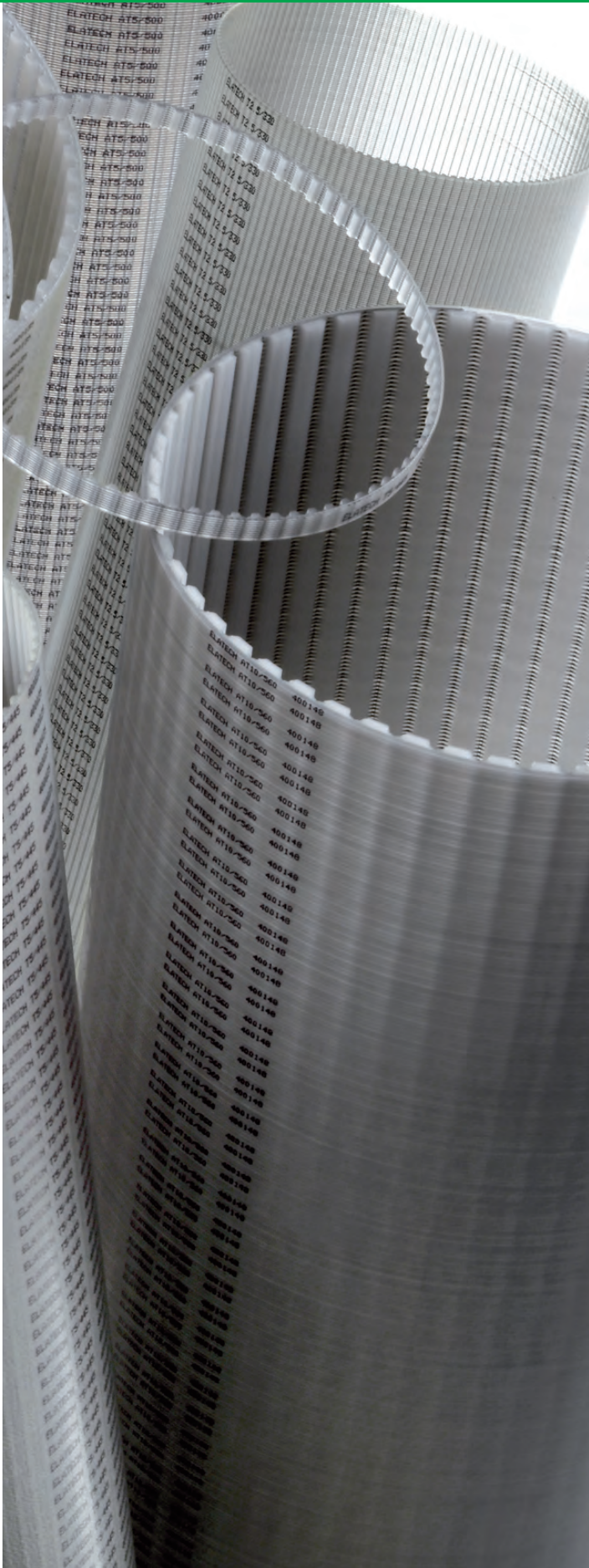
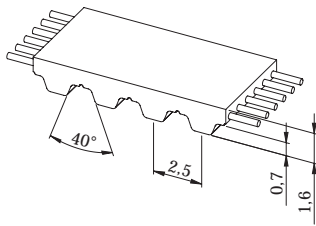
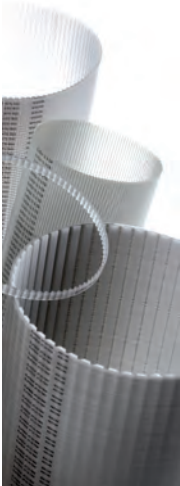


ELATECH® iSync®



ELATECH® iSync® high performance endless timing belt technical data

iSync® T 2,5



Belt characteristics

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 2,5 mm
- Ideal for drives where high belt flexibility is required
- Allows the use of small diameter pulleys
- Transmissible power up to 5 kW
- Rpm up to 10.000 [1/min]

- Width tolerance: ±0,3 [mm]
- Thickness tolerance: ±0,15 [mm]

Technical Data

Belt width [mm]	4	6	8	10	12	16	25	32
Allowable tensile load [N]	45	81	108	135	162	225	351	459
Weight [g/m]	6	9	12	15	18	24	37	48

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	0,471	0,000	1200	0,287	0,361	3400	0,228	0,810
20	0,454	0,010	1300	0,283	0,385	3600	0,224	0,845
40	0,44	0,018	1400	0,278	0,408	3800	0,221	0,880
60	0,429	0,027	1440	0,277	0,417	4000	0,218	0,914
80	0,421	0,035	1500	0,274	0,431	4500	0,211	0,996
100	0,414	0,043	1600	0,271	0,454	5000	0,205	1,074
200	0,382	0,080	1700	0,267	0,476	5500	0,200	1,150
300	0,362	0,114	1800	0,264	0,498	6000	0,195	1,223
400	0,347	0,145	1900	0,261	0,519	6500	0,19	1,293
500	0,335	0,175	2000	0,258	0,541	7000	0,186	1,360
600	0,325	0,204	2200	0,253	0,582	7500	0,182	1,426
700	0,317	0,232	2400	0,248	0,622	8000	0,178	1,489
800	0,31	0,259	2600	0,243	0,662	8500	0,174	1,551
900	0,303	0,286	2800	0,239	0,700	9000	0,171	1,611
1000	0,297	0,311	3000	0,235	0,715	9500	0,168	1,668
1100	0,292	0,336	3200	0,231	0,738	10000	0,165	1,725

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

$$P \text{ [kW]} = P_{spez} \cdot Z_e \cdot Z_k \cdot b / 1000$$

$$M \text{ [Nm]} = M_{spez} \cdot Z_e \cdot Z_k \cdot b / 100$$

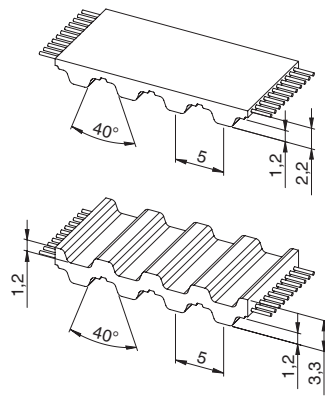
$$Z_e = \frac{Z_k}{180} \cdot \arccos \left[\frac{t \cdot (z_g - z_k)}{2 \cdot \pi \cdot A} \right]$$

- 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}	15 mm
Drive with reverse bending		Timing pulley Z _{min}	18
		Flat idler running on belt back d _{min}	15 mm

iSync® T 5 / T 5 Dual



Belt characteristic

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 5 mm
- Ideal for drives where high belt flexibility is required
- Allows the use of small diameter pulleys
- Rpm up to 10.000 [1/min]

- Width tolerance: ±0,5 [mm]
- Thickness tolerance: ±0,15 [mm]

Technical Data

Belt width [mm]	10	12	16	25	32	50	75	100
Allowable tensile load [N]	430	520	690	1090	1380	2170	3290	4160
Weight [g/m]	24	28	38	60	77	120	180	240
Weight DT5 [g/m]	27	32	43	68	97	138	210	270

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	2,523	0,000	1200	1,607	2,019	3400	1,248	4,444
20	2,458	0,051	1300	1,580	2,151	3600	1,229	4,632
40	2,403	0,101	1400	1,555	2,279	3800	1,209	4,812
60	2,354	0,148	1440	1,545	2,330	4000	1,191	4,988
80	2,312	0,194	1500	1,532	2,406	4500	1,149	5,414
100	2,276	0,238	1600	1,510	2,529	5000	1,111	5,818
200	2,135	0,447	1700	1,489	2,651	5500	1,078	6,206
300	2,032	0,638	1800	1,470	2,770	6000	1,046	6,571
400	1,951	0,817	1900	1,451	2,888	6500	1,017	6,924
500	1,884	0,987	2000	1,433	3,001	7000	0,991	7,262
600	1,829	1,149	2200	1,400	3,226	7500	0,966	7,588
700	1,781	1,306	2400	1,371	3,445	8000	0,943	7,897
800	1,738	1,456	2600	1,342	3,654	8500	0,920	8,191
900	1,701	1,603	2800	1,317	3,860	9000	0,900	8,480
1000	1,667	1,745	3000	1,306	3,940	9500	0,880	8,758
1100	1,635	1,884	3200	1,292	4,059	10000	0,862	9,027

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

$$P \text{ [kW]} = P_{spez} \cdot Z_e \cdot Z_k \cdot b / 1000$$

$$M \text{ [Nm]} = M_{spez} \cdot Z_e \cdot Z_k \cdot b / 100$$

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

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

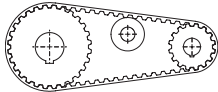
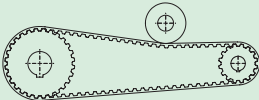
Z_k = number of teeth of the small pulley

b = belt width in cm

A = centre distance [mm]

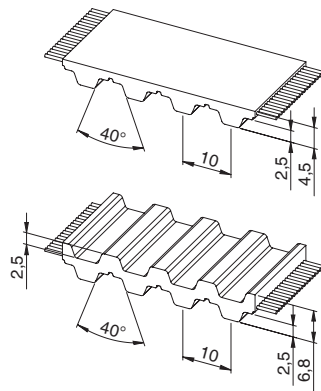
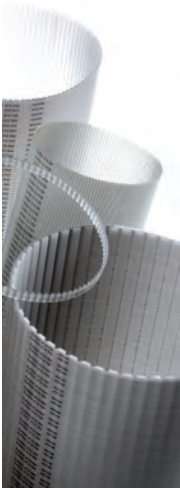
t = pitch

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



iSync® T 10 / T 10 Dual



Belt characteristics

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 10 mm
- Ideal for drives where high belt flexibility is required
- Allows the use of small diameter pulleys
- Rpm up to 10.000 [1/min]

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

Technical Data

Belt width [mm]	10	16	25	32	50	75	100	150
Allowable tensile load [N]	890	1520	2280	3040	4680	7080	9490	14170
Weight [g/m]	50	77	120	155	240	365	480	725
Weight DT10 [g/m]	62	92	145	190	290	430	570	900

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	10,717	0	1200	6,25	7,854	3400	4,499	16,017
20	10,412	0,218	1300	6,119	8,330	3600	4,400	16,587
40	10,147	0,425	1400	5,998	8,792	3800	4,307	17,136
60	9,916	0,623	1440	5,951	8,974	4000	4,218	17,666
80	9,715	0,814	1500	5,884	9,242	4500	4,013	18,910
100	9,541	0,999	1600	5,777	9,678	5000	3,829	20,049
200	8,846	1,853	1700	5,676	10,104	5500	3,663	21,094
300	8,334	2,618	1800	5,58	10,518	6000	3,510	22,054
400	7,938	3,325	1900	5,49	10,922	6500	3,370	22,935
500	7,615	3,987	2000	5,404	11,316	7000	3,239	23,743
600	7,342	4,613	2200	5,243	12,077	7500	3,118	24,484
700	7,106	5,209	2400	5,095	12,805	8000	3,004	25,162
800	6,899	5,779	2600	4,959	13,501	8500	2,897	25,781
900	6,713	6,326	2800	4,832	14,168	9000	2,795	26,345
1000	6,545	6,853	3000	4,714	14,809	9500	2,700	26,855
1100	6,391	7,362	3200	4,603	15,424	10000	2,609	27,317

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

$$P \text{ [kW]} = P_{\text{spez}} \cdot Z_e \cdot Z_k \cdot b / 1000$$

$$M \text{ [Nm]} = M_{\text{spez}} \cdot Z_e \cdot Z_k \cdot b / 100$$

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

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}	12
		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