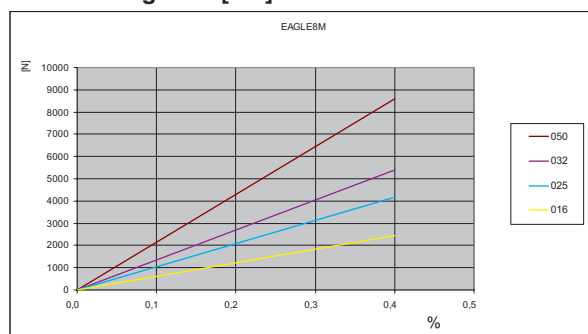

Belt characteristics

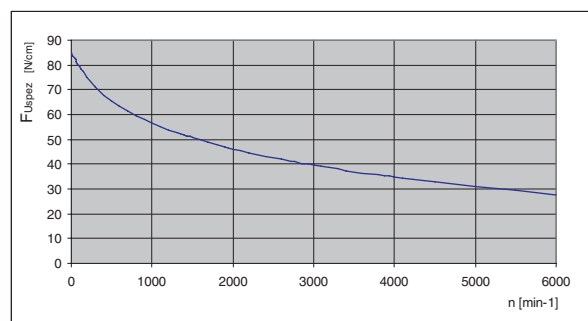
- Polyurethane timing belt with helical offset tooth, high tensile load steel cords and high torque capacity.
 - **Self tracking no need of pulley flanges**
 - Metric pitch 8 mm
 - **Extremely reduced noise generation**
 - Offers excellent operational reliability in linear positioning and medium power transmission applications
 - The special profile allows most compact drive
- 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	2470	1200	8640	612500	0,085
25	4200	2100	14700	1042500	0,145
32	5430	2700	19000	1347500	0,180
50	8640	4300	30250	2145000	0,300

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	4000	34,75
20	83,78	900	58,05	2000	46,14	4500	32,75
40	82,62	1000	56,58	2200	44,62	5000	30,94
60	81,49	1100	55,22	2400	43,22	5500	29,30
80	80,42	1200	53,95	2600	41,91	6000	27,79
100	79,38	1300	52,77	2800	40,70		
200	74,78	1400	51,66	2880	40,24		
300	71,01	1440	51,23	3000	39,56		
400	67,93	1500	50,61	3200	38,49		
500	65,52	1600	49,62	3400	37,48		
600	63,36	1700	48,69	3600	36,52		
700	61,42	1800	47,80	3800	35,61		

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_{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

PROFILE	Belt width b [mm]	STAINLESS STEEL		HPL High performance	
		F_{Tzul} [N] M type	F_{Br} [N]	F_{Tzul} [N] M type	F_{Br} [N]
E 8M	016	1800	7500	3840	14000
	025	3060	12750	6720	24500
	032	3960	16500	8640	31500
	050	6300	26250	14400	52500

Flexibility

Minimum pulley number of teeth and minimum idler diameter				
E 8M		TYPE OF CORD		
		STANDARD	STAINLESS	HPL
Drive without reverse bending 	Timing pulley z_{min}	20	24	28
	Idler running on belt teeth d_{min}	50 mm	80 mm	80 mm
Drive with reverse bending 	Timing pulley z_{min}	20	24	28
	Idler running on belt back d_{min}	100 mm	100 mm	100 mm

Timing pulleys

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

