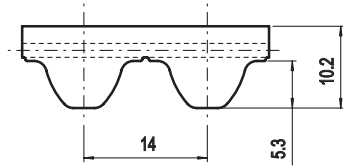


STD14M



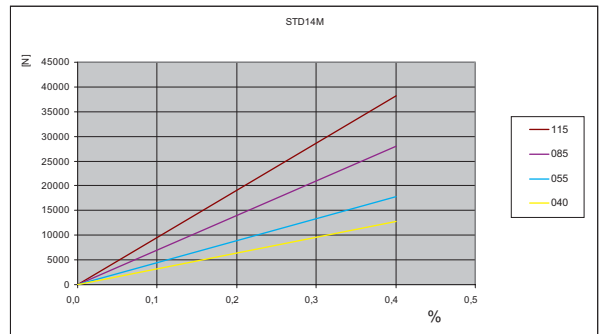
Belt characteristics

- Polyurethane timing belt with involute tooth, high tensile load steel cords and high torque capacity. Produced according to ISO 13050
 - Metric pitch 14 mm
 - Low noise generation in high speed drives
 - Tension cords with increased tensile load for lower elongation
 - Superior performance in lifting applications
 - The special profile allows smooth running properties
- Width tolerance: $\pm 1,0$ [mm]
 - Length tolerance: $\pm 0,5$ [mm/m]
 - Thickness tolerance: $\pm 0,4$ [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]
40	12750	6375	48000	3187500	0,48
55	17850	8925	67200	4462500	0,65
85	28050	14025	105600	7012500	1,10
115	38250	19125	144000	9562500	1,40

Load / Elongation [%]

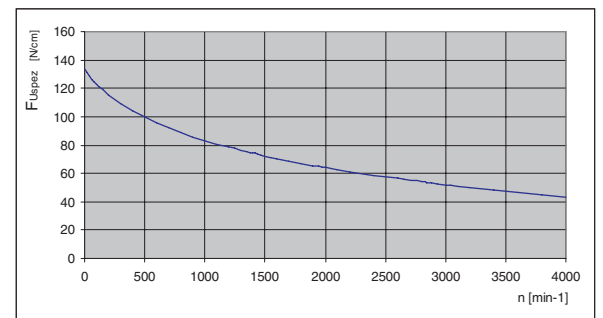


Other widths are available on request.

Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	134,00	800	88,80	1900	65,49	4000	43,24
20	131,31	900	85,85	2000	64,01		
40	128,83	1000	83,14	2200	61,23		
60	126,53	1100	80,63	2400	58,68		
80	124,42	1200	78,31	2600	56,30		
100	122,46	1300	76,14	2800	54,09		
200	114,77	1400	74,11	2880	53,24		
300	109,29	1440	73,33	3000	52,01		
400	104,19	1500	72,19	3200	50,06		
500	99,65	1600	70,38	3400	48,22		
600	95,64	1700	68,67	3600	46,48		
700	92,04	1800	67,04	3800	44,82		

Tooth shear strenght / 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

Flexibility

Minimum pulley number of teeth and minimum idler diameter		
STD14M		TYPE OF CORD
		STANDARD
 Drive without reverse bending	Timing pulley z_{min}	32
	Idler running on belt teeth d_{min}	140 mm
 Drive with reverse bending	Timing pulley z_{min}	32
	Idler running on belt back d_{min}	250 mm

Timing pulleys

z	da	dw	z	da	dw	z	da	dw	z	da	dw
28	122,12	124,77	57	251,22	254,01	86	380,46	383,23	115	509,69	512,47
29	126,58	129,22	58	255,68	258,46	87	384,91	387,70	116	514,14	516,93
30	130,99	133,69	59	260,14	262,91	88	389,37	392,15	117	518,60	521,38
31	135,45	138,14	60	264,60	267,38	89	393,83	396,60	118	523,06	525,83
32	139,88	142,59	61	269,04	271,83	90	398,29	401,07	119	527,51	530,30
33	144,35	147,06	62	273,50	276,28	91	402,73	405,52	120	531,97	534,75
34	148,79	151,51	63	277,96	280,75	92	407,19	409,97			
35	153,25	155,96	64	282,42	285,20	93	411,65	414,44			
36	157,68	160,41	65	286,88	289,65	94	416,10	418,89			
37	162,14	164,88	66	291,32	294,11	95	420,56	423,35			
38	166,60	169,34	67	295,78	298,56	96	425,02	427,80			
39	171,02	173,79	68	300,24	303,03	97	429,48	432,25			
40	175,48	178,24	69	304,70	307,48	98	433,94	436,72			
41	179,92	182,71	70	309,16	311,93	99	438,38	441,17			
42	184,37	187,16	71	313,61	316,40	100	442,84	445,62			
43	188,83	191,61	72	318,07	320,85	101	447,30	450,09			
44	193,29	196,08	73	322,53	325,30	102	451,76	454,54			
45	197,75	200,53	74	326,98	329,77	103	456,21	459,00			
46	202,21	204,98	75	331,44	334,22	104	460,67	463,45			
47	206,65	209,43	76	335,90	338,67	105	465,13	467,90			
48	211,11	213,90	77	340,34	343,12	106	469,58	472,37			
49	215,57	218,35	78	344,80	347,59	107	474,03	476,82			
50	220,03	222,80	79	349,26	352,04	108	478,49	481,28			
51	224,49	227,27	80	353,72	356,49	109	482,95	485,74			
52	228,95	231,72	81	358,17	360,96	110	487,41	490,19			
53	233,39	236,18	82	362,63	365,41	111	491,87	494,64			
54	237,85	240,64	83	367,09	369,86	112	496,32	499,10			
55	242,30	245,09	84	371,54	374,33	113	500,78	503,55			
56	246,76	249,55	85	376,00	378,78	114	505,23	508,02			

