

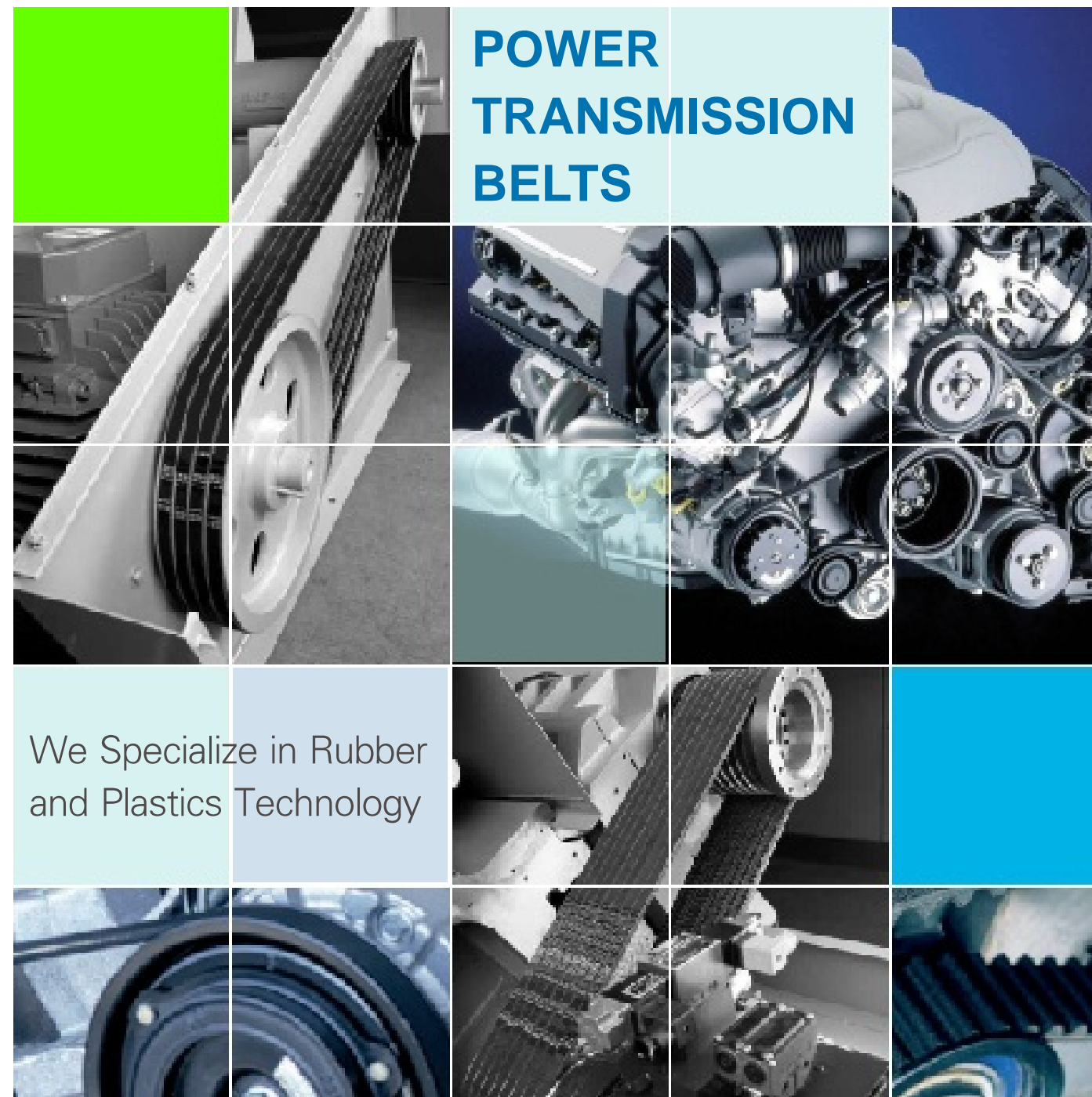


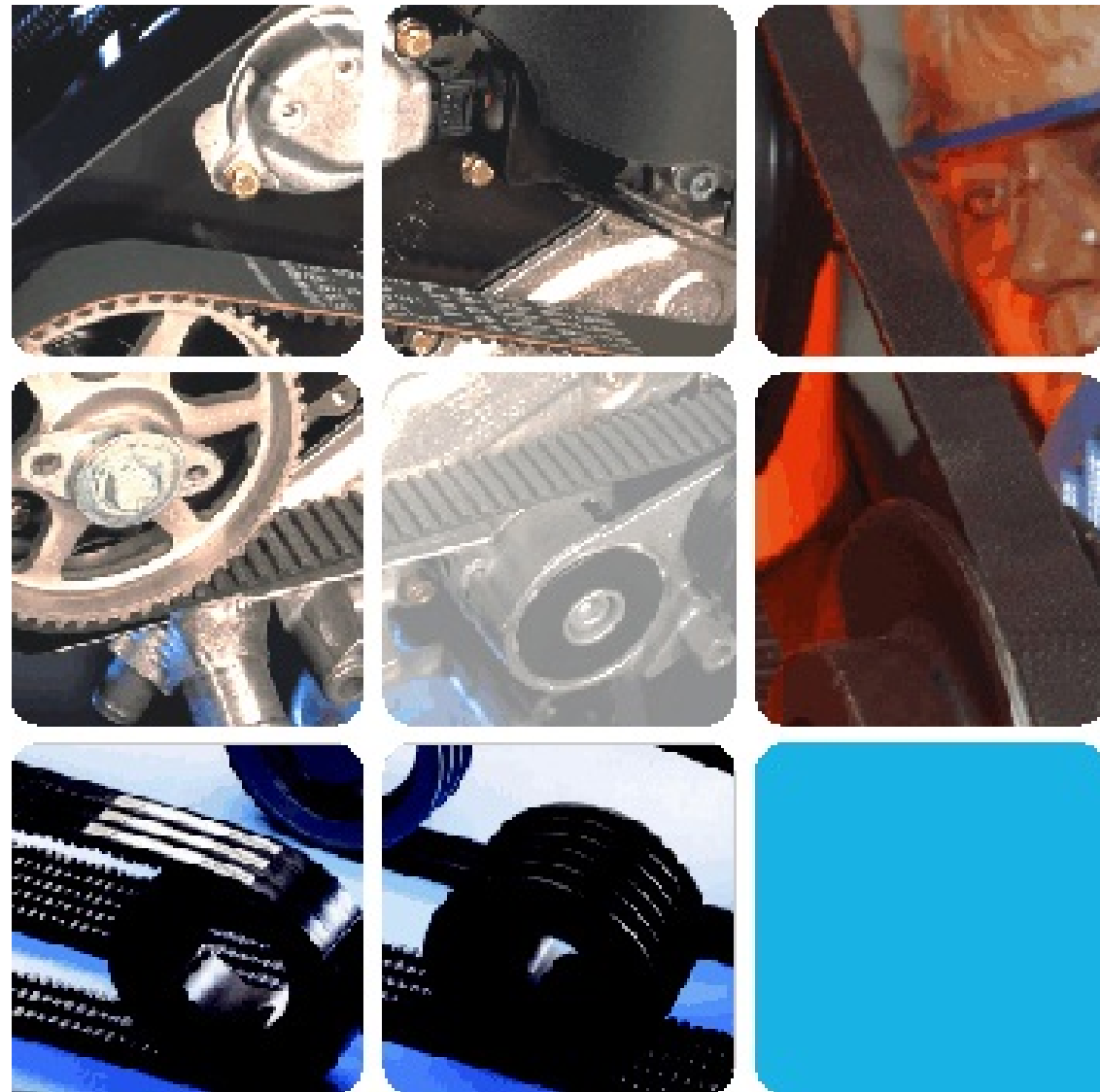
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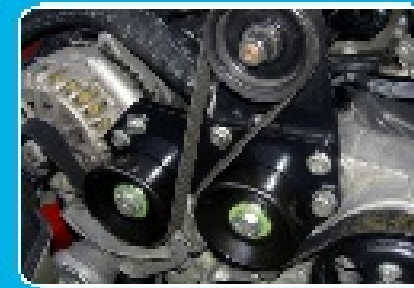
Power Transmission Belts

Power Transmission Belts, essential for transferring power of all automotive, industrial and agricultural machines over the world, have been accepted by customers as a pronoun for quality and reliability for over ten years.

Power Transmission Belts are used as essential parts to transfer power of all machines and equipment used on a wide range of products in all heavy and light industries, including automotive, home and office appliances and equipment, chemicals, machinery, ships and farming equipment.

We have steadily improved the product quality and developed products for diverse applications through development of various synthetic rubber, fiber, chemicals and their processing techniques.

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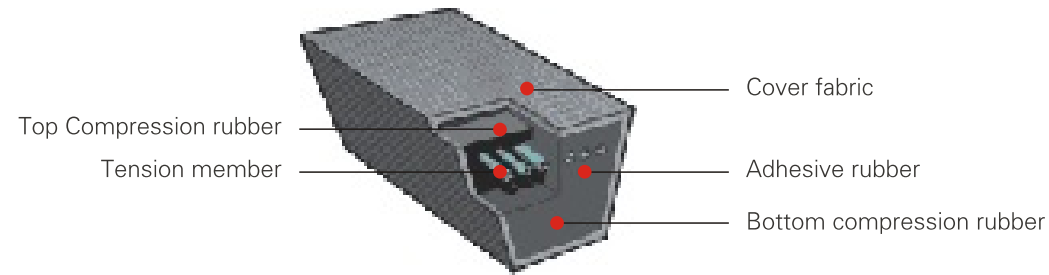
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▶ **Wrapped Belts**

V-shape belt with surface covered with fabrics.



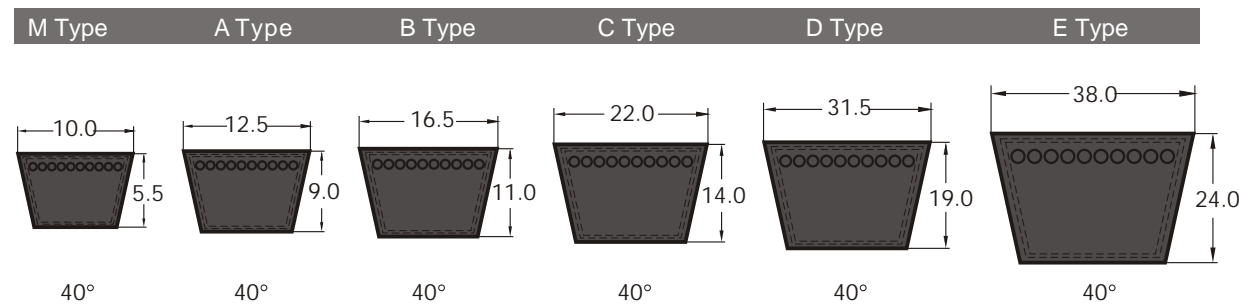
▶ **Features**

- + Cover fabrics enhance durability by protecting inner parts.
- + Specially designed cords enhance durability and length stability.
- + Excellent in resistance against heat, oil and wear.
- + Safe use is ensured by preventing static electricity.
- + Enhances power transmission efficiency by reducing slip.

Construction	Functions	Materials
Cover fabric	Protects the inner parts of the belts and strong abrasion the pulley groove	Cotton synthetic fabric
Tension member	Primary material for transferring power	Polyester, Aramid
Top Compression rubber	Maintain belt shape (upper)	NR, CR
Adhesive rubber	Supports and protects Tension member adhesion	NR, CR
Bottom compression rubber	Maintains belt shape (lower)	NR, CR

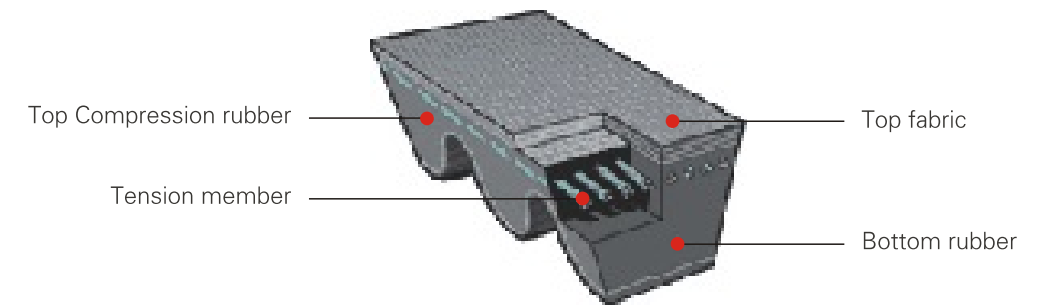
NR : Natural Rubber , CR: Chloroprene Rubber

▶ **Measure of section**



▶ **Raw Edge Cogged Belts**

V-belt with cog-shaped grooves on the bottom to enhance flexibility while top and bottom parts are covered with rubber or fabrics exposed on sides.



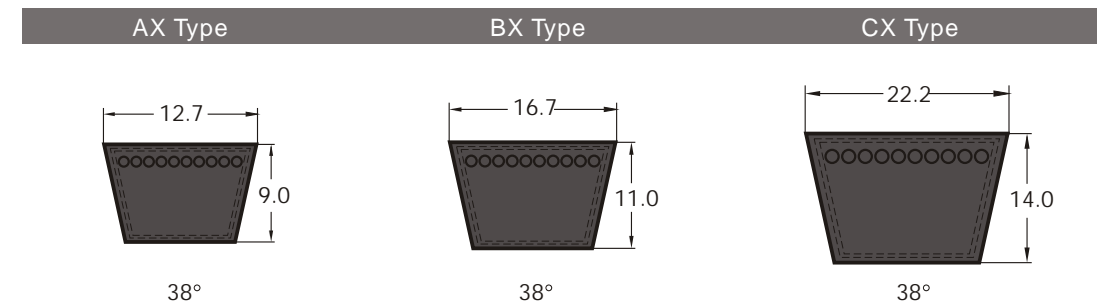
▶ **Features**

- + Excellent durability and flexibility in driving.
- + Specially designed cords enhance durability and length stability.
- + Excellent in resistance against heat, oil and wear.
- + Can be used on small pulleys.
- + Show stable performance on high speed rotation.

Construction	Functions	Materials
Top fabric	Protects internal tension member	Cotton synthetic fabric
Tension member	Primary material for transferring power	Polyester, Aramid
Compression rubber	Maintains sectional shape by side pressure	CR
Bottom rubber	Absorbs shock and prevent cracking in compression rubber	NR, CR

CR : Chloroprene Rubber

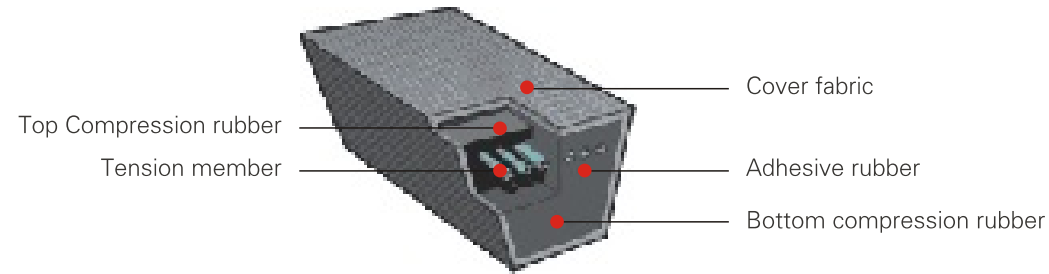
▶ **Measure of section**





► **Wrapped Belts**

V-shape belt with surface covered with fabrics.



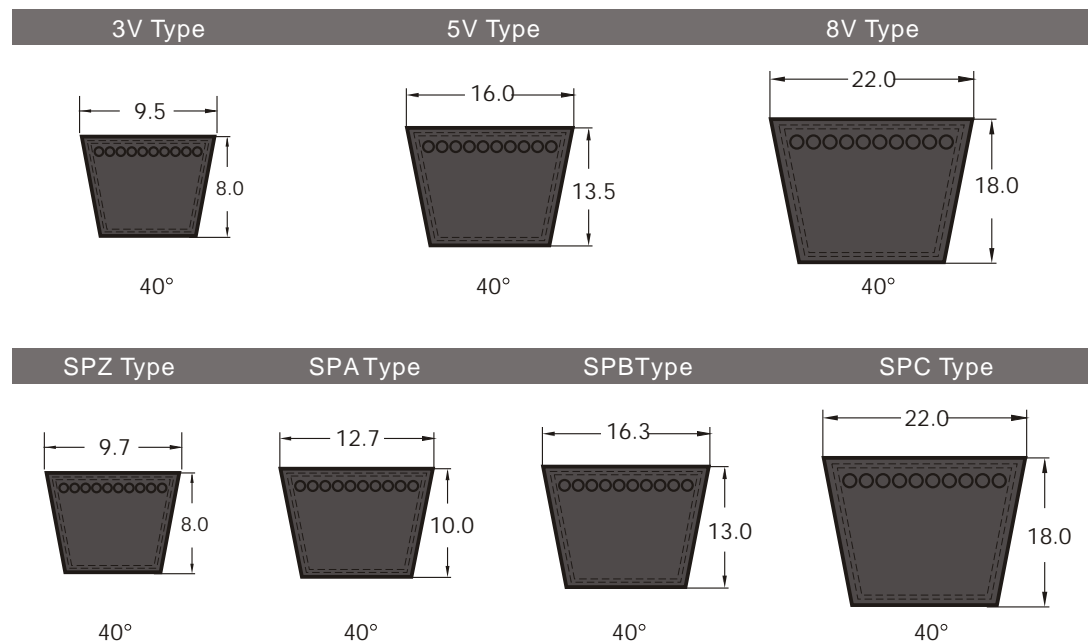
► **Features**

- Designed to enhance power transmission efficiency by giving even stress over tension member with a special section all shape of narrower top width and taller height, special raw materials and production technique.

Construction	Functions	Materials
Cover fabric	Protects the inner parts of the belts and strong abrasion the pulley groove	Cotton synthetic fabric
Tension member	Primary material for transferring power	Polyester, Aramid
Top Compression rubber	Maintain belt shape (upper)	NR, CR
Adhesive rubber	Supports and protects Tension member adhesion	NR, CR
Bottom compression rubber	Maintains belt shape (lower)	NR, CR

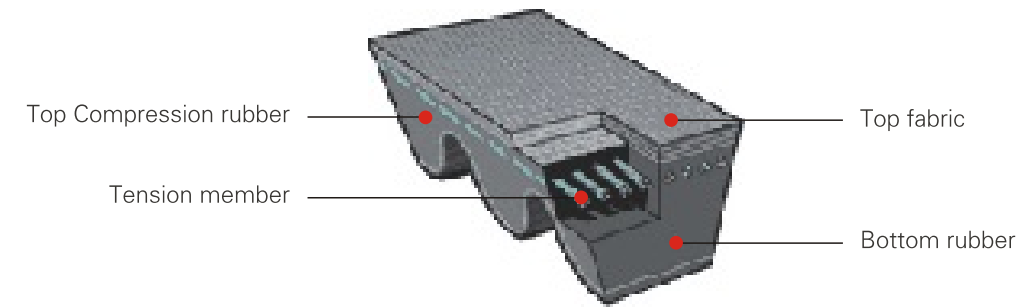
NR : NaturalRubber , CR: Chloroprene Rubber

► **Measure of section**



► **Raw Edge Cogged Belts**

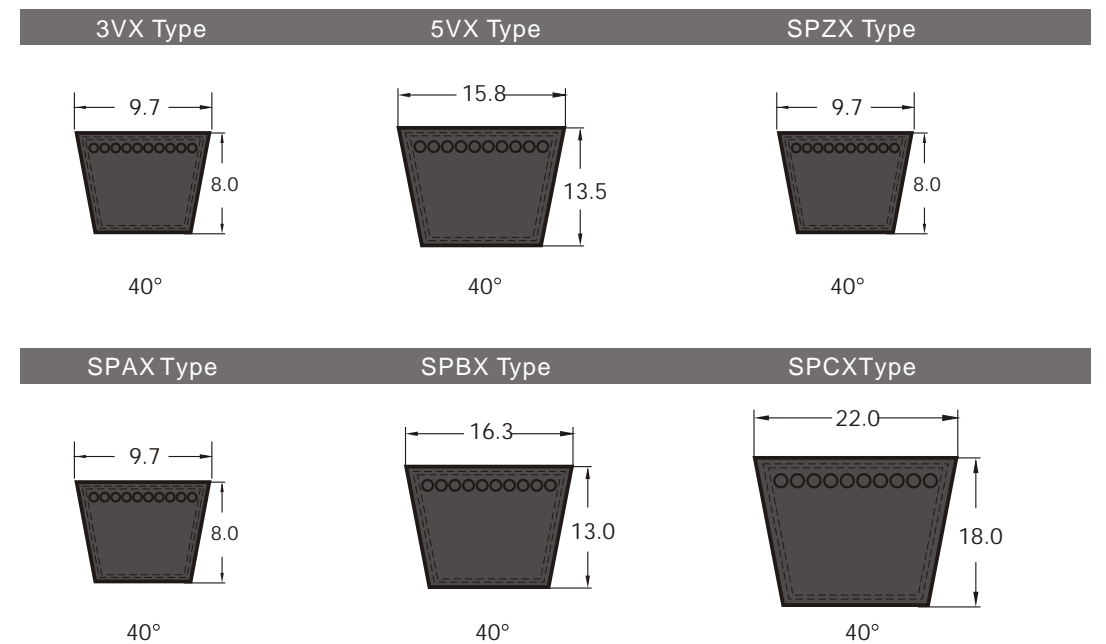
V-belt with cog-shaped grooves on the bottom to enhance flexibility while top and bottom parts are covered with fabrics or rubber is exposed on sides.



Construction	Functions	Materials
Top fabric	Protects internal tension member	Cotton synthetic fabric
Tension member	Primary material for transferring power	Polyester, Aramid
Compression rubber	Maintains sectional shape by side pressure	CR
Bottom rubber	Absorbs shock and prevent cracking in compression rubber	NR, CR

CR : ChloropreneRubber

► **Measure of section**



Industrial Joined-V-Belts

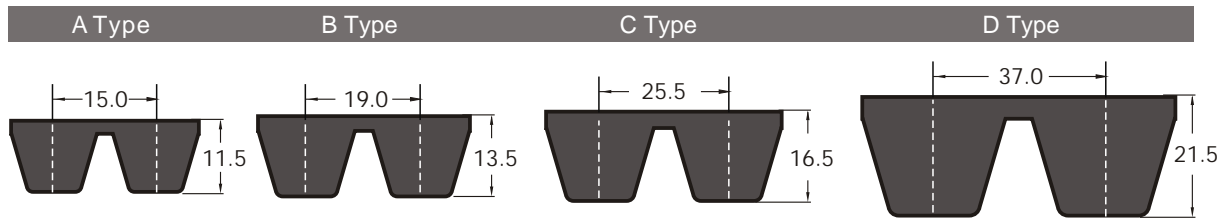


▶ Wrapped Belts

▶ Features

- + The belt prevents abrasion caused by length differences among v-shaped belts used on one pulley. It can adjust the hold based on the need.

▶ Measure of section

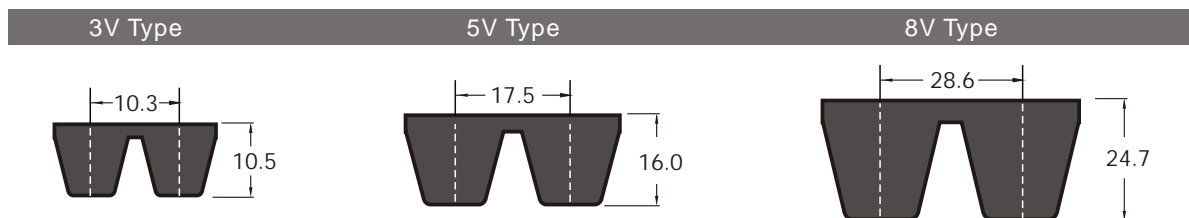


▶ Narrow Belts

▶ Features

- + Higher power transmission efficiency
- + The use of smaller pulley
- + Space saving
- + Excellent resistance against heat, oil and wear

▶ Measure of section

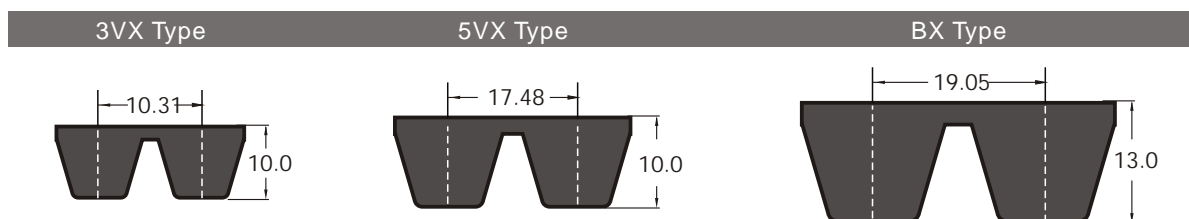


▶ Raw Edge Cogged Belts

▶ Features

- + Minimize temporary shock & vibration
- + Prevent popping on the pulley & torsion of belts
- + Stabilize tension
- + Maintains the length stability

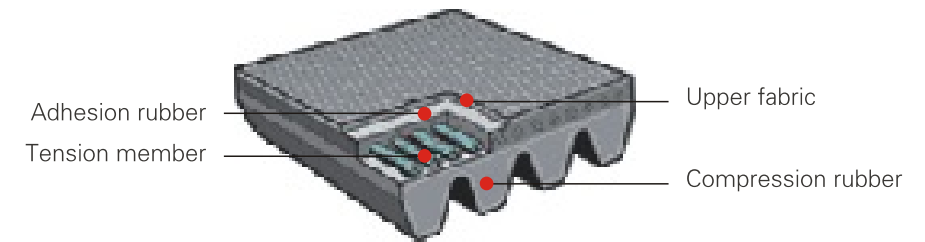
▶ Measure of section



Industrial V-Ribbed Belts



V-Ribbed Belts have wide top width and thin thickness. It provides consistent tension while driving by connecting in the each rib. It is also called Poly V-belts or Micro V-belts.



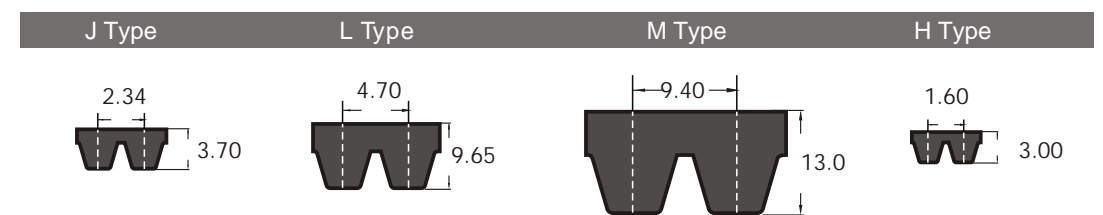
▶ Features

- + The wide width and thin height provide the excellent flexibility
- + High power transmission under operational conditions of high-speed rotation, reverse bending and a small diameter pulley
- + Maintains consistent tension during operation for cords of high modulus and low shrinkage
- + Excellent in resistance against heat, oil and wear
- + Enhances power transmission efficiency by reducing slip during operation

Construction	Functions	Materials
Upper fabric	Protects internal tension member	Cotton synthetic fabric
Adhesion rubber	Supports and protects adhesiveness of tension member	CR, EPDM
Tension member	Primary material for transferring power	Polyester, Nylon
Compression rubber	Maintains belt shape and enhances side pressure	CR, EPDM

CR : Chloroprene Rubber , EPDM: Ethylene Propylene Diene Monomer

▶ Measure of section



▶ Grinded PJ belts

Materials : CR based
Tension member : Polyester Cable Cord (P.C.C)

▶ Molded PJ belts

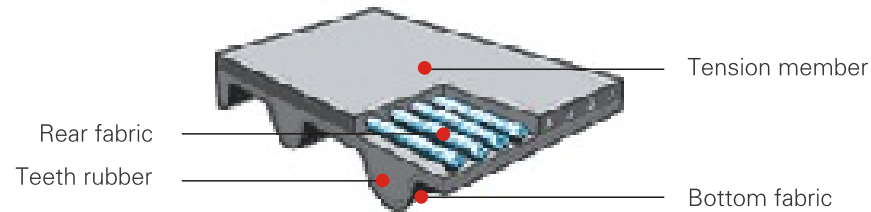
Materials : CR / BR based
Tension member : Nylon
Max Rib : 210 Ribs

- + CR : Chloroprene Rubber , BR : Polybutadiene Rubber
- + ※ PH Belts are available upon request.

Industrial Timing Belts



Timing belts function a synchronous driving like a gear or chain. It is so called "Synchronous Belt".



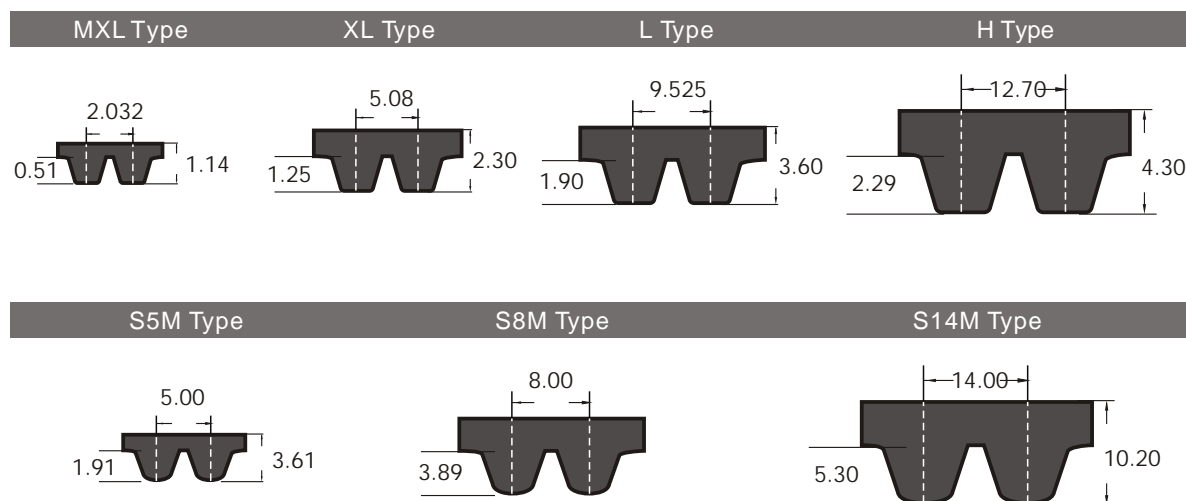
► Features

- + May solve problems which can be happen by using the chain related to degrading power transmission during high-speed operation, and the distance problem between the driving and the driven part, and driving problem under the conditions of oil spreading
- + Prevents belt elasticity by using glass fiber for tension member
- + Excellent in resistance against heat, oil and wear
- + Guarantees high power transmission efficiency under driving conditions of high speed and severe temperature fluctuation
- + Show stable performance on high-speed rotation

Construction	Functions	Materials
Tension member	Primary material for transferring power	Glass Fiber
Rear fabric	Protects tension member	CR
Teeth rubber	Protects tension member, maintains belt shape	CR, HNBR
Bottom fabric	Maintains belt and teeth shape	Nylon

CR : Chloroprene Rubber

► Measure of section

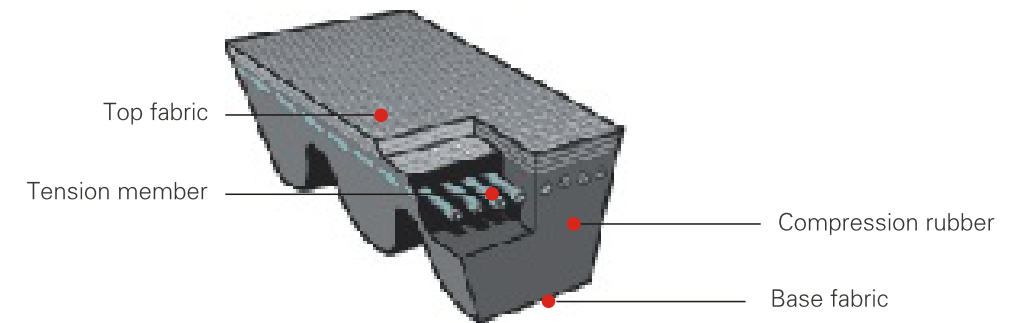


Automotive Raw Edge Belts



► Raw Edge Cogged Belts

Made of high strength, flexible tension members and heat-resistant rubber compounds, these automotive belts are designed for high-speed and high-temperature conditions in specially designed shapes.

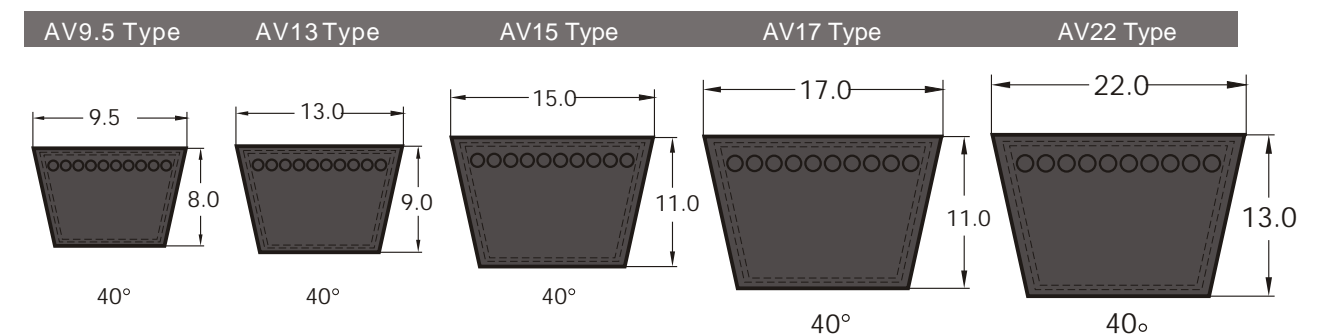


► Features

- + Highly flexible and thus suitable for conditions requiring high flexibility and a small pulley diameter.
- + Assures uniform performance over the entire belt length for the entire belt life.
- + Excellent in resistance against heat, oil and wear.
- + Resistant to heat, oil and abrasion.

Construction	Functions & Materials
Top fabric	Features flexibility and resistance to heat, oil and abrasion
Tension member	Made of highly strong cords with low stretch ability, gives high flexibility and length stability
Compression rubber	Made of fiber-reinforced rubber compounds. Features high durability and smooth running
Base fabric	Made of flexible carcass, it functions to absorb shock and prevent rubber cracks

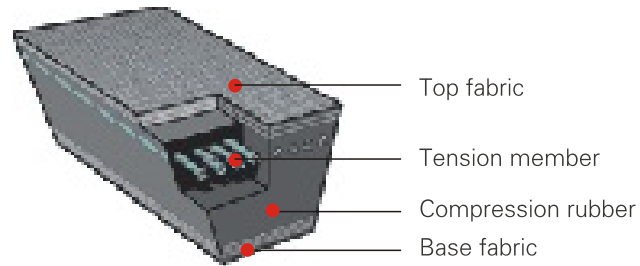
► Measure of section



Automotive Raw Edge Belts



▶ Raw Edge Laminated Belts

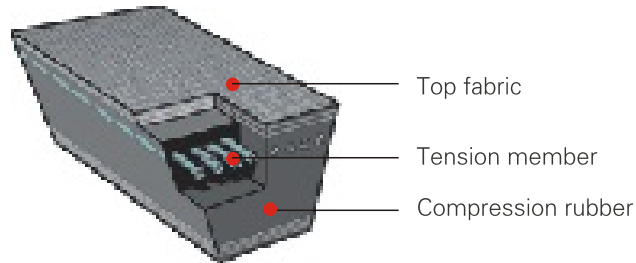


▶ Features

- + Noise reduction
- + Prevents slippage
- + Resistant to shock
- + Resistant to heat, oil and abrasion

Construction	Functions & Materials
Top fabric	Features flexibility and resistance to heat, oil and abrasion
Tension member	Made of highly strong cords with low stretch ability, gives high flexibility and length stability
Compression rubber	Made of fiber-reinforced rubber compounds. Features high durability and smooth running
Base fabric	Made of flexible carcass, excellent for noise absorption and quiet running

▶ Raw Edge Plain Belts

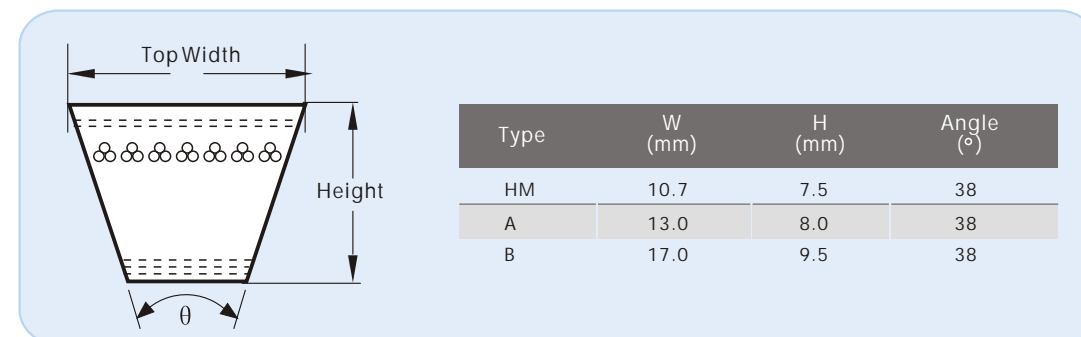


▶ Features

- + Prevents slippage
- + Resistant to heat, oil and abrasion

Construction	Functions & Materials
Top fabric	Features flexibility and resistance to heat, oil and abrasion
Tension member	Gives high flexibility and length stability
Compression rubber	Features high durability and smooth running

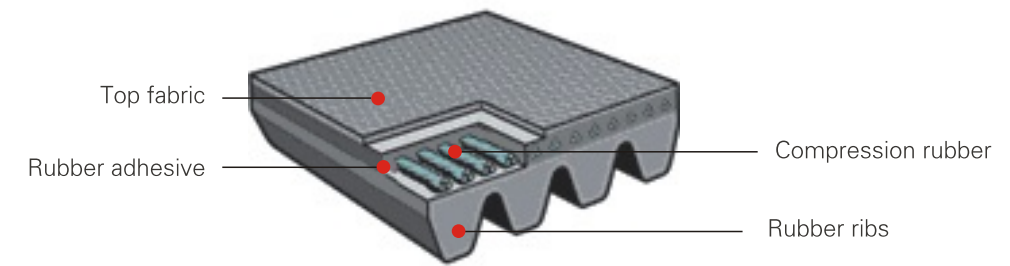
▶ Measure of section



Automotive V-Ribbed Belts



High flexibility due to unique belt cross-section allows long service life and compact drives. ZUNHUA V-Ribbed Belts are suited for high speed drives and high power transmission drives. V-Ribbed Belt is so-called "Poly V-Belt".

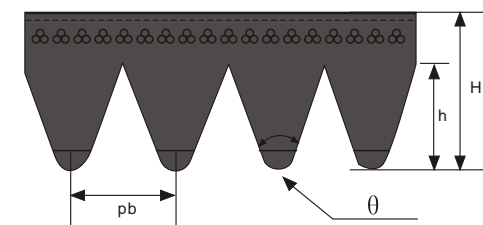


▶ Features

- + Designed for excellent flexibility, meets the requirements of small pulley diameters and reverse bending
- + High power transmission efficiency
- + Reduced noise
- + Smooth running

Construction	Functions & Materials
Top fabric	Resistant to heat, oil, wear and crack
Tension member	The specially heat-treated cords provide high modulus and shock load resistance
Rubber adhesive	Maintains cohesion of the cords and rib rubber as well as protecting cords
Rubber ribs	Fiber-reinforced rib rubber offers support for the cords and excellent wear resistance

▶ Measure of section

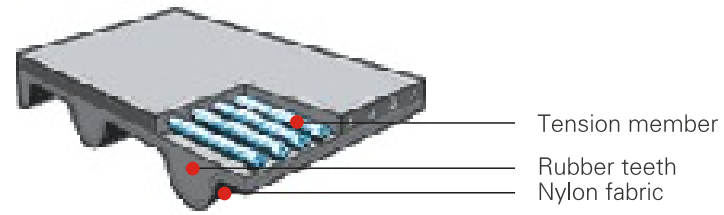


Type	Pb	θ (°)	H (mm)	h (mm)
PK	3.56	40	4.8/4.3	2.5/2.0

Automotive Timing Belts



Timing belts have mainly been used for automotive overhead camshaft(OHC) drives and guarantee variable speed change and high temperature drive conditions. These belts drive offer many advantages over conventional chain and gear drives. Timing belt is so-called "Synchronous Belt".



► Features

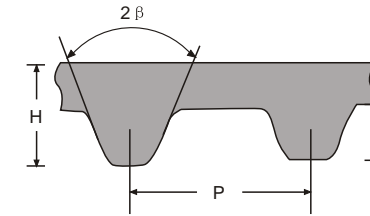
- + Quieter running
- + No lubrication needed
- + Non-slip engagement
- + Economical operation
- + Excellent mechanical efficiency

Construction	Functions & Materials
Tension member	Fiberglass cords with high tensile strength, excellent flexibility and which eliminate belt stretching
Rubber teeth	Excellent heat and oil resistance, adhesion both on tensile member and tooth fabric
Nylon fabric	Excellent wear-resistant, low friction coefficient facing gives long service life

► Design Features

Design Features	Application Benefits
Synchronous drive element	Synchronous speed transmission, low bearing loads
Shear resistant teeth with precision tooth spacing	High power transmission, extreme reliability, precise engagement of pulley teeth, high temperature resistance
Low stretch, glass fibre tension cord	High tension resistance, no retightening, maintenance free
Flat belt design	Very flexible, small pulleys possible
Durable, robust top surface	Protection of the tension cord against mechanical wear, oil and Moisture
Protective fabric on tooth side with low coefficient of friction	Low engagement friction, long service life, very smooth running, high efficiency

Automotive Timing Belts



Example of mark

121 ZA 19
 Width: 19mm
 Model: ZA (P=9.525mm)
 Number of teeth: 121

► Correlative figure of automotive timing belt

Type	Pitch	Toothheight	Belt thickness
R(MR)	9.525	3.54	5.69
Y(MY)	8	3.11	5.21
ZBS	9.525	2.80	5.10
YU	8	3.109	5.20
RU	9.525	3.56	5.70
ZA	9.525	1.91	4.10
FS8M	8	3.05	5.30
ZR	9.525	3.20	5.40
ZAS	9.525	2.32	4.62
ZB	9.525	2.29	4.50
RHD	9.525	3.50	5.70
RHX	9.525	2.617	4.80
RPP	9.525	2.25	4.50
SL	9.525	3.40	5.50
ZD	9.525	3.50	5.50
S8M	8.000	2.95	5.30



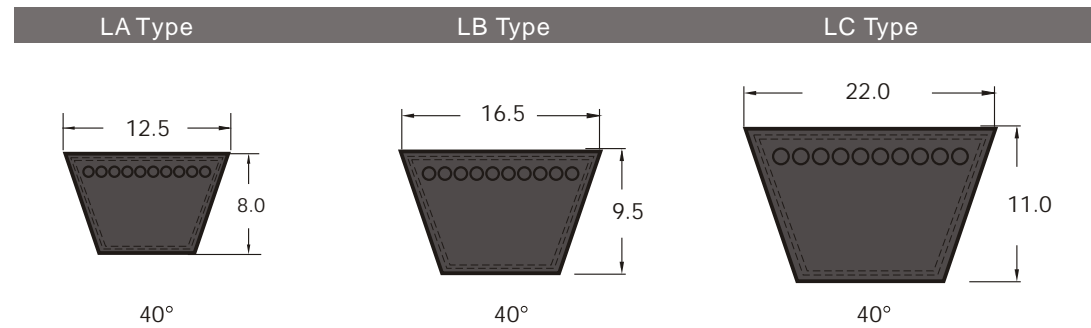
▶ **Wrapped Belts**



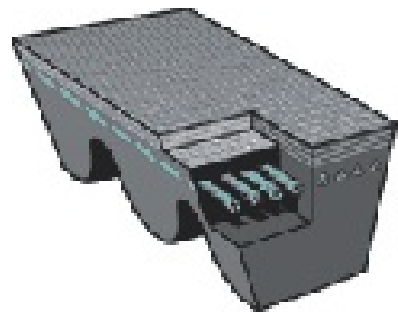
▶ **Features**

- + Highly flexible and thus suitable for conditions requiring high flexibility and a small pulley diameter
- + Assures uniform performance over the entire belt length for the entire belt life
- + Resistant to heat, oil and abrasion

▶ **Measure of section**



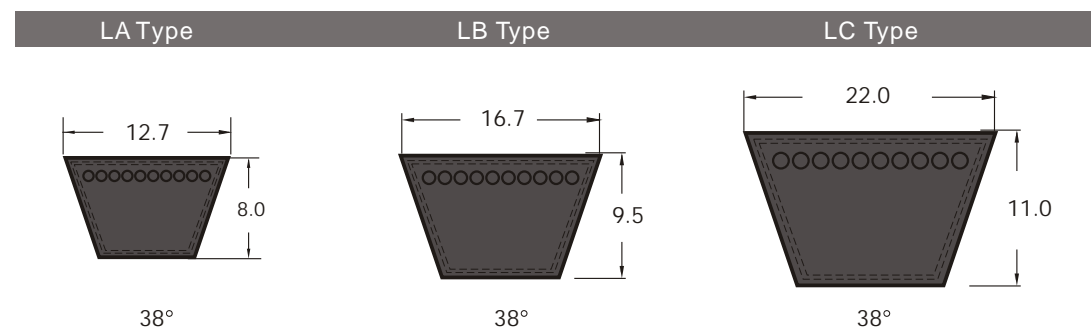
▶ **Raw Edge Cogged Belts**



▶ **Features**

- + Highly flexible and thus suitable for conditions requiring high flexibility and a small pulley diameter.
- + Assures uniform performance over the entire belt length for the entire belt life.
- + Excellent in resistance against heat, oil and wear.
- + Resistant to heat, oil and abrasion.

▶ **Measure of section**



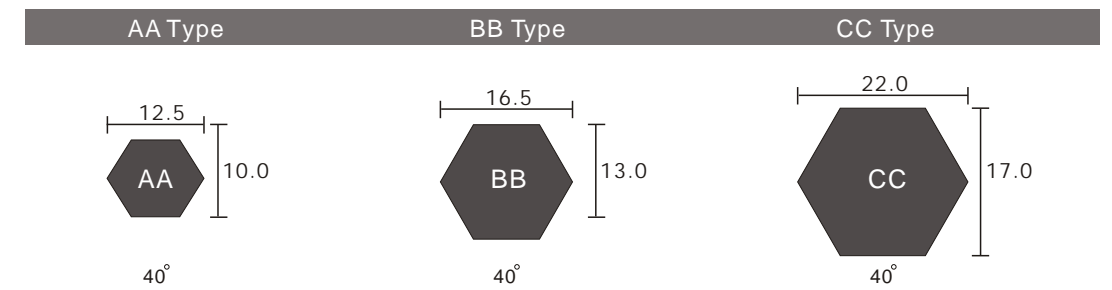
▶ **Double Belts**



▶ **Features**

- + Belts that enable power transmission on multiple axis by joining two general V-belts by their upper part

▶ **Measure of section**



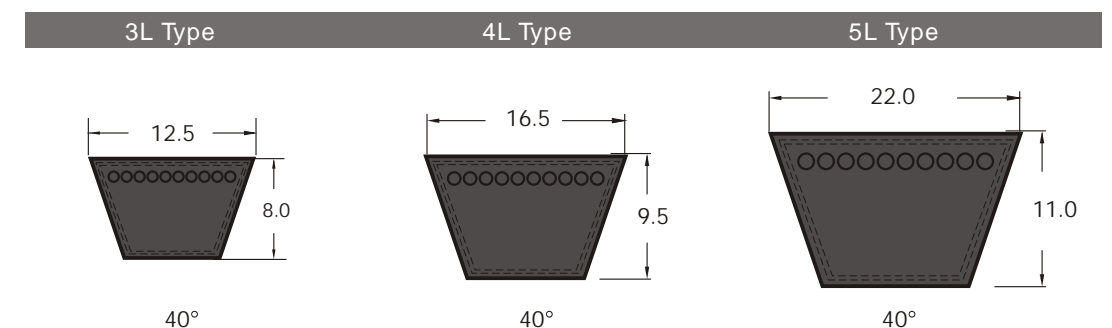
▶ **FHP V-Belts**

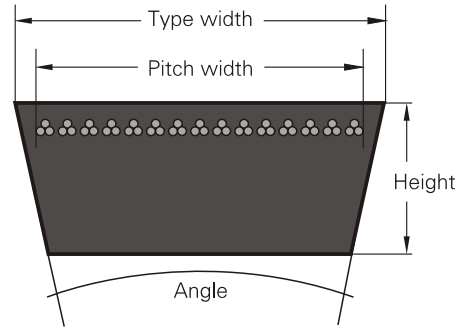


▶ **Features**

- + Compact design and can be used on small pulleys

▶ **Measure of section**





Example of mark

25 x 8 x 710 - 28

- Angle is 28°
- Pitch length is 710mm
- Height is 8mm
- Type is 25

Top width	Pitch width	Height
17	16	6
21	20	7
26	25	8
33	31.5	10
42	40	13
52	50	16
65	63	20
83	80	26
104	100	32



Notes: The special specification can be made according to customers' request.

► Features


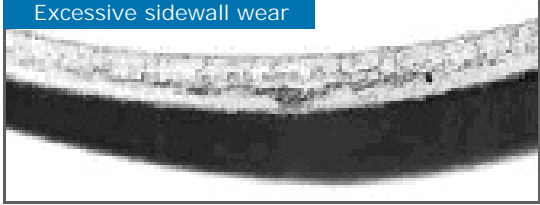
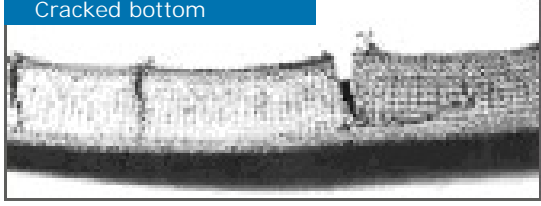
- + Industrial Variable Speed belts feature: simple structure, smooth transmission, small mechanical vibration, easy maintenance and are capable of continuously variable transmission.




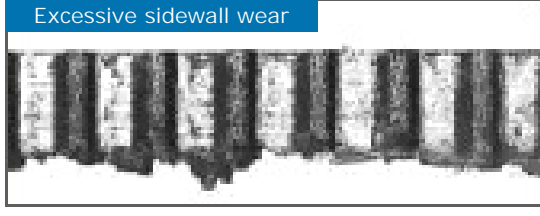
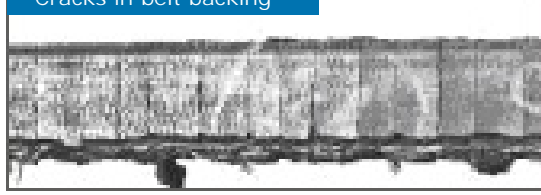
► Troubleshooting Examples

- + Here are some examples of belt failures described as following.
- + If you've encountered similar problems, check below for probable causes and solutions.

V-Belts

Problem	probable Cause	solution
	Foreign object in drive	Shield drive
	Worn or damaged sheaves	Replace sheaves
	Sheave diameter too small back side idler diameter Too small Slippage High temperature	Redesign drive Replace with an inside idler on slack side, or redesign Retention drive Remove heat source Improve ventilation

Timing-Belts

Problem	probable Cause	solution
	Underdesigned drive Sharp bend caused tensile cord damage Belt was pried or forced on the drive Foreign object in drive Belt ran onto pulley flange	Redesign drive Follow proper storage and handling procedures Follow proper installation guidelines Shield drive Align pulleys
	Misalignment or non-rigid centers Bent flange	Align drive and/or reinforce mounting Straighten flange
	High temperatures	Remove heat source. Improve ventilation. Check for special belt construction



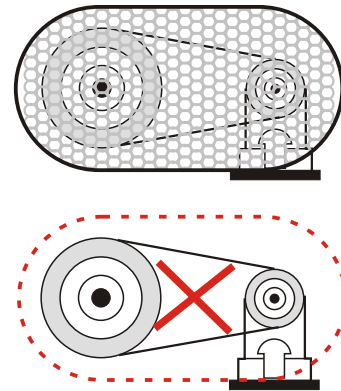
► Precautions for Installing and Using Industrial Belts

► Precaution for Installing Industrial Belts



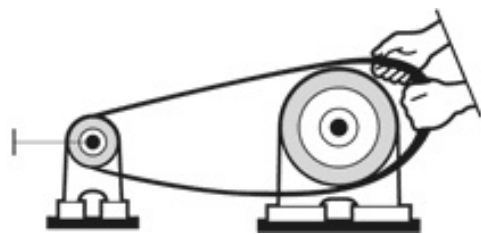
Warning

- + Before installing, check your clothing to ensure that there are no loose parts, including loose hair, gloves or clothing that may be pulled into the rotating parts, including the pulley belt.
- + Always install safety cover over rotating parts, including the pulley.

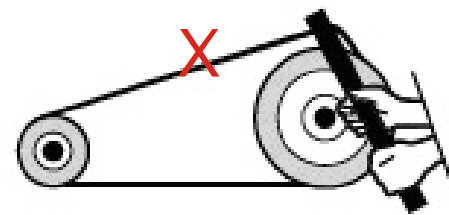


Caution

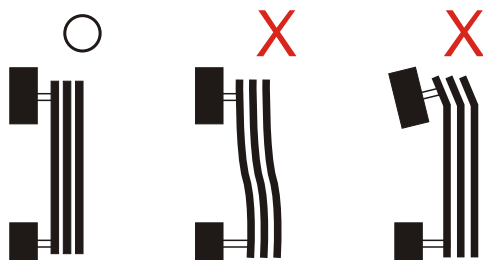
- + Always ensure that the belt fully stops before checking, repairing, or replacing a belt.
- + Ensure the power switch is not turned on during the belt inspection, repair or replacement.
- + Fix the machine before operating it, if it may rock when the belt is removed.
- + Ensure that the same type belt or pulley replace an existing one.
- + Do not cut the belt with a knife or scissors while the belt is still under tension. It may spring out to hurt nearby people.
- + Do not touch the belt or pulley immediately after it stops. Your hand may be burnt.
- + Mount the belt from the driving pulley to replace the belt after loosening its tension. Forced mounting may cause early breakage.



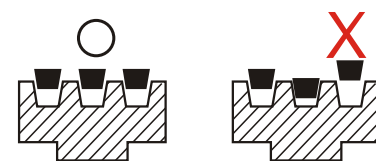
- + Align the belt to the pulley center. Otherwise, it will shorten the belt life as one side will wear heavily



- + Do not apply too much force to install a belt, for example, with a lever



- + Install the belt according to the instructions in the catalog or design specifications
- + Inadequate mounting may result in early breakage of the belt or the axis



- + Ensure the belt is duly placed in the pulley groove



► Precaution for Using Industrial Belts



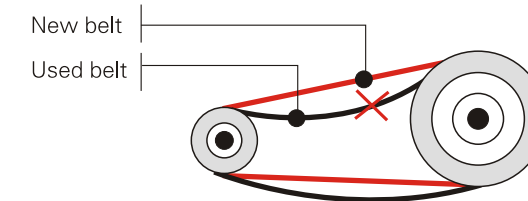
Warning

- + Never hang or pull an article with a belt
- + Never use the belt for purposes other than power transmission



Caution

- + Remove oil, grease or dust from the pulley groove. Rough or damaged pulley surface may cause excessive wear of the belt
- + Never use the belt for insulation
- + Always select a pulley that meets the specifications
- + Keep the belt or pulley from water, oil, chemical, paint etc. They may cause early breakage
- + Do not use a new and old belt together. It will cause the belt break early as the weight will be loaded on the new one



- + Maintain the defined tension in mounting or using the belt. Wrong tension will cause noise or breakage
- + Do not burn used belts as it generates harmful gas
- + Do not modify the belt as it may hurt the quality and performance



► Precautions for Mounting and Using Automotive Belts

► Precautions for Mounting Automotive Belts



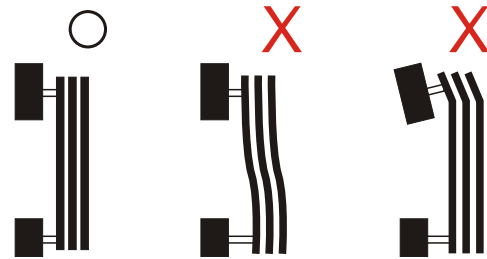
Warning

- + Check your clothing to ensure that there are no loose parts, including loose hair, gloves or clothing that may be pulled into the rotating parts, including the pulley belt
- + Always ensure that the engine is turned off and the belt fully stops before checking, repairing or replacing a belt
- + Ensure the power switch is not turned on during the belt inspection, repair or replacement

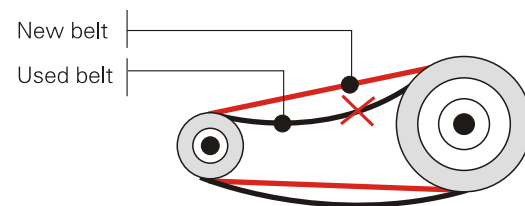


Caution

- + Ensure that a same type belt or pulley replace the existing one
- + Do not cut the belt with a knife or scissors while the belt is still under tension. It may spring out to hurt near by people
- + Align the belt to the pulley center. Otherwise, it will shorten the belt life as one side will wear heavily



- + Do not touch the belt or pulley immediately after it stops. Your hand may be burnt
- + Reduce the belt tension before replacing it with a belt
- + Inadequate mounting with wrong tension will cause early wear or breakage
- + Maintain the defined tension in mounting or using the belt. Wrong tension will cause noise or breakage
- + Replace all belts on one pulley at the sametime
- + Otherwise, it will cause early wear or breakage



► Precaution for Using Automotive Belts



Warning

- + Never hang or pull an article with a belt
- + Never use the belt for purposes other than power transmission



Caution

- + Remove oil, grease or dust from the pulley groove. Rough or damaged pulley surface may cause excessive wear of the belt
- + Do not use the belt for insulation
- + Keep the belt or pulley from water, oil, chemical, paint etc
- + Do not burn used belts as it generates harmful gas

► Observe the following in handling or storing automotive belts



Caution

- + Do not fold a belt by applying excessive force. It will tear the lining materials
- + Keep belts away from direct sunlight
- + Do not place heavy articles on top belts under transport or storage
- + Scratch or scar on the belt surface will cause early breakage