

## Power transmission technology

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### AT high performance timing belt - endless

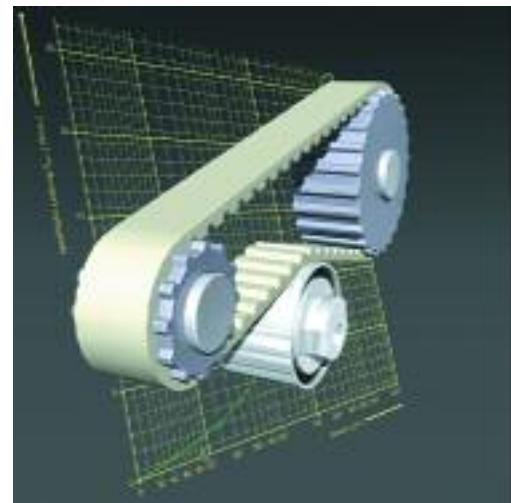
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**AT 3**

Power transmission:	$\leq 5 \text{ kW}$
Rotational speed:	approx. 20000 rpm
Peripheral speed:	approx. $80 \text{ ms}^{-1}$
Synchronous pulleys:	from $t=15$

Applications (example): small power drives , Handling technology

**AT 5**

Power transmission:	$\leq 15 \text{ kW}$
Rotational speed:	approx. 10000 rpm
Peripheral speed:	approx. $80 \text{ ms}^{-1}$
Synchronous pulleys:	from $t=15$

Applications (example): Machine tools, pumps, textile machinery

**AT 10; BAT 10; SFAT 10;  
ATK 10 K6**

Power transmission:	$\leq 70 \text{ kW}$
Rotational speed:	approx. 10000 rpm
Peripheral speed:	approx. $60 \text{ ms}^{-1}$
Synchronous pulleys:	from $t=15$

Applications (example): Construction machines, pumps, paper-making machines, compressors compactors, textile machines, Roller-table drives

**SFAT 15**

Power transmission:	$\leq 135 \text{ kW}$
Rotational speed:	approx. 8000 rpm
Peripheral speed:	approx. $48 \text{ ms}^{-1}$
Synchronous pulleys:	from $t=20$

Applications (example): Construction machines, pumps, paper-making machines, compressors/ compactors

**ATP 10**

Power transmission:	$\leq 100 \text{ kW}$
Rotational speed:	approx. 10000 rpm
Peripheral speed:	approx. $60 \text{ ms}^{-1}$
Synchronous pulleys:	from $t=15$

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

**ATP 15**

Power transmission:	possible beyond 200 kW
Rotational speed:	approx. 10000 rpm
Peripheral speed:	approx. $50 \text{ ms}^{-1}$
Synchronous pulleys:	from $t=20$

Applications (example): Power drives,Machine tools

**AT 20; SFAT 20**

Power transmission:	possible beyond 200 kW
Rotational speed:	approx. 6500 rpm
Peripheral speed:	approx. $40 \text{ ms}^{-1}$
Synchronous pulleys:	from $t=18$

Applications (example):	Heavy-duty drives, Textile machinery, Printing machinery, Machine tools
K 1.5; T 2; M; T 2.5	

Power transmission:	$\leq 0,5 \text{ kW}$
Rotational speed:	approx. 20000 rpm
Peripheral speed:	approx. $80 \text{ ms}^{-1}$
Synchronous pulleys:	from $t=10$

Applications (example):	Precision machine drives, Film camera drives, Positioning drives
-------------------------	--

**T 5; XL**

Power transmission:	$\leq 5 \text{ kW}$
Rotational speed:	approx. 10000 rpm
Peripheral speed:	approx. $80 \text{ ms}^{-1}$
Synchronous pulleys:	from $t=10$

Applications (example):	Office machinery, Do-It-Yourself units, Positioning and regulating drives
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**T 10; L; H**

Power transmission:	$\leq 30 \text{ kW}$
Rotational speed:	approx. 10000 rpm
Peripheral speed:	approx. $60 \text{ ms}^{-1}$
Synchronous pulleys:	from $t=12$

Applications (example):	Machine tools, Main and subsidiary drives, textile machines, Printing machinery
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**T 20; XH**

Power transmission:	up to approx. 100 kW
Rotational speed:	approx. 6500 rpm
Peripheral speed:	approx. $40 \text{ ms}^{-1}$
Synchronous pulleys:	from $t=15$

Applications (example):	Heavy construction machinery, Paper machinery, pumps, compressors compactors, Textile machinery
-------------------------	---

**Remark:**

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

## Highly flexible tension inserts - the E steel cord tension member

The thinner the single wire, the more flexible the overall tension member! This interrelation led us to develop BRECO® BRECOFLEX® and SYNCHROFLEX® TIMING BELTS with E tension members.

In the E tension member the tension member cross-section is distributed to a lot more thin individual wires and, therefore, the bending fatigues are markedly lower in the individual wires. The advantage of the E tension members is a higher flexibility.

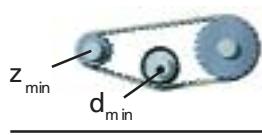
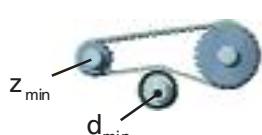
This is especially important, when smaller mounting dimensions for pulleys and tension rollers are required. The minimum number of teeth and/or minimum diameter of the pulleys can be fallen below up to 30% compared with standard tension members.

Timing belts with E tension members are recommended for multi-shaft drive with frequent bends.

### Summary:

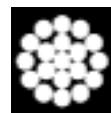
- thinner individual wires in the steel cord
- higher dynamic capabilities
- extremely high bonding and bending fatigue strength
- smaller pulley and tension roller diameter
- no correction of the synchronising pulleys are necessary

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

Drive type		AT 3 (Standard)	AT 5 (BFX Standard)	AT 10 ATP 10	T 5	T 10	T 20
without contraflexure	 Synchronising pulley $z_{\min}$ 15 12 12 10 10 12 Tension roller (smooth), running on teeth $d_{\min}$ [mm] 20 18 50 18 50 80						
with contraflexure	 Synchronising pulley $z_{\min}$ 20 20 20 12 15 20 Tension roller (smooth), running on the back of the belt $d_{\min}$ [mm] 20 50 80 18 50 120						

Application informations: For intended application under extreme conditions please contact our technical department for advise.

Steel cord tension members encapsulated in polyurethane:



The thinner the individual wire the more flexible the whole timing belt

## AT / ATP high performance timing belt - GEN III

SYNCHROFLEX® TIMING BELT (SFX)

### AT GEN III / ATP GEN III



Each generation is different.  
GEN III is better!

The intensive development work on the SYNCHROFLEX® TIMING BELTS of the AT and ATP series emphasizing on the power drives has proven successful, because an increase in power transmission of up to 25% of the new generation compared to the AT / ATP standard could be achieved. A further economical plus: All SYNCHROFLEX® TIMING BELTS GEN III are suitable for application with standard AT / ATP synchronising pulleys.

For all partners in the Mulco Europe EWIV progress means to provide the best possible solution for each product down to the smallest technical detail. This is achieved for the new SYNCHROFLEX® GEN III of the AT and ATP series by the use of a two-filament tension member arrangement and with a higher density.

#### A powerful basis

The combination of high tensile steel cord tension members and wear resistant polyurethane forms the basis for dimensionally stable and high resistant polyurethane timing belts. A technology convincing with excellent product properties.

- constant length, no post-elongation
- high dimensional stability
- Transmission of high torques
- quite run
- maintenance-free
- no timing belt lubrication
- high resistance against mechanical and chemical influences

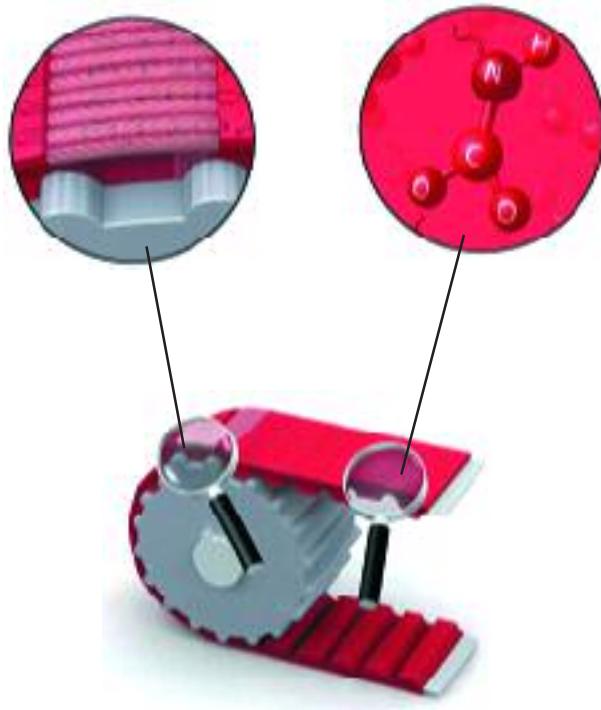
The new high performance polyurethane is distinguished by numerous performance improvements. Thus, amongst others, it is possible to consider a higher number of load bearing teeth in the calculation by an increased hardness.

**SYNCHROFLEX®-GEN III - a higher power transmission of up to 25% compared to the AT / ATP standard:**

- due to closer wound cords  $F_{adm}$  to max. +45%
- strongly reduced wandering-off tendency / optimised straight run due to two-filament tension members and balanced twist direction in S and Z design
- reduced friction at the flange
- minimised running noise with reduced belt width and equal performance
- $F_{spec} +25\%$
- longer longevity
- Circumferential force distribution to a number of load bearing teeth increased by up to 30%
- Application up to 100°C  
(for performance values in the limit range please contact us)

Two-filament tension member arrangement

New high performance polyurethane



SYNCHROFLEX® standard

SYNCHROFLEX®-GEN III

## Calculation example



### Task

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

The application conditions are:

Given: Power	P = 10 kW
Nominal speed	n = 800 min <sup>-1</sup>
Start-up torque	M = 300 Nm
Transmission, number of teeth	i = 1 z = 25
Centre distance	a = 625 mm

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

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

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

$$F_u = \frac{2 \cdot 10^3 \cdot M}{d_0} \quad F_u [\text{N}]$$

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

$$d_0 = \frac{z \cdot t}{\pi} \quad [\text{mm}]$$

## 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 it will be used  $z_e = 12$  (see basis of calculation).

Calculation of the belt width with the nominal speed of 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  $b = 100 \text{ mm}$ .

### 2. Tension cord strength

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

$$\begin{aligned} F_u &= \frac{2 \cdot 10^3 \cdot M}{d_0} \\ &= \frac{2 \cdot 10^3 \cdot M}{79,58} = \underline{7539 \text{ N} < 16000 \text{ N}} \end{aligned}$$

The tabular value  $F_{\text{adm}}$  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.

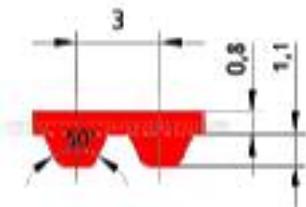
Result: The drive is correctly designed with a belt width of 100 mm. A maintenance-free operation can be expected.

Ordering code: SYNCHROFLEX TIMING BELT 100 AT 10 / 1500

## AT high performance timing belt - endless

### SYNCHROFLEX® TIMING BELT (SFX)

#### AT 3 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
- Steel cord tension members in highly flexible construction
- FA: with strengthened back of the belt
- FN: with profiles on the back of the belt

#### Product range\*

Type GEN III / Length	Number of teeth	Type GEN III / Length	Number of teeth
AT 3 / 150	50	AT 3 / 816	272
AT 3 / 201	67	AT 3 / 816 FA	272
AT 3 / 252	84	AT 3 / 900	300
AT 3 / 267	89	AT 3 / 1011	337
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 / 501	167		
AT 3 / 549	183		
AT 3 / 600	200		
AT 3 / 639	213		
AT 3 / 648 FN24	216		

#### Preferred belt width\*

b [mm]: 6 10 16 25 32

\*Other dimension upon request.

#### Order example

SYNCHROFLEX®-TIMING BELT 10 AT3 / 450 GEN III

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

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

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

Specification Generation III \_\_\_\_\_

Technical data of the SYNCHROFLEX® TIMING BELT

AT 3 GEN III

Belt width b[cm]

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

1. Tooth shear strength (specific belt tooth load bearing)

$$F_u [N]$$

R.p.m. n [rpm]	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]	R.p.m. n [rpm]	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]
0	40,43	1,93	0,00	2400	24,66	1,18	2,96
20	40,00	1,91	0,04	2500	24,40	1,17	3,05
40	39,60	1,89	0,08	2600	24,14	1,15	3,14
60	39,21	1,87	0,12	2800	23,63	1,13	3,31
80	38,85	1,86	0,16	3000	23,16	1,11	3,47
100	38,50	1,84	0,19	3200	22,71	1,09	3,63
150	37,70	1,80	0,28	3400	22,30	1,07	3,79
200	36,98	1,77	0,37	3600	21,90	1,05	3,94
300	35,69	1,70	0,54	3800	21,53	1,03	4,09
400	34,60	1,65	0,69	4000	21,16	1,01	4,23
500	33,64	1,61	0,84	4500	20,34	0,97	4,58
600	32,79	1,57	0,98	5000	19,59	0,94	4,90
700	32,03	1,53	1,12	5500	18,90	0,90	5,20
800	31,34	1,50	1,25	6000	18,28	0,87	5,48
900	30,70	1,47	1,38	6500	17,69	0,85	5,75
1000	30,11	1,44	1,51	7000	17,15	0,82	6,00
1100	29,56	1,41	1,63	7500	16,65	0,80	6,24
1200	29,05	1,39	1,74	8000	16,18	0,77	6,47
1300	28,58	1,36	1,86	8500	15,74	0,75	6,69
1400	28,13	1,34	1,97	9000	15,31	0,73	6,89
1500	27,70	1,32	2,08	9500	14,91	0,71	7,08
1600	27,30	1,30	2,18	10000	14,54	0,69	7,27
1700	26,91	1,29	2,29	12000	13,19	0,63	7,91
1800	26,55	1,27	2,39	15000	11,53	0,55	8,64
1900	26,20	1,25	2,49	18000	10,16	0,49	9,15
2000	25,88	1,24	2,59	20000	9,38	0,45	9,37
2200	25,25	1,21	2,78				

Drive load bearing characteristics

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b [N]$$

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100} [Nm]$$

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

intermeshing number of teeth

$z_{e\max} = 16$

$$z_e = \frac{z_1}{180} \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

2. Tension cord strength (permitted tensile force of the belt  $F_{adm}$ ), belt weight

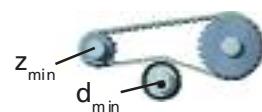
Belt width	b	[mm]	6	10	16	25	32
SYNCHROFLEX® Belt weight	$F_{adm}$ AT 3 GEN III [kg/m]	[N]	330 0,016	599 0,026	1002 0,042	1608 0,065	2079 0,083

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

Drive type	SFX AT 3 GEN III		
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$	15
		$d_{min}$ [mm]	20
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$ $d_{min}$ [mm]	20



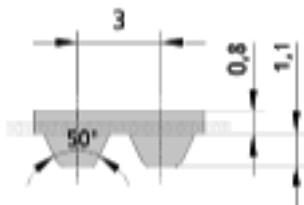
with contraflexure



## AT high performance timing belt - endless

### SYNCHROFLEX® TIMING BELT (SFX)

#### AT 3



High performance AT profile with metric pitches and trapezoidal teeth.

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

#### Available versions:

- single-sided
- with reinforced design
- with Aramid tension member
- Polyurethane special materials upon request antistatic, coloured, mechanical reworked
- FA: with reinforced back of the belt
- FN: with profiles on the back of the belt

Type	/Length	Number of teeth	Type/ Length	Number of teeth
AT 3 / 150		50	AT 3 / 816	272
AT 3 / 201		67	AT 3 / 816 FA	272
AT 3 / 252		84	AT 3 / 900	300
AT 3 / 267		89	AT 3 / 1011	337
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 / 501	167
			AT 3 / 549	183
			AT 3 / 600	200
			AT 3 / 639	213
			AT 3 / 648 FN24	216

Preferred belt width

b [mm]: 6 10 16 25 32

In-between belt widths are available

Other dimension upon request.

#### Order example

SYNCHROFLEX®-TIMING BELT 10 AT3 / 450

Belt width in mm

Type / Pitch

Belt length in mm

**Technical data of the SYNCHROFLEX® TIMING BELT**

**AT 3**

**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

**Drive load bearing characteristics**

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

intermeshing number of teeth

$$z_{e\max} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

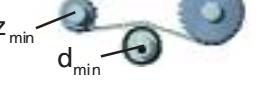
**1. Tooth shear strength (specific belt tooth load bearing)**

	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
b	0	32,34	1,544	0,000	2200	20,20	0,964	2,222
	20	32,00	1,528	0,032	2400	19,73	0,942	2,367
	40	31,68	1,513	0,063	2500	19,52	0,932	2,440
	60	31,37	1,498	0,094	2600	19,31	0,922	2,510
	80	31,08	1,484	0,124	2800	18,90	0,902	2,646
	100	30,80	1,471	0,154	2880	18,75	0,895	2,700
	150	30,16	1,440	0,226	3000	18,53	0,885	2,779
	200	29,58	1,412	0,296	3200	18,17	0,868	2,907
	300	28,55	1,363	0,428	3400	17,84	0,852	3,033
	400	27,68	1,322	0,554	3600	17,52	0,837	3,153
	500	26,91	1,285	0,673	3800	17,22	0,822	3,272
	600	26,23	1,252	0,787	4000	16,93	0,808	3,386
	700	25,62	1,223	0,897	4500	16,27	0,777	3,660
	730	25,45	1,215	0,929	5000	15,67	0,748	3,917
	800	25,07	1,197	1,003	5500	15,12	0,722	4,158
	900	24,56	1,173	1,105	6000	14,62	0,698	4,386
	1000	24,09	1,150	1,204	6500	14,15	0,676	4,598
	1100	23,65	1,129	1,301	7000	13,72	0,655	4,802
	1200	23,24	1,110	1,394	7500	13,32	0,636	4,995
	1300	22,86	1,091	1,486	8000	12,94	0,618	5,176
	1400	22,50	1,074	1,575	8500	12,59	0,601	5,350
	1460	22,29	1,064	1,627	9000	12,25	0,585	5,512
	1500	22,16	1,058	1,662	9500	11,93	0,570	5,666
	1600	21,84	1,043	1,747	10000	11,63	0,555	5,815
	1700	21,53	1,028	1,830	12000	10,55	0,504	6,330
	1800	21,24	1,014	1,911	15000	9,22	0,440	6,914
	1900	20,96	1,001	1,991	18000	8,13	0,388	7,316
	2000	20,70	0,988	2,070	20000	7,50	0,358	7,499

**2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight**

Belt width	b	[mm]	6	10	16	25	32
SYNCHROFLEX®	F <sub>adm</sub>	[N]	190	380	646	1102	1406
Belt weight	AT 3	[kg/m]	0,014	0,023	0,037	0,058	0,074

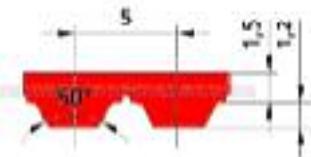
**3. Flexibility (Minimum numbers of teeth, minimum diameter)**

Drive type		SFX AT 3
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	z <sub>min</sub> d <sub>min</sub> [mm]
		15 20
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	z <sub>min</sub> d <sub>min</sub> [mm]
		20 20

## AT high performance timing belt - endless

### SYNCHROFLEX® TIMING BELT (SFX)

#### AT 5 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
- Steel cord tension members in highly flexible construction
- FA: with reinforced back of the belt

##### Product range\*

Type GEN III / Length	Number of teeth	Type GEN III / 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 / 3350 FA	670
AT 5 / 545	109	AT 5 / 3800 FA	760
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\*

b [mm]: 6 10 16 25 32 50 75 100

\*Other dimension upon request.

##### Order example

SYNCHROFLEX®-TIMING BELT 50 AT5 / 450 GEN III

Belt width in mm	50
Type / Pitch	AT5
Belt length in mm	450
Specification Generation III	III

Technical data of the SYNCHROFLEX® TIMING BELT

AT 5 GEN III

Belt width b[cm]

1. Tooth shear strength (specific belt tooth load bearing)

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

F<sub>u</sub>[N]

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

P[kW]

Drive load bearing characteristics

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

[N]

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

[Nm]

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

[kW]

intermeshing number of teeth

z<sub>emax</sub> = 16

$$z_e = \frac{z_1}{180} \cdot \text{arc cos} \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	44,13	3,51	0,00	2400	26,00	2,07	5,20
	20	43,63	3,48	0,07	2600	25,38	2,02	5,50
	40	43,13	3,44	0,14	2800	24,80	1,97	5,79
	60	42,63	3,40	0,21	3000	24,28	1,93	6,06
	80	42,25	3,36	0,28	3200	23,76	1,89	6,34
	100	41,88	3,33	0,35	3400	23,30	1,85	6,60
	200	40,00	3,19	0,67	3600	22,85	1,82	6,85
	300	38,63	3,08	0,96	3800	22,41	1,78	7,10
	400	37,25	2,96	1,24	4000	22,01	1,85	7,34
	500	36,25	2,88	1,51	4500	21,08	1,68	7,90
	600	35,25	2,80	1,76	5000	20,23	1,61	8,43
	700	34,28	2,74	2,00	5500	19,45	1,55	8,91
	800	33,50	2,68	2,24	6000	18,75	1,49	9,38
	900	32,88	2,61	2,46	6500	18,10	1,44	9,80
	1000	32,13	2,56	2,68	7000	17,49	1,39	10,20
	1100	31,50	2,51	2,89	7500	16,93	1,35	10,58
	1200	31,00	2,64	3,10	8000	16,39	1,30	10,93
	1300	30,38	2,42	3,30	8500	15,89	1,26	11,25
	1400	29,88	2,38	3,49	9000	15,41	1,23	11,55
	1500	29,38	2,34	3,68	9500	14,96	1,19	11,84
	1600	29,00	2,30	3,86	10000	14,54	1,16	12,11
	1700	28,50	2,27	4,04				
	1800	28,13	2,24	4,21				
	1900	27,75	2,21	4,39				
	2000	27,38	2,18	4,56				
	2200	26,63	2,12	4,89				

Rotational speeds over 10000 rpm and/or belt speeds over 80 m/s are in need of a special drive design. Please request for our advice.

2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight

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

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

Drive type

without contraflexure



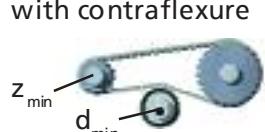
SFX AT 5 GEN III

Synchronising pulley z<sub>min</sub>

Tension roller (smooth), running on teeth d<sub>min</sub> [mm]

15

with contraflexure



Synchronising pulley z<sub>min</sub>

Tension roller (smooth), running on the back of the belt d<sub>min</sub> [mm]

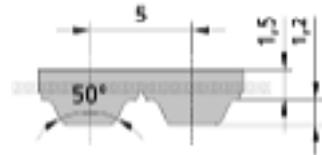
20

60

## AT high performance timing belt - endless

### SYNCHROFLEX® TIMING BELT (SFX)

#### AT 5



High performance AT profile with metric pitches and trapezoidal teeth.

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

#### Available versions:

- single-sided
- with E tension member for a better flexibility
- with reinforced design
- with Aramid tension member
- Polyurethane special materials upon request
- antistatic, coloured, mechanical reworked
- **FA:** with reinforced back of the belt

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 / 3350 FA	670
AT 5 / 545	109	AT 5 / 3800 FA	760
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

b [mm]: 10 16 25 32 50

In-between belt widths are available

Other dimension upon request.

#### Order example

SYNCHROFLEX®-TIMING BELT 10 AT5 / 450

Belt width in mm

Type / Pitch

Belt length in mm

Technical data of the SYNCHROFLEX® TIMING BELT

AT 5

Belt width b[cm]

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

F<sub>u</sub>[N]

1. Tooth shear strength (specific belt tooth load bearing)

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

P[kW]

Drive load bearing characteristics

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

[N]

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

[Nm]

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

[kW]

intermeshing number of teeth

$$z_{e\max} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

	R.p.m. n [rpm]	F <sub>u</sub> <sub>spec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>u</sub> <sub>spec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	35,3	2,810	0,000	2800	19,84	1,579	4,63
	20	34,9	2,780	0,058	3000	19,42	1,545	4,85
	40	34,5	2,750	0,115	3200	19,01	1,513	5,07
	60	34,1	2,720	0,171	3400	18,64	1,483	5,28
	80	33,8	2,690	0,225	3600	18,28	1,454	5,48
	100	33,5	2,660	0,279	3800	17,93	1,427	5,68
	200	32,0	2,550	0,534	4000	17,61	1,401	5,87
	300	30,9	2,460	0,771	4500	16,86	1,342	6,32
	400	29,8	2,370	0,995	5000	16,18	1,288	6,74
	500	29,0	2,300	1,207	5500	15,56	1,239	7,13
	600	28,2	2,240	1,409	6000	15,00	1,194	7,50
	700	27,5	2,190	1,603	6500	14,48	1,152	7,84
	800	26,8	2,140	1,789	7000	13,99	1,113	8,16
	900	26,3	2,090	1,969	7500	13,54	1,077	8,46
	1000	25,7	2,050	2,140	8000	13,11	1,043	8,74
	1100	25,2	2,010	2,310	8500	12,71	1,011	9,00
	1200	24,8	1,970	2,480	9000	12,33	0,981	9,24
	1300	24,3	1,936	2,640	9500	11,97	0,953	9,47
	1400	23,9	1,903	2,790	10000	11,63	0,925	9,69
	1500	23,5	1,872	2,940				
	1600	23,2	1,843	3,090				
	1700	22,8	1,816	3,230				
	1800	22,5	1,789	3,370				
	1900	22,2	1,764	3,510				
	2000	21,9	1,740	3,650				
	2200	21,3	1,695	3,910				
	2400	20,8	1,654	4,160				
	2600	20,3	1,615	4,400				

Rotational speeds over 10000 rpm and/or belt speeds over 80 m/s are in need of a special drive design. Please request for our advice.

2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight

Belt width	b	[mm]	6	10	16	25	32	50	75	100
SYNCHROFLEX® AT 5	F <sub>adm</sub>	[N]	350	700	1260	2030	2660	4200	6370	8610
Belt weight		[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)

Drive type

without contraflexure



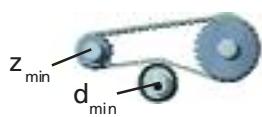
Synchronising pulley z<sub>min</sub>

Tension roller (smooth), running on teeth d<sub>min</sub> [mm]

15

25

with contraflexure



Synchronising pulley z<sub>min</sub>

Tension roller (smooth), running on the back of the belt d<sub>min</sub> [mm]

20

60

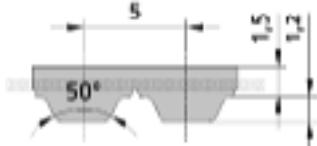
SYNCHROFLEX® AT 5\*

\* Request for advice in limit ranges.

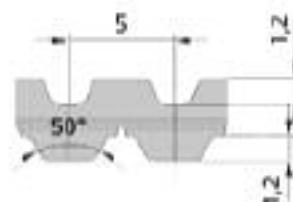
## AT high performance timing belt - endless

### BRECOFLEX® TIMING BELTS (BFX)

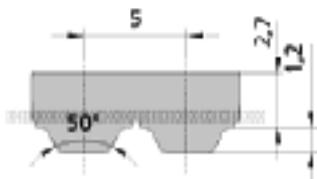
#### AT 5-E



#### AT 5-DL-E



#### AT 5-DR-E



#### Available endless lengths for AT 5-E

- Preferred lengths refer to table
- Belt lengths smaller than 1100 mm with nylon tooth facing
- under 1075 mm: further lengths upon request
- over 1075 mm: Any number of teeth available, request minimum purchase amount for intermediate lengths.
- over 15,000 mm on request

#### Available versions:

- AT 5-E:** As standard: single-sided with E tension members
- DL-E:** As standard: double-sided over 1075 mm, with E tension member, minimum amount on request, under 1075 mm on request
- PAZ-E:** Nylon tooth facing, with E tension member
- DL-PAZ-E:** Nylon facing on double-sided belts, coating is only possible on the inner side, with E tension member, minimum amount on request
- DR-E, DR-PAZ-E:** reinforced back of the belt, through 1.2 mm larger belt thickness, available with a length over 1075 mm, with E tension member, minimum amount on request

#### Endless lengths

Type / length	Number of teeth	Type / length	Number of teeth
AT5-E / 225	45	AT5-E / 1900	380
AT5-E / 255	51	AT5-E / 2000	400
AT5-E / 280	56	AT5-E / 2120	424
AT5-E / 305	61	AT5-E / 2240	448
AT5-E / 340	68	AT5-E / 2360	472
AT5-E / 390	78	AT5-E / 2500	500
AT5-E / 420	84	AT5-E / 2650	530
AT5-E / 455	91	AT5-E / 2800	560
AT5-E / 500	100	AT5-E / 3000	600
AT5-E / 545	109	AT5-E / 3150	630
AT5-E / 610	122	AT5-E / 3350	670
AT5-E / 660	132	AT5-E / 3550	710
AT5-E / 720	144	AT5-E / 3750	750
AT5-E / 780	156	AT5-E / 4000	800
AT5-E / 840	168	AT5-E / 4250	850
AT5-E / 855	171	AT5-E / 4500	900
AT5-E / 875	175	AT5-E / 4750	950
AT5-E / 960	192	AT5-E / 5000	1000
AT5-E / 990	198	AT5-E / 5300	1060
AT5-E / 1005	201	AT5-E / 5600	1120
AT5-E / 1020	204	AT5-E / 6000	1200
AT5-E / 1075	215	AT5-E / 6300	1260
AT5-E / 1100	220	AT5-E / 6700	1340
AT5-E / 1215	243	AT5-E / 7100	1420
AT5-E / 1380	276	AT5-E / 7500	1500
AT5-E / 1400	280	current maximum manufacturing length:	
AT5-E / 1500	300	AT5-E / 15000	
AT5-E / 1600	320	3000	
AT5-E / 1700	340		
AT5-E / 1800	360		

#### Preferred belt width

b [mm]: 10 16 25 32 50 75 100  
In-between belt widths are available

#### Order example

BRECOFLEX®-TIMING BELT 16 AT5 / 720 PAZ-E

Belt width in mm

Type / Pitch

Belt length in mm

Specification

## Technical data of the BRECOFLEX® TIMING BELT

### AT 5-E, AT 5-DL-E, AT 5-DR-E

**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

**F<sub>u</sub>[N]**

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

**M[Nm]**

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

**P[kW]**
**Drive load bearing characteristics**

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

**[N]**

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

**[Nm]**

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

**[kW]**

intermeshing number of teeth

$$z_{emax} = 12$$

$$z_e = \frac{z_1 \cdot \arccos t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

**1. Tooth shear strength (specific belt tooth load bearing)**

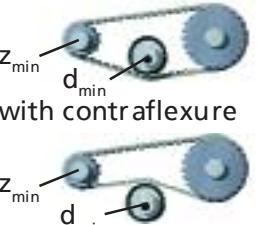
	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	35,3	2,810	0,000	2800	19,84	1,579	4,63
	20	34,9	2,780	0,058	3000	19,42	1,545	4,85
	40	34,5	2,750	0,115	3200	19,01	1,513	5,07
	60	34,1	2,720	0,171	3400	18,64	1,483	5,28
	80	33,8	2,690	0,225	3600	18,28	1,454	5,48
	100	33,5	2,660	0,279	3800	17,93	1,427	5,68
	200	32,0	2,550	0,534	4000	17,61	1,401	5,87
	300	30,9	2,460	0,771	4500	16,86	1,342	6,32
	400	29,8	2,370	0,995	5000	16,18	1,288	6,74
	500	29,0	2,300	1,207	5500	15,56	1,239	7,13
	600	28,2	2,240	1,409	6000	15,00	1,194	7,50
	700	27,5	2,190	1,603	6500	14,48	1,152	7,84
	800	26,8	2,140	1,789	7000	13,99	1,113	8,16
	900	26,3	2,090	1,969	7500	13,54	1,077	8,46
	1000	25,7	2,050	2,140	8000	13,11	1,043	8,74
	1100	25,2	2,010	2,310	8500	12,71	1,011	9,00
	1200	24,8	1,970	2,480	9000	12,33	0,981	9,24
	1300	24,3	1,936	2,640	9500	11,97	0,953	9,47
	1400	23,9	1,903	2,790	10000	11,63	0,925	9,69
	1500	23,5	1,872	2,940				
	1600	23,2	1,843	3,090				
	1700	22,8	1,816	3,230				
	1800	22,5	1,789	3,370				
	1900	22,2	1,764	3,510				
	2000	21,9	1,740	3,650				
	2200	21,3	1,695	3,910				
	2400	20,8	1,654	4,160				
	2600	20,3	1,615	4,400				

Rotational speeds over 10000 rpm and/or belt speeds over 80 m/s are in need of a special drive design. Please request for our advice.

**2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight**

Belt width	b	[mm]	10	16	25	32	50	75	100
BRECOFLEX®	F <sub>adm</sub>	[N]	700	1260	2030	2660	4200	6370	8610
Belt weight	AT 5-E	[kg/m]	0,031	0,052	0,085	0,105	0,164	0,241	0,328
	AT 5-DL-E	[kg/m]	0,040	0,064	0,101	0,130	0,204	0,307	0,410
	AT 5-DR-E	[kg/m]	0,045	0,073	0,115	0,148	0,231	0,348	0,464

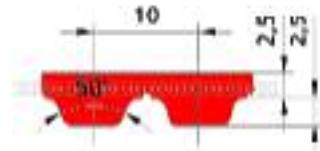
**3. Flexibility (Minimum numbers of teeth, minimum diameter)**

Drive type			BFX AT 5-E	BFX AT 5-DL-E	BFX AT 5-DR-E
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	z <sub>min</sub>	12	20	25
		d <sub>min</sub> [mm]	18	20	60
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	z <sub>min</sub>	20	20	25
		d <sub>min</sub> [mm]	50	50	60

# AT high performance timing belt - endless

## SYNCHROFLEX® TIMING BELT (SFX)

### AT 10 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

#### Product range\*

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

#### Preferred belt width\*

b [mm]: 16 25 32 50 75 100 150

\*Other dimension upon request.

#### Order example

SYNCHROFLEX®-TIMING BELT 32 AT10 / 800 GEN III

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

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

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

Specification Generation III \_\_\_\_\_

Technical data of the SYNCHROFLEX® TIMING BELT

AT 10 GEN III

**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

**Drive load bearing characteristics**

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

intermeshing number of teeth

$$z_{e\max} = 16$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

**1. Tooth shear strength (specific belt tooth load bearing)**

$F_u$ [N]	R.p.m. n [rpm]	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]	R.p.m. n [rpm]	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]
$M$ [Nm]	0	91,88	14,63	0,00	2400	47,25	7,51	18,88
	20	90,50	14,41	0,30	2600	45,75	7,29	19,83
$P$ [kW]	40	89,25	14,21	0,60	2800	44,38	7,08	20,73
	60	88,13	14,01	0,88	3000	43,13	6,88	21,59
	80	87,00	13,84	1,16	3200	42,00	6,69	22,40
	100	85,88	13,68	1,43	3400	40,88	6,50	23,16
	200	81,25	12,94	2,71	3600	39,88	6,34	23,89
	300	77,63	12,35	3,88	3800	38,88	6,18	24,59
	400	74,38	11,85	4,96	4000	37,88	6,03	25,25
	500	71,75	11,41	5,98	4500	35,63	5,68	26,75
	600	69,38	11,04	6,94	5000	33,63	5,36	28,13
	700	67,13	10,69	7,84	5500	31,88	5,08	29,25
	800	65,25	10,39	8,70	6000	30,25	4,81	30,25
	900	63,50	10,10	9,53	6500	28,75	4,56	31,13
	1000	61,88	9,85	10,31	7000	27,25	4,34	31,88
	1100	60,38	9,61	110,8	7500	26,00	4,13	32,50
	1200	59,00	9,39	11,80	8000	24,71	3,94	33,00
	1300	57,75	9,19	12,50	8500	23,55	3,75	33,38
	1400	56,50	8,99	13,18	9000	22,44	3,58	33,63
	1500	55,38	8,80	13,84	9500	21,40	3,40	33,88
	1600	54,25	8,64	14,46	10000	20,40	3,25	34,00
	1700	53,25	8,48	15,08				
	1800	52,25	8,31	15,68				
	1900	51,25	8,16	16,25				
	2000	50,38	8,03	16,80				
	2200	48,75	7,75	17,88				

Rotational speeds over 10000 rpm and/or belt speeds over 80 m/s are in need of a special drive design. Please request for our advice.

**2. Tension cord strength (permitted tensile force of the belt  $F_{adm}$ ), belt weight**

Belt width	b	[mm]	16	25	32	50	75	100	150
SYNCHROFLEX® Belt weight	$F_{adm}$ AT10 GEN III [kg/m]		3000 0,117	5000 0,183	6750 0,234	10750 0,365	16500 0,548	22000 0,730	33500 1,095

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

**Drive type**

without contraflexure



with contraflexure



**SFX AT 10 GEN III**

Synchronising pulley  
Tension roller (smooth),  
running on teeth

$$z_{min}$$

15

$$d_{min} [\text{mm}]$$

50

Synchronising pulley  
Tension roller (smooth), running  
on the back of the belt

$$z_{min}$$

25

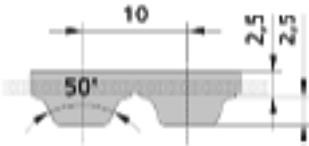
$$d_{min} [\text{mm}]$$

120

## AT high performance timing belt - endless

### SYNCHROFLEX® TIMING BELT (SFX)

#### AT 10



High performance AT profile with metric pitches and trapezoidal teeth.

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

#### Available versions:

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

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

Preferred belt width

b [mm]: 16 25 32 50 75 100

In-between widths and larger widths are available

Other dimension upon request

#### Order examples

SYNCHROFLEX® TIMING BELT

Belt width in mm

Type / pitch

Endless length in mm

32 AT 10 / 800

Technical data of the SYNCHROFLEX® TIMING BELT

AT 10

Belt width b[cm]

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

F<sub>u</sub>[N]

1. Tooth shear strength (specific belt tooth load bearing)

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

P[kW]

Drive load bearing

characteristics

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

[N]

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

[Nm]

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

[kW]

intermeshing number of teeth

$$z_{e\max} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

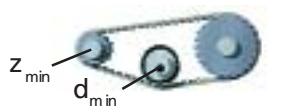
	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	73,5	11,70	0,000	2800	35,50	5,66	16,58
	20	72,4	11,53	0,241	3000	34,50	5,50	17,27
	40	71,4	11,37	0,476	3200	33,60	5,35	17,92
	60	70,5	11,21	0,705	3400	32,70	5,20	18,53
	80	69,6	11,07	0,928	3600	31,90	5,07	19,11
	100	68,7	10,94	1,145	3800	31,10	4,94	19,67
	200	65,0	10,35	2,170	4000	30,30	4,82	20,20
	300	62,1	9,88	3,100	4500	28,50	4,54	21,40
	400	59,5	9,48	3,970	5000	26,90	4,29	22,50
	500	57,4	9,13	4,780	5500	25,50	4,06	23,40
	600	55,5	8,83	5,550	6000	24,20	3,85	24,20
	700	53,7	8,55	6,270	6500	23,00	3,65	24,90
	800	52,2	8,31	6,960	7000	21,80	3,47	25,50
	900	50,8	8,08	7,620	7500	20,80	3,30	26,00
	1000	49,5	7,88	8,250	8000	19,77	3,15	26,40
	1100	48,3	7,69	8,860	8500	18,84	3,00	26,70
	1200	47,2	7,51	9,440	9000	17,95	2,86	26,90
	1300	46,2	7,35	10,000	9500	17,12	2,72	27,10
	1400	45,2	7,19	10,540	10000	16,32	2,60	27,20
	1500	44,3	7,04	11,070				
	1600	43,4	6,91	11,570				
	1700	42,6	6,78	12,060				
	1800	41,8	6,65	12,540				
	1900	41,0	6,53	13,000				
	2000	40,3	6,42	13,440				
	2200	39,0	6,20	14,300				
	2400	37,8	6,01	15,100				
	2600	36,6	5,83	15,860				

2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight

Belt width	b	[mm]	16	25	32	50	75	100	150
SYNCHROFLEX®	F <sub>adm</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)

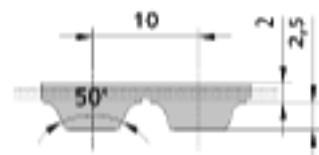
Drive type	SFX AT 10			
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$		15
		$d_{min}$ [mm]		50
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$		25
		$d_{min}$ [mm]		120



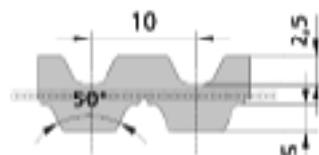
## AT high performance timing belt - endless

### BRECOFLEX® TIMING BELTS (BFX)

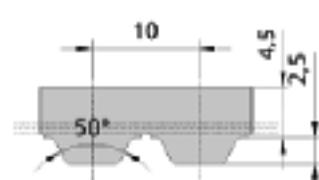
#### AT 10



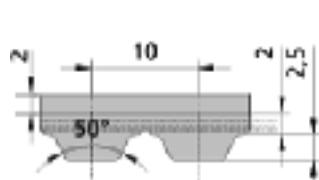
#### AT 10-DL



#### AT 10-DR



#### AT 10-T



#### Available endless lengths for AT 10

- Preferred lengths refer to table
- Belt lengths under 1080 mm with nylon tooth facing
- under 1080 mm: maximum manufactured width is 100 mm,  
further lengths upon request
- over 1080 mm: Any number of teeth available,  
request minimum purchase amount for intermediate lengths.
- over 20000 mm on request

#### Available versions:

- AT 10:** Standard, single-sided
- E:** with E tension member
- DL:** Standard, double-sided, available over 1150 mm, available belt width up to  $b_{max}=100$ , Request minimum purchase amount
- PAZ:** Nylon tooth facing
- DL-PAZ:** Nylon on double-sided belts, only inner side can be coated, available belt width up to  $b_{max}=100$ , minimum amount on request
- T, T-PAZ:** Transport support, available up to a belt width of  $b_{max}=100$ , Request minimum purchase amount
- DR, DR-PAZ:** reinforced back of the belt, through 2.5 mm larger belt thickness, available length over 1080 mm, available belt width up to  $b_{max}=100$ , Request minimum purchase amount
- \*) 150 mm belt width available from 1500 mm to 15000 mm

Endless lengths		Type / length	Type / length
	Number of teeth		Number of teeth
AT10 / 400	40	AT10 / 2000	200
AT10 / 500	50	AT10 / 2120	212
AT10 / 530	53	AT10 / 2240	224
AT10 / 560	56	AT10 / 2360	236
AT10 / 610	61	AT10 / 2500	250
AT10 / 630	63	AT10 / 2650	265
AT10 / 660	66	AT10 / 2800	280
AT10 / 700	70	AT10 / 3000	300
AT10 / 720	72	AT10 / 3150	315
AT10 / 780	78	AT10 / 3350	335
AT10 / 800	80	AT10 / 3550	355
AT10 / 810	81	AT10 / 3750	375
AT10 / 840	84	AT10 / 4000	400
AT10 / 850	85	AT10 / 4250	425
AT10 / 880	88	AT10 / 4500	450
AT10 / 890	89	AT10 / 4750	475
AT10 / 920	92	AT10 / 5000	500
AT10 / 960	96	AT10 / 5300	530
AT10 / 970	97	AT10 / 5600	560
AT10 / 980	98	AT10 / 6000	600
AT10 / 1010	101	AT10 / 6300	630
AT10 / 1080	108	AT10 / 6700	670
AT10 / 1150	115	AT10 / 7100	710
AT10 / 1210	121	AT10 / 7500	750
AT10 / 1240	124	AT10 / 8000	800
AT10 / 1250	125	AT10 / 9000	900
AT10 / 1320	132		
AT10 / 1400	140		
AT10 / 1420	142		
AT10 / 1500	150		
AT10 / 1530	153		
AT10 / 1600	160		
AT10 / 1700	170		
AT10 / 1800	180		
AT10 / 1900	190		

#### Preferred belt width

b [mm] 25 32 50 75 100 150\*

In-between belt widths are available

#### Order example

BRECOFLEX®-TIMING BELT 50 AT10 / 2500 DR-PAZ

Belt width in mm

Type / Pitch

Belt length in mm

Specification

## Technical data of the BRECOFLEX® TIMING BELT

### AT 10, AT 10-DL, AT 10-DR, AT 10-T

**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

**Drive load bearing characteristics**

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

intermeshing number of teeth

$$z_{e\max} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

**1. Tooth shear strength (specific belt tooth load bearing)**

	$F_u$ [N]	R.p.m. n [rpm]	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]	R.p.m. n [rpm]	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]
		0	73,5	11,70	0,000	2800	35,5	5,66	16,58
		20	72,4	11,53	0,241	3000	34,5	5,50	17,27
		40	71,4	11,37	0,476	3200	33,6	5,35	17,92
		60	70,5	11,21	0,705	3400	32,7	5,20	18,53
		80	69,6	11,07	0,928	3600	31,9	5,07	19,11
		100	68,7	10,94	1,145	3800	31,1	4,94	19,67
		200	65,0	10,35	2,170	4000	30,3	4,82	20,20
		300	62,1	9,88	3,100	4500	28,5	4,54	21,40
		400	59,5	9,48	3,970	5000	26,9	4,29	22,50
		500	57,4	9,13	4,780	5500	25,5	4,06	23,40
		600	55,5	8,83	5,550	6000	24,2	3,85	24,20
		700	53,7	8,55	6,270	6500	23,0	3,65	24,90
		800	52,2	8,31	6,960	7000	21,8	3,47	25,50
		900	50,8	8,08	7,620	7500	20,8	3,30	26,00
		1000	49,5	7,88	8,250	8000	19,77	3,15	26,40
		1100	48,3	7,69	8,860	8500	18,84	3,00	26,70
		1200	47,2	7,51	9,440	9000	17,95	2,86	26,90
		1300	46,2	7,35	10,000	9500	17,12	2,72	27,10
		1400	45,2	7,19	10,540	10000	16,32	2,60	27,20
		1500	44,3	7,04	11,070				
		1600	43,4	6,91	11,570				
		1700	42,6	6,78	12,060				
		1800	41,8	6,65	12,540				
		1900	41,0	6,53	13,000				
		2000	40,3	6,42	13,440				
		2200	39,0	6,20	14,300				
		2400	37,8	6,01	15,100				
		2600	36,6	5,83	15,860				

Rotational speeds over 10000 rpm and/or belt speeds over 60 m/s are in need of a special drive design. Please request for our advice.

**2. Tension cord strength (permitted tensile force of the belt  $F_{adm}$ ), belt weight**

Belt width	b	[mm]	25	32	50	75	100	150
BRECOFLEX®	$F_{adm}$	[N]	3500	4750	7750	12000	16000	24500
Belt weight	AT 10	[kg/m]	0,138	0,180	0,290	0,436	0,581	0,839
	AT 10-DL	[kg/m]	0,184	0,233	0,375	0,566	0,755	-
	AT 10-DR	[kg/m]	0,213	0,275	0,433	0,653	0,871	-
	AT 10-T	[kg/m]	0,198	0,256	0,404	0,609	0,812	-

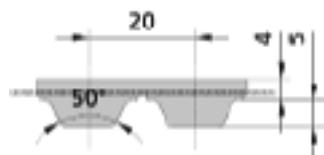
**3. Flexibility (Minimum numbers of teeth, minimum diameter)**

Drive type			AT10	AT10-DL	AT10-DR	AT10-T	AT10-E
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$	15	25	25	25	12
		$d_{min}$ [mm]	50	80	80	80	50
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$	25	25	25	25	20
		$d_{min}$ [mm]	120	120	120	120	80

## AT high performance timing belt - endless

### SYNCHROFLEX® TIMING BELT (SFX)

#### AT 20



High performance AT profile with metric pitches and trapezoidal teeth.

The technical data refer to standard casting 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	Type / Length	Number of teeth
AT 20 / 1000	50	AT 20 / 1960	98
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 length mm      32    50    75    100  
In-between widths and larger widths are available.

Other dimension upon request.

#### Order example

SYNCHROFLEX®-TIMING BELT

Belt width in mm \_\_\_\_\_ 50  
Type / Pitch \_\_\_\_\_ AT20 / 1500  
Belt length in mm \_\_\_\_\_

Technical data of the SYNCHROFLEX® TIMING BELT

AT 20

Belt width b[cm]

1. Tooth shear strength (specific belt tooth load bearing)

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

F<sub>u</sub>[N]

	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
b = $\frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$	0	147,0	46,80	0,000	2800	55,5	17,65	51,8
	20	144,2	45,90	0,962	3000	53,1	16,90	53,1
	40	141,7	45,10	1,889	3200	50,9	16,20	54,3
	60	139,3	44,30	2,790	3400	48,8	15,53	55,3
	80	137,0	43,60	3,650	3600	46,8	14,91	56,2
	100	134,9	42,90	4,500	3800	45,0	14,31	56,9
b = $\frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$	200	125,8	40,00	8,390	4000	43,2	13,74	57,6
	300	118,5	37,70	11,850	4500	39,0	12,43	58,6
	400	112,4	35,80	14,990	5000	35,3	11,25	58,8
Drive load bearing characteristics	500	107,2	34,10	17,860	5500	32,0	10,17	60,6
with given belt width [cm]	600	102,6	32,70	20,500	6000	28,9	9,19	61,7
	700	98,5	31,40	23,000	6500	26,0	8,28	62,4
F <sub>u</sub> = F <sub>uspec</sub> · z <sub>e</sub> · b	800	94,8	30,20	25,300				
	900	91,5	29,10	27,400				
	1000	88,4	28,10	29,500				
M = $\frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$	1100	85,6	27,20	31,400				
	1200	82,9	26,40	33,200				
	1300	80,5	25,60	34,900				
	1400	78,2	24,90	36,500				
P = $\frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$	1500	76,0	24,20	38,000				
	1600	73,9	23,50	39,400				
	1700	72,0	22,90	40,800				
Number of teeth in mesh	1800	70,1	22,30	42,100				
	1900	68,4	21,80	43,300				
z <sub>emax</sub> = 12	2000	66,7	21,20	44,500				
	2200	63,6	20,20	46,600				
	2400	60,7	19,31	48,500				
z <sub>e</sub> = $\frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$	2600	58,0	18,45	50,200				

Rotational speeds over 6500 rpm and/  
or belt speeds over 40 m/s are in need  
of a special drive design. Please request  
for our advice.

Number of teeth in mesh

z<sub>emax</sub> = 12

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight

Belt width	b	[mm]	32	50	75	100	150
SYNCHROFLEX®	F <sub>adm</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)

Drive type SFX AT20

without contraflexure



Synchronising pulley

z<sub>min</sub>

18

Tension roller (smooth),  
running on teeth

d<sub>min</sub> [mm]

120

with contraflexure



Synchronising pulley

z<sub>min</sub>

25

Tension roller (smooth), running  
on the back of the belt

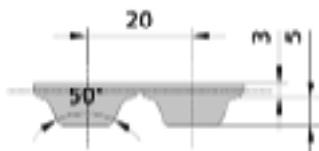
d<sub>min</sub> [mm]

180

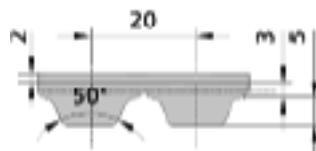
## AT high performance timing belt - endless

BRECOFLEX® TIMING BELTS (BFX)

### AT 20



### AT 20-T



#### Available endless lengths for AT20

- Preferred lengths refer to table
- under 1,500 mm: further lengths upon request.
- over 1,500 mm: Any number of teeth available, request minimum purchase amount for intermediate lengths.
- \*) 150 mm belt width available from 1500 mm to 15000 mm
- over 20000 mm: on request

#### Available versions:

- **AT 20:** Standard, single-sided
- **PAZ:** Nylon tooth facing
- **T, T-PAZ:** Transport support available belt width up to  $b_{max} = 100$  mm, minimum purchase amount on request

Endless lengths		Number of teeth	Type / Length	Number of teeth
Type / Length	Number of teeth			
AT 20 / 1500	75		AT 20 / 4760	238
AT 20 / 1600	80		AT 20 / 5000	250
AT 20 / 1700	85		AT 20 / 5300	265
AT 20 / 1800	90		AT 20 / 5600	280
AT 20 / 1900	95		AT 20 / 6000	300
AT 20 / 2000	100		AT 20 / 6300	315
AT 20 / 2120	106		AT 20 / 6700	335
AT 20 / 2240	112		AT 20 / 7100	355
AT 20 / 2360	118		AT 20 / 7500	375
AT 20 / 2500	125		AT 20 / 8000	400
AT 20 / 2660	133		AT 20 / 8500	425
AT 20 / 2800	140		AT 20 / 9000	450
AT 20 / 3000	150			
AT 20 / 3160	158			
AT 20 / 3360	168			
AT 20 / 3560	178			
AT 20 / 3760	188			
AT 20 / 4000	200			
AT 20 / 4260	213			
AT 20 / 4500	225			
				current maximum manufacturing length:
				AT 20 / 20000 1000

Preferred belt length mm 32 50 75 100 150\*)  
In-between belt widths are available

#### Order example

BRECOFLEX®-TIMING BELT

32 AT 20 / 8000

Belt width in mm

Type / Pitch

Belt length in mm

## Technical data of the BRECOFLEX® TIMING BELT

### AT 20, AT 20-T

**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

$F_u$ [N]

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

P[kW]

**Drive load bearing characteristics**  
with given belt width [cm] is

$$F_u = F_{uspec} \cdot z_e \cdot b$$

[N]

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

[Nm]

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

[kW]

intermeshing number of teeth

$$z_{e\max} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

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

	R.p.m. n [rpm]	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]	R.p.m. n [rpm]	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]
	0	147,0	46,80	0,000	2800	55,5	17,65	51,8
	20	144,2	45,90	0,962	3000	53,1	16,90	53,1
	40	141,7	45,10	1,889	3200	50,9	16,20	54,3
	60	139,3	44,30	2,790	3400	48,8	15,53	55,3
	80	137,0	43,60	3,650	3600	46,8	14,91	56,2
	100	134,9	42,90	4,500	3800	45,0	14,31	56,9
	200	125,8	40,00	8,390	4000	43,2	13,74	57,6
	300	118,5	37,70	11,850	4500	39,0	12,43	58,6
	400	112,4	35,80	14,990	5000	35,3	11,25	58,8
	500	107,2	34,10	17,860	5500	32,0	10,17	60,6
	600	102,6	32,70	20,500	6000	28,9	9,19	61,7
	700	98,5	31,40	23,000	6500	26,0	8,28	62,4
	800	94,8	30,20	25,300				
	900	91,5	29,10	27,400				
	1000	88,4	28,10	29,500				
	1100	85,6	27,20	31,400				
	1200	82,9	26,40	33,200				
	1300	80,5	25,60	34,900				
	1400	78,2	24,90	36,500				
	1500	76,0	24,20	38,000				
	1600	73,9	23,50	39,400				
	1700	72,0	22,90	40,800				
	1800	70,1	22,30	42,100				
	1900	68,4	21,80	43,300				
	2000	66,7	21,20	44,500				
	2200	63,6	20,20	46,600				
	2400	60,7	19,31	48,500				
	2600	58,0	18,45	50,200				

Rotational speeds over 6500 rpm and/or belt speeds over 40 m/s are in need of a special drive design. Please request for our advice.

### 2. Tension cord strength (permitted tensile force of the belt $F_{adm}$ ), belt weight

Belt width	b	[mm]	32	50	75	100	150
BRECOFLEX®	$F_{adm}$	[N]	6000	10000	15600	21200	32400
Belt weight AT 20		[kg/m]	0,307	0,480	0,720	0,960	1,423
Belt weight AT 20-T		[kg/m]	0,372	0,588	0,888	1,187	-

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

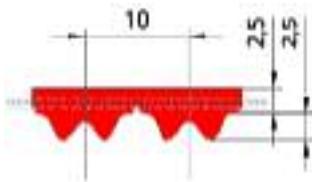
Drive type

		BFX AT20	BFX AT20-T
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$ $d_{min}$ [mm]	18 120
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$ $d_{min}$ [mm]	25 180

## ATP high performance timing belt - endless

### SYNCHROFLEX® TIMING BELT (SFX)

#### ATP 10 GEN III



High performance ATP profile with metric pitch and optimised meshing with a double support of the tooth head.

##### 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

##### Product range\*

Type GEN III / Length of teeth	Number	Type GEN III / Length of teeth	Number
ATP 10 / 630	63	ATP 10 / 1280	128
ATP 10 / 660	66	ATP 10 / 1400	140
ATP 10 / 700	70	ATP 10 / 1650	165
ATP 10 / 780	78	ATP 10 / 1800	180
ATP 10 / 840	84	ATP 10 / 1760 **	176
ATP 10 / 890	89		
ATP 10 / 920	92		
ATP 10 / 1010	101		
ATP 10 / 1080	108		
ATP 10 / 1150	115		

##### Preferred belt width

b [mm]: 16 25 32 50 75 100 150

\*Other dimension upon request.

\*\* in preparation

##### Order example

SYNCHROFLEX®-TIMING BELT 32 ATP10 / 780 GEN III

Belt width in mm	32
Type / Pitch	ATP10 / 780
Belt length in mm	780
Specification Generation III	GEN III

**Technical data of the SYNCHROFLEX® TIMING BELT**

**ATP 10 GEN III**

**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

**Drive load bearing characteristics**

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b \quad [N]$$

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

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

intermeshing number of teeth

$$z_{e\max} = 16$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

**1. Tooth shear strength (specific belt tooth load bearing)**

$F_u$ [N]	R.p.m. n [rpm]	$F_{uspec}$		$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]	R.p.m. n [rpm]	$F_{uspec}$		$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]
		[N/cm]	[N/cm]				[N/cm]	[W/cm]		
	0	105,050	16,713	0,000	0,000	2400	53,957	8,584	21,575	
	20	103,508	16,468	0,345	0,345	2600	52,318	8,324	22,663	
	40	102,064	16,238	0,680	0,680	2800	50,790	8,081	23,694	
	60	100,706	16,023	1,007	1,007	3000	49,358	7,853	24,671	
	80	99,424	15,818	1,326	1,326	3200	48,010	7,638	25,597	
	100	98,210	15,626	1,637	1,637	3400	46,737	7,436	26,476	
	150	95,432	15,183	2,385	2,385	3600	45,532	7,245	27,310	
	200	92,956	14,790	3,098	3,098	3800	44,387	7,062	28,102	
	300	88,706	14,110	4,433	4,433	4000	43,297	6,888	28,855	
	400	85,093	13,538	4,433	4,433	4500	40,780	6,488	30,575	
	500	81,989	13,045	6,830	6,830	5000	38,513	6,127	32,084	
	600	79,257	12,609	7,923	7,923	5500	36,452	5,799	33,403	
	700	76,817	12,222	8,985	8,985	6000	34,561	5,499	34,549	
	800	74,614	11,871	9,945	9,945	6500	32,815	5,221	35,538	
	900	72,604	11,551	10,887	10,887	7000	31,194	4,963	36,380	
	1000	70,758	11,257	11,789	11,789	7500	29,679	4,722	37,087	
	1100	69,049	10,986	12,654	12,654	8000	28,260	4,496	37,666	
	1200	67,461	10,733	13,487	13,487	8500	26,923	4,283	38,128	
	1300	65,975	10,496	14,290	14,290	9000	25,661	4,082	38,477	
	1400	64,580	10,275	15,063	15,063	9500	24,464	3,892	38,721	
	1500	63,265	10,065	15,811	15,811	10000	23,328	3,711	38,865	
	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						
	2000	57,636	9,170	19,205						
	2200	55,722	8,865	20,425						

Rotational speeds over 10000 rpm and/or belt speeds over 80 m/s are in need of a special drive design. Please request for our advice.

**2. Tension cord strength (permitted tensile force of the belt  $F_{adm}$ ), belt weight**

Belt width	b	[mm]	16	25	32	50	75	100	150
SYNCHROFLEX®	$F_{adm}$	[N]	3000	5000	6750	10750	16500	22000	33500
Belt weight	ATP10 GEN III	[kg/m]	0,109	0,170	0,218	0,340	0,510	0,680	1,020

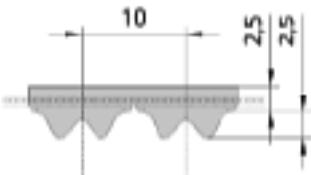
**3. Flexibility (Minimum numbers of teeth, minimum diameter)**

Drive type	SFX ATP 10 GEN III			
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$	15	
		$d_{min}$ [mm]	50	
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$	25	
		$d_{min}$ [mm]	120	

## ATP high performance timing belt - endless

### SYNCHROFLEX® TIMING BELT (SFX)

#### ATP 10



High performance ATP profile with metric pitch and optimised meshing with a double support of the tooth head.

#### Product range\*

Type /length	Number of teeth	Type /length	Number of teeth
ATP 10 / 630	63	ATP 10 / 1280	128
ATP 10 / 660	66	ATP 10 / 1400	140
ATP 10 / 700	70	ATP 10 / 1650	165
ATP 10 / 780	78	ATP 10 / 1760**	176
ATP 10 / 840	84	ATP 10 / 1800	180
ATP 10 / 890	89		
ATP 10 / 920	92		
ATP 10 / 1010	101		
ATP 10 / 1080	108		
ATP 10 / 1150	115		

#### Preferred belt width

b [mm]: 16 25 32 50 75 100

In-between widths and larger widths are available

#### Available versions:

- single-sided
- with E tension member for a better flexibility
- with reinforced tension member design
- Polyurethane special materials upon request (Standard: DADU 9311, colour: yellow)
- antistatic, coloured, mechanical reworked

\* Other dimension upon request.

\*\* in preparation

#### Order example

SYNCHROFLEX®-TIMING BELT 32 ATP10 / 780

Belt width in mm

Type / Pitch

Belt length in mm

**Technical data of the SYNCHROFLEX® TIMING BELT**

**ATP 10**

Belt width b[cm]

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

F<sub>u</sub>[N]

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

P[kW]

Drive load bearing characteristics

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

[N]

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

[Nm]

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

[kW]

intermeshing number of teeth

$$z_{e\max} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

**1. Tooth shear strength (specific belt tooth load bearing)**

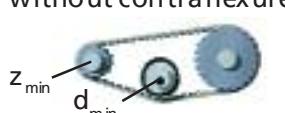
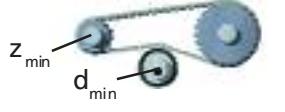
	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	95,500	15,199	0,000	2200	50,656	8,062	18,572
	20	94,098	14,976	0,314	2400	49,052	7,807	19,619
	40	92,785	14,767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

Rotational speeds over 10000 rpm and/or belt speeds over 40 m/s are in need of a special drive design. Please request for our advice.

**2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight**

Belt width	b	[mm]	16	25	32	50	75	100	150
SYNCHROFLEX®	F <sub>adm</sub>	[N]	2000	3500	4750	7750	12000	16000	24500
Belt weight	ATP 10	[kg/m]	0,096	0,15	0,192	0,300	0,450	0,600	0,900

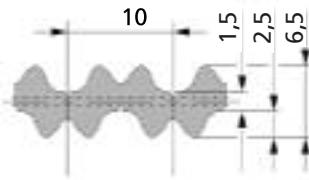
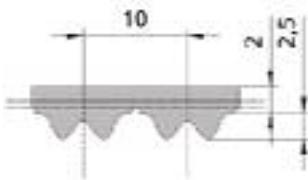
**3. Flexibility (Minimum numbers of teeth, minimum diameter)**

Drive type		SFX	ATP 10
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	z <sub>min</sub>	15
		d <sub>min</sub> [mm]	50
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	z <sub>min</sub>	25
		d <sub>min</sub> [mm]	120

## ATP high performance timing belt - endless

### BRECOFLEX® TIMING BELTS (BFX)

#### ATP 10



#### Available endless lengths for ATP 10

- Preferred lengths refer to table
- under 1500 mm: not available
- over 1500 mm: Any number of teeth available, request minimum purchase amount for intermediate lengths.
- over 12000 mm on request

#### Available versions:

- ATP 10:** Standard, single-sided
- DL:** Standard, double-sided

#### Endless lengths

Type / length	Number of teeth	Type / length	Number of teeth
ATP 10 / 1500	150	ATP 10 / 3750	375
ATP 10 / 1600	160	ATP 10 / 4000	400
ATP 10 / 1700	170	ATP 10 / 4250	425
ATP 10 / 1900	190	ATP 10 / 4500	450
ATP 10 / 2000	200	ATP 10 / 4750	475
ATP 10 / 2120	212	ATP 10 / 5000	500
ATP 10 / 2240	224	ATP 10 / 5300	530
ATP 10 / 2360	236	ATP 10 / 5600	560
ATP 10 / 2500	250	ATP 10 / 6000	600
ATP 10 / 2650	265	ATP 10 / 6300	630
ATP 10 / 2800	280	current maximum manufacturing length:	
ATP 10 / 3000	300		
ATP 10 / 3150	315		
ATP 10 / 3350	335		
ATP 10 / 3550	355		
ATP 10 / 12000		1200	

#### Preferred belt width

b [mm]: 16 25 32 50 75 100

In-between belt widths are available

#### Order example

BRECOFLEX®-TIMING BELT      32 ATP10 / 1900  
 Belt width in mm \_\_\_\_\_  
 Type / Pitch \_\_\_\_\_  
 Belt length in mm \_\_\_\_\_

## Technical data of the BRECOFLEX® TIMING BELT

### ATP 10

**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

$F_u$  [N]

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

P[kW]

**Drive load bearing characteristics**

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

[N]

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

[Nm]

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

[kW]

intermeshing number of teeth

$$z_{e\max} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

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

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

Rotational speeds over 10000 rpm and/or belt speeds over 40 m/s are in need of a special drive design. Please request for our advice.

### 2. Tension cord strength (permitted tensile force of the belt $F_{adm}$ ), belt weight

Belt width	b	[mm]	16	25	32	50	75	100
BRECOFLEX®	$F_{adm}$	[N]	2000	3500	4750	7750	12000	16000
Belt weight	ATP 10	[kg/m]	0,096	0,150	0,192	0,300	0,450	0,600
	ATP 10-DL	[kg/m]	0,097	0,154	0,200	0,316	0,477	0,636

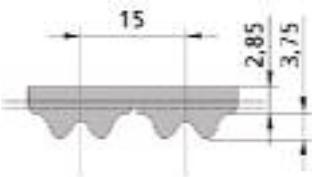
### 3. Flexibility (Minimum numbers of teeth, minimum diameter)

Drive type		BFX	ATP 10	BFX	ATP 10-DL
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$	15		25
	$d_{min}$ [mm]	50		80	
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$	25		25
	$d_{min}$ [mm]	120		120	

## ATP high performance timing belt - endless

### SYNCHROFLEX® TIMING BELT (SFX)

#### ATP 15



High performance ATP profile with metric pitch and optimised meshing with a double support of the tooth head.

#### Available versions:

- single-sided
- with E tension member for a better flexibility
- with reinforced tension member design
- Polyurethane special materials upon request (Standard: DADU 9311, colour: yellow)
- antistatic, coloured, mechanical reworked

Type / Length*	Number of teeth
ATP 15 / 990**	66
ATP 15 / 1125	75
ATP 15 / 1185	79
ATP 15 / 1260	84
ATP 15 / 1395**	93

Type / Length	Number of teeth
ATP 15 / 1560	104

#### Preferred belt width

b [mm]: 25 32 50 75 100 150

In-between belt widths are available

\* Other dimensions upon request

\*\* dimensions in preparation

#### Order example

SYNCHROFLEX®-TIMING BELT 32 ATP15 / 1260

Belt width in mm

Type / Pitch

Belt length in mm

**Technical data of the SYNCHROFLEX® TIMING BELT**

**ATP 15**

Belt width b[cm]

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

Drive load bearing characteristics

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

intermeshing number of teeth

$$z_{emax} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

**1. Tooth shear strength (specific belt tooth load bearing)**

	R.p.m. n [rpm]	F <sub>U</sub> [N]	F <sub>U,spec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>U,spec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	143,325	34,216	0,000		2200	69,141	16,506	38,027
	20	140,945	33,648	0,705		2400	66,523	15,881	39,914
	40	138,722	33,117	1,387		2600	64,094	15,301	41,661
	60	136,637	32,620	2,050		2800	61,828	14,760	43,280
	80	134,674	32,151	2,693		3000	59,706	14,254	44,779
	100	132,818	31,708	3,320		3200	57,709	13,777	46,167
	150	128,584	30,697	4,822		3400	55,824	13,327	47,451
	200	124,832	29,799	6,241		3600	54,040	12,901	48,636
	300	118,367	28,258	8,877		3800	52,345	12,496	49,727
	400	112,952	26,965	11,295		4000	50,731	12,111	50,731
	500	108,288	25,852	13,536		4500	47,006	11,222	52,881
	600	104,193	24,874	15,629		5000	43,652	10,421	54,565
	700	100,542	24,003	17,595		5500	40,602	9,693	55,828
	800	97,249	23,216	19,450		6000	37,806	9,026	56,709
	900	94,249	22,500	21,206		6500	35,225	8,409	57,240
	1000	91,495	21,843	22,874		7000	32,827	7,837	57,447
	1100	88,949	21,235	24,461		7500	30,589	7,303	57,354
	1200	86,583	20,670	25,975		8000	28,490	6,802	56,980
	1300	84,372	20,142	27,421		8500	26,515	6,330	56,344
	1400	82,297	19,647	28,804		9000	24,649	5,884	55,460
	1500	80,343	19,180	30,128		9500	22,881	5,462	54,342
	1600	78,495	18,739	31,398		10000	21,201	5,061	53,003
	1700	76,745	18,321	32,616					
	1800	75,080	17,924	33,786					
	1900	73,494	17,545	34,910					
	2000	71,980	17,184	35,990					

Rotational speeds over 10000 rpm and/or belt speeds over 40 m/s are in need of a special drive design. Please request for our advice.

**2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight**

Belt width	b	[mm]	25	32	50	75	100	150
SYNCHROFLEX®	F <sub>adm</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

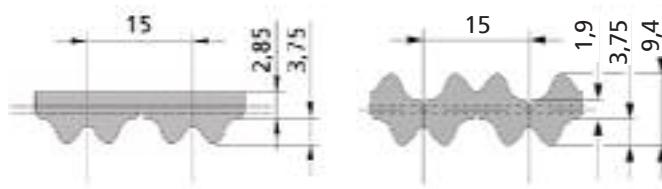
**3. Flexibility (Minimum numbers of teeth, minimum diameter)**

Drive type	SFX ATP 15			
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$	20	
		$d_{min}$ [mm]	100	
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$	30	
		$d_{min}$ [mm]	160	

## ATP high performance timing belt - endless

### BRECOFLEX® TIMING BELTS (BFX)

#### ATP 15



#### Available endless lengths for ATP 15

- Preferred lengths refer to table
- under 1740 mm: not available
- over 1740 mm: Any number of teeth available, request minimum purchase amount for intermediate lengths.
- max. manufacturing width: 150 mm
- over 12000 mm on request

#### Available versions:

- **ATP 15:** Standard, single-sided
- **DL:** Standard, double-sided

#### Endless lengths

Type / length	Number of teeth	Type / length	Number of teeth
ATP 15 / 1740	116	ATP 15 / 4875	325
ATP 15 / 1965	131	ATP 15 / 5250	350
ATP 15 / 2100	140	ATP 15 / 5625	375
ATP 15 / 2250	150	ATP 15 / 6000	400
ATP 15 / 2385	159		
ATP 15 / 2520	168		
ATP 15 / 2670	178		
ATP 15 / 2805	187		
ATP 15 / 3000	200		
ATP 15 / 3225	215		
ATP 15 / 3450	230		
ATP 15 / 3675	245		
ATP 15 / 3900	260		
ATP 15 / 4125	275		
ATP 15 / 4500	300		

current maximum manufacturing length:

ATP 15 / 12000 800

#### Preferred belt width

b [mm]: 25 32 50 75 100 150

In-between belt widths are available

#### Order example

BRECOFLEX®-TIMING BELT	50	ATP15 / 3900
Belt width in mm	_____	
Type / Pitch	_____	
Belt length in mm	_____	

## Technical data of the BRECOFLEX® TIMING BELT

### ATP 15

**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

**Drive load bearing characteristics**

with given belt width [cm]  
 $F_u = F_{uspec} \cdot z_e \cdot b$  [N]

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$
 [Nm]

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

intermeshing number of teeth

$$z_{e\max} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

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

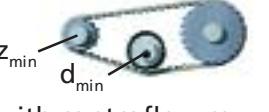
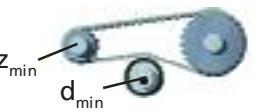
$F_u$ [N]	R.p.m.	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]	R.p.m.	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]
	n [rpm]				n [rpm]			
	0	143,325	34,216	0,000	2400	66,523	15,881	39,914
	20	140,945	33,648	0,705	2600	64,094	15,301	41,661
	40	138,722	33,117	1,387	2800	61,828	14,760	43,280
	60	136,637	32,620	2,050	3000	59,706	14,254	44,779
	80	134,674	32,151	2,693	3200	57,709	13,777	46,167
	100	132,818	31,708	3,320	3400	55,824	13,327	47,451
	150	128,584	30,697	4,822	3600	54,040	12,901	48,636
	200	124,832	29,799	6,241	3800	52,345	12,496	49,727
	300	118,367	28,258	8,877	4000	50,731	12,111	50,731
	400	112,952	26,965	11,295	4500	47,006	11,222	52,881
	500	108,288	25,852	13,536	5000	43,652	10,421	54,565
	600	104,193	24,874	15,629	5500	40,602	9,693	55,828
	700	100,542	24,003	17,595	6000	37,806	9,026	56,709
	800	97,249	23,216	19,450	6500	35,225	8,409	57,240
	900	94,249	22,500	21,206	7000	32,827	7,837	57,447
	1000	91,495	21,843	22,874	7500	30,589	7,303	57,354
	1100	88,949	21,235	24,461	8000	28,490	6,802	56,980
	1200	86,583	20,670	25,975	8500	26,515	6,330	56,344
	1300	84,372	20,142	27,421	9000	24,649	5,884	55,460
	1400	82,297	19,647	28,804	9500	22,881	5,462	54,342
	1500	80,343	19,180	30,128	10000	21,201	5,061	53,003
	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				
	2000	71,980	17,184	35,990				
	2200	69,141	16,506	38,027				

Rotational speeds over 10000 rpm and/or belt speeds over 40 m/s are in need of a special drive design. Please request for our advice.

#### 2. Tension cord strength (permitted tensile force of the belt $F_{adm}$ ), belt weight

Belt width	b	[mm]	25	32	50	75	100	150
BRECOFLEX®	$F_{adm}$	[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
	ATP 15-DL	[kg/m]	0,210	0,272	0,432	0,654	0,876	-

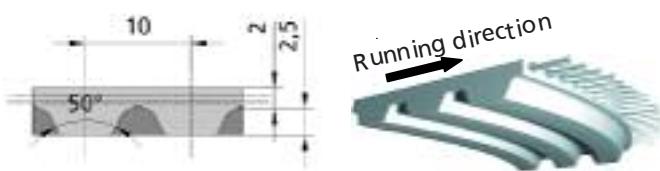
#### 3. Flexibility (Minimum numbers of teeth, minimum diameter)

Drive type			BFX ATP 15	BFX ATP 15-DL
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$	20	25
		$d_{min}$ [mm]	100	120
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$	30	30
		$d_{min}$ [mm]	160	160

## Self-guiding timing belts - endless

BRECOFLEX® TIMING BELT (BFX) with curved teeth

### BAT 10



#### Available endless lengths for BAT 10

- Preferred lengths refer to table
- under 1100 mm: not available
- over 1100 mm: Any number of teeth available, for in-between lengths minimum purchase amount on request
- over 20000 mm on request

#### Available versions

- **BAT 10:** Standard
- **PAZ:** Nylon tooth facing

Please note, that the BAT timing belt has its self-guiding property only in the stated preferred running direction (see figure above).

Endless lengths	Type / Length	Number of teeth	Type / Length	Number of teeth
	BAT 10 / 1100	110	BAT 10 / 5000	500
	BAT 10 / 1150	115	BAT 10 / 5600	560
	BAT 10 / 1210	121	BAT 10 / 6000	600
	BAT 10 / 1240	124	BAT 10 / 6700	670
	BAT 10 / 1250	125	BAT 10 / 7100	710
	BAT 10 / 1320	132	BAT 10 / 7500	750
	BAT 10 / 1400	140		
	BAT 10 / 1500	150		
	BAT 10 / 1600	160		
	BAT 10 / 1700	170		
	BAT 10 / 1800	180	BAT 10 / 20000	2000
	BAT 10 / 1900	190		
	BAT 10 / 2000	200		
	BAT 10 / 2240	224		
	BAT 10 / 2500	250		
	BAT 10 / 2800	280		
	BAT 10 / 3000	300		
	BAT 10 / 3550	355		
	BAT 10 / 4000	400		
	BAT 10 / 4500	450		

Belt widths b [mm]:      32    50    75    100

#### Order example:

BRECOFLEX®-TIMING BELT      50 BAT 10 / 2000

Belt width in mm	50
Type / Pitch	BAT 10
Belt length in mm	2000

## Technical data of the BRECOFLEX® TIMING BELT

## BAT 10

**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

 F<sub>u</sub>[N]

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

P[kW]

**Drive load bearing characteristics**

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

[N]

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

[Nm]

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

[kW]

intermeshing number of teeth

$$z_{emax} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

**1. Tooth shear strength (specific belt tooth load bearing)**

	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	77,91	12,40	0,00	2800	37,63	6,00	17,57
	20	76,74	12,22	0,26	3000	36,57	5,83	18,31
	40	75,68	12,05	0,50	3200	35,62	5,67	19,00
	60	74,73	11,88	0,75	3400	34,66	5,51	19,64
	80	73,78	11,73	0,98	3600	33,81	5,37	20,26
	100	72,82	11,60	1,21	3800	32,97	5,24	20,85
	200	68,90	10,97	2,30	4000	32,12	5,11	21,41
	300	65,83	10,47	3,29	4500	30,53	4,81	22,68
	400	63,07	10,05	4,21	5000	28,51	4,55	23,85
	500	60,84	9,68	5,07	5500	27,03	4,30	24,80
	600	58,83	9,36	5,88	6000	25,65	4,08	25,65
	700	56,92	9,06	6,65	6500	24,38	3,87	26,39
	800	55,33	8,81	7,38	7000	23,11	3,68	27,03
	900	53,85	8,56	8,08	7500	22,05	3,50	27,56
	1000	52,47	8,35	8,75	8000	20,96	3,34	27,98
	1100	51,20	8,15	9,39	8500	19,97	3,18	28,30
	1200	50,03	7,96	10,01	9000	19,03	3,03	28,51
	1300	48,97	7,79	10,60	9500	18,15	2,88	28,73
	1400	47,91	7,62	11,17	10000	17,30	2,76	28,83
	1500	46,96	7,46	11,73				
	1600	46,00	7,32	12,26				
	1700	45,16	7,19	12,78				
	1800	44,31	7,05	13,29				
	1900	43,46	6,92	13,78				
	2000	42,72	6,81	14,25				
	2200	41,34	6,57	15,16				
	2400	40,07	6,37	16,01				
	2600	38,80	6,18	16,81				

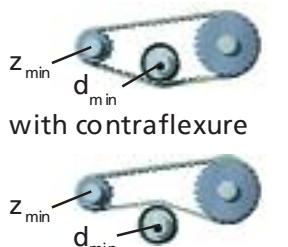
Rotational speeds over 10000 rpm and/or belt speeds over 60 m/s are in need of a special drive design. Please request for our advice.

**2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight**

Belt width	b	[mm]	32	50	75	100
BRECOFLEX®	F <sub>adm</sub>	[N]	4750	7750	12000	16000
Belt weight	BAT 10	[kg/m]	0,180	0,290	0,436	0,581

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

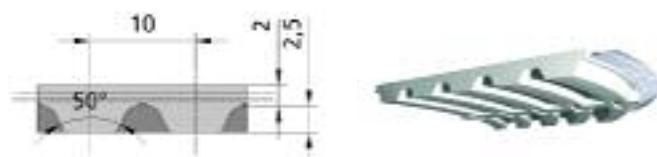
Drive type		BFX BAT 10		
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	z <sub>min</sub>	d <sub>min</sub> [mm]	20
				60
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	z <sub>min</sub>	d <sub>min</sub> [mm]	25
				120



## Self-guiding timing belts - endless

**BRECOFLEX® TIMING BELT (BFX) with curved teeth and tracking**

### BATK 10



#### Available endless lengths for BATK 10

- Preferred lengths refer to table
- under 1100 mm: not available
- over 1100 mm: Any number of teeth available, request minimum purchase amount for intermediate lengths.
- over 20000 mm on request

#### Available versions

- **BATK 10:** Standard
- **PAZ:** Nylon tooth facing, Textile colour: white

Endless lengths		Type / Length	Number of teeth	Type / Length	Number of teeth
BATK10 / 1100	110	BATK10 / 5000	500		
BATK10 / 1150	115	BATK10 / 5600	560		
BATK10 / 1210	121	BATK10 / 6000	600		
BATK10 / 1240	124	BATK10 / 6700	670		
BATK10 / 1250	125	BATK10 / 7100	710		
BATK10 / 1320	132	BATK10 / 7500	750		
BATK10 / 1400	140				
BATK10 / 1500	150				
BATK10 / 1600	160				
BATK10 / 1700	170				
BATK10 / 1800	180				
BATK10 / 1900	190				
BATK10 / 2000	200				
BATK10 / 2240	224				
BATK10 / 2500	250				
BATK10 / 2800	280				
BATK10 / 3000	300				
BATK10 / 3550	355				
BATK10 / 4000	400				
BATK10 / 4500	450				

current maximum manufacturing length:

BATK10 / 20000 2000

Belt widths b [mm]: 32 50 75 100

#### Order example:

BRECOFLEX®-TIMING BELT      50 BATK 10 / 2000

Belt width in mm	50
Type / Pitch	10
Belt length in mm	2000

## Technical data of the BRECOFLEX® TIMING BELT BATK 10

**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

F<sub>u</sub>[N]

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

P[kW]

**Drive load bearing characteristics**  
with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

[N]

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

[Nm]

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

[kW]

intermeshing number of teeth

$$z_{emax} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

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

	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	77,91	12,40	0,00	2800	37,63	6,00	17,57
	20	76,74	12,22	0,26	3000	36,57	5,83	18,31
	40	75,68	12,05	0,50	3200	35,62	5,67	19,00
	60	74,73	11,88	0,75	3400	34,66	5,51	19,64
	80	73,78	11,73	0,98	3600	33,81	5,37	20,26
	100	72,82	11,60	1,21	3800	32,97	5,24	20,85
	200	68,90	10,97	2,30	4000	32,12	5,11	21,41
	300	65,83	10,47	3,29	4500	30,53	4,81	22,68
	400	63,07	10,05	4,21	5000	28,51	4,55	23,85
	500	60,84	9,68	5,07	5500	27,03	4,30	24,80
	600	58,83	9,36	5,88	6000	25,65	4,08	25,65
	700	56,92	9,06	6,65	6500	24,38	3,87	26,39
	800	55,33	8,81	7,38	7000	23,11	3,68	27,03
	900	53,85	8,56	8,08	7500	22,05	3,50	27,56
	1000	52,47	8,35	8,75	8000	20,96	3,34	27,98
	1100	51,20	8,15	9,39	8500	19,97	3,18	28,30
	1200	50,03	7,96	10,01	9000	19,03	3,03	28,51
	1300	48,97	7,79	10,60	9500	18,15	2,88	28,73
	1400	47,91	7,62	11,17	10000	17,30	2,76	28,83
	1500	46,96	7,46	11,73				
	1600	46,00	7,32	12,26				
	1700	45,16	7,19	12,78				
	1800	44,31	7,05	13,29				
	1900	43,46	6,92	13,78				
	2000	42,72	6,81	14,25				
	2200	41,34	6,57	15,16				
	2400	40,07	6,37	16,01				
	2600	38,80	6,18	16,81				

Rotational speeds over 10000 rpm and/or belt speeds over 60 m/s are in need of a special drive design. Please request for our advice.

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

Belt width	b	[mm]	32	50	75	100
BRECOFLEX® Belt weight	F <sub>adm</sub> BATK 10	[N] [kg/m]	4750 0,192	7750 0,300	12000 0,450	16000 0,600

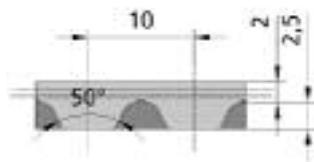
### 3. Flexibility (Minimum numbers of teeth, minimum diameter)

Drive type	BFX BATK10			
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	z <sub>min</sub>	d <sub>min</sub> [mm]	20
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	z <sub>min</sub>	d <sub>min</sub> [mm]	25

## Self-guiding timing belts - endless

### Self-guiding BRECOFLEX® TIMING BELT (BFX)

#### SFAT 10



#### Available endless lengths for SFAT10

- Preferred lengths refer to table
- under 1100 mm: Not available
- over 1100 mm: Any number of teeth available, request minimum purchase amount for in-between lengths
- over 20000 mm on request

Endless lengths Type / Length	Number of teeth	Type /Length	Number of teeth
SFAT 10 / 1100	110	SFAT 10 / 4000	400
SFAT 10 / 1200	120	SFAT 10 / 4500	450
SFAT 10 / 1300	130	SFAT 10 / 5000	500
SFAT 10 / 1400	140	SFAT 10 / 5600	560
SFAT 10 / 1500	150	SFAT 10 / 6000	600
SFAT 10 / 1600	160	SFAT 10 / 6700	670
SFAT 10 / 1700	170	SFAT 10 / 7100	710
SFAT 10 / 1800	180	SFAT 10 / 7500	750
SFAT 10 / 1900	190		
SFAT 10 / 2000	200		
SFAT 10 / 2240	224		
SFAT 10 / 2500	250		
SFAT 10 / 2800	280		
SFAT 10 / 3000	300		
SFAT 10 / 3550	355		

current maximum  
manufacturing length:  
SFAT 10 / 20000 2000

Preferred belt width b [mm]      50    75    100

#### Available versions:

- **SFAT 10:**Standard
- **PAZ:** Nylon tooth facing

#### Order example:

BRECOFLEX®-TIMING BELT      50 SFAT10 / 2000  
 Belt width in mm \_\_\_\_\_  
 Type / Pitch \_\_\_\_\_  
 Belt length in mm \_\_\_\_\_

## Technical data of the BRECOFLEX® TIMING BELT SFAT 10

**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

$F_u$ [N]

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

P[kW]

**Drive load bearing characteristics**  
with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

[N]

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

[Nm]

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

[kW]

intermeshing number of teeth

$$z_{e\max} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

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

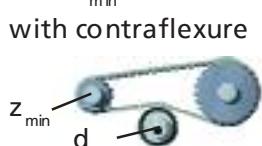
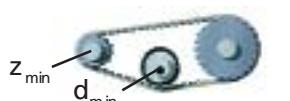
	R.p.m. n [rpm]	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]	R.p.m. n [rpm]	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]
	0	73,5	11,70	0,000	2800	35,50	5,66	16,58
	20	72,4	11,53	0,241	3000	34,50	5,50	17,27
	40	71,4	11,37	0,476	3200	33,60	5,35	17,92
	60	70,5	11,21	0,705	3400	32,70	5,20	18,53
	80	69,6	11,07	0,928	3600	31,90	5,07	19,11
	100	68,7	10,94	1,145	3800	31,10	4,94	19,67
	200	65,0	10,35	2,170	4000	30,30	4,82	20,20
	300	62,1	9,88	3,100	4500	28,50	4,54	21,40
	400	59,5	9,48	3,970	5000	26,90	4,29	22,50
	500	57,4	9,13	4,780	5500	25,50	4,06	23,40
	600	55,5	8,83	5,550	6000	24,20	3,85	24,20
	700	53,7	8,55	6,270	6500	23,00	3,65	24,90
	800	52,2	8,31	6,960	7000	21,80	3,47	25,50
	900	50,8	8,08	7,620	7500	20,80	3,30	26,00
	1000	49,5	7,88	8,250	8000	19,77	3,15	26,40
	1100	48,3	7,69	8,860	8500	18,84	3,00	26,70
	1200	47,2	7,51	9,440	9000	17,95	2,86	26,90
	1300	46,2	7,35	10,000	9500	17,12	2,72	27,10
	1400	45,2	7,19	10,540	10000	16,32	2,60	27,20
	1500	44,3	7,04	11,070				
	1600	43,4	6,91	11,570				
	1700	42,6	6,78	12,060				
	1800	41,8	6,65	12,540				
	1900	41,0	6,53	13,000				
	2000	40,3	6,42	13,440				
	2200	39,0	6,20	14,300				
	2400	37,8	6,01	15,100				
	2600	36,6	5,83	15,860				

### 2. Tension cord strength (permitted tensile force of the belt $F_{adm}$ ), belt weight

Belt width	b	[mm]	50	75	100
BRECOFLEX®	$F_{adm}$	[N]	7750	12000	16000
Belt weight	SFAT 10	[kg/m]	0,290	0,436	0,581

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

Drive type	BFX SFAT 10			
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$	15	
		$d_{min}$ [mm]	50	
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$	25	
		$d_{min}$ [mm]	120	



## Self-guiding timing belts - endless

### Self-guiding BRECOFLEX® TIMING BELT (BFX)

#### SFAT 15



#### Available endless lengths for SFAT 15

- Preferred lengths refer to table
- under 1500 mm: Not available
- over 1500 mm: Any number of teeth available, request minimum purchase amount for in-between lengths
- over 21990 mm on request

#### Available versions:

- SFAT 15: Standard
- PAZ: Nylon tooth facing

Endless lengths	
Type / length	Number of teeth
SFAT 15 / 1500	100
SFAT 15 / 1590	106
SFAT 15 / 1710	114
SFAT 15 / 1800	120
SFAT 15 / 1905	127
SFAT 15 / 1995	133
SFAT 15 / 2250	150
SFAT 15 / 2505	167
SFAT 15 / 2790	186
SFAT 15 / 3000	200
SFAT 15 / 3495	233
SFAT 15 / 3750	250
SFAT 15 / 4005	267
SFAT 15 / 4500	300
SFAT 15 / 4995	333
SFAT 15 / 5295	353
SFAT 15 / 5595	373
SFAT 15 / 6000	400
SFAT 15 / 6300	420
SFAT 15 / 6705	447

Preferred belt width b [mm]      50      75      100

Type / length	Number of teeth
SFAT 15 / 7095	473
SFAT 15 / 7500	500

current maximum manufacturing length:

SFAT 15 / 21990 1466

## Technical data of the BRECOFLEX® TIMING BELT SFAT 15

**Belt width b [cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

**F<sub>u</sub> [N]**

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

**M[Nm]**

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

**P[kW]**
**Drive load bearing characteristics**

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

**[N]**

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

**[Nm]**

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

**[kW]**

intermeshing number of teeth

$$z_{emax} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

**1. Tooth shear strength (specific belt tooth load bearing)**

	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	110,25	29,250	0,000	2200	53,50	13,200	30,450
	20	110,25	28,715	0,601	2400	51,30	12,655	31,810
	40	108,30	28,235	1,182	2500	49,25	12,410	32,445
	60	106,55	27,755	1,745	2600	48,25	12,115	33,045
	80	104,90	27,335	2,291	2800	47,30	11,680	34,165
	100	103,30	26,920	2,821	2880	45,50	11,445	34,585
	150	101,80	26,015	4,086	3000	44,80	11,200	35,185
	200	98,45	25,175	5,278	3200	43,80	10,775	36,100
	300	95,40	23,790	7,477	3400	42,25	10,350	36,920
	400	90,30	22,640	9,478	3600	40,75	9,985	37,650
	500	85,95	21,615	11,321	3800	39,35	9,620	38,300
	600	82,30	20,765	13,030	4000	38,05	9,260	38,875
	700	79,05	19,975	14,626	4500	36,75	8,470	39,980
	730	76,10	19,740	15,085	5000	35,45	7,745	40,675
	800	75,35	19,255	16,122	5500	34,15	6,855	41,470
	900	73,50	18,590	17,530	6000	32,95	6,135	42,315
	1000	71,15	17,990	18,858	6500	31,75	5,235	43,010
	1100	68,95	17,445	20,115				
	1200	66,95	16,955	21,305				
	1300	65,05	16,475	22,435				
	1400	63,35	16,045	23,509				
	1460	61,70	15,800	24,128				
	1500	60,70	15,620	24,530				
	1600	60,15	15,205	25,502				
	1700	58,65	14,840	26,429				
	1800	57,30	14,475	27,311				
	1900	55,95	14,165	28,153				
	2000	54,70	13,810	28,955				

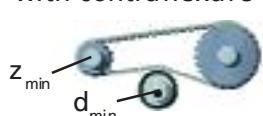
Rotational speeds over 6500 rpm and/or belt speeds over 40 m/s are in need of a special drive design. Please request for our advice.

**2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight**

Belt width	b	[mm]	50	75	100
BRECOFLEX®	F <sub>adm</sub>	[N]	10000	15600	21200
Belt weight		[kg/m]	0,440	0,660	0,875

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

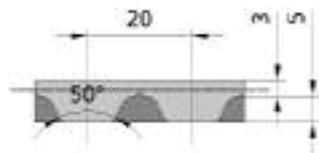
Drive type		B FX SFAT 15	
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$	20
		$d_{min}$ [mm]	100
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$	25
		$d_{min}$ [mm]	150



## Self-guiding timing belts - endless

### Self-guiding BRECOFLEX® TIMING BELT (BFX)

#### SFAT 20



#### Available endless lengths for SFAT 20

- Preferred lengths refer to table
- under 1500 mm: Not available
- over 1500 mm: Any number of teeth available, request minimum purchase amount for in-between lengths
- over 20000 mm on request

#### Endless lengths

Type / Length	Number of teeth
SFAT 20 / 1500	75
SFAT 20 / 1600	80
SFAT 20 / 1700	85
SFAT 20 / 1800	90
SFAT 20 / 1900	95
SFAT 20 / 2000	100
SFAT 20 / 2240	112
SFAT 20 / 2500	125
SFAT 20 / 2800	140
SFAT 20 / 3000	150
SFAT 20 / 3560	178
SFAT 20 / 3760	188
SFAT 20 / 4000	200
SFAT 20 / 4500	225
SFAT 20 / 5000	250

#### Type / Length Number of teeth

SFAT 20 / 5600	280
SFAT 20 / 6000	300
SFAT 20 / 6700	335
SFAT 20 / 7100	355
SFAT 20 / 7500	375

current maximum manufacturing length:

SFAT 20 / 20000 1000

Preferred belt width b [mm]

50 75 100

#### Available versions:

- SFAT 20:** Standard
- PAZ:** Nylon tooth facing

#### Order example:

BRECOFLEX®-TIMING BELT

100 SFAT20 / 4000

Belt width in mm

Type / Pitch

Belt length in mm

## Technical data of the BRECOFLEX® TIMING BELT SFAT 20

**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

**F<sub>u</sub>[N]**

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

**M[Nm]**

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

**P[kW]**
**Drive load bearing characteristics**

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

**[N]**

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

**[Nm]**

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

**[kW]**

intermeshing number of teeth

$$z_{emax} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

**1. Tooth shear strength (specific belt tooth load bearing)**

	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
b	0	147,0	46,80	0,000	2800	55,5	17,65	51,8
	20	144,2	45,90	0,962	3000	53,1	16,90	53,1
	40	141,7	45,10	1,889	3200	50,9	16,20	54,3
	60	139,3	44,30	2,790	3400	48,8	15,53	55,3
	80	137,0	43,60	3,650	3600	46,8	14,91	56,2
	100	134,9	42,90	4,500	3800	45,0	14,31	56,9
	200	125,8	40,00	8,390	4000	43,2	13,74	57,6
	300	118,5	37,70	11,850	4500	39,0	12,43	58,6
	400	112,4	35,80	14,990	5000	35,3	11,25	58,8
	500	107,2	34,10	17,860	5500	32,0	10,17	60,6
	600	102,6	32,70	20,500	6000	28,9	9,19	61,7
	700	98,5	31,40	23,000	6500	26,0	8,28	62,4
	800	94,8	30,20	25,300				
	900	91,5	29,10	27,400				
	1000	88,4	28,10	29,500				
	1100	85,6	27,20	31,400				
	1200	82,9	26,40	33,200				
	1300	80,5	25,60	34,900				
	1400	78,2	24,90	36,500				
	1500	76,0	24,20	38,000				
	1600	73,9	23,50	39,400				
	1700	72,0	22,90	40,800				
	1800	70,1	22,30	42,100				
	1900	68,4	21,80	43,300				
	2000	66,7	21,20	44,500				
	2200	63,6	20,20	46,600				
	2400	60,7	19,31	48,500				
	2600	58,0	18,45	50,200				

Rotational speeds over 6500 rpm and/or belt speeds over 40 m/s are in need of a special drive design. Please request for our advice.

**2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight**

Belt width	b	[mm]	50	75	100
BRECOFLEX® SFAT 20	F <sub>adm</sub>	[N]	10000	15600	21200
Belt weight		[kg/m]	0,480	0,720	0,960

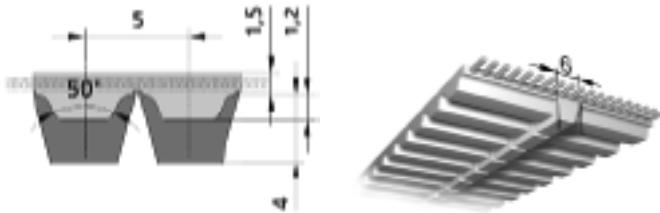
**3. Flexibility (Minimum numbers of teeth, minimum diameter)**

Drive type	BFX SFAT 20			
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	z <sub>min</sub>	18	
		d <sub>min</sub> [mm]	120	
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	z <sub>min</sub>	25	
		d <sub>min</sub> [mm]	180	

## Self-guiding timing belts - endless

### Self-guiding BRECOFLEX® TIMING BELT (BFX)

#### ATK 5 K6-E



#### Available endless lengths for ATK 5 K6-E

- Preferred lengths refer to table
- over 1075 mm: Any number of teeth available, request minimum purchase amount for in-between lengths.
- over 15,000 mm on request

#### Available versions:

- ATK 5 K6-E:** As standard: single-sided with E tension members
- PAZ:** Nylon tooth facing

#### Endless lengths

Type / length	Number of teeth
ATK5K6-E / 1075	215
ATK5K6-E / 1100	220
ATK5K6-E / 1215	243
ATK5K6-E / 1380	276
ATK5K6-E / 1400	280
ATK5K6-E / 1500	300
ATK5K6-E / 1600	320
ATK5K6-E / 1700	340
ATK5K6-E / 1800	360
ATK5K6-E / 1900	380
ATK5K6-E / 2000	400
ATK5K6-E / 2120	424
ATK5K6-E / 2240	448
ATK5K6-E / 2360	472
ATK5K6-E / 2500	500
ATK5K6-E / 2650	530
ATK5K6-E / 2800	560
ATK5K6-E / 3000	600
ATK5K6-E / 3150	630
ATK5K6-E / 3350	670
ATK5K6-E / 3550	710
ATK5K6-E / 3750	750
ATK5K6-E / 4000	800
ATK5K6-E / 4250	850
ATK5K6-E / 4500	900

#### Type / length Number of teeth

ATK5K6-E / 4750	950
ATK5K6-E / 5000	1000
ATK5K6-E / 5300	1060
ATK5K6-E / 5600	1120
ATK5K6-E / 6000	1200

ATK5K6-E / 6300	1260
ATK5K6-E / 6700	1340
ATK5K6-E / 7100	1420
ATK5K6-E / 7500	1500

current maximum manufacturing length:

ATK5K6-E / 15000 3000

#### Preferred belt width

b [mm]: 50 100

In-between widths upon request

#### Order example:

BRECOFLEX®-TIMING BELT 50 ATK5K6-E / 1200

Belt width in mm

Type / Pitch

Belt length in mm

## Technical data of the BRECOFLEX® TIMING BELT

**ATK 5 K6-E**
**Belt width b[cm]**
**1. Tooth shear strength (specific belt tooth load bearing)**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

$$F_u [N]$$

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

$$M [Nm]$$

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

$$P [kW]$$

**Drive load bearing characteristics**

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

$$[N]$$

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

$$[Nm]$$

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

$$[kW]$$

intermeshing number of teeth

 $z_{emax} = 12$ 

$$z_e = \frac{z_1 \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}}{180}$$

R.p.m. n [rpm]	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]
0	35,3	2,810	0,000
20	34,9	2,780	0,058
40	34,5	2,750	0,115
60	34,1	2,720	0,171
80	33,8	2,690	0,225
100	33,5	2,660	0,279
200	32,0	2,550	0,534
300	30,9	2,460	0,771
400	29,8	2,370	0,995
500	29,0	2,300	1,207
600	28,2	2,240	1,409
700	27,5	2,190	1,603
800	26,8	2,140	1,789
900	26,3	2,090	1,969
1000	25,7	2,050	2,140
1100	25,2	2,010	2,310
1200	24,8	1,970	2,480
1300	24,3	1,936	2,640
1400	23,9	1,903	2,790
1500	23,5	1,872	2,940
1600	23,2	1,843	3,090
1700	22,8	1,816	3,230
1800	22,5	1,789	3,370
1900	22,2	1,764	3,510
2000	21,9	1,740	3,650
2200	21,3	1,695	3,910
2400	20,8	1,654	4,160
2600	20,3	1,615	4,400

R.p.m. n [rpm]	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]
2800	19,84	1,579	4,63
3000	19,42	1,545	4,85
3200	19,01	1,513	5,07
3400	18,64	1,483	5,28
3600	18,28	1,454	5,48
3800	17,93	1,427	5,68
4000	17,61	1,401	5,87
4500	16,86	1,342	6,32
5000	16,18	1,288	6,74
5500	15,56	1,239	7,13
6000	15,00	1,194	7,50
6500	14,48	1,152	7,84
7000	13,99	1,113	8,16
7500	13,54	1,077	8,46
8000	13,11	1,043	8,74
8500	12,71	1,011	9,00
9000	12,33	0,981	9,24
9500	11,97	0,953	9,47
10000	11,63	0,925	9,69

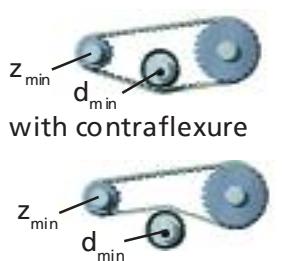
Rotational speeds over 10000 rpm and/or belt speeds over 80 m/s are in need of a special drive design. Please request for our advice.

**2. Tension cord strength (permitted tensile force of the belt  $F_{adm}$ ), belt weight**

Belt width	b	[mm]	50	100
BRECOFLEX®	$F_{adm}$	[N]	4200	8610
Belt weight	ATK5K6-E	[kg/m]	0,167	0,334

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

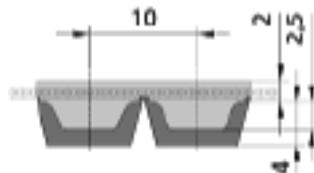
Drive type	BFX ATK 5 K6-E		
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$	25
		$d_{min}$ [mm]	40
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$	25
		$d_{min}$ [mm]	80



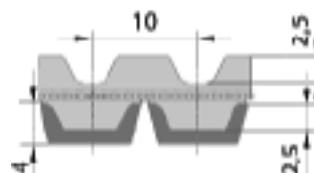
## Self-guiding timing belts - endless

### Self-guiding BRECOFLEX® TIMING BELT (BFX)

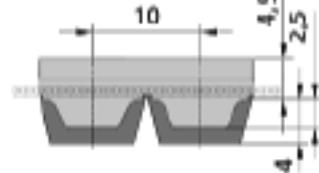
#### ATK 10 K6



#### ATK 10 K6-DL



#### ATK 10 K6-DR



#### Available endless lengths for ATK10 K6

- Preferred lengths refer to table
- under 1500 mm: not available
- over 1500 mm: Any number of teeth available, request minimum purchase amount for in-between lengths
- over 20000 mm on request.

#### Available versions:

- **ATK 10 K6:** Standard, single-sided
- **DL:** Standard, double-sided, minimum purchase amount on request
- **PAZ:** Nylon tooth facing
- **DL-PAZ:** Double-sided self-tracking belt with nylon facing on the track-guided tooth side, minimum purchase amount on request
- **DR, DR-PAZ:** Reinforced back of the belt, through 2.5 mm larger belt thickness, minimum purchase amount on request

#### Endless lengths

Type / length      Number of teeth

ATK10 K6 / 1500	150
ATK10 K6 / 1600	160
ATK10 K6 / 1700	170
ATK10 K6 / 1800	180
ATK10 K6 / 1900	190

ATK10 K6 / 2000	200
ATK10 K6 / 2120	212
ATK10 K6 / 2240	224
ATK10 K6 / 2360	236
ATK10 K6 / 2500	250

ATK10 K6 / 2650	265
ATK10 K6 / 2800	280
ATK10 K6 / 3000	300
ATK10 K6 / 3150	315
ATK10 K6 / 3350	335

ATK10 K6 / 3550	355
ATK10 K6 / 3750	375
ATK10 K6 / 4000	400
ATK10 K6 / 4250	425
ATK10 K6 / 4500	450

ATK10 K6 / 4750	475
ATK10 K6 / 5000	500
ATK10 K6 / 5300	530
ATK10 K6 / 5600	560
ATK10 K6 / 6000	600

Type / length      Number of teeth

ATK10 K6 / 6300	630
ATK10 K6 / 6700	670
ATK10 K6 / 7100	710
ATK10 K6 / 7500	750
ATK10 K6 / 8000	800

current maximum manufacturing length:

ATK10K6 / 20000 2000

Preferred belt width b mm 50 100

In-between widths upon request

#### Order example:

BRECOFLEX®-TIMING BELT 50 ATK 10 K6 / 6000 PAZ

Belt width in mm

Type / Pitch

Belt length in mm

Nylon facing on the tooth side

**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

**F<sub>u</sub>[N]**

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

**M[Nm]**

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

**P[KW]**
**Drive load bearing characteristics**  
with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

**[N]**

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

**[Nm]**

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

**[kW]**
**intermeshing number of teeth**
**z<sub>emax</sub> = 12**

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

**1. Tooth shear strength (specific belt tooth load bearing)**

	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	73,5	11,70	0,000	2800	35,50	5,66	16,58
	20	72,4	11,53	0,241	3000	34,50	5,50	17,27
	40	71,4	11,37	0,476	3200	33,60	5,35	17,92
	60	70,5	11,21	0,705	3400	32,70	5,20	18,53
	80	69,6	11,07	0,928	3600	31,90	5,07	19,11
	100	68,7	10,94	1,145	3800	31,10	4,94	19,67
	200	65,0	10,35	2,170	4000	30,30	4,82	20,20
	300	62,1	9,88	3,100	4500	28,50	4,54	21,40
	400	59,5	9,48	3,970	5000	26,90	4,29	22,50
	500	57,4	9,13	4,780	5500	25,50	4,06	23,40
	600	55,5	8,83	5,550	6000	24,20	3,85	24,20
	700	53,7	8,55	6,270	6500	23,00	3,65	24,90
	800	52,2	8,31	6,960	7000	21,80	3,47	25,50
	900	50,8	8,08	7,620	7500	20,80	3,30	26,00
	1000	49,5	7,88	8,250	8000	19,77	3,15	26,40
	1100	48,3	7,69	8,860	8500	18,84	3,00	26,70
	1200	47,2	7,51	9,440	9000	17,95	2,86	26,90
	1300	46,2	7,35	10,000	9500	17,12	2,72	27,10
	1400	45,2	7,19	10,540	10000	16,32	2,60	27,20
	1500	44,3	7,04	11,070				
	1600	43,4	6,91	11,570				
	1700	42,6	6,78	12,060				
	1800	41,8	6,65	12,540				
	1900	41,0	6,53	13,000				
	2000	40,3	6,42	13,440				
	2200	39,0	6,20	14,300				
	2400	37,8	6,01	15,100				
	2600	36,6	5,83	15,860				

Rotational speeds over 10000 rpm and/or belt speeds over 60 m/s are in need of a special drive design. Please request for our advice.

**2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight**

Belt width	b	[mm]	50	100
BRECOFLEX®	F <sub>adm</sub>	[N]	7750	16000
Belt weight	ATK 10 K6	[kg/m]	0,290	0,581
	ATK10K6-DL	[kg/m]	0,386	0,766
	ATK10K6-DR	[kg/m]	0,445	0,886

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

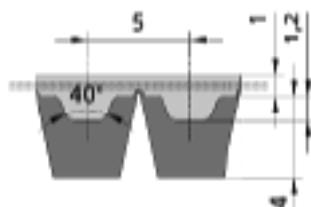
Drive type		BFX ATK10K6	BFX ATK10K6-DL	BFX ATK10K6-DR	
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$ $d_{min}$ [mm]	20 80	25 80	25*
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$ $d_{min}$ [mm]	25 120	25 120	25

\*Rotational speed limitation

## Self-guiding timing belts - endless

### Self-guiding BRECOFLEX® TIMING BELT (BFX)

#### TK 5 K6



#### Available endless lengths for TK 5 K6

- Preferred lengths refer to table
- over 1050 mm: Any number of teeth available, request minimum purchase amount for in-between lengths.
- over 15,000 mm on request

#### Available versions:

- TK 5 K6:** Standard, single-sided
- PAZ:** Nylon tooth facing

#### Endless lengths

Type / length	Number of teeth
TK5K6 / 1075	215
TK5K6 / 1100	220
TK5K6 / 1215	243
TK5K6 / 1380	276
TK5K6 / 1400	280
TK5K6 / 1500	300
TK5K6 / 1600	320
TK5K6 / 1700	340
TK5K6 / 1800	360
TK5K6 / 1900	380
TK5K6 / 2000	400
TK5K6 / 2120	424
TK5K6 / 2240	448
TK5K6 / 2360	472
TK5K6 / 2500	500
TK5K6 / 2650	530
TK5K6 / 2800	560
TK5K6 / 3000	600
TK5K6 / 3150	630
TK5K6 / 3350	670
TK5K6 / 3550	710
TK5K6 / 3750	750
TK5K6 / 4000	800
TK5K6 / 4250	850
TK5K6 / 4500	900

Type / length	Number of teeth
TK5K6 / 4750	950
TK5K6 / 5000	1000
TK5K6 / 5300	1060
TK5K6 / 5600	1120
TK5K6 / 6000	1200

Type / length	Number of teeth
TK5K6 / 6300	1260
TK5K6 / 6700	1340
TK5K6 / 7100	1420
TK5K6 / 7500	1500

current maximum manufacturing length:  
TK5K6 / 15000 3000

#### Preferred belt width

b [mm]: 50 100

In-between widths upon request

#### Order example:

BRECOFLEX®-TIMING BELT 50 TK5K6 / 1500

Belt width in mm

Type / Pitch

Belt length in mm

## Technical data of the BRECOFLEX® TIMING BELT

### TK 5 K6

**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

**F<sub>u</sub>[N]**

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

**M[Nm]**

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

**P[kW]**
**Drive load bearing characteristics**

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

**[N]**

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

**[Nm]**

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

**[kW]**

intermeshing number of teeth

$$z_{emax} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

**1. Tooth shear strength (specific belt tooth load bearing)**

	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	24,00	1,910	0,000	2800	12,59	1,002	2,94
	20	23,40	1,861	0,039	3000	12,37	0,984	3,09
	40	22,90	1,819	0,076	3200	12,16	0,967	3,24
	60	22,40	1,783	0,112	3400	11,96	0,951	3,39
	80	22,00	1,751	0,147	3600	11,77	0,936	3,53
	100	21,70	1,723	0,180	3800	11,59	0,922	3,67
	200	20,30	1,614	0,338	4000	11,42	0,909	3,81
	300	19,30	1,536	0,483	4500	11,03	0,878	4,14
	400	18,55	1,476	0,618	5000	10,68	0,850	4,45
	500	17,93	1,427	0,747	5500	10,36	0,825	4,75
	600	17,41	1,385	0,870	6000	10,07	0,802	5,04
	700	16,96	1,349	0,989	6500	9,81	0,780	5,31
	800	16,56	1,318	1,104	7000	9,56	0,761	5,58
	900	16,20	1,289	1,215	7500	9,33	0,742	5,83
	1000	15,88	1,263	1,323	8000	9,11	0,725	6,08
	1100	15,58	1,240	1,428	8500	8,91	0,709	6,31
	1200	15,31	1,218	1,531	9000	8,72	0,694	6,54
	1300	15,06	1,198	1,632	9500	8,54	0,679	6,76
	1400	14,83	1,180	1,730	10000	8,37	0,666	6,97
	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				
	2000	13,69	1,089	2,280				
	2200	13,38	1,065	2,450				
	2400	13,10	1,042	2,620				
	2600	12,84	1,021	2,780				

Rotational speeds over 10000 rpm and/or belt speeds over 80 m/s are in need of a special drive design. Please request for our advice.

**2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight**

Belt width	b	[mm]	50	100
BRECOFLEX®	F <sub>adm</sub>	[N]	1920	3930
Belt weight	TK5K6	[kg/m]	0,123	0,232

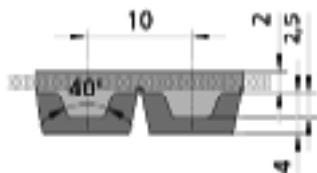
**3. Flexibility (Minimum numbers of teeth, minimum diameter)**

Drive type	BFX TK 5 K6		
without contraflexure	Synchronising pulley	$z_{min}$	25
	Tension roller (smooth), running on teeth	$d_{min}$ [mm]	40
with contraflexure	Synchronising pulley	$z_{min}$	25
	Tension roller (smooth), running on the back of the belt	$d_{min}$ [mm]	60

## Self-guiding timing belts - endless

### Self-guiding BRECOFLEX® TIMING BELT (BFX)

#### TK 10 K6



#### Available endless lengths for TK 10 K6

- Preferred lengths refer to table
- over 1080 mm: Any number of teeth available, request minimum purchase amount for in-between lengths.
- over 20000 mm on request

#### Available versions:

- TK 10 K6:** Standard, single-sided
- PAZ:** Nylon tooth facing

#### Endless lengths

Type / length      Number of teeth

TK10K6 / 1080	108
TK10K6 / 1150	115
TK10K6 / 1210	121
TK10K6 / 1240	124
TK10K6 / 1250	125
TK10K6 / 1320	132
TK10K6 / 1350	135
TK10K6 / 1390	139
TK10K6 / 1400	140
TK10K6 / 1420	142
TK10K6 / 1460	146
TK10K6 / 1500	150
TK10K6 / 1560	156
TK10K6 / 1610	161
TK10K6 / 1750	175
TK10K6 / 1780	178
TK10K6 / 1880	188
TK10K6 / 1960	196
TK10K6 / 2250	225
TK10K6 / 2360	236
TK10K6 / 2500	250
TK10K6 / 2650	265
TK10K6 / 2800	280
TK10K6 / 3000	300
TK10K6 / 3100	310

Type / length      Number of teeth

TK10K6 / 3150	315
TK10K6 / 3350	335
TK10K6 / 3750	375
TK10K6 / 4000	400
TK10K6 / 4250	425
TK10K6 / 4500	450
TK10K6 / 4750	475
TK10K6 / 5000	500
TK10K6 / 5300	530
TK10K6 / 5600	560
TK10K6 / 6000	600
TK10K6 / 6300	630
TK10K6 / 6700	670
TK10K6 / 7100	710
TK10K6 / 7500	750
TK10K6 / 8000	800
TK10K6 / 9000	900

current maximum manufacturing length:

TK10K6 / 20000 2000

Preferred belt width

b [mm]:      50                  100

In-between widths upon request

Order example:

BRECOFLEX®-TIMING BELT 50 TK10K6 / 1500

Belt width in mm

Type / Pitch

Beltlength in mm

## Technical data of the BRECOFLEX® TIMING BELT

## TK 10 K6

**Belt width b[cm]**
**1. Tooth shear strength (specific belt tooth load bearing)**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

**F<sub>u</sub>[N]**

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

**M[Nm]**

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

**P[kW]**
**Drive load bearing characteristics**

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

**[N]**

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

**[Nm]**

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

**[kW]**

intermeshing number of teeth

$$z_{emax} = 12$$

$$z_e = \frac{z_1}{180} \cdot \text{arc cos} \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	50,5	8,04	0,000	2800	22,70	3,620	10,60
	20	49,0	7,80	0,163	3000	22,20	3,530	11,08
	40	47,7	7,60	0,318	3200	21,70	3,450	11,55
	60	46,6	7,42	0,466	3400	21,20	3,360	11,99
	80	45,7	7,27	0,609	3600	20,70	3,300	12,42
	100	44,8	7,13	0,746	3800	20,30	3,230	12,84
	200	41,4	6,60	1,381	4000	19,86	3,160	13,24
	300	39,1	6,22	1,953	4500	18,91	3,010	14,18
	400	37,2	5,92	2,480	5000	18,06	2,870	15,05
	500	35,7	5,68	2,980	5500	17,28	2,750	15,84
	600	34,4	5,48	3,440	6000	16,58	2,640	16,58
	700	33,3	5,31	3,890	6500	15,93	2,540	17,26
	800	32,4	5,15	4,320	7000	15,33	2,440	17,88
	900	31,5	5,01	4,730	7500	14,76	2,350	18,46
	1000	30,7	4,89	5,120	8000	14,24	2,270	18,99
	1100	30,0	4,77	5,500	8500	13,74	2,180	19,47
	1200	29,3	4,67	5,870	9000	13,28	2,110	19,92
	1300	28,7	4,57	6,220	9500	12,84	2,040	20,30
	1400	28,2	4,48	6,570	10000	12,42	1,976	20,70
	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				
	2000	25,4	4,04	8,460				
	2200	24,6	3,92	9,030				
	2400	23,9	3,81	9,580				
	2600	23,3	3,71	10,100				

**2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight**

Belt width	b	[mm]	50	100
BRECOFLEX®	F <sub>adm</sub>	[N]	3800	7800
Belt weight	TK10K6	[kg/m]	0,235	0,458

**3. Flexibility (Minimum numbers of teeth, minimum diameter)**
**Drive type**

without contraflexure

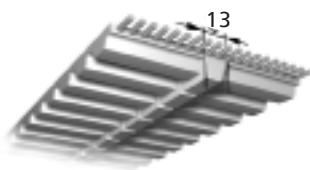
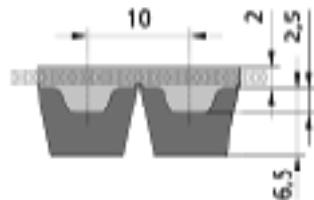


BFX TK 10 K6			
Synchronous pulley	$z_{min}$	20	
Tension roller (smooth), running on teeth	$d_{min}$ [mm]	60	
Synchronous pulley	$z_{min}$	25	
Tension roller (smooth), running on the back of the belt	$d_{min}$ [mm]	80	

## Self-guiding timing belts - endless

### Self-guiding BRECOFLEX® TIMING BELT (BFX)

#### TK 10 K13



#### Available endless lengths for TK 10 K13

- Preferred lengths refer to table
- over 1080 mm: Any number of teeth available, request minimum purchase amount for in-between lengths.
- over 20000 mm on request

#### Available versions:

- TK 10 K13:** Standard, single-sided
- PAZ:** Nylon tooth facing

#### Endless lengths

Type / length	Number of teeth
TK10K13 / 1080	108
TK10K13 / 1150	115
TK10K13 / 1210	121
TK10K13 / 1240	124
TK10K13 / 1250	125
TK10K13 / 1320	132
TK10K13 / 1350	135
TK10K13 / 1390	139
TK10K13 / 1400	140
TK10K13 / 1420	142
TK10K13 / 1460	146
TK10K13 / 1500	150
TK10K13 / 1560	156
TK10K13 / 1610	161
TK10K13 / 1750	175
TK10K13 / 1780	178
TK10K13 / 1880	188
TK10K13 / 1960	196
TK10K13 / 2250	225
TK10K13 / 2360	236
TK10K13 / 2500	250
TK10K13 / 2650	265
TK10K13 / 2800	280
TK10K13 / 3000	300
TK10K13 / 3100	310

Type / length	Number of teeth
TK10K13 / 3150	315
TK10K13 / 3350	335
TK10K13 / 3750	375
TK10K13 / 4000	400
TK10K13 / 4250	425

Type / length	Number of teeth
TK10K13 / 4500	450
TK10K13 / 4750	475
TK10K13 / 5000	500
TK10K13 / 5300	530
TK10K13 / 5600	560

Type / length	Number of teeth
TK10K13 / 6000	600
TK10K13 / 6300	630
TK10K13 / 6700	670
TK10K13 / 7100	710
TK10K13 / 7500	750

Type / length	Number of teeth
TK10K13 / 8000	800
TK10K13 / 9000	900

current maximum manufacturing length:

TK10K13 / 20000 2000

Preferred belt width  
b [mm]: 50

In-between widths upon request

#### Order example:

BRECOFLEX®-TIMING BELT 50 TK10K13 / 2500

Belt width in mm

Type / Pitch

Belt length in mm

## Technical data of the BRECOFLEX® TIMING BELT

### TK 10 K13

**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

$F_u$  [N]

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

P[kW]

**Drive load bearing characteristics**

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

[N]

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

[Nm]

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

[kW]

intermeshing number of teeth

$$z_{emax} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

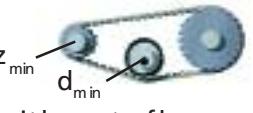
### 1. Tooth shear strength (specific belt tooth load bearing)

	R.p.m. n [rpm]	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]	R.p.m. n [rpm]	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]
	0	50,5	8,04	0,000	2800	22,70	3,620	10,60
	20	49,0	7,80	0,163	3000	22,20	3,530	11,08
	40	47,7	7,60	0,318	3200	21,70	3,450	11,55
	60	46,6	7,42	0,466	3400	21,20	3,360	11,99
	80	45,7	7,27	0,609	3600	20,70	3,300	12,42
	100	44,8	7,13	0,746	3800	20,30	3,230	12,84
	200	41,4	6,60	1,381	4000	19,86	3,160	13,24
	300	39,1	6,22	1,953	4500	18,91	3,010	14,18
	400	37,2	5,92	2,480	5000	18,06	2,870	15,05
	500	35,7	5,68	2,980	5500	17,28	2,750	15,84
	600	34,4	5,48	3,440	6000	16,58	2,640	16,58
	700	33,3	5,31	3,890	6500	15,93	2,540	17,26
	800	32,4	5,15	4,320	7000	15,33	2,440	17,88
	900	31,5	5,01	4,730	7500	14,76	2,350	18,46
	1000	30,7	4,89	5,120	8000	14,24	2,270	18,99
	1100	30,0	4,77	5,500	8500	13,74	2,180	19,47
	1200	29,3	4,67	5,870	9000	13,28	2,110	19,92
	1300	28,7	4,57	6,220	9500	12,84	2,040	20,30
	1400	28,2	4,48	6,570	10000	12,42	1,976	20,70
	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				
	2000	25,4	4,04	8,460				
	2200	24,6	3,92	9,030				
	2400	23,9	3,81	9,580				
	2600	23,3	3,71	10,100				

### 2. Tension cord strength (permitted tensile force of the belt $F_{adm}$ ), belt weight

Belt width	b	[mm]	50
BRECOFLEX® Belt weight	$F_{adm}$ TK10K13	[N] [kg/m]	3800 0,283

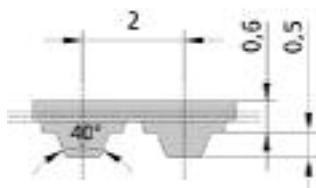
### 3. Flexibility (Minimum numbers of teeth, minimum diameter)

Drive type	BFX TK 10 K13		
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$	25
	$d_{min}$ [mm]	80	
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$	25
	$d_{min}$ [mm]	120	

## T standard timing belts - endless

### SYNCHROFLEX® TIMING BELT (SFX)

#### T 2



Standard T profile with metric pitch and trapezoidal teeth.

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

#### Available versions:

- single-sided
- with Aramid tension member
- Polyurethane special materials upon request
- antistatic, coloured, mechanical reworked
- FA: with reinforced back of the belt

Type / Length	Number of teeth	Type / Length	Number of teeth
T 2 / 90	45	T 2 / 256	128
T 2 / 108	54	T 2 / 262	131
T 2 / 118	59	T 2 / 280	140
T 2 / 120 FA	60	T 2 / 292	146
T 2 / 120	60	T 2 / 320	160
T 2 / 138	69	T 2 / 360	180
T 2 / 140	70	T 2 / 600	300
T 2 / 144	72	T 2 / 710	355
T 2 / 150	75	T 2 / 710 FA	355
T 2 / 160	80		
T 2 / 180	90		
T 2 / 200	100		
T 2 / 220 FA	110		
T 2 / 220	110		
T 2 / 240	120		

Preferred belt width b [mm]: 4      6      10  
In-between widths and larger widths are available.

Other dimension upon request.

#### Order example:

SYNCHROFLEX®-ZAHNRIEMEN

6 T2 / 240

Belt width in mm

Type / Pitch

Belt length in mm

Technical data of the SYNCHROFLEX® TIMING BELT

T 2

Belt width b[cm]

$$b = \frac{F_U}{z_e \cdot F_{U\text{spec}}}$$

F<sub>U</sub>[N]

1. Tooth shear strength (specific belt tooth load bearing)

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{\text{spec}}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{\text{spec}}}$$

P[kW]

Drive load bearing characteristics

with given belt width [cm]

$$F_U = F_{U\text{spec}} \cdot z_e \cdot b$$

[N]

$$M = \frac{M_{\text{spec}} \cdot z_1 \cdot z_e \cdot b}{100}$$

[Nm]

$$P = \frac{P_{\text{spec}} \cdot z_1 \cdot z_e \cdot b}{1000}$$

[kW]

intermeshing number of teeth

z<sub>e,max</sub> = 12

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

	R.p.m. n [rpm]	F <sub>U</sub> <sub>spec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>U</sub> <sub>spec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	6,58	0,209	0,000	2200	3,50	0,111	0,257
	20	6,36	0,202	0,004	2400	3,42	0,109	0,274
	40	6,18	0,197	0,008	2500	3,39	0,108	0,282
	60	6,03	0,192	0,012	2600	3,35	0,107	0,290
	80	5,90	0,188	0,016	2800	3,29	0,105	0,307
	100	5,79	0,184	0,019	2880	3,26	0,104	0,313
	150	5,56	0,177	0,028	3000	3,23	0,103	0,323
	200	5,38	0,171	0,036	3200	3,17	0,101	0,338
	300	5,10	0,162	0,051	3400	3,12	0,099	0,354
	400	4,89	0,156	0,065	3600	3,07	0,098	0,368
	500	4,72	0,150	0,079	3800	3,02	0,096	0,383
	600	4,58	0,146	0,092	4000	2,98	0,095	0,397
	700	4,45	0,142	0,104	4500	2,88	0,092	0,432
	730	4,42	0,141	0,108	5000	2,78	0,088	0,463
	800	4,35	0,138	0,116	5500	2,70	0,086	0,495
	900	4,25	0,135	0,127	6000	2,63	0,084	0,526
	1000	4,16	0,132	0,139	6500	2,56	0,081	0,555
	1100	4,08	0,130	0,150	7000	2,49	0,079	0,581
	1200	4,01	0,128	0,160	7500	2,43	0,077	0,607
	1300	3,94	0,125	0,171	8000	2,37	0,075	0,632
	1400	3,88	0,124	0,181	8500	2,32	0,074	0,657
	1460	3,85	0,123	0,187	9000	2,27	0,072	0,681
	1500	3,82	0,122	0,191	9500	2,22	0,071	0,703
	1600	3,77	0,120	0,201	10000	2,18	0,069	0,727
	1700	3,72	0,118	0,211	12000	2,02	0,064	0,808
	1800	3,67	0,117	0,220	15000	1,82	0,058	0,910
	1900	3,62	0,115	0,229	18000	1,66	0,053	0,996
	2000	3,58	0,114	0,239	20000	1,57	0,050	1,047

2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight

Belt width	b [mm]	4	6	10	16	25	32
SYNCHROFLEX® T2	F <sub>adm</sub> [N]	39	65	117	195	312	403
Belt weight T2	[kg/m]	0,004	0,007	0,011	0,018	0,028	0,035

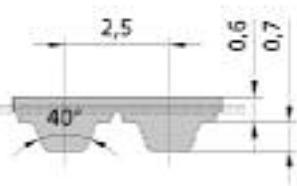
3. Flexibility (Minimum numbers of teeth, minimum diameter)

Drive type	SFX T2
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth
	$z_{\min}$ 10 $d_{\min}$ [mm] 15
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt
	$z_{\min}$ 18 $d_{\min}$ [mm] 15

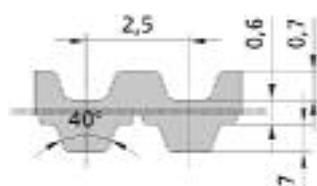
## T standard timing belts - endless

### SYNCHROFLEX® TIMING BELT (SFX)

#### T 2,5



#### T 2,5-DL



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

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

#### Available versions:

- single-sided (as standard)
- with Aramid tension member
- Polyurethane special materials upon request
- antistatic, coloured, mechanical reworked
- DL: double-sided
- FA: with reinforced back of the belt
- 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 / 380	152
T 2,5 / 120	48	T 2,5 / 395	158
T 2,5 / 145	58	T 2,5 / 400 FA	160
T 2,5 / 160	4	T 2,5 / 415 DL	166
T 2,5 / 160 FA	64	T 2,5 / 420	168
T 2,5 / 177,5	71	T 2,5 / 457,5 DL	183
T 2,5 / 180	72	T 2,5 / 480	192
T 2,5 / 182,5	73	T 2,5 / 500	200
T 2,5 / 200	80	T 2,5 / 540	216
T 2,5 / 210 FA	84	T 2,5 / 540 FA	216
T 2,5 / 220 FN	88	T 2,5 / 600 FA	240
T 2,5 / 225	90	T 2,5 / 620	248
T 2,5 / 230	92	T 2,5 / 650	260
T 2,5 / 230 FA	92	T 2,5 / 780	312
T 2,5 / 245	98	T 2,5 / 950	380
T 2,5 / 250	100	T 2,5 / 1300	520
T 2,5 / 265	106	T 2,5 / 1300 FA	520
T 2,5 / 285	114	T 2,5 / 1475 FA	590
T 2,5 / 285 FA	114		
T 2,5 / 290	116		
T 2,5 / 305	122		
T 2,5 / 305 FA	122		
T 2,5 / 317,5	127		
T 2,5 / 317,5 DL	127		
T 2,5 / 330	132		

Preferred belt length mm      4      6      10  
In-between widths and larger widths are available.

Other dimension upon request.

#### Order example:

SYNCHROFLEX®-TIMING BELT

10 T2,5 / 380

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

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

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

Technical data of the SYNCHROFLEX® TIMING BELT

T 2,5

Belt width b[cm]

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

F<sub>u</sub>[N]

1. Tooth shear strength (specific belt tooth load bearing)

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

P[KW]

Drive load bearing characteristics

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

[N]

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

[Nm]

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

[kW]

intermeshing number of teeth

z<sub>emax</sub> = 12

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

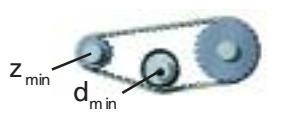
	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	9,03	0,359	0,000	2200	4,80	0,191	0,440
	20	8,72	0,347	0,007	2400	4,70	0,187	0,470
	40	8,48	0,337	0,014	2500	4,65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

2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight

Belt width	b	[mm]	4	6	10	16	25	32
SYNCHROFLEX®	F <sub>adm</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)

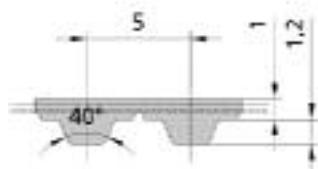
Drive type	SFX T 2,5			
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	z <sub>min</sub>	10	
		d <sub>min</sub> [mm]	15	
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	z <sub>min</sub>	18	
		d <sub>min</sub> [mm]	15	



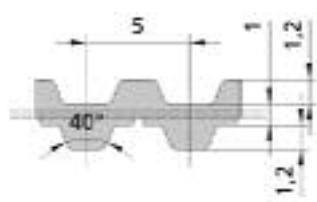
## T standard timing belts - endless

### SYNCHROFLEX® TIMING BELT (SFX)

**T 5**



**T 5-DL**



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

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

#### Available versions:

- single-sided (as standard)
- with E tension member for a better flexibility
- with Aramid tension member
- Polyurethane special materials upon request
- antistatic, coloured, mechanical reworked
  
- **DL:** double-sided
- **FA:** with reinforced back of the belt
- **FN:** with profiles on the back of the belt

Type / length	Number of teeth	Type / length	Number of teeth
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/ 180	36	T 5/ 620	124
T 5/ 185	37	T 5/ 620 DL	124
T 5/ 200	40	T 5/ 625 DL	125
T 5/ 210	42	T 5/ 630	126
T 5/ 215	43	T 5/ 630 FA	126
T 5/ 220	44	T 5/ 650	130
T 5/ 225	45	T 5/ 660 FN	132
T 5/ 245	49	T 5/ 690	138
T 5/ 250	50	T 5/ 690 FA	138
T 5/ 255	51	T 5/ 700	140
T 5/ 260	52	T 5/ 720	144
T 5/ 260 DL	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/ 815	163
T 5/ 340	68	T 5/ 815 DL	163
T 5/ 355	71	T 5/ 840	168
T 5/ 365	73	T 5/ 860 DL	172
T 5/ 390	78	T 5/ 860 FN	172
T 5/ 400	80	T 5/ 900	180
T 5/ 410	82	T 5/ 920	184
T 5/ 410 DL	82	T 5/ 925	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 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/ 505	101	T 5/ 1100 DL	220
T 5/ 510	102	T 5/ 1140 FN	228
T 5/ 515 DL	103	T 5/ 1160	232
T 5/ 525	105	T 5/ 1215	243
T 5/ 525 DL	105	T 5/ 1315	263
T 5/ 545	109	T 5/ 1325 DL	265
T 5/ 550	110	T 5/ 1380	276
T 5/ 560	112	T 5/ 1500	300
T 5/ 575	115		
T 5/ 590	118		

#### Order example:

SYNCHROFLEX®-TIMING BELT

10 T5 / 455

Belt width in mm

Type / Pitch

Belt length in mm

Preferred belt length mm

6 10 16 25 50

In-between widths and larger widths are available.  
Other dimension upon request.

Technical data of the SYNCHROFLEX® TIMING BELT

**T 5, T 5-DL**

Belt width b[cm]

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

F<sub>u</sub>[N]

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

P[kW]

Drive load bearing characteristics

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

[N]

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

[Nm]

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

[kW]

intermeshing number of teeth

$$z_{emax} = 12$$

$$z_e = \frac{z_1}{180} \cdot \text{arc cos} \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

**1. Tooth shear strength (specific belt tooth load bearing)**

	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	24,00	1,910	0,000	2800	12,59	1,002	2,94
	20	23,40	1,861	0,039	3000	12,37	0,984	3,09
	40	22,90	1,819	0,076	3200	12,16	0,967	3,24
	60	22,40	1,783	0,112	3400	11,96	0,951	3,39
	80	22,00	1,751	0,147	3600	11,77	0,936	3,53
	100	21,70	1,723	0,180	3800	11,59	0,922	3,67
	200	20,30	1,614	0,338	4000	11,42	0,909	3,81
	300	19,30	1,536	0,483	4500	11,03	0,878	4,14
	400	18,55	1,476	0,618	5000	10,68	0,850	4,45
	500	17,93	1,427	0,747	5500	10,36	0,825	4,75
	600	17,41	1,385	0,870	6000	10,07	0,802	5,04
	700	16,96	1,349	0,989	6500	9,81	0,780	5,31
	800	16,56	1,318	1,104	7000	9,56	0,761	5,58
	900	16,20	1,289	1,215	7500	9,33	0,742	5,83
	1000	15,88	1,263	1,323	8000	9,11	0,725	6,08
	1100	15,58	1,240	1,428	8500	8,91	0,709	6,31
	1200	15,31	1,218	1,531	9000	8,72	0,694	6,54
	1300	15,06	1,198	1,632	9500	8,54	0,679	6,76
	1400	14,83	1,180	1,730	10000	8,37	0,666	6,97
	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				
	2000	13,69	1,089	2,280				
	2200	13,38	1,065	2,450				
	2400	13,10	1,042	2,620				
	2600	12,84	1,021	2,780				

Rotational speeds over 10000 rpm and/or belt speeds over 80 m/s are in need of a special drive design. Please request for our advice.

**2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight**

Belt width	b [mm]	6	10	16	25	32	50	75	100
SYNCHROFLEX® F <sub>adm</sub>	[N]	180	330	570	930	1200	1920	2940	3930
Belt weight T5	[kg/m]	0,014	0,024	0,038	0,060	0,077	0,120	0,180	0,240
T5-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)**

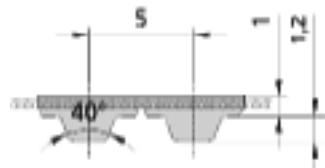
Drive type	SFX T 5			
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$	10	
		$d_{min}$ [mm]	30	
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$	15	
		$d_{min}$ [mm]	30	



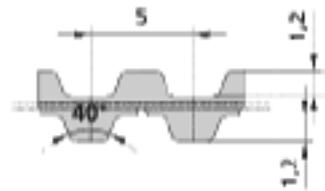
## T standard timing belts - endless

### BRECOFLEX®-ZAHNRIEMEN (BFX)

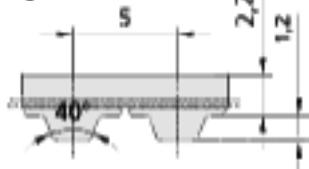
**T 5**



**T 5-DL**



**T 5-DR**



#### Available endless lengths for T 5

- Preferred lengths refer to table
- under 1075 mm: Further lengths on request
- Belt length smaller than 1075 mm with nylon tooth facing
- over 1075 mm: Any number of teeth available, request minimum purchase amount for in-between lengths
- over 15,000 mm on request

#### Available versions:

- T 5:** Standard, single-sided
- E:** with E tension member
- DL:** Standard, double-sided, available length: over 1075 mm. Lengths over 2650 mm, request minimum purchase amount, under 1075 mm upon request.
- PAZ:** Nylon tooth facing
- DL-PAZ:** Nylon facing on double-sided belts, coating is only possible on the inner sideRequest minimum purchase amount for lengths over 2650 mm
- DR, DR-PAZ:** Reinforced back of the belt, through 1.2 mm larger belt thickness, available in lengths over 1075 mm, minimum purchase amount on request

#### Order example:

BRECOFLEX®-TIMING BELT

10 T5 / 2000

Belt width in mm

\_\_\_\_\_

Type / Pitch

\_\_\_\_\_

Belt length in mm

\_\_\_\_\_

100

Endless lengths Type / length	Number of teeth	Type / length	Number of teeth
T 5/ 200	40	T 5/ 850	170
T 5/ 215	43	T 5/ 860	172
T 5/ 220	44	T 5/ 900	180
T 5/ 225	45	T 5/ 945	189
T 5/ 240	48	T 5/ 990	198
T 5/ 245	49	T 5/ 1040	208
T 5/ 255	51	T 5/ 1075	215
T 5/ 260	52	T 5/ 1100	220
T 5/ 270	54	T 5/ 1215	243
T 5/ 280	56	T 5/ 1380	276
T 5/ 295	59	T 5/ 1400	280
T 5/ 305	61	T 5/ 1500	300
T 5/ 330	66	T 5/ 1600	320
T 5/ 340	68	T 5/ 1700	340
T 5/ 355	71	T 5/ 1800	360
T 5/ 365	73	T 5/ 1900	380
T 5/ 370	74	T 5/ 2000	400
T 5/ 390	78	T 5/ 2120	424
T 5/ 400	80	T 5/ 2240	448
T 5/ 410	82	T 5/ 2360	472
T 5/ 420	84	T 5/ 2500	500
T 5/ 435	87	T 5/ 2650	530
T 5/ 455	91	T 5/ 2800	560
T 5/ 480	96	T 5/ 3000	600
T 5/ 500	100	T 5/ 3150	630
T 5/ 510	102	T 5/ 3350	670
T 5/ 525	105	T 5/ 3550	710
T 5/ 545	109	T 5/ 3750	750
T 5/ 560	112	T 5/ 4000	800
T 5/ 575	115	T 5/ 4250	850
T 5/ 610	122	T 5/ 4500	900
T 5/ 620	124	T 5/ 4750	950
T 5/ 630	126	T 5/ 5000	1000
T 5/ 660	132	T 5/ 5300	1060
T 5/ 690	138	T 5/ 5600	1120
T 5/ 720	144	T 5/ 6000	1200
T 5/ 750	150	T 5/ 6300	1260
T 5/ 755	151	T 5/ 6700	1340
T 5/ 780	156	T 5/ 7100	1420
T 5/ 800	160	T 5/ 7500	1500
T 5/ 815	163	current maximum manufacturing length:	
T 5/ 840	168	T 5/ 15000	3000

Preferred belt length mm 10 16 25 32 50 75 100  
In-between belt widths are available

Belt width b[cm]

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

$F_u$ [N]

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

P[kW]

Drive load bearing characteristics with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

[N]

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

[Nm]

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

[kW]

intermeshing number of teeth

$$z_{emax} = 12$$

$$z_e = \frac{z_1}{180} \cdot \text{arc cos} \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

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

	R.p.m. n [rpm]	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]	R.p.m. n [rpm]	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]
	0	24,00	1,910	0,000	2800	12,59	1,002	2,94
	20	23,40	1,861	0,039	3000	12,37	0,984	3,09
	40	22,90	1,819	0,076	3200	12,16	0,967	3,24
	60	22,40	1,783	0,112	3400	11,96	0,951	3,39
	80	22,00	1,751	0,147	3600	11,77	0,936	3,53
	100	21,70	1,723	0,180	3800	11,59	0,922	3,67
	200	20,30	1,614	0,338	4000	11,42	0,909	3,81
	300	19,30	1,536	0,483	4500	11,03	0,878	4,14
	400	18,55	1,476	0,618	5000	10,68	0,850	4,45
	500	17,93	1,427	0,747	5500	10,36	0,825	4,75
	600	17,41	1,385	0,870	6000	10,07	0,802	5,04
	700	16,96	1,349	0,989	6500	9,81	0,780	5,31
	800	16,56	1,318	1,104	7000	9,56	0,761	5,58
	900	16,20	1,289	1,215	7500	9,33	0,742	5,83
	1000	15,88	1,263	1,323	8000	9,11	0,725	6,08
	1100	15,58	1,240	1,428	8500	8,91	0,709	6,31
	1200	15,31	1,218	1,531	9000	8,72	0,694	6,54
	1300	15,06	1,198	1,632	9500	8,54	0,679	6,76
	1400	14,83	1,180	1,730	10000	8,37	0,666	6,97
	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				
	2000	13,69	1,089	2,280				
	2200	13,38	1,065	2,450				
	2400	13,10	1,042	2,620				
	2600	12,84	1,021	2,780				

## 2. Tension cord strength (permitted tensile force of the belt $F_{adm}$ ), belt weight

Belt width	b	[mm]	6	10	16	25	32	50	75	100
BRECOFLEX®	$F_{adm}$	[N]	180	330	570	930	1200	1920	2940	3930
Belt weight	$T5$	[kg/m]	0,013	0,022	0,034	0,052	0,067	0,105	0,163	0,210
	$T5-DL$	[kg/m]	0,017	0,028	0,045	0,072	0,099	0,141	0,212	0,283
	$T5-DR$	[kg/m]	0,021	0,036	0,057	0,090	0,115	0,180	0,271	0,362

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

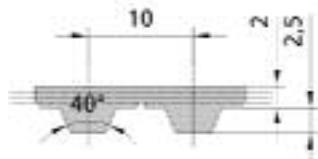
Drive type		BFX T 5	BFX T5-E	BFX T5-DL	BFX T5-DL-E	BFX T5-DR	
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$	10	10	15	12	20*
	$d_{min}$ [mm]	30	30	30	30	30	
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$	15	12	15	12	20*
	$d_{min}$ [mm]	30	30	30	30	60	

\*Rotational speed limitation

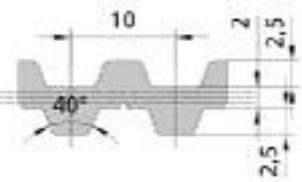
## T standard timing belts - endless

### SYNCHROFLEX® TIMING BELT (SFX)

#### T 10



#### T 10-DL



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

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

#### Available versions:

- **T 10:** single-sided (as standard)
- with E tension member for a better flexibility
- with Aramid tension member
- Polyurethane special materials upon request
- antistatic, coloured, mechanical reworked
- **DL:** double-sided
- **FA:** with reinforced back of the belt
- **FN:** with profiles on the back of the belt

Type / length	Number of teeth	Type / length	Number of teeth
T 10/ 260	26	T 10/ 980 DL	98
T 10/ 260 DL	26	T 10/ 1010	101
T 10/ 350	35	T 10/ 1080	108
T 10/ 370	37	T 10/ 1110	111
T 10/ 410	41	T 10/ 1140	114
T 10/ 410 FA	41	T 10/ 1150	115
T 10/ 410	41	T 10/ 1210	121
T 10/ 420 FN	42	T 10/ 1210 DL	121
T 10/ 440	44	T 10/ 1240	124
T 10/ 450	45	T 10/ 1240 DL	124
T 10/ 500	50	T 10/ 1250	125
T 10/ 530 DL	53	T 10/ 1250 DL	125
T 10/ 530	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 DL	63	T 10/ 1350 DL	135
T 10/ 630	63	T 10/ 1390	139
T 10/ 660 DL	66	T 10/ 1400	140
T 10/ 660	65	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 DL	72	T 10/ 1500	150
T 10/ 720	72	T 10/ 1560	156
T 10/ 730	73	T 10/ 1610	161
T 10/ 750	75	T 10/ 1610 DL	161
T 10/ 760	76	T 10/ 1750	175
T 10/ 780	78	T 10/ 1780	178
T 10/ 800 FN	80	T 10/ 1800 FN	180
T 10/ 810	81	T 10/ 1880 DL	188
T 10/ 840 DL	84	T 10/ 1880	188
T 10/ 840	84	T 10/ 1960	196
T 10/ 850	85	T 10/ 2250	225
T 10/ 880	88	T 10/ 3100	310
T 10/ 890	89	T 10/ 4780	478
T 10/ 920	92	T 10/ 4780 DL*	478
T 10/ 960	96		
T 10/ 970	97		
T 10/ 980	98		

#### Order example:

SYNCHROFLEX®-TIMING BELT      16 T 10 / 260  
 Belt width in mm \_\_\_\_\_  
 Type / Pitch \_\_\_\_\_  
 Belt length in mm \_\_\_\_\_

\*Request application-dependent informations

Preferred belt length mm 16 25 32 50  
 In-between widths and larger widths are available.

Other dimension upon request.

Technical data of the SYNCHROFLEX® TIMING BELT

**T 10, T 10-DL**

Belt width b[cm]

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

F<sub>u</sub>[N]

**1. Tooth shear strength (specific belt tooth load bearing)**

	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
b = $\frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$	0	50,5	8,04	0,000	2800	22,70	3,62	10,60
	20	49,0	7,80	0,163	3000	22,20	3,53	11,08
	40	47,7	7,60	0,318	3200	21,70	3,45	11,55
	60	46,6	7,42	0,466	3400	21,20	3,36	11,99
	80	45,7	7,27	0,609	3600	20,70	3,30	12,42
	100	44,8	7,13	0,746	3800	20,30	3,23	12,84
b = $\frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$	200	41,4	6,60	1,381	4000	19,86	3,16	13,24
	300	39,1	6,22	1,953	4500	18,91	3,01	14,18
	400	37,2	5,92	2,480	5000	18,06	2,87	15,05
Drive load bearing characteristics	500	35,7	5,68	2,980	5500	17,28	2,75	15,84
with given belt width [cm]	600	34,4	5,48	3,440	6000	16,58	2,64	16,58
F <sub>u</sub> = F <sub>uspec</sub> · z <sub>e</sub> · b	700	33,3	5,31	3,890	6500	15,93	2,54	17,26
	800	32,4	5,15	4,320	7000	15,33	2,44	17,88
	900	31,5	5,01	4,730	7500	14,76	2,35	18,46
M = $\frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$	1000	30,7	4,89	5,120	8000	14,24	2,27	18,99
	1100	30,0	4,77	5,500	8500	13,74	2,18	19,47
	1200	29,3	4,67	5,870	9000	13,28	2,11	19,92
	1300	28,7	4,57	6,220	9500	12,84	2,04	20,30
P = $\frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$	1400	28,2	4,48	6,570	10000	12,42	1,97	20,70
intermeshing number of teeth	1500	27,6	4,40	6,910				
z <sub>emax</sub> = 12	1600	27,1	4,32	7,230				
	1700	26,7	4,24	7,550	Rotational speeds over 10000 rpm and/or belt speeds over 60 m/s are in need of a special drive design. Please request for our advice.			
	1800	26,2	4,17	7,860				
	1900	25,8	4,10	8,160				
	2000	25,4	4,04	8,460				
	2200	24,6	3,92	9,030				
	2400	23,9	3,81	9,580				
	2600	23,3	3,71	10,100				

**2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight**

Belt width	b	[mm]	16	25	32	50	75	100	150
SYNCHROFLEX®	F <sub>adm</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

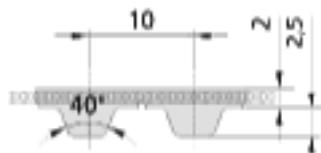
**3. Flexibility (Minimum numbers of teeth, minimum diameter)**

Drive type	SFX T 10			
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	z <sub>min</sub>	d <sub>min</sub> [mm]	12
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	z <sub>min</sub>	d <sub>min</sub> [mm]	20

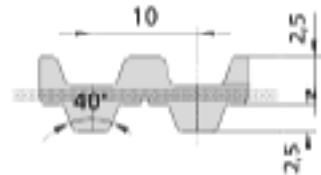
## T standard timing belts - endless

### BRECOFLEX® TIMING BELTS (BFX)

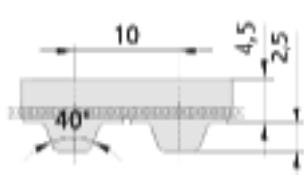
**T 10**



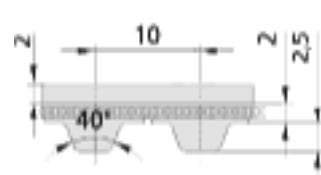
**T 10-DL**



**T 10-DR**



**T 10-T**



#### Available endless lengths for T10

- Preferred lengths refer to table
- Belt length smaller than 1080 mm with nylon tooth facing
- under 1080 mm: Further lengths on request
- over 1080 mm: Any number of teeth available, request minimum purchase amount for in-between lengths
- over 20000 mm: on request

#### Available versions:

- T 10:** Standard, single-sided
- E:** with E tension member
- DL, DL-E:** Standard, double-sided, available length over 1080 mm, for length over 5300 mm request minimum purchase amount
- PAZ:** Nylon tooth facing
- DL-PAZ:** Nylon on double-sided belts, only inner side can be coated, available length over 1080 mm, for length over 5300 mm request minimum purchase amount
- T, T-PAZ:** Transport support, available length over 1080 mm, minimum purchase amount on request
- DR, DR-PAZ:** Reinforced back of the belt, through 2.5 mm larger belt thickness, available length over 1080 mm minimum purchase amount on request

Endless lengths		Number of teeth	
Type / length		Type / length	
T 10 / 500	50	T 10 / 1750	175
T 10 / 530	53	T 10 / 1780	178
T 10 / 560	56	T 10 / 1880	188
T 10 / 600	60	T 10 / 1960	196
T 10 / 610	61	T 10 / 2250	225
T 10 / 630	63	T 10 / 2360	236
T 10 / 660	66	T 10 / 2500	250
T 10 / 690	69	T 10 / 2650	265
T 10 / 700	70	T 10 / 2800	280
T 10 / 720	72	T 10 / 3000	300
T 10 / 780	78	T 10 / 3100	310
T 10 / 810	81	T 10 / 3150	315
T 10 / 840	84	T 10 / 3350	335
T 10 / 880	88	T 10 / 3750	375
T 10 / 890	89	T 10 / 4000	400
T 10 / 920	92	T 10 / 4250	425
T 10 / 960	96	T 10 / 4500	450
T 10 / 970	97	T 10 / 4750	475
T 10 / 980	98	T 10 / 5000	500
T 10 / 990	99	T 10 / 5300	530
T 10 / 1010	101	T 10 / 5600	560
T 10 / 1080	108	T 10 / 6000	600
T 10 / 1150	115	T 10 / 6300	630
T 10 / 1210	121	T 10 / 6700	670
T 10 / 1240	124	T 10 / 7100	710
T 10 / 1250	125	T 10 / 7500	750
T 10 / 1320	132	T 10 / 8000	800
T 10 / 1350	135	T 10 / 9000	900
T 10 / 1390	139		
T 10 / 1400	140		
T 10 / 1420	142		
T 10 / 1460	146		
T 10 / 1500	150		
T 10 / 1560	156		
T 10 / 1610	161		

current maximum manufacturing length:

T 10/ 20000 2000

Preferred belt length mm 16 25 32 50 75 100

In-between belt widths are available

#### Order example:

BRECOFLEX®-TIMING BELT

25 T10 / 3350 -DL-E

Belt width in mm

\_\_\_\_\_

Type / Pitch

\_\_\_\_\_

Belt length in mm

\_\_\_\_\_

Specification

\_\_\_\_\_

## Technical data of the BRECOFLEX® TIMING BELT

### T 10, T 10-DL, T 10-DR, T 10-T

#### Belt width b[cm]

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

F<sub>u</sub>[N]

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

P[kW]

#### Drive load bearing characteristics

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

[N]

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

[Nm]

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

[kW]

intermeshing number of teeth

$$z_{emax} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

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

	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	50,5	8,04	0,000	2800	22,70	3,620	10,60
	20	49,0	7,80	0,163	3000	22,20	3,530	11,08
	40	47,7	7,60	0,318	3200	21,70	3,450	11,55
	60	46,6	7,42	0,466	3400	21,20	3,360	11,99
	80	45,7	7,27	0,609	3600	20,70	3,300	12,42
	100	44,8	7,13	0,746	3800	20,30	3,230	12,84
	200	41,4	6,60	1,381	4000	19,86	3,160	13,24
	300	39,1	6,22	1,953	4500	18,91	3,010	14,18
	400	37,2	5,92	2,480	5000	18,06	2,870	15,05
	500	35,7	5,68	2,980	5500	17,28	2,750	15,84
	600	34,4	5,48	3,440	6000	16,58	2,640	16,58
	700	33,3	5,31	3,890	6500	15,93	2,540	17,26
	800	32,4	5,15	4,320	7000	15,33	2,440	17,88
	900	31,5	5,01	4,730	7500	14,76	2,350	18,46
	1000	30,7	4,89	5,120	8000	14,24	2,270	18,99
	1100	30,0	4,77	5,500	8500	13,74	2,180	19,47
	1200	29,3	4,67	5,870	9000	13,28	2,110	19,92
	1300	28,7	4,57	6,220	9500	12,84	2,040	20,30
	1400	28,2	4,48	6,570	10000	12,42	1,976	20,70
	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				
	2000	25,4	4,04	8,460				
	2200	24,6	3,92	9,030				
	2400	23,9	3,81	9,580				
	2600	23,3	3,71	10,100				

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

Belt width	b	[mm]	16	25	32	50	75	100
BRECOFLEX®	F <sub>adm</sub>	[N]	1000	1800	2300	3800	5800	7800
Belt weight	T10	[kg/m]	0,068	0,114	0,145	0,227	0,341	0,454
	T10-DL	[kg/m]	0,090	0,143	0,183	0,288	0,432	0,577
	T10-DR	[kg/m]	0,119	0,185	0,237	0,372	0,558	0,795
	T10-T	[kg/m]	0,107	0,170	0,217	0,342	0,513	0,685

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

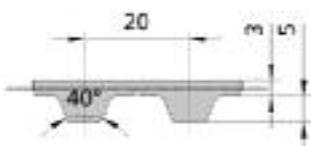
Drive type		BFX T10	BFX T10-E	BFX T10-DL-E	BFX T10-DL	BFX T10-T
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$	12	10	15	20
	$d_{min}$ [mm]	60	50	50	60	60
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$	20	15	15	20
	$d_{min}$ [mm]	60	50	50	60	80

\*Rotational speed limitation

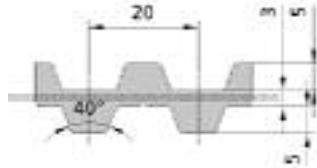
## T standard timing belts - endless

### SYNCHROFLEX® TIMING BELT (SFX)

#### T 20



#### T 20-DL



Type/ Length	Number of teeth	Type/ Length	Number of teeth
T 20 / 1260	63	T 20 / 2600	130
T 20 / 1460	73	T 20 / 2600 DL*	130
T 20 / 1780	89	T 20 / 3100	155
T 20 / 1880	94	T 20 / 3620	181
T 20 / 2360	118	T 20 / 3620 DL*	181

\* Request application-depending informations

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

Preferred belt length mm 32 50 75 100  
In-between widths and larger widths are available

Other dimension upon request.

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

#### Available versions:

- **T 20:** single-sided (as standard)
- with E tension member for a better flexibility
- with Aramid steel cord tension member (except DL)
- Polyurethane special materials upon request
- antistatic, coloured, mechanical reworked
- **DL:** double-sided

#### Order example:

SYNCHROFLEX®-TIMING BELT

50 T20 / 2600

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

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

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

Technical data of the SYNCHROFLEX® TIMING BELT

**T 20, T 20-DL**

Belt width b[cm]

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

F<sub>u</sub>[N]

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

P[kW]

**Drive load bearing characteristics**

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

[N]

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

[Nm]

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

[kW]

intermeshing number of teeth

$$z_{emax} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

**1. Tooth shear strength (specific belt tooth load bearing)**

	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	101,5	32,30	0,000	2800	39,4	12,53	36,7
	20	98,1	31,20	0,654	3000	38,1	12,13	38,1
	40	95,3	30,30	1,271	3200	37,0	11,77	39,4
	60	92,8	29,50	1,856	3400	35,9	11,42	40,7
	80	90,7	28,90	2,420	3600	34,9	11,09	41,8
	100	88,7	28,20	2,960	3800	33,9	10,78	42,9
	200	81,2	25,90	5,420	4000	33,0	10,49	43,9
	300	75,9	24,20	7,590	4500	30,8	9,81	46,2
	400	71,8	22,90	9,570	5000	28,9	9,21	48,2
	500	68,4	21,80	11,410	5500	27,2	8,66	49,9
	600	65,6	20,90	13,110	6000	25,6	8,16	51,2
	700	63,1	20,10	14,730	6500	24,2	7,69	52,4
	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				
	2000	45,3	14,42	30,200				
	2200	43,6	13,89	32,000				
	2400	42,1	13,40	33,700				
	2600	40,7	12,95	35,200				

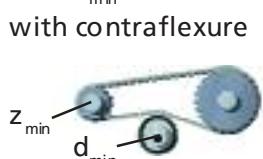
Rotational speeds over 6500 rpm and/or belt speeds over 40 m/s are in need of a special drive design. Please request for our advice.

**2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight**

Belt width	b	[mm]	32	50	75	100	150
SYNCHROFLEX®	F <sub>adm</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)**

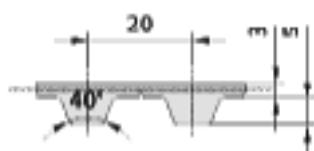
Drive type	SFX T 20			
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$		15
		$d_{min}$ [mm]		120
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$	25	
		$d_{min}$ [mm]		120



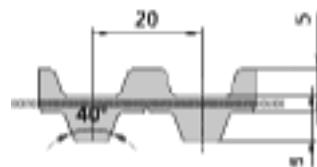
## T standard timing belts - endless

BRECOFLEX® TIMING BELTS (BFX)

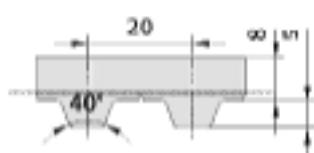
**T 20**



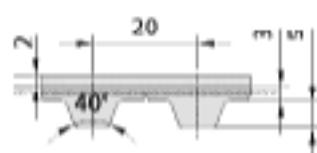
**T 20-DL**



**T 20-DR**



**T 20-T**



### Available endless lengths for T20

- Preferred lengths refer to table
- under 1500 mm: Further lengths on request
- over 1500 mm: Any number of teeth available, request minimum purchase amount for in-between lengths
- over 20000 mm: on request
- \*) 150 mm belt width available from 1500 mm to 15000 mm

### Available versions:

- **T 20:** Standard, single-sided
- **DL:** Standard, double-sided, available belt width up to  $b_{max}=100$  mm, minimum purchase amount for length over 5300 mm on request
- **PAZ:** Nylon tooth facing
- **DL-PAZ:** Nylon on double-sided belts, only inner side can be coated available belt width up to  $b_{max}=100$  mm, minimum purchase amount for length over 3760 mm on request
- **T, T-PAZ:** Transport support, available belt width up to  $b_{max}=100$  mm, minimum purchase amount on request
- **DR, DR-PAZ:** Reinforced back of the belt, through 5 mm larger belt thickness, available belt width up to  $b_{max}=100$  mm, minimum purchase amount on request

Type / Length	Number of teeth	Type / Length	Number of teeth
T 20 / 1500	75	T 20 / 4760	238
T 20 / 1600	80	T 20 / 5000	250
T 20 / 1700	85	T 20 / 5300	265
T 20 / 1800	90	T 20 / 5600	280
T 20 / 1900	95	T 20 / 6000	300
T 20 / 2000	100	T 20 / 6300	315
T 20 / 2120	106	T 20 / 6700	335
T 20 / 2240	112	T 20 / 7100	355
T 20 / 2360	118	T 20 / 7500	375
T 20 / 2500	125	T 20 / 8000	400
T 20 / 2660	133	T 20 / 8500	425
T 20 / 2800	140	T 20 / 9000	450
T 20 / 3000	150		
T 20 / 3160	158		
T 20 / 3360	168		
T 20 / 3560	178		
T 20 / 3760	188		
T 20 / 4000	200		
T 20 / 4260	213		
T 20 / 4500	225		

Preferred belt length mm      32 50 75 100 150\*)

In-between belt widths are available

### Order example:

BRECOFLEX®-TIMING BELT

100 T20 / 5300

Belt width in mm

Type / Pitch

Belt length in mm

## Technical data of the BRECOFLEX® TIMING BELT T 20, T 20-DL

**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

$F_u$  [N]

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

P[kW]

**Drive load bearing characteristics**

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

[N]

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

[Nm]

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

[kW]

intermeshing number of teeth

$$z_{emax} = 12$$

$$z_e = \frac{z_1 \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}}{180}$$

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

	R.p.m. n [rpm]	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]	R.p.m. n [rpm]	$F_{uspec}$ [N/cm]	$M_{spec}$ [Ncm/cm]	$P_{spec}$ [W/cm]
	0	101,5	32,30	0,000	2800	39,4	12,53	36,7
	20	98,1	31,20	0,654	3000	38,1	12,13	38,1
	40	95,3	30,30	1,271	3200	37,0	11,77	39,4
	60	92,8	29,50	1,856	3400	35,9	11,42	40,7
	80	90,7	28,90	2,420	3600	34,9	11,09	41,8
	100	88,7	28,20	2,960	3800	33,9	10,78	42,9
	200	81,2	25,90	5,420	4000	33,0	10,49	43,9
	300	75,9	24,20	7,590	4500	30,8	9,81	46,2
	400	71,8	22,90	9,570	5000	28,9	9,21	48,2
	500	68,4	21,80	11,410	5500	27,2	8,66	49,9
	600	65,6	20,90	13,110	6000	25,6	8,16	51,2
	700	63,1	20,10	14,730	6500	24,2	7,69	52,4
	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				
	2000	45,3	14,42	30,200				
	2200	43,6	13,89	32,000				
	2400	42,1	13,40	33,700				
	2600	40,7	12,95	35,200				

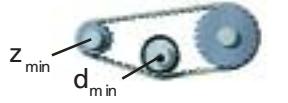
Rotational speeds over 6500 rpm and/or belt speeds over 40 m/s are in need of a special drive design. Please request for our advice.

### 2. Tension cord strength (permitted tensile force of the belt $F_{adm}$ ), belt weight

Belt width	b	[mm]	32	50	75	100	150
BRECOFLEX®	$F_{adm}$	[N]	4750	7750	12000	16000	24500
Belt weight	T 20	[kg/m]	0,236	0,368	0,552	0,736	1,095
	T 20-DL	[kg/m]	0,319	0,499	0,753	1,004	-
	T 20-DR	[kg/m]	0,430	0,675	1,016	1,354	-
	T 20-T	[kg/m]	0,315	0,495	0,746	0,994	-

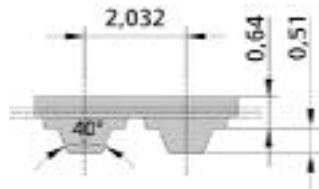
### 3. Flexibility (Minimum numbers of teeth, minimum diameter)

Drive type		B FX T20	B FX T20-DL	B FX T20-DR	B FX T20-T
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$	15	25	25
		$d_{min}$ [mm]	120	120	150
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$	25	25	25
		$d_{min}$ [mm]	120	120	180



## SYNCHROFLEX® TIMING BELT (SFX)

### M (MXL)



Standard trapezoidal teeth according to DIN/ISO 5296 with Minipitch (2.03mm=0.08 Inch).

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

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 FA	121,92	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 508FN50	508,00	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 b mm      4    6    10  
In-between widths and larger widths are available.

Other dimension upon request.

#### Available versions:

- single-sided
- with Aramid tension member
- Polyurethane special materials upon request
- antistatic, coloured, mechanical reworked
- FA: with reinforced back of the belt
- FN: with profiles on the back of the belt

#### Order example:

SYNCHROFLEX®-TIMING BELT

6 M / 182

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

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

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

Technical data of the SYNCHROFLEX® TIMING BELT  
**M (MXL)**

**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

$$F_u [N]$$

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

$$M [Nm]$$

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

$$P [kW]$$

**Drive load bearing characteristics**

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b [N]$$

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100} [Nm]$$

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

intermeshing number of teeth

$$z_{emax} = 12$$

$$z_e = \frac{z_1}{180} \cdot \text{arc cos} \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

**1. Tooth shear strength (specific belt tooth load bearing)**

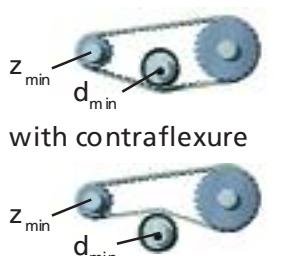
	R.p.m. n [rpm]	F <sub>U</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>U</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	6,58	0,209	0,000	2200	3,50	0,111	0,257
	20	6,36	0,202	0,004	2400	3,42	0,109	0,274
	40	6,18	0,197	0,008	2500	3,39	0,108	0,282
	60	6,03	0,192	0,012	2600	3,35	0,107	0,290
	80	5,90	0,188	0,016	2800	3,29	0,105	0,307
	100	5,79	0,184	0,019	2880	3,26	0,104	0,313
	150	5,56	0,177	0,028	3000	3,23	0,103	0,323
	200	5,38	0,171	0,036	3200	3,17	0,101	0,338
	300	5,10	0,162	0,051	3400	3,12	0,099	0,354
	400	4,89	0,156	0,065	3600	3,07	0,098	0,368
	500	4,72	0,150	0,079	3800	3,02	0,096	0,383
	600	4,58	0,146	0,092	4000	2,98	0,095	0,397
	700	4,45	0,142	0,104	4500	2,88	0,092	0,432
	730	4,42	0,141	0,108	5000	2,78	0,088	0,463
	800	4,35	0,138	0,116	5500	2,70	0,086	0,495
	900	4,25	0,135	0,127	6000	2,63	0,084	0,526
	1000	4,16	0,132	0,139	6500	2,56	0,081	0,555
	1100	4,08	0,130	0,150	7000	2,49	0,079	0,581
	1200	4,01	0,128	0,160	7500	2,43	0,077	0,607
	1300	3,94	0,125	0,171	8000	2,37	0,075	0,632
	1400	3,88	0,124	0,181	8500	2,32	0,074	0,657
	1460	3,85	0,123	0,187	9000	2,27	0,072	0,681
	1500	3,82	0,122	0,191	9500	2,22	0,071	0,703
	1600	3,77	0,120	0,201	10000	2,18	0,069	0,727
	1700	3,72	0,118	0,211	12000	2,02	0,064	0,808
	1800	3,67	0,117	0,220	15000	1,82	0,058	0,910
	1900	3,62	0,115	0,229	18000	1,66	0,053	0,996
	2000	3,58	0,114	0,239	20000	1,57	0,050	1,047

**2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight**

Belt width b [mm]	4	6	10	16	25	32
SYNCHROFLEX® F <sub>adm</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)**

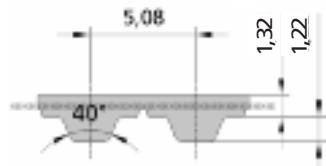
Drive type	SFX M			
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$	10	
		$d_{min}$ [mm]	15	
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$	18	
		$d_{min}$ [mm]	15	



## Imperial- timing belts - endless

### BRECOFLEX® TIMING BELTS (BFX)

#### XL mit Polyamidgewebe



$1/5'' = 5,08 \text{ mm}$

#### Available endless lengths for XL

- Preferred lengths refer to table
- Further lengths on request.

#### Available versions:

- **XL:** Standard, single-sided, with Nylon tooth facing

#### Endless lengths

Length code / Pitch	Length mm	Number of teeth
60 XL	152,40	30
70 XL	177,80	35
80 XL	203,20	40
90 XL	228,60	45
100 XL	254,00	50
110 XL	279,40	55
120 XL	304,80	60
130 XL	330,20	65
140 XL	355,60	70
150 XL	381,00	75
160 XL	406,40	80
170 XL	431,80	85
180 XL	457,20	90
190 XL	482,60	95
200 XL	508,00	100

Length code / Pitch	Length mm	Number of teeth
210 XL	533,40	105
220 XL	558,80	110
230 XL	584,20	115
240 XL	609,60	120
250 XL	635,00	125
260 XL	660,40	130

Preferred belt width b (in-between widths are available)

Imperial code: 025 031 037 050 075 100  
mm: 6,35 7,94 9,53 12,7 19,1 25,4

#### Order example:

BRECOFLEX®-TIMING BELT

110 XL 037 PAZ

Length code \_\_\_\_\_

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

Width code \_\_\_\_\_

Nylon facing on the tooth side \_\_\_\_\_

## Technical data of the BRECOFLEX® TIMING BELT

XL

**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

 F<sub>u</sub> [N]

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

P[KW]

**Drive load bearing characteristics**

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

[N]

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

[Nm]

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

[kW]

intermeshing number of teeth

$$z_{emax} = 12$$

$$z_e = \frac{z_1 \cdot \text{arc cos } t \cdot (z_2 - z_1)}{180 \cdot 2\pi \cdot a}$$

**1. Tooth shear strength (specific belt tooth load bearing)**

	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	24,40	1,973	0,000	2800	12,80	1,035	3,06
	20	23,80	1,922	0,040	3000	12,57	1,017	3,19
	40	23,20	1,879	0,079	3200	12,36	0,999	3,35
	60	22,80	1,842	0,116	3400	12,16	0,983	3,50
	80	22,40	1,809	0,152	3600	11,96	0,967	3,65
	100	22,00	1,780	0,186	3800	11,78	0,953	3,79
	200	20,60	1,667	0,349	4000	11,61	0,939	3,93
	300	19,63	1,587	0,498	4500	11,21	0,907	4,27
	400	18,86	1,525	0,639	5000	10,86	0,878	4,60
	500	18,23	1,474	0,772	5500	10,54	0,852	4,91
	600	17,70	1,431	0,899	6000	10,24	0,828	5,20
	700	17,24	1,394	1,022	6500	9,97	0,806	5,49
	800	16,83	1,361	1,140	7000	9,72	0,786	5,76
	900	16,47	1,332	1,255	7500	9,49	0,767	6,02
	1000	16,14	1,305	1,367	8000	9,27	0,749	6,28
	1100	15,84	1,281	1,475	8500	9,06	0,732	6,52
	1200	15,57	1,259	1,582	9000	8,86	0,717	6,76
	1300	15,31	1,238	1,685	9500	8,68	0,702	6,98
	1400	15,07	1,219	1,787	10000	8,51	0,688	7,20
	1500	14,85	1,201	1,886				
	1600	14,64	1,184	1,984				
	1700	14,45	1,168	2,080				
	1800	14,26	1,153	2,170				
	1900	14,08	1,139	2,270				
	2000	13,91	1,125	2,360				
	2200	13,60	1,100	2,530				
	2400	13,31	1,076	2,710				
	2600	13,05	1,055	2,870				

**2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight**

Belt width	b	[mm]	6,35	7,94	9,53	12,7	19,1	25,4
BRECOFLEX® Belt weight	F <sub>adm</sub> XL	[N] [kg/m]	180 0,016	240 0,020	300 0,024	420 0,030	690 0,380	930 0,061

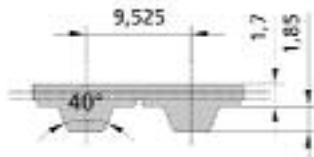
**3. Flexibility (Minimum numbers of teeth, minimum diameter)**

Drive type	BFX XL			
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	z <sub>min</sub>	10	
	d <sub>min</sub> [mm]	30		
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	z <sub>min</sub>	15	
	d <sub>min</sub> [mm]	30		

## Imperial- timing belts - endless

### BRECOFLEX®-TIMING BELTS (BFX)

L



**3/8" = 9,525 mm**

#### Available endless lengths for L

- Preferred lengths refer to table
- under 1066,8 mm: further lengths upon request.
- over 1066,8 mm: Any number of teeth available, request minimum purchase amount for in-between lengths
- over 14992,35 mm on request

#### Available versions:

- L: Standard, single-sided
- PAZ: Nylon tooth facing

#### Endless lengths

Length code / Pitch	Length mm	Number of teeth
124 L	314,33	33
150 L	381,00	40
187 L	476,25	50
202 L	514,35	54
210 L	533,40	56
225 L	571,50	60
240 L	609,60	64
255 L	647,70	68
270 L	685,80	72
285 L	723,90	76
300 L	762,00	80
322 L	819,15	86
345 L	876,30	92
367 L	933,45	98
390 L	990,60	104

Length code / Pitch	Length mm	Number of teeth
420 L	1066,80	112
450 L	1143,00	120
480 L	1219,20	128
540 L	1371,60	144
570 L	1447,80	152
600 L	1524,00	160
630 L	1600,20	168
660 L	1676,40	176
705 L	1790,70	188
750 L	1905,00	200
300 L	762,00	80
322 L	819,15	86
345 L	876,30	92
367 L	933,45	98
390 L	990,60	104

current maximum manufacturing length:

5902 L 14992,35 1574

Preferred belt width b (in-between widths are available)

Imperial code:	037	050	075	100	200	400
mm:	9,53	12,7	19,1	25,4	50,8	101,6

#### Order example:

BRECOFLEX®-TIMING BELT

210 L 075

Length code \_\_\_\_\_

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

Width code \_\_\_\_\_

## Technical data of the BRECOFLEX® TIMING BELT

L

**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

 F<sub>u</sub>[N]

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

P[kW]

**Drive load bearing characteristics**

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

intermeshing number of teeth

$$z_{emax} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

**1. Tooth shear strength (specific belt tooth load bearing)**

	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	37,40	5,67	0,000	2800	16,81	2,550	7,47
	20	36,30	5,50	0,115	3000	16,40	2,490	7,81
	40	35,30	5,35	0,224	3200	16,02	2,430	8,14
	60	34,50	5,23	0,329	3400	15,66	2,370	8,45
	80	33,80	5,12	0,429	3600	15,32	2,320	8,76
	100	33,10	5,02	0,526	3800	15,00	2,270	9,05
	200	30,70	4,65	0,974	4000	14,69	2,230	9,33
	300	28,90	4,38	1,377	4500	13,99	2,120	9,99
	400	27,50	4,18	1,749	5000	13,36	2,030	10,61
	500	26,40	4,01	2,100	5500	12,79	1,939	11,17
	600	25,50	3,86	2,430	6000	12,27	1,860	11,69
	700	24,70	3,74	2,740	6500	11,79	1,787	12,16
	800	24,00	3,63	3,040	7000	11,34	1,719	12,60
	900	23,30	3,53	3,330	7500	10,93	1,656	13,01
	1000	22,70	3,45	3,610	8000	10,54	1,597	13,38
	1100	22,20	3,37	3,880	8500	10,17	1,542	13,72
	1200	21,70	3,29	4,140	9000	9,83	1,490	14,04
	1300	21,30	3,22	4,390	9500	9,50	1,440	14,33
	1400	20,80	3,16	4,630	10000	9,19	1,393	14,59
	1500	20,40	3,10	4,870				
	1600	20,10	3,04	5,100				
	1700	19,72	2,99	5,320				
	1800	19,39	2,94	5,540				
	1900	19,08	2,89	5,750				
	2000	18,78	2,85	5,960				
	2200	18,22	2,76	6,370				
	2400	17,71	2,69	6,750				
	2600	17,25	2,61	7,120				

Rotational speeds over 10000 rpm and/or belt speeds over 60 m/s are in need of a special drive design. Please request for our advice.

**2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight**

Belt width	b	[mm]	9,53	12,7	19,1	25,4	38,1	50,8	76,2	101,6
BRECOFLEX®	F <sub>adm</sub>	[N]	630	910	1470	2030	3150	4270	6510	8750
Belt weight	L	[kg/m]	0,038	0,044	0,066	0,088	0,133	0,178	0,266	0,356

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

Drive type	BFX L			
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	z <sub>min</sub>	15	
		d <sub>min</sub> [mm]	60	
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	z <sub>min</sub>	20	
		d <sub>min</sub> [mm]	60	



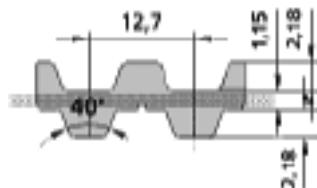
## Imperial- timing belts - endless

### BRECOFLEX®-ZAHNRIEMEN (BFX)

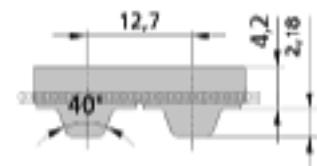
H



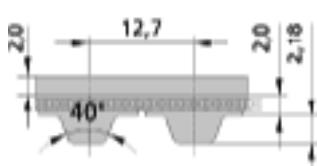
H-DL



H-DR



H-T



1/2" = 12,7 mm

#### Available endless lengths for H

- Preferred lengths refer to table
- under 1066,8 mm: Further lengths on request
- over 1066,8 mm: Any number of teeth available, request minimum purchase amount for in-between lengths
- over 16002.0 mm: On request

#### Available versions:

- H: Standard, single-sided
- DL: Standard, double-sided, available over 1066.8 mm, for length over 1250 H request for minimum purchase amount
- PAZ: Nylon tooth facing
- DL-PAZ: Nylon facing on double-sided belts, only inner side can be coated, for length over 1250 H request for minimum purchase amount
- T, T-PAZ: Transport support, minimum purchase amount on request
- DR, DR-PAZ: Reinforced back of the belt, through 2.18 mm larger belt thickness, available in lengths over 1066.8 mm, minimum purchase amount on request

#### Endless lengths

Length code / Pitch	Length mm	Number of teeth
420 H	1066,80	84
450 H	1143,00	90
480 H	1219,20	96
510 H	1295,40	102
540 H	1371,60	108
570 H	1447,80	114
600 H	1524,00	120
630 H	1600,20	126
660 H	1676,40	132
700 H	1778,00	140
750 H	1905,00	150
800 H	2032,00	160
850 H	2159,00	170
900 H	2286,00	180
1000 H	2540,00	200

Length code / Pitch	Length mm	Number of teeth
1100 H	2794,00	220
1250 H	3175,00	250
1400 H	3556,00	280
1700 H	4318,00	340
2000 H	5080,00	400
2300 H	5842,00	460
2600 H	6604,00	520
3000 H	7620,00	600
current maximum manufacturing length:		
6300 H	16002,00	1260

Preferred belt width b (in-between widths are available)  
Imperial code: 050 075 100 150 200 300 400  
mm: 12,7 19,1 25,4 38,1 50,8 76,2 101,6

#### Order example:

BRECOFLEX®-TIMING BELT

750 H 200

Length code \_\_\_\_\_

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

Width code \_\_\_\_\_

## Technical data of the BRECOFLEX® TIMING BELT

## H, H-DL

Belt width b[cm]

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

 F<sub>u</sub> [N]

	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]		R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	44,0	8,90	0,000		2800	19,81	4,00	11,74
	20	42,7	8,64	0,181		3000	19,33	3,91	12,27
b = $\frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$	40	41,6	8,41	0,352		3200	18,88	3,82	12,79
	60	40,7	8,22	0,516		3400	18,45	3,73	13,28
	80	39,8	8,05	0,674		3600	18,05	3,65	13,76
b = $\frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$	100	39,1	7,89	0,827		3800	17,68	3,57	14,22
	200	36,1	7,30	1,530		4000	17,32	3,50	14,66
	300	34,1	6,89	2,160		4500	16,49	3,33	15,70
	400	32,5	6,56	2,750		5000	15,74	3,18	16,66
Drive load bearing characteristics	500	31,1	6,30	3,300		5500	15,07	3,05	17,55
with given belt width [cm]	600	30,0	6,07	3,810		6000	14,46	2,92	18,36
F <sub>u</sub> = F <sub>uspec</sub> · z <sub>e</sub> · b [N]	700	29,1	5,88	4,310		6500	13,89	2,81	19,11
	800	28,2	5,71	4,780		7000	13,36	2,70	19,80
	900	27,5	5,55	5,230		7500	12,87	2,60	20,40
M = $\frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$ [Nm]	1000	26,8	5,41	5,670		8000	12,42	2,51	21,00
	1100	26,2	5,29	6,090		8500	11,99	2,42	21,60
	1200	25,6	5,17	6,500		9000	11,58	2,34	22,10
	1300	25,1	5,06	6,890		9500	11,19	2,26	22,50
	1400	24,6	4,96	7,280		10000	10,83	2,19	22,90
P = $\frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$ [kW]	1500	24,1	4,87	7,650					
	1600	23,7	4,78	8,010					
intermeshing number of teeth	1700	23,2	4,70	8,360					
z <sub>emax</sub> = 12	1800	22,9	4,62	8,710					
	1900	22,5	4,54	9,040					
	2000	22,1	4,47	9,370					
z <sub>e</sub> = $\frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$	2200	21,5	4,34	10,000					
	2400	20,9	4,22	10,600					
	2600	20,3	4,11	11,180					

Rotational speeds over 10000 rpm and/or belt speeds over 60 m/s are in need of a special drive design. Please request for our advice.

 2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight

Belt width	b	[mm]	12,7	19,1	25,4	38,1	50,8	76,2	101,6
BRECOFLEX® Belt weight	F <sub>adm</sub> H	[N] [kg/m]	800 0,053	1300 0,079	1800 0,108	2800 0,161	3800 0,216	5800 0,324	7900 0,432
	H-DL	[kg/m]	0,064	0,097	0,130	0,196	0,262	0,394	0,527
	H-DR	[kg/m]	0,085	0,128	0,171	0,258	0,345	0,518	0,692
	H-T	[kg/m]	0,082	0,124	0,165	0,249	0,333	0,499	0,668

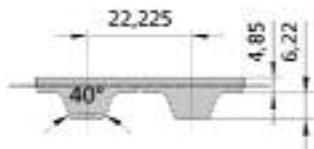
## 3. Flexibility (Minimum numbers of teeth, minimum diameter)

Drive type		BFX H	BFX H-DL	BFX H-DR	BFX H-T
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	$z_{min}$	14	20	20
		$d_{min}$ [mm]	60	60	80
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	$z_{min}$	20	20	20
		$d_{min}$ [mm]	80	80	80

## Imperial- timing belts - endless

### BRECOFLEX®-ZAHNRIEMEN (BFX)

#### XH



**7/8" = 22,225 mm**

#### Endless lengths

Length code / Pitch	Length mm	Number of teeth
560 XH	1422,40	64
630 XH	1600,20	72
700 XH	1778,00	80
770 XH	1955,80	88
840 XH	2133,60	96
980 XH	2489,20	112
1120 XH	2844,80	128
1260 XH	3200,40	144
1400 XH	3556,00	160
1540 XH	3911,60	176

Length code / Pitch	Length mm	Number of teeth
1750 XH	4445,00	200
1960 XH	4978,40	224
2275 XH	5778,50	260
2450 XH	6223,00	280
3500 XH	8890,00	400
current maximum manufacturing length:		
6300 XH	16002,00	720

#### Available endless lengths for XH

- Preferred lengths refer to table
- under 1422,4 mm: Further lengths on request
- over 1422,4 mm: Any number of teeth available, request minimum purchase amount for in-between lengths
- over 16002,00 mm On request

#### Available versions:

- **XH:** Standard, single-sided
- **PAZ:** Nylon tooth facing

Preferred belt width b (in-between widths are available)

Imperial code: 200 300 400  
mm: 50,8 76,2 101,6

#### Order example:

BRECOFLEX®-TIMING BELT

700 XH 200

Length code \_\_\_\_\_

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

Width code \_\_\_\_\_

Technical data of the BRECOFLEX® TIMING BELT  
**XH**
**Belt width b[cm]**

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

**F<sub>u</sub> [N]**

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

**M[Nm]**

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

**P[kW]**
**Drive load bearing characteristics**

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

**[N]**

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

**[Nm]**

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

**[kW]**

intermeshing number of teeth

$$z_{e\max} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

**1. Tooth shear strength (specific belt tooth load bearing)**

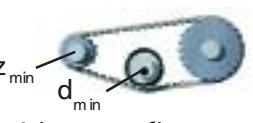
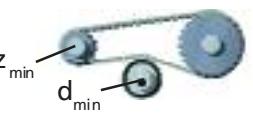
	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	91,35	29,070	0,000	2800	35,46	11,277	33,030
	20	88,29	28,080	0,589	3000	34,29	10,917	34,290
	40	85,77	27,270	1,144	3200	33,30	10,593	35,460
	60	83,52	26,550	1,670	3400	32,31	10,278	36,630
	80	81,63	26,010	2,178	3600	31,41	9,981	37,620
	100	79,83	25,380	2,664	3800	30,51	9,702	38,610
	200	73,08	23,310	4,878	4000	29,70	9,441	39,510
	300	68,31	21,780	6,831	4500	27,72	8,829	41,580
	400	64,62	20,610	8,613				
	500	61,56	19,620	10,269				
	600	59,04	18,810	11,799				
	700	56,79	18,090	13,257				
	800	54,81	17,460	14,625				
	900	53,10	16,902	15,930				
	1000	51,48	16,398	17,172				
	1100	50,04	15,939	18,360				
	1200	48,78	15,516	19,530				
	1300	47,52	15,120	20,610				
	1400	46,35	14,760	21,600				
	1500	45,27	14,418	22,680				
	1600	44,28	14,094	23,580				
	1700	43,38	13,797	24,570				
	1800	42,48	13,509	25,470				
	1900	41,58	13,239	26,370				
	2000	40,77	12,978	27,180				
	2200	39,24	12,501	28,800				
	2400	37,89	12,060	30,330				
	2600	36,63	11,665	31,680				

Rotational speeds over 4500 rpm and/or belt speeds over 40 m/s are in need of a special drive design. Please request for our advice.

**2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight**

Belt width	b	[mm]	50,8	76,2	101,6
BRECOFLEX®	F <sub>adm</sub>	[N]	7750	12000	16250
Belt weight	XH	[kg/m]	0,530	0,795	1,059

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

Drive type	BFX XH		
without contraflexure	Synchronising pulley	$z_{min}$	18
	Tension roller (smooth), running on teeth	$d_{min}$ [mm]	150
with contraflexure	Synchronising pulley	$z_{min}$	25
	Tension roller (smooth), running on the back of the belt	$d_{min}$ [mm]	180

## F- flat belts - endless

### BRECOFLEX® FLAT BELTS (BFX)

#### F 2.0



##### Endless lengths

Type	Length	Type	Length
F 2.0	1500	F 2.0	2000
F 2.0	1550	F 2.0	2100
F 2.0	1600	F 2.0	2500
F 2.0	1650	F 2.0	3000
F 2.0	1700	F 2.0	4000
F 2.0	1750	F 2.0	5000
F 2.0	1800		
F 2.0	1850		
F 2.0	1900		
F 2.0	1950		
			current maximum manufacturing length: F 2.0 20000

##### Preferred belt width

b [mm]: 25 32 50 75 100

In-between belt widths are available

#### Available endless lengths for F 2.0

- Preferred lengths refer to table
- under 1,500 mm: on request
- request for in-between lengths for the minimum purchase
- over 20,000 mm on request

#### Available versions for F 2.0

- **F 2.0:Standard**
- **PAZ:** Nylon tooth facing on the groove side

##### Order example:

BRECOFLEX®-FLATBELT                                    50 F2.0 / 2500 -PAZ  
 Belt width in mm    Type  
 Type    Belt length in mm  
 Belt length in mm    Nylon facing on the groove side

#### Tension cord strength (permitted tensile force of the belt $F_{adm}$ ), belt weight

Belt width	b	[mm]	25	32	50	75	100
BRECOFLEX®	$F_{adm}$	[N]	1800	2300	3800	5800	7800
Belt weight	F 2.0	[kg/m]	0,067	0,098	0,155	0,234	0,313

#### Flexibility (minimum diameter)

Drive type	F2.0		
without contraflexure	Minimum diameter	$d_{min}$ [mm]	30
with contraflexure	internal minimum diameter $d_{min(i)}$ [mm] Tension roller (smooth), running on the back of the belt	$d_{min(a)}$ [mm]	40 60

**SYNCHROFLEX® FLAT BELT (SFX)**

**F, AF, BF, CF, DF**

Type	Shape No.	Length l [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:**

SYNCHROFLEX®-FLATBELT

10 AF 108

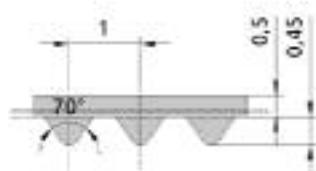
Belt width in mm

Type / No. of grooves

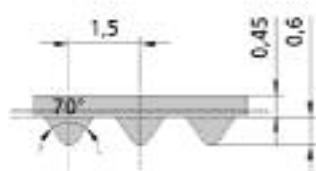
## Timing belts with special profiles - endless

### SYNCHROFLEX® TIMING BELT (SFX)

**K 1**



**K 1,5**



Notched profile with a metric pitch.

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

#### Available versions:

- single-sided
- with Aramid tension member
- Polyurethane special materials upon request
- antistatic, coloured, mechanical reworked

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 /	100,5	67
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
K 1,5 /	400,5	267
K 1,5 /	501,0	334

Type/	Length	Number of teeth
K 1,5 /	600,0	400
K 1,5 /	1242,0	828
K 1,5 /	1671,0	1114

\*) in casting polyurethane DADU 9311, yellow colour

Preferred belt length mm      4      6      10  
In-between widths and larger widths are available.

Other dimension upon request.

#### Order Example:

SYNCHROFLEX®-TIMING BELT

6 K1,5 / 100,5

Belt width in mm

Type / Pitch

Belt length in mm

Technical data of the SYNCHROFLEX® TIMING BELT

K 1, K 1,5

Belt width b[cm]

$$b = \frac{F_u}{z_e \cdot F_{uspec}}$$

F<sub>u</sub>[N]

$$b = \frac{100 \cdot M}{z_1 \cdot z_e \cdot M_{spec}}$$

M[Nm]

$$b = \frac{1000 \cdot P}{z_1 \cdot z_e \cdot P_{spec}}$$

P[kW]

Drive load bearing characteristics

with given belt width [cm]

$$F_u = F_{uspec} \cdot z_e \cdot b$$

[N]

$$M = \frac{M_{spec} \cdot z_1 \cdot z_e \cdot b}{100}$$

[Nm]

$$P = \frac{P_{spec} \cdot z_1 \cdot z_e \cdot b}{1000}$$

[kW]

intermeshing number of teeth

$$z_{emax} = 12$$

$$z_e = \frac{z_1}{180} \cdot \arccos \frac{t \cdot (z_2 - z_1)}{2\pi \cdot a}$$

1. Tooth shear strength (specific belt tooth load bearing)

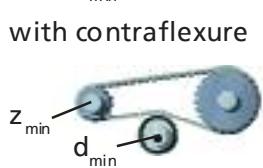
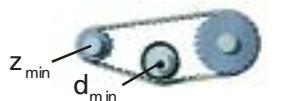
	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]	R.p.m. n [rpm]	F <sub>uspec</sub> [N/cm]	M <sub>spec</sub> [Ncm/cm]	P <sub>spec</sub> [W/cm]
	0	6,45	0,154	0,000	2200	3,43	0,082	0,189
	20	6,23	0,149	0,003	2400	3,35	0,080	0,201
	40	6,06	0,145	0,006	2500	3,32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

2. Tension cord strength (permitted tensile force of the belt F<sub>adm</sub>), belt weight

Belt width	b	[mm]	4	6	10	16	25	32
SYNCHROFLEX®	F <sub>adm</sub>	[N]	39	65	117	195	312	403
Belt weight	K1,5	[kg/m]	0,0044	0,007	0,011	0,018	0,028	0,035
	K1	[kg/m]	0,004	0,006	0,010	0,016	0,025	0,032

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

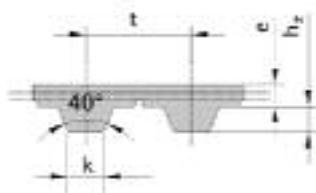
Drive type		SFX K1	SFX K1,5
without contraflexure	Synchronising pulley Tension roller (smooth), running on teeth	z <sub>min</sub>	14
	d <sub>min</sub> [mm]	15	15
with contraflexure	Synchronising pulley Tension roller (smooth), running on the back of the belt	z <sub>min</sub>	20
	d <sub>min</sub> [mm]	15	15



# Timing belts with special profiles - endless

## SYNCHROFLEX® TIMING BELT (SFX)

V



**Order Example:**

SYNCHROFLEX®-ZAHNRIEMEN

Belt width in mm  
Type / Length code

10 V 100 / 3 F

Type	Imperial pitch	Shape No.	Length l [mm]	Pitch t [mm]	Module m	Number of teeth z	k [mm]	h <sub>z</sub> [mm]	e [mm]
V 100/3 F		K4730-F	100,98	3,060	0,974	33	1,20	0,80	0,70
V 149/4 F		K5870-F	149,49	4,983	1,586	30	1,80	1,20	1,00
V 150/5 F		K3950-F	150,10	5,176	1,648	29	1,60	1,50	1,30
V 158/4 F		K4186-F	158,27	4,522	1,439	35	1,50	1,00	1,20
V 161/5 F		K3961-F	160,68	5,951	1,894	27	2,00	1,50	1,50
V 165/3 F		K3978-F	164,73	3,581	1,140	46	1,00	1,00	1,30
V 167/4 F		K3628-F	167,31	4,522	1,439	37	1,50	1,00	1,20
V 170/4 FA		K4503-FA	169,44	4,459	1,419	38	1,50	1,00	1,00
V 172/4 F		K3880-F	172,24	4,921	1,566	35	1,60	1,50	1,20
V 174/3 F		K5385-F	174,90	3,300	1,050	53	1,00	1,00	1,20
V 177/5 F	XL	K5841-F	177,80	5,080	1,617	35	1,20	1,20	0,85
V 190/4 F		K6238-F	192,02	4,572	1,455	42	1,30	1,20	1,40
V 203/5 F	XL	K5369-F	203,20	5,080	1,617	40	1,37	1,27	0,80
V 206/6 FK		K4662-FK	206,14	6,063	1,930	34	1,80	1,20	1,00
V 213/7 F		K3969-F	212,46	7,869	2,505	27	2,50	1,40	1,40
V 225/3 F		K6175-F	225,00	3,000	0,955	75	1,20	0,80	0,70
V 226/5 F		K4187-F	226,10	5,950	1,894	38	2,00	1,50	1,50
V 228/6 F		K5290-F	228,60	6,350	2,021	36	2,00	1,50	0,80
V 228/6 FA		K6222-FA	228,60	6,350	2,021	36	2,00	1,50	1,05
V 229/6 F		K3595-F	229,02	6,736	2,144	34	2,00	1,20	1,20
V 233/5 F	XL	K5674-F	233,68	5,080	1,617	46	1,37	1,22	1,28
V 238/5 F		K3964-F	238,04	5,951	1,894	40	2,00	1,50	1,10
V 242/5 F		K4088-F	242,40	5,050	1,607	48	1,60	1,50	1,20
V 248/7 F		K3319-F	247,69	7,285	2,319	34	2,50	1,40	1,50
V 252/6 K		K3264-K	252,53	6,475	2,061	39	2,20	1,20	1,80
V 255/6 FK		K4891-FK	255,25	6,717	2,138	38	2,50	1,80	1,00
V 261/7 K		K3251-K	261,59	7,927	2,523	33	2,50	1,40	1,00
V 265/8 F		K3436-F	264,63	8,019	2,553	33	2,50	1,40	1,50
V 268/7 F		K3944-F	268,55	7,258	2,310	37	2,50	1,80	1,50
V 277/3 F		K5386-F	277,20	3,300	1,050	84	1,00	1,00	1,20
V 279/6 F		K6250-F	279,40	6,350	2,021	44	2,00	1,50	1,05
V 284/5 F	XL	K5545-F	284,48	5,080	1,617	56	1,80	1,20	0,70
V 285/6 F		K5401-F	285,75	6,350	2,021	45	1,80	1,20	1,00
V 290/3 F		K5388-F	290,40	3,300	1,050	88	1,00	1,00	1,20
V 291/7 F		K3584-F	290,24	7,256	2,310	40	2,50	1,40	1,60
V 295/6 F		K3804-F	294,50	6,266	1,995	47	1,60	1,50	1,50
V 295/6 FA		K4469-FA	294,83	6,273	1,997	47	1,60	1,50	1,50
V 304/5 F	XL	K5368-F	304,80	5,080	1,617	60	1,37	1,27	0,60
V 307/5 F		K4031-F	306,92	5,202	1,656	59	1,60	1,50	1,30
V 309/7 FK		K4610-FK	310,72	7,226	2,300	43	2,20	1,60	1,30

**SYNCHROFLEX® TIMING BELT (SFX)**

V

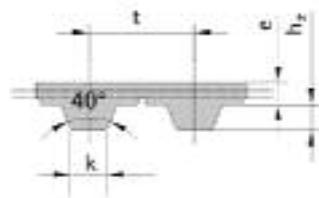
Order Example:

SYNCHROFLEX®-ZAHNRIEMEN

10 V 100 / 3 F

Belt width in mm

Type / Length code

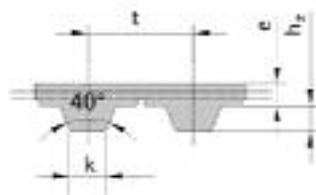


Type	Imperial pitch	Shape No.	Length l [mm]	Pitch t [mm]	Module m	Number of teeth z	k [mm]	h_z [mm]	e [mm]
V 310/5 F		K3888-F	309,56	5,953	1,895	52	1,80	1,50	1,50
V 316/3 F		K5406	316,80	3,300	1,050	96	1,00	1,00	1,20
V 323/3 F		K5098	323,40	3,300	1,050	98	1,00	1,00	1,20
V 337/7 F		K3498-F	337,04	7,660	2,438	44	2,50	1,60	1,45
V 341/7 F		K3673-F	340,30	7,734	2,462	44	2,50	2,00	1,40
V 350/5 FK		K4909-FK	350,31	5,077	1,616	69	1,80	1,20	1,00
V 351/2 F		K5999-F	351,79	2,645	0,842	133	1,50	1,00	0,60
V 354/6 F		K3653-F	353,82	5,997	1,909	59	2,20	1,40	1,50
V 356/7 F		K3722-F	355,79	7,261	2,311	49	2,50	1,80	1,40
V 357/7 F		K3701-F	356,69	7,431	2,365	48	2,50	2,00	1,90
V 360/6 F		K3805-F	360,57	6,934	2,207	52	2,50	1,80	1,40
V 361/6 F		K3776-F	360,31	6,929	2,206	52	2,50	2,00	2,00
V 364/7 F		K3282-K	364,46	7,923	2,522	46	2,50	1,40	1,80
V 367/7 FK		K4463-FK	367,12	7,060	2,247	52	2,50	1,40	1,40
V 367/7 F		K3791-F	368,82	7,527	2,396	49	2,50	2,00	1,50
V 368/7 F		K4079-F	368,50	7,370	2,346	50	2,50	1,80	1,50
V 368/7 F		K3591-F	368,82	7,527	2,396	49	2,50	1,60	1,30
V 370/6 F		K3803-F	369,81	6,268	1,995	59	1,60	1,50	1,50
V 375/6 FK		K4746-FK	375,52	6,588	2,097	57	2,20	1,60	1,20
V 381/5 F	XL	K6026-F	381,00	5,080	1,617	75	1,35	1,25	0,95
V 381/5 FK		K4773-FK	380,78	5,077	1,616	75	1,80	1,50	1,00
V 385/4 FK		K4759-FK	385,24	4,939	1,572	78	1,80	1,20	1,00
V 386/6 F		K4704-F	386,40	6,662	2,121	58	2,20	1,80	1,40
V 388/7 K		K3035-K	388,85	7,070	2,250	55	2,03	1,40	1,20
V 392/7 F		K3783-F	391,77	7,255	2,309	54	2,50	1,80	1,40
V 395/6 F		K5198-F	395,10	6,585	2,096	60	2,20	1,80	1,20
V 402/7 K		K3541-K	405,13	7,791	2,480	52	2,50	1,40	1,40
V 406/5 F	XL	K6064-F	406,40	5,080	1,617	80	1,37	1,27	1,30
V 409/4 FK		K4834-FK	410,00	5,000	1,592	82	1,80	1,20	1,00
V 411/5 F		K3887-F	410,96	5,956	1,896	69	1,80	1,50	1,50
V 419/7 F		K3745-F	418,72	7,346	2,338	57	2,50	2,20	2,00
V 420/6 F		K3802-F	420,09	6,270	1,996	67	1,60	1,50	1,50
V 423/7 F		K3728-F	422,99	7,981	2,540	53	2,50	2,00	2,00
V 431/6 F		K3242-F	430,15	6,145	1,956	70	2,00	1,40	1,50
V 431/6 K		K3242-K	431,06	6,158	1,960	70	2,00	1,40	1,60
V 432/7 F		K3886-F	431,93	7,447	2,370	58	2,50	2,20	2,00
V 432/7 K		K3083-K	432,10	7,450	2,371	58	2,50	1,40	1,40
V 432/7 F		K3083-F	432,10	7,450	2,371	58	2,50	1,40	1,40
V 437/9 FK		K4720-FK	437,80	9,950	3,167	44	3,50	2,50	1,60
V 438/9 F	L	K5095-F	438,15	9,525	3,032	46	3,20	1,80	1,20

# Timing belts with special profiles - endless

## SYNCHROFLEX® TIMING BELT (SFX)

V



**Order Example:**

SYNCHROFLEX®-ZAHN RIEMEN

10 V 100 / 3 F

Belt width in mm

Type / Length code

Type	Imperial pitch	Shape No.	Length l [mm]	Pitch t [mm]	Module m	Number of teeth z	k [mm]	h <sub>z</sub> [mm]	e [mm]
V 440/5 F		K3998-F	439,82	5,712	1,818	77	1,60	1,50	1,20
V 443/7 K		K3594-K	442,98	7,383	2,350	60	2,50	1,40	1,40
V 444/7 F		K4276-F	444,18	7,403	2,356	60	2,50	1,80	1,40
V 446/7 F		K3743-F	445,80	7,430	2,365	60	2,50	1,80	1,50
V 448/7 F		K3903-F	447,56	7,852	2,499	57	2,50	1,40	1,50
V 449/7 K		K2947-K	449,16	7,880	2,508	57	2,50	1,40	1,80
V 449/9 K		K3509-K	449,18	9,358	2,979	48	3,20	2,20	1,90
V 450/7 F		K3034-F	449,47	7,023	2,235	64	2,50	1,40	1,20
V 457/6 K		K3406-K	457,34	6,352	2,022	72	2,20	1,20	1,60
V 459/9 F		K3690-F	459,10	9,182	2,923	50	3,00	2,50	1,70
V 463/7 F		K3794-F	463,94	7,249	2,307	64	2,50	1,80	1,50
V 468/7 K		K3315-K	468,66	7,559	2,406	62	2,50	1,60	2,00
V 473/7 K		K3086-K	473,46	7,284	2,319	65	2,50	1,40	1,60
V 474/7 F		K3785-F	473,22	7,394	2,354	64	2,50	1,80	1,50
V 480/7 K		K3471-K	480,69	7,753	2,468	62	2,50	1,40	1,60
V 491/7 F		K3666-F	490,73	7,915	2,519	62	2,00	1,40	1,10
V 508/5 F	XL	K6011-F	508,00	5,080	1,617	100	1,32	1,22	1,32
V 510/10 F		K6142-F	510,00	10,000	3,183	51	3,50	2,50	1,60
V 511/9 F		K3347-F	511,43	9,471	3,015	54	3,00	2,50	2,00
V 513/8 K		K3223-K	513,88	8,860	2,820	58	2,80	1,60	0,00
V 514/9 K		K3411-K	514,25	9,183	2,923	56	3,20	2,20	2,00
V 515/7 F		K3826-F	515,24	7,577	2,412	68	2,50	1,80	1,60
V 515/9 FK		K4741-FK	515,86	9,553	3,041	54	3,50	2,50	1,40
V 516/7 F		K3680-F	516,56	7,947	2,530	65	2,50	1,40	1,30
V 522/6 F		K4084-F	522,49	6,295	2,004	83	2,50	1,40	1,40
V 532/9 F		K3638-F	532,50	9,509	3,027	56	3,20	2,20	2,00
V 537/7 F		K3088-F	537,88	7,910	2,518	68	2,50	1,40	1,40
V 546/7 F		K3830-F	546,42	7,806	2,485	70	2,50	1,80	1,50
V 548/2 F		K5661-F	548,64	2,540	0,809	216	1,00	0,70	0,60
V 552/6 F		K3703-F	552,46	6,278	1,998	88	2,20	1,20	1,20
V 555/7 FK		K4492-FK	555,43	7,823	2,490	71	2,50	1,80	1,30
V 563/9 F		K3897-F	563,76	9,720	3,094	58	3,20	1,80	2,00
V 567/5 F		K3974-F	567,25	5,971	1,901	95	2,00	1,50	1,50
V 570/9 F		K3840-F	570,71	9,205	2,930	62	3,00	2,50	2,00
V 571/9 F	L	K6114-F	571,50	9,525	3,032	60	3,26	1,91	1,69
V 574/7 F		K3890-F	574,64	7,561	2,407	76	2,50	2,20	2,00
V 583/9 F		K3723-F	582,54	9,709	3,090	60	3,00	2,50	2,00
V 592/7 F		K3754-F	592,20	7,896	2,513	75	2,50	2,20	2,00
V 609/5 F	XL	K5546-F	609,60	5,080	1,617	120	1,36	1,20	0,70
V 609/4 F		K6037-F	609,55	4,233	1,347	144	1,80	1,20	1,00

**SYNCHROFLEX® TIMING BELT (SFX)**

V

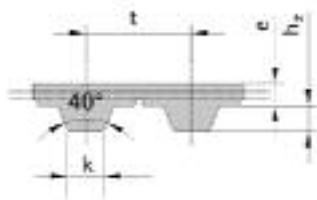
Order Example:

SYNCHROFLEX®-ZAHNRIEMEN

10 V 100 / 3 F

Belt width in mm

Type / Length code

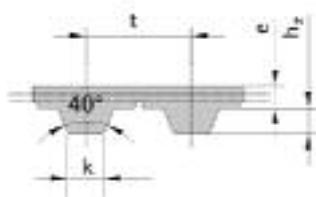


Type	Imperial pitch	Shape No.	Length l [mm]	Pitch t [mm]	Module m	Number of teeth z	k [mm]	h <sub>z</sub> [mm]	e [mm]
V 620/6	FK	K3142-FK	620,24	6,969	2,218	89	2,50	1,40	1,30
V 620/6	F	K3142-F	620,24	6,969	2,218	89	2,50	1,40	1,50
V 623/9	F	K3206-K	623,62	9,744	3,102	64	3,20	1,60	1,50
V 626/6	F	K6255-F	626,50	6,265	1,994	100	1,60	1,50	1,50
V 628/6	F	K3782-F	628,30	6,283	2,000	100	2,20	1,80	1,80
V 629/9	F	K4593-F	629,50	9,992	3,181	63	3,50	2,50	2,00
V 635/5	F	XL	K5394-F	635,00	5,080	1,617	125	1,32	1,20
V 651/7	F	K3297-F	651,51	7,239	2,304	90	2,50	1,40	1,60
V 685/5	F	XL	K5821-F	685,80	5,080	1,617	135	1,36	1,20
V 686/9	F	K3971-F	686,74	9,538	3,036	72	3,20	1,80	1,50
V 698/9	FK	K4585-FK	699,02	9,986	3,179	70	3,50	2,50	1,60
V 728/15	K	K5667-K	728,50	15,500	4,934	47	4,70	2,30	1,60
V 758/8	FA	K3708-FA	757,21	8,508	2,708	89	3,00	2,50	2,40
V 760/8	F	K5665-F	759,88	8,538	2,718	89	3,00	2,50	1,80
V 779/2	F	K5680-F	779,78	2,540	0,809	307	1,00	0,70	0,60
V 818/6	F	K3853-F	818,33	6,935	2,207	118	2,50	1,80	1,60
V 829/8	F	K3831-F	828,48	8,630	2,747	96	3,00	2,50	2,00
V 850/4	F	K5782-F	850,75	4,032	1,283	211	1,30	1,20	1,90
V 853/5	F	K3770-F	853,14	5,966	1,899	143	1,60	1,50	1,30
V 859/6	F	K5328-F	859,40	6,095	1,940	141	2,44	0,92	0,90
V 862/13	F	K3764-F	861,38	13,252	4,218	65	3,20	2,80	2,50
V 870/9	F	K3867-F	868,95	9,655	3,073	90	3,00	2,50	2,00
V 889/5	F	XL	K5601-F	889,00	5,080	1,617	175	1,80	1,20
V 901/9	F	K3777-F	900,13	9,185	2,924	98	3,00	2,50	2,50
V 910/10	F	K6155-F	910,00	10,000	3,183	91	3,50	2,50	1,60
V 912/7	F	K3661-F	911,71	7,473	2,379	122	2,50	1,60	1,50
V 914/12	F	H	K5692-F	914,40	12,700	4,043	72	4,30	2,20
V 939/9	F	K3878-F	939,13	9,583	3,050	98	3,20	1,80	1,50
V 969/6	F	K5063-F	968,95	6,094	1,940	159	2,44	0,92	0,90
V 971/9	F	L	K5354-F	971,55	9,525	3,032	102	3,25	1,90
V 978/9	F	K5486-F	978,04	9,980	3,177	98	3,50	2,50	0,00
V 990/9	F	L	K5185-F	990,60	9,525	3,032	104	3,10	2,20
V 1000/9	F	L	K5202-F	1000,13	9,525	3,032	105	3,10	2,20
V 1003/2	F	K6219-F	1003,33	2,073	0,660	484	0,60	0,42	0,80
V 1010/10	F	K6156-F	1010,00	10,000	3,183	101	3,50	2,50	1,60
V 1023/9	K	K3399-K	1023,77	9,307	2,963	110	3,20	2,20	2,00
V 1023/9	F	K3765-F	1022,23	9,293	2,958	110	3,00	2,50	2,50
V 1027/9	F	K4259-F	1026,78	9,420	2,998	109	3,00	2,50	2,00
V 1028/9	F	L	K5589-F	1028,70	9,525	3,032	108	3,10	1,90
V 1052/15	F	K6018-F	1052,44	15,708	5,000	67	5,00	1,70	3,00

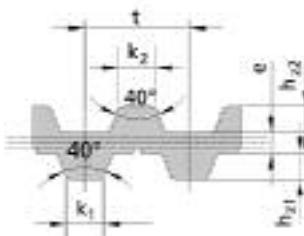
## Timing belts with special profiles - endless

### SYNCHROFLEX® TIMING BELT (SFX)

V



V-DL



Type	Imperial pitch	Shape No.	Length l [mm]	Pitch t [mm]	Module m	Number of teeth z	k [mm]	h <sub>z</sub> [mm]	e [mm]
V 1060/4 F		K6012-F	1059,68	4,975	1,584	213	1,80	1,20	1,00
V 1065/12 FK		K4676-FK	1066,30	12,694	4,041	84	4,00	2,20	1,40
V 1080/4 F		K5746-F	1080,58	4,032	1,283	268	1,32	1,20	0,70
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	1,00
V 1104/9 F L		K5435-F	1104,90	9,525	3,032	116	3,25	1,90	2,30
V 1106/2 F		K6260-F	1145,42	2,922	0,930	392	0,76	0,51	0,59
V 1110/10 F		K6143-F	1110,00	10,000	3,183	111	3,50	2,50	1,60
V 1140/10 F		K3823-F	1138,28	10,945	3,484	104	3,20	2,80	2,50
V 1149/4 F		K5871-F	1149,12	4,032	1,283	285	1,32	1,20	0,70
V 1152/9 F L		K5493-F	1152,53	9,525	3,032	121	3,10	1,90	1,65
V 1177/4 F		K5814-F	1177,34	4,032	1,283	292	1,30	1,20	0,90
V 1178/5 F XL		K5876-F	1178,56	5,080	1,617	232	1,80	1,20	1,00
V 1215/9 FA		K3316-FA	1213,42	9,334	2,971	130	3,00	2,50	2,00
V 1215/9 F		K5203-F	1213,42	9,334	2,971	130	3,20	1,80	2,00
V 1257/9 F L		K5310-F	1257,30	9,525	3,032	132	3,20	1,90	1,65
V 1270/12 F H		K5258-F	1270,00	12,700	4,043	100	4,45	2,18	2,01
V 1300/9 F		K5335-F	1300,65	9,425	3,000	138	3,00	2,50	2,00
V 1332/6 F		K3781-F	1331,15	6,279	1,999	212	2,20	1,80	1,80
V 1390/9 F L		K5449-F	1390,65	9,525	3,032	146	3,20	1,90	1,30
V 1423/9 F		K5495-F	1423,40	9,553	3,041	149	3,50	1,90	1,30
V 1529/6 F		K4866-F	1528,71	6,291	2,002	243	2,20	1,80	1,30
V 1563/9 F		K4035-F	1561,56	9,407	2,994	166	3,00	2,50	2,00
V 1584/5 F XL		K5600-F	1584,96	5,080	1,617	312	1,80	1,20	1,00
V 1635/9 F		K3340-F	1632,47	9,382	2,986	174	3,00	2,50	2,50
V 1637/9 F		K4582-F	1633,86	9,390	2,989	174	3,00	2,50	2,50
V 1676/12 F		K5262-F	1672,97	12,674	4,034	132	4,40	2,30	1,95
V 1778/12 F H		K5260-F	1778,00	12,700	4,043	140	4,40	2,30	1,40
V 1997/18 F		K5331-F	1997,04	18,840	5,997	106	6,50	4,00	3,00

Type	Imperial pitch	Shape No.	Length l [mm]	Pitch t [mm]	Module m	Number of teeth z	k <sub>1</sub> [mm]	k <sub>2</sub> [mm]	h <sub>z1</sub> [mm]	h <sub>z2</sub> [mm]	e [mm]
V 409/4 DL		K4834-DL	409,10	4,989	1,588	82	1,80	1,80	1,20	1,20	1,00
V 431/5 DL XL		K6038-DL	431,80	5,080	1,617	85	1,37	1,37	1,27	1,27	0,81
V 454/7 DL		K3460-DL	453,44	7,818	2,489	58	2,20	2,50	1,00	1,40	1,20
V 461/5 DL		K3760-DL	460,82	5,486	1,746	84	1,60	1,60	1,50	1,50	1,10
V 551/7 DL		K3304-DL	550,13	7,536	2,399	73	2,80	2,50	1,60	1,60	1,50
V 758/8 DLII		K3708-DLII	757,48	8,511	2,709	89	3,00	5,50	2,50	2,00	2,70
V 785/6 DL		K4592-DL	785,25	6,282	2,000	125	2,20	2,20	1,50	1,50	0,90
V 1215/9 DL		K3316-DL	1212,51	9,327	2,969	130	3,20	3,20	1,80	1,80	1,70
V 1357/6 DL		K3579-DL	1356,12	6,919	2,202	196	2,20	2,20	1,80	1,80	1,30
V 1635/9 DL		K3340-DL	1633,86	9,390	2,989	174	3,00	3,00	2,50	2,50	2,30
V 1635/9 DLII		K3340-DLII	1633,86	9,390	2,989	174	3,00	3,20	2,50	1,80	2,30