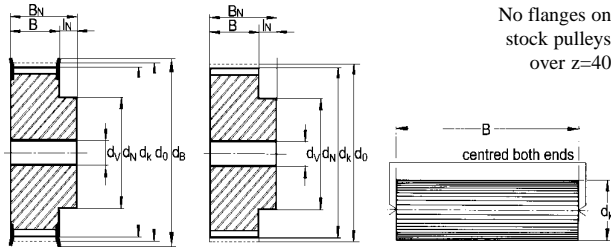
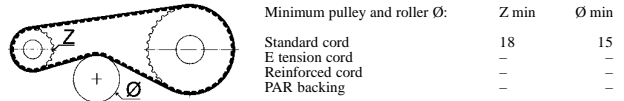


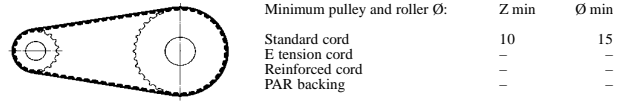
PULLEY & BAR DIMENSIONS



REVERSE BENDING



NORMAL USE



Pulley width B _N	Z, no. teeth	d _o (mm)	d _k (mm)	d _B * (mm)	d _N (mm)	bore size	
						d _v	d _{max}
16	50	10	7.96	7.45	10	3	3
		11	8.75	8.25	11	3	3
50	12	9.55	9.00	12	12	3	3
		13	10.35	9.80	13		3.5
50	14	11.14	10.60	14	14	3	4
		15	11.94	11.40	15	15	3
50	16	12.73	12.20	16	16	4	6
		17	13.53	13.00	16		7
50	18	14.32	13.80	17	10	4	7
		19	15.12	14.60	18	10	4
90	20	15.92	15.40	19	12 [†]	4	9
		21	16.71	16.20	20		10
125	22	17.51	17.00	20	14 [†]	4	10
		23	18.30	17.80	21		11
125	24	19.10	18.55	22	14	4	11
		25	19.89	19.35	23	14 [†]	4
125	26	20.69	20.15	23	14	4	13
		27	21.49	20.95	24		13
125	28	22.28	21.75	25	14	4	13
		29	23.08	22.55	26		14
125	30	23.87	23.35	27	16	6	15
		31	24.67	24.15	27		16
125	32	25.46	24.95	28	16	6	16
		33	26.26	25.75	29		17
125	34	27.06	26.55	30			17
		35	27.85	27.35	31		20
132	36	28.65	28.15	31	20	6	20
		37	29.44	28.94	32		21
132	38	30.24	29.74	33			21
		39	31.04	30.54	34		22
132	40	31.83	31.33	35	22	6	23
		41	32.63	32.13	35		24
140	42	33.42	32.92	35			24
		43	34.22	33.72	37		24
140	44	35.01	34.51	38	24	6	25
		45	35.81	35.31	39		26
140	46	36.61	36.11	39			27
		47	37.40	36.90	40		27
140	48	38.20	37.70	41	26	6	27
		49	38.99	38.49	42		28
160	50	39.79	39.29	43			29
		51	40.58	40.08	43		30
160	52	41.38	40.88	44			30
		53	42.18	41.68	45		30
160	54	42.97	42.47	46			31
		55	43.77	43.27	47		32
160	56	44.56	44.06	47			32
		57	45.36	44.86	48		32
160	58	46.15	45.65	49			33

● Available from stock in Aluminium. Preferred sizes shaded red
 Non stock sizes available to order (see page 86)

STOCK PULLEY ORDER CODE EXAMPLE

Mat'l	Width B _N	Type / no. teeth	No. of. flanges	Special instructions
AL	16	T2.5 / 40	-2	

Pulley width B _N	Z, no. teeth	d _o (mm)	d _k (mm)	d _B * (mm)	d _N (mm)	bore size	
						d _v	d _{max}
160	59	46.95	46.45	50			34
		60	47.75	47.25	51	34	8
160	61	48.54	48.04	51			36
		62	49.34	48.84	52		
160	63	50.13	49.63	53			37
		64	50.93	50.43	54		
160	65	51.73	51.23	55			38
		66	52.52	52.02	55		
160	67	53.32	52.82	56			39
		68	54.11	53.61	57		
160	69	54.91	54.41	58			40
		70	55.70	55.20	59		
160	71	56.50	56.00	59			42
		72	57.30	56.80	60		
160	73	58.09	57.59	61			43
		74	58.89	58.39	61		
160	75	59.68	59.18	62			45
		76	60.48	59.98	63		
160	77	61.27	60.77	64			46
		78	62.07	61.57	65		
160	79	62.87	62.37	66			47
		80	63.66	63.16	67		
160	81	64.46	63.96	67			47
		82	65.25	64.75	68		
160	83	66.05	65.55	69			49
		84	66.85	66.35	70		
160	85	67.64	67.14	71			50
		86	68.44	67.94	71		
160	87	69.23	68.73	72			51
		88	70.03	69.53	73		
160	89	70.82	70.32	74			52
		90	71.62	71.12	75		
160	91	72.42	71.92	75			53
		92	73.21	72.71	76		
160	93	74.01	73.51	77			55
		94	74.80	74.30	78		
160	95	75.60	75.10	79			56
		96	76.39	75.89	79		
160	97	77.19	76.69	80			57
		98	77.99	77.49	81		
160	99	78.78	78.28	82			58
		100	79.58	79.08	83		
160	101	80.37	79.87	83			59
		102	81.17	80.67	84		
160	103	81.96	81.46	85			61
		104	82.76	82.26	86		
160	105	83.56	83.06	87			63
		106	84.35	83.85	87		
160	107	85.15	84.65	88			64

d_o = Pitch circle diameter
 d_k = Outside diameter
 d_N = Hub diameter (*variable)
 d_v / d_{max} = Stock pulley bore diameter / max. bore
 d_B = Flange diameter (*approximate)

T2.5 TECHNICAL DATA

Tooth shear strength, tension member tensile strength and flexibility determine belt dimensions. See p.102.

1) Tooth Shear Strength

The belt width (in cm) required to transmit known peripheral force F_U , torque M or power P without exceeding the maximum allowable tooth shear strength is calculated using any of the following formulae and the values from the table:

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

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

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

b = belt width (in cm)

$F_{U\text{spez}}$ = specific peripheral force (N/cm)

M_{spez} = specific torque (Ncm/cm)

P_{spez} = specific power (W/cm)

z_1 = No. of teeth on the small pulley

z_2 = No. of teeth in the large pulley

t = pitch in mm

a = centre distance in mm

z_e = No. of teeth in mesh (see below)

$z_{e\text{max}} = 12$ for Brecoflex®, Synchroflex® or Breco® M

$z_{e\text{max}} = 6$ for Breco® V timing belts

To calculate the number of teeth in mesh, z_e :

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

Specific Tooth Shear Strength Tables

Rpm, n (min ⁻¹)	$F_{U\text{spez}}$ (N/cm)	M_{spez} (Ncm/cm)	P_{spez} (W/cm)	Rpm, n (min ⁻¹)	$F_{U\text{spez}}$ (N/cm)	M_{spez} (Ncm/cm)	P_{spez} (W/cm)	Rpm, n (min ⁻¹)	$F_{U\text{spez}}$ (N/cm)	M_{spez} (Ncm/cm)	P_{spez} (W/cm)
0	9.03	0.359	0.000	1100	5.61	0.223	0.257	3200	4.36	0.173	0.581
20	8.72	0.347	0.007	1200	5.51	0.219	0.275	3400	4.28	0.170	0.607
40	8.48	0.337	0.014	1300	5.41	0.215	0.293	3600	4.22	0.168	0.632
60	8.28	0.329	0.021	1400	5.33	0.212	0.311	3800	4.15	0.165	0.657
80	8.10	0.322	0.027	1500	5.25	0.209	0.328	4000	4.09	0.163	0.682
100	7.95	0.316	0.033	1600	5.17	0.206	0.345	5000	3.82	0.152	0.796
200	7.39	0.294	0.062	1700	5.10	0.203	0.361	6000	3.60	0.143	0.901
300	7.01	0.279	0.088	1800	5.04	0.200	0.378	7000	3.42	0.136	0.997
400	6.71	0.267	0.112	1900	4.97	0.198	0.394	8000	3.26	0.130	1.086
500	6.48	0.258	0.135	2000	4.91	0.195	0.409	9000	3.11	0.124	1.168
600	6.28	0.250	0.157	2200	4.80	0.191	0.440	10000	2.99	0.119	1.245
700	6.11	0.243	0.178	2400	4.70	0.187	0.470	12000	2.77	0.110	1.384
800	5.97	0.237	0.199	2600	4.60	0.183	0.499	15000	2.50	0.099	1.561
900	5.83	0.232	0.219	2800	4.51	0.180	0.527	18000	2.28	0.091	1.708
1000	5.71	0.227	0.238	3000	4.43	0.176	0.554	20000	2.15	0.086	1.791

For designs over the quoted speed, please contact our Technical Department

2) Tensile Strength of Tension Member

Allowable tensile load F_{zul} on belt cross section in Newtons

BELT WIDTH (in mm)	3	4	6	8	10	16	25	32
Synchroflex	25	39	65	92	117	195	312	403
Breco M	-	-	-	77	98	162	250	320
Breco V	-	-	-	38	49	81	125	160
Brecoflex	-	-	-	-	-	-	-	-