

Belt characteristics

- Polyurethane timing belt with helical offset tooth, high tensile load steel cords and high torque capacity
- **Self tracking no need of pulley flanges**
- Metric pitch 8 mm
- **Extremely reduced noise generation**
- Offers excellent operational reliability in linear positioning and medium power transmission applications
- The special profile allows most compact drive
- White colour and grey fabric on tooth side (PAZ) as standard

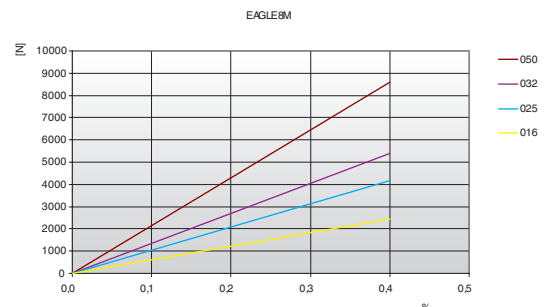
- Width tolerance: $\pm 0,8$ [mm]
- Length tolerance: $\pm 0,8$ [mm/m]
- Thickness tolerance: $\pm 0,3$ [mm]

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]
16	2450	1200	9500	612500	0,085
25	4170	2100	16150	1042500	0,145
32	5390	2700	20900	1347500	0,180
50	8580	4300	33250	2145000	0,300

Other widths are available on request.

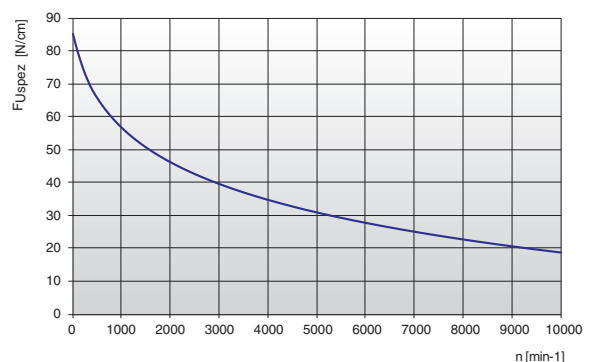
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	85,00	800	59,66	1900	46,95	4500	32,75
20	83,78	900	58,05	2000	46,14	5000	30,94
40	82,62	1000	56,58	2200	44,62	5500	29,30
60	81,49	1100	55,22	2400	43,22	6000	27,79
80	80,42	1200	53,95	2600	41,91	6500	26,40
100	79,38	1300	52,77	2800	40,70	7000	25,11
200	74,78	1400	51,66	3000	39,56	7500	23,90
300	71,01	1440	51,23	3200	38,49	8000	22,77
400	67,93	1500	50,61	3400	37,48	8500	21,70
500	65,52	1600	49,62	3600	36,52	9000	20,69
600	63,36	1700	48,69	3800	35,61	9500	19,73
700	61,42	1800	47,80	4000	34,75	10000	18,82

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:

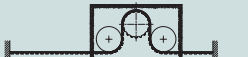
$$F_u [N] = F_{Uspez} \cdot z_e \cdot b$$

- $F_u [N]$ = 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

Specialties

Belt width b [mm]	ARAMID CORD		STAINLESS STEEL		HPL High Performance	
	F_{Tzul} [N] M type	F_{Br} [N]	F_{Tzul} [N] M type	F_{Br} [N]	F_{Tzul} [N] M type	F_{Br} [N]
16	2200	10000	1800	7500	3840	14000
25	3740	17000	3060	12750	6720	24500
32	4840	22000	3960	16500	8640	31500
50	7700	35000	6300	26250	14400	52500

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord		
		STANDARD	STAINLESS	HPL
Drive without reverse bending 	Timing pulley z_{min}	20	24	30
	Flat idler running on belt teeth d_{min}	50 mm	70 mm	80 mm
Drive with reverse bending 	Timing pulley z_{min}	30	40	30
	Flat idler running on belt back d_{min}	120 mm	120 mm	150 mm

Timing pulleys

z	da	dw	z	da	dw	z	da	dw	z	da	dw
18	44,46	45,83	48	120,86	122,23	78	197,25	198,62	108	273,64	275,01
19	47,01	48,38	49	123,40	124,77	79	199,80	201,17	109	276,19	277,56
20	49,56	50,93	50	125,95	127,32	80	202,35	203,72	110	278,74	280,11
21	52,10	53,47	51	128,50	129,87	81	204,89	206,26	111	281,29	282,66
22	54,65	56,02	52	131,05	132,41	82	207,44	208,81	112	283,84	285,21
23	57,20	58,57	53	133,59	134,96	83	209,98	211,35	113	286,38	287,75
24	59,75	61,12	54	136,14	137,51	84	212,53	213,90	114	288,93	290,30
25	62,29	63,66	55	138,68	140,05	85	215,08	216,45	115	291,47	292,84
26	64,84	66,21	56	141,23	142,60	86	217,63	219,00	116	294,02	295,39
27	67,38	68,75	57	143,78	145,15	87	220,17	221,54	117	296,57	297,94
28	70,08	71,30	58	146,32	147,69	88	222,72	224,09	118	299,11	300,48
29	72,59	73,84	59	148,87	150,24	89	225,26	226,63	119	301,66	303,03
30	75,13	76,39	60	151,42	152,79	90	227,81	229,18	120	304,2	305,57
31	77,65	78,94	61	153,96	155,33	91	230,35	231,72			
32	80,16	81,49	62	156,52	157,89	92	232,90	234,27			
33	82,68	84,03	63	159,06	160,43	93	235,45	236,82			
34	85,21	86,58	64	161,6	162,97	94	238,00	239,37			
35	87,76	89,12	65	164,15	165,52	95	240,54	241,91			
36	90,30	91,67	66	166,69	168,06	96	243,09	244,46			
37	92,85	94,22	67	169,24	170,61	97	245,63	247,00			
38	95,40	96,77	68	171,79	173,16	98	248,18	249,55			
39	97,94	99,31	69	174,33	175,70	99	250,73	252,10			
40	100,49	101,86	70	176,88	178,25	100	253,28	254,67			
41	103,04	104,40	71	179,43	180,80	101	255,82	257,19			
42	105,58	106,95	72	181,98	183,35	102	258,37	259,74			
43	108,13	109,50	73	184,52	185,89	103	260,91	262,28			
44	110,68	112,05	74	187,07	188,44	104	263,46	264,83			
45	113,22	114,59	75	189,61	190,98	105	266,01	267,38			
46	115,77	117,14	76	192,16	193,53	106	268,55	269,92			
47	118,31	119,68	77	194,71	196,08	107	271,1	272,47			

