

# HVAC

**TIMKEN** BELTS

Industrial Distribution - HVAC

**YOUR SOURCE  
FOR ENERGY SAVINGS**

**UP TO 98% EFFICIENT**

**STATE-OF-THE-ART  
ENGINEERING & TECHNOLOGY**



# Energy Saving Solutions

Getting the most out of every kilowatt dollar doesn't happen by accident. Premium energy efficient motors and high efficiency air moving equipment are all part of a sound game plan to reduce ever-increasing energy costs.

Another key component in that game plan is the power transmission system that connects the motor to the driven equipment – the drive belt.

Timken Belts has a long history of quality and innovation with a reputation for being among the finest drive belts in the industry. In fact, we developed the first raw edge v-belt in 1921 and patented the raw edge cog-belt in 1926.

The unique and varied applications that exist in the HVAC industry demand a wide selection of belts to achieve maximum efficiency and reliable performance. Timken Belts meets those needs by offering a comprehensive line of belts, pulleys and sprockets to service complete drive systems.

- **Extensive inventories are ready for immediate delivery**
- **Reduce downtime and save energy with Timken Belts**

# 980% EFFICIENT HVAC Synchronous Belts

## Panther®XT



### Extreme Torque!

- Drive efficiency of 98%
- Allows for more compact drive designs and reduced metal costs
- Panther®XT belts are engineered to achieve higher power ratings than Panther® and competitive belts
- High modulus carbon fiber cord construction for minimal stretch and increased durability
- Fabric is engineered to be low-friction and abrasion-resistant for extended belt life
- Oil and heat resistant (-40°F to 248°F)
- An advanced polymer compound combines high elasticity and hardness for improved performance in harsh environments
- Engineered to reduce high frequency noise when compared to polyurethane belt construction

## Panther®



### Strong. Resilient. Efficient.

- The energy efficient Panther synchronous belt performs at 98% operating efficiency for reduced energy consumption
- Panther belts shrug off shock loads by incorporating Ultra-Cord®, a belt component that delivers strength and dimensional stability into the belt design
- Uniquely engineered teeth are made of a high performance compound which increases both the strength and abrasion resistance of the teeth
- Panther belts offer higher power ratings than conventional rubber synchronous belts
- Made in USA

EFFICIENT

# HVAC Premium V-Belts

# Belts Built to Last

## Gold-Ribbon® Cog-Belt®



### The Energy Saver!

The engineered construction of the Gold-Ribbon Cog-Belt combines the superior flexing of precision molded cogs with the tenacious gripping power of raw edge sidewalls to provide higher energy efficiency, and greater horsepower ratings than conventional wrapped belts.

- Energy efficient
- Quality Ethylene Propylene Diene Monomer (EPDM) construction
- High horsepower ratings
- Design flexibility
- Increased durability for longer belt life
- Heat resistant, static conductive
- Resists hardening and glazing
- Broader operating temperature range
- Built to Chek Mate® belt tolerances for a matched set
- Made in the USA

## Power-Wedge® Cog-Belt®

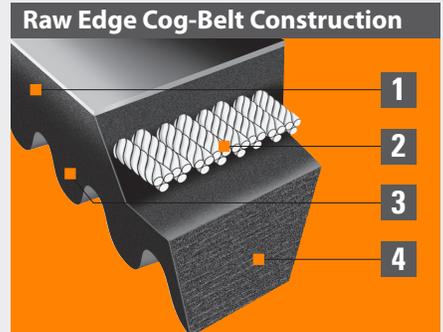


### More Grip, Less Slip!

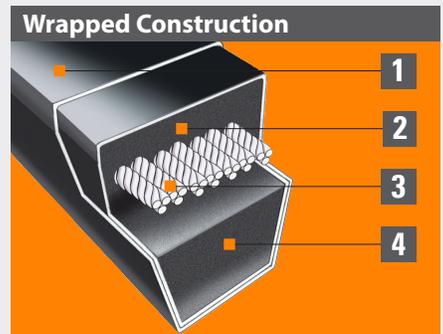
The energy efficient EPDM Power-Wedge Cog-Belt is specially designed for optimum performance. Raw edge construction contributes to outstanding operating efficiency. The result: reduced downtime and energy costs.

- Energy efficient
- Quality EPDM construction
- High horsepower ratings
- Design flexibility
- Increased durability for longer belt life
- Heat resistant
- Static conductive
- Resists hardening and glazing
- Broader operating temperature range
- Built to Chek Mate® belt tolerances for a matched set
- Made in the USA

## Belt Construction



1. Raw edge sidewalls provide anti-slip surface, increased efficiency and reduced vibration
2. Oversized high-modulus cord carries the horsepower load and minimizes stretching
3. Precision molded cogs improve flexibility and reduce bending stress
4. EPDM offers superior flex and load carrying capacity at high and low temperatures



1. Heavy-duty fabric cover is impregnated with engineered rubber compounds and protects the core
2. Synthetic rubber is specially formulated to stretch as belt bends around sheaves
3. Oversized high-modulus cord carries the horsepower load and minimizes stretching
4. Synthetic rubber is designed to support cords evenly and compress while bending around sheaves

# Belts that Better the Bottom Line

With today's rising energy costs, easy, energy-efficient solutions can be hard to find. Drive system performance is at the mercy of its weakest link.

Through research and development, intensive efforts have been made to improve the efficiency and productivity of motors and driven equipment in industrial applications, while relatively little attention is given to the belt drive that connects the components.

Energy efficient Timken belts are engineered to improve drive system performance.

- Payback is significant and begins immediately
- High horsepower capacity and long belt life reduce maintenance intervals and critical down time

Energy savings escalate with the number of drives, and with the increased horsepower within those drives. Installing a Gold-Ribbon Cog-Belt or Power-Wedge Cog-Belt on an existing v-belt drive can deliver immediate energy savings without changing sheaves or modifying drives.

- Conventional wrapped v-belts achieve a nominal efficiency of 93%
- Raw edge belts like Super II and Durapower II are 94% efficient
- The Gold-Ribbon Cog-Belt and Power-Wedge Cog-Belt maintain 95% energy efficiency ratings
- Panther and Panther XT synchronous belts consistently achieve a 98% efficiency rating

# 94% EFFICIENT HVAC Performance V-Belts

## Super II® V-Belt



### The Problem Solver!

Super II® v-belts perform better than ordinary wrapped belts. Raw edge EPDM construction combined with our special central neutral axis (CNA) cord placement creates a flexible, stable and efficient v-belt. Super II belts minimize the constant, costly problem of replacing or re-tensioning belts by providing greater strength, longer life and better heat dissipation than comparable wrapped belts. The raw edge belt grips pulleys, while minimizing belt slip, noise and drive vibration.

- Long belt life
- Quality EPDM construction
- Superior strength, stretch resistance, flexibility and heat dissipation
- Helps reduce drive maintenance needs
- Oil, heat and ozone resistant
- Made in USA

## Durapower® II FHP V-Belt



### Lasts Longer & Resists Stretch!

Raw edge technology makes Durapower® II belts heavyweights in the light duty v-belt arena. The secret to superior strength and lasting power is combining the advantages of EPDM, raw edge and CNA construction. Durapower II belts last longer and resist stretch better than ordinary wrapped light duty v-belts.

- Stress-relieved bias-cut fabric provides maximum flexibility
- Quality EPDM construction
- High-modulus polyester cord is specially treated to maintain belt loads without stretching
- Raw edge belt side walls grip pulleys, minimizing belt slip, noise and drive vibration
- Special compounds support cords evenly and resist flex fatigue
- Made in USA

# HVAC Standard V-Belts

# HVAC Specialty Belts

# The Synchronous Advantage

## Super Blue Ribbon® V-Belt



### Workhorse of Classical V-Belts

Super Blue Ribbon® belts are built to the highest standards in the industry. The heavy fabric cover on these premium wrapped belts ensures longer, more dependable performance than other wrapped belts — providing positive flex fatigue characteristics and extending load life capacity.

Super Blue Ribbon v-belts operate within a wide range of load capacities and speeds — making them the ideal choice for dependable performance on an extremely wide range of applications.

- Resists oil, heat, weather and aggressive environmental conditions
- Built to Chek Mate® belt tolerances for a matched set
- Long belt life, more dependable performance
- Made in USA

## ACHE Synchronous Belt



### Special “Z” Twist Construction

Timken Belts manufactures special “Z” twist construction synchronous belts designed for air cooled heat exchangers. Because the drive has a vertical shaft, the ACHE (air cooled heat exchanger) belt is built with “Z” twist cords only. This gives the belt upward lateral movement which reduces excessive wear on the bottom side of the belt.

The cord in a synchronous belt is made up of a number of small fiber strands twisted together. These strands can be twisted clockwise or counterclockwise. The two twist directions are referred to as “S” twist and “Z” twist. To reduce lateral movement, most synchronous belts are constructed by alternately spiraling “S” and “Z” type cords. ACHE belts use only “Z” twist cords to predetermine the lateral movement of the belt.

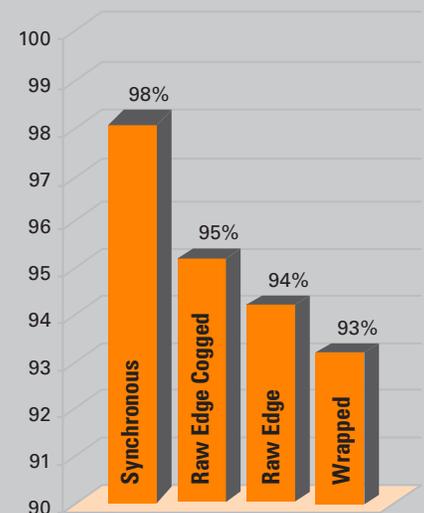
Synchronous belts are designed for maximum energy efficiency with positive engagement between the belt tooth and sprocket, eliminating slippage and speed loss common to v-belts.

Synchronous belts maintain 98% efficiency throughout the life of the drive as compared to 95% efficiency from raw edge cog-belts or 93% from standard wrapped v-belts. Unlike v-belts, synchronous belts do not need re-tensioning, resulting in reduced maintenance costs and downtime.

Consider switching existing v-belt drives to the compact drive design of Panther or PantherXT belts to achieve significant savings in energy, maintenance costs, and reduced downtime.

Timken Belt’s PowerMiser online calculator will quickly and easily reveal the savings potential you can realize by installing Timken synchronous belts.

### % Belt Efficiency by Construction



# Timken – Your HVAC Resource

Timken Belts is part of The Timken Company's growing portfolio of engineered bearings and power transmission products. Bring the Timken advantage to the HVAC market by serving not just your belt needs, but your bearing needs as well.

## Timken Ball Bearing Housed Units for HVAC

Timken® Fafnir® housed units are the ideal solution for the Heating, Ventilation and Air Conditioning industry. They help reduce vibration, are easy to install and run cooler at higher speeds to extend grease life. Timken housed units keep lubricants in and contaminants out. Designed to maximize performance, a housed unit combines the bearing, housing, seal and locking system into one device for easy installation and operation. Installed in a sturdy housing, each bearing provides shaft support for radial, thrust or combination loads to reduce friction in applications.

For more information scan the QR code below:



# Timken Belts – The Belt Experts

## Belt Experts Since 1905

- USA manufacturer since 1905
- Global tier one supplier to industrial distribution, OEM and HVAC markets
- ISO 9001:2015 multi-site registered
- Innovative product development
- Dedicated to customer satisfaction
- Focus on quality, performance, service, durability and value

## Committed to Customer Satisfaction

- Technical problem solving and drive design
- Latest technology materials and construction
- Long-term durability and performance
- Energy saving solutions
- Solutions and service from an experienced sales force
- Designed and built to rigid specifications
- Complete offering of belts, pulleys and sprockets for one-stop shopping

## Unsurpassed Technical Expertise

- Dedicated drive belt Technical Center
- Advanced research and material science technology
- Expert application engineering, drive design and analysis
- New product development and custom applications
- Rigorous product testing under real world operating conditions
- Energy testing and research
- Cutting edge process engineering and development

## EPDM Construction

Ethylene Propylene Diene Monomer is a synthetic rubber with outstanding properties used in many Timken belts.

EPDM is:

- Durable
- Static conductive
- Resistant to hardening and glazing
- Broader operating temperature range: -50°F/-45°C to +250°F/121°C



Performance Driven. **Performance Proven.**

# Martin<sup>®</sup> Metal Components

## The Timken Belts Commitment



- Superior Quality
- Superior Performance
- Superior Support
- Superior Service
- Superior Savings

Timken Belts is proud to partner with Martin Sprocket & Gear, Inc. to fulfill all your HVAC belt drive needs.

The following Martin sprockets, sheaves and bushings are available along with Timken Belts' full offering of belts engineered for HVAC applications.

- Sprockets
  - HTS<sup>®</sup> Sprockets (use with Panther<sup>®</sup> belts)
  - MPC<sup>®</sup> Sprockets (use with Panther<sup>®</sup>XT belts)
- Sheaves
  - QD Sheaves
  - MST<sup>®</sup> and Taper Bushed Sheaves
  - Fractional Horsepower Sheaves
- Bushings
  - QD Bushings
  - Taper Bushed Bushings
  - MST<sup>®</sup> Bushings

For optimum performance and increased belt life, choose Timken Belts and Martin Sprocket & Gear.

Together, we're your single source for HVAC belt drive solutions:

- Product
- Service
- On-time delivery
- Quality
- Engineering support

HTS<sup>®</sup> is a registered trademark of Gates Corporation. MPC<sup>®</sup> and MST<sup>®</sup> are registered trademarks of Martin Sprocket & Gear, Inc.

# Energy Efficiency at Your Fingertips

## Timken Belt's PowerMiser™ Efficiency Calculator

PowerMiser™ is a free web app that calculates estimated annual energy savings that can be realized by upgrading to energy efficient Timken belts. The greater the number of drives and higher the horsepower of the drive, the more you save!

Check out PowerMiser at <http://powermiser.driveengineer.com/> to calculate the energy savings you'll enjoy when using Timken belts.



## Drive Engineer®

Drive Engineer® is mobile web application that delivers robust belt drive design and analysis to your desktop or mobile device.

The package includes information about part numbers, horsepower capacity, warnings for drive limits, service factors, hub loads, bushings, diameters, center distance and tensioning – in short, everything needed to design a maximum-efficiency drive system.

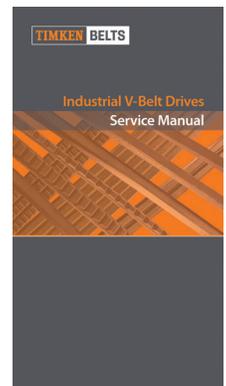
Go to [www.driveengineer.com](http://www.driveengineer.com) for this handy tool and begin designing, analyzing and improving your HVAC drive system efficiency today.



## Industrial V-Belt Drives Service Manual

Proper belt tensioning and alignment are also important for energy efficiency and drive life. Consult the "Industrial V-Belt Drives Service Manual" for Timken belts to access helpful tips on proper installation and maintenance of belt drives.

Available at: <https://www.timkenbelts.com/> resources, or scan the QR code below:



**TIMKEN BELTS**

Timken Belts is part of The Timken Company's growing portfolio of engineered bearings and power transmission products. A manufacturer of premium performance power transmission belts, Timken Belts' associates and products help keep industry in motion and the world more productive.

[www.timkenbelts.com](http://www.timkenbelts.com)

Performance Driven. **Performance Proven.**

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