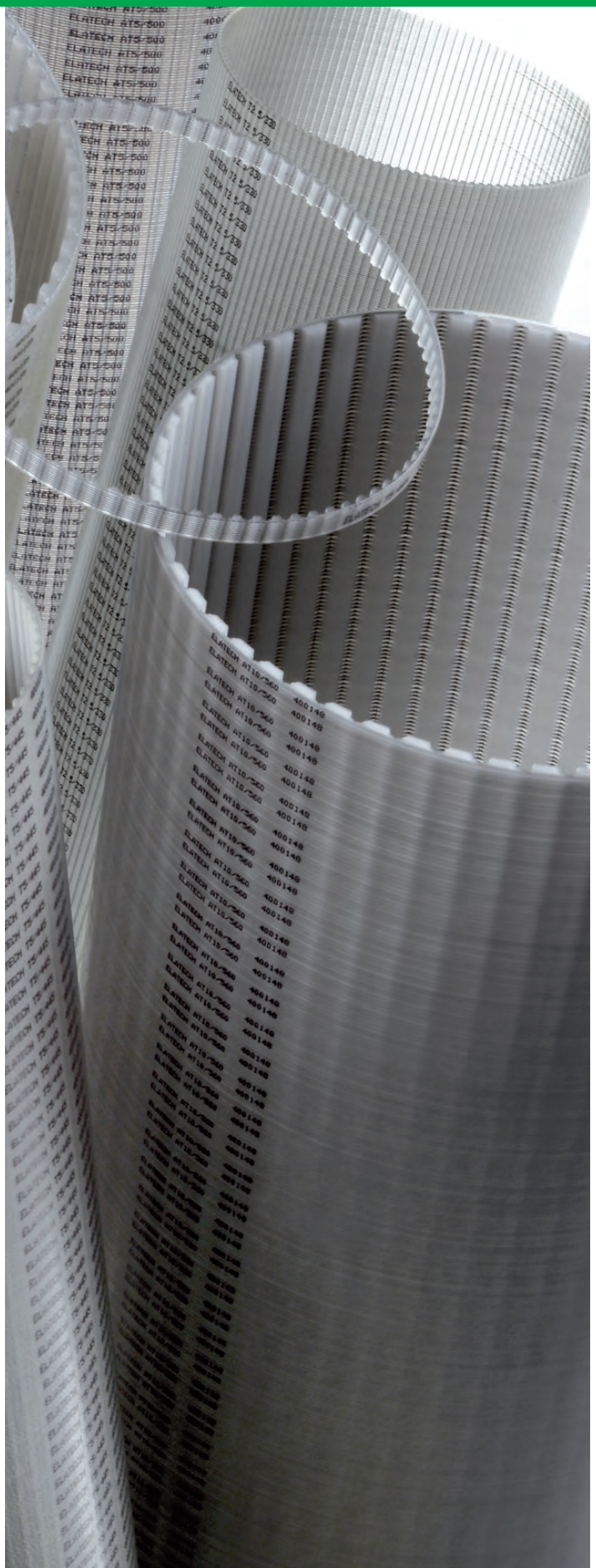
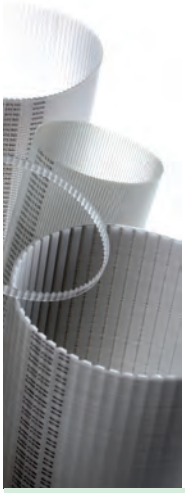
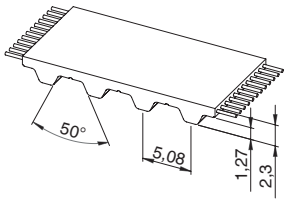
ELATECH® iSync®



iSync®

XL





Belt characteristics

- Truly endless polyurethane timing belt with steel tension cords and trapezoidal tooth profile according to UNI/ISO 5296
- Imperial pitch 1/5" = 5,08 mm
- Mainly used in applications where inch pitch is an advantage
- Transmissible power up to 5 kW
- Rpm up to 10.000 [1/min]

- Width tolerance: ±0,5 [mm]
- Thickness tolerance: ±0,2 [mm]

Technical Data

Belt width [inch]	**0,25**	**0,31**	**0,37**	**0,50**
Allowable tensile load [N]	224	320	384	512
Weight [g/m]	12	16	19	22

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	2,638	0	**1200**	1,682	2,114	**3400**	1,308	4,655
20	2,571	0,054	**1300**	1,654	2,252	**3600**	1,287	4,850
40	2,512	0,105	**1400**	1,628	2,387	**3800**	1,266	5,039
60	2,462	0,155	**1440**	1,618	2,44	**4000**	1,247	5,225
80	2,417	0,202	**1500**	1,604	2,519	**4500**	1,204	5,671
100	2,379	0,249	**1600**	1,581	2,649	**5000**	1,164	6,095
200	2,233	0,468	**1700**	1,560	2,776	**5500**	1,129	6,499
300	2,125	0,668	**1800**	1,539	2,901	**6000**	1,096	6,885
400	2,041	0,855	**1900**	1,520	3,024	**6500**	1,066	7,253
500	1,973	1,033	**2000**	1,501	3,144	**7000**	1,038	7,606
600	1,915	1,203	**2200**	1,467	3,379	**7500**	1,012	7,945
700	1,865	1,367	**2400**	1,435	3,607	**8000**	0,987	8,270
800	1,821	1,525	**2600**	1,406	3,828	**8500**	0,964	8,582
900	1,781	1,678	**2800**	1,379	4,043	**9000**	0,943	8,883
1000	1,745	1,827	**3000**	1,354	4,253	**9500**	0,922	9,172
1100	1,712	1,972	**3200**	1,330	4,457	**10000**	0,903	9,450

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

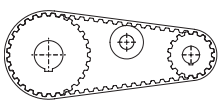
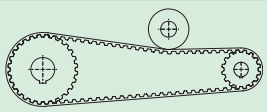
P [kW] = P_{spez} • z_e • z_k • b / 1000

M [Nm] = M_{spez} • z_e • z_k • 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 pulley number of teeth and minimum idler diameter			
Drive without reverse bending		Timing pulley z_{min}	10
		Flat idler running on belt teeth d_{min}	30 mm
Drive with reverse bending		Timing pulley z_{min}	15
		Flat idler running on belt back d_{min}	30 mm

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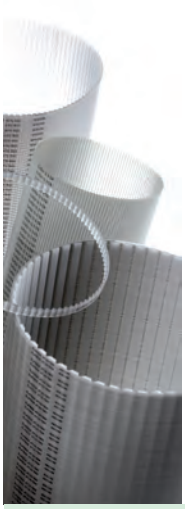

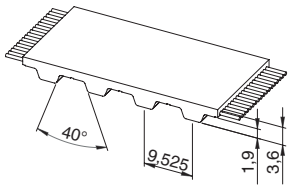

Belt characteristics

- Truly endless polyurethane timing belt with steel tension cords and trapezoidal tooth profile according to UNI/ISO 5296
- Imperial pitch 3/8" = 9,525 mm
- Mainly used in applications where inch pitch is an advantage
- Transmissible power up to 20 kW
- Rpm up to 10.000 [1/min]

- Width tolerance: ±0,5 [mm]
- Thickness tolerance: ±0,2 [mm]

Technical Data

Belt width [inch]	0,50	0,75	1,00	1,50	2,00	3,00	4,00
Allowable tensile load [N]	1150	1725	2300	3565	4715	7245	9660
Weight [g/m]	50	80	100	150	200	300	400

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	7,607	0	**1200**	4,411	5,543	**3400**	3,174	11,299
20	7,375	0,154	**1300**	4,319	5,879	**3600**	3,104	11,701
40	7,174	0,300	**1400**	4,233	6,205	**3800**	3,038	12,087
60	6,999	0,440	**1440**	4,200	6,333	**4000**	2,975	12,46
80	6,847	0,574	**1500**	4,153	6,522	**4500**	2,830	13,335
100	6,714	0,703	**1600**	4,077	6,831	**5000**	2,700	14,135
200	6,225	1,304	**1700**	4,006	7,131	**5500**	2,582	14,869
300	5,872	1,844	**1800**	3,938	7,423	**6000**	2,474	15,542
400	5,596	2,344	**1900**	3,874	7,708	**6500**	2,374	16,159
500	5,370	2,811	**2000**	3,813	7,986	**7000**	2,282	16,725
600	5,179	3,254	**2200**	3,700	8,523	**7500**	2,196	17,243
700	5,013	3,675	**2400**	3,596	9,036	**8000**	2,115	17,716
800	4,867	4,077	**2600**	3,499	9,527	**8500**	2,039	18,148
900	4,737	4,464	**2800**	3,410	9,997	**9000**	1,967	18,540
1000	4,618	4,836	**3000**	3,326	10,448	**9500**	1,899	18,894
1100	4,510	5,195	**3200**	3,248	10,882	**10000**	1,835	19,214

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

P [kW] = P_{spez} • z_e • z_k • b / 1000

M [Nm] = M_{spez} • z_e • z_k • 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
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z_e = number of teeth in mesh of the small pulley
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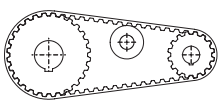
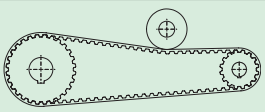
Flexibility

Minimum pulley number of teeth and minimum idler diameter			
Drive without reverse bending		Timing pulley z_{min}	15
		Flat idler running on belt teeth d_{min}	60 mm
Drive with reverse bending		Timing pulley z_{min}	20
		Flat idler running on belt back d_{min}	60 mm