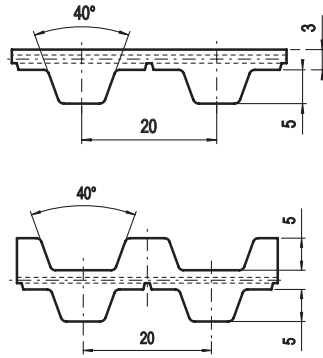


T20



Belt characteristics

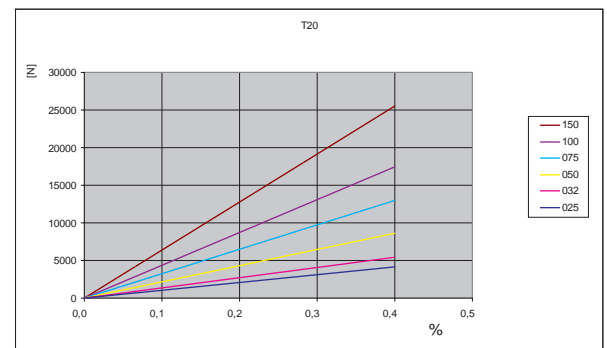
- Polyurethane timing belt with steel tension cords
- Trapezoidal tooth profile according to DIN 7721 T1
- Metric pitch 20 mm
- Ideal for drives where high belt flexibility is requested
- Widely used for conveying, linear drive and heavy power transmission applications
- Double sided tooth construction available

- Width tolerance: $\pm 1,0$ [mm]
- Length tolerance: $\pm 0,5$ [mm/m]
- Thickness tolerance: $\pm 0,4$ [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]
25	4170	2085	16150	1042500	0,18
32	5390	2695	20900	1347500	0,24
50	8580	4290	33250	2145000	0,37
75	12990	6495	50350	3247500	0,55
100	17400	8700	67450	4350000	0,73
150	25480	12740	98800	6370000	1,10

Load / Elongation [%]

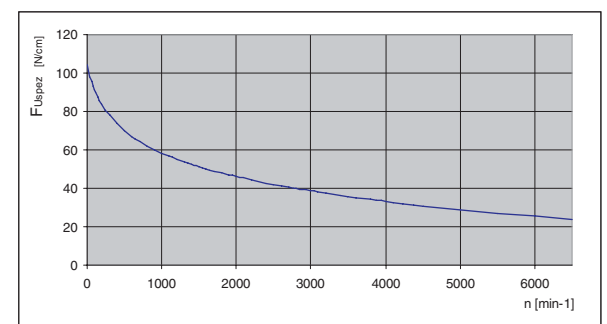


Other widths are available on request.

Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	104,50	800	62,15	1900	46,88	4500	30,92
20	101,10	900	60,13	2000	45,94	5000	28,93
40	98,15	1000	58,31	2200	44,20	5500	27,14
60	95,58	1100	56,64	2400	42,61	6000	25,49
80	93,35	1200	55,11	2600	41,13	6500	23,97
100	91,41	1300	53,70	2800	39,77		
200	83,50	1400	52,38	3000	38,49		
300	77,84	1440	51,87	3200	37,29		
400	73,49	1500	51,14	3400	36,16		
500	69,96	1600	49,98	3600	35,10		
600	66,98	1700	48,89	3800	34,09		
700	64,41	1800	47,86	4000	33,13		

Tooth shear strenght / 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]

F_{Uspez} [N/cm]

z_e

z_{emax}

z_{emax}

z_{emax}

b [cm]

= peripheral force

= specific load

= number of teeth in mesh in the small pulley
= max. no of teeth in mesh to be considered for the calculation of the drive

= 12 for ELATECH® M


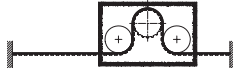
= 6 for ELATECH® V

= belt width in cm

Specialties

PROFILE	Belt width b [mm]	ARAMID CORD		STAINLESS STEEL		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]
T20	025	3230	13430	3060	12750	3400	14450
	032	4180	17380	3960	16500	4400	18700
	050	6650	27650	6300	26250	7000	29750
	075	10070	41870			10600	45050
	100	13490	56090			14200	60350
	150	19760	82160				

Flexibility

Minimum pulley number of teeth and minimum idler diameter					
T20		TYPE OF CORD			
		STANDARD	ARAMID	STAINLESS	HFE
Drive without reverse bending 	Timing pulley z _{min}	15	15	20	15
	Idler running on belt teeth d _{min}	120 mm	120 mm	130 mm	100 mm
Drive with reverse bending 	Timing pulley z _{min}	25	25	20	20
	Idler running on belt back d _{min}	120 mm	120 mm	130 mm	100 mm

Timing pulleys

z	da	dw	z	da	dw	z	da	dw	z	da	dw
15	92,65	95,49	44	277,25	280,10	73	461,85	464,73	102	646,50	649,34
16	99,00	101,86	45	283,60	286,47	74	468,25	471,08	103	652,85	655,71
17	105,40	108,22	46	289,95	292,84	75	474,60	477,45	104	659,20	662,06
18	111,75	114,59	47	296,35	299,21	76	480,95	483,82	105	665,60	668,43
19	118,10	120,96	48	302,70	305,58	77	487,35	490,19	106	671,95	674,80
20	124,50	127,32	49	309,10	311,93	78	493,70	496,56	107	678,30	681,17
21	130,75	133,69	50	315,45	318,30	79	500,05	502,91	108	684,70	687,54
22	137,20	140,06	51	321,80	324,67	80	506,45	509,28	109	691,05	693,89
23	143,55	146,43	52	328,15	331,03	81	512,80	515,65	110	697,40	700,26
24	149,95	152,78	53	334,50	337,40	82	519,15	522,02	111	703,80	706,63
25	156,30	159,15	54	340,90	343,76	83	525,55	528,39	112	710,15	712,99
26	162,65	165,52	55	347,25	350,13	84	531,90	534,74	113	716,50	719,36
27	169,00	171,89	56	353,60	356,50	85	538,25	541,11	114	722,90	725,73
28	175,40	178,25	57	360,00	362,86	86	544,60	547,48	115	729,24	732,09
29	181,75	184,62	58	366,35	369,23	87	551,00	553,85	116	735,61	738,46
30	188,10	190,99	59	372,75	375,59	88	557,35	560,22	117	741,96	744,83
31	194,50	197,35	60	379,10	381,96	89	563,70	566,57	118	748,34	751,19
32	200,85	203,72	61	385,45	388,33	90	570,10	572,94	119	754,70	757,56
33	207,20	210,09	62	391,85	394,70	91	576,45	579,31	120	761,07	763,93
34	213,60	216,44	63	398,20	401,06	92	582,85	585,67			
35	219,95	222,81	64	404,55	407,43	93	589,20	592,04			
36	226,35	229,18	65	410,95	413,80	94	595,55	598,41			
37	232,70	235,54	66	417,30	420,17	95	601,90	604,77			
38	239,05	241,91	67	423,65	426,52	96	608,30	611,14			
39	245,40	248,28	68	430,05	432,89	97	614,65	617,51			
40	251,75	254,65	69	436,40	439,26	98	621,00	623,88			
41	258,15	261,02	70	442,80	445,63	99	627,35	630,25			
42	264,50	267,37	71	449,15	451,99	100	633,75	636,60			
43	270,85	273,74	72	455,50	458,36	101	640,10	642,97			

