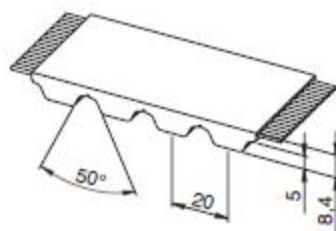


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Belt characteristics

- High performance polyurethane timing belt with HPL steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 20 mm
- Specially designed for linear drives
- Tension cords with increased allowable tensile load compared to standard for lower elongation
- Produced with special pretension and pitch tolerance to guarantee high positioning precision in linear drives

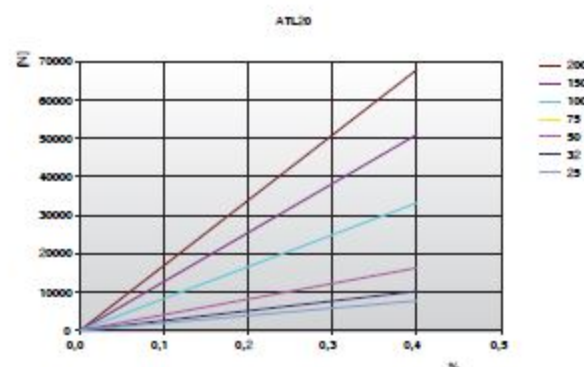
- Width tolerance: $\pm 1,0$ [mm]
- Thickness tolerance: $\pm 0,4$ [mm]

Technical Data

Belt width b [mm]	Allowable tensile load Type M F_{Tzul} [N]	Breaking load Type M F_{Br} [N]	Specific spring rate C_{spez} [N]	Weight [kg/m]
25	7650	28800	1912500	0,28
32	10200	38400	2550000	0,36
50	16150	60800	4037500	0,56
75	24650	92800	6162500	0,84
100	33150	124800	8287500	1,12
150	51000	192000	12750000	1,68
200	68000	256000	17000000	2,25

Other widths are available on request.

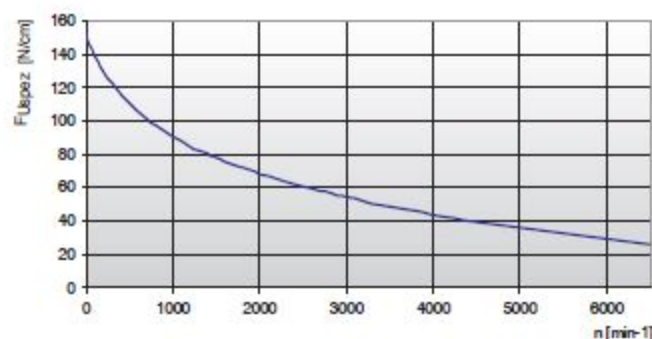
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	151,40	800	97,44	1900	69,96	4500	39,72
20	148,56	900	93,93	2000	68,22	5000	35,90
40	145,89	1000	90,73	2200	64,97	5500	32,42
60	143,38	1100	87,77	2400	61,98	6000	29,23
80	141,01	1200	85,02	2600	59,20	6500	26,29
100	138,78	1300	82,47	2800	56,62	-	-
200	129,43	1400	80,07	3000	54,20	-	-
300	122,28	1440	79,16	3200	51,92	-	-
400	115,96	1500	77,82	3400	49,77	-	-
500	110,45	1600	75,70	3600	47,74	-	-
600	105,61	1700	73,69	3800	45,80	-	-
700	101,31	1800	71,77	4000	43,96	-	-

Tooth shear strength / rpm



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:

$$F_u [N] = F_{Uspez} \cdot z_e \cdot b$$

- 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

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Specialties

Belt width b [mm]	STAINLESS STEEL	
	F _{Tzul} [N] M type	F _{Br} [N]
25	5220	20700
32	6960	27600
50	11020	43700
75	16820	66700
100	22620	89700

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord	
		STANDARD	STAINLESS
 Drive without reverse bending	Timing pulley z _{min}	25	32
	Flat idler running on belt teeth d _{min}	160 mm	200 mm
 Drive with reverse bending	Timing pulley z _{min}	25	40
	Flat idler running on belt back d _{min}	250 mm	250 mm

Timing pulleys

z	da	dw	z	da	dw	z	da	dw	z	da	dw
18	111,75	114,59	48	302,70	305,58	78	493,70	496,56	108	684,70	687,54
19	118,10	120,95	49	309,10	311,93	79	500,05	502,91	109	691,05	693,89
20	124,50	127,32	50	315,45	318,30	80	506,45	509,28	110	697,40	700,26
21	130,75	133,69	51	321,80	324,67	81	512,80	515,65	111	703,80	706,63
22	137,20	140,05	52	328,20	331,03	82	519,15	522,02	112	710,15	712,99
23	143,55	146,42	53	334,55	337,40	83	525,55	528,39	113	716,50	719,36
24	149,95	152,78	54	340,90	343,76	84	531,90	534,74	114	722,90	725,72
25	156,30	159,15	55	347,30	350,13	85	538,25	541,11	115	729,24	732,09
26	162,65	165,52	56	353,65	356,50	86	544,60	547,48	116	735,61	738,46
27	169,05	171,88	57	360,00	362,86	87	551,00	553,85	117	741,96	744,83
28	175,40	178,25	58	366,40	369,23	88	557,35	560,22	118	748,34	751,19
29	181,75	184,62	59	372,75	375,59	89	563,70	566,57	119	754,70	757,56
30	188,15	190,99	60	379,10	381,96	90	570,10	572,94	120	761,07	763,93
31	194,50	197,35	61	385,45	388,33	91	576,45	579,31			
32	200,85	203,72	62	391,85	394,69	92	582,85	585,67			
33	207,20	210,09	63	398,20	401,06	93	589,20	592,04			
34	213,60	216,44	64	404,55	407,43	94	595,55	598,40			
35	219,95	222,81	65	410,95	413,79	95	601,90	604,77			
36	226,35	229,18	66	417,30	420,16	96	608,30	611,14			
37	232,70	235,54	67	423,65	426,52	97	614,65	617,50			
38	239,05	241,91	68	430,05	432,89	98	621,00	623,87			
39	245,45	248,27	69	436,40	439,26	99	627,35	630,24			
40	251,80	254,64	70	442,80	445,63	100	633,75	636,60			
41	258,15	261,01	71	449,15	451,99	101	640,10	642,97			
42	264,50	267,37	72	455,50	458,36	102	646,50	649,34			
43	270,90	273,74	73	461,85	464,73	103	652,85	655,71			
44	277,25	280,10	74	468,25	471,08	104	659,20	662,06			
45	283,60	286,47	75	474,60	477,45	105	665,60	668,43			
46	290,00	292,84	76	480,95	483,82	106	671,95	674,80			
47	296,35	299,21	77	487,35	490,19	107	678,30	681,17			

