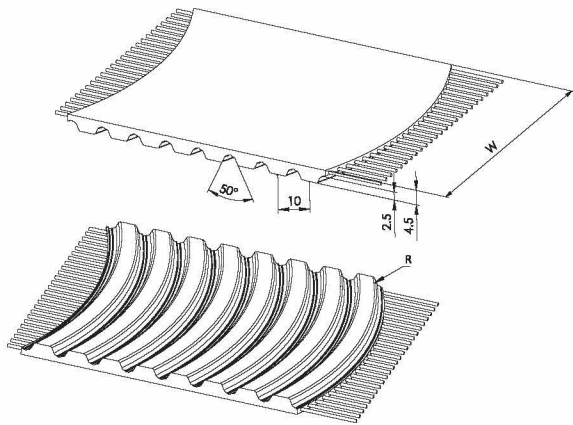




CAT 10



Belt characteristics

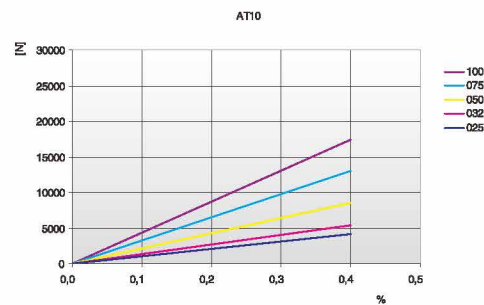
- Polyurethane self tracking timing belt with steel tension cords
- Metric pitch 10 mm
- Tooth profile and dimension are optimised to guarantee uniform load distribution and minimum deformation under load
- High resistance and low stretch steel cords to guarantee high stability and low elongation
- Reduced polygonal effect with reduced drive vibration
- Particularly suitable for linear drives and medium power transmission applications with high axial and angular positioning accuracy
- Negative length tolerance available on request

- 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	4170	2085	16150	1042500	0,15
32	5390	2695	20900	1347500	0,19
50	8580	4290	33250	2145000	0,30
75	12990	6495	50350	3247500	0,44
100	17400	8700	67450	4350000	0,59

Load / Elongation [%]

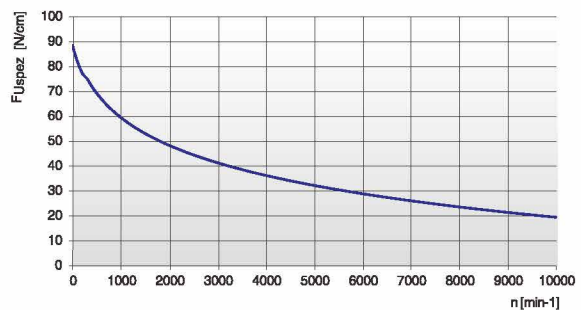


Other widths are available on request.

Tooth shear strength

rpm	F _{Uspez} [N/cm]	rpm	F _{Uspez} [N/cm]	rpm	F _{Uspez} [N/cm]	rpm	F _{Uspez} [N/cm]
0	88,57	800	62,83	1900	49,16	4500	34,08
20	87,06	900	61,09	2000	48,29	5000	32,17
40	85,66	1000	59,49	2200	46,67	5500	30,43
60	84,35	1100	58,02	2400	45,18	6000	28,84
80	83,13	1200	56,66	2600	43,80	6500	27,37
100	81,99	1300	55,39	2800	42,51	7000	26,01
200	77,36	1400	54,20	3000	41,30	7500	24,73
300	75,09	1440	53,74	3200	40,17	8000	23,53
400	71,99	1500	53,08	3400	39,09	8500	22,41
500	69,27	1600	52,02	3600	38,08	9000	21,34
600	66,88	1700	51,02	3800	37,11	9500	20,33
700	64,75	1800	50,06	4000	36,20	10000	19,37

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

AT 10

Specialties

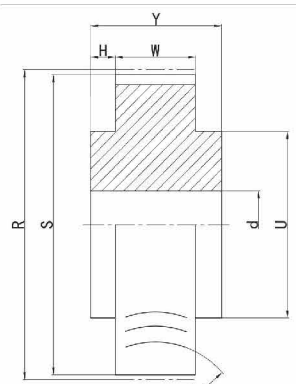
Belt width b [mm]	ARAMID CORD		STAINLESS STEEL		HFE High Flexibility	
	F _{Tzul} [N] M type	F _{Br} [N]	F _{Tzul} [N] M type	F _{Br} [N]	F _{Tzul} [N] M type	F _{Br} [N]
25	3740	17000	3060	12750	3400	14450
32	4840	22000	3960	16500	4400	18700
50	7700	35000	6300	26250	7000	29750
75	11660	53000	9540	39750	-	-
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

Code	ΦD±0.1	ΦS	ΦR	ΦU	CAT10/25-W=30		CAT10/32-W=35		CAT10/50-W=55		CAT10/75-W=80		CAT10/100-W=105		d
					Y	H	Y	H	Y	H	Y	H	Y	H	
20 CAT10	62.8	61.84	63.66	46	40	5	47	6	65	5	90	5	115	5	12H7
21 CAT10	66	65.02	66.84	50	40	5	47	6	65	5	90	5	115	5	12H7
22 CAT10	69.2	68.21	70.03	53	40	5	47	6	65	5	90	5	115	5	12H7
23 CAT10	72.4	71.39	73.21	56	40	5	47	6	65	5	90	5	115	5	12H7
24 CAT10	75.6	74.57	76.39	57	40	5	47	6	65	5	90	5	115	5	12H7
25 CAT10	78.8	77.76	79.58	59	40	5	47	6	65	5	90	5	115	5	12H7
26 CAT10	82	80.94	82.76	62	40	5	47	6	65	5	90	5	115	5	12H7
27 CAT10	85.1	84.12	85.94	64	40	5	47	6	65	5	90	5	115	5	12H7
28 CAT10	88.4	87.31	89.13	67	40	5	47	6	65	5	90	5	115	5	12H7
29 CAT10	91.5	90.49	92.31	70	40	5	47	6	65	5	90	5	115	5	12H7
30 CAT10	94.7	93.67	95.49	73	40	5	47	6	65	5	90	5	115	5	12H7
31 CAT10	97.9	96.86	98.68	77	40	5	47	6	65	5	90	5	115	5	12H7
32 CAT10	101.1	100.04	101.86	80	40	5	47	6	65	5	90	5	115	5	12H7
33 CAT10	104.3	103.22	105.04	83	40	5	47	6	65	5	90	5	115	5	12H7
34 CAT10	107.4	106.4	108.22	86	40	5	47	6	65	5	90	5	115	5	12H7
35 CAT10	110.6	109.59	111.41	90	40	5	47	6	65	5	90	5	115	5	16H7
36 CAT10	113.8	112.77	114.59	92	40	5	47	6	65	5	90	5	115	5	16H7
37 CAT10	117	115.95	117.77	95	40	5	47	6	65	5	90	5	115	5	16H7
38 CAT10	120.2	119.14	120.96	99	40	5	47	6	65	5	90	5	115	5	16H7
39 CAT10	123.4	122.32	124.14	102	40	5	47	6	65	5	90	5	115	5	16H7
40 CAT10	126.5	125.5	127.32	105	40	5	47	6	65	5	90	5	115	5	16H7
41 CAT10	129.7	128.69	130.51	108	40	5	47	6	65	5	90	5	115	5	16H7
42 CAT10	132.9	131.87	133.69	111	40	5	47	6	65	5	90	5	115	5	16H7
43 CAT10	136.1	135.05	136.87	115	40	5	47	6	65	5	90	5	115	5	16H7
44 CAT10	139.3	138.24	140.06	118	40	5	47	6	65	5	90	5	115	5	16H7
45 CAT10	142.5	141.42	143.24	121	40	5	47	6	65	5	90	5	115	5	16H7
46 CAT10	145.6	144.6	146.42	124	40	5	47	6	65	5	90	5	115	5	16H7
47 CAT10	148.8	147.79	149.61	127	40	5	47	6	65	5	90	5	115	5	16H7
48 CAT10	152	150.97	152.79	130	40	5	47	6	65	5	90	5	115	5	16H7
49 CAT10	155.2	154.15	155.97	134	40	5	47	6	65	5	90	5	115	5	20H7
50 CAT10	158.4	157.33	159.15	137	40	5	47	6	65	5	90	5	115	5	20H7
51 CAT10	161.6	160.52	162.34	140	40	5	47	6	65	5	90	5	115	5	20H7
52 CAT10	164.7	163.7	165.52	143	40	5	47	6	65	5	90	5	115	5	20H7
53 CAT10	167.9	166.88	168.7	146	40	5	47	6	65	5	90	5	115	5	20H7
54 CAT10	171.1	170.07	171.89	150	40	5	47	6	65	5	90	5	115	5	20H7
55 CAT10	174.3	173.25	175.07	153	40	5	47	6	65	5	90	5	115	5	20H7
56 CAT10	177.5	176.43	178.25	156	40	5	47	6	65	5	90	5	115	5	20H7
57 CAT10	180.7	179.62	181.44	159	40	5	47	6	65	5	90	5	115	5	20H7
58 CAT10	183.8	182.8	184.62	162	40	5	47	6	65	5	90	5	115	5	20H7
59 CAT10	187	185.98	187.8	165	40	5	47	6	65	5	90	5	115	5	20H7
60 CAT10	190.2	189.17	190.99	169	40	5	47	6	65	5	90	5	115	5	20H7
61 CAT10	193.4	192.35	194.17	172	40	5	47	6	65	5	90	5	115	5	20H7
62 CAT10	196.6	195.53	197.35	175	40	5	47	6	65	5	90	5	115	5	20H7
63 CAT10	199.8	198.71	200.53	178	40	5	47	6	65	5	90	5	115	5	20H7
64 CAT10	202.9	201.9	203.72	181	40	5	47	6	65	5	90	5	115	5	20H7
65 CAT10	206.1	205.08	206.9	185	40	5	47	6	65	5	90	5	115	5	20H7
66 CAT10	209.3	208.26	210.08	188	40	5	47	6	65	5	90	5	115	5	20H7
67 CAT10	212.5	211.45	213.27	191	40	5	47	6	65	5	90	5	115	5	20H7
68 CAT10	215.7	214.63	216.45	194	40	5	47	6	65	5	90	5	115	5	20H7
69 CAT10	218.9	217.81	219.63	197	40	5	47	6	65	5	90	5	115	5	20H7
70 CAT10	222	221	222.82	201	40	5	47	6	65	5	90	5	115	5	20H7
71 CAT10	225.2	224.18	226	204	40	5	47	6	65	5	90	5	115	5	20H7
72 CAT10	228.4	227.36	229.18	207	40	5	47	6	65	5	90	5	115	5	20H7



"T" value is according to belt width