



## V-BELT SOLUTIONS HVAC INDUSTRY



# HVAC INDUSTRY

## POWER SOLUTIONS FOR



**SMALL BUSINESS & RESIDENTIAL**



**LARGE FACILITIES**



**INDUSTRIAL**

## APPLICATIONS

- AIR CONDITIONERS
- WHOLE HOUSE FANS
- MUSHROOM FANS
- EXHAUST FANS
- ROOFTOP FANS
- VENTILATION FANS
- AIR MOVERS
- AIR CURTAINS
- BLOWERS
- PUMPS
- AXIAL FANS
- COOLING TOWERS
- CONDENSERS
- CHILLERS
- AIR HANDLERS
- CENTRIFUGE FANS
- TURBINES
- STACKS
- FORCE DRAFT
- FIN FANS
- EVAPORATORS

## ENGINEERING SUPPORT & ON-SITE CONSULTATION

OPTIBELT can assist your operations with a full site review, expert engineering services, and custom manufactured products.







## OPTIBELT V-BELT ADVANTAGES

OPTIBELT manufactures the highest quality v-belts in the industry. That means your HVAC drives will run more efficiently, require less maintenance, and have fewer instances of downtime saving your business thousands of dollars every year.



### ROTARY VULCANIZATION

Most manufacturers utilize a step-cure process which vulcanizes belts in sections. This process is easier but can produce overlapping cured sections that can cause performance issues and failures.

OPTIBELT's rotary vulcanization continually rotates the belt as it is being cured. This has the following benefits:

- Smooth profile side-walls for superior sheave contact
- Consistent cured rubber improves performance and durability
- No molds needed for v-belt production 47" and above

### WHAT IT MEANS FOR YOU:

- Any of your multiple v-belt drives will consume less power reducing your energy bills.
- Consistent power delivery will reduce drive stress and increase production.
- Reduced maintenance intervals will save replacement costs and valuable production time.



### LENGTH TOLERANCES

Single v-belts of the same length will vary during manufacturing. This is an issue when running multiple v-belts on one drive. Industry matched-set length tolerances were established to identify v-belts with closer tolerances. That meant operations had to track sets of single v-belt matched-sets to ensure proper tension.

OPTIBELT established a higher manufacturing standard called **S=C PLUS** or **Set-Constant**. Every S-C Plus labeled v-belt is much closer to equal lengths than any matched-set **regardless of the date manufactured**. Any drive running multiple single v-belts will run more efficiently simply by using Optibelt S=C PLUS v-belts.

### WHAT IS YOUR MULTIPLE?

# x2

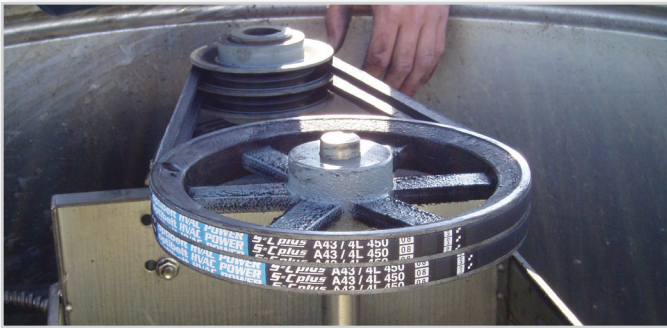
Drives running 2 single v-belts (on average) will run **2-5%** more efficiently using OPTIBELT S=C PLUS v-belts.

# x4

Drives running 4 single v-belts (on average) will run **4-8%** more efficiently using OPTIBELT S=C PLUS v-belts.

**Note:** Results are averaged, individual results will vary.

## DRIVE SOLUTION PROFILES



### INDUSTRY: FOOD SERVICE

### APPLICATION: EXHAUST FAN

### PRODUCT: HVAC POWER

A well-established Chicago restaurant location was having issues with one of their exhaust fans. The unit was positioned in the heat stream of the exhaust plenum produced from the kitchens cooking units. Ever since the exhaust fan was installed, the average belt life was only 3 to 4 weeks.

HVAC POWER's unique construction allows it operate in high temperature applications (over 200°F). By switching to HVAC POWER the **belt lifespan of the drive has increased to a full year.**



### INDUSTRY: POWER GENERATION

### APPLICATION: COOLING TOWER

### PRODUCT: RED POWER

A large power plant was having issues using cogged belts on several cooling tower units. The high temperatures and heat exhaust produced by the plant were causing the belts to fail after only 2 weeks.

Due to RED POWER's construction the belt is able to keep tension over time and dissipates heat rapidly which substantially improves durability. RED POWER provided **10X the previous belt's life** without the need for re-tensioning maintenance.

## EXPERIENCE THE OPTIBELT ADVANTAGE

Simply replace your current v-belts with OPTIBELT to experience the superior performance and v-belt length tolerances can do for your operations. If you have questions, need engineering support or would like an on-site visit, contact a customer service representative at 800-292-6081, or send an e-mail to [info@optibelt-usa.com](mailto:info@optibelt-usa.com).

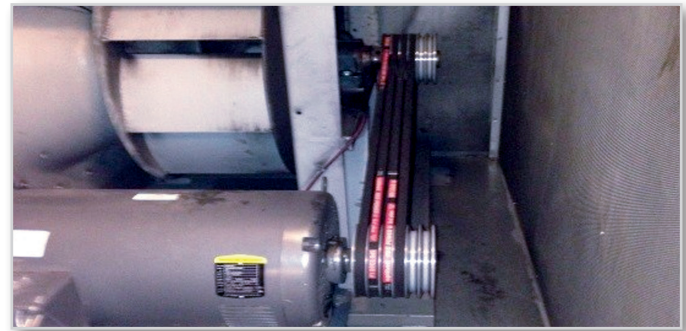




**INDUSTRY: HOTEL & HOSPITALITY**  
**APPLICATION: AIR HANDLER (AHU)**  
**PRODUCT: RED POWER**

A casino was experiencing frequent belt failures on their air handlers because the maintenance staff was not able to re-tension them as needed because of difficulties accessing the drive. Over time belts were stretching, losing tension, and failing. With over 60 AHUs the customer was looking for a way to reduce maintenance time and free up their workers for other service.

Optibelt's RED POWER belts were substituted to two different configuration drives and have been running **without issue for 4 years**. In addition RED POWER eliminated the scheduled re-tensioning maintenance.



**INDUSTRY: MANUFACTURING**  
**APPLICATION: AIR HANDLER (AHU)**  
**PRODUCT: RED POWER**

A plant for one of the largest automotive manufacturers in the world was looking to improve durability, and energy savings at their facility. As part of this effort several v-belt manufacturers were tested on HVAC applications throughout the plant. The units ran continuously for six months with energy consumption comparisons being recorded.

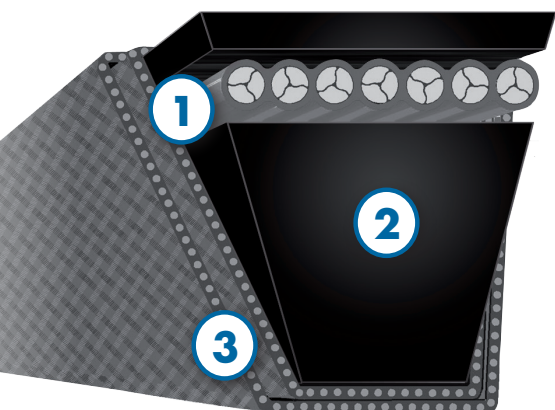
RED POWER lasted longer than competition and because RED POWER has the ability to transmit 50% more power than standard v-belts it **required half the number of belts**. This greatly reduced the stress on the motor shaft and reduced overall energy consumption.



## PRODUCTS

# VB & SK PERFORMANCE V-BELTS

VB Classical and SK Standard & Metric v-belts are OPTIBELT's performance standard. The combination of superior engineered materials, manufacturing processes and S=C PLUS length tolerances is what makes them far superior than industry standards.



### 1 POLYESTER CORD

Capable of handling stress loads in high power drives.

### 2 BLENDED RUBBER

Engineered natural and synthetic rubber combined with additional stabilizing agents for superior performance.

### 3 DUAL WRAP

Rubber impregnated 2x fabric wrap increases grip strength and provides increased durability.

#### SPECIFICATIONS

Temperature Range: -40° - 158°F

Anti-Static: ISO 1813

#### PRODUCT INFORMATION & SIZES

Additional sizes and specialty constructions available. Contact an OPTIBELT Representative for more details.

PROFILE	SINGLE	BANDED
A	20 - 190 in.	
B	23 - 360 in.	48 - 360 in.
C	47 - 420 in.	81 - 420 in.
D	100 - 660 in.	100 - 660 in.
E	180 - 660 in.	180 - 660 in.
3V	20 - 190 in.	48 - 360 in.
5V	47 - 420 in.	81 - 420 in.
8V	100 - 660 in.	100 - 660 in.
SPZ	487 - 3550 mm	1250 - 3550 mm
SPA	707 - 4500 mm	1250 - 4500 mm
SPB	1250 - 8000 mm	2000 - 8000 mm
SPC	2000 - 12500 mm	3000 - 12500 mm



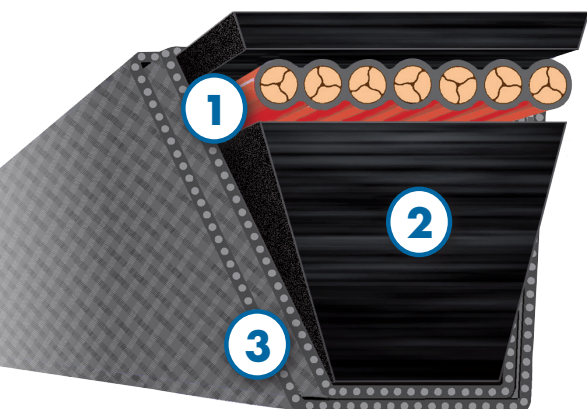
Additional sizes and specialty constructions available.





# RED POWER HIGH PERFORMANCE

RED POWER is the most advanced v-belt available. Its combination of high modulus polyester cord and transverse fiber core improves power capacity up to 50%, provides superior temperature resistance, and eliminates the need for re-tensioning maintenance.



## 1 HIGH MODULUS CORD

Up to 50% more power capacity over standard v-belts and no re-tensioning maintenance needed.

## 2 TRANSVERSE FIBER RUBBER

Increased efficiency, ability to absorb stress loads, and increases the heat dissipation rate.

## 3 DUAL WRAP

Rubber impregnated 2x fabric wrap increases grip strength and provides increased durability.

### SPECIFICATIONS

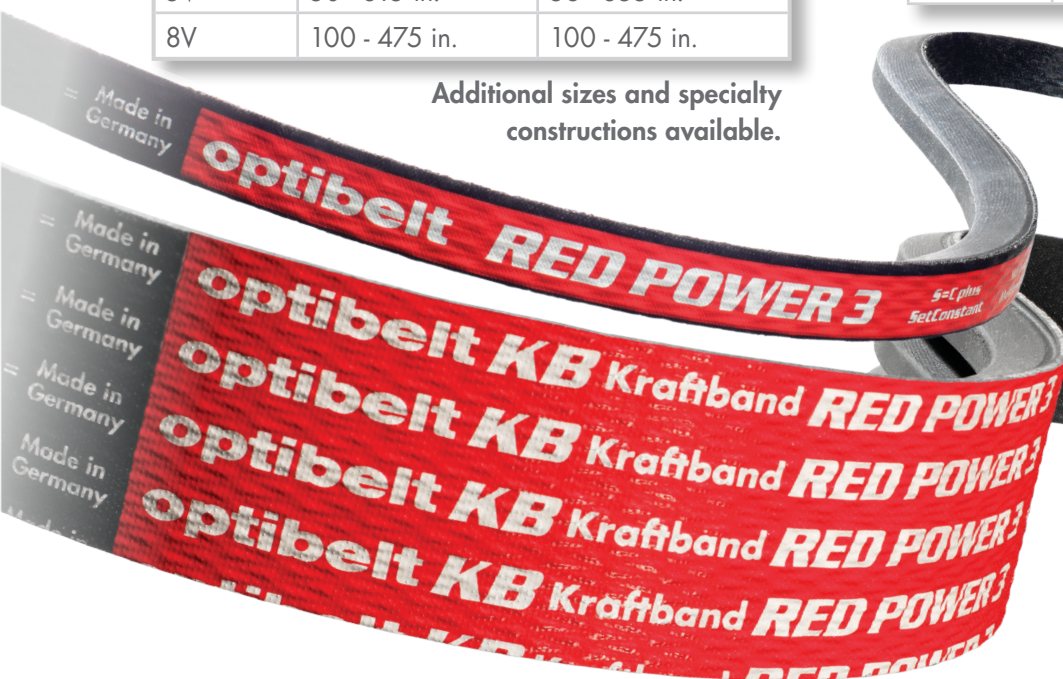
Temperature Range: -22° - 212°F

Anti-Static: ISO 1813

PROFILE	SINGLE	BANDED
A	52 - 120 in.	
B	52 - 148 in.	144 - 240 in.
3V	47 - 150 in.	50 - 150 in.
5V	50 - 315 in.	56 - 355 in.
8V	100 - 475 in.	100 - 475 in.

PROFILE	SINGLE	BANDED
SPZ	1202 - 3550 mm	1250 - 3550 mm
SPA	1207 - 4000 mm	1250 - 4500 mm
SPB	1250 - 8000 mm	2000 - 8000 mm
SPC	2000 - 8000 mm	3000 - 10000 mm

Additional sizes and specialty constructions available.

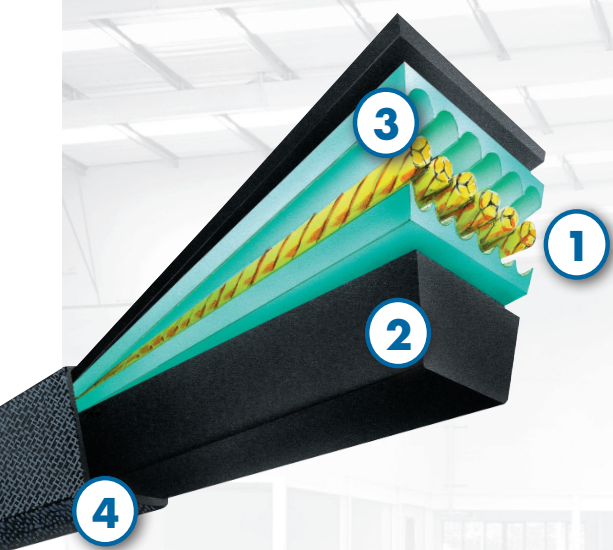




## PRODUCTS

# HVAC POWER HIGH PERFORMANCE

HVAC POWER is engineered to provide the flex-range and grip of a raw-edged cogged belt and the durability of a wrapped v-belt. The results have produced the only high performance fractional horsepower belt in the industry. It runs quieter, provides superior tolerances to heat and cold, and has proven to last far longer than traditional raw-edge cogged v-belts.



### 1 HIGH MODULUS CORD

Small diameter premium cords improves flex range and reduces re-tensioning maintenance.

### 2 BINDING COMPOUND

Coats cords and helps bind small diameter cords to the core rubber for superior performance.

### 3 ENGINEERED RUBBER

Blended rubber core has a greater heat dissipation rate which increases the belt's lifespan.

### 4 DUAL WRAP

Rubber impregnated 2x fabric wrap increases grip strength and provides increased durability.

#### SPECIFICATIONS

Temperature Range: -40° - 212°F

Anti-Static: ISO 1813

#### PRODUCT INFORMATION & SIZES

Additional sizes and specialty constructions available. Contact an OPTIBELT representative for more details.

PROFILE	LENGTHS	PROFILE DIM.
A	18 - 51 in.	1/2"W x 11/32"H
4L	20 - 53 in.	
B	23 - 51 in.	21/32"W x 7/16"H
5L	26 - 54 in.	

**SIZING NOTE:** A & 4L, and B & 5L have the same profile dimensions. A & B profile lengths are measured on the inside of the belt loop while 4L & 5L profile lengths are measured on the outside.

