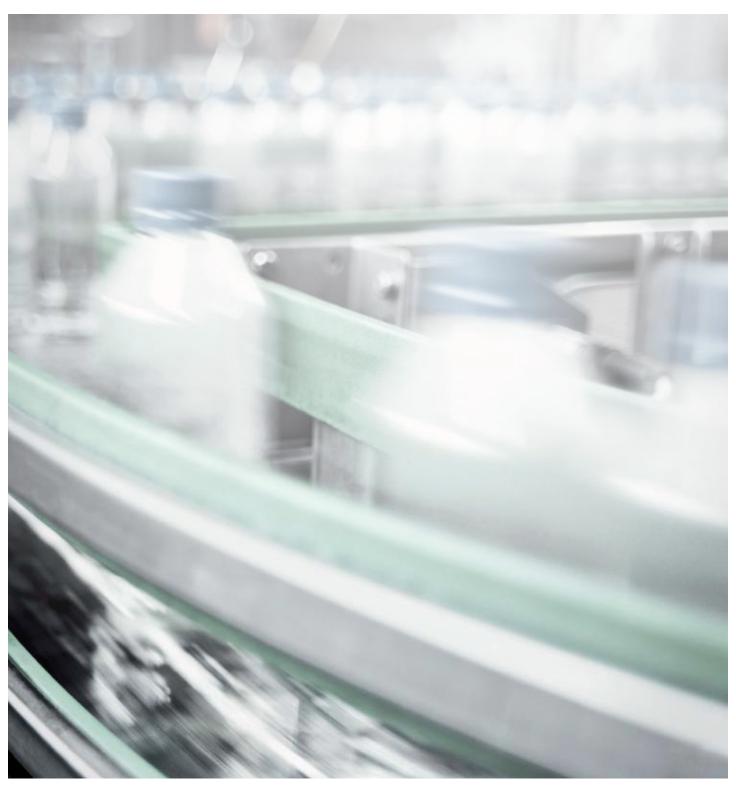


POLYURETHANE

TIMING BELTS



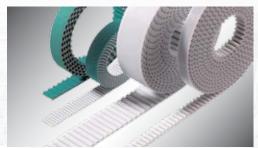




POWER TRANSMISSION DRIVES



MECHANICAL BELT JOINTS



LINEAR DRIVES



ROUND BELTS



CONVEYOR DRIVES

10



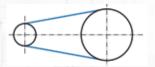
TIMING BELT PULLEYS

25

POWER TRANSMISSION DRIVES

LINEAR DRIVES

CONVEYOR DRIVES

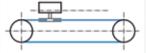


ALPHA POWER

ALPHA FLEX

ALPHA TORQUE

endless



ALPHA LINEAR

open-ended



ALPHA V

ALPHA SPECIAL

ALPHA SRP

endless welded/endless

APPLICATION EXAMPLES

- Machine tools
- Textile machines
- Printing machines
- Packaging machines
- Office machines
- Medical devices
- Robots
- Handling devices

- Positioning drives
- Lifting drives
- Handling devices
- Door and gate opening drives
- Washing bays
- Plotters
- Packaging machines
- Gantry robots

- Parallel conveyors
- Synchronous conveyors
- Inclined conveyors
- Accumulating conveyors
- Vacuum conveyors
- Take-up and transfer units
- Separators
- Workpiece positioners

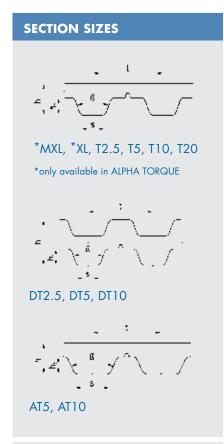
optibelt ALPHA - BELT PRODUCT RANGE

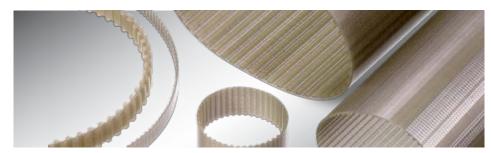
PRODUCT GROUPS				
	ALPHA TORQUE ALPHA POWER ALPHA SRP	ALPHA FLEX	ALPHA LINEAR	ALPHA V
	Casted, endless	Extruded, endless	Extruded, open-ended	Welded, endless
BASIC PROFILES		PR	OFILE	
Profile, imperial	MXL, XL, L (ALPHA TORQUE)	Н	XL, L, H, XH	XL, L, H, XH
Profile T	T2.5, T5, T10, T20 DT5, DT10	T5, T10, T20, DT5, DT10	T5, T10, T20	T5, T10, T20, DT5 ¹ , DT10 ¹
Profile TK, wedge				T5K6, T10K6, T10K13
Profile AT	AT5, AT10	AT5, AT10, AT20, DAT5, DAT10	AT5, AT10, AT20	AT5, AT10, AT20, DAT5 ¹ , DAT10 ¹
Profile ATK, wedge				AT5K6, AT10K6, AT10K13
Profile ATL			ATL5, ATL10, ATL20	
Profile ATC, cleat				ATC10
Profile HTD®		5M, 8M, 14M, D5M, D8M	5M, 8M, 14M, 14ML	5M, 8M, 14M, 14ML D5M ¹ , D8M ¹
Profile F, flat belts			F2, F2.5, F3, FL3	F2, F2.5, F3, FL3
			Steel	
Standard tension cord ²	Steel	Steel Steel, high flexible	Aramid excluding AT20 Steel, high flexible, exc T5, ATL10, AT20, F2.5,	luding imperial profiles,
			Stainless steel excluding ATL10, AT20, F2.5, F3	g L, 5M, 14M, T5, AT5,
Special tension cords	Aramid Steel, high flexible Stainless steel Polyester	Aramid Stainless steel	On	request
Optionally without coiling sleeve	_	_		+ 3

¹ Double toothed profiles on request ² ... and without the according profiles TK, ATK ³ Profile T10 available without coiling sleeve, further profiles on request



POWER TRANSMISSION DRIVES





ALPHA TORQUE

ENDLESS, CASTED POLYURETHANE TIMING BELTS

- Sleeve height up to 380 mm
- Belt lengths up to 2250 mm
- Color options available
- Tension members: steel, high flexible steel, aramid, stainless steel, polyester, Vectran®





PERFORMANCE ENDLESS, CASTED POLYURETHANE TIMING BELTS

- Up to 30% higher power ratings
- High indexing precision and narrow tolerances
- Tension members: steel, high flexible steel, stainless steel



SECTION SIZES H, T5, T10, T20 DT5, DT10 AT5, AT10, AT20 DAT5, DAT10 5M, 8M, 14M

D5M, D8M



ALPHA FLEX

ENDLESS, EXTRUDED POLYURETHANE TIMING BELTS

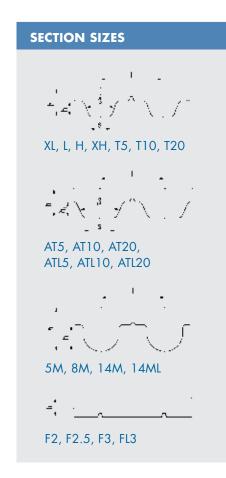
- 1,500 mm to 24,000 mm length range
- Production widths 100 mm or 150 mm
- Optional with polyamide fabric on the teeth
- Optional direct weld on cleats and guides
- Optional high-flex or stainless steel tension cords



ALPHA FLEX is manufactured with counter wound cords. This means for every cord with a right-to-left "S" twist, there is a counterbalancing left-to-right "Z" twist cord. OPTIBELT's method eliminates any pull bias for the truest running belts in the industry.





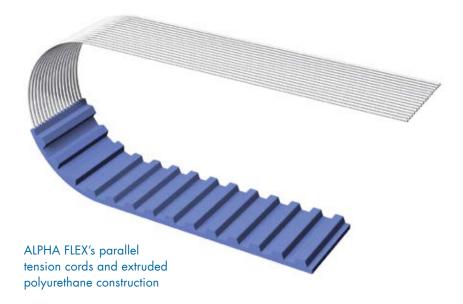


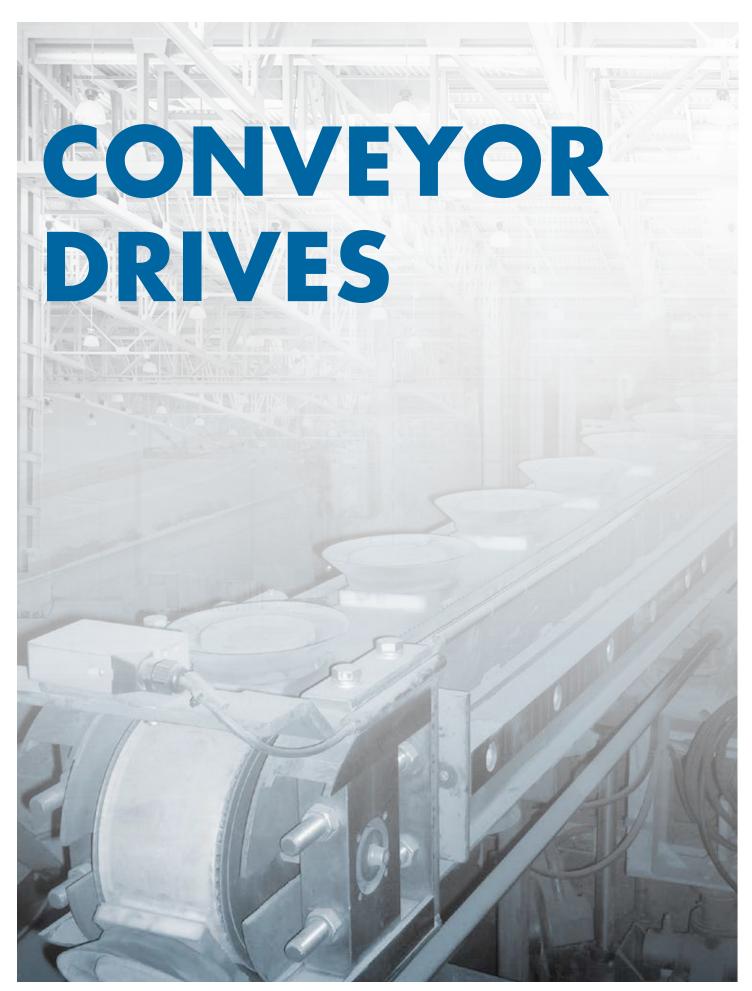


ALPHA LINEAR

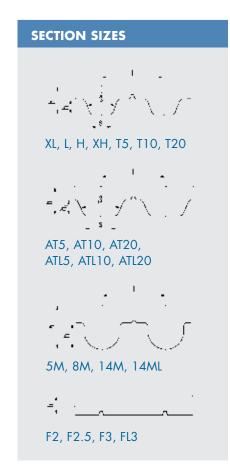
OPEN-ENDED, EXTRUDED POLYURETHANE TIMING BELTS

- High tension force with low elongation
- High positioning accuracy
- Optional design includes high flexible steel, aramid, and stainless steel tension members
- Available with polyamide fabric layers on the teeth and/or the belt top surface
- PU optionally with FDA/EU approval for direct contact with food
- Optional with thicker belt back, T2, PU foam yellow and APL plus
- Optional colors available
- Roll lengths 50 m or 100 m; > 100 m available











ALPHA SRP

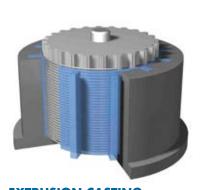
CLEATED CAST POLYURETHANE TIMING BELTS

- Easy production of small belts with cleats through molding process
- Precision manufacturing for placing a large number of cleats in a small area.
- Precision cleat geometries due to the cast polyurethane process
- High stability of the cleat on the base belt due to homogeneous compounding

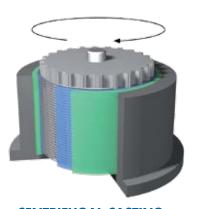
CAST POLYURETHANE TIMING BELTS WITH DUAL LAYER POLYURETHANE BACKING:

- Production of small coated timing belts or flat belts by molding process
- Backings without joints
- High backing adhesion properties due to homogeneous compounding

THE ALPHA SRP IS BASED ON THE BELT DESIGNS OF THE ALPHA POWER OR ALPHA TORQUE TIMING BELT RANGE. ADDITIONAL OPTIONS AVAILABLE.

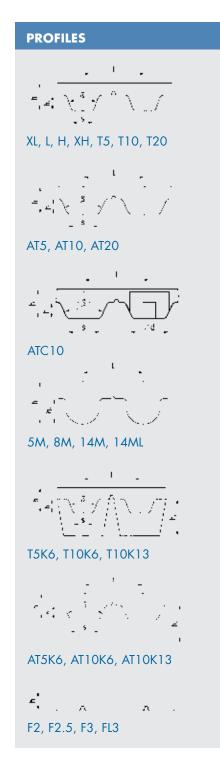


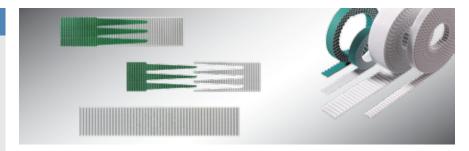
EXTRUSION CASTINGALPHA SRP timing belts with cleats



CENTRIFUGAL CASTINGALPHA SRP timing belts with dual layer backing

CONVEYOR DRIVES

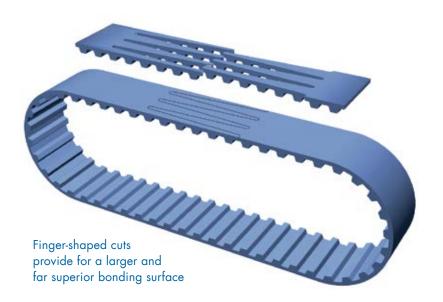




ALPHA V

WELDED POLYURETHANE TIMING BELTS

- Minimum length ranges: 450 mm to 1200 mm
- Belt lengths available in every pitch step
- Low-priced and quick availability
- Ideal for product transport drives
- Available with polyamide fabric on the teeth and/or on the belt top surface
- Available in FDA/EU compliant construction for direct contact with food
- Optional with thicker backings: T2, PU foam yellow, and APL plus
- High bond integrity of cleats and guides
- 50% more shear resistance compared to standard spliced belts



ALPHA SPECIAL

POLYURETHANE TIMING BELTS WITH BACKINGS OR COATINGS





PVC foils are applied after the extrusion process, however optibelt APL Plus coating is applied during the extrusion process. ALPHA V, in combination with the coating, allows for joint-less and completely adhesive for easy and cost-effective conveyance.

TIMING BELTS WITH COATINGS

optibelt ALPHA SPECIAL line allow for innovative, customized and cost effective solutions modern manufacturing operations demand. Contact an OPTIBELT representative for more details.









ALPHA SPECIAL COATINGS, MATERIAL

FOAM



POLYURETHANE (PU)

- Sylomer R (see picture)
- Sylomer L
- Celloflex
- Sylomer M
- PU-foam yellow
- PU 06



RUBBER

- Porol (see picture)
- EPDM

WITH PROFILES OR STRUCTURES



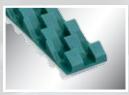
POLYURETHANE (PU)

- PU longitudinal groove (see picture)
- Pointed cone
- PU longitudinal groove fine
- PU-spike profile
- Pebbles rounded cone



RUBBER

- Supergrip black (see picture)
- Supergrip blue





POLYVINYLCHLORIDE (PVC)

- PVC shark tooth (see upper picture)
- PVC longitudinal groove
- Supergrip petrol blue
- Supergrip green
- Supergrip white (see picture below)
- Minigrip petrol blue
- Minigrip green
- PVC cleats
- PVC fishbone pattern
- PVC saw tooth
- PVC triangular profile

AND SURFACE CHARACTERISTICS



SMOOTH OR SLIGHTLY STRUCTURED



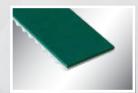
POLYURETHANE (PU)

- PU foil 65 Shore A
- Polythane D15
- Polythane D44
- PU foil blue
- PU foil 85 Shore A
- T2 (shown)
- PU foil 92 Shore A
- Higher back



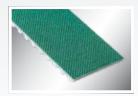
RUBBER

- RP 400 (shown)
- Correx beige
- Linatex
- Linaplus FGL
- NG red
- Linatrile
- Elastomer green



POLYVINYLCHLORIDE (PVC)

- PVC foil petrol blue (shown)PVC foil green
- PVC foil blue
- PVC foil white
- APL plus
- PVC pepita



PA FABRIC

- PA fabric
- PA fabric anti static





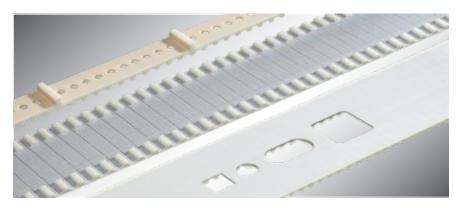
SPECIAL

- PTFE (shown, top)
- TT60
- Para flees
- Chrome leather (shown, bottom)

STANDARD EXAMPLES

Coatings and Backings	Name, color, material Standard thickness s [mm] Minimum pulley Ø [mm]	Hardness/density Slaving capacity	Temp. Range Abrasion Resistance
	Sylomer L, green, PU foam s 6.0 12.0 15.0 20.0 25.0 Ø 120 240 300 400 500	⇒ 300 kg/m³ ↑ Slaving ↑	→ -30°C+70°C ↑ Abrasion resistance ↑
	PU 06, yellow, fine pored PU s 2.0 3.0 4.0 5.0 6.0 8.0 Ø 60 70 80 100 120 160		→ −10°C+60°C ↑ Abrasion resistance ↑
	PU foil 85 shore a, transparent, PU s 2.0 3.0 4.0 Ø 60 80 100		→ -10°C+70°C ↑ Abrasion resistance ↑
	Linatex, red, natural rubber s 1.5 2.4 3.2 5.0 6.4 8.0 Ø 30 50 65 100 140 180		→ −40°C+70°C ↑ Abrasion resistance ↑
	PU longitudinal groove, fine, transparent, PU s 3.5 Ø 70		→ −10°C+70°C ↑ Abrasion resistance ↑
	Supergrip petrol blue, polyvinyl chloride s 4.0 Ø 60		→ −10°C+90°C ↑ Abrasion resistance ↑
	APLplus, red, elastic PVC s 2.0 3.0	⇒ 65 Shore A Slaving	





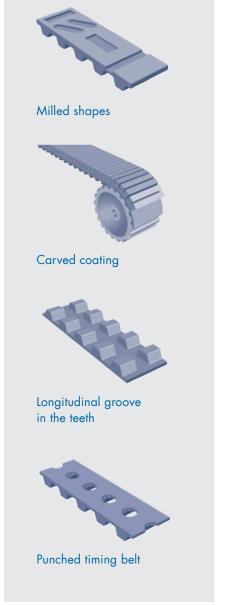
ALPHA SPECIAL

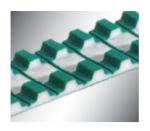
MECHANICAL PROCESSING

Additional geometrical and dimensional adaptations of standard timing belts, coated belts, and belt cleats extend the application options.

The following processes are available for forward machining:

- Grinding
- Milling
- Water jet cutting
- Punching
- Drilling
- Cutting, Carving



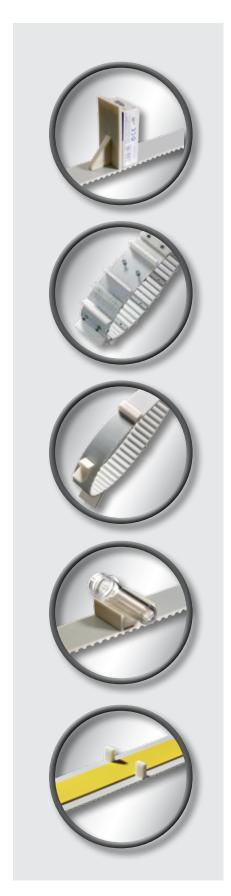


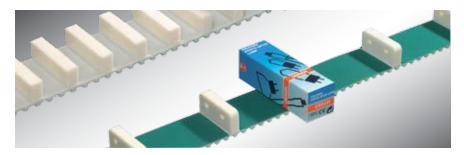






CLEATING EXAMPLES





ALPHA SPECIAL

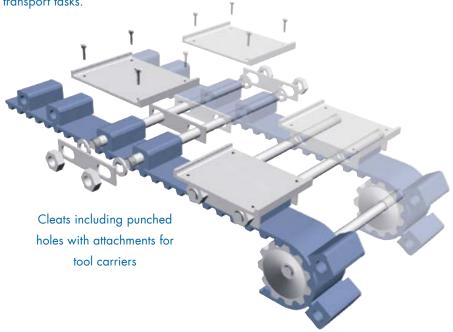
POLYURETHANE TIMING BELTS WITH CLEATS

Cleats can be applied on ALPHA LINEAR, ALPHA V, and ALPHA FLEX timing belts using various processes.

These include welding, chemical bonding, and mechanical connections. The inhouse injection molding process ensures good product availability.

In case you cannot find the suitable cleat in our product range, we can produce or adapt it according to your requirements in a cost-effective way.

We will be pleased to support you in finding the suitable solution for your transport tasks.

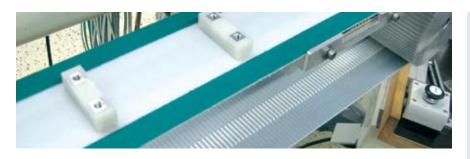


ONLINE CLEAT SELECTOR

Build your custom conveyor belt online at: www.optibelt.com/cleat-selector

Select from over 300 custom cleats, belt sizes, and much more!





ALPHA SPECIAL

POLYURETHANE TIMING BELTS WITH CLEATS

In contrast to coatings with frictional connection, cleats allow for synchronous traction of the goods to be moved on conveyor drives. They also can:

- convey products in one consistent direction
- position products on the conveyor belt
- allow for product sorting
- secure items for high acceleration and/or high speed transfer
- synchronize product delivery

The OPTIBELT cleat range offers customized cast blanks and cleats, which can be used for different applications. The casts can be adapted using two production methods:

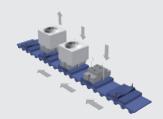
- Machining
- Injection molding

This cast blank process lowers custom production costs while ensuring quality and consistency.

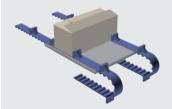
AVAILABLE STANDARD POLYURETHANE CLEAT MATERIALS:

- PU 92 Shore A, white
- PU 65 and 85 Shore A, transparent
- PU 98 Shore A, grayish white
- PU FDA 85 Shore A, transparent/blue
- GFK (PU)

Additional materials and colors available.



Cleats as workpiece carriers



Parallel conveyor with supporting table

Shape and function of the cleat

simple special special

Rectangle Round	T-shaped L-shaped	Blades	Trapezoidal Shape	V-trapezoidal Shape	Triangle	Concave, Convex	Groove	Holes	Inserts
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CUSTOM PROCESSES

ALPHA SPECIAL

CUSTOMIZED POLYURETHANE TIMING BELTS

OPTIBELT's manufacturing expertise has allowed us to develop specialty solutions for the conveyance, food, packaging, glass, wood, linear drives, and medical applications.

- All product groups of endless and joined belts can be used for conveyance.
 Examples: parallel and synchronous conveyors, inclined conveyors, accumulating conveyors, vacuum conveyors, separators or work-piece positioners, exhaust units
- The base belts can be adapted for specialty conveyance, using coatings and/or cleats
- The base belt, coating, and cleat can all be further machined.

COATED TIMING BELTS HAVE THE FOLLOWING CHARACTERISTICS:

- Improved chemical resistance, e.g. for applications in food industry
- High abrasion resistance, e.g. accumulation conveyors
- High temperature resistance, e.g. for the conveyance of heat treated parts
- Good cut resistance, e.g. for sharp-edged goods to be conveyed
- Non-stick, e.g. for contact with adhesives
- Anti-static, e.g. for the conveyance of electronic parts
- Absorption of shocks, e.g. when placing sensitive goods



ALPHA SPECIAL

APPLICATION EXAMPLES



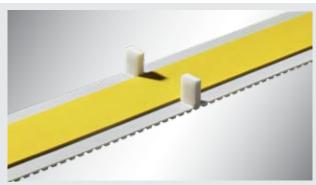
Customized solution for the conveyance of semi-finished aoods

The example given in the picture presents a customized solution for the conveyance of semi-finished products. In this particular case, an optibelt ALPHA V AT20–ST was coated with the coating material Sylomer L, green, PU foam. Afterwards, grooves and holes were cut out using water jet, and vacuum pockets were milled with an NC milling machine. With this belt, the semi-finished products can be conveyed on to further processing steps using vacuum technology.

OPTIBELT has developed a process for on-demand manufacturers who need product conveyance. By using the same timing section profile, but applying various shape and depth backings, manufacturers can run multiple belt sets in tandem to transfer their products. This cost-effective solution securely transfers products of different sizes on the same conveyor line.



Customized solution for the conveyance of on-demand products of varying sizes



Customized solution for the conveyance of pet/animal food packaging

The customized solution shown in this picture was manufactured for a customer from the pet/animal food industry in order to convey empty pet/animal food packaging to filling stations. The belt back was coated with a natural rubber (RP 400, yellow) and equipped with cleats. The welded cleats have an additional glass fiber reinforced protective layer in order to counter the high shear forces of the sharp-edged pet/animal food packaging. The cleats also ensure exact product positioning.

MECHANICAL TIMING BELT JOINTS



ZS and ZSi

DESIGNED FOR THE REPEATED DETACHING AND JOINING OF TIMING BELTS.

AT10 and Hex profile designs are available in stainless steel. This connection can be used in combination with OPTIBELT timing belts in the food and pharmaceutical industry. For profile T10, the toothed side inserts are brass which is not compliant with use in the food and pharmaceutical industry.

The back plates are connected with the inserts on the toothed side via bolts that are screwed on through the belt. The belt back of ZSi is 1 mm higher so the back plates are embedded into the timing belt and end at the height of the belt back.

The standard widths belt joints for the profiles AT10 and T10 are 25, 32, and 50 mm, and for the H profile 25.4, 38.1, and 50.8 mm.

Further intermediate widths and widths exceeding 50 mm are available on request.





PINJOIN

DESIGNED FOR ON SITE, ONE TIME, TIMING BELT CONNECTION.

The belt is joined using threaded stainless steel pins in cross holes through the tooth. This connection can be used in combination with OPTIBELT timing belts in food and pharmaceutical industry.

The pinjoin connection can also be used with coated belts. In



ROUND POLYURETHANE BELTS



SHORE A 82 YELLOW

For small deflecting pulleys; flexible at low temperatures; very elastic; low power transmission capability.



SHORE A 85 LIGHT BLUE FDA

Food industry for direct contact with food.



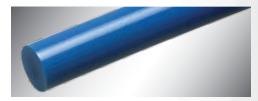
SHORE A 88 GREEN (SMOOTH/ROUGH)

Moderate loads; rough surface for the conveyance of wet or greasy products and optimizes slaving



SHORE A 92 WHITE

Application: for medium to heavy loads; the white design still offers enough flexibility; for continuous operation even at higher temperatures.



SHORE A 98 BLUE

For extreme loads and high temperatures; very strong quality; please respect the minimum pulley diameter by all means.

RR/RR PLUS

POLYURETHANE ROUND BELTS

OPTIBELT round belts are produced as open-ended rolls in special production processes. Diameters are available from 2 mm to 20 mm. Optibelt's RR PLUS is designed with a polyester tension cord for additional power capacity.

CHARACTERISTICS

- Superior friction coefficient
- Good skid resistance during conveyance
- Abrasion resistant
- High elasticity
- High tensile strength
- Non-marking color
- Resistant against grease, oil and various chemical
- UV and ozone resistant
- RR PLUS features low stretch cord

ADVANTAGES

- Can be welded together on site
- No disassembly of the drive/shafts for installation
- Allows for quick replacement and shortened downtime
- Simple storage (on rolls)
- Immediately available
- Diverse construction designs, as every desired length can be produced

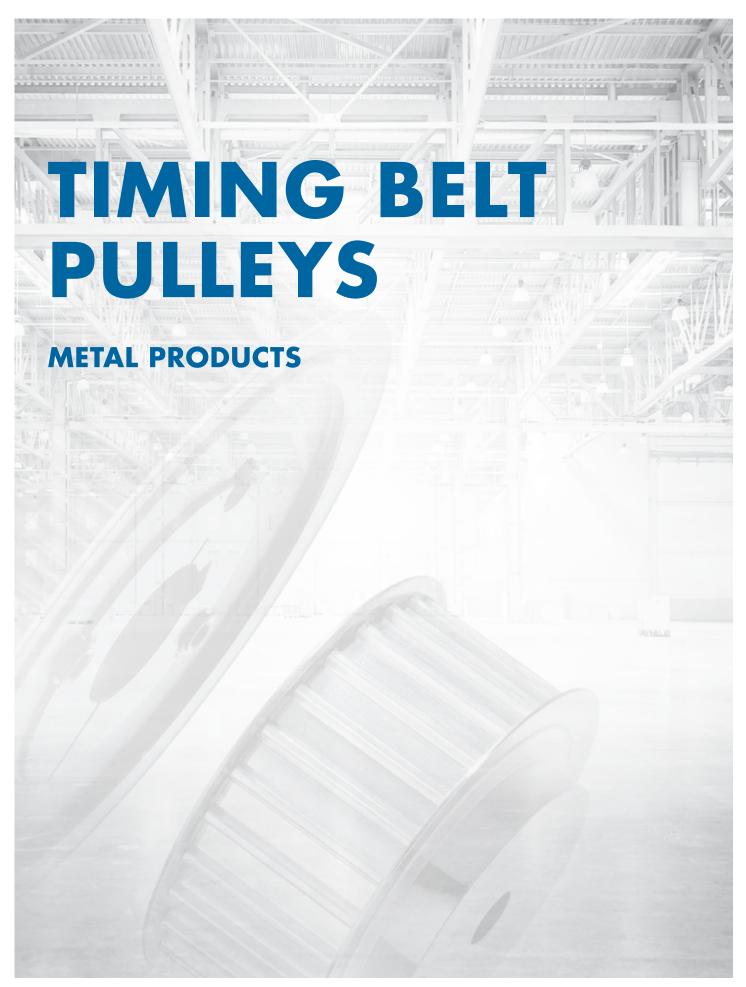
CONVEYANCE APPLICATIONS USES:

- Tiles, plates, flat glass
- Veneers in wood processing
- Roof tiles, marble, concrete slabs
- Cardboard conveyance in the packaging sector
- Also as guiding belts for the conveyance of bottles and cans
- optibelt RR PLUS is especially suitable for use in long conveyors

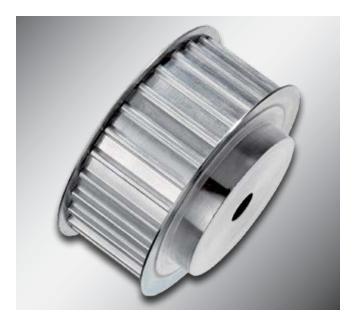


SHORE A 65 BLACK

For special applications; 5 mm to 12 mm diameters available; very flexible at low temperatures; extremely soft material.



METAL PULLEYS



OMEGA Profile	Width Code	Number of Teeth
5M	9	12- <i>7</i> 2
	15	12- 72
	25	12- 72
8M	20	22-192
	30	22-192
	50	22-192
	85	22-192
14M	40	28-216
	55	28-216
	85	28-216
	115	28-216
	170	28-216

ZRS

STANDARD BORED TO SIZE PULLEYS

ALPHA Profile	Belt Width [mm]	Number of Teeth
T5	10	10-60
	16	10-60
	25	10-60
T10	16	10-60
	25	10-60
	32	18-60
	50	18-60
AT5	10	12-60
	16	12-60
	25	12-60
AT10	16	15-60
	25	15-60
	32	18-60
	50	18-60

ALPHA or ZR	Width Code	Number of Teeth
Profile	TTIGHT COUC	1 TOTAL OF TECHT
XL	037	10- 72
L	050	10- 84
	075	10- 84
	100	10- 84
Н	075	14- 48
	100	14-120
	150	14-120
	200	14-120
	300	16-120
XH	200	18- 96
	300	18- 96
	400	18- 96

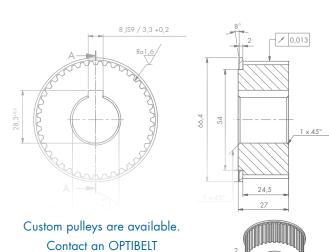
NOTE:

ALPHA Profiles are polyurethane timing belt sections ZR Profiles are neoprene rubber timing belts sections OMEGA Profiles are rubber timing belts sections

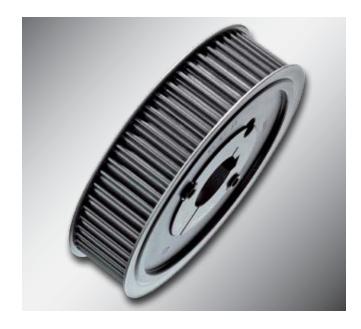


ALPHA or ZR Profile	Belt Width [mm]	Number of Teeth
L	050	18-120
	075	18-120
	100	18-120
Н	100	16-120
	150	18-120
	200	18-120
	300	20-120
XH	200	18- 48
	300	18- 48
	400	20- 48

OMEGA Profile	Belt Width [mm]	Number of Teeth
5M	15	34-150
8M	20	22- 90
	30	22-144
	50	28-192
	85	34-192
14M	40	28-216
	55	28-216
	85	28-216
	115	28-216
	170	38-216



representative for details.



ZRSSTANDARD PULLEYS
FOR TAPER BUSHINGS



Taper bushings

