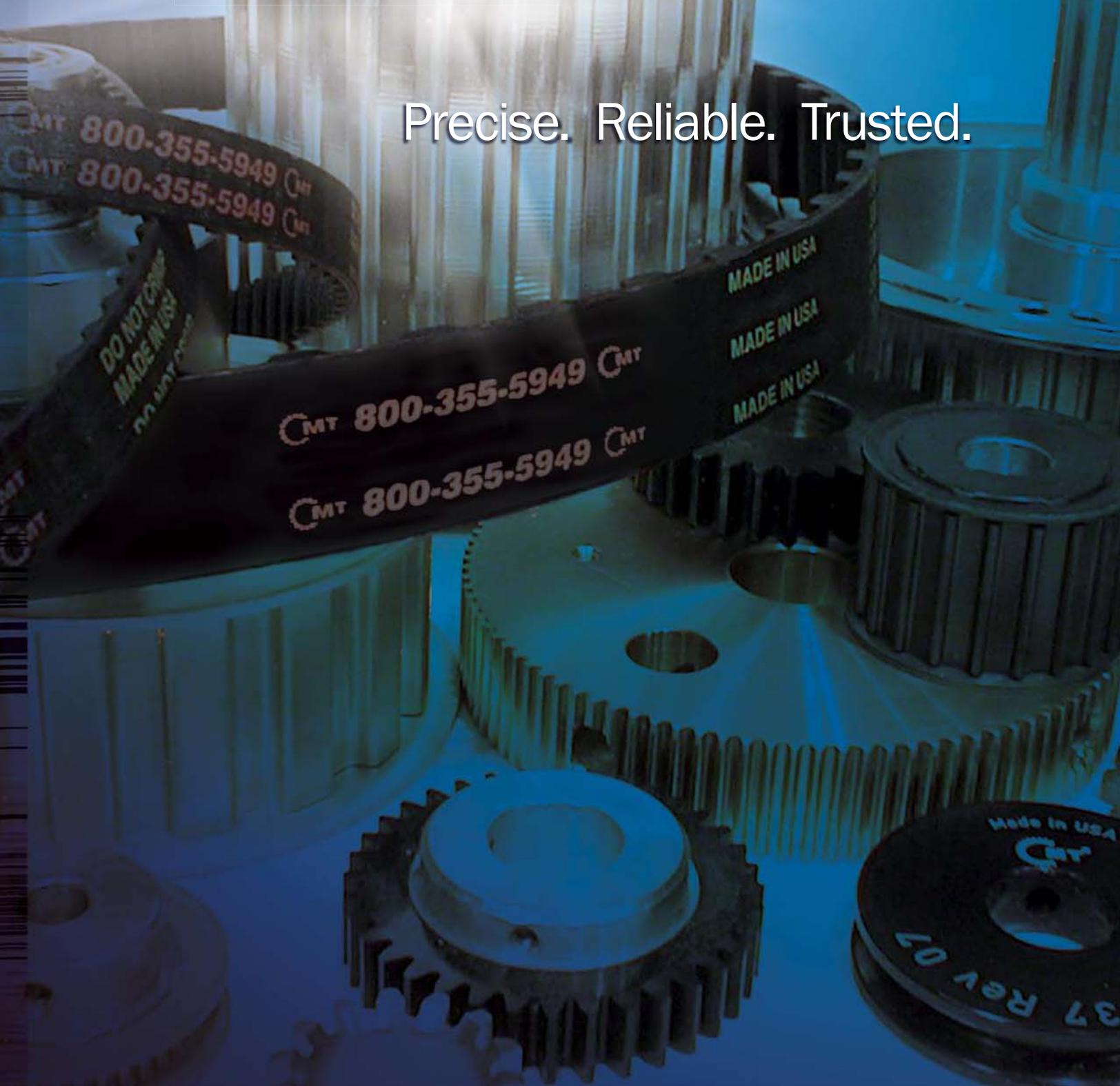




Manufacturers of Power Transmission  
and Motion Control Components

Precise. Reliable. Trusted.





# Concentric Maxi Torque

Revolutionary Keyless Hub-to-Shaft Connection System

## CMT Experience

### Maintenance, Vibration and Runout Vastly Reduced



**Customer Situation:** GBR Systems Corp., a manufacturer of paper handling equipment, was using set screws to connect a high-speed drive pulley, running a Gates Polyflex JB belt, to a 3/8 in. shaft. The set screws would loosen during clutching and breaking at high RPMs, causing the machine to malfunction and damage to the belt. Constantly tightening the set screws resulted in loss of machine productivity and increased maintenance costs.

**CMT Solution:** After investigating the cost of alternative connection methods, GBR turned to CMT and the Concentric Maxi Torque system. GBR concluded that the CMT system provided a positive connection that eliminated the need for secondary machining of the shaft, decreased vibration and reduced runout. Maintenance costs and down time were dramatically reduced due to the benefits of the CMT system.

Since its introduction in 2000, the Concentric Maxi Torque system has **NEVER** failed a customer.

- ▶ Superior concentricity and flexible positioning
- ▶ Twelve sizes cover bores from .125 in. (2mm) to 1.1875 in. (30mm)
- ▶ Outperforms set screws, keyways, pins, clamp collars, etc.
- ▶ Perfect for timing pulleys, gears, sprockets, pinch rollers, couplings and more...

**Innovative.** CMT's patented keyless hub to shaft connection system enables customers to easily phase, install, adjust and remove drive components, all while offering precise component positioning.

**Concentric.** With radial runout less than .001/.026mm as assembled, the CMT system enables customers to attain higher drive speeds, reduce unwanted vibration and maintain concentricity, offering a superior connection solution.

**Reliable.** The mechanical shrink fit accomplished by the CMT system provides torque capacity which far exceeds that of two set screws arranged perpendicular to the shaft, offering the most reliable connection in the industry.

**Economical.** The compact design eliminates the need for the extended hubs used to accommodate set screws, allowing motion systems engineers to design drives which are lighter and use less space. Additionally, the shaft damage and added expense of shaft modification often associated with the use of set screws or pins is eliminated.

**Versatile.** The Concentric Maxi Torque system is currently being manufactured for synchronous belt drives in standard inch and metric pitches, for shaft sizes ranging from .125 in. (2mm) to 1.1875 in. (30mm). Other drive systems, including gears, sprockets, bearing assemblies, couplings, etc., will be quoted upon request.

Details at [www.cmtco.com](http://www.cmtco.com) - Click on **Concentric Maxi Torque**

**Join the Revolution! Design the CMT system into your next project.**



Shown Actual Size

Call our Engineering Department, 1-800-355-5949, for free application assistance.



# Custom Synchronous Drives

Precise. Reliable. Cost Effective.

**CMT is your source for custom and unique timing pulleys. We've been providing superior manufacturing solutions since 1964.**

- ▶ Inch/Metric pitch pulleys and belts
- ▶ Manufactured to the latest industry standards
- ▶ Flexible delivery to meet your requirements
- ▶ Split deliveries, Kanban, JIT, etc.

**Precise.** In today's high performance driven world there's no room for error when manufacturing a custom designed product. CMT has been manufacturing precise, reliable custom designed components for the PT/MC industry for over 43 years. Our investment in state-of-the-art CNC machines, coupled with the expertise of our seasoned machinists, enable us to consistently machine parts to within 50 millionths of an inch.

**Comprehensive.** We provide our customers with a full range of timing pulleys, timing belts, timing pulley stock, and timing pulley flanges in aluminum, stainless steel, steel, plastic, brass and bronze for both stock and custom applications. CMT precision generates its pulley teeth one part at a time, ensuring the lowest possible runout and best tooth profile. We also produce custom v-ribbed pulleys, tapered bushings, sprockets, assemblies, idler bearings, and other industrial power transmission components.

**Performance.** CMT supplements its manufacturing capabilities with many additional value added services including, product assembly, kanban, just-in-time inventory, drop shipments, custom packaging and laser engraving.

Details at [www.cmtco.com](http://www.cmtco.com) - Click on **Product Catalog**

**Buy the best. Buy CMT.**



For additional information, assistance and orders:

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## CMT Experience

### Precision, Concentricity and Reduced Runout



**Customer Situation:** MarquipWardUnited, a manufacturer of finishing equipment for the corrugated machinery was bolting two idler pulleys of different widths and diameters together in an effort to run two drive belts within close proximity of each other. The bolted pulleys were unable to maintain concentricity and were a costly attempt at solving the problem.

**CMT Solution:** By designing and manufacturing a dual idler pulley from one piece of material CMT was able to supply a precision product that held concentricity and reduced runout, extending the life of the product and the machine while saving the customer time and money.

Send us your drawing for a prompt quote



# Timing Pulley Stock

CMT® Pulley Stock - Guaranteed When You Need It!\*

## CMT offers the best quality and service in the industry. Period.

- ▶ 72 hour guaranteed delivery on 5 pieces or less\*
- ▶ Any pitch and number of teeth
- ▶ Matching flanges and belts also available
- ▶ Volume purchase price breaks

**Trusted.** CMT has been the preferred choice for pulley stock at OEM's for over 30 years. We now have a pricing and delivery program for distributors that will increase profits and deliver product quicker than anyone in the pulley stock business.

**Inclusive.** Our experience working with distributors has helped us create helpful tools that make finding and ordering the parts you need both quick and easy. The CMT website offers a complete list of pulley stock that includes all popular pitch types and tooth counts, as well as a complete list of matching flanges, providing you with a one-stop solution for all your pulley stock needs.

**Available.** Call us at 1-800-355-5949 and we'll give you a quote right over the phone. Then, upon receipt of your order, we'll ship your product within 72 hours (3 business days) guaranteed or we'll pay the freight. Visit [www.cmtco.com](http://www.cmtco.com) for details.

**Affordable.** Offering the best product, service and price to our customers enables you to increase profits and grow your business. The next time you need timing pulley stock, make sure you look for the CMT logo to ensure you've got the best product for your customer.

\*Details at [www.cmtco.com](http://www.cmtco.com)  
- Click on **Pulley Stock Program**

## We want your pulley stock business and we're out to prove it!

Pulley Stock - Flanges - Timing Belts  
CMT is Your Quick and Total Solution.



### CMT Experience

#### Guarantee Assures Customer Delivery Demands



**Customer Situation:** Innovative Robotics, a manufacturer of SCARA Robots, used in semiconductor fabrication facilities, needed a source for quick availability of pulley stock based on their customer's short product notification lead times. Current sources were unable to meet the lead time requirements, making it difficult for Innovative Robotics to meet their customer's needs.

**CMT Solution:** After searching for a more responsive source for pulley stock, Innovative Robotics contacted CMT upon learning about our 72-hour delivery guarantee. CMT's Pulley Stock Promise now enables them to take customer order's with confidence, knowing they have a source that can meet their required lead times.

Authorized Gates Distributor



CMT is a full line Gates Industrial Power Transmission System Distribution Partner.

Pulley Stock with a promise!

# CMT Experience

Making Your Products Better™

## Increased Product Life and Efficiency

**Customer Situation:** A global manufacturer of mail sorting equipment was using bulky, unreliable clamp collars to connect multiple drive rollers to a shaft within a paper handling system. The clamp collars added weight, contributing to performance problems due to increased inertia.

**Cmt Solution:** CMT redesigned the rollers to include the Concentric Maxi Torque connection system, eliminating the need for clamp collars and reducing the weight of the component. This resulted in a dramatic decrease in inertia and amp draw, enabling the machine to run more efficiently and lengthening the life of the product.

## Zero Loss of Registration Plus Cost Effectiveness

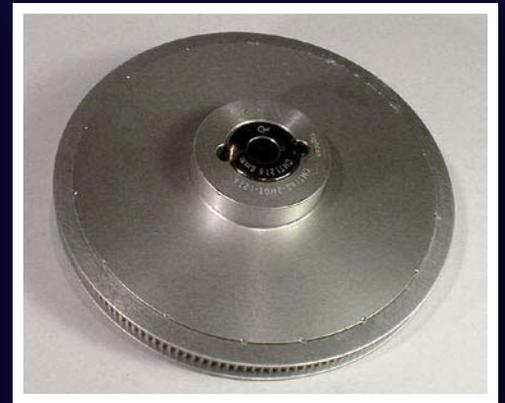
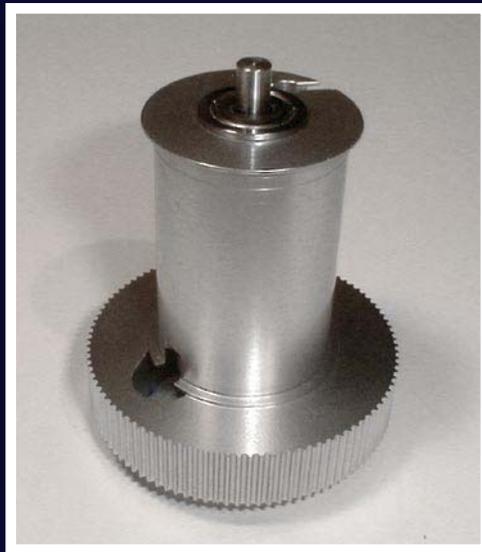
**Customer Situation:** Gerber Scientific, a manufacturer of ophthalmic lens processing equipment, was working with a unique cable spool and pulley assembly, consisting of eleven separate components and unreliable fasteners that caused the pulley to separate from the spool and lose registration during operation.

**Cmt Solution:** CMT's engineering team redesigned the component, eliminating the fasteners and integrating the pulley and spool as a single component. The new design was substantially more cost effective and provided perfect registration during operation.

## Improved Concentricity and Positional Accuracy

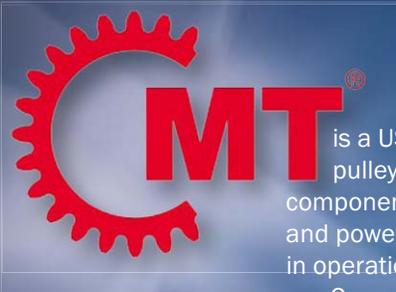
**Customer Situation:** KMC Systems Inc., a designer of precision automated medical instruments, was having trouble with a pulley-to-shaft connection within an automated analyzer. Positional accuracy is extremely important in this application, but loosening set screws and other connection methods proved unreliable, and constant rework and repairs were difficult and costly.

**CMT Solution:** After deciding that a better connection system was needed, the designers discovered the Concentric Maxi Torque system. By integrating the CMT connection system, they were able to improve concentricity, which in turn, improved positional accuracy. The CMT system also eliminated the need for flats on the mating shaft, providing a more cost effective AND reliable solution.



Over 40 years of manufacturing exceptional power transmission and motion control components have shown us that your success is our success.





is a US manufacturer of timing pulleys, drive systems and components for the motion control and power transmission markets in operation since 1964.

Our product offering contains all popular timing pulley tooth designs including Trapezoidal inch and metric, AT metric, HTD® metric curvilinear, and Gates PowerGrip® GT, and Zero Backlash.

Our state of the art facility enables us to provide a full range of timing pulleys, timing belts, timing pulley stock, and timing pulley flanges, in a variety of materials, for both stock and custom applications.

We also produce sprockets, custom v-ribbed pulleys, tapered bushings, idler bearings, assemblies and other industrial power transmission components, and offer value added services such as kanban and JIT delivery options and laser engraving services.

CMT has developed and patented (US patent #6,568,063) a new and revolutionary hub to shaft connection device, which allows for precise component positioning and tight runout control on demanding applications. At the same time it is easy to install and remove, and is economical to manufacture.

Our keyless hub to shaft connection device has superior features and benefits compared to other connection systems such as keyways, pins, set screws, clamp collars, and other tapered shaft locking devices.

The new system, called Concentric Maxi Torque, is available for immediate inclusion in our full offering of timing belt pulleys and can be designed into any custom application.

We are confident that you will not find another hub to shaft locking connection system device or system that provides a better solution to your motion control and power transmission shaft attachment requirements.

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American Made