Chemi-Flex

The Leading Polyurethane Timing Belt Designer And Manufacturer

THE

SEVEN

ADVANTAGES

This durable belt is designed and constructed to withstand high shock load.
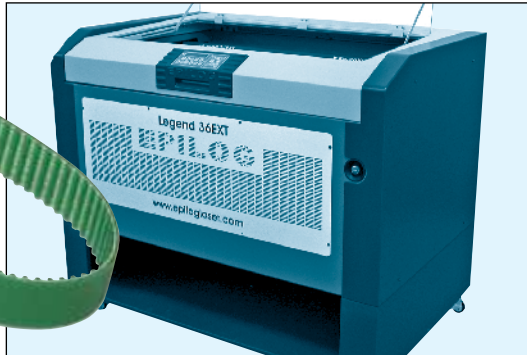

HP Products' TurboCat®

Ozone resistance and printing accuracy dictate the compound selection and belt construction for this high-speed application.

AMT Datasouth's Accel 6310 Printer

Tight tolerance molding and high modulus reinforcement achieve positional accuracy for this high intensity laser.

Epilog Laser Legend™ 36 EXT

*Our custom pitch design controls the precise movements of this visual field analyzer.*

Carl Zeiss Meditec's HFA II-I Humphrey® Visual Field Analyzer

Since 1979...

Chemi-Flex has been the nation's most innovative supplier of precision urethane and silicone timing belts. Chemi-Flex offers unmatched quality and pricing for low volume users as well as high volume OEM's.

Our timing belts are found in applications as vital components for:

- Appliances
- Architectural Lighting
- Banking & Currency Handling
- Computers
- Custom Conveying
- Electronics
- Electronic Testing
- Exercise Equipment
- Food & Beverage Machinery
- Laser Devices
- Leisure Equipment
- Medical Devices
- Motion Control
- Motor Vehicles
- Office Automation
- Optical Equipment
- Packaging
- Paper Processing
- Printing
- Pharmaceutical
- Processing
- Robotics
- Textile Machinery
- Ticketing Equipment
- Vending Machinery

$$b = 2L - \pi(D - d)$$

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

$$Tq = 0.039GD^2 \times \frac{(n_2 - n_1)}{t}$$
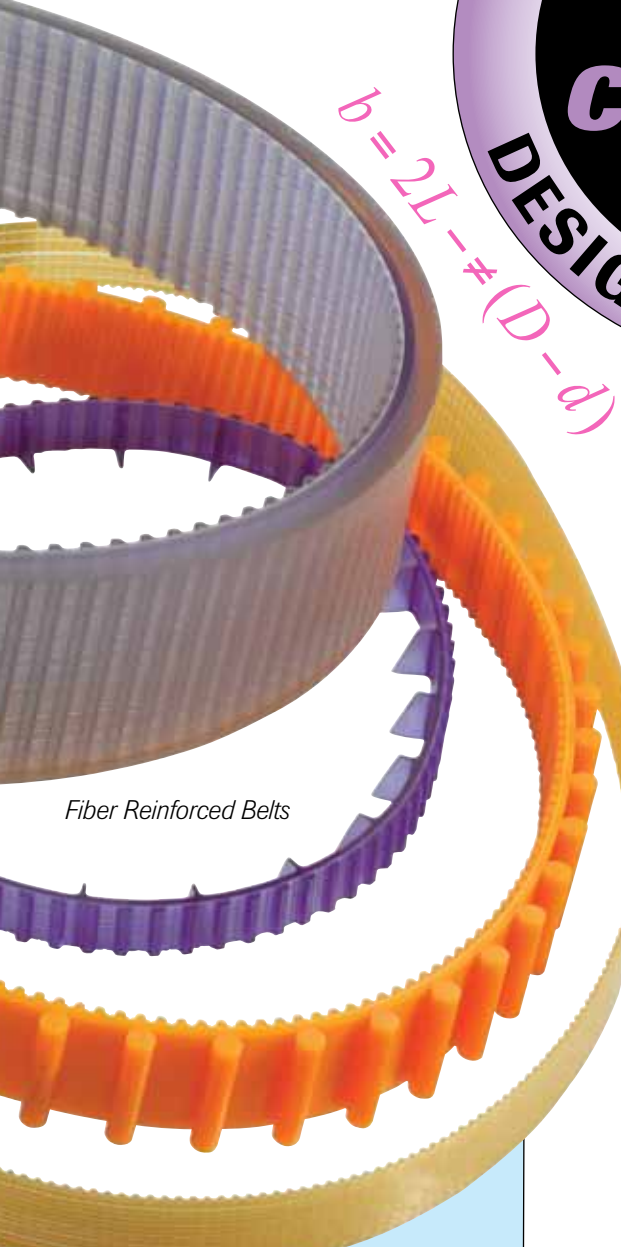
We Engineer Solutions For Our Customers' Applications

Fiber Reinforced Belts

Co-engineered Solutions
Because it's our job to ensure the belts we produce are the best they can be, we help our clients make the right first phase decisions.
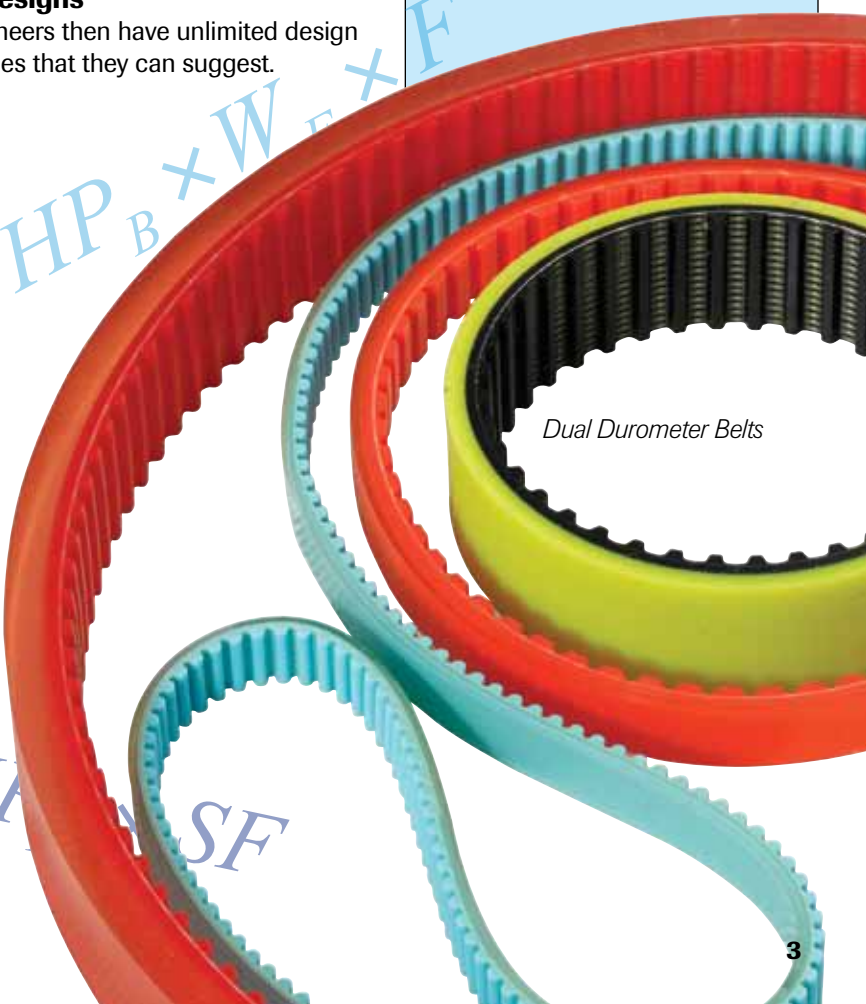
Value Analysis
We then do a value analysis that leads to functional enhancement of the belt design.

Drive Designs
Our engineers then have unlimited design possibilities that they can suggest.

MULTI-DUROMETER SYSTEM
Our multi-durometer system molecularly bonds two or more urethane or silicone layers. It's the perfect solution if varying co-efficients of friction or abrasion resistance are required for separate mechanical functions.
For example: One side withstands the wear and tear of a pulley while the second side is designed to advance products.

FIBER REINFORCEMENT
For enhanced strength, stability and endurance, we reinforce our timing belts with several cords and fabrics:
- Filament Kevlars®
- Twisted Kevlars®
- Various Polyesters
- Hybrid Nylons
- Wire
- Vectran®

$$DHP < HP_B \times W_F \times F$$

$$Tq = 0.039GD^2 \times \frac{(n_2 - n_1)}{t}$$

$$DHP < HP_B \times SF$$

Dual Durometer Belts

Poly V-Belts For Fixed Center Pulleys And Variable Speed Drives.

More Than 7,500 Formulations

Chemi-Flex offers greater depth and breadth in chemical research and development. Therefore, we guarantee the optimal compound and reinforcement will be chosen for your application.

Our Chemical Engineers critically consider chemical factors such as:

- *Esters for functionality*
- *Ethers for stability*
- *Lubricants to reduce operational noise*
- *Antistatics for conductivity*
- *UV Stabilizers*
- *Silicone for high temperatures*
- *Pigments for appeal and identification*
- *RTV based systems to resist corrosion*
- *Catalysts for performance alterations*
- *HPP elastomers for heat dissipation*
- *UHMW surfactants for abrasive belts*

High Heat Silicone Belts

VL3000™ Spot Light

High Temp Silicone Belts

Made to Withstand:
- Temperatures to 400º F
- Acids
- Bases
- Solvents
- Steams

Typical Applications
- Architectural, Stage and Exhibit Lighting
- Paper Pulp Plants
- Chemical Processing
- SemiConductor Testing
- Microprocessor Manufacturing
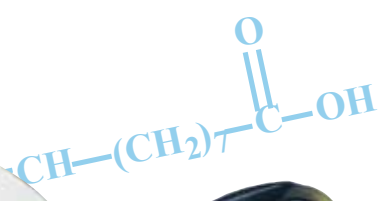- Food Processing

Formulations and Designs

Wide Range Of Shore Hardnesses For Surface Coefficient Of Friction And Elongation Properties
- Flat
- Toothed
- Positive Drive
- Friction
- Multiple Durometer
- Molded Backside
- Food Grade

Antistatic additives prevent static contamination of electronic products.
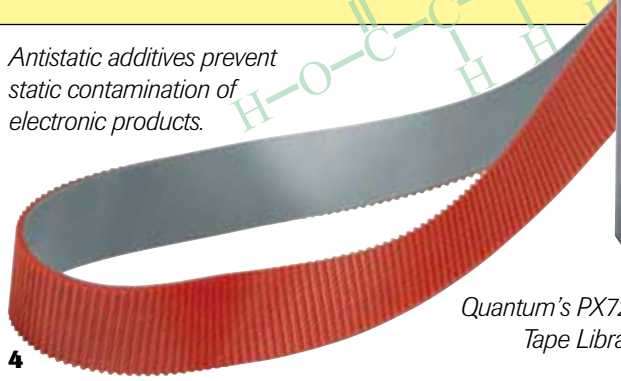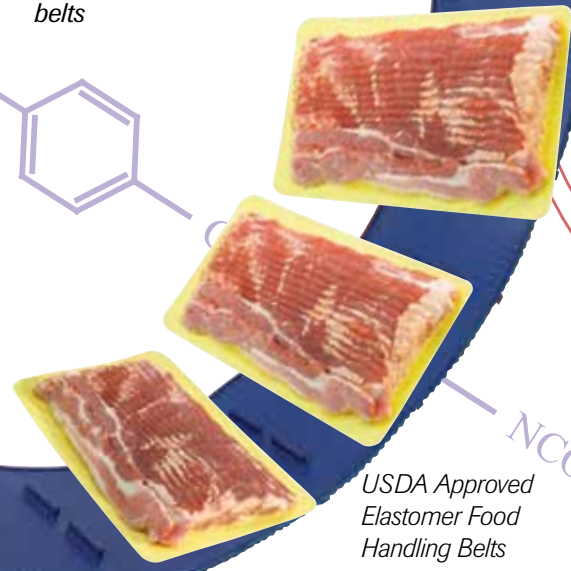
Quantum's PX720 Tape Library

*USDA Approved Elastomer Food Handling Belts*

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The Key To Reducing Lead Times And Keeping Costs Down

Chemi-Flex has comprehensive machine capabilities which produce molds with pitch lengths of one inch to 200 inches.

Using 3-D CAD, our fully equipped machine shop designs, builds, rebuilds and manufactures all its own core and barrel molds, which are machined from various aluminum and steel alloys.

We can produce aluminum molds so quickly that they are the perfect answer for rapid prototyping of new designs.

We've produced over 1500 molds and tools for timing belts in numerous standard and international pitches.
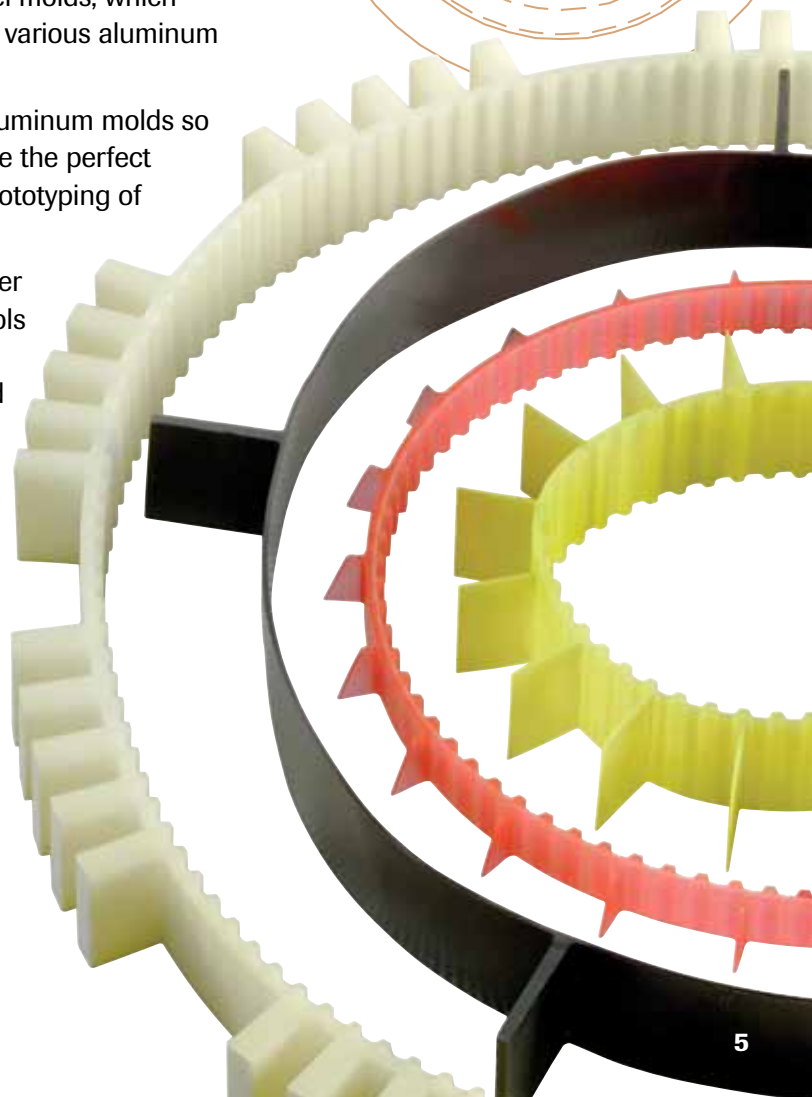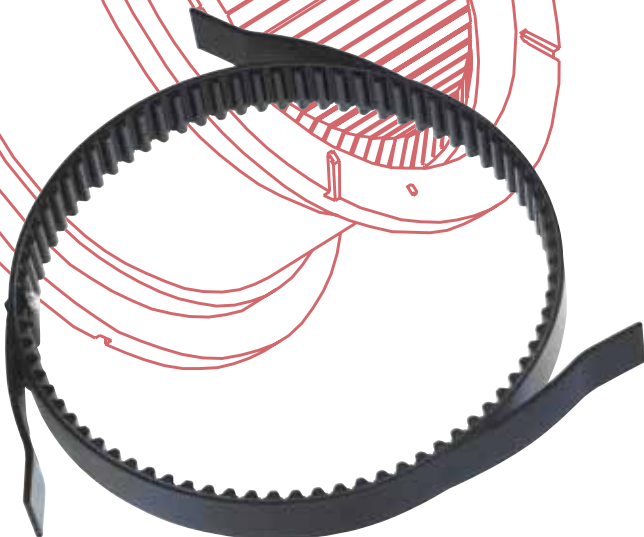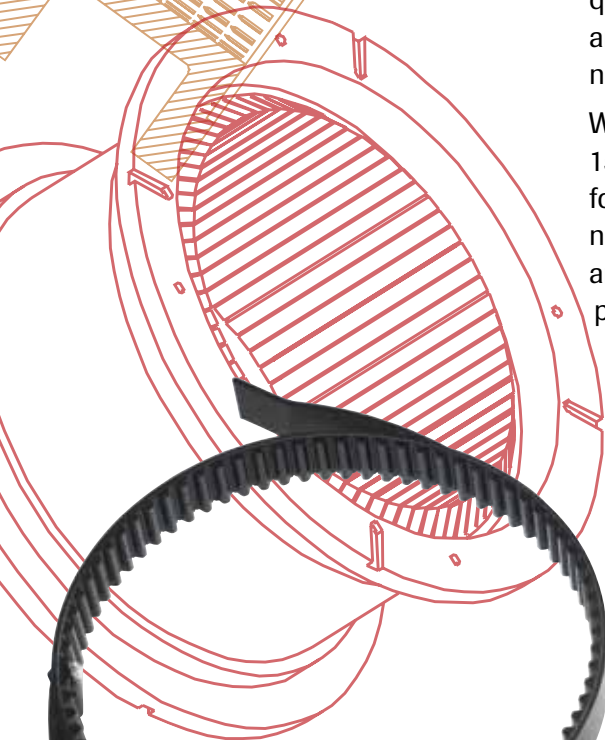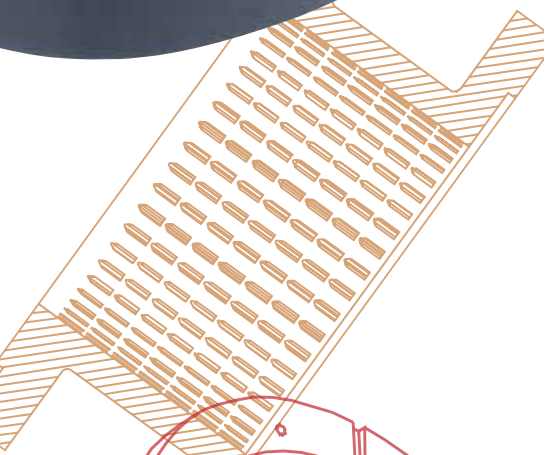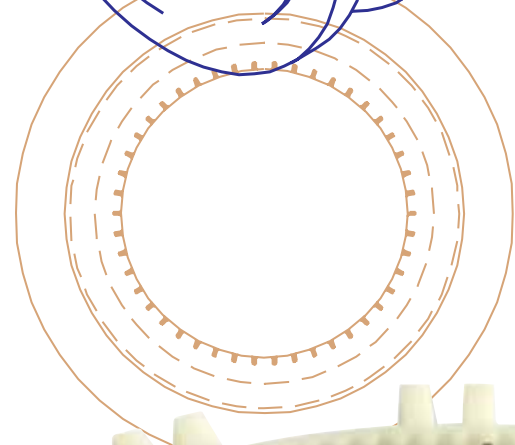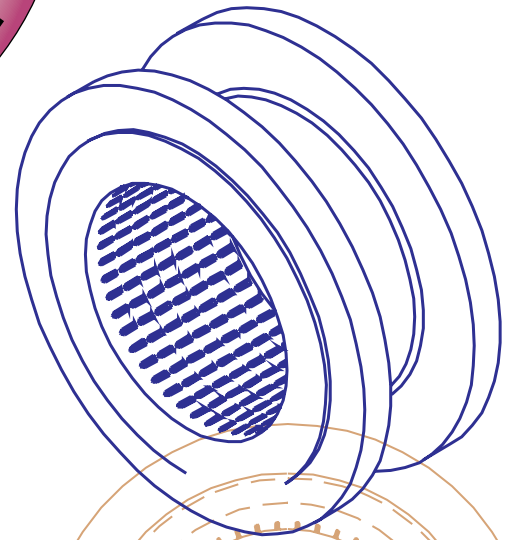
Integrated Processes Turn Great Designs Into Quality Timing Belts.

Rapid Cost Estimates
Process parameters are computerized for instant calculations and our 'compounds and costs' database produces speedy, precise estimates.

Preproduction
A smooth manufacturing process begins well before production is scheduled. During a supervised pilot production run, each step in the manufacturing process is identified, quantified and formally certified by our engineering and quality department.
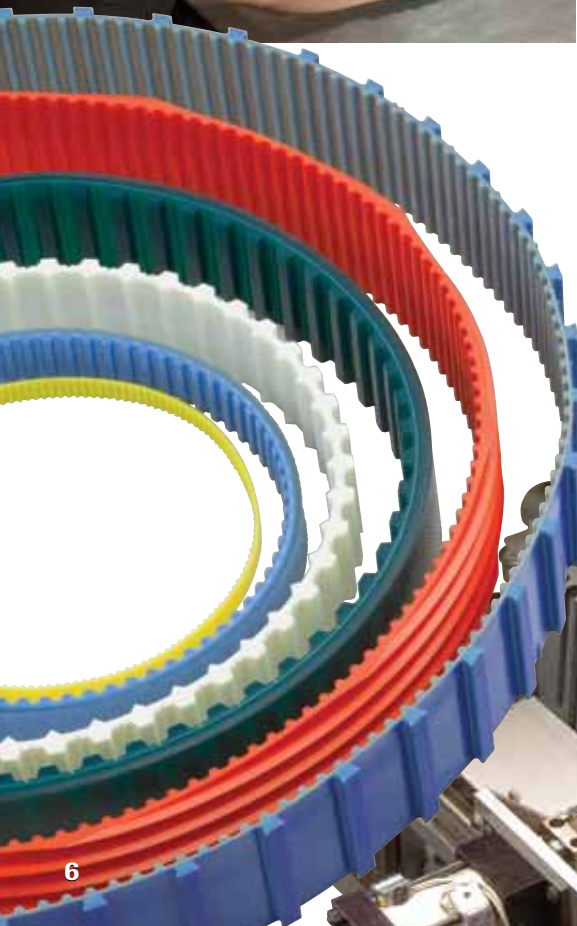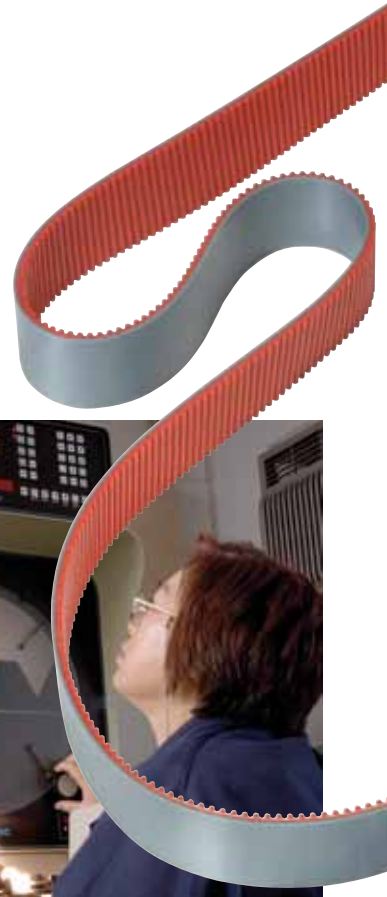
Manufacturing Processes
We can meet diverse molding requirements with our various molding technologies.

Finishing Capabilities
Chemi-Flex's in-house finishing capabilities include: Slitting, surface grinding, splitting, dies and lacing fixtures, intricate hole patterns stamping and imprinting.

Before

Chemi-Flex's quality assurance laboratory conducts prepolymer tests and analysis of basic chemical components as well as the physical testing of cords and fabrics before they go into inventory.

During

Not only are belts tested and retested throughout the manufacturing process, we're able to construct test fixtures to customers' application specifications to replicate end use conditions.

Our stringent requirements include several engineering standards for:

• Center Distance

• Dimensional Tolerances

• Cord TPI and Twist

• Elongation and Break Strength

• Chemical Cure

After

Our use of SPC monitors process capability and product integrity. Through our database we can track each manufacturing lot for cosmetic standards, length, thickness, width and special geometric specifications.

Chemi-Flex

ADVANTAGE
## SEVEN
COMMITMENT
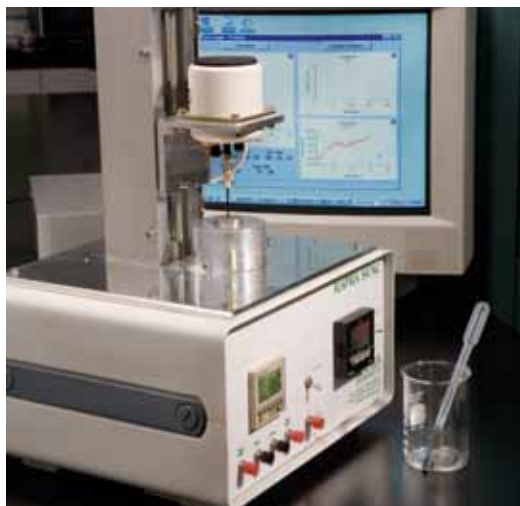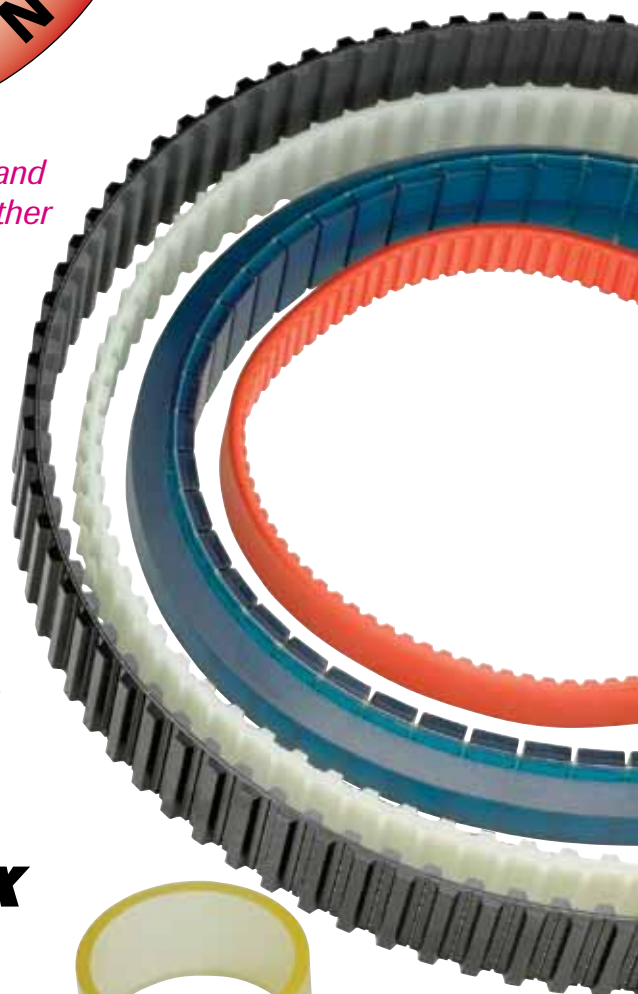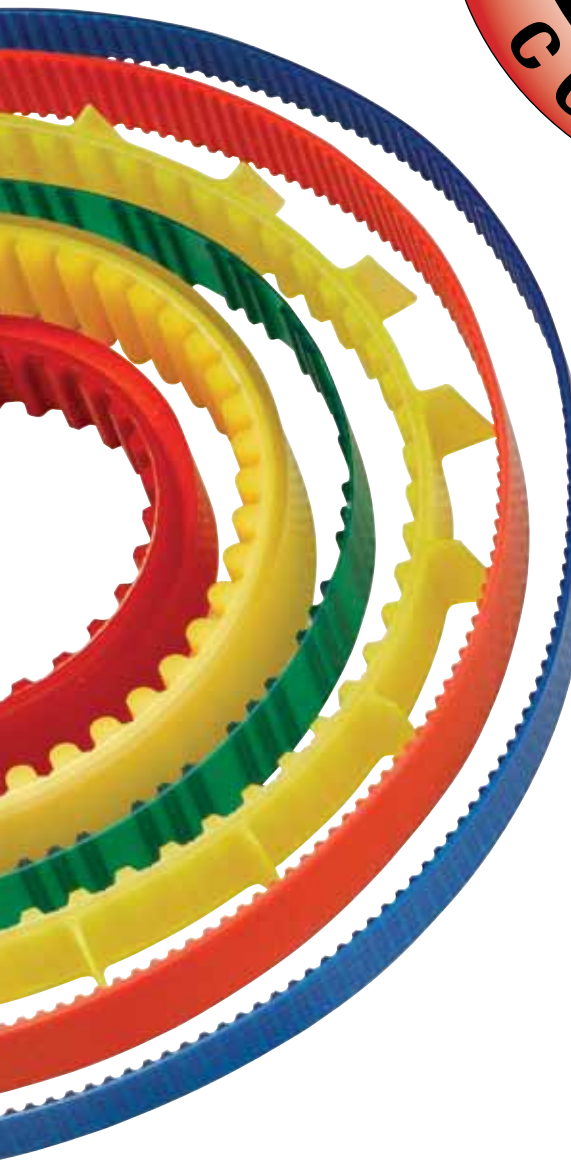
Chemi-Flex's experienced and dedicated staff works together with our customers as an efficient and flexible team developing innovative solutions that make the difference in the products we provide.

Chemi-Flex is committed to providing quality polyurethane timing belts and custom molded products that meet or exceed customer specified requirements.

Chemi-Flex

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The Belting Association®
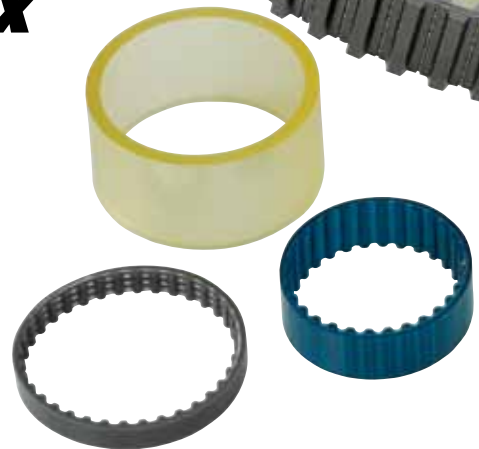
PMA Polyurethane Manufacturers Association
Our strengths. Your gains.

Chemi-Flex is a proud member of the Polyurethane Manufacturers Association.