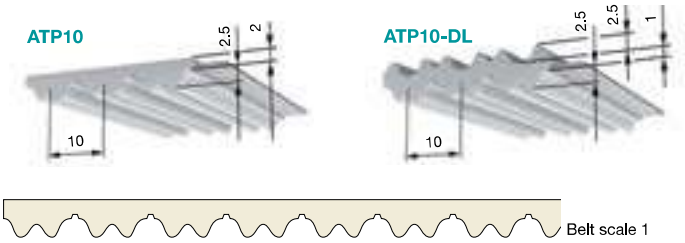
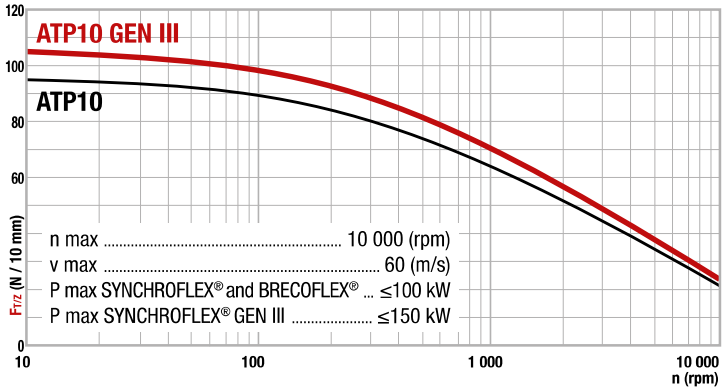
TIMING BELTS



Tangential force transmittable by the teeth



Tangential force transmittable by the tension members

Belt widths	b (mm)	16	25	32	50	75	100	150
SYNCHROFLEX® GEN III belt								
F_N	(N)	3000	5000	6750	10750	16500	22000	33500
Weight	(kg/m)	0.109	0.170	0.218	0.340	0.510	0.680	1.020
BRECOFLEX® belts								
F_N standard tension members	(N)	2000	3500	4750	7750	12000	16000	
Weight BRECOFLEX® ATP10	(kg/m)	0.096	0.150	0.200	0.300	0.450	0.600	
Weight BRECOFLEX® ATP10-DL	(kg/m)	0.097	0.154	0.2	0.316	0.477	0.636	
SYNCHROFLEX® belts								
F_N standard tension members	(N)	2000	3500	4750	7750	12000	16000	24500
Weight SYNCHROFLEX® standard	(kg/m)	0.096	0.150	0.192	0.300	0.450	0.600	0.900

Manufacturing capacities

	SYNCHROFLEX®	SYNCHROFLEX® GEN III	BRECOFLEX® ATP10
Lengths up to 1 090 mm	Standard length only		
Lengths from 1 100 to 12 000 mm			All intermediate lengths can be produced[1]
Versions DL			All intermediate lengths can be produced[1]
Polyurethanes[2]	DEDU 8600	DADU 9333	TPU SM1
Winding	Monofilaire	Bifilar	Lengths from 1 100 to 12 000 mm: bifilar
Tension members[3]	Steel	Steel	Steel

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

Standard lengths profile / mm	No. of teeth	SYNCHROFLEX® SD SYNCHROFLEX® GEN III	BRECOFLEX® SD	BRECOFLEX® DL
ATP10 / 630	63	●		
ATP10 / 660	66	●		
ATP10 / 700	70	●		
ATP10 / 780	78	●		
ATP10 / 840	84	●		
ATP10 / 890	89	●		
ATP10 / 920	92	●		
ATP10 / 1010	101	●		
ATP10 / 1080	108	●		
ATP10 / 1100	110			
ATP10 / 1150	115	●		
ATP10 / 1280	128	●		
ATP10 / 1400	140	●		
ATP10 / 1500	150		○	○
ATP10 / 1600	160		○	○
ATP10 / 1650	165	○		
ATP10 / 1700	170		○	○
ATP10 / 1800	180	○	○	○
ATP10 / 1900	190		○	○
ATP10 / 2000	200		○	○
ATP10 / 2120	212		○	○
ATP10 / 2240	224		○	○
ATP10 / 2360	236		○	○
ATP10 / 2500	250		○	○
ATP10 / 2650	265		○	○
ATP10 / 2800	280		○	○
ATP10 / 3000	300		○	○
ATP10 / 3150	315		○	○
ATP10 / 3350	335		○	○
ATP10 / 3550	355		○	○
ATP10 / 3750	375		○	○
ATP10 / 4000	400		○	○
ATP10 / 4250	425		○	○
ATP10 / 4500	450		○	○
ATP10 / 4750	475		○	○
ATP10 / 5000	500		○	○
ATP10 / 5300	530		○	○
ATP10 / 5600	560		○	○
ATP10 / 6000	600		○	○
ATP10 / 6300	630		○	○

Width max. = 100 mm

SD: single toothing. DL: double toothing.

DELIVERY TIMES		
Standard belts	○	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	50	ATP10/2500	SYN	GEN III
BRECOFLEX timing belt	50	ATP10/4500	BFX	DL

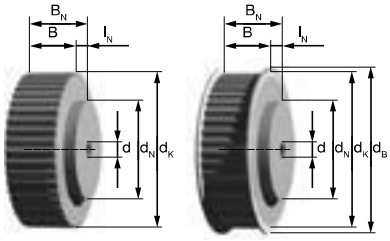
TOOTHED PULLEYS

Pulleys acc. to drawing see page 8

Standard pulleys

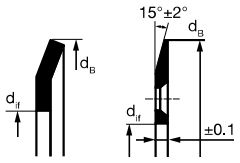
Version 2 (with flanges):
stock up to Z = 44

Version 0 (without flanges)

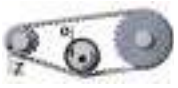


	Belt widths	b	16	25	32	50	75	100	150
Pulley widths	Pulley without hub	B	23	32	40	60	85	110	160
	Pulley with hub	B_N	33	42	50	70	95	120	170

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



Flanges			
Z	Thickness	Shape	Mounting
Z ≤ 39	1.5	Angled	Rolled
39 < Z ≤93	2	Angled	Screwed
B_N ≥ 66 and Z < 40	2	Angled	Screwed
Z > 93	2	Straight at 15°	Screwed

Kinematics	Tension member type		BRECOFLEX® SD	BRECOFLEX® DL
 Monoflexure	Steel tension members	Z min.	15	25
		ø min (mm)	50	80
	E tension members*	Z min.	12	20
		ø min (mm)	50	60
	Stainless steel tension members	Z min.		
		ø min (mm)		
 Contraflexure	Steel tension members	Z min.	25	25
		ø min (mm)	120	120
	E tension members*	Z min.	20	20
		ø min (mm)	80	100
	Stainless steel tension members	Z min.		
		ø min (mm)		

*Special manufacture: minimum quantity.

Width B_N 42	50	70	Z	d_K	d_N	Bore d (H7) min. stock	max.	d_B	d_{IF} Rolled flanges	Screwed flanges
			15	46.15			34	52	38	21
			16	49.33			36	55	41	25
			17	52.51			40	58	44	28
			18	55.70			44	61	47	31
			19	58.88			46	64	50	34
o	o	o	20	62.06	46	12	50	68	57	36
			21	65.25			52	72	58	37
			22	68.43			56	74	60	41
			23	71.61			60	78	64	44
o	o	o	24	74.79	58	12	62	80	66	47
			25	77.98			66	84	70	50
			26	81.16			68	86	73	53
			27	84.34			72	90	76	57
			28	87.53			76	93	79	60
			29	90.71			78	96	82	63
o	o	o	30	93.89	60	12	82	99	95	66
			31	97.08			84	102	88	69
o	o	o	32	100.26	65	12	88	105	91	73
			33	103.44			88	109	95	76
			34	106.63			92	112	98	79
			35	109.81			96	115	101	82
o	o	o	36	112.99	70	16	98	118	104	85
			37	116.17			101	121	107	88
			38	119.36			104	125	111	92
			39	122.54			106	128	114	95
o	o	o	40	125.72	80	16	110	131		98
			41	128.91			110	134		101
			42	132.09			112	137		104
			43	135.27			114	140		108
		o	44	138.46	90	16	118	144		111
			45	141.64			120	147		114
			46	144.82			122	150		117
			47	148.01			122	153		120
			48	151.19			124	156		123
			49	154.37			126	160		127
			50	157.56			130	163		130
			51	160.74			134	166		133
			52	163.92			136	169		136
			53	167.10			140	172		139
			54	170.29			144	176		143
			55	173.47			146	179		146
			56	176.65			150	182		149
			57	179.84			152	185		152
			58	183.02			156	188		155
			59	186.20			160	191		158
			60	189.39			162	195		162
			61	192.57			164	198		165
			62	195.75			166	201		168
			63	198.94			170	204		171
			64	202.12			171	207		174
			65	205.30			174	210		178
			66	208.48			175	214		181
			67	211.67			177	217		184
			68	214.85			181	220		187
			69	218.03			185	223		190
			70	221.22			187	226		193
			71	224.40			191	230		197
			72	227.58			193	233		200
			73	230.77			197	236		203
			74	233.95			201	239		206
			75	237.13				242		209

Z: number of teeth.

Comments

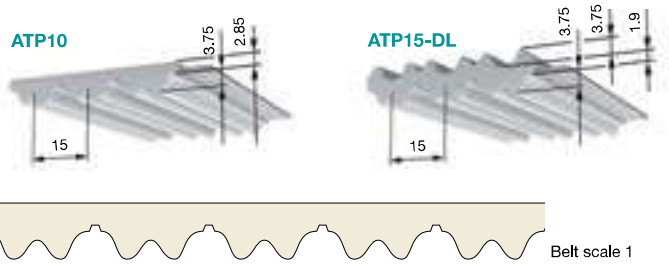
- Larger number of teeth possible
- Standard material: aluminium HR (7075), see page 8
- Flange: galvanised steel, see page 9
- d_{max}: max.mum bore without keyway for flanged pulley

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

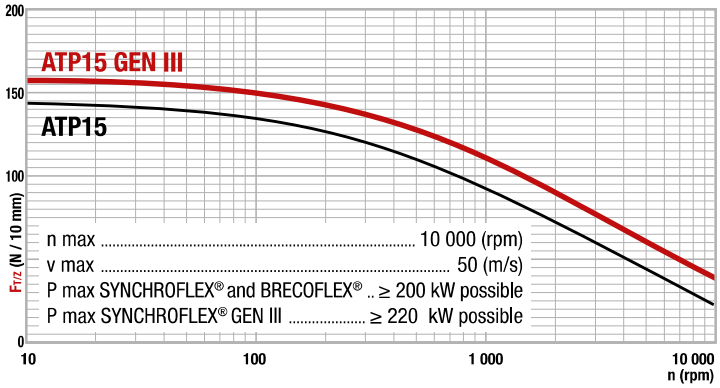
PULLEY ORDERING EXAMPLES						
Designation	Material	Width	Type/No. of teeth	Flanges	Hub	Dia. d
Aratron tooth pulley	AL	60	ATP10/27-	2		8H7

DELIVERY TIMES		
Pulleys in factory stock	o	2 weeks

TIMING BELTS



Tangential force transmittable by the teeth



Tangential force transmittable by the tension members

Belt widths	b (mm)	25	32	50	75	100	150
SYNCHROFLEX® GEN III belt							
F_N	(N)	6 300	8 550	13 950	21 600	28 800	44 100
Weight	(kg/m)	0.218	0.279	0.436	0.654	0.872	1.308
SYNCHROFLEX® et BRECOFLEX® belts							
F_N standard tension members	(N)	4 950	6 750	11 250	17 550	23 850	36 450
Weight BRECOFLEX® ATP15	(kg/m)	0.200	0.256	0.400	0.600	0.800	1.200
Weight BRECOFLEX® ATP15 DL	(kg/m)	0.21	0.272	0.432	0.654	0.876	

Manufacturing capacities

	SYNCHROFLEX®	SYNCHROFLEX® GEN III	BRECOFLEX® ATP15
Lengths from 1 500 to 12 000 mm	Standard length only		All intermediate lengths can be produced[1]
Versions DL and DL PAZ[4]			
Polyurethanes[2]	DEDU 8600	DADU 9333	TPU SM1
Winding	Monofilar	Bifilar	Lengths from 1 500 to 12 000 mm: bifilar
Tension members[3]	Steel	Steel	Steel

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

Standard lengths profile / mm	No. of teeth	SYNCHROFLEX® and SYNCHROFLEX® GEN III	BRECOFLEX® SD	BRECOFLEX® DL
ATP15 / 1125	75	o		
ATP15 / 1185	79	o		
ATP15 / 1260	84	o		
ATP15 / 1500	100			
ATP15 / 1560	104	o		
ATP15 / 1740	116		o	o
ATP15 / 1965	131		o	o
ATP15 / 2100	140		o	o
ATP15 / 2250	150		o	o
ATP15 / 2385	159		o	o
ATP15 / 2520	168		o	o
ATP15 / 2670	178		o	o
ATP15 / 2805	187		o	o
ATP15 / 3000	200		o	o
ATP15 / 3225	215		o	o
ATP15 / 3450	230		o	o
ATP15 / 3675	245		o	o
ATP15 / 3900	260		o	o
ATP15 / 4125	275		o	o
ATP15 / 4500	300		o	o
ATP15 / 4875	325		o	o
ATP15 / 5250	350		o	o
ATP15 / 5625	375		o	o
ATP15 / 6000	400		o	o

Width max. = 150 mm

Width max. = 100 mm

SD: single toothing. DL: double toothing.

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	ATP15/2500	SYN	GEN III
BRECOFLEX timing belt	50	ATP15/4500	BFX	DL

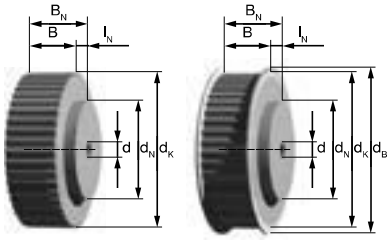
TOOTHED PULLEYS

Pulleys acc. to drawing see page 8

Standard pulleys

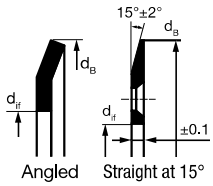
Version 2 (with flanges):
stock up to Z = 44

Version 0 (without flanges) :
stock from Z = 45

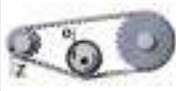


	Belt widths	b	25	32	50	75	100	150
Pulley widths	Pulley without hub	B	32	40	60	85	110	160
	Pulley with hub	B_N	42	50	70	95	120	170

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



Flanges			
Z	Thickness	Shape	Mounting
Z ≤ 62	2	Angled	Screwed
Z > 62	2	Straight at 15°	Screwed

Kinematics	Tension member type		SYNCHROFLEX® BRECOFLEX® SD	BRECOFLEX® DL
 Monoflexure	Steel tension members	Z min.	20	25
		ø min (mm)	100	120
	E tension members*	Z min.	18	20
		ø min (mm)	80	100
	Stainless steel tension members	Z min.		
		ø min (mm)		
 Contraflexure	Steel tension members	Z min.	30	30
		ø min (mm)	160	160
	E tension members*	Z min.	25	25
		ø min (mm)	120	140
	Stainless steel tension members	Z min.		
		ø min (mm)		

*Special manufacture: minimum quantity

Width B_N			Z	d_K	d_N	Bore d (H7)		d_B	d_{IF}
42	50	70				min. stock	max.		Screwed flanges
o	o	o	20	93.39	46	12	62	100	66
			21	98.17			70	106	73
			22	102.94			74	109	76
			23	107.72			79	115	82
o	o	o	24	112.49	58	12	84	118	85
			25	117.27			89	125	92
			26	122.04			94	128	95
			27	126.82			96	134	101
			28	131.59			103	137	104
			29	136.36			108	144	111
o	o	o	30	141.14	60	12	113	147	114
			31	145.91			117	153	120
o	o	o	32	150.69	65	12	122	156	123
			33	155.46			127	163	130
			34	160.24			132	166	133
			35	165.01			137	172	139
o	o	o	36	169.79	70	16	141	176	143
			37	174.56			146	182	149
			38	179.34			151	185	152
			39	184.11			156	191	158
o	o	o	40	188.89	80	16	160	195	162
			41	193.66			165	201	168
			42	198.44			170	204	171
			43	203.21			175	210	178
		o	44	207.98	90	16	179	214	181
			45	212.76				220	187
			46	217.53			184	223	190
			47	222.31			187	230	197
			48	227.03			192	234	200
			49	231.56			197	239	206
			50	236.63			202	242	209
			51	241.41			207	249	216
			52	246.48			212	252	219
			53	250.96			216	258	225
			54	255.73			220	262	228
			55	260.51			225	268	235
			56	265.28			230	271	238
			57	270.05			235	277	244
			58	274.83			240	281	247
			59	279.60			245	287	254
			60	284.38			250	290	257
			61	289.15			255	296	263
			62	293.93			260	300	267
			63	298.70			265	306	273
			64	303.48			270	310	276
			65	308.25			275	315	283
			66	313.03			280	319	286
			67	317.80			285	325	292
			68	322.58			290	329	295
			69	327.35			295	335	302
			70	332.13			300	338	305
			71	336.90			305	344	311
			72	341.67			310	348	314
			73	346.45			315	354	321
			74	351.22			320	357	324
			75	356.00			330	363	330
			76	360.77			335	367	334
			77	365.55			340	372	335
			78	370.32			345	377	340
			79	375.10			350	382	345
			80	379.87			355	386	350

Z: number of teeth.

Comments

- Larger number of teeth possible
- Standard material: aluminium HR (7075), 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	60	ATP15/27-	2		8H7

DELIVERY TIMES		
Pulleys in factory stock	o	2 weeks