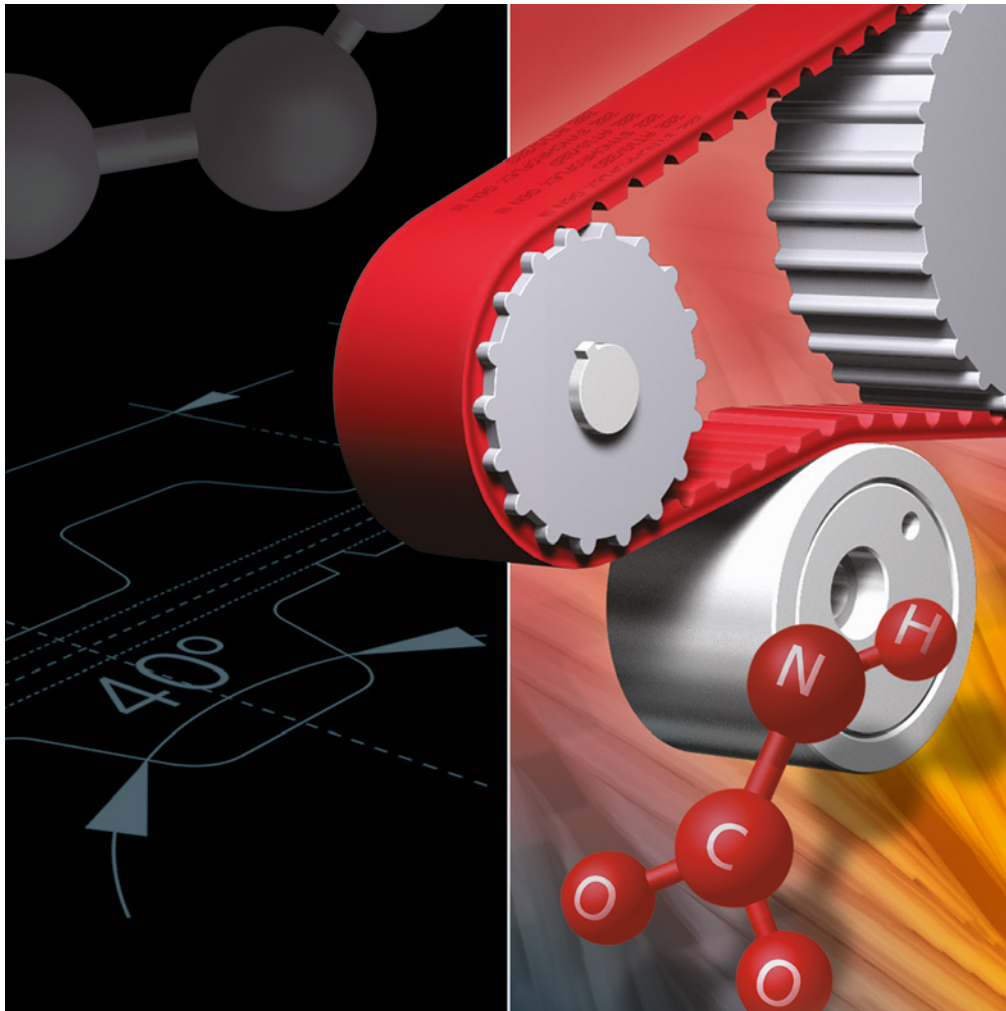
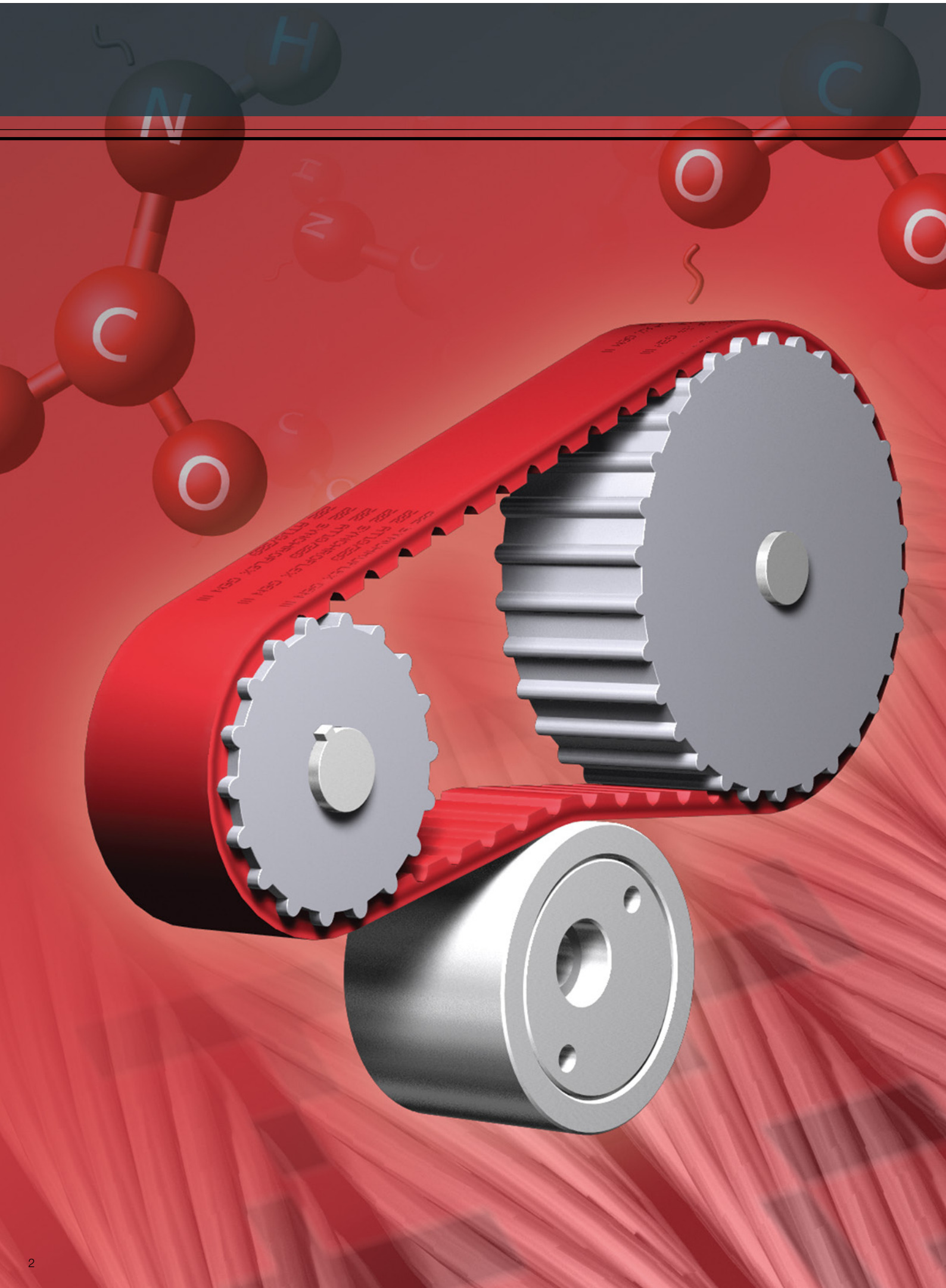


# CONTI® SYNCHROFLEX Polyurethane Timing Belts Overall catalog



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# CONTI® SYNCHROFLEX Timing Belts

## Advanced manufacture and high-performance materials combine for product excellence

CONTI® SYNCHROFLEX polyurethane timing belts deliver best-in-class power transmission performance thanks to the uncompromising selection of high-grade components and the superior bonding strength between the hard-wearing polyurethane shell and the constant-length galvanised steel tension members.

The highly flexible production process is particularly suitable for manufacturing double-sided belts and high accuracy profiles on the belt back. A range of specialist compounds and materials are available to enable operation at low temperatures, in clean rooms and in the food industry.



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# Manufacturing process

CONTI® SYNCHROFLEX polyurethane timing belts consist of two components – a cast polyurethane shell and a high grade steel cord tension member. The excellent bond between the two materials results in a very high power transmission capacity.

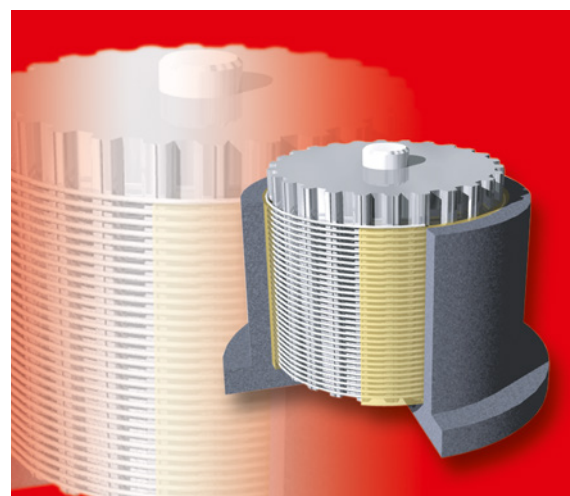
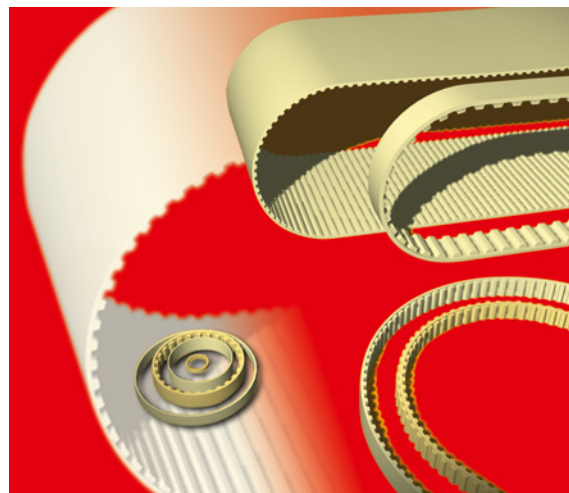
**The manufacturing process – cast moulded polyurethane – combines the following advantages:**

- The cast polyurethane timing belt is an exact image of the precision engineered mould. High pitch accuracy is achieved over the entire belt. The technology is particularly suitable for applications requiring high levels of angular accuracy, smooth running characteristics, high rotational speeds and long life.
- Excellent linearity with high pitch accuracy and repeatability allows the length to be optimised by adjusting the cord tension.
- The casting method combines with the capillary effect, producing an exceptionally high strength bond with the steel tension members.
- The high reproduction quality of the cast polyurethane process enables fine contoured features and smaller belt pitches to be moulded. Double-sided belts and profiled flights on the back of the belt can be moulded simultaneously.
- The process produces an effective belt width of up to 300 mm.
- Belt lengths from 55 mm to 6000 mm endless length.

CONTI® SYNCHROFLEX polyurethane timing belts are used across a very wide range of applications for the transmission of synchronous rotary motion in power transmission systems, servo and motion controls, conveyors and transfer lines. They operate in a rotational speed range of up to 20,000 rpm.

**Applications include:**

- office machinery
- electronic data processing equipment (EDP)
- textile machinery
- wood processing machinery
- machine tools
- printing machinery
- pumps
- compressors
- building machinery



Casting mould, illustrated with a spirally wound tension member on the mould core.



Ready de-moulded timing belt sleeve, partly separated into individual belts.

# Construction

CONTI® SYNCHROFLEX polyurethane timing belts are manufactured from wear resistant polyurethane and high tensile steel cord tension members. Both high quality materials combine to form the basis for dimensionally stable and highly durable polyurethane timing belts. Polyurethane timing belts have very high longitudinal stiffness and no post-elongation of the tension members is to be expected in continuous operation. Only under extreme loading conditions and as a precaution after a brief run-in, a small loss of tension may necessitate a once-only retensioning.

The timing belts are temperature resistant with ambient temperatures from -30°C to +80°C. However, applications close to these temperature limits (< -10°C and > +50°C), may require adapted dimensioning. For specific temperature ranges, optional belt materials are available; e.g. the CONTI® SYNCHROFLEX GEN III polyurethane timing belt range is temperature resistant up to +100°C. Please contact our technical specialists for this type of application.



CONTI® SYNCHROFLEX polyurethane timing belts are manufactured using production methods that maintain very high tolerances to ensure a uniform load distribution during power transmission. They are equally suited for high torque transmission and precise positioning applications or the combination of both.

## Properties:

### mechanical

- positive fit, synchronous running
- constant length, no post-elongation
- low noise
- wear resistant
- low-maintenance
- highly flexible
- positional and angular accuracy
- fatigue resistant, low extension steel cord tension members
- belt speeds up to 80 ms<sup>-1</sup>
- small production quantities available
- excellent power-to-weight ratio
- low pre-tension
- low bearing loads
- permits large centre distances
- permits large transmission ratios
- high degree of efficiency, max. 98%

### chemical

- hydrolysis stabilized
- resistant to aging
- temperature resistant from -30°C to 80°C, note: CONTI® SYNCHROFLEX GEN III up to 100°C (see information in the text "Construction")
- tropical climate resistant
- resistant against simple oils, fats and petrol
- resistant to some acids and alkalines

For further information about the environmental resistance characteristics of CONTI® SYNCHROFLEX polyurethane timing belts please contact your Mulco sales partner.

# Timing Belt Types

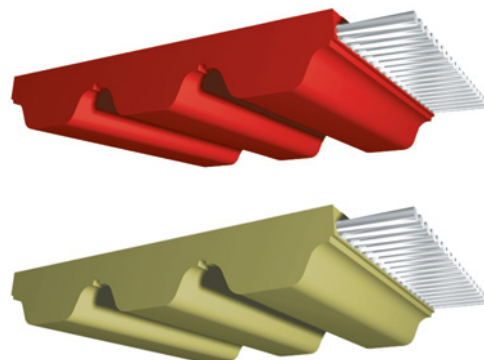
## AT High capacity profile

Further development of the T profile resulted in the AT profile. This type of belt is characterised by the larger tooth shear strength resulting from the larger tooth volume and the stronger tension members.

Further advantages:

- favourable tooth mesh
- strengthened tension members for constant pitch
- Improved performance up to 50 % as compared to the T profile
- precise transmission of movement in conjunction with synchronous pulleys with reduced or zero backlash
- reduction of meshing impacts or shocks
- compact drive dimensions

(also available in the GEN III version)



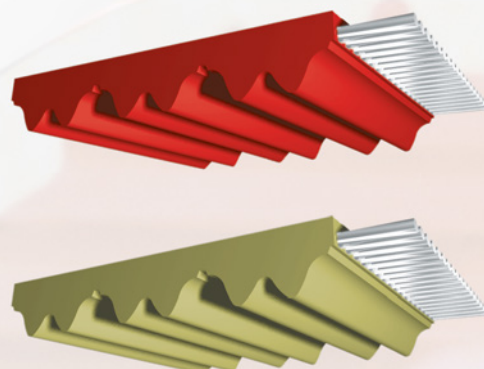
## ATP High capacity profile

Further increased performance, noise reduction and extension of the belts useful life led to the development of the ATP timing belt in 1993. At the time, the main interest was focussed on the optimum tooth form. The basic concept of the new ATP profile provides the division of the trapezoidal tooth into two individual and load bearing teeth.

Performance increase up to 60 %, running noise reduced by up to 10 db(A) and an increased longevity by:

- tooth surface area increased by 70 %
- uniform load/tension distribution
- improved power dispersion
- reduced polygon effect
- small construction width
- optimised tooth mesh

(also available in the GEN III version)

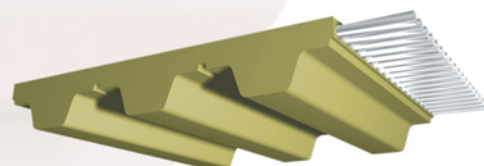


## T Standard profile

The timing belt with a trapezoidal profile according to DIN 7721 is regarded as the classical standard timing belt.

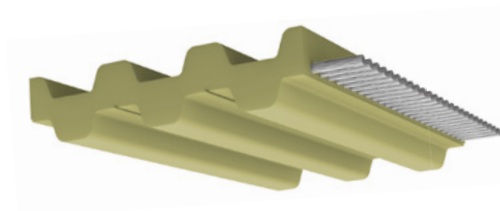
Preferred use:

- for standard drive tasks
- transmission tasks with double-sided belts
- for high bending stress
- for drives with contraflexure



**T in DL version**

The DL timing belt (the belt is double-sided) is used in the power transmission and transport technology. Multiple-shaft drives with different rotational directions can be realised with this timing belt. Full load ability on both tooth sides.

**Imperial profile**

Imperial pitches according to DIN/ISO 5296 are available in the following sizes:

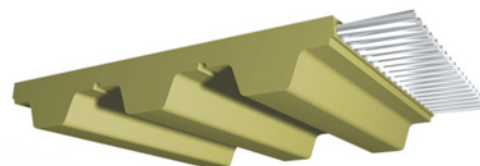
M (MXL) = 2.032 mm

XL = 5.080 mm      L = 9.525 mm

H = 12.700 mm      XH = 22.225 mm

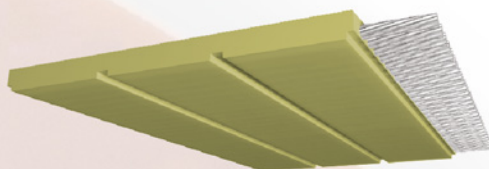
Preferred use:

- Applications in imperial units

**F F Flat belts**

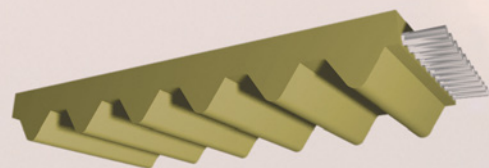
Preferred use:

- Friction drives (open length and endless)
- high-speed drives (CONTI® SYNCHROFLEX Belt)
- drives without synchronous transmission

**K Serrated metric pitch profile.**

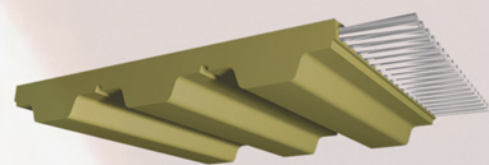
Preferred use:

- Fine mechanical technology requiring small dimensions

**V** The development of the PU timing belt started in 1954 with pitches other than standard.

Preferred use:

- tasks requiring special pitches
- spares



Please contact your nearest Mulco distributor to know more about our entire range of V-type belts.



# Antistatic CONTI® SYNCHROFLEX Timing Belts

## Characteristics of CONTI® SYNCHROFLEX Antistatic Timing Belts

The antistatic properties of CONTI® SYNCHROFLEX polyurethane timing belts are achieved by:

### 1. antistatic coating

A post-process application of an electrically conductive coating on all sides of the belts with or without textile facing

### 2. antistatic polyurethane mixture

A special conductive polyurethane mixture (max. belt length to 700 mm)

Other lengths on request.

Colour of antistatic timing belts: black.

### Application / Use

Antistatic CONTI® SYNCHROFLEX polyurethane timing belts are used where electrostatic discharge (ESD) is not desired or is prohibited, e.g. for the transport of electronic components, for drives and/or conveying equipment in an inflammable or explosive environment.

### Electrostatic charges

The build up of static electricity, due to the continual separation of two contact surfaces, can be expected where timing belts are involved, e.g. between pulley and timing belt. This static electric charge can be considerable and may increase the danger of ignition at the moment of discharge. The value of the static electric charge is dependent on the materials used for the timing belt, synchronous pulleys, tension rollers and/or support rollers. The risk of ESD rises as the belt speed, belt tension and the contact surface width increase.

### Antistatic properties

Antistatic CONTI® SYNCHROFLEX polyurethane timing belts consistently avoid the formation of static electric charges.

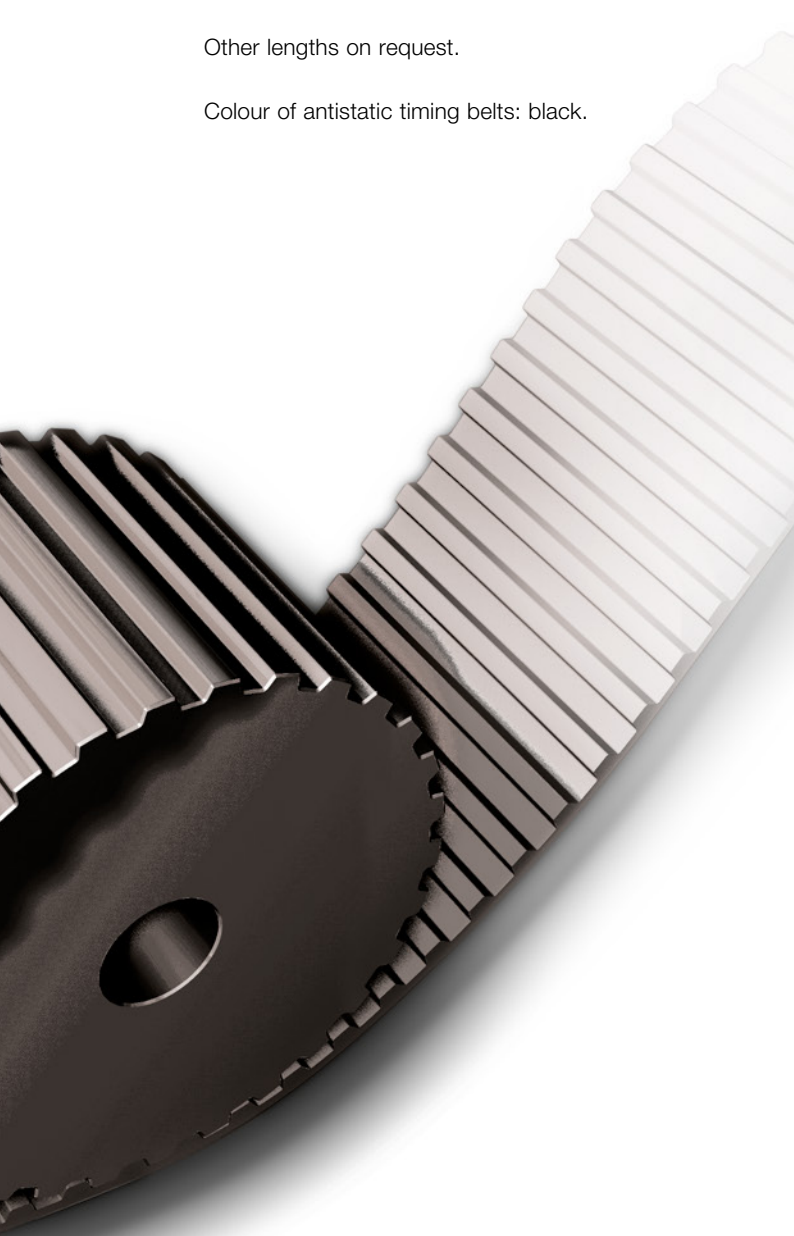
### Quality assurance

Conductivity is measured using test equipment meeting ISO 9563 requirements. Upon request, the wear resistance of the antistatic layer can be checked on test timing belts with an antistatic facing. Due to the fact that extended operation will result in probable surface wear, the conductivity of the antistatic timing belts may deteriorate and regular checks of the resistance values are essential. When belts are to be used in environments with a high likelihood of explosion, please contact our technical specialists for advice.

### Order example

CONTI® SYNCHROFLEX Timing Belt 25 T 5 / 630 EL-PU antistatic coated

For available lengths, please contact your Mulco sales partner.





# “E” Tension Member

## Highly flexible tension members – the “E” steel cord tension member

The smaller the diameter of each single wire, the more flexible the overall tension member is! This relationship led us to develop CONTI® SYNCHROFLEX polyurethane timing belts with “E” tension members.

The cross sectional area of the “E” tension member comprises several strands of smaller diameter wires, each with excellent bending fatigue characteristics. With much improved overall flexibility CONTI® SYNCHROFLEX polyurethane timing belts are particularly suited to smaller diameter pulleys and tension rollers; the minimum number of teeth and/or minimum diameter of the pulleys can be reduced by up to 30% compared with standard tension members. Timing belts with “E” tension members are recommended for multi-shaft drive applications with frequent reverse bending.

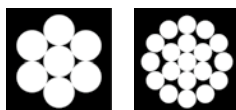
### Summary:

- smaller diameter individual wires in the steel cord
- higher dynamic capabilities
- extremely high bonding and bending fatigue strength
- smaller pulley and tension roller diameters
- runs on standard diameter timing pulleys.

For applications under extreme conditions, please contact your Mulco sales partner.

### Application information:

Steel cord tension members encapsulated in polyurethane:



The smaller the diameter of the individual wire, the more flexible the whole timing belt.

### Available versions:

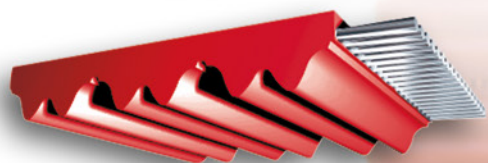
- for the pitches AT 3 (standard), AT 5 (Gen III standard), AT 10, ATP10, T 5, T 10, T 20
- all standard belt lengths for the chosen pitch
- all standard pulley sizes for the chosen pitch
- all calculations as per the standard belt chosen

### Timing belts with “E” tension members, minimum numbers of teeth:

| Drive Type                |                                                                |                 | AT 3<br>(Standard) | AT 5<br>(GEN III,<br>Standard) | AT 10<br>ATP 10 | T 5 | T 10 | T 20 |
|---------------------------|----------------------------------------------------------------|-----------------|--------------------|--------------------------------|-----------------|-----|------|------|
| without contraflexure<br> | Timing pulley                                                  | $z_{\min}$      | 15                 | 12                             | 12              | 10  | 10   | 12   |
|                           | Tension roller (smooth),<br>running on teeth                   | $d_{\min}$ [mm] | 20                 | 18                             | 50              | 18  | 50   | 80   |
| with contraflexure<br>    | Timing pulley                                                  | $z_{\min}$      | 20                 | 20                             | 20              | 12  | 15   | 20   |
|                           | Tension roller (smooth),<br>running on the back<br>of the belt | $d_{\min}$ [mm] | 20                 | 50                             | 80              | 18  | 50   | 120  |

# High-power version GEN III

## CONTI® SYNCHROFLEX Timing Belt (SFX) AT GEN III / ATP GEN III



### A powerful basis

The combination of high tensile steel cord tension members and wear resistant polyurethane forms the basis for dimensionally stable and extremely durable high-performance timing belts. A convincing technology with excellent product features that include:

- constant length, no post-elongation
- high dimensional stability
- high-torque transmission
- quiet running
- maintenance-free
- lubrication-free
- highly chemical resistant and mechanically durable

### Each generation is different.

#### GEN III is better!

It was worth its while to focus on further developing the power drives of the AT and ATP range CONTI® SYNCHROFLEX polyurethane timing belts because the new GEN III generation excels in a 25% increase in power transmission compared with the AT/ ATP standard. Another economic bonus: all CONTI® SYNCHROFLEX GEN III polyurethane timing belts support the use of standard AT/ATP pulleys.

Mulco partners everywhere agree that advancement is synonymous to providing solutions for every product at a level of sophistication down to the smallest detail. A bifilar tension member arrangement and a higher packing density translates this into the CONTI® SYNCHROFLEX GEN III polyurethane timing belt for the AT and ATP ranges.

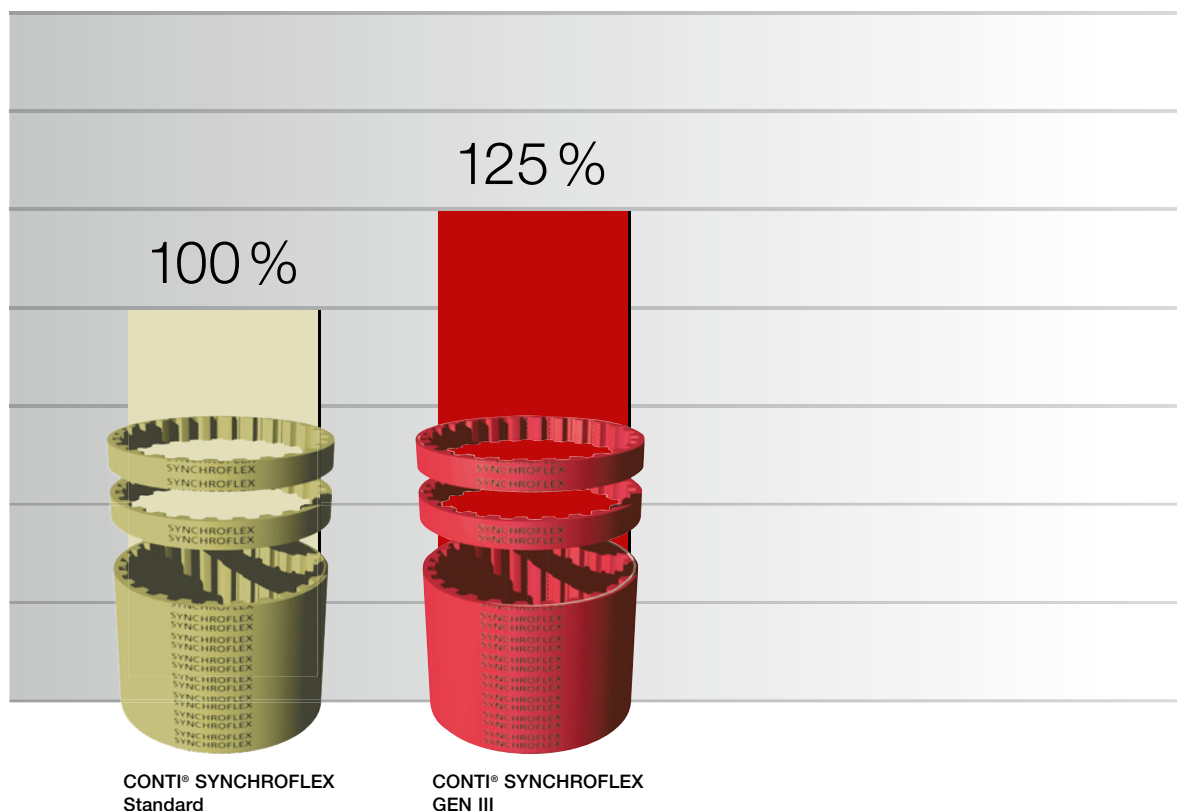
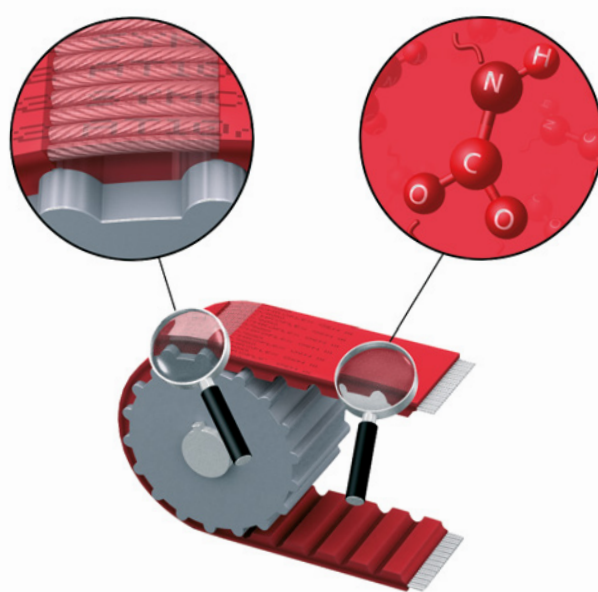
The high-performance polyurethane designed for dedicated use with the CONTI® SYNCHROFLEX GEN III polyurethane timing belts yields greatly improved benchmark results compared with the standard. One of the benefits is that its increased hardness allows line engineers to count on a larger number of load-carrying teeth.

**CONTI® SYNCHROFLEX GEN III – with up to 25% greater power transmission compared with the AT / ATP standard:**

- increased tensile force  $F_{zul}$  to max. +45% due to closer wound cords
- Increased power transmission  $F_{spec}$  +25%
- redesigned bifilar steel (S and Z) cord balance for better tracking
- reduced flange friction
- lower running noise with narrower belt width for equal performance
- longer life
- load bearing teeth force distribution – increased by up to 30%
- temperature range up to +100° C  
(For performance values close to the range limit, please contact your Mulco sales partner.)

Two-filament tension member arrangement

New high performance polyurethane



# Belt performance table

## Belt performance table

### AT 3 GEN III

|                     |                                  |
|---------------------|----------------------------------|
| Power transmission: | ≤ 6 kW                           |
| Rotational speed:   | approx. 20.000 min <sup>-1</sup> |
| Peripheral speed:   | approx. 80 ms <sup>-1</sup>      |
| Timing pulleys:     | from z=15                        |

Applications (Example): small power drives,  
Handling technology

### AT 3

|                     |                                  |
|---------------------|----------------------------------|
| Power transmission: | ≤ 5 kW                           |
| Rotational speed:   | approx. 20.000 min <sup>-1</sup> |
| Peripheral speed:   | approx. 80 ms <sup>-1</sup>      |
| Timing pulleys:     | from z=15                        |

Applications (Example): small power drives,  
Handling technology

### AT 5 GEN III

|                     |                                  |
|---------------------|----------------------------------|
| Power transmission: | ≤ 18 kW                          |
| Rotational speed:   | approx. 10.000 min <sup>-1</sup> |
| Peripheral speed:   | approx. 80 ms <sup>-1</sup>      |
| Timing pulleys:     | from z=15                        |

Applications (Example): Machine tools, Pumps,  
Textile machinery

### AT 5

|                     |                                  |
|---------------------|----------------------------------|
| Power transmission: | ≤ 15 kW                          |
| Rotational speed:   | approx. 10.000 min <sup>-1</sup> |
| Peripheral speed:   | approx. 80 ms <sup>-1</sup>      |
| Timing pulleys:     | from z=15                        |

Applications (Example): Machine tools, Pumps,  
Textile machinery

### AT 10 GEN III

|                     |                                  |
|---------------------|----------------------------------|
| Power transmission: | ≤ 87 kW                          |
| Rotational speed:   | approx. 10.000 min <sup>-1</sup> |
| Peripheral speed:   | approx. 60 ms <sup>-1</sup>      |
| Timing pulleys:     | from z=15                        |

Applications (Example): Construction machines,  
Pumps, Paper-making  
machines, Compressors  
compactors, Textile machin-  
ery, Roller-table drives

### AT 10

|                     |                                  |
|---------------------|----------------------------------|
| Power transmission: | ≤ 70 kW                          |
| Rotational speed:   | approx. 10.000 min <sup>-1</sup> |
| Peripheral speed:   | approx. 60 ms <sup>-1</sup>      |
| Timing pulleys:     | from z=15                        |

Applications (Example): Construction machines,  
Pumps, Paper-making  
machines, Compressors  
compactors, Textile machin-  
ery, Roller-table drives

### ATP 10 GEN III

|                     |                                  |
|---------------------|----------------------------------|
| Power transmission: | ≤ 150 kW                         |
| Rotational speed:   | approx. 10.000 min <sup>-1</sup> |
| Peripheral speed:   | approx. 60 ms <sup>-1</sup>      |
| Timing pulleys:     | from z=15                        |

Applications (Example): Machine tools, Textile  
machinery, Power drives

### ATP 10

|                     |                                  |
|---------------------|----------------------------------|
| Power transmission: | ≤ 100 kW                         |
| Rotational speed:   | approx. 10.000 min <sup>-1</sup> |
| Peripheral speed:   | approx. 60 ms <sup>-1</sup>      |
| Timing pulleys:     | from z=15                        |

Applications (Example): Sanding machinery,  
Power drives,  
Machine tools



**ATP 15 GEN III**

Power transmission: possible beyond 220 kW  
 Rotational speed: approx. 10.000 min<sup>-1</sup>  
 Peripheral speed: approx. 50 ms<sup>-1</sup>  
 Timing pulleys: from z=20

Applications (Example): Textile machinery,  
 Machine tools,  
 High power drives

**ATP 15**

Power transmission: possible beyond 200 kW  
 Rotational speed: approx. 10.000 min<sup>-1</sup>  
 Peripheral speed: approx. 50 ms<sup>-1</sup>  
 Timing pulleys: from z=20

Applications (Example): Power drives,  
 Machine tools

**AT 20 GEN III**

Power transmission: possible beyond 250 kW  
 Rotational speed: approx. 6.500 min<sup>-1</sup>  
 Peripheral speed: approx. 40 ms<sup>-1</sup>  
 Timing pulleys: from z=18

Applications (Example): Heavy-duty drives, Textile  
 machinery, Printing machine,  
 Machine tools

**AT 20**

Power transmission: possible beyond 200 kW  
 Rotational speed: approx. 6.500 min<sup>-1</sup>  
 Peripheral speed: approx. 40 ms<sup>-1</sup>  
 Timing pulleys: from z=18

Applications (Example): Heavy-duty drives,  
 Textile machinery,  
 Printing Machine,  
 Machine tools

**K 1,5; T 2; M; T 2,5**

Power transmission: ≤ 0,5 kW  
 Rotational speed: approx. 20.000 min<sup>-1</sup>  
 Peripheral speed: approx. 80 ms<sup>-1</sup>  
 Timing pulleys: from z=10

Applications (Example): Precision machine drives,  
 Film camera drives,  
 Positioning drives

**T 5**

Power transmission: ≤ 5 kW  
 Rotational speed: approx. 10.000 min<sup>-1</sup>  
 Peripheral speed: approx. 80 ms<sup>-1</sup>  
 Timing pulleys: from z=10

Applications (Example): Office machinery,  
 Home appliances,  
 Positioning and  
 regulating drives

**T 10**

Power transmission: ≤ 30 kW  
 Rotational speed: approx. 10.000 min<sup>-1</sup>  
 Peripheral speed: approx. 60 ms<sup>-1</sup>  
 Timing pulleys: from z=12

Applications (Example): Machine tools,  
 Main and subsidiary drives,  
 Textile machinery,  
 Printing machinery

**T 20**

Power transmission: up to approx. 100 kW  
 Rotational speed: approx. 6.500 min<sup>-1</sup>  
 Peripheral speed: approx. 40 ms<sup>-1</sup>  
 Timing pulleys: from z=15

Applications (Example): Heavy Construction machines,  
 Paper-making machines,  
 Pumps, Compressors  
 compactors, Textile machinery

**Remark:**

Special timing belt designs allow the rpm and peripheral speed parameters to be increased.

# Tolerances

## CONTI® SYNCHROFLEX Timing Belts Tolerances

### Length tolerances for standard CONTI® SYNCHROFLEX Polyurethane Timing Belts

Belt length measurement is carried out to  
DIN 7721, in relation to the centre distance.

| Belt length    | Length tolerance<br>in relation to<br>centre distance |
|----------------|-------------------------------------------------------|
| up to 320 mm   | ± 0,15 mm                                             |
| 320 – 630 mm   | ± 0,18 mm                                             |
| 630 – 1000 mm  | ± 0,25 mm                                             |
| 1000 – 1960 mm | ± 0,40 mm                                             |
| 1960 – 3500 mm | ± 0,50 mm                                             |
| 3500 – 4500 mm | ± 0,80 mm                                             |
| 4500 – 6000 mm | ± 1,20 mm                                             |

### Width tolerances for standard CONTI® SYNCHROFLEX Polyurethane Timing Belts

| Type / group  | up to 50 mm | 50 – 100 mm | over 100 mm in % der Belt width |
|---------------|-------------|-------------|---------------------------------|
| K 1           | ± 0,3 mm    | ± 0,5 mm    | ± 0,5 %                         |
| K 1,5         | ± 0,3 mm    | ± 0,5 mm    | ± 0,5 %                         |
| T 2           | ± 0,3 mm    | ± 0,5 mm    | ± 0,5 %                         |
| M (MXL)       | ± 0,3 mm    | ± 0,5 mm    | ± 0,5 %                         |
| T 2,5         | ± 0,3 mm    | ± 0,5 mm    | ± 0,5 %                         |
| T 5           | ± 0,3 mm    | ± 0,5 mm    | ± 0,5 %                         |
| T 5-DL        | ± 0,3 mm    | ± 0,5 mm    | ± 0,5 %                         |
| T 10          | ± 0,5 mm    | ± 0,5 mm    | ± 0,5 %                         |
| T 10-DL       | ± 0,5 mm    | ± 0,5 mm    | ± 0,5 %                         |
| T 20          | ± 1,0 mm    | ± 1,0 mm    | ± 1,0 %                         |
| T 20-DL       | ± 1,0 mm    | ± 1,0 mm    | ± 1,0 %                         |
| AT 3          | ± 0,3 mm    | ± 0,5 mm    | ± 0,5 %                         |
| AT 5          | ± 0,5 mm    | ± 0,5 mm    | ± 0,5 %                         |
| AT 10         | ± 1,0 mm    | ± 1,0 mm    | ± 1,0 %                         |
| ATP 10/ATP 15 | ± 1,0 mm    | ± 1,0 mm    | ± 1,0 %                         |
| AT 20         | ± 1,0 mm    | ± 1,0 mm    | ± 1,0 %                         |

#### Please note:

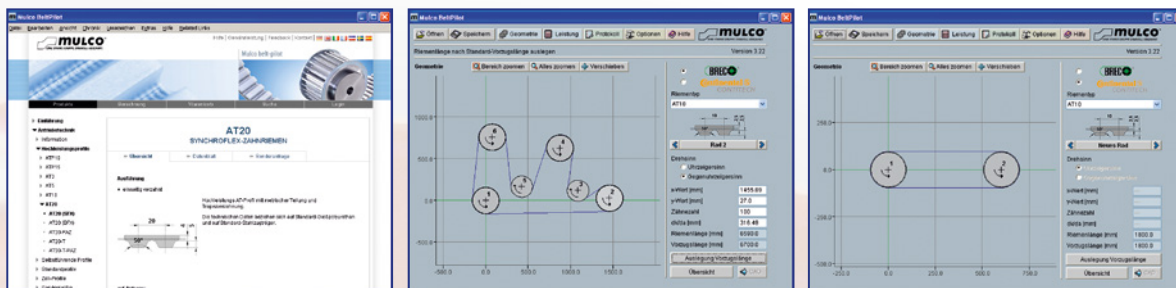
Tolerance for special tension members  
upon request.

# Mulco b@lt-pilot

## Your direct road to perfect design solutions

**Mulco belt-pilot – online support at [www.mulco.net](http://www.mulco.net)**

Let others talk about being close to the customer, we as the market leading provider of polyurethane timing belts actually live by the idea. Mulco-Europe EWIV's secret of success has always been largely due to advising our customers before they enter the design stage. Mulco belt-pilot is taking our customer dedication a critical step further ahead. Our interactive Internet service offering enables you to calculate your personal design solutions online. Whatever field of technology you are interested in - power transmission, linear, transport or components - start Mulco belt-pilot at [www.mulco.net](http://www.mulco.net) for 24/7 access to the actual product information, CAD downloads and calculations you need.



## Mulco b@lt-pilot

### Many benefits.

- ▶ Interactive service offering with video-based e-learning option
- ▶ Extensive product databases
- ▶ Free use of CAD downloads
- ▶ Import the CAD drawings into your CAD system
- ▶ Calculate timing belts, pulleys and components
- ▶ Email inquiries supported



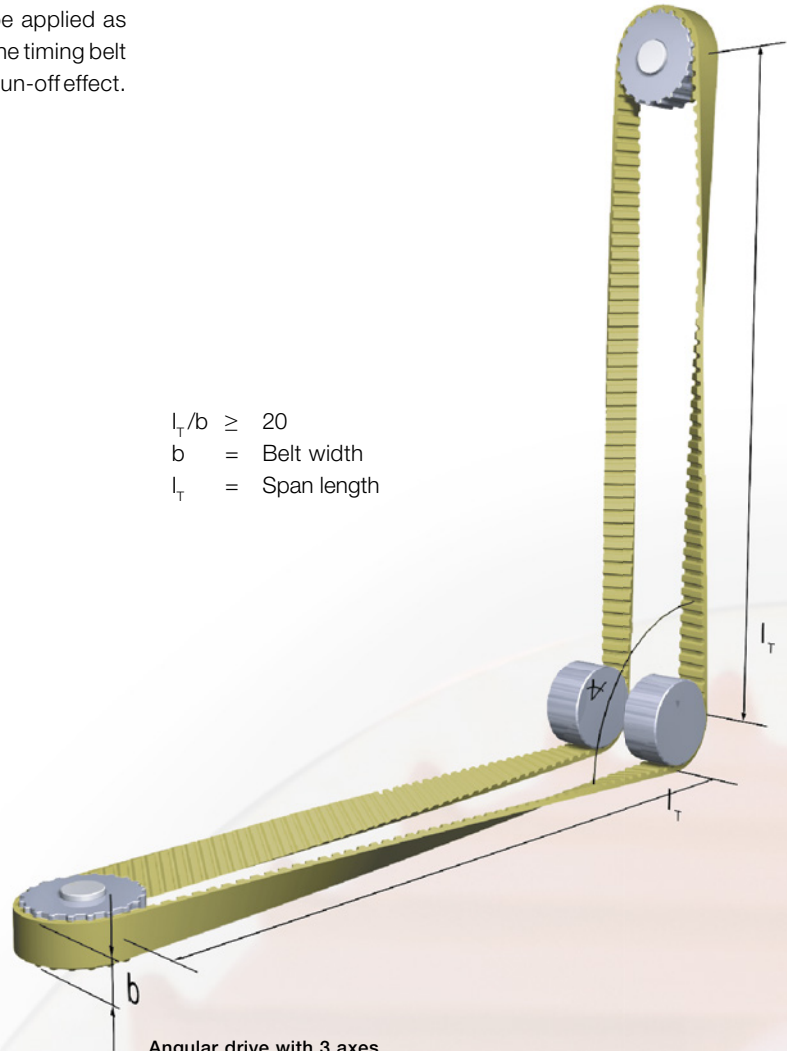
# Angular drives

CONTI® SYNCHROFLEX timing belts can be applied as angular drives. Take into consideration that the timing belt can only be crossed (twisted). Eliminates the run-off effect.



Angular drive with 2 axes

$$\begin{aligned} l_T / b &\geq 20 \\ b &= \text{Belt width} \\ l_T &= \text{Span length} \end{aligned}$$

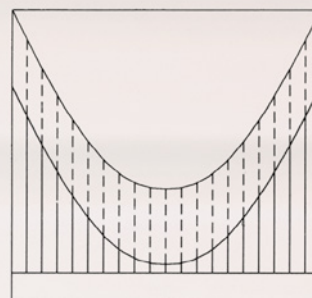


Angular drive with 3 axes

With crossed timing belt applications the outer tension members suffer a higher elongation than the inner ones. Due to the larger elongation in the edge zone the permitted proportional circumferential force for the belt in the tension members is reduced.

No power reductions or special measures are necessary at a ratio of  $l_T / b \geq 20$ .

At a required ratio of  $l_T / b < 20$  please contact our technical department for advice.



$F_{zul}$  admissible tensile force

$F_U$  The remaining peripheral force

$F_S$  Tensile force due to crossing

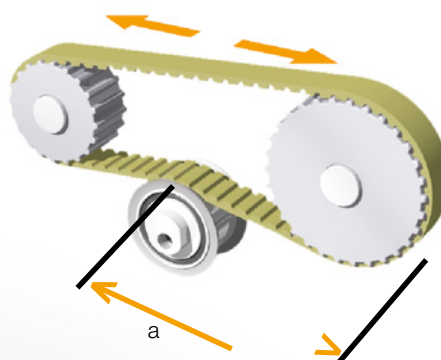


# Guiding belts with flanges

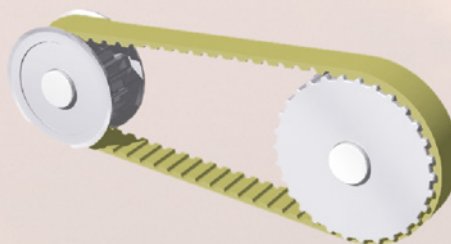
Timing belts must be guided to eliminate the lateral run-off effect. This is normally done by flanges. Minimum lateral forces and low frictional losses can be resulted by the optimum arrangement of the belt guidance.

**For this purpose, the following possibilities are available:**

- Timing belt guidance downstream of a large free span length (infeed length (a) should not be less than 5 times belt width)
- Guidance at the drive pulley (preferable for two shaft drives with short centre distance)
- Guide for low-transmission pulleys (preferably for multiple-shaft drives)
- Guidance on the tension rollers
  - Tension roller arrangement in the slack span side
  - With arrangement on the belt back side: consider minimum diameter with contraflexure
  - With arrangement on the belt toothed side: Length of arc of contact, min. 3 teeth
  - with changing rotational directions preferable in the span length centre
  - Condition: Minimum span length (a) between tension roller and pulley should not be less than 5 times belt width
- Ensure high axis parallelity and flush alignment of all pulleys to achieve optimum guiding features.
- For cost reasons it is possible to fit flanges also to the smaller pulley after taking the functional reliability into consideration.



The application of CONTI® SYNCHROFLEX polyurethane timing belts in two-filament arrangement is the ideal prerequisite for an optimum belt guidance.



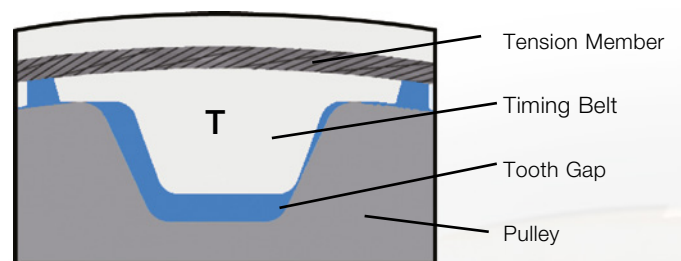
# Tooth gap shapes

Timing belts are positive fitted drive elements. They work slippage-free with the respective synchronising pulleys. CONTI® SYNCHROFLEX timing belt drives can be optimised additionally for a movement transmission with a low flank backlash.

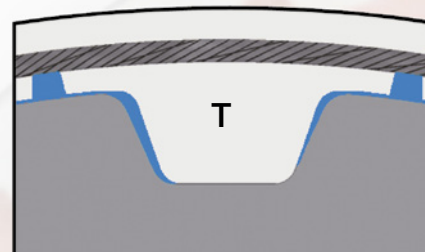
For some profiles and pitches, the SE or zero gap can be used for especially high accuracy drives. Please contact us for technical advice.

- Prerequisites for the application:  
Pitch matching between timing belts and pulley.
- Influencing factors of the pitch matching:
  - Pre-tension force
  - No. of teeth in mesh ( $z_g$ )
  - Load rate (rotational speed, dynamic behaviour...)
  - Manufacturing tolerances

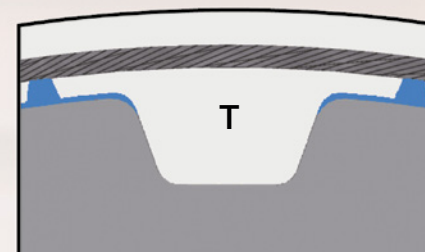
## Tooth gap shapes



Normal Backlash  
Tooth Gap



Reduced Backlash  
"SE" Tooth Gap



Zero Backlash  
"0" Tooth Gap

# Safety factors

The width of a timing belt is correct when the permissible values for tooth shear strength, tension cord strength and flexibility are not exceeded under unfavourable operating conditions. In our catalogue, load limits are stated which have been reliably proven and confirmed by bench tests and results obtained in practice.

It is important, that the unfavourable load types occurring in the drive are known resp. correctly estimated by the engineer. With a positive fit transmission, even short-period overloads act via the timing belt being the drive member. Some instructions to this issue:

## Rated operation

Design timing belts for the operating condition of the rated load. The rated load is the operating condition at which the drive should transmit the torque or the power at rated speeds under normal conditions.

## Start-up characteristics

a) Drive side: The max. torque of the drive machine under start-up conditions is to be taken into consideration. The start-up torque, e.g. for three-phase squirrel cage motors amounts to 2 to 2.5 times the rated value.

b) On the drive side: If necessary, „initial torques“ effective to the drive part timing belt are to be taken into consideration under start-up characteristics.

Check load case a) or b) with rotational speed  $n=0$ .

## Braking

It might have to be defined whether braking leads to loads which fully act via the timing belt and possibly exceed the type of load produced by the rated operation or the start-up characteristics. During braking a possible torque reversal should be taken into consideration.

## Unevennesses (load variations, shock loads)

In addition to the rated load, superimposed vibration and shock loads could act on the timing belt as the transmission member. For the illustrated example, increase the calculated belt width by the factor of 1.3.

## Moments of inertia

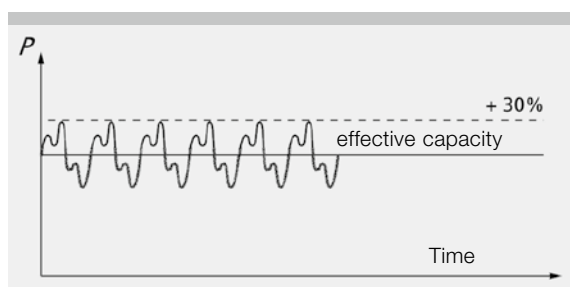
Moments of inertia and/or centrifugal masses in the drives generally create a uniform running behaviour. Depending on the acceleration and deceleration characteristic it has to be differentiated and checked whether the moments of inertia create an additional load on the timing belt.

## Step-up transmission

The following safety factors are to be applied for step-up transmissions:

|                         |           |
|-------------------------|-----------|
| $i = 0,66$ up to $1,00$ | $S = 1,1$ |
| $i = 0,40$ up to $0,66$ | $S = 1,2$ |
| $i < 0,40$              | $S = 1,3$ |

During braking a torque reversal may occur which would change a reduction ration into a step-up drive.

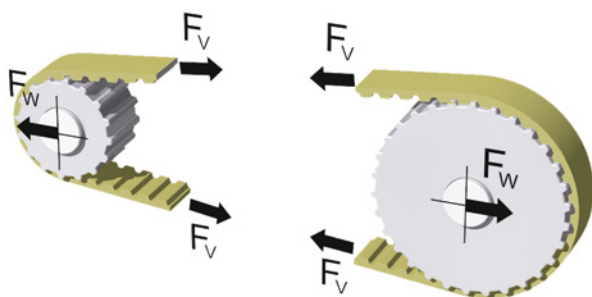


# Pre-tension force

## Pre-tension force

Pre-tension is intended to guarantee a minimum tensioning force at the slack span side to ensure smooth tooth meshing into the driven pulley.

Generally, the pre-tension should only be set as high as necessary. The necessary pre-tension force of the spans  $F_V$  depends on the max. peripheral force  $F_U$ , the belt length  $L_B$  (number of teeth  $Z_B$ ) and the drive configuration.



The recommendations shown in the table refer to the pre-tension force setting per span.

| Drive configuration                               | Pre-tension force of each individual span |
|---------------------------------------------------|-------------------------------------------|
| Two-shaft drive                                   |                                           |
| $Z_B < 60$                                        | $F_V = 1/3 F_U$                           |
| $60 \leq Z_B < 150$                               | $F_V = 1/2 F_U$                           |
| $Z_B > 150$                                       | $F_V = 2/3 F_U$                           |
| Multiple-shaft drive                              |                                           |
| $l_{\text{Load span}} \leq l_{\text{Slack span}}$ | $F_V = F_U$                               |
| $l_{\text{Load span}} > l_{\text{Slack span}}$    | $F_V > F_U$                               |
| Linear drive                                      | $F_V \geq F_U$                            |

In every case, the tension cord strength is the top limit of the span load. Take into consideration that especially with multiple-shaft and linear drives, an addition of the pre-tension force and the peripheral force in relation to the load span force is to be expected.

## Influencing factors

### Belt stiffness

Friction forces created by the interaction of the tooth mesh (especially at the slack span) intensify the span forces, which in turn increase the degree of elongation. This influence may lead to the slack span tooth mesh butting against the driven pulley, thereby causing the belt to jump.

Elongation being directly depending on the belt stiffness, the high stiffness of the steel cord tension members permits a comparably low pre-tension.

### Peripheral force

The peripheral force acts in proportion to the elongation of the load span, i.e. excessive slackening of the slack span can be counter-acted by a pre-tension matched to the peripheral force.

### Belt length

Belt elongation resulting from the effect of the peripheral force and the friction forces is also approximately in proportion to the belt length. Therefore, the tendency of running up or jumping is considerably influenced by the belt length. Even under high peripheral forces with the resulting friction forces, a very short timing belt will elongate to only a small degree, so that even when subject to low pre-tension forces there will be no danger of running up or jumping of teeth. On the contrary, with short timing belts peripheral deviations of the pulleys could cause heavy pre-tension fluctuations and, as a result, extreme peak values.

### Proportion of the span lengths

Especially with multiple-shaft drives the load span is often markedly longer than the slack span side. For this reason, a slight elongation of the load span results in a very unfavourable slack on the span side. Therefore, the pre-tension force of spans of such ratios should be higher than the peripheral force.

### Precise transmission of movement

There is a high transmission accuracy possible in the reverse operation with CONTI® SYNCHROFLEX timing belts, when the span pre-tension forces are selected in the same size of the peripheral force.



## Consequences of faulty pre-tension setting:

### too low pre-tension

- the teeth of the slack span side run up on or override the teeth of the driven pulley
- Wear on the faces caused by the friction force during meshing
- Forced breakage by excessive elongation due to full overriding

### excessive pre-tension

- high bearing load of the shafts
- Reduction of the transmittable power
- Wear and tear at the belt tooth

## Measuring with frequency measuring meter

The intrinsic frequency of a vibrating belt span can be measured by means of various Mulco belt tension measuring meters. The pre-tension force of the span can be calculated from the measured intrinsic frequency:

$$F_V = 4 \cdot m \cdot l_T^2 \cdot f^2$$

The corresponding intrinsic frequency can be calculated, if the pre-tension is preset:

$$f = \sqrt{\frac{F_V}{4 \cdot m \cdot l_T^2}}$$

f: Frequency of the variations in Hz

m: Mass of the belt per meter length in kg/m

$l_T$ : drum span length subject to vibration in m

$F_V$ : Span force in N

Please contact your Mulco partner for the various measuring meters (see page 16).

## General informations

### Design

- In the transmission configuration, design at least one adjustable axis, plan one adjustable tension roller (not spring-loaded) for fix centre distances
- the bearing has to be absolutely rigid
- Note the importance of a parallel run and flush alignment of the timing pulleys

### Transport/storing

- Upon receipt, unpack the timing belt immediately and store in circular position (CONTI® SYNCHROFLEX timing belts) in a dry place at room temperature
- Do not bend

### Mounting

- Fit timing belts on the pulleys when slack without exerting any force
- Exert no force when fitting with fixed centre distances (CONTI® SYNCHROFLEX timing belts) if necessary, fit together with timing pulleys
- Apply pre-tensioning force according to the chapter „Pre-tension“
- secure adjustable axis against slippage
- Do not clamp the timing belt between the flanges

### Operation

- Protect the drives against dust, dirt, hot surrounding media as well as acids and alkalis
- Take into consideration the ambient temperatures (see characteristics of polyurethane timing belts)

# Basis of calculation

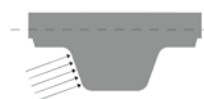
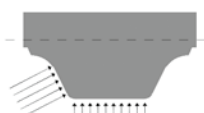
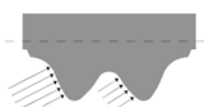
Providing the following conditions of tooth strength (1st), tension member tensile strength (2nd) and flexibility (3rd)

are met, then a maintenance-free timing belt operation can be expected.

## 1. Tooth shear strength

### specific tooth shear strength

Force distribution

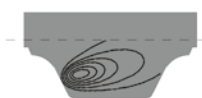
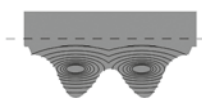


ATP

AT

T

Load distribution



The specific tooth shear strength depends on the rotational speed. The maximum specific tooth shear strength is the limit load the belt tooth can bear in continuous operation. The values are stated in tables for each timing belt type. The timing belt drive is correctly designed, when not exceeding the admissible tooth shear strength. Generally, a special safety factor is not necessary, see chapter „Safety factors“.

The high specific tooth shear strength of the ATP profile, for example, is achieved by the optimised force and load distribution. The effective force is distributed to two tooth faces.

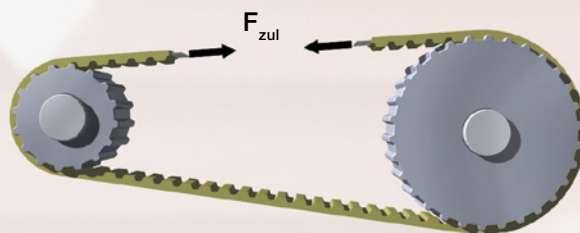
The working loads can be distributed more effectively with more belt teeth meshing in the pulley.

Due to the high pitch accuracy of CONTI® SYNCHRO-FLEX timing belts, generally, it can be calculated with 12 belt teeth in mesh, unless there are less than that number actually in mesh.

## 2. Tension member strength

Admissible tensile stress on the belt's cross-section

The timing belt is designed correctly, when the maximum admissible tensile force in the steel cord tension members is not exceeded under operation conditions. The table values for  $F_{zul}$  refer to the constant loading.



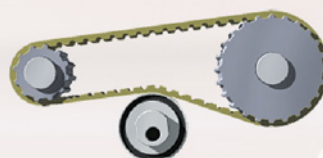
## 3. Flexibility

Minimum number of teeth, minimum diameter

The recommended minimum number of teeth and/or the minimum diameter for a malfunction-free operation depends on the selected belt type. Take especially into consideration that the minimum number of teeth and/or the minimum diameter is higher when using a belt arrangement „with contraflexure“ (e. g. due to a tension roller).



Drive layout without  
contraflexure

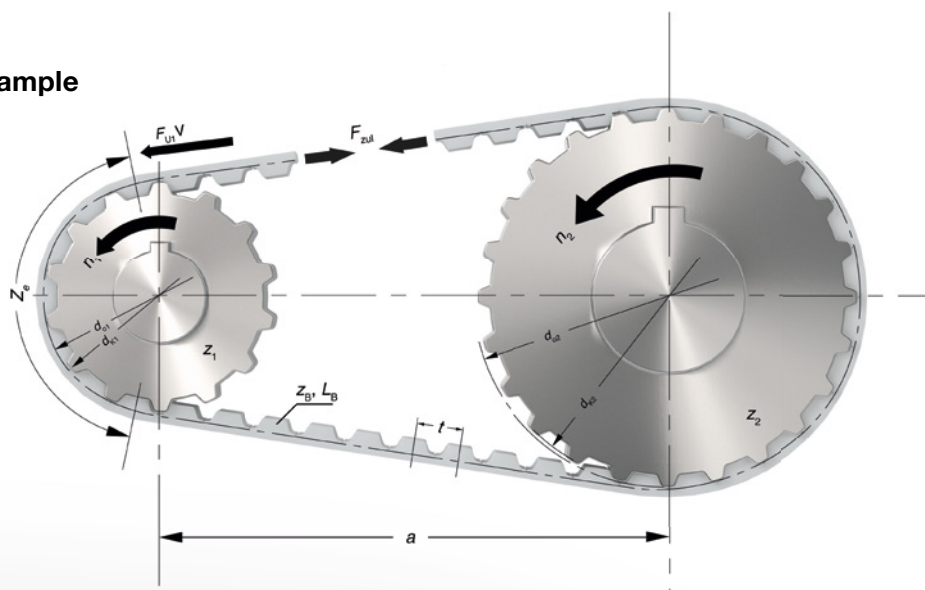


Drive layout with  
contraflexure

# Calculation example

## Calculation example

### Terms, definitions



|                          |                    |                       |
|--------------------------|--------------------|-----------------------|
| Peripheral force         | $F_U$              | [N]                   |
| specific tooth force     | $F_{U\text{spec}}$ | [N/cm]                |
| admissible tensile force | $F_{zul}$          | [N]                   |
| Pre-tension force        | $F_V$              | [N]                   |
| Shaft force              | $F_W$              | [N]                   |
| Torque                   | $M$                | [Nm]                  |
| Acceleration torque      | $M_B$              | [Nm]                  |
| specific torque          | $M_{\text{spec}}$  | [Ncm/cm]              |
| Power                    | $P$                | [kW]                  |
| specific power           | $P_{\text{spec}}$  | [W/cm]                |
| Load bearing torque      | $J$                | [kgm <sup>2</sup> ]   |
| Load                     | $m$                | [kg]                  |
| Density                  | $\rho$             | [kg/dm <sup>3</sup> ] |
| Speed                    | $v$                | [m/s]                 |
| Rotational speed         | $n$                | [min <sup>-1</sup> ]  |
| Angular speed            | $\omega$           | [s <sup>-1</sup> ]    |
| Frequency                | $f_e$              | [s <sup>-1</sup> ]    |

|                              |       |      |
|------------------------------|-------|------|
| Centre distance              | $a$   | [mm] |
| Belt length                  | $L_B$ | [mm] |
| Belt width                   | $b$   | [mm] |
| Pulley width                 | $B$   | [mm] |
| Bore, pulley                 | $d$   | [mm] |
| Pitch circle diameter        | $d_o$ | [mm] |
| Outside diameter             | $d_k$ | [mm] |
| Span length                  | $L_T$ | [mm] |
| Pitch                        | $t$   | [mm] |
| Number of belt teeth         | $z_B$ |      |
| Number of teeth with $i = 1$ | $z$   |      |
| Number of teeth in mesh      | $z_e$ |      |
| No. of teeth, small pulley   | $z_1$ |      |
| No. of teeth, large pulley   | $z_2$ |      |
| Ratio                        | $i$   |      |
| Acceleration time            | $t_B$ | [s]  |

### Peripheral force

$$F_U = \frac{2 \cdot 10^3 \cdot M}{d_o}$$

$$= \frac{19,1 \cdot 10^6 \cdot P}{n \cdot d_o}$$

$$= \frac{10^3 \cdot P}{v}$$

### Torque

$$M = \frac{d_o \cdot F_U}{2 \cdot 10^3}$$

$$= \frac{9,55 \cdot 10^3 \cdot P}{n}$$

$$= \frac{d_o \cdot P}{2 \cdot v}$$

### Power

$$P = \frac{M \cdot n}{9,55 \cdot 10^3}$$

$$= \frac{F_U \cdot d_o \cdot n}{19,1 \cdot 10^6}$$

$$= \frac{F_U \cdot v}{10^3}$$

### Belt Length for $i = 1$

$$L_B = 2a + \pi \cdot d_o$$

$$= 2a + z \cdot t$$

### Angular speed

$$\omega = \frac{\pi \cdot n}{30}$$

### Rotational speed

$$n = \frac{19,1 \cdot 10^3 \cdot v}{d_o}$$

### Speed

$$v = \frac{d_o \cdot n}{19,1 \cdot 10^3}$$

### Pitch circle diameter

$$d_o = \frac{z \cdot t}{\pi}$$

### Acceleration torque

$$M_B = \frac{J \cdot \Delta n}{9,55 \cdot t_B}$$

### Load bearing torque

$$J = 98,2 \cdot 10^{-15} \cdot B \cdot \rho \cdot (d_k^4 - d^4)$$

Apply all equations with the dimensions mentioned here.

# Calculation example

## Calculation example

**Task** A roll table drive must be designed for heavy conveying duties. Under start-up conditions approx. 2.5 times the running torque is exerted on the timing belt.

**The application conditions are:**

|               |                 |                            |
|---------------|-----------------|----------------------------|
| <b>Given:</b> | Power           | $P = 10 \text{ kW}$        |
|               | Nominal speed   | $n = 800 \text{ min}^{-1}$ |
|               | Start-up torque | $M = 300 \text{ Nm}$       |
|               | Ratio           | $i = 1$                    |
|               | Number of teeth | $z = 25$                   |
|               | Centre distance | $a = 625 \text{ mm}$       |

**Required:** The timing belt pitch is to be determined and the belt width is to be calculated.

**Formulae:**  $b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{\text{spec}}} \quad M[\text{Nm}]$

$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{\text{spec}}} \quad P[\text{kW}]$

$F_u = \frac{2 \cdot 10^3 \cdot M}{d_o} \quad F_u [\text{N}]$

$L = 2 \cdot a + z \cdot t \quad [\text{mm}]$

$d_o = \frac{z \cdot t}{\pi} \quad [\text{mm}]$



## How to proceed

**Belt length:** Profile preselection: AT10. Calculation of the belt length with formula:

$$\begin{aligned} L &= 2 \cdot a + z \cdot t \\ &= 2 \cdot 625 + 25 \cdot 10 \\ &= \underline{1500 \text{ mm}} \end{aligned}$$

**Calculation of the belt width:**

### 1. Tooth shear strength

In the calculation  $z_e = 12$  will be used (see basis of calculation).

Calculation of the belt width with the nominal speed from the power equations.

$$\begin{aligned} b &= \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{\text{spec}}} \\ &= \frac{1000 \cdot 10}{25 \cdot 12 \cdot 6,96} \\ &= 4,79 \text{ cm} = \underline{47,9 \text{ mm}} \end{aligned}$$

Calculation of the belt width under start-up torque when rotational speed  $n = 0$ .

$$\begin{aligned} b &= \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{\text{spec}}} \\ &= \frac{100 \cdot 300}{25 \cdot 12 \cdot 11,70} \\ &= 8,54 \text{ cm} = \underline{85,4 \text{ mm}} \end{aligned}$$

The belt width is to be determined from the least favourable load conditions.

Selected: the next larger standard belt width  $\underline{b = 100 \text{ mm}}$ .

### 2. Tension member strength

The corresponding peripheral force can be calculated from the general data supplied:

$$\begin{aligned} F_u &= \frac{2 \cdot 10^3 \cdot M}{d_o} \\ &= \frac{2 \cdot 10^3 \cdot M}{79,58} = \underline{7539 \text{ N} < 16000 \text{ N}} \end{aligned}$$

The tabular value  $F_{\text{zul}}$  for AT 10 with 100 mm belt width is 16000 N. Thus, there is a sufficient tension member safety factor.

### 3. Flexibility

The design is a drive „without contraflexure“. The minimum number of teeth according to the table is adhered to.

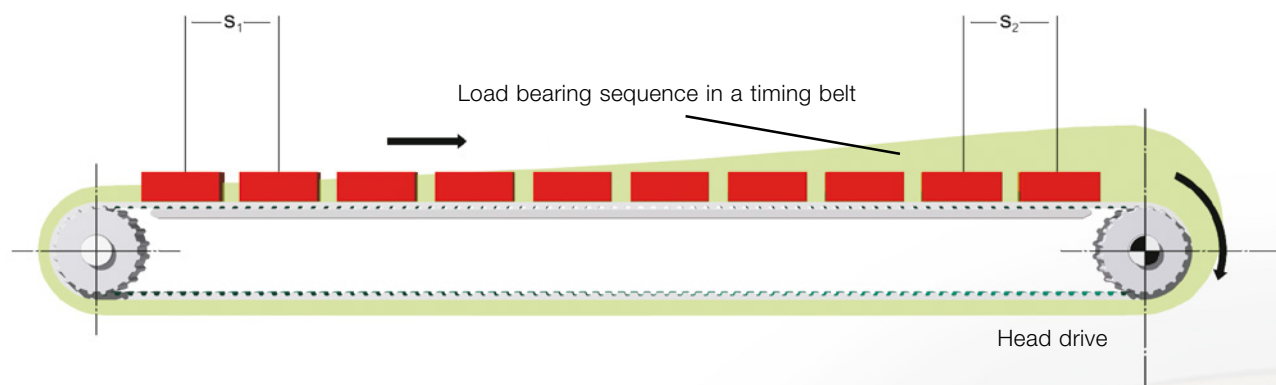
**Result:** The drive is correctly designed with a belt width of 100 mm. A maintenance-free operation can be expected.

Order code: CONTI® SYNCHROFLEX 100 AT 10/1500

# Calculation example

## CONTI® SYNCHROFLEX Timing Belts used for transportation

Transport belts should be designed preferably with a head drive. The goods to be transported can consist of one or more individual loads. Multiple individual loads can be seen as a line load.



### Calculation of the Peripheral force $F_U$

From the overall transport load, the required haul-off force or the peripheral force  $F_U$  for the drive pulley assemblies can be derived:

$$F_U = 9,81 \cdot m \cdot \mu$$

|                                                                 |       |      |
|-----------------------------------------------------------------|-------|------|
| Peripheral force at the drive pulley.                           | $F_U$ | [N]  |
| Mass of the items to be transported                             | $m$   | [kg] |
| Friction factor of the timing belt in relation to the bed plate | $\mu$ |      |

As friction factor  $\mu$  (slide friction), the following values can be assumed:

|                      |           |
|----------------------|-----------|
| Steel/PUR 92 Shore A | 0,6 - 0,7 |
| PE/PUR               | 0,3 - 0,4 |

In general, friction factors show large ranges. Trials should be carried out, if necessary. Errors and omissions excepted.

### Information on the force/elongation behaviour

The grid surface in the picture shows the force/elongation behaviour in the timing belt under operating conditions. The individual spacing between the transported products increases towards the drive pulley due to belt elongation.

Centre  $s_1 < s_2$

### Pre-tension force

We recommend to set the pre-tension force in the transport timing belt such that a residual pre-tension force is always maintained on the slack span side under operating conditions. The following pre-tension force is required::

$$F_v > F_U$$

### Calculating the Belt width $b$

$$b = \frac{F_U}{z_e \cdot F_{U\text{spec}}} \quad F_U [\text{N}]$$

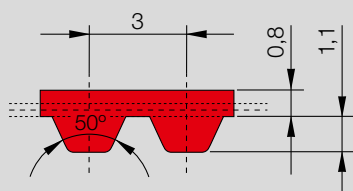
$F_U$ : peripheral force (calculated)

$F_{U\text{spec}}$ : specific load of the belt teeth



# AT high performance Timing Belts

## AT 3 GEN III



CONTI® SYNCHROFLEX Timing Belt (SFX) AT 3 GEN III

High performance AT profile with metric pitch and trapezoidal teeth.

### Standard version:

- single-sided
- high performance polyurethane in red colour
- steel cord tension members with high density
- steel cord tension members in two-filament construction
- steel cord tension members in highly flexible construction

**FA:** with bigger back thickness

**FN:** with profiles on the back of the belt

| Type / Length*<br>GEN III | Number of teeth |
|---------------------------|-----------------|
| AT 3 / 150                | 50              |
| AT 3 / 201                | 67              |
| AT 3 / 201 FN68           | 67              |
| AT 3 / 252                | 84              |
| AT 3 / 267                | 89              |
| <hr/>                     |                 |
| AT 3 / 270                | 90              |
| AT 3 / 300                | 100             |
| AT 3 / 351                | 117             |
| AT 3 / 399                | 133             |
| AT 3 / 417                | 139             |
| <hr/>                     |                 |
| AT 3 / 450                | 150             |
| AT 3 / 486 FN18           | 162             |
| AT 3 / 501                | 167             |
| AT 3 / 549                | 183             |
| AT 3 / 600                | 200             |
| <hr/>                     |                 |
| AT 3 / 639                | 213             |
| AT 3 / 648                | 216             |
| AT 3 / 648 FN24           | 216             |
| AT 3 / 714                | 238             |

Preferred belt width\* in mm:  
6, 10, 16, 25, 32

| Type / Length*<br>GEN III | Number of teeth |
|---------------------------|-----------------|
| AT 3 / 816                | 272             |
| AT 3 / 816 FA             | 272             |
| AT 3 / 900                | 300             |
| AT 3 / 1011               | 337             |

\* Other dimensions upon request.

### Order example

CONTI® SYNCHROFLEX Timing Belt 10 AT3/450 GEN III

Belt width in mm \_\_\_\_\_  
 Type/Pitch \_\_\_\_\_  
 Belt length in mm \_\_\_\_\_  
 Specification Generation III \_\_\_\_\_

## AT 3 GEN III Technical data

### 1. Tooth shear strength (specific belt tooth strength)

| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 0                                | 44,44                        | 2,12                          | 0,00                        |
| 20                               | 44,00                        | 2,10                          | 0,04                        |
| 40                               | 43,56                        | 2,08                          | 0,09                        |
| 60                               | 43,14                        | 2,06                          | 0,13                        |
| 80                               | 42,74                        | 2,04                          | 0,17                        |
| 100                              | 42,35                        | 2,02                          | 0,21                        |
| 200                              | 40,67                        | 1,94                          | 0,41                        |
| 300                              | 39,26                        | 1,87                          | 0,59                        |
| 400                              | 38,06                        | 1,82                          | 0,76                        |
| 500                              | 37,01                        | 1,77                          | 0,93                        |
| 600                              | 36,07                        | 1,72                          | 1,08                        |
| 700                              | 35,23                        | 1,68                          | 1,23                        |
| 800                              | 34,47                        | 1,65                          | 1,38                        |
| 900                              | 33,76                        | 1,61                          | 1,52                        |
| 1000                             | 33,12                        | 1,58                          | 1,66                        |
| 1100                             | 32,52                        | 1,55                          | 1,79                        |
| 1200                             | 31,96                        | 1,53                          | 1,92                        |
| 1300                             | 31,43                        | 1,50                          | 2,04                        |
| 1400                             | 30,94                        | 1,48                          | 2,17                        |
| 1500                             | 30,47                        | 1,45                          | 2,28                        |
| 1600                             | 30,03                        | 1,43                          | 2,40                        |
| 1700                             | 29,61                        | 1,41                          | 2,52                        |
| 1800                             | 29,20                        | 1,39                          | 2,63                        |
| 1900                             | 28,82                        | 1,38                          | 2,74                        |
| 2000                             | 28,46                        | 1,36                          | 2,85                        |
| 2200                             | 27,77                        | 1,33                          | 3,05                        |
| 2400                             | 27,14                        | 1,30                          | 3,26                        |
| 2600                             | 26,54                        | 1,27                          | 3,45                        |
| 2800                             | 25,99                        | 1,24                          | 3,64                        |
| 3000                             | 25,48                        | 1,22                          | 3,82                        |
| 3200                             | 24,99                        | 1,19                          | 4,00                        |
| 3400                             | 24,53                        | 1,17                          | 4,17                        |
| 3600                             | 24,09                        | 1,15                          | 4,34                        |
| 3800                             | 23,68                        | 1,13                          | 4,50                        |

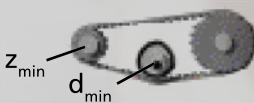
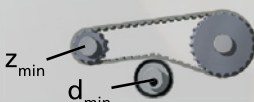
| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 4000                             | 23,28                        | 1,11                          | 4,66                        |
| 4500                             | 22,36                        | 1,07                          | 5,03                        |
| 5000                             | 21,54                        | 1,03                          | 5,38                        |
| 5500                             | 20,79                        | 0,99                          | 5,72                        |
| 6000                             | 20,10                        | 0,96                          | 6,03                        |
| 6500                             | 19,46                        | 0,93                          | 6,32                        |
| 7000                             | 18,87                        | 0,90                          | 6,60                        |
| 7500                             | 18,32                        | 0,87                          | 6,87                        |
| 8000                             | 17,80                        | 0,85                          | 7,12                        |
| 8500                             | 17,31                        | 0,83                          | 7,36                        |
| 9000                             | 16,85                        | 0,80                          | 7,58                        |
| 9500                             | 16,41                        | 0,78                          | 7,79                        |
| 10000                            | 15,99                        | 0,76                          | 8,00                        |
| 10500                            | 15,59                        | 0,74                          | 8,19                        |
| 11000                            | 15,22                        | 0,73                          | 8,37                        |
| 11500                            | 14,85                        | 0,71                          | 8,54                        |
| 12000                            | 14,51                        | 0,69                          | 8,70                        |
| 12500                            | 14,17                        | 0,68                          | 8,86                        |
| 13000                            | 13,85                        | 0,66                          | 9,00                        |
| 13500                            | 13,54                        | 0,65                          | 9,14                        |
| 14000                            | 13,24                        | 0,63                          | 9,27                        |
| 14500                            | 12,96                        | 0,62                          | 9,39                        |
| 15000                            | 12,68                        | 0,61                          | 9,51                        |
| 15500                            | 12,41                        | 0,59                          | 9,62                        |
| 16000                            | 12,15                        | 0,58                          | 9,72                        |
| 16500                            | 11,89                        | 0,57                          | 9,81                        |
| 17000                            | 11,65                        | 0,56                          | 9,90                        |
| 17500                            | 11,41                        | 0,54                          | 9,98                        |
| 18000                            | 11,18                        | 0,53                          | 10,06                       |
| 18500                            | 10,95                        | 0,52                          | 10,13                       |
| 19000                            | 10,73                        | 0,51                          | 10,19                       |
| 19500                            | 10,52                        | 0,50                          | 10,25                       |
| 20000                            | 10,31                        | 0,49                          | 10,31                       |

Rotational speeds over 20000 rpm and/or belt speeds over 80 m/s need special drive designs. Please ask our advice.

### 2. Tension member strength (permitted tensile force of the belt F<sub>zul</sub>), Belt weight

| Belt width                               | b            | [mm]   | 6     | 10    | 16    | 25    | 32    |
|------------------------------------------|--------------|--------|-------|-------|-------|-------|-------|
| Tension member strength F <sub>zul</sub> |              | [N]    | 330   | 599   | 1002  | 1608  | 2079  |
| Belt weight                              | AT 3 GEN III | [kg/m] | 0,016 | 0,026 | 0,042 | 0,065 | 0,083 |

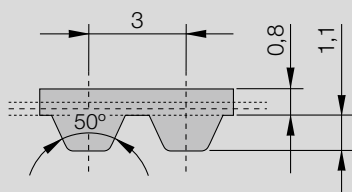
### 3. Flexibility (Minimum numbers of teeth, minimum diameter)

|                                                             |                       |    |                                                                                      |                                  |
|-------------------------------------------------------------|-----------------------|----|--------------------------------------------------------------------------------------|----------------------------------|
| Timing pulley                                               | z <sub>min</sub>      | 15 |  | Drive type without contraflexure |
| Tension roller (smooth),<br>running on teeth                | d <sub>min</sub> [mm] | 20 |                                                                                      |                                  |
| Timing pulley                                               | z <sub>min</sub>      | 20 |  | Drive type with contraflexure    |
| Tension roller (smooth),<br>running on the back of the belt | d <sub>min</sub> [mm] | 20 |                                                                                      |                                  |



# AT high performance Timing Belts

## AT 3



CONTI® SYNCHROFLEX Timing Belt (SFX) AT 3

High performance AT profile with metric pitch and trapezoidal teeth.

The technical data refer to standard polyurethane and standard steel cord tension members.

### Available versions:

- single-sided
- with reinforced design
- with Aramide tension member
- polyurethane special materials upon request
- antistatic, coloured, mechanical reworked

**FA:** with bigger back thickness

**FN:** with profiles on the back of the belt

| Type | / | Length*  | Number of teeth |
|------|---|----------|-----------------|
| AT 3 | / | 150      | 50              |
| AT 3 | / | 201      | 67              |
| AT 3 | / | 201 FN68 | 67              |
| AT 3 | / | 252      | 84              |
| AT 3 | / | 267      | 89              |
| AT 3 | / | 270      | 90              |
| AT 3 | / | 300      | 100             |
| AT 3 | / | 351      | 117             |
| AT 3 | / | 399      | 133             |
| AT 3 | / | 417      | 139             |
| AT 3 | / | 450      | 150             |
| AT 3 | / | 486 FN18 | 162             |
| AT 3 | / | 501      | 167             |
| AT 3 | / | 549      | 183             |
| AT 3 | / | 600      | 200             |
| AT 3 | / | 639      | 213             |
| AT 3 | / | 648      | 216             |
| AT 3 | / | 648 FN24 | 216             |
| AT 3 | / | 714      | 238             |

Preferred belt width\* in mm:  
6, 10, 16, 25, 32

| Type | / | Length* | Number of teeth |
|------|---|---------|-----------------|
| AT 3 | / | 816     | 272             |
| AT 3 | / | 816 FA  | 272             |
| AT 3 | / | 900     | 300             |
| AT 3 | / | 1011    | 337             |

\* Other dimensions upon request.

### Order example

CONTI® SYNCHROFLEX Timing Belt 10 AT3/450

Belt width in mm \_\_\_\_\_

Type/Pitch \_\_\_\_\_

Belt length in mm \_\_\_\_\_

## AT 3 Technical data

### 1. Tooth shear strength (specific belt tooth strength)

| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 0                                | 35,55                        | 1,70                          | 0,00                        |
| 20                               | 35,20                        | 1,68                          | 0,04                        |
| 40                               | 34,85                        | 1,66                          | 0,07                        |
| 60                               | 34,51                        | 1,65                          | 0,10                        |
| 80                               | 34,19                        | 1,63                          | 0,14                        |
| 100                              | 33,88                        | 1,62                          | 0,17                        |
| 200                              | 32,53                        | 1,55                          | 0,33                        |
| 300                              | 31,41                        | 1,50                          | 0,47                        |
| 400                              | 30,45                        | 1,45                          | 0,61                        |
| 500                              | 29,61                        | 1,41                          | 0,74                        |
| 600                              | 28,86                        | 1,38                          | 0,87                        |
| 700                              | 28,18                        | 1,35                          | 0,99                        |
| 800                              | 27,57                        | 1,32                          | 1,10                        |
| 900                              | 27,01                        | 1,29                          | 1,22                        |
| 1000                             | 26,49                        | 1,26                          | 1,32                        |
| 1100                             | 26,01                        | 1,24                          | 1,43                        |
| 1200                             | 25,56                        | 1,22                          | 1,53                        |
| 1300                             | 25,14                        | 1,20                          | 1,63                        |
| 1400                             | 24,75                        | 1,18                          | 1,73                        |
| 1500                             | 24,37                        | 1,16                          | 1,83                        |
| 1600                             | 24,02                        | 1,15                          | 1,92                        |
| 1700                             | 23,68                        | 1,13                          | 2,01                        |
| 1800                             | 23,36                        | 1,12                          | 2,10                        |
| 1900                             | 23,06                        | 1,10                          | 2,19                        |
| 2000                             | 22,77                        | 1,09                          | 2,28                        |
| 2200                             | 22,22                        | 1,06                          | 2,44                        |
| 2400                             | 21,71                        | 1,04                          | 2,60                        |
| 2600                             | 21,24                        | 1,01                          | 2,76                        |
| 2800                             | 20,79                        | 0,99                          | 2,91                        |
| 3000                             | 20,38                        | 0,97                          | 3,06                        |
| 3200                             | 19,99                        | 0,95                          | 3,20                        |
| 3400                             | 19,62                        | 0,94                          | 3,34                        |
| 3600                             | 19,27                        | 0,92                          | 3,47                        |
| 3800                             | 18,94                        | 0,90                          | 3,60                        |

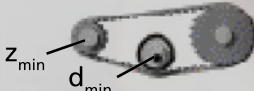
| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 4000                             | 18,62                        | 0,89                          | 3,72                        |
| 4500                             | 17,89                        | 0,85                          | 4,03                        |
| 5000                             | 17,23                        | 0,82                          | 4,31                        |
| 5500                             | 16,63                        | 0,79                          | 4,57                        |
| 6000                             | 16,08                        | 0,77                          | 4,82                        |
| 6500                             | 15,57                        | 0,74                          | 5,06                        |
| 7000                             | 15,10                        | 0,72                          | 5,28                        |
| 7500                             | 14,65                        | 0,70                          | 5,49                        |
| 8000                             | 14,24                        | 0,68                          | 5,69                        |
| 8500                             | 13,85                        | 0,66                          | 5,88                        |
| 9000                             | 13,48                        | 0,64                          | 6,06                        |
| 9500                             | 13,13                        | 0,63                          | 6,23                        |
| 10000                            | 12,79                        | 0,61                          | 6,40                        |
| 10500                            | 12,48                        | 0,60                          | 6,55                        |
| 11000                            | 12,17                        | 0,58                          | 6,69                        |
| 11500                            | 11,88                        | 0,57                          | 6,83                        |
| 12000                            | 11,60                        | 0,55                          | 6,96                        |
| 12500                            | 11,34                        | 0,54                          | 7,09                        |
| 13000                            | 11,08                        | 0,53                          | 7,20                        |
| 13500                            | 10,83                        | 0,52                          | 7,31                        |
| 14000                            | 10,60                        | 0,51                          | 7,42                        |
| 14500                            | 10,36                        | 0,49                          | 7,51                        |
| 15000                            | 10,14                        | 0,48                          | 7,61                        |
| 15500                            | 9,93                         | 0,47                          | 7,69                        |
| 16000                            | 9,72                         | 0,46                          | 7,77                        |
| 16500                            | 9,51                         | 0,45                          | 7,85                        |
| 17000                            | 9,32                         | 0,44                          | 7,92                        |
| 17500                            | 9,13                         | 0,44                          | 7,99                        |
| 18000                            | 8,94                         | 0,43                          | 8,05                        |
| 18500                            | 8,76                         | 0,42                          | 8,10                        |
| 19000                            | 8,58                         | 0,41                          | 8,15                        |
| 19500                            | 8,41                         | 0,40                          | 8,20                        |
| 20000                            | 8,25                         | 0,39                          | 8,24                        |

Rotational speeds over 20000 rpm and/or belt speeds over 80 m/s need special drive designs. Please ask our advice.

### 2. Tension member strength (permitted tensile force of the belt F<sub>zul</sub>), Belt weight

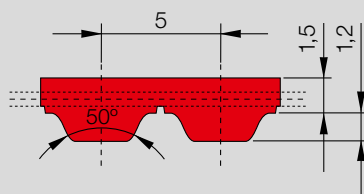
| Belt width                               | b    | [mm]   | 6     | 10    | 16    | 25    | 32    |
|------------------------------------------|------|--------|-------|-------|-------|-------|-------|
| Tension member strength F <sub>zul</sub> |      | [N]    | 190   | 380   | 646   | 1102  | 1406  |
| Belt weight                              | AT 3 | [kg/m] | 0,014 | 0,023 | 0,037 | 0,058 | 0,074 |

### 3. Flexibility (Minimum numbers of teeth, minimum diameter)

|                                                             |                       |    |                                                                                      |                                  |
|-------------------------------------------------------------|-----------------------|----|--------------------------------------------------------------------------------------|----------------------------------|
| Timing pulley                                               | z <sub>min</sub>      | 15 |  | Drive type without contraflexure |
| Tension roller (smooth),<br>running on teeth                | d <sub>min</sub> [mm] | 20 |                                                                                      |                                  |
| Timing pulley                                               | z <sub>min</sub>      | 20 |  | Drive type with contraflexure    |
| Tension roller (smooth),<br>running on the back of the belt | d <sub>min</sub> [mm] | 20 |                                                                                      |                                  |

# AT high performance Timing Belts

## AT 5 GEN III



CONTI® SYNCHROFLEX Timing Belt (SFX) AT 5 GEN III

High performance AT profile with metric pitch and trapezoidal teeth.

### Standard version:

- single-sided
- high performance polyurethane in red colour
- steel cord tension members with high density
- steel cord tension members in two-filament construction
- steel cord tension members in highly flexible construction

**FA:** with bigger back thickness

| Type / Length*<br>GEN III | Number of teeth | Type / Length*<br>GEN III | Number of teeth |
|---------------------------|-----------------|---------------------------|-----------------|
| AT 5 / 225                | 45              | AT 5 / 720                | 144             |
| AT 5 / 255                | 51              | AT 5 / 750                | 150             |
| AT 5 / 260                | 52              | AT 5 / 780                | 156             |
| AT 5 / 280                | 56              | AT 5 / 825                | 165             |
| AT 5 / 300                | 60              | AT 5 / 860                | 172             |
| AT 5 / 330                | 66              | AT 5 / 875                | 175             |
| AT 5 / 340                | 68              | AT 5 / 900                | 180             |
| AT 5 / 375                | 75              | AT 5 / 920                | 184             |
| AT 5 / 390                | 78              | AT 5 / 975                | 195             |
| AT 5 / 420                | 84              | AT 5 / 1050               | 210             |
| AT 5 / 450                | 90              | AT 5 / 1125               | 225             |
| AT 5 / 455                | 91              | AT 5 / 1230               | 246             |
| AT 5 / 480                | 96              | AT 5 / 1500               | 300             |
| AT 5 / 490                | 98              | AT 5 / 1750               | 350             |
| AT 5 / 500                | 100             | AT 5 / 2000               | 400             |
| AT 5 / 525                | 105             | AT 5 / 3800 FA**          | 760             |
| AT 5 / 545                | 109             |                           |                 |
| AT 5 / 600                | 120             |                           |                 |
| AT 5 / 610                | 122             |                           |                 |
| AT 5 / 620                | 124             |                           |                 |
| AT 5 / 630                | 126             |                           |                 |
| AT 5 / 660                | 132             |                           |                 |
| AT 5 / 670                | 134             |                           |                 |
| AT 5 / 690                | 138             |                           |                 |
| AT 5 / 710                | 142             |                           |                 |

Preferred belt width\* in mm:  
6, 10, 16, 25, 32, 50, 75, 100

\* Other dimensions upon request.

\*\* Please request technical support from your Mulco sales partner.

### Order example

CONTI® SYNCHROFLEX Timing Belt 50 AT5/450 GEN III

Belt width in mm \_\_\_\_\_  
 Type/Pitch \_\_\_\_\_  
 Belt length in mm \_\_\_\_\_  
 Specification Generation III \_\_\_\_\_

## AT 5 GEN III Technical data

### 1. Tooth shear strength (specific belt tooth strength)

| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 0                                | 48,48                        | 3,86                          | 0,00                        |
| 20                               | 47,96                        | 3,82                          | 0,08                        |
| 40                               | 47,43                        | 3,77                          | 0,16                        |
| 60                               | 46,94                        | 3,74                          | 0,23                        |
| 80                               | 46,47                        | 3,70                          | 0,31                        |
| 100                              | 46,02                        | 3,66                          | 0,38                        |
| 200                              | 44,05                        | 3,51                          | 0,73                        |
| 300                              | 42,42                        | 3,38                          | 1,06                        |
| 400                              | 41,03                        | 3,27                          | 1,37                        |
| 500                              | 39,82                        | 3,17                          | 1,66                        |
| 600                              | 38,75                        | 3,08                          | 1,94                        |
| 700                              | 37,78                        | 3,01                          | 2,20                        |
| 800                              | 36,91                        | 2,94                          | 2,46                        |
| 900                              | 36,11                        | 2,87                          | 2,71                        |
| 1000                             | 35,37                        | 2,81                          | 2,95                        |
| 1100                             | 34,68                        | 2,76                          | 3,18                        |
| 1200                             | 34,05                        | 2,71                          | 3,40                        |
| 1300                             | 33,45                        | 2,66                          | 3,62                        |
| 1400                             | 32,88                        | 2,62                          | 3,84                        |
| 1500                             | 32,35                        | 2,57                          | 4,04                        |
| 1600                             | 31,85                        | 2,53                          | 4,25                        |
| 1700                             | 31,37                        | 2,50                          | 4,44                        |
| 1800                             | 30,92                        | 2,46                          | 4,64                        |
| 1900                             | 30,49                        | 2,43                          | 4,83                        |

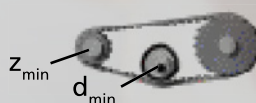
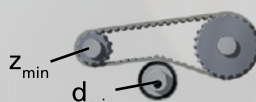
| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 2000                             | 30,07                        | 2,39                          | 5,01                        |
| 2200                             | 29,29                        | 2,33                          | 5,37                        |
| 2400                             | 28,57                        | 2,27                          | 5,71                        |
| 2600                             | 27,91                        | 2,22                          | 6,05                        |
| 2800                             | 27,28                        | 2,17                          | 6,37                        |
| 3000                             | 26,70                        | 2,12                          | 6,67                        |
| 3200                             | 26,14                        | 2,08                          | 6,97                        |
| 3400                             | 25,62                        | 2,04                          | 7,26                        |
| 3600                             | 25,13                        | 2,00                          | 7,54                        |
| 3800                             | 24,66                        | 1,96                          | 7,81                        |
| 4000                             | 24,21                        | 1,93                          | 8,07                        |
| 4500                             | 23,18                        | 1,84                          | 8,69                        |
| 5000                             | 22,25                        | 1,77                          | 9,27                        |
| 5500                             | 21,40                        | 1,70                          | 9,81                        |
| 6000                             | 20,62                        | 1,64                          | 10,31                       |
| 6500                             | 19,90                        | 1,58                          | 10,78                       |
| 7000                             | 19,24                        | 1,53                          | 11,22                       |
| 7500                             | 18,61                        | 1,48                          | 11,63                       |
| 8000                             | 18,03                        | 1,43                          | 12,02                       |
| 8500                             | 17,48                        | 1,39                          | 12,38                       |
| 9000                             | 16,95                        | 1,35                          | 12,71                       |
| 9500                             | 16,46                        | 1,31                          | 13,03                       |
| 10000                            | 15,99                        | 1,27                          | 13,33                       |

Rotational speeds over 10000 rpm and/or belt speeds over 80 m/s need special drive designs. Please ask our advice.

### 2. Tension member strength (permitted tensile force of the belt F<sub>zul</sub>), Belt weight

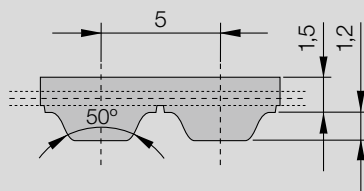
| Belt width                               | b            | [mm]   | 6     | 10    | 16    | 25    | 32    | 50    | 75    | 100   |
|------------------------------------------|--------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| Tension member strength F <sub>zul</sub> |              | [N]    | 417   | 787   | 1342  | 2175  | 2823  | 4489  | 6803  | 9117  |
| Belt weight                              | AT 5 GEN III | [kg/m] | 0,022 | 0,036 | 0,058 | 0,090 | 0,115 | 0,180 | 0,270 | 0,360 |

### 3. Flexibility (Minimum numbers of teeth, minimum diameter)

|                                                             |                 |    |                                                                                      |                                  |
|-------------------------------------------------------------|-----------------|----|--------------------------------------------------------------------------------------|----------------------------------|
| Timing pulley                                               | $z_{\min}$      | 15 |  | Drive type without contraflexure |
| Tension roller (smooth),<br>running on teeth                | $d_{\min}$ [mm] | 25 |                                                                                      |                                  |
| Timing pulley                                               | $z_{\min}$      | 20 |  | Drive type with contraflexure    |
| Tension roller (smooth),<br>running on the back of the belt | $d_{\min}$ [mm] | 60 |                                                                                      |                                  |

# AT high performance Timing Belts

## AT 5



CONTI® SYNCHROFLEX Timing Belt (SFX) AT 5

High performance AT profile with metric pitch and trapezoidal teeth.

The technical data refer to standard polyurethane and standard steel cord tension members.

### Available versions:

- single-sided
- with "E" tension member for a better flexibility
- with reinforced design
- with Aramide tension member
- polyurethane special materials upon request
- antistatic, coloured, mechanical reworked

| Type / Length* | Number of teeth | Type / Length*   | Number of teeth |
|----------------|-----------------|------------------|-----------------|
| AT 5 / 225     | 45              | AT 5 / 720       | 144             |
| AT 5 / 255     | 51              | AT 5 / 750       | 150             |
| AT 5 / 260     | 52              | AT 5 / 780       | 156             |
| AT 5 / 280     | 56              | AT 5 / 825       | 165             |
| AT 5 / 300     | 60              | AT 5 / 860       | 172             |
| AT 5 / 330     | 66              | AT 5 / 875       | 175             |
| AT 5 / 340     | 68              | AT 5 / 900       | 180             |
| AT 5 / 375     | 75              | AT 5 / 920       | 184             |
| AT 5 / 390     | 78              | AT 5 / 975       | 195             |
| AT 5 / 420     | 84              | AT 5 / 1050      | 210             |
| AT 5 / 450     | 90              | AT 5 / 1125      | 225             |
| AT 5 / 455     | 91              | AT 5 / 1230      | 246             |
| AT 5 / 480     | 96              | AT 5 / 1500      | 300             |
| AT 5 / 490     | 98              | AT 5 / 1750      | 350             |
| AT 5 / 500     | 100             | AT 5 / 2000      | 400             |
| AT 5 / 525     | 105             | AT 5 / 3800 FA** | 760             |
| AT 5 / 545     | 109             |                  |                 |
| AT 5 / 600     | 120             |                  |                 |
| AT 5 / 610     | 122             |                  |                 |
| AT 5 / 620     | 124             |                  |                 |
| AT 5 / 630     | 126             |                  |                 |
| AT 5 / 660     | 132             |                  |                 |
| AT 5 / 670     | 134             |                  |                 |
| AT 5 / 690     | 138             |                  |                 |
| AT 5 / 710     | 142             |                  |                 |

Preferred belt width\* in mm:  
10, 16, 25, 32, 50

\* Other dimensions upon request.  
\*\* Please request technical support from your Mulco sales partner.

### Order example

CONTI® SYNCHROFLEX Timing Belt 10 AT5/450

Belt width in mm \_\_\_\_\_  
Type/Pitch \_\_\_\_\_  
Belt length in mm \_\_\_\_\_



## AT 5 Technical data

### 1. Tooth shear strength (specific belt tooth strength)

| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 0                                | 38,79                        | 3,09                          | 0,00                        |
| 20                               | 38,37                        | 3,05                          | 0,06                        |
| 40                               | 37,95                        | 3,02                          | 0,13                        |
| 60                               | 37,55                        | 2,99                          | 0,19                        |
| 80                               | 37,17                        | 2,96                          | 0,25                        |
| 100                              | 36,82                        | 2,93                          | 0,31                        |
| 200                              | 35,24                        | 2,80                          | 0,59                        |
| 300                              | 33,94                        | 2,70                          | 0,85                        |
| 400                              | 32,83                        | 2,61                          | 1,09                        |
| 500                              | 31,86                        | 2,54                          | 1,33                        |
| 600                              | 31,00                        | 2,47                          | 1,55                        |
| 700                              | 30,23                        | 2,41                          | 1,76                        |
| 800                              | 29,53                        | 2,35                          | 1,97                        |
| 900                              | 28,89                        | 2,30                          | 2,17                        |
| 1000                             | 28,29                        | 2,25                          | 2,36                        |
| 1100                             | 27,75                        | 2,21                          | 2,54                        |
| 1200                             | 27,24                        | 2,17                          | 2,72                        |
| 1300                             | 26,76                        | 2,13                          | 2,90                        |
| 1400                             | 26,31                        | 2,09                          | 3,07                        |
| 1500                             | 25,88                        | 2,06                          | 3,24                        |
| 1600                             | 25,48                        | 2,03                          | 3,40                        |
| 1700                             | 25,10                        | 2,00                          | 3,56                        |
| 1800                             | 24,74                        | 1,97                          | 3,71                        |
| 1900                             | 24,39                        | 1,94                          | 3,86                        |

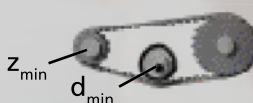
| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 2000                             | 24,06                        | 1,91                          | 4,01                        |
| 2200                             | 23,43                        | 1,86                          | 4,30                        |
| 2400                             | 22,86                        | 1,82                          | 4,57                        |
| 2600                             | 22,32                        | 1,78                          | 4,84                        |
| 2800                             | 21,83                        | 1,74                          | 5,09                        |
| 3000                             | 21,36                        | 1,70                          | 5,34                        |
| 3200                             | 20,92                        | 1,66                          | 5,58                        |
| 3400                             | 20,50                        | 1,63                          | 5,81                        |
| 3600                             | 20,10                        | 1,60                          | 6,03                        |
| 3800                             | 19,73                        | 1,57                          | 6,25                        |
| 4000                             | 19,37                        | 1,54                          | 6,46                        |
| 4500                             | 18,54                        | 1,48                          | 6,95                        |
| 5000                             | 17,80                        | 1,42                          | 7,42                        |
| 5500                             | 17,12                        | 1,36                          | 7,85                        |
| 6000                             | 16,50                        | 1,31                          | 8,25                        |
| 6500                             | 15,92                        | 1,27                          | 8,62                        |
| 7000                             | 15,39                        | 1,22                          | 8,98                        |
| 7500                             | 14,89                        | 1,18                          | 9,31                        |
| 8000                             | 14,42                        | 1,15                          | 9,61                        |
| 8500                             | 13,98                        | 1,11                          | 9,90                        |
| 9000                             | 13,56                        | 1,08                          | 10,17                       |
| 9500                             | 13,17                        | 1,05                          | 10,42                       |
| 10000                            | 12,79                        | 1,02                          | 10,66                       |

Rotational speeds over 10000 rpm and/or belt speeds over 80 m/s need special drive designs. Please ask our advice.

### 2. Tension member strength (permitted tensile force of the belt F<sub>zul</sub>), Belt weight

| Belt width                               | b    | [mm]   | 6     | 10    | 16    | 25    | 32    | 50    | 75    | 100   |
|------------------------------------------|------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| Tension member strength F <sub>zul</sub> |      | [N]    | 350   | 700   | 1260  | 2030  | 2660  | 4200  | 6370  | 8610  |
| Belt weight                              | AT 5 | [kg/m] | 0,020 | 0,034 | 0,054 | 0,085 | 0,109 | 0,170 | 0,255 | 0,340 |

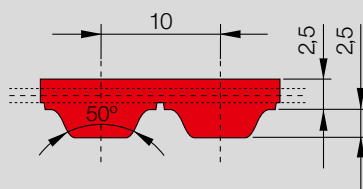
### 3. Flexibility (Minimum numbers of teeth, minimum diameter)

|                                              |                 |    |                                                                                      |                                  |
|----------------------------------------------|-----------------|----|--------------------------------------------------------------------------------------|----------------------------------|
| Timing pulley                                | $z_{\min}$      | 15 |  | Drive type without contraflexure |
| Tension roller (smooth),<br>running on teeth | $d_{\min}$ [mm] | 25 |                                                                                      |                                  |

|                                                             |                 |    |                                                                                      |                               |
|-------------------------------------------------------------|-----------------|----|--------------------------------------------------------------------------------------|-------------------------------|
| Timing pulley                                               | $z_{\min}$      | 20 |  | Drive type with contraflexure |
| Tension roller (smooth),<br>running on the back of the belt | $d_{\min}$ [mm] | 60 |                                                                                      |                               |

# AT high performance Timing Belts

## AT 10 GEN III



CONTI® SYNCHROFLEX Timing Belt (SFX) AT 10 GEN III

High performance AT profile with metric pitch and trapezoidal teeth.

### Standard version:

- single-sided
- high performance polyurethane in red colour
- steel cord tension members with high density
- steel cord tension members in two-filament construction

**FN:** with profiles on the back of the belt

| Type / Length*<br>GEN III | Number<br>of teeth | Type / Length*<br>GEN III | Number<br>of teeth |
|---------------------------|--------------------|---------------------------|--------------------|
| AT 10 / 440               | 44                 | AT 10 / 1150              | 115                |
| AT 10 / 460               | 46                 | AT 10 / 1200              | 120                |
| AT 10 / 500               | 50                 | AT 10 / 1210              | 121                |
| AT 10 / 560               | 56                 | AT 10 / 1250              | 125                |
| AT 10 / 570               | 57                 | AT 10 / 1280              | 128                |
| AT 10 / 580               | 58                 | AT 10 / 1300              | 130                |
| AT 10 / 600               | 60                 | AT 10 / 1320              | 132                |
| AT 10 / 610               | 61                 | AT 10 / 1350              | 135                |
| AT 10 / 660               | 66                 | AT 10 / 1360              | 136                |
| AT 10 / 700               | 70                 | AT 10 / 1360 FN2          | 136                |
| AT 10 / 730               | 73                 | AT 10 / 1400              | 140                |
| AT 10 / 780               | 78                 | AT 10 / 1480              | 148                |
| AT 10 / 800               | 80                 | AT 10 / 1500              | 150                |
| AT 10 / 840               | 84                 | AT 10 / 1600              | 160                |
| AT 10 / 840 FN2           | 84                 | AT 10 / 1700              | 170                |
| AT 10 / 880               | 88                 | AT 10 / 1720              | 172                |
| AT 10 / 890               | 89                 | AT 10 / 1800              | 180                |
| AT 10 / 920               | 92                 | AT 10 / 1860              | 186                |
| AT 10 / 960               | 96                 | AT 10 / 1940              | 194                |
| AT 10 / 980               | 98                 |                           |                    |
| AT 10 / 1000              | 100                |                           |                    |
| AT 10 / 1010              | 101                |                           |                    |
| AT 10 / 1050              | 105                |                           |                    |
| AT 10 / 1080              | 108                |                           |                    |
| AT 10 / 1100              | 110                |                           |                    |

Preferred belt width\* in mm:  
16, 25, 32, 50, 75, 100, 150

\* Other dimensions upon request.

### Order example

CONTI® SYNCHROFLEX Timing Belt 32 AT10/800 GEN III

Belt width in mm \_\_\_\_\_  
 Type/Pitch \_\_\_\_\_  
 Belt length in mm \_\_\_\_\_  
 Specification Generation III \_\_\_\_\_

# AT 10 GEN III Technical data

## 1. Tooth shear strength (specific belt tooth strength)

| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 0                                | 100,99                       | 16,07                         | 0,00                        |
| 20                               | 99,58                        | 15,85                         | 0,33                        |
| 40                               | 98,19                        | 15,63                         | 0,65                        |
| 60                               | 96,88                        | 15,42                         | 0,97                        |
| 80                               | 95,65                        | 15,22                         | 1,28                        |
| 100                              | 94,48                        | 15,04                         | 1,57                        |
| 200                              | 89,43                        | 14,23                         | 2,98                        |
| 300                              | 85,32                        | 13,58                         | 4,27                        |
| 400                              | 81,86                        | 13,03                         | 5,46                        |
| 500                              | 78,88                        | 12,55                         | 6,57                        |
| 600                              | 76,25                        | 12,14                         | 7,62                        |
| 700                              | 73,90                        | 11,76                         | 8,62                        |
| 800                              | 71,78                        | 11,42                         | 9,57                        |
| 900                              | 69,85                        | 11,12                         | 10,48                       |
| 1000                             | 68,07                        | 10,83                         | 11,34                       |
| 1100                             | 66,43                        | 10,57                         | 12,18                       |
| 1200                             | 64,90                        | 10,33                         | 12,98                       |
| 1300                             | 63,47                        | 10,10                         | 13,75                       |
| 1400                             | 62,13                        | 9,89                          | 14,50                       |
| 1500                             | 60,86                        | 9,69                          | 15,21                       |
| 1600                             | 59,67                        | 9,50                          | 15,91                       |
| 1700                             | 58,53                        | 9,32                          | 16,58                       |
| 1800                             | 57,46                        | 9,14                          | 17,24                       |
| 1900                             | 56,43                        | 8,98                          | 17,87                       |

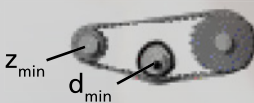
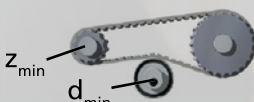
| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 2000                             | 55,45                        | 8,82                          | 18,48                       |
| 2200                             | 53,61                        | 8,53                          | 19,65                       |
| 2400                             | 51,91                        | 8,26                          | 20,76                       |
| 2600                             | 50,33                        | 8,01                          | 21,81                       |
| 2800                             | 48,86                        | 7,78                          | 22,80                       |
| 3000                             | 47,48                        | 7,56                          | 23,74                       |
| 3200                             | 46,19                        | 7,35                          | 24,63                       |
| 3400                             | 44,96                        | 7,16                          | 25,48                       |
| 3600                             | 43,80                        | 6,97                          | 26,28                       |
| 3800                             | 42,70                        | 6,80                          | 27,04                       |
| 4000                             | 41,65                        | 6,63                          | 27,77                       |
| 4500                             | 39,23                        | 6,24                          | 29,42                       |
| 5000                             | 37,05                        | 5,90                          | 30,87                       |
| 5500                             | 35,07                        | 5,58                          | 32,14                       |
| 6000                             | 33,25                        | 5,29                          | 33,25                       |
| 6500                             | 31,57                        | 5,02                          | 34,20                       |
| 7000                             | 30,01                        | 4,78                          | 35,01                       |
| 7500                             | 28,55                        | 4,54                          | 35,69                       |
| 8000                             | 27,19                        | 4,33                          | 36,25                       |
| 8500                             | 25,90                        | 4,12                          | 36,69                       |
| 9000                             | 24,69                        | 3,93                          | 37,03                       |
| 9500                             | 23,54                        | 3,75                          | 37,26                       |
| 10000                            | 22,44                        | 3,57                          | 37,40                       |

Rotational speeds over 10000 rpm and/or belt speeds over 60 m/s need special drive designs. Please ask our advice.

## 2. Tension member strength (permitted tensile force of the belt F<sub>zul</sub>), Belt weight

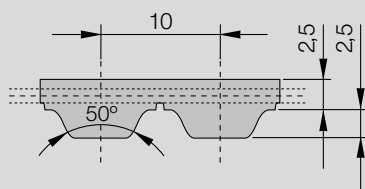
| Belt width<br>b [mm]                         | 16    | 25    | 32    | 50    | 75    | 100   | 150   |
|----------------------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Tension member strength F <sub>zul</sub> [N] | 3000  | 5000  | 6750  | 10750 | 16500 | 22000 | 33500 |
| Belt weight AT 10 GEN III [kg/m]             | 0,117 | 0,183 | 0,234 | 0,365 | 0,548 | 0,730 | 1,095 |

## 3. Flexibility (Minimum numbers of teeth, minimum diameter)

|                                                             |                       |     |                                                                                      |                                  |
|-------------------------------------------------------------|-----------------------|-----|--------------------------------------------------------------------------------------|----------------------------------|
| Timing pulley                                               | z <sub>min</sub>      | 15  |  | Drive type without contraflexure |
| Tension roller (smooth),<br>running on teeth                | d <sub>min</sub> [mm] | 50  |                                                                                      |                                  |
| Timing pulley                                               | z <sub>min</sub>      | 25  |  | Drive type with contraflexure    |
| Tension roller (smooth),<br>running on the back of the belt | d <sub>min</sub> [mm] | 120 |                                                                                      |                                  |

# AT high performance Timing Belts

## AT 10



CONTI® SYNCHROFLEX Timing Belt (SFX) AT 10

High performance AT profile with metric pitch and trapezoidal teeth.

The technical data refer to standard polyurethane and standard steel cord tension members.

### Available versions:

- single-sided
- with "E" tension member for a better flexibility
- with reinforced design
- with Aramide tension member
- polyurethane special materials upon request
- antistatic, coloured, mechanical reworked

**FN:** with profiles on the back of the belt

| Type / Length*  | Number of teeth | Type / Length*   | Number of teeth |
|-----------------|-----------------|------------------|-----------------|
| AT 10 / 440     | 44              | AT 10 / 1150     | 115             |
| AT 10 / 460     | 46              | AT 10 / 1200     | 120             |
| AT 10 / 500     | 50              | AT 10 / 1210     | 121             |
| AT 10 / 560     | 56              | AT 10 / 1250     | 125             |
| AT 10 / 570     | 57              | AT 10 / 1280     | 128             |
| AT 10 / 580     | 58              | AT 10 / 1300     | 130             |
| AT 10 / 600     | 60              | AT 10 / 1320     | 132             |
| AT 10 / 610     | 61              | AT 10 / 1350     | 135             |
| AT 10 / 660     | 66              | AT 10 / 1360     | 136             |
| AT 10 / 700     | 70              | AT 10 / 1360 FN2 | 136             |
| AT 10 / 730     | 73              | AT 10 / 1400     | 140             |
| AT 10 / 780     | 78              | AT 10 / 1480     | 148             |
| AT 10 / 800     | 80              | AT 10 / 1500     | 150             |
| AT 10 / 840     | 84              | AT 10 / 1600     | 160             |
| AT 10 / 840 FN2 | 84              | AT 10 / 1700     | 170             |
| AT 10 / 880     | 88              | AT 10 / 1720     | 172             |
| AT 10 / 890     | 89              | AT 10 / 1800     | 180             |
| AT 10 / 920     | 92              | AT 10 / 1860     | 186             |
| AT 10 / 960     | 96              | AT 10 / 1940     | 194             |
| AT 10 / 980     | 98              |                  |                 |
| AT 10 / 1000    | 100             |                  |                 |
| AT 10 / 1010    | 101             |                  |                 |
| AT 10 / 1050    | 105             |                  |                 |
| AT 10 / 1080    | 108             |                  |                 |
| AT 10 / 1100    | 110             |                  |                 |

Preferred belt width\* in mm:  
16, 25, 32, 50, 75, 100

\* Other dimensions upon request.

### Order example

CONTI® SYNCHROFLEX Timing Belt 32 AT10/800

Belt width in mm

Type/Pitch

Belt length in mm

# AT 10 Technical data

## 1. Tooth shear strength (specific belt tooth strength)

| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 0                                | 80,79                        | 12,86                         | 0,00                        |
| 20                               | 79,66                        | 12,68                         | 0,27                        |
| 40                               | 78,55                        | 12,50                         | 0,52                        |
| 60                               | 77,51                        | 12,34                         | 0,78                        |
| 80                               | 76,52                        | 12,18                         | 1,02                        |
| 100                              | 75,59                        | 12,03                         | 1,26                        |
| 200                              | 71,54                        | 11,39                         | 2,38                        |
| 300                              | 68,26                        | 10,86                         | 3,41                        |
| 400                              | 65,49                        | 10,42                         | 4,37                        |
| 500                              | 63,10                        | 10,04                         | 5,26                        |
| 600                              | 61,00                        | 9,71                          | 6,10                        |
| 700                              | 59,12                        | 9,41                          | 6,90                        |
| 800                              | 57,43                        | 9,14                          | 7,66                        |
| 900                              | 55,88                        | 8,89                          | 8,38                        |
| 1000                             | 54,46                        | 8,67                          | 9,08                        |
| 1100                             | 53,14                        | 8,46                          | 9,74                        |
| 1200                             | 51,92                        | 8,26                          | 10,38                       |
| 1300                             | 50,78                        | 8,08                          | 11,00                       |
| 1400                             | 49,70                        | 7,91                          | 11,60                       |
| 1500                             | 48,69                        | 7,75                          | 12,17                       |
| 1600                             | 47,73                        | 7,60                          | 12,73                       |
| 1700                             | 46,83                        | 7,45                          | 13,27                       |
| 1800                             | 45,97                        | 7,32                          | 13,79                       |
| 1900                             | 45,14                        | 7,18                          | 14,29                       |

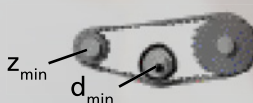
| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 2000                             | 44,36                        | 7,06                          | 14,78                       |
| 2200                             | 42,89                        | 6,83                          | 15,72                       |
| 2400                             | 41,53                        | 6,61                          | 16,61                       |
| 2600                             | 40,27                        | 6,41                          | 17,45                       |
| 2800                             | 39,09                        | 6,22                          | 18,24                       |
| 3000                             | 37,99                        | 6,05                          | 18,99                       |
| 3200                             | 36,95                        | 5,88                          | 19,71                       |
| 3400                             | 35,97                        | 5,72                          | 20,38                       |
| 3600                             | 35,04                        | 5,58                          | 21,02                       |
| 3800                             | 34,16                        | 5,44                          | 21,63                       |
| 4000                             | 33,32                        | 5,30                          | 22,21                       |
| 4500                             | 31,39                        | 5,00                          | 23,54                       |
| 5000                             | 29,64                        | 4,72                          | 24,70                       |
| 5500                             | 28,05                        | 4,47                          | 25,71                       |
| 6000                             | 26,60                        | 4,23                          | 26,60                       |
| 6500                             | 25,26                        | 4,02                          | 27,36                       |
| 7000                             | 24,01                        | 3,82                          | 28,01                       |
| 7500                             | 22,84                        | 3,64                          | 28,55                       |
| 8000                             | 21,75                        | 3,46                          | 29,00                       |
| 8500                             | 20,72                        | 3,30                          | 29,35                       |
| 9000                             | 19,75                        | 3,14                          | 29,62                       |
| 9500                             | 18,83                        | 3,00                          | 29,81                       |
| 10000                            | 17,95                        | 2,86                          | 29,92                       |

Rotational speeds over 10000 rpm and/or belt speeds over 60 m/s need special drive designs. Please ask our advice.

## 2. Tension member strength (permitted tensile force of the belt F<sub>zul</sub>), Belt weight

| Belt width                               | b     | [mm]   | 16    | 25    | 32    | 50    | 75    | 100   | 150   |
|------------------------------------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| Tension member strength F <sub>zul</sub> |       | [N]    | 2000  | 3500  | 4750  | 7750  | 12000 | 16000 | 24500 |
| Belt weight                              | AT 10 | [kg/m] | 0,101 | 0,158 | 0,202 | 0,315 | 0,473 | 0,630 | 0,945 |

## 3. Flexibility (Minimum numbers of teeth, minimum diameter)

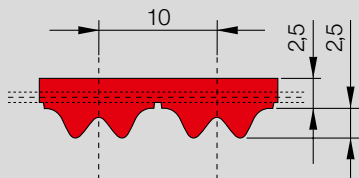
|                                              |                 |    |                                                                                      |                                  |
|----------------------------------------------|-----------------|----|--------------------------------------------------------------------------------------|----------------------------------|
| Timing pulley                                | $z_{\min}$      | 15 |  | Drive type without contraflexure |
| Tension roller (smooth),<br>running on teeth | $d_{\min}$ [mm] | 50 |                                                                                      |                                  |

|                                                             |                 |     |                                                                                      |                               |
|-------------------------------------------------------------|-----------------|-----|--------------------------------------------------------------------------------------|-------------------------------|
| Timing pulley                                               | $z_{\min}$      | 25  |  | Drive type with contraflexure |
| Tension roller (smooth),<br>running on the back of the belt | $d_{\min}$ [mm] | 120 |                                                                                      |                               |



# ATP high performance Timing Belts

## ATP 10 GEN III



CONTI® SYNCHROFLEX Timing Belt (SFX) ATP 10 GEN III

High performance ATP profile with metric pitch and optimised meshing of the double engagement toothform.

**Standard version**

- single-sided
- high performance polyurethane in red colour
- steel cord tension members with high density
- steel cord tension members in two-filament construction

| Type / Length*<br>GEN III | Number<br>of teeth |
|---------------------------|--------------------|
| ATP 10 / 630              | 63                 |
| ATP 10 / 660              | 66                 |
| ATP 10 / 700              | 70                 |
| ATP 10 / 780              | 78                 |
| ATP 10 / 840              | 84                 |
| ATP 10 / 890              | 89                 |
| ATP 10 / 920              | 92                 |
| ATP 10 / 1010             | 101                |
| ATP 10 / 1080             | 108                |
| ATP 10 / 1150             | 115                |

Preferred belt width\* in mm:  
16, 25, 32, 50, 75, 100, 150

| Type / Length*<br>GEN III | Number<br>of teeth |
|---------------------------|--------------------|
| ATP 10 / 1280             | 128                |
| ATP 10 / 1400             | 140                |
| ATP 10 / 1650             | 165                |
| ATP 10 / 1800             | 180                |

\* Other dimensions upon request.

**Order example**

CONTI® SYNCHROFLEX Timing Belt 32 ATP10/780 GEN III

Belt width in mm

Type/Pitch

Belt length in mm

Specification Generation III

# ATP 10 GEN III Technical data

## 1. Tooth shear strength (specific belt tooth strength)

| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 0                                | 105,050                      | 16,713                        | 0,000                       |
| 20                               | 103,508                      | 16,468                        | 0,345                       |
| 40                               | 102,064                      | 16,238                        | 0,680                       |
| 60                               | 100,706                      | 16,023                        | 1,007                       |
| 80                               | 99,424                       | 15,818                        | 1,326                       |
| 100                              | 98,210                       | 15,626                        | 1,637                       |
| 150                              | 95,432                       | 15,183                        | 2,385                       |
| 200                              | 92,956                       | 14,790                        | 3,098                       |
| 300                              | 88,706                       | 14,110                        | 4,433                       |
| 400                              | 85,093                       | 13,538                        | 5,671                       |
| 500                              | 81,989                       | 13,045                        | 6,830                       |
| 600                              | 79,257                       | 12,609                        | 7,923                       |
| 700                              | 76,817                       | 12,222                        | 8,985                       |
| 800                              | 74,614                       | 11,871                        | 9,945                       |
| 900                              | 72,604                       | 11,551                        | 10,887                      |
| 1000                             | 70,758                       | 11,257                        | 11,789                      |
| 1100                             | 69,049                       | 10,986                        | 12,654                      |
| 1200                             | 67,461                       | 10,733                        | 13,487                      |
| 1300                             | 65,975                       | 10,496                        | 14,290                      |
| 1400                             | 64,580                       | 10,275                        | 15,063                      |
| 1500                             | 63,265                       | 10,065                        | 15,811                      |
| 1600                             | 62,022                       | 9,868                         | 16,534                      |
| 1700                             | 60,844                       | 9,680                         | 17,234                      |
| 1800                             | 59,723                       | 9,502                         | 17,911                      |
| 1900                             | 58,655                       | 9,332                         | 18,568                      |

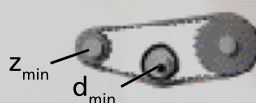
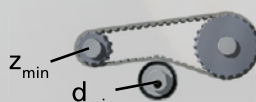
| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 2000                             | 57,636                       | 9,170                         | 19,205                      |
| 2200                             | 55,722                       | 8,865                         | 20,425                      |
| 2400                             | 53,957                       | 8,584                         | 21,575                      |
| 2600                             | 52,318                       | 8,324                         | 22,663                      |
| 2800                             | 50,790                       | 8,081                         | 23,694                      |
| 3000                             | 49,358                       | 7,853                         | 24,671                      |
| 3200                             | 48,010                       | 7,638                         | 25,597                      |
| 3400                             | 46,737                       | 7,436                         | 26,476                      |
| 3600                             | 45,532                       | 7,245                         | 27,310                      |
| 3800                             | 44,387                       | 7,062                         | 28,102                      |
| 4000                             | 43,297                       | 6,888                         | 28,855                      |
| 4500                             | 40,780                       | 6,488                         | 30,575                      |
| 5000                             | 38,513                       | 6,127                         | 32,084                      |
| 5500                             | 36,452                       | 5,799                         | 33,403                      |
| 6000                             | 34,561                       | 5,499                         | 34,549                      |
| 6500                             | 32,815                       | 5,221                         | 35,538                      |
| 7000                             | 31,194                       | 4,963                         | 36,380                      |
| 7500                             | 29,679                       | 4,722                         | 37,087                      |
| 8000                             | 28,260                       | 4,496                         | 37,666                      |
| 8500                             | 26,923                       | 4,283                         | 38,128                      |
| 9000                             | 25,661                       | 4,082                         | 38,477                      |
| 9500                             | 24,464                       | 3,892                         | 38,721                      |
| 10000                            | 23,328                       | 3,711                         | 38,865                      |

Rotational speeds over 10000 rpm and/or belt speeds over 60 m/s need special drive designs. Please ask our advice.

## 2. Tension member strength (permitted tensile force of the belt F<sub>zul</sub>), Belt weight

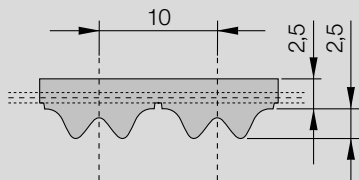
| Belt width                               | b              | [mm]   | 16    | 25    | 32    | 50    | 75    | 100   | 150   |
|------------------------------------------|----------------|--------|-------|-------|-------|-------|-------|-------|-------|
| Tension member strength F <sub>zul</sub> |                | [N]    | 3000  | 5000  | 6750  | 10750 | 16500 | 22000 | 33500 |
| Belt weight                              | ATP 10 GEN III | [kg/m] | 0,109 | 0,170 | 0,218 | 0,340 | 0,510 | 0,680 | 1,020 |

## 3. Flexibility (Minimum numbers of teeth, minimum diameter)

|                                                             |                 |     |                                                                                      |                                  |
|-------------------------------------------------------------|-----------------|-----|--------------------------------------------------------------------------------------|----------------------------------|
| Timing pulley                                               | $z_{\min}$      | 15  |  | Drive type without contraflexure |
| Tension roller (smooth),<br>running on teeth                | $d_{\min}$ [mm] | 50  |                                                                                      |                                  |
| Timing pulley                                               | $z_{\min}$      | 25  |  | Drive type with contraflexure    |
| Tension roller (smooth),<br>running on the back of the belt | $d_{\min}$ [mm] | 120 |                                                                                      |                                  |

# ATP high performance Timing Belts

## ATP 10



CONTI® SYNCHROFLEX Timing Belt (SFX) ATP 10

High performance ATP profile with metric pitch and optimised meshing of the double engagement toothform.

The technical data refer to standard polyurethane and standard steel cord tension members.

**Available versions:**

- single-sided
- with “E” tension member for a better flexibility
- with reinforced tension member design
- polyurethane special materials upon request (Standard: 93ShA, colour: red)
- antistatic, coloured, mechanical reworked

| Type / Length* | Number of teeth |
|----------------|-----------------|
| ATP 10 / 630   | 63              |
| ATP 10 / 660   | 66              |
| ATP 10 / 700   | 70              |
| ATP 10 / 780   | 78              |
| ATP 10 / 840   | 84              |
| ATP 10 / 890   | 89              |
| ATP 10 / 920   | 92              |
| ATP 10 / 1010  | 101             |
| ATP 10 / 1080  | 108             |
| ATP 10 / 1150  | 115             |

Preferred belt width\* in mm:  
16, 25, 32, 50, 75, 100

| Type / Length* | Number of teeth |
|----------------|-----------------|
| ATP 10 / 1280  | 128             |
| ATP 10 / 1400  | 140             |
| ATP 10 / 1650  | 165             |
| ATP 10 / 1800  | 180             |

\* Other dimensions upon request.

**Order example**

CONTI® SYNCHROFLEX Timing Belt 32 ATP10/780

Belt width in mm

Type/Pitch

Belt length in mm

# ATP 10 Technical data

## 1. Tooth shear strength (specific belt tooth strength)

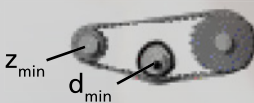
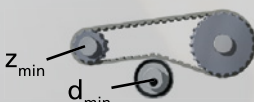
| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] | R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 0                                | 95,500                       | 15,199                        | 0,000                       | 2000                             | 52,396                       | 8,339                         | 17,464                      |
| 20                               | 94,098                       | 14,976                        | 0,314                       | 2200                             | 50,656                       | 8,062                         | 18,572                      |
| 40                               | 92,785                       | 14,767                        | 0,619                       | 2400                             | 49,052                       | 7,807                         | 19,619                      |
| 60                               | 91,551                       | 14,571                        | 0,915                       | 2600                             | 47,562                       | 7,570                         | 20,609                      |
| 80                               | 90,385                       | 14,385                        | 1,205                       | 2800                             | 46,173                       | 7,349                         | 21,546                      |
| 100                              | 89,282                       | 14,210                        | 1,488                       | 2880                             | 45,642                       | 7,264                         | 21,907                      |
| 150                              | 86,756                       | 13,808                        | 2,169                       | 3000                             | 44,871                       | 7,141                         | 22,434                      |
| 200                              | 84,505                       | 13,449                        | 2,817                       | 3200                             | 43,645                       | 6,946                         | 23,276                      |
| 300                              | 80,642                       | 12,835                        | 4,032                       | 3400                             | 42,488                       | 6,762                         | 24,075                      |
| 400                              | 77,357                       | 12,312                        | 5,157                       | 3600                             | 41,393                       | 6,588                         | 24,834                      |
| 500                              | 74,535                       | 11,863                        | 6,211                       | 3800                             | 40,352                       | 6,422                         | 25,554                      |
| 600                              | 72,052                       | 11,467                        | 7,205                       | 4000                             | 39,361                       | 6,264                         | 26,239                      |
| 700                              | 69,834                       | 11,114                        | 8,147                       | 4500                             | 37,073                       | 5,900                         | 27,803                      |
| 730                              | 69,212                       | 11,015                        | 8,420                       | 5000                             | 35,012                       | 5,572                         | 29,175                      |
| 800                              | 67,831                       | 10,796                        | 9,043                       | 5500                             | 33,138                       | 5,274                         | 30,374                      |
| 900                              | 66,004                       | 10,505                        | 9,900                       | 6000                             | 31,419                       | 5,000                         | 31,417                      |
| 1000                             | 64,325                       | 10,238                        | 10,720                      | 6500                             | 29,832                       | 4,748                         | 32,316                      |
| 1100                             | 62,772                       | 9,990                         | 11,507                      | 7000                             | 28,358                       | 4,513                         | 33,082                      |
| 1200                             | 61,328                       | 9,761                         | 12,265                      | 7500                             | 26,981                       | 4,294                         | 33,724                      |
| 1300                             | 59,977                       | 9,546                         | 12,994                      | 8000                             | 25,691                       | 4,089                         | 34,252                      |
| 1400                             | 58,709                       | 9,344                         | 13,698                      | 8500                             | 24,475                       | 3,895                         | 34,670                      |
| 1460                             | 57,984                       | 9,228                         | 14,108                      | 9000                             | 23,328                       | 3,713                         | 34,989                      |
| 1500                             | 57,514                       | 9,154                         | 14,377                      | 9500                             | 22,240                       | 3,540                         | 35,211                      |
| 1600                             | 56,348                       | 8,968                         | 15,025                      | 10000                            | 21,207                       | 3,375                         | 35,342                      |
| 1700                             | 55,313                       | 8,803                         | 15,671                      |                                  |                              |                               |                             |
| 1800                             | 54,294                       | 8,641                         | 16,287                      |                                  |                              |                               |                             |
| 1900                             | 53,323                       | 8,487                         | 16,884                      |                                  |                              |                               |                             |

Rotational speeds over 10000 rpm and/or belt speeds over 60 m/s need special drive designs. Please ask for our advice.

## 2. Tension member strength (permitted tensile force of the belt F<sub>zul</sub>), Belt weight

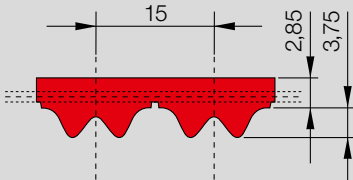
| Belt width                               | b      | [mm]   | 16    | 25    | 32    | 50    | 75    | 100   | 150   |
|------------------------------------------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| Tension member strength F <sub>zul</sub> |        | [N]    | 2000  | 3500  | 4750  | 7750  | 12000 | 16000 | 24500 |
| Belt weight                              | ATP 10 | [kg/m] | 0,096 | 0,150 | 0,192 | 0,300 | 0,450 | 0,600 | 0,900 |

## 3. Flexibility (Minimum numbers of teeth, minimum diameter)

|                                                             |                       |     |                                                                                      |                                  |
|-------------------------------------------------------------|-----------------------|-----|--------------------------------------------------------------------------------------|----------------------------------|
| Timing pulley                                               | z <sub>min</sub>      | 15  |  | Drive type without contraflexure |
| Tension roller (smooth),<br>running on teeth                | d <sub>min</sub> [mm] | 50  |                                                                                      |                                  |
| Timing pulley                                               | z <sub>min</sub>      | 25  |  | Drive type with contraflexure    |
| Tension roller (smooth),<br>running on the back of the belt | d <sub>min</sub> [mm] | 120 |                                                                                      |                                  |

# ATP high performance Timing Belts

## ATP 15 GEN III



CONTI® SYNCHROFLEX Timing Belt (SFX) ATP 15 GEN III

High performance ATP profile with metric pitch and optimised meshing of the double engagement toothform.

**Standard version**

- single-sided
- high performance polyurethane in red colour
- steel cord tension members with high density
- steel cord tension members in two-filament construction

| Type / Length*<br>GEN III | Number<br>of teeth |
|---------------------------|--------------------|
| ATP 15 / 1125             | 75                 |
| ATP 15 / 1185             | 79                 |

Preferred belt width\* in mm:  
25, 32, 50, 75, 100, 150

| Type / Length*<br>GEN III | Number<br>of teeth |
|---------------------------|--------------------|
| ATP 15 / 1260             | 84                 |
| ATP 15 / 1560             | 104                |

\* Other dimensions upon request.

**Order example**

CONTI® SYNCHROFLEX Timing Belt 32 ATP15/1260 GEN III

Belt width in mm

Type/Pitch

Belt length in mm

Specification Generation III



# ATP 15 GEN III Technical data

## 1. Tooth shear strength (specific belt tooth strength)

| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 0                                | 157,672                      | 37,641                        | 0,000                       |
| 20                               | 155,054                      | 37,016                        | 0,775                       |
| 40                               | 152,609                      | 36,433                        | 1,526                       |
| 60                               | 150,315                      | 35,885                        | 2,255                       |
| 80                               | 148,155                      | 35,369                        | 2,963                       |
| 100                              | 146,114                      | 34,882                        | 3,653                       |
| 150                              | 141,455                      | 33,770                        | 5,305                       |
| 200                              | 137,318                      | 32,782                        | 6,866                       |
| 300                              | 130,215                      | 31,087                        | 9,766                       |
| 400                              | 124,258                      | 29,664                        | 12,426                      |
| 500                              | 119,128                      | 28,440                        | 14,891                      |
| 600                              | 114,623                      | 27,364                        | 17,193                      |
| 700                              | 110,606                      | 26,405                        | 19,356                      |
| 800                              | 106,984                      | 25,540                        | 21,397                      |
| 900                              | 103,684                      | 24,753                        | 23,329                      |
| 1000                             | 100,564                      | 24,029                        | 25,163                      |
| 1100                             | 97,853                       | 23,361                        | 26,910                      |
| 1200                             | 95,250                       | 22,739                        | 28,575                      |
| 1300                             | 92,817                       | 22,159                        | 30,166                      |
| 1400                             | 90,535                       | 21,614                        | 31,687                      |
| 1500                             | 88,385                       | 21,100                        | 33,144                      |
| 1600                             | 86,353                       | 20,615                        | 34,541                      |
| 1700                             | 84,427                       | 20,155                        | 35,881                      |
| 1800                             | 82,596                       | 19,718                        | 37,168                      |
| 1900                             | 80,851                       | 19,302                        | 38,404                      |

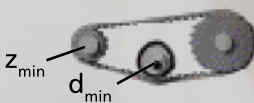
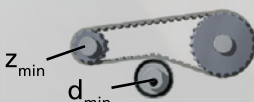
| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 2000                             | 79,185                       | 18,904                        | 39,592                      |
| 2200                             | 76,062                       | 18,158                        | 41,834                      |
| 2400                             | 73,182                       | 17,471                        | 43,909                      |
| 2600                             | 70,510                       | 16,833                        | 45,831                      |
| 2800                             | 68,018                       | 16,238                        | 47,612                      |
| 3000                             | 65,683                       | 15,681                        | 49,262                      |
| 3200                             | 63,486                       | 15,156                        | 50,789                      |
| 3400                             | 61,413                       | 14,661                        | 52,201                      |
| 3600                             | 59,449                       | 14,192                        | 53,504                      |
| 3800                             | 57,584                       | 13,747                        | 54,705                      |
| 4000                             | 55,809                       | 13,323                        | 55,809                      |
| 4500                             | 51,711                       | 12,345                        | 58,175                      |
| 5000                             | 48,022                       | 11,464                        | 60,027                      |
| 5500                             | 44,667                       | 10,663                        | 61,417                      |
| 6000                             | 41,591                       | 9,929                         | 62,386                      |
| 6500                             | 38,751                       | 9,251                         | 62,970                      |
| 7000                             | 36,113                       | 8,621                         | 63,198                      |
| 7500                             | 33,651                       | 8,034                         | 63,095                      |
| 8000                             | 31,342                       | 7,482                         | 62,684                      |
| 8500                             | 29,169                       | 6,964                         | 61,984                      |
| 9000                             | 27,116                       | 6,474                         | 61,012                      |
| 9500                             | 25,171                       | 6,009                         | 59,782                      |
| 10000                            | 23,324                       | 5,568                         | 58,309                      |

Rotational speeds over 10000 rpm and/or belt speeds over 50 m/s need special drive designs. Please ask for our advice.

## 2. Tension member strength (permitted tensile force of the belt F<sub>zul</sub>), Belt weight

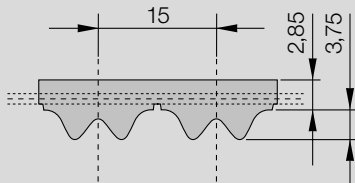
| Belt width                               | b              | [mm]   | 25    | 32    | 50    | 75    | 100   | 150   |
|------------------------------------------|----------------|--------|-------|-------|-------|-------|-------|-------|
| Tension member strength F <sub>zul</sub> |                | [N]    | 6300  | 8550  | 13950 | 21600 | 28800 | 44100 |
| Belt weight                              | ATP 15 GEN III | [kg/m] | 0,218 | 0,279 | 0,436 | 0,654 | 0,872 | 1,308 |

## 3. Flexibility (Minimum numbers of teeth, minimum diameter)

|                                                             |                       |     |                                                                                      |                                  |
|-------------------------------------------------------------|-----------------------|-----|--------------------------------------------------------------------------------------|----------------------------------|
| Timing pulley                                               | z <sub>min</sub>      | 20  |  | Drive type without contraflexure |
| Tension roller (smooth),<br>running on teeth                | d <sub>min</sub> [mm] | 100 |                                                                                      |                                  |
| Timing pulley                                               | z <sub>min</sub>      | 30  |  | Drive type with contraflexure    |
| Tension roller (smooth),<br>running on the back of the belt | d <sub>min</sub> [mm] | 160 |                                                                                      |                                  |

# ATP high performance Timing Belts

## ATP 15



CONTI® SYNCHROFLEX Timing Belt (SFX) ATP 15

High performance ATP profile with metric pitch and optimised meshing of the double engagement toothform.

**Available versions:**

- single-sided
- with “E” tension member for a better flexibility
- with reinforced tension member design
- polyurethane special materials upon request (Standard: 93ShA, colour: red)
- antistatic, coloured, mechanical reworked

| Type / Length*<br>GEN III | Number<br>of teeth |
|---------------------------|--------------------|
| ATP 15 / 1125             | 75                 |
| ATP 15 / 1185             | 79                 |

Preferred belt width\* in mm:  
25, 32, 50, 75, 100, 150

| Type / Length*<br>GEN III | Number<br>of teeth |
|---------------------------|--------------------|
| ATP 15 / 1260             | 84                 |
| ATP 15 / 1560             | 104                |

\* Other dimensions upon request.

**Order example**

CONTI® SYNCHROFLEX Timing Belt 32 ATP15/1260

Belt width in mm

Type/Pitch

Belt length in mm

# ATP 15 Technical data

## 1. Tooth shear strength (specific belt tooth strength)

| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 0                                | 143,325                      | 34,216                        | 0,000                       |
| 20                               | 140,945                      | 33,648                        | 0,705                       |
| 40                               | 138,722                      | 33,117                        | 1,387                       |
| 60                               | 136,637                      | 32,620                        | 2,050                       |
| 80                               | 134,674                      | 32,151                        | 2,693                       |
| 100                              | 132,818                      | 31,708                        | 3,320                       |
| 150                              | 128,584                      | 30,697                        | 4,822                       |
| 200                              | 124,832                      | 29,799                        | 6,241                       |
| 300                              | 118,367                      | 28,258                        | 8,877                       |
| 400                              | 112,952                      | 26,965                        | 11,295                      |
| 500                              | 108,288                      | 25,852                        | 13,536                      |
| 600                              | 104,193                      | 24,874                        | 15,629                      |
| 700                              | 100,542                      | 24,003                        | 17,595                      |
| 800                              | 97,249                       | 23,216                        | 19,450                      |
| 900                              | 94,249                       | 22,500                        | 21,206                      |
| 1000                             | 91,495                       | 21,843                        | 22,874                      |
| 1100                             | 88,949                       | 21,235                        | 24,461                      |
| 1200                             | 86,583                       | 20,670                        | 25,975                      |
| 1300                             | 84,372                       | 20,142                        | 27,421                      |
| 1400                             | 82,297                       | 19,647                        | 28,804                      |
| 1500                             | 80,343                       | 19,180                        | 30,128                      |
| 1600                             | 78,495                       | 18,739                        | 31,398                      |
| 1700                             | 76,745                       | 18,321                        | 32,616                      |
| 1800                             | 75,080                       | 17,924                        | 33,786                      |
| 1900                             | 73,494                       | 17,545                        | 34,910                      |

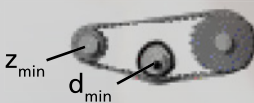
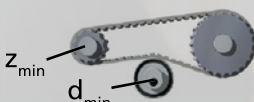
| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 2000                             | 71,980                       | 17,184                        | 35,990                      |
| 2200                             | 69,141                       | 16,506                        | 38,027                      |
| 2400                             | 66,523                       | 15,881                        | 39,914                      |
| 2600                             | 64,094                       | 15,301                        | 41,661                      |
| 2800                             | 61,828                       | 14,760                        | 43,280                      |
| 3000                             | 59,706                       | 14,254                        | 44,779                      |
| 3200                             | 57,709                       | 13,777                        | 46,167                      |
| 3400                             | 55,824                       | 13,327                        | 47,451                      |
| 3600                             | 54,040                       | 12,901                        | 48,636                      |
| 3800                             | 52,345                       | 12,496                        | 49,727                      |
| 4000                             | 50,731                       | 12,111                        | 50,731                      |
| 4500                             | 47,006                       | 11,222                        | 52,881                      |
| 5000                             | 43,652                       | 10,421                        | 54,565                      |
| 5500                             | 40,602                       | 9,693                         | 55,828                      |
| 6000                             | 37,806                       | 9,026                         | 56,709                      |
| 6500                             | 35,225                       | 8,409                         | 57,240                      |
| 7000                             | 32,827                       | 7,837                         | 57,447                      |
| 7500                             | 30,589                       | 7,303                         | 57,354                      |
| 8000                             | 28,490                       | 6,802                         | 56,980                      |
| 8500                             | 26,515                       | 6,330                         | 56,344                      |
| 9000                             | 24,649                       | 5,884                         | 55,460                      |
| 9500                             | 22,881                       | 5,462                         | 54,342                      |
| 10000                            | 21,201                       | 5,061                         | 53,003                      |

Rotational speeds over 10000 rpm and/or belt speeds over 50 m/s need special drive designs. Please ask for our advice.

## 2. Tension member strength (permitted tensile force of the belt F<sub>zul</sub>), Belt weight

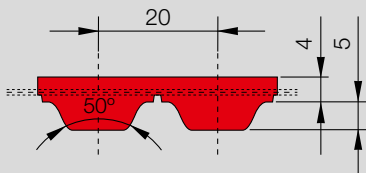
| Belt width                               | b      | [mm]   | 25    | 32    | 50    | 75    | 100   | 150   |
|------------------------------------------|--------|--------|-------|-------|-------|-------|-------|-------|
| Tension member strength F <sub>zul</sub> |        | [N]    | 4950  | 6750  | 11250 | 17550 | 23850 | 36450 |
| Belt weight                              | ATP 15 | [kg/m] | 0,200 | 0,256 | 0,400 | 0,600 | 0,800 | 1,200 |

## 3. Flexibility (Minimum numbers of teeth, minimum diameter)

|                                                             |                       |     |                                                                                      |                                  |
|-------------------------------------------------------------|-----------------------|-----|--------------------------------------------------------------------------------------|----------------------------------|
| Timing pulley                                               | z <sub>min</sub>      | 20  |  | Drive type without contraflexure |
| Tension roller (smooth),<br>running on teeth                | d <sub>min</sub> [mm] | 100 |                                                                                      |                                  |
| Timing pulley                                               | z <sub>min</sub>      | 30  |  | Drive type with contraflexure    |
| Tension roller (smooth),<br>running on the back of the belt | d <sub>min</sub> [mm] | 60  |                                                                                      |                                  |

# AT high performance Timing Belts

## AT 20 GEN III



CONTI® SYNCHROFLEX Timing Belt (SFX) AT 20 GEN III

High performance AT profile with metric pitches and trapezoidal teeth.

**Standard version:**

- single-sided
- high performance polyurethane in red colour
- steel cord tension members with high density
- steel cord tension members in two-filament construction

| Type / Length*<br>GEN III | Number<br>of teeth |
|---------------------------|--------------------|
| AT 20 / 1000**            | 50                 |
| AT 20 / 1100              | 55                 |
| AT 20 / 1200**            | 60                 |
| AT 20 / 1260              | 63                 |
| AT 20 / 1500**            | 75                 |
| AT 20 / 1600**            | 80                 |
| AT 20 / 1700              | 85                 |
| AT 20 / 1760**            | 88                 |
| AT 20 / 1800              | 90                 |
| AT 20 / 1900**            | 95                 |

Preferred belt width\* in mm:  
32, 50, 75, 100

| Type / Length*<br>GEN III | Number<br>of teeth |
|---------------------------|--------------------|
| AT 20 / 1960**            | 98                 |

\* Other dimensions upon request.

\*\* In combination with reduced pulley gap  
please ask for technical support from  
your Mulco sales partner.

**Order example**

CONTI® SYNCHROFLEX Timing Belt 32 AT20/1000 GEN III

Belt width in mm

Type/Pitch

Belt length in mm

Specification Generation III

# AT 20 GEN III Technical data

## 1. Tooth shear strength (specific belt tooth strength)

| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 0                                | 201,93                       | 64,28                         | 0,00                        |
| 20                               | 198,34                       | 63,13                         | 1,32                        |
| 40                               | 194,82                       | 62,01                         | 2,60                        |
| 60                               | 191,52                       | 60,96                         | 3,83                        |
| 80                               | 188,43                       | 59,98                         | 5,02                        |
| 100                              | 185,51                       | 59,05                         | 6,18                        |
| 200                              | 172,99                       | 55,07                         | 11,53                       |
| 300                              | 162,95                       | 51,87                         | 16,29                       |
| 400                              | 154,56                       | 49,20                         | 20,61                       |
| 500                              | 147,36                       | 46,91                         | 24,56                       |
| 600                              | 141,05                       | 44,90                         | 28,21                       |
| 700                              | 135,43                       | 43,11                         | 31,60                       |
| 800                              | 130,37                       | 41,50                         | 34,76                       |
| 900                              | 125,77                       | 40,03                         | 37,73                       |
| 1000                             | 121,55                       | 38,69                         | 40,51                       |
| 1100                             | 117,65                       | 37,45                         | 43,13                       |
| 1200                             | 114,03                       | 36,30                         | 45,61                       |
| 1300                             | 110,64                       | 35,22                         | 47,94                       |
| 1400                             | 107,47                       | 34,21                         | 50,15                       |
| 1500                             | 104,48                       | 33,26                         | 52,24                       |
| 1600                             | 101,66                       | 32,36                         | 54,22                       |
| 1700                             | 98,99                        | 31,51                         | 56,09                       |
| 1800                             | 96,45                        | 30,70                         | 57,87                       |
| 1900                             | 94,03                        | 29,93                         | 59,55                       |

| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 2000                             | 91,72                        | 29,19                         | 61,14                       |
| 2200                             | 87,39                        | 27,82                         | 64,08                       |
| 2400                             | 83,40                        | 26,55                         | 66,71                       |
| 2600                             | 79,70                        | 25,37                         | 69,07                       |
| 2800                             | 76,25                        | 24,27                         | 71,16                       |
| 3000                             | 73,01                        | 23,24                         | 73,01                       |
| 3200                             | 69,97                        | 22,27                         | 74,63                       |
| 3400                             | 67,10                        | 21,36                         | 76,05                       |
| 3600                             | 64,39                        | 20,50                         | 77,26                       |
| 3800                             | 61,81                        | 19,67                         | 78,28                       |
| 4000                             | 59,35                        | 18,89                         | 79,13                       |
| 4500                             | 53,69                        | 17,09                         | 80,52                       |
| 5000                             | 48,59                        | 15,47                         | 80,97                       |
| 5500                             | 43,95                        | 13,99                         | 80,57                       |
| 6000                             | 39,70                        | 12,64                         | 79,40                       |
| 6500                             | 35,78                        | 11,39                         | 77,51                       |

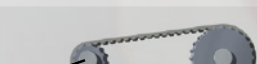
Rotational speeds over 6500 rpm and/or belt speeds over 40 m/s need special drive designs. Please ask for our advice.

## 2. Tension member strength (permitted tensile force of the belt F<sub>zul</sub>), Belt weight

| Belt width                               | b             | [mm]   | 25    | 32    | 50    | 75    | 100   | 150   |
|------------------------------------------|---------------|--------|-------|-------|-------|-------|-------|-------|
| Tension member strength F <sub>zul</sub> |               | [N]    | 6300  | 8550  | 13950 | 21600 | 28800 | 44100 |
| Belt weight                              | AT 20 GEN III | [kg/m] | 0,290 | 0,371 | 0,583 | 0,87  | 1,16  | 1,74  |

## 3. Flexibility (Minimum numbers of teeth, minimum diameter)

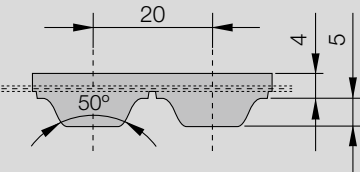
|                                              |                 |     |                                                                                      |                                  |
|----------------------------------------------|-----------------|-----|--------------------------------------------------------------------------------------|----------------------------------|
| Timing pulley                                | $z_{\min}$      | 18  |  | Drive type without contraflexure |
| Tension roller (smooth),<br>running on teeth | $d_{\min}$ [mm] | 120 |                                                                                      |                                  |

|                                                             |                 |     |                                                                                      |                               |
|-------------------------------------------------------------|-----------------|-----|--------------------------------------------------------------------------------------|-------------------------------|
| Timing pulley                                               | $z_{\min}$      | 25  |  | Drive type with contraflexure |
| Tension roller (smooth),<br>running on the back of the belt | $d_{\min}$ [mm] | 180 |                                                                                      |                               |



# AT high performance Timing Belts

## AT 20



CONTI® SYNCHROFLEX Timing Belt (SFX) AT 20

High performance AT profile with metric pitches and trapezoidal teeth.

The technical data refer to standard polyurethane and standard steel cord tension members.

**Available versions:**

- single-sided
- polyurethane special materials upon request
- antistatic, coloured, mechanical reworked

| Type / Length*  | Number of teeth |
|-----------------|-----------------|
| AT 20 / 1000 ** | 50              |
| AT 20 / 1100    | 55              |
| AT 20 / 1200 ** | 60              |
| AT 20 / 1260    | 63              |
| AT 20 / 1500 ** | 75              |
| AT 20 / 1600 ** | 80              |
| AT 20 / 1700    | 85              |
| AT 20 / 1760 ** | 88              |
| AT 20 / 1800    | 90              |
| AT 20 / 1900 ** | 95              |

Preferred belt width\* in mm:  
32, 50, 75, 100

| Type / Length*  | Number of teeth |
|-----------------|-----------------|
| AT 20 / 1960 ** | 98              |

\* Other dimensions upon request.

\*\* In combination with reduced pulley gap please ask for technical support from your Mulco sales partner.

**Order example**

CONTI® SYNCHROFLEX Timing Belt 50 AT20/1500

Belt width in mm

Type/Pitch

Belt length in mm

## AT 20 Technical data

### 1. Tooth shear strength (specific belt tooth strength)

| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 0                                | 161,54                       | 51,42                         | 0,00                        |
| 20                               | 158,67                       | 50,51                         | 1,06                        |
| 40                               | 155,85                       | 49,61                         | 2,08                        |
| 60                               | 153,22                       | 48,77                         | 3,06                        |
| 80                               | 150,74                       | 47,98                         | 4,02                        |
| 100                              | 148,41                       | 47,24                         | 4,95                        |
| 200                              | 138,40                       | 44,05                         | 9,23                        |
| 300                              | 130,36                       | 41,50                         | 13,04                       |
| 400                              | 123,65                       | 39,36                         | 16,49                       |
| 500                              | 117,89                       | 37,52                         | 19,65                       |
| 600                              | 112,84                       | 35,92                         | 22,57                       |
| 700                              | 108,35                       | 34,49                         | 25,28                       |
| 800                              | 104,30                       | 33,20                         | 27,81                       |
| 900                              | 100,62                       | 32,03                         | 30,18                       |
| 1000                             | 97,24                        | 30,95                         | 32,41                       |
| 1100                             | 94,12                        | 29,96                         | 34,51                       |
| 1200                             | 91,22                        | 29,04                         | 36,49                       |
| 1300                             | 88,51                        | 28,18                         | 38,35                       |
| 1400                             | 85,98                        | 27,37                         | 40,12                       |
| 1500                             | 83,59                        | 26,61                         | 41,79                       |
| 1600                             | 81,33                        | 25,89                         | 43,37                       |
| 1700                             | 79,19                        | 25,21                         | 44,87                       |
| 1800                             | 77,16                        | 24,56                         | 46,29                       |
| 1900                             | 75,22                        | 23,94                         | 47,64                       |

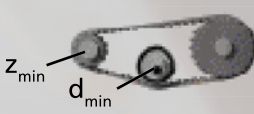
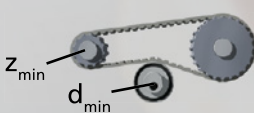
| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 2000                             | 73,37                        | 23,36                         | 48,91                       |
| 2200                             | 69,91                        | 22,25                         | 51,26                       |
| 2400                             | 66,72                        | 21,24                         | 53,37                       |
| 2600                             | 63,76                        | 20,29                         | 55,25                       |
| 2800                             | 61,00                        | 19,42                         | 56,93                       |
| 3000                             | 58,41                        | 18,59                         | 58,41                       |
| 3200                             | 55,98                        | 17,82                         | 59,71                       |
| 3400                             | 53,68                        | 17,09                         | 60,84                       |
| 3600                             | 51,51                        | 16,40                         | 61,81                       |
| 3800                             | 49,45                        | 15,74                         | 62,63                       |
| 4000                             | 47,48                        | 15,11                         | 63,31                       |
| 4500                             | 42,95                        | 13,67                         | 64,42                       |
| 5000                             | 38,87                        | 12,37                         | 64,78                       |
| 5500                             | 35,16                        | 11,19                         | 64,46                       |
| 6000                             | 31,76                        | 10,11                         | 63,52                       |
| 6500                             | 28,62                        | 9,11                          | 62,01                       |

Rotational speeds over 6500 rpm and/or belt speeds over 40 m/s need special drive designs. Please ask for our advice.

### 2. Tension member strength (permitted tensile force of the belt F<sub>zul</sub>), Belt weight

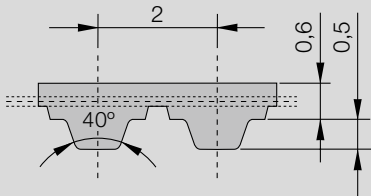
| Belt width                               | b     | [mm]   | 32    | 50    | 75    | 100   | 150   |
|------------------------------------------|-------|--------|-------|-------|-------|-------|-------|
| Tension member strength F <sub>zul</sub> |       | [N]    | 6750  | 11250 | 17550 | 23850 | 36450 |
| Belt weight                              | AT 20 | [kg/m] | 0,339 | 0,530 | 0,795 | 1,060 | 1,590 |

### 3. Flexibility (Minimum numbers of teeth, minimum diameter)

|                                                             |                       |     |                                                                                      |                                  |
|-------------------------------------------------------------|-----------------------|-----|--------------------------------------------------------------------------------------|----------------------------------|
| Timing pulley                                               | z <sub>min</sub>      | 18  |  | Drive type without contraflexure |
| Tension roller (smooth),<br>running on teeth                | d <sub>min</sub> [mm] | 120 |                                                                                      |                                  |
| Timing pulley                                               | z <sub>min</sub>      | 25  |  | Drive type with contraflexure    |
| Tension roller (smooth),<br>running on the back of the belt | d <sub>min</sub> [mm] | 180 |                                                                                      |                                  |

# T standard Timing Belts

## T 2



CONTI® SYNCHROFLEX Timing Belt (SFX) T 2

Standard T profile with metric pitch and trapezoidal teeth.

The technical data refer to standard polyurethane and standard steel cord tension members.

Available versions:

- single-sided
- with Aramide tension member
- polyurethane special materials upon request
- antistatic, coloured, mechanical reworked

**FA:** with bigger back thickness

**FN:** with profiles on the back of the belt

| Type / Length* |   |     | Number of teeth |
|----------------|---|-----|-----------------|
| T 2            | / | 68  | 34              |
| T 2            | / | 90  | 45              |
| T 2            | / | 108 | 54              |
| T 2            | / | 118 | 59              |
| T 2            | / | 120 | 60              |

|     |   |     |    |    |
|-----|---|-----|----|----|
| T 2 | / | 120 | FA | 60 |
| T 2 | / | 138 |    | 69 |
| T 2 | / | 140 |    | 70 |
| T 2 | / | 144 |    | 72 |
| T 2 | / | 150 |    | 75 |

|     |   |     |    |     |
|-----|---|-----|----|-----|
| T 2 | / | 160 |    | 80  |
| T 2 | / | 180 |    | 90  |
| T 2 | / | 200 |    | 100 |
| T 2 | / | 220 |    | 110 |
| T 2 | / | 220 | FA | 110 |

| Type / Length* |   |     | Number of teeth |
|----------------|---|-----|-----------------|
| T 2            | / | 220 | FN2 110         |
| T 2            | / | 240 | 120             |
| T 2            | / | 256 | 128             |
| T 2            | / | 262 | 131             |
| T 2            | / | 280 | 140             |

|     |   |     |  |     |
|-----|---|-----|--|-----|
| T 2 | / | 292 |  | 146 |
| T 2 | / | 320 |  | 160 |
| T 2 | / | 360 |  | 180 |
| T 2 | / | 600 |  | 300 |
| T 2 | / | 710 |  | 355 |

|     |   |     |    |     |
|-----|---|-----|----|-----|
| T 2 | / | 710 | FA | 355 |
|-----|---|-----|----|-----|

Preferred belt width\* in mm: 4, 6, 10

\* Other dimensions upon request.

Order example

CONTI® SYNCHROFLEX Timing Belt 6 T2/240

Belt width in mm

Type/Pitch

Belt length in mm

## T 2 Technical data

### 1. Tooth shear strength (specific belt tooth strength)

| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 0                                | 6,58                         | 0,209                         | 0,000                       |
| 20                               | 6,36                         | 0,202                         | 0,004                       |
| 40                               | 6,18                         | 0,197                         | 0,008                       |
| 60                               | 6,03                         | 0,192                         | 0,012                       |
| 80                               | 5,90                         | 0,188                         | 0,016                       |
| 100                              | 5,79                         | 0,184                         | 0,019                       |
| 150                              | 5,56                         | 0,177                         | 0,028                       |
| 200                              | 5,38                         | 0,171                         | 0,036                       |
| 300                              | 5,10                         | 0,162                         | 0,051                       |
| 400                              | 4,89                         | 0,156                         | 0,065                       |
| 500                              | 4,72                         | 0,150                         | 0,079                       |
| 600                              | 4,58                         | 0,146                         | 0,092                       |
| 700                              | 4,45                         | 0,142                         | 0,104                       |
| 730                              | 4,42                         | 0,141                         | 0,108                       |
| 800                              | 4,35                         | 0,138                         | 0,116                       |
| 900                              | 4,25                         | 0,135                         | 0,127                       |
| 1000                             | 4,16                         | 0,132                         | 0,139                       |
| 1100                             | 4,08                         | 0,130                         | 0,150                       |
| 1200                             | 4,01                         | 0,128                         | 0,160                       |
| 1300                             | 3,94                         | 0,125                         | 0,171                       |
| 1400                             | 3,88                         | 0,124                         | 0,181                       |
| 1460                             | 3,85                         | 0,123                         | 0,187                       |
| 1500                             | 3,82                         | 0,122                         | 0,191                       |
| 1600                             | 3,77                         | 0,120                         | 0,201                       |
| 1700                             | 3,72                         | 0,118                         | 0,211                       |
| 1800                             | 3,67                         | 0,117                         | 0,220                       |
| 1900                             | 3,62                         | 0,115                         | 0,229                       |
| 2000                             | 3,58                         | 0,114                         | 0,239                       |
| 2200                             | 3,50                         | 0,111                         | 0,257                       |

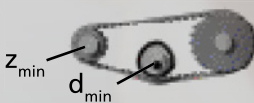
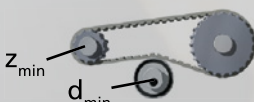
| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 2400                             | 3,42                         | 0,109                         | 0,274                       |
| 2500                             | 3,39                         | 0,108                         | 0,282                       |
| 2600                             | 3,35                         | 0,107                         | 0,290                       |
| 2800                             | 3,29                         | 0,105                         | 0,307                       |
| 2880                             | 3,26                         | 0,104                         | 0,313                       |
| 3000                             | 3,23                         | 0,103                         | 0,323                       |
| 3200                             | 3,17                         | 0,101                         | 0,338                       |
| 3400                             | 3,12                         | 0,099                         | 0,354                       |
| 3600                             | 3,07                         | 0,098                         | 0,368                       |
| 3800                             | 3,02                         | 0,096                         | 0,383                       |
| 4000                             | 2,98                         | 0,095                         | 0,397                       |
| 4500                             | 2,88                         | 0,092                         | 0,432                       |
| 5000                             | 2,78                         | 0,088                         | 0,463                       |
| 5500                             | 2,70                         | 0,086                         | 0,495                       |
| 6000                             | 2,63                         | 0,084                         | 0,526                       |
| 6500                             | 2,56                         | 0,081                         | 0,555                       |
| 7000                             | 2,49                         | 0,079                         | 0,581                       |
| 7500                             | 2,43                         | 0,077                         | 0,607                       |
| 8000                             | 2,37                         | 0,075                         | 0,632                       |
| 8500                             | 2,32                         | 0,074                         | 0,657                       |
| 9000                             | 2,27                         | 0,072                         | 0,681                       |
| 9500                             | 2,22                         | 0,071                         | 0,703                       |
| 10000                            | 2,18                         | 0,069                         | 0,727                       |
| 12000                            | 2,02                         | 0,064                         | 0,808                       |
| 15000                            | 1,82                         | 0,058                         | 0,910                       |
| 18000                            | 1,66                         | 0,053                         | 0,996                       |
| 20000                            | 1,57                         | 0,050                         | 1,047                       |

Rotational speeds over 20000 rpm and/or belt speeds over 80 m/s need special drive designs. Please ask for our advice.

### 2. Tension member strength (permitted tensile force of the belt F<sub>zul</sub>), Belt weight

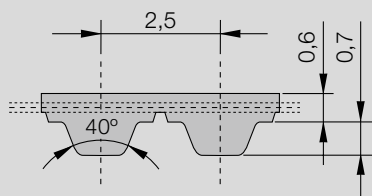
| Belt width                               | b   | [mm]   | 4     | 6     | 10    | 16    | 25    | 32    |
|------------------------------------------|-----|--------|-------|-------|-------|-------|-------|-------|
| Tension member strength F <sub>zul</sub> |     | [N]    | 39    | 65    | 117   | 195   | 312   | 403   |
| Belt weight                              | T 2 | [kg/m] | 0,004 | 0,007 | 0,011 | 0,018 | 0,028 | 0,035 |

### 3. Flexibility (Minimum numbers of teeth, minimum diameter)

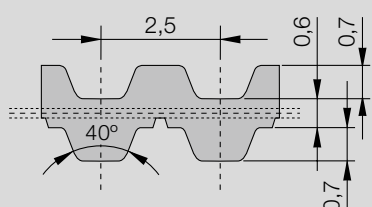
|                                                             |                       |    |                                                                                      |                                  |
|-------------------------------------------------------------|-----------------------|----|--------------------------------------------------------------------------------------|----------------------------------|
| Timing pulley                                               | z <sub>min</sub>      | 10 |  | Drive type without contraflexure |
| Tension roller (smooth),<br>running on teeth                | d <sub>min</sub> [mm] | 15 |                                                                                      |                                  |
| Timing pulley                                               | z <sub>min</sub>      | 18 |  | Drive type with contraflexure    |
| Tension roller (smooth),<br>running on the back of the belt | d <sub>min</sub> [mm] | 15 |                                                                                      |                                  |

# T standard Timing Belts

## T 2,5 / T 2,5-DL



CONTI® SYNCHROFLEX Timing Belt (SFX) T 2,5



CONTI® SYNCHROFLEX Timing Belt (SFX) T 2,5-DL

Standard T profile according to DIN 7721 with metric pitch and trapezoidal teeth.

The technical data refer to standard polyurethane and standard steel cord tension members.

### Available versions:

- single-sided (as standard)
- with Aramide tension member
- polyurethane special materials upon request
- antistatic, coloured, mechanical reworked

**DL:** double-sided

**FA:** with bigger back thickness

**FN:** with profiles on the back of the belt

| Type / Length*   | Number of teeth | Type / Length*    | Number of teeth |
|------------------|-----------------|-------------------|-----------------|
| T 2,5 / 55 FA    | 22              | T 2,5 / 317,5 DL  | 127             |
| T 2,5 / 75 FN2   | 30              | T 2,5 / 330       | 132             |
| T 2,5 / 120      | 48              | T 2,5 / 380       | 152             |
| T 2,5 / 145      | 58              | T 2,5 / 395       | 158             |
| T 2,5 / 160      | 64              | T 2,5 / 400 FA    | 160             |
| T 2,5 / 160 FA   | 64              | T 2,5 / 415 DL    | 166             |
| T 2,5 / 177,5    | 71              | T 2,5 / 420       | 168             |
| T 2,5 / 180      | 72              | T 2,5 / 420 FN168 | 168             |
| T 2,5 / 182,5    | 73              | T 2,5 / 457,5 DL  | 183             |
| T 2,5 / 200      | 80              | T 2,5 / 480       | 192             |
| T 2,5 / 210 FA   | 84              | T 2,5 / 500       | 200             |
| T 2,5 / 210 FN28 | 84              | T 2,5 / 500 FA    | 200             |
| T 2,5 / 220 FN3  | 88              | T 2,5 / 540       | 216             |
| T 2,5 / 225      | 90              | T 2,5 / 540 FA    | 216             |
| T 2,5 / 230      | 92              | T 2,5 / 600 FA    | 240             |
| T 2,5 / 230 FA   | 92              | T 2,5 / 620       | 248             |
| T 2,5 / 245      | 98              | T 2,5 / 650       | 260             |
| T 2,5 / 250      | 100             | T 2,5 / 650 FN2   | 260             |
| T 2,5 / 265      | 106             | T 2,5 / 780       | 312             |
| T 2,5 / 285      | 114             | T 2,5 / 780 FA    | 312             |
| T 2,5 / 285 FA   | 114             | T 2,5 / 950       | 380             |
| T 2,5 / 290      | 116             | T 2,5 / 1300      | 520             |
| T 2,5 / 305      | 122             | T 2,5 / 1300 FA   | 520             |
| T 2,5 / 305 FA   | 122             | T 2,5 / 1350 FA   | 540             |
| T 2,5 / 305 FN1  | 122             | T 2,5 / 1475 FA   | 590             |
| T 2,5 / 317,5    | 127             |                   |                 |

Preferred belt width\* in mm:  
4, 6, 10

\* Other dimensions upon request.

### Order example

CONTI® SYNCHROFLEX Timing Belt 10 T2,5/380

Belt width in mm

Type/Pitch

Belt length in mm

## T 2,5 / T 2,5-DL Technical data

### 1. Tooth shear strength (specific belt tooth strength)

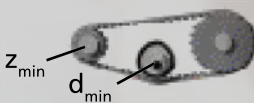
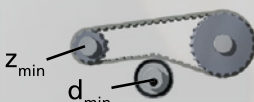
| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] | R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 0                                | 9,03                         | 0,359                         | 0,000                       | 2500                             | 4,65                         | 0,185                         | 0,484                       |
| 20                               | 8,72                         | 0,347                         | 0,007                       | 2600                             | 4,60                         | 0,183                         | 0,499                       |
| 40                               | 8,48                         | 0,337                         | 0,014                       | 2800                             | 4,51                         | 0,180                         | 0,527                       |
| 60                               | 8,28                         | 0,329                         | 0,021                       | 2880                             | 4,48                         | 0,178                         | 0,538                       |
| 80                               | 8,10                         | 0,322                         | 0,027                       | 3000                             | 4,43                         | 0,176                         | 0,554                       |
| 100                              | 7,95                         | 0,316                         | 0,033                       | 3200                             | 4,36                         | 0,173                         | 0,581                       |
| 150                              | 7,64                         | 0,304                         | 0,048                       | 3400                             | 4,28                         | 0,170                         | 0,607                       |
| 200                              | 7,39                         | 0,294                         | 0,062                       | 3600                             | 4,22                         | 0,168                         | 0,632                       |
| 300                              | 7,01                         | 0,279                         | 0,088                       | 3800                             | 4,15                         | 0,165                         | 0,657                       |
| 400                              | 6,71                         | 0,267                         | 0,112                       | 4000                             | 4,09                         | 0,163                         | 0,682                       |
| 500                              | 6,48                         | 0,258                         | 0,135                       | 4500                             | 3,95                         | 0,157                         | 0,740                       |
| 600                              | 6,28                         | 0,250                         | 0,157                       | 5000                             | 3,82                         | 0,152                         | 0,796                       |
| 700                              | 6,11                         | 0,243                         | 0,178                       | 5500                             | 3,71                         | 0,148                         | 0,850                       |
| 730                              | 6,07                         | 0,241                         | 0,185                       | 6000                             | 3,60                         | 0,143                         | 0,901                       |
| 800                              | 5,97                         | 0,237                         | 0,199                       | 6500                             | 3,51                         | 0,140                         | 0,950                       |
| 900                              | 5,83                         | 0,232                         | 0,219                       | 7000                             | 3,42                         | 0,136                         | 0,997                       |
| 1000                             | 5,71                         | 0,227                         | 0,238                       | 7500                             | 3,33                         | 0,133                         | 1,042                       |
| 1100                             | 5,61                         | 0,223                         | 0,257                       | 8000                             | 3,26                         | 0,130                         | 1,086                       |
| 1200                             | 5,51                         | 0,219                         | 0,275                       | 8500                             | 3,18                         | 0,127                         | 1,128                       |
| 1300                             | 5,41                         | 0,215                         | 0,293                       | 9000                             | 3,11                         | 0,124                         | 1,168                       |
| 1400                             | 5,33                         | 0,212                         | 0,311                       | 9500                             | 3,05                         | 0,121                         | 1,207                       |
| 1460                             | 5,28                         | 0,210                         | 0,321                       | 10000                            | 2,99                         | 0,119                         | 1,245                       |
| 1500                             | 5,25                         | 0,209                         | 0,328                       | 12000                            | 2,77                         | 0,110                         | 1,384                       |
| 1600                             | 5,17                         | 0,206                         | 0,345                       | 15000                            | 2,50                         | 0,099                         | 1,561                       |
| 1700                             | 5,10                         | 0,203                         | 0,361                       | 18000                            | 2,28                         | 0,091                         | 1,708                       |
| 1800                             | 5,04                         | 0,200                         | 0,378                       | 20000                            | 2,15                         | 0,086                         | 1,791                       |
| 1900                             | 4,97                         | 0,198                         | 0,394                       |                                  |                              |                               |                             |
| 2000                             | 4,91                         | 0,195                         | 0,409                       |                                  |                              |                               |                             |
| 2200                             | 4,80                         | 0,191                         | 0,440                       |                                  |                              |                               |                             |
| 2400                             | 4,70                         | 0,187                         | 0,470                       |                                  |                              |                               |                             |

Rotational speeds over 20000 rpm and/or belt speeds over 80 m/s need special drive designs. Please ask for our advice.

### 2. Tension member strength (permitted tensile force of the belt F<sub>zul</sub>), Belt weight

| Belt width                               | b        | [mm]   | 4     | 6     | 10    | 16    | 25    | 32    |
|------------------------------------------|----------|--------|-------|-------|-------|-------|-------|-------|
| Tension member strength F <sub>zul</sub> |          | [N]    | 39    | 65    | 117   | 195   | 312   | 403   |
| Belt weight                              | T 2,5    | [kg/m] | 0,006 | 0,009 | 0,015 | 0,024 | 0,038 | 0,048 |
|                                          | T 2,5-DL | [kg/m] | 0,006 | 0,009 | 0,016 | 0,025 | 0,040 | 0,051 |

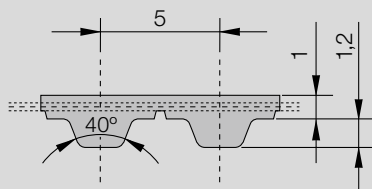
### 3. Flexibility (Minimum numbers of teeth, minimum diameter)

|                                                             |                       |    |                                                                                      |                                  |
|-------------------------------------------------------------|-----------------------|----|--------------------------------------------------------------------------------------|----------------------------------|
| Timing pulley                                               | z <sub>min</sub>      | 10 |  | Drive type without contraflexure |
| Tension roller (smooth),<br>running on teeth                | d <sub>min</sub> [mm] | 15 |                                                                                      |                                  |
| Timing pulley                                               | z <sub>min</sub>      | 18 |  | Drive type with contraflexure    |
| Tension roller (smooth),<br>running on the back of the belt | d <sub>min</sub> [mm] | 15 |                                                                                      |                                  |

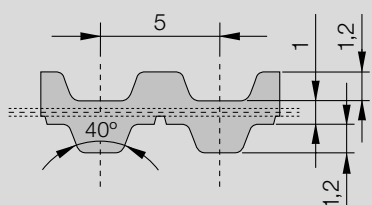


# T standard Timing Belts

## T 5 / T 5-DL



CONTI® SYNCHROFLEX Timing Belt (SFX) T 5



CONTI® SYNCHROFLEX Timing Belt (SFX) T 5-DL

Standard T profile according to DIN 7721 with metric pitch and trapezoidal teeth.

The technical data refer to standard polyurethane and standard steel cord tension members.

### Available versions:

- single-sided (as standard)
- with "E" tension member for a better flexibility
- with Aramide tension member
- polyurethane special materials upon request
- antistatic, coloured, mechanical reworked

**DL:** double-sided

**FA:** with bigger back thickness

**FN:** with profiles on the back of the belt

### Order example

CONTI® SYNCHROFLEX Timing Belt 10 T5/455

Belt width in mm \_\_\_\_\_  
Type/Pitch \_\_\_\_\_  
Belt length in mm \_\_\_\_\_

| Type / Length* | Number of teeth | Type / Length*  | Number |
|----------------|-----------------|-----------------|--------|
| T 5 / 100      | 20              | T 5 / 590 DL    | 118    |
| T 5 / 150      | 30              | T 5 / 600 FN    | 120    |
| T 5 / 150 DL   | 30              | T 5 / 610       | 122    |
| T 5 / 165      | 33              | T 5 / 615 FN    | 123    |
| T 5 / 165 FN33 | 33              | T 5 / 620       | 124    |
| T 5 / 180      | 36              | T 5 / 620 DL    | 124    |
| T 5 / 185      | 37              | T 5 / 625 DL    | 125    |
| T 5 / 200      | 40              | T 5 / 630       | 126    |
| T 5 / 210      | 42              | T 5 / 630 FA    | 126    |
| T 5 / 215      | 43              | T 5 / 650       | 130    |
| T 5 / 220      | 44              | T 5 / 650 FA    | 130    |
| T 5 / 225      | 45              | T 5 / 660       | 132    |
| T 5 / 225 FN90 | 45              | T 5 / 660 FN30  | 132    |
| T 5 / 245      | 49              | T 5 / 690       | 138    |
| T 5 / 250      | 50              | T 5 / 690 FA    | 138    |
| T 5 / 255      | 51              | T 5 / 690 FN3   | 138    |
| T 5 / 260      | 52              | T 5 / 700       | 140    |
| T 5 / 260 DL   | 52              | T 5 / 720       | 144    |
| T 5 / 260 FN1  | 52              | T 5 / 725       | 145    |
| T 5 / 270      | 54              | T 5 / 750       | 150    |
| T 5 / 280      | 56              | T 5 / 750 DL    | 150    |
| T 5 / 295      | 59              | T 5 / 765       | 153    |
| T 5 / 300 DL   | 60              | T 5 / 780       | 156    |
| T 5 / 305      | 61              | T 5 / 800       | 160    |
| T 5 / 330      | 66              | T 5 / 800 FN2   | 160    |
| T 5 / 330 DL   | 66              | T 5 / 815       | 163    |
| T 5 / 340      | 68              | T 5 / 815 DL    | 163    |
| T 5 / 340 FN6  | 68              | T 5 / 840       | 168    |
| T 5 / 355      | 71              | T 5 / 840 FN    | 168    |
| T 5 / 365      | 73              | T 5 / 860 FN1   | 172    |
| T 5 / 390      | 78              | T 5 / 860 DL    | 172    |
| T 5 / 390 FN1  | 78              | T 5 / 900       | 180    |
| T 5 / 400      | 80              | T 5 / 920       | 184    |
| T 5 / 410      | 82              | T 5 / 925       | 185    |
| T 5 / 410 DL   | 82              | T 5 / 925 FN1   | 185    |
| T 5 / 420      | 84              | T 5 / 940       | 188    |
| T 5 / 455      | 91              | T 5 / 940 DL    | 188    |
| T 5 / 460      | 92              | T 5 / 990       | 198    |
| T 5 / 460 FN4  | 92              | T 5 / 990 FN4   | 198    |
| T 5 / 460 DL   | 92              | T 5 / 1075      | 215    |
| T 5 / 480      | 96              | T 5 / 1075 FA   | 215    |
| T 5 / 500      | 100             | T 5 / 1100      | 220    |
| T 5 / 500 FN10 | 100             | T 5 / 1100 DL   | 220    |
| T 5 / 505      | 101             | T 5 / 1100 FN22 | 220    |
| T 5 / 510      | 102             | T 5 / 1140 FN1  | 228    |
| T 5 / 510 FN1  | 102             | T 5 / 1160      | 232    |
| T 5 / 515 DL   | 103             | T 5 / 1215      | 243    |
| T 5 / 525      | 105             | T 5 / 1215 FN   | 243    |
| T 5 / 525 FA   | 105             | T 5 / 1315      | 263    |
| T 5 / 525 DL   | 105             | T 5 / 1325 DL   | 265    |
| T 5 / 545      | 109             | T 5 / 1350 FN1  | 270    |
| T 5 / 550      | 110             | T 5 / 1380      | 276    |
| T 5 / 560      | 112             | T 5 / 1380 FN1  | 276    |
| T 5 / 575      | 115             | T 5 / 1500      | 300    |
| T 5 / 590      | 118             |                 |        |

Preferred belt width\* in mm:  
6, 10, 16, 25, 50

\* Other dimensions upon request.

## T 5 / T 5-DL Technical data

### 1. Tooth shear strength (specific belt tooth strength)

| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 0                                | 24,00                        | 1,910                         | 0,000                       |
| 20                               | 23,40                        | 1,861                         | 0,039                       |
| 40                               | 22,90                        | 1,819                         | 0,076                       |
| 60                               | 22,40                        | 1,783                         | 0,112                       |
| 80                               | 22,00                        | 1,751                         | 0,147                       |
| 100                              | 21,70                        | 1,723                         | 0,180                       |
| 200                              | 20,30                        | 1,614                         | 0,338                       |
| 300                              | 19,30                        | 1,536                         | 0,483                       |
| 400                              | 18,55                        | 1,476                         | 0,618                       |
| 500                              | 17,93                        | 1,427                         | 0,747                       |
| 600                              | 17,41                        | 1,385                         | 0,870                       |
| 700                              | 16,96                        | 1,349                         | 0,989                       |
| 800                              | 16,56                        | 1,318                         | 1,104                       |
| 900                              | 16,20                        | 1,289                         | 1,215                       |
| 1000                             | 15,88                        | 1,263                         | 1,323                       |
| 1100                             | 15,58                        | 1,240                         | 1,428                       |
| 1200                             | 15,31                        | 1,218                         | 1,531                       |
| 1300                             | 15,06                        | 1,198                         | 1,632                       |
| 1400                             | 14,83                        | 1,180                         | 1,730                       |
| 1500                             | 14,61                        | 1,162                         | 1,826                       |
| 1600                             | 14,40                        | 1,146                         | 1,920                       |
| 1700                             | 14,21                        | 1,131                         | 2,010                       |
| 1800                             | 14,03                        | 1,116                         | 2,100                       |
| 1900                             | 13,85                        | 1,102                         | 2,190                       |

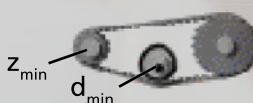
| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 2000                             | 13,69                        | 1,089                         | 2,28                        |
| 2200                             | 13,38                        | 1,065                         | 2,45                        |
| 2400                             | 13,10                        | 1,042                         | 2,62                        |
| 2600                             | 12,84                        | 1,021                         | 2,78                        |
| 2800                             | 12,59                        | 1,002                         | 2,94                        |
| 3000                             | 12,37                        | 0,984                         | 3,09                        |
| 3200                             | 12,16                        | 0,967                         | 3,24                        |
| 3400                             | 11,96                        | 0,951                         | 3,39                        |
| 3600                             | 11,77                        | 0,936                         | 3,53                        |
| 3800                             | 11,59                        | 0,922                         | 3,67                        |
| 4000                             | 11,42                        | 0,909                         | 3,81                        |
| 4500                             | 11,03                        | 0,878                         | 4,14                        |
| 5000                             | 10,68                        | 0,850                         | 4,45                        |
| 5500                             | 10,36                        | 0,825                         | 4,75                        |
| 6000                             | 10,07                        | 0,802                         | 5,04                        |
| 6500                             | 9,81                         | 0,780                         | 5,31                        |
| 7000                             | 9,56                         | 0,761                         | 5,58                        |
| 7500                             | 9,33                         | 0,742                         | 5,83                        |
| 8000                             | 9,11                         | 0,725                         | 6,08                        |
| 8500                             | 8,91                         | 0,709                         | 6,31                        |
| 9000                             | 8,72                         | 0,694                         | 6,54                        |
| 9500                             | 8,54                         | 0,679                         | 6,76                        |
| 10000                            | 8,37                         | 0,666                         | 6,97                        |

Rotational speeds over 10000 rpm and/or belt speeds over 80 m/s need special drive designs. Please ask for our advice.

### 2. Tension member strength (permitted tensile force of the belt F<sub>zul</sub>), Belt weight

| Belt width                               | b      | [mm]   | 6     | 10    | 16    | 25    | 32    | 50    | 75    | 100   |
|------------------------------------------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| Tension member strength F <sub>zul</sub> |        | [N]    | 180   | 330   | 570   | 930   | 1200  | 1920  | 2940  | 3930  |
| Belt weight                              | T 5    | [kg/m] | 0,014 | 0,024 | 0,038 | 0,060 | 0,077 | 0,120 | 0,180 | 0,240 |
|                                          | T 5-DL | [kg/m] | 0,016 | 0,027 | 0,043 | 0,067 | 0,086 | 0,135 | 0,203 | 0,270 |

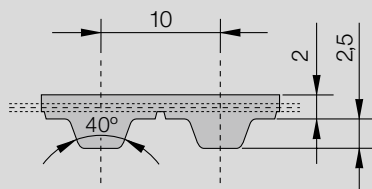
### 3. Flexibility (Minimum numbers of teeth, minimum diameter)

|                                              |                 |    |                                                                                      |                                  |
|----------------------------------------------|-----------------|----|--------------------------------------------------------------------------------------|----------------------------------|
| Timing pulley                                | $z_{\min}$      | 10 |  | Drive type without contraflexure |
| Tension roller (smooth),<br>running on teeth | $d_{\min}$ [mm] | 30 |                                                                                      |                                  |

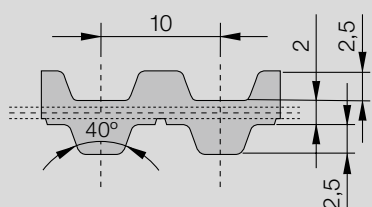
|                                                             |                 |    |                                                                                      |                               |
|-------------------------------------------------------------|-----------------|----|--------------------------------------------------------------------------------------|-------------------------------|
| Timing pulley                                               | $z_{\min}$      | 15 |  | Drive type with contraflexure |
| Tension roller (smooth),<br>running on the back of the belt | $d_{\min}$ [mm] | 30 |                                                                                      |                               |

# T standard Timing Belts

## T 10 / T 10-DL



CONTI® SYNCHROFLEX Timing Belt (SFX) T 10



CONTI® SYNCHROFLEX Timing Belt T (SFX) 10-DL

Standard T profile according to DIN 7721 with metric pitch and trapezoidal teeth.

The technical data refer to standard polyurethane and standard steel cord tension members.

### Available version

- single-sided (as standard)
- with "E" tension member for a better flexibility
- with Aramide tension member
- polyurethane special materials upon request
- antistatic, coloured, mechanical reworked

**DL:** double-sided

**FA:** with bigger back thickness

**FN:** with profiles on the back of the belt

### Order example

CONTI® SYNCHROFLEX Timing Belt 16 T10/260

Belt width in mm \_\_\_\_\_  
Type/Pitch \_\_\_\_\_  
Belt length in mm \_\_\_\_\_

| Type / Length*  | Number of teeth | Type / Length*    | Number of teeth |
|-----------------|-----------------|-------------------|-----------------|
| T 10 / 260      | 26              | T 10 / 980        | 98              |
| T 10 / 260 DL   | 26              | T 10 / 980 DL     | 98              |
| T 10 / 350      | 35              | T 10 / 1010       | 101             |
| T 10 / 370      | 37              | T 10 / 1080       | 108             |
| T 10 / 400      | 40              | T 10 / 1110       | 111             |
| T 10 / 410      | 41              | T 10 / 1140       | 114             |
| T 10 / 410 FA   | 41              | T 10 / 1150       | 115             |
| T 10 / 420 FN21 | 42              | T 10 / 1210       | 121             |
| T 10 / 440      | 44              | T 10 / 1210 DL    | 121             |
| T 10 / 450      | 45              | T 10 / 1240       | 124             |
| T 10 / 500      | 50              | T 10 / 1240 DL    | 124             |
| T 10 / 500 FN   | 50              | T 10 / 1250       | 125             |
| T 10 / 530      | 53              | T 10 / 1250 DL    | 125             |
| T 10 / 530 DL   | 53              | T 10 / 1300       | 130             |
| T 10 / 560      | 56              | T 10 / 1320       | 132             |
| T 10 / 600      | 60              | T 10 / 1320 DL    | 132             |
| T 10 / 610      | 61              | T 10 / 1350       | 135             |
| T 10 / 630      | 63              | T 10 / 1350 DL    | 135             |
| T 10 / 630 DL   | 63              | T 10 / 1390       | 139             |
| T 10 / 660      | 66              | T 10 / 1400       | 140             |
| T 10 / 660 DL   | 66              | T 10 / 1420       | 142             |
| T 10 / 680      | 68              | T 10 / 1420 DL    | 142             |
| T 10 / 690      | 69              | T 10 / 1450       | 145             |
| T 10 / 700      | 70              | T 10 / 1460       | 146             |
| T 10 / 720      | 72              | T 10 / 1460 FN146 | 146             |
| T 10 / 720 DL   | 72              | T 10 / 1500       | 150             |
| T 10 / 730      | 73              | T 10 / 1560       | 156             |
| T 10 / 750      | 75              | T 10 / 1610       | 161             |
| T 10 / 760      | 76              | T 10 / 1610 DL    | 161             |
| T 10 / 780      | 78              | T 10 / 1750       | 175             |
| T 10 / 780 FN78 | 78              | T 10 / 1780       | 178             |
| T 10 / 800 FN80 | 80              | T 10 / 1800 FN12  | 180             |
| T 10 / 810      | 81              | T 10 / 1880       | 188             |
| T 10 / 840      | 84              | T 10 / 1880 DL    | 188             |
| T 10 / 840 DL   | 84              | T 10 / 1960       | 196             |
| T 10 / 840 FN84 | 84              | T 10 / 2250       | 225             |
| T 10 / 850      | 85              | T 10 / 3100       | 310             |
| T 10 / 880      | 88              | T 10 / 4780       | 478             |
| T 10 / 890      | 89              | T 10 / 4780 DL**  | 478             |
| T 10 / 920      | 92              |                   |                 |
| T 10 / 960      | 96              |                   |                 |
| T 10 / 970      | 97              |                   |                 |
| T 10 / 970 FN97 | 97              |                   |                 |

Preferred belt width\* in mm:  
16, 25, 32, 50

\* Other dimensions upon request.

\*\* Please request technical support from your Mulco sales partner.

# T 10 / T 10-DL Technical data

## 1. Tooth shear strength (specific belt tooth strength)

| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 0                                | 50,5                         | 8,04                          | 0,000                       |
| 20                               | 49,0                         | 7,80                          | 0,163                       |
| 40                               | 47,7                         | 7,60                          | 0,318                       |
| 60                               | 46,6                         | 7,42                          | 0,466                       |
| 80                               | 45,7                         | 7,27                          | 0,609                       |
| 100                              | 44,8                         | 7,13                          | 0,746                       |
| 200                              | 41,4                         | 6,60                          | 1,381                       |
| 300                              | 39,1                         | 6,22                          | 1,953                       |
| 400                              | 37,2                         | 5,92                          | 2,480                       |
| 500                              | 35,7                         | 5,68                          | 2,980                       |
| 600                              | 34,4                         | 5,48                          | 3,440                       |
| 700                              | 33,3                         | 5,31                          | 3,890                       |
| 800                              | 32,4                         | 5,15                          | 4,320                       |
| 900                              | 31,5                         | 5,01                          | 4,730                       |
| 1000                             | 30,7                         | 4,89                          | 5,120                       |
| 1100                             | 30,0                         | 4,77                          | 5,500                       |
| 1200                             | 29,3                         | 4,67                          | 5,870                       |
| 1300                             | 28,7                         | 4,57                          | 6,220                       |
| 1400                             | 28,2                         | 4,48                          | 6,570                       |
| 1500                             | 27,6                         | 4,40                          | 6,910                       |
| 1600                             | 27,1                         | 4,32                          | 7,230                       |
| 1700                             | 26,7                         | 4,24                          | 7,550                       |
| 1800                             | 26,2                         | 4,17                          | 7,860                       |
| 1900                             | 25,8                         | 4,10                          | 8,160                       |

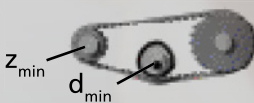
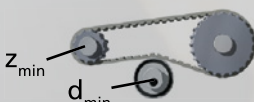
| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 2000                             | 25,40                        | 4,04                          | 8,46                        |
| 2200                             | 24,60                        | 3,92                          | 9,03                        |
| 2400                             | 23,90                        | 3,81                          | 9,58                        |
| 2600                             | 23,30                        | 3,71                          | 10,10                       |
| 2800                             | 22,70                        | 3,62                          | 10,60                       |
| 3000                             | 22,20                        | 3,53                          | 11,08                       |
| 3200                             | 21,70                        | 3,45                          | 11,55                       |
| 3400                             | 21,20                        | 3,36                          | 11,99                       |
| 3600                             | 20,70                        | 3,30                          | 12,42                       |
| 3800                             | 20,30                        | 3,23                          | 12,84                       |
| 4000                             | 19,86                        | 3,16                          | 13,24                       |
| 4500                             | 18,91                        | 3,01                          | 14,18                       |
| 5000                             | 18,06                        | 2,87                          | 15,05                       |
| 5500                             | 17,28                        | 2,75                          | 15,84                       |
| 6000                             | 16,58                        | 2,64                          | 16,58                       |
| 6500                             | 15,93                        | 2,54                          | 17,26                       |
| 7000                             | 15,33                        | 2,44                          | 17,88                       |
| 7500                             | 14,76                        | 2,35                          | 18,46                       |
| 8000                             | 14,24                        | 2,27                          | 18,99                       |
| 8500                             | 13,74                        | 2,18                          | 19,47                       |
| 9000                             | 13,28                        | 2,11                          | 19,92                       |
| 9500                             | 12,84                        | 2,04                          | 20,30                       |
| 10000                            | 12,42                        | 1,97                          | 20,70                       |

Rotational speeds over 10000 rpm and/or belt speeds over 60 m/s need special drive designs. Please ask for our advice.

## 2. Tension member strength (permitted tensile force of the belt F<sub>zul</sub>), Belt weight

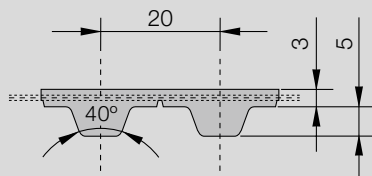
| Belt width                               | b       | [mm]   | 16    | 25    | 32    | 50    | 75    | 100   | 150   |
|------------------------------------------|---------|--------|-------|-------|-------|-------|-------|-------|-------|
| Tension member strength F <sub>zul</sub> |         | [N]    | 1200  | 2000  | 2700  | 4300  | 6600  | 8800  | 13400 |
| Belt weight                              | T 10    | [kg/m] | 0,077 | 0,120 | 0,154 | 0,240 | 0,360 | 0,480 | 0,720 |
|                                          | T 10-DL | [kg/m] | 0,091 | 0,143 | 0,182 | 0,285 | 0,428 | 0,570 | 0,855 |

## 3. Flexibility (Minimum numbers of teeth, minimum diameter)

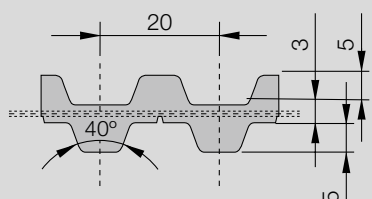
|                                                             |                       |    |                                                                                      |                                  |
|-------------------------------------------------------------|-----------------------|----|--------------------------------------------------------------------------------------|----------------------------------|
| Timing pulley                                               | z <sub>min</sub>      | 12 |  | Drive type without contraflexure |
| Tension roller (smooth),<br>running on teeth                | d <sub>min</sub> [mm] | 60 |                                                                                      |                                  |
| Timing pulley                                               | z <sub>min</sub>      | 20 |  | Drive type with contraflexure    |
| Tension roller (smooth),<br>running on the back of the belt | d <sub>min</sub> [mm] | 60 |                                                                                      |                                  |

# T standard Timing Belts

## T 20 / T 20-DL



CONTI® SYNCHROFLEX Timing Belt (SFX) T 20



CONTI® SYNCHROFLEX Timing Belt (SFX) T 20-DL

| Type | / Length* | Number of teeth |
|------|-----------|-----------------|
| T 20 | / 1260    | 63              |
| T 20 | / 1460    | 73              |
| T 20 | / 1780    | 89              |
| T 20 | / 1880    | 94              |
| T 20 | / 2600    | 130             |

Preferred belt width\* in mm:  
32, 50, 75, 100

| Type | / Length*   | Number of teeth |
|------|-------------|-----------------|
| T 20 | / 2600 DL** | 130             |
| T 20 | / 3100      | 155             |
| T 20 | / 3620      | 181             |
| T 20 | / 3620 DL** | 181             |

\* Other dimensions upon request.

\*\* In combination with reduced pulley gap please ask for technical support from your Mulco sales partner.

Standard T profile according to DIN 7721 with metric pitch and trapezoidal teeth.

The technical data refer to standard polyurethane and standard steel cord tension members.

### Available versions:

- single-sided (as standard)
- with "E" tension member for a better flexibility
- with Aramide tension member (except DL)
- polyurethane special materials upon request
- antistatic, coloured, mechanical reworked

DL: double-sided

### Order example

CONTI® SYNCHROFLEX Timing Belt 50 T20/2600

Belt width in mm \_\_\_\_\_

Type/Pitch \_\_\_\_\_

Belt length in mm \_\_\_\_\_

# T 20 / T 20-DL Technical data

## 1. Tooth shear strength (specific belt tooth strength)

| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 0                                | 101,5                        | 32,30                         | 0,000                       |
| 20                               | 98,1                         | 31,20                         | 0,654                       |
| 40                               | 95,3                         | 30,30                         | 1,271                       |
| 60                               | 92,8                         | 29,50                         | 1,856                       |
| 80                               | 90,7                         | 28,90                         | 2,420                       |
| 100                              | 88,7                         | 28,20                         | 2,960                       |
| 200                              | 81,2                         | 25,90                         | 5,420                       |
| 300                              | 75,9                         | 24,20                         | 7,590                       |
| 400                              | 71,8                         | 22,90                         | 9,570                       |
| 500                              | 68,4                         | 21,80                         | 11,410                      |
| 600                              | 65,6                         | 20,90                         | 13,110                      |
| 700                              | 63,1                         | 20,10                         | 14,730                      |
| 800                              | 60,9                         | 19,40                         | 16,250                      |
| 900                              | 59,0                         | 18,78                         | 17,700                      |
| 1000                             | 57,2                         | 18,22                         | 19,080                      |
| 1100                             | 55,6                         | 17,71                         | 20,400                      |
| 1200                             | 54,2                         | 17,24                         | 21,700                      |
| 1300                             | 52,8                         | 16,80                         | 22,900                      |
| 1400                             | 51,5                         | 16,40                         | 24,000                      |
| 1500                             | 50,3                         | 16,02                         | 25,200                      |
| 1600                             | 49,2                         | 15,66                         | 26,200                      |
| 1700                             | 48,2                         | 15,33                         | 27,300                      |
| 1800                             | 47,2                         | 15,01                         | 28,300                      |
| 1900                             | 46,2                         | 14,71                         | 29,300                      |

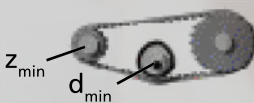
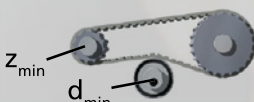
| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 2000                             | 45,3                         | 14,42                         | 30,2                        |
| 2200                             | 43,6                         | 13,89                         | 32,0                        |
| 2400                             | 42,1                         | 13,40                         | 33,7                        |
| 2600                             | 40,7                         | 12,95                         | 35,2                        |
| 2800                             | 39,4                         | 12,53                         | 36,7                        |
| 3000                             | 38,1                         | 12,13                         | 38,1                        |
| 3200                             | 37,0                         | 11,77                         | 39,4                        |
| 3400                             | 35,9                         | 11,42                         | 40,7                        |
| 3600                             | 34,9                         | 11,09                         | 41,8                        |
| 3800                             | 33,9                         | 10,78                         | 42,9                        |
| 4000                             | 33,0                         | 10,49                         | 43,9                        |
| 4500                             | 30,8                         | 9,81                          | 46,2                        |
| 5000                             | 28,9                         | 9,21                          | 48,2                        |
| 5500                             | 27,2                         | 8,66                          | 49,9                        |
| 6000                             | 25,6                         | 8,16                          | 51,2                        |
| 6500                             | 24,2                         | 7,69                          | 52,4                        |

Rotational speeds over 6500 rpm and/or belt speeds over 40 m/s need special drive designs. Please ask for our advice.

## 2. Tension member strength (permitted tensile force of the belt F<sub>zul</sub>), Belt weight

| Belt width                               | b       | [mm]   | 32    | 50    | 75    | 100   | 150   |
|------------------------------------------|---------|--------|-------|-------|-------|-------|-------|
| Tension member strength F <sub>zul</sub> |         | [N]    | 4750  | 7750  | 12000 | 16000 | 24500 |
| Belt weight                              | T 20    | [kg/m] | 0,269 | 0,420 | 0,630 | 0,840 | 1,260 |
|                                          | T 20-DL | [kg/m] | 0,355 | 0,555 | 0,833 | 1,110 | 1,665 |

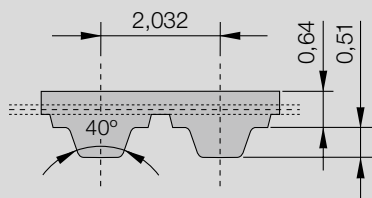
## 3. Flexibility (Minimum numbers of teeth, minimum diameter)

|                                                             |                       |     |                                                                                      |                                  |
|-------------------------------------------------------------|-----------------------|-----|--------------------------------------------------------------------------------------|----------------------------------|
| Timing pulley                                               | z <sub>min</sub>      | 15  |  | Drive type without contraflexure |
| Tension roller (smooth),<br>running on teeth                | d <sub>min</sub> [mm] | 120 |                                                                                      |                                  |
| Timing pulley                                               | z <sub>min</sub>      | 25  |  | Drive type with contraflexure    |
| Tension roller (smooth),<br>running on the back of the belt | d <sub>min</sub> [mm] | 120 |                                                                                      |                                  |



# Imperial Timing Belts

## M (MXL)



CONTI® SYNCHROFLEX Timing Belt (SFX) M (MXL)

Standard trapezoidal teeth according to DIN/ISO 5296 with Minipitch (2.032 mm = 0.08 Inch).

The technical data refer to standard polyurethane and standard steel cord tension members.

### Available versions:

- single-sided
- with Aramide tension member
- polyurethane special materials upon request
- antistatic, coloured, mechanical reworked

**FA:** with bigger back thickness

**FN:** with profiles on the back of the belt

| Type / Length*    | Number of teeth | Type / Length*    | Number of teeth |
|-------------------|-----------------|-------------------|-----------------|
| M 111 / 111,76    | 55              | M 264 / 264,16    | 130             |
| M 113 / 113,79    | 56              | M 284 / 284,48    | 140             |
| M 121 / 121,92    | 60              | M 304 / 304,80    | 150             |
| M 121 / 121,92 FA | 60              | M 355 / 355,60    | 175             |
| M 132 / 132,08    | 65              | M 373 / 373,89    | 184             |
| M 142 / 142,24    | 70              | M 449 / 449,07    | 221             |
| M 144 / 144,27    | 71              | M 503 / 503,94    | 248             |
| M 162 / 162,56    | 80              | M 508 / 508,00 FN | 250             |
| M 182 / 182,88    | 90              | M 520 / 520,19    | 256             |
| M 197 / 197,10    | 97              | M 599 / 599,44    | 295             |
| M 203 / 203,20    | 100             | M 731 / 731,52    | 360             |
| M 209 / 209,30    | 103             | M1178 / 1178,56   | 580             |
| M 213 / 213,36    | 105             |                   |                 |
| M 243 / 243,86    | 120             |                   |                 |
| M 256 / 256,03    | 126             |                   |                 |

Preferred belt width\* in mm:  
4, 6, 10

\* Other dimensions upon request.

### Order example

CONTI® SYNCHROFLEX Timing Belt 6 M / 182

Belt width in mm \_\_\_\_\_  
 Type/Pitch \_\_\_\_\_  
 Belt length in mm \_\_\_\_\_

# M (MXL) Technical data

## 1. Tooth shear strength (specific belt tooth strength)

| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 0                                | 6,58                         | 0,209                         | 0,000                       |
| 20                               | 6,36                         | 0,202                         | 0,004                       |
| 40                               | 6,18                         | 0,197                         | 0,008                       |
| 60                               | 6,03                         | 0,192                         | 0,012                       |
| 80                               | 5,90                         | 0,188                         | 0,016                       |
| 100                              | 5,79                         | 0,184                         | 0,019                       |
| 150                              | 5,56                         | 0,177                         | 0,028                       |
| 200                              | 5,38                         | 0,171                         | 0,036                       |
| 300                              | 5,10                         | 0,162                         | 0,051                       |
| 400                              | 4,89                         | 0,156                         | 0,065                       |
| 500                              | 4,72                         | 0,150                         | 0,079                       |
| 600                              | 4,58                         | 0,146                         | 0,092                       |
| 700                              | 4,45                         | 0,142                         | 0,104                       |
| 730                              | 4,42                         | 0,141                         | 0,108                       |
| 800                              | 4,35                         | 0,138                         | 0,116                       |
| 900                              | 4,25                         | 0,135                         | 0,127                       |
| 1000                             | 4,16                         | 0,132                         | 0,139                       |
| 1100                             | 4,08                         | 0,130                         | 0,150                       |
| 1200                             | 4,01                         | 0,128                         | 0,160                       |
| 1300                             | 3,94                         | 0,125                         | 0,171                       |
| 1400                             | 3,88                         | 0,124                         | 0,181                       |
| 1460                             | 3,85                         | 0,123                         | 0,187                       |
| 1500                             | 3,82                         | 0,122                         | 0,191                       |
| 1600                             | 3,77                         | 0,120                         | 0,201                       |
| 1700                             | 3,72                         | 0,118                         | 0,211                       |
| 1800                             | 3,67                         | 0,117                         | 0,220                       |
| 1900                             | 3,62                         | 0,115                         | 0,229                       |
| 2000                             | 3,58                         | 0,114                         | 0,239                       |
| 2200                             | 3,50                         | 0,111                         | 0,257                       |
| 2400                             | 3,42                         | 0,109                         | 0,274                       |

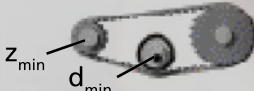
| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 2500                             | 3,39                         | 0,108                         | 0,282                       |
| 2600                             | 3,35                         | 0,107                         | 0,290                       |
| 2800                             | 3,29                         | 0,105                         | 0,307                       |
| 2880                             | 3,26                         | 0,104                         | 0,313                       |
| 3000                             | 3,23                         | 0,103                         | 0,323                       |
| 3200                             | 3,17                         | 0,101                         | 0,338                       |
| 3400                             | 3,12                         | 0,099                         | 0,354                       |
| 3600                             | 3,07                         | 0,098                         | 0,368                       |
| 3800                             | 3,02                         | 0,096                         | 0,383                       |
| 4000                             | 2,98                         | 0,095                         | 0,397                       |
| 4500                             | 2,88                         | 0,092                         | 0,432                       |
| 5000                             | 2,78                         | 0,088                         | 0,463                       |
| 5500                             | 2,70                         | 0,086                         | 0,495                       |
| 6000                             | 2,63                         | 0,084                         | 0,526                       |
| 6500                             | 2,56                         | 0,081                         | 0,555                       |
| 7000                             | 2,49                         | 0,079                         | 0,581                       |
| 7500                             | 2,43                         | 0,077                         | 0,607                       |
| 8000                             | 2,37                         | 0,075                         | 0,632                       |
| 8500                             | 2,32                         | 0,074                         | 0,657                       |
| 9000                             | 2,27                         | 0,072                         | 0,681                       |
| 9500                             | 2,22                         | 0,071                         | 0,703                       |
| 10000                            | 2,18                         | 0,069                         | 0,727                       |
| 12000                            | 2,02                         | 0,064                         | 0,808                       |
| 15000                            | 1,82                         | 0,058                         | 0,910                       |
| 18000                            | 1,66                         | 0,053                         | 0,996                       |
| 20000                            | 1,57                         | 0,050                         | 1,047                       |

Rotational speeds over 20000 rpm and/or belt speeds over 80 m/s need special drive designs. Please ask for our advice.

## 2. Tension member strength (permitted tensile force of the belt F<sub>zul</sub>), Belt weight

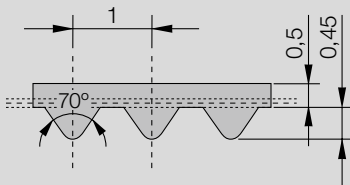
| Belt width                               | b | [mm]   | 4     | 6     | 10    | 16    | 25    | 32    |
|------------------------------------------|---|--------|-------|-------|-------|-------|-------|-------|
| Tension member strength F <sub>zul</sub> |   | [N]    | 39    | 65    | 117   | 195   | 312   | 403   |
| Belt weight                              | M | [kg/m] | 0,005 | 0,007 | 0,012 | 0,019 | 0,030 | 0,038 |

## 3. Flexibility (Minimum numbers of teeth, minimum diameter)

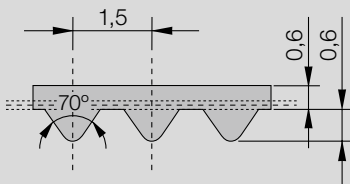
|                                                             |                       |    |                                                                                      |                                  |
|-------------------------------------------------------------|-----------------------|----|--------------------------------------------------------------------------------------|----------------------------------|
| Timing pulley                                               | z <sub>min</sub>      | 10 |  | Drive type without contraflexure |
| Tension roller (smooth),<br>running on teeth                | d <sub>min</sub> [mm] | 15 |                                                                                      |                                  |
| Timing pulley                                               | z <sub>min</sub>      | 18 |  | Drive type with contraflexure    |
| Tension roller (smooth),<br>running on the back of the belt | d <sub>min</sub> [mm] | 15 |                                                                                      |                                  |

# Serrated Profile Timing Belts

## K 1 / K 1,5



CONTI® SYNCHROFLEX Timing Belt (SFX) K 1



CONTI® SYNCHROFLEX Timing Belt (SFX) K 1,5

| Type  | / Length* | Number of teeth |
|-------|-----------|-----------------|
| K 1   | / 279,0   | 279             |
| K 1   | / 348,0   | 348             |
| K 1,5 | / 57,0**  | 38              |
| K 1,5 | / 64,5**  | 43              |
| K 1,5 | / 67,5**  | 45              |
| K 1,5 | / 100,5   | 67              |
| K 1,5 | / 141,0   | 94              |
| K 1,5 | / 165,0   | 110             |
| K 1,5 | / 201,0   | 134             |
| K 1,5 | / 228,0   | 152             |
| K 1,5 | / 286,0   | 191             |
| K 1,5 | / 300,0   | 200             |

Preferred belt width\* in mm:  
4, 6, 10

| Type  | / Length* | Number of teeth |
|-------|-----------|-----------------|
| K 1,5 | / 400,5   | 267             |
| K 1,5 | / 501,0   | 334             |
| K 1,5 | / 600,0   | 400             |
| K 1,5 | / 1242,5  | 828             |
| K 1,5 | / 1671,5  | 1114            |

\* Other dimensions upon request.  
\*\* In casting polyurethane 93 ShA, red colour.

Serrated metric pitch profile.

The technical data refer to standard polyurethane and standard steel cord tension members.

Available versions:

- single-sided
- with Aramide tension member
- polyurethane special materials upon request
- antistatic, coloured, mechanical reworked

Order example

CONTI® SYNCHROFLEX Timing Belt 6 K1,5/100,5

Belt width in mm

Type/Pitch

Belt length in mm

## K / K1,5 Technical data

### 1. Tooth shear strength (specific belt tooth strength)

| R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] | R.p.m.<br>n [min <sup>-1</sup> ] | F <sub>Uspec</sub><br>[N/cm] | M <sub>spec</sub><br>[Ncm/cm] | P <sub>spec</sub><br>[W/cm] |
|----------------------------------|------------------------------|-------------------------------|-----------------------------|----------------------------------|------------------------------|-------------------------------|-----------------------------|
| 0                                | 6,45                         | 0,154                         | 0,000                       | 2500                             | 3,32                         | 0,079                         | 0,207                       |
| 20                               | 6,23                         | 0,149                         | 0,003                       | 2600                             | 3,29                         | 0,079                         | 0,214                       |
| 40                               | 6,06                         | 0,145                         | 0,006                       | 2800                             | 3,22                         | 0,077                         | 0,225                       |
| 60                               | 5,91                         | 0,141                         | 0,009                       | 2880                             | 3,20                         | 0,076                         | 0,230                       |
| 80                               | 5,79                         | 0,138                         | 0,012                       | 3000                             | 3,17                         | 0,076                         | 0,238                       |
| 100                              | 5,68                         | 0,136                         | 0,014                       | 3200                             | 3,11                         | 0,074                         | 0,249                       |
| 150                              | 5,46                         | 0,130                         | 0,020                       | 3400                             | 3,06                         | 0,073                         | 0,260                       |
| 200                              | 5,28                         | 0,126                         | 0,026                       | 3600                             | 3,01                         | 0,072                         | 0,271                       |
| 300                              | 5,00                         | 0,119                         | 0,037                       | 3800                             | 2,96                         | 0,071                         | 0,281                       |
| 400                              | 4,80                         | 0,115                         | 0,048                       | 4000                             | 2,92                         | 0,070                         | 0,292                       |
| 500                              | 4,63                         | 0,111                         | 0,058                       | 4500                             | 2,82                         | 0,067                         | 0,317                       |
| 600                              | 4,49                         | 0,107                         | 0,067                       | 5000                             | 2,73                         | 0,065                         | 0,341                       |
| 700                              | 4,37                         | 0,104                         | 0,076                       | 5500                             | 2,65                         | 0,063                         | 0,364                       |
| 730                              | 4,33                         | 0,103                         | 0,079                       | 6000                             | 2,57                         | 0,061                         | 0,385                       |
| 800                              | 4,26                         | 0,102                         | 0,085                       | 6500                             | 2,51                         | 0,060                         | 0,408                       |
| 900                              | 4,17                         | 0,100                         | 0,094                       | 7000                             | 2,44                         | 0,058                         | 0,427                       |
| 1000                             | 4,08                         | 0,097                         | 0,102                       | 7500                             | 2,38                         | 0,057                         | 0,446                       |
| 1100                             | 4,00                         | 0,095                         | 0,110                       | 8000                             | 2,33                         | 0,056                         | 0,466                       |
| 1200                             | 3,93                         | 0,094                         | 0,118                       | 8500                             | 2,27                         | 0,054                         | 0,482                       |
| 1300                             | 3,87                         | 0,092                         | 0,126                       | 9000                             | 2,22                         | 0,053                         | 0,499                       |
| 1400                             | 3,81                         | 0,091                         | 0,133                       | 9500                             | 2,18                         | 0,052                         | 0,518                       |
| 1460                             | 3,77                         | 0,090                         | 0,138                       | 10000                            | 2,13                         | 0,051                         | 0,532                       |
| 1500                             | 3,75                         | 0,090                         | 0,141                       | 12000                            | 1,98                         | 0,047                         | 0,594                       |
| 1600                             | 3,69                         | 0,088                         | 0,148                       | 15000                            | 1,78                         | 0,042                         | 0,667                       |
| 1700                             | 3,64                         | 0,087                         | 0,155                       | 18000                            | 1,63                         | 0,039                         | 0,733                       |
| 1800                             | 3,60                         | 0,086                         | 0,162                       | 20000                            | 1,54                         | 0,037                         | 0,770                       |
| 1900                             | 3,55                         | 0,085                         | 0,169                       |                                  |                              |                               |                             |
| 2000                             | 3,51                         | 0,084                         | 0,175                       |                                  |                              |                               |                             |
| 2200                             | 3,43                         | 0,082                         | 0,189                       |                                  |                              |                               |                             |
| 2400                             | 3,35                         | 0,080                         | 0,201                       |                                  |                              |                               |                             |

Rotational speeds over 20000 rpm and/or belt speeds over 80 m/s need special drive designs. Please ask for our advice.

### 2. Tension member strength (permitted tensile force of the belt F<sub>zul</sub>), Belt weight

| Belt width                               | b     | [mm]   | 4      | 6     | 10    | 16    | 25    | 32    |
|------------------------------------------|-------|--------|--------|-------|-------|-------|-------|-------|
| Tension member strength F <sub>zul</sub> |       | [N]    | 39     | 65    | 117   | 195   | 312   | 403   |
| Belt weight                              | K 1   | [kg/m] | 0,0044 | 0,007 | 0,011 | 0,018 | 0,028 | 0,035 |
|                                          | K 1,5 | [kg/m] | 0,004  | 0,006 | 0,010 | 0,016 | 0,025 | 0,032 |

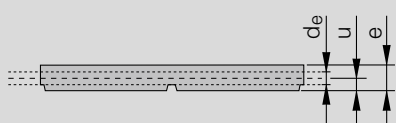
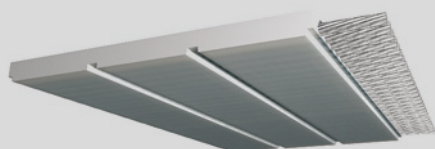
### 3. Flexibility (Minimum numbers of teeth, minimum diameter)

|                                              |                 |    |                                                                                      |                                  |
|----------------------------------------------|-----------------|----|--------------------------------------------------------------------------------------|----------------------------------|
| Timing pulley                                | $z_{\min}$      | 14 |  | Drive type without contraflexure |
| Tension roller (smooth),<br>running on teeth | $d_{\min}$ [mm] | 15 |                                                                                      |                                  |

|                                                             |                 |    |                                                                                      |                               |
|-------------------------------------------------------------|-----------------|----|--------------------------------------------------------------------------------------|-------------------------------|
| Timing pulley                                               | $z_{\min}$      | 20 |  | Drive type with contraflexure |
| Tension roller (smooth),<br>running on the back of the belt | $d_{\min}$ [mm] | 15 |                                                                                      |                               |

# F Flat Belts

## F / AF / BF / CF / DF



CONTI® SYNCHROFLEX Flat Belt (SFX)

The technical data refer to standard polyurethane and standard steel cord tension members.

| Type      | Mould Nr. | Length [mm] | e [mm] | u [mm] | d <sub>e</sub> [mm] |
|-----------|-----------|-------------|--------|--------|---------------------|
| F 213/7   | K3969-Z   | 212,95      | 1,60   | 0,800  | 0,15                |
| F 254/4   | K5111-Z   | 253,74      | 0,80   | 0,400  | 0,15                |
| F 314/5   | K5558-Z   | 314,16      | 5,50   | 2,000  | 0,60                |
| F 315/4   | K5428-Z   | 315,73      | 1,20   | 0,600  | 0,15                |
| F 330/2   | K5651-Z   | 330,00      | 1,00   | 0,400  | 0,15                |
| F 435/2   | K5691-Z   | 435,00      | 0,80   | 0,400  | 0,15                |
| F 502/7   | K5430-Z   | 501,84      | 1,00   | 0,500  | 0,30                |
| F 697/4   | 52648-Z   | 695,57      | 0,55   | 0,275  | 0,15                |
| F 738/4   | K5112-Z   | 738,64      | 0,80   | 0,400  | 0,15                |
| F 762/7   | K3708-Z   | 762,00      | 2,60   | 1,300  | 0,30                |
| F 959/2   | K5578-Z   | 959,40      | 1,00   | 0,500  | 0,30                |
| F 1240/10 | K5178-Z   | 1240,00     | 1,20   | 0,800  | 0,60                |
| F 1458/9  | K4377-Z   | 1458,50     | 2,60   | 0,450  | 0,30                |
| F 1780/10 | K4667-Z   | 1780,00     | 1,40   | 0,600  | 0,60                |
| AF 24     | 51669-Z   | 113,08      | 0,80   | 0,275  | 0,15                |
| AF 56     | 51772-Z   | 263,16      | 0,80   | 0,400  | 0,15                |
| AF 67     | 51601-Z   | 315,70      | 0,70   | 0,275  | 0,15                |
| AF 76     | 39669-Z   | 357,30      | 0,80   | 0,400  | 0,15                |
| AF 87     | 38919-Z   | 409,57      | 0,85   | 0,575  | 0,15                |
| AF 108    | 39796-Z   | 508,39      | 0,70   | 0,275  | 0,15                |
| AF 138    | 39847-Z   | 649,60      | 0,80   | 0,275  | 0,15                |
| AF 140    | 40121-Z   | 659,03      | 0,60   | 0,275  | 0,15                |
| AF 148    | 39631-Z   | 695,57      | 0,80   | 0,275  | 0,15                |
| BF 44     | 38852-Z   | 345,57      | 0,90   | 0,450  | 0,30                |
| BF 64     | 38805-Z   | 501,85      | 0,90   | 0,450  | 0,30                |
| BF 67     | 38902-Z   | 525,70      | 0,90   | 0,450  | 0,30                |
| BF 70     | 39980-Z   | 548,90      | 0,90   | 0,450  | 0,30                |
| CF 66     | 38917-Z   | 828,55      | 1,40   | 0,700  | 0,60                |
| DF 45     | 39839-Z   | 282,74      | 0,90   | 0,450  | 0,30                |
| DF 130    | 51636-Z   | 815,34      | 0,90   | 0,450  | 0,30                |
| DF 153    | 39979-Z   | 959,40      | 0,90   | 0,450  | 0,30                |

### Order example

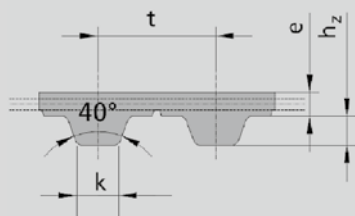
CONTI® SYNCHROFLEX Flat Belt 10 AF/108

Belt width in mm

Type/No. of grooves

# Timing Belts with special tooth profiles

## V (excerpts of XL, L, H)



| Type      |   | Imperial pitch | Shape No. | Length<br>l [mm] | Pitch<br>t [mm] | Module<br>m | Number of<br>teeth z | k [mm] | h <sub>z</sub> [mm] | e [mm] |
|-----------|---|----------------|-----------|------------------|-----------------|-------------|----------------------|--------|---------------------|--------|
| V 177/5   | F | XL             | K5841-F   | 177,80           | 5,080           | 1,617       | 35                   | 1,20   | 1,20                | 0,85   |
| V 203/5   | F | XL             | K5369-F   | 203,20           | 5,080           | 1,617       | 40                   | 1,37   | 1,27                | 0,80   |
| V 233/5   | F | XL             | K5674-F   | 233,68           | 5,080           | 1,617       | 46                   | 1,37   | 1,22                | 1,28   |
| V 284/5   | F | XL             | K5445-F   | 284,48           | 5,080           | 1,617       | 56                   | 1,80   | 1,20                | 0,70   |
| V 304/5   | F | XL             | K5368-F   | 304,80           | 5,080           | 1,617       | 60                   | 1,37   | 1,27                | 0,60   |
| V 381/5   | F | XL             | K6026-F   | 381,00           | 5,080           | 1,617       | 75                   | 1,35   | 1,25                | 0,95   |
| V 406/5   | F | XL             | K6064-F   | 406,40           | 5,080           | 1,617       | 80                   | 1,37   | 1,27                | 1,30   |
| V 508/5   | F | XL             | K6011-F   | 508,00           | 5,080           | 1,617       | 100                  | 1,32   | 1,22                | 1,32   |
| V 609/5   | F | XL             | K5546-F   | 609,60           | 5,080           | 1,617       | 120                  | 1,36   | 1,20                | 0,70   |
| V 635/5   | F | XL             | K5394-F   | 635,00           | 5,050           | 1,617       | 125                  | 1,32   | 1,20                | 0,60   |
| V 685/5   | F | XL             | K5821-F   | 685,80           | 9,538           | 1,617       | 135                  | 1,62   | 1,20                | 0,70   |
| V 889/5   | F | XL             | K5601-F   | 889,00           | 5,050           | 1,617       | 175                  | 1,80   | 1,20                | 1,00   |
| V 1097/5  | F | XL             | K5993-F   | 1097,28          | 5,080           | 1,617       | 216                  | 1,37   | 1,27                | 1,30   |
| V 1102/5  | F | XL             | K5776-F   | 1102,36          | 5,080           | 1,617       | 217                  | 1,80   | 1,20                | 1,20   |
| V 1178/5  | F | XL             | K5876-F   | 1178,56          | 5,080           | 1,617       | 232                  | 1,80   | 1,20                | 1,00   |
| V 1584/5  | F | XL             | K5600-F   | 1584,96          | 5,080           | 1,617       | 312                  | 1,80   | 1,20                | 1,00   |
| V 438/9   | F | L              | K5095-F   | 438,15           | 9,525           | 3,032       | 46                   | 3,20   | 1,80                | 1,00   |
| V 571/9   | F | L              | K6114-F   | 571,50           | 9,525           | 3,032       | 60                   | 3,26   | 1,91                | 1,69   |
| V 971/9   | F | L              | K5354-F   | 971,55           | 9,525           | 3,032       | 102                  | 3,25   | 1,90                | 1,40   |
| V 990/9   | F | L              | K5185-F   | 990,60           | 9,525           | 3,032       | 104                  | 3,10   | 2,20                | 1,65   |
| V 1000/9  | F | L              | K5202-F   | 1000,13          | 9,525           | 3,032       | 105                  | 3,10   | 2,20                | 1,65   |
| V 1028/9  | F | L              | K5589-F   | 1028,70          | 9,525           | 3,032       | 108                  | 3,10   | 1,90                | 1,65   |
| V 1104/9  | F | L              | K5435-F   | 1104,90          | 9,525           | 3,032       | 116                  | 3,25   | 1,90                | 2,30   |
| V 1152/9  | F | L              | K5493-F   | 1152,53          | 9,525           | 3,032       | 121                  | 3,10   | 1,90                | 1,65   |
| V 1257/9  | F | L              | K5310-F   | 1257,30          | 9,525           | 3,032       | 132                  | 3,20   | 1,90                | 1,65   |
| V 1390/9  | F | L              | K5449-F   | 1390,65          | 9,525           | 3,032       | 146                  | 3,20   | 1,90                | 1,30   |
| V 914/12  | F | H              | K5692-F   | 914,40           | 12,700          | 4,043       | 72                   | 4,30   | 2,20                | 1,85   |
| V 1270/12 | F | H              | K5258-F   | 1270,00          | 12,700          | 4,043       | 100                  | 4,45   | 2,18                | 2,01   |
| V 1778/12 | F | H              | K5260-F   | 1778,00          | 12,700          | 4,043       | 140                  | 4,40   | 2,30                | 1,40   |

### Order example

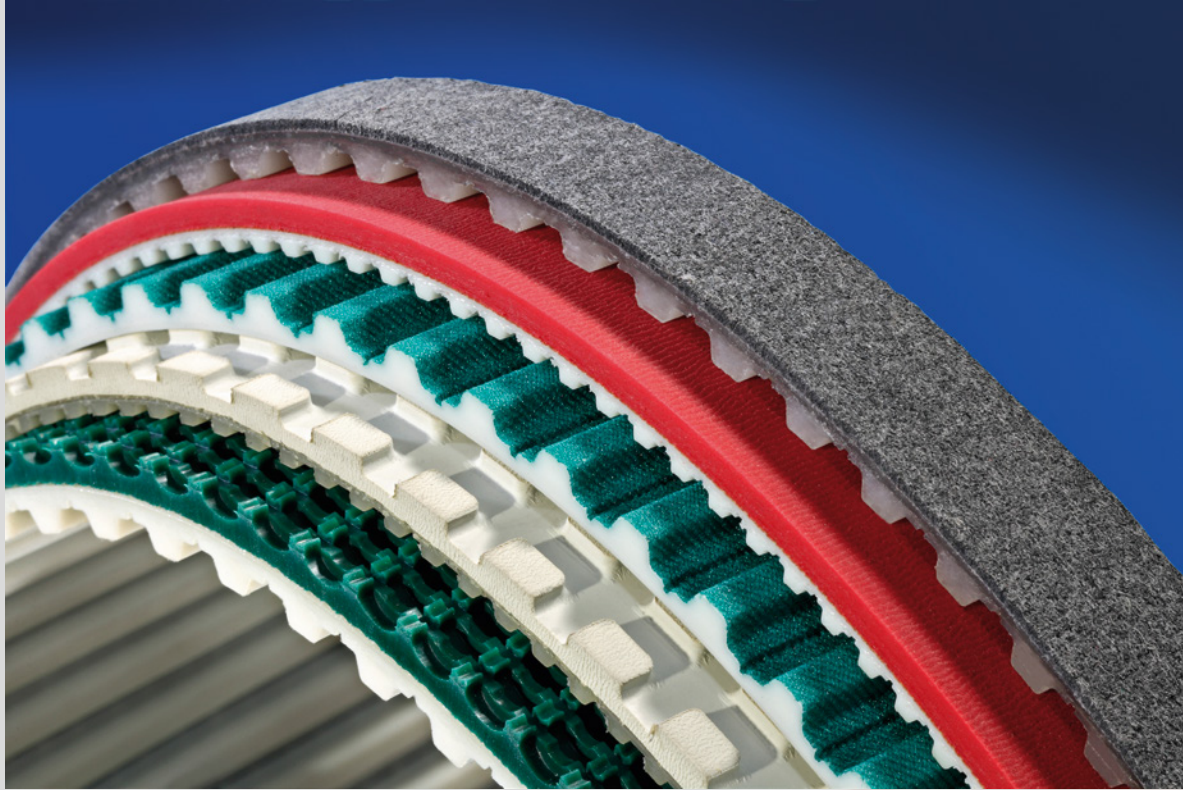
CONTI® SYNCHROFLEX Flat Belt 10 V 177 / 5 F

Belt width in mm

Type/Length



## Coated timing belts



CONTI® SYNCHROFLEX timing belts consist of wear resistant polyurethane (PUR) and high tensile steel cord tension members. The coating of the timing belts with various materials provides a variety of application possibilities in the transport technology.

The selection of the correct coating depends on the transport item properties and the required grip. High friction for a good carrying effect, low friction to reduce the power transmission performance, soft for sensitive items or hard for sharp-edged items are the determining factors.

Every material involved assumes its task according to its specific property.

To meet specific transport applications, the tooth side and/or the transport side can be mechanically reworked. In this manner, the flexibility of the entire belt can be restored by making incisions in thick coatings.

### Resistance

Depending on the application the resistance of each material part of the coated timing belt is to be viewed separately. The material resistance depends, among others, on the pH value, the concentration, the temperature and the influencing time of the medium. Simple oils generally have no damaging effect on the belt. Additives in the oil and temperatures over approx. 40°C can reduce the longevity.

### Friction

The friction of the belt on a support produces heat. This increases the more the belt is loaded by the items to be transported. The bed support must be selected such that the friction value of the transport belt in contact with the material of the bed plate results in a minimum value. The bed plate should guarantee good heat dissipation under high pressure forces.

The friction value is temperature dependent. It increases as the temperature rises and reduces at temperatures below zero (frost).

### Information

You should ask for advice for coatings over 75 mm wide and approx. 2 mm thick because of the different processing properties.

### Drives with contraflexure

Generally, coated timing belts are suitable for drives with contraflexure. Very smooth coatings (e.g. Sylomer) must be adjusted with reduced pre-tension.

### Temperature influence

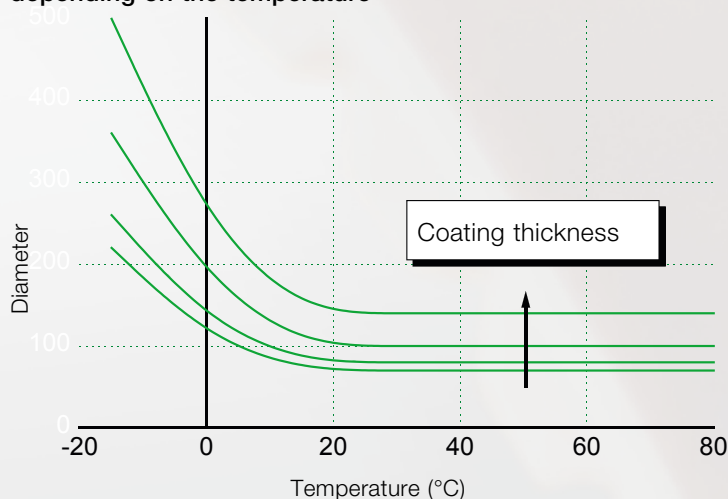
If hot items (above approx. 80°C) are transported, ensure that the contact time is as short as possible to avoid heating of the belt substructure to over 80°C. A coated belt can resist a thermally higher load over short distances or a short period, assuming that there being sufficient cooling for the remainder of the revolution.

The tooth shear strength is slightly reduced in a temperature range of over approx. 60°C. An additional safety factor is only required with a high tooth load.

The flexibility of the coating is reduced with low ambient temperatures. To this effect, select larger timing pulley diameters compared to normal temperatures (see diagram). The flexibility of the timing belt is also reduced with low temperatures.

The stated minimum diameters are standard values. They are valid with the ambient temperature of 20°C and a speed of 1m/s. A low load of the goods to be transported is presumed. Reducing the diameters is possible with precise knowledge of the application. Relevant advice can be obtained from your Mulco partner.

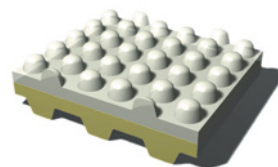
**Synchronising pulley diameter depending on the temperature**



# Coated timing belts

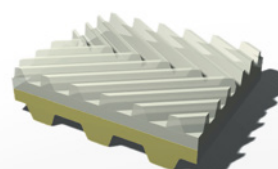
## NP 385

|                         |                                                                                       |
|-------------------------|---------------------------------------------------------------------------------------|
| Material designation:   | polyurethane                                                                          |
| Colour:                 | transparent                                                                           |
| Hardness:               | 85 Shore A                                                                            |
| Available thickness:    | 4 mm                                                                                  |
| Minimum diameter:       | 120 mm                                                                                |
| Temperature resistance: | -20°C to +50°C                                                                        |
| Resistances:            | resistant against simple oils and fats                                                |
| Properties:             | nub tip contact with the product to be transported                                    |
| Application fields:     | transport with oil influence, sheet transport, elevator, brick making, glass industry |



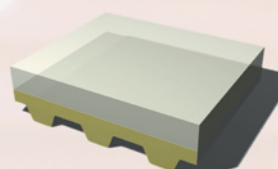
## FG 385

|                         |                                                                                       |
|-------------------------|---------------------------------------------------------------------------------------|
| Material designation:   | polyurethane                                                                          |
| Colour:                 | transparent                                                                           |
| Hardness:               | 85 Shore A                                                                            |
| Available thickness:    | 4 mm                                                                                  |
| Minimum diameter:       | 120 mm                                                                                |
| Temperature resistance: | -20°C to +50°C                                                                        |
| Resistances:            | resistant against simple oils and fats                                                |
| Properties:             | linear contact of the product to be transported                                       |
| Application fields:     | transport with oil influence, sheet transport, elevator, brick making, glass industry |



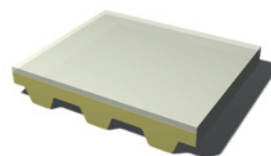
## PUR 385

|                         |                                                                                                                                       |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Material designation:   | polyurethane                                                                                                                          |
| Colour:                 | transparent                                                                                                                           |
| Hardness:               | 85 Shore A                                                                                                                            |
| Available thickness:    | 3      4      5      6      mm                                                                                                        |
| Minimum diameter:       | 80      120      150      180      mm                                                                                                 |
| Temperature resistance: | -20°C to +50°C                                                                                                                        |
| Resistances:            | resistant to petrol, ozone, simple fats and oils                                                                                      |
| Properties:             | high resistance to wear, high coefficient of friction                                                                                 |
| Application fields:     | transport of parts showing a coarse surface or burrs, woodworking and sheet fabricating industry, glass industry, cardboard transport |

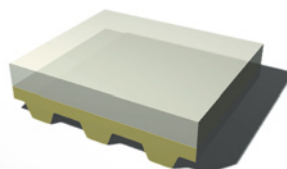


**HV1 film**

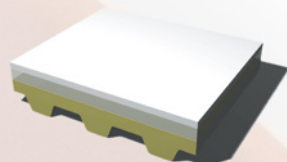
|                       |                                                                                                     |
|-----------------------|-----------------------------------------------------------------------------------------------------|
| Material designation: | polyurethane                                                                                        |
| Colour:               | transparent, shiny                                                                                  |
| Hardness:             | 88 Shore A                                                                                          |
| Available thickness:  | 1 mm                                                                                                |
| Minimum diameter:     | 60 mm                                                                                               |
| Melting range:        | approx. 166°C                                                                                       |
| Resistances:          | resistant to some cleaning agents                                                                   |
| Properties:           | good wear resistance, adhesive                                                                      |
| Application fields:   | foodstuff industry, glass and woodworking industry, sheet fabricating industry, cardboard transport |

**Polythane D15**

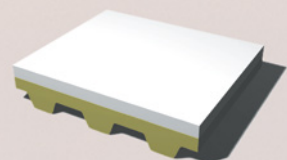
|                         |                                                                                     |
|-------------------------|-------------------------------------------------------------------------------------|
| Material designation:   | polyurethane                                                                        |
| Colour:                 | transparent/yellowish                                                               |
| Hardness:               | 70 Shore A                                                                          |
| Available thickness:    | 2 3 to 6 mm                                                                         |
| Minimum diameter:       | 60 80 mm                                                                            |
| Temperature resistance: | 80°C                                                                                |
| Resistances:            | resistant against simple oils and fats                                              |
| Properties:             | wear resistant                                                                      |
| Application fields:     | general transport tasks, woodworking and glass industry, sheet fabricating industry |

**Compound coating**

|                         |                                                                               |
|-------------------------|-------------------------------------------------------------------------------|
| Material designation:   | e.g. PUR/silicone                                                             |
| Colour:                 | white                                                                         |
| Hardness:               | 60 / 50 Shore A                                                               |
| Available thickness:    | 2.4 mm                                                                        |
| Minimum diameter:       | 60 mm                                                                         |
| Temperature resistance: | in accordance with the materials used,<br>Silicone: short-term 180°C          |
| Resistances:            | in accordance with the materials used                                         |
| Properties:             | non-stick                                                                     |
| Application fields:     | light weight transport tasks, air filter transport, textile and wood industry |

**PVC white**

|                         |                                                                            |
|-------------------------|----------------------------------------------------------------------------|
| Material designation:   | PVC                                                                        |
| Colour:                 | white                                                                      |
| Hardness:               | approx. 40 Shore A                                                         |
| Available thickness:    | 2 mm (more thicknesses on request)                                         |
| Minimum diameter:       | 60 mm                                                                      |
| Temperature resistance: | -15°C° to +90°C                                                            |
| Resistances:            | top covering layer is resistant against acid, salts and bases              |
| Properties:             | FDA approval for contact with foodstuff                                    |
| Application fields:     | foodstuff industry, film processing, pharmaceutical and packaging industry |

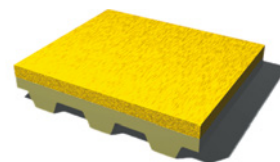




# Coated timing belts

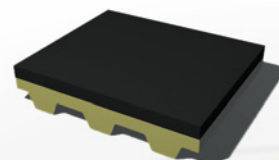
## PU yellow

|                         |                                                                                                            |    |    |     |     |     |    |    |
|-------------------------|------------------------------------------------------------------------------------------------------------|----|----|-----|-----|-----|----|----|
| Material designation:   | polyurethane                                                                                               |    |    |     |     |     |    |    |
| Colour:                 | yellow                                                                                                     |    |    |     |     |     |    |    |
| Hardness:               | approx. 55 ± 7 Shore A                                                                                     |    |    |     |     |     |    |    |
| Available thickness:    | 2                                                                                                          | 3  | 4  | 5   | 6   | 8   | 10 | mm |
| Minimum diameter:       | 60                                                                                                         | 60 | 80 | 100 | 100 | 100 | 20 | mm |
| Temperature resistance: | -10°C to +60°C                                                                                             |    |    |     |     |     |    |    |
| Resistances:            | resistant against simple oils and fats                                                                     |    |    |     |     |     |    |    |
| Properties:             | good wear resistance, very good to rework                                                                  |    |    |     |     |     |    |    |
| Application fields:     | vacuum transport belts subject to high loads, paper industry,<br>textile industry, glass and wood industry |    |    |     |     |     |    |    |



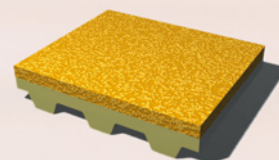
## Porol

|                         |                                                                                     |    |    |    |  |  |  |  |  |  |
|-------------------------|-------------------------------------------------------------------------------------|----|----|----|--|--|--|--|--|--|
| Material designation:   | cellular rubber                                                                     |    |    |    |  |  |  |  |  |  |
| Colour:                 | black                                                                               |    |    |    |  |  |  |  |  |  |
| Density, hardness:      | 190 g/dm <sup>3</sup> , approx. 15 Shore A                                          |    |    |    |  |  |  |  |  |  |
| Available thickness:    | 3                                                                                   | 5  | 10 | mm |  |  |  |  |  |  |
| Minimum diameter:       | 40                                                                                  | 60 | 80 | mm |  |  |  |  |  |  |
| Temperature resistance: | -40°C to +70°C                                                                      |    |    |    |  |  |  |  |  |  |
| Resistances:            | resistance to some simple fats and oils                                             |    |    |    |  |  |  |  |  |  |
| Properties:             | smooth foam quality, high coefficient of friction                                   |    |    |    |  |  |  |  |  |  |
| Application fields:     | transport of sensitive parts, paper industry, textile industry, cardboard transport |    |    |    |  |  |  |  |  |  |



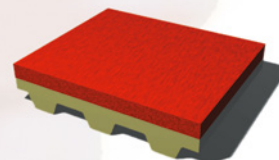
## Celloflex

|                         |                                                                              |    |    |    |       |
|-------------------------|------------------------------------------------------------------------------|----|----|----|-------|
| Material designation:   | microcellular elastomeric polyurethane                                       |    |    |    |       |
| Colour:                 | yellow-brown                                                                 |    |    |    |       |
| Density:                | 350 g/dm3                                                                    |    |    |    |       |
| Available thickness:    | 1                                                                            | 2  | 3  | 4  | 5 mm  |
| Minimum diameter:       | 40                                                                           | 40 | 60 | 60 | 80 mm |
| Temperature resistance: | -30°C to +80°C                                                               |    |    |    |       |
| Resistances:            | resistance to some simple fats and oils                                      |    |    |    |       |
| Properties:             | highly flexible, high damping ratio                                          |    |    |    |       |
| Application fields:     | transport of sensitive items, film and packaging industry, textile transport |    |    |    |       |



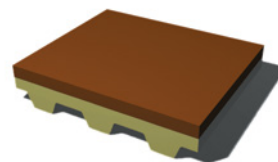
## Linatex

|                         |                                                                                                                                                                                                      |     |    |    |     |     |     |     |     |    |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|----|-----|-----|-----|-----|-----|----|
| Material designation:   | natural rubber                                                                                                                                                                                       |     |    |    |     |     |     |     |     |    |
| Colour:                 | red                                                                                                                                                                                                  |     |    |    |     |     |     |     |     |    |
| Hardness:               | approx. 40 Shore A                                                                                                                                                                                   |     |    |    |     |     |     |     |     |    |
| Available thickness:    | 1.5                                                                                                                                                                                                  | 2.4 | 3  | 5  | 6.4 | 8   | 10  | 12  | 20  | mm |
| Minimum diameter:       | 40                                                                                                                                                                                                   | 60  | 80 | 80 | 100 | 100 | 120 | 120 | 150 | mm |
| Temperature resistance: | -40°C to +70°C                                                                                                                                                                                       |     |    |    |     |     |     |     |     |    |
| Resistances:            | resistant to some oils and abrasion when wet                                                                                                                                                         |     |    |    |     |     |     |     |     |    |
| Properties:             | wear resistant to a limited extent, high coefficient of friction, high resistance to rupture, is still flexible at lower temperatures, please request for advice for coating thicknesses over 2.4 mm |     |    |    |     |     |     |     |     |    |
| Application fields:     | transport or haul-off belts subject to high friction, wood, paper, textile industry, transport with a high acceleration                                                                              |     |    |    |     |     |     |     |     |    |



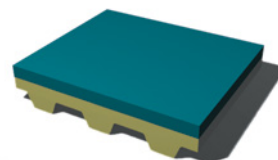
### Sylomer

|                         |                                                                                             |           |                       |
|-------------------------|---------------------------------------------------------------------------------------------|-----------|-----------------------|
| Material designation:   | Elastomeric PUR                                                                             |           |                       |
| Colour:                 | Blue (R)                                                                                    | Green (L) | Brown (M)             |
| Density:                | 220                                                                                         | 300       | 400 g/dm <sup>3</sup> |
| Available thickness:    | 3-25                                                                                        | 3-25      | 3-25 mm               |
| Minimum diameter:       | 80 - 120                                                                                    | 80 - 120  | 80 - 120 mm           |
| Temperature resistance: | -30°C to +70°C                                                                              |           |                       |
| Resistances:            | resistance to some oils and fats                                                            |           |                       |
| Properties:             | good wear resistance, not suitable for sharpened items                                      |           |                       |
| Application fields:     | transport of light weight parts, paper and textile industry, haul-off belts, pressure belts |           |                       |



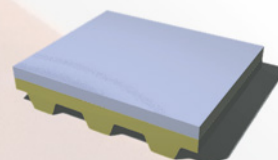
### PVC blue

|                         |                                                                                                               |  |  |
|-------------------------|---------------------------------------------------------------------------------------------------------------|--|--|
| Material designation:   | PVC                                                                                                           |  |  |
| Colour:                 | blue                                                                                                          |  |  |
| Hardness:               | approx. 40 Shore A                                                                                            |  |  |
| Available thickness:    | 1 mm                                                                                                          |  |  |
| Minimum diameter:       | 30 mm                                                                                                         |  |  |
| Temperature resistance: | -15°C to +90°C                                                                                                |  |  |
| Resistances:            | top covering layer is resistant against acid, salts and bases                                                 |  |  |
| Properties:             | high coefficient of friction                                                                                  |  |  |
| Application fields:     | paper, film, wood and sheet transport, pharmaceutic and packaging industry, application in card reading units |  |  |



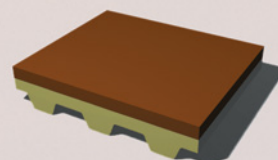
### Chrome-leather

|                         |                                                                                                                                                                       |     |    |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|
| Material designation:   | leather                                                                                                                                                               |     |    |
| Colour:                 | grey-blue                                                                                                                                                             |     |    |
| Hardness:               | -                                                                                                                                                                     |     |    |
| Available thickness:    | 2                                                                                                                                                                     | 3   | mm |
| Minimum diameter:       | 80                                                                                                                                                                    | 100 | mm |
| Temperature resistance: | 60°C                                                                                                                                                                  |     |    |
| Resistances:            | resistant against simple oils and fats                                                                                                                                |     |    |
| Properties:             | good friction even with oiled surfaces of items to be transported, good wear resistance behaviour                                                                     |     |    |
| Application fields:     | transport of fatty or oily parts, sheet and tube industry, transport of sensitive products, caterpillar haul-offs in the cable industry, transport of lacquered parts |     |    |



### Correx

|                         |                                                                        |     |    |
|-------------------------|------------------------------------------------------------------------|-----|----|
| Material designation:   | para rubber                                                            |     |    |
| Colour:                 | brown                                                                  |     |    |
| Hardness:               | approx. 35 to 40 shore A                                               |     |    |
| Available thickness:    | 6                                                                      | 10  | mm |
| Minimum diameter:       | 80                                                                     | 120 | mm |
| Temperature resistance: | up to approx. 70°C                                                     |     |    |
| Resistances:            | resistant to some oils and fats                                        |     |    |
| Properties:             | wear resistant quality, good carrying behaviour                        |     |    |
| Application fields:     | general transport tasks, sheet and tube transport, cardboard transport |     |    |

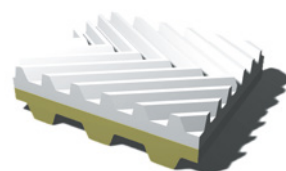




# Coated timing belts

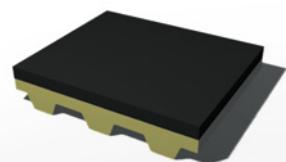
## PVC herringbone

|                         |                                                                |
|-------------------------|----------------------------------------------------------------|
| Material designation:   | PVC                                                            |
| Colour:                 | white                                                          |
| Hardness:               | approx. 65 Shore A                                             |
| Available thickness:    | 3 mm                                                           |
| Minimum diameter:       | 60 mm                                                          |
| Temperature resistance: | -10°C to +110°C                                                |
| Resistances:            | resistant to some oils and fats                                |
| Properties:             | FDA approval for contact with foodstuff                        |
| Application fields:     | foodstuff industry, elevators, transport of glass in wet areas |



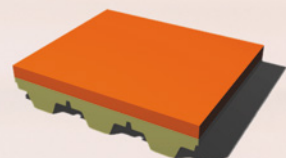
## Viton

|                         |                                                                                                                             |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Material designation:   | FKM mix                                                                                                                     |
| Colour:                 | black                                                                                                                       |
| Hardness:               | 75 ± 5 Shore A                                                                                                              |
| Available thickness:    | 2 4 mm                                                                                                                      |
| Minimum diameter:       | 80 100 mm                                                                                                                   |
| Temperature resistance: | -10°C to +275°C                                                                                                             |
| Resistances:            | high heat resistance, resistant against simple oils and fats, petrol, acids, lyes, ozone                                    |
| Application fields:     | short-term transport of parts with high residual heat, belts with glue and adhesive contact, metal part and glass transport |



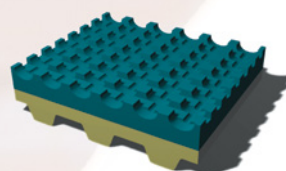
## Linatrilite

|                         |                                                                                                       |
|-------------------------|-------------------------------------------------------------------------------------------------------|
| Material designation:   | vulcanized material based on nitrile                                                                  |
| Colour:                 | orange                                                                                                |
| Hardness:               | 55 Shore A                                                                                            |
| Available thickness:    | 3-6 mm (more thicknesses on request, max. 25 mm)                                                      |
| Minimum diameter:       | depending on the selected thickness, the thicker the coating the larger the diameter must be selected |
| Temperature resistance: | -20°C to +110°C                                                                                       |
| Resistances:            | resistant against oil, fat and other chemicals                                                        |
| Properties:             | good wear resistance, ageing stability, fatigue resisting                                             |
| Application fields:     | haul-off belts in the textile area, transport of waxy materials                                       |



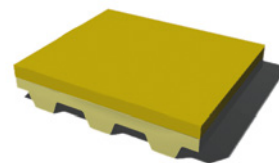
## Supergrip green/blue

|                         |                                                                                                                         |                      |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------|
| Material designation:   | PVC                                                                                                                     |                      |
| Colour:                 | green                                                                                                                   | blue                 |
| Hardness:               | approx. 40 Shore A                                                                                                      | approx. 40 Shore A   |
| Available thickness:    | 4 mm                                                                                                                    | 4 mm                 |
| Minimum diameter:       | 60 mm                                                                                                                   | 60 mm                |
| Temperature resistance: | -15°C to +90°C                                                                                                          | -15°C to + 90°C      |
| Resistances:            | resistant against simple oils and fats                                                                                  | not resistant to oil |
| Properties:             | high resistance to wear, high coefficient of friction                                                                   |                      |
| Application fields:     | particularly suitable for inclined conveying, transport of light weight items, elevators in the wood and paper industry |                      |

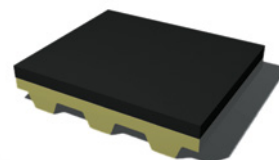


**RP 400**

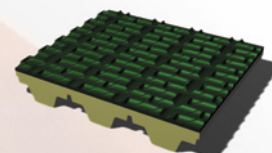
|                         |                                                                   |    |    |    |    |                                              |
|-------------------------|-------------------------------------------------------------------|----|----|----|----|----------------------------------------------|
| Material designation:   | rubber                                                            |    |    |    |    |                                              |
| Colour:                 | yellow                                                            |    |    |    |    |                                              |
| Hardness:               | 35 Shore A                                                        |    |    |    |    |                                              |
| Available thickness:    | 2                                                                 | 3  | 4  | 5  | 6  | mm (more thicknesses on request, max. 30 mm) |
| Minimum diameter:       | 30                                                                | 40 | 40 | 60 | 60 | mm                                           |
| Temperature resistance: | -10°C to +80°C                                                    |    |    |    |    |                                              |
| Resistances:            | resistant to some oils and fats                                   |    |    |    |    |                                              |
| Properties:             | very high resistance against wear and tear                        |    |    |    |    |                                              |
| Application fields:     | glass and steel industry, abrasive material up to a size of 40 mm |    |    |    |    |                                              |

**NBR**

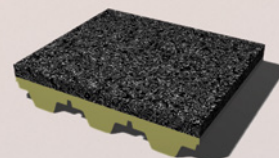
|                         |                                                                                           |    |    |
|-------------------------|-------------------------------------------------------------------------------------------|----|----|
| Material designation:   | Nitrile Butadiene Rubber                                                                  |    |    |
| Colour:                 | black                                                                                     |    |    |
| Hardness:               | 65 ± 5 Shore A                                                                            |    |    |
| Available thickness:    | 1,5                                                                                       | 3  | mm |
| Minimum diameter:       | 60                                                                                        | 80 | mm |
| Temperature resistance: | -20°C to +70°C                                                                            |    |    |
| Resistances:            | well resistant against oils, resistant to a limit extent against petrol, acid and alkalis |    |    |
| Application fields:     | general transport tasks                                                                   |    |    |

**PVC Minigrip**

|                         |                                                                          |    |
|-------------------------|--------------------------------------------------------------------------|----|
| Material designation:   | PVC                                                                      |    |
| Colour:                 | green/blue                                                               |    |
| Hardness:               | approx. 65 Shore A                                                       |    |
| Available thickness:    | 1,5                                                                      | mm |
| Minimum diameter:       | 30                                                                       | mm |
| Temperature resistance: | -10°C to +110°C                                                          |    |
| Resistances:            | resistant to some oils and fats                                          |    |
| Properties:             | high coefficient of friction                                             |    |
| Application fields:     | transport of damp parts, good carrying behaviour due to profiled surface |    |

**TT 60**

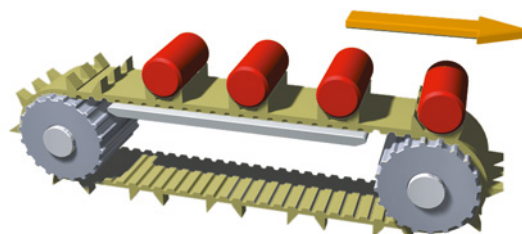
|                         |                                                  |  |  |  |  |  |
|-------------------------|--------------------------------------------------|--|--|--|--|--|
| Material designation:   | polyester fleece                                 |  |  |  |  |  |
| Colour:                 | black                                            |  |  |  |  |  |
| Available thickness:    | 2 mm                                             |  |  |  |  |  |
| Minimum diameter:       | 120 mm                                           |  |  |  |  |  |
| Temperature resistance: | -10°C to +120°C                                  |  |  |  |  |  |
| Resistances:            | resistance to oils and fats                      |  |  |  |  |  |
| Properties:             | electro-static properties                        |  |  |  |  |  |
| Application fields:     | glass industry as transport belt in the hot area |  |  |  |  |  |



# Integrated flights

## CONTI® SYNCHROFLEX Timing Belts with cast flights/profiles:

CONTI® SYNCHROFLEX timing belts with profiles offer further opportunities for the designer with flights or cleats on the belt back. Can be used in conveying, feeding or positioning.

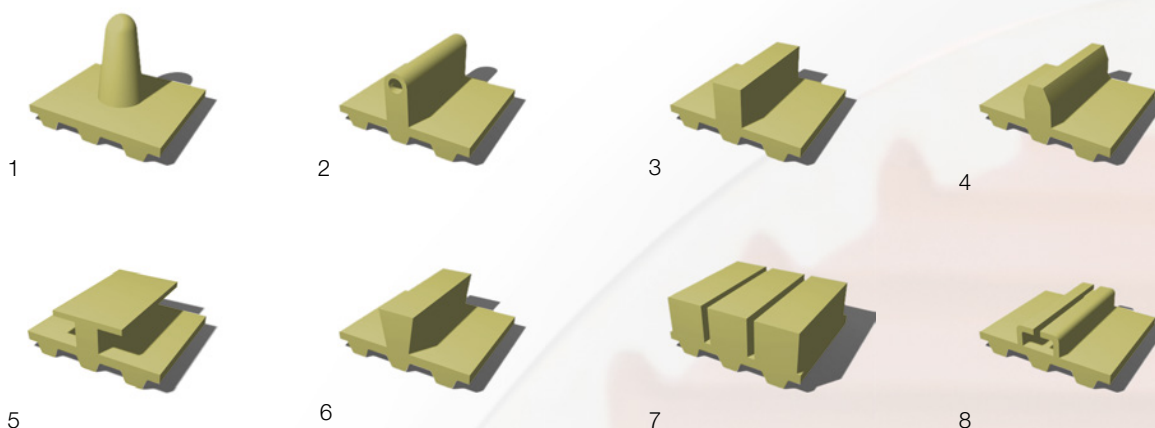


Assembly belt

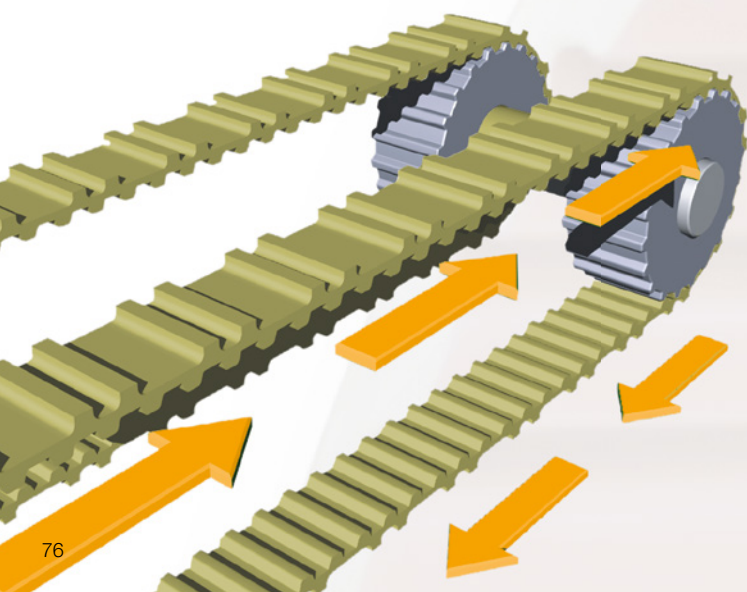
Maximum precision is achieved by the manufacture in one operating step using a timing belt mould. Customer requirements with regard to the shape of the flights and

their number can be taken into consideration at the time of producing a new mould. Best flight centre distance tolerance achievable:  $\pm 0.05$  mm.

### Examples of flighted CONTI® SYNCHROFLEX timing belts from a single mould:



### Application example



### Applications:

Synchronising technology to achieve maximum precision

- EDP equipment
- Office machinery
- Fine mechanical technology
- Packaging machinery
- Indexing systems
- Synchronous conveyors
- Handling technology
- Transport technology

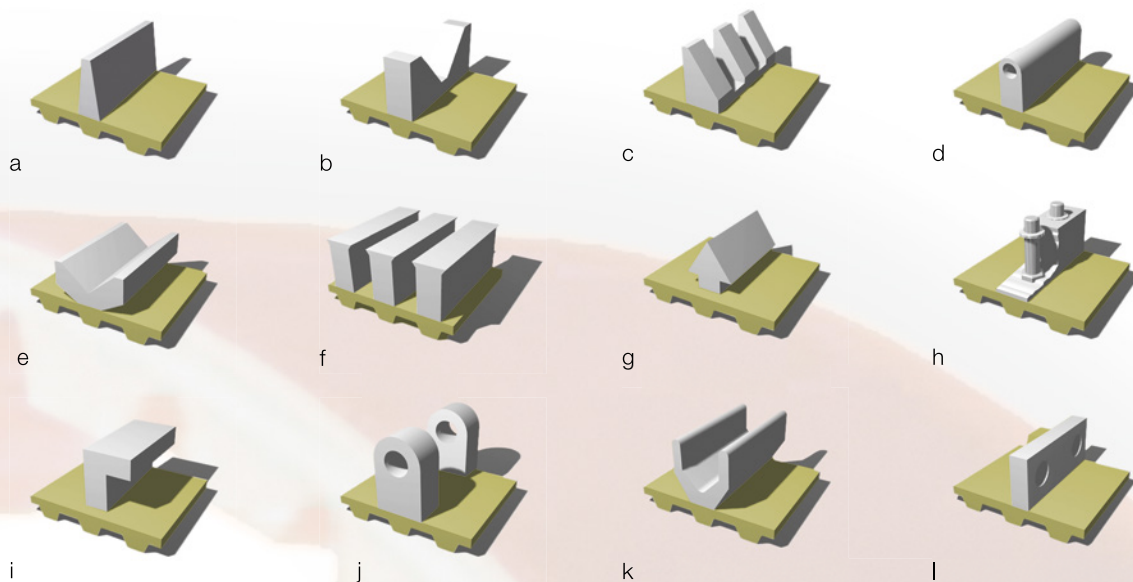
Please contact us for technical advice if you require more detailed information on special belt dimensions (existing timing belt moulds).

## CONTI® SYNCHROFLEX timing belts with welded flights/profiles:

All CONTI® SYNCHROFLEX timing belts as from pitch T 2.5 can be retrofitted with flights. In line with the customer's drawing, the desired number of flights are thermally butt-welded to the back of the belt. The achieve-

vable weld-on tolerance of each individual flight is  $\pm 0.5$  mm. Hundreds of shapes of flights are available. Please ask for additional information. For special customer requirements new flights can be manufactured.

### Examples of possible flight shapes requiring mechanical re-work:



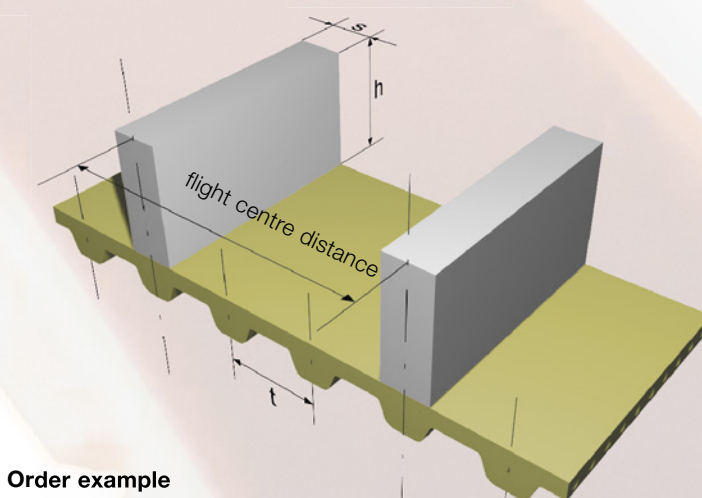
The various shapes of flights allow an adaptation of the transport timing belt to the envisaged practical function. The flight pitch is freely selectable. The flights can be manufactured with moulded inserts. Profile attachments can be retrofitted (positioned). The welding point itself and the maximum bending stress are subject to special parameters.

Please contact us for technical advice.

### Applications:

General transport technology

- Conveying/transporting
- Separation
- Positioning
- Indexing
- Feeding



### Order example

CONTI® SYNCHROFLEX Timing Belt 25 T 10 / 1960 - FN 49

Belt width in mm

Type/Pitch

Belt length in mm

Number of profiles

# Brush timing belts

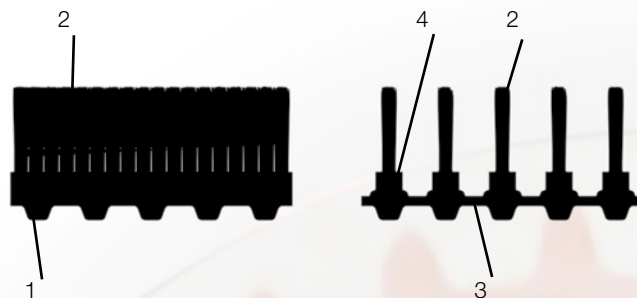
## A solution for almost every application

To complement standard applications in power transmission, linear and transport technology, we offer the CONTI® SYNCHROFLEX brush timing belt for special applications.

### Construction

The timing belt is either equipped with a stronger back with brush or - to meet the individual application - with brush flights. The thickness of the back is between 10 and 20 mm, depending on the fibre thickness and cutting length. Flight centre-distance, fibre density and type are individual matched to each application.

1. Timing belts with reinforced back (the necessary flexibility is achieved by notches in the back of the belt).
2. Brushes/fibres
3. Standard timing belt
4. Profile



## Versatile application

### Conveying:

- Transport of sensitive parts for example: glass, ceramics, paper
- Conveying of materials featuring delicate surfaces
- Accumulation conveying due to the extremely low coefficient of friction
- Larger contact surface resulting from the fanned fibre arrangement
- Reduced conveying noise
- Dirt and chips cannot accumulate on the contact surface
- Combination with all transport flights

### Cleaning:

- Dry and wet application
- Surface treatment

### Product range

Brush timing belts are available in any length offered in our product range and in the following pitches:

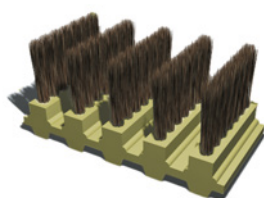
T 5, T 10, T 20, AT 5, AT 10, AT 20

Please contact us for more detailed information on fibre materials, data on chemical resistances and admissible temperature ranges.

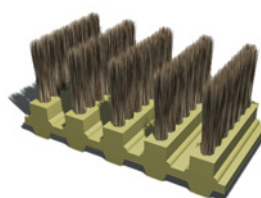


**Natural fibres and hair**

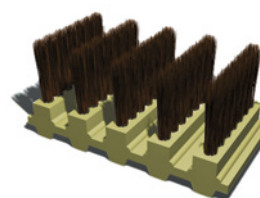
(max. cutting length 30 mm)



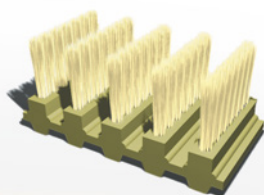
Horsehair, soft



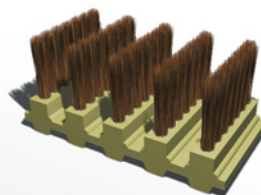
Horsehair mix, semi-hard

Calcutta bristles,  
semi-hard**Plant fibres**

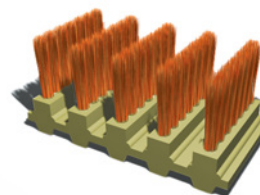
(cutting length 10 to 75 mm)



Mex. fibre, semi-hard



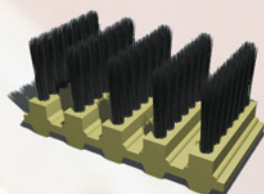
Arenga, hard



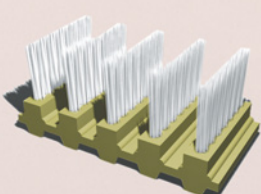
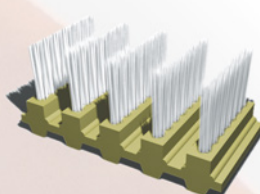
Coconut fibre, hard

**Artificial bristles**

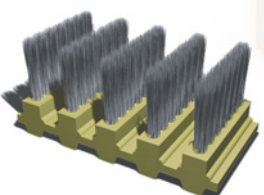
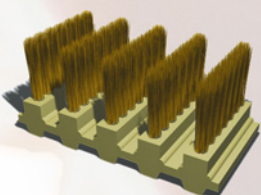
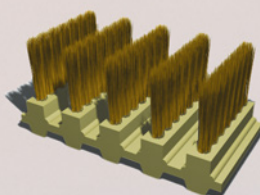
(any cutting length)



Mypren 0.20 mm dia.

Nylon 6 Ø 0.15 to 0.5 mm  
straight or corrugatedNylon 6.6.  
Ø 0.15 - 0.5 mm  
straight or corrugated**Wire**

(any cutting length)

Steel wire  
Ø 0.15 - 0,4 mm  
straight or corrugatedBrass wire  
Ø 0,1 - 0,4 mm  
straight or corrugatedPhosphate bronze  
Ø 0,1 - 0,4 mm  
straight or corrugated



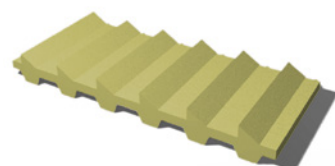
# Mechanical rework

CONTI® SYNCHROFLEX timing belts can be mechanically reworked to meet special functional features. Timing belts with a thick backing are especially suited for mechanical rework. They offer far reaching design possibilities for the designer.

Available types: Version FA and coatings/coverings  
Please note that the flexibility of timing belts with a thicker back is reduced and therefore, requiring larger pulley diameters. Belt flexibility can be improved by cross grooving or incisions.

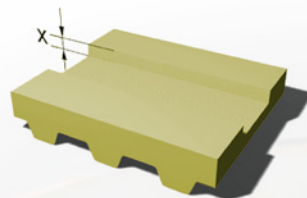
## Back cross milling

Cross grooves on the belt back enhance the flexibility of the belt. Milled grooves are, in as much as they are possible from the technical feasibility point of view, used to improve safe loading and secure positioning of the products on the belts.



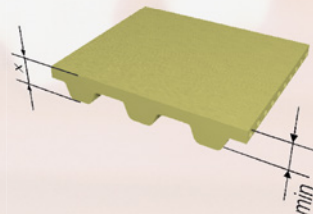
## Back longitudinal milling

Independent on the belt pitch, the belt back shaping offers a wide range of design variants for customised solutions. In this manner, belt guiding can be achieved by a trapezoidal back profile, or a round section supported and moved by means of a prism shaped cross section. Dimensions are to be indicated as depth measure  $x$  in relation to the belt back.



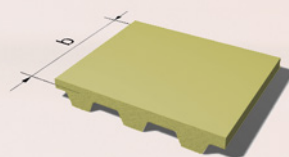
## Back grinding

All CONTI® SYNCHROFLEX timing belts can be ground and finished for reasons of precision or in order to obtain a roughened surface. Note that the belts must not be ground to anything less than the overall thickness  $x$  because otherwise the tension members might take damage.



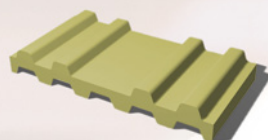
## Edge grinding

Particularly accurate belt width tolerances can be achieved by grinding the belt edges.



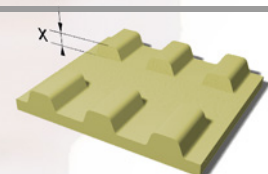
## Removing individual teeth

The removal of individual teeth or groups of teeth is possible and practical due to the high dimensional precision meshing, when the remaining teeth are to serve as precise position load areas.



## Longitudinal milling of teeth

Machining the tooth profile is significant for CONTI® SYNCHROFLEX timing belts which are protected from running off laterally for instance by bed plates. The processing depth  $x$  is indicated as measured from the tooth top surface.



## Perforated timing belts

Aramide tension members should be preferably used with CONTI® SYNCHROFLEX timing belts in this type of application.



# List of Catalogues

## All our information at a glance

### Polyurethane Timing Belts

BRECO®, BRECOFLEX® timing belts  
 BRECO®, BRECOFLEX® – Processing of timing belts  
 BRECO®, BRECOFLEX® flat belts  
 BRECO® ATN-system  
 BRECOprotect® – Timing Belts  
 BRECObasic® – Timing Belts  
 BRECOMove, BRECOFLEXmove – Timing Belts

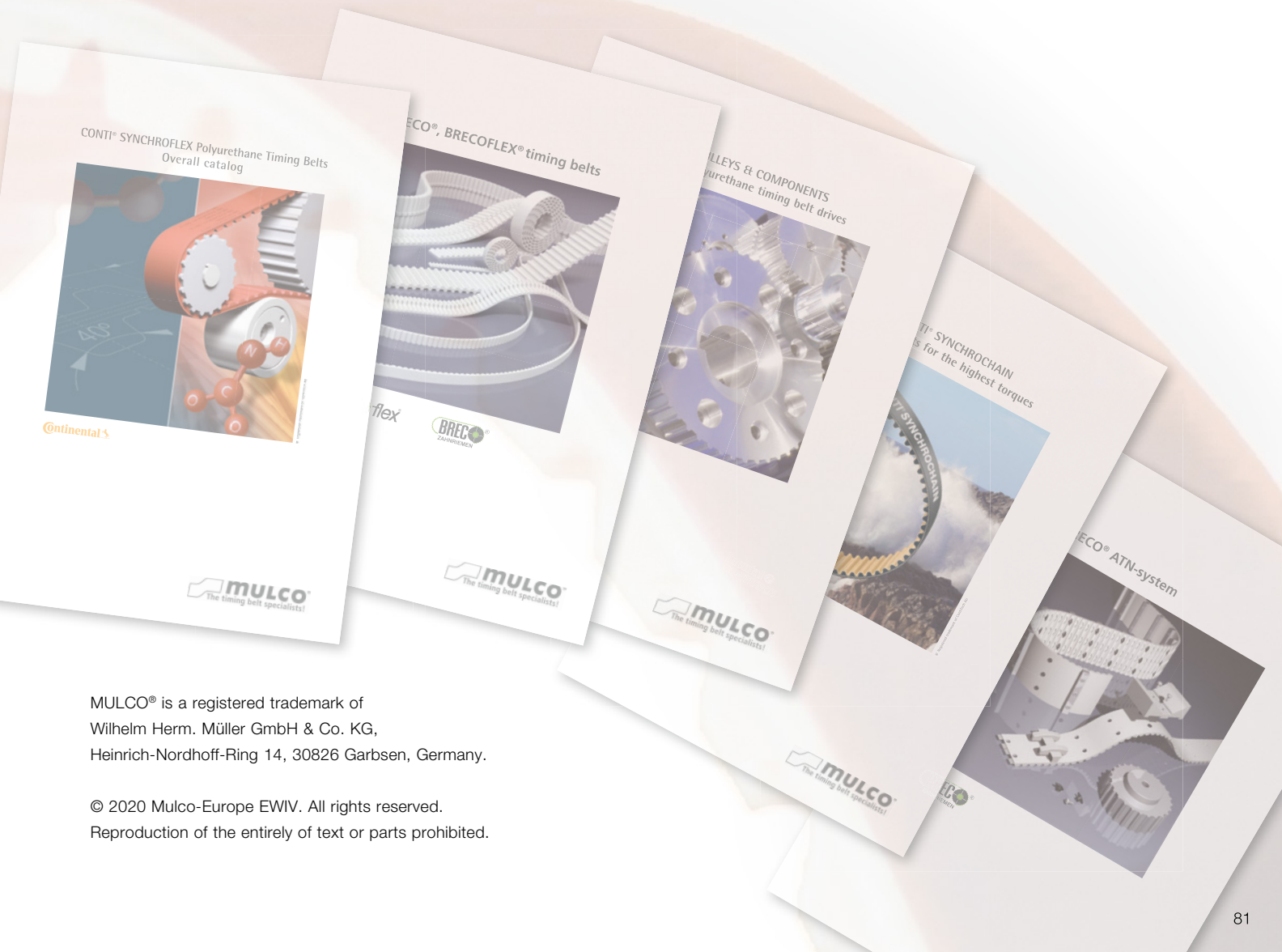
CONTI® SYNCHROFLEX Polyurethane Timing Belts. Overall catalog  
 CONTI® SYNCHROCHAIN / SYNCHROCHAIN CARBON Heavy-Duty Timing Belts  
 CONTI® SYNCHRODRIVE Polyurethane Synchronous Drive Belts  
 CONTI® SYNCHRODRIVE N10 Nubbed Belt

### Pulleys and Accessories

PULLEYS & COMPONENTS for polyurethane timing belt drives  
 Portable TSG 5 welder for polyurethane timing belts

**All product information  
 can be requested from  
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