CARLISLE
BELTS BY TIMKEN

Super II® V-Belt for HVAC

The Right Belt for the Job®

- HIGHER PERFORMANCE, COMPETITIVELY PRICED ALTERNATIVE TO BEST-IN-CLASS WRAPPED V-BELTS
- MORE ENERGY EFFICIENT THAN WRAPPED V-BELTS
- QUIET, NO SQUEAL AT STARTUP
- UNIQUE DESIGN FOR LONGER LIFE – LESS MAINTENANCE AND DOWNTIME
- CHEK MATE® TOLERANCES – NO NEED TO MACHINE MATCH BELTS
- MADE WITH HEAT RESISTANT EPDM RUBBER COMPOUND

MADE IN USA

www.carlislebelts.com

EPDM
DURABLE & HEAT RESISTANT

IRON CLAD GUARANTEE

Super II® V-Belt vs. Wrapped V-Belt

Save energy, reduce downtime and stop changing belts with Super II® v-belts – The Right Belt for the Job®

Cool. Calculated. Savings.

Saving energy on your air moving drive systems is as easy as taking your old v-belts off the drive and installing a Chek Mate® matched set of Super II v-belts.

The more v-belt driven air handlers you have in your facility, the faster your energy savings accumulate.

Super II V-Belt – Proven Efficient

Super II® v-belts are the efficient and cost competitive alternative to the highest quality wrapped v-belts available. Engineered to meet energy efficiency head-on, Super II belts deliver optimum power with minimal energy loss.

Specially formulated fiber-loaded EPDM rubber compounds, engineered fabrics and high-modulus polyester cord contribute to the Super II belt's unique design – turning energy loss into efficiency gain.

Power Miser™ Calculator: Best-in-Class Wrapped V-Belt vs. Super II V-Belt

Drive Parameters		Energy Calculations	Wrapped Belt	Super II V-Belt
Driver:	20 HP/1800 RPM	Annual KWH	106,097	105,039
Driven:	900 RPM	Annual Energy Cost	$15,915	**$15,756**
Motor Efficiency:	90%	Annual Energy Savings	–	**$160**
Electric Rate:	$0.15/Kwh	Belt Drive Premium	**Same Cost**	
Drive Operation:	6400 hours/year			

CNA Cord

The unique CNA (central neutral axis) cord placement positions the strength of the belt lower on the pulleys to maintain stability and prevent roll-over.

Raw Edge Construction

The special combination of fabric layers and engineered rubber compounds found in raw edge construction generates a higher coefficient of friction which results in more efficient power transmission and reduced energy loss. In contrast, the fabric cover construction of a wrapped belt can slip on the pulley, resulting in lost efficiency.

The durable EPDM rubber compound is static conductive, resistant to hardening and glazing, and operates in broader temperature ranges (-50°F to +250°F).

Testing proves that Super II belts offer greater strength, longer life, better heat dissipation and higher efficiencies than best-in-class wrapped v-belts.

Belt Grade Card – *Super II V-Belt vs. Best-in-Class Competitor's Wrapped V-Belt*

Evaluate all your HVAC drive systems to realize the many benefits of upgrading to EPDM Super II v-belts!

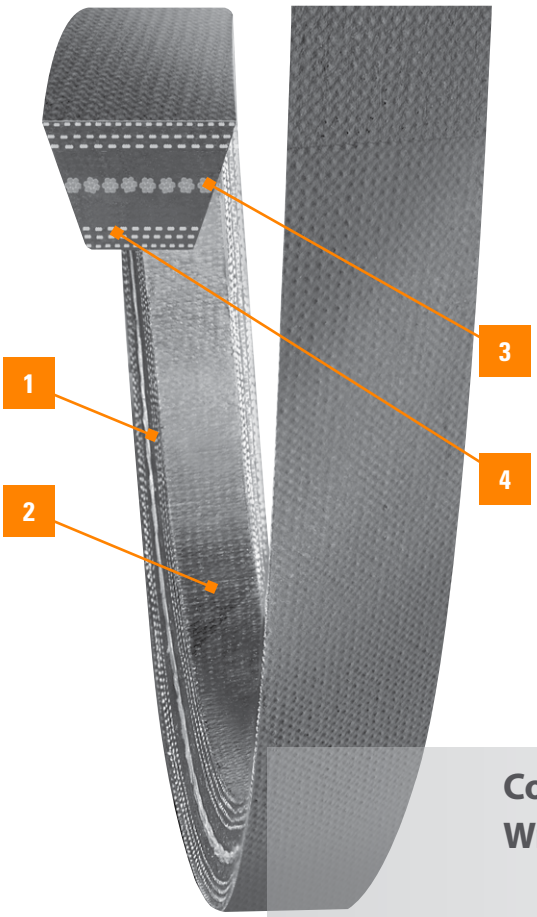
Gain improved performance at the same cost when compared to the best-in-class wrapped v-belts!

DRIVE PARAMETER OR CONDITION
(For more precise information, utilize Timken's Drive Engineer program or contact a Timken b

	General Ratings					Design	
	Normal HP Limit	Normal Ambient Temperature Range (°F) (Minimum)	Normal Ambient Temperature Range (°F) (Maximum)	Maximum Belt Speed (feet/minute)	Lengths Manufactured to ARPM Industry Standard for Matching	Energy Efficiency	High Speed Ratio
Super II v-belt with raw edge EPDM construction	500	-50°	+250°	6500	◪	★ ★ ★	★ ★
Best-in-Class competitor's wrapped v-belt	500	-35°	+120°	6500	YES	★ ★	★

Legend: ★ ★ ★ = Excellent ★ ★ = Satisfactory ★ = Use only if necessary to meet other conditions ◪ = Manufactured to Chek Mate® matching tol

Unique Construction Improves Efficiency



1 Raw Edge Construction:

Raw-edge construction results in a higher coefficient of friction than wrapped belts which increases drive efficiency.

- Grips pulleys better
- Minimizes belt slip
- Significantly reduces drive vibration and noise under AC shock load conditions – no squeal at start-up

2 EPDM Rubber Compound:

Special EPDM rubber compound with stiff-flex technology is durable, static conductive, and resistant to heat.

- Withstands heat (-50°F to +250°F continuous operating temperature)
- Contributes to longer belt life under harsh conditions

3 Center Cord Construction:

Centrally located high-modulus polyester cord is specially treated to maintain extreme loads without stretching. The central neutral axis (CNA) cord position contributes to greater balance, flexibility, belt strength and belt life while ensuring:

- Belt stability
- Resistance to belt roll-over
- Flexibility on small diameter sheaves

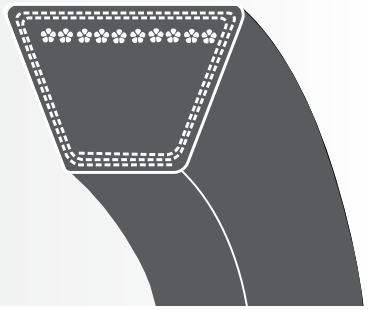
4 Multiple Fabric Plies:

Multiple plies of angle-induced fabric, top and bottom, relieve stress on the load-carrying cord for added flexibility.

- Contributes to longer belt life, less maintenance and downtime

Compare to Competitors' Wrapped V-Belts

- Cord placement at top of belt
- Absence of high modulus cord material
- Smaller cord diameter
- Single ply standard cotton/poly fabric wrapped
- SBR rubber compound without stiff-flex qualities



elt specialist)

Factors		Space Limitations					Environmental Conditions				
Minimum Slip	Shock Loads – No Squeal at Startup	Extremely Long Centers	Extremely Short Centers	Small Sheave Diameters	Overall Compactness	Light Weight Drive	Dust, Abrasives	Excessive Heat	Excessive Moisture	Inaccessible for Maintenance	Meets ARPM Standard for Static Conductivity (IP-3-3)
★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★	★ ★	★ ★	★ ★	★ ★ ★	★ ★ ★	★ ★	YES
★	★ ★	★ ★	★	★	★	★	★	★	★	★	YES

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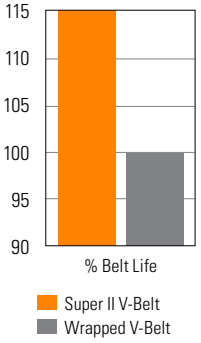
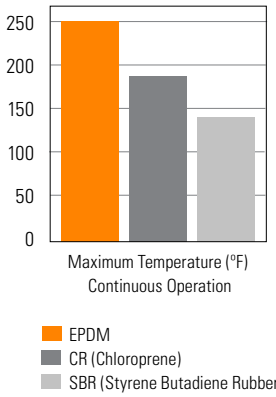
Super II V-Belt – Proven Performance

Lab and field tests prove that EPDM Super II v-belts are superior to wrapped v-belts.

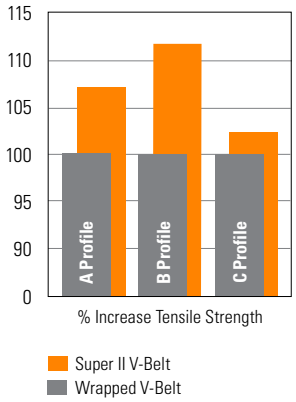
Belt Life



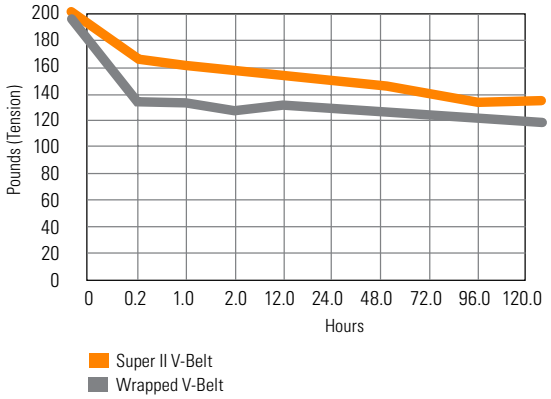
Operating Temperature



Tensile Strength



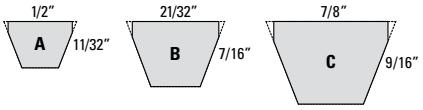
Tension Decay (Stretch Resistance)



Part Number Interchange

The Carlisle Super II raw edge v-belt by Timken is specified using the same part numbers as the competitor's wrapped v-belt. Available in A, B and C cross-sections, the upgrade to raw edge efficiency is easy!

	Manufacturer	Part Number		
Raw Edge	Carlisle® Super II® V-Belt	A50	B85	C100
Classical Wrapped	Carlisle® Super Blue Ribbon®	AP50	BP85	CP100
	Browning® Super Gripbelt®	A50	B85	C100
	Optibelt® VB	A50	B85	C100
	Bando® Power King®	A50	B85	C100
	Gates® Hi-Power® II	A50	B85	C100
	ContiTech® HY-T®	A50	B85	C100



Chek Mate® Matching System

The need for machine-matched belts can be avoided in all but the most sensitive applications by using Chek Mate certified Super II v-belts by Timken. All Chek Mate certified Carlisle belts approximately 67" in length and shorter that carry the Chek Mate logo or icon are equivalent to machine matched belts without any added premium.

Our engineers developed the Chek Mate manufacturing process to hold v-belt lengths within ARPM (Association for Rubber Products Manufacturers) tolerances for a matched set.

Belts cannot be matched by using date codes. Simply look for belts that carry the distinctive Chek Mate logo or icon:

chekmate®

Timken's PowerMiser™ Efficiency Calculator

POWERMISER
Energy Savings Calculator

Use PowerMiser to calculate the savings you'll realize by converting your HVAC drives to Carlisle belts by Timken. The greater the number of drives and higher the horsepower of the drive, the more you save!

Download the PowerMiser energy conservation tool at: powermiser.driveengineer.com to calculate the energy savings you'll enjoy when you upgrade to Carlisle belts by Timken.

TIMKEN

The Timken team applies their know-how to improve the reliability and performance of machinery in diverse markets worldwide. The company designs, makes and markets high-performance mechanical components, including bearings, gears, chain, belts, couplings and related mechanical power transmission products and services.

www.carlislebelts.com

Stronger. By Design.

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