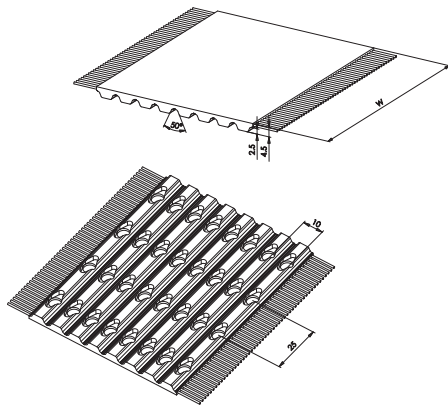




ATF10



Belt characteristics

- 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 requested
- Widely used for conveying, linear drive and medium power transmission applications

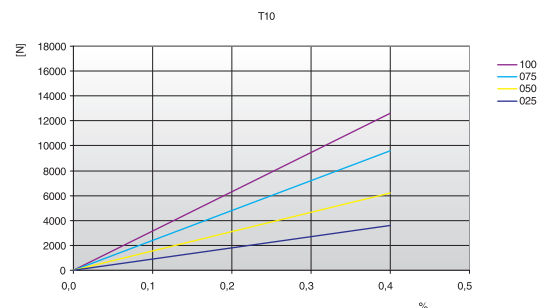
- Width tolerance: ±0,5 [mm]
- Length tolerance: ±0,5 [mm/m]
- Thickness tolerance: ±0,2 [mm]

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]
25	3169,2	1584,6	11400	792300	0,15
50	6338,4	3169,2	22800	1584600	0,3
75	9507,6	4753,8	34200	2376900	0,44
100	12676,8	6338,4	45600	3169200	0,59

Other widths are available on request.

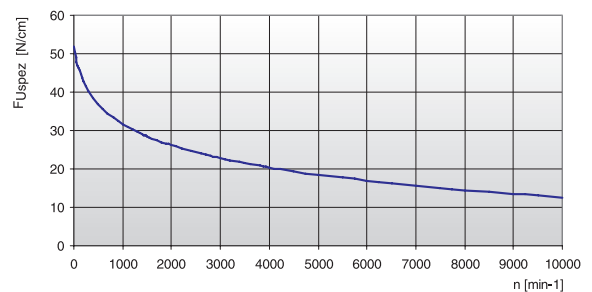
Load / Elongation [%]



Tooth shear strength

rpm	F _{Uspez} [N/cm]	rpm	F _{Uspez} [N/cm]	rpm	F _{Uspez} [N/cm]	rpm	F _{Uspez} [N/cm]
0	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

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_{e,max} = max. no of teeth in mesh to be considered for the calculation of the drive
- Z_{e,max} = 12 for ELATECH® M
- Z_{e,max} = 6 for ELATECH® V
- b [cm] = belt width in cm




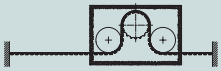
ATF10

ELATECH® M and V

Specialties

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]
25	3740	17000	3060	12750	3400	14450
50	7700	35000	6300	26250	7000	29750
75	11660	53000	9540	39750	-	-
100	15620	71000	12780	53250	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord			
		STANDARD	ARAMID	STAINLESS	HFE
 Drive without reverse bending	Timing pulley Z _{min}	15	15	20	12
	Flat idler running on belt teeth d _{min}	50 mm	50 mm	70 mm	50 mm
 Drive with reverse bending	Timing pulley Z _{min}	25	20	40	20
	Flat idler running on belt back d _{min}	120 mm	120 mm	120 mm	80 mm

Timing pulleys

z	da	dw	z	da	dw	z	da	dw	z	da	dw
15	45,70	47,75	45	141,40	143,24	75	236,90	238,72	105	332,35	334,21
16	49,05	50,93	46	144,55	146,42	76	240,05	241,94	106	335,55	337,40
17	52,25	54,11	47	147,75	149,60	77	243,25	245,09	107	338,75	340,58
18	55,45	57,29	48	150,95	152,78	78	246,40	248,24	108	341,90	343,76
19	58,60	60,48	49	154,10	155,97	79	249,60	251,46	109	345,10	346,95
20	61,80	63,66	50	157,30	159,15	80	252,80	254,64	110	348,30	350,13
21	65,00	66,84	51	160,50	162,33	81	255,95	257,82	111	351,45	353,31
22	68,15	70,03	52	163,65	165,52	82	259,15	261,00	112	354,65	356,50
23	71,35	73,20	53	166,85	168,70	83	262,30	264,19	113	357,80	359,68
24	74,55	76,39	54	170,05	171,88	84	265,50	267,37	114	361,00	362,86
25	77,70	79,58	55	173,20	175,06	85	268,70	270,52	115	364,19	366,04
26	80,90	82,76	56	176,40	178,25	86	271,90	273,74	116	367,39	369,23
27	84,10	85,95	57	179,60	181,43	87	275,05	276,92	117	370,56	372,41
28	87,25	89,12	58	182,75	184,61	88	278,25	280,10	118	373,74	375,59
29	90,45	92,21	59	185,95	187,80	89	281,45	283,28	119	376,93	378,78
30	93,65	95,49	60	189,10	190,98	90	284,60	286,47	120	380,11	381,96
31	96,80	98,67	61	192,30	194,16	91	287,80	289,65			
32	100,00	101,86	62	195,50	197,35	92	291,00	292,84			
33	103,20	105,04	63	198,65	200,53	93	294,20	296,02			
34	106,40	108,19	64	201,85	203,71	94	297,35	299,20			
35	109,55	111,41	65	205,05	206,90	95	300,55	302,39			
36	112,75	114,59	66	208,20	210,08	96	303,70	305,57			
37	115,90	117,77	67	211,40	213,26	97	306,90	308,75			
38	119,10	120,95	68	214,60	216,44	98	310,10	311,93			
39	122,30	124,14	69	217,75	219,63	99	313,25	315,12			
40	125,45	127,32	70	220,95	222,81	100	316,45	318,30			
41	128,65	130,50	71	224,15	225,99	101	319,65	321,48			
42	131,85	133,69	72	227,30	229,18	102	322,80	324,66			
43	135,00	136,87	73	230,50	232,33	103	326,00	327,85			
44	138,20	140,05	74	233,70	235,54	104	329,20	331,03			

