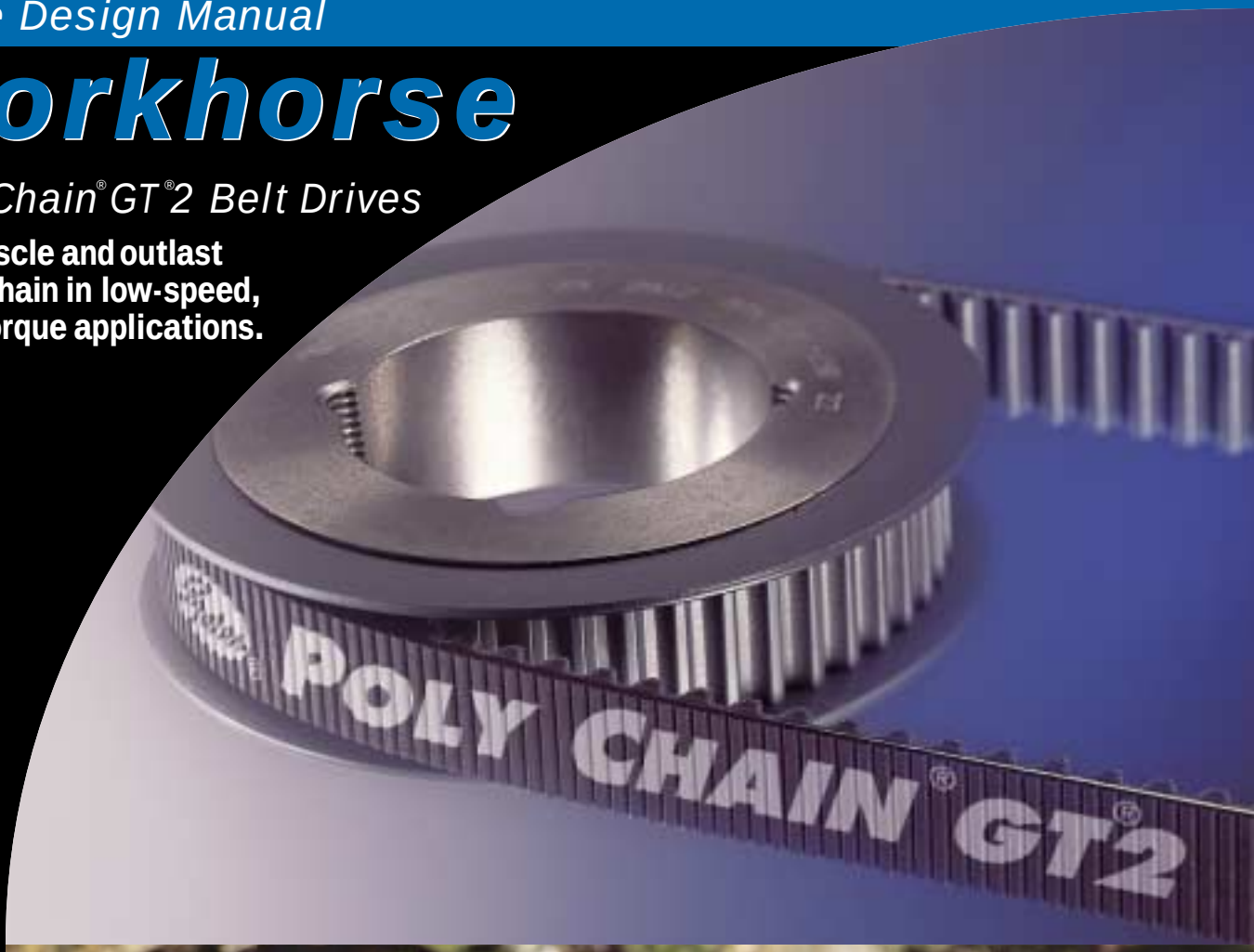
Drive Design Manual

Workhorse

Poly Chain® GT®2 Belt Drives

Outmuscle and outlast roller chain in low-speed, high-torque applications.



Gates®

THE DRIVING FORCE IN POWER TRANSMISSION

NOTE: Click on the desired item or page number to jump directly to that page.

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. The Gates Rubber Company has prepared this complete Poly Chain® GT® 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.

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The Gates Rubber Company
Denver, Colorado 80217

Printed in U.S.A.

Low speed. High speed. And any speed in between.
Gates has your total synchronous belt drive system solution!

Synchronous belt drives are being used more extensively than ever for the transfer of power from one shaft to another, multiplication of torque, speed reduction or increase, and synchronization of shaft operations.

Gates, the world's recognized leader in synchronous belt technology, continues to meet all your needs for synchronous belts, sprockets and bushings across the broadest range of industry applications. Choose from a full line of quality products featuring leading-edge technologies that deliver the advantages you're looking for:

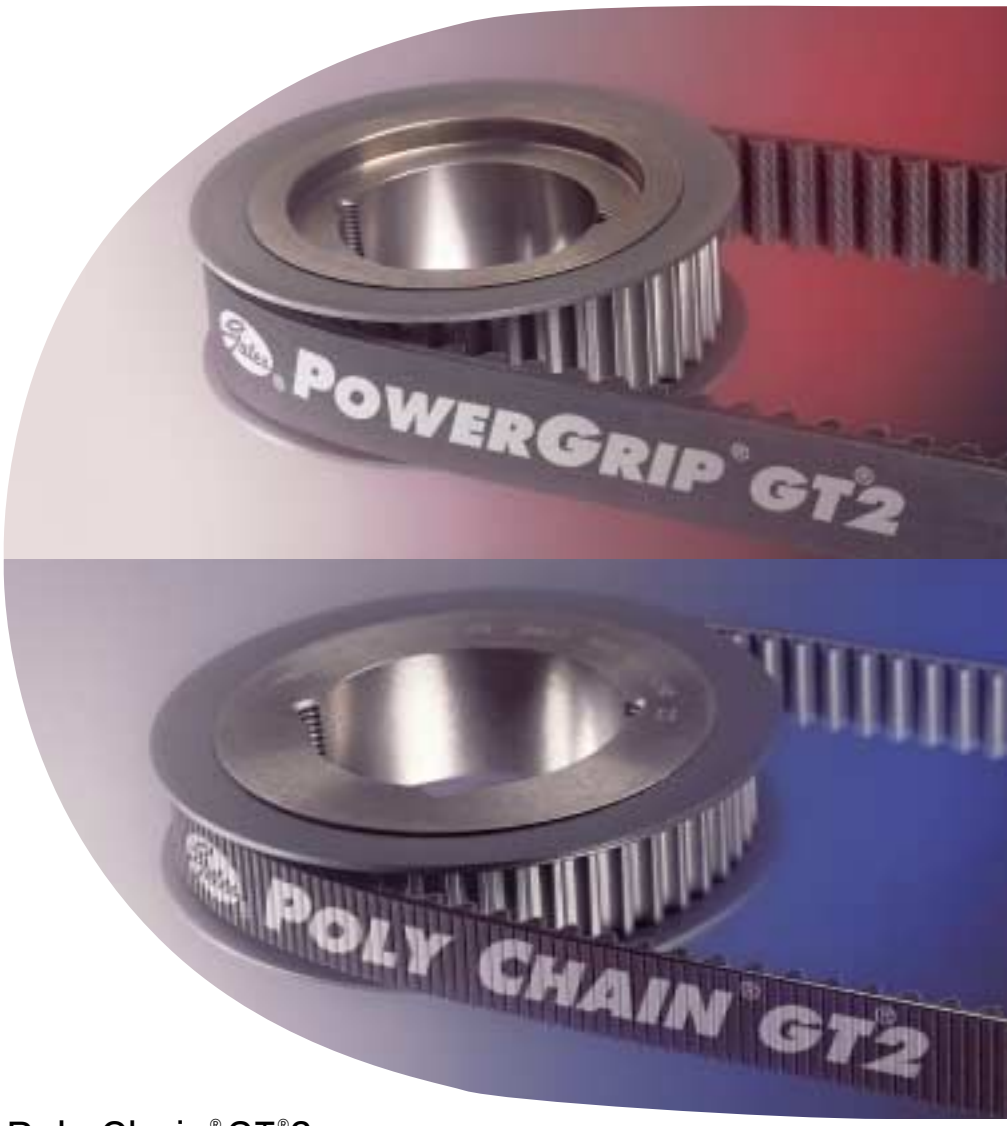
- ***Reduced downtime***
- ***Reduced over-all drive cost***
- ***Reduced drive package size***
- ***Increased component life***
- ***Increased performance***
- ***Energy savings***
- ***Reduced acquisition costs***
- ***Reduced transaction costs***
- ***Increased drive design options***

New, improved synchronous belt lines.

The latest innovations in Gates synchronous drive systems are two redesigned and reengineered belt and sprocket lines. They are the clear winners in overall cost, drive selection options and performance when compared to any other belt drive products on the market today.

PowerGrip® GT®2

The Racehorse. *This is the performance choice for a wide variety of high-speed (above 500 rpm) drive applications. PowerGrip GT2 will deliver more power at a lower overall cost than any other rubber synchronous belt drive system available.*



Poly Chain® GT®2

The Workhorse. *This is the optimal choice in meeting your needs for low-speed (below 500 rpm), high-torque drive applications. The powerful Poly Chain GT2 polyurethane belt drive system will outperform roller chain drives and any rubber belt drive system on the market today, delivering the lowest-cost belt drive system available for low-speed, high-torque applications.*

And we can prove it!

Taper-Lock® sprockets & bushings.

Poly Chain GT2 and PowerGrip GT2 belt drive systems feature Taper-Lock bushings. Advantages of the Taper-Lock system include:

- ***Industry-proven robustness***
- ***True running, concentric***
- ***Extensive use in roller chain sprockets***
- ***Easy installation and removal***
- ***Allows compact sprocket hub designs***
- ***Short length-thru-bore dimensions***
- ***Flush mount with no protruding hubs***
- ***Installs with less axial sprocket movement than other bushing systems***

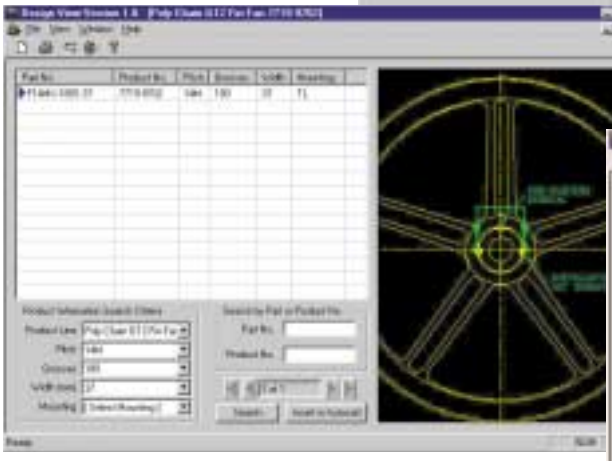
Made-to-order sprockets.

Gates Made-to-Order (MTO) Metal Department supports synchronous MTO sprockets with 90% of Requests For Quote (RFQ) provided within 48 hours and 84% of quotes provided within 24 hours. Quoted delivery dates are met at a 97% rate and most deliveries are made within four weeks. Call 800-709-6001 for more information.

Gates Compass® CD-ROM: selection, maintenance, and design tool.

The Gates Compass CD-ROM is a powerful tool offering a variety of useful information and features. It makes choosing the right drive system fast and easy. Compass contains *Design Flex™ II, Design View™ and Design OHL™* for invaluable assistance in product selection, drive design, energy savings calculations, installation and system cost savings. The CD also contains eight instructional videos covering topics such as belt drive troubleshooting, tensioning, safety and installation. The Compass CD-ROM is available through authorized Gates Industrial Power Transmission Distributors.

▲ **Design Flex II™**



▲ **Design View™**

Design OHL™ ▶

A partnership commitment.

To ensure that you get the synchronous drive systems that are right for your applications, Gates provides the industry's leading support program and the largest distributor network. You get local inventory availability and a single source for all your needs. You also get access to Gates Product Application Engineering Support for unmatched design and problem-solving expertise in every aspect of synchronous drive operation. You're backed by the industry's largest manufacturer's field sales force, voted number one in a recent *Selling Power* magazine survey. Your Gates representatives are experts in the products they market and provide a variety of in-house and on-site training programs. Nobody is as committed to supporting you as Gates!

It's obvious! Gates is your total synchronous drive solution.

With industry-leading technologies, a complete line of high quality, top-performing products, and unmatched customer support, it's easy to see that Gates is the partner to choose in meeting all your needs for synchronous belt drive systems.

®Taper-Lock is a registered trademark of the Reliance Electric Corporation.

Poly Chain GT2

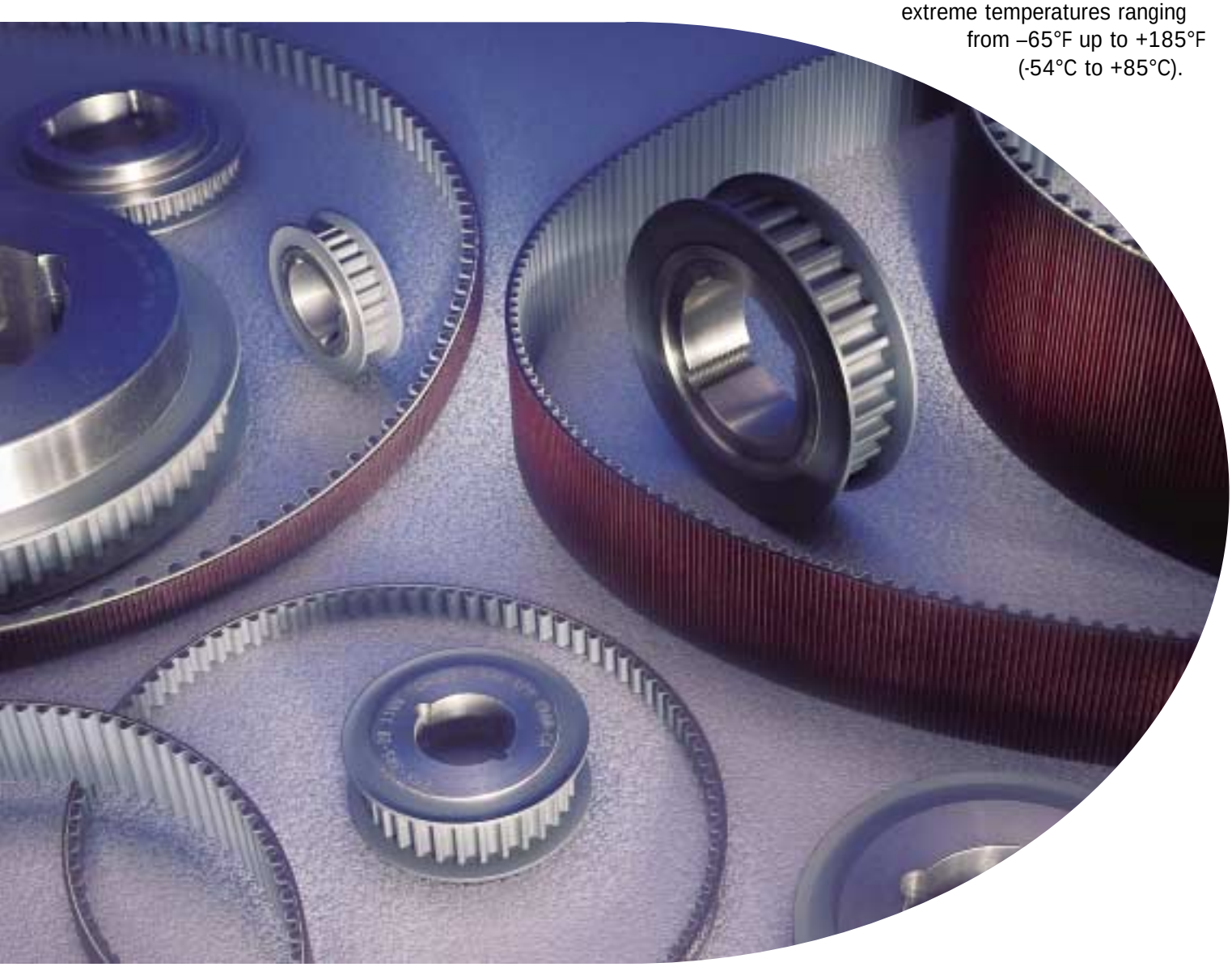
New Poly Chain GT2 is Gates most powerful synchronous belt, ideally suited for low-speed (below 500 rpm), high torque industrial applications. This improved belt features a polyurethane body with a robust aramid fiber tensile cord and new nylon tooth facing—improvements that enable increased load-carrying capacity. Size for size, space for space, Poly Chain GT2 transmits up to 30 percent more power than its predecessor. It also permits the design of more compact, lighter weight drives that deliver more power in less space than any other belt drive system available.

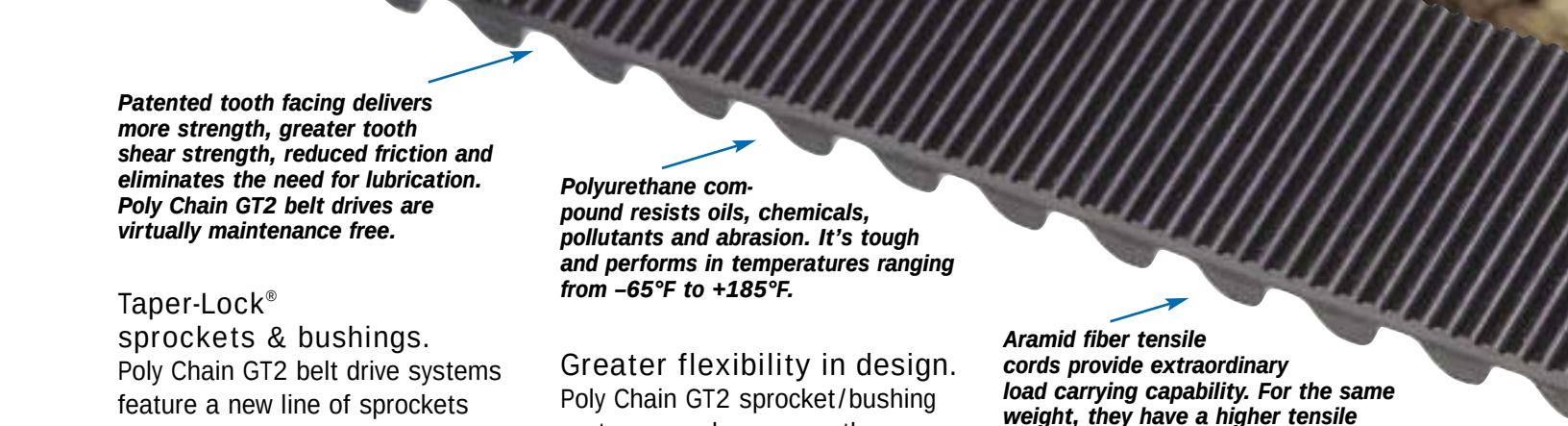
Poly Chain GT2 is the result of innovative state-of-the-art design and engineering. The body and teeth are made of a durable polyurethane compound, specially blended for uncompromising adhesion to the tensile cords and heavy nylon tooth facing, allowing for increased tooth shear strength and excellent flex life. The result is ***the toughest belt on the market*** by far, virtually immune to abrasion and chemical attack.

Poly Chain GT2 performs flawlessly, even under the harshest operating conditions.

The aramid fiber tensile cords constitute the belt's muscle. The cord provides exceptional flex fatigue life and its high impact strength makes the belt resistant to shock and surge loading. Poly Chain GT2 drives dramatically reduce maintenance costs, expensive production downtime and noise problems associated with the metal-to-metal contact of roller chain drives.

The nylon fabric covering the teeth is highly resistant to oil, chemicals, pollutants, corrosion and abrasion, while providing excellent tooth shear strength and durability. Poly Chain GT2 belts are exceptionally durable and remain fully operational under extreme temperatures ranging from –65°F up to +185°F (-54°C to +85°C).





Patented tooth facing delivers more strength, greater tooth shear strength, reduced friction and eliminates the need for lubrication. Poly Chain GT2 belt drives are virtually maintenance free.

Polyurethane compound resists oils, chemicals, pollutants and abrasion. It's tough and performs in temperatures ranging from –65°F to +185°F.

Aramid fiber tensile cords provide extraordinary load carrying capability. For the same weight, they have a higher tensile modulus than steel for incredible strength and virtually zero elongation. Exceptional flex fatigue characteristics combined with the ability to absorb shock loads make Poly Chain GT2 the ideal drive system choice for low-speed high-torque applications.

Taper-Lock® sprockets & bushings.

Poly Chain GT2 belt drive systems feature a new line of sprockets that have been redesigned to carry the new increased belt power ratings. These new sprockets utilize the Taper-Lock bushing system that has been tested and proven in industry for many years. This allows easy sprocket installation and removal and keeps the hubs narrow so the length-thru-bore dimension is less than ever before. Now, Poly Chain GT2 sprockets will fit on those applications with short shafts, with room to spare.

In addition, the left-justified hub design allows shaft mounting close to outboard bearings. This keeps the center of load dimension small, so overhung load values are as low as possible—lower than any competitive belt drive system.

Poly Chain GT2 is the ideal candidate for low-speed and speed reducer applications. Its high load carrying capacity is unmatched by any competitive belt drive system, allowing drive designs in widths narrower than ever before, approaching roller chain drive systems.

More horsepower in less space for less cost.

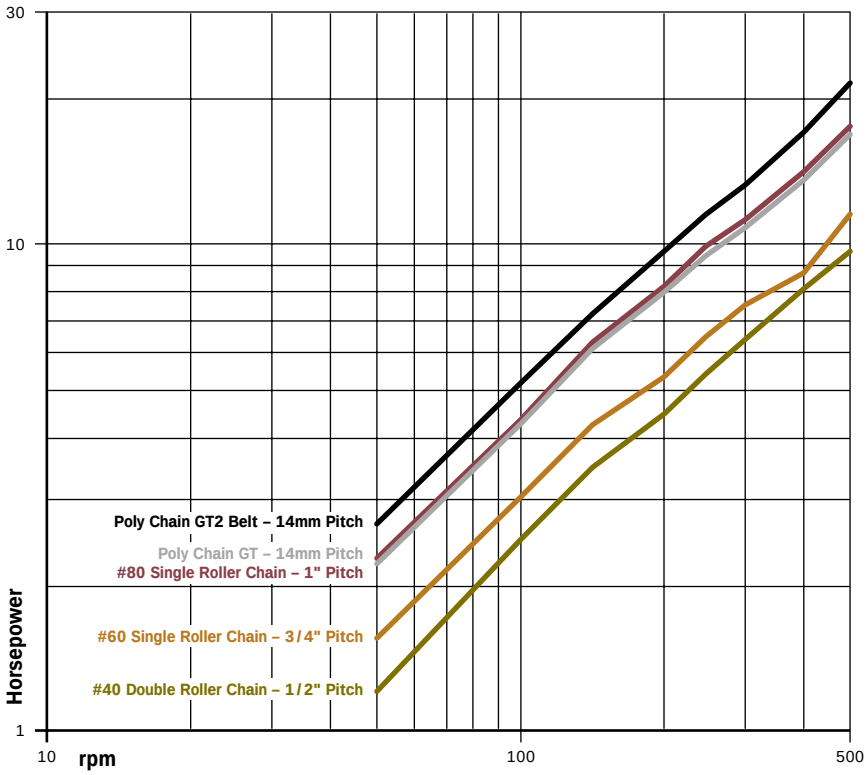
From low-speed fractional horsepower drives to more than 1,200 horsepower, Poly Chain GT2 drives are unsurpassed in transmitting positive power over a wide range of loads, while withstanding power surges and shock loading. Think of all the places you could use a drive system like that!

Greater flexibility in design.

Poly Chain GT2 sprocket/bushing systems use less space than conventional sprockets and sheaves. In comparison with most competitive drives (roller chain or rubber), Poly Chain GT2 belt drives are as little as one-half the width and 50 percent lighter. Yet they can deliver over five times more horsepower than standard rubber synchronous systems in the same space. Savings like these in space and weight allow for a wide latitude in design flexibility.

How do you calculate the cost of downtime?

The "normal" downtime costs and lost productivity resulting from maintenance and chain replacement could add up to hundreds—if not thousands—of dollars per drive per year. You have no choice. If you use roller chain drives, you must maintain them or they <u>will</u> break down. Consequently, regular scheduled maintenance on your production equipment must be accomplished to maintain these roller chain drives, often resulting in extensive downtime. Elimination of this downtime would clearly result in increased production output.



Horsepower Rating Comparison
(Width is approximately 1" for all transmission media)

Poly Chain GT2
advantages over roller chain:

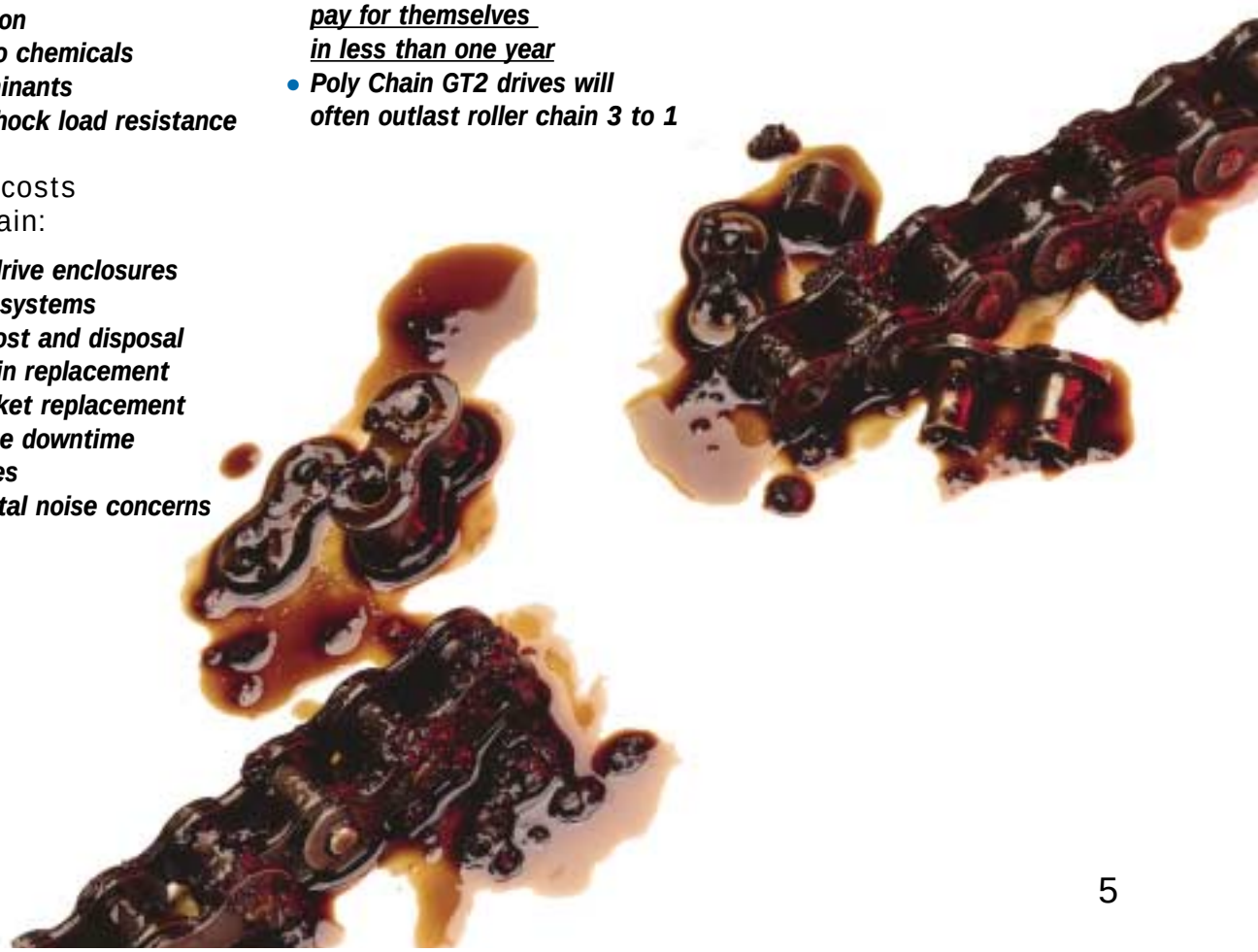
- ***Long, dependable life***
- ***Reduced downtime***
- ***Virtually maintenance free***
- ***No retensioning***
- ***Quiet***
- ***Minimal vibration due to chordal action***
- ***Virtually no elongation***
- ***Clean running system***
- ***No expensive oil baths***
- ***No lubrication***
- ***Resistant to chemicals and contaminants***
- ***Excellent shock load resistance***

Save big with
Poly Chain GT2 drives:

- ***No "hidden costs" in lost productivity***
- ***No "hidden costs" of ongoing maintenance***
- ***Poly Chain GT2 drives reduce overall costs and can pay for themselves in less than one year***
- ***Poly Chain GT2 drives will often outlast roller chain 3 to 1***

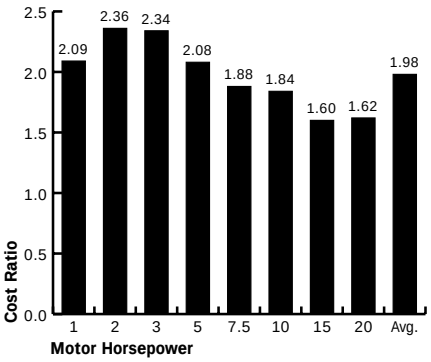
The hidden costs
of roller chain:

- ***Expensive drive enclosures***
- ***Lubrication systems***
- ***Lubricant cost and disposal***
- ***Broken chain replacement***
- ***Worn sprocket replacement***
- ***Maintenance downtime***
- ***Safety issues***
- ***Environmental noise concerns***

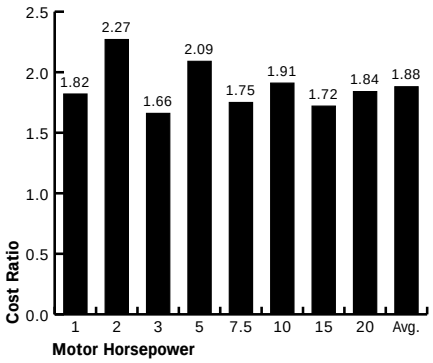


Poly Chain GT2 Drives are guaranteed to outperform and outmuscle roller chain and high-performance rubber belt synchronous systems—at a lower overall service lifetime cost per drive. *And here's proof!*

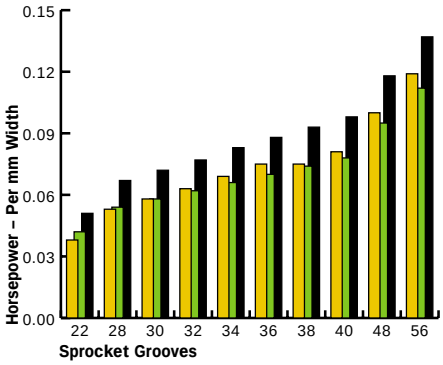
Poly Chain® GT®2
Poly Chain® GT® **Dayco® Panther®** **Goodyear® Eagle Pd™** **HTD®**



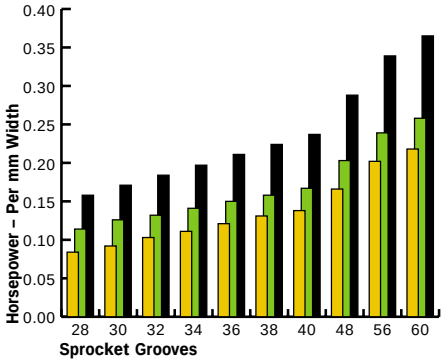
Cost Ratio
Poly Chain GT2 / Roller Chain
(100 rpm Shaft Speed)



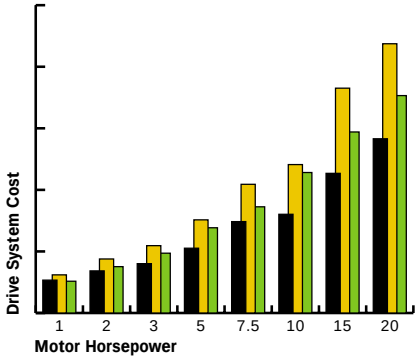
Cost Ratio
Poly Chain GT2 / Roller Chain
(200 rpm Shaft Speed)



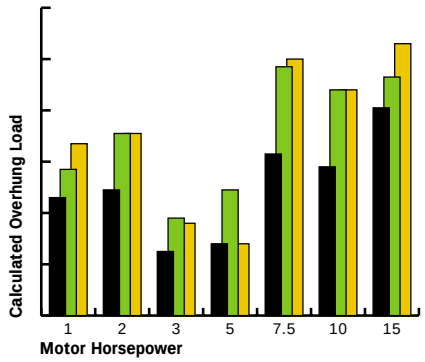
Horsepower Per mm Belt Width
Light Package Conveyor Example
(8mm Pitch, 100 rpm Reducer Output
Service Factor Added)



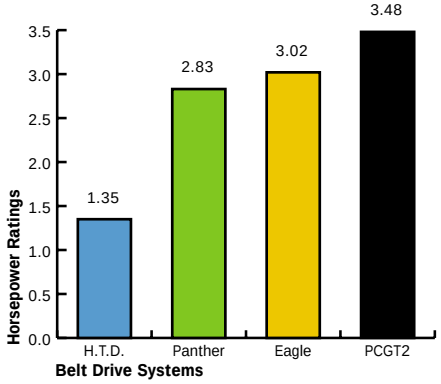
Horsepower Per mm Belt Width
Light Package Conveyor Example
(14mm Pitch, 100 rpm Reducer Output
Service Factor Added)



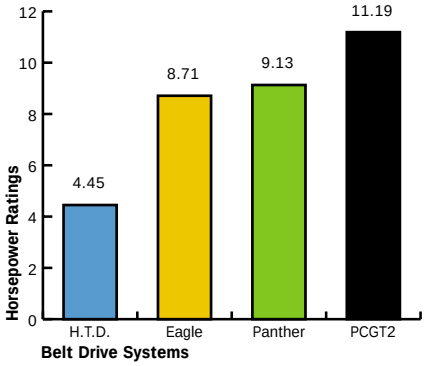
System Cost For Motor Horsepowers
(1:1 Speed Ratio, 103 rpm Reducer Output)



Overhung Load Comparison
Poly Chain GT2 vs Eagle Pd and Panther
(All drives designed with
comparable diameter sprockets)

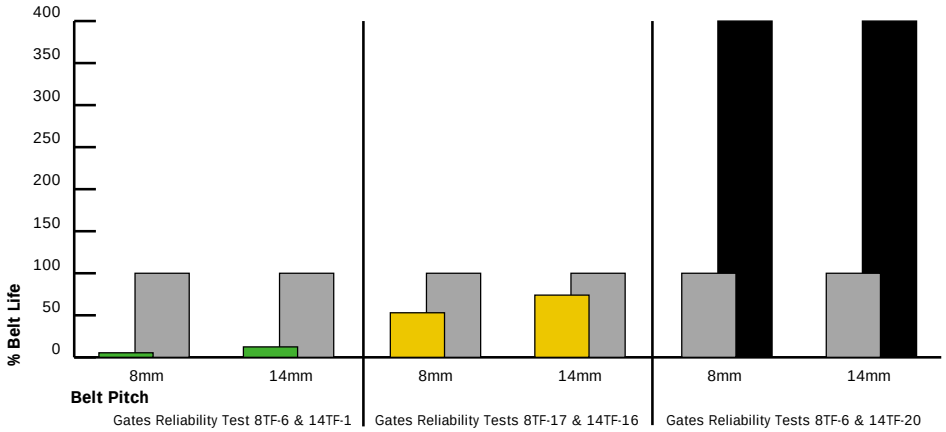


Published Horsepower Rating
Per Inch of Width
(8mm Sprocket, 56 Groove,
100 rpm Reducer Output)



Published Horsepower Rating
Per Inch of Width
(14mm Sprocket, 56 Groove,
100 rpm Reducer Output)

* Because Poly Chain GT2 belts have the highest capacity, a narrow belt drive can be used, meaning that the center of the belt load is closer to the reducer bearing, resulting in less bearing load.



Life Performance Indexes

Poly Chain GT vs Panther, Eagle and Poly Chain GT2

Belt Test Descriptions

Dr **Competitive Comparisons** **Dn**

Test ID	Pitch	Speed	Sprockets	Load
8TF-6	8mm	2000 rpm	24T/24T	High Torque
8TF-17	8mm	2000 rpm	24T/24T	High Torque
14TF-1	14mm	1750 rpm	32T/32T	High Torque
14TF-16	14mm	1750 rpm	32T/32T	High Torque
14TF-20	14mm	1750 rpm	32T/32T	High Torque

Note: All competitive belt tests were conducted in a laboratory environment under identical operating conditions

8mm Pitch Product Line Comparison

	Gates Poly Chain GT2	Goodyear Eagle Pd	Dayco RPP Panther
Sprocket Diameters	26	26	20
Sprocket Selections	103	52	80
Center Distance Range	5.51 – 84.72	5.51 – 44.09	3.78 – 83.15
Maximum Speed Ratio	10.18:1	11.20:1	8.73:1
Belt Length Selections	20	14	26
Belt Length Range	640 – 4480mm	640 – 2400mm	480 – 4400mm
Belt Width Selections	12-21-36-62	16-32	12-22-35-60
Total Drive Combinations	22,000+	7,000+	16,500+

14mm Pitch Product Line Comparison

	Gates Poly Chain GT2	Goodyear Eagle Pd	Dayco RPP Panther
Sprocket Diameters	32	21	23
Sprocket Selections	160	84	115
Center Distance Range	8.54 – 79.09	8.54 – 47.40	7.99 – 89.84
Maximum Speed Ratio	8.00:1	6.00:1	7.71:1
Belt Length Selections	19	14	18
Belt Length Range	994 – 4410mm	994 – 2800mm	966 – 4956mm
Belt Width Selections	20-37-68-90-125	35-53-70-105	20-42-65-90-120
Total Drive Combinations	36,000+	8,000+	17,500+

® ™ Eagle PD is a trademark of The Goodyear Tire & Rubber Company. Dayco and Panther are registered trademarks and RPP is a trademark of Dayco Products Inc.

The bottom line:

Compared to other drive system alternatives to roller chain available today, Poly Chain GT2 drives offer you:

- ***The most compact belt drive system available today***
- ***Lowest cost drive system at low speed***
- ***Lowest overhung load generated on speed reducer shafts***
- ***Longest life, width for width***

That's why Gates is ***The Driving Force In Power Transmission!***

Poly Chain GT2 vs. Roller Chain Savings Calculator

This sample calculator below illustrates the dramatic cost savings of a Poly Chain GT2 drive system compared to a roller chain system.

Make the switch to Poly Chain GT2

Poly Chain GT2 drives tested in a variety of applications lasted longer and required less maintenance than the roller chain or rubber belt drives they replaced. The following industries are ideal for Poly Chain GT2 drive systems:

ANNUAL COSTS	Roller Chain	Poly Chain® GT2®
Unit Cost of New Drive System	$ 110.21	$ 186.34
Yearly Costs To Maintain Roller Chain:		
Replacement cost – Chain/Belt	$ 33.96	$ *
Labor	$ 13.00	$ *
Replacement cost – Sprockets	$ 28.58	$ *
Labor	$ 13.00	$ *
Lubrication cost – Labor	$ 6.50	$
Disposal	$?	$
Production Downtime	$ 100.00	$
Employee Complaints (noise/lost production)	$?	$
Safety costs (lube on floor, etc.)	$?	$
Annual Total Cost to Maintain System:	$ 195.04	$ 0.00
Annual Total Cost of New System:	$ 305.25	$ 186.34
Annual Total Cost to Maintain System: Pay Back: Poly Chain GT2	0.61 Years	
Cost of Systems in Three Years	$ 695.33	$ 186.34
Savings in Dollars - First Three Years:	$ 508.99 Per Drive	
Cost of Systems in Five Years	$ 1,085.41	$ 266.34
Savings in Dollars – First Five Years:	$ 819.07 Per Drive	

*NOTE: Worksheet assumes that roller chain drives are replaced once per year on the average and that a properly designed Poly Chain GT2 belt (only) should have to be replaced only once every 3 years; hence the yearly replacement costs are calculated at 1/3 of the component cost.

*Visit **www.gates.com/sync** for an online version*

Lumber, Pulp & Paper

Conveyors, repulpers, sentry screens, effluent systems, presses, waxers, chippers, debarkers, slashers, chip 'n saws, edgers, roll grinders, screw conveyors, flotation cells, cut-off saws, hourglass rolls, dryers, agitators, calendars, pumps, winders

Packaging

Box makers, carton sealers, case palletizers, and live roll, apron, belt, chain and screw conveyors

Food Processing

Pumps, bucket elevators, belt conveyors, icing machines, elongators, dough mixers, cookers, mills, bottling machines, meat grinders, hog dehairers

Aluminum/Steel

Bucket elevators, shot blasters, conveyor drives, scrap cutters, sand seals, drag-out machines, polishers, cooling chambers, muffler furnaces, mandrel stripping rods, spinner cars, gray iron foundries, sand conveyors, bucket elevators, grinders

Petrochemical Industries

Air coolers, chlorine compressors, processing, centrifuges, dryers, compressors, pumps

Sand, Gravel & Concrete

Feeder drives, conveyor drives, elevators, screw conveyors

Glass Manufacturing/Bottles

Conveyors, crushers, grinders, carton sealers, case palletizers

And more!

Gates Poly Chain GT2 belts are protected by U.S. patents 4,838,843, 4,605,389, 4,652,252, 5,971,879 and U.S. and foreign patents pending.

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.

Poly Chain® GT®2 Low-Speed Design Load Calculations

For use when designing Poly Chain GT2 belt drives for gear reducer output shafts and general roller chain conversions.

When designing Poly Chain GT2 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 GT2 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

$$Design\,Load = (Motor\,Load) \times (Service\,Factor) \times (\%\,Reducer\,Efficiency / 100)$$

Motor Load: From user/OEM
Service Factor: From Table 1
% Efficiency: From Speed Reducer Catalog (also refer to the Reference Data Section on page 12)

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®2 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 12.

Poly Chain® GT®2 Low-Speed Design Load Calculations—continued

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 12 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

$$Design\ Load = (Estimated\ Motor\ Load)\times(Service\ Factor)\times\frac{\%\ Reducer\ Efficiency}{100}$$

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 12.

*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®2 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

$$Design\ Load = (Roller\ Chain\ Power\ Rating) \times (Service\ Factor)$$

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 15.

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 GT2 belts, follow the procedures starting on page 106.

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.

Poly Chain® GT®2 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 GT2 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										$\frac{(hp)(746)}{(V)(Eff)}$	$\frac{(hp)(746)}{(V)(Eff)(PF)}$	$\frac{(hp)(746)}{(173)(V)(Eff)(PF)}$
Motor hp										$\frac{(Amp)(V)(Eff)}{746}$	$\frac{(Amp)(V)(Eff)(PF)}{746}$	$\frac{(1.73)(Amp)(V)(Eff)(PF)}{746}$
Motor Torque (lb-in)										$\frac{(hp\,Load)(63025)}{(Motor\,rpm)}$		
Reducer Output Torque										$(Motor\ Torque)(Reducer\ Speed\ Ratio)(Reducer\ Efficiency)$		
Reducer Output Torque										$\frac{(hp\ Load)(Reducer\ Speed\ Ratio)(Reducer\ Efficiency)(63025)}{(Motor\,rpm)}$		

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 19 for assistance in collecting drive design information.

Low-Speed Poly Chain® GT®2 Belt Drive Selection Procedure

For drive selections with shaft speeds less than 500 rpm

Selection of a Stock Poly Chain GT2 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 19. This form provides a convenient method for collecting data to properly design or convert to a Poly Chain GT2 belt drive.

In this example, an ore conveyor is powered by an electric motor directly connected to a speed reducer. A Poly Chain GT2 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 20 ± 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:

$$\textit{Design Horsepower} = (\textit{Motor Load}) \times (\textit{Low-Speed Service Factor}) \times (\textit{Reducer Efficiency})$$

Procedure

A. The motor load can be determined by several methods as explained in the Low-Speed Drive Load Calculations section on pages 10-13. The method used for determining motor load will depend on how much information is available on the application. A worksheet is provided on page 13 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 11.

Motor = 5.00 hp (nameplate rating)

Nameplate Amps = 7.0

Measured Amps: *Phase 1* = 4.1
Phase 2 = 4.4
Phase 3 = 4.2

$$\textit{Average Measured Amps} = \frac{\textit{Phase 1} + \textit{Phase 2} + \textit{Phase 3}}{3} = \frac{4.1\ \textit{amps} + 4.4\ \textit{amps} + 4.2\ \textit{amps}}{3}$$

Average Measured Amps = 4.2 amps

$$\textit{Motor Load} = \frac{\textit{Nameplate hp} \times \textit{Average Measured Amps}}{\textit{Nameplate Amps}} = \frac{5\ \textit{hp} \times 4.2\ \textit{amps}}{7.0\ \textit{amps}}$$

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 on page 10. 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 12.

Example - Speed Reducer Efficiency Calculation

Speed Reducer Rated Input Load = 6.5 *hp*

Speed Reducer Rated Output Torque = 6210 *lb-in.*

Speed Reducer Rated Output Speed = 35 *rpm*

$$\textit{Rated Output hp} = \frac{(\textit{Rated Output Torque}) \times (\textit{Output Speed})}{63025} = \frac{(6210\ \textit{lb-in}) \times (35\ \textit{rpm})}{63025}$$

Rated Output hp = 3.4

$$\textit{Reducer Efficiency} = \frac{\textit{Rated Output Power}}{\textit{Rated Input Power}} = \frac{3.4\ \textit{hp}}{6.5\ \textit{hp}}$$

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%

$$\textit{Design Horsepower} = (\textit{Motor Load}) \times (\textit{Low-Speed Service Factor}) \times (\textit{Reducer Efficiency} / 100)$$

Design Horsepower = 2.07 hp

Low-Speed Poly Chain® GT®2 Belt Drive Design Procedure – continued

Step 2 Select The Belt Pitch

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 25.

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 **14mm pitch** section.

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 = 20 rpm

$$Speed\ Ratio = \frac{rpm\ of\ faster\ shaft}{rpm\ of\ slower\ shaft} = \frac{35}{20} = 1.75$$

B. Select The Sprocket Combination and Belt Length: Referring to the Stock Drive Selection Tables on pages 28-61, 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 = 1.750

Center Distance = 50.00 ± 3.00 in. (from the problem statement)

Refer to the 14mm Pitch Stock Drive Selection Tables on pages 42-61. Reading down the Speed Ratio Column locate 1.750 on page 52. In this case, there are three different drive combinations available for a 1.750 Speed Ratio. Checking the center distance values for each combination, the 49.56 inch value is the closest to the 50.00 inch target. So, the **32 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 49.56 inches**.

Step 4 Select The Proper Belt Width

Procedure

Horsepower Rating Tables are located on pages 62-70 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:

$$Rated\ Drive\ Horsepower = [Rated\ Base\ Horsepower + Added\ Horsepower\ for\ Speed\ Ratio] \times (Belt\ Length\ Correction\ Factor)$$

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 101 for additional details.

Example

Referring to the 14mm pitch Horsepower Rating Table for 20mm Wide belts on page 66. 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 32 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 1.84 HP.**

Next, referencing the Speed Ratio Add-On Correction Table, find the listing for a 1.750 speed ratio. An **add-on factor of 0.07 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.

Calculate the Corrected Horsepower Rating:

$$Rated\ Drive\ Horsepower =$$
$$[Rated\ Base\ Horsepower + Added\ HP\ for\ Speed\ Ratio] \times$$
$$(Belt\ Length\ Correction\ Factor) = [1.84\,hp + 0.07\,hp] \times (1.12)$$

Rated Drive Horsepower = 2.14 hp

The Corrected Horsepower Rating of 2.14 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 72-77. 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 pages 82-84, check the bore range and keyway dimensions against the design requirements.

Example

Also from the sprocket data on page 74 we note that the **14MX-32S-20 sprocket requires a 2012 bushing** and the **14MX-56S-20 sprocket requires a 3525 bushing**. On page 82 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 GT2 belt
1 ea. – 14MX-32S-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 GT2 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 108 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 108.)

Example

As can be seen in the Sprocket Specifications Table on page 74, 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 = 0.16 in. + 1.97 in. = 2.13 in.

Tensioning Allowance = 0.05 in.

Subtracting this from the nominal center distance value gives a minimum center distance necessary for belt installation of (49.56 inch - 2.13 inch) = 47.43 inches. From the problem statement, the center distance can be reduced down to 47.0 in. if needed. 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 12 on page 107. The m value is listed in Table 10 on page 107.

Example

Belt Pitch = 14mm
Belt Size = 14MGT-3136, 224 teeth (123.46 in. P.L.)
Belt Width = 20mm
DriveR Sprocket = 32 grooves (5.614 in. P.D.)
DriveR Shaft Speed = 35 rpm
DriveN Sprocket = 56 grooves (9.825 in. P.D.)
Actual Center Distance = 49.56 in.
Design Horsepower = 2.07 hp

$$T_{ST} = \frac{17.4\,DHP}{S} + mS^2, pounds$$

where:

DHP = Design Horsepower = **2.07 hp**

m = **0.92**, constant for 14mm pitch, 20mm wide belt from Table 10 on page 107.

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

= (5.614 in.) x (35 rpm) / 3822.76

S = 0.05

$$T_{ST} = \frac{17.4(2.07)}{(0.05)} + (0.92)(0.05)^2$$
$$T_{ST} = 700.23 + 0.002\,lb.$$
$$\boldsymbol{T_{ST} = 700.2\ lb.}$$

Low-Speed Poly Chain® GT®2 Drive Design Procedure – continued

Step 7 Calculate Belt Tensioning Requirements

Procedure — continued

B. Calculate minimum and maximum deflection forces using Formulas 13 and 14 on page 107. 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 = **49.56 in.**
D = diameter of larger sprocket = **9.825 in. P.D.**
d = diameter of smaller sprocket = **5.614 in. P.D.**

$$t = \sqrt{49.56^2 - \left(\frac{9.825-5.614}{2}\right)^2}$$

t = 49.52 in.

b. Calculate Minimum and Maximum belt deflection forces referring to Formulas 13 and 14 on page 107:

$$Min.Deflection\,Force = \frac{1.4T_{ST} + \left(\frac{t}{L}\right)Y}{16}, pounds$$

where:

T_{ST} = **700.2** pounds static tension as calculated above
t = **49.52** inches span length as calculated above
L = **123.46** inches belt length
Y = **134.57** (constant for Table 10 on page 107)

$$Min.Deflection\,Force = \frac{1.4(700.2) + \left(\frac{49.52}{123.46}\right)(134.57)}{16}$$

Min. Deflection Force = 65 lb.

$$Max.Deflection\,Force = \frac{1.5T_{ST} + \left(\frac{t}{L}\right)Y}{16}, pounds$$

$$Max.Deflection\,Force = \frac{1.5(700.2) + \left(\frac{49.52}{123.46}\right)(134.57)}{16}$$

Max. Deflection Force = 69 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

$$Deflection\,Distance = \frac{t}{64}, inches$$

$$Deflection\,Distance = \frac{49.52}{64}$$

Deflection Distance = 0.77 in.

D. Applying The Tension:

At the center of span (t), apply a force perpendicular to the belt span large enough to deflect the belt 0.77 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 0.77 in. should require a deflection force within the range of 65 to 69 lb.

Step 8 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®2 Drive Design 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 22-25 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 on pages 14-17 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 66-70, **a belt width of 90mm is required for this higher 8.50 Design Horsepower Load using the Traditional Design Method compared to a belt width of only a 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 affects 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 10.

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 66-70, **the belt width required for 6.50 Design Horsepower is only 68mm compared to the 90mm belt width required for the Traditional Design Method in Comparison 1.**

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 66-70, 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 12.) 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 66-70, **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 = 90mm.

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

Low Speed Drive Design Information Sheet

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 Three-Phase ❑ AC Single-Phase ❑ DC (Direct Current) ❑

Output speed: Constant ❑ Variable ❑

Measured Motor Data

Voltage: Phase 1 = _____ Phase 2 = _____ Phase 3 = _____

Amps: Phase 1 = _____ Phase 2 = _____ Phase 3 = _____

Reducer Information:

Reducer Type: Helical ❑ Planetary ❑ Cycloidal ❑ Worm ❑ Combination Type ❑ Other ❑

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:

Minimum = _____ Nominal = _____ Maximum = _____

Type of Center Distance Adjustment: _____

Idler used: Yes ❑ No ❑ Inside ❑ Backside ❑

DriveN Information:

Type of Equipment: _____ Actual Horsepower Required = _____

Required Operating RPM = _____ Required Speed Ratio = _____

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

Shock Load: Light ❑ Moderate ❑ Severe ❑

Start Up Load: % Overload = _____ Starting Torque = _____

Special Requirements:

Space Limitations:

Maximum DriveR Dia. = _____ Maximum DriveN Dia. = _____

Maximum DriveR Width = _____ Maximum DriveN Width = _____

Environmental Conditions:

Temperature Range = _____ Belt Conductivity Required ❑

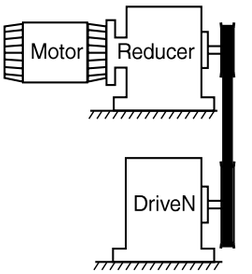
Oil Mist ❑ Oil Splash ❑ Moisture ❑ Abrasives ❑

Drive Sketch:

Drive Layout

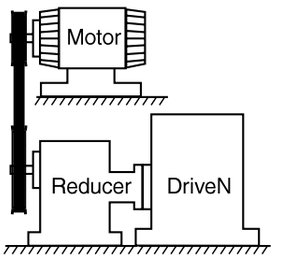
(check one)

❑ **Motor Reducer Belt Drive Driven**



Belt Drive on Reducer Output Shaft

❑ **Motor Belt Drive Reducer Driven**



Belt Drive on Reducer Input Shaft

Gates Poly Chain® GT®2 Belt System Specifications

To satisfy a wide range of loads, speeds and applications, Poly Chain GT2 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 GT2 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 GT2 Belt must be run with Poly Chain GT2 sprockets of the same pitch.

Gates Poly Chain GT2 belts are made in 8mm and 14mm pitches. Standard belt sizes are listed in the stock Poly Chain GT2 Belt Tables on page 21. 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

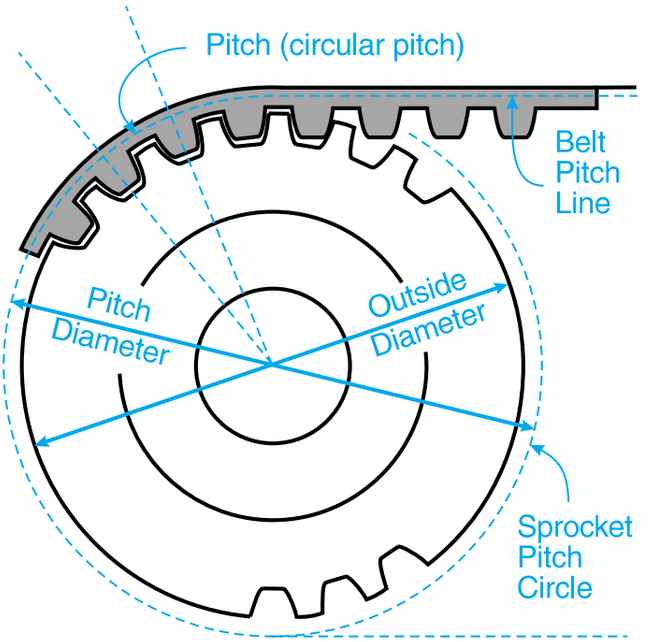
Sprockets for Poly Chain GT2 belts are also made in 8mm and 14mm pitches. Standard sprocket sizes are listed in the Sprocket Specification Tables on Pages 72 through 77. For each Poly Chain GT2 Belt width, there is a table listing the sprocket code symbol, the applicable bushing style and pertinent dimensional 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

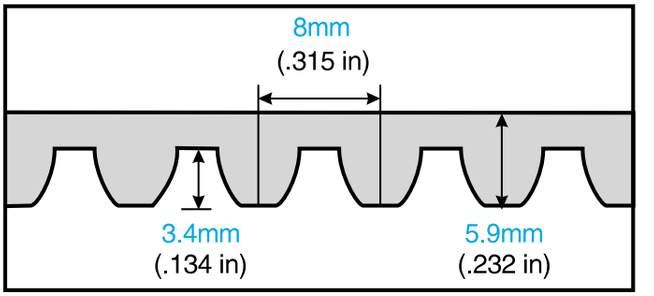
*The "S" is used after the number of grooves to help identify it is a sprocket and avoid any confusion with the belt code.

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 Sprockets plus Bore and Keyseat information on Pages 82 through 84 will give you the data needed to order the proper bushing. For example,

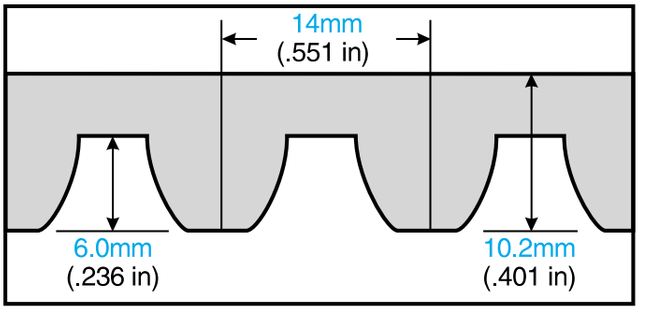
Style 2517 Bushing with a 2-inch bore



8mm Pitch — Reference Dimensions



14mm Pitch — Reference Dimensions



Gates Poly Chain® GT®2 Belt Standard Line

Stock Sizes

8mm Pitch Lengths

Designation	No. of Teeth	Length mm in
8MGT-352	44	352 13.86
8MGT-416	52	416 16.38
8MGT-456	57	456 17.96
8MGT-480	60	480 18.90
8MGT-544	68	544 21.42
8MGT-608	76	608 23.94
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-1000	125	1000 39.37
8MGT-1120	140	1120 44.09
8MGT-1200	150	1200 47.24
8MGT-1280	160	1280 50.39
8MGT-1440	180	1440 56.69
8MGT-1600	200	1600 62.99
8MGT-1792	224	1792 70.55
8MGT-2000	250	2000 78.74
8MGT-2240	280	2240 88.19
8MGT-2400	300	2400 94.49
8MGT-2520	315	2520 99.21
8MGT-2840	355	2840 111.81
8MGT-3200	400	3200 125.98
8MGT-3600	450	3600 141.73
8MGT-4000	500	4000 157.48
8MGT-4480	560	4480 176.38

14mm Pitch Lengths

Designation	No. of Teeth	Length mm in
14MGT-994	7l	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-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-2380	170	2380 93.70
14MGT-2520	180	2520 99.21
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-3500	250	3500 137.80
14MGT-3920	280	3920 154.33
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®2 Belt Drive Selection Procedure

Selection of a stock Poly Chain GT2 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 2⅛ 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 GT2.

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 27. 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 25.

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 28-61, 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 26).

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 28-41. Reading down the Speed Ratio column locate 2.00 on the bottom of page 34 and the top of page 36. The various sprocket combinations within the allowable center distance range is six. 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 26) 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 42-61. Reading down the Speed Ratio Column locate 2.00 on page 52. 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 14MX-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:

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

Example

14mm Pitch Drive with 40 groove driveR:

$$V = \frac{7.018 \times 1160}{3.82} = 21311 fpm$$

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 62-70 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] × (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 101 for additional details.

Example

Referring to the 14mm pitch Horsepower Rating Table for 20mm Wide belts on page 66. 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 55.60 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 2.65 hp** is listed. Then, referencing the Belt Length Correction Factor Table, find the listing for a 14MGT-2380 belt. A **correction factor of 1.01** is listed.

Calculate the Corrected Horsepower Rating:

Rated Drive Horsepower =
[Rated Base Horsepower + Added HP for Speed Ratio] × (Belt Length Correction Factor) = [55.60 hp + 2.65 hp] × (1.01)

Rated Drive Horsepower = 58.83 hp

The Drive Horsepower Rating of 58.83 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 72 through 77. Use flange diameters when checking against maximum diameter requirements.

Example

From the table on page 74, 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 pages 82-84, check the bore range and keyway dimensions against the design requirements.

Example

Also from the sprocket data on page 74 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 82, a **2517 bushing has a bore range of ½ to 2 11/16 inches**, which includes the 2⅛ 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 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 GT2 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

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 GT2 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 108 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 108.)

Example

As can be seen in the Sprocket Specifications Table on page 74, 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 12 on page 107. The m value is listed in Table 10 on page 107.

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

$$T_{ST} = \frac{17.4\,DHP}{S} + mS^2, pounds$$

Where:
DHP = Design Horsepower = **51 hp**
m = **0.92**, constant for 14mm pitch, 20mm wide belt from Table 10 on page 107
S = (Sprocket Diameter) x (Shaft Speed) / 3822.76
= (7.018 in.) x (1160 rpm) / 3822.76
S = **2.13**

$$T_{ST} = \frac{17.4\,(51)}{(2.13)} + (0.92)(2.13)^2$$

$$T_{ST} = 416.62 + 4.17\ lb.$$

$$\boldsymbol{T_{ST} = 420.79\ lb.}$$

B. Calculate minimum and maximum deflection forces using Formulas 13 and 14 on page 107. 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 13 and 14 on page 107:

$$Min.\ Deflection\ Force = \frac{14T_{ST} + \left(\frac{t}{L}\right)Y}{16}$$

where:

T_{ST} = **420.78** pounds static tension as calculated before
t = **29.90** inches span length as calculated before
L = **93.70** inches belt length
Y = **134.57** (constant for Table 10 on page 107)

$$Min.\ Deflection\ Force = \frac{14(420.79) + \left(\frac{29.90}{93.70}\right)(134.57)}{16}$$

Min. Deflection Force = 39.50 lb.

$$Max.\ Deflection\ Force = \frac{15T_{ST} + \left(\frac{t}{L}\right)Y}{16}$$

$$Max.\ Deflection\ Force = \frac{15(420.79) + \left(\frac{29.90}{93.70}\right)(134.57)}{16}$$

Max. Deflection Force = 42.13 lb.

Poly Chain® GT®2 Belt Drive Selection Procedure (continued)

Step 7 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

$$Deflection\ Distance = \frac{t}{64}, inches$$

$$Deflection\ Distance = \frac{29.9}{64}$$

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 40 to 42 lb.

Belt Pitch Selection Guide

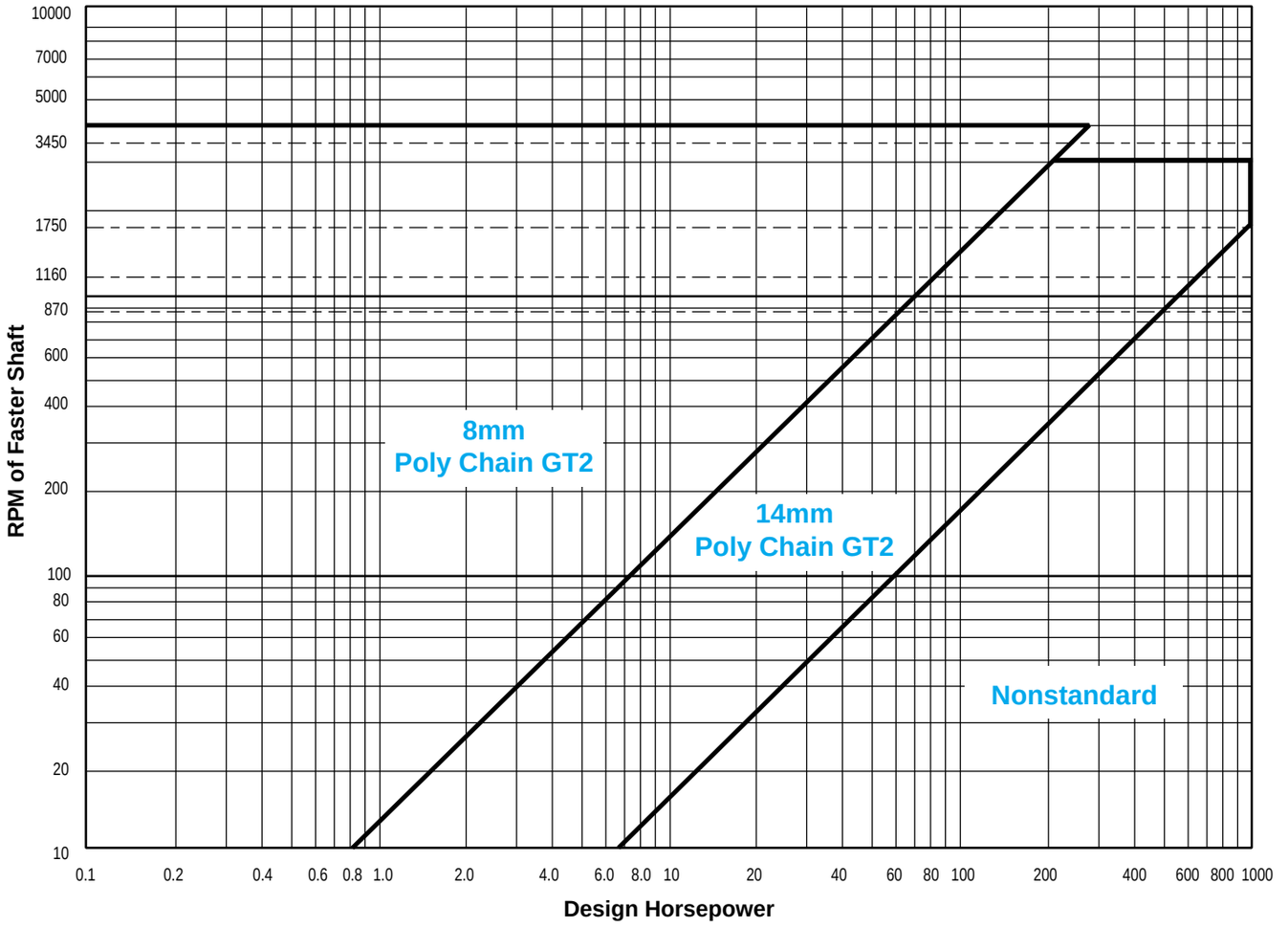


Table No. 4

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	3.4	15
20	7.4	6.1	5.4	4.7	4.0	4.0	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 99.

Poly Chain® GT®2 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 Calender, 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

8mm PITCH BELTS

Table No. 5
Drive Selection Table

Sprocket Combinations					Center Distance, Inches								
DriveR		DriveN											
No. of Grooves	Pitch Diameter (Inches)	No. of Grooves	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-1000 P.L 39.37 125 teeth	8MGT-1120 P.L 44.09 140 teeth	8MGT-1200 P.L 47.24 150 teeth	8MGT-1280 P.L 50.39 160 teeth	8MGT-1440 P.L 56.69 180 teeth
22	2.206	22	2.206	1.000	9.13	10.71	12.28	14.17	16.22	18.58	20.15	21.73	24.88
25	2.506	25	2.506	1.000	8.66	10.24	11.81	13.70	15.75	18.11	19.68	21.26	24.41
28	2.807	28	2.807	1.000	8.19	9.77	11.34	13.23	15.28	17.64	19.21	20.79	23.94
30	3.008	30	3.008	1.000	7.88	9.45	11.03	12.92	14.96	17.32	18.90	20.47	23.62
32	3.208	32	3.208	1.000	7.56	9.14	10.71	12.60	14.65	17.01	18.58	20.16	23.31
34	3.409	34	3.409	1.000	7.25	8.82	10.40	12.29	14.33	16.69	18.27	19.84	22.99
36	3.609	36	3.609	1.000	6.93	8.51	10.08	11.97	14.02	16.38	17.95	19.53	22.68
38	3.810	38	3.810	1.000	6.62	8.19	9.77	11.66	13.70	16.06	17.64	19.21	22.36
40	4.010	40	4.010	1.000	6.30	7.88	9.45	11.34	13.39	15.75	17.32	18.90	22.05
42	4.211	42	4.211	1.000	5.99	7.56	9.14	11.03	13.07	15.43	17.01	18.58	21.73
45	4.511	45	4.511	1.000	5.51	7.09	8.66	10.55	12.60	14.96	16.53	18.11	21.26
48	4.812	48	4.812	1.000		6.62	8.19	10.08	12.13	14.49	16.06	17.64	20.79
50	5.013	50	5.013	1.000		6.30	7.88	9.77	11.81	14.17	15.75	17.32	20.47
53	5.314	53	5.314	1.000		5.83	7.40	9.29	11.34	13.70	15.27	16.85	20.00
56	5.614	56	5.614	1.000			6.93	8.82	10.87	13.23	14.80	16.38	19.53
60	6.015	60	6.015	1.000				8.19	10.24	12.60	14.17	15.75	18.90
63	6.316	63	6.316	1.000				7.72	9.76	12.12	13.70	15.27	18.42
67	6.717	67	6.717	1.000					9.13	11.49	13.07	14.64	17.79
71	7.118	71	7.118	1.000					8.50	10.86	12.44	14.01	17.16
75	7.519	75	7.519	1.000						10.23	11.81	13.38	16.53
80	8.020	80	8.020	1.000						9.45	11.02	12.60	15.75
48	4.812	50	5.013	1.042		6.46	8.03	9.92	11.97	14.33	15.90	17.48	20.63
40	4.010	42	4.211	1.050	6.14	7.72	9.29	11.18	13.23	15.59	17.16	18.74	21.89
60	6.015	63	6.316	1.050				7.95	10.00	12.36	13.93	15.51	18.66
38	3.810	40	4.010	1.053	6.46	8.03	9.61	11.50	13.54	15.90	17.48	19.05	22.20
36	3.609	38	3.810	1.056	6.77	8.35	9.92	11.81	13.86	16.22	17.79	19.37	22.52
71	7.118	75	7.519	1.056					8.19	10.55	12.12	13.70	16.85
53	5.314	56	5.614	1.057			7.17	9.06	11.10	13.46	15.04	16.61	19.76
34	3.409	36	3.609	1.059	7.09	8.66	10.24	12.13	14.17	16.53	18.11	19.68	22.83
50	5.013	53	5.314	1.060		6.06	7.64	9.53	11.57	13.93	15.51	17.08	20.23
67	6.717	71	7.118	1.060					8.82	11.18	12.75	14.33	17.48
32	3.208	34	3.409	1.063	7.40	8.98	10.55	12.44	14.49	16.85	18.42	20.00	23.15
63	6.316	67	6.717	1.063				7.40	9.45	11.81	13.38	14.96	18.11
30	3.008	32	3.208	1.067	7.72	9.29	10.87	12.76	14.80	17.16	18.74	20.31	23.46
45	4.511	48	4.812	1.067	5.28	6.85	8.43	10.32	12.36	14.72	16.30	17.87	21.02
75	7.519	80	8.020	1.067						9.84	11.41	12.99	16.14
28	2.807	30	3.008	1.071	8.03	9.61	11.18	13.07	15.12	17.48	19.05	20.63	23.78
42	4.211	45	4.511	1.071	5.75	7.32	8.90	10.79	12.83	15.19	16.77	18.34	21.49
56	5.614	60	6.015	1.071			6.61	8.50	10.55	12.91	14.49	16.06	19.21
48	4.812	53	5.314	1.104		6.22	7.79	9.68	11.73	14.09	15.67	17.24	20.39
38	3.810	42	4.211	1.105	6.30	7.87	9.45	11.34	13.38	15.74	17.32	18.89	22.04
36	3.609	40	4.010	1.111	6.61	8.19	9.76	11.65	13.70	16.06	17.63	19.21	22.36
45	4.511	50	5.013	1.111		6.69	8.27	10.16	12.20	14.56	16.14	17.71	20.86
60	6.015	67	6.717	1.117				7.63	9.68	12.04	13.62	15.19	18.34
34	3.409	38	3.810	1.118	6.93	8.50	10.08	11.97	14.01	16.37	17.95	19.52	22.67
67	6.717	75	7.519	1.119					8.49	10.86	12.43	14.01	17.16
25	2.506	28	2.807	1.120	8.43	10.00	11.58	13.47	15.51	17.87	19.45	21.02	24.17
50	5.013	56	5.614	1.120		5.82	7.40	9.29	11.33	13.70	15.27	16.85	20.00
32	3.208	36	3.609	1.125	7.24	8.82	10.39	12.28	14.33	16.69	18.26	19.84	22.99
40	4.010	45	4.511	1.125	5.90	7.48	9.05	10.94	12.99	15.35	16.93	18.50	21.65
56	5.614	63	6.316	1.125				8.26	10.31	12.67	14.25	15.82	18.97
80	8.020	90	9.023	1.125							10.22	11.80	14.95
Length Factor*					0.79	0.83	0.87	0.91	0.96	1.00	1.03	1.05	1.10

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

8mm PITCH BELTS

Center Distance, Inches											Speed Ratio	Sprocket Combinations	
												DriveR	DriveN
8MGT-1600 P.L 62.99 200 teeth	8MGT-1792 P.L 70.55 224 teeth	8MGT-2000 P.L 78.74 250 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-2840 P.L 111.81 355 teeth	8MGT-3200 P.L 125.98 400 teeth	8MGT-3600 P.L 141.73 450 teeth	8MGT-4000 P.L 157.48 500 teeth	8MGT-4480 P.L 176.38 560 teeth		No. of grooves	No. of grooves
28.03	31.81	35.90	40.63	43.78	46.14	52.44	59.52	67.40	75.27	84.72	1.000	22	22
27.56	31.34	35.43	40.16	43.31	45.67	51.97	59.05	66.93	74.80	84.25	1.000	25	25
27.09	30.87	34.96	39.69	42.84	45.20	51.50	58.58	66.46	74.33	83.78	1.000	28	28
26.77	30.55	34.65	39.37	42.52	44.88	51.18	58.27	66.14	74.02	83.47	1.000	30	30
26.46	30.24	34.33	39.06	42.21	44.57	50.87	57.95	65.83	73.70	83.15	1.000	32	32
26.14	29.92	34.02	38.74	41.89	44.25	50.55	57.64	65.51	73.39	82.84	1.000	34	34
25.83	29.61	33.70	38.43	41.58	43.94	50.24	57.32	65.20	73.07	82.52	1.000	36	36
25.51	29.29	33.39	38.11	41.26	43.62	49.92	57.01	64.88	72.76	82.21	1.000	38	38
25.20	28.98	33.07	37.80	40.95	43.31	49.61	56.69	64.57	72.44	81.89	1.000	40	40
24.88	28.66	32.76	37.48	40.63	42.99	49.29	56.38	64.25	72.13	81.58	1.000	42	42
24.41	28.19	32.28	37.01	40.16	42.52	48.82	55.90	63.78	71.65	81.10	1.000	45	45
23.94	27.72	31.81	36.54	39.69	42.05	48.35	55.43	63.31	71.18	80.63	1.000	48	48
23.62	27.40	31.50	36.22	39.37	41.73	48.03	55.12	62.99	70.87	80.32	1.000	50	50
23.15	26.93	31.02	35.75	38.90	41.26	47.56	54.64	62.52	70.39	79.84	1.000	53	53
22.68	26.46	30.55	35.28	38.43	40.79	47.09	54.17	62.05	69.92	79.37	1.000	56	56
22.05	25.83	29.92	34.65	37.80	40.16	46.46	53.54	61.42	69.29	78.74	1.000	60	60
21.57	25.35	29.45	34.17	37.32	39.68	45.98	53.07	60.94	68.82	78.27	1.000	63	63
20.94	24.72	28.82	33.54	36.69	39.05	45.35	52.44	60.31	68.19	77.64	1.000	67	67
20.31	24.09	28.19	32.91	36.06	38.42	44.72	51.81	59.68	67.56	77.01	1.000	71	71
19.68	23.46	27.56	32.28	35.43	37.79	44.09	51.18	59.05	66.93	76.38	1.000	75	75
18.90	22.68	26.77	31.50	34.65	37.01	43.31	50.39	58.27	66.14	75.59	1.000	80	80
23.78	27.56	31.65	36.38	39.53	41.89	48.19	55.27	63.15	71.02	80.47	1.042	48	50
25.04	28.82	32.91	37.64	40.79	43.15	49.45	56.53	64.41	72.28	81.73	1.050	40	42
21.81	25.59	29.68	34.41	37.56	39.92	46.22	53.31	61.18	69.06	78.51	1.050	60	63
25.35	29.13	33.23	37.95	41.10	43.46	49.76	56.85	64.72	72.60	82.05	1.053	38	40
25.67	29.45	33.54	38.27	41.42	43.78	50.08	57.16	65.04	72.91	82.36	1.056	36	38
20.00	23.78	27.87	32.60	35.75	38.11	44.41	51.49	59.37	67.24	76.69	1.056	71	75
22.91	26.69	30.79	35.51	38.66	41.02	47.32	54.41	62.28	70.16	79.61	1.057	53	56
25.98	29.76	33.86	38.58	41.73	44.09	50.39	57.48	65.35	73.23	82.68	1.059	34	36
23.38	27.16	31.26	35.98	39.13	41.49	47.79	54.88	62.75	70.63	80.08	1.060	50	53
20.63	24.41	28.50	33.23	36.38	38.74	45.04	52.12	60.00	67.87	77.32	1.060	67	71
26.30	30.08	34.17	38.90	42.05	44.41	50.71	57.79	65.67	73.54	82.99	1.063	32	34
21.26	25.04	29.13	33.86	37.01	39.37	45.67	52.75	60.63	68.50	77.95	1.063	63	67
26.61	30.39	34.49	39.21	42.36	44.72	51.02	58.11	65.98	73.86	83.31	1.067	30	32
24.17	27.95	32.05	36.77	39.92	42.28	48.58	55.67	63.54	71.42	80.87	1.067	45	48
19.29	23.07	27.16	31.89	35.04	37.40	43.70	50.79	58.66	66.54	75.99	1.067	75	80
26.93	30.71	34.80	39.53	42.68	45.04	51.34	58.42	66.30	74.17	83.62	1.071	28	30
24.64	28.42	32.52	37.24	40.39	42.75	49.05	56.14	64.01	71.89	81.34	1.071	42	45
22.36	26.14	30.24	34.96	38.11	40.47	46.77	53.86	61.73	69.61	79.06	1.071	56	60
23.54	27.32	31.42	36.14	39.29	41.65	47.95	55.04	62.91	70.79	80.24	1.104	48	53
25.19	28.97	33.07	37.79	40.94	43.30	49.60	56.69	64.57	72.44	81.89	1.105	38	42
25.51	29.29	33.39	38.11	41.26	43.62	49.92	57.01	64.88	72.76	82.21	1.111	36	40
24.01	27.79	31.89	36.61	39.76	42.12	48.42	55.51	63.38	71.26	80.71	1.111	45	50
21.49	25.27	29.37	34.09	37.24	39.60	45.90	52.99	60.86	68.74	78.19	1.117	60	67
25.82	29.60	33.70	38.42	41.57	43.93	50.23	57.32	65.19	73.07	82.52	1.118	34	38
20.31	24.09	28.19	32.91	36.06	38.42	44.72	51.81	59.68	67.56	77.01	1.119	67	75
27.32	31.10	35.20	39.92	43.07	45.43	51.73	58.82	66.69	74.57	84.02	1.120	25	28
23.15	26.93	31.02	35.75	38.90	41.26	47.56	54.64	62.52	70.39	79.84	1.120	50	56
26.14	29.92	34.02	38.74	41.89	44.25	50.55	57.64	65.51	73.39	82.84	1.125	32	36
24.80	28.58	32.68	37.40	40.55	42.91	49.21	56.30	64.17	72.05	81.50	1.125	40	45
22.12	25.90	30.00	34.72	37.87	40.23	46.53	53.62	61.49	69.37	78.82	1.125	56	63
18.10	21.88	25.98	30.71	33.86	36.22	42.52	49.60	57.48	65.35	74.80	1.125	80	90
1.14	1.18	1.22	1.26	1.29	1.31	1.36	1.40	1.45	1.49	1.53	Length Factor*		

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

8mm PITCH BELTS

Table No. 5
Drive Selection Table

Sprocket Combinations					Center Distance, Inches								
DriveR		DriveN											
No. of Grooves	Pitch Diameter (Inches)	No. of Grooves	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-1000 P.L 39.37 125 teeth	8MGT-1120 P.L 44.09 140 teeth	8MGT-1200 P.L 47.24 150 teeth	8MGT-1280 P.L 50.39 160 teeth	8MGT-1440 P.L 56.69 180 teeth
63	6.316	71	7.118	1.127					9.13	11.49	13.06	14.64	17.79
71	7.118	80	8.020	1.127						10.15	11.72	13.30	16.45
53	5.314	60	6.015	1.132			6.84	8.74	10.78	13.14	14.72	16.29	19.44
30	3.008	34	3.409	1.133	7.56	9.13	10.71	12.60	14.64	17.00	18.58	20.15	23.30
22	2.206	25	2.506	1.136	8.90	10.47	12.05	13.94	15.98	18.34	19.92	21.49	24.64
28	2.807	32	3.208	1.143	7.87	9.45	11.02	12.91	14.96	17.32	18.89	20.47	23.62
42	4.211	48	4.812	1.143	5.51	7.08	8.66	10.55	12.59	14.96	16.53	18.11	21.26
36	3.609	42	4.211	1.167	6.45	8.03	9.60	11.49	13.54	15.90	17.48	19.05	22.20
48	4.812	56	5.614	1.167		5.97	7.55	9.44	11.49	13.85	15.43	17.00	20.15
34	3.409	40	4.010	1.176	6.77	8.34	9.92	11.81	13.85	16.22	17.79	19.37	22.52
45	4.511	53	5.314	1.178		6.45	8.02	9.92	11.96	14.32	15.90	17.47	20.62
60	6.015	71	7.118	1.183				7.30	9.35	11.72	13.29	14.87	18.02
38	3.810	45	4.511	1.184	6.05	7.63	9.21	11.10	13.15	15.51	17.08	18.66	21.81
32	3.208	38	3.810	1.188	7.08	8.66	10.23	12.12	14.17	16.53	18.11	19.68	22.83
53	5.314	63	6.316	1.189			6.60	8.49	10.54	12.90	14.48	16.05	19.20
42	4.211	50	5.013	1.190	5.34	6.92	8.50	10.39	12.43	14.80	16.37	17.95	21.10
63	6.316	75	7.519	1.190					8.80	11.16	12.74	14.32	17.47
67	6.717	80	8.020	1.194					8.08	10.45	12.03	13.60	16.76
56	5.614	67	6.717	1.196				7.94	9.99	12.35	13.92	15.50	18.65
25	2.506	30	3.008	1.200	8.27	9.84	11.42	13.31	15.35	17.71	19.29	20.86	24.01
30	3.008	36	3.609	1.200	7.40	8.97	10.55	12.44	14.48	16.85	18.42	20.00	23.15
40	4.010	48	4.812	1.200	5.66	7.24	8.81	10.70	12.75	15.11	16.69	18.26	21.41
50	5.013	60	6.015	1.200			7.07	8.96	11.01	13.37	14.95	16.53	19.68
75	7.519	90	9.023	1.200						9.02	10.60	12.18	15.33
28	2.807	34	3.409	1.214	7.71	9.29	10.86	12.75	14.80	17.16	18.74	20.31	23.46
34	3.409	42	4.211	1.235	6.60	8.18	9.76	11.65	13.69	16.06	17.63	19.21	22.36
45	4.511	56	5.614	1.244		6.20	7.78	9.67	11.72	14.08	15.66	17.23	20.39
32	3.208	40	4.010	1.250	6.92	8.50	10.07	11.96	14.01	16.37	17.95	19.52	22.67
36	3.609	45	4.511	1.250	6.21	7.78	9.36	11.25	13.30	15.66	17.24	18.81	21.96
40	4.010	50	5.013	1.250	5.49	7.07	8.65	10.54	12.59	14.95	16.53	18.10	21.25
48	4.812	60	6.015	1.250			7.22	9.12	11.17	13.53	15.10	16.68	19.83
60	6.015	75	7.519	1.250					9.02	11.39	12.97	14.55	17.70
50	5.013	63	6.316	1.260			6.82	8.72	10.77	13.13	14.71	16.28	19.44
42	4.211	53	5.314	1.262		6.67	8.25	10.14	12.19	14.55	16.13	17.71	20.86
38	3.810	48	4.812	1.263	5.81	7.39	8.96	10.86	12.90	15.27	16.84	18.42	21.57
53	5.314	67	6.717	1.264				8.16	10.21	12.58	14.15	15.73	18.88
30	3.008	38	3.810	1.267	7.23	8.81	10.39	12.28	14.32	16.69	18.26	19.84	22.99
56	5.614	71	7.118	1.268				7.60	9.66	12.02	13.60	15.18	18.33
71	7.118	90	9.023	1.268						9.32	10.90	12.48	15.64
63	6.316	80	8.020	1.270					8.38	10.75	12.33	13.91	17.06
22	2.206	28	2.807	1.273	8.66	10.23	11.81	13.70	15.74	18.11	19.68	21.26	24.41
25	2.506	32	3.208	1.280	8.10	9.68	11.26	13.15	15.19	17.55	19.13	20.70	23.85
28	2.807	36	3.609	1.286	7.55	9.13	10.70	12.59	14.64	17.00	18.58	20.15	23.30
32	3.208	42	4.211	1.313	6.75	8.33	9.91	11.80	13.85	16.21	17.79	19.36	22.51
48	4.812	63	6.316	1.313			6.97	8.87	10.92	13.28	14.86	16.44	19.59
38	3.810	50	5.013	1.316	5.64	7.22	8.80	10.69	12.74	15.10	16.68	18.26	21.41
34	3.409	45	4.511	1.324	6.36	7.94	9.51	11.41	13.45	15.82	17.39	18.97	22.12
40	4.010	53	5.314	1.325	5.24	6.82	8.40	10.30	12.34	14.71	16.28	17.86	21.01
30	3.008	40	4.010	1.333	7.07	8.65	10.23	12.12	14.16	16.53	18.10	19.68	22.83
36	3.609	48	4.812	1.333	5.96	7.54	9.12	11.01	13.06	15.42	17.00	18.57	21.72
42	4.211	56	5.614	1.333		6.42	8.00	9.90	11.95	14.31	15.89	17.46	20.62
45	4.511	60	6.015	1.333		5.86	7.44	9.34	11.39	13.76	15.33	16.91	20.06
Length Factor*					0.79	0.83	0.87	0.91	0.96	1.00	1.03	1.05	1.10

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

8mm PITCH BELTS

Center Distance, Inches											Speed Ratio	Sprocket Combinations	
												DriveR	DriveN
8MGT-1600 P.L 62.99 200 teeth	8MGT-1792 P.L 70.55 224 teeth	8MGT-2000 P.L 78.74 250 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-2840 P.L 111.81 355 teeth	8MGT-3200 P.L 125.98 400 teeth	8MGT-3600 P.L 141.73 450 teeth	8MGT-4000 P.L 157.48 500 teeth	8MGT-4480 P.L 176.38 560 teeth		No. of grooves	No. of grooves
20.94	24.72	28.82	33.54	36.69	39.05	45.35	52.44	60.31	68.19	77.64	1.127	63	71
19.60	23.38	27.48	32.20	35.35	37.71	44.01	51.10	58.97	66.85	76.30	1.127	71	80
22.59	26.37	30.47	35.20	38.35	40.71	47.01	54.09	61.97	69.84	79.29	1.132	53	60
26.45	30.23	34.33	39.05	42.20	44.56	50.86	57.95	65.82	73.70	83.15	1.133	30	34
27.79	31.57	35.67	40.39	43.54	45.90	52.20	59.29	67.16	75.04	84.49	1.136	22	25
26.77	30.55	34.65	39.37	42.52	44.88	51.18	58.27	66.14	74.02	83.47	1.143	28	32
24.41	28.19	32.28	37.01	40.16	42.52	48.82	55.90	63.78	71.65	81.10	1.143	42	48
25.35	29.13	33.23	37.95	41.10	43.46	49.76	56.85	64.72	72.60	82.05	1.167	36	42
23.30	27.08	31.18	35.90	39.05	41.41	47.71	54.80	62.68	70.55	80.00	1.167	48	56
25.67	29.45	33.54	38.27	41.42	43.78	50.08	57.16	65.04	72.91	82.36	1.176	34	40
23.78	27.56	31.65	36.38	39.53	41.89	48.19	55.27	63.15	71.02	80.47	1.178	45	53
21.17	24.95	29.05	33.78	36.93	39.29	45.59	52.67	60.55	68.42	77.87	1.183	60	71
24.96	28.74	32.83	37.56	40.71	43.07	49.37	56.45	64.33	72.20	81.65	1.184	38	45
25.98	29.76	33.86	38.58	41.73	44.09	50.39	57.48	65.35	73.23	82.68	1.188	32	38
22.36	26.14	30.23	34.96	38.11	40.47	46.77	53.85	61.73	69.60	79.05	1.189	53	63
24.25	28.03	32.12	36.85	40.00	42.36	48.66	55.74	63.62	71.49	80.94	1.190	42	50
20.62	24.40	28.50	33.22	36.37	38.73	45.03	52.12	60.00	67.87	77.32	1.190	63	75
19.91	23.69	27.79	32.51	35.66	38.03	44.33	51.41	59.29	67.16	76.61	1.194	67	80
21.80	25.58	29.68	34.41	37.56	39.92	46.22	53.30	61.18	69.05	78.50	1.196	56	67
27.16	30.94	35.04	39.76	42.91	45.27	51.57	58.66	66.53	74.41	83.86	1.200	25	30
26.30	30.08	34.17	38.90	42.05	44.41	50.71	57.79	65.67	73.54	82.99	1.200	30	36
24.56	28.34	32.44	37.16	40.31	42.67	48.97	56.06	63.93	71.81	81.26	1.200	40	48
22.83	26.61	30.70	35.43	38.58	40.94	47.24	54.33	62.20	70.08	79.53	1.200	50	60
18.49	22.27	26.37	31.09	34.24	36.61	42.91	49.99	57.87	65.74	75.19	1.200	75	90
26.61	30.39	34.49	39.21	42.36	44.72	51.02	58.11	65.98	73.86	83.31	1.214	28	34
25.51	29.29	33.38	38.11	41.26	43.62	49.92	57.00	64.88	72.75	82.20	1.235	34	42
23.54	27.32	31.41	36.14	39.29	41.65	47.95	55.04	62.91	70.79	80.24	1.244	45	56
25.82	29.60	33.70	38.42	41.57	43.93	50.23	57.32	65.19	73.07	82.52	1.250	32	40
25.11	28.89	32.99	37.71	40.87	43.23	49.53	56.61	64.49	72.36	81.81	1.250	36	45
24.40	28.18	32.28	37.00	40.16	42.52	48.82	55.90	63.78	71.65	81.10	1.250	40	50
22.98	26.76	30.86	35.59	38.74	41.10	47.40	54.48	62.36	70.23	79.68	1.250	48	60
20.85	24.63	28.73	33.46	36.61	38.97	45.27	52.36	60.23	68.11	77.56	1.250	60	75
22.59	26.37	30.47	35.19	38.34	40.70	47.00	54.09	61.96	69.84	79.29	1.260	50	63
24.01	27.79	31.88	36.61	39.76	42.12	48.42	55.51	63.38	71.26	80.71	1.262	42	53
24.72	28.50	32.59	37.32	40.47	42.83	49.13	56.22	64.09	71.97	81.42	1.263	38	48
22.03	25.82	29.91	34.64	37.79	40.15	46.45	53.54	61.41	69.29	78.74	1.264	53	67
26.14	29.92	34.01	38.74	41.89	44.25	50.55	57.63	65.51	73.38	82.83	1.267	30	38
21.48	25.26	29.36	34.09	37.24	39.60	45.90	52.98	60.86	68.74	78.19	1.268	56	71
18.79	22.58	26.68	31.40	34.55	36.92	43.22	50.30	58.18	66.06	75.51	1.268	71	90
20.22	24.00	28.10	32.82	35.98	38.34	44.64	51.72	59.60	67.48	76.93	1.270	63	80
27.56	31.34	35.43	40.16	43.31	45.67	51.97	59.05	66.93	74.80	84.25	1.273	22	28
27.00	30.79	34.88	39.61	42.76	45.12	51.42	58.50	66.38	74.25	83.70	1.280	25	32
26.45	30.23	34.33	39.05	42.20	44.56	50.86	57.95	65.82	73.70	83.15	1.286	28	36
25.66	29.44	33.54	38.26	41.42	43.78	50.08	57.16	65.04	72.91	82.36	1.313	32	42
22.74	26.52	30.62	35.35	38.50	40.86	47.16	54.24	62.12	70.00	79.45	1.313	48	63
24.56	28.34	32.43	37.16	40.31	42.67	48.97	56.06	63.93	71.81	81.26	1.316	38	50
25.27	29.05	33.15	37.87	41.02	43.38	49.68	56.77	64.64	72.52	81.97	1.324	34	45
24.16	27.94	32.04	36.77	39.92	42.28	48.58	55.66	63.54	71.41	80.86	1.325	40	53
25.98	29.76	33.85	38.58	41.73	44.09	50.39	57.48	65.35	73.23	82.68	1.333	30	40
24.87	28.65	32.75	37.48	40.63	42.99	49.29	56.37	64.25	72.12	81.57	1.333	36	48
23.77	27.55	31.65	36.37	39.52	41.88	48.18	55.27	63.14	71.02	80.47	1.333	42	56
23.22	27.00	31.09	35.82	38.97	41.33	47.63	54.72	62.59	70.47	79.92	1.333	45	60
1.14	1.18	1.22	1.26	1.29	1.31	1.36	1.40	1.45	1.49	1.53	Length Factor*		

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

8mm PITCH BELTS

Table No. 5
Drive Selection Table

Sprocket Combinations					Center Distance, Inches								
DriveR		DriveN											
No. of Grooves	Pitch Diameter (Inches)	No. of Grooves	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-1000 P.L 39.37 125 teeth	8MGT-1120 P.L 44.09 140 teeth	8MGT-1200 P.L 47.24 150 teeth	8MGT-1280 P.L 50.39 160 teeth	8MGT-1440 P.L 56.69 180 teeth
60	6.015	80	8.020	1.333					8.60	10.98	12.56	14.14	17.29
56	5.614	75	7.519	1.339				7.26	9.32	11.69	13.27	14.85	18.01
50	5.013	67	6.717	1.340			6.48	8.38	10.44	12.80	14.38	15.96	19.11
53	5.314	71	7.118	1.340				7.82	9.88	12.25	13.83	15.40	18.56
67	6.717	90	9.023	1.343						9.61	11.20	12.78	15.94
28	2.807	38	3.810	1.357	7.39	8.96	10.54	12.43	14.48	16.84	18.42	19.99	23.14
25	2.506	34	3.409	1.360	7.94	9.52	11.10	12.99	15.03	17.39	18.97	20.54	23.70
22	2.206	30	3.008	1.364	8.50	10.07	11.65	13.54	15.58	17.95	19.52	21.10	24.25
36	3.609	50	5.013	1.389	5.79	7.37	8.95	10.85	12.89	15.26	16.83	18.41	21.56
38	3.810	53	5.314	1.395	5.38	6.97	8.55	10.45	12.50	14.86	16.44	18.01	21.17
48	4.812	67	6.717	1.396			6.63	8.53	10.59	12.96	14.53	16.11	19.27
30	3.008	42	4.211	1.400	6.90	8.48	10.06	11.96	14.00	16.36	17.94	19.52	22.67
40	4.010	56	5.614	1.400		6.57	8.15	10.05	12.10	14.46	16.04	17.62	20.77
45	4.511	63	6.316	1.400			7.19	9.09	11.14	13.51	15.09	16.67	19.82
80	8.020	112	11.229	1.400								9.95	13.13
32	3.208	45	4.511	1.406	6.50	8.09	9.67	11.56	13.61	15.97	17.55	19.12	22.27
34	3.409	48	4.812	1.412	6.10	7.69	9.27	11.16	13.21	15.57	17.15	18.73	21.88
53	5.314	75	7.519	1.415				7.48	9.54	11.91	13.50	15.08	18.23
50	5.013	71	7.118	1.420				8.04	10.10	12.47	14.05	15.63	18.79
28	2.807	40	4.010	1.429	7.22	8.80	10.38	12.27	14.32	16.68	18.26	19.83	22.98
42	4.211	60	6.015	1.429		6.08	7.67	9.57	11.62	13.98	15.56	17.14	20.29
56	5.614	80	8.020	1.429					8.90	11.27	12.86	14.44	17.60
63	6.316	90	9.023	1.429						9.91	11.49	13.08	16.24
25	2.506	36	3.609	1.440	7.78	9.36	10.93	12.83	14.87	17.23	18.81	20.38	23.54
22	2.206	32	3.208	1.455	8.33	9.91	11.49	13.38	15.42	17.79	19.36	20.94	24.09
34	3.409	50	5.013	1.471	5.93	7.52	9.10	11.00	13.05	15.41	16.99	18.56	21.72
36	3.609	53	5.314	1.472	5.53	7.12	8.70	10.60	12.65	15.01	16.59	18.17	21.32
38	3.810	56	5.614	1.474		6.71	8.30	10.20	12.25	14.62	16.19	17.77	20.92
48	4.812	71	7.118	1.479				8.19	10.25	12.62	14.20	15.78	18.94
45	4.511	67	6.717	1.489			6.84	8.75	10.81	13.18	14.76	16.34	19.50
75	7.519	112	11.229	1.493								10.30	13.49
28	2.807	42	4.211	1.500	7.05	8.63	10.21	12.11	14.16	16.52	18.09	19.67	22.82
30	3.008	45	4.511	1.500	6.65	8.24	9.82	11.71	13.76	16.12	17.70	19.27	22.43
32	3.208	48	4.812	1.500	6.25	7.84	9.42	11.31	13.36	15.73	17.30	18.88	22.03
40	4.010	60	6.015	1.500		6.22	7.81	9.71	11.77	14.14	15.71	17.29	20.45
42	4.211	63	6.316	1.500		5.81	7.41	9.31	11.37	13.74	15.32	16.89	20.05
50	5.013	75	7.519	1.500				7.70	9.76	12.14	13.72	15.30	18.46
60	6.015	90	9.023	1.500						10.12	11.71	13.30	16.47
53	5.314	80	8.020	1.509					9.11	11.49	13.08	14.66	17.82
25	2.506	38	3.810	1.520	7.61	9.19	10.77	12.66	14.71	17.07	18.65	20.22	23.38
22	2.206	34	3.409	1.545	8.17	9.75	11.32	13.22	15.26	17.62	19.20	20.78	23.93
36	3.609	56	5.614	1.556	5.26	6.86	8.45	10.35	12.40	14.77	16.35	17.92	21.08
34	3.409	53	5.314	1.559	5.67	7.26	8.85	10.75	12.80	15.16	16.74	18.32	21.47
32	3.208	50	5.013	1.563	6.08	7.67	9.25	11.15	13.20	15.56	17.14	18.72	21.87
48	4.812	75	7.519	1.563				7.84	9.91	12.29	13.87	15.45	18.61
40	4.010	63	6.316	1.575		5.95	7.55	9.46	11.52	13.89	15.47	17.05	20.20
71	7.118	112	11.229	1.577								10.59	13.78
45	4.511	71	7.118	1.578			6.49	8.41	10.47	12.85	14.43	16.01	19.17
38	3.810	60	6.015	1.579		6.36	7.96	9.86	11.92	14.29	15.87	17.44	20.60
42	4.211	67	6.717	1.595			7.06	8.97	11.03	13.40	14.98	16.56	19.72
25	2.506	40	4.010	1.600	7.44	9.03	10.61	12.50	14.55	16.91	18.49	20.06	23.22
30	3.008	48	4.812	1.600	6.39	7.98	9.57	11.46	13.51	15.88	17.45	19.03	22.18
Length Factor*					0.79	0.83	0.87	0.91	0.96	1.00	1.03	1.05	1.10

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

8mm PITCH BELTS

Center Distance, Inches											Speed Ratio	Sprocket Combinations	
												DriveR	DriveN
8MGT-1600 P.L 62.99 200 teeth	8MGT-1792 P.L 70.55 224 teeth	8MGT-2000 P.L 78.74 250 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-2840 P.L 111.81 355 teeth	8MGT-3200 P.L 125.98 400 teeth	8MGT-3600 P.L 141.73 450 teeth	8MGT-4000 P.L 157.48 500 teeth	8MGT-4480 P.L 176.38 560 teeth		No. of grooves	No. of grooves
20.45	24.23	28.33	33.06	36.21	38.57	44.87	51.96	59.83	67.71	77.16	1.333	60	80
21.16	24.94	29.04	33.77	36.92	39.28	45.58	52.67	60.54	68.42	77.87	1.339	56	75
22.27	26.05	30.15	34.87	38.02	40.38	46.68	53.77	61.65	69.52	78.97	1.340	50	67
21.71	25.49	29.59	34.32	37.47	39.83	46.13	53.22	61.09	68.97	78.42	1.340	53	71
19.10	22.88	26.98	31.71	34.86	37.22	43.53	50.61	58.49	66.37	75.82	1.343	67	90
26.29	30.07	34.17	38.89	42.05	44.41	50.71	57.79	65.67	73.54	82.99	1.357	28	38
26.85	30.63	34.72	39.45	42.60	44.96	51.26	58.34	66.22	74.09	83.54	1.360	25	34
27.40	31.18	35.27	40.00	43.15	45.51	51.81	58.89	66.77	74.64	84.09	1.364	22	30
24.71	28.49	32.59	37.32	40.47	42.83	49.13	56.21	64.09	71.96	81.42	1.389	36	50
24.32	28.10	32.20	36.92	40.07	42.43	48.73	55.82	63.69	71.57	81.02	1.395	38	53
22.42	26.20	30.30	35.03	38.18	40.54	46.84	53.93	61.80	69.68	79.13	1.396	48	67
25.82	29.60	33.69	38.42	41.57	43.93	50.23	57.32	65.19	73.07	82.52	1.400	30	42
23.92	27.70	31.80	36.53	39.68	42.04	48.34	55.43	63.30	71.18	80.63	1.400	40	56
22.97	26.76	30.85	35.58	38.73	41.09	47.39	54.48	62.35	70.23	79.68	1.400	45	63
16.30	20.09	24.20	28.93	32.09	34.45	40.76	47.84	55.72	63.60	73.05	1.400	80	112
25.42	29.21	33.30	38.03	41.18	43.54	49.84	56.92	64.80	72.67	82.12	1.406	32	45
25.03	28.81	32.91	37.63	40.78	43.14	49.44	56.53	64.40	72.28	81.73	1.412	34	48
21.39	25.17	29.27	34.00	37.15	39.51	45.81	52.90	60.78	68.65	78.10	1.415	53	75
21.94	25.73	29.82	34.55	37.70	40.06	46.37	53.45	61.33	69.20	78.66	1.420	50	71
26.13	29.91	34.01	38.74	41.89	44.25	50.55	57.63	65.51	73.38	82.83	1.429	28	40
23.45	27.23	31.33	36.05	39.20	41.56	47.87	54.95	62.83	70.70	80.15	1.429	42	60
20.75	24.54	28.64	33.37	36.52	38.88	45.18	52.27	60.14	68.02	77.47	1.429	56	80
19.40	23.19	27.29	32.02	35.17	37.53	43.84	50.92	58.80	66.68	76.13	1.429	63	90
26.69	30.47	34.56	39.29	42.44	44.80	51.10	58.18	66.06	73.94	83.39	1.440	25	36
27.24	31.02	35.11	39.84	42.99	45.35	51.65	58.74	66.61	74.49	83.94	1.455	22	32
24.87	28.65	32.75	37.47	40.62	42.98	49.28	56.37	64.25	72.12	81.57	1.471	34	50
24.47	28.25	32.35	37.08	40.23	42.59	48.89	55.98	63.85	71.73	81.18	1.472	36	53
24.08	27.86	31.96	36.68	39.83	42.19	48.50	55.58	63.46	71.33	80.78	1.474	38	56
22.10	25.88	29.98	34.71	37.86	40.22	46.52	53.61	61.48	69.36	78.81	1.479	48	71
22.65	26.43	30.53	35.26	38.41	40.77	47.07	54.16	62.04	69.91	79.36	1.489	45	67
16.67	20.47	24.58	29.31	32.47	34.83	41.14	48.23	56.11	63.99	73.44	1.493	75	112
25.97	29.75	33.85	38.58	41.73	44.09	50.39	57.47	65.35	73.22	82.68	1.500	28	42
25.58	29.36	33.46	38.18	41.33	43.69	49.99	57.08	64.96	72.83	82.28	1.500	30	45
25.18	28.97	33.06	37.79	40.94	43.30	49.60	56.69	64.56	72.44	81.89	1.500	32	48
23.60	27.38	31.48	36.21	39.36	41.72	48.02	55.11	62.98	70.86	80.31	1.500	40	60
23.20	26.99	31.08	35.81	38.96	41.32	47.63	54.71	62.59	70.46	79.92	1.500	42	63
21.62	25.40	29.50	34.23	37.38	39.74	46.05	53.13	61.01	68.89	78.34	1.500	50	75
19.63	23.42	27.52	32.25	35.40	37.76	44.07	51.16	59.04	66.91	76.36	1.500	60	90
20.98	24.77	28.87	33.60	36.75	39.11	45.41	52.50	60.38	68.25	77.71	1.509	53	80
26.53	30.31	34.40	39.13	42.28	44.64	50.94	58.03	65.90	73.78	83.23	1.520	25	38
27.08	30.86	34.95	39.68	42.83	45.19	51.49	58.58	66.45	74.33	83.78	1.545	22	34
24.23	28.01	32.11	36.84	39.99	42.35	48.65	55.74	63.61	71.49	80.94	1.556	36	56
24.63	28.41	32.51	37.23	40.38	42.74	49.04	56.13	64.01	71.88	81.33	1.559	34	53
25.02	28.80	32.90	37.63	40.78	43.14	49.44	56.53	64.40	72.28	81.73	1.563	32	50
21.77	25.55	29.65	34.38	37.54	39.90	46.20	53.29	61.17	69.04	78.49	1.563	48	75
23.36	27.14	31.24	35.97	39.12	41.48	47.78	54.87	62.74	70.62	80.07	1.575	40	63
16.96	20.76	24.88	29.61	32.77	35.14	41.44	48.54	56.42	64.30	73.75	1.577	71	112
22.32	26.11	30.21	34.94	38.09	40.45	46.75	53.84	61.72	69.59	79.05	1.578	45	71
23.75	27.54	31.63	36.36	39.51	41.87	48.18	55.26	63.14	71.01	80.47	1.579	38	60
22.88	26.66	30.76	35.49	38.64	41.00	47.31	54.39	62.27	70.15	79.60	1.595	42	67
26.37	30.15	34.24	38.97	42.12	44.48	50.78	57.87	65.74	73.62	83.07	1.600	25	40
25.34	29.12	33.22	37.94	41.09	43.45	49.76	56.84	64.72	72.59	82.04	1.600	30	48
1.14	1.18	1.22	1.26	1.29	1.31	1.36	1.40	1.45	1.49	1.53	Length Factor*		

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

8mm PITCH BELTS

Table No. 5
Drive Selection Table

Sprocket Combinations					Center Distance, Inches								
DriveR		DriveN											
No. of Grooves	Pitch Diameter (Inches)	No. of Grooves	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-1000 P.L 39.37 125 teeth	8MGT-1120 P.L 44.09 140 teeth	8MGT-1200 P.L 47.24 150 teeth	8MGT-1280 P.L 50.39 160 teeth	8MGT-1440 P.L 56.69 180 teeth
50	5.013	80	8.020	1.600				7.25	9.33	11.71	13.30	14.88	18.05
28	2.807	45	4.511	1.607	6.80	8.38	9.97	11.86	13.91	16.28	17.85	19.43	22.58
56	5.614	90	9.023	1.607					8.01	10.41	12.00	13.59	16.76
22	2.206	36	3.609	1.636	8.00	9.58	11.16	13.05	15.10	17.46	19.04	20.62	23.77
34	3.409	56	5.614	1.647	5.40	7.00	8.59	10.50	12.55	14.92	16.50	18.07	21.23
32	3.208	53	5.314	1.656	5.81	7.41	9.00	10.90	12.95	15.32	16.89	18.47	21.63
38	3.810	63	6.316	1.658		6.09	7.69	9.61	11.66	14.04	15.62	17.20	20.35
30	3.008	50	5.013	1.667	6.22	7.81	9.40	11.30	13.35	15.71	17.29	18.87	22.02
36	3.609	60	6.015	1.667		6.50	8.10	10.01	12.07	14.44	16.02	17.60	20.75
45	4.511	75	7.519	1.667				8.05	10.12	12.51	14.09	15.67	18.84
48	4.812	80	8.020	1.667				7.39	9.47	11.86	13.45	15.03	18.20
67	6.717	112	11.229	1.672								10.87	14.07
40	4.010	67	6.717	1.675			7.20	9.11	11.18	13.55	15.13	16.72	19.87
25	2.506	42	4.211	1.680	7.27	8.86	10.44	12.34	14.38	16.75	18.32	19.90	23.05
42	4.211	71	7.118	1.690			6.69	8.62	10.69	13.07	14.65	16.23	19.39
53	5.314	90	9.023	1.698					8.21	10.62	12.22	13.81	16.98
28	2.807	48	4.812	1.714	6.54	8.13	9.71	11.61	13.66	16.03	17.61	19.18	22.34
22	2.206	38	3.810	1.727	7.83	9.42	11.00	12.89	14.94	17.30	18.88	20.45	23.61
32	3.208	56	5.614	1.750	5.54	7.14	8.74	10.64	12.70	15.07	16.65	18.23	21.38
36	3.609	63	6.316	1.750		6.23	7.84	9.75	11.81	14.19	15.77	17.35	20.51
80	8.020	140	14.036	1.750									
38	3.810	67	6.717	1.763			7.34	9.26	11.32	13.70	15.28	16.86	20.02
34	3.409	60	6.015	1.765		6.65	8.25	10.15	12.21	14.59	16.17	17.75	20.90
30	3.008	53	5.314	1.767	5.95	7.55	9.14	11.04	13.10	15.47	17.04	18.62	21.78
40	4.010	71	7.118	1.775			6.83	8.76	10.83	13.21	14.80	16.38	19.54
45	4.511	80	8.020	1.778				7.59	9.68	12.08	13.67	15.25	18.42
63	6.316	112	11.229	1.778							9.52	11.14	14.35
28	2.807	50	5.013	1.786	6.36	7.96	9.54	11.44	13.50	15.86	17.44	19.02	22.18
42	4.211	75	7.519	1.786				8.26	10.34	12.72	14.31	15.90	19.06
25	2.506	45	4.511	1.800	7.02	8.61	10.19	12.09	14.14	16.50	18.08	19.66	22.81
50	5.013	90	9.023	1.800					8.42	10.84	12.43	14.03	17.20
22	2.206	40	4.010	1.818	7.66	9.25	10.83	12.73	14.78	17.14	18.72	20.29	23.45
34	3.409	63	6.316	1.853		6.37	7.98	9.90	11.96	14.33	15.92	17.50	20.66
36	3.609	67	6.717	1.861		5.86	7.48	9.40	11.47	13.85	15.43	17.01	20.18
30	3.008	56	5.614	1.867	5.68	7.29	8.88	10.79	12.85	15.22	16.80	18.38	21.53
60	6.015	112	11.229	1.867							9.73	11.35	14.57
75	7.519	140	14.036	1.867									
38	3.810	71	7.118	1.868			6.97	8.90	10.98	13.36	14.95	16.53	19.69
32	3.208	60	6.015	1.875	5.16	6.79	8.39	10.30	12.36	14.73	16.32	17.90	21.05
40	4.010	75	7.519	1.875			6.46	8.40	10.48	12.87	14.46	16.04	19.21
48	4.812	90	9.023	1.875					8.56	10.98	12.58	14.17	17.35
28	2.807	53	5.314	1.893	6.09	7.69	9.29	11.19	13.25	15.62	17.20	18.77	21.93
42	4.211	80	8.020	1.905				7.80	9.89	12.29	13.88	15.47	18.64
22	2.206	42	4.211	1.909	7.49	9.08	10.66	12.56	14.61	16.98	18.55	20.13	23.28
25	2.506	48	4.812	1.920	6.75	8.35	9.94	11.84	13.89	16.26	17.84	19.41	22.57
32	3.208	63	6.316	1.969		6.51	8.12	10.04	12.10	14.48	16.06	17.65	20.81
34	3.409	67	6.717	1.971		5.99	7.62	9.54	11.61	13.99	15.58	17.16	20.32
36	3.609	71	7.118	1.972			7.11	9.04	11.12	13.51	15.09	16.68	19.84
71	7.118	140	14.036	1.972									11.19
38	3.810	75	7.519	1.974			6.59	8.54	10.62	13.01	14.60	16.19	19.36
25	2.506	50	5.013	2.000	6.57	8.17	9.76	11.67	13.72	16.09	17.67	19.25	22.40
28	2.807	56	5.614	2.000	5.82	7.43	9.03	10.94	13.00	15.37	16.95	18.53	21.69
Length Factor*					0.79	0.83	0.87	0.91	0.96	1.00	1.03	1.05	1.10

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

8mm PITCH BELTS

Center Distance, Inches											Speed Ratio	Sprocket Combinations	
												DriveR	DriveN
8MGT-1600 P.L 62.99 200 teeth	8MGT-1792 P.L 70.55 224 teeth	8MGT-2000 P.L 78.74 250 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-2840 P.L 111.81 355 teeth	8MGT-3200 P.L 125.98 400 teeth	8MGT-3600 P.L 141.73 450 teeth	8MGT-4000 P.L 157.48 500 teeth	8MGT-4480 P.L 176.38 560 teeth		No. of grooves	No. of grooves
21.21	24.99	29.10	33.83	36.98	39.34	45.64	52.73	60.61	68.49	77.94	1.600	50	80
25.73	29.52	33.61	38.34	41.49	43.85	50.15	57.24	65.11	72.99	82.44	1.607	28	45
19.93	23.72	27.82	32.55	35.71	38.07	44.38	51.47	59.34	67.22	76.68	1.607	56	90
26.92	30.70	34.80	39.52	42.67	45.03	51.33	58.42	66.29	74.17	83.62	1.636	22	36
24.38	28.17	32.26	36.99	40.14	42.50	48.81	55.89	63.77	71.64	81.10	1.647	34	56
24.78	28.56	32.66	37.39	40.54	42.90	49.20	56.29	64.16	72.04	81.49	1.656	32	53
23.51	27.29	31.39	36.12	39.27	41.63	47.94	55.02	62.90	70.78	80.23	1.658	38	63
25.18	28.96	33.06	37.78	40.93	43.29	49.60	56.68	64.56	72.43	81.88	1.667	30	50
23.91	27.69	31.79	36.52	39.67	42.03	48.33	55.42	63.29	71.17	80.62	1.667	36	60
22.00	25.78	29.88	34.61	37.77	40.13	46.43	53.52	61.40	69.28	78.73	1.667	45	75
21.36	25.15	29.25	33.98	37.13	39.49	45.80	52.89	60.77	68.64	78.10	1.667	48	80
17.25	21.06	25.17	29.92	33.07	35.44	41.75	48.84	56.73	64.61	74.06	1.672	67	112
23.03	26.82	30.92	35.64	38.80	41.16	47.46	54.55	62.43	70.30	79.75	1.675	40	67
26.21	29.99	34.08	38.81	41.96	44.32	50.62	57.71	65.58	73.46	82.91	1.680	25	42
22.55	26.34	30.44	35.17	38.32	40.68	46.98	54.07	61.95	69.83	79.28	1.690	42	71
20.15	23.94	28.05	32.78	35.94	38.30	44.61	51.70	59.58	67.45	76.91	1.698	53	90
25.49	29.27	33.37	38.10	41.25	43.61	49.91	57.00	64.87	72.75	82.20	1.714	28	48
26.76	30.54	34.64	39.36	42.51	44.87	51.17	58.26	66.14	74.01	83.46	1.727	22	38
24.54	28.32	32.42	37.15	40.30	42.66	48.96	56.05	63.92	71.80	81.25	1.750	32	56
23.66	27.45	31.55	36.27	39.43	41.79	48.09	55.18	63.06	70.93	80.38	1.750	36	63
13.84	17.70	21.84	26.60	29.77	32.14	38.46	45.57	53.46	61.34	70.80	1.750	80	140
23.18	26.97	31.07	35.80	38.95	41.31	47.61	54.70	62.58	70.46	79.91	1.763	38	67
24.06	27.84	31.94	36.67	39.82	42.18	48.49	55.57	63.45	71.33	80.78	1.765	34	60
24.93	28.72	32.81	37.54	40.69	43.05	49.36	56.44	64.32	72.19	81.65	1.767	30	53
22.70	26.49	30.59	35.32	38.47	40.84	47.14	54.23	62.11	69.98	79.43	1.775	40	71
21.58	25.37	29.48	34.21	37.36	39.72	46.03	53.12	61.00	68.88	78.33	1.778	45	80
17.54	21.35	25.47	30.22	33.37	35.74	42.05	49.15	57.03	64.91	74.37	1.778	63	112
25.33	29.11	33.21	37.94	41.09	43.45	49.75	56.84	64.71	72.59	82.04	1.786	28	50
22.22	26.01	30.11	34.84	38.00	40.36	46.66	53.75	61.63	69.51	78.96	1.786	42	75
25.96	29.75	33.84	38.57	41.72	44.08	50.38	57.47	65.35	73.22	82.67	1.800	25	45
20.37	24.17	28.28	33.01	36.17	38.53	44.84	51.93	59.81	67.69	77.14	1.800	50	90
26.60	30.38	34.48	39.20	42.35	44.71	51.01	58.10	65.98	73.85	83.30	1.818	22	40
23.81	27.60	31.70	36.43	39.58	41.94	48.25	55.33	63.21	71.09	80.54	1.853	34	63
23.33	27.12	31.22	35.95	39.10	41.47	47.77	54.86	62.74	70.61	80.06	1.861	36	67
24.69	28.47	32.57	37.30	40.45	42.81	49.12	56.20	64.08	71.96	81.41	1.867	30	56
17.76	21.57	25.69	30.44	33.60	35.97	42.28	49.38	57.26	65.14	74.60	1.867	60	112
14.19	18.05	22.20	26.97	30.14	32.51	38.84	45.95	53.84	61.72	71.19	1.867	75	140
22.85	26.64	30.74	35.47	38.63	40.99	47.29	54.38	62.26	70.14	79.59	1.868	38	71
24.21	28.00	32.10	36.82	39.98	42.34	48.64	55.73	63.61	71.48	80.93	1.875	32	60
22.37	26.16	30.26	35.00	38.15	40.51	46.82	53.91	61.79	69.66	79.12	1.875	40	75
20.52	24.32	28.43	33.16	36.32	38.68	44.99	52.08	59.96	67.84	77.30	1.875	48	90
25.09	28.87	32.97	37.70	40.85	43.21	49.51	56.60	64.47	72.35	81.80	1.893	28	53
21.81	25.60	29.70	34.44	37.59	39.95	46.26	53.35	61.23	69.11	78.56	1.905	42	80
26.44	30.22	34.32	39.04	42.19	44.55	50.86	57.94	65.82	73.69	83.14	1.909	22	42
25.72	29.50	33.60	38.33	41.48	43.84	50.14	57.23	65.11	72.98	82.43	1.920	25	48
23.96	27.75	31.85	36.58	39.73	42.10	48.40	55.49	63.37	71.24	80.69	1.969	32	63
23.48	27.27	31.37	36.10	39.26	41.62	47.92	55.01	62.89	70.77	80.22	1.971	34	67
23.00	26.79	30.90	35.63	38.78	41.14	47.45	54.54	62.42	70.29	79.75	1.972	36	71
14.47	18.33	22.49	27.26	30.43	32.81	39.14	46.25	54.14	62.03	71.49	1.972	71	140
22.52	26.31	30.42	35.15	38.30	40.66	46.97	54.06	61.94	69.82	79.27	1.974	38	75
25.56	29.34	33.44	38.17	41.32	43.68	49.98	57.07	64.95	72.82	82.28	2.000	25	50
24.84	28.63	32.73	37.45	40.61	42.97	49.27	56.36	64.24	72.11	81.56	2.000	28	56
1.14	1.18	1.22	1.26	1.29	1.31	1.36	1.40	1.45	1.49	1.53	Length Factor*		

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

8mm PITCH BELTS

Table No. 5
Drive Selection Table

Sprocket Combinations					Center Distance, Inches								
DriveR		DriveN											
No. of Grooves	Pitch Diameter (Inches)	No. of Grooves	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-1000 P.L 39.37 125 teeth	8MGT-1120 P.L 44.09 140 teeth	8MGT-1200 P.L 47.24 150 teeth	8MGT-1280 P.L 50.39 160 teeth	8MGT-1440 P.L 56.69 180 teeth
30	3.008	60	6.015	2.000	5.30	6.92	8.53	10.44	12.51	14.88	16.46	18.05	21.21
40	4.010	80	8.020	2.000				7.94	10.04	12.43	14.03	15.62	18.79
45	4.511	90	9.023	2.000					8.76	11.19	12.79	14.39	17.57
56	5.614	112	11.229	2.000							9.99	11.63	14.85
22	2.206	45	4.511	2.045	7.23	8.82	10.41	12.31	14.36	16.73	18.31	19.89	23.04
36	3.609	75	7.519	2.083			6.72	8.68	10.77	13.16	14.75	16.34	19.51
34	3.409	71	7.118	2.088			7.24	9.18	11.26	13.65	15.24	16.82	19.99
67	6.717	140	14.036	2.090									11.46
32	3.208	67	6.717	2.094		6.13	7.76	9.69	11.76	14.14	15.73	17.31	20.47
30	3.008	63	6.316	2.100		6.65	8.26	10.18	12.25	14.63	16.21	17.80	20.96
38	3.810	80	8.020	2.105				8.07	10.18	12.58	14.17	15.76	18.94
53	5.314	112	11.229	2.113							10.20	11.83	15.06
25	2.506	53	5.314	2.120	6.30	7.91	9.50	11.41	13.47	15.84	17.42	19.00	22.16
28	2.807	60	6.015	2.143	5.43	7.06	8.67	10.59	12.65	15.03	16.61	18.20	21.36
42	4.211	90	9.023	2.143					8.97	11.40	13.00	14.60	17.79
22	2.206	48	4.812	2.182	6.97	8.56	10.15	12.06	14.11	16.48	18.06	19.64	22.80
34	3.409	75	7.519	2.206			6.86	8.82	10.91	13.30	14.90	16.48	19.65
32	3.208	71	7.118	2.219		5.73	7.38	9.32	11.41	13.80	15.39	16.97	20.14
36	3.609	80	8.020	2.222				8.21	10.31	12.72	14.32	15.91	19.08
63	6.316	140	14.036	2.222									11.72
30	3.008	67	6.717	2.233		6.26	7.89	9.83	11.90	14.29	15.87	17.46	20.62
25	2.506	56	5.614	2.240	6.02	7.64	9.24	11.15	13.22	15.59	17.17	18.75	21.91
50	5.013	112	11.229	2.240						8.73	10.40	12.03	15.27
28	2.807	63	6.316	2.250	5.13	6.78	8.40	10.33	12.40	14.78	16.36	17.94	21.11
40	4.010	90	9.023	2.250				6.95	9.10	11.54	13.14	14.75	17.93
80	8.020	180	18.046	2.250									
22	2.206	50	5.013	2.273	6.78	8.39	9.98	11.89	13.94	16.31	17.90	19.47	22.63
48	4.812	112	11.229	2.333						8.86	10.53	12.17	15.41
60	6.015	140	14.036	2.333									11.92
32	3.208	75	7.519	2.344			6.99	8.95	11.05	13.45	15.04	16.63	19.80
34	3.409	80	8.020	2.353			6.35	8.34	10.45	12.86	14.46	16.05	19.23
30	3.008	71	7.118	2.367		5.86	7.51	9.46	11.55	13.94	15.53	17.12	20.29
38	3.810	90	9.023	2.368				7.08	9.24	11.67	13.28	14.89	18.08
28	2.807	67	6.717	2.393		6.39	8.03	9.97	12.05	14.43	16.02	17.61	20.77
25	2.506	60	6.015	2.400	5.63	7.27	8.88	10.80	12.87	15.25	16.84	18.42	21.58
75	7.519	180	18.046	2.400									
22	2.206	53	5.314	2.409	6.51	8.12	9.72	11.63	13.69	16.06	17.65	19.23	22.38
45	4.511	112	11.229	2.489						9.05	10.73	12.37	15.62
30	3.008	75	7.519	2.500			7.12	9.09	11.19	13.59	15.18	16.78	19.95
32	3.208	80	8.020	2.500			6.48	8.48	10.59	13.00	14.60	16.20	19.38
36	3.609	90	9.023	2.500				7.20	9.37	11.81	13.43	15.03	18.22
56	5.614	140	14.036	2.500									12.18
25	2.506	63	6.316	2.520	5.33	6.98	8.61	10.54	12.61	15.00	16.58	18.17	21.33
71	7.118	180	18.046	2.535									
28	2.807	71	7.118	2.536		5.99	7.65	9.60	11.69	14.08	15.68	17.27	20.44
22	2.206	56	5.614	2.545	6.22	7.85	9.45	11.37	13.43	15.81	17.39	18.98	22.14
53	5.314	140	14.036	2.642									12.37
34	3.409	90	9.023	2.647				7.33	9.50	11.95	13.56	15.17	18.37
30	3.008	80	8.020	2.667			6.61	8.61	10.73	13.14	14.75	16.34	19.52
42	4.211	112	11.229	2.667						9.24	10.92	12.58	15.83
28	2.807	75	7.519	2.679			7.25	9.23	11.33	13.73	15.33	16.92	20.10
25	2.506	67	6.717	2.680		6.59	8.24	10.18	12.26	14.65	16.24	17.83	21.00
Length Factor*					0.79	0.83	0.87	0.91	0.96	1.00	1.03	1.05	1.10

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

8mm PITCH BELTS

Center Distance, Inches											Speed Ratio	Sprocket Combinations	
												DriveR	DriveN
8MGT-1600 P.L 62.99 200 teeth	8MGT-1792 P.L 70.55 224 teeth	8MGT-2000 P.L 78.74 250 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-2840 P.L 111.81 355 teeth	8MGT-3200 P.L 125.98 400 teeth	8MGT-3600 P.L 141.73 450 teeth	8MGT-4000 P.L 157.48 500 teeth	8MGT-4480 P.L 176.38 560 teeth		No. of grooves	No. of grooves
24.36	28.15	32.25	36.98	40.13	42.49	48.80	55.88	63.76	71.64	81.09	2.000	30	60
21.96	25.75	29.85	34.59	37.74	40.11	46.41	53.50	61.38	69.26	78.72	2.000	40	80
20.74	24.54	28.65	33.39	36.55	38.91	45.22	52.31	60.19	68.07	77.53	2.000	45	90
18.05	21.87	25.99	30.74	33.90	36.27	42.58	49.68	57.57	65.45	74.91	2.000	56	112
26.19	29.98	34.07	38.80	41.95	44.31	50.62	57.70	65.58	73.46	82.91	2.045	22	45
22.67	26.46	30.57	35.30	38.46	40.82	47.12	54.21	62.09	69.97	79.43	2.083	36	75
23.15	26.94	31.05	35.78	38.93	41.30	47.60	54.69	62.57	70.45	79.90	2.088	34	71
14.74	18.61	22.78	27.55	30.73	33.10	39.44	46.55	54.44	62.33	71.80	2.090	67	140
23.63	27.42	31.53	36.26	39.41	41.77	48.08	55.17	63.05	70.92	80.38	2.094	32	67
24.12	27.90	32.00	36.73	39.89	42.25	48.55	55.64	63.52	71.40	80.85	2.100	30	63
22.10	25.90	30.00	34.74	37.90	40.26	46.57	53.66	61.54	69.42	78.87	2.105	38	80
18.26	22.08	26.21	30.96	34.12	36.49	42.81	49.91	57.80	65.68	75.14	2.113	53	112
25.31	29.10	33.20	37.93	41.08	43.44	49.74	56.83	64.71	72.58	82.04	2.120	25	53
24.51	28.30	32.40	37.13	40.28	42.65	48.95	56.04	63.92	71.79	81.25	2.143	28	60
20.96	24.76	28.88	33.61	36.77	39.14	45.45	52.54	60.42	68.30	77.76	2.143	42	90
25.95	29.73	33.83	38.56	41.71	44.07	50.38	57.46	65.34	73.22	82.67	2.182	22	48
22.82	26.61	30.72	35.45	38.61	40.97	47.28	54.37	62.25	70.13	79.58	2.206	34	75
23.30	27.09	31.20	35.93	39.09	41.45	47.75	54.85	62.72	70.60	80.06	2.219	32	71
22.25	26.05	30.16	34.89	38.05	40.41	46.72	53.81	61.69	69.57	79.03	2.222	36	80
15.01	18.89	23.06	27.84	31.02	33.40	39.73	46.85	54.74	62.64	72.10	2.222	63	140
23.78	27.57	31.68	36.41	39.56	41.93	48.23	55.32	63.20	71.08	80.53	2.233	30	67
25.07	28.86	32.96	37.69	40.84	43.20	49.50	56.59	64.47	72.35	81.80	2.240	25	56
18.48	22.30	26.43	31.18	34.35	36.72	43.04	50.14	58.03	65.91	75.37	2.240	50	112
24.27	28.05	32.16	36.89	40.04	42.40	48.71	55.80	63.68	71.55	81.01	2.250	28	63
21.11	24.91	29.03	33.77	36.92	39.29	45.60	52.69	60.58	68.46	77.91	2.250	40	90
	13.89	18.20	23.08	26.29	28.69	35.07	42.22	50.14	58.05	67.53	2.250	80	180
25.79	29.57	33.67	38.40	41.55	43.91	50.22	57.30	65.18	73.06	82.51	2.273	22	50
18.62	22.45	26.58	31.33	34.50	36.87	43.19	50.29	58.18	66.06	75.52	2.333	48	112
15.22	19.10	23.28	28.06	31.24	33.62	39.96	47.07	54.97	62.86	72.33	2.333	60	140
22.97	26.76	30.87	35.60	38.76	41.12	47.43	54.52	62.40	70.28	79.74	2.344	32	75
22.40	26.20	30.31	35.04	38.20	40.56	46.87	53.96	61.85	69.73	79.18	2.353	34	80
23.45	27.24	31.35	36.08	39.24	41.60	47.91	55.00	62.88	70.76	80.21	2.367	30	71
21.26	25.06	29.17	33.92	37.07	39.44	45.75	52.85	60.73	68.61	78.07	2.368	38	90
23.93	27.73	31.83	36.56	39.72	42.08	48.39	55.48	63.35	71.23	80.69	2.393	28	67
24.74	28.53	32.63	37.36	40.51	42.88	49.18	56.27	64.15	72.03	81.48	2.400	25	60
	14.21	18.54	23.42	26.64	29.05	35.43	42.59	50.51	58.42	67.91	2.400	75	180
25.54	29.33	33.43	38.16	41.31	43.67	49.97	57.06	64.94	72.82	82.27	2.409	22	53
18.83	22.66	26.80	31.55	34.72	37.09	43.41	50.52	58.41	66.29	75.75	2.489	45	112
23.12	26.91	31.02	35.76	38.91	41.28	47.58	54.68	62.56	70.44	79.89	2.500	30	75
22.55	26.35	30.46	35.19	38.35	40.72	47.02	54.12	62.00	69.88	79.34	2.500	32	80
21.40	25.21	29.32	34.07	37.23	39.59	45.90	53.00	60.88	68.77	78.22	2.500	36	90
15.49	19.38	23.56	28.35	31.53	33.91	40.25	47.37	55.27	63.17	72.63	2.500	56	140
24.49	28.28	32.39	37.12	40.27	42.63	48.94	56.03	63.91	71.79	81.24	2.520	25	63
	14.47	18.81	23.70	26.92	29.33	35.72	42.88	50.81	58.72	68.21	2.535	71	180
23.60	27.40	31.50	36.24	39.39	41.75	48.06	55.15	63.03	70.91	80.37	2.536	28	71
25.30	29.08	33.18	37.91	41.07	43.43	49.73	56.82	64.70	72.58	82.03	2.545	22	56
15.69	19.59	23.77	28.56	31.75	34.13	40.47	47.59	55.50	63.39	72.86	2.642	53	140
21.55	25.36	29.47	34.22	37.38	39.74	46.06	53.15	61.04	68.92	78.38	2.647	34	90
22.70	26.50	30.61	35.34	38.50	40.87	47.18	54.27	62.15	70.03	79.49	2.667	30	80
19.04	22.88	27.02	31.77	34.94	37.31	43.64	50.74	58.63	66.52	75.98	2.667	42	112
23.27	27.06	31.17	35.91	39.06	41.43	47.74	54.83	62.71	70.59	80.05	2.679	28	75
24.16	27.95	32.06	36.79	39.95	42.31	48.62	55.71	63.59	71.47	80.92	2.680	25	67
1.14	1.18	1.22	1.26	1.29	1.31	1.36	1.40	1.45	1.49	1.53	Length Factor*		

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

8mm PITCH BELTS

Table No. 5
Drive Selection Table

Sprocket Combinations					Center Distance, Inches								
DriveR		DriveN											
No. of Grooves	Pitch Diameter (Inches)	No. of Grooves	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-1000 P.L 39.37 125 teeth	8MGT-1120 P.L 44.09 140 teeth	8MGT-1200 P.L 47.24 150 teeth	8MGT-1280 P.L 50.39 160 teeth	8MGT-1440 P.L 56.69 180 teeth
67	6.717	180	18.046	2.687									
22	2.206	60	6.015	2.727	5.83	7.47	9.09	11.02	13.09	15.47	17.06	18.64	21.81
40	4.010	112	11.229	2.800						9.37	11.06	12.71	15.97
50	5.013	140	14.036	2.800									12.56
80	8.020	224	22.457	2.800									
32	3.208	90	9.023	2.813				7.46	9.64	12.09	13.70	15.31	18.51
25	2.506	71	7.118	2.840		6.18	7.85	9.81	11.90	14.30	15.89	17.48	20.66
28	2.807	80	8.020	2.857			6.74	8.75	10.87	13.28	14.89	16.49	19.67
63	6.316	180	18.046	2.857									
22	2.206	63	6.316	2.864	5.52	7.19	8.82	10.75	12.83	15.21	16.80	18.39	21.55
48	4.812	140	14.036	2.917									12.69
38	3.810	112	11.229	2.947						9.50	11.19	12.84	16.10
75	7.519	224	22.457	2.987									
25	2.506	75	7.519	3.000		5.75	7.45	9.43	11.54	13.95	15.54	17.14	20.32
30	3.008	90	9.023	3.000				7.59	9.77	12.22	13.84	15.45	18.65
60	6.015	180	18.046	3.000									
22	2.206	67	6.717	3.045	5.08	6.79	8.44	10.39	12.47	14.87	16.46	18.05	21.22
36	3.609	112	11.229	3.111						9.63	11.32	12.98	16.24
45	4.511	140	14.036	3.111									12.89
71	7.118	224	22.457	3.155									
25	2.506	80	8.020	3.200			6.93	8.94	11.07	13.50	15.10	16.70	19.89
28	2.807	90	9.023	3.214				7.71	9.90	12.36	13.98	15.59	18.80
56	5.614	180	18.046	3.214									
22	2.206	71	7.118	3.227		6.37	8.05	10.01	12.11	14.51	16.11	17.70	20.88
34	3.409	112	11.229	3.294						9.75	11.45	13.11	16.38
42	4.211	140	14.036	3.333								9.57	13.08
67	6.717	224	22.457	3.343									
53	5.314	180	18.046	3.396									
22	2.206	75	7.519	3.409		5.93	7.65	9.63	11.75	14.16	15.76	17.35	20.53
32	3.208	112	11.229	3.500						9.88	11.58	13.24	16.52
40	4.010	140	14.036	3.500								9.69	13.21
63	6.316	224	22.457	3.556									
25	2.506	90	9.023	3.600				7.90	10.10	12.57	14.19	15.80	19.01
50	5.013	180	18.046	3.600									
22	2.206	80	8.020	3.636			7.12	9.14	11.28	13.70	15.31	16.91	20.10
38	3.810	140	14.036	3.684								9.81	13.34
30	3.008	112	11.229	3.733						10.01	11.71	13.38	16.65
60	6.015	224	22.457	3.733									
48	4.812	180	18.046	3.750									
36	3.609	140	14.036	3.889								9.93	13.46
28	2.807	112	11.229	4.000					7.43	10.13	11.84	13.51	16.79
45	4.511	180	18.046	4.000									
56	5.614	224	22.457	4.000									
22	2.206	90	9.023	4.091			5.92	8.09	10.30	12.77	14.40	16.01	19.22
34	3.409	140	14.036	4.118								10.05	13.59
53	5.314	224	22.457	4.226									
42	4.211	180	18.046	4.286									
32	3.208	140	14.036	4.375								10.17	13.72
25	2.506	112	11.229	4.480					7.61	10.32	12.03	13.71	16.99
50	5.013	224	22.457	4.480									
40	4.010	180	18.046	4.500									
30	3.008	140	14.036	4.667								10.29	13.85
Length Factor*					0.79	0.83	0.87	0.91	0.96	1.00	1.03	1.05	1.10

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

8mm PITCH BELTS

Center Distance, Inches											Speed Ratio	Sprocket Combinations	
												DriveR	DriveN
8MGT-1600 P.L 62.99 200 teeth	8MGT-1792 P.L 70.55 224 teeth	8MGT-2000 P.L 78.74 250 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-2840 P.L 111.81 355 teeth	8MGT-3200 P.L 125.98 400 teeth	8MGT-3600 P.L 141.73 450 teeth	8MGT-4000 P.L 157.48 500 teeth	8MGT-4480 P.L 176.38 560 teeth		No. of grooves	No. of grooves
	14.72	19.07	23.97	27.20	29.61	36.01	43.17	51.10	59.02	68.51	2.687	67	180
24.97	28.76	32.86	37.59	40.74	43.11	49.41	56.50	64.38	72.26	81.71	2.727	22	60
19.19	23.02	27.16	31.92	35.09	37.46	43.79	50.89	58.79	66.67	76.14	2.800	40	112
15.89	19.80	23.98	28.78	31.97	34.35	40.69	47.82	55.72	63.62	73.09	2.800	50	140
			18.75	22.12	24.60	31.13	38.37	46.37	54.32	63.84	2.800	80	224
21.69	25.50	29.62	34.37	37.53	39.89	46.21	53.30	61.19	69.07	78.53	2.813	32	90
23.82	27.62	31.73	36.46	39.62	41.98	48.29	55.38	63.26	71.14	80.60	2.840	25	71
22.84	26.64	30.76	35.50	38.65	41.02	47.33	54.42	62.31	70.19	79.64	2.857	28	80
	14.98	19.34	24.25	27.48	29.89	36.30	43.46	51.40	59.32	68.81	2.857	63	180
24.72	28.51	32.61	37.35	40.50	42.86	49.17	56.26	64.14	72.02	81.47	2.864	22	63
16.02	19.94	24.12	28.92	32.11	34.49	40.84	47.96	55.87	63.77	73.24	2.917	48	140
19.33	23.17	27.31	32.07	35.24	37.61	43.94	51.04	58.94	66.83	76.29	2.947	38	112
			19.07	22.45	24.93	31.47	38.72	46.72	54.69	64.21	2.987	75	224
23.49	27.29	31.40	36.13	39.29	41.66	47.97	55.06	62.94	70.82	80.28	3.000	25	75
21.84	25.65	29.77	34.51	37.68	40.04	46.36	53.46	61.34	69.23	78.68	3.000	30	90
	15.17	19.54	24.45	27.69	30.10	36.51	43.68	51.62	59.54	69.03	3.000	60	180
24.38	28.18	32.28	37.02	40.17	42.54	48.84	55.94	63.82	71.70	81.15	3.045	22	67
19.47	23.31	27.45	32.22	35.39	37.76	44.09	51.19	59.09	66.98	76.44	3.111	36	112
16.22	20.14	24.34	29.14	32.33	34.71	41.06	48.19	56.10	64.00	73.47	3.111	45	140
			19.32	22.71	25.20	31.75	39.01	47.01	54.98	64.51	3.155	71	224
23.06	26.87	30.98	35.72	38.88	41.25	47.56	54.65	62.54	70.42	79.88	3.200	25	80
21.98	25.80	29.92	34.66	37.83	40.19	46.51	53.61	61.50	69.38	78.84	3.214	28	90
	15.42	19.80	24.73	27.97	30.38	36.80	43.97	51.91	59.83	69.33	3.214	56	180
24.05	27.84	31.95	36.69	39.85	42.21	48.52	55.61	63.49	71.37	80.83	3.227	22	71
19.61	23.45	27.60	32.36	35.53	37.91	44.24	51.34	59.24	67.13	76.59	3.294	34	112
16.42	20.35	24.55	29.35	32.54	34.93	41.28	48.41	56.32	64.22	73.70	3.333	42	140
			19.58	22.97	25.47	32.02	39.29	47.30	55.27	64.80	3.343	67	224
	15.61	20.00	24.93	28.18	30.59	37.01	44.18	52.13	60.06	69.55	3.396	53	180
23.71	27.51	31.62	36.36	39.52	41.88	48.19	55.29	63.17	71.05	80.51	3.409	22	75
19.75	23.59	27.74	32.51	35.68	38.05	44.38	51.49	59.39	67.28	76.75	3.500	32	112
16.56	20.49	24.69	29.49	32.69	35.07	41.43	48.56	56.47	64.37	73.85	3.500	40	140
			19.83	23.23	25.73	32.29	39.57	47.58	55.55	65.09	3.556	63	224
22.20	26.02	30.14	34.89	38.05	40.42	46.74	53.84	61.72	69.61	79.07	3.600	25	90
	15.80	20.20	25.13	28.38	30.80	37.22	44.40	52.35	60.28	69.77	3.600	50	180
23.28	27.09	31.20	35.95	39.11	41.47	47.79	54.88	62.77	70.65	80.11	3.636	22	80
16.69	20.62	24.83	29.64	32.83	35.22	41.57	48.71	56.62	64.52	74.00	3.684	38	140
19.89	23.74	27.88	32.65	35.83	38.20	44.53	51.64	59.54	67.43	76.90	3.733	30	112
		14.63	20.02	23.43	25.93	32.50	39.78	47.79	55.77	65.31	3.733	60	224
	15.93	20.33	25.27	28.52	30.94	37.36	44.55	52.49	60.42	69.92	3.750	48	180
16.82	20.76	24.97	29.78	32.97	35.36	41.72	48.85	56.77	64.67	74.15	3.889	36	140
20.03	23.88	28.03	32.80	35.97	38.35	44.68	51.79	59.69	67.58	77.05	4.000	28	112
11.77	16.12	20.53	25.47	28.73	31.15	37.58	44.76	52.71	60.65	70.15	4.000	45	180
		14.87	20.27	23.68	26.19	32.77	40.05	48.08	56.06	65.60	4.000	56	224
22.42	26.23	30.36	35.11	38.27	40.64	46.96	54.06	61.95	69.84	79.30	4.091	22	90
16.95	20.89	25.10	29.92	33.12	35.51	41.87	49.00	56.92	64.82	74.30	4.118	34	140
		15.04	20.46	23.88	26.39	32.97	40.26	48.29	56.27	65.82	4.226	53	224
11.95	16.30	20.72	25.68	28.93	31.36	37.79	44.98	52.93	60.87	70.37	4.286	42	180
17.09	21.03	25.24	30.06	33.26	35.65	42.01	49.15	57.06	64.97	74.45	4.375	32	140
20.24	24.09	28.25	33.02	36.19	38.57	44.91	52.02	59.92	67.81	77.28	4.480	25	112
		15.22	20.65	24.07	26.59	33.18	40.47	48.50	56.49	66.04	4.480	50	224
12.07	16.43	20.85	25.81	29.07	31.50	37.93	45.12	53.08	61.01	70.52	4.500	40	180
17.22	21.17	25.38	30.20	33.40	35.79	42.16	49.29	57.21	65.12	74.60	4.667	30	140
1.14	1.18	1.22	1.26	1.29	1.31	1.36	1.40	1.45	1.49	1.53	Length Factor*		

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

8mm PITCH BELTS

Table No. 5
Drive Selection Table

Sprocket Combinations					Center Distance, Inches								
DriveR		DriveN											
No. of Grooves	Pitch Diameter (Inches)	No. of Grooves	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-1000 P.L 39.37 125 teeth	8MGT-1120 P.L 44.09 140 teeth	8MGT-1200 P.L 47.24 150 teeth	8MGT-1280 P.L 50.39 160 teeth	8MGT-1440 P.L 56.69 180 teeth
48	4.812	224	22.457	4.667									
38	3.810	180	18.046	4.737									
45	4.511	224	22.457	4.978									
28	2.807	140	14.036	5.000								10.41	13.97
36	3.609	180	18.046	5.000									
22	2.206	112	11.229	5.091					7.78	10.51	12.23	13.90	17.20
34	3.409	180	18.046	5.294									
42	4.211	224	22.457	5.333									
25	2.506	140	14.036	5.600							8.61	10.59	14.16
40	4.010	224	22.457	5.600									
32	3.208	180	18.046	5.625									
38	3.810	224	22.457	5.895									
30	3.008	180	18.046	6.000									
36	3.609	224	22.457	6.222									
22	2.206	140	14.036	6.364							8.78	10.77	14.35
28	2.807	180	18.046	6.429									
34	3.409	224	22.457	6.588									
32	3.208	224	22.457	7.000									
25	2.506	180	18.046	7.200									
30	3.008	224	22.457	7.467									
28	2.807	224	22.457	8.000									
22	2.206	180	18.046	8.182									
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	0.96	1.00	1.03	1.05	1.10

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

8mm PITCH BELTS

Center Distance, Inches											Speed Ratio	Sprocket Combinations	
												DriveR	DriveN
8MGT-1600 P.L 62.99 200 teeth	8MGT-1792 P.L 70.55 224 teeth	8MGT-2000 P.L 78.74 250 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-2840 P.L 111.81 355 teeth	8MGT-3200 P.L 125.98 400 teeth	8MGT-3600 P.L 141.73 450 teeth	8MGT-4000 P.L 157.48 500 teeth	8MGT-4480 P.L 176.38 560 teeth		No. of grooves	No. of grooves
		15.34	20.77	24.20	26.72	33.31	40.61	48.65	56.63	66.18	4.667	48	224
12.18	16.55	20.99	25.95	29.21	31.64	38.07	45.26	53.22	61.16	70.67	4.737	38	180
		15.51	20.96	24.39	26.91	33.52	40.82	48.86	56.85	66.40	4.978	45	224
17.35	21.30	25.52	30.35	33.55	35.94	42.30	49.44	57.36	65.27	74.75	5.000	28	140
12.30	16.68	21.12	26.08	29.34	31.77	38.21	45.41	53.37	61.31	70.81	5.000	36	180
20.44	24.30	28.46	33.24	36.41	38.79	45.13	52.24	60.14	68.04	77.51	5.091	22	112
12.42	16.80	21.25	26.22	29.48	31.91	38.35	45.55	53.51	61.45	70.96	5.294	34	180
		15.69	21.15	24.59	27.11	33.72	41.03	49.07	57.06	66.62	5.333	42	224
17.55	21.51	25.73	30.56	33.76	36.15	42.52	49.66	57.58	65.49	74.98	5.600	25	140
		15.81	21.28	24.72	27.24	33.85	41.17	49.21	57.21	66.76	5.600	40	224
12.53	16.93	21.38	26.35	29.62	32.05	38.49	45.69	53.66	61.60	71.11	5.625	32	180
		15.92	21.40	24.84	27.37	33.99	41.30	49.35	57.35	66.91	5.895	38	224
12.65	17.05	21.51	26.48	29.75	32.19	38.64	45.84	53.80	61.75	71.26	6.000	30	180
		16.04	21.52	24.97	27.50	34.12	41.44	49.49	57.49	67.05	6.222	36	224
17.74	21.71	25.94	30.77	33.97	36.37	42.74	49.88	57.81	65.72	75.20	6.364	22	140
12.77	17.18	21.64	26.62	29.89	32.32	38.78	45.98	53.95	61.89	71.41	6.429	28	180
		16.16	21.65	25.10	27.63	34.26	41.58	49.63	57.64	67.20	6.588	34	224
		16.27	21.77	25.23	27.76	34.39	41.72	49.77	57.78	67.34	7.000	32	224
12.94	17.36	21.83	26.82	30.09	32.53	38.99	46.19	54.17	62.11	71.63	7.200	25	180
		16.39	21.90	25.36	27.89	34.53	41.85	49.91	57.92	67.49	7.467	30	224
		16.51	22.02	25.48	28.02	34.66	41.99	50.06	58.06	67.63	8.000	28	224
13.12	17.55	22.02	27.02	30.30	32.74	39.20	46.41	54.38	62.33	71.85	8.182	22	180
		16.68	22.21	25.68	28.22	34.86	42.20	50.27	58.28	67.85	8.960	25	224
		16.85	22.39	25.87	28.41	35.06	42.40	50.48	58.49	68.07	10.182	22	224
1.14	1.18	1.22	1.26	1.29	1.31	1.36	1.40	1.45	1.49	1.53			

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Table No. 6
Drive Selection Table

Sprocket Combinations					Center Distance, Inches								
DriveR		DriveN											
No. of Grooves	Pitch Diameter (Inches)	No. of Grooves	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-1750 P.L 68.90 125 teeth	14MGT-1890 P.L 74.41 135 teeth	14MGT-1960 P.L 77.17 140 teeth
28	4.912	28	4.912	1.000	11.85	14.33	15.71	17.09	19.84	23.15	26.73	29.49	30.87
29	5.088	29	5.088	1.000	11.57	14.05	15.43	16.81	19.57	22.87	26.46	29.21	30.59
30	5.263	30	5.263	1.000	11.30	13.78	15.16	16.54	19.29	22.60	26.18	28.94	30.32
31	5.439	31	5.439	1.000	11.02	13.50	14.88	16.26	19.02	22.32	25.91	28.66	30.04
32	5.614	32	5.614	1.000	10.75	13.23	14.61	15.99	18.74	22.05	25.63	28.39	29.77
33	5.790	33	5.790	1.000	10.47	12.95	14.33	15.71	18.47	21.77	25.36	28.11	29.49
34	5.965	34	5.965	1.000	10.20	12.68	14.06	15.44	18.19	21.50	25.08	27.84	29.22
35	6.141	35	6.141	1.000	9.92	12.40	13.78	15.16	17.91	21.22	24.80	27.56	28.94
36	6.316	36	6.316	1.000	9.64	12.12	13.50	14.88	17.64	20.94	24.53	27.28	28.66
37	6.492	37	6.492	1.000	9.37	11.85	13.23	14.61	17.36	20.67	24.25	27.01	28.39
38	6.667	38	6.667	1.000	9.09	11.57	12.95	14.33	17.09	20.39	23.98	26.73	28.11
39	6.842	39	6.842	1.000	8.82	11.30	12.68	14.06	16.81	20.12	23.70	26.46	27.84
40	7.018	40	7.018	1.000	8.54	11.02	12.40	13.78	16.54	19.84	23.43	26.18	27.56
43	7.544	43	7.544	1.000		10.19	11.57	12.95	15.71	19.01	22.60	25.35	26.73
45	7.895	45	7.895	1.000		9.64	11.02	12.40	15.16	18.46	22.05	24.80	26.18
48	8.421	48	8.421	1.000			10.20	11.58	14.33	17.64	21.22	23.98	25.36
50	8.772	50	8.772	1.000			9.65	11.03	13.78	17.09	20.67	23.43	24.81
53	9.299	53	9.299	1.000				10.20	12.95	16.26	19.84	22.60	23.98
56	9.825	56	9.825	1.000					12.13	15.43	19.02	21.77	23.15
60	10.527	60	10.527	1.000						14.33	17.91	20.67	22.05
63	11.053	63	11.053	1.000						13.50	17.09	19.84	21.22
67	11.755	67	11.755	1.000							15.99	18.74	20.12
71	12.457	71	12.457	1.000							14.88	17.64	19.02
75	13.158	75	13.158	1.000								16.54	17.92
80	14.036	80	14.036	1.000								15.16	16.54
38	6.667	39	6.842	1.026	8.95	11.43	12.81	14.19	16.95	20.25	23.84	26.59	27.97
39	6.842	40	7.018	1.026	8.68	11.16	12.54	13.92	16.67	19.98	23.56	26.32	27.70
37	6.492	38	6.667	1.027	9.23	11.71	13.09	14.47	17.22	20.53	24.11	26.87	28.25
36	6.316	37	6.492	1.028	9.51	11.99	13.37	14.75	17.50	20.81	24.39	27.15	28.53
34	5.965	35	6.141	1.029	10.06	12.54	13.92	15.30	18.05	21.36	24.94	27.70	29.08
35	6.141	36	6.316	1.029	9.78	12.26	13.64	15.02	17.78	21.08	24.67	27.42	28.80
33	5.790	34	5.965	1.030	10.33	12.81	14.19	15.57	18.33	21.63	25.22	27.97	29.35
32	5.614	33	5.790	1.031	10.61	13.09	14.47	15.85	18.60	21.91	25.49	28.25	29.63
31	5.439	32	5.614	1.032	10.88	13.36	14.74	16.12	18.88	22.18	25.77	28.52	29.90
30	5.263	31	5.439	1.033	11.16	13.64	15.02	16.40	19.15	22.46	26.04	28.80	30.18
29	5.088	30	5.263	1.034	11.44	13.92	15.30	16.68	19.43	22.74	26.32	29.08	30.46
28	4.912	29	5.088	1.036	11.71	14.19	15.57	16.95	19.71	23.01	26.60	29.35	30.73
48	8.421	50	8.772	1.042			9.92	11.30	14.06	17.36	20.95	23.70	25.08
43	7.544	45	7.895	1.047		9.92	11.30	12.68	15.43	18.74	22.32	25.08	26.46
60	10.527	63	11.053	1.050						13.91	17.50	20.25	21.63
38	6.667	40	7.018	1.053	8.82	11.30	12.68	14.06	16.81	20.12	23.70	26.46	27.84
37	6.492	39	6.842	1.054	9.09	11.57	12.95	14.33	17.09	20.39	23.98	26.73	28.11
36	6.316	38	6.667	1.056	9.37	11.85	13.23	14.61	17.36	20.67	24.25	27.01	28.39
71	12.457	75	13.158	1.056							14.33	17.08	18.46
35	6.141	37	6.492	1.057	9.64	12.12	13.50	14.88	17.64	20.94	24.53	27.28	28.66
53	9.299	56	9.825	1.057					12.54	15.84	19.43	22.18	23.56
34	5.965	36	6.316	1.059	9.92	12.40	13.78	15.16	17.91	21.22	24.80	27.56	28.94
50	8.772	53	9.299	1.060				10.61	13.36	16.67	20.26	23.01	24.39
67	11.755	71	12.457	1.060							15.43	18.19	19.57
33	5.790	35	6.141	1.061	10.19	12.67	14.05	15.43	18.19	21.49	25.08	27.83	29.21
32	5.614	34	5.965	1.063	10.47	12.95	14.33	15.71	18.47	21.77	25.36	28.11	29.49
63	11.053	67	11.755	1.063						12.95	16.53	19.29	20.67
Length Factor*					0.68	0.73	0.75	0.77	0.81	0.85	0.89	0.92	0.94

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Center Distance, Inches											Speed Ratio	Sprocket Combinations	
												DriveR	DriveN
14MGT-2100 P.L 82.68 150 teeth	14MGT-2240 P.L 88.19 160 teeth	14MGT-2380 P.L 93.70 170 teeth	14MGT-2520 P.L 99.21 180 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-3500 P.L 137.79 250 teeth	14MGT-3920 P.L 154.33 280 teeth	14MGT-4410 P.L 173.62 315 teeth		No. of grooves	No. of grooves
33.62	36.38	39.13	41.89	44.64	47.40	54.01	57.32	61.18	69.45	79.09	1.000	28	28
33.35	36.10	38.86	41.61	44.37	47.13	53.74	57.05	60.90	69.17	78.82	1.000	29	29
33.07	35.83	38.58	41.34	44.09	46.85	53.46	56.77	60.63	68.90	78.54	1.000	30	30
32.80	35.55	38.31	41.06	43.82	46.58	53.19	56.50	60.35	68.62	78.27	1.000	31	31
32.52	35.28	38.03	40.79	43.54	46.30	52.91	56.22	60.08	68.35	77.99	1.000	32	32
32.25	35.00	37.76	40.51	43.27	46.03	52.64	55.95	59.80	68.07	77.72	1.000	33	33
31.97	34.73	37.48	40.24	42.99	45.75	52.36	55.67	59.53	67.80	77.44	1.000	34	34
31.69	34.45	37.20	39.96	42.71	45.47	52.08	55.39	59.25	67.52	77.16	1.000	35	35
31.42	34.17	36.93	39.68	42.44	45.20	51.81	55.12	58.97	67.24	76.89	1.000	36	36
31.14	33.90	36.65	39.41	42.16	44.92	51.53	54.84	58.70	66.97	76.61	1.000	37	37
30.87	33.62	36.38	39.13	41.89	44.65	51.26	54.57	58.42	66.69	76.34	1.000	38	38
30.59	33.35	36.10	38.86	41.61	44.37	50.98	54.29	58.15	66.42	76.06	1.000	39	39
30.32	33.07	35.83	38.58	41.34	44.10	50.71	54.02	57.87	66.14	75.79	1.000	40	40
29.49	32.24	35.00	37.75	40.51	43.27	49.88	53.19	57.04	65.31	74.96	1.000	43	43
28.94	31.69	34.45	37.20	39.96	42.72	49.33	52.64	56.49	64.76	74.41	1.000	45	45
28.11	30.87	33.62	36.38	39.13	41.89	48.50	51.81	55.67	63.94	73.58	1.000	48	48
27.56	30.32	33.07	35.83	38.58	41.34	47.95	51.26	55.12	63.39	73.03	1.000	50	50
26.73	29.49	32.24	35.00	37.75	40.51	47.12	50.43	54.29	62.56	72.20	1.000	53	53
25.91	28.66	31.42	34.17	36.93	39.69	46.30	49.61	53.46	61.73	71.38	1.000	56	56
24.80	27.56	30.31	33.07	35.82	38.58	45.19	48.50	52.36	60.63	70.27	1.000	60	60
23.98	26.73	29.49	32.24	35.00	37.76	44.37	47.68	51.53	59.80	69.45	1.000	63	63
22.88	25.63	28.39	31.14	33.90	36.66	43.27	46.58	50.43	58.70	68.35	1.000	67	67
21.77	24.53	27.28	30.04	32.79	35.55	42.16	45.47	49.33	57.60	67.24	1.000	71	71
20.67	23.43	26.18	28.94	31.69	34.45	41.06	44.37	48.23	56.50	66.14	1.000	75	75
19.29	22.05	24.80	27.56	30.31	33.07	39.68	42.99	46.85	55.12	64.76	1.000	80	80
30.73	33.48	36.24	38.99	41.75	44.51	51.12	54.43	58.28	66.55	76.20	1.026	38	39
30.45	33.21	35.96	38.72	41.47	44.23	50.84	54.15	58.01	66.28	75.92	1.026	39	40
31.00	33.76	36.51	39.27	42.02	44.78	51.39	54.70	58.56	66.83	76.47	1.027	37	38
31.28	34.04	36.79	39.55	42.30	45.06	51.67	54.98	58.84	67.11	76.75	1.028	36	37
31.83	34.59	37.34	40.10	42.85	45.61	52.22	55.53	59.39	67.66	77.30	1.029	34	35
31.56	34.31	37.07	39.82	42.58	45.34	51.95	55.26	59.11	67.38	77.03	1.029	35	36
32.11	34.86	37.62	40.37	43.13	45.89	52.50	55.81	59.66	67.93	77.58	1.030	33	34
32.38	35.14	37.89	40.65	43.40	46.16	52.77	56.08	59.94	68.21	77.85	1.031	32	33
32.66	35.41	38.17	40.92	43.68	46.44	53.05	56.36	60.21	68.48	78.13	1.032	31	32
32.93	35.69	38.44	41.20	43.95	46.71	53.32	56.63	60.49	68.76	78.40	1.033	30	31
33.21	35.97	38.72	41.48	44.23	46.99	53.60	56.91	60.77	69.04	78.68	1.034	29	30
33.49	36.24	39.00	41.75	44.51	47.27	53.88	57.19	61.04	69.31	78.96	1.036	28	29
27.84	30.59	33.35	36.10	38.86	41.62	48.23	51.54	55.39	63.66	73.31	1.042	48	50
29.21	31.97	34.72	37.48	40.23	42.99	49.60	52.91	56.77	65.04	74.68	1.047	43	45
24.39	27.14	29.90	32.66	35.41	38.17	44.78	48.09	51.95	60.22	69.86	1.050	60	63
30.59	33.35	36.10	38.86	41.61	44.37	50.98	54.29	58.15	66.42	76.06	1.053	38	40
30.87	33.62	36.38	39.13	41.89	44.65	51.26	54.57	58.42	66.69	76.34	1.054	37	39
31.14	33.90	36.65	39.41	42.16	44.92	51.53	54.84	58.70	66.97	76.61	1.056	36	38
21.22	23.97	26.73	29.48	32.24	35.00	41.61	44.92	48.78	57.05	66.69	1.056	71	75
31.42	34.17	36.93	39.68	42.44	45.20	51.81	55.12	58.97	67.24	76.89	1.057	35	37
26.32	29.07	31.83	34.58	37.34	40.10	46.71	50.02	53.87	62.14	71.79	1.057	53	56
31.69	34.45	37.20	39.96	42.71	45.47	52.08	55.39	59.25	67.52	77.16	1.059	34	36
27.15	29.90	32.66	35.41	38.17	40.93	47.54	50.85	54.70	62.97	72.62	1.060	50	53
22.32	25.08	27.83	30.59	33.34	36.10	42.71	46.02	49.88	58.15	67.79	1.060	67	71
31.97	34.72	37.48	40.23	42.99	45.75	52.36	55.67	59.52	67.79	77.44	1.061	33	35
32.25	35.00	37.76	40.51	43.27	46.03	52.64	55.95	59.80	68.07	77.72	1.063	32	34
23.42	26.18	28.93	31.69	34.44	37.20	43.82	47.13	50.98	59.25	68.90	1.063	63	67
0.96	0.99	1.01	1.03	1.05	1.07	1.12	1.14	1.16	1.20	1.25	Length Factor*		

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Table No. 6
Drive Selection Table

Sprocket Combinations					Center Distance, Inches								
DriveR		DriveN											
No. of Grooves	Pitch Diameter (Inches)	No. of Grooves	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-1750 P.L 68.90 125 teeth	14MGT-1890 P.L 74.41 135 teeth	14MGT-1960 P.L 77.17 140 teeth
31	5.439	33	5.790	1.065	10.74	13.22	14.60	15.98	18.74	22.05	25.63	28.39	29.77
30	5.263	32	5.614	1.067	11.02	13.50	14.88	16.26	19.02	22.32	25.91	28.66	30.04
45	7.895	48	8.421	1.067		9.23	10.61	11.99	14.74	18.05	21.63	24.39	25.77
75	13.158	80	14.036	1.067								15.84	17.22
29	5.088	31	5.439	1.069	11.30	13.78	15.16	16.54	19.29	22.60	26.18	28.94	30.32
28	4.912	30	5.263	1.071	11.57	14.05	15.43	16.81	19.57	22.87	26.46	29.21	30.59
56	9.825	60	10.527	1.071					11.57	14.88	18.46	21.22	22.60
40	7.018	43	7.544	1.075	8.12	10.60	11.99	13.37	16.12	19.43	23.01	25.77	27.15
37	6.492	40	7.018	1.081	8.95	11.43	12.81	14.19	16.95	20.25	23.84	26.59	27.97
36	6.316	39	6.842	1.083	9.23	11.71	13.09	14.47	17.22	20.53	24.11	26.87	28.25
35	6.141	38	6.667	1.086	9.50	11.98	13.36	14.74	17.50	20.80	24.39	27.14	28.52
34	5.965	37	6.492	1.088	9.78	12.26	13.64	15.02	17.77	21.08	24.66	27.42	28.80
33	5.790	36	6.316	1.091	10.05	12.53	13.91	15.29	18.05	21.36	24.94	27.70	29.08
32	5.614	35	6.141	1.094	10.33	12.81	14.19	15.57	18.33	21.63	25.22	27.97	29.35
31	5.439	34	5.965	1.097	10.61	13.09	14.47	15.85	18.60	21.91	25.49	28.25	29.63
30	5.263	33	5.790	1.100	10.88	13.36	14.74	16.12	18.88	22.18	25.77	28.52	29.90
29	5.088	32	5.614	1.103	11.16	13.64	15.02	16.40	19.15	22.46	26.04	28.80	30.18
39	6.842	43	7.544	1.103	8.26	10.74	12.12	13.50	16.26	19.56	23.15	25.90	27.28
48	8.421	53	9.299	1.104				10.88	13.64	16.94	20.53	23.28	24.66
28	4.912	31	5.439	1.107	11.43	13.91	15.29	16.67	19.43	22.73	26.32	29.07	30.45
36	6.316	40	7.018	1.111	9.09	11.57	12.95	14.33	17.08	20.39	23.97	26.73	28.11
45	7.895	50	8.772	1.111			10.33	11.71	14.46	17.77	21.36	24.11	25.49
35	6.141	39	6.842	1.114	9.36	11.84	13.22	14.60	17.36	20.67	24.25	27.01	28.39
43	7.544	48	8.421	1.116		9.50	10.88	12.26	15.01	18.32	21.91	24.66	26.04
60	10.527	67	11.755	1.117						13.35	16.94	19.70	21.08
34	5.965	38	6.667	1.118	9.64	12.12	13.50	14.88	17.64	20.94	24.53	27.28	28.66
67	11.755	75	13.158	1.119							14.87	17.62	19.01
50	8.772	56	9.825	1.120				10.19	12.94	16.25	19.84	22.59	23.97
33	5.790	37	6.492	1.121	9.91	12.39	13.77	15.15	17.91	21.22	24.80	27.56	28.94
32	5.614	36	6.316	1.125	10.19	12.67	14.05	15.43	18.19	21.49	25.08	27.83	29.21
40	7.018	45	7.895	1.125		10.32	11.70	13.09	15.84	19.15	22.73	25.49	26.87
56	9.825	63	11.053	1.125					11.15	14.45	18.04	20.80	22.18
80	14.036	90	15.790	1.125									
63	11.053	71	12.457	1.127							15.97	18.73	20.11
71	12.457	80	14.036	1.127								16.38	17.76
31	5.439	35	6.141	1.129	10.46	12.95	14.33	15.71	18.46	21.77	25.35	28.11	29.49
38	6.667	43	7.544	1.132	8.39	10.87	12.26	13.64	16.39	19.70	23.28	26.04	27.42
53	9.299	60	10.527	1.132					11.97	15.28	18.87	21.62	23.01
30	5.263	34	5.965	1.133	10.74	13.22	14.60	15.98	18.74	22.04	25.63	28.38	29.76
29	5.088	33	5.790	1.138	11.02	13.50	14.88	16.26	19.01	22.32	25.90	28.66	30.04
28	4.912	32	5.614	1.143	11.29	13.77	15.15	16.53	19.29	22.60	26.18	28.94	30.32
35	6.141	40	7.018	1.143	9.22	11.70	13.08	14.46	17.22	20.53	24.11	26.87	28.25
34	5.965	39	6.842	1.147	9.50	11.98	13.36	14.74	17.50	20.80	24.39	27.14	28.52
33	5.790	38	6.667	1.152	9.77	12.25	13.63	15.01	17.77	21.08	24.66	27.42	28.80
39	6.842	45	7.895	1.154		10.46	11.84	13.22	15.98	19.28	22.87	25.63	27.01
32	5.614	37	6.492	1.156	10.05	12.53	13.91	15.29	18.05	21.35	24.94	27.69	29.07
31	5.439	36	6.316	1.161	10.32	12.81	14.19	15.57	18.32	21.63	25.21	27.97	29.35
37	6.492	43	7.544	1.162	8.52	11.01	12.39	13.77	16.53	19.83	23.42	26.18	27.56
43	7.544	50	8.772	1.163		9.21	10.59	11.97	14.73	18.04	21.63	24.38	25.76
30	5.263	35	6.141	1.167	10.60	13.08	14.46	15.84	18.60	21.90	25.49	28.24	29.63
48	8.421	56	9.825	1.167				10.45	13.21	16.52	20.11	22.86	24.24
29	5.088	34	5.965	1.172	10.88	13.36	14.74	16.12	18.87	22.18	25.77	28.52	29.90
Length Factor*					0.68	0.73	0.75	0.77	0.81	0.85	0.89	0.92	0.94

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Center Distance, Inches											Speed Ratio	Sprocket Combinations	
												DriveR	DriveN
14MGT-2100 P.L 82.68 150 teeth	14MGT-2240 P.L 88.19 160 teeth	14MGT-2380 P.L 93.70 170 teeth	14MGT-2520 P.L 99.21 180 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-3500 P.L 137.79 250 teeth	14MGT-3920 P.L 154.33 280 teeth	14MGT-4410 P.L 173.62 315 teeth		No. of grooves	No. of grooves
32.52	35.28	38.03	40.79	43.54	46.30	52.91	56.22	60.08	68.35	77.99	1.065	31	33
32.80	35.55	38.31	41.06	43.82	46.58	53.19	56.50	60.35	68.62	78.27	1.067	30	32
28.52	31.28	34.03	36.79	39.54	42.30	48.91	52.22	56.08	64.35	73.99	1.067	45	48
19.98	22.73	25.49	28.24	31.00	33.76	40.37	43.68	47.53	55.81	65.45	1.067	75	80
33.07	35.83	38.58	41.34	44.09	46.85	53.46	56.77	60.63	68.90	78.54	1.069	29	31
33.35	36.10	38.86	41.61	44.37	47.13	53.74	57.05	60.90	69.17	78.82	1.071	28	30
25.35	28.11	30.86	33.62	36.37	39.13	45.74	49.05	52.91	61.18	70.82	1.071	56	60
29.90	32.66	35.41	38.17	40.92	43.68	50.29	53.60	57.46	65.73	75.37	1.075	40	43
30.73	33.48	36.24	38.99	41.75	44.51	51.12	54.43	58.28	66.55	76.20	1.081	37	40
31.00	33.76	36.51	39.27	42.02	44.78	51.40	54.71	58.56	66.83	76.48	1.083	36	39
31.28	34.03	36.79	39.54	42.30	45.06	51.67	54.98	58.84	67.11	76.75	1.086	35	38
31.56	34.31	37.07	39.82	42.58	45.34	51.95	55.26	59.11	67.38	77.03	1.088	34	37
31.83	34.59	37.34	40.10	42.85	45.61	52.22	55.53	59.39	67.66	77.30	1.091	33	36
32.11	34.86	37.62	40.37	43.13	45.89	52.50	55.81	59.66	67.93	77.58	1.094	32	35
32.38	35.14	37.89	40.65	43.40	46.16	52.77	56.08	59.94	68.21	77.85	1.097	31	34
32.66	35.41	38.17	40.92	43.68	46.44	53.05	56.36	60.21	68.48	78.13	1.100	30	33
32.93	35.69	38.44	41.20	43.95	46.71	53.32	56.63	60.49	68.76	78.40	1.103	29	32
30.04	32.79	35.55	38.30	41.06	43.82	50.43	53.74	57.60	65.87	75.51	1.103	39	43
27.42	30.17	32.93	35.69	38.44	41.20	47.81	51.12	54.98	63.25	72.89	1.104	48	53
33.21	35.96	38.72	41.47	44.23	46.99	53.60	56.91	60.76	69.03	78.68	1.107	28	31
30.87	33.62	36.38	39.13	41.89	44.65	51.26	54.57	58.42	66.69	76.34	1.111	36	40
28.25	31.00	33.76	36.51	39.27	42.03	48.64	51.95	55.80	64.07	73.72	1.111	45	50
31.14	33.90	36.65	39.41	42.16	44.92	51.53	54.84	58.70	66.97	76.61	1.114	35	39
28.80	31.55	34.31	37.06	39.82	42.58	49.19	52.50	56.35	64.62	74.27	1.116	43	48
23.83	26.59	29.34	32.10	34.85	37.61	44.23	47.54	51.39	59.66	69.31	1.117	60	67
31.42	34.17	36.93	39.68	42.44	45.20	51.81	55.12	58.97	67.24	76.89	1.118	34	38
21.76	24.52	27.27	30.03	32.79	35.55	42.16	45.47	49.32	57.59	67.24	1.119	67	75
26.73	29.48	32.24	34.99	37.75	40.51	47.12	50.43	54.29	62.56	72.20	1.120	50	56
31.69	34.45	37.20	39.96	42.71	45.47	52.08	55.39	59.25	67.52	77.16	1.121	33	37
31.97	34.72	37.48	40.23	42.99	45.75	52.36	55.67	59.52	67.79	77.44	1.125	32	36
29.62	32.38	35.13	37.89	40.64	43.41	50.02	53.33	57.18	65.45	75.10	1.125	40	45
24.93	27.69	30.45	33.20	35.96	38.72	45.33	48.64	52.49	60.76	70.41	1.125	56	63
17.89	20.65	23.41	26.17	28.92	31.68	38.29	41.61	45.46	53.73	63.38	1.125	80	90
22.86	25.62	28.38	31.13	33.89	36.65	43.26	46.57	50.43	58.70	68.34	1.127	63	71
20.52	23.27	26.03	28.79	31.54	34.30	40.91	44.23	48.08	56.35	66.00	1.127	71	80
32.24	35.00	37.75	40.51	43.26	46.02	52.63	55.94	59.80	68.07	77.71	1.129	31	35
30.18	32.93	35.69	38.44	41.20	43.96	50.57	53.88	57.73	66.00	75.65	1.132	38	43
25.76	28.52	31.27	34.03	36.78	39.54	46.15	49.46	53.32	61.59	71.24	1.132	53	60
32.52	35.27	38.03	40.79	43.54	46.30	52.91	56.22	60.08	68.35	77.99	1.133	30	34
32.79	35.55	38.30	41.06	43.82	46.58	53.19	56.50	60.35	68.62	78.27	1.138	29	33
33.07	35.83	38.58	41.34	44.09	46.85	53.46	56.77	60.63	68.90	78.54	1.143	28	32
31.00	33.76	36.51	39.27	42.02	44.78	51.39	54.70	58.56	66.83	76.47	1.143	35	40
31.28	34.03	36.79	39.54	42.30	45.06	51.67	54.98	58.83	67.10	76.75	1.147	34	39
31.55	34.31	37.06	39.82	42.57	45.33	51.94	55.25	59.11	67.38	77.03	1.152	33	38
29.76	32.52	35.27	38.03	40.78	43.54	50.15	53.46	57.32	65.59	75.23	1.154	39	45
31.83	34.58	37.34	40.09	42.85	45.61	52.22	55.53	59.39	67.66	77.30	1.156	32	37
32.10	34.86	37.62	40.37	43.13	45.89	52.50	55.81	59.66	67.93	77.58	1.161	31	36
30.31	33.07	35.82	38.58	41.33	44.09	50.70	54.01	57.87	66.14	75.78	1.162	37	43
28.52	31.27	34.03	36.79	39.54	42.30	48.91	52.22	56.08	64.35	73.99	1.163	43	50
32.38	35.14	37.89	40.65	43.40	46.16	52.77	56.08	59.94	68.21	77.85	1.167	30	35
27.00	29.76	32.51	35.27	38.02	40.78	47.39	50.70	54.56	62.83	72.48	1.167	48	56
32.66	35.41	38.17	40.92	43.68	46.44	53.05	56.36	60.21	68.48	78.13	1.172	29	34
0.96	0.99	1.01	1.03	1.05	1.07	1.12	1.14	1.16	1.20	1.25	Length Factor*		

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Table No. 6
Drive Selection Table

Sprocket Combinations					Center Distance, Inches								
DriveR		DriveN											
No. of Grooves	Pitch Diameter (Inches)	No. of Grooves	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-1750 P.L 68.90 125 teeth	14MGT-1890 P.L 74.41 135 teeth	14MGT-1960 P.L 77.17 140 teeth
34	5.965	40	7.018	1.176	9.35	11.84	13.22	14.60	17.36	20.66	24.25	27.00	28.38
45	7.895	53	9.299	1.178			9.90	11.28	14.04	17.35	20.93	23.69	25.07
28	4.912	33	5.790	1.179	11.15	13.63	15.01	16.39	19.15	22.46	26.04	28.80	30.18
33	5.790	39	6.842	1.182	9.63	12.11	13.49	14.87	17.63	20.94	24.52	27.28	28.66
60	10.527	71	12.457	1.183						12.78	16.37	19.13	20.51
38	6.667	45	7.895	1.184	8.10	10.59	11.97	13.35	16.11	19.42	23.00	25.76	27.14
32	5.614	38	6.667	1.188	9.91	12.39	13.77	15.15	17.91	21.21	24.80	27.55	28.93
53	9.299	63	11.053	1.189					11.54	14.85	18.44	21.20	22.58
63	11.053	75	13.158	1.190							15.40	18.16	19.54
31	5.439	37	6.492	1.194	10.18	12.66	14.04	15.43	18.18	21.49	25.07	27.83	29.21
36	6.316	43	7.544	1.194	8.66	11.14	12.52	13.91	16.66	19.97	23.56	26.31	27.69
67	11.755	80	14.036	1.194							14.15	16.91	18.29
56	9.825	67	11.755	1.196						13.88	17.47	20.23	21.61
30	5.263	36	6.316	1.200	10.46	12.94	14.32	15.70	18.46	21.76	25.35	28.11	29.49
40	7.018	48	8.421	1.200		9.89	11.28	12.66	15.42	18.73	22.31	25.07	26.45
50	8.772	60	10.527	1.200					12.37	15.68	19.27	22.03	23.41
75	13.158	90	15.790	1.200									15.79
29	5.088	35	6.141	1.207	10.73	13.22	14.60	15.98	18.73	22.04	25.63	28.38	29.76
33	5.790	40	7.018	1.212	9.49	11.97	13.35	14.73	17.49	20.80	24.38	27.14	28.52
28	4.912	34	5.965	1.214	11.01	13.49	14.87	16.25	19.01	22.32	25.90	28.66	30.04
37	6.492	45	7.895	1.216	8.24	10.72	12.11	13.49	16.25	19.55	23.14	25.90	27.28
32	5.614	39	6.842	1.219	9.76	12.25	13.63	15.01	17.77	21.07	24.66	27.42	28.80
31	5.439	38	6.667	1.226	10.04	12.52	13.90	15.28	18.04	21.35	24.93	27.69	29.07
35	6.141	43	7.544	1.229	8.79	11.28	12.66	14.04	16.80	20.10	23.69	26.45	27.83
39	6.842	48	8.421	1.231		10.03	11.41	12.79	15.55	18.86	22.45	25.21	26.59
30	5.263	37	6.492	1.233	10.31	12.80	14.18	15.56	18.32	21.62	25.21	27.97	29.35
43	7.544	53	9.299	1.233			10.16	11.54	14.30	17.61	21.20	23.96	25.34
29	5.088	36	6.316	1.241	10.59	13.07	14.46	15.84	18.59	21.90	25.49	28.24	29.62
45	7.895	56	9.825	1.244				10.84	13.61	16.92	20.51	23.27	24.65
28	4.912	35	6.141	1.250	10.87	13.35	14.73	16.11	18.87	22.18	25.76	28.52	29.90
32	5.614	40	7.018	1.250	9.62	12.10	13.49	14.87	17.62	20.93	24.52	27.27	28.66
36	6.316	45	7.895	1.250	8.37	10.85	12.24	13.62	16.38	19.69	23.28	26.03	27.41
40	7.018	50	8.772	1.250		9.60	10.99	12.37	15.13	18.44	22.03	24.79	26.17
48	8.421	60	10.527	1.250					12.63	15.95	19.54	22.30	23.68
60	10.527	75	13.158	1.250							15.79	18.56	19.94
31	5.439	39	6.842	1.258	9.89	12.38	13.76	15.14	17.90	21.21	24.79	27.55	28.93
50	8.772	63	11.053	1.260					11.93	15.25	18.84	21.60	22.99
38	6.667	48	8.421	1.263		10.16	11.54	12.93	15.69	18.99	22.58	25.34	26.72
53	9.299	67	11.755	1.264						14.28	17.87	20.63	22.01
34	5.965	43	7.544	1.265	8.92	11.41	12.79	14.17	16.93	20.24	23.83	26.58	27.96
30	5.263	38	6.667	1.267	10.17	12.66	14.04	15.42	18.18	21.48	25.07	27.83	29.21
56	9.825	71	12.457	1.268						13.30	16.90	19.66	21.04
71	12.457	90	15.790	1.268								14.93	16.31
63	11.053	80	14.036	1.270							14.67	17.44	18.82
29	5.088	37	6.492	1.276	10.45	12.93	14.31	15.69	18.45	21.76	25.35	28.10	29.48
39	6.842	50	8.772	1.282		9.73	11.12	12.50	15.27	18.58	22.17	24.92	26.30
28	4.912	36	6.316	1.286	10.72	13.21	14.59	15.97	18.73	22.04	25.62	28.38	29.76
35	6.141	45	7.895	1.286	8.50	10.99	12.37	13.75	16.51	19.82	23.41	26.17	27.55
31	5.439	40	7.018	1.290	9.75	12.24	13.62	15.00	17.76	21.07	24.65	27.41	28.79
37	6.492	48	8.421	1.297		10.29	11.67	13.06	15.82	19.13	22.72	25.47	26.86
30	5.263	39	6.842	1.300	10.03	12.51	13.90	15.28	18.04	21.34	24.93	27.69	29.07
43	7.544	56	9.825	1.302			9.72	11.10	13.87	17.19	20.78	23.54	24.92
Length Factor*					0.68	0.73	0.75	0.77	0.81	0.85	0.89	0.92	0.94

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Center Distance, Inches											Speed Ratio	Sprocket Combinations	
												DriveR	DriveN
14MGT-2100 P.L 82.68 150 teeth	14MGT-2240 P.L 88.19 160 teeth	14MGT-2380 P.L 93.70 170 teeth	14MGT-2520 P.L 99.21 180 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-3500 P.L 137.79 250 teeth	14MGT-3920 P.L 154.33 280 teeth	14MGT-4410 P.L 173.62 315 teeth		No. of grooves	No. of grooves
31.14	33.89	36.65	39.40	42.16	44.92	51.53	54.84	58.70	66.97	76.61	1.176	34	40
27.83	30.58	33.34	36.09	38.85	41.61	48.22	51.53	55.39	63.66	73.30	1.178	45	53
32.93	35.69	38.44	41.20	43.95	46.71	53.32	56.63	60.49	68.76	78.40	1.179	28	33
31.41	34.17	36.93	39.68	42.44	45.20	51.81	55.12	58.97	67.24	76.89	1.182	33	39
23.27	26.03	28.78	31.54	34.29	37.06	43.67	46.98	50.83	59.11	68.75	1.183	60	71
29.90	32.65	35.41	38.16	40.92	43.68	50.29	53.60	57.45	65.73	75.37	1.184	38	45
31.69	34.45	37.20	39.96	42.71	45.47	52.08	55.39	59.25	67.52	77.16	1.188	32	38
25.34	28.10	30.85	33.61	36.37	39.13	45.74	49.05	52.90	61.17	70.82	1.189	53	63
22.30	25.06	27.81	30.57	33.33	36.09	42.70	46.01	49.87	58.14	67.79	1.190	63	75
31.97	34.72	37.48	40.23	42.99	45.75	52.36	55.67	59.52	67.79	77.44	1.194	31	37
30.45	33.20	35.96	38.71	41.47	44.23	50.84	54.15	58.01	66.28	75.92	1.194	36	43
21.05	23.81	26.57	29.33	32.08	34.85	41.46	44.77	48.63	56.90	66.54	1.194	67	80
24.37	27.13	29.89	32.64	35.40	38.16	44.77	48.08	51.94	60.21	69.85	1.196	56	67
32.24	35.00	37.75	40.51	43.26	46.02	52.63	55.94	59.80	68.07	77.71	1.200	30	36
29.21	31.96	34.72	37.47	40.23	42.99	49.60	52.91	56.76	65.04	74.68	1.200	40	48
26.17	28.92	31.68	34.44	37.19	39.95	46.56	49.87	53.73	62.00	71.65	1.200	50	60
18.56	21.32	24.08	26.84	29.60	32.36	38.97	42.28	46.14	54.41	64.06	1.200	75	90
32.52	35.27	38.03	40.78	43.54	46.30	52.91	56.22	60.07	68.34	77.99	1.207	29	35
31.27	34.03	36.79	39.54	42.30	45.06	51.67	54.98	58.83	67.10	76.75	1.212	33	40
32.79	35.55	38.30	41.06	43.81	46.57	53.18	56.49	60.35	68.62	78.27	1.214	28	34
30.03	32.79	35.54	38.30	41.05	43.81	50.43	53.74	57.59	65.86	75.51	1.216	37	45
31.55	34.31	37.06	39.82	42.57	45.33	51.94	55.25	59.11	67.38	77.02	1.219	32	39
31.83	34.58	37.34	40.09	42.85	45.61	52.22	55.53	59.38	67.65	77.30	1.226	31	38
30.58	33.34	36.10	38.85	41.61	44.37	50.98	54.29	58.14	66.41	76.06	1.229	35	43
29.34	32.10	34.85	37.61	40.36	43.13	49.74	53.05	56.90	65.17	74.82	1.231	39	48
32.10	34.86	37.61	40.37	43.12	45.88	52.49	55.80	59.66	67.93	77.58	1.233	30	37
28.10	30.85	33.61	36.37	39.12	41.88	48.49	51.80	55.66	63.93	73.58	1.233	43	53
32.38	35.13	37.89	40.64	43.40	46.16	52.77	56.08	59.94	68.21	77.85	1.241	29	36
27.41	30.16	32.92	35.67	38.43	41.19	47.80	51.11	54.97	63.24	72.89	1.244	45	56
32.65	35.41	38.16	40.92	43.67	46.43	53.05	56.36	60.21	68.48	78.13	1.250	28	35
31.41	34.17	36.92	39.68	42.43	45.19	51.80	55.11	58.97	67.24	76.89	1.250	32	40
30.17	32.92	35.68	38.44	41.19	43.95	50.56	53.87	57.73	66.00	75.64	1.250	36	45
28.93	31.68	34.44	37.19	39.95	42.71	49.32	52.63	56.49	64.76	74.40	1.250	40	50
26.44	29.19	31.95	34.71	37.46	40.22	46.84	50.15	54.00	62.27	71.92	1.250	48	60
22.70	25.46	28.22	30.97	33.73	36.49	43.11	46.42	50.28	58.55	68.20	1.250	60	75
31.69	34.44	37.20	39.95	42.71	45.47	52.08	55.39	59.25	67.52	77.16	1.258	31	39
25.74	28.50	31.26	34.02	36.77	39.53	46.15	49.46	53.31	61.58	71.23	1.260	50	63
29.48	32.23	34.99	37.74	40.50	43.26	49.87	53.18	57.04	65.31	74.95	1.263	38	48
24.77	27.53	30.29	33.05	35.80	38.56	45.18	48.49	52.34	60.62	70.26	1.264	53	67
30.72	33.48	36.23	38.99	41.74	44.50	51.11	54.42	58.28	66.55	76.20	1.265	34	43
31.96	34.72	37.47	40.23	42.98	45.74	52.36	55.67	59.52	67.79	77.44	1.267	30	38
23.80	26.56	29.32	32.08	34.83	37.60	44.21	47.52	51.38	59.65	69.30	1.268	56	71
19.08	21.85	24.61	27.37	30.13	32.89	39.51	42.82	46.68	54.95	64.60	1.268	71	90
21.58	24.34	27.10	29.86	32.62	35.38	42.00	45.31	49.17	57.44	67.09	1.270	63	80
32.24	34.99	37.75	40.50	43.26	46.02	52.63	55.94	59.80	68.07	77.71	1.276	29	37
29.06	31.82	34.57	37.33	40.09	42.85	49.46	52.77	56.62	64.89	74.54	1.282	39	50
32.51	35.27	38.03	40.78	43.54	46.30	52.91	56.22	60.07	68.34	77.99	1.286	28	36
30.30	33.06	35.82	38.57	41.33	44.09	50.70	54.01	57.86	66.14	75.78	1.286	35	45
31.55	34.30	37.06	39.81	42.57	45.33	51.94	55.25	59.11	67.38	77.02	1.290	31	40
29.61	32.37	35.12	37.88	40.64	43.40	50.01	53.32	57.17	65.45	75.09	1.297	37	48
31.82	34.58	37.33	40.09	42.85	45.61	52.22	55.53	59.38	67.65	77.30	1.300	30	39
27.67	30.43	33.19	35.95	38.70	41.46	48.07	51.39	55.24	63.51	73.16	1.302	43	56
0.96	0.99	1.01	1.03	1.05	1.07	1.12	1.14	1.16	1.20	1.25	Length Factor*		

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Table No. 6
Drive Selection Table

Sprocket Combinations					Center Distance, Inches								
DriveR		DriveN											
No. of Grooves	Pitch Diameter (Inches)	No. of Grooves	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-1750 P.L 68.90 125 teeth	14MGT-1890 P.L 74.41 135 teeth	14MGT-1960 P.L 77.17 140 teeth
33	5.790	43	7.544	1.303	9.05	11.54	12.92	14.31	17.06	20.37	23.96	26.72	28.10
29	5.088	38	6.667	1.310	10.30	12.79	14.17	15.55	18.31	21.62	25.21	27.96	29.34
48	8.421	63	11.053	1.313					12.19	15.51	19.11	21.87	23.25
38	6.667	50	8.772	1.316		9.86	11.25	12.64	15.40	18.71	22.30	25.06	26.44
28	4.912	37	6.492	1.321	10.58	13.06	14.45	15.83	18.59	21.89	25.48	28.24	29.62
34	5.965	45	7.895	1.324	8.63	11.12	12.50	13.89	16.65	19.96	23.54	26.30	27.68
40	7.018	53	9.299	1.325		9.16	10.55	11.94	14.70	18.01	21.60	24.36	25.74
30	5.263	40	7.018	1.333	9.88	12.37	13.75	15.13	17.89	21.20	24.79	27.55	28.93
36	6.316	48	8.421	1.333		10.42	11.80	13.19	15.95	19.26	22.85	25.61	26.99
45	7.895	60	10.527	1.333				10.25	13.02	16.34	19.94	22.70	24.08
60	10.527	80	14.036	1.333							15.06	17.83	19.21
56	9.825	75	13.158	1.339						12.70	16.31	19.08	20.47
50	8.772	67	11.755	1.340					11.34	14.67	18.27	21.03	22.41
53	9.299	71	12.457	1.340						13.69	17.29	20.06	21.44
67	11.755	90	15.790	1.343								15.44	16.83
32	5.614	43	7.544	1.344	9.18	11.67	13.06	14.44	17.20	20.51	24.10	26.85	28.23
29	5.088	39	6.842	1.345	10.16	12.64	14.03	15.41	18.17	21.48	25.06	27.82	29.20
37	6.492	50	8.772	1.351		9.99	11.38	12.77	15.53	18.84	22.43	25.19	26.57
28	4.912	38	6.667	1.357	10.43	12.92	14.30	15.69	18.45	21.75	25.34	28.10	29.48
39	6.842	53	9.299	1.359		9.29	10.68	12.07	14.83	18.15	21.74	24.50	25.88
33	5.790	45	7.895	1.364	8.75	11.25	12.63	14.02	16.78	20.09	23.68	26.44	27.82
35	6.141	48	8.421	1.371	8.05	10.55	11.93	13.32	16.08	19.39	22.98	25.74	27.12
29	5.088	40	7.018	1.379	10.01	12.50	13.88	15.27	18.03	21.34	24.92	27.68	29.06
31	5.439	43	7.544	1.387	9.31	11.80	13.19	14.57	17.33	20.64	24.23	26.99	28.37
36	6.316	50	8.772	1.389		10.12	11.51	12.90	15.66	18.98	22.57	25.33	26.71
28	4.912	39	6.842	1.393	10.29	12.78	14.16	15.54	18.30	21.61	25.20	27.96	29.34
38	6.667	53	9.299	1.395		9.41	10.81	12.19	14.96	18.28	21.87	24.63	26.01
43	7.544	60	10.527	1.395				10.51	13.28	16.61	20.20	22.96	24.35
48	8.421	67	11.755	1.396					11.59	14.93	18.53	21.29	22.68
40	7.018	56	9.825	1.400			10.10	11.49	14.26	17.58	21.18	23.94	25.32
45	7.895	63	11.053	1.400					12.58	15.90	19.50	22.27	23.65
80	14.036	112	19.650	1.400									
32	5.614	45	7.895	1.406	8.88	11.38	12.76	14.15	16.91	20.22	23.81	26.57	27.95
34	5.965	48	8.421	1.412	8.17	10.68	12.06	13.45	16.21	19.53	23.12	25.88	27.26
53	9.299	75	13.158	1.415						13.08	16.70	19.47	20.86
50	8.772	71	12.457	1.420						14.07	17.68	20.45	21.83
28	4.912	40	7.018	1.429	10.14	12.63	14.02	15.40	18.16	21.47	25.06	27.82	29.20
35	6.141	50	8.772	1.429		10.25	11.64	13.03	15.79	19.11	22.70	25.46	26.84
56	9.825	80	14.036	1.429							15.57	18.34	19.73
63	11.053	90	15.790	1.429								15.95	17.34
37	6.492	53	9.299	1.432		9.54	10.93	12.32	15.09	18.41	22.00	24.76	26.15
30	5.263	43	7.544	1.433	9.44	11.93	13.32	14.70	17.46	20.78	24.36	27.12	28.50
39	6.842	56	9.825	1.436			10.23	11.62	14.39	17.71	21.31	24.07	25.45
31	5.439	45	7.895	1.452	9.01	11.51	12.89	14.28	17.04	20.36	23.95	26.70	28.09
33	5.790	48	8.421	1.455	8.30	10.80	12.19	13.58	16.35	19.66	23.25	26.01	27.39
43	7.544	63	11.053	1.465				10.05	12.83	16.16	19.77	22.53	23.91
34	5.965	50	8.772	1.471		10.38	11.77	13.16	15.92	19.24	22.83	25.59	26.97
36	6.316	53	9.299	1.472		9.67	11.06	12.45	15.22	18.54	22.14	24.90	26.28
38	6.667	56	9.825	1.474		8.95	10.35	11.75	14.52	17.84	21.44	24.20	25.58
48	8.421	71	12.457	1.479						14.33	17.94	20.71	22.10
29	5.088	43	7.544	1.483	9.56	12.06	13.45	14.83	17.60	20.91	24.50	27.26	28.64
45	7.895	67	11.755	1.489					11.97	15.31	18.92	21.69	23.07
Length Factor*					0.68	0.73	0.75	0.77	0.81	0.85	0.89	0.92	0.94

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Center Distance, Inches											Speed Ratio	Sprocket Combinations	
												DriveR	DriveN
14MGT-2100 P.L 82.68 150 teeth	14MGT-2240 P.L 88.19 160 teeth	14MGT-2380 P.L 93.70 170 teeth	14MGT-2520 P.L 99.21 180 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-3500 P.L 137.79 250 teeth	14MGT-3920 P.L 154.33 280 teeth	14MGT-4410 P.L 173.62 315 teeth		No. of grooves	No. of grooves
30.86	33.61	36.37	39.12	41.88	44.64	51.25	54.56	58.42	66.69	76.33	1.303	33	43
32.10	34.85	37.61	40.36	43.12	45.88	52.49	55.80	59.66	67.93	77.57	1.310	29	38
26.01	28.77	31.53	34.28	37.04	39.80	46.42	49.73	53.58	61.86	71.50	1.313	48	63
29.20	31.95	34.71	37.46	40.22	42.98	49.59	52.90	56.76	65.03	74.68	1.316	38	50
32.37	35.13	37.89	40.64	43.40	46.16	52.77	56.08	59.93	68.20	77.85	1.321	28	37
30.44	33.20	35.95	38.71	41.46	44.22	50.84	54.15	58.00	66.27	75.92	1.324	34	45
28.50	31.26	34.02	36.77	39.53	42.29	48.90	52.21	56.07	64.34	73.99	1.325	40	53
31.68	34.44	37.19	39.95	42.71	45.47	52.08	55.39	59.24	67.51	77.16	1.333	30	40
29.75	32.50	35.26	38.02	40.77	43.53	50.14	53.46	57.31	65.58	75.23	1.333	36	48
26.84	29.60	32.35	35.11	37.87	40.63	47.24	50.55	54.41	62.68	72.33	1.333	45	60
21.98	24.74	27.50	30.26	33.02	35.79	42.40	45.71	49.57	57.85	67.50	1.333	60	80
23.23	25.99	28.75	31.51	34.27	37.03	43.65	46.96	50.82	59.09	68.74	1.339	56	75
25.17	27.93	30.69	33.45	36.21	38.97	45.58	48.90	52.75	61.02	70.67	1.340	50	67
24.20	26.96	29.72	32.48	35.24	38.00	44.61	47.93	51.78	60.06	69.70	1.340	53	71
19.60	22.37	25.14	27.90	30.66	33.43	40.05	43.36	47.22	55.49	65.14	1.343	67	90
30.99	33.75	36.50	39.26	42.01	44.78	51.39	54.70	58.55	66.82	76.47	1.344	32	43
31.96	34.71	37.47	40.23	42.98	45.74	52.35	55.66	59.52	67.79	77.44	1.345	29	39
29.33	32.09	34.84	37.60	40.36	43.12	49.73	53.04	56.90	65.17	74.81	1.351	37	50
32.23	34.99	37.75	40.50	43.26	46.02	52.63	55.94	59.79	68.07	77.71	1.357	28	38
28.64	31.39	34.15	36.91	39.66	42.43	49.04	52.35	56.20	64.48	74.12	1.359	39	53
30.57	33.33	36.09	38.84	41.60	44.36	50.97	54.28	58.14	66.41	76.05	1.364	33	45
29.88	32.64	35.39	38.15	40.91	43.67	50.28	53.59	57.45	65.72	75.36	1.371	35	48
31.82	34.57	37.33	40.09	42.84	45.60	52.21	55.52	59.38	67.65	77.30	1.379	29	40
31.13	33.88	36.64	39.39	42.15	44.91	51.52	54.83	58.69	66.96	76.61	1.387	31	43
29.46	32.22	34.98	37.73	40.49	43.25	49.86	53.18	57.03	65.30	74.95	1.389	36	50
32.09	34.85	37.61	40.36	43.12	45.88	52.49	55.80	59.66	67.93	77.57	1.393	28	39
28.77	31.53	34.29	37.04	39.80	42.56	49.17	52.48	56.34	64.61	74.26	1.395	38	53
27.11	29.86	32.62	35.38	38.14	40.90	47.51	50.83	54.68	62.95	72.60	1.395	43	60
25.44	28.20	30.96	33.72	36.48	39.24	45.85	49.17	53.02	61.30	70.94	1.396	48	67
28.08	30.83	33.59	36.35	39.11	41.87	48.48	51.79	55.65	63.92	73.57	1.400	40	56
26.41	29.17	31.93	34.69	37.44	40.21	46.82	50.13	53.99	62.26	71.91	1.400	45	63
	17.41	20.20	22.98	25.75	28.52	35.16	38.48	42.35	50.63	60.29	1.400	80	112
30.71	33.47	36.22	38.98	41.73	44.50	51.11	54.42	58.27	66.55	76.19	1.406	32	45
30.02	32.77	35.53	38.29	41.04	43.80	50.42	53.73	57.58	65.85	75.50	1.412	34	48
23.62	26.39	29.15	31.91	34.67	37.43	44.05	47.36	51.22	59.50	69.15	1.415	53	75
24.60	27.36	30.12	32.88	35.64	38.40	45.02	48.33	52.19	60.46	70.11	1.420	50	71
31.95	34.71	37.47	40.22	42.98	45.74	52.35	55.66	59.52	67.79	77.43	1.429	28	40
29.60	32.36	35.11	37.87	40.63	43.39	50.00	53.31	57.17	65.44	75.09	1.429	35	50
22.50	25.27	28.03	30.79	33.55	36.32	42.94	46.25	50.11	58.39	68.04	1.429	56	80
20.12	22.89	25.66	28.42	31.19	33.95	40.58	43.89	47.75	56.03	65.68	1.429	63	90
28.90	31.66	34.42	37.18	39.93	42.69	49.31	52.62	56.48	64.75	74.39	1.432	37	53
31.26	34.02	36.77	39.53	42.29	45.05	51.66	54.97	58.83	67.10	76.74	1.433	30	43
28.21	30.97	33.73	36.48	39.24	42.00	48.62	51.93	55.78	64.06	73.70	1.436	39	56
30.84	33.60	36.36	39.11	41.87	44.63	51.24	54.55	58.41	66.68	76.33	1.452	31	45
30.15	32.91	35.66	38.42	41.18	43.94	50.55	53.86	57.72	65.99	75.64	1.455	33	48
26.68	29.44	32.20	34.95	37.71	40.48	47.09	50.40	54.26	62.53	72.18	1.465	43	63
29.73	32.49	35.25	38.00	40.76	43.52	50.14	53.45	57.30	65.58	75.22	1.471	34	50
29.04	31.80	34.55	37.31	40.07	42.83	49.44	52.75	56.61	64.88	74.53	1.472	36	53
28.34	31.10	33.86	36.62	39.38	42.14	48.75	52.06	55.92	64.19	73.84	1.474	38	56
24.86	27.62	30.39	33.15	35.91	38.67	45.29	48.60	52.46	60.73	70.38	1.479	48	71
31.39	34.15	36.91	39.66	42.42	45.18	51.79	55.11	58.96	67.23	76.88	1.483	29	43
25.83	28.60	31.36	34.12	36.88	39.64	46.26	49.57	53.43	61.70	71.35	1.489	45	67
0.96	0.99	1.01	1.03	1.05	1.07	1.12	1.14	1.16	1.20	1.25	Length Factor*		

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Table No. 6
Drive Selection Table

Sprocket Combinations					Center Distance, Inches								
DriveR		DriveN											
No. of Grooves	Pitch Diameter (Inches)	No. of Grooves	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-1750 P.L 68.90 125 teeth	14MGT-1890 P.L 74.41 135 teeth	14MGT-1960 P.L 77.17 140 teeth
75	13.158	112	19.650	1.493									
30	5.263	45	7.895	1.500	9.14	11.64	13.02	14.41	17.18	20.49	24.08	26.84	28.22
32	5.614	48	8.421	1.500	8.42	10.93	12.32	13.71	16.48	19.79	23.38	26.14	27.53
40	7.018	60	10.527	1.500			9.48	10.88	13.67	16.99	20.60	23.36	24.74
50	8.772	75	13.158	1.500						13.46	17.09	19.86	21.25
60	10.527	90	15.790	1.500							13.52	16.32	17.72
53	9.299	80	14.036	1.509							15.95	18.73	20.12
35	6.141	53	9.299	1.514		9.79	11.19	12.58	15.35	18.67	22.27	25.03	26.41
37	6.492	56	9.825	1.514		9.08	10.48	11.87	14.65	17.97	21.57	24.33	25.72
33	5.790	50	8.772	1.515	7.99	10.50	11.89	13.28	16.05	19.37	22.96	25.72	27.11
28	4.912	43	7.544	1.536	9.69	12.19	13.58	14.96	17.73	21.04	24.63	27.39	28.77
39	6.842	60	10.527	1.538			9.61	11.01	13.80	17.12	20.73	23.49	24.88
31	5.439	48	8.421	1.548	8.55	11.06	12.45	13.84	16.61	19.92	23.52	26.28	27.66
29	5.088	45	7.895	1.552	9.26	11.76	13.15	14.54	17.31	20.62	24.21	26.97	28.35
36	6.316	56	9.825	1.556		9.20	10.60	12.00	14.78	18.10	21.70	24.46	25.85
43	7.544	67	11.755	1.558					12.22	15.56	19.18	21.95	23.33
34	5.965	53	9.299	1.559		9.92	11.31	12.71	15.48	18.80	22.40	25.16	26.54
32	5.614	50	8.772	1.563	8.11	10.63	12.02	13.41	16.18	19.50	23.10	25.86	27.24
48	8.421	75	13.158	1.563						13.71	17.34	20.12	21.51
40	7.018	63	11.053	1.575				10.42	13.21	16.55	20.16	22.92	24.31
71	12.457	112	19.650	1.577									
45	7.895	71	12.457	1.578					11.35	14.70	18.32	21.10	22.48
38	6.667	60	10.527	1.579			9.73	11.13	13.92	17.25	20.86	23.62	25.01
30	5.263	48	8.421	1.600	8.67	11.19	12.58	13.97	16.74	20.06	23.65	26.41	27.79
35	6.141	56	9.825	1.600		9.32	10.73	12.13	14.91	18.23	21.83	24.60	25.98
50	8.772	80	14.036	1.600						12.68	16.32	19.11	20.50
33	5.790	53	9.299	1.606		10.04	11.44	12.83	15.61	18.93	22.53	25.29	26.68
28	4.912	45	7.895	1.607	9.39	11.89	13.28	14.67	17.44	20.75	24.35	27.11	28.49
56	9.825	90	15.790	1.607							14.01	16.82	18.22
31	5.439	50	8.772	1.613	8.23	10.75	12.15	13.54	16.31	19.63	23.23	25.99	27.37
39	6.842	63	11.053	1.615				10.54	13.34	16.68	20.29	23.05	24.44
37	6.492	60	10.527	1.622			9.85	11.26	14.05	17.38	20.99	23.75	25.14
34	5.965	56	9.825	1.647		9.45	10.85	12.25	15.03	18.36	21.96	24.73	26.11
43	7.544	71	12.457	1.651					11.59	14.95	18.58	21.35	22.74
29	5.088	48	8.421	1.655	8.80	11.31	12.71	14.10	16.87	20.19	23.78	26.54	27.93
32	5.614	53	9.299	1.656		10.16	11.57	12.96	15.74	19.06	22.66	25.43	26.81
38	6.667	63	11.053	1.658				10.66	13.46	16.80	20.41	23.18	24.57
30	5.263	50	8.772	1.667	8.36	10.88	12.28	13.67	16.44	19.76	23.36	26.12	27.51
36	6.316	60	10.527	1.667			9.97	11.38	14.17	17.51	21.12	23.88	25.27
45	7.895	75	13.158	1.667						14.08	17.72	20.50	21.89
48	8.421	80	14.036	1.667						12.92	16.57	19.36	20.76
67	11.755	112	19.650	1.672									
40	7.018	67	11.755	1.675					12.59	15.94	19.56	22.34	23.72
33	5.790	56	9.825	1.697		9.57	10.98	12.38	15.16	18.49	22.09	24.86	26.24
53	9.299	90	15.790	1.698							14.38	17.19	18.60
37	6.492	63	11.053	1.703				10.78	13.59	16.93	20.54	23.31	24.70
31	5.439	53	9.299	1.710		10.29	11.69	13.09	15.87	19.19	22.79	25.56	26.94
28	4.912	48	8.421	1.714	8.92	11.44	12.83	14.22	17.00	20.32	23.91	26.68	28.06
35	6.141	60	10.527	1.714			10.09	11.50	14.30	17.64	21.25	24.01	25.40
39	6.842	67	11.755	1.718					12.72	16.07	19.69	22.46	23.85
29	5.088	50	8.772	1.724	8.48	11.00	12.40	13.80	16.57	19.89	23.49	26.25	27.64
43	7.544	75	13.158	1.744						14.33	17.97	20.76	22.15
Length Factor*					0.68	0.73	0.75	0.77	0.81	0.85	0.89	0.92	0.94

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Center Distance, Inches											Speed Ratio	Sprocket Combinations	
												DriveR	DriveN
14MGT-2100 P.L 82.68 150 teeth	14MGT-2240 P.L 88.19 160 teeth	14MGT-2380 P.L 93.70 170 teeth	14MGT-2520 P.L 99.21 180 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-3500 P.L 137.79 250 teeth	14MGT-3920 P.L 154.33 280 teeth	14MGT-4410 P.L 173.62 315 teeth		No. of grooves	No. of grooves
	18.03	20.83	23.61	26.39	29.17	35.82	39.14	43.01	51.29	60.96	1.493	75	112
30.98	33.74	36.49	39.25	42.01	44.77	51.38	54.69	58.55	66.82	76.46	1.500	30	45
30.28	33.04	35.80	38.56	41.31	44.07	50.69	54.00	57.85	66.13	75.77	1.500	32	48
27.50	30.26	33.02	35.78	38.54	41.30	47.92	51.23	55.09	63.36	73.01	1.500	40	60
24.02	26.78	29.54	32.31	35.07	37.83	44.45	47.77	51.62	59.90	69.55	1.500	50	75
20.50	23.28	26.05	28.82	31.58	34.35	40.98	44.29	48.15	56.43	66.09	1.500	60	90
22.89	25.66	28.42	31.19	33.95	36.72	43.34	46.65	50.51	58.79	68.44	1.509	53	80
29.17	31.93	34.69	37.45	40.20	42.96	49.58	52.89	56.75	65.02	74.67	1.514	35	53
28.48	31.24	33.99	36.75	39.51	42.27	48.89	52.20	56.05	64.33	73.98	1.514	37	56
29.87	32.62	35.38	38.14	40.90	43.66	50.27	53.58	57.44	65.71	75.36	1.515	33	50
31.53	34.29	37.04	39.80	42.56	45.32	51.93	55.24	59.10	67.37	77.02	1.536	28	43
27.64	30.40	33.16	35.92	38.67	41.44	48.05	51.37	55.22	63.50	73.15	1.538	39	60
30.42	33.18	35.93	38.69	41.45	44.21	50.82	54.13	57.99	66.26	75.91	1.548	31	48
31.11	33.87	36.63	39.38	42.14	44.90	51.51	54.83	58.68	66.95	76.60	1.552	29	45
28.61	31.37	34.13	36.89	39.64	42.41	49.02	52.33	56.19	64.46	74.11	1.556	36	56
26.10	28.86	31.62	34.38	37.14	39.91	46.52	49.84	53.70	61.97	71.62	1.558	43	67
29.30	32.06	34.82	37.58	40.34	43.10	49.71	53.03	56.88	65.16	74.80	1.559	34	53
30.00	32.76	35.52	38.27	41.03	43.79	50.41	53.72	57.57	65.85	75.49	1.563	32	50
24.28	27.04	29.81	32.57	35.33	38.10	44.72	48.03	51.89	60.17	69.82	1.563	48	75
27.07	29.83	32.59	35.35	38.11	40.88	47.49	50.81	54.66	62.94	72.59	1.575	40	63
	18.53	21.33	24.12	26.90	29.69	36.34	39.66	43.53	51.82	61.49	1.577	71	112
25.25	28.02	30.78	33.54	36.30	39.07	45.69	49.00	52.86	61.14	70.79	1.578	45	71
27.77	30.53	33.29	36.05	38.81	41.57	48.19	51.50	55.36	63.63	73.28	1.579	38	60
30.55	33.31	36.07	38.83	41.58	44.34	50.96	54.27	58.13	66.40	76.05	1.600	30	48
28.74	31.50	34.26	37.02	39.78	42.54	49.16	52.47	56.33	64.60	74.25	1.600	35	56
23.28	26.05	28.82	31.58	34.35	37.11	43.74	47.05	50.91	59.19	68.85	1.600	50	80
29.44	32.20	34.96	37.71	40.47	43.23	49.85	53.16	57.02	65.29	74.94	1.606	33	53
31.25	34.00	36.76	39.52	42.28	45.04	51.65	54.96	58.82	67.09	76.74	1.607	28	45
21.01	23.79	26.56	29.34	32.10	34.87	41.50	44.82	48.69	56.97	66.63	1.607	56	90
30.13	32.89	35.65	38.41	41.16	43.93	50.54	53.85	57.71	65.98	75.63	1.613	31	50
27.20	29.97	32.73	35.49	38.25	41.01	47.63	50.94	54.80	63.08	72.72	1.615	39	63
27.90	30.66	33.42	36.18	38.94	41.70	48.32	51.63	55.49	63.77	73.42	1.622	37	60
28.87	31.63	34.39	37.15	39.91	42.67	49.29	52.60	56.46	64.73	74.38	1.647	34	56
25.51	28.28	31.04	33.81	36.57	39.33	45.96	49.27	53.13	61.41	71.06	1.651	43	71
30.68	33.44	36.20	38.96	41.72	44.48	51.09	54.40	58.26	66.53	76.18	1.655	29	48
29.57	32.33	35.09	37.85	40.61	43.37	49.98	53.30	57.15	65.43	75.07	1.656	32	53
27.33	30.10	32.86	35.62	38.38	41.14	47.76	51.08	54.93	63.21	72.86	1.658	38	63
30.27	33.03	35.78	38.54	41.30	44.06	50.68	53.99	57.85	66.12	75.77	1.667	30	50
28.03	30.79	33.56	36.32	39.07	41.84	48.46	51.77	55.63	63.90	73.55	1.667	36	60
24.66	27.43	30.20	32.96	35.73	38.50	45.12	48.43	52.29	60.57	70.23	1.667	45	75
23.53	26.31	29.08	31.84	34.61	37.38	44.00	47.32	51.18	59.46	69.12	1.667	48	80
16.19	19.02	21.83	24.62	27.41	30.20	36.85	40.18	44.05	52.35	62.02	1.672	67	112
26.49	29.25	32.02	34.78	37.54	40.31	46.93	50.24	54.10	62.38	72.03	1.675	40	67
29.01	31.77	34.53	37.29	40.05	42.81	49.42	52.74	56.60	64.87	74.52	1.697	33	56
21.39	24.17	26.95	29.72	32.49	35.27	41.90	45.22	49.08	57.37	67.03	1.698	53	90
27.47	30.23	32.99	35.75	38.51	41.28	47.90	51.21	55.07	63.34	72.99	1.703	37	63
29.70	32.46	35.22	37.98	40.74	43.50	50.12	53.43	57.29	65.56	75.21	1.710	31	53
30.82	33.58	36.34	39.09	41.85	44.61	51.23	54.54	58.40	66.67	76.32	1.714	28	48
28.16	30.93	33.69	36.45	39.21	41.97	48.59	51.90	55.76	64.04	73.69	1.714	35	60
26.62	29.39	32.15	34.91	37.67	40.44	47.06	50.37	54.23	62.51	72.16	1.718	39	67
30.40	33.16	35.92	38.68	41.43	44.20	50.81	54.12	57.98	66.25	75.90	1.724	29	50
24.92	27.69	30.46	33.23	35.99	38.76	45.38	48.70	52.56	60.84	70.49	1.744	43	75
0.96	0.99	1.01	1.03	1.05	1.07	1.12	1.14	1.16	1.20	1.25	Length Factor*		

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Table No. 6
Drive Selection Table

Sprocket Combinations					Center Distance, Inches								
DriveR		DriveN											
No. of Grooves	Pitch Diameter (Inches)	No. of Grooves	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-1750 P.L 68.90 125 teeth	14MGT-1890 P.L 74.41 135 teeth	14MGT-1960 P.L 77.17 140 teeth
32	5.614	56	9.825	1.750		9.69	11.10	12.50	15.29	18.62	22.22	24.99	26.38
36	6.316	63	11.053	1.750			9.49	10.91	13.71	17.06	20.67	23.44	24.83
80	14.036	140	24.562	1.750									
38	6.667	67	11.755	1.763				10.01	12.84	16.20	19.82	22.59	23.98
34	5.965	60	10.527	1.765			10.22	11.63	14.43	17.77	21.38	24.14	25.53
30	5.263	53	9.299	1.767		10.41	11.82	13.21	16.00	19.32	22.92	25.69	27.07
40	7.018	71	12.457	1.775					11.95	15.33	18.96	21.74	23.13
45	7.895	80	14.036	1.778						13.28	16.95	19.74	21.14
63	11.053	112	19.650	1.778									
28	4.912	50	8.772	1.786	8.60	11.13	12.53	13.92	16.70	20.02	23.62	26.39	27.77
35	6.141	63	11.053	1.800			9.61	11.03	13.84	17.19	20.80	23.57	24.96
50	8.772	90	15.790	1.800							14.74	17.56	18.97
31	5.439	56	9.825	1.806		9.81	11.22	12.63	15.42	18.75	22.35	25.12	26.51
37	6.492	67	11.755	1.811				10.13	12.96	16.32	19.94	22.72	24.11
33	5.790	60	10.527	1.818		8.91	10.34	11.75	14.55	17.89	21.50	24.27	25.66
39	6.842	71	12.457	1.821					12.07	15.45	19.09	21.87	23.26
29	5.088	53	9.299	1.828	7.99	10.53	11.94	13.34	16.12	19.45	23.05	25.82	27.20
34	5.965	63	11.053	1.853			9.72	11.15	13.96	17.31	20.93	23.70	25.09
43	7.544	80	14.036	1.860						13.52	17.19	19.99	21.39
36	6.316	67	11.755	1.861				10.25	13.08	16.45	20.07	22.85	24.24
30	5.263	56	9.825	1.867		9.93	11.34	12.75	15.54	18.88	22.48	25.25	26.64
60	10.527	112	19.650	1.867									
75	13.158	140	24.562	1.867									
38	6.667	71	12.457	1.868					12.19	15.58	19.21	21.99	23.39
32	5.614	60	10.527	1.875		9.03	10.46	11.87	14.68	18.02	21.63	24.40	25.79
40	7.018	75	13.158	1.875					11.29	14.70	18.35	21.14	22.53
48	8.421	90	15.790	1.875							14.98	17.81	19.22
28	4.912	53	9.299	1.893	8.11	10.66	12.06	13.46	16.25	19.58	23.18	25.95	27.34
33	5.790	63	11.053	1.909			9.84	11.27	14.09	17.44	21.06	23.83	25.22
35	6.141	67	11.755	1.914				10.37	13.21	16.57	20.20	22.98	24.37
37	6.492	71	12.457	1.919					12.31	15.70	19.34	22.12	23.51
39	6.842	75	13.158	1.923					11.41	14.82	18.47	21.26	22.66
29	5.088	56	9.825	1.931		10.05	11.47	12.87	15.67	19.00	22.61	25.38	26.77
31	5.439	60	10.527	1.935		9.15	10.58	11.99	14.80	18.15	21.76	24.53	25.92
32	5.614	63	11.053	1.969			9.96	11.39	14.21	17.56	21.18	23.96	25.35
34	5.965	67	11.755	1.971				10.49	13.33	16.70	20.33	23.11	24.50
36	6.316	71	12.457	1.972					12.43	15.82	19.46	22.25	23.64
71	12.457	140	24.562	1.972									
38	6.667	75	13.158	1.974					11.53	14.94	18.60	21.39	22.78
28	4.912	56	9.825	2.000		10.17	11.59	13.00	15.79	19.13	22.74	25.51	26.90
30	5.263	60	10.527	2.000		9.27	10.70	12.12	14.93	18.27	21.89	24.66	26.05
40	7.018	80	14.036	2.000						13.88	17.56	20.37	21.77
45	7.895	90	15.790	2.000							15.34	18.17	19.58
56	9.825	112	19.650	2.000									
37	6.492	75	13.158	2.027					11.65	15.06	18.72	21.51	22.91
35	6.141	71	12.457	2.029					12.55	15.94	19.59	22.37	23.77
33	5.790	67	11.755	2.030				10.60	13.45	16.82	20.45	23.23	24.62
31	5.439	63	11.053	2.032			10.08	11.51	14.33	17.69	21.31	24.09	25.48
39	6.842	80	14.036	2.051						14.00	17.69	20.49	21.89
29	5.088	60	10.527	2.069		9.38	10.82	12.24	15.05	18.40	22.02	24.79	26.18
36	6.316	75	13.158	2.083					11.76	15.18	18.84	21.64	23.04
34	5.965	71	12.457	2.088					12.67	16.07	19.71	22.50	23.90
Length Factor*					0.68	0.73	0.75	0.77	0.81	0.85	0.89	0.92	0.94

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Center Distance, Inches											Speed Ratio	Sprocket Combinations	
												DriveR	DriveN
14MGT-2100 P.L 82.68 150 teeth	14MGT-2240 P.L 88.19 160 teeth	14MGT-2380 P.L 93.70 170 teeth	14MGT-2520 P.L 99.21 180 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-3500 P.L 137.79 250 teeth	14MGT-3920 P.L 154.33 280 teeth	14MGT-4410 P.L 173.62 315 teeth		No. of grooves	No. of grooves
29.14	31.90	34.66	37.42	40.18	42.94	49.56	52.87	56.73	65.01	74.65	1.750	32	56
27.60	30.36	33.12	35.89	38.65	41.41	48.03	51.34	55.20	63.48	73.13	1.750	36	63
				21.39	24.23	30.97	34.32	38.22	46.55	56.25	1.750	80	140
26.75	29.52	32.28	35.04	37.81	40.57	47.19	50.51	54.37	62.64	72.30	1.763	38	67
28.30	31.06	33.82	36.58	39.34	42.11	48.72	52.04	55.90	64.17	73.82	1.765	34	60
29.83	32.60	35.36	38.11	40.87	43.64	50.25	53.57	57.42	65.70	75.35	1.767	30	53
25.90	28.67	31.44	34.20	36.96	39.73	46.35	49.67	53.53	61.81	71.46	1.775	40	71
23.92	26.69	29.47	32.23	35.00	37.77	44.40	47.72	51.58	59.86	69.52	1.778	45	80
16.67	19.51	22.32	25.12	27.91	30.70	37.37	40.70	44.57	52.88	62.55	1.778	63	112
30.53	33.29	36.05	38.81	41.57	44.33	50.95	54.26	58.12	66.39	76.04	1.786	28	50
27.73	30.49	33.26	36.02	38.78	41.54	48.16	51.48	55.34	63.61	73.26	1.800	35	63
21.77	24.55	27.33	30.11	32.88	35.66	42.29	45.61	49.48	57.77	67.43	1.800	50	90
29.27	32.03	34.79	37.55	40.31	43.08	49.69	53.01	56.86	65.14	74.79	1.806	31	56
26.88	29.65	32.41	35.18	37.94	40.70	47.33	50.64	54.50	62.78	72.43	1.811	37	67
28.43	31.19	33.95	36.71	39.47	42.24	48.86	52.17	56.03	64.31	73.96	1.818	33	60
26.03	28.80	31.57	34.33	37.10	39.86	46.49	49.80	53.66	61.94	71.60	1.821	39	71
29.97	32.73	35.49	38.25	41.01	43.77	50.39	53.70	57.56	65.83	75.48	1.828	29	53
27.86	30.62	33.39	36.15	38.91	41.68	48.30	51.61	55.47	63.75	73.40	1.853	34	63
24.17	26.95	29.72	32.49	35.26	38.03	44.66	47.98	51.84	60.13	69.79	1.860	43	80
27.01	29.78	32.54	35.31	38.07	40.84	47.46	50.77	54.63	62.91	72.57	1.861	36	67
29.40	32.16	34.93	37.69	40.45	43.21	49.83	53.14	57.00	65.28	74.93	1.867	30	56
17.02	19.87	22.69	25.49	28.29	31.08	37.75	41.09	44.96	53.27	62.94	1.867	60	112
				21.99	24.84	31.59	34.95	38.85	47.19	56.90	1.867	75	140
26.16	28.93	31.70	34.46	37.23	40.00	46.62	49.94	53.80	62.08	71.73	1.868	38	71
28.56	31.32	34.08	36.85	39.61	42.37	48.99	52.31	56.16	64.44	74.09	1.875	32	60
25.31	28.08	30.85	33.62	36.38	39.15	45.78	49.10	52.96	61.24	70.90	1.875	40	75
22.02	24.81	27.59	30.37	33.14	35.92	42.56	45.88	49.74	58.03	67.69	1.875	48	90
30.10	32.86	35.62	38.38	41.14	43.90	50.52	53.83	57.69	65.97	75.62	1.893	28	53
27.99	30.75	33.52	36.28	39.04	41.81	48.43	51.74	55.60	63.88	73.53	1.909	33	63
27.14	29.91	32.67	35.44	38.20	40.97	47.59	50.91	54.77	63.05	72.70	1.914	35	67
26.29	29.06	31.83	34.59	37.36	40.13	46.75	50.07	53.93	62.21	71.87	1.919	37	71
25.44	28.21	30.98	33.75	36.52	39.29	45.91	49.23	53.09	61.38	71.03	1.923	39	75
29.53	32.30	35.06	37.82	40.58	43.34	49.96	53.27	57.13	65.41	75.06	1.931	29	56
28.69	31.45	34.22	36.98	39.74	42.50	49.12	52.44	56.30	64.58	74.23	1.935	31	60
28.12	30.88	33.65	36.41	39.18	41.94	48.56	51.88	55.74	64.02	73.67	1.969	32	63
27.27	30.04	32.80	35.57	38.33	41.10	47.72	51.04	54.90	63.18	72.84	1.971	34	67
26.42	29.19	31.96	34.72	37.49	40.26	46.89	50.20	54.06	62.35	72.00	1.972	36	71
			19.59	22.46	25.32	32.08	35.45	39.35	47.71	57.42	1.972	71	140
25.56	28.34	31.11	33.88	36.65	39.42	46.05	49.36	53.23	61.51	71.17	1.974	38	75
29.66	32.43	35.19	37.95	40.71	43.48	50.10	53.41	57.27	65.54	75.20	2.000	28	56
28.82	31.58	34.35	37.11	39.87	42.64	49.26	52.57	56.43	64.71	74.36	2.000	30	60
24.55	27.33	30.11	32.88	35.65	38.42	45.06	48.38	52.24	60.53	70.19	2.000	40	80
22.39	25.18	27.97	30.75	33.53	36.30	42.95	46.27	50.14	58.43	68.09	2.000	45	90
17.50	20.35	23.18	25.99	28.79	31.59	38.26	41.60	45.48	53.79	63.47	2.000	56	112
25.69	28.47	31.24	34.01	36.78	39.55	46.18	49.49	53.36	61.64	71.30	2.027	37	75
26.55	29.32	32.09	34.86	37.62	40.39	47.02	50.33	54.20	62.48	72.13	2.029	35	71
27.40	30.17	32.94	35.70	38.46	41.23	47.86	51.17	55.03	63.31	72.97	2.030	33	67
28.25	31.02	33.78	36.54	39.31	42.07	48.70	52.01	55.87	64.15	73.80	2.032	31	63
24.68	27.46	30.24	33.01	35.78	38.55	45.19	48.51	52.37	60.66	70.32	2.051	39	80
28.95	31.71	34.48	37.24	40.00	42.77	49.39	52.71	56.57	64.84	74.50	2.069	29	60
25.82	28.60	31.37	34.14	36.91	39.68	46.31	49.63	53.49	61.78	71.43	2.083	36	75
26.67	29.45	32.22	34.99	37.75	40.52	47.15	50.47	54.33	62.61	72.27	2.088	34	71
0.96	0.99	1.01	1.03	1.05	1.07	1.12	1.14	1.16	1.20	1.25	Length Factor*		

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Table No. 6
Drive Selection Table

Sprocket Combinations					Center Distance, Inches								
DriveR		DriveN											
No. of Grooves	Pitch Diameter (Inches)	No. of Grooves	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-1750 P.L 68.90 125 teeth	14MGT-1890 P.L 74.41 135 teeth	14MGT-1960 P.L 77.17 140 teeth
67	11.755	140	24.562	2.090									
43	7.544	90	15.790	2.093							15.57	18.42	19.83
32	5.614	67	11.755	2.094				10.72	13.57	16.94	20.58	23.36	24.75
30	5.263	63	11.053	2.100			10.20	11.63	14.45	17.81	21.44	24.22	25.61
80	14.036	168	29.475	2.100									
38	6.667	80	14.036	2.105						14.12	17.81	20.61	22.02
53	9.299	112	19.650	2.113									14.94
28	4.912	60	10.527	2.143		9.50	10.94	12.36	15.17	18.53	22.15	24.92	26.31
35	6.141	75	13.158	2.143					11.88	15.30	18.97	21.76	23.16
33	5.790	71	12.457	2.152				9.91	12.79	16.19	19.84	22.63	24.02
31	5.439	67	11.755	2.161			9.38	10.84	13.69	17.07	20.70	23.49	24.88
37	6.492	80	14.036	2.162						14.24	17.93	20.74	22.14
29	5.088	63	11.053	2.172		8.86	10.31	11.75	14.58	17.94	21.57	24.34	25.73
34	5.965	75	13.158	2.206					12.00	15.42	19.09	21.89	23.29
32	5.614	71	12.457	2.219				10.02	12.91	16.31	19.96	22.75	24.15
36	6.316	80	14.036	2.222					10.88	14.36	18.05	20.86	22.27
63	11.053	140	24.562	2.222									
30	5.263	67	11.755	2.233			9.50	10.95	13.81	17.19	20.83	23.62	25.01
50	8.772	112	19.650	2.240									15.28
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	21.69	24.47	25.86
40	7.018	90	15.790	2.250						12.15	15.93	18.78	20.19
80	14.036	180	31.580	2.250									
33	5.790	75	13.158	2.273					12.11	15.54	19.21	22.01	23.41
35	6.141	80	14.036	2.286					11.00	14.48	18.17	20.99	22.39
31	5.439	71	12.457	2.290				10.14	13.03	16.43	20.09	22.88	24.28
39	6.842	90	15.790	2.308						12.26	16.05	18.90	20.32
29	5.088	67	11.755	2.310			9.61	11.07	13.93	17.31	20.96	23.74	25.14
48	8.421	112	19.650	2.333									15.51
60	10.527	140	24.562	2.333									
32	5.614	75	13.158	2.344					12.23	15.67	19.34	22.14	23.54
34	5.965	80	14.036	2.353					11.11	14.59	18.29	21.11	22.51
71	12.457	168	29.475	2.366									
30	5.263	71	12.457	2.367				10.25	13.15	16.56	20.21	23.01	24.40
38	6.667	90	15.790	2.368						12.38	16.16	19.02	20.44
28	4.912	67	11.755	2.393			9.73	11.19	14.05	17.44	21.08	23.87	25.26
75	13.158	180	31.580	2.400									
31	5.439	75	13.158	2.419					12.35	15.78	19.46	22.26	23.66
33	5.790	80	14.036	2.424					11.22	14.71	18.42	21.23	22.64
37	6.492	90	15.790	2.432						12.49	16.28	19.14	20.56
29	5.088	71	12.457	2.448				10.36	13.27	16.68	20.34	23.13	24.53
45	7.895	112	19.650	2.489								14.35	15.85
30	5.263	75	13.158	2.500					12.46	15.90	19.58	22.39	23.79
32	5.614	80	14.036	2.500					11.34	14.83	18.54	21.36	22.76
36	6.316	90	15.790	2.500						12.60	16.40	19.26	20.68
56	9.825	140	24.562	2.500									
80	14.036	200	35.089	2.500									
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	20.46	23.26	24.65
35	6.141	90	15.790	2.571						12.71	16.52	19.38	20.80
31	5.439	80	14.036	2.581					11.45	14.95	18.66	21.48	22.88
Length Factor*					0.68	0.73	0.75	0.77	0.81	0.85	0.89	0.92	0.94

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Center Distance, Inches											Speed Ratio	Sprocket Combinations	
												DriveR	DriveN
14MGT-2100 P.L 82.68 150 teeth	14MGT-2240 P.L 88.19 160 teeth	14MGT-2380 P.L 93.70 170 teeth	14MGT-2520 P.L 99.21 180 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-3500 P.L 137.79 250 teeth	14MGT-3920 P.L 154.33 280 teeth	14MGT-4410 P.L 173.62 315 teeth		No. of grooves	No. of grooves
			20.05	22.94	25.80	32.58	35.94	39.86	48.22	57.93	2.090	67	140
22.64	25.43	28.22	31.00	33.78	36.56	43.21	46.53	50.40	58.69	68.36	2.093	43	90
27.53	30.30	33.07	35.83	38.60	41.36	47.99	51.31	55.17	63.45	73.10	2.094	32	67
28.38	31.15	33.91	36.68	39.44	42.21	48.83	52.15	56.01	64.29	73.94	2.100	30	63
						26.42	29.86	33.84	42.28	52.06	2.100	80	168
24.81	27.59	30.37	33.14	35.91	38.68	45.32	48.64	52.51	60.79	70.45	2.105	38	80
17.85	20.71	23.54	26.36	29.16	31.96	38.65	41.98	45.87	54.18	63.86	2.113	53	112
29.08	31.85	34.61	37.37	40.14	42.90	49.52	52.84	56.70	64.98	74.63	2.143	28	60
25.95	28.72	31.50	34.27	37.04	39.81	46.44	49.76	53.62	61.91	71.57	2.143	35	75
26.80	29.58	32.35	35.12	37.88	40.65	47.28	50.60	54.46	62.75	72.40	2.152	33	71
27.66	30.43	33.20	35.96	38.73	41.50	48.12	51.44	55.30	63.58	73.24	2.161	31	67
24.93	27.72	30.49	33.27	36.04	38.81	45.45	48.77	52.64	60.93	70.59	2.162	37	80
28.51	31.28	34.04	36.81	39.57	42.34	48.96	52.28	56.14	64.42	74.07	2.172	29	63
26.07	28.85	31.63	34.40	37.17	39.94	46.57	49.89	53.76	62.04	71.70	2.206	34	75
26.93	29.70	32.48	35.25	38.01	40.78	47.41	50.73	54.59	62.88	72.54	2.219	32	71
25.06	27.84	30.62	33.40	36.17	38.94	45.58	48.90	52.77	61.06	70.72	2.222	36	80
			20.51	23.41	26.27	33.07	36.44	40.36	48.72	58.45	2.222	63	140
27.78	30.56	33.33	36.09	38.86	41.63	48.25	51.57	55.43	63.72	73.37	2.233	30	67
18.20	21.07	23.91	26.73	29.54	32.34	39.03	42.37	46.25	54.57	64.26	2.240	50	112
						27.00	30.46	34.44	42.90	52.69	2.240	75	168
28.64	31.41	34.17	36.94	39.70	42.47	49.10	52.41	56.27	64.55	74.21	2.250	28	63
23.01	25.81	28.60	31.38	34.16	36.95	43.60	46.92	50.79	59.09	68.76	2.250	40	90
						24.30	27.82	31.85	40.38	50.22	2.250	80	180
26.20	28.98	31.75	34.53	37.30	40.07	46.70	50.02	53.89	62.17	71.83	2.273	33	75
25.18	27.97	30.75	33.53	36.30	39.07	45.71	49.03	52.90	61.19	70.85	2.286	35	80
27.06	29.83	32.61	35.38	38.14	40.91	47.54	50.86	54.73	63.01	72.67	2.290	31	71
23.13	25.93	28.73	31.51	34.29	37.07	43.73	47.05	50.92	59.22	68.89	2.308	39	90
27.91	30.69	33.46	36.22	38.99	41.76	48.39	51.70	55.57	63.85	73.51	2.310	29	67
18.43	21.30	24.15	26.97	29.78	32.59	39.28	42.62	46.51	54.83	64.52	2.333	48	112
			20.85	23.76	26.63	33.43	36.81	40.73	49.10	58.83	2.333	60	140
26.33	29.11	31.88	34.66	37.43	40.20	46.83	50.15	54.02	62.31	71.97	2.344	32	75
25.31	28.10	30.88	33.65	36.43	39.20	45.84	49.17	53.03	61.32	70.99	2.353	34	80
						27.47	30.93	34.92	43.39	53.19	2.366	71	168
27.18	29.96	32.73	35.51	38.27	41.05	47.68	51.00	54.86	63.15	72.80	2.367	30	71
23.25	26.06	28.85	31.64	34.42	37.20	43.85	47.18	51.05	59.35	69.02	2.368	38	90
28.04	30.81	33.59	36.35	39.12	41.89	48.52	51.84	55.70	63.98	73.64	2.393	28	67
						24.87	28.40	32.44	40.99	50.84	2.400	75	180
26.45	29.23	32.01	34.78	37.56	40.33	46.97	50.29	54.15	62.44	72.10	2.419	31	75
25.43	28.22	31.00	33.78	36.56	39.33	45.97	49.30	53.16	61.46	71.12	2.424	33	80
23.38	26.18	28.98	31.76	34.55	37.33	43.98	47.31	51.18	59.48	69.15	2.432	37	90
27.31	30.09	32.86	35.63	38.40	41.18	47.81	51.13	54.99	63.28	72.94	2.448	29	71
18.78	21.66	24.51	27.34	30.15	32.96	39.66	43.00	46.89	55.22	64.91	2.489	45	112
26.58	29.36	32.14	34.91	37.69	40.46	47.10	50.42	54.28	62.57	72.23	2.500	30	75
25.56	28.35	31.13	33.91	36.68	39.46	46.10	49.43	53.30	61.59	71.25	2.500	32	80
23.50	26.31	29.10	31.89	34.67	37.46	44.11	47.44	51.31	59.61	69.29	2.500	36	90
		18.34	21.31	24.22	27.10	33.92	37.30	41.23	49.61	59.34	2.500	56	140
								28.33	37.08	47.04	2.500	80	200
						27.93	31.40	35.40	43.89	53.70	2.507	67	168
						25.32	28.85	32.91	41.47	51.33	2.535	71	180
27.44	30.22	32.99	35.76	38.53	41.31	47.94	51.26	55.12	63.41	73.07	2.536	28	71
23.62	26.43	29.23	32.02	34.80	37.59	44.24	47.57	51.44	59.75	69.42	2.571	35	90
25.68	28.47	31.26	34.04	36.81	39.59	46.23	49.56	53.43	61.72	71.38	2.581	31	80
0.96	0.99	1.01	1.03	1.05	1.07	1.12	1.14	1.16	1.20	1.25	Length Factor*		

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Table No. 6
Drive Selection Table

Sprocket Combinations					Center Distance, Inches								
DriveR		DriveN											
No. of Grooves	Pitch Diameter (Inches)	No. of Grooves	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-1750 P.L 68.90 125 teeth	14MGT-1890 P.L 74.41 135 teeth	14MGT-1960 P.L 77.17 140 teeth
29	5.088	75	13.158	2.586					12.58	16.02	19.71	22.51	23.91
43	7.544	112	19.650	2.605								14.57	16.07
53	9.299	140	24.562	2.642									
34	5.965	90	15.790	2.647						12.83	16.63	19.50	20.92
30	5.263	80	14.036	2.667					11.56	15.06	18.78	21.60	23.01
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	19.83	22.64	24.04
67	11.755	180	31.580	2.687									
33	5.790	90	15.790	2.727						12.94	16.75	19.62	21.04
29	5.088	80	14.036	2.759					11.67	15.18	18.90	21.72	23.13
40	7.018	112	19.650	2.800								14.90	16.41
50	8.772	140	24.562	2.800									
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	16.87	19.73	21.16
71	12.457	200	35.089	2.817									
28	4.912	80	14.036	2.857					11.78	15.30	19.02	21.85	23.25
63	11.053	180	31.580	2.857									
39	6.842	112	19.650	2.872								15.01	16.52
31	5.439	90	15.790	2.903						13.16	16.98	19.85	21.28
48	8.421	140	24.562	2.917									
38	6.667	112	19.650	2.947								15.12	16.63
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	17.10	19.97	21.40
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
29	5.088	90	15.790	3.103						13.38	17.21	20.09	21.52
36	6.316	112	19.650	3.111								15.34	16.85
45	7.895	140	24.562	3.111									
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
28	4.912	90	15.790	3.214						13.49	17.33	20.21	21.64
56	9.825	180	31.580	3.214									
43	7.544	140	24.562	3.256									
34	5.965	112	19.650	3.294								15.56	17.08
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
53	9.299	180	31.580	3.396									
32	5.614	112	19.650	3.500								15.77	17.30
40	7.018	140	24.562	3.500									
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									
50	8.772	180	31.580	3.600									
Length Factor*					0.68	0.73	0.75	0.77	0.81	0.85	0.89	0.92	0.94

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Center Distance, Inches											Speed Ratio	Sprocket Combinations	
												DriveR	DriveN
14MGT-2100 P.L 82.68 150 teeth	14MGT-2240 P.L 88.19 160 teeth	14MGT-2380 P.L 93.70 170 teeth	14MGT-2520 P.L 99.21 180 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-3500 P.L 137.79 250 teeth	14MGT-3920 P.L 154.33 280 teeth	14MGT-4410 P.L 173.62 315 teeth		No. of grooves	No. of grooves
26.70	29.49	32.27	35.04	37.81	40.59	47.23	50.55	54.41	62.70	72.37	2.586	29	75
19.01	21.89	24.75	27.58	30.40	33.21	39.91	43.26	47.15	55.48	65.17	2.605	43	112
		18.67	21.65	24.57	27.46	34.28	37.67	41.60	49.99	59.73	2.642	53	140
23.74	26.55	29.35	32.14	34.93	37.71	44.37	47.70	51.57	59.88	69.55	2.647	34	90
25.81	28.60	31.39	34.17	36.94	39.72	46.36	49.69	53.56	61.85	71.52	2.667	30	80
					21.26	28.39	31.87	35.88	44.37	54.19	2.667	63	168
							24.67	28.90	37.66	47.65	2.667	75	200
26.83	29.62	32.40	35.17	37.94	40.72	47.36	50.68	54.55	62.84	72.50	2.679	28	75
						25.76	29.31	33.38	41.95	51.82	2.687	67	180
23.87	26.68	29.48	32.27	35.05	37.84	44.50	47.83	51.70	60.01	69.68	2.727	33	90
25.93	28.73	31.51	34.29	37.07	39.85	46.49	49.82	53.69	61.98	71.65	2.759	29	80
19.36	22.25	25.11	27.94	30.76	33.58	40.29	43.64	47.53	55.86	65.56	2.800	40	112
		19.00	21.99	24.92	27.81	34.65	38.04	41.97	50.36	60.11	2.800	50	140
					21.59	28.74	32.22	36.23	44.74	54.57	2.800	60	168
									32.81	43.05	2.800	80	224
23.99	26.80	29.60	32.39	35.18	37.97	44.63	47.96	51.83	60.14	69.81	2.813	32	90
							25.10	29.34	38.13	48.13	2.817	71	200
26.06	28.85	31.64	34.42	37.20	39.98	46.62	49.95	53.82	62.12	71.78	2.857	28	80
						26.21	29.77	33.84	42.43	52.32	2.857	63	180
19.47	22.36	25.23	28.06	30.89	33.70	40.41	43.76	47.66	55.99	65.69	2.872	39	112
24.11	26.92	29.73	32.52	35.31	38.09	44.76	48.09	51.96	60.27	69.95	2.903	31	90
		19.22	22.22	25.15	28.05	34.89	38.28	42.22	50.62	60.36	2.917	48	140
19.58	22.48	25.34	28.18	31.01	33.83	40.54	43.89	47.78	56.12	65.82	2.947	38	112
							25.53	29.79	38.60	48.61	2.985	67	200
									33.37	43.64	2.987	75	224
24.23	27.05	29.85	32.64	35.43	38.22	44.89	48.22	52.09	60.40	70.08	3.000	30	90
					22.02	29.19	32.69	36.71	45.23	55.06	3.000	56	168
						26.54	30.11	34.19	42.79	52.68	3.000	60	180
19.70	22.60	25.46	28.31	31.13	33.95	40.66	44.02	47.91	56.25	65.95	3.027	37	112
24.35	27.17	29.97	32.77	35.56	38.35	45.01	48.35	52.22	60.53	70.21	3.103	29	90
19.81	22.72	25.58	28.43	31.25	34.07	40.79	44.14	48.04	56.38	66.08	3.111	36	112
		19.55	22.56	25.49	28.40	35.25	38.65	42.59	50.99	60.75	3.111	45	140
									33.81	44.10	3.155	71	224
					22.35	29.54	33.03	37.06	45.59	55.44	3.170	53	168
							25.97	30.23	39.06	49.09	3.175	63	200
19.93	22.83	25.70	28.55	31.37	34.19	40.91	44.27	48.16	56.50	66.21	3.200	35	112
24.47	27.29	30.10	32.90	35.69	38.48	45.14	48.48	52.35	60.66	70.34	3.214	28	90
						26.99	30.56	34.65	43.27	53.17	3.214	56	180
	16.65	19.77	22.78	25.72	28.63	35.49	38.89	42.83	51.24	61.00	3.256	43	140
20.04	22.95	25.82	28.67	31.50	34.32	41.04	44.39	48.29	56.63	66.34	3.294	34	112
							26.29	30.57	39.41	49.45	3.333	60	200
									34.26	44.57	3.343	67	224
					22.67	29.88	33.38	37.41	45.96	55.81	3.360	50	168
20.16	23.07	25.94	28.79	31.62	34.44	41.16	44.52	48.42	56.76	66.47	3.394	33	112
						27.32	30.90	35.00	43.63	53.54	3.396	53	180
20.27	23.18	26.06	28.91	31.74	34.56	41.29	44.64	48.54	56.89	66.60	3.500	32	112
	16.97	20.10	23.12	26.07	28.98	35.85	39.25	43.20	51.61	61.38	3.500	40	140
				19.71	22.89	30.11	33.61	37.65	46.20	56.06	3.500	48	168
									34.70	45.03	3.556	63	224
						22.87	26.72	31.01	39.87	49.93	3.571	56	200
	17.08	20.21	23.23	26.18	29.10	35.97	39.37	43.32	51.74	61.51	3.590	39	140
						27.65	31.24	35.35	43.99	53.91	3.600	50	180
0.96	0.99	1.01	1.03	1.05	1.07	1.12	1.14	1.16	1.20	1.25	Length Factor*		

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Table No. 6
Drive Selection Table

Sprocket Combinations					Center Distance, Inches								
DriveR		DriveN											
No. of Grooves	Pitch Diameter (Inches)	No. of Grooves	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-1750 P.L 68.90 125 teeth	14MGT-1890 P.L 74.41 135 teeth	14MGT-1960 P.L 77.17 140 teeth
31	5.439	112	19.650	3.613								15.88	17.41
38	6.667	140	24.562	3.684									
30	5.263	112	19.650	3.733								15.99	17.52
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									
29	5.088	112	19.650	3.862							12.91	16.10	17.63
36	6.316	140	24.562	3.889									
43	7.544	168	29.475	3.907									
28	4.912	112	19.650	4.000							13.01	16.21	17.74
35	6.141	140	24.562	4.000									
45	7.895	180	31.580	4.000									
50	8.772	200	35.089	4.000									
56	9.825	224	39.300	4.000									
34	5.965	140	24.562	4.118									
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									
39	6.842	168	29.475	4.308									
32	5.614	140	24.562	4.375									
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									
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									
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									
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									
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									
Length Factor*					0.68	0.73	0.75	0.77	0.81	0.85	0.89	0.92	0.94

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Center Distance, Inches											Speed Ratio	Sprocket Combinations	
												DriveR	DriveN
14MGT-2100 P.L 82.68 150 teeth	14MGT-2240 P.L 88.19 160 teeth	14MGT-2380 P.L 93.70 170 teeth	14MGT-2520 P.L 99.21 180 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-3500 P.L 137.79 250 teeth	14MGT-3920 P.L 154.33 280 teeth	14MGT-4410 P.L 173.62 315 teeth		No. of grooves	No. of grooves
20.38	23.30	26.17	29.03	31.86	34.68	41.41	44.77	48.67	57.02	66.73	3.613	31	112
	17.18	20.32	23.34	26.30	29.21	36.09	39.49	43.44	51.86	61.63	3.684	38	140
20.50	23.41	26.29	29.15	31.98	34.81	41.54	44.90	48.80	57.15	66.86	3.733	30	112
				20.03	23.21	30.45	33.96	38.00	46.56	56.42	3.733	45	168
								25.60	35.03	45.38	3.733	60	224
						27.87	31.47	35.58	44.22	54.15	3.750	48	180
						23.18	27.04	31.34	40.22	50.29	3.774	53	200
	17.29	20.43	23.45	26.41	29.33	36.21	39.62	43.56	51.99	61.76	3.784	37	140
20.61	23.53	26.41	29.27	32.10	34.93	41.66	45.02	48.92	57.27	66.98	3.862	29	112
	17.39	20.54	23.56	26.52	29.44	36.33	39.74	43.69	52.11	61.88	3.889	36	140
				20.23	23.43	30.67	34.19	38.24	46.80	56.67	3.907	43	168
20.72	23.65	26.53	29.39	32.22	35.05	41.79	45.15	49.05	57.40	67.11	4.000	28	112
	17.50	20.65	23.68	26.64	29.56	36.45	39.86	43.81	52.24	62.01	4.000	35	140
					20.61	28.20	31.81	35.92	44.58	54.51	4.000	45	180
						23.49	27.36	31.67	40.56	50.64	4.000	50	200
								26.01	35.47	45.84	4.000	56	224
	17.60	20.75	23.79	26.75	29.68	36.57	39.98	43.93	52.36	62.14	4.118	34	140
						23.70	27.58	31.89	40.79	50.88	4.167	48	200
					20.81	28.42	32.03	36.15	44.82	54.76	4.186	43	180
				20.55	23.75	31.01	34.54	38.59	47.16	57.04	4.200	40	168
								26.32	35.80	46.18	4.226	53	224
	17.70	20.86	23.90	26.86	29.79	36.68	40.10	44.05	52.49	62.26	4.242	33	140
				20.65	23.86	31.13	34.65	38.71	47.28	57.16	4.308	39	168
	17.81	20.97	24.01	26.98	29.91	36.80	40.22	44.17	52.61	62.39	4.375	32	140
				20.75	23.97	31.24	34.77	38.82	47.40	57.29	4.421	38	168
						24.01	27.90	32.22	41.14	51.24	4.444	45	200
								26.63	36.13	46.53	4.480	50	224
					21.12	28.75	32.37	36.49	45.17	55.12	4.500	40	180
	17.91	21.08	24.12	27.09	30.02	36.92	40.34	44.30	52.73	62.51	4.516	31	140
				20.86	24.07	31.35	34.88	38.94	47.52	57.41	4.541	37	168
					21.23	28.86	32.48	36.61	45.29	55.24	4.615	39	180
						24.21	28.11	32.44	41.37	51.47	4.651	43	200
	18.02	21.19	24.23	27.21	30.14	37.04	40.46	44.42	52.86	62.64	4.667	30	140
				20.96	24.18	31.46	35.00	39.06	47.64	57.53	4.667	36	168
								26.84	36.35	46.76	4.667	48	224
					21.33	28.97	32.59	36.72	45.41	55.36	4.737	38	180
				21.06	24.29	31.58	35.11	39.17	47.76	57.65	4.800	35	168
	18.12	21.30	24.34	27.32	30.25	37.16	40.58	44.54	52.98	62.77	4.828	29	140
					21.43	29.08	32.70	36.84	45.52	55.48	4.865	37	180
				21.17	24.39	31.69	35.23	39.29	47.88	57.78	4.941	34	168
								27.14	36.68	47.10	4.978	45	224
	18.23	21.40	24.45	27.43	30.37	37.28	40.70	44.66	53.10	62.89	5.000	28	140
					21.53	29.19	32.81	36.95	45.64	55.61	5.000	36	180
						24.52	28.43	32.77	41.71	51.83	5.000	40	200
				21.27	24.50	31.80	35.34	39.40	48.00	57.90	5.091	33	168
						24.62	28.53	32.88	41.82	51.95	5.128	39	200
					21.63	29.30	32.93	37.06	45.76	55.73	5.143	35	180
								27.35	36.90	47.33	5.209	43	224
				21.38	24.61	31.91	35.45	39.52	48.12	58.02	5.250	32	168
						24.73	28.64	32.99	41.94	52.06	5.263	38	200
					21.74	29.41	33.04	37.18	45.88	55.85	5.294	34	180
						24.83	28.75	33.10	42.05	52.18	5.405	37	200
0.96	0.99	1.01	1.03	1.05	1.07	1.12	1.14	1.16	1.20	1.25	Length Factor*		

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Table No. 6
Drive Selection Table

Sprocket Combinations					Center Distance, Inches								
DriveR		DriveN											
No. of Grooves	Pitch Diameter (Inches)	No. of Grooves	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-1750 P.L 68.90 125 teeth	14MGT-1890 P.L 74.41 135 teeth	14MGT-1960 P.L 77.17 140 teeth
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	0.89	0.92	0.94

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

14mm PITCH BELTS

Center Distance, Inches											Speed Ratio	Sprocket Combinations	
												DriveR	DriveN
14MGT-2100 P.L 82.68 150 teeth	14MGT-2240 P.L 88.19 160 teeth	14MGT-2380 P.L 93.70 170 teeth	14MGT-2520 P.L 99.21 180 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-3500 P.L 137.79 250 teeth	14MGT-3920 P.L 154.33 280 teeth	14MGT-4410 P.L 173.62 315 teeth		No. of grooves	No. of grooves
			18.00	21.48	24.71	32.03	35.57	39.64	48.24	58.14	5.419	31	168
					21.84	29.52	33.15	37.29	45.99	55.97	5.455	33	180
						24.93	28.85	33.21	42.17	52.30	5.556	36	200
			18.10	21.58	24.82	32.14	35.68	39.75	48.36	58.26	5.600	30	168
								27.66	37.23	47.67	5.600	40	224
					21.94	29.62	33.26	37.41	46.11	56.09	5.625	32	180
						25.03	28.96	33.32	42.28	52.42	5.714	35	200
								27.76	37.34	47.79	5.744	39	224
			18.19	21.69	24.93	32.25	35.80	39.87	48.48	58.39	5.793	29	168
					22.04	29.73	33.37	37.52	46.23	56.21	5.806	31	180
						25.14	29.07	33.43	42.39	52.53	5.882	34	200
								27.86	37.45	47.90	5.895	38	224
			18.29	21.79	25.03	32.36	35.91	39.99	48.60	58.51	6.000	28	168
					22.14	29.84	33.48	37.63	46.35	56.33	6.000	30	180
								27.96	37.56	48.01	6.054	37	224
						25.24	29.17	33.53	42.51	52.65	6.061	33	200
					22.25	29.95	33.59	37.75	46.46	56.45	6.207	29	180
								28.07	37.67	48.13	6.222	36	224
						25.34	29.28	33.64	42.62	52.77	6.250	32	200
								28.17	37.78	48.24	6.400	35	224
				18.70	22.35	30.06	33.71	37.86	46.58	56.57	6.429	28	180
						25.44	29.38	33.75	42.74	52.89	6.452	31	200
							23.19	28.27	37.88	48.36	6.588	34	224
						25.55	29.49	33.86	42.85	53.01	6.667	30	200
							23.28	28.37	37.99	48.47	6.788	33	224
						25.65	29.59	33.97	42.96	53.12	6.897	29	200
							23.38	28.47	38.10	48.58	7.000	32	224
						25.75	29.70	34.08	43.08	53.24	7.143	28	200
							23.48	28.58	38.21	48.70	7.226	31	224
							23.58	28.68	38.32	48.81	7.467	30	224
							23.67	28.78	38.43	48.93	7.724	29	224
							23.77	28.88	38.54	49.04	8.000	28	224
0.96	0.99	1.01	1.03	1.05	1.07	1.12	1.14	1.16	1.20	1.25	Length Factor*		

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

Center Distance is greater than eight times the small diameter and the large sprocket is not flanged. See Engineering Section I-10 for additional details.

Horsepower Rating for 12mm Wide

8mm Pitch Poly Chain® GT®2 Belts

RPM OF FASTER SHAFT	Rated Base 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	45 4.511	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
10	0.077	0.088	0.100	0.11	0.12	0.12	0.13	0.14	0.15	0.15	0.16	0.18	0.18	0.19	0.20	0.22	0.23	0.24	0.26	0.27	0.29
20	0.14	0.17	0.19	0.20	0.22	0.23	0.25	0.26	0.27	0.29	0.31	0.33	0.34	0.36	0.38	0.41	0.43	0.46	0.49	0.51	0.55
35	0.24	0.27	0.31	0.34	0.36	0.38	0.41	0.43	0.45	0.48	0.51	0.55	0.57	0.61	0.64	0.68	0.72	0.76	0.81	0.85	0.91
44	0.29	0.34	0.38	0.41	0.44	0.47	0.50	0.53	0.56	0.59	0.63	0.67	0.70	0.74	0.79	0.84	0.88	0.94	0.99	1.05	1.12
58	0.37	0.43	0.49	0.53	0.57	0.61	0.64	0.68	0.72	0.75	0.81	0.86	0.90	0.95	1.01	1.08	1.13	1.20	1.27	1.34	1.43
70	0.44	0.51	0.58	0.63	0.67	0.72	0.76	0.81	0.85	0.89	0.96	1.02	1.07	1.13	1.19	1.28	1.34	1.43	1.51	1.59	1.69
88	0.54	0.63	0.71	0.77	0.82	0.88	0.93	0.99	1.04	1.10	1.18	1.26	1.31	1.39	1.47	1.57	1.65	1.75	1.85	1.95	2.08
100	0.61	0.70	0.80	0.86	0.92	0.99	1.05	1.11	1.17	1.23	1.32	1.41	1.47	1.56	1.64	1.76	1.85	1.96	2.08	2.19	2.33
117	0.70	0.81	0.92	0.99	1.06	1.13	1.20	1.27	1.34	1.41	1.52	1.62	1.69	1.79	1.89	2.03	2.13	2.26	2.39	2.52	2.68
175	1.00	1.16	1.31	1.42	1.52	1.62	1.72	1.82	1.92	2.02	2.17	2.32	2.42	2.56	2.71	2.90	3.04	3.23	3.42	3.61	3.84
200	1.12	1.30	1.48	1.59	1.71	1.83	1.94	2.05	2.17	2.28	2.44	2.61	2.72	2.89	3.05	3.26	3.42	3.64	3.85	4.06	4.32
233	1.28	1.49	1.69	1.82	1.96	2.09	2.22	2.35	2.48	2.61	2.80	2.99	3.11	3.30	3.49	3.74	3.92	4.16	4.41	4.65	4.94
300	1.60	1.86	2.11	2.28	2.44	2.61	2.77	2.94	3.10	3.26	3.50	3.73	3.89	4.13	4.36	4.67	4.90	5.20	5.50	5.80	6.18
350	1.83	2.13	2.42	2.61	2.80	2.99	3.17	3.36	3.55	3.73	4.00	4.28	4.46	4.73	4.99	5.35	5.61	5.96	6.30	6.65	7.07
400	2.06	2.39	2.71	2.93	3.14	3.36	3.57	3.78	3.99	4.19	4.50	4.81	5.01	5.31	5.61	6.01	6.31	6.70	7.08	7.47	7.95
500	2.49	2.90	3.30	3.56	3.82	4.08	4.34	4.59	4.84	5.10	5.47	5.84	6.09	6.46	6.82	7.30	7.66	8.14	8.61	9.07	9.65
575	2.81	3.27	3.72	4.02	4.31	4.61	4.90	5.18	5.47	5.76	6.18	6.60	6.88	7.29	7.70	8.25	8.65	9.19	9.72	10.2	10.9
600	2.92	3.39	3.86	4.17	4.47	4.78	5.08	5.38	5.68	5.97	6.41	6.85	7.14	7.57	7.99	8.56	8.98	9.53	10.1	10.6	11.3
690	3.29	3.83	4.36	4.70	5.05	5.39	5.73	6.07	6.41	6.74	7.24	7.73	8.06	8.54	9.02	9.66	10.1	10.8	11.4	12.0	12.8
700	3.33	3.87	4.41	4.76	5.11	5.46	5.81	6.15	6.49	6.83	7.33	7.83	8.16	8.65	9.14	9.78	10.3	10.9	11.5	12.1	12.9
800	3.73	4.34	4.95	5.34	5.74	6.13	6.51	6.90	7.28	7.66	8.22	8.78	9.15	9.71	10.3	11.0	11.5	12.2	12.9	13.6	14.5
870	4.01	4.67	5.32	5.74	6.17	6.59	7.00	7.42	7.83	8.23	8.84	9.44	9.84	10.4	11.0	11.8	12.4	13.1	13.9	14.6	15.6
900	4.13	4.80	5.47	5.91	6.35	6.78	7.21	7.64	8.06	8.48	9.10	9.72	10.1	10.7	11.3	12.1	12.7	13.5	14.3	15.1	16.0
1000	4.51	5.26	5.99	6.47	6.95	7.42	7.89	8.36	8.82	9.28	9.96	10.6	11.1	11.8	12.4	13.3	13.9	14.8	15.6	16.5	17.5
1160	5.12	5.96	6.79	7.34	7.89	8.43	8.96	9.49	10.0	10.5	11.3	12.1	12.6	13.3	14.1	15.1	15.8	16.8	17.7	18.7	19.9
1750	7.23	8.43	9.61	10.4	11.2	11.9	12.7	13.4	14.2	14.9	16.0	17.1	17.8	18.9	19.9	21.3	22.3	23.7	25.0	26.3	27.9
2000	8.07	9.42	10.7	11.6	12.5	13.3	14.2	15.0	15.9	16.7	17.9	19.1	19.9	21.1	22.2	23.8	24.9	26.4	27.8	29.3	31.1
3000	11.3	13.1	15.0	16.2	17.4	18.6	19.8	21.0	22.1	23.2	24.9	26.5	27.6	29.2	30.8	32.8	34.3	36.3	38.1	40.0	42.2
3450	12.6	14.7	16.8	18.2	19.5	20.8	22.1	23.4	24.7	26.0	27.8	29.6	30.8	32.5	34.2	36.5	38.1	40.2	42.2		
4000	14.2	16.6	18.9	20.4	21.9	23.4	24.9	26.3	27.7	29.1	31.1	33.1	34.4	36.3	38.2	40.5					
4500	15.5	18.2	20.7	22.4	24.0	25.7	27.2	28.8	30.3	31.8	34.0	36.1	37.5	39.5							
5000	16.9	19.7	22.5	24.3	26.1	27.8	29.5	31.1	32.8	34.3	36.6	38.9	40.3								
5500	18.1	21.2	24.2	26.1	28.0	29.8	31.6	33.4	35.1	36.7	39.1										

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

RPM OF FASTER SHAFT	Additional Horsepower 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
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
35	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
44	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02
58	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
70	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03
88	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.04
100	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04
117	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05
175	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.07
200	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.08
233	0.00	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.09	0.10
300	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.13
350	0.00	0.02	0.03	0.05	0.07	0.08	0.10	0.12	0.13	0.15
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
575	0.00	0.03	0.05	0.08	0.11	0.14	0.16	0.19	0.22	0.24
600	0.00	0.03	0.06	0.08	0.11	0.14	0.17	0.20	0.23	0.25
690	0.00	0.03	0.06	0.10	0.13	0.16	0.19	0.23	0.26	0.29
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
870	0.00	0.04	0.08	0.12	0.16	0.20	0.25	0.29	0.33	0.37
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
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
2000	0.00	0.09	0.19	0.28	0.38	0.47	0.56	0.66	0.75	0.85
3000	0.00	0.14	0.28	0.42	0.56	0.70	0.85	0.99	1.13	1.27
3450	0.00	0.16	0.32	0.49	0.65	0.81	0.97	1.13	1.30	1.46
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

Poly Chain GT2 Belt Length Correction Factor Table

Pitch/Length Designation	No. of Teeth	Correction Factor
8MGT-640	80	0.79
8MGT-720	90	0.83
8MGT-800	100	0.87
8MGT-896	112	0.91
8MGT-1000	125	0.96
8MGT-1120	140	1.00
8MGT-1200	150	1.03
8MGT-1280	160	1.05
8MGT-1440	180	1.10
8MGT-1600	200	1.14
8MGT-1792	224	1.18
8MGT-2000	250	1.22
8MGT-2240	280	1.26
8MGT-2400	300	1.29
8MGT-2520	315	1.31
8MGT-2840	355	1.36
8MGT-3200	400	1.40
8MGT-3600	450	1.45
8MGT-4000	500	1.49
8MGT-4480	560	1.53

Speed Reducer Output Shaft Speed For 1750 rpm Motor Input	
Reducer Speed Ratio	Reducer Output Speed
Up to 5:1	Use a belt drive
5:1	350
7.5:1	233
10:1	175
15:1	117
30:1	58
40:1	44
50:1	35

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

Horsepower Rating for 21mm Wide

8mm Pitch Poly Chain® GT®2 Belts

RPM OF FASTER SHAFT	Rated Base 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	45 4.511	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
10	0.13	0.15	0.17	0.19	0.20	0.21	0.23	0.24	0.25	0.27	0.29	0.31	0.32	0.34	0.36	0.38	0.40	0.43	0.45	0.48	0.51
20	0.25	0.29	0.33	0.35	0.38	0.40	0.43	0.45	0.48	0.50	0.54	0.58	0.60	0.64	0.67	0.72	0.76	0.80	0.85	0.90	0.96
35	0.42	0.48	0.55	0.59	0.63	0.67	0.71	0.75	0.80	0.84	0.90	0.96	1.00	1.06	1.12	1.20	1.26	1.34	1.41	1.49	1.59
44	0.51	0.59	0.67	0.72	0.77	0.83	0.88	0.93	0.98	1.03	1.10	1.18	1.23	1.30	1.38	1.47	1.55	1.64	1.74	1.83	1.95
58	0.66	0.76	0.86	0.93	0.99	1.06	1.12	1.19	1.25	1.32	1.42	1.51	1.58	1.67	1.77	1.89	1.98	2.11	2.23	2.35	2.50
70	0.78	0.90	1.02	1.10	1.17	1.25	1.33	1.41	1.49	1.56	1.68	1.79	1.87	1.98	2.09	2.24	2.35	2.50	2.64	2.79	2.97
88	0.95	1.10	1.25	1.35	1.44	1.54	1.63	1.73	1.82	1.92	2.06	2.20	2.29	2.43	2.57	2.75	2.88	3.06	3.24	3.42	3.64
100	1.07	1.23	1.40	1.51	1.62	1.72	1.83	1.94	2.05	2.15	2.31	2.46	2.57	2.72	2.88	3.08	3.23	3.43	3.64	3.83	4.08
117	1.22	1.42	1.61	1.73	1.86	1.98	2.11	2.23	2.35	2.47	2.66	2.84	2.96	3.13	3.31	3.55	3.72	3.95	4.18	4.41	4.69
175	1.75	2.02	2.30	2.48	2.66	2.84	3.01	3.19	3.37	3.54	3.80	4.06	4.23	4.49	4.74	5.07	5.32	5.65	5.98	6.31	6.72
200	1.97	2.28	2.59	2.79	2.99	3.19	3.39	3.59	3.79	3.99	4.28	4.57	4.76	5.05	5.33	5.71	5.99	6.37	6.74	7.10	7.56
233	2.25	2.60	2.96	3.19	3.42	3.66	3.88	4.11	4.34	4.56	4.90	5.23	5.45	5.78	6.11	6.54	6.86	7.29	7.71	8.13	8.65
300	2.80	3.25	3.69	3.99	4.28	4.57	4.85	5.14	5.42	5.70	6.12	6.54	6.81	7.22	7.63	8.17	8.57	9.10	9.63	10.2	10.8
350	3.20	3.72	4.23	4.56	4.90	5.23	5.56	5.88	6.21	6.53	7.01	7.48	7.80	8.27	8.74	9.36	9.82	10.4	11.0	11.6	12.4
400	3.60	4.18	4.75	5.13	5.50	5.88	6.24	6.61	6.98	7.34	7.88	8.41	8.77	9.30	9.82	10.5	11.0	11.7	12.4	13.1	13.9
500	4.37	5.07	5.77	6.23	6.68	7.14	7.59	8.03	8.48	8.92	9.57	10.2	10.7	11.3	11.9	12.8	13.4	14.2	15.1	15.9	16.9
575	4.92	5.72	6.51	7.03	7.55	8.06	8.57	9.07	9.57	10.1	10.8	11.5	12.0	12.8	13.5	14.4	15.1	16.1	17.0	17.9	19.1
600	5.11	5.94	6.76	7.30	7.83	8.36	8.89	9.41	9.93	10.5	11.2	12.0	12.5	13.2	14.0	15.0	15.7	16.7	17.6	18.6	19.8
690	5.76	6.70	7.62	8.23	8.84	9.44	10.0	10.6	11.2	11.8	12.7	13.5	14.1	14.9	15.8	16.9	17.7	18.8	19.9	21.0	22.3
700	5.83	6.78	7.72	8.34	8.95	9.56	10.2	10.8	11.4	11.9	12.8	13.7	14.3	15.1	16.0	17.1	18.0	19.1	20.2	21.3	22.6
800	6.53	7.60	8.66	9.35	10.0	10.7	11.4	12.1	12.7	13.4	14.4	15.4	16.0	17.0	17.9	19.2	20.1	21.4	22.6	23.8	25.3
870	7.02	8.17	9.30	10.1	10.8	11.5	12.3	13.0	13.7	14.4	15.5	16.5	17.2	18.3	19.3	20.6	21.6	23.0	24.3	25.6	27.2
900	7.22	8.41	9.58	10.3	11.1	11.9	12.6	13.4	14.1	14.8	15.9	17.0	17.7	18.8	19.9	21.2	22.3	23.7	25.0	26.4	28.0
1000	7.90	9.20	10.5	11.3	12.2	13.0	13.8	14.6	15.4	16.2	17.4	18.6	19.4	20.6	21.7	23.3	24.4	25.9	27.4	28.8	30.7
1160	8.96	10.4	11.9	12.9	13.8	14.7	15.7	16.6	17.5	18.4	19.8	21.1	22.0	23.4	24.7	26.4	27.7	29.4	31.0	32.7	34.8
1750	12.6	14.7	16.8	18.2	19.5	20.9	22.2	23.5	24.8	26.1	28.0	29.9	31.2	33.0	34.8	37.3	39.1	41.4	43.7	46.0	48.8
2000	14.1	16.5	18.8	20.3	21.8	23.3	24.8	26.3	27.7	29.2	31.3	33.4	34.8	36.9	38.9	41.6	43.6	46.2	48.7	51.3	54.3
3000	19.7	23.0	26.3	28.4	30.5	32.6	34.6	36.7	38.7	40.7	43.6	46.5	48.3	51.1	53.9	57.4	60.0	63.4	66.7	70.0	73.9
3450	22.0	25.8	29.4	31.8	34.1	36.5	38.8	41.0	43.2	45.4	48.7	51.8	53.9	56.9	59.9	63.8	66.6	70.3	73.8		
4000	24.8	29.0	33.1	35.8	38.4	41.0	43.5	46.1	48.5	50.9	54.5	58.0	60.2	63.6	66.8	70.9					
4500	27.2	31.8	36.3	39.2	42.1	44.9	47.7	50.4	53.0	55.7	59.5	63.2	65.6	69.1							
5000	29.5	34.5	39.4	42.5	45.6	48.6	51.6	54.5	57.3	60.1	64.1	68.0	70.5								
5500	31.7	37.1	42.3	45.7	49.0	52.2	55.3	58.4	61.3	64.3	68.4										

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

RPM OF FASTER SHAFT	Additional Horsepower 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
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
35	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03
44	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.03
58	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04
70	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.05	0.05
88	0.00	0.01	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.07
100	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.07
117	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
175	0.00	0.01	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.13
200	0.00	0.02	0.03	0.05	0.07	0.08	0.10	0.12	0.13	0.15
233	0.00	0.02	0.04	0.06	0.08	0.10	0.11	0.13	0.15	0.17
300	0.00	0.02	0.05	0.07	0.10	0.12	0.15	0.17	0.20	0.22
350	0.00	0.03	0.06	0.09	0.12	0.14	0.17	0.20	0.23	0.26
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
575	0.00	0.05	0.09	0.14	0.19	0.24	0.28	0.33	0.38	0.43
600	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.39	0.44
690	0.00	0.06	0.11	0.17	0.23	0.28	0.34	0.40	0.45	0.51
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
870	0.00	0.07	0.14	0.21	0.29	0.36	0.43	0.50	0.57	0.64
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
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
2000	0.00	0.16	0.33	0.49	0.66	0.82	0.99	1.15	1.32	1.48
3000	0.00	0.25	0.49	0.74	0.99	1.23	1.48	1.73	1.97	2.22
3450	0.00	0.28	0.57	0.85	1.13	1.42	1.70	1.99	2.27	2.55
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

Poly Chain GT2 Belt Length Correction Factor Table

Pitch/Length Designation	No. of Teeth	Correction Factor
8MGT-640	80	0.79
8MGT-720	90	0.83
8MGT-800	100	0.87
8MGT-896	112	0.91
8MGT-1000	125	0.96
8MGT-1120	140	1.00
8MGT-1200	150	1.03
8MGT-1280	160	1.05
8MGT-1440	180	1.10
8MGT-1600	200	1.14
8MGT-1792	224	1.18
8MGT-2000	250	1.22
8MGT-2240	280	1.26
8MGT-2400	300	1.29
8MGT-2520	315	1.31
8MGT-2840	355	1.36
8MGT-3200	400	1.40
8MGT-3600	450	1.45
8MGT-4000	500	1.49
8MGT-4480	560	1.53

Speed Reducer Output Shaft Speed For 1750 rpm Motor Input	
Reducer Speed Ratio	Reducer Output Speed
Up to 5:1	Use a belt drive
5:1	350
7.5:1	233
10:1	175
15:1	117
30:1	58
40:1	44
50:1	35

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

Horsepower Rating for 36mm Wide

8mm Pitch Poly Chain® GT®2 Belts

RPM OF FASTER SHAFT	Rated Base 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	45 4.511	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
10	0.23	0.26	0.30	0.32	0.35	0.37	0.39	0.41	0.44	0.46	0.49	0.53	0.55	0.58	0.61	0.66	0.69	0.73	0.78	0.82	0.87
20	0.43	0.50	0.56	0.61	0.65	0.69	0.74	0.78	0.82	0.86	0.93	0.99	1.03	1.09	1.15	1.24	1.30	1.38	1.46	1.54	1.64
35	0.71	0.82	0.93	1.01	1.08	1.15	1.22	1.29	1.36	1.43	1.54	1.64	1.71	1.82	1.92	2.05	2.16	2.29	2.42	2.56	2.72
44	0.88	1.01	1.15	1.24	1.33	1.42	1.50	1.59	1.68	1.76	1.89	2.02	2.11	2.23	2.36	2.53	2.65	2.82	2.98	3.14	3.35
58	1.12	1.30	1.47	1.59	1.70	1.81	1.93	2.04	2.15	2.26	2.43	2.59	2.70	2.86	3.03	3.24	3.40	3.61	3.82	4.03	4.29
70	1.33	1.54	1.74	1.88	2.01	2.15	2.28	2.42	2.55	2.68	2.87	3.07	3.20	3.39	3.58	3.84	4.03	4.28	4.53	4.78	5.08
88	1.63	1.89	2.14	2.31	2.47	2.64	2.80	2.97	3.13	3.29	3.53	3.77	3.93	4.16	4.40	4.71	4.94	5.25	5.56	5.86	6.24
100	1.83	2.11	2.40	2.59	2.77	2.96	3.14	3.32	3.51	3.69	3.96	4.23	4.40	4.67	4.93	5.28	5.54	5.89	6.23	6.57	7.00
117	2.10	2.43	2.76	2.97	3.19	3.40	3.61	3.82	4.03	4.24	4.55	4.86	5.07	5.37	5.68	6.08	6.38	6.78	7.17	7.56	8.05
175	3.00	3.47	3.94	4.25	4.56	4.86	5.17	5.47	5.77	6.07	6.51	6.96	7.25	7.69	8.12	8.70	9.13	9.69	10.3	10.8	11.5
200	3.37	3.90	4.43	4.78	5.13	5.48	5.82	6.16	6.50	6.83	7.33	7.83	8.16	8.66	9.14	9.79	10.3	10.9	11.5	12.2	13.0
233	3.85	4.46	5.07	5.47	5.87	6.27	6.66	7.05	7.44	7.82	8.39	8.97	9.34	9.91	10.5	11.2	11.8	12.5	13.2	13.9	14.8
300	4.80	5.57	6.33	6.84	7.33	7.83	8.32	8.81	9.29	9.77	10.5	11.2	11.7	12.4	13.1	14.0	14.7	15.6	16.5	17.4	18.5
350	5.49	6.38	7.25	7.82	8.39	8.96	9.52	10.1	10.6	11.2	12.0	12.8	13.4	14.2	15.0	16.0	16.8	17.9	18.9	19.9	21.2
400	6.17	7.16	8.14	8.79	9.43	10.1	10.7	11.3	12.0	12.6	13.5	14.4	15.0	15.9	16.8	18.0	18.9	20.1	21.3	22.4	23.8
500	7.48	8.69	9.89	10.7	11.5	12.2	13.0	13.8	14.5	15.3	16.4	17.5	18.3	19.4	20.5	21.9	23.0	24.4	25.8	27.2	29.0
575	8.44	9.81	11.2	12.1	12.9	13.8	14.7	15.6	16.4	17.3	18.5	19.8	20.6	21.9	23.1	24.7	26.0	27.6	29.2	30.7	32.7
600	8.76	10.2	11.6	12.5	13.4	14.3	15.2	16.1	17.0	17.9	19.2	20.5	21.4	22.7	24.0	25.7	26.9	28.6	30.3	31.9	33.9
690	9.87	11.5	13.1	14.1	15.1	16.2	17.2	18.2	19.2	20.2	21.7	23.2	24.2	25.6	27.1	29.0	30.4	32.3	34.1	36.0	38.3
700	9.99	11.6	13.2	14.3	15.3	16.4	17.4	18.4	19.5	20.5	22.0	23.5	24.5	25.9	27.4	29.3	30.8	32.7	34.6	36.4	38.7
800	11.2	13.0	14.8	16.0	17.2	18.4	19.5	20.7	21.8	23.0	24.7	26.3	27.5	29.1	30.8	32.9	34.5	36.7	38.8	40.9	43.5
870	12.0	14.0	15.9	17.2	18.5	19.8	21.0	22.2	23.5	24.7	26.5	28.3	29.5	31.3	33.1	35.4	37.1	39.4	41.7	43.9	46.7
900	12.4	14.4	16.4	17.7	19.0	20.3	21.6	22.9	24.2	25.4	27.3	29.2	30.4	32.2	34.0	36.4	38.2	40.6	42.9	45.2	48.1
1000	13.5	15.8	18.0	19.4	20.8	22.3	23.7	25.1	26.5	27.8	29.9	31.9	33.3	35.3	37.2	39.9	41.8	44.4	46.9	49.4	52.6
1160	15.4	17.9	20.4	22.0	23.7	25.3	26.9	28.5	30.0	31.6	33.9	36.2	37.8	40.0	42.3	45.2	47.4	50.3	53.2	56.1	59.6
1750	21.7	25.3	28.8	31.2	33.5	35.8	38.1	40.3	42.5	44.8	48.0	51.3	53.4	56.6	59.7	63.9	66.9	71.0	75.0	78.9	83.7
2000	24.2	28.3	32.2	34.9	37.5	40.0	42.6	45.1	47.6	50.0	53.7	57.3	59.7	63.2	66.7	71.3	74.7	79.2	83.5	87.9	93.2
3000	33.7	39.4	45.0	48.7	52.3	55.9	59.4	62.9	66.3	69.7	74.7	79.6	82.9	87.6	92.3	98.4	102.9	108.8	114.4	119.9	126.6
3450	37.8	44.2	50.4	54.5	58.5	62.5	66.4	70.3	74.1	77.9	83.4	88.8	92.4	97.6	102.7	109.4	114.2	120.5	126.5		
4000	42.5	49.7	56.7	61.3	65.8	70.3	74.6	78.9	83.2	87.3	93.4	99.4	103.3	109.0	114.5	121.6					
4500	46.6	54.5	62.2	67.2	72.1	77.0	81.7	86.4	90.9	95.4	102.0	108.3	112.5	118.5							
5000	50.6	59.1	67.5	72.9	78.2	83.4	88.4	93.4	98.3	103.0	109.9	116.6	120.9								
5500	54.4	63.6	72.5	78.3	83.9	89.4	94.8	100.1	105.2	110.2	117.3										

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

RPM OF FASTER SHAFT	Additional Horsepower 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
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
35	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04
44	0.00	0.01	0.01	0.02	0.02	0.03	0.04	0.04	0.05	0.06
58	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.07
70	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
88	0.00	0.01	0.02	0.04	0.05	0.06	0.07	0.09	0.10	0.11
100	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.13
117	0.00	0.02	0.03	0.05	0.07	0.08	0.10	0.12	0.13	0.15
175	0.00	0.02	0.05	0.07	0.10	0.12	0.15	0.17	0.20	0.22
200	0.00	0.03	0.06	0.08	0.11	0.14	0.17	0.20	0.23	0.25
233	0.00	0.03	0.07	0.10	0.13	0.16	0.20	0.23	0.26	0.30
300	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.30	0.34	0.38
350	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.39	0.44
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
575	0.00	0.08	0.16	0.24	0.32	0.41	0.49	0.57	0.65	0.73
600	0.00	0.08	0.17	0.25	0.34	0.42	0.51	0.59	0.68	0.76
690	0.00	0.10	0.19	0.29	0.39	0.49	0.58	0.68	0.78	0.88
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
870	0.00	0.12	0.25	0.37	0.49	0.61	0.74	0.86	0.98	1.10
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
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
2000	0.00	0.28	0.56	0.85	1.13	1.41	1.69	1.97	2.25	2.54
3000	0.00	0.42	0.85	1.27	1.69	2.11	2.54	2.96	3.38	3.80
3450	0.00	0.49	0.97	1.46	1.94	2.43	2.92	3.40	3.89	4.38
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

Poly Chain GT2 Belt Length Correction Factor Table

Pitch/Length Designation	No. of Teeth	Correction Factor
8MGT-640	80	0.79
8MGT-720	90	0.83
8MGT-800	100	0.87
8MGT-896	112	0.91
8MGT-1000	125	0.96
8MGT-1120	140	1.00
8MGT-1200	150	1.03
8MGT-1280	160	1.05
8MGT-1440	180	1.10
8MGT-1600	200	1.14
8MGT-1792	224	1.18
8MGT-2000	250	1.22
8MGT-2240	280	1.26
8MGT-2400	300	1.29
8MGT-2520	315	1.31
8MGT-2840	355	1.36
8MGT-3200	400	1.40
8MGT-3600	450	1.45
8MGT-4000	500	1.49
8MGT-4480	560	1.53

Speed Reducer Output Shaft Speed For 1750 rpm Motor Input	
Reducer Speed Ratio	Reducer Output Speed
Up to 5:1	Use a belt drive
5:1	350
7.5:1	233
10:1	175
15:1	117
30:1	58
40:1	44
50:1	35

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

Horsepower Rating for 62mm Wide

8mm Pitch Poly Chain® GT®2 Belts

RPM OF FASTER SHAFT	Rated Base 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	45 4.511	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
10	0.40	0.46	0.52	0.56	0.60	0.63	0.67	0.71	0.75	0.79	0.85	0.90	0.94	1.00	1.06	1.13	1.19	1.26	1.34	1.41	1.50
20	0.74	0.86	0.97	1.05	1.12	1.19	1.27	1.34	1.41	1.49	1.60	1.70	1.77	1.88	1.99	2.13	2.23	2.37	2.51	2.65	2.82
35	1.23	1.42	1.61	1.73	1.86	1.98	2.11	2.23	2.35	2.47	2.65	2.83	2.95	3.13	3.30	3.54	3.71	3.94	4.17	4.40	4.69
44	1.51	1.75	1.98	2.13	2.29	2.44	2.59	2.74	2.89	3.04	3.26	3.48	3.63	3.85	4.06	4.35	4.57	4.85	5.13	5.41	5.76
58	1.94	2.24	2.54	2.73	2.93	3.13	3.32	3.51	3.70	3.90	4.18	4.46	4.65	4.93	5.21	5.58	5.86	6.22	6.58	6.94	7.39
70	2.29	2.65	3.00	3.24	3.47	3.70	3.93	4.16	4.39	4.61	4.95	5.29	5.51	5.84	6.17	6.61	6.93	7.37	7.80	8.22	8.75
88	2.81	3.25	3.68	3.97	4.26	4.54	4.82	5.11	5.39	5.66	6.08	6.49	6.76	7.17	7.58	8.11	8.51	9.05	9.57	10.1	10.7
100	3.15	3.64	4.13	4.45	4.77	5.09	5.41	5.73	6.04	6.35	6.82	7.28	7.58	8.04	8.50	9.10	9.55	10.1	10.7	11.3	12.0
117	3.62	4.18	4.75	5.12	5.49	5.86	6.22	6.59	6.95	7.31	7.84	8.37	8.73	9.25	9.78	10.5	11.0	11.7	12.3	13.0	13.9
175	5.16	5.98	6.79	7.32	7.85	8.38	8.90	9.42	9.94	10.5	11.2	12.0	12.5	13.2	14.0	15.0	15.7	16.7	17.7	18.6	19.8
200	5.80	6.72	7.63	8.24	8.83	9.43	10.0	10.6	11.2	11.8	12.6	13.5	14.1	14.9	15.7	16.9	17.7	18.8	19.9	21.0	22.3
233	6.63	7.69	8.73	9.43	10.1	10.8	11.5	12.1	12.8	13.5	14.5	15.4	16.1	17.1	18.0	19.3	20.3	21.5	22.8	24.0	25.5
300	8.27	9.60	10.9	11.8	12.6	13.5	14.3	15.2	16.0	16.8	18.1	19.3	20.1	21.3	22.5	24.1	25.3	26.9	28.4	30.0	31.9
350	9.46	11.0	12.5	13.5	14.5	15.4	16.4	17.4	18.3	19.3	20.7	22.1	23.0	24.4	25.8	27.6	29.0	30.8	32.6	34.3	36.5
400	10.6	12.3	14.0	15.1	16.2	17.3	18.4	19.5	20.6	21.7	23.3	24.8	25.9	27.5	29.0	31.0	32.6	34.6	36.6	38.6	41.1
500	12.9	15.0	17.0	18.4	19.7	21.1	22.4	23.7	25.0	26.3	28.3	30.2	31.5	33.4	35.2	37.7	39.6	42.0	44.5	46.9	49.9
575	14.5	16.9	19.2	20.8	22.3	23.8	25.3	26.8	28.3	29.7	31.9	34.1	35.5	37.7	39.8	42.6	44.7	47.5	50.2	52.9	56.3
600	15.1	17.5	19.9	21.5	23.1	24.7	26.2	27.8	29.3	30.9	33.1	35.4	36.9	39.1	41.3	44.2	46.4	49.3	52.1	54.9	58.4
690	17.0	19.8	22.5	24.3	26.1	27.9	29.6	31.4	33.1	34.8	37.4	39.9	41.6	44.1	46.6	49.9	52.3	55.6	58.8	62.0	65.9
700	17.2	20.0	22.8	24.6	26.4	28.2	30.0	31.8	33.5	35.3	37.9	40.4	42.1	44.7	47.2	50.5	53.0	56.3	59.5	62.7	66.7
800	19.3	22.4	25.6	27.6	29.6	31.7	33.7	35.6	37.6	39.6	42.5	45.4	47.3	50.1	53.0	56.7	59.5	63.1	66.8	70.4	74.8
870	20.7	24.1	27.5	29.7	31.9	34.0	36.2	38.3	40.4	42.5	45.7	48.8	50.8	53.9	56.9	60.9	63.9	67.9	71.8	75.6	80.4
900	21.3	24.8	28.3	30.5	32.8	35.0	37.2	39.5	41.6	43.8	47.0	50.2	52.3	55.5	58.6	62.7	65.8	69.9	73.9	77.8	82.8
1000	23.3	27.2	30.9	33.4	35.9	38.3	40.8	43.2	45.6	47.9	51.5	55.0	57.3	60.7	64.1	68.7	72.0	76.4	80.8	85.1	90.5
1160	26.4	30.8	35.1	37.9	40.7	43.5	46.3	49.0	51.7	54.4	58.4	62.4	65.0	68.9	72.8	77.9	81.7	86.7	91.6	96.5	102.6
1750	37.3	43.5	49.7	53.7	57.7	61.6	65.5	69.4	73.3	77.1	82.7	88.3	92.0	97.5	102.9	110.0	115.3	122.2	129.1	135.8	144.2
2000	41.7	48.7	55.5	60.1	64.5	68.9	73.3	77.6	81.9	86.2	92.5	98.7	102.8	108.9	114.9	122.8	128.6	136.3	143.9	151.3	160.4
3000	58.1	67.9	77.5	83.9	90.1	96.2	102.3	108.3	114.2	120.0	128.7	137.1	142.7	151.0	159.0	169.5	177.2	187.3	197.1	206.6	218.0
3450	65.0	76.0	86.8	93.9	100.8	107.7	114.4	121.1	127.6	134.1	143.6	153.0	159.1	168.1	176.9	188.3	196.7	207.4	217.9		
4000	73.2	85.6	97.7	105.6	113.4	121.0	128.5	136.0	143.2	150.4	160.9	171.2	177.9	187.7	197.2	209.4					
4500	80.3	93.9	107.1	115.8	124.2	132.6	140.7	148.8	156.6	164.3	175.6	186.5	193.7	204.0							
5000	87.1	101.8	116.2	125.5	134.6	143.6	152.3	160.9	169.2	177.4	189.3	200.8	208.2								
5500	93.7	109.5	124.9	134.8	144.5	154.0	163.3	172.3	181.1	189.7	202.1										

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

RPM OF FASTER SHAFT	Additional Horsepower 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
10	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02
20	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04
35	0.00	0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08
44	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.09	0.10
58	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.13
70	0.00	0.02	0.03	0.05	0.07	0.08	0.10	0.12	0.14	0.15
88	0.00	0.02	0.04	0.06	0.09	0.11	0.13	0.15	0.17	0.19
100	0.00	0.02	0.05	0.07	0.10	0.12	0.15	0.17	0.19	0.22
117	0.00	0.03	0.06	0.09	0.11	0.14	0.17	0.20	0.23	0.26
175	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.30	0.34	0.38
200	0.00	0.05	0.10	0.15	0.19	0.24	0.29	0.34	0.39	0.44
233	0.00	0.06	0.11	0.17	0.23	0.28	0.34	0.40	0.45	0.51
300	0.00	0.07	0.15	0.22	0.29	0.36	0.44	0.51	0.58	0.66
350	0.00	0.08	0.17	0.25	0.34	0.42	0.51	0.59	0.68	0.76
400	0.00	0.10	0.19	0.29	0.39	0.49	0.58	0.68	0.78	0.87
500	0.00	0.12	0.24	0.36	0.49	0.61	0.73	0.85	0.97	1.09
575	0.00	0.14	0.28	0.42	0.56	0.70	0.84	0.98	1.12	1.26
600	0.00	0.15	0.29	0.44	0.58	0.73	0.87	1.02	1.16	1.31
690	0.00	0.17	0.34	0.50	0.67	0.84	1.00	1.17	1.34	1.51
700	0.00	0.17	0.34	0.51	0.68	0.85	1.02	1.19	1.36	1.53
800	0.00	0.19	0.39	0.58	0.78	0.97	1.16	1.36	1.55	1.75
870	0.00	0.21	0.42	0.63	0.84	1.06	1.27	1.48	1.69	1.90
900	0.00	0.22	0.44	0.66	0.87	1.09	1.31	1.53	1.75	1.97
1000	0.00	0.24	0.49	0.73	0.97	1.21	1.46	1.70	1.94	2.18
1160	0.00	0.28	0.56	0.84	1.13	1.41	1.69	1.97	2.25	2.53
1750	0.00	0.42	0.85	1.27	1.70	2.12	2.55	2.97	3.40	3.82
2000	0.00	0.49	0.97	1.46	1.94	2.43	2.91	3.40	3.88	4.37
3000	0.00	0.73	1.46	2.18	2.91	3.64	4.37	5.10	5.82	6.55
3450	0.00	0.84	1.68	2.51	3.35	4.19	5.02	5.86	6.70	7.53
4000	0.00	0.97	1.94	2.91	3.88	4.85	5.82	6.80	7.76	8.74
4500	0.00	1.09	2.19	3.28	4.37	5.46	6.55	7.64	8.74	9.83
5000	0.00	1.21	2.43	3.64	4.85	6.07	7.28	8.49	9.71	10.9
5500	0.00	1.33	2.67	4.00	5.34	6.67	8.01	9.34	10.7	12.0

Poly Chain GT2 Belt Length Correction Factor Table

Pitch/Length Designation	No. of Teeth	Correction Factor
8MGT-640	80	0.79
8MGT-720	90	0.83
8MGT-800	100	0.87
8MGT-896	112	0.91
8MGT-1000	125	0.96
8MGT-1120	140	1.00
8MGT-1200	150	1.03
8MGT-1280	160	1.05
8MGT-1440	180	1.10
8MGT-1600	200	1.14
8MGT-1792	224	1.18
8MGT-2000	250	1.22
8MGT-2240	280	1.26
8MGT-2400	300	1.29
8MGT-2520	315	1.31
8MGT-2840	355	1.36
8MGT-3200	400	1.40
8MGT-3600	450	1.45
8MGT-4000	500	1.49
8MGT-4480	560	1.53

Speed Reducer Output Shaft Speed For 1750 rpm Motor Input	
Reducer Speed Ratio	Reducer Output Speed
Up to 5:1	Use a belt drive
5:1	350
7.5:1	233
10:1	175
15:1	117
30:1	58
40:1	44
50:1	35

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

Horsepower Rating for 20mm Wide

14mm Pitch Poly Chain® GT®2 Belts

RPM OF FASTER SHAFT	Rated Base Horsepower for Small Sprocket (Number of Grooves and Pitch Diameter, Inches)																								
	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	0.50	0.52	0.54	0.56	0.58	0.60	0.62	0.64	0.66	0.68	0.70	0.72	0.74	0.80	0.84	0.90	0.94	1.00	1.06	1.14	1.19	1.27	1.35	1.43	1.52
20	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.21	1.25	1.29	1.33	1.37	1.41	1.52	1.60	1.71	1.79	1.90	2.01	2.16	2.27	2.42	2.56	2.71	2.89
35	1.57	1.64	1.71	1.77	1.84	1.90	1.97	2.03	2.10	2.16	2.23	2.29	2.35	2.55	2.67	2.86	2.99	3.18	3.37	3.62	3.80	4.05	4.30	4.54	4.85
44	1.94	2.02	2.10	2.18	2.27	2.35	2.43	2.51	2.59	2.67	2.75	2.83	2.91	3.14	3.30	3.54	3.69	3.93	4.16	4.47	4.70	5.00	5.31	5.61	5.99
58	2.50	2.60	2.71	2.81	2.92	3.02	3.12	3.23	3.33	3.43	3.54	3.64	3.74	4.05	4.25	4.56	4.76	5.06	5.36	5.76	6.05	6.45	6.84	7.23	7.72
70	2.96	3.09	3.21	3.34	3.46	3.59	3.71	3.83	3.96	4.08	4.20	4.32	4.44	4.81	5.05	5.41	5.65	6.01	6.37	6.84	7.19	7.66	8.13	8.59	9.17
88	3.65	3.80	3.96	4.11	4.26	4.42	4.57	4.72	4.87	5.03	5.18	5.33	5.48	5.93	6.23	6.67	6.97	7.41	7.85	8.43	8.87	9.45	10.0	10.6	11.3
100	4.10	4.27	4.44	4.62	4.79	4.96	5.13	5.31	5.48	5.65	5.82	5.99	6.15	6.66	7.00	7.50	7.83	8.33	8.82	9.48	9.97	10.6	11.3	11.9	12.7
117	4.72	4.93	5.12	5.33	5.52	5.72	5.92	6.12	6.32	6.51	6.71	6.90	7.10	7.69	8.07	8.65	9.04	9.61	10.2	10.9	11.5	12.3	13.0	13.7	14.7
175	6.80	7.09	7.38	7.67	7.95	8.24	8.53	8.82	9.10	9.39	9.67	9.95	10.2	11.1	11.6	12.5	13.0	13.9	14.7	15.8	16.6	17.7	18.8	19.8	21.2
200	7.67	7.99	8.32	8.65	8.97	9.30	9.62	9.95	10.3	10.6	10.9	11.2	11.6	12.5	13.1	14.1	14.7	15.7	16.6	17.8	18.7	20.0	21.2	22.4	23.9
233	8.79	9.17	9.55	9.93	10.3	10.7	11.0	11.4	11.8	12.2	12.5	12.9	13.3	14.4	15.1	16.2	16.9	18.0	19.0	20.5	21.5	22.9	24.3	25.7	27.4
300	11.0	11.5	12.0	12.5	12.9	13.4	13.9	14.3	14.8	15.3	15.7	16.2	16.7	18.0	19.0	20.3	21.2	22.6	23.9	25.7	27.1	28.8	30.6	32.3	34.5
350	12.7	13.2	13.8	14.3	14.8	15.4	15.9	16.5	17.0	17.5	18.1	18.6	19.1	20.7	21.8	23.4	24.4	26.0	27.5	29.6	31.1	33.1	35.1	37.1	39.6
400	14.3	14.9	15.5	16.1	16.7	17.3	18.0	18.6	19.2	19.8	20.4	21.0	21.6	23.4	24.6	26.3	27.5	29.3	31.0	33.3	35.1	37.4	39.6	41.9	44.7
500	17.4	18.2	18.9	19.7	20.4	21.2	21.9	22.7	23.4	24.2	24.9	25.6	26.4	28.6	30.0	32.2	33.6	35.8	37.9	40.7	42.8	45.6	48.4	51.2	54.6
575	19.7	20.6	21.4	22.3	23.1	24.0	24.8	25.7	26.5	27.4	28.2	29.0	29.9	32.4	34.0	36.5	38.1	40.5	43.0	46.2	48.6	51.7	54.9	58.0	61.9
600	20.5	21.4	22.3	23.1	24.0	24.9	25.8	26.7	27.6	28.4	29.3	30.2	31.0	33.6	35.3	37.9	39.6	42.1	44.6	48.0	50.4	53.7	57.0	60.2	64.2
690	23.2	24.2	25.2	26.2	27.2	28.2	29.2	30.2	31.2	32.2	33.2	34.2	35.1	38.1	40.0	42.9	44.8	47.7	50.5	54.3	57.1	60.8	64.5	68.2	72.7
700	23.5	24.5	25.5	26.5	27.6	28.6	29.6	30.6	31.6	32.6	33.6	34.6	35.6	38.6	40.5	43.5	45.4	48.3	51.2	55.0	57.9	61.6	65.3	69.0	73.6
800	26.4	27.6	28.7	29.9	31.0	32.2	33.3	34.4	35.6	36.7	37.8	39.0	40.1	43.4	45.6	48.9	51.1	54.4	57.6	61.9	65.1	69.3	73.5	77.7	82.8
870	28.4	29.7	30.9	32.2	33.4	34.6	35.9	37.1	38.3	39.5	40.8	42.0	43.2	46.8	49.2	52.7	55.1	58.6	62.1	66.7	70.1	74.7	79.2	83.6	89.1
900	29.3	30.6	31.9	33.1	34.4	35.7	37.0	38.2	39.5	40.7	42.0	43.2	44.5	48.2	50.7	54.3	56.7	60.4	64.0	68.7	72.2	76.9	81.5	86.1	91.8
1000	32.1	33.5	35.0	36.4	37.8	39.2	40.6	42.0	43.3	44.7	46.1	47.5	48.8	52.9	55.6	59.6	62.3	66.2	70.2	75.4	79.2	84.3	89.4	94.4	100.6
1160	36.6	38.2	39.8	41.4	43.0	44.6	46.2	47.8	49.4	50.9	52.5	54.1	55.6	60.3	63.3	67.9	70.9	75.4	79.9	85.8	90.2	95.9	101.7	107.3	114.3
1750	52.3	54.6	56.9	59.2	61.5	63.8	66.1	68.3	70.6	72.8	75.0	77.3	79.5	86.1	90.4	96.8	101.1	107.4	113.6	121.8	127.8	135.7	143.5	151.1	160.4
2000	58.6	61.2	63.8	66.4	69.0	71.5	74.1	76.6	79.1	81.6	84.1	86.6	89.1	96.4	101.2	108.4	113.1	120.1	126.9	135.9	142.5	151.2	159.6		
3000	82.4	86.0	89.7	93.3	96.8	100.4	103.9	107.4	110.8	114.2	117.6	121.0	124.4	134.2	140.7										
3450	92.3	96.4	100.4	104.4	108.3	112.3	116.2	120.0	123.8	127.6	131.3	135.0	138.7												
4000	103.8	108.3	112.8	117.2	121.6	125.9	130.2	134.4	138.6																

RPM OF FASTER SHAFT	Additional Horsepower 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
10	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03
20	0.00	0.01	0.01	0.02	0.03	0.03	0.04	0.05	0.05	0.06
35	0.00	0.01	0.02	0.03	0.05	0.06	0.07	0.08	0.09	0.10
44	0.00	0.01	0.03	0.04	0.06	0.07	0.09	0.10	0.11	0.13
58	0.00	0.02	0.04	0.06	0.08	0.09	0.11	0.13	0.15	0.17
70	0.00	0.02	0.05	0.07	0.09	0.11	0.14	0.16	0.18	0.21
88	0.00	0.03	0.06	0.09	0.11	0.14	0.17	0.20	0.23	0.26
100	0.00	0.03	0.07	0.10	0.13	0.16	0.20	0.23	0.26	0.29
117	0.00	0.04	0.08	0.11	0.15	0.19	0.23	0.27	0.30	0.34
175	0.00	0.06	0.11	0.17	0.23	0.29	0.34	0.40	0.46	0.51
200	0.00	0.07	0.13	0.20	0.26	0.33	0.39	0.46	0.52	0.59
233	0.00	0.08	0.15	0.23	0.30	0.38	0.46	0.53	0.61	0.68
300	0.00	0.10	0.20	0.29	0.39	0.49	0.59	0.68	0.78	0.88
350	0.00	0.11	0.23	0.34	0.46	0.57	0.68	0.80	0.91	1.03
400	0.00	0.13	0.26	0.39	0.52	0.65	0.78	0.91	1.04	1.17
500	0.00	0.16	0.33	0.49	0.65	0.81	0.98	1.14	1.30	1.47
575	0.00	0.19	0.37	0.56	0.75	0.94	1.12	1.31	1.50	1.69
600	0.00	0.20	0.39	0.59	0.78	0.98	1.17	1.37	1.56	1.76
690	0.00	0.22	0.45	0.67	0.90	1.12	1.35	1.57	1.80	2.02
700	0.00	0.23	0.46	0.68	0.91	1.14	1.37	1.60	1.82	2.05
800	0.00	0.26	0.52	0.78	1.04	1.30	1.56	1.82	2.08	2.35
870	0.00	0.28	0.57	0.85	1.13	1.42	1.70	1.98	2.27	2.55
900	0.00	0.29	0.59	0.88	1.17	1.47	1.76	2.05	2.35	2.64
1000	0.00	0.33	0.65	0.98	1.30	1.63	1.95	2.28	2.61	2.93
1160	0.00	0.38	0.76	1.13	1.51	1.89	2.27	2.65	3.02	3.40
1750	0.00	0.57	1.14	1.71	2.28	2.85	3.42	3.99	4.56	5.13
2000	0.00	0.65	1.30	1.95	2.61	3.26	3.91	4.56	5.21	5.86
3000	0.00	0.98	1.96	2.93	3.91	4.89	5.86	6.84	7.82	8.80
3450	0.00	1.12	2.25	3.37	4.50	5.62	6.74	7.87	8.99	10.1
4000	0.00	1.30	2.61	3.91	5.21	6.52	7.82	9.12	10.4	11.7

Poly Chain GT2 Belt Length Correction Factor Table

Pitch/Length Designation	No. of Teeth	Correction Factor
14MGT-994	71	0.68
14MGT-1120	80	0.73
14MGT-1190	85	0.75
14MGT-1260	90	0.77
14MGT-1400	100	0.81
14MGT-1568	112	0.85
14MGT-1750	125	0.89
14MGT-1890	135	0.92
14MGT-1960	140	0.94
14MGT-2100	150	0.96
14MGT-2240	160	0.99
14MGT-2380	170	1.01
14MGT-2520	180	1.03
14MGT-2660	190	1.05
14MGT-2800	200	1.07
14MGT-3136	224	1.12
14MGT-3304	236	1.14
14MGT-3500	250	1.16
14MGT-3920	280	1.20
14MGT-4410	315	1.25

Speed Reducer Output Shaft Speed For 1750 rpm Motor Input	
Reducer Speed Ratio	Reducer Output Speed
Up to 5:1	Use a belt drive
5:1	350
7.5:1	233
10:1	175
15:1	117
30:1	58
40:1	44
50:1	35

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

Horsepower Rating for 37mm Wide

14mm Pitch Poly Chain® GT®2 Belts

RPM OF FASTER SHAFT	Rated Base Horsepower for Small Sprocket (Number of Grooves and Pitch Diameter, Inches)																								
	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	0.92	0.96	1.00	1.03	1.07	1.11	1.15	1.18	1.22	1.26	1.30	1.33	1.37	1.48	1.56	1.67	1.74	1.85	1.96	2.10	2.21	2.35	2.50	2.64	2.82
20	1.74	1.82	1.89	1.96	2.03	2.10	2.18	2.25	2.32	2.39	2.46	2.53	2.60	2.81	2.95	3.16	3.30	3.51	3.72	3.99	4.20	4.47	4.74	5.02	5.35
35	2.91	3.03	3.16	3.28	3.40	3.52	3.64	3.76	3.88	4.00	4.12	4.24	4.36	4.71	4.95	5.30	5.53	5.88	6.23	6.69	7.04	7.50	7.95	8.41	8.97
44	3.59	3.74	3.89	4.04	4.19	4.34	4.49	4.64	4.79	4.93	5.08	5.23	5.37	5.81	6.11	6.54	6.83	7.26	7.69	8.26	8.69	9.25	9.82	10.4	11.1
58	4.62	4.81	5.01	5.20	5.39	5.59	5.78	5.97	6.16	6.35	6.54	6.73	6.92	7.49	7.87	8.43	8.80	9.36	9.91	10.6	11.2	11.9	12.7	13.4	14.3
70	5.48	5.71	5.94	6.18	6.40	6.63	6.86	7.09	7.32	7.55	7.77	8.00	8.22	8.90	9.34	10.0	10.5	11.1	11.8	12.7	13.3	14.2	15.0	15.9	17.0
88	6.75	7.04	7.32	7.61	7.89	8.17	8.45	8.74	9.02	9.30	9.58	9.85	10.1	11.0	11.5	12.3	12.9	13.7	14.5	15.6	16.4	17.5	18.5	19.6	20.9
100	7.58	7.90	8.22	8.54	8.86	9.18	9.50	9.81	10.1	10.4	10.8	11.1	11.4	12.3	12.9	13.9	14.5	15.4	16.3	17.5	18.4	19.6	20.8	22.0	23.5
117	8.74	9.11	9.48	9.85	10.2	10.6	11.0	11.3	11.7	12.1	12.4	12.8	13.1	14.2	14.9	16.0	16.7	17.8	18.8	20.2	21.3	22.7	24.1	25.4	27.1
175	12.6	13.1	13.6	14.2	14.7	15.3	15.8	16.3	16.8	17.4	17.9	18.4	18.9	20.5	21.5	23.1	24.1	25.6	27.2	29.2	30.7	32.7	34.7	36.7	39.2
200	14.2	14.8	15.4	16.0	16.6	17.2	17.8	18.4	19.0	19.6	20.2	20.8	21.4	23.1	24.3	26.1	27.2	29.0	30.7	33.0	34.7	36.9	39.2	41.4	44.2
233	16.3	17.0	17.7	18.4	19.1	19.7	20.4	21.1	21.8	22.5	23.2	23.9	24.5	26.6	27.9	29.9	31.3	33.3	35.2	37.9	39.8	42.4	45.0	47.6	50.8
300	20.4	21.3	22.2	23.0	23.9	24.8	25.7	26.5	27.4	28.3	29.1	30.0	30.8	33.4	35.1	37.6	39.3	41.8	44.3	47.6	50.1	53.3	56.6	59.8	63.8
350	23.4	24.4	25.5	26.5	27.5	28.5	29.5	30.5	31.5	32.5	33.4	34.4	35.4	38.4	40.3	43.2	45.1	48.0	50.9	54.7	57.5	61.3	65.0	68.7	73.3
400	26.4	27.5	28.7	29.8	31.0	32.1	33.2	34.4	35.5	36.6	37.7	38.8	39.9	43.3	45.5	48.7	50.9	54.2	57.4	61.7	64.9	69.1	73.3	77.5	82.7
500	32.2	33.6	35.0	36.4	37.8	39.2	40.6	41.9	43.3	44.7	46.1	47.4	48.8	52.8	55.5	59.5	62.2	66.2	70.1	75.4	79.3	84.4	89.6	94.7	101.0
575	36.5	38.1	39.6	41.2	42.8	44.4	45.9	47.5	49.1	50.6	52.2	53.7	55.3	59.9	62.9	67.5	70.5	75.0	79.5	85.4	89.8	95.7	101.5	107.3	114.4
600	37.9	39.5	41.2	42.8	44.5	46.1	47.7	49.4	51.0	52.6	54.2	55.8	57.4	62.2	65.4	70.1	73.2	77.9	82.6	88.7	93.3	99.4	105.4	111.4	118.8
690	42.9	44.7	46.6	48.5	50.3	52.2	54.0	55.9	57.7	59.6	61.4	63.2	65.0	70.4	74.0	79.4	82.9	88.3	93.5	100.5	105.7	112.5	119.4	126.1	134.5
700	43.4	45.3	47.2	49.1	51.0	52.9	54.7	56.6	58.5	60.3	62.2	64.0	65.9	71.4	75.0	80.4	84.0	89.4	94.7	101.8	107.0	114.0	120.9	127.7	136.2
800	48.8	51.0	53.1	55.3	57.4	59.5	61.6	63.7	65.8	67.9	70.0	72.1	74.2	80.3	84.4	90.5	94.6	100.6	106.6	114.6	120.5	128.3	136.0	143.7	153.2
870	52.6	54.9	57.2	59.5	61.8	64.1	66.4	68.6	70.9	73.2	75.4	77.6	79.9	86.5	91.0	97.5	101.9	108.4	114.8	123.4	129.7	138.1	146.5	154.7	164.9
900	54.2	56.6	58.9	61.3	63.7	66.0	68.4	70.7	73.0	75.4	77.7	80.0	82.3	89.2	93.7	100.5	105.0	111.7	118.3	127.1	133.7	142.3	150.9	159.4	169.9
1000	59.4	62.1	64.7	67.3	69.9	72.5	75.0	77.6	80.2	82.7	85.3	87.8	90.3	97.9	102.9	110.3	115.2	122.6	129.8	139.4	146.6	156.0	165.4	174.7	186.1
1160	67.7	70.7	73.7	76.6	79.6	82.6	85.5	88.4	91.3	94.3	97.1	100.0	102.9	111.5	117.2	125.6	131.2	139.6	147.8	158.7	166.8	177.5	188.1	198.5	211.4
1750	96.7	101.0	105.3	109.6	113.8	118.0	122.2	126.4	130.6	134.7	138.8	142.9	147.0	159.2	167.2	179.2	187.0	198.7	210.2	225.3	236.5	251.1	265.5	279.6	296.8
2000	108.4	113.3	118.1	122.8	127.6	132.3	137.0	141.7	146.3	151.0	155.6	160.2	164.8	178.3	187.3	200.5	209.2	222.1	234.8	251.5	263.7	279.7	295.3		
3000	152.4	159.2	165.9	172.5	179.1	185.7	192.2	198.6	205.0	211.4	217.6	223.9	230.1	248.4	260.3										
3450	170.8	178.3	185.8	193.2	200.5	207.7	214.9	222.0	229.0	236.0	242.9	249.8	256.5												
4000	192.0	200.4	208.7	216.9	225.0	233.0	240.9	248.7	256.4																

RPM OF FASTER SHAFT	Additional Horsepower 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
10	0.00	0.01	0.01	0.02	0.02	0.03	0.04	0.04	0.05	0.05
20	0.00	0.01	0.02	0.04	0.05	0.06	0.07	0.08	0.10	0.11
35	0.00	0.02	0.04	0.06	0.08	0.11	0.13	0.15	0.17	0.19
44	0.00	0.03	0.05	0.08	0.11	0.13	0.16	0.19	0.21	0.24
58	0.00	0.03	0.07	0.10	0.14	0.17	0.21	0.24	0.28	0.31
70	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.30	0.34	0.38
88	0.00	0.05	0.11	0.16	0.21	0.27	0.32	0.37	0.42	0.48
100	0.00	0.06	0.12	0.18	0.24	0.30	0.36	0.42	0.48	0.54
117	0.00	0.07	0.14	0.21	0.28	0.35	0.42	0.49	0.56	0.63
175	0.00	0.11	0.21	0.32	0.42	0.53	0.63	0.74	0.84	0.95
200	0.00	0.12	0.24	0.36	0.48	0.60	0.72	0.84	0.96	1.08
233	0.00	0.14	0.28	0.42	0.56	0.70	0.84	0.98	1.12	1.26
300	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.27	1.45	1.63
350	0.00	0.21	0.42	0.63	0.84	1.05	1.27	1.48	1.69	1.90
400	0.00	0.24	0.48	0.72	0.96	1.21	1.45	1.69	1.93	2.17
500	0.00	0.30	0.60	0.90	1.21	1.51	1.81	2.11	2.41	2.71
575	0.00	0.35	0.69	1.04	1.39	1.73	2.08	2.43	2.77	3.12
600	0.00	0.36	0.72	1.08	1.45	1.81	2.17	2.53	2.89	3.25
690	0.00	0.42	0.83	1.25	1.66	2.08	2.50	2.91	3.33	3.74
700	0.00	0.42	0.84	1.27	1.69	2.11	2.53	2.95	3.38	3.80
800	0.00	0.48	0.97	1.45	1.93	2.41	2.89	3.38	3.86	4.34
870	0.00	0.52	1.05	1.57	2.10	2.62	3.15	3.67	4.19	4.72
900	0.00	0.54	1.09	1.63	2.17	2.71	3.25	3.80	4.34	4.88
1000	0.00	0.60	1.21	1.81	2.41	3.01	3.62	4.22	4.82	5.42
1160	0.00	0.70	1.40	2.10	2.80	3.50	4.20	4.89	5.59	6.29
1750	0.00	1.05	2.11	3.16	4.22	5.27	6.33	7.38	8.44	9.49
2000	0.00	1.21	2.41	3.62	4.82	6.03	7.23	8.44	9.64	10.8
3000	0.00	1.81	3.62	5.42	7.23	9.04	10.8	12.7	14.5	16.3
3450	0.00	2.08	4.16	6.24	8.32	10.4	12.5	14.6	16.6	18.7
4000	0.00	2.41	4.83	7.23	9.64	12.1	14.5	16.9	19.3	21.7

Poly Chain GT2 Belt Length Correction Factor Table

Pitch/Length Designation	No. of Teeth	Correction Factor
14MGT-994	71	0.68
14MGT-1120	80	0.73
14MGT-1190	85	0.75
14MGT-1260	90	0.77
14MGT-1400	100	0.81
14MGT-1568	112	0.85
14MGT-1750	125	0.89
14MGT-1890	135	0.92
14MGT-1960	140	0.94
14MGT-2100	150	0.96
14MGT-2240	160	0.99
14MGT-2380	170	1.01
14MGT-2520	180	1.03
14MGT-2660	190	1.05
14MGT-2800	200	1.07
14MGT-3136	224	1.12
14MGT-3304	236	1.14
14MGT-3500	250	1.16
14MGT-3920	280	1.20
14MGT-4410	315	1.25

Speed Reducer Output Shaft Speed For 1750 rpm Motor Input	
Reducer Speed Ratio	Reducer Output Speed
Up to 5:1	Use a belt drive
5:1	350
7.5:1	233
10:1	175
15:1	117
30:1	58
40:1	44
50:1	35

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

Horsepower Rating for 68mm Wide

14mm Pitch Poly Chain® GT®2 Belts

RPM OF FASTER SHAFT	Rated Base Horsepower for Small Sprocket (Number of Grooves and Pitch Diameter, Inches)																								
	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	1.69	1.76	1.83	1.90	1.97	2.04	2.11	2.18	2.25	2.31	2.38	2.45	2.52	2.72	2.86	3.06	3.20	3.40	3.60	3.86	4.06	4.33	4.59	4.85	5.18
20	3.20	3.34	3.47	3.60	3.73	3.87	4.00	4.13	4.26	4.39	4.52	4.65	4.78	5.17	5.43	5.81	6.07	6.45	6.83	7.34	7.72	8.22	8.72	9.22	9.84
35	5.35	5.58	5.80	6.02	6.25	6.47	6.69	6.91	7.13	7.35	7.57	7.79	8.01	8.66	9.09	9.74	10.2	10.8	11.5	12.3	12.9	13.8	14.6	15.4	16.5
44	6.60	6.88	7.15	7.43	7.70	7.98	8.25	8.52	8.79	9.07	9.34	9.61	9.88	10.7	11.2	12.0	12.6	13.3	14.1	15.2	16.0	17.0	18.0	19.1	20.4
58	8.49	8.85	9.20	9.56	9.91	10.3	10.6	11.0	11.3	11.7	12.0	12.4	12.7	13.8	14.5	15.5	16.2	17.2	18.2	19.6	20.6	21.9	23.3	24.6	26.2
70	10.1	10.5	10.9	11.3	11.8	12.2	12.6	13.0	13.4	13.9	14.3	14.7	15.1	16.4	17.2	18.4	19.2	20.4	21.6	23.3	24.5	26.0	27.6	29.2	31.2
88	12.4	12.9	13.5	14.0	14.5	15.0	15.5	16.1	16.6	17.1	17.6	18.1	18.6	20.2	21.2	22.7	23.7	25.2	26.7	28.7	30.2	32.1	34.1	36.0	38.4
100	13.9	14.5	15.1	15.7	16.3	16.9	17.5	18.0	18.6	19.2	19.8	20.4	20.9	22.6	23.8	25.5	26.6	28.3	30.0	32.2	33.9	36.1	38.3	40.5	43.2
117	16.1	16.7	17.4	18.1	18.8	19.5	20.1	20.8	21.5	22.1	22.8	23.5	24.1	26.1	27.4	29.4	30.7	32.7	34.6	37.2	39.1	41.7	44.2	46.7	49.9
175	23.1	24.1	25.1	26.1	27.0	28.0	29.0	30.0	30.9	31.9	32.9	33.8	34.8	37.7	39.6	42.4	44.3	47.1	49.9	53.7	56.4	60.1	63.8	67.4	72.0
200	26.1	27.2	28.3	29.4	30.5	31.6	32.7	33.8	34.9	36.0	37.1	38.2	39.3	42.5	44.7	47.9	50.0	53.2	56.4	60.6	63.7	67.9	72.0	76.1	81.3
233	29.9	31.2	32.5	33.7	35.0	36.3	37.6	38.8	40.1	41.3	42.6	43.8	45.1	48.8	51.3	55.0	57.5	61.1	64.8	69.6	73.2	78.0	82.7	87.4	93.3
300	37.5	39.1	40.7	42.4	44.0	45.6	47.2	48.8	50.3	51.9	53.5	55.1	56.7	61.4	64.5	69.1	72.2	76.8	81.4	87.5	92.0	98.0	104.0	109.9	117.3
350	43.1	44.9	46.8	48.6	50.5	52.3	54.2	56.0	57.8	59.7	61.5	63.3	65.1	70.5	74.1	79.4	83.0	88.3	93.5	100.5	105.7	112.6	119.5	126.3	134.8
400	48.5	50.6	52.7	54.8	56.9	59.0	61.1	63.1	65.2	67.3	69.3	71.3	73.4	79.5	83.5	89.6	93.6	99.6	105.5	113.4	119.2	127.0	134.8	142.4	152.0
500	59.2	61.8	64.3	66.9	69.5	72.0	74.5	77.1	79.6	82.1	84.6	87.1	89.6	97.1	102.1	109.4	114.3	121.6	128.9	138.5	145.7	155.2	164.6	174.0	185.7
575	67.0	70.0	72.9	75.8	78.7	81.6	84.4	87.3	90.2	93.1	95.9	98.7	101.6	110.0	115.7	124.0	129.6	137.9	146.1	157.0	165.1	175.8	186.5	197.1	210.3
600	69.6	72.6	75.7	78.7	81.7	84.7	87.7	90.7	93.7	96.7	99.6	102.6	105.5	114.3	120.1	128.8	134.6	143.2	151.7	163.1	171.5	182.7	193.7	204.7	218.4
690	78.8	82.2	85.7	89.1	92.5	95.9	99.3	102.7	106.1	109.5	112.8	116.2	119.5	129.5	136.1	145.9	152.4	162.2	171.9	184.7	194.2	206.8	219.4	231.8	247.2
700	79.8	83.3	86.8	90.2	93.7	97.2	100.6	104.0	107.5	110.9	114.3	117.6	121.0	131.1	137.8	147.8	154.4	164.3	174.1	187.0	196.7	209.5	222.2	234.8	250.4
800	89.8	93.7	97.6	101.6	105.5	109.4	113.2	117.1	121.0	124.8	128.6	132.5	136.3	147.7	155.2	166.4	173.9	185.0	196.0	210.6	221.4	235.8	250.0	264.1	281.6
870	96.7	100.9	105.1	109.4	113.6	117.8	122.0	126.1	130.3	134.4	138.6	142.7	146.8	159.0	167.2	179.2	187.3	199.2	211.1	226.8	238.4	253.9	269.2	284.3	303.1
900	99.6	104.0	108.3	112.7	117.0	121.4	125.7	130.0	134.3	138.5	142.8	147.0	151.3	163.9	172.3	184.7	193.0	205.3	217.5	233.6	245.6	261.5	277.3	292.9	312.2
1000	109.2	114.1	118.9	123.7	128.4	133.2	137.9	142.6	147.3	152.0	156.7	161.3	166.0	179.9	189.0	202.7	211.7	225.2	238.6	256.3	269.4	286.8	304.0	321.0	342.1
1160	124.4	129.9	135.4	140.9	146.3	151.7	157.1	162.5	167.9	173.2	178.5	183.8	189.1	204.9	215.4	230.9	241.2	256.5	271.7	291.7	306.6	326.2	345.7	364.9	388.6
1750	177.7	185.7	193.5	201.4	209.1	216.9	224.6	232.3	240.0	247.6	255.2	262.7	270.2	292.6	307.4	329.3	343.7	365.2	386.3	414.1	434.6	461.6	488.0	513.8	545.5
2000	199.3	208.2	217.0	225.8	234.5	243.2	251.8	260.4	269.0	277.5	286.0	294.4	302.8	327.7	344.2	368.5	384.5	408.3	431.6	462.2	484.6	514.0	542.7		
3000	280.1	292.6	304.8	317.1	329.2	341.2	353.2	365.0	376.8	388.5	400.0	411.5	422.9	456.4	478.4										
3450	313.9	327.7	341.4	355.0	368.4	381.8	394.9	408.0	421.0	433.8	446.5	459.0	471.5												
4000	353.0	368.4	383.5	398.6	413.5	428.2	442.7	457.1	471.2																

RPM OF FASTER SHAFT	Additional Horsepower 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
10	0.00	0.01	0.02	0.03	0.04	0.06	0.07	0.08	0.09	0.10
20	0.00	0.02	0.04	0.07	0.09	0.11	0.13	0.16	0.18	0.20
35	0.00	0.04	0.08	0.12	0.16	0.19	0.23	0.27	0.31	0.35
44	0.00	0.05	0.10	0.15	0.19	0.24	0.29	0.34	0.39	0.44
58	0.00	0.06	0.13	0.19	0.26	0.32	0.39	0.45	0.51	0.58
70	0.00	0.08	0.16	0.23	0.31	0.39	0.47	0.54	0.62	0.70
88	0.00	0.10	0.20	0.29	0.39	0.49	0.58	0.68	0.78	0.88
100	0.00	0.11	0.22	0.33	0.44	0.55	0.66	0.78	0.89	1.00
117	0.00	0.13	0.26	0.39	0.52	0.65	0.78	0.91	1.04	1.17
175	0.00	0.19	0.39	0.58	0.78	0.97	1.16	1.36	1.55	1.74
200	0.00	0.22	0.44	0.66	0.89	1.11	1.33	1.55	1.77	1.99
233	0.00	0.26	0.52	0.77	1.03	1.29	1.55	1.81	2.06	2.32
300	0.00	0.33	0.67	1.00	1.33	1.66	1.99	2.33	2.66	2.99
350	0.00	0.39	0.78	1.16	1.55	1.94	2.33	2.71	3.10	3.49
400	0.00	0.44	0.89	1.33	1.77	2.22	2.66	3.10	3.54	3.99
500	0.00	0.55	1.11	1.66	2.22	2.77	3.32	3.88	4.43	4.98
575	0.00	0.64	1.27	1.91	2.55	3.18	3.82	4.46	5.10	5.73
600	0.00	0.66	1.33	1.99	2.66	3.32	3.99	4.65	5.32	5.98
690	0.00	0.76	1.53	2.29	3.06	3.82	4.59	5.35	6.11	6.88
700	0.00	0.78	1.55	2.33	3.10	3.88	4.65	5.43	6.20	6.98
800	0.00	0.89	1.77	2.66	3.54	4.43	5.32	6.20	7.09	7.98
870	0.00	0.96	1.93	2.89	3.85	4.82	5.78	6.75	7.71	8.67
900	0.00	1.00	2.00	2.99	3.99	4.98	5.98	6.98	7.98	8.97
1000	0.00	1.11	2.22	3.32	4.43	5.54	6.65	7.75	8.86	9.97
1160	0.00	1.28	2.57	3.86	5.14	6.43	7.71	9.00	10.3	11.6
1750	0.00	1.94	3.88	5.82	7.75	9.69	11.6	13.6	15.5	17.4
2000	0.00	2.21	4.43	6.65	8.86	11.1	13.3	15.5	17.7	19.9
3000	0.00	3.32	6.65	9.97	13.3	16.6	19.9	23.3	26.6	29.9
3450	0.00	3.82	7.65	11.5	15.3	19.1	22.9	26.8	30.6	34.4
4000	0.00	4.43	8.87	13.3	17.7	22.2	26.6	31.0	35.4	39.9

Poly Chain GT2 Belt Length Correction Factor Table

Pitch/Length Designation	No. of Teeth	Correction Factor
14MGT-994	71	0.68
14MGT-1120	80	0.73
14MGT-1190	85	0.75
14MGT-1260	90	0.77
14MGT-1400	100	0.81
14MGT-1568	112	0.85
14MGT-1750	125	0.89
14MGT-1890	135	0.92
14MGT-1960	140	0.94
14MGT-2100	150	0.96
14MGT-2240	160	0.99
14MGT-2380	170	1.01
14MGT-2520	180	1.03
14MGT-2660	190	1.05
14MGT-2800	200	1.07
14MGT-3136	224	1.12
14MGT-3304	236	1.14
14MGT-3500	250	1.16
14MGT-3920	280	1.20
14MGT-4410	315	1.25

Speed Reducer Output Shaft Speed For 1750 rpm Motor Input	
Reducer Speed Ratio	**Reducer Output Speed**
Up to 5:1	Use a belt drive
5:1	350
7.5:1	233
10:1	175
15:1	117
30:1	58
40:1	44
50:1	35

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

Horsepower Rating for 90mm Wide

14mm Pitch Poly Chain® GT®2 Belts

RPM OF FASTER SHAFT	Rated Base Horsepower for Small Sprocket (Number of Grooves and Pitch Diameter, Inches)																								
	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	2.24	2.33	2.42	2.52	2.61	2.70	2.79	2.88	2.97	3.06	3.15	3.24	3.33	3.60	3.78	4.05	4.23	4.50	4.76	5.11	5.38	5.72	6.07	6.42	6.85
20	4.24	4.42	4.59	4.77	4.94	5.12	5.29	5.47	5.64	5.81	5.98	6.16	6.33	6.84	7.19	7.70	8.03	8.54	9.05	9.72	10.2	10.9	11.5	12.2	13.0
35	7.08	7.38	7.68	7.97	8.27	8.56	8.85	9.15	9.44	9.73	10.0	10.3	10.6	11.5	12.0	12.9	13.5	14.3	15.2	16.3	17.1	18.2	19.3	20.4	21.8
44	8.73	9.10	9.47	9.83	10.2	10.6	10.9	11.3	11.6	12.0	12.4	12.7	13.1	14.1	14.9	15.9	16.6	17.7	18.7	20.1	21.1	22.5	23.9	25.2	26.9
58	11.2	11.7	12.2	12.7	13.1	13.6	14.1	14.5	15.0	15.5	15.9	16.4	16.8	18.2	19.1	20.5	21.4	22.8	24.1	25.9	27.2	29.0	30.8	32.5	34.7
70	13.3	13.9	14.5	15.0	15.6	16.1	16.7	17.2	17.8	18.4	18.9	19.5	20.0	21.6	22.7	24.4	25.4	27.0	28.6	30.8	32.4	34.5	36.6	38.7	41.3
88	16.4	17.1	17.8	18.5	19.2	19.9	20.6	21.3	21.9	22.6	23.3	24.0	24.7	26.7	28.0	30.0	31.4	33.3	35.3	38.0	39.9	42.5	45.1	47.7	50.9
100	18.4	19.2	20.0	20.8	21.6	22.3	23.1	23.9	24.6	25.4	26.2	26.9	27.7	30.0	31.5	33.7	35.2	37.5	39.7	42.7	44.9	47.8	50.7	53.6	57.2
117	21.3	22.2	23.1	24.0	24.9	25.8	26.6	27.5	28.4	29.3	30.2	31.1	32.0	34.6	36.3	38.9	40.7	43.2	45.8	49.2	51.8	55.1	58.5	61.8	66.0
175	30.6	31.9	33.2	34.5	35.8	37.1	38.4	39.7	41.0	42.2	43.5	44.8	46.1	49.9	52.4	56.2	58.7	62.4	66.1	71.0	74.7	79.6	84.4	89.3	95.3
200	34.5	36.0	37.4	38.9	40.4	41.9	43.3	44.8	46.2	47.7	49.1	50.5	52.0	56.3	59.1	63.4	66.2	70.4	74.6	80.2	84.3	89.8	95.3	100.8	107.5
233	39.6	41.3	43.0	44.7	46.4	48.0	49.7	51.4	53.1	54.7	56.4	58.0	59.7	64.6	67.9	72.8	76.0	80.9	85.7	92.1	96.9	103.2	109.5	115.7	123.5
300	49.7	51.8	53.9	56.1	58.2	60.3	62.4	64.5	66.6	68.7	70.8	72.9	75.0	81.2	85.3	91.5	95.6	101.7	107.7	115.8	121.8	129.7	137.6	145.5	155.3
350	57.0	59.5	61.9	64.4	66.8	69.3	71.7	74.1	76.5	79.0	81.4	83.8	86.2	93.3	98.0	105.1	109.8	116.8	123.8	133.0	139.9	149.1	158.2	167.2	178.4
400	64.2	67.0	69.8	72.6	75.3	78.1	80.8	83.6	86.3	89.0	91.7	94.4	97.1	105.2	110.6	118.5	123.8	131.8	139.6	150.1	157.8	168.1	178.4	188.5	201.2
500	78.3	81.8	85.2	88.6	91.9	95.3	98.7	102.0	105.4	108.7	112.0	115.3	118.7	128.5	135.1	144.8	151.3	161.0	170.6	183.3	192.8	205.4	217.9	230.3	245.7
575	88.7	92.6	96.4	100.3	104.1	108.0	111.8	115.6	119.4	123.2	126.9	130.7	134.4	145.6	153.1	164.1	171.5	182.5	193.3	207.8	218.5	232.7	246.9	260.9	278.4
600	92.1	96.2	100.2	104.2	108.1	112.1	116.1	120.1	124.0	127.9	131.8	135.7	139.7	151.3	159.0	170.5	178.1	189.5	200.8	215.8	227.0	241.7	256.4	271.0	289.1
690	104.3	108.8	113.4	117.9	122.4	127.0	131.5	136.0	140.4	144.9	149.3	153.7	158.2	171.4	180.1	193.1	201.8	214.7	227.5	244.4	257.0	273.8	290.3	306.8	327.2
700	105.6	110.2	114.8	119.4	124.0	128.6	133.1	137.7	142.2	146.7	151.2	155.7	160.2	173.6	182.4	195.6	204.4	217.4	230.4	247.6	260.3	277.3	294.1	310.7	331.4
800	118.8	124.0	129.2	134.4	139.6	144.8	149.9	155.0	160.1	165.2	170.3	175.3	180.4	195.4	205.4	220.3	230.1	244.8	259.4	278.7	293.0	312.1	330.9	349.6	372.8
870	127.9	133.6	139.2	144.8	150.3	155.9	161.4	167.0	172.4	177.9	183.4	188.8	194.3	210.5	221.2	237.2	247.9	263.7	279.4	300.1	315.6	336.0	356.2	376.3	401.2
900	131.8	137.6	143.4	149.2	154.9	160.6	166.3	172.0	177.7	183.4	189.0	194.6	200.2	216.9	228.0	244.5	255.4	271.7	287.8	309.2	325.1	346.2	367.0	387.6	413.2
1000	144.6	151.0	157.3	163.7	170.0	176.3	182.5	188.8	195.0	201.2	207.4	213.6	219.7	238.1	250.2	268.3	280.2	298.1	315.8	339.2	356.6	379.6	402.4	424.9	452.8
1160	164.7	172.0	179.2	186.4	193.6	200.8	207.9	215.1	222.2	229.3	236.3	243.3	250.3	271.2	285.0	305.6	319.2	339.5	359.6	386.1	405.8	431.8	457.5	482.9	514.3
1750	235.2	245.7	256.1	266.5	276.8	287.1	297.3	307.5	317.6	327.7	337.7	347.7	357.7	387.3	406.8	435.8	454.9	483.4	511.3	548.1	575.3	610.9	645.8	680.1	721.9
2000	263.8	275.5	287.2	298.8	310.3	321.9	333.3	344.7	356.0	367.3	378.5	389.6	400.8	433.8	455.5	487.7	508.9	540.3	571.2	611.7	641.5	680.4	718.4		
3000	370.8	387.2	403.5	419.7	435.7	451.7	467.4	483.2	498.7	514.2	529.4	544.6	559.7	604.1	633.1										
3450	415.5	433.8	451.9	469.9	487.6	505.3	522.7	540.1	557.2	574.2	591.0	607.6	624.1												
4000	467.2	487.6	507.6	527.6	547.2	566.7	585.9	605.0	623.7																

RPM OF FASTER SHAFT	Additional Horsepower 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
10	0.00	0.01	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.13
20	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.23	0.26
35	0.00	0.05	0.10	0.15	0.21	0.26	0.31	0.36	0.41	0.46
44	0.00	0.06	0.13	0.19	0.26	0.32	0.39	0.45	0.52	0.58
58	0.00	0.09	0.17	0.26	0.34	0.43	0.51	0.60	0.68	0.77
70	0.00	0.10	0.21	0.31	0.41	0.51	0.62	0.72	0.82	0.92
88	0.00	0.13	0.26	0.39	0.52	0.65	0.77	0.90	1.03	1.16
100	0.00	0.15	0.29	0.44	0.59	0.73	0.88	1.03	1.17	1.32
117	0.00	0.17	0.34	0.51	0.69	0.86	1.03	1.20	1.37	1.54
175	0.00	0.26	0.51	0.77	1.03	1.28	1.54	1.80	2.05	2.31
200	0.00	0.29	0.59	0.88	1.17	1.47	1.76	2.05	2.35	2.64
233	0.00	0.34	0.68	1.02	1.37	1.71	2.05	2.39	2.73	3.07
300	0.00	0.44	0.88	1.32	1.76	2.20	2.64	3.08	3.52	3.96
350	0.00	0.51	1.03	1.54	2.05	2.57	3.08	3.59	4.10	4.62
400	0.00	0.59	1.17	1.76	2.35	2.93	3.52	4.11	4.69	5.28
500	0.00	0.73	1.47	2.20	2.93	3.67	4.40	5.13	5.86	6.60
575	0.00	0.84	1.69	2.53	3.37	4.22	5.06	5.90	6.74	7.59
600	0.00	0.88	1.76	2.64	3.52	4.40	5.28	6.16	7.04	7.92
690	0.00	1.01	2.02	3.04	4.05	5.06	6.07	7.08	8.09	9.10
700	0.00	1.03	2.05	3.08	4.10	5.13	6.16	7.18	8.21	9.24
800	0.00	1.17	2.35	3.52	4.69	5.86	7.04	8.21	9.38	10.6
870	0.00	1.28	2.55	3.83	5.10	6.38	7.65	8.93	10.2	11.5
900	0.00	1.32	2.64	3.96	5.28	6.60	7.92	9.24	10.6	11.9
1000	0.00	1.47	2.93	4.40	5.86	7.33	8.80	10.3	11.7	13.2
1160	0.00	1.70	3.40	5.10	6.80	8.50	10.2	11.9	13.6	15.3
1750	0.00	2.56	5.14	7.70	10.3	12.8	15.4	18.0	20.5	23.1
2000	0.00	2.93	5.87	8.80	11.7	14.7	17.6	20.5	23.5	26.4
3000	0.00	4.40	8.80	13.2	17.6	22.0	26.4	30.8	35.2	39.6
3450	0.00	5.06	10.1	15.2	20.2	25.3	30.3	35.4	40.5	45.5
4000	0.00	5.86	11.7	17.6	23.5	29.3	35.2	41.1	46.9	52.8

Poly Chain GT2 Belt Length Correction Factor Table

Pitch/Length Designation	No. of Teeth	Correction Factor
14MGT-994	71	0.68
14MGT-1120	80	0.73
14MGT-1190	85	0.75
14MGT-1260	90	0.77
14MGT-1400	100	0.81
14MGT-1568	112	0.85
14MGT-1750	125	0.89
14MGT-1890	135	0.92
14MGT-1960	140	0.94
14MGT-2100	150	0.96
14MGT-2240	160	0.99
14MGT-2380	170	1.01
14MGT-2520	180	1.03
14MGT-2660	190	1.05
14MGT-2800	200	1.07
14MGT-3136	224	1.12
14MGT-3304	236	1.14
14MGT-3500	250	1.16
14MGT-3920	280	1.20
14MGT-4410	315	1.25

Speed Reducer Output Shaft Speed For 1750 rpm Motor Input	
Reducer Speed Ratio	Reducer Output Speed
Up to 5:1	Use a belt drive
5:1	350
7.5:1	233
10:1	175
15:1	117
30:1	58
40:1	44
50:1	35

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

Horsepower Rating for 125mm Wide

14mm Pitch Poly Chain® GT®2 Belts

RPM OF FASTER SHAFT	Rated Base Horsepower for Small Sprocket (Number of Grooves and Pitch Diameter, Inches)																								
	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	3.11	3.24	3.37	3.49	3.62	3.75	3.88	4.00	4.13	4.26	4.38	4.51	4.63	5.01	5.26	5.63	5.87	6.24	6.61	7.10	7.47	7.95	8.43	8.91	9.51
20	5.89	6.14	6.38	6.62	6.87	7.11	7.35	7.59	7.83	8.07	8.31	8.55	8.79	9.51	9.98	10.7	11.2	11.9	12.6	13.5	14.2	15.1	16.0	16.9	18.1
35	9.84	10.3	10.7	11.1	11.5	11.9	12.3	12.7	13.1	13.5	13.9	14.3	14.7	15.9	16.7	17.9	18.7	19.9	21.1	22.6	23.8	25.3	26.9	28.4	30.3
44	12.1	12.6	13.1	13.7	14.2	14.7	15.2	15.7	16.2	16.7	17.2	17.7	18.2	19.6	20.6	22.1	23.1	24.5	26.0	27.9	29.4	31.3	33.2	35.1	37.4
58	15.6	16.3	16.9	17.6	18.2	18.9	19.5	20.2	20.8	21.5	22.1	22.7	23.4	25.3	26.6	28.5	29.7	31.6	33.5	36.0	37.8	40.3	42.7	45.2	48.2
70	18.5	19.3	20.1	20.9	21.6	22.4	23.2	24.0	24.7	25.5	26.3	27.0	27.8	30.1	31.6	33.8	35.3	37.6	39.8	42.7	45.0	47.9	50.8	53.7	57.3
88	22.8	23.8	24.7	25.7	26.7	27.6	28.6	29.5	30.5	31.4	32.4	33.3	34.2	37.0	38.9	41.7	43.5	46.3	49.1	52.7	55.4	59.0	62.6	66.2	70.7
100	25.6	26.7	27.8	28.9	29.9	31.0	32.1	33.2	34.2	35.3	36.4	37.4	38.5	41.6	43.7	46.9	48.9	52.0	55.1	59.2	62.3	66.4	70.4	74.4	79.4
117	29.5	30.8	32.0	33.3	34.5	35.8	37.0	38.2	39.5	40.7	41.9	43.2	44.4	48.0	50.5	54.1	56.5	60.1	63.6	68.4	71.9	76.6	81.3	85.9	91.7
175	42.5	44.3	46.1	47.9	49.7	51.5	53.3	55.1	56.9	58.7	60.4	62.2	64.0	69.3	72.8	78.0	81.5	86.7	91.8	98.7	103.8	110.5	117.3	124.0	132.3
200	47.9	50.0	52.0	54.1	56.1	58.1	60.2	62.2	64.2	66.2	68.2	70.2	72.2	78.2	82.1	88.0	92.0	97.8	103.6	111.4	117.1	124.8	132.4	140.0	149.4
233	55.0	57.3	59.7	62.0	64.4	66.7	69.0	71.4	73.7	76.0	78.3	80.6	82.9	89.8	94.3	101.1	105.6	112.3	119.0	127.9	134.5	143.3	152.1	160.7	171.6
300	69.0	71.9	74.9	77.9	80.8	83.8	86.7	89.6	92.5	95.5	98.4	101.3	104.2	112.8	118.5	127.1	132.7	141.2	149.6	160.8	169.1	180.2	191.1	202.0	215.6
350	79.2	82.6	86.0	89.4	92.8	96.2	99.6	103.0	106.3	109.7	113.0	116.3	119.7	129.6	136.2	146.0	152.5	162.3	172.0	184.8	194.4	207.0	219.7	232.2	247.8
400	89.2	93.1	96.9	100.8	104.6	108.4	112.2	116.1	119.8	123.6	127.4	131.2	134.9	146.1	153.6	164.6	172.0	183.0	193.9	208.4	219.2	233.5	247.7	261.8	279.4
500	108.8	113.6	118.3	123.0	127.7	132.4	137.0	141.7	146.3	151.0	155.6	160.2	164.8	178.5	187.6	201.2	210.2	223.6	236.9	254.6	267.8	285.3	302.6	319.9	341.3
575	123.2	128.6	133.9	139.3	144.6	150.0	155.2	160.5	165.8	171.1	176.3	181.5	186.7	202.3	212.6	228.0	238.2	253.4	268.5	288.6	303.5	323.3	342.9	362.4	386.6
600	127.9	133.5	139.1	144.7	150.2	155.7	161.2	166.7	172.2	177.7	183.1	188.5	194.0	210.1	220.8	236.8	247.4	263.2	278.9	299.7	315.2	335.8	356.2	376.4	401.5
690	144.8	151.2	157.5	163.8	170.1	176.3	182.6	188.8	195.0	201.2	207.4	213.5	219.7	238.0	250.1	268.2	280.2	298.2	315.9	339.5	357.0	380.2	403.3	426.1	454.5
700	146.7	153.1	159.5	165.9	172.2	178.6	184.9	191.2	197.5	203.8	210.0	216.3	222.5	241.1	253.4	271.7	283.8	302.0	320.0	343.8	361.6	385.1	408.4	431.6	460.3
800	165.0	172.3	179.5	186.7	193.9	201.1	208.2	215.3	222.4	229.5	236.5	243.5	250.5	271.4	285.3	305.9	319.6	340.0	360.3	387.1	407.0	433.4	459.6	485.5	517.7
870	177.7	185.5	193.3	201.1	208.8	216.5	224.2	231.9	239.5	247.1	254.7	262.3	269.9	292.4	307.3	329.5	344.2	366.2	388.0	416.8	438.3	466.7	494.8	522.6	557.2
900	183.1	191.1	199.2	207.2	215.1	223.1	231.0	238.9	246.8	254.7	262.5	270.3	278.1	301.3	316.6	339.5	354.7	377.3	399.8	429.5	451.5	480.8	509.7	538.4	573.9
1000	200.8	209.7	218.5	227.3	236.1	244.8	253.5	262.2	270.8	279.5	288.1	296.6	305.2	330.6	347.5	372.6	389.2	414.0	438.6	471.1	495.3	527.2	558.8	590.1	628.9
1160	228.7	238.8	248.9	258.9	268.9	278.9	288.8	298.7	308.6	318.4	328.2	337.9	347.7	376.7	395.9	424.4	443.3	471.5	499.4	536.2	563.6	599.7	635.4	670.7	714.3
1750	326.7	341.3	355.7	370.1	384.4	398.7	412.9	427.1	441.1	455.1	469.1	482.9	496.8	537.9	565.0	605.3	631.9	671.3	710.2	761.3	799.0	848.5	897.0	944.5	1002.7
2000	366.3	382.7	398.8	415.0	431.0	447.0	462.9	478.8	494.4	510.1	525.7	541.2	556.6	602.4	632.6	677.3	706.8	750.5	793.4	849.6	890.9	944.9	997.7		
3000	515.0	537.8	560.4	582.9	605.1	627.3	649.2	671.0	692.6	714.1	735.3	756.4	777.4	839.1	879.4										
3450	577.0	602.5	627.6	652.6	677.2	701.8	726.0	750.1	773.8	797.5	820.8	843.8	866.8												
4000	648.8	677.2	705.1	732.8	760.0	787.1	813.8	840.2	866.2																

RPM OF FASTER SHAFT	Additional Horsepower 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
10	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.18
20	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.29	0.33	0.37
35	0.00	0.07	0.14	0.21	0.29	0.36	0.43	0.50	0.57	0.64
44	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81
58	0.00	0.12	0.24	0.35	0.47	0.59	0.71	0.83	0.94	1.06
70	0.00	0.14	0.29	0.43	0.57	0.71	0.86	1.00	1.14	1.28
88	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.25	1.43	1.61
100	0.00	0.20	0.41	0.61	0.81	1.02	1.22	1.43	1.63	1.83
117	0.00	0.24	0.48	0.71	0.95	1.19	1.43	1.67	1.91	2.14
175	0.00	0.36	0.71	1.07	1.43	1.78	2.14	2.49	2.85	3.21
200	0.00	0.41	0.82	1.22	1.63	2.04	2.44	2.85	3.26	3.67
233	0.00	0.47	0.95	1.42	1.90	2.37	2.85	3.32	3.80	4.27
300	0.00	0.61	1.22	1.83	2.44	3.05	3.67	4.28	4.89	5.50
350	0.00	0.71	1.43	2.14	2.85	3.56	4.28	4.99	5.70	6.41
400	0.00	0.81	1.63	2.44	3.26	4.07	4.89	5.70	6.52	7.33
500	0.00	1.02	2.04	3.05	4.07	5.09	6.11	7.13	8.14	9.16
575	0.00	1.17	2.34	3.51	4.68	5.85	7.03	8.20	9.37	10.5
600	0.00	1.22	2.45	3.67	4.89	6.11	7.33	8.55	9.77	11.0
690	0.00	1.40	2.81	4.22	5.62	7.03	8.43	9.84	11.2	12.6
700	0.00	1.42	2.85	4.28	5.70	7.13	8.55	9.98	11.4	12.8
800	0.00	1.63	3.26	4.89	6.52	8.15	9.77	11.4	13.0	14.7
870	0.00	1.77	3.55	5.32	7.09	8.86	10.6	12.4	14.2	15.9
900	0.00	1.83	3.67	5.50	7.33	9.16	11.0	12.8	14.7	16.5
1000	0.00	2.04	4.08	6.11	8.14	10.2	12.2	14.3	16.3	18.3
1160	0.00	2.36	4.73	7.09	9.45	11.8	14.2	16.5	18.9	21.3
1750	0.00	3.56	7.13	10.7	14.3	17.8	21.4	24.9	28.5	32.1
2000	0.00	4.07	8.15	12.2	16.3	20.4	24.4	28.5	32.6	36.7
3000	0.00	6.11	12.2	18.3	24.4	30.5	36.7	42.8	48.9	55.0
3450	0.00	7.02	14.1	21.1	28.1	35.1	42.2	49.2	56.2	63.2
4000	0.00	8.14	16.3	24.4	32.6	40.7	48.9	57.0	65.2	73.3

Poly Chain GT2 Belt Length Correction Factor Table

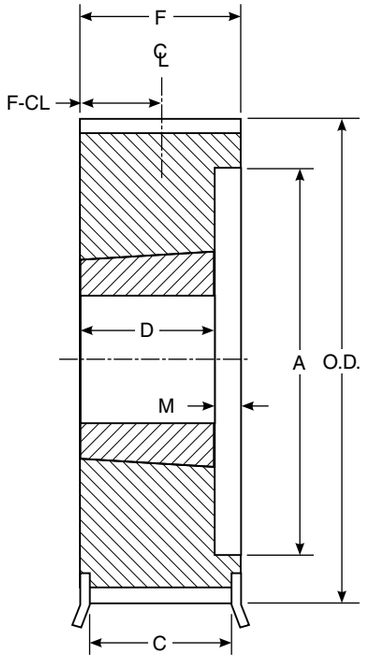
Pitch/Length Designation	No. of Teeth	Correction Factor
14MGT-994	71	0.68
14MGT-1120	80	0.73
14MGT-1190	85	0.75
14MGT-1260	90	0.77
14MGT-1400	100	0.81
14MGT-1568	112	0.85
14MGT-1750	125	0.89
14MGT-1890	135	0.92
14MGT-1960	140	0.94
14MGT-2100	150	0.96
14MGT-2240	160	0.99
14MGT-2380	170	1.01
14MGT-2520	180	1.03
14MGT-2660	190	1.05
14MGT-2800	200	1.07
14MGT-3136	224	1.12
14MGT-3304	236	1.14
14MGT-3500	250	1.16
14MGT-3920	280	1.20
14MGT-4410	315	1.25

Speed Reducer Output Shaft Speed For 1750 rpm Motor Input	
Reducer Speed Ratio	**Reducer Output Speed**
Up to 5:1	Use a belt drive
5:1	350
7.5:1	233
10:1	175
15:1	117
30:1	58
40:1	44
50:1	35

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

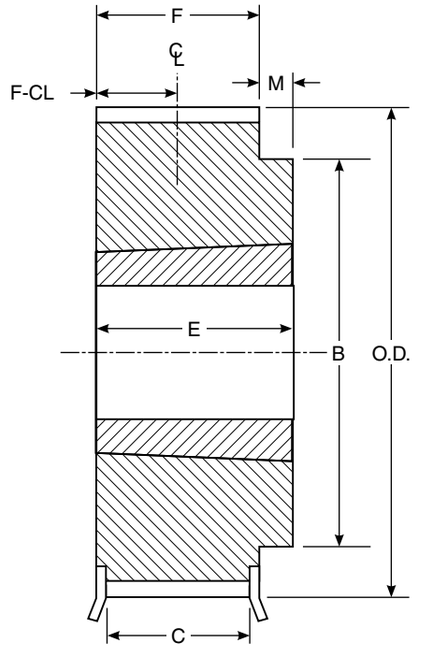
Poly Chain® GT®2 Sprocket Specifications

Type A



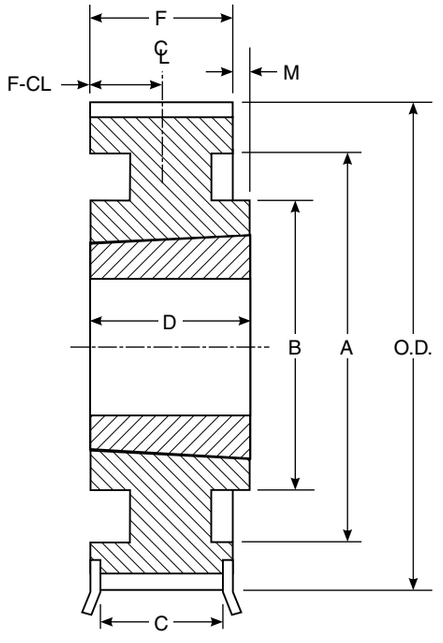
Type AF

Type B



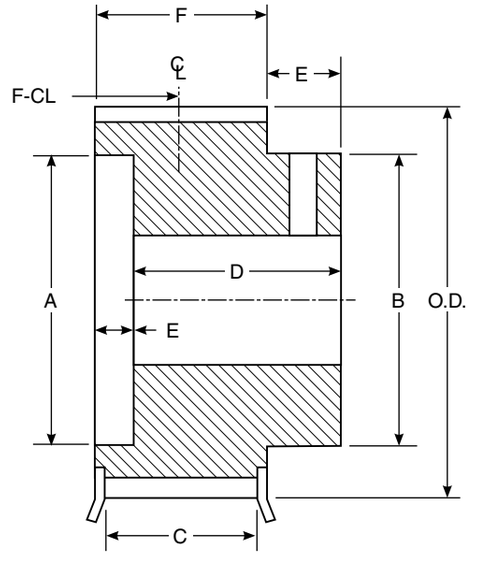
Type BF

Type C



Type CF

Type 6



Type 6F

Stock 8mm Poly Chain® GT®2 Sprocket Specifications

(All stock sprockets conform to the metallurgical and mechanical properties noted in ASTM A48 for Gray Iron castings and ASTM A536 for Ductile Iron castings.)

Sprocket Number	Number of Teeth	Diameters (in)			Design Type	Dimensions (in)								Bushing Size	Bore Sizes		Approx. Wt. (lb)	Approx. WR^2	Matl. Spec.
		Pitch	O.D	Flange Ref.		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	D
8MX-22S-12-PB	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	D
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	G
8MX-25S-12-PB	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	D
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	G
8MX-28S-12-PB	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	D
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	G
8MX-30S-12-PB	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	D
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	D
8MX-32S-12-PB	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	D
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	D
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	G
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	G
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	D
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G

Material Spec : S - Steel SS - Sintered Steel G - Grey Iron D - Ductile Iron **Design Type Suffix**: 1 - Solid 2 - Web 3 - Arms

Sprocket Number	Number of Teeth	Diameters (in)			Design Type	Dimensions (in)								Bushing Size	Bore Sizes		Approx. Wt. (lb)	Approx. WR^2	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	D
8MX-22S-21-PB	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	D
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	G
8MX-25S-21-PB	25	2.506	2.443	2.910	6F-1	-	2.08	0.92	1.65	0.45	1.20	0	0.60	MPB	0.500	1.500	1.8	0.009	D
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
8MX-28S-21-PB	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	D
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	G
8MX-30S-21-PB	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	D
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	D
8MX-32S-21-PB	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	D
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	D
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	1.6	0.023	D
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	G
8MX-40S-21	40	4.010	3.947	4.410	AF-1	-	-	0.97	1.25	-	1.25	0	0.63	2012	0.500	2.125	2.0	0.037	D
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G

Material Spec : S - Steel SS - Sintered Steel G - Grey Iron D - Ductile Iron **Design Type Suffix**: 1 - Solid 2 - Web 3 - Arms

NOTES:

- Weights for Minimum Plain Bore (MPB) Sprockets are with minimum bore.
- Weights and WR^2 for Bushed Sprockets do not include bushings.
- WR^2 values have lb-ft^2 units.

Stock 8mm 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. WR^2	Matl. Spec.
		Pitch	O.D	Flange Ref.		A	B	C	D	E	F	M	F-CL		Min	Max			
8MX-22S-36-PB	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	D
8MX-25S-36-PB	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	D
8MX-28S-36-PB	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	D
8MX-30S-36-PB	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	D
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	D
8MX-32S-36-PB	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	D
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	D
8MX-34S-36-PB	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	D
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	D
8MX-36S-36-PB	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	D
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	D
8MX-38S-36-PB	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	D
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	D
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	D
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G

Material Spec : S - Steel SS - Sintered Steel G - Grey Iron D - Ductile Iron **Design Type Suffix**: 1 - Solid 2 - Web 3 - Arms

Sprocket Number	Number of Teeth	Diameters (in)			Design Type	Dimensions (in)								Bushing Size	Bore Sizes		Approx. Wt. (lb)	Approx. WR^2	Matl. Spec.
		Pitch	O.D	Flange Ref.		A	B	C	D	E	F	M	F-CL		Min	Max			
8MX-22S-62-PB	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	D
8MX-25S-62-PB	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	D
8MX-28S-62-PB	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	D
8MX-30S-62-PB	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	D
8MX-32S-62-PB	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	D
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	D
8MX-34S-62-PB	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	D
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	D
8MX-36S-62-PB	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	D
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	D
8MX-38S-62-PB	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	D
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	D
8MX-40S-62-PB	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	D
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	D
8MX-42S-62-PB	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	D
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	D
8MX-45S-62-PB	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	D
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G

Material Spec : S - Steel SS - Sintered Steel G - Grey Iron D - Ductile Iron **Design Type Suffix**: 1 - Solid 2 - Web 3 - Arms

NOTES:

- Weights for Minimum Plain Bore (MPB) Sprockets are with minimum bore.
- Weights and WR^2 for Bushed Sprockets do not include bushings.
- WR^2 values have lb-ft^2 units.

Stock 14mm Poly Chain® GT®2 Sprocket Specifications

Sprocket Number	Number of Teeth	Diameters (in)			Design Type	Dimensions (in)								Bushing Size	Bore Sizes		Approx. Wt. (lb)	Approx. WR^2	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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G

Material Spec : S - Steel SS - Sintered Steel G - Grey Iron D - Ductile Iron **Design Type Suffix**: 1 - Solid 2 - Web 3 - Arms

Sprocket Number	Number of Teeth	Diameters (in)			Design Type	Dimensions (in)								Bushing Size	Bore Sizes		Approx. Wt. (lb)	Approx. WR^2	Matl. Spec.
		Pitch	O.D	Flange Ref.		A	B	C	D	E	F	M	F-CL		Min	Max			
14MX-28S-37-PB	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	D
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G

Material Spec : S - Steel SS - Sintered Steel G - Grey Iron D - Ductile Iron **Design Type Suffix**: 1 - Solid 2 - Web 3 - Arms

NOTES:

- Weights for Minimum Plain Bore (MPB) Sprockets are with minimum bore.
- Weights and WR^2 for Bushed Sprockets do not include bushings.
- WR^2 values have $lb\text{-}ft^2$ units.

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

Sprocket Number	Number of Teeth	Diameters (in)			Design Type	Dimensions (in)											Approx. Wt. (lb)	Approx. WR^2	Matl. Spec.
		Pitch	O.D	Flange Ref.		A	B	C	D	E	F	M	F-CL	Bushing Size	Bore Sizes Min	Bore Sizes Max			
14MX-28S-68-PB	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	D
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	G
14MX-29S-68-PB	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	D
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	G
14MX-30S-68-PB	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	D
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	G
14MX-31S-68-PB	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	D
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	G
14MX-32S-68-PB	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	D
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	G
14MX-33S-68-PB	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	D
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	G
14MX-34S-68-PB	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	D
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	0.375	3.250	10.3	0.498	D
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	0.375	3.250	11.7	0.589	D
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	0.375	3.250	12.3	0.646	G
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	0.375	3.250	13.8	0.754	G
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	0.375	3.250	14.6	0.831	G
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	0.375	3.250	16.2	0.957	G
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	0.375	3.250	18.4	1.22	G
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	0.375	3.250	21.9	1.571	G
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	D
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	D
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G

Material Spec : S - Steel SS - Sintered Steel G - Grey Iron D - Ductile Iron

Design Type Suffix: 1 - Solid 2 - Web 3 - Arms

NOTES:

- Weights for Minimum Plain Bore (MPB) Sprockets are with minimum bore.
- Weights and WR^2 for Bushed Sprockets do not include bushings.
- WR^2 values have lb-ft^2 units.

Stock 14mm 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. WR^2	Matl. Spec.
		Pitch	O.D	Flange Ref.		A	B	C	D	E	F	M	F-CL		Min	Max			
14MX-28S-90-PB	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
14MX-29S-90-PB	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
14MX-30S-90-PB	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
14MX-31S-90-PB	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
14MX-32S-90-PB	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
14MX-33S-90-PB	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
14MX-34S-90-PB	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	0.375	3.250	12.1	0.602	D
14MX-35S-90-PB	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	0.375	3.250	13.9	0.717	D
14MX-36S-90-PB	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	0.375	3.250	14.2	0.773	G
14MX-37S-90-PB	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	0.375	3.250	16.1	0.909	G
14MX-38S-90-PB	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	0.375	3.250	16.8	0.992	G
14MX-39S-90-PB	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	0.375	3.250	18.8	1.152	G
14MX-40S-90-PB	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 : S - Steel SS - Sintered Steel G - Grey Iron D - Ductile Iron

Design Type Suffix: 1 - Solid 2 - Web 3 - Arms

NOTES:

- Weights for Minimum Plain Bore (MPB) Sprockets are with minimum bore.
- Weights and WR^2 for Bushed Sprockets do not include bushings.
- WR^2 values have lb-ft^2 units.

Stock 14mm 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. WR^2	Matl. Spec.
		Pitch	O.D	Flange Ref.		A	B	C	D	E	F	M	F-CL		Min	Max			
14MX-28S-125-PB	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	D
14MX-29S-125-PB	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	D
14MX-30S-125-PB	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	D
14MX-31S-125-PB	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	D
14MX-32S-125-PB	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	D
14MX-33S-125-PB	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	D
14MX-34S-125-PB	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	D
14MX-35S-125-PB	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	D
14MX-36S-125-PB	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	D
14MX-37S-125-PB	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	D
14MX-38S-125-PB	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	D
14MX-39S-125-PB	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	D
14MX-40S-125-PB	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	D
14MX-43S-125-PB	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	D
14MX-45S-125-PB	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	D
14MX-48S-125-PB	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	D
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	D
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	D
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	D
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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	G
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.	G

Material Spec : S - Steel SS - Sintered Steel G - Grey Iron D - Ductile Iron

Design Type Suffix: 1 - Solid 2 - Web 3 - Arms

NOTES:

- Weights for Minimum Plain Bore (MPB) Sprockets are with minimum bore.
- Weights and WR^2 for Bushed Sprockets do not include bushings.
- WR^2 values have lb-ft^2 units.

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.

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

Sprocket Runout

Radial Runout*

Outside Diameter		Total Eccentricity Total Indicator Reading	
(in)	(mm)	(in)	(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 outside diameters 1.0 inches and under. . 0.001 inches

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**

Sprocket and Bushing Keyseat

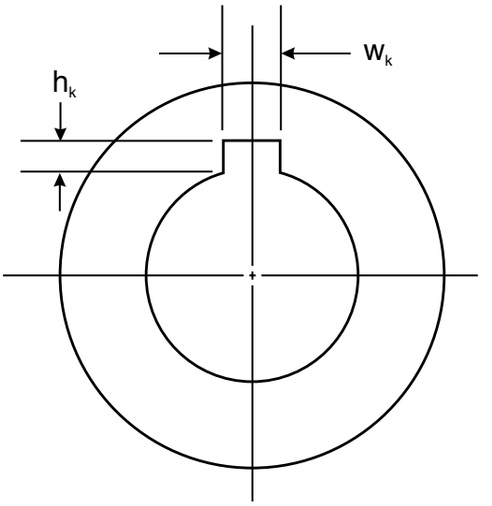
Shaft Diameter (in)	Width w_k† (in)	Depth, h_k (in) + 0.015 0.000
Up through 7/16 (0.44)	3/32 (0.0938)	3/64 (0.047)
Over 7/16 (0.44) to and incl. 9/16 (0.56)	1/8 (0.125)	1/16 (0.062)
Over 9/16 (0.56) to and incl. 7/8 (0.88)	3/16 (0.1875)	3/32 (0.094)
Over 7/8 (0.88) to and incl. 1 1/4 (1.25)	1/4 (0.250)	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 The Gates Rubber Company to operate with the Gates Poly Chain GT2 Belt. See Engineering Section II-3, Tooth Profile, on page 104 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 micro-inches 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® GT®2 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 made-to-order. Check with you 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 made-to-order. Check with you 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® GT®2 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 GT2 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, and ductile iron. The materials used may vary with the size of the sprocket. See the Sprocket Specification Tables, pages 72 thru 77 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″

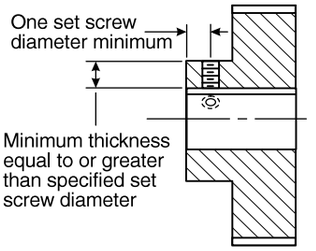


Figure 1 - Minimum Hub Thickness and Set Screw Placement Guidelines

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 7 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 GT2 curvilinear drives *transmitting cyclical, pulsating, or reversing loads.*

Table 7 - Recommended Shaft / Bore Fits (Inches)

		Clearance Fits		Interference Fits			
		Class 1- Smooth Load		Cyclical, Pulsating, Reversing Load			
Nominal Bore Range Over - To (Incl.)	Shaft Tol. (minus)	Bore Tol. (Plus)	Fit Tol. (Plus)	Bore Tolerance Range (Minus)		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 7 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.

Recommended Re-bore Specifications and Instructions

For Minimum Plain Bore (MPB) Sprockets

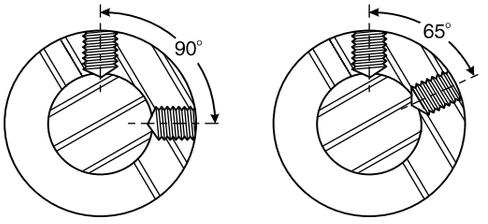


Figure 2 - Set Screw Angles

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 8 below.

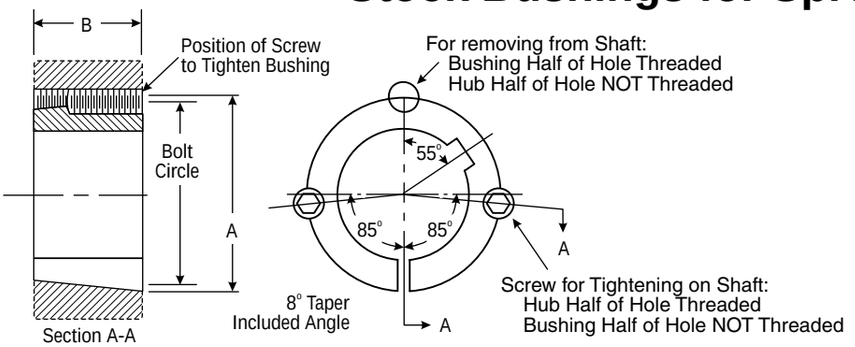
Table 8 - Recommended Tightening Torque Values For Set Screws

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

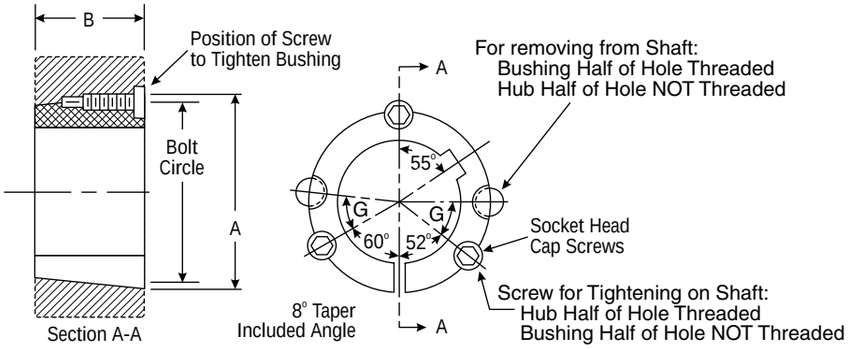
6. After reboring, the sprocket may require rebalancing. Vibration, noise, reduced bearing life, and undue stresses on the mechanical components in the system could result if improper rebalancing practices are used. See Sprocket Specifications, page 78, for recommended sprocket balancing specifications.
7. Standard square or rectangular keys should be used. See pages 83-84 for standard key dimensions.

Specifications and tolerances for sprocket eccentricity, parallelism, and balancing, etc. are all presented on Page 78.

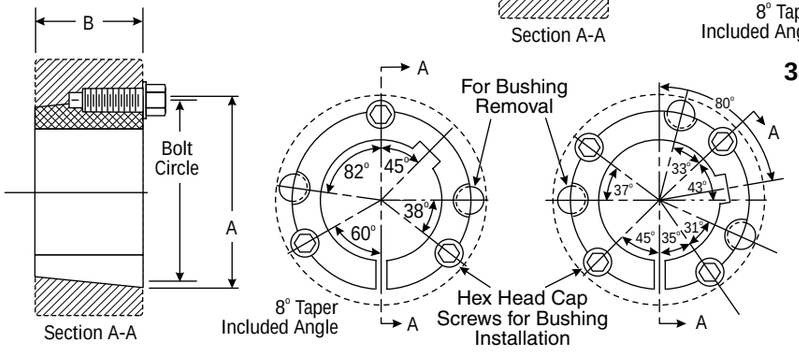
Stock Bushings for Sprockets



1008 thru 3020



3525 thru 5040



6050 **7060**

TAPER-LOCK* BUSHINGS

Bushing Size	Torque Capacity (lb-in)	Dimensions (in)		Bolt Circle (in)	Mounting Screws			Bore Range (in)			Weight Range (lb)	
									Max Bore			
		A	B		Quantity	Size	G (deg)	Min. Bore	Standard Keyseat***	Shallow Keyseat**	Max. Bore	Min. Bore
1008	1,200	1.386	0.875	1.328	2	1/4 x 1/2	-	0.500	0.875	1.000	0.2	0.3
1108	1,300	1.511	0.875	1.328	2	1/4 x 1/2	-	0.500	1.000	1.125	0.1	0.3
1210	3,600	1.875	1.000	1.750	2	3/8 x 5/8	-	0.500	1.250	-	0.4	0.6
1610	4,300	2.250	1.000	2.125	2	3/8 x 5/8	-	0.500	1.500	1.688	0.5	0.9
1615	4,300	2.25	1.500	2.125	2	3/8 x 5/8	-	0.500	1.500	1.688	0.6	1.3
2012	7,150	2.750	1.250	2.625	2	7/16 x 5/8	-	0.500	1.875	2.125	0.9	1.7
2517	11,600	3.375	1.750	3.250	2	1/2 x 1	-	0.500	2.250	2.688	1.8	3.7
3020	24,000	4.250	2.000	4.000	2	5/8 x 1 1/4	-	0.875	2.750	3.250	3.3	6.5
3525	44,800	5.000	2.500	4.830	3	1/2 x 1 1/2	39	1.188	3.250	3.938	4.2	11.1
3535	44,800	5.000	3.500	4.830	3	1/2 x 1 1/2	39	1.188	3.250	3.938	5.0	14.8
4030	77,300	5.750	3.000	5.540	3	5/8 x 1 3/4	40	1.438	3.625	4.438	6.7	17.5
4040	77,300	5.750	4.000	5.540	3	5/8 x 1 3/4	40	1.438	3.625	4.438	8.2	22.1
4535	110,000	6.375	3.500	6.130	3	3/4 x 2	40	1.938	4.250	4.938	9.3	24.1
4545	110,000	6.375	4.500	6.130	3	3/4 x 2	40	1.938	4.250	4.938	11.2	30.3
5040	126,000	7.000	4.000	6.720	3	7/8 x 2 1/4	37	2.438	4.500	5.000	16.4	31.9
6050	282,000	9.250	5.000	9.000	3	1 1/4 x 3 1/2	-	4.438	6.000	-	45.0	57.0
7060	416,000	10.250	6.000	10.000	4	1 1/4 x 3 1/2	-	4.938	7.000	-	66.0	87.0

* Registered trademark of Reliance Electric. ** Key is furnished with each bushing having a shallow keyseat.
*** Keys are not furnished with bushings having standard keyseats.

Taper-Lock 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 Bushing 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 dimensions 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 - 3.250	3/4 x 1/4
3525	1.188 - 3.250	Standard
	3.313 - 3.750	7/8 x 1/4
	3.875 - 3.938	1 x 1/4
3535	1.188 - 3.250	Standard
	3.313 - 3.750	7/8 x 1/4
	3.875 - 3.938	1 x 1/4
4030	1.438 - 3.625	Standard
	3.688 - 3.750	7/8 x 1/4
	3.875 - 4.438	1 x 1/4
4040	1.438 - 3.625	Standard
	3.688 - 3.750	7/8 x 1/4
	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 1/8 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

	Keyseat (in)		Key (in)	
Shaft Diameter (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

Bushing Bore and Keyseat Information — continued

Specifying English and Metric Keyways

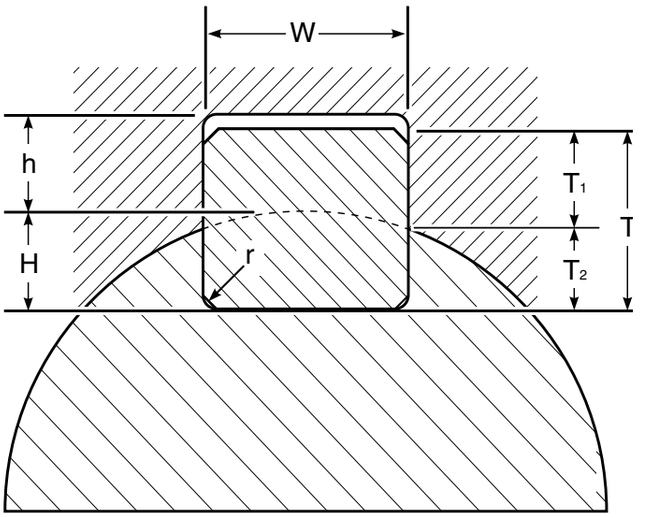
Dimensioning and specifying metric keys and keyways varies significantly from the English system. In the English system, it is the standard practice to dimension the keyway, while in the metric system it is common practice to specify the key size. In the English system, the keyway in the hub is dimensioned 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:	**Metric**:
W x T_1 Keyway	W x T Key
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 keyways will be either of the following:

1. Specify “standard Keyway”
2. Customer to specify keysize (keyseat to be standard size in shaft)

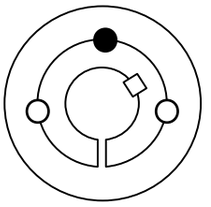


Metric Bore and Key Dimensions for Taper-Lock Bushings

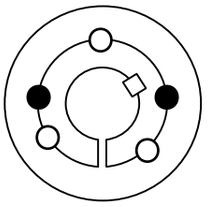
Bushing	Bore (mm)	Keyway (WxT) (mm)	Key Size (ref.) (mm)
1008	14, 16	5 X 2.3	5 X 5
	18, 19, 20, 22	6 X 2.8	6 X 6
	24	8 X 3.3	8 X 7
1108	14*, 16	5 X 2.3	5 X 5
	18, 19, 20, 22	6 X 2.8	6 X 6
	24, 25	8 X 3.3	8 X 7
1210	14, 16	5 X 2.3	5 X 5
	18, 19, 20, 22*	6 X 2.8	6 X 6
	24, 25, 28, 30	8 X 3.3	8 X 7
1610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

* Non-stock, made to order bushing

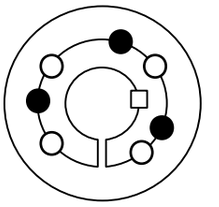
Taper-Lock Type Sprocket Installation and Removal



1008 to 3020



3525 to 6050



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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

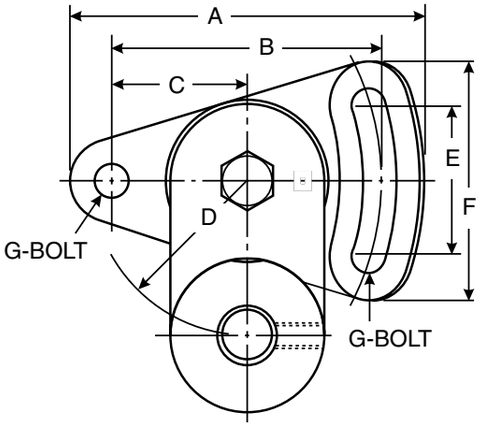
Bushing Style	Bolts		Torque Wrench	
	Qty.	Size	lb-ft	lb-in
1008	2	1/4-20 x 1/2	4.6	55
1108	2	1/4-20 x 1/2	4.6	55
1210	2	3/8-16 x 5/8	14.6	175
1610	2	3/8-16 x 5/8	14.6	175
1615	2	3/8-16 x 5/8	14.6	175
2012	2	7/16-14 x 7/8	23.3	280
2517	2	1/2-13 x 1	35.8	430
3020	2	5/8-11 x 1 1/4	66.7	800
3525	3	1/2-13 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	142	1700
4040	3	5/8-11 x 1 3/4	142	1700
4535	3	3/4-10 x 2	204	2450
4545	3	3/4-10 x 2	204	2450
5040	3	7/8-9 x 2 1/4	258	3100
6050	3	1 1/4-7 x 3 1/2	652	7820
7060	4	1 1/4-7 x 3 1/2	652	7820

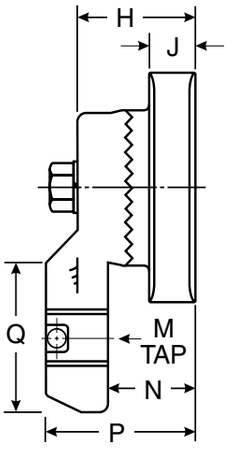
Caution: Excessive bolt torque can cause sprocket and/or bushing breakage.

Note: To insure proper bushing/sprocket performance, full bushing contact on the shaft is recommended.

Belt Drive Tensioners

(Double Adjustable)

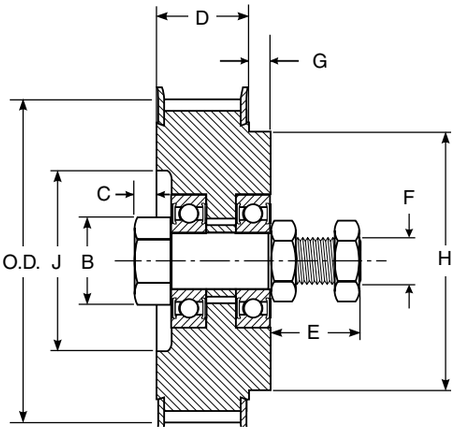




Specifications

Tensioned Product No.	Use With	Part No.	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)
7720-2010	8mm Pitch Poly Chain GT2	10-IDL-BRAK2	4.63	3.50	1.75	2.00	2.06	3.06	0.38	1.50	0.56	¾-16	1.00	1.88	1.75	2.7
7720-2020	14mm Pitch Poly Chain GT2	20-IDL-BRAK2	6.94	5.25	2.63	5.00	3.00	4.56	0.63	2.38	1.00	1-14	1.63	2.94	0.75	10.8

Poly Chain® GT®2 Idler Sprockets



Poly Chain GT 2 Idler Dimensions

Product No.	Use With	Part No.	Size Designation	Belt Width (in)	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)	Wt. (lb)
7720-1700	8mm Pitch Poly Chain GT2	12-IDL-SPK2	8MX-32S-12	12	32	3.145	1.25	0.50	0.85	1.56	¾-16	0.94	2.75	-	1.0
7720-1710		21-IDL-SPK2	8MX-32S-21	21	32	3.145	1.25	0.50	1.24	1.56	¾-16	0.56	2.75	-	1.1
7720-1720		36-IDL-SPK2	8MX-36S-36	36	36	3.546	1.91	0.75	1.86	1.63	¾-16	-	-	-	2.0
7720-1730		62-IDL-SPK2	8MX-36S-62	62	36	3.546	1.91	0.75	2.91	1.69	¾-16	0.69	3.13	-	2.1
7720-1800	14mm Pitch Poly Chain GT2	20-IDL-SPK2	14MX-30S-20	20	30	5.153	2.55	1.00	1.36	2.25	1-14	1.00	4.38	-	9.0
7720-1810		37-IDL-SPK2	14MX-30S-37	37	30	5.153	2.55	1.00	2.06	2.25	1-14	0.25	4.38	-	12.0
7720-1820		68-IDL-SPK2	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
7720-1830		90-IDL-SPK2	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
7720-1840		125-IDL-SPK2	14MX-35S-125	125	35	6.031	3.38	0.19	5.61	2.25	1-14	1.09	4.88	4.34	23.1

Poly Chain® GT®2 Sprocket Diameter Table

8mm Pitch Sprocket Diameters

No. of Grooves	Diameters mm* in PD	Diameters mm* in OD	No. of Grooves	Diameters mm* in PD	Diameters mm* in OD	No. of Grooves	Diameters mm* in PD	Diameters mm* in OD	No. of Grooves	Diameters mm* in PD	Diameters mm* in OD	No. of Grooves	Diameters mm* in PD	Diameters mm* in OD
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**	388.01 **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.

Poly Chain® GT®2 Sprocket Diameter Table

8mm Pitch Sprocket Diameters

No. of Grooves	Diameters mm* in PD	OD	No. of Grooves	Diameters mm* in PD	OD	No. of Grooves	Diameters mm* in PD	OD	No. of Grooves	Diameters mm* in PD	OD	No. of Grooves	Diameters mm* in PD	OD
167	425.26 **16.743**	423.66 **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	Diameters mm* in PD	OD	No. of Grooves	Diameters mm* in PD	OD	No. of Grooves	Diameters mm* in PD	OD	No. of Grooves	Diameters mm* in PD	OD	No. of Grooves	Diameters mm* in PD	OD
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 **7.083**	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**	184.37 **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**
36	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**

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Millimeters are shown in blue in light face type.

Stock sprockets are shown shaded.

Poly Chain® GT®2 Sprocket Diameter Table

14mm Pitch Sprocket Diameters

No. of Grooves	Diameters mm* in PD	OD	No. of Grooves	Diameters mm* in PD	OD	No. of Grooves	Diameters mm* in PD	OD	No. of Grooves	Diameters mm* in PD	OD	No. of Grooves	Diameters mm* in PD	OD
88	392.16 **15.439**	389.36 **15.329**	116	516.94 **20.352**	514.14 **20.242**	144	641.71 **25.264**	638.91 **25.154**	172	766.49 **30.177**	763.69 **30.067**	200	891.27 **35.089**	888.47 **34.979**
89	396.61 **15.615**	393.81 **15.505**	117	521.39 **20.527**	518.59 **20.417**	145	646.17 **25.440**	643.37 **25.330**	173	770.95 **30.352**	768.15 **30.242**	201	895.72 **35.265**	892.92 **35.155**
90	401.07 **15.790**	398.27 **15.680**	118	525.85 **20.703**	523.05 **20.593**	146	650.63 **25.615**	647.83 **25.505**	174	775.40 **30.528**	772.60 **30.418**	202	900.18 **35.440**	897.38 **35.330**
91	405.53 **15.966**	402.73 **15.856**	119	530.30 **20.878**	527.50 **20.768**	147	655.08 **25.791**	652.28 **25.681**	175	779.86 **30.703**	777.06 **30.593**	203	904.64 **35.616**	901.84 **35.506**
92	409.98 **16.141**	407.18 **16.031**	120	534.76 **21.054**	531.96 **20.944**	148	659.54 **25.966**	656.74 **25.856**	176	784.32 **30.879**	781.52 **30.769**	204	909.09 **35.791**	906.29 **35.681**
93	414.44 **16.317**	411.64 **16.207**	121	539.22 **21.229**	536.42 **21.119**	149	663.99 **26.142**	661.19 **26.032**	177	788.77 **31.054**	785.97 **30.944**	205	913.55 **35.967**	910.75 **35.857**
94	418.90 **16.492**	416.10 **16.382**	122	543.67 **21.404**	540.87 **21.294**	150	668.45 **26.317**	665.65 **26.207**	178	793.23 **31.229**	790.43 **31.119**	206	918.01 **36.142**	915.21 **36.032**
95	423.35 **16.667**	420.55 **16.557**	123	548.13 **21.580**	545.33 **21.470**	151	672.91 **26.492**	670.11 **26.382**	179	797.68 **31.405**	794.88 **31.295**	207	922.46 **36.317**	919.66 **36.207**
96	427.81 **16.843**	425.01 **16.733**	124	552.59 **21.755**	549.79 **21.645**	152	677.36 **26.668**	674.56 **26.558**	180	802.14 **31.580**	799.34 **31.470**	208	926.92 **36.493**	924.12 **36.383**
97	432.26 **17.018**	429.46 **16.908**	125	557.04 **21.931**	554.24 **21.821**	153	681.82 **26.843**	679.02 **26.733**	181	806.60 **31.756**	803.80 **31.646**	209	931.37 **36.668**	928.57 **36.558**
98	436.72 **17.194**	433.92 **17.084**	126	561.50 **22.106**	558.70 **21.996**	154	686.28 **27.019**	683.48 **26.909**	182	811.05 **31.931**	808.25 **31.821**	210	935.83 **36.844**	933.03 **36.734**
99	441.18 **17.369**	438.38 **17.259**	127	565.95 **22.282**	563.15 **22.172**	155	690.73 **27.194**	687.93 **27.084**	183	815.51 **32.107**	812.71 **31.997**	211	940.29 **37.019**	937.49 **36.909**
100	445.63 **17.545**	442.83 **17.435**	128	570.41 **22.457**	567.61 **22.347**	156	695.19 **27.370**	692.39 **27.260**	184	819.97 **32.282**	817.17 **32.172**	212	944.74 **37.195**	941.94 **37.085**
101	450.09 **17.720**	447.29 **17.610**	129	574.87 **22.633**	572.07 **22.523**	157	699.65 **27.545**	696.85 **27.435**	185	824.42 **32.458**	821.62 **32.348**	213	949.20 **37.370**	946.40 **37.260**
102	454.55 **17.896**	451.75 **17.786**	130	579.32 **22.808**	576.52 **22.698**	158	704.10 **27.721**	701.30 **27.611**	186	828.88 **32.633**	826.08 **32.523**	214	953.66 **37.546**	950.86 **37.436**
103	459.00 **18.071**	456.20 **17.961**	131	583.78 **22.983**	580.98 **22.873**	159	708.56 **27.896**	705.76 **27.786**	187	833.34 **32.808**	830.54 **32.698**	215	958.11 **37.721**	955.31 **37.611**
104	463.46 **18.246**	460.66 **18.136**	132	588.24 **23.159**	585.44 **23.049**	160	713.01 **28.071**	710.21 **27.961**	188	837.79 **32.984**	834.99 **32.874**	216	962.57 **37.896**	959.77 **37.786**
105	467.92 **18.422**	465.12 **18.312**	133	592.69 **23.334**	589.89 **23.224**	161	717.47 **28.247**	714.67 **28.137**	189	842.25 **33.159**	839.45 **33.049**	217	967.03 **38.072**	964.23 **37.962**
106	472.37 **18.597**	469.57 **18.487**	134	597.15 **23.510**	594.35 **23.400**	162	721.93 **28.422**	719.13 **28.312**	190	846.70 **33.335**	843.90 **33.225**	218	971.48 **38.247**	968.68 **38.137**
107	476.83 **18.773**	474.03 **18.663**	135	601.61 **23.685**	598.81 **23.575**	163	726.38 **28.598**	723.58 **28.488**	191	851.16 **33.510**	848.36 **33.400**	219	975.94 **38.423**	973.14 **38.313**
108	481.28 **18.948**	478.48 **18.838**	136	606.06 **23.861**	603.26 **23.751**	164	730.84 **28.773**	728.04 **28.663**	192	855.62 **33.686**	852.82 **33.576**	220	980.39 **38.598**	977.59 **38.488**
109	485.74 **19.124**	482.94 **19.014**	137	610.52 **24.036**	607.72 **23.926**	165	735.30 **28.949**	732.50 **28.839**	193	860.07 **33.861**	857.27 **33.751**	221	984.85 **38.774**	982.05 **38.664**
110	490.20 **19.299**	487.40 **19.189**	138	614.97 **24.212**	612.17 **24.102**	166	739.75 **29.124**	736.95 **29.014**	194	864.53 **34.037**	861.73 **33.927**	222	989.31 **38.949**	986.51 **38.839**
111	494.65 **19.475**	491.85 **19.365**	139	619.43 **24.387**	616.63 **24.277**	167	744.21 **29.300**	741.41 **29.190**	195	868.99 **34.212**	866.19 **34.102**	223	993.76 **39.125**	990.96 **39.015**
112	499.11 **19.650**	496.31 **19.540**	140	623.89 **24.562**	621.09 **24.452**	168	748.66 **29.475**	745.86 **29.365**	196	873.44 **34.387**	870.64 **34.277**	224	998.22 **39.300**	995.42 **39.190**
113	503.57 **19.825**	500.77 **19.715**	141	628.34 **24.738**	625.54 **24.628**	169	753.12 **29.650**	750.32 **29.540**	197	877.90 **34.563**	875.10 **34.453**			
114	508.02 **20.001**	505.22 **19.891**	142	632.80 **24.913**	630.00 **24.803**	170	757.58 **29.826**	754.78 **29.716**	198	882.36 **34.738**	879.56 **34.628**			
115	512.48 **20.176**	509.68 **20.066**	143	637.26 **25.089**	634.46 **24.979**	171	762.03 **30.001**	759.23 **29.891**	199	886.81 **34.914**	884.01 **34.804**			

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Millimeters are shown in blue in light face type.

Stock sprockets are shown shaded.

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 now available in a series of short lengths. These unique belts are available in 8mm pitch only, and in standard 12mm, 21mm, and 36mm widths. Now the unsurpassed performance and reliability of Poly Chain GT can be utilized in spaces smaller than ever before.

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 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.

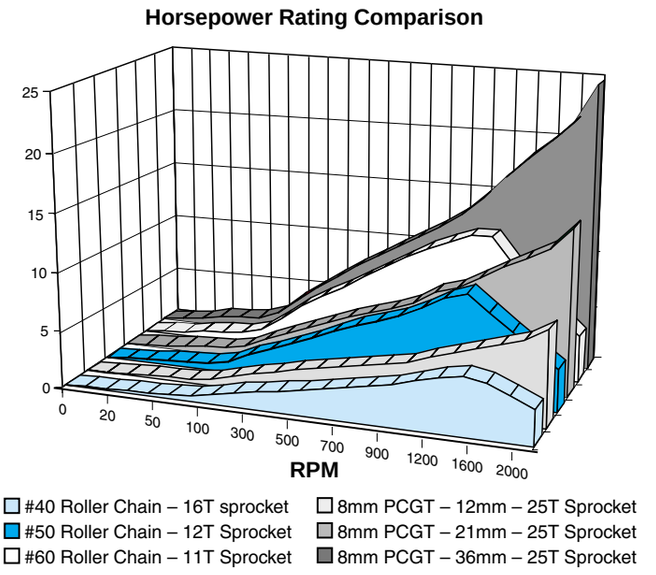
Live roller conveyers are a natural application for Short-Length Poly Chain GT belt drive systems. Live roller conveyers are used for controlled movement of a great variety of both regular and irregular shaped commodities, from light and fragile to heavy and rugged loading.

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.



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**

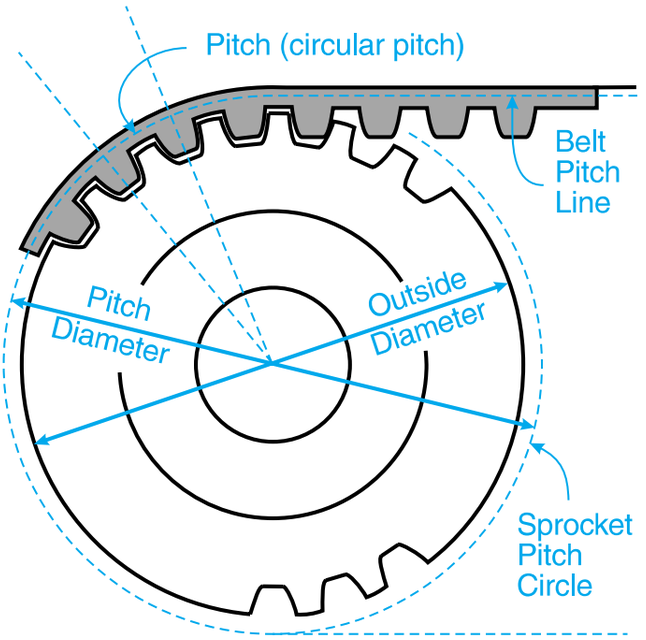
8mm Widths

12mm	21mm	36mm
.47″	.83″	1.42″

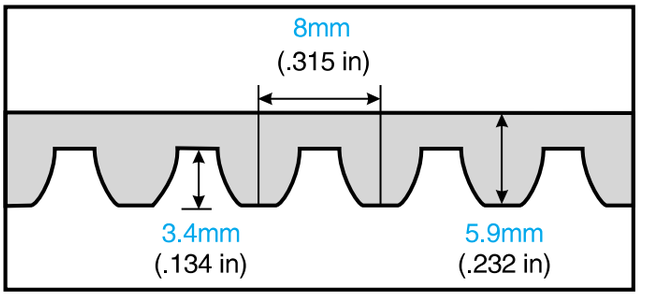
Dimensions are given in inches and millimeters. Inches are shown in black type. Millimeters are shown in blue type.

Gates Short-Length Poly Chain GT belts are designed to run in Gates Poly Chain GT2 sprockets. See the Sprocket Specification Tables on pages 72-73 for a listing of available sizes, pertinent dimensions, applicable bushing sizes, bore ranges, etc. See page 20 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 14-19 , or the High Speed Drive Design Procedure on pages 22-25, but substitute Table 9 on pages 92-93 for belt length and center distance selections, and the tables on pages 94-96 for horsepower ratings.



8mm Pitch — Reference Dimensions



8mm PITCH BELTS

Table No. 9
Drive Selection Table

Sprocket Combinations					Center Distance, Inches							Sprocket Combinations	
DriveR		DriveN										DriveR	DriveN
No. of Grooves	Pitch Diam. Inches	No. of Grooves	Pitch Diam. Inches	Speed Ratio	8M-352 P.L. 13.858 44 Teeth	8M-416 P.L. 16.378 52 Teeth	8M-456 P.L. 17.953 57 Teeth	8M-480 P.L. 18.898 60 Teeth	8M-544 P.L. 21.417 68 Teeth	8M-608 P.L. 23.937 76 Teeth	Speed Ratio	No. of Grooves	No. of Grooves
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
28	2.807	28	2.807	1.000		3.78	4.57	5.04	6.30	7.56	1.000	28	28
30	3.008	30	3.008	1.000			4.25	4.73	5.99	7.25	1.000	30	30
32	3.208	32	3.208	1.000			3.94	4.41	5.67	6.93	1.000	32	32
34	3.409	34	3.409	1.000				4.10	5.36	6.62	1.000	34	34
36	3.609	36	3.609	1.000					5.04	6.30	1.000	36	36
38	3.810	38	3.810	1.000					4.73	5.99	1.000	38	38
40	4.010	40	4.010	1.000						5.67	1.000	40	40
42	4.211	42	4.211	1.000						5.36	1.000	42	42
40	4.010	42	4.211	1.050						5.51	1.050	40	42
38	3.810	40	4.010	1.053					4.57	5.83	1.053	38	40
36	3.609	38	3.810	1.056					4.88	6.14	1.056	36	38
34	3.409	36	3.609	1.059					5.20	6.46	1.059	34	36
32	3.208	34	3.409	1.063				4.25	5.51	6.77	1.063	32	34
30	3.008	32	3.208	1.067			4.09	4.57	5.83	7.09	1.067	30	32
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
38	3.810	42	4.211	1.105						5.67	1.105	38	42
36	3.609	40	4.010	1.111					4.72	5.98	1.111	36	40
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
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
30	3.008	34	3.409	1.133			3.93	4.41	5.67	6.93	1.133	30	34
22	2.206	25	2.506	1.136	3.23	4.49	5.27	5.75	7.01	8.27	1.136	22	25
28	2.807	32	3.208	1.143			4.25	4.72	5.98	7.24	1.143	28	32
36	3.609	42	4.211	1.167					4.56	5.82	1.167	36	42
34	3.409	40	4.010	1.176					4.87	6.14	1.176	34	40
38	3.810	45	4.511	1.184						5.42	1.184	38	45
32	3.208	38	3.810	1.188					5.19	6.45	1.188	32	38
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
40	4.010	48	4.812	1.200						5.03	1.200	40	48
28	2.807	34	3.409	1.214			4.08	4.56	5.82	7.08	1.214	28	34
34	3.409	42	4.211	1.235					4.71	5.97	1.235	34	42
32	3.208	40	4.010	1.250					5.02	6.29	1.250	32	40
36	3.609	45	4.511	1.250						5.57	1.250	36	45
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
22	2.206	28	2.807	1.273		4.24	5.03	5.50	6.77	8.03	1.273	22	28
25	2.506	32	3.208	1.280		3.69	4.47	4.95	6.21	7.47	1.280	25	32
28	2.807	36	3.609	1.286			3.92	4.39	5.66	6.92	1.286	28	36
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
34	3.409	45	4.511	1.324					4.46	5.72	1.324	34	45
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
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
36	3.609	50	5.013	1.389						5.15	1.389	36	50
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
34	3.409	48	4.812	1.412						5.47	1.412	34	48
28	2.807	40	4.010	1.429				4.05	5.32	6.59	1.429	28	40
25	2.506	36	3.609	1.440			4.14	4.61	5.88	7.15	1.440	25	36
22	2.206	32	3.208	1.455		3.91	4.70	5.17	6.44	7.70	1.455	22	32
34	3.409	50	5.013	1.471						5.29	1.471	34	50
Length Factor*					0.65	0.70	0.73	0.74	0.78	0.81			

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

8mm PITCH BELTS

Table No. 9
Drive Selection Table

Sprocket Combinations					Center Distance, Inches							Sprocket Combinations	
DriveR		DriveN										DriveR	DriveN
No. of Grooves	Pitch Diam. Inches	No. of Grooves	Pitch Diam. Inches	Speed Ratio	8M-352 P.L. 13.858 44 Teeth	8M-416 P.L. 16.378 52 Teeth	8M-456 P.L. 17.953 57 Teeth	8M-480 P.L. 18.898 60 Teeth	8M-544 P.L. 21.417 68 Teeth	8M-608 P.L. 23.937 76 Teeth	Speed Ratio	No. of Grooves	No. of Grooves
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						5.61	1.500	32	48
25	2.506	38	3.810	1.520			3.96	4.44	5.71	6.98	1.520	25	38
22	2.206	34	3.409	1.545		3.73	4.52	5.00	6.27	7.54	1.545	22	34
34	3.409	53	5.314	1.559						5.03	1.559	34	53
32	3.208	50	5.013	1.563						5.44	1.563	32	50
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
28	2.807	45	4.511	1.607					4.89	6.16	1.607	28	45
22	2.206	36	3.609	1.636		3.55	4.35	4.83	6.10	7.37	1.636	22	36
32	3.208	53	5.314	1.656						5.17	1.656	32	53
30	3.008	50	5.013	1.667						5.58	1.667	30	50
25	2.506	42	4.211	1.680				4.09	5.37	6.64	1.680	25	42
28	2.807	48	4.812	1.714					4.62	5.90	1.714	28	48
22	2.206	38	3.810	1.727			4.17	4.66	5.93	7.20	1.727	22	38
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
28	2.807	50	5.013	1.786					4.43	5.72	1.786	28	50
25	2.506	45	4.511	1.800					5.10	6.38	1.800	25	45
22	2.206	40	4.010	1.818			3.99	4.48	5.76	7.03	1.818	22	40
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
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
22	2.206	45	4.511	2.045				4.01	5.31	6.59	2.045	22	45
25	2.506	53	5.314	2.120						5.65	2.120	25	53
22	2.206	48	4.812	2.182					5.03	6.32	2.182	22	48
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
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						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			

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

Horsepower Rating for 12mm Wide

8mm Pitch Poly Chain® GT® Belts

RPM OF FASTER SHAFT	Rated Base 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									
	22	25	28	30	32	34	36	38	40	42		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
	2.206	2.506	2.807	3.008	3.208	3.409	3.609	3.810	4.010	4.211											
870	3.14	3.68	4.21	4.55	4.90	5.24	5.58	5.9	6.2	6.6	870	0.00	0.04	0.08	0.12	0.16	0.20	0.25	0.29	0.33	0.37
1160	3.96	4.64	5.32	5.8	6.2	6.6	7.1	7.5	7.9	8.3	1160	0.00	0.05	0.11	0.16	0.22	0.27	0.33	0.38	0.44	0.49
1750	5.47	6.4	7.4	8.0	8.6	9.2	9.8	10.4	11.0	11.6	1750	0.00	0.08	0.16	0.25	0.33	0.41	0.49	0.58	0.66	0.74
3450	9.13	10.8	12.4	13.5	14.5	15.5	16.5	17.5	18.4	19.4	3450	0.00	0.16	0.32	0.49	0.65	0.81	0.97	1.13	1.30	1.46
10	0.07	0.08	0.09	0.09	0.10	0.11	0.11	0.12	0.13	0.13	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.12	0.14	0.16	0.17	0.19	0.20	0.21	0.22	0.24	0.25	20	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
40	0.23	0.26	0.30	0.32	0.35	0.37	0.39	0.42	0.44	0.46	40	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02
60	0.33	0.38	0.43	0.46	0.50	0.53	0.56	0.60	0.63	0.66	60	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03
100	0.51	0.59	0.67	0.73	0.78	0.83	0.88	0.93	0.99	1.04	100	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04
200	0.92	1.07	1.22	1.32	1.42	1.52	1.61	1.71	1.80	1.90	200	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.08
300	1.30	1.52	1.73	1.87	2.01	2.14	2.28	2.42	2.55	2.68	300	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.13
400	1.66	1.93	2.20	2.38	2.56	2.74	2.91	3.09	3.26	3.43	400	0.00	0.02	0.04	0.06	0.08	0.09	0.11	0.13	0.15	0.17
500	1.99	2.33	2.66	2.88	3.09	3.30	3.52	3.73	3.93	4.14	500	0.00	0.02	0.05	0.07	0.09	0.12	0.14	0.16	0.19	0.21
600	2.32	2.71	3.09	3.35	3.60	3.85	4.10	4.34	4.58	4.82	600	0.00	0.03	0.06	0.08	0.11	0.14	0.17	0.20	0.23	0.25
700	2.63	3.08	3.52	3.81	4.09	4.38	4.66	4.94	5.21	5.49	700	0.00	0.03	0.07	0.10	0.13	0.16	0.20	0.23	0.26	0.30
800	2.93	3.43	3.93	4.25	4.57	4.89	5.20	5.51	5.8	6.1	800	0.00	0.04	0.08	0.11	0.15	0.19	0.23	0.26	0.30	0.34
900	3.23	3.78	4.32	4.68	5.04	5.39	5.7	6.1	6.4	6.8	900	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.30	0.34	0.38
1000	3.51	4.12	4.71	5.10	5.49	5.9	6.3	6.6	7.0	7.4	1000	0.00	0.05	0.09	0.14	0.19	0.23	0.28	0.33	0.38	0.42
1200	4.06	4.77	5.46	5.9	6.4	6.8	7.3	7.7	8.1	8.6	1200	0.00	0.06	0.11	0.17	0.23	0.28	0.34	0.39	0.45	0.51
1400	4.59	5.39	6.2	6.7	7.2	7.7	8.2	8.7	9.2	9.7	1400	0.00	0.07	0.13	0.20	0.26	0.33	0.39	0.46	0.53	0.59
1600	5.10	6.0	6.9	7.5	8.0	8.6	9.1	9.7	10.2	10.8	1600	0.00	0.08	0.15	0.23	0.30	0.38	0.45	0.53	0.60	0.68
1800	5.59	6.6	7.6	8.2	8.8	9.4	10.0	10.6	11.2	11.8	1800	0.00	0.08	0.17	0.25	0.34	0.42	0.51	0.59	0.68	0.76
2000	6.07	7.1	8.2	8.9	9.6	10.2	10.9	11.6	12.2	12.8	2000	0.00	0.09	0.19	0.28	0.38	0.47	0.56	0.66	0.75	0.85
2400	6.97	8.2	9.4	10.2	11.0	11.8	12.6	13.3	14.1	14.8	2400	0.00	0.11	0.23	0.34	0.45	0.56	0.68	0.79	0.90	1.01
2800	7.83	9.2	10.6	11.5	12.4	13.3	14.1	15.0	15.8	16.6	2800	0.00	0.13	0.26	0.39	0.53	0.66	0.79	0.92	1.05	1.18
3200	8.64	10.2	11.7	12.7	13.7	14.7	15.6	16.5	17.4	18.3	3200	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35
3500	9.23	10.9	12.5	13.6	14.6	15.7	16.7	17.6	18.6	19.6	3500	0.00	0.16	0.33	0.49	0.66	0.82	0.99	1.15	1.32	1.48
4000	10.2	12.0	13.8	15.0	16.1	17.2	18.3	19.4	20.4	21.5	4000	0.00	0.19	0.38	0.56	0.75	0.94	1.13	1.32	1.50	1.69
4500	11.0	13.0	15.0	16.3	17.5	18.7	19.9	21.0	22.1	23.2	4500	0.00	0.21	0.42	0.63	0.85	1.06	1.27	1.48	1.69	1.90
5000	11.8	14.0	16.1	17.5	18.8	20.0	21.3	22.5	23.6	24.8	5000	0.00	0.23	0.47	0.70	0.94	1.17	1.41	1.64	1.88	2.11
5500	12.6	14.9	17.2	18.6	20.0	21.3	22.6	23.8	25.0	26.2	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 is 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] × Belt Length Correction Factor

Horsepower Rating for 21mm Wide

8mm Pitch Poly Chain® GT® Belts

RPM OF FASTER SHAFT	Rated Base 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									
	22	25	28	30	32	34	36	38	40	42		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
	2.206	2.506	2.807	3.008	3.208	3.409	3.609	3.810	4.010	4.211											
870	5.49	6.43	7.36	7.97	8.57	9.17	9.76	10.3	10.9	11.5	870	0.00	0.07	0.14	0.21	0.29	0.36	0.43	0.50	0.57	0.64
1160	6.92	8.12	9.30	10.1	10.8	11.6	12.3	13.1	13.8	14.6	1160	0.00	0.10	0.19	0.29	0.38	0.48	0.57	0.67	0.76	0.86
1750	9.57	11.3	12.9	14.0	15.1	16.1	17.2	18.2	19.2	20.2	1750	0.00	0.14	0.29	0.43	0.58	0.72	0.86	1.01	1.15	1.29
3450	16.00	18.9	21.7	23.5	25.3	27.1	28.8	30.6	32.2	33.9	3450	0.00	0.28	0.57	0.85	1.13	1.42	1.70	1.99	2.27	2.55
10	0.12	0.13	0.15	0.16	0.18	0.19	0.20	0.21	0.22	0.23	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
20	0.22	0.25	0.28	0.31	0.33	0.35	0.37	0.39	0.42	0.44	20	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
40	0.40	0.46	0.53	0.57	0.61	0.65	0.69	0.73	0.77	0.81	40	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03
60	0.57	0.66	0.75	0.81	0.87	0.93	0.99	1.04	1.10	1.16	60	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04
100	0.89	1.03	1.18	1.27	1.36	1.45	1.54	1.64	1.73	1.82	100	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.07
200	1.61	1.88	2.14	2.31	2.48	2.65	2.82	2.99	3.15	3.32	200	0.00	0.02	0.03	0.05	0.07	0.08	0.10	0.12	0.13	0.15
300	2.28	2.65	3.02	3.27	3.51	3.75	3.99	4.23	4.46	4.70	300	0.00	0.02	0.05	0.07	0.10	0.12	0.15	0.17	0.20	0.22
400	2.90	3.38	3.86	4.17	4.48	4.79	5.10	5.40	5.70	6.00	400	0.00	0.03	0.07	0.10	0.13	0.16	0.20	0.23	0.26	0.30
500	3.49	4.07	4.65	5.03	5.41	5.78	6.15	6.52	6.88	7.24	500	0.00	0.04	0.08	0.12	0.16	0.21	0.25	0.29	0.33	0.37
600	4.05	4.74	5.42	5.86	6.30	6.74	7.17	7.60	8.02	8.44	600	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.39	0.44
700	4.60	5.38	6.15	6.66	7.16	7.66	8.15	8.64	9.12	9.60	700	0.00	0.06	0.12	0.17	0.23	0.29	0.35	0.40	0.46	0.52
800	5.13	6.01	6.87	7.44	8.00	8.55	9.10	9.65	10.2	10.7	800	0.00	0.07	0.13	0.20	0.26	0.33	0.39	0.46	0.53	0.59
900	5.65	6.61	7.57	8.19	8.81	9.43	10.0	10.6	11.2	11.8	900	0.00	0.07	0.15	0.22	0.30	0.37	0.44	0.52	0.59	0.67
1000	6.15	7.20	8.25	8.93	9.61	10.3	10.9	11.6	12.2	12.9	1000	0.00	0.08	0.16	0.25	0.33	0.41	0.49	0.58	0.66	0.74
1200	7.11	8.35	9.56	10.4	11.1	11.9	12.7	13.5	14.2	15.0	1200	0.00	0.10	0.20	0.30	0.39	0.49	0.59	0.69	0.79	0.89
1400	8.04	9.44	10.8	11.7	12.6	13.5	14.4	15.2	16.1	16.9	1400	0.00	0.12	0.23	0.35	0.46	0.58	0.69	0.81	0.92	1.04
1600	8.93	10.5	12.0	13.0	14.0	15.0	16.0	17.0	17.9	18.9	1600	0.00	0.13	0.26	0.39	0.53	0.66	0.79	0.92	1.05	1.18
1800	9.79	11.5	13.2	14.3	15.4	16.5	17.6	18.6	19.7	20.7	1800	0.00	0.15	0.30	0.44	0.59	0.74	0.89	1.04	1.18	1.33
2000	10.60	12.5	14.3	15.6	16.7	17.9	19.1	20.2	21.4	22.5	2000	0.00	0.16	0.33	0.49	0.66	0.82	0.99	1.15	1.32	1.48
2400	12.20	14.4	16.5	17.9	19.3	20.6	22.0	23.3	24.6	25.9	2400	0.00	0.20	0.39	0.59	0.79	0.99	1.18	1.38	1.58	1.78
2800	13.70	16.2	18.6	20.2	21.7	23.2	24.7	26.2	27.7	29.1	2800	0.00	0.23	0.46	0.69	0.92	1.15	1.38	1.61	1.84	2.07
3200	15.10	17.9	20.5	22.3	24.0	25.7	27.3	28.9	30.5	32.1	3200	0.00	0.26	0.53	0.79	1.05	1.32	1.58	1.84	2.10	2.37
3500	16.10	19.1	21.9	23.8	25.6	27.4	29.2	30.9	32.6	34.2	3500	0.00	0.29	0.58	0.86	1.15	1.44	1.73	2.01	2.30	2.59
4000	17.8	21.0	24.2	26.2	28.2	30.1	32.1	33.9	35.8	37.5	4000	0.00	0.33	0.66	0.99	1.32	1.64	1.97	2.30	2.63	2.96
4500	19.3	22.8	26.2	28.4	30.6	32.7	34.7	36.8	38.7	40.6	4500	0.00	0.37	0.74	1.11	1.48	1.85	2.22	2.59	2.96	3.33
5000	20.7	24.5	28.2	30.6	32.8	35.1	37.2	39.3	41.4	43.4	5000	0.00	0.41	0.82	1.23	1.64	2.05	2.47	2.88	3.29	3.70
5500	22.1	26.1	30.0	32.5	34.9	37.3	39.5	41.7	43.8	45.8	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 is 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] × Belt Length Correction Factor

Horsepower Rating for 36mm Wide

8mm Pitch Poly Chain® GT® Belts

RPM OF FASTER SHAFT	Rated Base 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									
	22	25	28	30	32	34	36	38	40	42		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
	2.206	2.506	2.807	3.008	3.208	3.409	3.609	3.810	4.010	4.211											
870	9.42	11.0	12.6	13.7	14.7	15.7	16.7	17.7	18.7	19.7	870	0.00	0.12	0.25	0.37	0.49	0.61	0.74	0.86	0.98	1.10
1160	11.9	13.9	15.9	17.3	18.6	19.9	21.2	22.4	23.7	24.9	1160	0.00	0.16	0.33	0.49	0.65	0.82	0.98	1.14	1.31	1.47
1750	16.4	19.3	22.1	24.0	25.8	27.7	29.4	31.2	33.0	34.7	1750	0.00	0.25	0.49	0.74	0.99	1.23	1.48	1.73	1.97	2.22
3450	27.4	32.4	37.2	40.4	43.4	46.5	49.5	52.4	55.2	58.1	3450	0.00	0.49	0.97	1.46	1.94	2.43	2.92	3.40	3.89	4.38
10	0.20	0.23	0.26	0.28	0.30	0.32	0.34	0.36	0.38	0.40	10	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
20	0.37	0.43	0.49	0.52	0.56	0.60	0.64	0.67	0.71	0.75	20	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03
40	0.69	0.79	0.90	0.97	1.04	1.11	1.18	1.25	1.32	1.39	40	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.05	0.05
60	0.98	1.13	1.29	1.39	1.49	1.59	1.69	1.79	1.89	1.99	60	0.00	0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08
100	1.53	1.77	2.01	2.18	2.33	2.49	2.65	2.80	2.96	3.11	100	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.13
200	2.77	3.22	3.67	3.96	4.25	4.55	4.83	5.12	5.40	5.69	200	0.00	0.03	0.06	0.08	0.11	0.14	0.17	0.20	0.23	0.25
300	3.90	4.55	5.18	5.61	6.02	6.43	6.84	7.25	7.65	8.05	300	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.30	0.34	0.38
400	4.97	5.80	6.61	7.15	7.68	8.21	8.74	9.26	9.77	10.3	400	0.00	0.06	0.11	0.17	0.23	0.28	0.34	0.39	0.45	0.51
500	5.98	6.98	7.98	8.63	9.27	9.91	10.5	11.2	11.8	12.4	500	0.00	0.07	0.14	0.21	0.28	0.35	0.42	0.49	0.56	0.63
600	6.95	8.13	9.28	10.0	10.8	11.5	12.3	13.0	13.7	14.5	600	0.00	0.08	0.17	0.25	0.34	0.42	0.51	0.59	0.68	0.76
700	7.89	9.23	10.5	11.4	12.3	13.1	14.0	14.8	15.6	16.5	700	0.00	0.10	0.20	0.30	0.39	0.49	0.59	0.69	0.79	0.89
800	8.80	10.3	11.8	12.8	13.7	14.7	15.6	16.5	17.5	18.4	800	0.00	0.11	0.23	0.34	0.45	0.56	0.68	0.79	0.90	1.01
900	9.68	11.3	13.0	14.0	15.1	16.2	17.2	18.2	19.3	20.3	900	0.00	0.13	0.25	0.38	0.51	0.63	0.76	0.89	1.01	1.14
1000	10.5	12.4	14.1	15.3	16.5	17.6	18.8	19.9	21.0	22.1	1000	0.00	0.14	0.28	0.42	0.56	0.70	0.85	0.99	1.13	1.27
1200	12.2	14.3	16.4	17.8	19.1	20.4	21.8	23.1	24.4	25.6	1200	0.00	0.17	0.34	0.51	0.68	0.85	1.01	1.18	1.35	1.52
1400	13.8	16.2	18.5	20.1	21.6	23.1	24.6	26.1	27.6	29.0	1400	0.00	0.20	0.39	0.59	0.79	0.99	1.18	1.38	1.58	1.78
1600	15.3	18.0	20.6	22.4	24.1	25.8	27.4	29.1	30.7	32.3	1600	0.00	0.23	0.45	0.68	0.90	1.13	1.35	1.58	1.80	2.03
1800	16.8	19.7	22.6	24.6	26.4	28.3	30.1	31.9	33.7	35.5	1800	0.00	0.25	0.51	0.76	1.01	1.27	1.52	1.78	2.03	2.28
2000	18.2	21.4	24.6	26.7	28.7	30.7	32.7	34.7	36.6	38.5	2000	0.00	0.28	0.56	0.85	1.13	1.41	1.69	1.97	2.25	2.54
2400	20.9	24.7	28.3	30.7	33.1	35.4	37.7	40.0	42.2	44.4	2400	0.00	0.34	0.68	1.01	1.35	1.69	2.03	2.37	2.71	3.04
2800	23.5	27.7	31.9	34.6	37.2	39.8	42.4	44.9	47.4	49.9	2800	0.00	0.39	0.79	1.18	1.58	1.97	2.37	2.76	3.16	3.55
3200	25.9	30.6	35.2	38.2	41.1	44.0	46.8	49.6	52.3	55.0	3200	0.00	0.45	0.90	1.35	1.80	2.25	2.71	3.16	3.61	4.06
3500	27.7	32.7	37.6	40.8	43.9	47.0	50.0	52.9	55.8	58.7	3500	0.00	0.49	0.99	1.48	1.97	2.47	2.96	3.45	3.95	4.44
4000	30.5	36.0	41.4	44.9	48.3	51.7	55.0	58.2	61.3	64.4	4000	0.00	0.56	1.13	1.69	2.25	2.82	3.38	3.95	4.51	5.07
4500	33.1	39.1	45.0	48.8	52.5	56.1	59.6	63.0	66.3	69.6	4500	0.00	0.63	1.27	1.90	2.54	3.17	3.80	4.44	5.07	5.71
5000	35.5	42.0	48.3	52.4	56.3	60.1	63.8	67.4	70.9	74.3	5000	0.00	0.70	1.41	2.11	2.82	3.52	4.23	4.93	5.64	6.34
5500	37.8	44.8	51.5	55.7	59.9	63.9	67.7	71.5	75.1	78.6	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 is 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] × Belt Length Correction Factor

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. **Minimum Belt Wrap and Tooth Engagement**
14. **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.

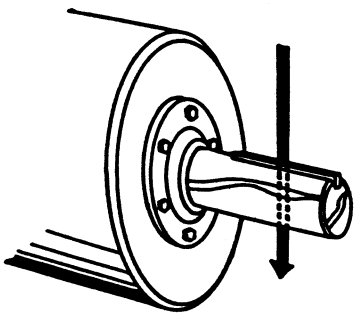


Figure 3 - Overhung Load

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:

$$OHL = \frac{126{,}000 \times HP \times k_{LCF} \times K_{SF} \times K_{LLF}}{PD \times RPM}$$

Where: HP = Actual horsepower being transmitted at the gear motor/reducer output shaft with no service factor applied
K_{LCF} = Overhung load connection factor (1.3 for all synchronous belt drives)
K_{SF} = Service factor for the speed reducer (available from the manufacturer)
K_{LLF} = 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.

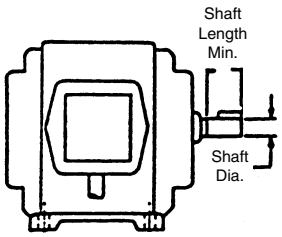
If the calculated overhung load for a particular belt drive system does exceed the speed reducer manufacturer's maximum recommended value, consider altering the belt drive design. In order to reduce the calculated overhung load, consider:

- 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.



Motor Frame Dimensions

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
184	7/8	2	3/16 x 3/16 x 1-3/8
184T	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 x1/2 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

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
184T	1.125	7-1/2	5	—	—	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.

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

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

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 also be consulted for additional design assistance.

7. High Performance 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. The standard tensile cord used in PolyChain GT2 belts is an aramid type. The tensile modulus of this cord is considerably higher than fiberglass cords, and also provides excellent flex fatigue characteristics. 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. Polychain GT2 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. Contact Gates Power Transmission Product Application for additional information.

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.

9. Belt Drive Noise

Field experience on actual applications verifies that some positive belt drives can produce some noise. The noise levels produced are typically greater than V-belts, and are associated with tooth meshing characteristics. For the most part, this noise is low level and will not exceed the level of noise produced by the equipment it is used on or the surrounding environment of the equipment. Laboratory studies (confirmed by field studies), using highly instrumented equipment, show a high probability for significant noise generation at speeds greater than 3,500 feet per minute and belt widths in excess of 85mm.

Many times a belt drive system, when operating under load, is not the primary cause for noise. Undersized, poorly lubricated, worn or misaligned bearings can cause significant noise levels. Rotating parts of a total system can create air disturbances, thus generating noise. A weak structural design could flex under the load and cause misalignment and affect components in the drive system, thereby creating noise. Consideration should also be given to assuring that the total system has not been designed to act as an echo chamber, thus amplifying an otherwise insignificant noise.

It becomes obvious there are many sources for noise in most applications. The study and understanding of noise analysis is a complex and controversial issue. It should be apparent to the designer that noise problems require very careful and thorough examinations. If belt drive noise is a problem, contact Gates Power Transmission Product Application for further assistance.

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, belt tracking may be more difficult to control. Check to be sure that the belt tracks completely on both sprockets. Special attention should be given to proper drive alignment, and both sprockets may require flanging on both sides. (See Engineering Section II-10, Drive Alignment on Page 108.)

3. On vertical shaft drives, one sprocket should be flanged on both sides, and all remaining sprockets in the system may require flanging on the bottom side only if the belt does not track correctly on the sprockets.

4. On drives with more than two sprockets, the recommended flanging requirements are two flanges on every other sprocket, or one flange on every sprocket—on alternating sides.

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 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. Molding processes do not generally have the capability of maintaining the necessary accuracy.

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 to review the application.

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. For inside idlers, grooved sprockets are recommended up to 40 grooves. On larger diameters, flat uncrowned idlers may be used. 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.

Based upon both laboratory testing and field experience, backside idler applications using PolyChain GT2 belts perform best with operating speeds up to 500 rpm. Higher operating speeds may be considered, particularly with 8mm pitch drive systems.

Backside idlers should be flat and uncrowned, and sized as follows:

8mm Pitch: 3" O.D. Minimum
14mm Pitch: 6-1/2" O.D. Minimum

Idler sizes smaller than this may result in excessive tensile fatigue resulting in premature belt failures

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 startup and operation.

In most cases, use of spring-loaded idlers is not recommended on positive belt applications. This stems from the fact that a synchronous belt can generate sufficient tension to overcome any reasonable force imposed by a spring-loaded idler (See Engineering Section II-14, Self Generated Tension on Page 110). The belt may ratchet in this situation because the idler has not maintained sufficient belt tension on the slack side span. Any spring force sufficient to resist being overcome by belt span tensions may be excessive and could significantly reduce belt life. Exceptions include lightly loaded applications.

13. 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 8

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

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 6 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.

14. 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 -65° and 185°F (-54° and 85°C). Temperature extremes beyond these limits should be reviewed by Gates Power Transmission Product Application.

Chemical Resistance
Based on lab and field testing, PolyChain GT2 belts provide excellent resistance to most chemicals, including some acids, alkalis and petroleum distillates. Actual performance characteristics will be determined by the degree of concentration of the chemical, the time of exposure and the type of exposure (drip, splash, immersion, etc.). In addition to possible belt degradation, these chemicals can act as a lubricant in the drive system. As with any positive belt drive, PolyChain GT2 drives which run where excessive lubrication is present have an increased tendency to ratchet (See Engineering Section II-14, Self Generated Tension on Page 110). Special attention should be given to assure that recommended tension is maintained (See Engineering Section II-8, Belt Installation Tension on Page 106).

High Humidity
Many industrial applications face the problems of rusting parts. 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, which in the most severe cases may lead to premature wear.

In these instances the designer may elect to use special stainless steel sprockets or a more economical choice such as nickel coating. A 0.001" thick coating of electroless nickel can, in many instances, dramatically slow down the effects of rusting.

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

Synchronous belts should be protected from moisture, temperature extremes, direct sunlight and high ozone environments. Each belt should be stored in its original package, avoiding any sharp bends or crimping which will cause damage. When properly stored, Gates synchronous belts should easily meet the criteria covered in RMA Bulletin IP-3-4 (eight years' storage with no reduced performance).

2. Center Distance and Belt Length

The approximate relationship between a center distance and belt pitch length is given by the following formula:

Formula 9

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

Where: L_p = 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 10

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

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

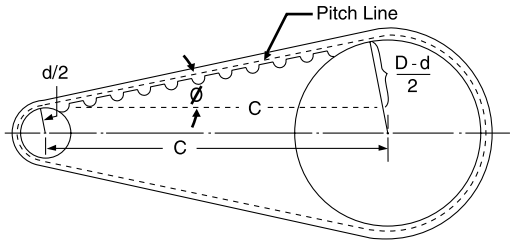
$$\varphi = \sin^{-1}\left(\frac{D - d}{2C}\right) \text{ degrees}$$

The approximate center distance can be found by this formula:

Formula 11

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

Where: $K = 4L_p - 6.28 (D + d)$



The exact center distance can be calculated using an iterative process between the center distance (Formula 11) and belt length (Formula 10) 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 new 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 Figure 4.

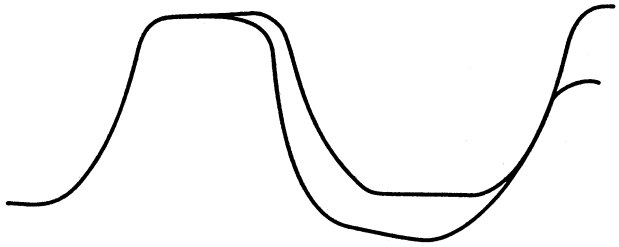


Figure 4

4. Static Conductivity

All belts, whether made from rubber or urethane, naturally build up an electric charge while in operation. While the likelihood that an electrical discharge from a belt could actually cause a detonation continues to be a point of speculation, lower humidity levels around 15% are known to result in significantly stronger electrical charges than higher humidity levels around 60% or more. Thus, greater precautions should be taken for belt drive systems operating in low humidity, or dry, environments.

Power transmission belts produced in a conductive construction have traditionally been considered to be relatively safe for explosive environments. Conductive belts continuously dissipate their electrical charge into the ferrous sprockets or sheaves on which they operate. The test procedure described in RMA Bulletin IP-3-3/1995 provides a measurable standard of belt conductivity to ensure that electrical charges from power transmission belts are safely dissipated into the belt drive hardware. It is important to note that this test procedure applies only to new belts.

PolyChain GT2 belts do not meet the static conductivity requirements specified in RMA Bulletin IP-3-3/1995. This is also true for most rubber synchronous drive belts unless specially ordered from the manufacturer to meet this requirement. Though rubber power transmission belts can be produced in a conductive construction, it is important to understand that belt conductivity properties are known to decay over time with belt usage. In addition, power transmission belts that do not meet the RMA IP-3-3 standard are widely available. A conductive power transmission belt used in an explosive environment could inadvertently be replaced with an unsafe belt, creating a potential safety hazard.

Testing confirms that under normal dynamic operating conditions, PolyChain GT2 belts generate a minimal static charge. 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 on pages 62 through 65, and pages 94 through 96 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.

6. Efficiency

When properly designed and applied, PolyChain GT2 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:

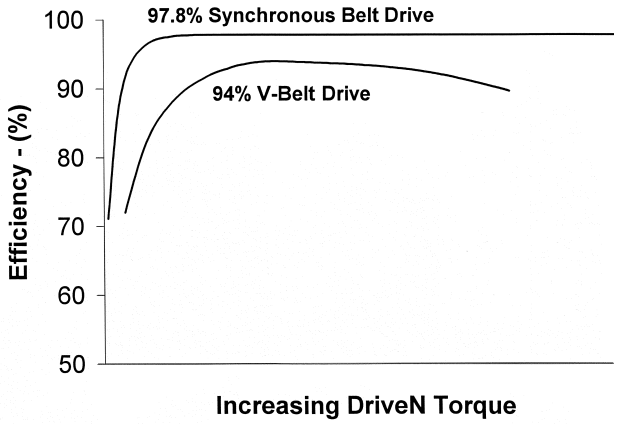
$$\text{Efficiency, percent} = \frac{\text{DN RPM} \times \text{DN Torque}}{\text{DR RPM} \times \text{DR Torque}} \times 100$$

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.



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

Stock Belt Width Tolerances

Belt Pitch	Standard Belt Width (mm) (in)	Belt Width Tolerances (mm) (in)
8mm	12 **0.47**	± 0.61 **.024**
	21 **.083**	± 0.63 **.025**
	36 **1.42**	± 1.08 **0.43**
	62 **2.44**	± 1.86 **0.73**
14mm	20 **0.79**	± 0.060 **0.024**
	37 **1.46**	± 1.11 **0.044**
	68 **2.68**	± 2.04 **0.080**
	90 **3.54**	± 2.70 **0.106**
	125 **4.92**	± 3.75 **0.148**

8. Belt Installation Tension

Standard Belt Tensioning Procedure

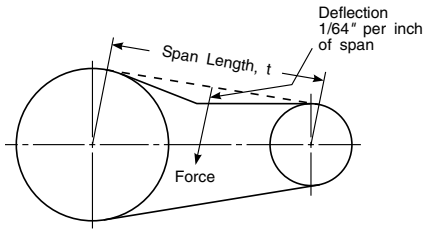
When installing a Gates PolyChain GT2 belt:

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.

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

Measure the force (lb) required to deflect one belt span a given amount, as shown in the sketch below.



STEP 1: Calculate the required base static installation tension.

Use Formula 12 to calculate the required base static installation tension.

Formula 12

$$T_{st} = \frac{17.4DHP}{S} + mS^2 \text{ , pounds}$$

Where: DHP = Design Horsepower

$$S = \frac{PD \times RPM}{3820}$$

m = Value from Table 10

PD = Sprocket Pitch Diameter, inches

RPM = Sprocket Speed

Table 10

Pitch	Belt Width	m	Y	Minimum T_{st} (lb) per span
8mm	12mm	0.33	43.83	28
	21mm	0.57	76.70	49
	36mm	0.97	131.49	84
	62mm	1.68	226.45	145
14mm	20mm	0.92	134.57	119
	37mm	1.69	248.95	220
	68mm	3.11	457.52	405
	90mm	4.12	605.55	536
	125mm	5.72	841.04	744

Because of the high performance capabilities of PolyChain GT2 belts, it is possible to design drives that have significantly greater load capacity than are necessary to carry the actual design load. Consequently, Formula 12 can provide T_{st} 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 T_{st} values are provided in Table 10 to assure that the PolyChain GT2 belts are tensioned properly when lightly loaded.

Always use the greater T_{st} value; i.e., from T_{st} Formula 12 or Table 10.

NOTE:
When applying static belt tension values directly, multiply the required base static installation tension calculated in Formula 12 by the following factors:

For New Belts:

Minimum Static Tension = Base Static Tension x 1.4

Maximum Static Tension = Base Static Tension x 1.5

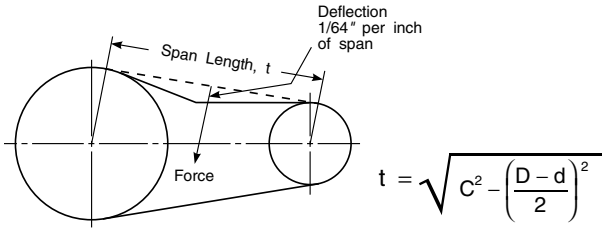
For Used Belts:

Minimum Static Tension = Base Static Tension x 1.2

Maximum Static Tension = Base Static Tension x 1.3

STEP 2: Calculate the minimum and maximum recommended deflection forces.

A. Measure the span length of your drive (see sketch).



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

Where: C = center distance, inches

D = pitch diameter of large sprocket, inches

d = pitch diameter of small sprocket, inches

B. Minimum recommended force :

Formula 13

$$\text{deflection force, Min.} = \frac{1.4\,T_{st} + \left(\frac{t}{L}\right)Y}{16} \text{ , } lb_f$$

C. Maximum recommended force :

Formula 14

$$\text{deflection force, Max.} = \frac{1.5\,T_{st} + \left(\frac{t}{L}\right)Y}{16} \text{ , } lb_f$$

Where: T_{st} = Base Static tension, lb_f

t = span length, inches

L = belt pitch length, inches

Y= constant from Table 10

NOTE: For re-installation of a used belt, a recommended tension of 1.2 Tst to 1.3 Tst value should be used in calculating the deflection forces.

STEP 3: Applying the tension.

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.

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.

9. Center Distance Allowances for Installation and Tensioning

Since fixed center drives are not recommended, center distance allowances for a Gates PolyChain GT2 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

Belt Length (mm) (in)	Standard Installation Allowance (Flanged Sprockets Removed For Installation) (mm) (in)	Tensioning Allowance (All Drives) (mm) (in)
Up to 125 / 5	0.5 / 0.02	0.5 / 0.02
Over 125 to 250 / 5 to 10	0.8 / 0.03	0.8 / 0.03
Over 250 to 500 / 10 to 20	1.0 / 0.04	0.8 / 0.03
Over 500 to 1000 / 20 to 40	1.8 / 0.07	0.8 / 0.03
Over 1000 to 1780 / 40 to 70	2.8 / 0.10	0.8 / 0.04
Over 1780 to 2540 / 70 to 100	3.3 / 0.13	1.0 / 0.04
Over 2540 to 3300 / 100 to 130	4.1 / 0.16	1.3 / 0.05
Over 3300 to 4600 / 130 to 180	4.8 / 0.19	1.3 / 0.05
Over 4600 to 6900 / 180 to 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 Figure 1). 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 tool. The 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 taken into account.

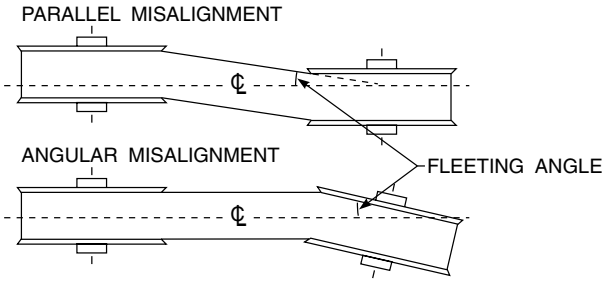


Figure 5

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.

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 15

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

Formula 16

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

Where: DHP = Horsepower x Service Factor (hp)
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 Figure 6. T_T and T_S vectors are drawn to a convenient scale and parallel to the tightside and slackside, respectively. Figure 6 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 Figure 3, 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.

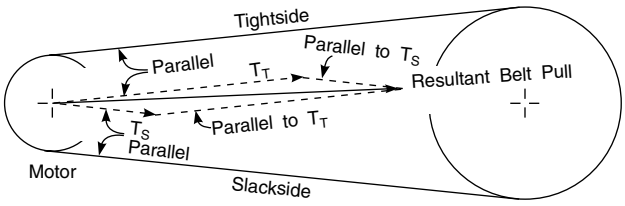


Figure 6

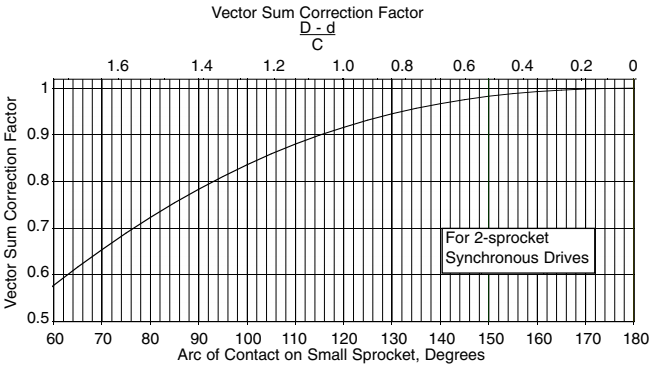


Figure 7

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 Section 12 on this page. 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.

A. Overhung Sprocket

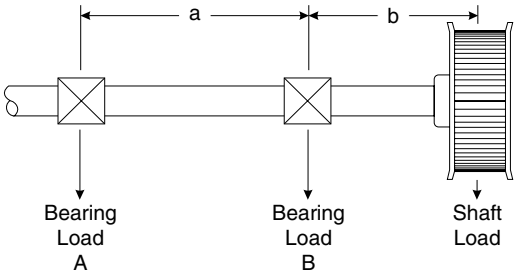


Figure 8

Formula 17

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

Formula 18

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

Where: a and b = spacing, (in), per Figure 1

B. Sprocket Between Bearings

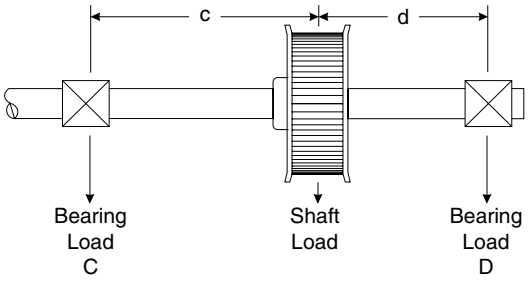


Figure 9

Formula 19

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

Formula 20

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

Where: c and d = spacing (in), per Figure 2

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 is 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.

Properly designed and tensioned drives will not be significantly affected by self-generated tension. While belt overtensioning can impose higher bearing and shaft loads and lead to reduced belt life, undertensioning can result in self-tensioning.

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, the 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.

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®2 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 GT2 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	Redesign drive for increased capacity
	Less than 6 teeth-in-mesh	Redesign drive
	Extreme sprocket runout	Replace sprocket
	Worn sprocket	Replace sprocket
	Backside idler	Use inside idler
	Incorrect belt profile for the sprocket (i.e., HTD®, etc.)	Use proper Gates Poly Chain® GT®2 belt/sprocket
	Misaligned drive	Correct alignment
	Belt undertensioned	Adjust tension to recommended value
Tensile break	Excessive shock load	Redesign drive for increased capacity
	Subminimal diameter	Redesign drive using larger diameters
	Improper belt handling and storage prior to installation	Follow proper handling and storage procedures
	Debris or foreign object in drive	Protect drive
	Extreme sprocket runout	Replace sprocket
	Sprocket has too little wear resistance (i.e., plastic, aluminum, softer metals)	Use alternate sprocket material
		Unusual sprocket wear
Belt cracking	Backside idler	Use inside idler
	Extreme low temperature startup	Preheat drive environment
	Extended exposure to harsh chemicals	Protect drive
	Cocked bushing/sprocket assembly	Install bushing per instructions
	Misaligned drive	Correct alignment
	Too low or too high belt tension	Adjust tension to recommended value
Excessive temperature (belt, bearing, housing, shafts, etc.)	Incorrect belt profile (i.e. HTD, etc.)	Use proper Gates Poly Chain GT2 belt/sprocket
	Incorrect belt profile for the sprocket (i.e. HTD, etc.)	Use proper Gates Poly Chain GT2 belt/sprocket
Vibration	Too low or too high belt tension	Adjust tension to recommended value
	Bushing or key loose	Check and reinstall per instructions

Standard Calculations

Required	Given	Formula
Speed ratio (R)	Shaft speeds (rpm)	$R = \frac{\text{rpm (faster shaft speed)}}{\text{rpm (slower shaft speed)}}$
	Pulley diameter (D & d)	$R = \frac{\text{D (larger pulley diameter)}}{\text{d (smaller pulley diameter)}}$
	Number of pulley grooves (N & n)	$R = \frac{\text{N (larger pulley groove no.)}}{\text{n (smaller pulley groove no.)}}$
Horsepower (hp) (33,000 lb-ft/min)	Torque (T) in lb-in Shaft speed (rpm)	$hp = \frac{T \times rpm}{63{,}025}$
	Effective tension (Te) in lb. Belt velocity in fpm	$hp = \frac{Te \times V}{33{,}000}$
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)	$T = \frac{63{,}025 \times hp}{rpm}$
	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	$V = \frac{pd \times rpm}{3.82}$
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	$PL = 2C + [1.57 \times (D + d)] + \frac{(D-d)^2}{(4C)}$
Arc of contact on smaller pulley (A/Cs)	Pulley diameters (D & d) in inches Center distance (C) in inches	$A/Cs = 180 - \left[\frac{(D-d) \times 60}{4C}\right]$
Torque (T) due to flywheel effect (WR^2) in lb-inches (accel. and/or decel.)	Final speed (RPM) Initial speed (rpm) Flywheel effect (WR2) in lb-ft^2 Time (t) in seconds	$T = \frac{.039 \times (RPM - rpm) \times WR^2}{t}$
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	$WR^2 = \frac{F \times Z \times (D^4 - d^4)}{1467}$

Useful Formulas and Calculations

Power Transmission Conversions

FORCE CONVERSION CONSTANTS

Metric to U.S.
Newtons × 3.5969 = Ounces$_f$
Newtons × 0.2248 = Pounds$_f$
Kilograms$_f$ × 2.2046 = Pounds$_f$

U.S. to Metric
Ounces$_f$ × 0.2780 = Newtons
Pounds$_f$ × 4.4482 = Newtons
Pounds$_f$ × 0.4536 = Kilograms$_f$

Metric to Metric
Kilograms$_f$ × 9.8067 = Newtons
Newtons × 0.1020 = Kilograms$_f$

TORQUE CONVERSION CONSTANTS

Metric to U.S.
Newton Meters × 141.6119 = Ounce$_f$ Inches
Newton Meters × 8.8508 = Pound$_f$ Inches
Newton Meters × 0.7376 = Pound$_f$ Feet

Metric to Metric
Newton Meters × 10.1972 = Kilogram$_f$ Centimeters
Kilogram$_f$ Centimeters × 0.0981 = Newton Meters
Newton Meters × 0.1020 = Kilogram$_f$ Meters
Kilogram$_f$ Meters × 9.8067 = Newton Meters

U.S. to Metric
Ounce$_f$ Inches × 0.0071 = Newton Meters
Pound$_f$ Inches × 0.1130 = Newton Meters
Pound$_f$ Feet × 1.3558 = Newton Meters

POWER CONVERSION CONSTANTS

Metric to U.S.
Kilowatt × 1.3410 = Horsepower
Watt × 0.0013 = Horsepower

U.S. to Metric
Horsepower × 745.6999 = Watt
Horsepower × 0.7457 = Kilowatt

LINEAR BELT SPEED CONVERSION CONSTANTS

Metric to U.S.
Meters per second × 196.8504 = Feet per Minute

U.S. to Metric
Feet per Minute × 0.005080 = Meters per Second
Square Miles × 2.5900 = Square Kilometers

U.S. to U.S.
Feet per Second × 60.00 = Feet per Minute
Feet per Minute × 0.0167 = Feet per Second

Other Conversions

LENGTH CONVERSION CONSTANTS

Metric to U.S.
Millimeters × 0.0394 = Inches
Meters × 39.3701 = Inches
Meters × 3.2808 = Feet
Meters × 1.0936 = Yards
Kilometers × 3280.84 = Feet
Kilometers × 0.6214 = Statute Miles
Kilometers × 0.5396 = Nautical Miles

U.S. to Metric
Inches × 25.4000 = Millimeters
Inches × 0.0254 = Meters
Feet × 0.3048 = Meters
Yards × 0.9144 = Meters
Feet × 0.0003048 = Kilometers
Statute Miles × 1.6093 = Kilometers
Nautical Miles × 1.8532 = Kilometers

AREA CONVERSION CONSTANTS

Metric to U.S.
Square Millimeters × 0.0016 = Square Inches
Square Centimeters × 0.1550 = Square Inches
Square Meters × 10.7639 = Square Feet
Square Meters × 1.1960 = Square Yards
Hectares × 2.4711 = Acres
Square Kilometers × 247.105 = Acres
Square Kilometers × 0.3861 = Square Miles

U.S. to Metric
Square Inches × 645.160 = Square Millimeters
Square Inches × 6.4516 = Square Centimeters
Square Feet × 0.0929 = Square Meters
Square Yards × 0.8361 = Square Meters
Acres × 0.4047 = Hectares
Acres × 0.004047 = Square Kilometers
Square Miles × 2.5900 = Square Kilometers

Useful Formulas and Calculations

Other Conversions — continued

WEIGHT CONVERSION CONSTANTS

Metric to U.S.

Grams × 15.4324 = Grains
Grams × 0.0353 = Ounces (Avd.)
Grams × 0.0338 = Fluid Ounces (water)
Kilograms × 35.2740 = Ounces (Avd.)
Kilograms × 2.2046 = Pounds (Avd.)
Metric Tons (1000 Kg) × 1.1023 = Net Ton (2000 lbs.)
Metric Tons (1000 Kg) × 0.9842 = Gross Ton (2240 lbs.)

U.S. to Metric

Grains × 0.0648 = Grams
Ounces (Avd.) × 28.3495 = Grams
Fluid Ounces (water) × 29.5735 = Grams
Ounces (Avd.) × 0.0283 = Kilograms
Pounds (Avd.) × 0.4536 = Kilograms
Net Ton (2000 lbs.) × 0.9072 = Metric Tons (1000 Kg)
Gross Ton (2240 lbs.) × 1.0160 = Metric Tons 10(00 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	1.191	35/64	.546875	13.891
1/16	.0625	1.588	9/16	.5625	14.288
5/64	.078125	1.984	37/64	.578125	14.684
3/32	.09375	2.381	19/32	.59375	15.081
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	6.747	49/64	.765625	19.447
9/32	.28125	7.144	25/32	.78125	19.844
19/64	.296875	7.541	51/64	.796875	20.241
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® 2	8mm, 14mm	Poly Chain® GT® 2 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® GT® Long Length Belting	8mm,14mm	PowerGrip GT2 Belt Drive Design Manual 17195
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 HTD	PowerGrip GT2 Belt Drive Design Manual 17195
PowerGrip® GT® Long Length Belting	2mm, 3mm, 5mm, 8mm PowerGrip GT	PowerGrip GT2 Belt Drive Design Manual 17195
Synchro-Power Polyurethane Long Length Belting	T5, T10, T20, AT5, AT10, AT20, XL, L, H, XH, 5mm, 8mm, 14mm HTD	PowerGrip GT2 Belt Drive Design Manual 17195
Twin Power®	XL, L, H PowerGrip Timing, 8mm, 14mm PowerGrip GT2	PowerGrip GT2 Belt Drive Design Manual 17195

Synchronous Belt Product Listing

8mm Pitch Poly Chain® GT®2 and Short-Length Poly Chain GT Belts

8M and 8MGT Stock Belt Lengths

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
8M-248	248	9.77	31
8M-288	288	11.34	36
8M-352	352	13.86	44
8M-416	416	16.38	52
8M-456	456	17.96	57
8M-480	480	18.90	60
8M-544	544	21.42	68
8M-608	608	23.94	76
8MGT-640	640	25.20	80
8MGT-720	720	28.35	90
8MGT-800	800	31.50	100
8MGT-896	896	35.28	112
8MGT-1000	1000	39.38	125
8MGT-1120	1120	44.10	140

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
8MGT-1200	1200	47.25	150
8MGT-1280	1280	50.40	160
8MGT-1440	1440	56.70	180
8MGT-1600	1600	63.00	200
8MGT-1792	1792	70.56	224
8MGT-2000	2000	78.75	250
8MGT-2240	2240	88.20	280
8MGT-2400	2400	94.50	300
8MGT-2520	2520	99.23	315
8MGT-2840	2840	111.83	355
8MGT-3200	3200	126.00	400
8MGT-3600	3600	141.75	450
8MGT-4000	4000	157.50	500
8MGT-4480	4480	176.40	560

8M Short Length Stock Belt Widths

Belt Width Code	Belt Width (mm)	Belt Width (in)
12	12	0.472
21	21	0.827
36	36	1.417

8MGT Stock Belt Widths

Belt Width Code	Belt Width (mm)	Belt Width (in)
12	12	0.472
21	21	0.827
36	36	1.417
62	62	2.441

14mm Pitch Poly Chain GT2 Belts

14MGT Stock Belt Lengths

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
14MGT-994	994	39.13	71
14MGT-1120	1120	44.09	80
14MGT-1190	1190	46.85	85
14MGT-1260	1260	49.60	90
14MGT-1400	1400	55.11	100
14MGT-1568	1568	61.73	112
14MGT-1750	1750	68.89	125
14MGT-1890	1890	74.40	135
14MGT-1960	1960	77.16	140
14MGT-2100	2100	82.67	150
14MGT-2240	2240	88.18	160

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
14MGT-2380	2380	93.69	170
14MGT-2520	2520	99.20	180
14MGT-2660	2660	104.71	190
14MGT-2800	2800	110.23	200
14MGT-3136	3136	123.45	224
14MGT-3304	3304	130.07	236
14MGT-3500	3500	137.78	250
14MGT-3920	3920	154.32	280
14MGT-4410	4410	173.60	315

14MGT Stock Belt Widths

Belt Width Code	Belt Width (mm)	Belt Width (in)
20	20	0.787
37	37	1.457
68	68	2.677
90	90	3.543
125	125	4.921

2mm Pitch PowerGrip® GT®2 Belts

2MR Stock Belt Lengths

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
2MR-100	100	3.94	50
2MR-112	112	4.41	56
2MR-126	126	4.96	63
2MR-134	134	5.28	67
2MR-136	136	5.35	68
2MR-140	140	5.51	70
2MR-152	152	5.98	76
2MR-158	158	6.22	79
2MR-160	160	6.30	80
2MR-164	164	6.46	82
2MR-166	166	6.54	83
2MR-168	168	6.61	84
2MR-172	172	6.77	86
2MR-180	180	7.09	90
2MR-192	192	7.56	96
2MR-200	200	7.87	100
2MR-202	202	7.95	101
2MR-210	210	8.27	105
2MR-212	212	8.35	106
2MR-216	216	8.50	108
2MR-220	220	8.66	110
2MR-232	232	9.13	116
2MR-236	236	9.29	118
2MR-240	240	9.45	120
2MR-250	250	9.84	125
2MR-252	252	9.92	126
2MR-258	258	10.16	129

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
2MR-278	278	10.94	139
2MR-280	280	11.02	140
2MR-300	300	11.81	150
2MR-320	320	12.60	160
2MR-322	322	12.68	161
2MR-346	346	13.62	173
2MR-350	350	13.78	175
2MR-364	364	14.33	182
2MR-370	370	14.57	185
2MR-380	380	14.96	190
2MR-386	386	15.20	193
2MR-400	400	15.75	200
2MR-406	406	15.98	203
2MR-420	420	16.54	210
2MR-456	456	17.95	228
2MR-470	470	18.50	235
2MR-474	474	18.66	237
2MR-488	488	19.21	244
2MR-504	504	19.84	252
2MR-528	528	20.79	264
2MR-552	552	21.73	276
2MR-576	576	22.68	288
2MR-600	600	23.62	300
2MR-640	640	25.20	320
2MR-696	696	27.40	348
2MR-744	744	29.29	372
2MR-1164	1164	45.83	582

2MR Stock Belt Widths

Belt Width Code	Belt Width (mm)	Belt Width (in)
04	4	0.157
06	6	0.236
09	9	0.354

3mm Pitch PowerGrip GT2 Belts

3MR Stock Belt Lengths

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
3MR-165	165	6.50	55
3MR-189	189	7.44	63
3MR-201	201	7.91	67
3MR-219	219	8.62	73
3MR-225	225	8.86	75
3MR-240	240	9.45	80
3MR-243	243	9.57	81
3MR-267	267	10.51	89
3MR-282	282	11.10	94
3MR-291	291	11.46	97
3MR-300	300	11.81	100
3MR-339	339	13.35	113
3MR-348	348	13.70	116
3MR-357	357	14.06	119
3MR-360	360	14.17	120
3MR-375	375	14.76	125
3MR-420	420	16.54	140

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
3MR-447	447	17.60	149
3MR-450	450	17.72	150
3MR-474	474	18.66	158
3MR-480	480	18.90	160
3MR-483	483	19.02	161
3MR-489	489	19.25	163
3MR-537	537	21.14	179
3MR-600	600	23.62	200
3MR-630	630	24.80	210
3MR-684	684	26.93	228
3MR-750	750	29.53	250
3MR-840	840	33.07	280
3MR-945	945	37.20	315
3MR-1050	1050	41.34	350
3MR-1080	1080	42.52	360
3MR-1536	1536	60.47	512
3MR-2061	2062	81.18	687

3MR Stock Belt Widths

Belt Width Code	Belt Width (mm)	Belt Width (in)
06	6	0.236
09	9	0.354
15	15	0.591

5mm Pitch PowerGrip® GT®2 Belts

5MR Stock Belt Lengths

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
5MR-300	300	11.81	60
5MR-355	355	13.98	71
5MR-375	375	14.76	75
5MR-400	400	15.75	80
5MR-405	405	15.94	81
5MR-425	425	16.73	85
5MR-450	450	17.72	90
5MR-500	500	19.69	100
5MR-535	535	21.06	107
5MR-565	565	22.24	113
5MR-580	580	22.83	116
5MR-600	600	23.62	120
5MR-625	625	24.61	125

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
5MR-650	650	25.59	130
5MR-700	700	27.56	140
5MR-750	750	29.53	150
5MR-800	800	31.50	160
5MR-850	850	33.46	170
5MR-900	900	35.43	180
5MR-1000	1000	39.37	200
5MR-1150	1150	45.28	230
5MR-1300	1300	51.18	260
5MR-1450	1450	57.09	290
5MR-1600	1600	62.99	320
5MR-1720	1720	67.72	344
5MR-2100	2100	82.67	420

5MR Stock Belt Widths

Belt Width Code	Belt Width (mm)	Belt Width (in)
09	9	0.354
15	15	0.591
25	25	0.984

8mm Pitch PowerGrip GT2 Belts

8MGT Stock Belt Lengths

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
384-8MGT	384	15.12	48
480-8MGT	480	18.89	60
560-8MGT	560	22.05	70
600-8MGT	600	23.62	75
640-8MGT	640	25.20	80
720-8MGT	720	28.35	90
800-8MGT	800	31.50	100
840-8MGT	840	33.07	105
880-8MGT	880	34.65	110
920-8MGT	920	36.22	115
960-8MGT	960	37.80	120
1040-8MGT	1040	40.94	130
1064-8MGT	1064	41.89	133
1120-8MGT	1120	44.09	140
1160-8MGT	1164	45.67	145
1200-8MGT	1200	47.24	150
1224-8MGT	1224	48.19	153

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
1280-8MGT	1280	50.39	160
1440-8MGT	1440	56.69	180
1512-8MGT	1512	59.53	189
1584-8MGT	1584	62.36	198
1600-8MGT	1600	62.99	200
1760-8MGT	1760	69.29	220
1800-8MGT	1800	70.87	225
2000-8MGT	2000	78.74	250
2200-8MGT	2200	86.61	275
2400-8MGT	2400	94.49	300
2600-8MGT	2600	102.36	325
2800-8MGT	2800	110.24	350
3048-8MGT	3048	120.00	381
3280-8MGT	3280	129.13	410
3600-8MGT	3600	141.73	450
4400-8MGT	4400	173.23	550

8MGT Stock Belt Widths

Belt Width Code	Belt Width (mm)	Belt Width (in)
20	20	0.787
30	30	1.181
50	50	1.969
85	85	3.346

Refer to the Industrial Power Transmission Products catalog, 19993, for a listing of 8mm and 14mm pitch PowerGrip GT belts for replacement use on existing PowerGrip GT or HTD drives.

14mm Pitch PowerGrip® GT®2 Belts

14MGT Stock Belt Lengths

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
966-14MGT	966	38.03	69
1190-14MGT	1190	46.85	85
1400-14MGT	1400	55.12	100
1610-14MGT	1610	63.39	115
1778-14MGT	1778	70.00	127
1890-14MGT	1890	74.41	135
2100-14MGT	2100	82.63	150
2310-14MGT	2310	90.94	165
2450-14MGT	2450	96.46	175
2590-14MGT	2590	101.97	185
2800-14MGT	2800	110.24	200
3150-14MGT	3150	124.02	225

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
3360-14MGT	3360	132.28	240
3500-14MGT	3500	137.80	250
3850-14MGT	3850	151.57	275
4326-14MGT	4326	170.32	309
4578-14MGT	4578	180.24	327
4956-14MGT	4956	195.12	354
5320-14MGT	5320	209.45	380
5740-14MGT	5740	225.98	410
6160-14MGT	6160	242.52	440
6860-14MGT	6860	270.08	490

14MGT Stock Belt Widths

Belt Width Code	Belt Width (mm)	Belt Width (in)
40	40	1.575
55	55	2.165
85	85	3.346
115	115	4.528
170	170	6.693

Refer to the Industrial Power Transmission Products catalog, 19993, for a listing of 8mm and 14mm pitch PowerGrip GT belts for replacement use on existing PowerGrip GT or HTD drives.

20mm Pitch PowerGrip GT2 Belts

20M Stock Belt Lengths

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
2000-20M	2000	78.74	100
2500-20M	2500	98.43	125
3400-20M	3400	133.86	170
3800-20M	3800	149.61	190
4200-20M	4200	165.35	210
4600-20M	4600	181.10	230
5000-20M	5000	196.85	250
5200-20M	5200	204.72	260
5400-20M	5400	212.60	270

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
5600-20M	5600	220.47	280
5800-20M	5800	228.35	290
6000-20M	6000	236.22	300
6200-20M	6200	244.09	310
6400-20M	6400	251.97	320
6600-20M	6600	259.84	330

20M Stock Belt Widths

Belt Width Code	Belt Width (mm)	Belt Width (in)
115	115	4.528
170	170	6.693
230	230	9.055
290	290	11.417
340	340	13.386

3mm Pitch PowerGrip® HTD® Belts

3M Stock Belt Lengths

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
150-3M	150	5.91	50
159-3M	159	6.26	53
168-3M	168	6.61	56
177-3M	177	6.97	59
189-3M	189	7.44	63
201-3M	201	7.91	67
213-3M	213	8.39	71
225-3M	225	8.86	75
240-3M	240	9.45	80
252-3M	252	9.92	84
255-3M	255	10.04	85
267-3M	267	10.51	89
285-3M	285	11.22	95
300-3M	300	11.81	100
312-3M	312	12.28	104
318-3M	318	12.52	106
339-3M	339	13.35	113
357-3M	357	14.06	119
363-3M	363	14.29	121
384-3M	384	15.12	128
390-3M	390	15.35	130
399-3M	399	15.71	133
420-3M	420	16.54	140

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
447-3M	447	17.60	149
474-3M	474	18.66	158
486-3M	486	19.13	162
501-3M	501	19.72	167
513-3M	513	20.20	171
531-3M	531	20.91	177
564-3M	564	22.20	188
597-3M	597	23.50	199
633-3M	633	24.92	211
669-3M	669	26.34	223
711-3M	711	27.99	237
753-3M	753	29.65	251
795-3M	795	31.30	265
843-3M	843	33.19	281
882-3M	882	34.72	294
945-3M	945	37.20	315
1002-3M	1002	39.45	334
1062-3M	1062	41.81	354
1125-3M	1125	44.29	375
1191-3M	1191	46.89	397
1263-3M	1263	49.72	421

3M HTD Stock Belt Widths

Belt Width Code	Belt Width (mm)	Belt Width (in)
06	6	0.236
09	9	0.354
15	15	0.591

5mm Pitch PowerGrip HTD Belts

5M Stock Belt Lengths

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
350-5M	350	13.78	70
375-5M	375	14.76	75
400-5M	400	15.75	80
425-5M	425	16.73	85
450-5M	450	17.72	90
475-5M	475	18.70	95
500-5M	500	19.69	100
535-5M	535	21.06	107
565-5M	565	22.24	113
600-5M	600	23.62	120
635-5M	635	25.00	127
670-5M	670	26.38	134
710-5M	710	27.95	142
740-5M	740	29.13	148
800-5M	800	31.50	160
850-5M	850	33.46	170

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
890-5M	890	35.04	178
950-5M	950	37.40	190
1000-5M	1000	39.37	200
1050-5M	1050	41.34	210
1125-5M	1125	44.29	225
1195-5M	1195	47.05	239
1270-5M	1270	50.00	254
1420-5M	1420	55.91	284
1595-5M	1595	62.80	319
1690-5M	1690	66.54	338
1790-5M	1790	70.47	358
1895-5M	1895	74.61	379
2000-5M	2000	78.74	400
2250-5M	2250	88.58	450
2525-5M	2525	99.40	505

5M HTD Stock Belt Widths

Belt Width Code	Belt Width (mm)	Belt Width (in)
09	9	0.354
15	15	0.591
25	25	0.984

MXL Pitch PowerGrip® Timing Belts

MXL Stock Belt Lengths

Part No.	Pitch Length (in)	No. of Teeth
36MXL	3.60	45
40MXL	4.00	50
44MXL	4.40	55
48MXL	4.80	60
56MXL	5.60	70
64MXL	6.40	80
68MXL	6.80	85
72MXL	7.20	90
76MXL	7.60	95
80MXL	8.00	100
88MXL	8.80	110
96MXL	9.60	120
104MXL	10.40	130

Part No.	Pitch Length (in)	No. of Teeth
112MXL	11.20	140
120MXL	12.00	150
132MXL	13.20	165
140MXL	14.00	175
152MXL	15.20	190
160MXL	16.00	200
168MXL	16.80	210
180MXL	18.00	225
200MXL	20.00	250
208MXL	20.80	260
236MXL	23.60	295
240MXL	24.00	300
320MXL	32.00	400

MXL Stock Belt Widths

Belt Width Code	Belt Width (in)
012	0.125
019	0.188
025	0.250

XL Pitch PowerGrip Timing Belts

XL Stock Belt Lengths

Part No.	Pitch Length (in)	No. of Teeth
50XL	5.00	25
60XL	6.00	30
70XL	7.00	35
80XL	8.00	40
90XL	9.00	45
100XL	10.00	50
110XL	11.00	55
120XL	12.00	60
130XL	13.00	65
140XL	14.00	70
150XL	15.00	75
160XL	16.00	80
170XL	17.00	85
180XL	18.00	90
190XL	19.00	95
200XL	20.00	100
210XL	21.00	105
220XL	22.00	110
230XL	23.00	115
240XL	24.00	120
250XL	25.00	125

Part No.	Pitch Length (in)	No. of Teeth
260XL	26.00	130
280XL	28.00	140
290XL	29.00	145
300XL	30.00	150
310XL	31.00	155
330XL	33.00	165
340XL	34.00	170
350XL	35.00	175
370XL	37.00	185
380XL	38.00	190
390XL	39.00	195
400XL	40.00	200
420XL	42.00	210
450XL	45.00	225
460XL	46.00	230
480XL	48.00	240
500XL	50.00	250
570XL	57.00	285
630XL	63.00	315
770XL	77.00	385

XL Stock Belt Widths

Belt Width Code	Belt Width (in)
025	0.250
037	0.375

L Pitch PowerGrip® Timing Belts

L Stock Belt Lengths

Part No.	Pitch Length (in)	No. of Teeth
124L	12.38	33
135L	13.50	36
150L	15.00	40
165L	16.50	44
187L	18.75	50
195L	19.50	52
210L	21.00	56
225L	22.50	60
240L	24.00	64
255L	25.50	68
270L	27.00	72
285L	28.50	76
300L	30.00	80
315L	31.50	84

Part No.	Pitch Length (in)	No. of Teeth
322L	32.25	86
345L	34.50	92
367L	36.75	98
390L	39.00	104
420L	42.00	112
450L	45.00	120
480L	48.00	128
510L	51.00	136
540L	54.00	144
600L	60.00	160
660L	66.00	176
817L	81.75	218
900L	90.00	240

L Stock Belt Widths

Belt Width Code	Belt Width (in)
050	0.500
075	0.750
100	1.000

H Pitch PowerGrip Timing Belts

H Stock Belt Lengths

Part No.	Pitch Length	No. of Teeth
210H	21.00	42
220H	22.00	44
230H	23.00	46
240H	24.00	48
270H	27.00	54
300H	30.00	60
320H	32.00	64
330H	33.00	66
340H	34.00	68
350H	35.00	70
360H	36.00	72
370H	37.00	74
390H	39.00	78
400H	40.00	80
410H	41.00	82
420H	42.00	84
450H	45.00	90
480H	48.00	96
490H	49.00	98
510H	51.00	102
540H	54.00	108
560H	56.00	112
570H	57.00	114

Part No.	Pitch Length	No. of Teeth
585H	58.50	117
600H	60.00	120
630H	63.00	126
645H	64.50	129
660H	66.00	132
700H	70.00	140
730H	73.00	146
750H	75.00	150
780H	78.00	156
800H	80.00	160
820H	82.00	164
840H	84.00	168
850H	85.00	170
900H	90.00	180
960H	96.00	192
1000H	100.00	200
1100H	110.00	220
1140H	114.00	228
1250H	125.00	250
1400H	140.00	280
1550H	155.00	310
1700H	170.00	340

H Stock Belt Widths

Belt Width Code	Belt Width (in)
75	0.750
100	1.000
150	1.500
200	2.000
300	3.000

Refer to the Industrial Power Transmission Products catalog, 19993, for a listing of XH and XXH PowerGrip Timing belts for replacement use on existing drives.

8mm Pitch PowerGrip® GT®2 Twin Power® Belts

TP 8MGT Stock Belt Lengths

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
TP840-8MGT	840	33.08	105
TP880-8MGT	880	34.65	110
TP920-8MGT	920	36.23	115
TP960-8MGT	960	37.80	120
TP1040-8MGT	1040	40.95	130
TP1120-8MGT	1120	44.10	140
TP1200-8MGT	1200	47.25	150
TP1224-8MGT	1224	48.20	153
TP1280-8MGT	1280	50.40	160
TP1440-8MGT	1440	56.70	180
TP1600-8MGT	1600	63.00	200

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
TP1760-8MGT	1760	69.30	220
TP1800-8MGT	1800	70.88	225
TP2000-8MGT	2000	78.75	250
TP2200-8MGT	2200	86.63	275
TP2400-8MGT	2400	94.50	300
TP2600-8MGT	2600	102.38	325
TP2800-8MGT	2800	110.25	350
TP3048-8MGT	3048	120.02	381
TP3280-8MGT	3280	129.15	410
TP3600-8MGT	3600	141.75	450
TP4400-8MGT	4400	173.25	550

8MGT2 Twin Power Stock Belt Widths

Belt Width Code	Belt Width (mm)	Belt Width (in)
20	20	0.787
30	30	1.181
50	50	1.969
85	85	3.346

14mm Pitch PowerGrip GT2 Twin Power Belts

TP 14MGT Stock Belt Lengths

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
TP966-14MGT	966	38.03	69
TP1190-14MGT	1190	46.85	85
TP1400-14MGT	1400	55.12	100
TP1610-14MGT	1610	63.38	115
TP1778-14MGT	1778	70.00	127
TP1890-14MGT	1890	74.41	135
TP2100-14MGT	2100	82.67	150
TP2310-14MGT	2310	90.94	165
TP2450-14MGT	2450	96.45	175

Part No.	Pitch Length (mm)	Pitch Length (in)	No. of Teeth
TP2590-14MGT	2590	101.96	185
TP2800-14MGT	2800	110.23	200
TP3150-14MGT	3150	124.01	225
TP3360-14MGT	3360	132.28	240
TP3500-14MGT	3500	137.79	250
TP3850-14MGT	3850	151.57	275
TP4326-14MGT	4326	170.31	309
TP4578-14MGT	4578	180.23	327

14MGT2 Twin Power Stock Belt Widths

Belt Width Code	Belt Width (mm)	Belt Width (in)
40	40	1.575
55	55	2.165
85	85	3.346

Refer to the Industrial Power Transmission Products catalog, 19993, for a listing of 8mm and 14mm pitch PowerGrip GT Twin Power belts for replacement use on existing PowerGrip GT or HTD Twin Power drives.

XL Pitch PowerGrip® Twin Power® Timing Belts

TP XL Stock Belt Lengths

Part No.	Pitch Length (in)	No. of Teeth
TP140XL	14.00	70
TP150XL	15.00	75
TP160XL	16.00	80
TP170XL	17.00	85
TP180XL	18.00	90
TP190XL	19.00	95
TP200XL	20.00	100
TP210XL	21.00	105
TP220XL	22.00	110
TP230XL	23.00	115

Part No.	Pitch Length (in)	No. of Teeth
TP240XL	24.00	120
TP250XL	25.00	125
TP260XL	26.00	130
TP270XL	27.00	135
TP280XL	28.00	140
TP290XL	29.00	145
TP300XL	30.00	150
TP310XL	31.00	155
TP330XL	33.00	165
TP340XL	34.00	170

XL Twin Power Stock Belt Widths

Belt Width Code	Belt Width (in)
025	0.250
037	0.375

L Pitch PowerGrip Twin Power Timing Belts

TP L Stock Belt Lengths

Part No.	Pitch Length (in)	No. of Teeth
TP150L	15.00	40
TP165L	16.50	44
TP187L	18.75	50
TP195L	19.50	52
TP210L	21.00	56
TP225L	22.50	60
TP240L	24.00	64
TP255L	25.50	68
TP270L	27.00	72
TP285L	28.50	76
TP300L	30.00	80
TP322L	32.25	86
TP345L	34.50	92

Part No.	Pitch Length (in)	No. of Teeth
TP367L	36.75	98
TP390L	39.00	104
TP420L	42.00	112
TP450L	45.00	120
TP480L	48.00	128
TP510L	51.00	136
TP540L	54.00	144
TP600L	60.00	160
TP660L	66.00	176
TP817L	81.75	218

L Twin Power Stock Belt Widths

Belt Width Code	Belt Width (in)
050	0.500
075	0.750
100	1.000

H Pitch PowerGrip® Twin Power® Timing Belts

TP H Stock Belt Lengths

Part No.	Pitch Length (in)	No. of Teeth
TP240H	24.00	48
TP270H	27.00	54
TP300H	30.00	60
TP330H	33.00	66
TP350H	35.00	70
TP360H	36.00	72
TP390H	39.00	78
TP400H	40.00	80
TP420H	42.00	84
TP450H	45.00	90
TP480H	48.00	96
TP510H	51.00	102
TP540H	54.00	108
TP570H	57.00	114

Part No.	Pitch Length (in)	No. of Teeth
TP600H	60.00	120
TP630H	63.00	126
TP660H	66.00	132
TP700H	70.00	140
TP750H	75.00	150
TP800H	80.00	160
TP850H	85.00	170
TP900H	90.00	180
TP1000H	100.00	200
TP1100H	110.00	220
TP1250H	125.00	250
TP1400H	140.00	280
TP1700H	170.00	340

H Twin Power Stock Belt Widths

Belt Width Code	Belt Width (in)
075	0.750
100	1.000
150	1.500
200	2.000
300	3.000

PowerGrip® Timing — Long Length Belting

Mini-Pitch (0.080/MXL) — Fiberglass Tensile

Part No.	Product No.	Width (in)	Net Wt. /ft. (lbs)
LL025MXL	9314-2020	1/4	0.01
LL037MXL	9314-2014	3/8	0.02
LL050MXL	9314-2038	1/2	0.02

1/5 Pitch (0.200/XL) - Fiberglass Tensile

Part No.	Product No.	Width (in)	Net Wt. /ft. (lbs)
LL025XL	9314-0001	1/4	0.01
LL037XL	9314-0002	3/8	0.01
LL050XL	9314-2012	1/2	0.03
LL075XL	9314-2090	3/4	0.04

3/8 Pitch (0.375/L) - Fiberglass Tensile

Part No.	Product No.	Width (in)	Net Wt. /ft. (lbs)
LL037L	9314-2089	3/8	0.02
LL050L	9314-0004	1/2	0.02
LL075L	9314-0007	3/4	0.04
LL100L	9314-0015	1	0.05

1/2" Pitch (0.500"/H) - Fiberglass Tensile

Part No.	Product No.	Width (in)	Net Wt. /ft. (lbs)
LL050H	9314-0003	1/2	0.04
LL075H	9314-0006	3/4	0.06
LL100H	9314-0008	1	0.12
LL150H	9314-0017	1 1/2	0.12
LL200H	9314-0021	2	0.16
LL300H	9314-0025	3	0.24

1/5 Pitch (0.200/XL) - Steel Tensile

Part No.	Product No.	Width (in)	Net Wt. /ft. (lbs)
LL025XLST	9314-10028	1/4	0.064
LL037XLST	9314-10029	3/8	0.072
LL050XLST	9314-10030	1/2	0.082

3/8 Pitch (0.375/L) - Steel Tensile

Part No.	Product No.	Width (in)	Net Wt. /ft. (lbs)
LL050LST	9314-10035	1/2	0.163
LL075LST	9314-10036	3/4	0.198

1/2" Pitch (0.500"/H) - Steel Tensile

Part No.	Product No.	Width (in)	Net Wt. /ft. (lbs)
LL075HST	9314-10011	3/4	0.229
LL100HST	9314-10037	1	0.253

Poly Chain® GT® — Long Length Belting

8mm - 14mm Pitch

Part No.	Product No.	Width (in)	Net Wt. /ft. (lbs)
LL8M012GT	9305-0001	12	0.03
LL8M021GT	9305-0002	21	0.06
LL8M036GT	9305-0003	36	0.11
LL14M020GT	9305-0005	20	0.10
LL14M037GT	9305-0006	37	0.19

PowerGrip® HTD® — Long Length Belting

PowerGrip HTD Belting - Fiberglass Tensile
3mm - 5mm - 8mm - 14mm Pitch

Part No.	Product No.	Width (in)	Net Wt. /ft. (lbs)
LL3M06	9308-0044	6	0.01
LL3M09	9308-0003	9	0.01
LL3M15	9308-0084	15	0.01
LL5M09	9308-0045	9	0.01
LL5M15	9308-0033	15	0.01
LL5M25	9308-0025	25	0.05
LL8M20	9308-0001	20	0.08
LL8M30	9308-0004	30	0.13
LL8M50	9308-0005	50	0.21
LL8M85	9308-0006	85	0.36
LL14M40	9308-10009	40	0.26
LL14M55	9308-10020	55	0.35
LL14M85	9308-10057	85	0.55

PowerGrip HTD Belting - Steel Tensile
14mm Pitch

Part No.	Product No.	Width (in)	Net Wt. /ft. (lbs)
LL14M40ST	9308-10016	40	0.76
LL14M55ST	9308-10051	55	1.02
LL14M85ST	9308-10084	85	1.51

PowerGrip GT® — Long Length Belting

PowerGrip GT - Fiberglass Tensile
2mm - 3mm - 5mm - 8mm Pitch

Part No.	Product No.	Width (in)	Net Wt. /ft. (lbs)
LL2MR04	9396-0033	4	0.01
LL2MR06	9396-0009	6	0.01
LL2MR09	9396-0011	9	0.01
LL3MR06	9396-0002	6	0.01
LL3MR09	9396-0012	9	0.01
LL3MR15	9396-0021	15	0.01
LL5MR09	9396-0020	9	0.01
LL5MR15	9396-0025	15	0.01
LL5MR25	9396-0018	25	0.05
LL8MR20	9396-0029	20	0.08
LL8MR30	9396-0030	30	0.13
LL8MR50	9396-0031	50	0.21
LL8MR85	9396-0032	85	0.36

PowerGrip GT - Steel Tensile
5mm - 8mm Pitch

Part No.	Product No.	Width (in)	Net Wt. /ft. (lbs)
LL5MR15ST	9308-10043	15	0.18
LL5MR25ST	9308-40417	25	0.23
LL8MR20ST	9308-10049	20	0.29
LL8MR30ST	9308-10050	30	0.37
LL8MR50ST	9308-40433	50	0.53

Synchro-Power® PolyUrethane Long Length Belting

T5 Pitch

Part No.	Width (mm)	Wt. per ft. (lbs)
U6T5LL	6	.01
U8T5LL	8*	.01
U10T5LL	10	.02
U12T5LL	12*	.02
U16T5LL	16	.03
U20T5LL	20*	.03
U25T5LL	25	.04
U32T5LL	32	.05
U50T5LL	50	.08

AT5 Pitch

Part No.	Width (mm)	Wt. per ft. (lbs)
U6AT5LL	6	.01
U10AT5LL	10	.02
U16AT5LL	16	.03
U20AT5LL	20	.04
U25AT5LL	25	.05
U32AT5LL	32	.06
U50AT5LL	50	.10

T10 Pitch

Part No.	Width (mm)	Wt. per ft. (lbs)
U12T10LL	12*	.04
U16T10LL	16	.05
U20T10LL	20*	.07
U25T10LL	25	.08
U32T10LL	32	.11
U40T10LL	40*	.13
U50T10LL	50	.16
U75T10LL	75	.25
U100T10LL	100	.33

AT10 Pitch

Part No.	Width (mm)	Wt. per ft. (lbs)
U16AT10LL	16	.06
U20AT10LL	20*	.08
U25AT10LL	25	.10
U32AT10LL	32	.13
U40AT10LL	40*	.16
U50AT10LL	50	.20
U75AT10LL	75*	.30
U100AT10LL	100*	.40

T20 Pitch

Part No.	Width (mm)	Wt. per ft. (lbs)
U25T10LL	25*	.13
U32T20LL	32*	.17
U50T20LL	50*	.27
U75T20LL	75*	.40
U100T20LL	100*	.54

*Standard/Non-Stock item, may require manufacturing lead time.

AT20 Pitch

Part No.	Width (mm)	Wt. per ft. (lbs)
U25AT20LL	25*	.17
U32AT20LL	32*	.22
U50AT20LL	50*	.34
U75AT20LL	75*	.50
U100AT20LL	100*	.67
U120AT20LL	120*	.81
U150AT20LL	150*	1.01

*Standard/Non-Stock item, may require manufacturing lead time.

Synchro-Power® PolyUrethane Long Length Belting

1/5"Pitch (0.200"/XL)

Part No.	Width (mm)	Wt. per ft. (lbs)
U.25INXL LL	.250*	.01
U.31INXL LL	.310*	.01
U.375INXL LL	.375*	.01
U.50INXL LL	.500*	.02
U.75INXL LL	.750*	.03
U1.00INXL LL	1.000*	.03
U2.00INXL LL	2.000*	.07

3/8" Pitch (0.375"/L)

Part No.	Width (mm)	Wt. per ft. (lbs)
U.375INL LL	.375	.02
U.50INL LL	.500	.02
U.75INL LL	.750	.03
U1.00INL LL	1.000	.04
U1.50INL LL	1.500*	.06
U2.00INL LL	2.000*	.08

1/2" Pitch (0.500"/H)

Part No.	Width (mm)	Wt. per ft. (lbs)
U.50INH LL	.500	.02
U.75INH LL	.750	.04
U1.00INH LL	1.000	.05
U1.50INH LL	1.500	.07
U2.00INH LL	2.000	.09
U3.00INH LL	3.000*	.14
U4.00INH LL	4.000*	.19

7/8" Pitch (0.875"/XH)

Part No.	Width (mm)	Wt. per ft. (lbs)
U1.00INXHLL	1.000*	.22
U1.50INXHLL	1.500*	.32
U2.00INXHLL	2.000*	.43
U3.00INXHLL	3.000*	.65
U4.00INXHLL	4.000*	.86

*Standard/Non-Stock item, may require manufacturing lead time.

5mm Pitch HTD

Part No.	Width (mm)	Wt. per ft. (lbs)
U10MTD5MLL	10*	.03
U15MTD5MLL	15*	.04
U25MTD5MLL	25*	.07
U50MTD5MLL	50*	.13

8mm Pitch HTD

Part No.	Width (mm)	Wt. per ft. (lbs)
U10MTD8MLL	10*	.04
U15MTD8MLL	15*	.06
U20MTD8MLL	20*	.08
U30MTD8MLL	30*	.13
U50MTD8MLL	50*	.21
U85MTD8MLL	85*	.36
U100MTD8MLL	100*	.42

14MM Pitch

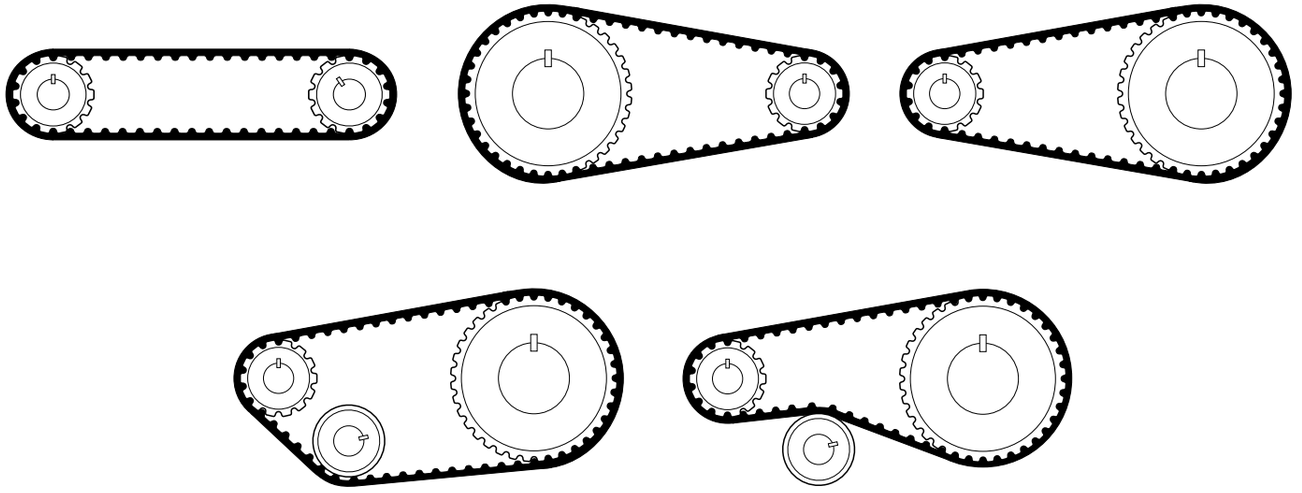
Part No.	Width (mm)	Wt. per ft. (lbs)
U25MTD14MLL	25*	.19
U40MTD14MLL	40*	.30
U55MTD14MLL	55*	.41
U85MTD14MLL	85*	.64
U100MTD14MLL	100*	.75

*Standard/Non-Stock item, may require manufacturing lead time.

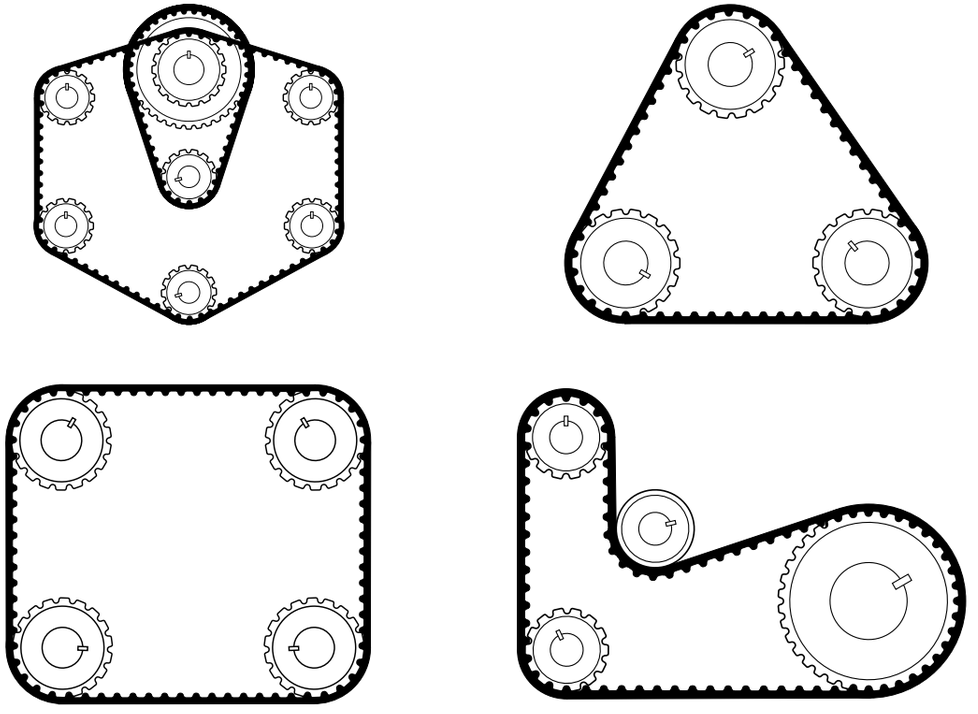
Application Examples

The following illustrations show a few of the many ways that Poly Chain® GT®2 belt drives can be used to transmit both power and motion. Synchronous belt drive systems are amazingly versatile, yet reliable and efficient.

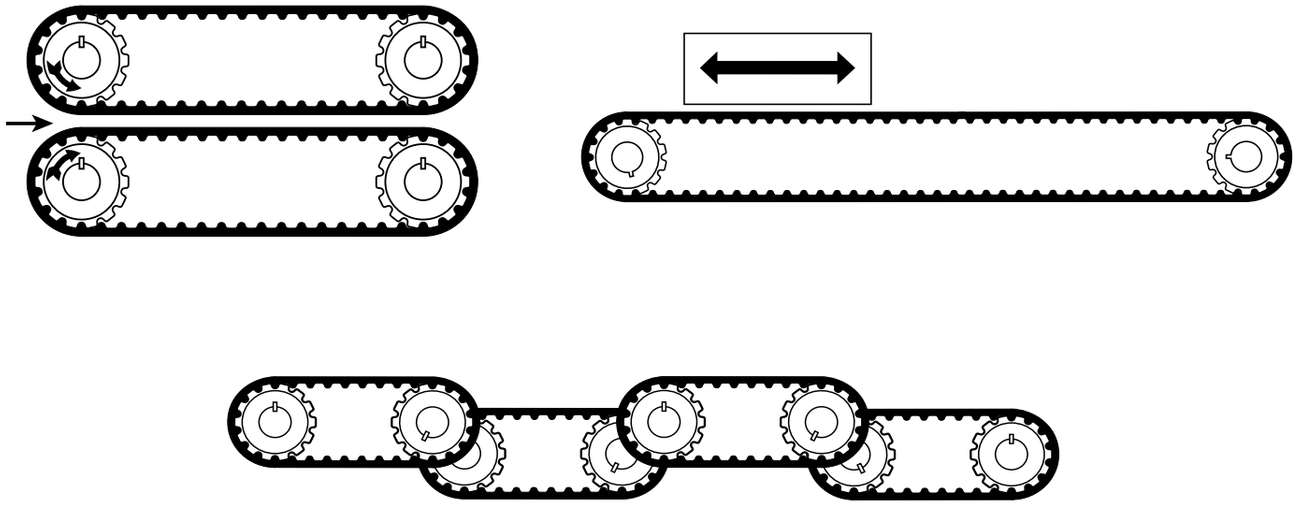
Common Drive Configurations



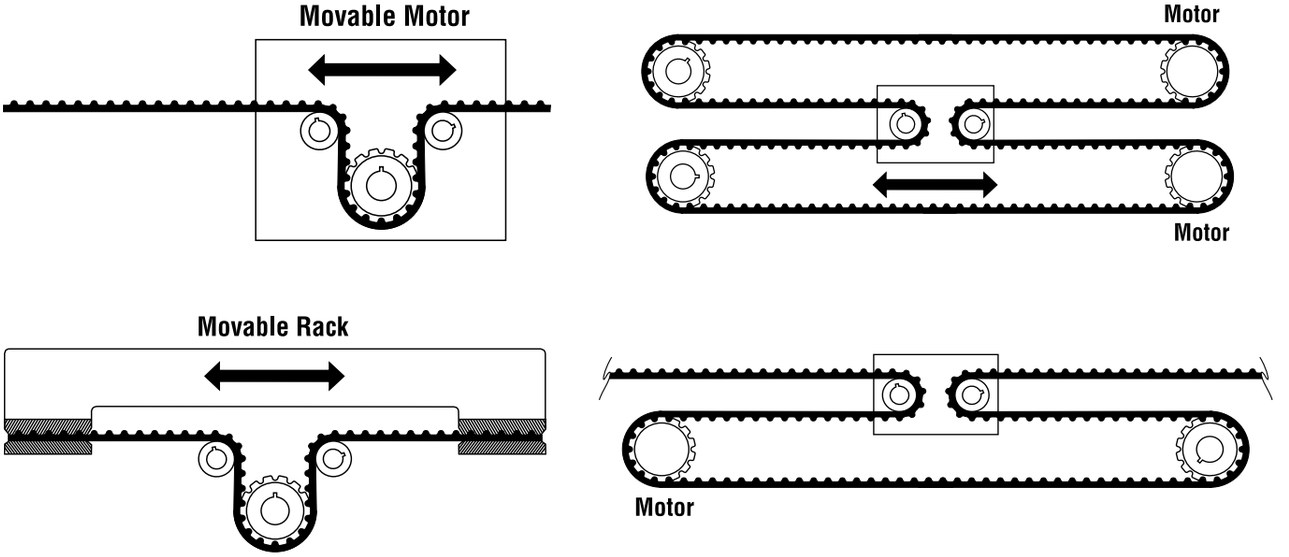
Multiple Shaft Drive Configurations



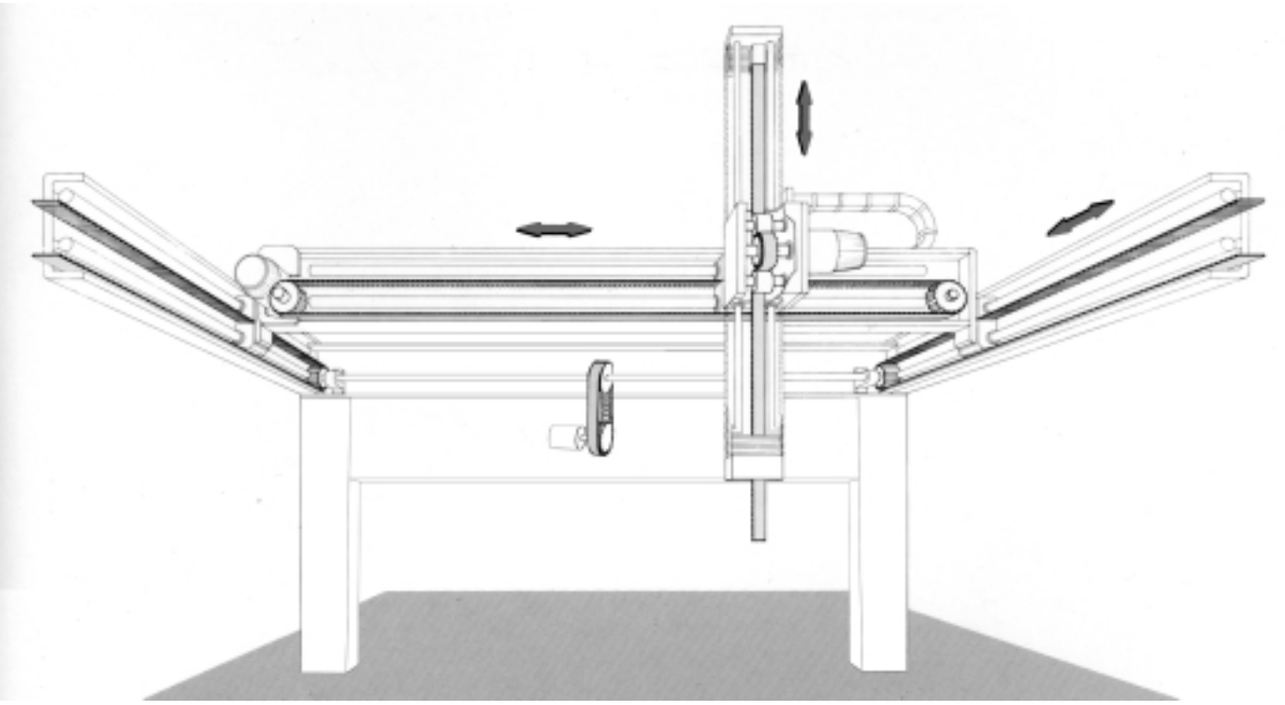
Conveying and Material Transport Applications



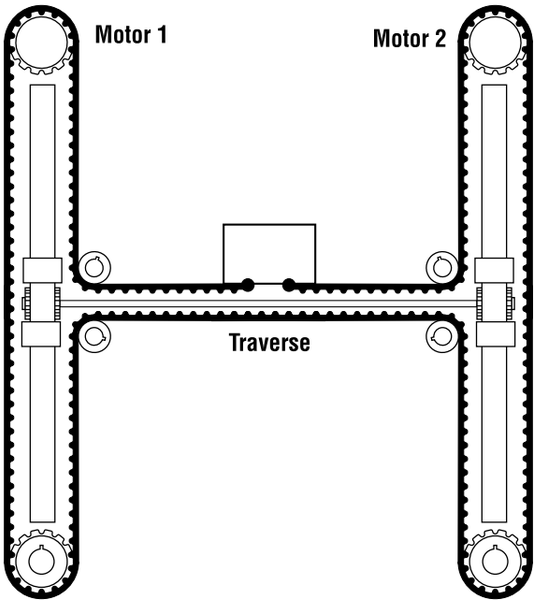
Rack and Carriage Drive Configurations



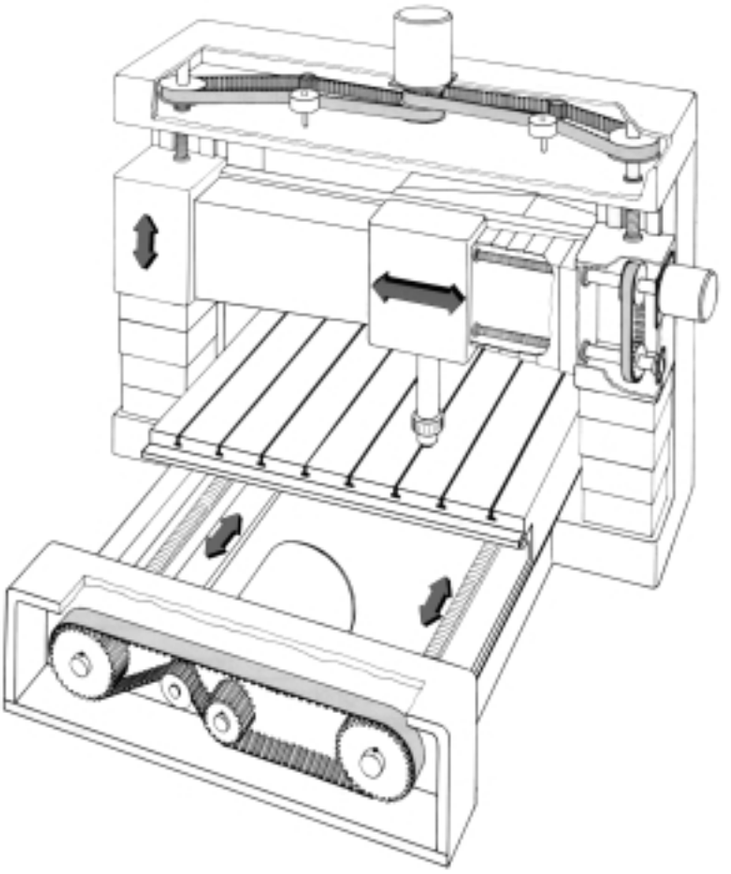
Long Length Drive Applications



Complex Carriage Drive Configuration



Lead Screw Drive Applications



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