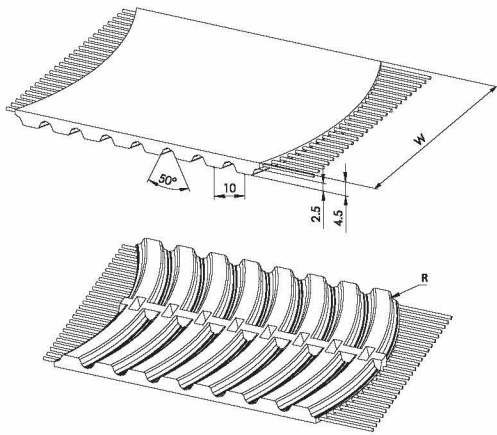




# CATK 10



### Belt characteristics

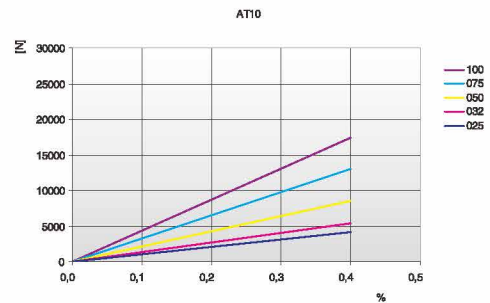
- Polyurethane self tracking timing belt with steel tension cords
- Metric pitch 10 mm
- Tooth profile and dimension are optimised to guarantee uniform load distribution and minimum deformation under load
- High resistance and low stretch steel cords to guarantee high stability and low elongation
- Reduced 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 <sub>Tzul</sub> [N]	Allowable tensile load Type V F <sub>Tzul</sub> [N]	Breaking load Type M F <sub>Br</sub> [N]	Specific spring rate C <sub>spez</sub> [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 [ % ]

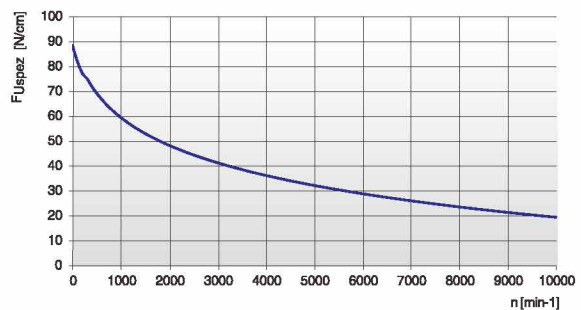


Other widths are available on request.

### Tooth shear strength

rpm	F <sub>Uspez</sub> [N/cm]	rpm	F <sub>Uspez</sub> [N/cm]	rpm	F <sub>Uspez</sub> [N/cm]	rpm	F <sub>Uspez</sub> [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<sub>Uspez</sub> 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<sub>u</sub> transmissible by the belt in the drive is calculated by:

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

- F<sub>u</sub> [N] = peripheral force
- F<sub>Uspez</sub> [N/cm] = specific load
- z<sub>e</sub> = number of teeth in mesh in the small pulley
- z<sub>e</sub>max = max. no of teeth in mesh to be considered for the calculation of the drive
- z<sub>e</sub>max = 12 for ELATECH® M
- z<sub>e</sub>max = 6 for ELATECH® V
- b [cm] = belt width in cm

# AT 10

## Specialties

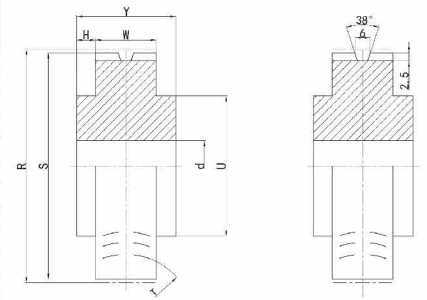
Belt width b [mm]	ARAMID CORD		STAINLESS STEEL		HFE High Flexibility	
	F <sub>Tzul</sub> [N] M type	F <sub>Br</sub> [N]	F <sub>Tzul</sub> [N] M type	F <sub>Br</sub> [N]	F <sub>Tzul</sub> [N] M type	F <sub>Br</sub> [N]
25	3740	17000	3060	12750	3400	14450
32	4840	22000	3960	16500	4400	18700
50	7700	35000	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 <sub>min</sub>	15	15	20	12
	Flat idler running on belt teeth d <sub>min</sub>	50 mm	50 mm	70 mm	50 mm
Drive with reverse bending 	Timing pulley z <sub>min</sub>	25	20	40	20
	Flat idler running on belt back d <sub>min</sub>	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		d
					Y	H	Y	H	Y	H	Y	H	
20 CATK10	62.8	61.84	63.66	46	47	6	65	5	90	5	115	5	12H7
21 CATK10	66	65.02	66.84	50	47	6	65	5	90	5	115	5	12H7
22 CATK10	69.2	68.21	70.03	53	47	6	65	5	90	5	115	5	12H7
23 CATK10	72.4	71.39	73.21	56	47	6	65	5	90	5	115	5	12H7
24 CATK10	75.6	74.57	76.39	57	47	6	65	5	90	5	115	5	12H7
25 CATK10	78.8	77.76	79.58	59	47	6	65	5	90	5	115	5	12H7
26 CATK10	82	80.94	82.76	62	47	6	65	5	90	5	115	5	12H7
27 CATK10	85.1	84.12	85.94	64	47	6	65	5	90	5	115	5	12H7
28 CATK10	88.4	87.31	89.13	67	47	6	65	5	90	5	115	5	12H7
29 CATK10	91.5	90.49	92.31	70	47	6	65	5	90	5	115	5	12H7
30 CATK10	94.7	93.67	95.49	73	47	6	65	5	90	5	115	5	12H7
31 CATK10	97.9	96.86	98.68	77	47	6	65	5	90	5	115	5	12H7
32 CATK10	101.1	100.04	101.86	80	47	6	65	5	90	5	115	5	12H7
33 CATK10	104.3	103.22	105.04	83	47	6	65	5	90	5	115	5	12H7
34 CATK10	107.4	106.4	108.22	86	47	6	65	5	90	5	115	5	12H7
35 CATK10	110.6	109.59	111.41	90	47	6	65	5	90	5	115	5	16H7
36 CATK10	113.8	112.77	114.59	92	47	6	65	5	90	5	115	5	16H7
37 CATK10	117	115.95	117.77	95	47	6	65	5	90	5	115	5	16H7
38 CATK10	120.2	119.14	120.96	99	47	6	65	5	90	5	115	5	16H7
39 CATK10	123.4	122.32	124.14	102	47	6	65	5	90	5	115	5	16H7
40 CATK10	126.5	125.5	127.32	105	47	6	65	5	90	5	115	5	16H7
41 CATK10	129.7	128.69	130.51	108	47	6	65	5	90	5	115	5	16H7
42 CATK10	132.9	131.87	133.69	111	47	6	65	5	90	5	115	5	16H7
43 CATK10	136.1	135.05	136.87	115	47	6	65	5	90	5	115	5	16H7
44 CATK10	139.3	138.24	140.06	118	47	6	65	5	90	5	115	5	16H7
45 CATK10	142.5	141.42	143.24	121	47	6	65	5	90	5	115	5	16H7
46 CATK10	145.6	144.6	146.42	124	47	6	65	5	90	5	115	5	16H7
47 CATK10	148.8	147.79	149.61	127	47	6	65	5	90	5	115	5	16H7
48 CATK10	152	150.97	152.79	130	47	6	65	5	90	5	115	5	16H7
49 CATK10	155.2	154.15	155.97	134	47	6	65	5	90	5	115	5	20H7
50 CATK10	158.4	157.33	159.15	137	47	6	65	5	90	5	115	5	20H7
51 CATK10	161.6	160.52	162.34	140	47	6	65	5	90	5	115	5	20H7
52 CATK10	164.7	163.7	165.52	143	47	6	65	5	90	5	115	5	20H7
53 CATK10	167.9	166.88	168.7	146	47	6	65	5	90	5	115	5	20H7
54 CATK10	171.1	170.07	171.89	150	47	6	65	5	90	5	115	5	20H7
55 CATK10	174.3	173.25	175.07	153	47	6	65	5	90	5	115	5	20H7
56 CATK10	177.5	176.43	178.25	156	47	6	65	5	90	5	115	5	20H7
57 CATK10	180.7	179.62	181.44	159	47	6	65	5	90	5	115	5	20H7
58 CATK10	183.8	182.8	184.62	162	47	6	65	5	90	5	115	5	20H7
59 CATK10	187	185.98	187.8	165	47	6	65	5	90	5	115	5	20H7
60 CATK10	190.2	189.17	190.99	169	47	6	65	5	90	5	115	5	20H7
61 CATK10	193.4	192.35	194.17	172	47	6	65	5	90	5	115	5	20H7
62 CATK10	196.6	195.53	197.35	175	47	6	65	5	90	5	115	5	20H7
63 CATK10	199.8	198.71	200.53	178	47	6	65	5	90	5	115	5	20H7
64 CATK10	202.9	201.9	203.72	181	47	6	65	5	90	5	115	5	20H7
65 CATK10	206.1	205.08	206.9	185	47	6	65	5	90	5	115	5	20H7
66 CATK10	209.3	208.26	210.08	188	47	6	65	5	90	5	115	5	20H7
67 CATK10	212.5	211.45	213.27	191	47	6	65	5	90	5	115	5	20H7
68 CATK10	215.7	214.63	216.45	194	47	6	65	5	90	5	115	5	20H7
69 CATK10	218.9	217.81	219.63	197	47	6	65	5	90	5	115	5	20H7
70 CATK10	222	221	222.82	201	47	6	65	5	90	5	115	5	20H7
71 CATK10	225.2	224.18	226	204	47	6	65	5	90	5	115	5	20H7
72 CATK10	228.4	227.36	229.18	207	47	6	65	5	90	5	115	5	20H7



"T" value is according to belt width