

Products & Applications

# optibelt *ALPHA*

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# optibelt

## Polyurethane Timing Belts



Drive solutions with Optibelt

# optibelt ALPHA Power

## High performance polyurethane timing belts

The powerful Optibelt ALPHA Power timing belts are the result of consistent further developments.

The versatile experiences with the ALPHA standard timing belts have been implemented in this belt generation. With new, more resistant and more durable polyurethane compounds, this generation possesses an increase in power of up to 30 % in comparison with the previous standard belts.

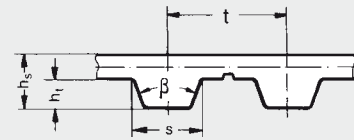
The Optibelt ALPHA Power permits more compact drive solutions that help cut costs when purchasing new belts and pulleys. The optimized interplay of the polyurethane and steel cord components guarantees the Optibelt ALPHA Power an extremely economical solution for a wide range of applications.

### Advantages

- Higher power transfer – up to 30% in comparison with conventional standard polyurethane timing belts
- Longer operational life thanks to optimised materials
- High level of flexibility thanks to optimised materials
- Runs in all conventional standard timing pulleys

## Examples of applications

Light engineering	■	Cameras
Data processing	■	Plotters
Office equipment	■	Printers
Bank equipment	■	Coin dispensers
Gardening equipment	■	Scarifiers, aerators
Machine tools	■	Feed drive systems
Medical technology	■	Sample transport
Textile machine	■	Fabric feed
Toys	■	Model aircraft



### Sections:

T2,5; T5; T10; AT5; AT10;  
double timing belt DT5 and DT10;  
MXL; XL; L (Optibelt ALPHA)

### Dimensions:

Optibelt ALPHA Power:  
Lengths from 120 to 2,250 mm  
Other dimensions on request

### Timing belt pulleys:

All standard pulleys  
Special pulleys on request



## Timing belts – manufactured endless

The Optibelt ALPHAflex timing belts are manufactured endless without any break to the tension cord. This means that an open-ended, spiral shaped drawn steel tension cord is used. Thanks to the ideal combination of extremely solid tension cords and polyurethane, these timing belts are intended for use in the most various of applications where a high level of power must be transferred in combination with extremely large centre distances.

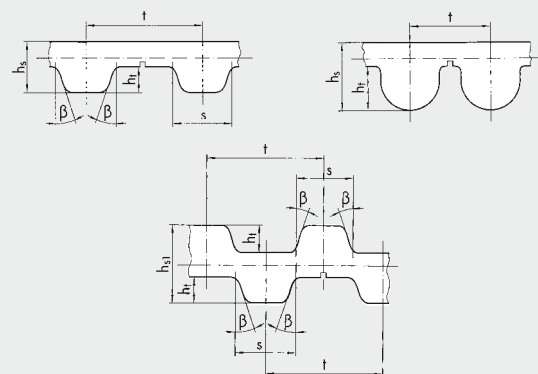
### Advantages

- Open-ended and double section timing belts
- High level of resistance to wear and tear
- Resistant to oil and lubricants
- Good material bonding with cleats
- Highest level of positioning accuracy
- Fabric coating on the teeth and/or belt top surface possible
- Dimensions from approx. 1,500 to 24,000 mm

The basic usage of this belt is in drive systems which require extremely long belts, such as long belt conveyor systems or in operating situations which require a high level of power.

## Examples of applications

- |                             |   |  |
|-----------------------------|---|--|
| Printing machines           | ■ | <i>Paper transport</i>                   |
| Film manufacture            | ■ | <i>Milling drives</i>                    |
| Tool machines               | ■ | <i>Spindle drives</i>                    |
| Timber processing machines  | ■ | <i>Transport systems</i>                 |
| Textile processing machines | ■ | <i>Winding machines</i>                  |
| Belt conveyor systems       | ■ | <i>Synchronous belt conveyor systems</i> |
| Heavy machine construction  | ■ | <i>Belt conveyor systems</i>             |



### Sections:

T5; T10; T20;  
AT5; AT10; AT20;  
DT5; DT10; AT5D;  
AT10D; 5M; 8M;  
14M; D-5M; D-8M

### Dimensions:

Optibelt ALPHAflex:  
Lengths from 1,500 to 24,000 mm  
Available irrespective of number of teeth

### Timing belt pulleys:

All standard pulleys  
Special pulleys on request

# optibelt ALPHA linear

## Timing belts – open-ended and endless

The Optibelt ALPHA linear timing belt is predominantly used as an open-ended belt with large dimensions in linear drive systems. The aramid or steel tension cord is extremely low stretch. The large choice of sections and lengths enables an abundance of drive solutions. The thermoplastic polyurethane surface is superbly intended for various coatings as well as for the welding on of cleats and plates.

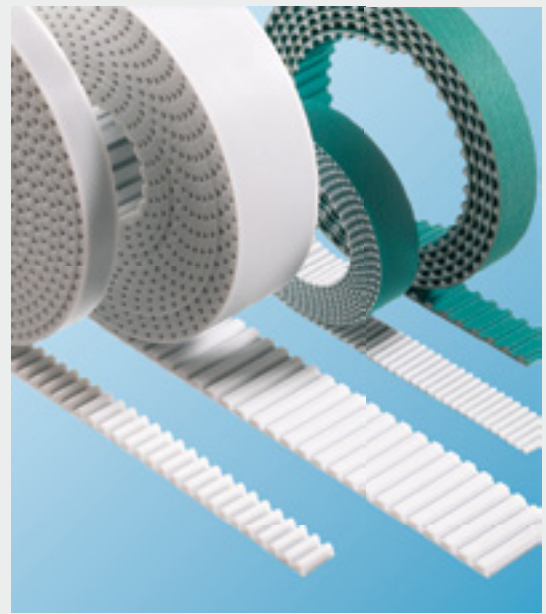
### Advantages

- Timing belts for linear and flexible drive systems
- Highest level of fitting accuracy
- Transmission of high levels of tensile forces
- Best possible adjustment to transport/positioning requirements
- Multiple lengths available – even lengths > 100,000 mm
- Can be supplied as endless belts or as metre goods
- Low levels of maintenance
- Fabric coating on the teeth side and/or belt top surface possible

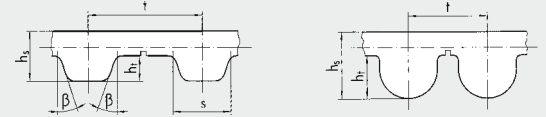
The main areas in which the Optibelt ALPHA linear are used are the transport and conveyor technology sectors as well as in the processing and control technology sectors.

## Examples of applications

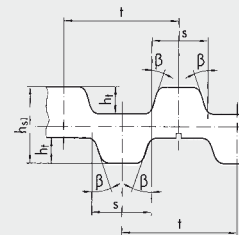
Drive Systems	■ Linear drives
for doors and gates	■ Automatic door opening systems
Processing technology	■ Carriage unit drive
Tool machines	■ Fan control
Washing system	■ System storage management
Conveyor belts	■ Synchronous conveyor systems
Conveyor technology	■ Transportation of goods
Medicine technology	■ Belt-driven conveyor belts
Timber processing industry	



### optibelt ALPHA linear



### optibelt ALPHA linear D



### Sections:

XL; L; H; XH; 5M; 8M; 14M;  
T5; T10; T20; AT5; AT10; AT20  
Double section timing belts on request

### Dimensions:

Optibelt ALPHA linear:  
Metre goods from 600 mm  
Other dimensions on request

### Timing belt pulleys:

All standard pulleys  
Special pulleys on request

## Timing belts – manufactured endless

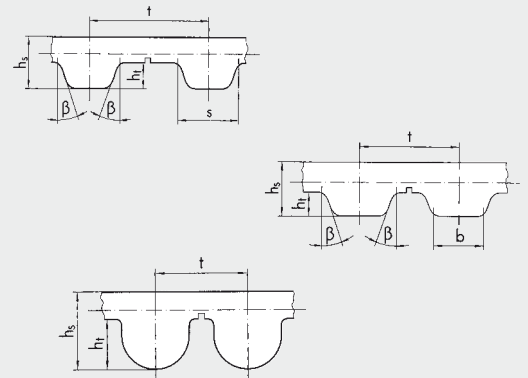
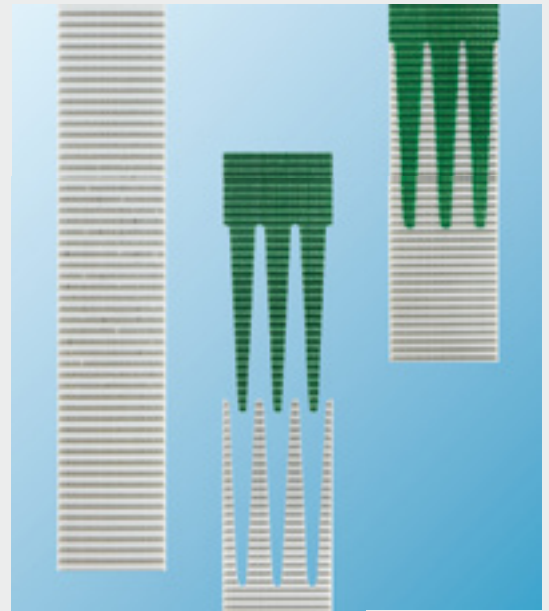
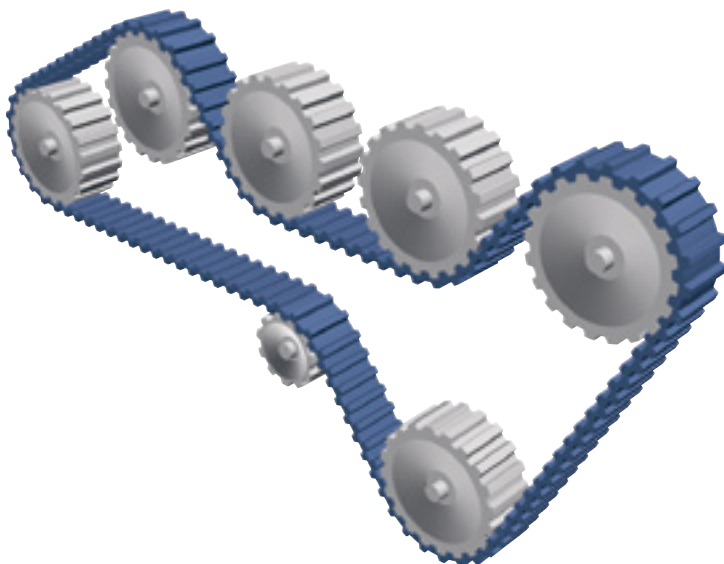
Optibelt ALPHA V are timing belts that are manufactured endless from Optibelt ALPHA linear with a break in the tension cord and are primarily used in the conveyor technology sector.

### Advantages

- Every length of pitch stepping can be manufactured endless
- Cost-efficient and can be supplied at short notice
- Large range of choice – even with fabric coating
- Although there is a break in the tension cord, approx 50% of the performance of the endless manufactured timing belts is achieved
- Ideal for conveyor technology
- Special tension cords are available

### Designs that can be delivered

- Mechanically processed
- Cleats and coatings
- Fabric on the teeth and/or belt top surface possible
- Special tension cords:
  - E-tension cord – highly flexible, aramid,
  - stainless steel – rust-proof
- Can be delivered already dyed



### Sections:

XL; L; H; XH; 5M; 8M; 14M;  
T5; T10; T20; AT5; AT10; AT20  
Double section timing belts on request

### Dimensions:

Optibelt ALPHA V:  
Metre goods from 600 mm  
Other dimensions on request

### Timing belt pulleys:

All standard pulleys  
Special pulleys on request

## Special timing belts for the requirements of conveyor system coatings

### Coatings

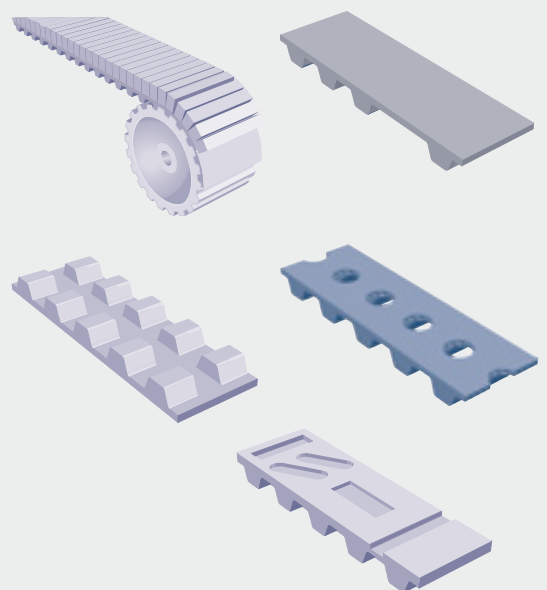
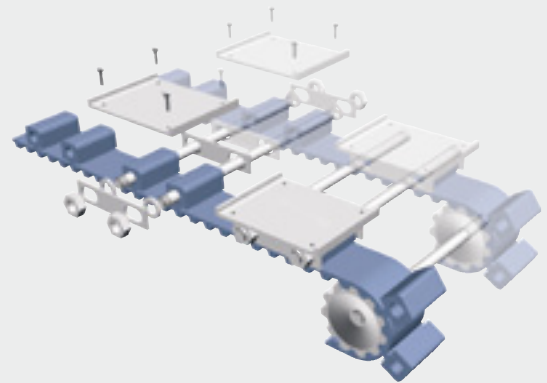
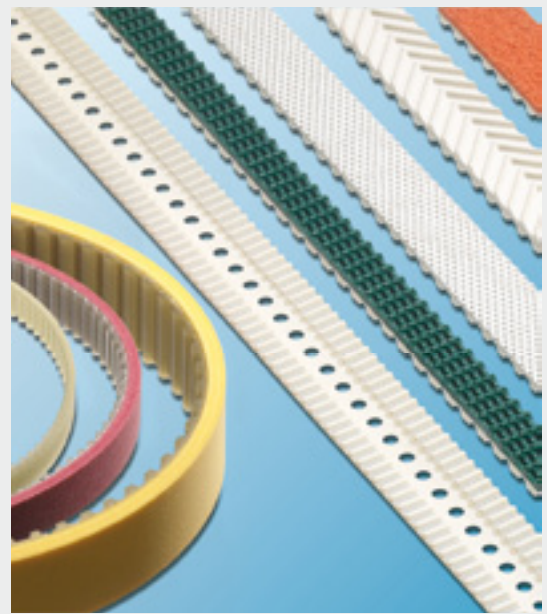
Optibelt special timing belts can be manufactured with special surfaces, cleats, plates or ribs via either a welding process (as is the case with Optibelt ALPHA SRP belts), or on the basis of an Optibelt ALPHAflex or Optibelt ALPHA linear/ALPHA V furnished with a rear coating as well as being further mechanically processed.

Innovative solutions are being developed due to the large range of coating and processing possibilities in combination with the properties of the timing belt.

### Mechanical processing

In order to ideally convert the properties of the Optibelt ALPHA special timing belts to the application required, the following further mechanical processing possibilities are available:

- Ground belt top surface
- Ground belt width
- Machined grooves lengthwise in the belt top surface
- Machined grooves lengthwise in the tooth side
- Removed individual teeth
- Pierced toothed belts
- Separate coatings
- Milled grooves in the belt top surface/coating
- Special timing belts for application in the conveying sector
- Available with special surfaces, plates or cleats or with mechanical post-processing
- For innovative drive solutions



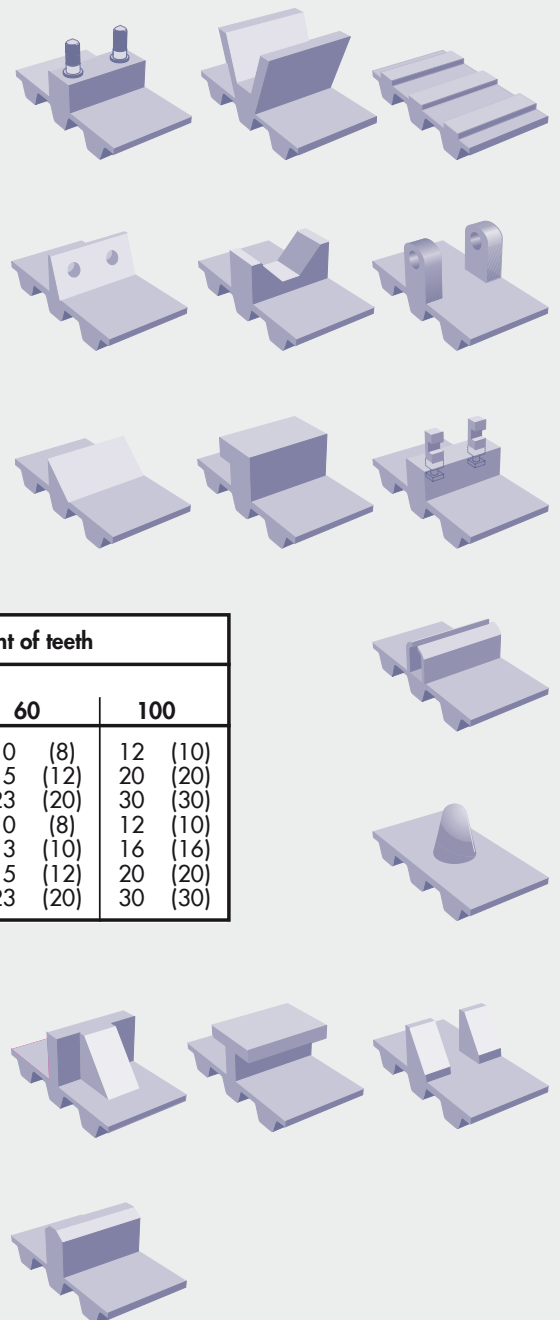
## Special timing belts for the requirements of conveyor system cleats

### Cleats

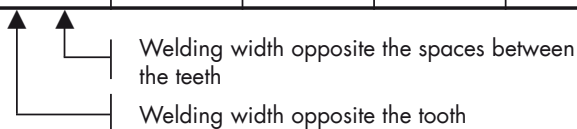
Optibelt ALPHA V Spezial / ALPHAflex Spezial special timing belts were retroactively installed with cleats upon the basis of Optibelt ALPHA V or Optibelt ALPHAflex.

Optibelt SRP with cleats are cast endless special timing belts where the cleats are profiled on the outer part of the mould. In the event that the present product range does not have a particular cleat, it can be manufactured /adjusted as according to your specifications at a low cost.

The selected welding width of the cleat is to be as low as possible due to the fact that the flexibility of the timing belt can be affected by this.



Recommended welding width [mm] of the cleat in relation to the amount of teeth							
Section	Amount of teeth on the pulley						
	20	25	30	40	50	60	100
T5/AT5	5 (2)	6 (2)	6 (3)	8 (4)	9 (6)	10 (8)	12 (10)
T10/AT10	8 (3)	9 (4)	10 (4)	12 (6)	14 (9)	15 (12)	20 (20)
T20/AT20	12 (5)	13 (5)	15 (6)	18 (6)	20 (12)	23 (20)	30 (30)
XL	5 (2)	6 (2)	6 (3)	8 (4)	9 (6)	10 (8)	12 (10)
L	6 (3)	7 (3)	8 (4)	10 (5)	12 (7)	13 (10)	16 (16)
H	8 (4)	9 (5)	10 (6)	12 (7)	14 (10)	15 (12)	20 (20)
XH	13 (5)	14 (5)	15 (6)	18 (8)	20 (12)	23 (20)	30 (30)



On this page you will be able to see an extract from our standard product range. We would be delighted to support you in solving your conveying problems.

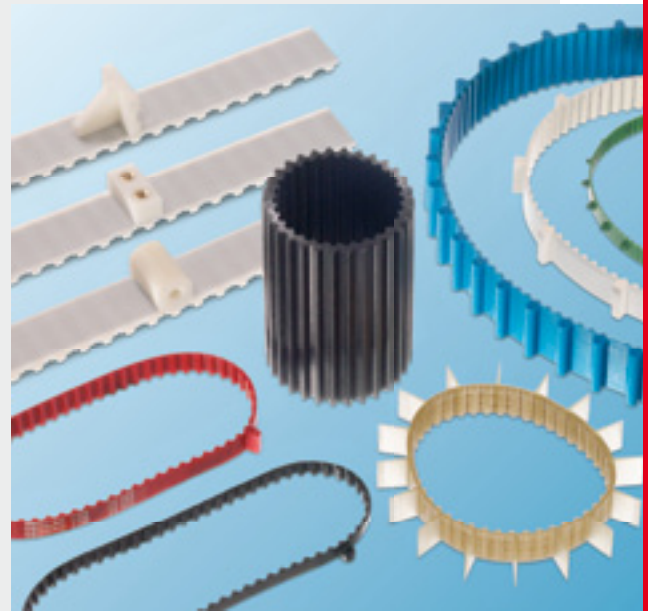
## Multifunctional special belts

Optibelt ALPHA SRP special belts impress thanks to their extremely high level of accuracy. The precision which is second to none is based upon a perfect timing belt tooth geometry and an ideal level of material bonding. In comparison to the belts that are retroactively coated, the Optibelt ALPHA SRP special belts achieve a substantially better adhesion between the individual elements. There is absolutely no chance of the coating loosening away from the belts.

The areas of application of this product range from being a multifunctional belt for drive and transport control to belts with complex conveyor cleats for special switching functions through to complicated rotational symmetrically shaped parts.

### Advantages

- High level of resistance to wear and tear
- Long operational life
- Perfect adjustment to various requirements
- Huge range of areas of application
- First-class elasticity and ductility
- Excellent length stability
- High level of positional accuracy



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Power Transmission