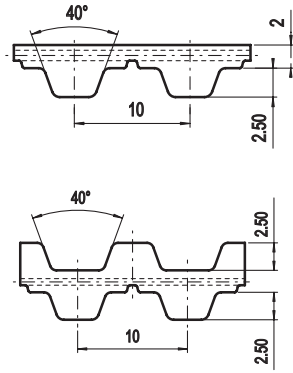


T10



Belt characteristics

- Polyurethane timing belt with steel tension cords
- Trapezoidal tooth profile according to DIN 7721 T1
- Metric pitch 10 mm
- Ideal for drives where high belt flexibility is requested
- Widely used for conveying, linear drive and medium power transmission applications
- Double sided tooth construction available

- Width tolerance: $\pm 0,5$ [mm]
- Length tolerance: $\pm 0,5$ [mm/m]
- Thickness tolerance: $\pm 0,2$ [mm]

Technical data

Belt width b [mm]	Allowable tensile load Type M F_{Tzul} [N]	Allowable tensile load Type V F_{Tzul} [N]	Breaking load Type M F_{Br} [N]	Specific spring rate C_{spez} [N]	Weight [kg/m]
10	920	460	3360	230000	0,05
16	1610	805	5880	402500	0,07
25	2650	1325	9660	662500	0,11
32	3450	1725	12600	862500	0,15
50	5520	2760	20160	1380000	0,23
75	8400	4200	30660	2100000	0,34
100	11270	5635	41160	2817500	0,45
150	17020	8510	62160	4255000	0,68
200	11270	5635	41160	2817500	0,60

Other widths are available on request.

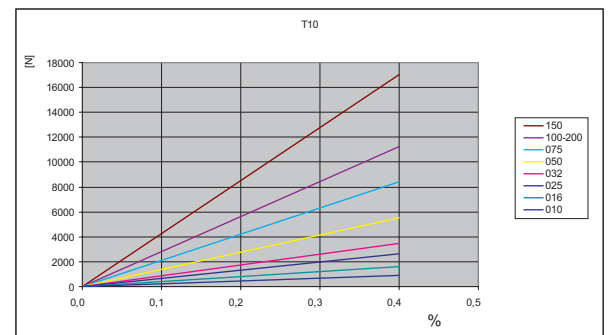
Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	51,80	800	33,34	1900	26,53	4500	19,40
20	50,32	900	32,44	2000	26,12	5000	18,51
40	49,04	1000	31,63	2200	25,34	5500	17,70
60	47,92	1100	30,89	2400	24,63	6000	16,97
80	46,95	1200	30,21	2600	23,97	6500	16,29
100	46,11	1300	29,58	2800	23,36	7000	15,66
200	42,75	1400	28,99	3000	22,78	7500	15,07
300	40,28	1440	28,76	3200	22,25	8000	14,52
400	38,36	1500	28,44	3400	21,74	8500	14,00
500	36,80	1600	27,92	3600	21,27	9000	13,51
600	35,49	1700	27,43	3800	20,81	9500	13,05
700	34,35	1800	26,97	4000	20,39	10000	12,61

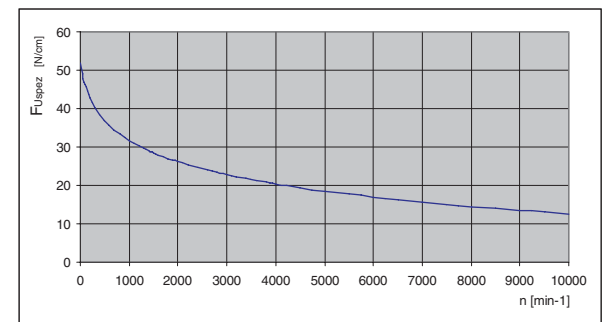
The specific load F_{Uspez} is the maximum load which one single belt tooth 1 cm wide can withstand in all operating conditions. This force is related to the drive rpm. The total load F_U transmissible by the belt in the drive is calculated by:

$$F_U [N] = F_{Uspez} \cdot Z_e \cdot b$$

Load / Elongation [%]



Tooth shear strength / rpm





- F_U [N] = peripheral force
- F_{Uspez} [N/cm] = specific load
- Z_e = number of teeth in mesh in the small pulley
- Z_{emax} = max. no of teeth in mesh to be considered for the calculation of the drive
- $Z_{emax} = 12$ for ELATECH® M
- $Z_{emax} = 6$ for ELATECH® V
- b [cm] = belt width in cm

Specialties

PROFILE	Belt width b [mm]	ARAMID CORD		STAINLESS STEEL		HPL High performance		HFE High flexibility	
		F _{Tzul} [N] M type	F _{Br} [N]	F _{Tzul} [N] M type	F _{Br} [N]	F _{Tzul} [N] M type	F _{Br} [N]	F _{Tzul} [N] M type	F _{Br} [N]
T10	010	880	3600	600	2400			960	3440
	016	1540	6300	1050	4200	2210	8550	1680	6020
	025	2530	10350	1730	6900	3750	14540	2760	9890
	032	3300	13500	2250	9000	4850	18810	3600	12900
	050	5280	21600	3600	14400	7720	29930	5760	20640
	075	8030	32850			11690	45320	8760	31390
	100	10780	44100			15660	60710	11760	42140
	150	16280	66600						
200	10780	44100							

Flexibility

Minimum pulley number of teeth and minimum idler diameter						
T10		TYPE OF CORD				
		STANDARD	ARAMID	STAINLESS	HPL	HFE
Drive without reverse bending 	Timing pulley z _{min}	12	15	12	15	12
	Idler running on belt teeth d _{min}	60 mm	60 mm	60 mm	100 mm	50 mm
Drive with reverse bending 	Timing pulley z _{min}	20	20	20	30	12
	Idler running on belt back d _{min}	60 mm	60 mm	60 mm	100 mm	50 mm

Timing pulleys

z	da	dw	z	da	dw	z	da	dw	z	da	dw
10	30,05	31,84	39	122,30	124,14	68	214,60	216,44	97	306,90	308,75
11	33,25	35,02	40	125,45	127,32	69	217,75	219,63	98	310,10	311,93
12	36,35	38,20	41	128,65	130,50	70	220,95	222,81	99	313,25	315,12
13	39,50	41,38	42	131,85	133,69	71	224,15	225,99	100	316,45	318,30
14	42,70	44,56	43	135,00	136,87	72	227,30	229,18	101	319,65	321,48
15	45,90	47,75	44	138,20	140,05	73	230,50	232,36	102	322,80	324,66
16	49,05	50,93	45	141,40	143,24	74	233,70	235,54	103	326,00	327,85
17	52,25	54,11	46	144,60	146,42	75	236,90	238,72	104	329,20	331,03
18	55,45	57,29	47	147,75	149,60	76	240,05	241,94	105	332,35	334,21
19	58,65	60,48	48	150,95	152,78	77	243,25	245,09	106	335,55	337,40
20	61,80	63,66	49	154,10	155,97	78	246,40	248,27	107	338,75	340,58
21	65,00	66,84	50	157,30	159,15	79	249,60	251,46	108	341,95	343,76
22	68,15	70,03	51	160,50	162,33	80	252,80	254,64	109	345,15	346,95
23	71,35	73,20	52	163,65	165,52	81	256,00	257,82	110	348,30	350,13
24	74,55	76,39	53	166,85	168,70	82	259,15	261,00	111	351,45	353,31
25	77,70	79,58	54	170,05	171,88	83	262,30	264,19	112	354,65	356,50
26	80,90	82,76	55	173,20	175,06	84	265,50	267,37	113	357,80	359,68
27	84,10	85,95	56	176,40	178,25	85	268,70	270,55	114	361,00	362,86
28	87,25	89,12	57	179,60	181,43	86	271,90	273,74	115	364,19	366,04
29	90,45	92,21	58	182,75	184,61	87	275,05	276,92	116	367,39	369,23
30	93,65	95,49	59	185,95	187,80	88	278,25	280,10	117	370,56	372,41
31	96,85	98,67	60	189,10	190,98	89	281,45	283,28	118	373,76	375,59
32	100,00	101,86	61	192,30	194,16	90	284,60	286,47	119	376,93	378,78
33	103,20	105,04	62	195,50	197,35	91	287,80	289,65	120	380,11	381,96
34	106,40	108,22	63	198,65	200,53	92	291,00	292,84			
35	109,55	111,41	64	201,85	203,71	93	294,20	296,02			
36	112,75	114,59	65	205,05	206,90	94	297,35	299,20			
37	115,90	117,77	66	208,20	210,08	95	300,55	302,39			
38	119,10	120,95	67	211,40	213,26	96	303,75	305,57			

