96875	24.606
31/64		.484375	12.303	63/64		.984375	25.003
	1/2	.500	12.700		1	1.000	25.400

Synchronous Belt Product Design Catalogs

Gates Synchronous Belt Products	Pitch	For Design Information Refer to:
Poly Chain® GT® Carbon™	8mm, 14mm	Poly Chain® GT® Carbon™ Belt Drive Design Manual Catalog 17595
PowerGrip® GT®2	5mm, 8mm, 14mm, 20mm	PowerGrip® GT2® Belt Drive Design Manual 17195
PowerGrip® GT®2	2mm, 3mm	Light Power & Precision Drives Design Manual Catalog 17183
PowerGrip® HTD®	3mm, 5mm	Light Power & Precision Drives Design Manual Catalog 17183
PowerGrip® Timing	XL, L, H	PowerGrip GT2 Belt Drive Design Manual 17195
PowerGrip® Timing	MXL, XL	Light Power & Precision Drives Design Manual Catalog 17183
Poly Chain® GT2® Long Length Belting	8mm,14mm	Polychain GT Carbon Belt Drive Design Manual 17595
PowerGrip® Timing Long Length Belting	MXL, XL, L, H	PowerGrip GT2 Belt Drive Design Manual 17195
PowerGrip® HTD Long Length Belting	3mm, 5mm, 8mm, 14mm	PowerGrip GT2 Belt Drive Design Manual 17195
PowerGrip® GT® Long Length Belting	2mm, 3mm, 5mm, 8mm	PowerGrip GT2 Belt Drive Design Manual 17195
Twin Power®	XL, L, H PowerGrip Timing, 8mm, 14mm	PowerGrip GT2 Belt Drive Design Manual 17195

DRIVE DESIGN SOFTWARE

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This software assists designers in quickly selecting optimum drive solutions.

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