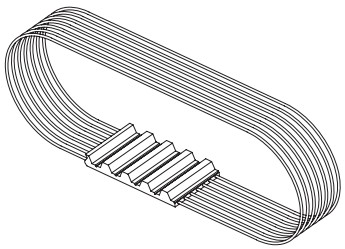
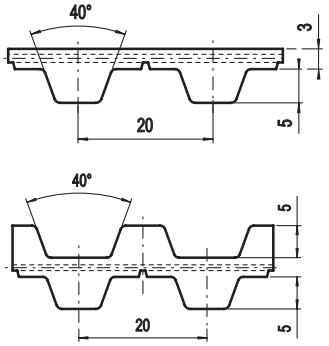
T20 ELA-flex SD™





Belt characteristics

- Truly endless polyurethane timing belt with steel tension cords according to DIN 7721 T1
- Metric pitch 20 mm
- Ideal for drives where high belt flexibility is requested
- Transmissible power up to 100 kW
- Rpm up to 6.000 [1/min]

- Maximum width: 150 mm
- Width tolerance: ±1,0 [mm]
- Thickness tolerance: ±0,2 [mm

Technical data

Belt width [mm]	25	32	50	75	100	150
Allowable tensile load [N]	4000	5100	7900	11900	15800	23700
Weight [kg/m]	0,18	0,23	0,37	0,55	0,73	1,1

Other widths are available on request

Tooth shear strength

rpm [min^{-1}]	M_{spez} [Ncm/cm]	P_{spez} [W/cm]	rpm [min^{-1}]	M_{spez} [Ncm/cm]	P_{spez} [W/cm]	rpm [min^{-1}]	M_{spez} [Ncm/cm]	P_{spez} [W/cm]
0	33,263	0,000	1200	17,542	22,042	3400	11,510	40,978
20	32,181	0,674	1300	17,093	23,268	3600	11,173	42,117
40	31,242	1,309	1400	16,673	24,442	3800	10,851	43,178
60	30,424	1,911	1440	16,511	24,896	4000	10,546	44,170
80	29,714	2,489	1500	16,278	25,568	4500	9,842	46,377
100	29,097	3,047	1600	15,909	26,654	5000	9,209	48,213
200	26,579	5,566	1700	15,562	27,702	5500	8,639	49,753
300	24,777	7,783	1800	15,234	28,714	6000	8,114	50,976
400	23,393	9,798	1900	14,922	29,689	6500	7,630	51,931
500	22,269	11,659	2000	14,623	30,624	7000		
600	21,320	13,395	2200	14,069	32,411	7500		
700	20,502	15,028	2400	13,563	34,086	8000		
800	19,783	16,572	2600	13,092	35,643	8500		
900	19,140	18,038	2800	12,659	37,116	9000		
1000	18,561	19,435	3000	12,252	38,487	9500		
1100	18,029	20,766	3200	11,870	39,773	10000		

The total power "P" and the total torque "M" transmitted by the belt, are calculated with the following formulas:

$P\ [Kw] = P_{spez} \cdot z_e \cdot z_k \cdot b / 1000$

$M\ [Nm] = M_{spez} \cdot z_e \cdot z_k \cdot b / 100$

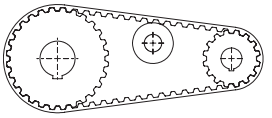
$$Z_e = \frac{Z_k}{180} \cdot \arccos \cdot \left[\frac{t \cdot (z_g - z_k)}{2 \cdot \pi \cdot A} \right]$$

P = power in Kw
M = torque in Nm
P_{spez} = specific power
M_{spez} = specific torque
z_e = number of teeth in mesh of the small pulley
z_{emax} = 12
z_k = number of teeth of the small pulley
b = belt width in cm
A = centre distance [mm]
t = pitch

Flexibility

Minimum number of teeth and minimum diameter

Drive without reverse bending
- Timing pulley $z_{min} = 15$
- Idler running on belt teeth $d_{min} = 120$ mm



Drive with reverse bending and double sided belt
- Timing pulley $z_{min} = 25$
- Idler running on belt back $d_{min} = 120$ mm