



Conveying Solutions *Power Transmission*



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Power Transmission

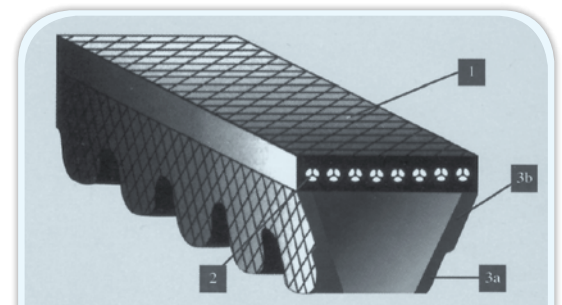
➔ After a long research and development process, our highly experienced and professional engineering team developed a unique technique to manufacture power transmission V-belts using Thermoplastics rather than rubber.

Our thermoplastic rubber (TPR) belts combine the performance properties of Thermo set rubber with the ability to use thermoplastics processing equipment. No compounding is required and no vulcanizing is necessary. TPR give us a better quality final product with great dimensional accuracy.

Our unique computerized production system enables us to manufacture power transmission belts in any length or quantity you may need.

We are also capable of adding a surface cover from our selection of belt coatings to the Volta Power belts. Our product expertise guarantees you a precisely uniform and highly durable coated belt.

We offer unique profile shapes and dimensions produced according to your specifications – with short lead time. Your special request Private labels and branding part numbers for OEM's are easily achieved. When building a new machine we urge you to challenge our team to supply the perfect custom-made belt for your project.



1 Top Component

Profile extruded from TPR, heat-welded to link all components

2 Cord Component

Polyester and high strength adhesive cord layout is balanced

3a Base Component

Continuous high traction moulded cog made from TPR

3b Abrasion resistance and high performance TPR

Volta Power® Belt Highlights

Resistant to Harsh Environment

Volta Power® belts are highly resistant to chemicals, hydrolysis and exposure to oils and extremely low temperatures up to -40° C.

State-of-the-Art Technology

Volta Power® excellent dimension accuracy is achieved by our patented computer controlled system.

High Performance and Operating Life

Volta Power® belts are extremely resistant due to their TPR material characteristics and special design.

No Minimum Quantity Required

Volta Power® technology allows us to manufacture these belts in small quantities at no time.

Volta Power® in the Wood Industry

➔ The Volta Power® product line includes belts especially designed for the unique requirements of the wood processing industry. These belts are manufactured from unique materials, have a white color and special coatings to increase grip and eliminate marking of products. The belts are manufactured using our patented computer controlled machinery to ensure the highest quality and dimensional accuracy available on the market.

Volta white belts are available in classical sections as well as special dimensions and banded belts. These belts are available with a smooth, Soft top (PKR0 equivalent) or our Waffle top (PKR2 equivalent).



Volta Power® belts can be supplied in any length of up to 70 meters, standard or non-standard, with no minimum quantities and shipment within days.

No more suffering through 2-6 month lead times or having to maintain extensive and expensive inventories.

Typical Machine Applications

Double-end tenoners and edgebenders are designed for high-speed processing of panel-shaped workpieces (such as directly coated panels, MDF, coreboard, solid wood, polywood, plastics, hard foam, cork, postforming or cement-bonded fiber-board) in a wide variety of methods. This work requires a belt that will grip any material used firmly without marking.



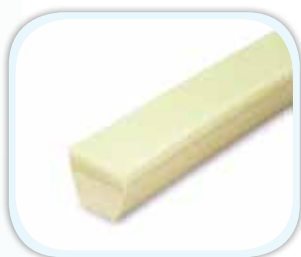
Volta Special 2C

Characteristics



- **Excellent** carrying capacity
- **Non-marking** - the white color and special materials prevent marking of products during production
- **Resistant to abrasion** - are highly resistant to abrasion and cutting
- **Resistant to moisture, chemicals, paints and glue** - prevents paint and glues from adhering to the surface making them easy to clean
- **Dimensional accuracy** - Volta's patented manufacturing process guarantees dimensional accuracy and stability in all Volta Power® products. Length dimensions are so accurate that there is no need for matched sets
- **High grip** - the top cover, both smooth (PKR0 equivalent) and waffle top (PKR2 equivalent) provides excellent grip
- **Long** belt life

Volta Power® for the Wood Industry Products



Classical Power Belt with Smooth Top

Sections	A	B	20	C	25	D
Width (~)	13	17	20	22	25	32
Height (~)	11	14	15	17	19	23
Min. Pulley (mm)*	80	140	180	200	280	400



Classical Power Belt with Waffle Top

Sections	A	B	20	C	25	D
Width (~)	13	17	20	22	25	32
Height (~)	11	14	15	17	19	23
Min. Pulley (mm)*	80	140	180	200	280	400



Classical Power Belt with Roof Top

Sections	D/32
Width (~)	32
Height (~)	23
Min. Pulley (mm)*	400



Banded Belt with Waffle & Smooth Top Volta Power® produces a line of special white banded belts. The belts are available with smooth, Soft top (PKR0) or with Waffle top (PKR2). These belts are designed to be used on processing machinery requiring a belt that is non-marking and has high grip. In addition, the belt provides excellent strength and carrying capacity.

The benefits of the banded belts are:

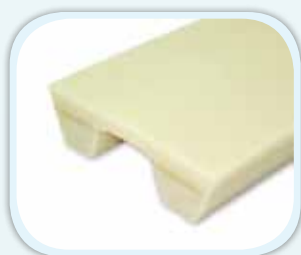
- eliminates belt twisting and reduces whipping
- ensures even belt tension
- increased transmission efficiency
- reduced maintenance cost

Special Wood Products:



Special Dimension Belts with Waffle Top

Sections		
Dimensions	48x15	50x20
Min. Pulley (mm)*	140	200



Special Banded Belt

Dimensions	62x18	67x17	70x17	75x17
Min. Pulley (mm)*	200	200	200	200

Classical, narrow, banded and conveyor belts are also available in white.

Volta Power® Transmission Products



Classical V-Belts The range of cogged Classical V-belts meets all relevant international standards(DIN 2215, BS3790, ISO4184).

Sections	Z/ZX	A/AX	B/BX	C/CX	25	D/DX	E/EX
Width (~)	10	13	17	22	25	32	40
Height (~)	6	8	11	14	16	20	25
Min. Pulley (mm)*	50 40	71 63	112 90	180 140	180	355 250	500 450



Narrow V-Belts The range of cogged Narrow V-belts meets all relevant international standards (DIN 7753, BS3790, USA Standard RMA/MPTA, ISO 4184).

Sections	3V/3vx	XPZ/SPZ	SPA/XPA	SPB/5V	XPB/5VX	SPC/ XPC	8V/ 8VX
Width (~)	9	9.7	12.7	16.5 15	16.5 15	22	25
Height (~)	8	8	10	13	13	18	23
Min. Pulley (mm)*	63 56	63 56	90 71	140	112	224 180	315



Banded V-Belts These belts combine molded, cogged V-belts under a single top The banded belt construction is designed to handle large pulsating and shock loads found in compressors, internal combustion engines, stone crushers and similar machinery.

Sections	3V	3VX	SPZ	XPZ	SPA	XPA	5V	5VX	SPB	XPB	SPC/ XPC	8V/ 8VX
Maximum Ribs	14				11		9			7		6
Width (~)	9	9.7		12.7		15		16.5		22		25
Height (~)	10	11		13		15		17		23		25
Min. Pulley (mm)*	75 67	75 67	100 90	180 150	180 150	250 224	375 335					

Sections	Z/ZX	A/AX	B/BX	C/CX	D/DX
Maximum Ribs	14	11	9	7	5
Width (~)	10	13	17	22	32
Height (~)	9	11	14	17	23
Min. Pulley (mm)*	60 50	80 71	130 125	210 200	370 355



Poly-V Belts The poly-V provides smooth running, low noise operation at high speeds and small pulley diameters. This belt is excellent in serpentine applications. **Volta Power®** poly-V belts are available in either TPE or PU.

Sections	PJ	PL	PM
Width (~)	2.34	4.70	9.40
Height (~)	3.5	10	17
Min. Pulley (mm)*	20	75	180



Wide Angle Belts The wide 60° angle provides more sidewall support under the tensile members for even load distribution and higher ratings. Banded construction of wide angle belts minimizes or eliminates the “turnover” problem normally associated with small cross belts. Can be produced in banded version also.

Sections	7M	11M
Width (~)	7	11
Height (~)	5	7

Classical, narrow, banded and conveyor belts are also available in white.

Volta Power® Transmission Special Products



Hexagonal V-Belts This belt provides excellent power transmission capabilities in serpentine applications.

Sections	AA	BB	CC	25x22	DD
Width (~)	13	17	22	25	32
Height (~)	10	13	17	22	25
Min. Pulley (mm)*	80	125	224	280	355



Round Power Belts

Diameter(mm)	8	9	10
Min. Pulley (mm)*	80	90	100



Conveyor Belts All V-belt conveyor sections are available with a standard flat top. The B and C sections can be ordered with a RidgeTop or SuperGrip cover. **Volta Power's** line of conveyor products provides high load capacity.

Volta Power® Bowling Belts



Cross conveyor belt for pinsetter **Volta Power®** produces special belts for bowling equipment. These belts offer a long service life, reduced downtime and unplanned stops of the lanes.



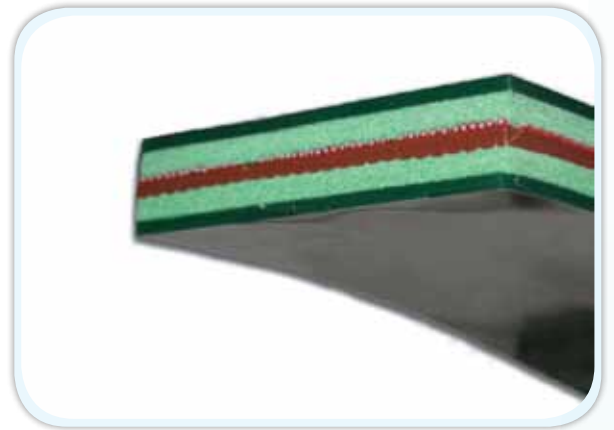
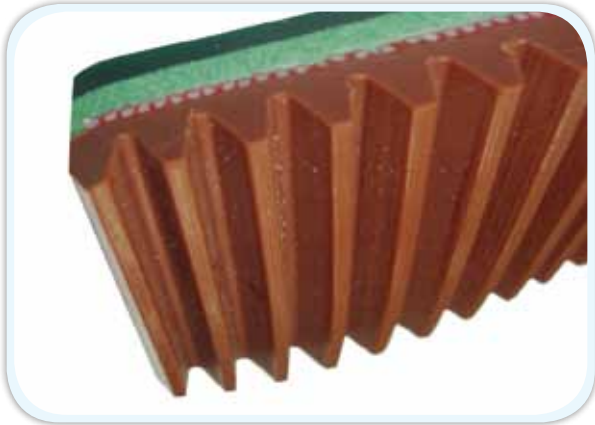
T-belt for ball retainer We offer special belt lengths according to the customer's needs and/ or the different machine types. Our unique technology allows us to offer a solution to your special needs without a minimum quantity or long delivery time. Volta may manufacture power specialty belts for bowling machines using our unique Volta Power® technology.

Classical, narrow and banded black belts are available with antistatic characteristics.

Volta Power® TPE Products

Haul-off / Puller / Caterpillar Belts

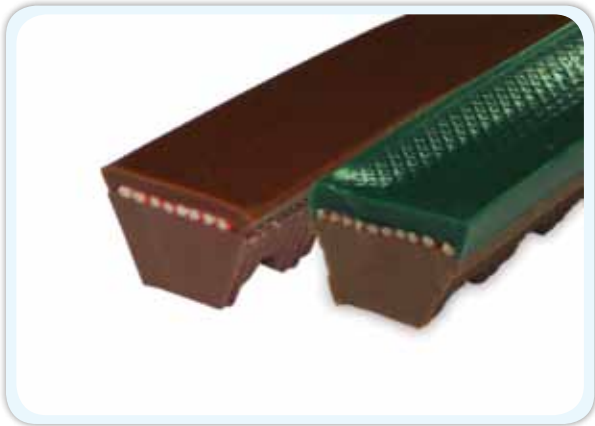
Volta Power® Line has a wide range of Haul-off belts produced on either a flat or poly-V belt base depending on customer requirements. These belts exhibit superior performance and operating life due to exceptionally low wear features.



➔ Our unique production technology, combined with special TPE materials allows us to provide unique customer specific belts with fast delivery times and no minimum order quantities. We have designed unique belts for plastic extrusion, rubber hose and wire production.

Volta Power® TPE Conveyor Belts

Our belts are made of high quality TPE (Thermoplastic Elastomer) material in combination with the **Volta Power®** technology and used as conveyor belts where high abrasion resistance is needed on a low pulley diameter. This kind of belt works excellently in concrete factories and Ice machines. these TPE belts are NOT suitable for power transmission!



Coatings



Special Shapes



TPE Belts can be produced in the same sections and geometry as the Power Transmission belts.

Installation Notes

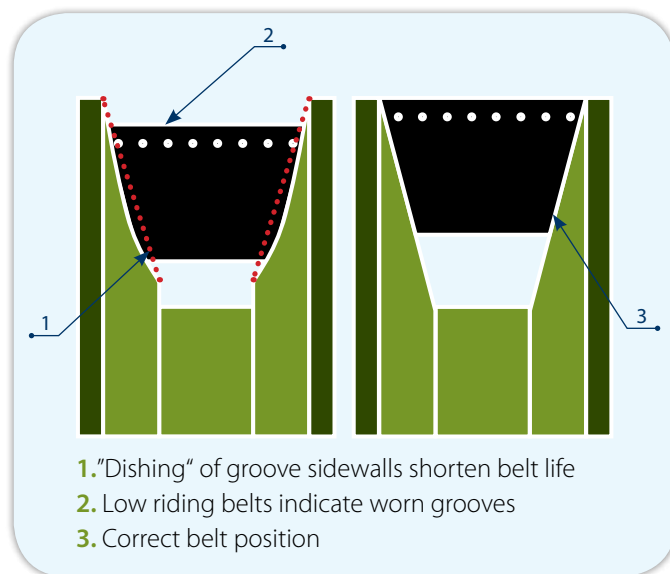
Correct design of drives **Volta Power® V-Belts** ensures long belt life and a high degree of operating safety. Here are a few pointers to keep in mind when installing the drive:

Check sheaves alignment

Shafts and pulleys should be correctly aligned prior to belt installation. Ordinarily a misalignment of more than one degree will adversely affect belt life. Improper sheave alignment produces uneven wear on one side of the belt, causing the belt to roll over in the sheave or to throw all the load on one side of the belt stretching or breaking the cords on that side.

Check the sheaves

Before a new set of V-Belts are installed, the condition of the sheaves should be checked. Grooves should be in good condition, free from scores or sharp edges. All dimensions should conform to the standard. Dirty or Rusty sheaves impair the drive's efficiency and abrade the belts which results in premature failure. Worn sheaves shorten belt life as much as 50%. If the grooves are worn to the point where the belt bottoms out slippage may result and the belts will burn.



Installation of the V-Belts

Shorten the center distance of the drive until the belts can be fitted without undue force. Forcing the belts can cause internal injury to the belts.

Maintenance

For maximum service splice V-Belt drives with a complete new matched set of belts. It is recommended that V-Belts drives should be regularly inspected for loss of belt tension, unusual heat build up or wear. Retention or replace when necessary. Belts of different manufacturers should not be mixed on the same drive.

Troubleshooting

Problems	Causes	Remedies
Severe Belt Vibration	Centre distance longer than recommended	Use Banded Belt
	High shock loading	
	Too low belt tension or Unbalanced pulleys	Correct and balance pulleys
Belt Turns Over in Pulleys	Poor drive alignment	Realign
	Incorrect pulleys groove section or excessive wear in grooves	Use Banded Belt
	Excessive belt flap	
	Foreign body in grooves	Use a more effective drive guard
Excessive Wear on Belt Flanks	Incorrect pulley section	Renew pulleys
	Excessive wear in grooves	Renew or remachine pulleys
	Poor drive alignment	Realign
	Small pulley diameter below recommended minimum	Redesign using correct pulley diameters
Excessive Noise	Poor drive alignment	Realign
	Overloaded drive	Check drive details and redesign if necessary
Unusual Belt Stretch	Worn or badly machined pulley grooves	Remachine or renew pulleys
	Used belts mixed with new belts on the drive	Replace with a completely new set of belts
Belt Breaking After Fitting	Forcing belt over pulley when fitting, damaging cord and cover	Reduce drive centre distance to fit belt
	Unwanted foreign body, e. g. a. stone, during running	Fit an effective guard



Power Conveying Applications

Apps.

Wood
Industry



← Edge Bender

Belt Section: SP - 2C
Quantity In Machine: 1

→ Postforming

Belt Section: SP - 2C
Quantity In Machine: 1



← Wood Processing

Belt Section: SP - 2C
Quantity In Machine: 1



Power Conveying Applications

Apps.

Wood Industry



← Edge Bender

Belt Section: D - PKR0

Quantity In Machine: 2

→ Postforming

Belt Section: D - PKR0

Quantity In Machine: 2



← Wood Processing

Belt Section: 48x15

Quantity In Machine: 1



Power Conveying Applications

Apps.

Mining Industry



← Stonecrusher

*Belt Section: BX
Length in mm: 4318
Quantity In Machine: 8
Pulley Diameter/mm
Drive R: 260
Drive N: 380*

→ Stonecrusher

*Belt Section: 8VX
Length in mm: 2360
Quantity In Machine: 9
Pulley Diameter/mm
Drive R: 235
Drive N: 695*



← Marble Saw

*Belt Section: XPB
Length in mm: 4500
Quantity In Machine: 9
Pulley Diameter/mm
Drive R: 165
Drive N: 250*



Power Conveying Applications

Apps.

Ceramics Industry



↩ Vertical Cone Crusher

Belt Section: BX
Length in mm: 2600
Quantity In Machine: 12
Pulley Diameter/mm
Drive R: 200
Drive N: 143

➔ Ball Mill

Belt Section: D
Length in mm: 442
Quantity In Machine: 15
Pulley Diameter/mm
Drive R: 500
Drive N: 3000



↩ Ball Mill

Belt Section: D
Length in mm: 330
Quantity In Machine: 12
Pulley Diameter/mm
Drive R: 335
Drive N: 2400

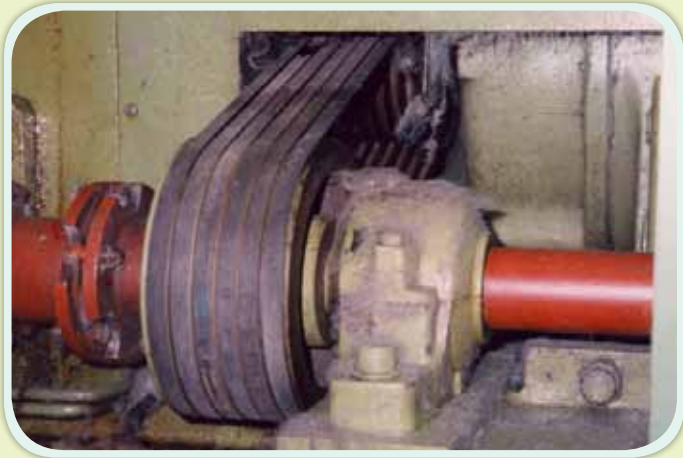




Power Conveying Applications

Apps.

General
Industry



← Cotton Fiber Threader

*Belt Section: SPB
Length in mm: 5200
Quantity In Machine: 6
Pulley Diameter/mm
Drive R: 240
Drive N: 240*

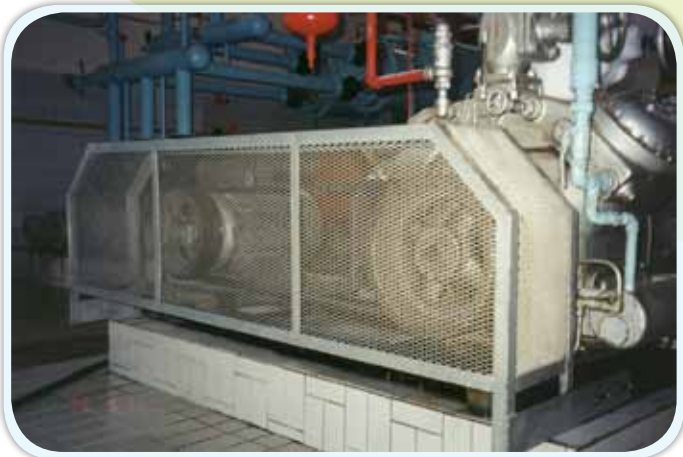
→ Waste Water Pump

*Belt Section: 5VX
Length in mm: 1290
Quantity In Machine: 5
Pulley Diameter/mm
Drive R: 220
Drive N: 420*



← Refrigeration Compressor in Food Packing Facility

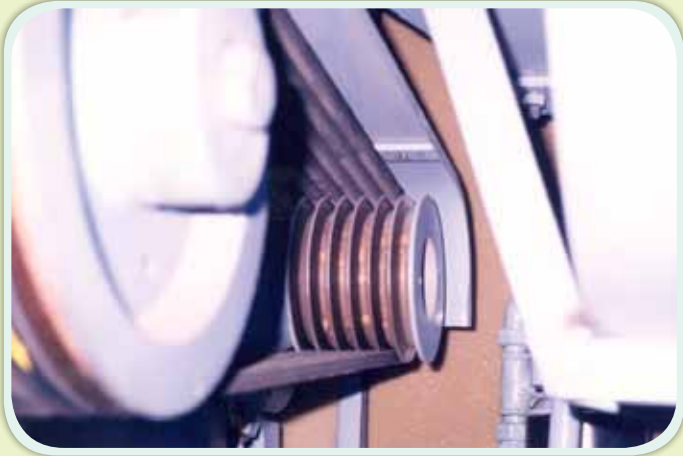
*Belt Section: C
Length in mm: 4096
Quantity In Machine: 8
Pulley Diameter/mm
Drive R: 350
Drive N: 420*



Power Conveying Applications

Apps.

General Industry



← Air Compressor

Belt Section: XPA
Length in mm: 1700
Quantity In Machine: 6
Pulley Diameter/mm
Drive R: 269
Drive N: 112

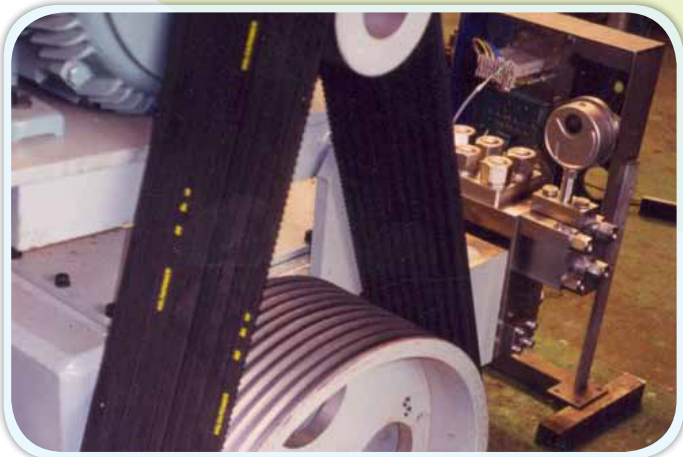
→ Blower

Belt Section: 5V
Length in mm: 1620
Quantity In Machine: 5
Pulley Diameter/mm
Drive R: 400
Drive N: 440



← Food Homogenizer

Belt Section: BX
Length in mm: 94
Quantity In Machine: 10
Pulley Diameter/mm
Drive R: 135
Drive N: 535



Use the Force of Volta Power® Belts

- Excellent resistance to oils, chemicals and water
- Highly resistant to the sun's UV radiation
- Superior performance in extremely cold operating conditions (-40° C)
- Belts available in any length and quantity without long lead time
- Non-standard lengths can be produced in days
- Computerized construction provides excellent length accuracy - there is no need to order matched sets
- There is no minimum quantity requirement for most Volta Power® belts



**Corporate Headquarters
Sales and Manufacturing**
sales@voltabelting.com

USA

Tel: +1 973 276 7905
Fax: +1 973 276 7908
Toll Free: 1-877-VOLTAUS

EUROPE

Tel: +31-546-580166
Fax: +31-546-579508

www.voltabelting.com