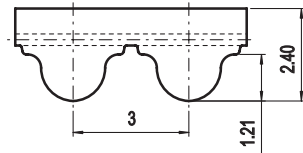


HTD3M



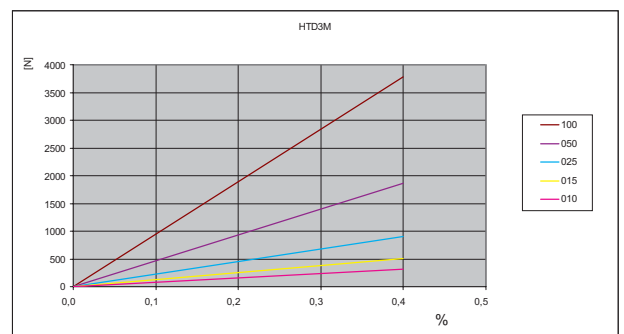
Belt characteristics

- Polyurethane timing belt with round tooth profile and high tensile load tension cords. Produced according to ISO 13050
 - Metric pitch 3 mm
 - The round tooth profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement.
 - Widely used in linear positioning, light power transmission applications.
- Width tolerance: $\pm 0,5$ [mm]
 - Length tolerance: $\pm 0,5$ [mm/m]
 - Thickness tolerance: $\pm 0,2$ [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]
10	320	160	1250	80000	0,02
15	510	255	2000	127500	0,03
25	900	450	3500	225000	0,05
50	1860	930	7250	465000	0,10
100	3780	1890	14750	945000	0,20

Load / Elongation [%]

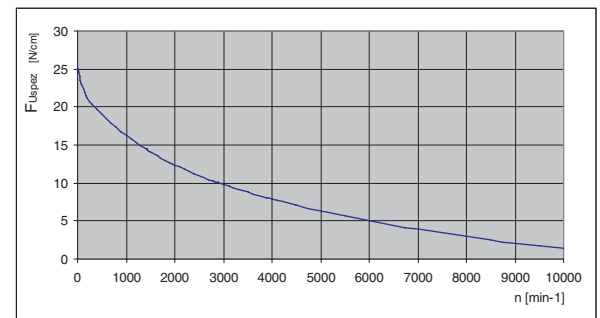


Other widths are available on request.

Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	25,20	800	17,30	1900	12,67	4500	7,05
20	24,60	900	16,75	2000	12,36	5000	6,32
40	24,06	1000	16,24	2200	11,77	5500	5,66
60	23,57	1100	15,75	2400	11,22	6000	5,04
80	23,12	1200	15,29	2600	10,71	6500	4,47
100	22,72	1300	14,86	2800	10,24	7000	3,94
200	21,22	1400	14,45	3000	9,79	7500	3,44
300	20,31	1440	14,29	3200	9,36	8000	2,98
400	19,75	1500	14,06	3400	8,96	8500	2,54
500	19,14	1600	13,69	3600	8,57	9000	2,12
600	18,50	1700	13,33	3800	8,21	9500	1,72
700	17,88	1800	12,99	4000	7,86	10000	1,35

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

Flexibility

Minimum pulley number of teeth and minimum idler diameter		
HTD3M		TYPE OF CORD
		STANDARD
Drive without reverse bending 	Timing pulley z_{min}	16
	Idler running on belt teeth d_{min}	30 mm
Drive with reverse bending 	Timing pulley z_{min}	20
	Idler running on belt back d_{min}	30 mm

Timing pulleys

z	da	dw	z	da	dw	z	da	dw	z	da	dw
10	8,79	9,55	43	40,30	41,06	76	71,82	72,58	109	103,33	104,09
11	9,74	10,50	44	41,26	42,02	77	72,77	73,53	110	104,29	105,05
12	10,70	11,46	45	42,21	42,97	78	73,73	74,49	111	105,24	106,00
13	11,65	12,41	46	43,17	43,93	79	74,68	75,44	112	106,20	106,96
14	12,61	13,37	47	44,12	44,88	80	75,64	76,40	113	107,15	107,91
15	13,56	14,32	48	45,08	45,84	81	76,59	77,35	114	108,11	108,87
16	14,52	15,28	49	46,03	46,79	82	77,55	78,31	115	109,06	109,82
17	15,47	16,23	50	46,99	47,75	83	78,50	79,26	116	110,02	110,78
18	16,43	17,19	51	47,94	48,70	84	79,46	80,22	117	110,97	111,73
19	17,38	18,14	52	48,90	49,66	85	80,41	81,17	118	111,93	112,69
20	18,34	19,10	53	49,85	50,61	86	81,37	82,13	119	112,88	113,64
21	19,29	20,05	54	50,81	51,57	87	82,32	83,08	120	113,83	114,59
22	20,25	21,01	55	51,76	52,52	88	83,28	84,04	121	114,79	115,55
23	21,20	21,96	56	52,72	53,48	89	84,23	84,99	122	115,74	116,50
24	22,16	22,92	57	53,67	54,43	90	85,19	85,95	123	116,70	117,46
25	23,11	23,87	58	54,63	55,39	91	86,14	86,90	124	117,65	118,41
26	24,07	24,83	59	55,58	56,34	92	87,10	87,86	125	118,61	119,37
27	25,02	25,78	60	56,54	57,30	93	88,05	88,81	126	119,56	120,32
28	25,98	26,74	61	57,49	58,25	94	89,01	89,77	127	120,52	121,28
29	26,93	27,69	62	58,45	59,21	95	89,96	90,72	128	121,47	122,23
30	27,89	28,65	63	59,40	60,16	96	90,92	91,68	129	122,43	123,19
31	28,84	29,60	64	60,36	61,12	97	91,87	92,63	130	123,38	124,14
32	29,80	30,56	65	61,31	62,07	98	92,83	93,59	131	124,34	125,10
33	30,75	31,51	66	62,27	63,03	99	93,78	94,54	132	125,29	126,05
34	31,71	32,47	67	63,22	63,98	100	94,74	95,50	133	126,25	127,01
35	32,66	33,42	68	64,18	64,94	101	95,69	96,45	134	127,20	127,96
36	33,62	34,38	69	65,13	65,89	102	96,65	97,41	135	128,16	128,92
37	34,57	35,33	70	66,09	66,85	103	97,60	98,36	136	129,11	129,87
38	35,53	36,29	71	67,04	67,80	104	98,56	99,32	137	130,07	130,83
39	36,48	37,24	72	68,00	68,76	105	99,51	100,27	138	131,02	131,78
40	37,44	38,20	73	68,95	69,71	106	100,47	101,23	139	131,98	132,74
41	38,39	39,15	74	69,91	70,67	107	101,42	102,18	140	132,93	133,69
42	39,35	40,11	75	70,86	71,62	108	102,38	103,14			

