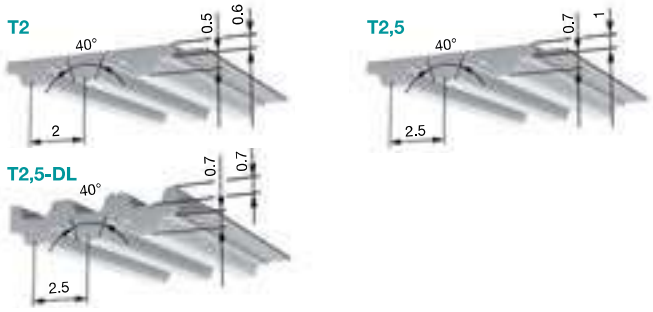
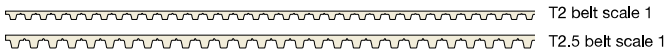
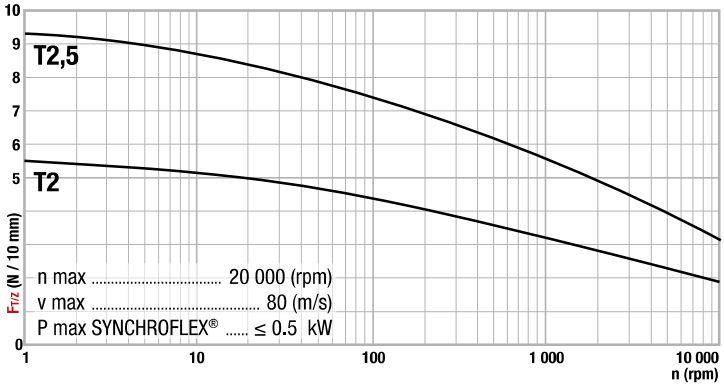
TIMING BELTS





Tangential force transmittable by the teeth



Tangential force transmittable by the tension member

Belt widths	b (mm)	4	6	8	10	12	16	25	32
SYNCHROFLEX® T2 belt									
F_N standard tension members	(N)	39	65	85	117	140	195	312	403
Weight SYNCHROFLEX®	(kg/m)	0.004	0.007	0.009	0.011	0.013	0.018	0.028	0.035
SYNCHROFLEX® T2.5 belt									
F_N standard tension members	(N)	39	65	85	117	140	195	312	403
Weight SYNCHROFLEX®	(kg/m)	0.006	0.009	0.012	0.015	0.018	0.024	0.038	0.048
Weight SYNCHROFLEX® DL	(kg/m)	0.006	0.009	0.013	0.016	0.019	0.025	0.040	0.051

Manufacturing capacities

	SYNCHROFLEX®
Lengths	Lengths standard only
Polyurethanes[1]	DEDU 8600
Winding	Monofilar
Tension member[2]	Steel

1. Other polyurethanes (see table "Characteristics of materials" *page 5*) } Consult us
2. Other tension member: Kevlar, see *page 6*

Lengths standard profil / mm	No. of teeth	SD	DL
SYNCHROFLEX® T2			
T2 / 68	34	○	
T2 / 90	45	○	
T2 / 108	54	○	
T2 / 118	59	○	
T2 / 120	60	○	
T2 / 138	69	○	
T2 / 140	70	○	
T2 / 144	72	○	
T2 / 150	75	○	
T2 / 160	80	○	
T2 / 180	90	○	
T2 / 200	100	○	
T2 / 220	110	○	
T2 / 240	120	○	
T2 / 256	128	○	
T2 / 262	131	○	
T2 / 280	140	○	
T2 / 292	146	○	
T2 / 320	160	○	
T2 / 360	180	○	
T2 / 600	300	○	
T2 / 710	355	○	
T2 / 1296	648 FA		
SYNCHROFLEX® T2.5			
T2.5 / 55	22 FA		
T2.5 / 120	48	●	
T2.5 / 145	58	●	
T2.5 / 160	64	●	
T2.5 / 177.5	71	●	
T2.5 / 180	72	●	
T2.5 / 182.5	73	●	
T2.5 / 200	80	●	
T2,5 / 210	84 FA		
T2.5 / 225	90	●	
T2.5 / 230	92	●	
T2.5 / 245	98	●	
T2.5 / 250	100	●	
T2.5 / 265	106	●	
T2.5 / 285	114	●	
T2.5 / 290	116	●	
T2.5 / 305	122	●	
T2.5 / 317.5	127	●	●
T2.5 / 330	132	●	
T2.5 / 380	152	●	
T2.5 / 395	158	●	
T2.5 / 400	160 FA		
T2.5 / 415	166		○
T2.5 / 420	168	●	
T2.5 / 457.5	183		●
T2.5 / 480	192	●	
T2.5 / 500	200	●	
T2.5 / 540	216	●	
T2.5 / 600	240 FA	●	
T2.5 / 620	248	●	
T2.5 / 650	260	●	
T2.5 / 780	312	●	
T2.5 / 950	380	●	
T2,5 / 1300	520	●	
T2.5 / 1350	540 FA	○	
T2.5 / 1475	590 FA	●	

FA : Belt with thicker. SD: single sided. DL: double sided.

DELIVERY TIMES		
Belts in stock	●	3 days acc. to availability

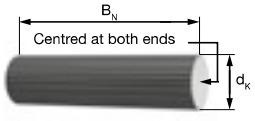
Recommended pre-tension: see *page 124*
General tolerances: see *page 81*
General information: see *page 4*

BELT ORDERING EXAMPLES				
Designation	Width	Profile / Length	Type	Particular specification
SYNCHROFLEX timing belt	16	T2.5/250	SYN	

TOOTHED PULLEYS

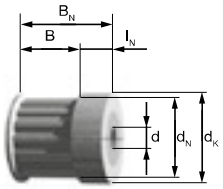
Pulleys acc. to drawing see page 8

Bars



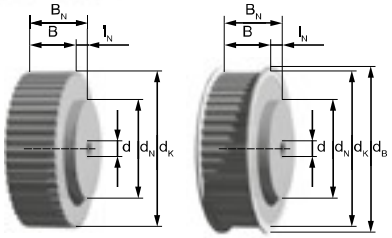
Standard pulleys

Version 2:
Stock from Z = 12 to Z = 15



Version 2 (with flanges):
Stock from Z = 18 to Z = 40

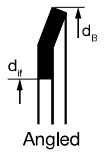
Version 0 (without flanges) :
stock from Z = 48



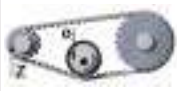
	Belt widths T2	b	4	6	8	10	12	16	25	32
Pulley widths	Pulley without hub	B	8	10	12	14	16	20	29	36
	Pulley with hub	B_N	14	16	18	20	22	26	35	42

	Belt widths T2.5	b	6	8	10	12	16	25	32
Pulley widths	Pulley without hub	B	10	12	14	16	20	29	36
	Pulley with hub	B_N	16		20	22	26		

The pulleys in stock all have a hub. **Standard width in stock in green.**



	Flanges		
	Thickness	Shape	Mounting
T2	1	Angled	Rolled
T2.5	1	Angled	Rolled

Kinematics	Tension member type		SYNCHROFLEX®
 Monoflexure	Steel tension members	Z min.	10
		ø min (mm)	15
 Contraflexure	Steel tension members	Z min.	18
		ø min (mm)	15

Comments

- Larger number of teeth possible
- Standard material 6026 conforming to RoHS, see page 8
- Flange: galvanised steel, see page 9
- d_{max}: max. mum bore without keyway for flanged pulley

Options
- The different materials such as steel and stainless steel and the surface treatment are shown on page 8
- Special flanges on request
- Special toothforms (zero or reduced backlash), see page 8

PULLEY ORDERING EXAMPLES						
Designation	Material	Width	Type/No. of teeth	Flanges	Hub	Dia. d
Aratron tooth pulley	AL	10	T2/20-	0		5h7
Aratron tooth pulley	AL	16	T2.5/32-	2	E : 16 X 6	6H7

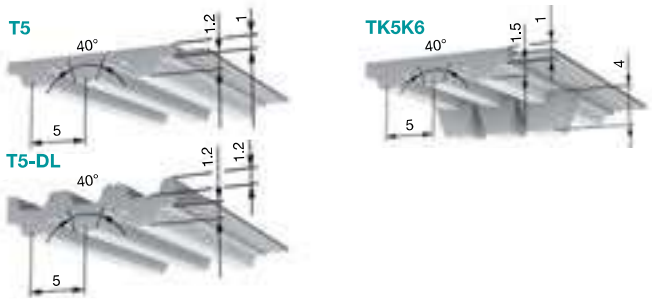
DELIVERY TIMES		
Pulleys in stock	●	3 days acc. to availability
Pulleys in factory stock	o	2 weeks

Z	d_K	Flanges d_B	Flanges d_{IF}
T2			
10	5.82	8	4
11	6.45	8	4
12	7.09	10	5
13	7.73	10	5
14	8.36	12	6
15	9.00	13	7
16	9.64	13	7
17	10.27	14	8
18	10.91	14	8
19	11.55	15	9
20	12.18	15	9
21	12.82	16	10
22	13.46	16	10
23	14.09	18	12
24	14.73	18	12
25	15.37	19	13
26	16.00	19	13
27	16.64	20	14
28	17.28	20	14
29	17.91	22	15
30	18.55	22	15
31	19.19	22	15
32	19.82	24	16
33	20.46	24	16
34	21.10	24	16
35	21.73	25	17
36	22.37	26	18
37	23.00	26	18
38	23.64	28	20
39	24.28	28	20
40	24.91	28	20
42	26.19	30	21
45	28.10	32	22
48	30.01	35	25
50	31.28	35	25
55	34.46	40	30
60	37.65	42	30
65	40.83	45	33
70	44.01	50	38
72	45.29	50	38
80	50.38	55	43
90	56.75	62	50
100	63.11	68	56

Width B_N 16	Width B_N 20	Z	d_K	d_N	Bore min. stock	Flanges d_B	Flanges d_{IF}
T2.5							
•	o	10	7.45	10	3	10	5
		11	8.25			12	6
•	o	12	9.00	12	3	12	6
		13	9.80			13	7
•	o	14	10.60	14	3	14	8
•	o	15	11.40	15	3	15	9
•	o	16	12.20	16	4	16	10
		17	13.00			16	10
•	o	18	13.80	10	4	17	11
•	o	19	14.60	10	4	18	12
•	o	20	15.40	12	4	19	13
		21	16.20			20	14
		22	17.00			20	14
		23	17.80			21	14
	o	24	18.55	14	4	22	15
	o	25	19.35	14	4	23	15
		26	20.15			23	15
		27	20.95			24	16
		28	21.75			25	17
		29	22.55			26	18
•	o	30	23.35	16	6	28	20
		31	24.15			28	20
•	o	32	24.95	16	6	28	20
		33	25.75			30	21
		34	26.55			30	21
		35	27.35			32	22
•	o	36	28.15	20	6	32	22
		37	28.90			32	22
		38	29.70			34	24
		39	30.50			34	24
•	o	40	31.30	22	6	35	25
		42	32.90			36	26
		45	35.30			39	29
•	o	48	37.70	26	6	42	30
		50	39.25			43	31
		55	43.25			47	35
•	o	60	47.25	34	8	52	40
		65	51.20			55	43
		70	55.20			60	48
		72	56.80			60	48
		80	63.15			68	54
		90	71.10			75	61
		100	79.05			84	70

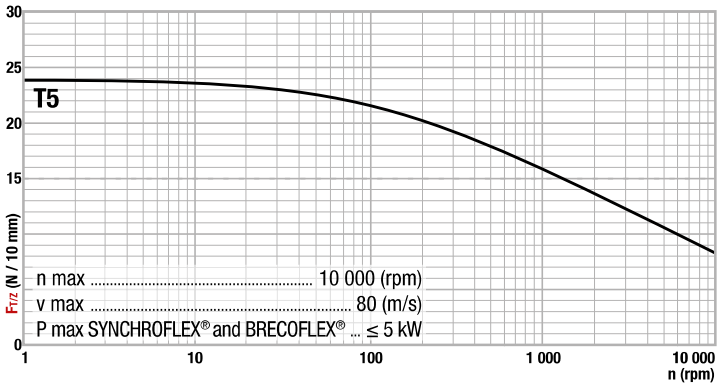
Z: number of teeth.

TIMING BELTS



T5 belt scale 1

Tangential force transmittable by the teeth



Tangential force transmittable by the tension member

Belt widths	b (mm)	6	10	12	16	25	32	50	75	100
SYNCHROFLEX® T5 belts										
F_N standard tension members	(N)	180	330	420	570	930	1200	1920	2940	3930
Weight SYNCHROFLEX®	(kg/m)	0.014	0.024	0.028	0.038	0.060	0.077	0.120	0.180	0.240
Weight SYNCHROFLEX® DL	(kg/m)	0.016	0.027	0.030	0.043	0.067	0.086	0.135	0.203	0.270
BRECOFLEX® T5 belts										
F_N standard tension members	(N)	180	330	420	570	390	1200	1920	2940	3930
F_N stainless steel tension members	(N)		250	320	435	710	910	1460	2235	2990
Weight BRECOFLEX®	(kg/m)	0.140	0.022	0.027	0.034	0.052	0.067	0.105	0.163	0.210
Weight BRECOFLEX® DL	(kg/m)	0.016	0.028	0.033	0.045	0.072	0.099	0.141	0.212	0.283
BRECOFLEX® TK5K6 belts										
F_N standard tension members	(N)							1920		3930
F_N stainless steel tension members	(N)							1460		2990
Weight BRECOFLEX®	(kg/m)							0.123		0.232

Standard widths in green.

Manufacturing capacities

	SYNCHROFLEX®	BRECOFLEX® T5 - T5 PAZ	BRECOFLEX® TK5K6 - TK5K6 PAZ
Lengths up to 700 mm	Standard length only	Standard length only	
Lengths from 720 to 15 000 mm		All intermediate lengths can be produced[1]	
Versions DL and DL/PAZ[4]	Standard length only without PAZ	All intermediate lengths can be produced[1]	
Polyurethanes[2]	DEDU 8600	Lengths smaller than 700 mm TPUST3 Lengths greater than 720 mm TPU ST1	TPU ST1
Winding	Monofilar	Lengths from 720 to 15 000 mm: bifilar	Lengths from 1075 to 15 000 mm: bifilar
Tension member[3]	Steel	Steel	Steel

1. Minimum order
2. Other polyurethanes (see table "Characteristics of materials" *page 5*) } Consult us
3. Other tension members (Kevlar, high-flexibility tension members, stainless steel)
4. See "Coatings" *page 56*

DELIVERY TIMES		
Belts in stock	●	3 days acc. to availability
Standard belts	○	4 weeks
Special belts		Consult us

Recommended pre-tension: see *page 124*. General tolerances: see *page 81*
General information: see *page 4*

Lengths standard profile / mm	No. of teeth	SYNCHROFLEX® SD	SYNCHROFLEX® DL	BRECOFLEX® SD	BRECOFLEX® DL	BRECOFLEX® ATK5 K6
T5 / 100	20	●				
T5 / 150	30	●	●			
T5 / 165	33	●				
T5 / 180	36	●				
T5 / 185	37	●				
T5 / 200	40	●		○		
T5 / 210	42	●				
T5 / 215	43	●		○		
T5 / 220	44	●		○		
T5 / 225	45	●		○		
T5 / 240	48			○		
T5 / 245	49	●		○		
T5 / 250	50	●				
T5 / 255	51	●		○		
T5 / 260	52	●	●	○		
T5 / 270	54	●		○		
T5 / 280	56	●		○		
T5 / 295	59	●		○		
T5 / 300	60		●			
T5 / 305	61	●		○		
T5 / 330	66	●		○		
T5 / 340	68	●		○		
T5 / 355	71	●		○		
T5 / 365	73	●		●		
T5 / 370	74			○		
T5 / 390	78	●		○		
T5 / 400	80	●		○		
T5 / 410	82	●	●	○		
T5 / 420	84	○		○		
T5 / 435	87			●		
T5 / 455	91	●		○		
T5 / 460	92	●	●			
T5 / 480	96	●		○		
T5 / 500	100	●		○		
T5 / 505	101	●				
T5 / 510	102	●		○		
T5 / 515	103		●			
T5 / 525	105	●	●	○		
T5 / 545	109	●		○		
T5 / 550	110	●				
T5 / 560	112	●		○		
T5 / 575	115	●		○		
T5 / 590	118	●	●			
T5 / 610	122	●		○		
T5 / 620	124	●	●	○		
T5 / 625	125		●			
T5 / 630	126	●		○		
T5 / 650	130	●				
T5 / 660	132			●		
T5 / 665	133			○		
T5 / 690	138	●		○		
T5 / 700	140	●				
T5 / 720	144	●		○		○
T5 / 725	145	●				
T5 / 750	150	●	●	○		○
T5 / 755	151			○		○
T5 / 765	153	●		●		
T5 / 780	156	●		○		○
T5 / 800	160	●		○		○
T5 / 815	163	●	●	○		○
T5 / 840	168	●		○		○
T5 / 850	170			○		○
T5 / 860	172		●	○		○
T5 / 900	180	●		○	○	○
T5 / 910	182			○	○	○
T5 / 920	184	●		○	○	○
T5 / 925	185	●				
T5 / 940	188	●	●			
T5 / 945	189			○	○	○
T5 / 980	196				○	
T5 / 990	198	●		○	○	○
T5 / 1000	200				○	
T5 / 1040	208			○	○	○
T5 / 1075	215	●		○	○	○
T5 / 1100	220	●	●	○	○	○
T5 / 1150						○
T5 / 1160	232	●				
T5 / 1215	243	●		○	○	○
T5 / 1315	263	●				
T5 / 1320	264			○		○
T5 / 1325	265		●			
T5 / 1380	276	●		○	○	○
T5 / 1400	280			○	○	○
T5 / 1500	300	●		○	○	○
T5 / 1600	320			○	○	○
T5 / 1700	340			○	○	○
T5 / 1800	360			○	○	○
T5 / 1900	380			○	○	○
T5 / 2000	400			○	○	○
T5 / 2120	424			○	○	○
T5 / 2240	448			○	○	○
T5 / 2360	472			○	○	○
T5 / 2500	500			○	○	○
T5 / 2650	530			○	○	○
T5 / 2800	560			○	○	○
T5 / 3000	600			○	○	○
T5 / 3150	630			○	○	○
T5 / 3350	670			○	○	○
T5 / 3550	710			○	○	○
T5 / 3750	750			○	○	○
T5 / 4000	800			○	○	○
T5 / 4250	850			○	○	○
T5 / 4500	900			○	○	○
T5 / 4750	950			○	○	○
T5 / 5000	1000			○	○	○
T5 / 5300	1060			○	○	○
T5 / 5600	1120			○	○	○
T5 / 6000	1200			○	○	○
T5 / 6300	1260			○	○	○
T5 / 6700	1340			○	○	○
T5 / 7100	1420			○	○	○
T5 / 7500	1500			○	○	○

Width max. = 100 mm

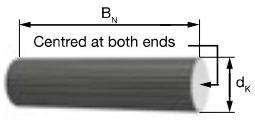
SD: single sided. DL: double sided.

BELT ORDERING EXAMPLES				
Designation	Width	Profile / Length	Type	Particular specification
BRECOFLEX timing belt	25	TK5K6F/1600	BFX	PAZ

TOOTHED PULLEYS

Pulleys acc. to drawing see page 8

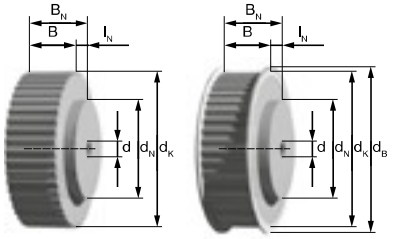
Bars



Standard pulleys

Version 2 (with flanges):
stock up to Z = 40

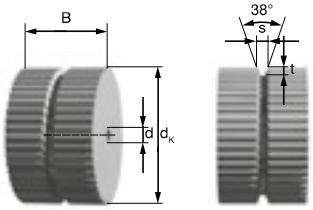
Version 0 (without flanges) :
stock from Z = 48



Self-guiding pulleys

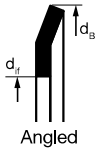
Pulleys on request
and only
from Z = 20

K6	
s	t
6.5	5



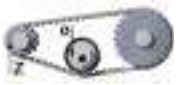
	Belt widthss T5	b	6	8	10	12	16	20	25	32	50	75	100
Pulley widths	Pulley without hub	B	11	13	15	17	21	25	30	37	55	80	105
	Pulley with hub	B_N			21		27		36				
	Self-guiding pulley without hub	B_N							30	37	55	80	105

The pulleys in stock all have a hub. **Standard width in stock in green.**



Angled

Flanges			
Z	Thickness	Shape	Mounting
Z ≤ 63	1	Angled	Rolled
Z > 63	1.5	Angled	Rolled

Kinematics	Tension member type		SYNCHROFLEX®	BRECOFLEX® SD	BRECOFLEX® DL	BRECOFLEX® ATK5 K6
 Monoflexure	Steel tension members	Z min.	10	10	15	25
		ø min (mm)	30	30	30	40
	E tension members*	Z min.		10	12	25
		ø min (mm)		18	30	40
	Stainless steel tension members*	Z min.		18	36	25
		ø min (mm)		30	60	40
 Contraflexure	Steel tension members	Z min.	15	15	15	25
		ø min (mm)		30	30	60
	E tension members*	Z min.		12	12	25
		ø min (mm)		18	30	60
	Stainless steel tension members*	Z min.		36	36	36
		ø min (mm)		60	60	60

*Special manufacture: minimum quantity

Comments

- Larger number of teeth possible
- Standard material 6026 conforming to RoHS, see page 8
- Flange: galvanised steel, see page 9
- d_{max}: max. mum bore without keyway for flanged pulley

Options
- The different materials such as steel and stainless steel and the surface treatment are shown on page 8
- Special flanges on request
- Special toothforms (zero or reduced backlash), see page 8

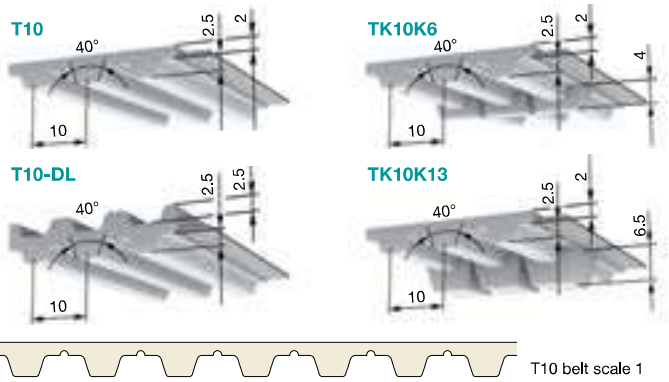
PULLEY ORDERING EXAMPLES						
Designation	Material	Width	Type/No. of teeth	Flanges	Hub	Dia. d
Aratron tooth pulley	AL	36	T5/48 -	0	E : 50 X 6	8H7

DELIVERY TIMES		
Pulleys in stock	●	3 days acc. to availability

Width B_N			Z	d_K	d_N	Bore	Flanges	
21	27	36				min. stock	d_B	d_F
●	○	●	10	15.05	8	4 *	20	12
			11	16.65			22	14
●	●	●	12	18.25	12	4 *	23	15
			13	19.85			25	17
●	●	●	14	21.45	14	6	26	18
●	●	●	15	23.05	16	6	28	20
●	●	●	16	24.60	18	6	30	21
			17	26.20			32	22
●	●	●	18	27.80	20	6	34	24
●	●	●	19	29.40	22	6	35	25
●	●	●	20	31.00	24	6	36	26
			21	32.60			37	27
			22	34.15			39	29
			23	35.75			40	30
●	●	●	24	37.35	26	6	42	30
●	●	●	25	38.95	26	6	43	31
			26	40.55			45	33
●	●	●	27	42.15	30	8	47	35
			28	43.75			48	36
			29	45.30			50	38
●	●	●	30	46.90	34	8	52	40
			31	48.50			53	41
●	●	●	32	50.10	38	8	55	43
			33	51.70			56	44
			34	53.30			58	46
			35	54.85			60	48
●	●	●	36	56.45	38	8	61	49
			37	58.05			62	50
			38	59.65			64	52
			39	61.25			66	52
●	●	●	40	62.85	40	8	68	54
			41	64.40			70	56
			42	66.00			72	58
			43	67.60			72	58
			44	69.20			74	60
			45	70.80			75	61
			46	72.40			76	62
			47	73.95			78	64
●	●	●	48	75.55	50	8	80	66
			49	77.15			82	68
			50	78.75			84	70
			51	80.35			86	72
			52	81.95			86	72
			53	83.55			88	74
			54	85.10			90	76
			55	86.70			91	77
			56	88.30			93	79
			57	89.90			94	80
			58	91.50			96	82
			59	93.10			99	85
●	●	●	60	94.65	65	8	99	85
			61	96.25			100	86
			62	97.85			102	88
			63	99.45			104	90
			64	101.05			105	91
			65	102.65			107	93
			66	104.20			109	95
			67	105.80			112	98
			68	107.40			112	98
			69	109.00			115	101
			70	110.60			115	101
			71	112.20			117	103
			72	113.75			118	104
			73	115.35			121	107
			74	116.95			121	107
			75	118.55			123	109
			76	120.15			125	111
			77	121.75			128	114
			78	123.35			128	114
			79	124.90			131	117
			80	126.50			131	117
			81	128.10			134	120
			82	129.70			134	120
			83	131.30			137	123
			84	132.90			137	123
			85	134.45			140	126
			86	136.05			142	128
			87	137.65			142	128
			88	139.25			144	130
			89	140.85			147	133
			90	142.45			147	133
			91	144.00			150	136
			92	145.60			150	136
			93	147.20			153	139
			94	148.80			153	139
			95	150.40			156	142
			96	152.00			156	142
			97	153.55			158	144
			98	155.15			160	146
			99	156.75			163	149
			100	158.35			163	149

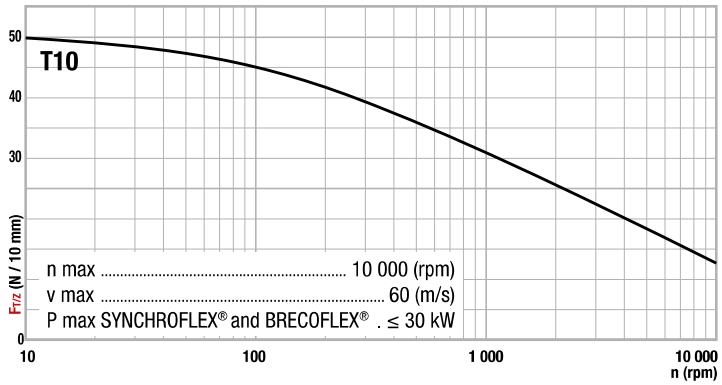
Z: number of teeth.
*6 for 36 mm wide pulleys.

TIMING BELTS



T10 belt scale 1

Tangential force transmittable by the teeth



Tangential force transmittable by the tension member

Belt widths	b (mm)	10	12	16	20	25	32	50	75	100
SYNCHROFLEX® and BRECOFLEX® belts										
F_N standard tension members	(N)	600	750	1000	1400	1800	2300	3800	5800	7800
F_N stainless steel tension members	(N)	500	600	800	1100	1440	1840	3040	4640	6240
Weight SYNCHROFLEX® et BRECOFLEX® T10	(kg/m)	0.042	0.051	0.068	0.112	0.140	0.145	0.227	0.341	0.454
Weight BRECOFLEX® T10 DL	(kg/m)	0.056	0.068	0.090	0.115	0.143	0.183	0.288	0.432	0.577
Weight BRECOFLEX® TK10K6	(kg/m)							0.235		0.458
Weight BRECOFLEX® TK10K13	(kg/m)							0.283		

Standard widths in green.

Manufacturing capacities

	SYNCHROFLEX®	BRECOFLEX® T10 - T10 PAZ	BRECOFLEX® T10K6 - T10K6 PAZ	BRECOFLEX® T10K13 - T10K13 PAZ
Lengths up to 700 mm	Standard length only	Standard length only		
Lengths from 720 to 22 000 mm		All intermediate lengths can be produced[1]		All intermediate lengths can be produced from 1 500 mm[1]
Versions DL and DL/PAZ[4]	Standard length only without PAZ	All intermediate lengths can be produced[1]		
Polyurethanes[2]	DEDU 8600	Lengths smaller than 700 mm TPU ST3 Lengths greater than 720 mm TPU ST1	TPU ST1	TPU ST1
Winding	Monofilar	Lengths from 720 to 22 000 mm: bifilar		Lengths from 1200 to 22 000 mm: bifilar
Tension member[3]	Steel	Steel	Steel	Steel

1. Minimum order
2. Other polyurethanes (see table "Characteristics of materials" *page 5*) } Consult us
3. Other tension members (Kevlar, high-flexibility tension members, stainless steel)
4. See "Coatings" *page 56*

Lengths standard profil / mm	No. of teeth	SYNCHROFLEX® SD	SYNCHROFLEX® DL	BRECOFLEX® SD	BRECOFLEX® DL	BRECOFLEX® TK10K6	BRECOFLEX® TK10K13
T10 / 260	26	●	○				
T10 / 350	35	●					
T10 / 370	37	●					
T10 / 400	40	○					
T10 / 410	41	●					
T10 / 440	44	●					
T10 / 450	45	●					
T10 / 500	50	●		○			
T10 / 530	53	●	●	○			
T10 / 560	56	●		○			
T10 / 600	60	●		○			
T10 / 610	61	●		○			
T10 / 630	63	●	●	○			
T10 / 660	66	●	●	○			
T10 / 680	68	●					
T10 / 690	69	●		○			
T10 / 700	70	●		○			
T10 / 720	72	●	●	○			
T10 / 730	73	●					
T10 / 750	75	●					
T10 / 760	76	●					
T10 / 780	78	●		○			
T10 / 810	81	●		○			
T10 / 840	84	●	●	○			
T10 / 850	85	●					
T10 / 880	88	●		○			
T10 / 890	89	●		○			
T10 / 900	90			○	○	○	
T10 / 920	92	●		○	○	○	
T10 / 960	96	●		○	○	○	
T10 / 970	97	●		○	○	○	
T10 / 980	98	●	●	○	○	○	
T10 / 990	99			○	○	○	
T10 / 1010	101	●		○	○	○	
T10 / 1050	105					○	
T10 / 1080	108	●		○	○	○	
T10 / 1110	111	●		○			
T10 / 1140	114	●					
T10 / 1150	115	●		○	○	○	
T10 / 1210	121	●	●	○	○	○	○
T10 / 1240	124	●	●	○	○	○	
T10 / 1250	125	●	●	○	○	○	
T10 / 1300	130	●					
T10 / 1320	132	●	●	○	○	○	
T10 / 1350	135	●	●	○	○	○	
T10 / 1390	139	●		○	○	○	
T10 / 1400	140	●		○	○	○	
T10 / 1420	142	●	●	○	○	○	
T10 / 1450	145	●					
T10 / 1460	146	●		○	○	○	
T10 / 1500	150	●		○	○	○	○
T10 / 1560	156	●		○	○	○	○
T10 / 1610	161	●	●	○	○	○	○
T10 / 1750	175	●		○	○	○	○
T10 / 1780	178	●		○	○	○	○
T10 / 1880	188	●	●	○	○	○	○
T10 / 1960	196	●		○	○	○	○
T10 / 2250	225	●		○	○	○	○
T10 / 2360	236			○	○	○	○
T10 / 2500	250			○	○	○	○
T10 / 2650	265			○	○	○	○
T10 / 2800	280			○	○	○	○
T10 / 3000	300			○	○	○	○
T10 / 3100	310	○		○	○	○	○
T10 / 3150	315			○	○	○	○
T10 / 3350	335			○	○	○	○
T10 / 3750	375			○	○	○	○
T10 / 4000	400			○	○	○	○
T10 / 4250	425			○	○	○	○
T10 / 4500	450			○	○	○	○
T10 / 4750	475			○	○	○	○
T10 / 4780	478	○	○		○		
T10 / 5000	500			○	○	○	○
T10 / 5300	530			○	○	○	○
T10 / 5600	560			○	○	○	○
T10 / 6000	600			○	○	○	○
T10 / 6300	630			○	○	○	○
T10 / 6700	670			○	○	○	○
T10 / 7100	710			○	○	○	○
T10 / 7500	750			○	○	○	○
T10 / 8000	800			○	○	○	○
T10 / 9000	900			○	○	○	○

Width max. = 100 mm
Width max. = 150 mm
Width max. = 100 mm
Width max. = 150 mm
Width = 50 mm

SD: single sided. DL: double sided.
* Correction of toothing, consult us.

DELIVERY TIMES		
Belts in stock	●	3 days acc. to availability
Standard belts	○	4 weeks
Special belts		Consult us

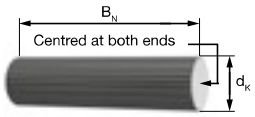
Recommended pre-tension: see *page 124*
General tolerances: see *page 81*
General information: see *page 4*

BELT ORDERING EXAMPLES				
Designation	Width	Profile / Length	Type	Particular specification
SYNCHROFLEX timing belt	25	T10/1500	SYN	
BRECOFLEX timing belt	50	TK10K6/2230	BFX	PAZ

TOOTHED PULLEYS

Pulleys acc. to drawing see page 8

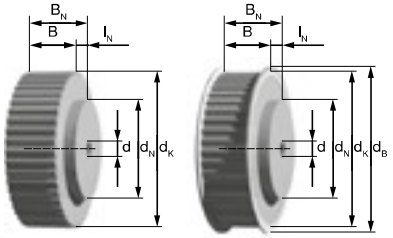
Bars



Standard pulleys

Version 2 (with flanges):
stock up to Z = 40

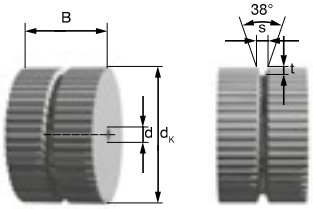
Version 0 (without flanges) :
stock from Z = 48



Self-guiding pulleys

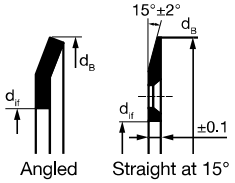
Pulleys on request and only from Z = 20

K6		K13	
s	t	s	t
6.5	5	13.5	7.5



	Belt widthss T10	b	10	12	16	25	32	50	75	100	150
Pulley widths	Pulley without hub	B	16	17	21	30	40	56	81	108	158
	Pulley with hub	B_N			31	40	50	66			
	Self-guiding pulley without hub	B_N				30	37	55	80	105	155

The pulleys in stock all have a hub. **Standard width in stock in green.**



Flanges			
Z	Thickness	Shape	Mounting
Z ≤ 32	1	Angled	Rolled
32 < Z ≤ 93	1.5	Angled	Rolled
B_N ≥ 66 and Z ≤ 93	2	Angled	Screwed
Z > 93	2	Straight at 15°	Screwed

Kinematics	Tension member type		SYNCHROFLEX®	BRECOFLEX® T10	BRECOFLEX® TK10K6	BRECOFLEX® TK10K13
 Monoflexure	Steel tension members	Z min.	12	12	20	25
		ø min (mm)	60	60	60	80
	E tension members*	Z min.		10	20	25
		ø min (mm)		50	60	80
	Stainless steel tension members*	Z min.		25	25	25
		ø min (mm)		80	80	80
 Contraflexure	Steel tension members	Z min.	20	20	25	25
		ø min (mm)	60	60	80	120
	E tension members*	Z min.		12	25	25
		ø min (mm)		50	80	120
	Stainless steel tension members*	Z min.		40	40	40
		ø min (mm)		130	130	130

*Special manufacture: minimum quantity.

Comments

- Larger number of teeth possible,
- Standard material 6026 conforming to RoHS, see page 8
- Flange: galvanised steel, see page 9
- d_{max}: max. mum bore without keyway for flanged pulley

Options
- The different materials such as steel and stainless steel and the surface treatment are shown on page 8
- Special flanges on request
- Special toothforms (zero or reduced backlash), see page 8

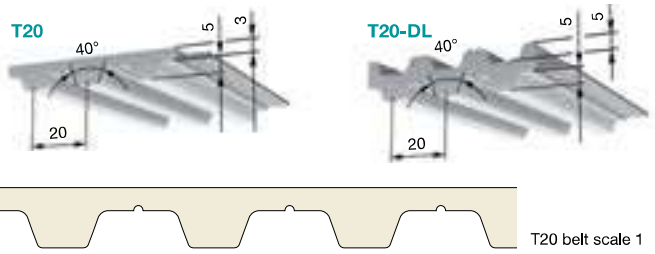
PULLEY ORDERING EXAMPLES						
Designation	Material	Width	Type/No. of teeth	Flanges	Hub	Dia. d
Aratron tooth pulley	AL	66	T10/36 -	2	E : 46 X 10	8H7

DELIVERY TIMES		
Pulleys in stock	●	3 days acc. to availability
Pulleys in facotry stock	o	2 weeks

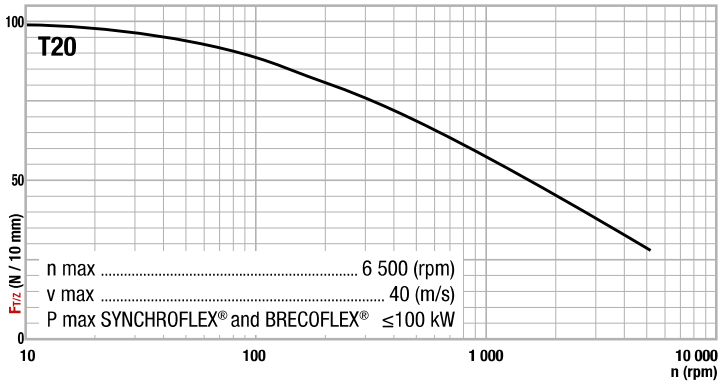
Width B_N					Z	d_K	d_N	Bore d (H7)		Rolled flanges	
31	40	50	66	Bar 180				min. stock	max.	d_B	d_{IF}
●	●				12	36.35	28	6	24	42	30
					13	39.55			26	45	33
●	●				14	42.70	32	8	30	48	36
●	●				15	45.90	32	8	34	52	40
●	●				16	49.10	35	8	36	55	43
					17	52.25			40	58	46
●	●	o	o		18	55.45	40	8 (10*)	44	61	49
●	●	o	o		19	58.65	44	8 (10*)	46	64	52
●	●	o	o		20	61.80	46	8 (12*)	50	68	54
		o	o		21	65.00			52	72	58
		o	o		22	68.20			56	74	60
		o	o		23	71.35			60	76	62
●	●	o	o		24	74.55	58	8 (12*)	62	80	66
●	●	o	o		25	77.75	60	8 (12*)	66	84	70
		o	o		26	80.90			68	86	72
●	●	o	o		27	84.10	60	8 (12*)	72	90	76
		o	o		28	87.25			76	93	79
		o	o		29	90.45			78	96	82
●	●	o	o		30	93.65	60	8 (12*)	82	99	85
		o	o		31	96.80			84	102	88
●	●	o	o		32	100.00	65	10 (12*)	88	106	92
		o	o		33	103.20			88	109	95
		o	o		34	106.35			92	112	98
		o	o		35	109.55			96	115	101
●	●	o	o		36	112.75	70	10 (16*)	98	118	104
		o	o		37	115.90			101	121	107
		o	o		38	119.10			104	125	111
		o	o		39	122.30			106	128	114
●	●	o	o		40	125.45	80	10 (16*)	110	131	117
		o	o		41	128.65			110	134	120
		o	o		42	131.85			112	137	123
		o	o		43	135.00			114	140	126
		o	o		44	138.20			118	144	130
		o	o		45	141.40			120	147	133
		o	o		46	144.55			122	150	136
		o	o		47	147.75			122	153	139
●	●	o	o		48	150.95	95	16	124	156	142
		o	o		49	154.10			126	160	146
			o		50	157.30			130	163	149
			o		51	160.50			134	166	152
					52	163.65			136	169	155
					53	166.85			140	172	158
					54	170.05			144	176	162
					55	173.20			146	179	165
					56	176.40			150	182	168
					57	179.60			152	185	171
					58	182.75			156	188	174
					59	185.95			160	191	177
					60	189.15	110	16	162	195	181
					61	192.30			164	198	184
					62	195.50			166	201	187
					63	198.70			170	204	190
					64	201.85			171	207	193
					65	205.05			174	210	196
					66	208.25			175	214	200
					67	211.40			177	217	203
					68	214.60			181	220	206
					69	217.80			185	223	209
					70	220.95			187	226	212
					71	224.15			191	230	216
					72	227.35			193	233	219
					73	230.50			197	236	222
					74	233.70			201	239	225
					75	236.90			203	242	228
					76	240.05			207	246	232
					77	243.25			209	249	235
					78	246.40			213	252	238
					79	249.60			215	255	241
					80	252.80			219	258	244
					81	255.95			223	262	248
					82	259.15			225	265	251
					83	262.35			229	268	254
					84	265.50			231	271	257
					85	268.70			235	274	260
					86	271.90			239	277	263
					87	275.05			241	281	267
					88	278.25			245	284	270
					89	281.45			247	287	273
					90	284.60			251	290	276
					91	287.80			255	293	279
					92	291.00			257	296	282
					93	294.15			261	300	285

Z: number of teeth. Larger number of teeth possible.
* for B_N = 50 and 66.

TIMING BELTS



Tangential force transmittable by the teeth



Tangential force transmittable by the tension member

Belt widths	b (mm)	16	20	25	32	50	75	100	150
SYNCHROFLEX® and BRECOFLEX® BELTS									
F_N standard tension members	(N)	2320	2900	3700	4750	7750	12000	16000	24500
F_N stainless steel tension members	(N)	1680	2100	2650	3420	5580	8640	11520	17640
Weight SYNCHROFLEX® and BRECOFLEX® T20	(kg/m)	0.117	0.147	0.184	0.236	0.368	0.552	0.736	1.095
Weight BRECOFLEX® T20 DL	(kg/m)	0.159	0.199	0.249	0.319	0.499	0.753	1.004	

Manufacturing capacities

	SYNCHROFLEX®	BRECOFLEX® T20 - T20 PAZ
Lengths from 1 100 to 22 000 mm	Standard length only	All intermediate lengths can be produced[1]
Versions DL and DL/PAZ[4]	Standard length only without PAZ	
Polyurethanes[2]	DEDU 8600	TPU ST1
Winding	Monofilar	Lengths from 1 500 to 22 000 mm: bifilar
Tension member[3]	Steel	Steel

1. Minimum order
2. Other polyurethanes (see table "Characteristics of materials" *page 5*) } Consult us
3. Other tension members (Kevlar, high-flexibility tension members, stainless steel)
4. See "Coatings" *page 56*

Lengths standard profile / mm	No. of teeth	SYNCHROFLEX® SD	SYNCHROFLEX® DL	BRECOFLEX® SD	BRECOFLEX® DL
T20 / 1100	55				
T20 / 1260	63	o			
T20 / 1460	73	o			
T20 / 1500	75			o	o
T20 / 1600	80			o	o
T20 / 1700	85			o	o
T20 / 1780	89	o			
T20 / 1800	90			o	o
T20 / 1880	94	o			
T20 / 1900	95			o	o
T20 / 2000	100			o	o
T20 / 2120	106			o	o
T20 / 2240	112			o	o
T20 / 2360	118	o		o	o
T20 / 2500	125			o	o
T20 / 2600	130	o	o		o
T20 / 2660	133			o	o
T20 / 2800	140			o	o
T20 / 3000	150			o	o
T20 / 3100	155	o			
T20 / 3160	158			o	o
T20 / 3360	168			o	o
T20 / 3560	178			o	o
T20 / 3620	181	o			o
T20 / 3760	188			o	o
T20 / 4000	200			o	o
T20 / 4260	213			o	o
T20 / 4500	225			o	o
T20 / 4760	238			o	o
T20 / 5000	250			o	o
T20 / 5300	265			o	o
T20 / 5600	280			o	o
T20 / 6000	300			o	o
T20 / 6300	315			o	o
T20 / 6700	335			o	o
T20 / 7100	355			o	o
T20 / 7500	375			o	o
T20 / 8000	400			o	o
T20 / 8500	425			o	o
T20 / 9000	450			o	o

Width max. = 100 mm
Width max. = 150 mm
Width max. = 100 mm

SD: single sided. DL: double sided.
* Correction of toothing, consult us.

DELIVERY TIMES		
Standard belts	o	4 weeks
Special belts		Consult us

Recommended pre-tension: see *page 124*
General tolerances: see *page 81*
General information: see *page 4*

BELT ORDERING EXAMPLES				
Designation	Width	Profile / Length	Type	Particular specification
SYNCHROFLEX timing belt	50	T20/3620	SYN	
BRECOFLEX timing belt	75	T20/4820	BFX	

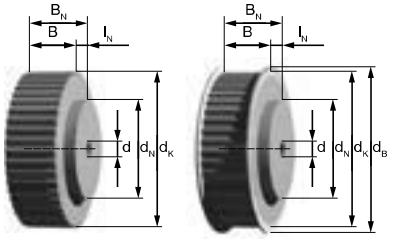
TOOTHED PULLEYS

Pulleys acc. to drawing see page 8

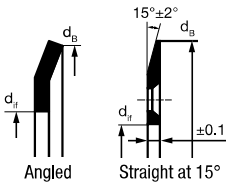
Pulleys

Version 2 (with flanges)

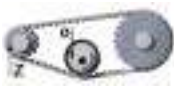
Version 0 (without flanges)



Belt widths T20	b	20	25	32	50	75	100	150
Widths of pulleys without hub	B	27	32	40	60	85	110	160



Flanges			
Z	Thickness	Shape	Mounting
Z ≤ 46	2	Angled	Screwed
Z > 46	2	Straight at 15°	Screwed

Kinematics	Tension member type		SYNCHROFLEX®	BRECOFLEX®
 Monoflexure	Steel tension members	Z min.	15	15
		ø min (mm)	120	120
	E tension members*	Z min.		12
		ø min (mm)		100
	Stainless steel tension members*	Z min.		20
		ø min (mm)		130
 Contraflexure	Steel tension members	Z min.	25	25
		ø min (mm)	120	120
	E tension members*	Z min.		22
		ø min (mm)		120
	Stainless steel tension members*	Z min.		30
		ø min (mm)		180

*Special manufacture: minimum quantity

Comments

- Larger number of teeth possible,
- Standard material 6026 conforming to RoHS, see page 8
- Flange: galvanised steel, see page 9
- d_{max}: max.mum bore without keyway for flanged pulley

Options
- The different materials such as steel and stainless steel and the surface treatment are shown on page 8
- Special flanges on request
- Special toothforms (zero or reduced backlash), see page 8

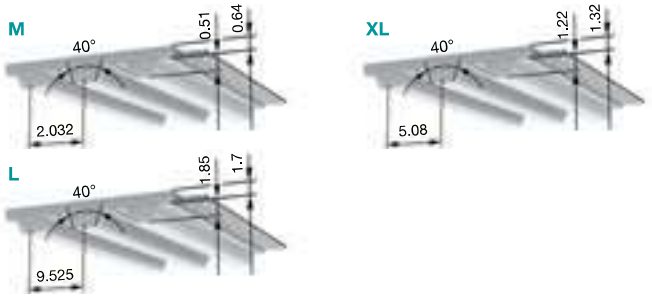
PULLEY ORDERING EXAMPLES						
Designation	Material	Width	Type/No. of teeth	Flanges	Hub	Dia. d
Aratron tooth pulley	AL	50	T20/27-	2	E : 120 X 10	40H7

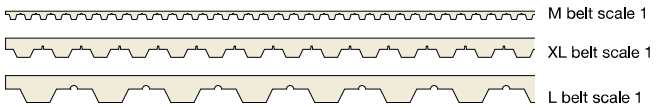
DELIVERY TIMES	
Pulleys acc. to drawing	Consult us

Z	d_K	$d_{max.}$	Screwed flanges	
			d_B	d_F
15	92.65	67	102	58
16	99.00	74	109	64
17	105.35	80	115	70
18	111.75	86	121	77
19	118.10	93	128	83
20	124.45	100	134	89
21	130.85	105	140	96
22	137.20	112	147	102
23	143.55	118	153	109
24	149.95	125	160	115
25	156.30	131	166	121
26	162.65	137	172	128
27	169.05	144	179	134
28	175.40	150	185	140
29	181.75	156	192	147
30	188.15	163	198	153
31	194.50	169	204	159
32	200.85	175	210	166
33	207.25	182	217	172
34	213.60	188	223	179
35	219.95	195	229	185
36	226.35	201	236	191
37	232.70	207	242	198
38	239.05	214	249	204
39	245.40	220	255	210
40	251.80	226	261	217
41	258.15	233	268	223
42	264.50	239	274	229
43	270.90	245	280	236
44	277.25	252	287	242
45	283.60	258	293	249
46	290.00	265	300	255
47	296.35	271	306	261
48	302.70	278	312	268
49	309.10	284	319	274
50	315.45	290	325	280
51	321.80	296	331	287
52	328.20	303	338	293
53	334.55	310	344	299
54	340.90	315	350	306
55	347.30	322	357	312
56	353.65	328	363	319
57	360.00	335	370	325
58	366.40	341	376	331
59	372.75	347	382	338
60	379.10	354	389	344
61	385.50	360	395	350
62	391.85	366	401	357
63	398.20	373	408	363
64	404.55	379	414	370
65	410.95	385	420	376
66	417.30	392	427	382
67	423.65	398	433	389
68	430.05	405	440	395
69	436.40	406	446	401
70	442.75	412	452	408
71	449.15	419	459	414
72	455.50	425	465	420
73	461.85	431	471	427
74	468.25	438	478	433
75	474.60	444	484	440
76	480.95	450	490	446
77	487.35	457	497	452
78	493.70	463	503	459
79	500.05	470	510	465
80	506.45	476	516	471
81	512.80	482	522	478
82	519.15	489	529	484
83	525.55	495	535	490
84	531.90	501	541	497
85	538.25	503	548	503
86	544.60	509	554	510
87	551.00	516	561	516
88	557.35	522	567	522
89	563.70	528	573	529
90	570.10	535	580	535
91	576.45	541	586	541
92	582.85	548	592	548
93	589.20	554	599	554
94	595.55	560	605	561
95	601.90	566	611	567
96	608.30	573	618	573
97	614.65	579	624	580

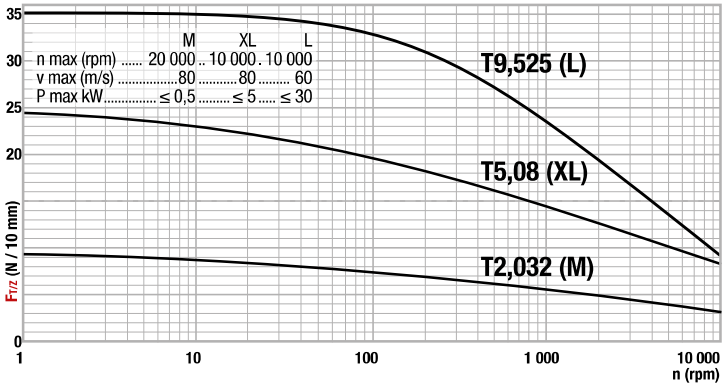
Z: number of teeth.

TIMING BELTS





Tangential force transmittable by the teeth



Available widths (mm)

M	4	6	10	16	25	32			
XL	6.35	7.94	9.53	12.7	19.1	25.4			
L			9.53	12.7	19.1	25.4	50.8	76.2	101.6
CODE	025	031	037	050	075	100	200	300	400

Manufacturing capacities

	SYNCHROFLEX®	BRECOFLEX® M - M PAZ	BRECOFLEX® L - L PAZ
Standard lengths	Length acc. to standard table only	Length acc. to standard table only, Width max. 101.6 mm	Length from 314.33 to 685.80 mm = one sleeve minimum All intermediate lengths can be produced from 723.9 mm to 14 992.35 mm [1]
Polyurethanes[2]	DEDU 8600	TPU ST3	Lengths smaller than 685.8 TPU ST3 Lengths greater than 723.9 TPU ST1
Winding	Monofilar	Bifilar	Lengths from 723,9 to 14 992,35 mm: bifilar
Tension member[3]	Steel	Steel	Steel

1. Minimum order
2. Other polyurethanes (see table "Characteristics of materials" *page 5*) } Consult us
3. Other tension members (Kevlar, high-flexibility tension members, stainless steel)
4. See "Coatings" *page 56*



Pulleys: see *page 8*

DELIVERY TIMES		
Standard belts	o	4 weeks

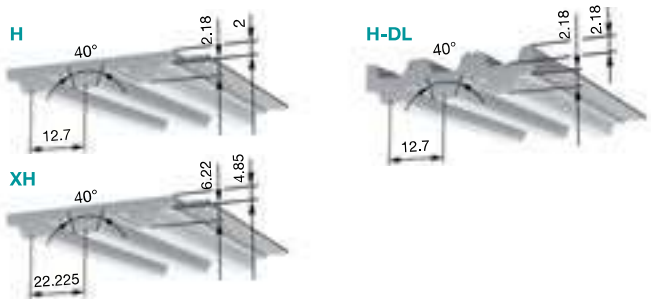
Standard lengths profile / mm	No. of teeth	SYNCHROFLEX® SD	BRECOFLEX® SD
M T2.032			
111 M / 111.76	55	o	
113 M / 113.79	56	o	
121 M / 121.92	60	o	
132 M / 132.08	65	o	
142 M / 142.24	70	o	
144 M / 144.27	71	o	
162 M / 162.56	80	o	
182 M / 182.88	90	o	
197 M / 197.10	97	o	
203 M / 203.20	100	o	
209 M / 209.30	103	o	
213 M / 213.36	105	o	
243 M / 243.84	120	o	
256 M / 256.03	126	o	
264 M / 264.16	130	o	
284 M / 284.48	140	o	
304 M / 304.80	150	o	
355 M / 355.60	175	o	
373 M / 373.89	184	o	
449 M / 449.07	221	o	
520 M / 520.19	256	o	
599 M / 599.44	295	o	
1178 M / 1178.56	580	o	
XL T5.08			
60 XL / 152.40	30		o
70 XL / 177.80	35	o	o
80 XL / 203.20	40	o	o
90 XL / 228.60	45	o	o
92 XL / 233.68	46	o	
100 XL / 254.00	50		o
110 XL / 279.40	55		o
112 XL / 284.50	56		
120 XL / 304.80	60	o	o
130 XL / 330.20	65		o
140 XL / 355.60	70		o
150 XL / 381.00	75	o	o
160 XL / 406.40	80	o	o
170 XL / 431.80	85		o
180 XL / 457.20	90		o
190 XL / 482.60	95		o
200 XL / 508.00	100	o	o
210 XL / 533.40	105		o
220 XL / 558.80	110		o
230 XL / 584.20	115		o
240 XL / 609.60	120	o	o
250 XL / 635.00	125		o
260 XL / 660.40	130		o
787 XL / 787.40	155		o
432 XL / 1097.28	216	o	
434 XL / 1102.36	217		
464 XL / 1178.56	232		
624 XL / 1585.00	312		
L T9.525			
124 L / 314.33	33		o
150 L / 381.00	40		o
172 L / 438.00	46	o	
187 L / 476.25	50		o
202 L / 514.35	54		o
210 L / 533.40	56		o
225 L / 571.50	60	o	o
240 L / 609.60	64		o
255 L / 647.70	68		o
270 L / 685.80	72		o
285 L / 723.90	76		o
300 L / 762.00	80		o
322 L / 819.15	86		o
345 L / 876.30	92		o
367 L / 933.45	98		o
382 L / 971.55	102	o	
390 L / 990.60	104	o	o
394 L / 1000.13	105	o	
405 L / 1028.70	108	o	
420 L / 1066.80	112		o
435 L / 1104.90	116	o	
450 L / 1143.00	120		o
454 L / 1152.50	121	o	
480 L / 1219.20	128		o
495 L / 1257.30	132	o	
540 L / 1371.60	144		o
547 L / 1390.65	146	o	
570 L / 1447.80	152		o
600 L / 1524.00	160		o
630 L / 1600.20	168		o
660 L / 1676.40	176		o
705 L / 1790.70	188		o
750 L / 1905.00	200		o
803 L / 2038.35	214		o
855 L / 2171.70	228		o
900 L / 2286.00	240		o
997 L / 2533.65	266		o
1102 L / 2800.35	294		o
1252 L / 3181.35	334		o
1402 L / 3562.35	374		o
1702 L / 4324.35	454		o
2002 L / 5086.35	534		o
2302 L / 5848.35	614		o
2602 L / 6610.35	694		o
3000 L / 7620.00	800		o

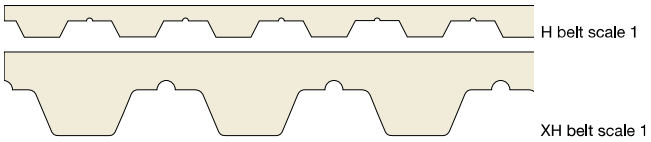
Width max. = 101.6 mm

Width max. = 101.6 mm

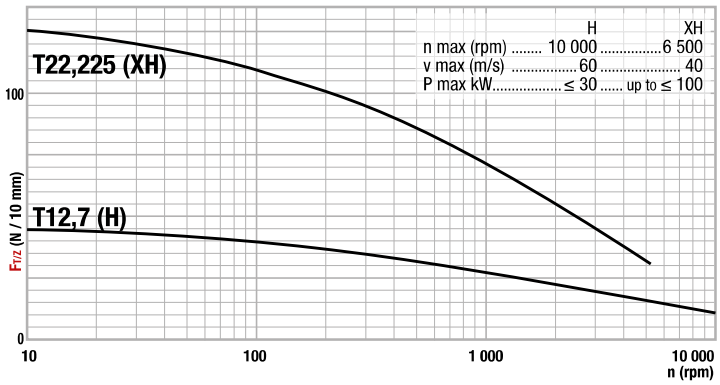
BELT ORDERING EXAMPLES				
Designation	Width	Profile / Length	Type	Particular specification
SYNCHROFLEX timing belt	6	M/182	SYN	
BRECOFLEX timing belt	25.4	T5.08/ 889	BFX	PAZ

TIMING BELTS





Tangential force transmittable by the teeth



Available widths (mm)

H	12.7	19.1	25.4	38.1	50.8	76.2	101.4
XH		19.1	25.4	38.1	50.8	76.2	101.4
CODE	050	075	100	150	200	300	400

Manufacturing capacities

	SYNCHROFLEX®	BRECOFLEX® H - H PAZ	BRECOFLEX® XH - XH PAZ
Standard lengths	Length acc. to standard table only	All intermediate lengths can be produced from 723,9 mm to 16 002 mm[1]	Length from 314,33 to 685,80 mm = one sleeve minimum All intermediate lengths can be produced from 1 422,4 mm to 16 002 mm [1]
Types DL and DL/PAZ[4]		All intermediate lengths possible from 901,7 mm[1]	
Polyurethanes[2]	DEDU 8600	TPU ST1	TPU ST1
Winding	Monofilar	Bifilar	Bifilar
Tension member[3]	Steel	Steel	Steel

1. Minimum order
2. Other polyurethanes (see table "Characteristics of materials" *page 5*) } Consult us
3. Other tension members (Kevlar, high-flexibility tension members, stainless steel)
4. See "Coatings" *page 56*

Standard lengths profile / mm	No. of teeth	SYNCHROFLEX® SD	BRECOFLEX® SD	BRECOFLEX® DL
H T12.7				
285 H / 723.90	57		o	
300 H / 762.00	60		o	
315 H / 800.10	63		o	
330 H / 838.20	66		o	
345 H / 876.30	69		o	
360 H / 914.40	72	o	o	o
375 H / 952.50	75		o	o
390 H / 990.60	78		o	o
405 H / 1028.70	81		o	o
420 H / 1066.80	84		o	o
450 H / 1143.00	90		o	o
480 H / 1219.20	96		o	o
500 H / 1270.00	100	o		
510 H / 1295.40	102		o	o
540 H / 1371.60	108		o	o
570 H / 1447.80	114		o	o
600 H / 1524.00	120		o	o
630 H / 1600.20	126		o	o
660 H / 1676.40	132		o	o
700 H / 1778.00	140	o	o	o
750 H / 1905.00	150		o	o
800 H / 2032.00	160		o	o
850 H / 2159.00	170		o	o
900 H / 2286.00	180		o	o
1000 H / 2540.00	200		o	o
1100 H / 2794.00	220		o	o
1250 H / 3175.00	250		o	o
1400 H / 3556.00	280		o	o
1700 H / 4318.00	340		o	o
2000 H / 5080.00	400		o	o
2300 H / 5842.00	460		o	o
2600 H / 6604.00	520		o	o
3000 H / 7620.00	600		o	o
XH T22.225				
560 XH / 1422.40	64		o	o
630 XH / 1600.20	72		o	o
700 XH / 1778.00	80		o	o
770 XH / 1955.80	88		o	o
840 XH / 2133.60	96		o	o
980 XH / 2489.20	112		o	o
1120 XH / 2844.80	128		o	o
1260 XH / 3200.40	144		o	o
1400 XH / 3556.00	160		o	o
1540 XH / 3911.60	176		o	o
1750 XH / 4445.00	200		o	o
1960 XH / 4978.40	224		o	o
2275 XH / 5778.50	260		o	o
2450 XH / 6223.00	280		o	o
3500 XH / 8890.00	400		o	o

Width max. = 101,6 mm



Pulleys: see *page 8*

DELIVERY TIMES		
Standard belts	o	4 weeks

BELT ORDERING EXAMPLES				
Designation	Type	Width	Profile / Length	Particular specifications
BRECOFLEX timing belt	BFX	25.4	T12.7/ 1778	PAZ