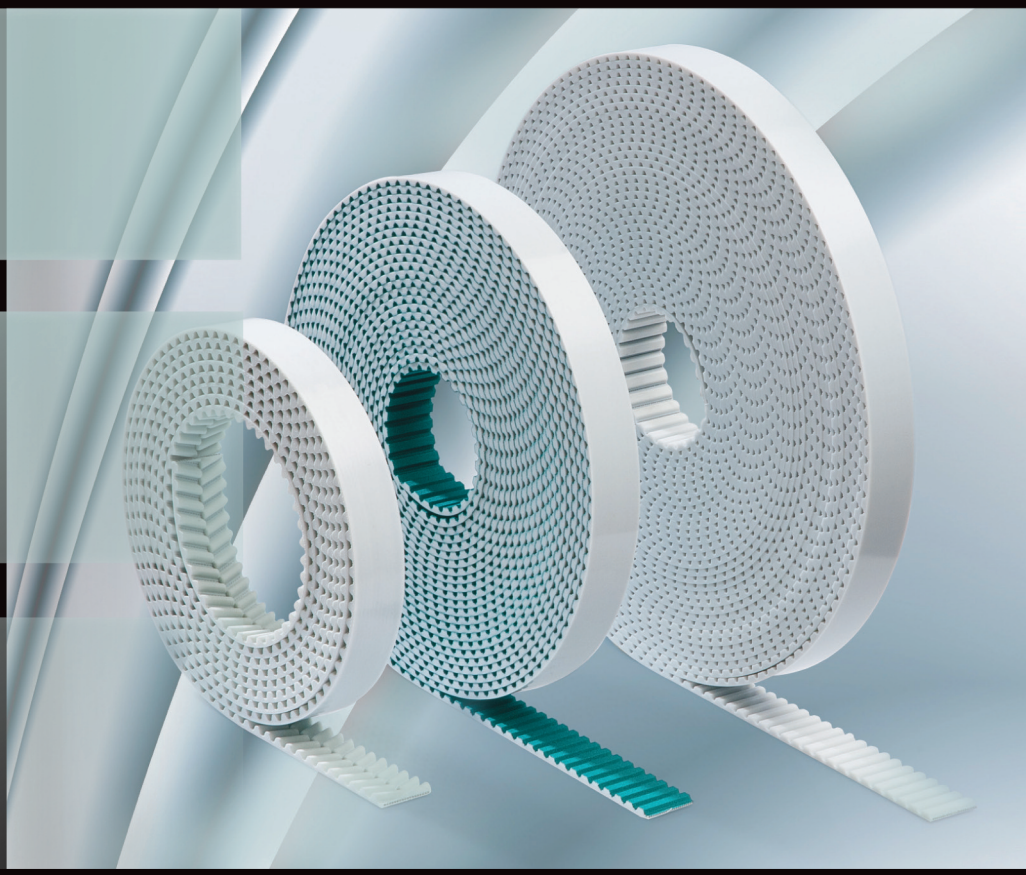
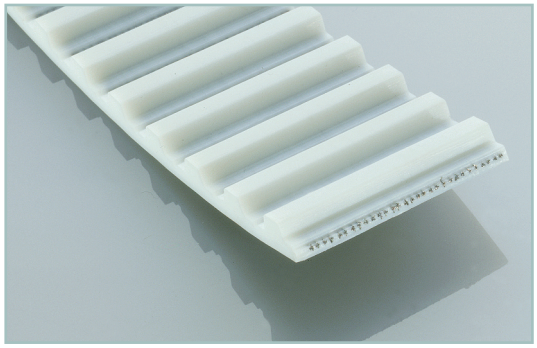
ELATECH® M and V



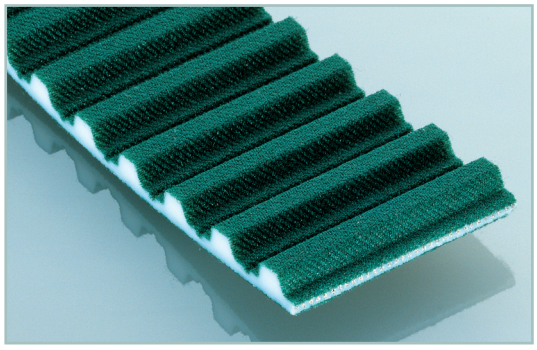
Elatech
Technology in Motion.

The timing belts manufactured by ELATECH® have been designed to comply with every need of the design engineer in linear motion, power transmission and in conveying applications where precise synchronisation is needed. ELATECH® timing belts are manufactured with the body in thermoplastic polyurethane with excellent wear resistance and with high tensile strength steel cords. A special polyamide fabric on the tooth (on request) reduces the coefficient of friction, improves the tooth engagement and reduces noise.

Standard belt



Belt with Polyamide fabric on teeth PAZ



Product declaration

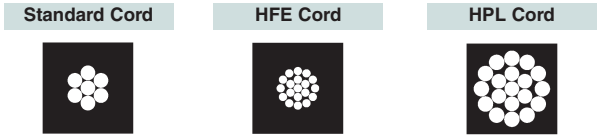
- ELATECH® belts are certified to be according RoHS 2011/65/UE
- On request, it is possible to deliver belts:
  - with antistatic properties according to ISO9563
  - other special certifications available on request

Colour

The standard colour ELATECH® timing belt is white.
On demand it is possible to deliver belts in different colours.

Tension Cords

In order to maximize the application of ELATECH® timing belts, construction with special cords is available on request:



- **HPL** high performance cords: the cord cross section is increased compared with standard. This results in a lower belt elongation and more precise positioning accuracy.

- **HFE** high Flexibility cords: the cord cross section is spread on a higher number of single filaments. This results in a lower bending stress and therefore in a higher resistance at reverse bending of the cords.
  They allow using pulleys and idlers up to 30% smaller in diameter compared to standard.

- **INOX** stainless steel cords are suitable for application in aggressive environments. They have lower tensile strength than standard cords.

- **ARAMID**: increases belt flexibility and decreases belt weight.

It is to be noted that steel cords offer the best technical performances and dimensional stability of the belts.
Belt length tolerances are valid for steel cord reinforcement. In case of other material (aramid, fibreglass) length tolerance may change.
For application with special cords ask our engineering department.

Mechanical properties:

- Excellent dimensional stability
- High abrasion resistance
- Low pretension and shaft load
- Maintenance free
- High linear and angular positioning precision
- High efficiency

Chemical properties:

High resistance to:

- Hydrolysis
- Ozone
- UVA
- Ageing
- Oils, greases and fats
- Gasoline
- Good resistance to acids
- Working temperatures range for standard material -10°C +80°C (peaks up to 110°C).
  For very low temperature special compound material is available on request (see dedicated table)
- Silicon free production (on request)

Executions

ELATECH® M

They are manufactured in rolls with standard length of 100 m. On request longer or shorter lengths are available. Main applications are linear drives.

Ordering example roll 100 m profile T :

ELATECH® "R" - Roll 100 m **R 025 T 10 A / Z**

- ELATECH® timing belt type "R"
- Width 25 mm (3 digits)
- Profile "T"
- Pitch 10 mm
- A= steel cords
  S= stainless steel cords
  K= Kevlar® cords
  F= high flexiblity cords
  P= high power cords
- Z= fabric on teeth (PAZ)
  R= fabric on back (PAR)
  D= fabric on PAZ + PAR

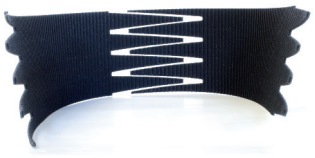
Ordering example profile H cut to length:

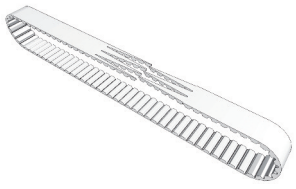
ELATECH® "M" cut to length **M 100 H A 01270 / Z**

- ELATECH® timing belt type "M"
- Width (x 0,254 = mm) - 3 digits
- Profile "H"
- A= steel cords
  S= stainless steel cords
  K= Kevlar® cords
  F= high flexiblity cords
  P= high power cords
- Length 1270 mm (5 digits)
- Z= fabric on teeth (PAZ)
  R= fabric on back (PAR)
  D= fabric on PAZ + PAR

ELATECH® V

They are jointed belts manufactured from open-end ELATECH® belts.Thanks to the specific manufacturing process, any length may be obtained tooth by tooth. Free combinations with special backing materials and welded profiles, make ELATECH® V belts ideal in synchronized conveying and highly specialised applications.





Ordering example profile AT :

ELATECH® "V" jointed **V 020 AT5 A 03410 / Z**

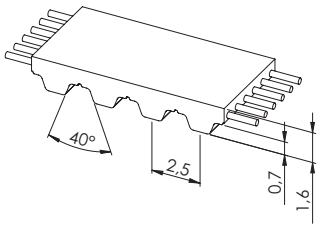
- ELATECH timing belt type "V" jointed
- Width 20 mm (3 digits)
- Profile "AT" - Pitch 5 mm
- A= steel cords
  S= stainless steel cords
  K= Kevlar® cords
  F= high flexiblity cords
  P= high power cords
- Length 3410 mm (5 digits)
- Z= fabric on teeth (PAZ)
  R= fabric on back (PAR)
  D= fabric on PAZ + PAR

Ordering example profile XL :

ELATECH® "V" jointed **V 150 XL A 00762 / Z**

- ELATECH timing belt type "V" jointed
- Width (x 0,254 = mm) - 3 digits
- Profile "XL"
- A= steel cords
  S= stainless steel cords
  K= Kevlar® cords
  F= high flexiblity cords
  P= high power cords
- Length 762 mm (5 digits)
- Z= fabric on teeth (PAZ)
  R= fabric on back (PAR)
  D= fabric on PAZ + PAR

T 2,5



Belt characteristics

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 2,5 mm
- Ideal for drives where high belt flexibility is requested
- Widely used for conveying, linear drive and light power transmission applications
- Color: white

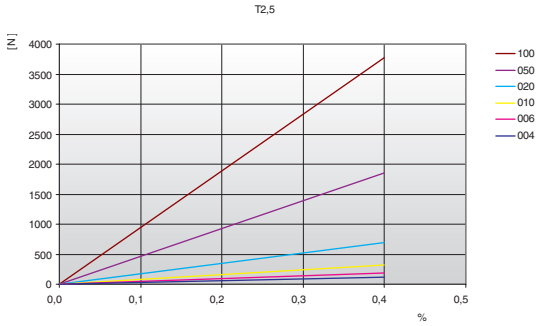
• Width tolerance:	±0,3 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,15 [mm]

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]
4	130	-	500	32500	0,004
6	190	-	750	47500	0,007
10	320	160	1250	80000	0,011
20	700	350	2750	175000	0,022
50	1860	930	7250	465000	0,055
100	3780	1890	14750	945000	0,110

Other widths are available on request.

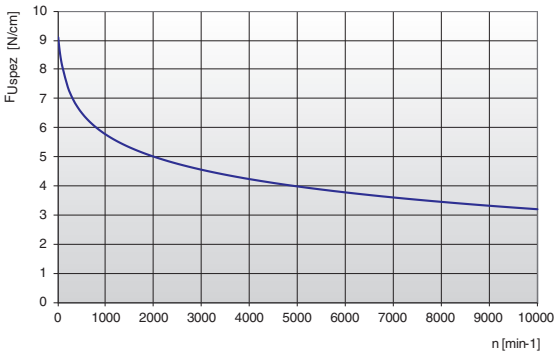
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	9,10	**800**	5,99	**1900**	5,05	**4500**	4,09
20	8,77	**900**	5,86	**2000**	4,99	**5000**	3,97
40	8,51	**1000**	5,75	**2200**	4,88	**5500**	3,86
60	8,30	**1100**	5,64	**2400**	4,79	**6000**	3,76
80	8,13	**1200**	5,55	**2600**	4,70	**6500**	3,67
100	8,00	**1300**	5,46	**2800**	4,62	**7000**	3,59
200	7,39	**1400**	5,38	**3000**	4,54	**7500**	3,51
300	7,00	**1440**	5,35	**3200**	4,47	**8000**	3,44
400	6,71	**1500**	5,31	**3400**	4,40	**8500**	3,37
500	6,48	**1600**	5,24	**3600**	4,34	**9000**	3,30
600	6,29	**1700**	5,17	**3800**	4,28	**9500**	3,24
700	6,13	**1800**	5,11	**4000**	4,22	**10000**	3,18

Tooth shear strength / rpm

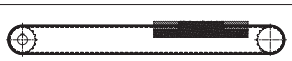


The specific load F_{Uspez} is the maximum load which one single belt tooth 1 cm wide can withstand in all operating conditions.
This force is related to the drive rpm.
The total load F_U transmissible by the belt in the drive is calculated by:

F_U [N] = F_{Uspez} • z_e • 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		Type of cord STANDARD
Drive without reverse bending	Timing pulley z_{min}	15
	Flat idler running on belt teeth d_{min}	15 mm
Drive with reverse bending	Timing pulley z_{min}	18
	Flat idler running on belt back d_{min}	18 mm

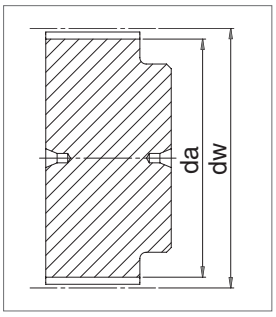
Timing pulleys

z	da	dw
10	7,46	7,96
11	8,25	8,75
12	9,05	9,55
13	9,85	10,35
14	10,64	11,14
15	11,44	11,94
16	12,23	12,73
17	13,03	13,53
18	13,82	14,32
19	14,62	15,12
20	15,42	15,92
21	16,21	16,71
22	17,01	17,51
23	17,80	18,30
24	18,60	19,10
25	19,39	19,89
26	20,19	20,69
27	20,99	21,49
28	21,78	22,28
29	22,58	23,08
30	23,37	23,87
31	24,17	24,67
32	24,97	25,47
33	25,76	26,26
34	26,56	27,06
35	27,35	27,85
36	28,15	28,65
37	28,94	29,44
38	29,74	30,24
39	30,54	31,04
40	31,33	31,83
41	32,13	32,63
42	32,92	33,42

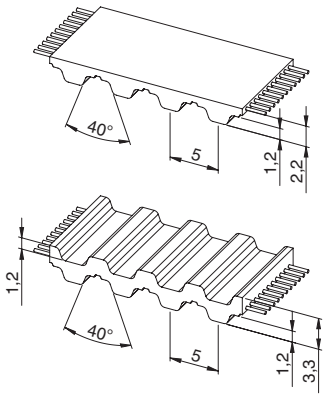
z	da	dw
43	33,72	34,22
44	34,52	35,02
45	35,31	35,81
46	36,11	36,61
47	36,90	37,40
48	37,70	38,20
49	38,49	38,99
50	39,29	39,79
51	40,09	40,59
52	40,88	41,38
53	41,68	42,18
54	42,47	42,97
55	43,27	43,77
56	44,06	44,56
57	44,86	45,36
58	45,66	46,16
59	46,45	46,95
60	47,25	47,75
61	48,04	48,54
62	48,84	49,34
63	49,64	50,14
64	50,43	50,93
65	51,23	51,73
66	52,02	52,52
67	52,82	53,32
68	53,61	54,11
69	54,41	54,91
70	55,21	55,71
71	56,00	56,50
72	56,80	57,30
73	57,59	58,09
74	58,39	58,89
75	59,18	59,68

z	da	dw
76	59,98	60,48
77	60,78	61,28
78	61,57	62,07
79	62,37	62,87
80	63,16	63,66
81	63,96	64,46
82	64,76	65,26
83	65,55	66,05
84	66,35	66,85
85	67,14	67,64
86	67,94	68,44
87	68,73	69,23
88	69,53	70,03
89	70,33	70,83
90	71,12	71,62
91	71,92	72,42
92	72,71	73,21
93	73,51	74,01
94	74,31	74,81
95	75,10	75,60
96	75,90	76,40
97	76,69	77,19
98	77,49	77,99
99	78,28	78,78
100	79,08	79,58
101	79,88	80,38
102	80,67	81,17
103	81,47	81,97
104	82,26	82,76
105	83,06	83,56
106	83,85	84,35
107	84,65	85,15
108	85,45	85,95

z	da	dw
109	86,24	86,74
110	87,04	87,54
111	87,83	88,33
112	88,63	89,13
113	89,43	89,93
114	90,22	90,72
115	91,02	91,52
116	91,81	92,31
117	92,61	93,11
118	93,40	93,90
119	94,20	94,70
120	95,00	95,50
121	95,79	96,29
122	96,59	97,09
123	97,38	97,88
124	98,18	98,68
125	98,97	99,47
126	99,77	100,27
127	100,57	101,07
128	101,36	101,86
129	102,16	102,66
130	102,95	103,45
131	103,75	104,25
132	104,55	105,05
133	105,34	105,84
134	106,14	106,64
135	106,93	107,43
136	107,73	108,23
137	108,52	109,02
138	109,32	109,82
139	110,12	110,62
140	110,91	111,41



T 5



Belt characteristics

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 5 mm
- Ideal for drives where high belt flexibility is requested
- Widely used for conveying, linear drive and light power transmission applications
- Double sided tooth construction available

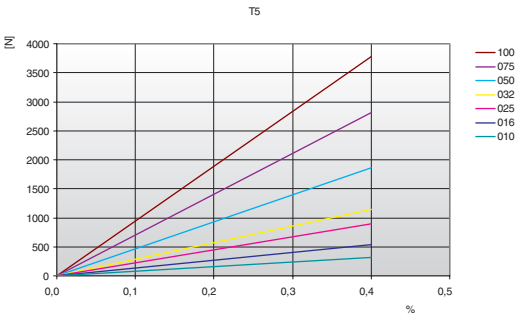
• Width tolerance:	±0,5 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,15 [mm]

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	0,021
16	540	270	2125	135000	0,034
25	900	450	3500	225000	0,053
32	1150	575	4500	287500	0,067
50	1860	930	7250	465000	0,105
75	2820	1410	11000	705000	0,158
100	3780	1890	14750	945000	0,210

Other widths are available on request.

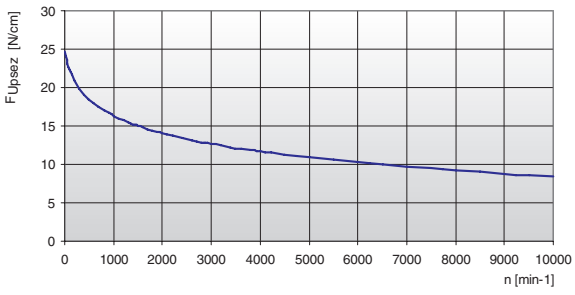
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	24,70	**800**	17,02	**1900**	14,21	**4500**	11,25
20	24,07	**900**	16,65	**2000**	14,03	**5000**	10,88
40	23,53	**1000**	16,32	**2200**	13,71	**5500**	10,55
60	23,05	**1100**	16,01	**2400**	13,42	**6000**	10,24
80	22,64	**1200**	15,73	**2600**	13,14	**6500**	9,96
100	22,28	**1300**	15,47	**2800**	12,89	**7000**	9,70
200	20,90	**1400**	15,22	**3000**	12,65	**7500**	9,46
300	19,89	**1440**	15,13	**3200**	12,43	**8000**	9,23
400	19,10	**1500**	15,00	**3400**	12,22	**8500**	9,01
500	18,45	**1600**	14,78	**3600**	12,03	**9000**	8,81
600	17,91	**1700**	14,58	**3800**	11,84	**9500**	8,62
700	17,44	**1800**	14,39	**4000**	11,66	**10000**	8,44

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:

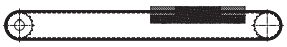
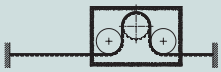
F_U [N] = F_{Uspez} • z_e • b

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		HPL High Performance	
	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]
10	700	2800	920	3360
16	1190	4760	1610	5880
25	1960	7840	2645	9660
32	2520	10080	3450	12600
50	4060	16240	5520	20160
75	6160	24640	8395	30660
100	8260	33040	11270	41160
150	-	-	16905	61740

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord		
		STANDARD	**ARAMID**	**HPL**
Drive without reverse bending 	Timing pulley z_{min}	10	10	24
	Flat idler running on belt teeth d_{min}	30 mm	30 mm	60 mm
Drive with reverse bending 	Timing pulley z_{min}	15	15	38
	Flat idler running on belt back d_{min}	30 mm	30 mm	60 mm

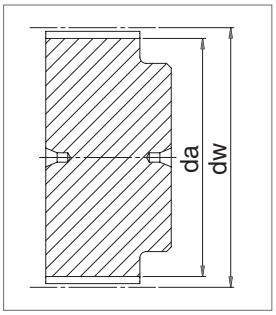
Timing pulleys

z	da	dw
10	15,05	15,92
11	16,65	17,51
12	18,25	19,10
13	19,85	20,70
14	21,45	22,29
15	23,05	23,88
16	24,60	25,47
17	26,20	27,06
18	27,80	28,65
19	29,40	30,25
20	31,00	31,83
21	32,70	33,43
22	34,25	35,02
23	35,85	36,62
24	37,40	38,21
25	39,00	39,80
26	40,60	41,39
27	42,20	42,98
28	43,75	44,58
29	45,35	46,17
30	46,95	47,76
31	48,55	49,35
32	50,10	50,94
33	51,70	52,54
34	53,25	54,13
35	54,85	55,72
36	56,45	57,31
37	58,05	58,90
38	59,65	60,50
39	61,25	62,09

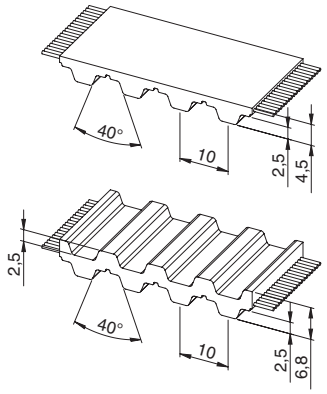
z	da	dw
40	62,85	63,66
41	64,4	65,27
42	66	66,86
43	67,7	68,46
44	69,2	70,05
45	70,8	71,64
46	72,4	73,23
47	73,95	74,82
48	75,55	76,42
49	77,15	78,01
50	78,75	79,60
51	80,35	81,19
52	81,95	82,78
53	83,5	84,38
54	85,1	85,97
55	86,7	87,54
56	88,3	89,15
57	89,9	90,74
58	91,5	92,34
59	93,05	93,93
60	94,65	95,52
61	96,25	97,11
62	97,85	98,70
63	99,45	100,30
64	101,05	101,89
65	102,65	103,48
66	104,2	105,07
67	105,8	106,66
68	107,40	108,26
69	109,00	109,85

z	da	dw
70	110,60	111,44
71	112,20	113,03
72	113,75	114,62
73	115,35	116,22
74	116,95	117,81
75	118,55	119,40
76	120,15	120,99
77	121,75	122,58
78	123,30	124,18
79	124,90	125,77
80	126,50	127,36
81	128,10	128,95
82	129,70	130,54
83	131,30	132,14
84	132,85	133,73
85	134,45	135,32
86	136,05	136,91
87	137,65	138,50
88	139,25	140,10
89	140,85	141,69
90	142,45	143,28
91	144,00	144,87
92	145,60	146,46
93	147,20	148,06
94	148,80	149,65
95	150,40	151,24
96	152,00	152,83
97	153,55	154,42
98	155,15	156,02
99	156,75	157,61

z	da	dw
100	158,35	159,20
101	159,95	160,79
102	161,55	162,38
103	163,10	163,97
104	164,70	165,57
105	166,30	167,16
106	167,90	168,75
107	169,50	170,34
108	171,10	171,94
109	172,65	173,53
110	174,25	175,12
111	175,85	176,71
112	177,45	178,30
113	179,05	179,84
114	180,65	181,49
115	182,23	183,08
116	183,82	184,67
117	185,42	186,26
118	187,01	187,86
119	188,61	189,45
120	190,21	191,04



T 10



Belt characteristics

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 10 mm
- Ideal for drives where high belt flexibility is requested
- Widely used for conveying, linear drive and medium power transmission applications
- Double sided tooth construction available

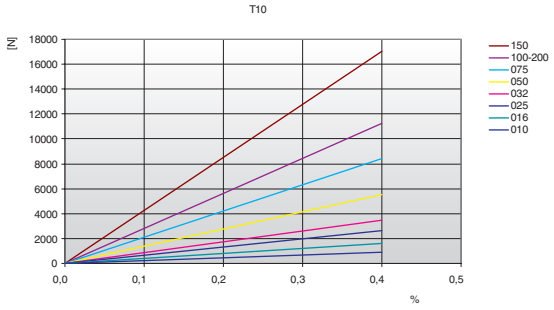
• Width tolerance:	±0,5 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,2 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{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	920	460	3360	230000	0,05
16	1610	805	5880	402500	0,07
25	2650	1325	9660	662500	0,11
32	3450	1725	12600	862500	0,15
50	5520	2760	20160	1380000	0,23
75	8400	4200	30660	2100000	0,34
100	11270	5635	41160	2817500	0,45
150	17020	8510	62160	4255000	0,68
200*	11270	5635	41160	2817500	0,60

Other widths are available on request. * = double cords spacing

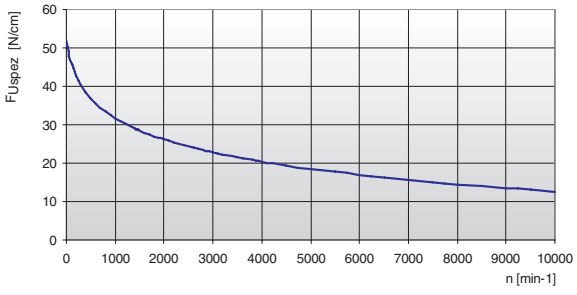
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	51,80	**800**	33,34	**1900**	26,53	**4500**	19,40
20	50,32	**900**	32,44	**2000**	26,12	**5000**	18,51
40	49,04	**1000**	31,63	**2200**	25,34	**5500**	17,70
60	47,92	**1100**	30,89	**2400**	24,63	**6000**	16,97
80	46,95	**1200**	30,21	**2600**	23,97	**6500**	16,29
100	46,11	**1300**	29,58	**2800**	23,36	**7000**	15,66
200	42,75	**1400**	28,99	**3000**	22,78	**7500**	15,07
300	40,28	**1440**	28,76	**3200**	22,25	**8000**	14,52
400	38,36	**1500**	28,44	**3400**	21,74	**8500**	14,00
500	36,80	**1600**	27,92	**3600**	21,27	**9000**	13,51
600	35,49	**1700**	27,43	**3800**	20,81	**9500**	13,05
700	34,35	**1800**	26,97	**4000**	20,39	**10000**	12,61

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} • z_e • b

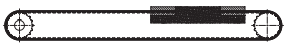
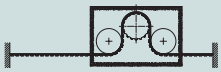
F_U [N]	= peripheral force
F_{Uspez} [N/cm]	= specific load
z_e	= number of teeth in mesh in the small pulley
z_{emax}	= max. no of teeth in mesh to be considered for the calculation of the drive
z_{emax}	= 12 for ELATECH® M
z_{emax}	= 6 for ELATECH® V
b [cm]	= belt width in cm

Specialties

Belt width b [mm]	ARAMID CORD		STAINLESS STEEL		HPL High Performance		HFE High Flexibility	
	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]
10	880	3600	600	2400	-	-	960	3440
16	1540	6300	1050	4200	2450	9500	1680	6020
25	2530	10350	1730	6900	4165	16150	2760	9890
32	3300	13500	2250	9000	5390	20900	3600	12900
50	5280	21600	3600	14400	8575	33250	5760	20640
75	8030	32850	-	-	12990	50350	-	-
100	10780	44100	-	-	17400	67450	-	-
150	16280	66600	-	-	-	-	-	-
200*	10780	44100	-	-	-	-	-	-

* = double cords spacing

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord				
		STANDARD	**ARAMID**	**STAINLESS**	**HPL**	**HFE**
Drive without reverse bending 	Timing pulley z_{min}	12	15	15	15	10
	Flat idler running on belt teeth d_{min}	60 mm	60 mm	60 mm	100 mm	50 mm
Drive with reverse bending 	Timing pulley z_{min}	20	20	40	30	15
	Flat idler running on belt back d_{min}	60 mm	60 mm	120 mm	100 mm	50 mm

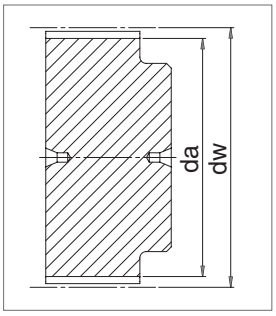
Timing pulleys

z	da	dw
10	30,05	31,84
11	33,25	35,02
12	36,35	38,20
13	39,50	41,38
14	42,70	44,56
15	45,90	47,75
16	49,05	50,93
17	52,25	54,11
18	55,45	57,29
19	58,65	60,48
20	61,80	63,66
21	65,00	66,84
22	68,15	70,03
23	71,35	73,20
24	74,55	76,39
25	77,70	79,58
26	80,90	82,76
27	84,10	85,95
28	87,25	89,12
29	90,45	92,21
30	93,65	95,49
31	96,85	98,67
32	100,00	101,86
33	103,20	105,04
34	106,40	108,22
35	109,55	111,41
36	112,75	114,59
37	115,90	117,77
38	119,10	120,95
39	122,30	124,14

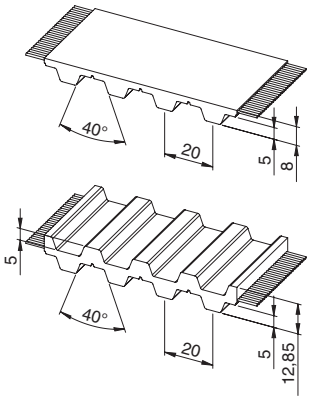
z	da	dw
40	125,45	127,32
41	128,65	130,50
42	131,85	133,69
44	138,20	140,05
45	141,40	143,24
46	144,60	146,42
47	147,75	149,60
48	150,95	152,78
49	154,10	155,97
50	157,30	159,15
51	160,50	162,33
52	163,65	165,52
53	166,85	168,70
54	170,05	171,88
55	173,20	175,06
56	176,40	178,25
57	179,60	181,43
58	182,75	184,61
59	185,95	187,80
60	189,10	190,98
61	192,30	194,16
62	195,50	197,35
63	198,65	200,53
64	201,85	203,71
65	205,05	206,90
66	208,20	210,08
67	211,40	213,26
68	214,60	216,44
69	217,75	219,63
70	220,95	222,81

z	da	dw
71	224,15	225,99
72	227,30	229,18
73	230,50	232,36
74	233,70	235,54
75	236,90	238,72
76	240,05	241,94
77	243,25	245,09
78	246,40	248,27
79	249,60	251,46
80	252,80	254,64
81	256,00	257,82
82	259,15	261,00
83	262,30	264,19
84	265,50	267,37
85	268,70	270,55
86	271,90	273,74
87	275,05	276,92
88	278,25	280,10
89	281,45	283,28
90	284,60	286,47
91	287,80	289,65
92	291,00	292,84
93	294,20	296,02
94	297,35	299,20
95	300,55	302,39
96	303,75	305,57
97	306,90	308,75
98	310,10	311,93
99	313,25	315,12
100	316,45	318,30

z	da	dw
101	319,65	321,48
102	322,80	324,66
103	326,00	327,85
104	329,20	331,03
105	332,35	334,21
106	335,55	337,40
107	338,75	340,58
108	341,95	343,76
109	345,15	346,95
110	348,30	350,13
111	351,45	353,31
112	354,65	356,50
113	357,80	359,68
114	361,00	362,86
115	364,19	366,04
116	367,39	369,23
117	370,56	372,41
118	373,76	375,59
119	376,93	378,78
120	380,11	381,96



T 20



Belt characteristics

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 20 mm
- Ideal for drives where high belt flexibility is requested
- Widely used for conveying, linear drive and heavy power transmission applications
- Double sided tooth construction available

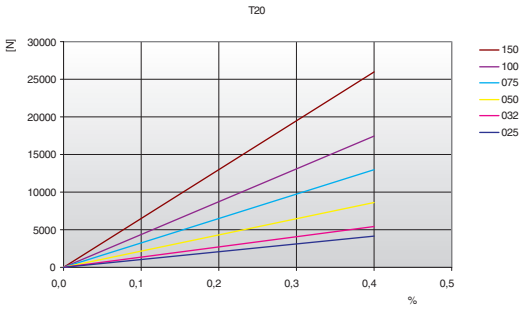
• Width tolerance:	±1,0 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,4 [mm]

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]
25	4170	2085	16150	1042500	0,20
32	5390	2695	20900	1347500	0,26
50	8580	4290	33250	2145000	0,41
75	12990	6495	50350	3247500	0,61
100	17400	8700	67450	4350000	0,82
150	26220	13110	101650	6555000	1,23

Other widths are available on request.

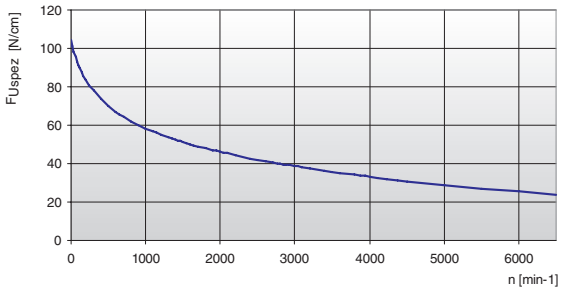
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	104,50	**800**	62,15	**1900**	46,88	**4500**	30,92
20	101,10	**900**	60,13	**2000**	45,94	**5000**	28,93
40	98,15	**1000**	58,31	**2200**	44,20	**5500**	27,14
60	95,58	**1100**	56,64	**2400**	42,61	**6000**	25,49
80	93,35	**1200**	55,11	**2600**	41,13	**6500**	23,97
100	91,41	**1300**	53,70	**2800**	39,77	-	-
200	83,50	**1400**	52,38	**3000**	38,49	-	-
300	77,84	**1440**	51,87	**3200**	37,29	-	-
400	73,49	**1500**	51,14	**3400**	36,16	-	-
500	69,96	**1600**	49,98	**3600**	35,10	-	-
600	66,98	**1700**	48,89	**3800**	34,09	-	-
700	64,41	**1800**	47,86	**4000**	33,13	-	-

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:

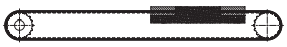
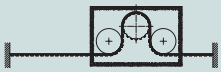
F_U [N] = F_{Uspez} • z_e • b

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		HFE High Flexibility	
	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [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	-	-	-	-
100	15620	71000	-	-	-	-
150	23540	107000	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord			
		STANDARD	ARAMID	STAINLESS	HFE
Drive without reverse bending 	Timing pulley z_{min}	15	15	20	12
	Flat idler running on belt teeth d_{min}	120 mm	120 mm	130 mm	100 mm
Drive with reverse bending 	Timing pulley z_{min}	25	25	30	22
	Flat idler running on belt back d_{min}	120 mm	120 mm	150 mm	120 mm

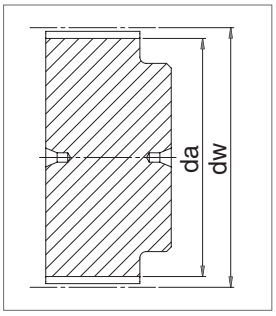
Timing pulleys

z	da	dw
15	92,65	95,49
16	99,00	101,86
17	105,40	108,22
18	111,75	114,59
19	118,10	120,96
20	124,50	127,32
21	130,75	133,69
22	137,20	140,06
23	143,55	146,43
24	149,95	152,78
25	156,30	159,15
26	162,65	165,52
27	169,00	171,89
28	175,40	178,25
29	181,75	184,62
30	188,10	190,99
31	194,50	197,35
32	200,85	203,72
33	207,20	210,09
34	213,60	216,44
35	219,95	222,81
36	226,35	229,18
37	232,70	235,54
38	239,05	241,91
39	245,40	248,28
40	251,75	254,65
41	258,15	261,02
42	264,50	267,37
43	270,85	273,74
44	277,25	280,10

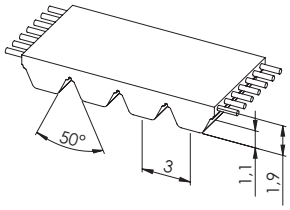
z	da	dw
45	283,60	286,47
46	289,95	292,84
47	296,35	299,21
48	302,70	305,58
49	309,10	311,93
50	315,45	318,30
51	321,80	324,67
52	328,15	331,03
53	334,50	337,40
54	340,90	343,76
55	347,25	350,13
56	353,60	356,50
57	360,00	362,86
58	366,35	369,23
59	372,75	375,59
60	379,10	381,96
61	385,45	388,33
62	391,85	394,70
63	398,20	401,06
64	404,55	407,43
65	410,95	413,80
66	417,30	420,17
67	423,65	426,52
68	430,05	432,89
69	436,40	439,26
70	442,80	445,63
71	449,15	451,99
72	455,50	458,36
73	461,85	464,73
74	468,25	471,08

z	da	dw
75	474,60	477,45
76	480,95	483,82
77	487,35	490,19
78	493,70	496,56
79	500,05	502,91
80	506,45	509,28
81	512,80	515,65
82	519,15	522,02
83	525,55	528,39
84	531,90	534,74
85	538,25	541,11
86	544,60	547,48
87	551,00	553,85
88	557,35	560,22
89	563,70	566,57
90	570,10	572,94
91	576,45	579,31
92	582,85	585,67
93	589,20	592,04
94	595,55	598,41
95	601,90	604,77
96	608,30	611,14
97	614,65	617,51
98	621,00	623,88
99	627,35	630,25
100	633,75	636,60
101	640,10	642,97
102	646,50	649,34
103	652,85	655,71
104	659,20	662,06

z	da	dw
105	665,60	668,43
106	671,95	674,80
107	678,30	681,17
108	684,70	687,54
109	691,05	693,89
110	697,40	700,26
111	703,80	706,63
112	710,15	712,99
113	716,50	719,36
114	722,90	725,73
115	729,24	732,09
116	735,61	738,46
117	741,96	744,83
118	748,34	751,19
119	754,70	757,56
120	761,07	763,93



AT 3



Belt characteristics

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 3 mm
- Tooth profile and dimension are optimised to guarantee unifor 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 light power transmission applications with high axial and angular positioning accuracy
- Negative length tolerance available on request

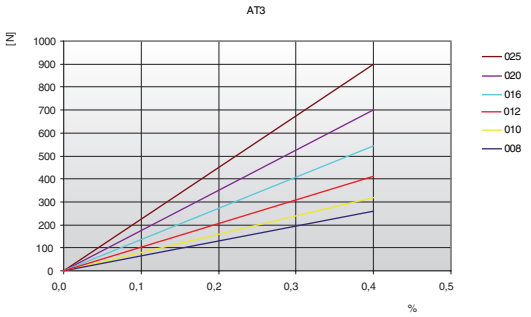
• Width tolerance:	±0,5 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,2 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{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]
8	260	130	1000	65000	0,018
10	320	160	1250	80000	0,022
12	416	208	1625	104000	0,026
16	540	270	2125	135000	0,035
20	700	350	2750	175000	0,044
25	900	450	3500	225000	0,054

Other widths are available on request.

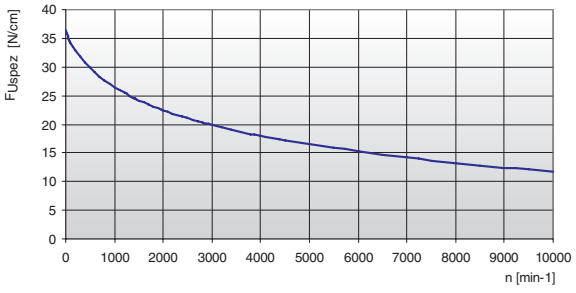
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	32,50	**800**	25,62	**1900**	20,98	**4500**	15,64
20	32,13	**900**	25,05	**2000**	20,68	**5000**	14,96
40	31,79	**1000**	24,52	**2200**	20,11	**5500**	14,33
60	31,48	**1100**	24,02	**2400**	19,59	**6000**	13,76
80	31,19	**1200**	23,56	**2600**	19,10	**6500**	13,23
100	30,92	**1300**	23,13	**2800**	18,64	**7000**	12,74
200	29,86	**1400**	22,72	**3000**	18,22	**7500**	12,28
300	29,15	**1440**	22,57	**3200**	17,81	**8000**	11,84
400	28,47	**1500**	22,34	**3400**	17,43	**8500**	11,43
500	27,66	**1600**	21,97	**3600**	17,07	**9000**	11,05
600	26,92	**1700**	21,63	**3800**	16,73	**9500**	10,68
700	26,25	**1800**	21,29	**4000**	16,40	**10000**	10,34

Tooth shear strength / rpm

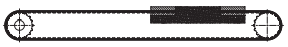
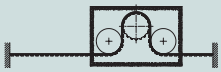


The specific load F_{Uspez} is the maximum load which one single belt tooth 1 cm wide can withstand in all operating conditions.
This force is related to the drive rpm.
The total load F_U transmissible by the belt in the drive is calculated by:

F_U [N] = F_{Uspez} • z_e • 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

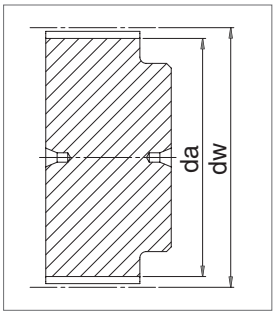
Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord STANDARD
Drive without reverse bending 	Timing pulley z_{min}	15
	Flat idler running on belt teeth d_{min}	20 mm
Drive with reverse bending 	Timing pulley z_{min}	20
	Flat idler running on belt back d_{min}	20 mm

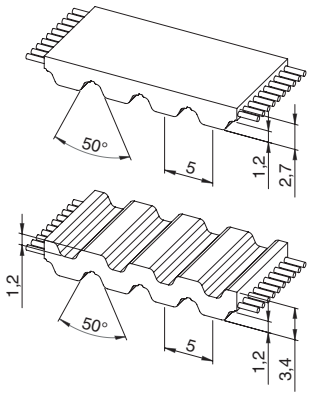
Timing pulleys

z	da	dw
15	13,92	14,32
16	14,87	15,28
17	15,82	16,23
18	16,78	17,19
19	17,73	18,14
20	18,69	19,10
21	19,64	20,05
22	20,60	21,01
23	21,55	21,96
24	22,51	22,92
25	23,46	23,87
26	24,42	24,83
27	25,37	25,78
28	26,33	26,74
29	27,28	27,69
30	28,24	28,65
31	29,19	29,60
32	30,15	30,56
33	31,10	31,51
34	32,06	32,47
35	33,01	33,42
36	33,97	34,38
37	34,92	35,33
38	35,88	36,29
39	36,83	37,24
40	37,79	38,20
41	38,74	39,15
42	39,70	40,11
43	40,65	41,06
44	41,61	42,02

z	da	dw
45	42,56	42,97
46	43,52	43,93
47	44,47	44,88
48	45,43	45,84
49	46,38	46,79
50	47,34	47,75
51	48,29	48,70
52	49,25	49,66
53	50,20	50,61
54	51,16	51,57
55	52,11	52,52
56	53,07	53,48
57	54,02	54,43
58	54,98	55,39
59	55,93	56,34
60	56,89	57,30
61	57,84	58,25
62	58,80	59,21
63	59,75	60,16
64	60,71	61,12
65	61,66	62,07
66	62,62	63,03
67	63,57	63,98
68	64,53	64,94
69	65,48	65,89
70	66,44	66,85
71	67,39	67,80
72	68,35	68,75



AT 5



Belt characteristics

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 5 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 light power transmission applications with high axial and angular positioning accuracy
- Double sided tooth construction available
- Negative length tolerance available on request

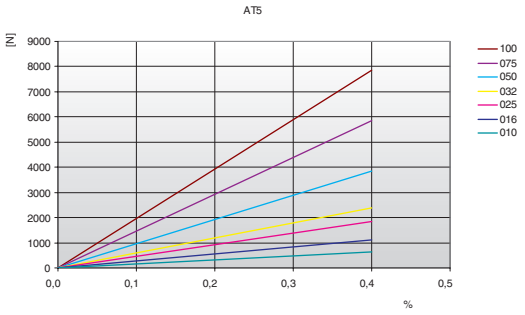
• Width tolerance:	±0,5 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,2 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{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	640	320	2160	160000	0,03
16	1120	560	3780	280000	0,05
25	1840	920	6210	460000	0,09
32	2400	1200	8100	600000	0,11
50	3840	1920	12960	960000	0,17
75	5840	2920	19710	1460000	0,26
100	7840	3920	26460	1960000	0,34

Other widths are available on request.

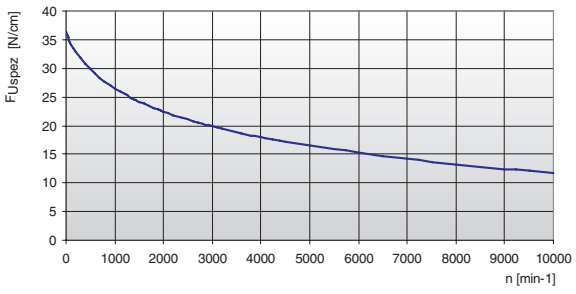
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	36,40	**800**	27,69	**1900**	22,73	**4500**	17,18
20	35,88	**900**	27,06	**2000**	22,42	**5000**	16,47
40	35,40	**1000**	26,49	**2200**	21,82	**5500**	15,83
60	34,97	**1100**	25,96	**2400**	21,28	**6000**	15,24
80	34,59	**1200**	25,47	**2600**	20,77	**6500**	14,69
100	34,24	**1300**	25,01	**2800**	20,29	**7000**	14,18
200	32,92	**1400**	24,57	**3000**	19,85	**7500**	13,71
300	31,92	**1440**	24,41	**3200**	19,43	**8000**	13,26
400	30,89	**1500**	24,16	**3400**	19,03	**8500**	12,85
500	29,95	**1600**	23,78	**3600**	18,66	**9000**	12,45
600	29,12	**1700**	23,41	**3800**	18,30	**9500**	12,07
700	28,37	**1800**	23,07	**4000**	17,96	**10000**	11,72

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:

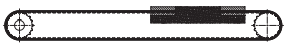
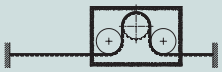
F_U [N] = F_{Uspez} • z_e • b

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		HFE High Flexibility	
	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]
10	880	3600	600	2400	960	3440
16	1540	6300	1050	4200	1680	6020
25	2530	10350	1725	6900	2760	9890
32	3300	13500	2250	9000	3600	12900
50	5280	21600	3600	14400	5760	20640
75	8030	32850	5475	21900	8760	31390
100	10780	44100	7350	29400	11760	42140

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord			
		STANDARD	ARAMID	STAINLESS	HFE
Drive without reverse bending 	Timing pulley z_{min}	15	15	18	15
	Flat idler running on belt teeth d_{min}	30 mm	30 mm	40 mm	25 mm
Drive with reverse bending 	Timing pulley z_{min}	25	25	25	20
	Flat idler running on belt back d_{min}	60 mm	60 mm	65 mm	50 mm

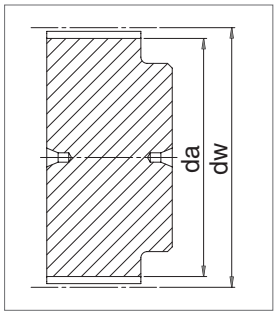
Timing pulleys

z	da	dw
15	22,65	23,88
16	24,20	25,47
17	25,80	27,06
18	27,40	28,65
19	29,00	30,25
20	30,60	31,83
21	32,20	33,43
22	33,80	35,02
23	35,40	36,62
24	37,00	38,21
25	38,60	39,80
26	40,20	41,39
27	41,80	42,98
28	43,35	44,58
29	44,95	46,17
30	46,55	47,76
31	48,15	49,35
32	49,70	50,94
33	51,30	52,54
34	52,85	54,13
35	54,45	55,72
36	56,05	57,31
37	57,65	58,90
38	59,25	60,50
39	60,85	62,09
40	62,45	63,66
41	64,00	65,27
42	65,60	66,86
43	67,30	68,46
44	68,80	70,05

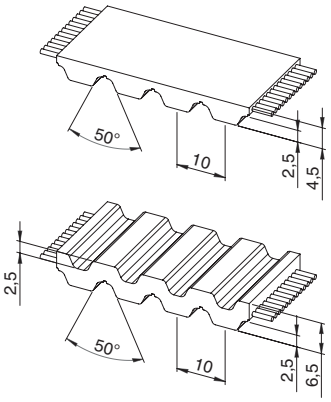
z	da	dw
45	70,40	71,64
46	72,00	73,23
47	73,55	74,82
48	75,15	76,42
49	76,75	78,01
50	78,35	79,60
51	79,95	81,19
52	81,55	82,78
53	83,10	84,38
54	84,70	85,97
55	86,30	87,54
56	87,90	89,15
57	89,50	90,74
58	91,10	92,34
59	92,65	93,93
60	94,25	95,52
61	95,85	97,11
62	97,45	98,70
63	99,05	100,30
64	100,65	101,89
65	102,25	103,48
66	103,80	105,07
67	105,40	106,66
68	107,00	108,26
69	108,60	109,85
70	110,20	111,44
71	111,80	113,03
72	113,35	114,62
73	114,95	116,22
74	116,55	117,81

z	da	dw
75	118,15	119,40
76	119,75	120,99
77	121,35	122,58
78	122,90	124,18
79	124,50	125,77
80	126,10	127,36
81	127,70	128,95
82	129,30	130,54
83	130,90	132,14
84	132,45	133,73
85	134,05	135,32
86	135,65	136,91
87	137,25	138,50
88	138,85	140,10
89	140,45	141,69
90	142,05	143,28
91	143,60	144,87
92	145,20	146,46
93	146,80	148,06
94	148,40	149,65
95	150,00	151,24
96	151,60	152,83
97	153,15	154,42
98	154,75	156,02
99	156,35	157,61
100	157,95	159,20
101	159,55	160,79
102	161,15	162,38
103	162,70	163,97
104	164,30	165,57

z	da	dw
105	165,90	167,16
106	167,50	168,75
107	169,10	170,34
108	170,70	171,94
109	172,25	173,53
110	173,85	175,12
111	175,45	176,71
112	177,05	178,30
113	178,65	179,84
114	180,25	181,49
115	181,85	183,08
116	183,45	184,67
117	185,00	186,26
118	186,60	187,86
119	188,20	189,45
120	189,80	191,04



AT 10



Belt characteristics

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- 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
- Double sided tooth construction available
- Negative length tolerance available on request

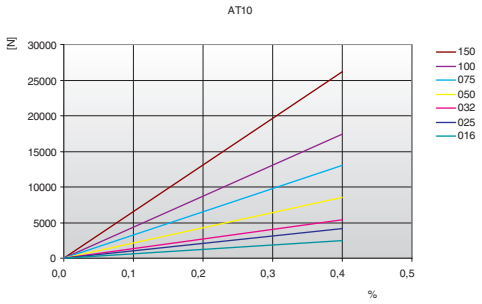
• Width tolerance:	±0,5 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,2 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{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	1225	9500	612500	0,09
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
150	26220	13110	101650	6555000	0,90

Other widths are available on request.

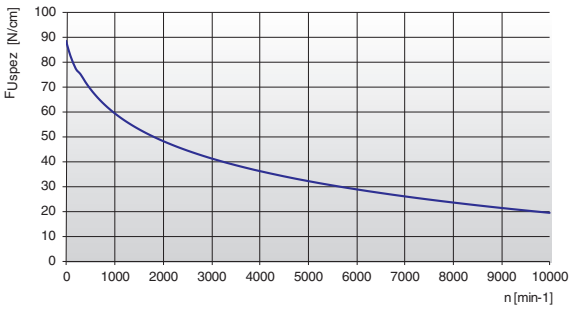
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	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_{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:

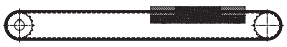
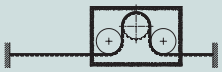
F_U [N] = F_{Uspez} • z_e • b

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		HFE High Flexibility	
	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	2000	8500
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	-	-
150	23540	107000	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord			
		STANDARD	ARAMID	STAINLESS	HFE
Drive without reverse bending 	Timing pulley z_{min}	15	15	20	12
	Flat idler running on belt teeth d_{min}	50 mm	50 mm	70 mm	50 mm
Drive with reverse bending 	Timing pulley z_{min}	25	20	40	20
	Flat idler running on belt back d_{min}	120 mm	120 mm	120 mm	80 mm

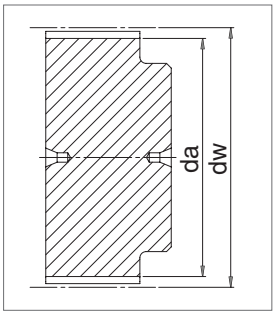
Timing pulleys

z	da	dw
15	45,70	47,75
16	49,05	50,93
17	52,25	54,11
18	55,45	57,29
19	58,60	60,48
20	61,80	63,66
21	65,00	66,84
22	68,15	70,03
23	71,35	73,20
24	74,55	76,39
25	77,70	79,58
26	80,90	82,76
27	84,10	85,95
28	87,25	89,12
29	90,45	92,21
30	93,65	95,49
31	96,80	98,67
32	100,00	101,86
33	103,20	105,04
34	106,40	108,19
35	109,55	111,41
36	112,75	114,59
37	115,90	117,77
38	119,10	120,95
39	122,30	124,14
40	125,45	127,32
41	128,65	130,50
42	131,85	133,69
43	135,00	136,87
44	138,20	140,05

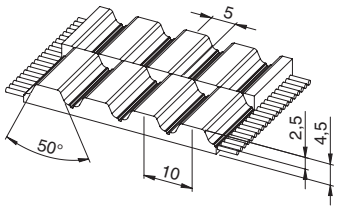
z	da	dw
45	141,40	143,24
46	144,55	146,42
47	147,75	149,60
48	150,95	152,78
49	154,10	155,97
50	157,30	159,15
51	160,50	162,33
52	163,65	165,52
53	166,85	168,70
54	170,05	171,88
55	173,20	175,06
56	176,40	178,25
57	179,60	181,43
58	182,75	184,61
59	185,95	187,80
60	189,10	190,98
61	192,30	194,16
62	195,50	197,35
63	198,65	200,53
64	201,85	203,71
65	205,05	206,90
66	208,20	210,08
67	211,40	213,26
68	214,60	216,44
69	217,75	219,63
70	220,95	222,81
71	224,15	225,99
72	227,30	229,18
73	230,50	232,33
74	233,70	235,54

z	da	dw
75	236,90	238,72
76	240,05	241,94
77	243,25	245,09
78	246,40	248,24
79	249,60	251,46
80	252,80	254,64
81	255,95	257,82
82	259,15	261,00
83	262,30	264,19
84	265,50	267,37
85	268,70	270,52
86	271,90	273,74
87	275,05	276,92
88	278,25	280,10
89	281,45	283,28
90	284,60	286,47
91	287,80	289,65
92	291,00	292,84
93	294,20	296,02
94	297,35	299,20
95	300,55	302,39
96	303,70	305,57
97	306,90	308,75
98	310,10	311,93
99	313,25	315,12
100	316,45	318,30
101	319,65	321,48
102	322,80	324,66
103	326,00	327,85
104	329,20	331,03

z	da	dw
105	332,35	334,21
106	335,55	337,40
107	338,75	340,58
108	341,90	343,76
109	345,10	346,95
110	348,30	350,13
111	351,45	353,31
112	354,65	356,50
113	357,80	359,68
114	361,00	362,86
115	364,19	366,04
116	367,39	369,23
117	370,56	372,41
118	373,74	375,59
119	376,93	378,78
120	380,11	381,96



SAT 10



Belt characteristics

- Polyurethane 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 thanks to the teeth offset
- Particularly suitable for linear drives and medium power transmission applications with high axial and angular positioning accuracy
- Negative length tolerance available on request

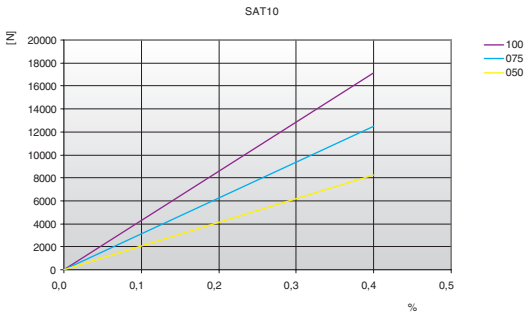
• Width tolerance:	±0,5 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,2 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{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]
50	8330	4165	32300	2082500	0,29
75	12740	6370	49400	3185000	0,43
100	17150	8575	66500	4287500	0,57

Other widths are available on request.

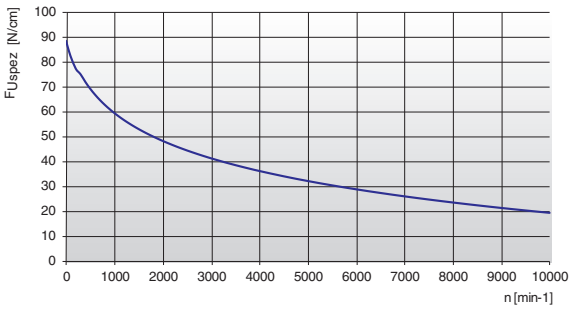
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	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_{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:

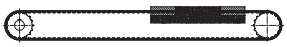
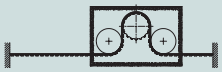
F_U [N] = F_{Uspez} • z_e • b

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]	STAINLESS STEEL		HFE High Flexibility	
	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]
50	6120	25500	6800	28900

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord			
		STANDARD	ARAMID	STAINLESS	HFE
Drive without reverse bending 	Timing pulley z_{min}	15	15	20	12
	Flat idler running on belt teeth d_{min}	50 mm	50 mm	70 mm	50 mm
Drive with reverse bending 	Timing pulley z_{min}	25	20	40	20
	Flat idler running on belt back d_{min}	120 mm	120 mm	120 mm	80 mm

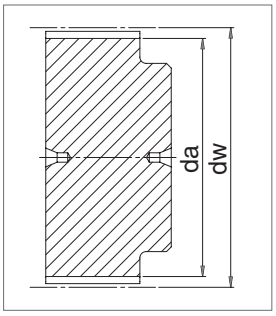
Timing pulleys

z	da	dw
15	45,70	47,75
16	49,05	50,93
17	52,25	54,11
18	55,45	57,29
19	58,60	60,48
20	61,80	63,66
21	65,00	66,84
22	68,15	70,03
23	71,35	73,20
24	74,55	76,39
25	77,70	79,58
26	80,90	82,76
27	84,10	85,95
28	87,25	89,12
29	90,45	92,21
30	93,65	95,49
31	96,80	98,67
32	100,00	101,86
33	103,20	105,04
34	106,40	108,19
35	109,55	111,41
36	112,75	114,59
37	115,90	117,77
38	119,10	120,95
39	122,30	124,14
40	125,45	127,32
41	128,65	130,50
42	131,85	133,69
43	135,00	136,87
44	138,20	140,05

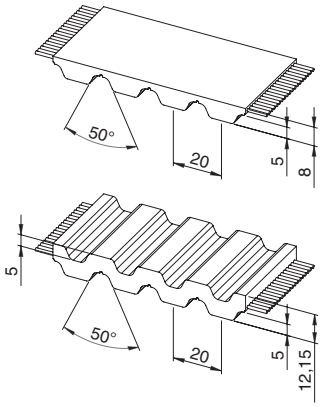
z	da	dw
45	141,40	143,24
46	144,55	146,42
47	147,75	149,60
48	150,95	152,78
49	154,10	155,97
50	157,30	159,15
51	160,50	162,33
52	163,65	165,52
53	166,85	168,70
54	170,05	171,88
55	173,20	175,06
56	176,40	178,25
57	179,60	181,43
58	182,75	184,61
59	185,95	187,80
60	189,10	190,98
61	192,30	194,16
62	195,50	197,35
63	198,65	200,53
64	201,85	203,71
65	205,05	206,90
66	208,20	210,08
67	211,40	213,26
68	214,60	216,44
69	217,75	219,63
70	220,95	222,81
71	224,15	225,99
72	227,30	229,18
73	230,50	232,33
74	233,70	235,54

z	da	dw
75	236,90	238,72
76	240,05	241,94
77	243,25	245,09
78	246,40	248,24
79	249,60	251,46
80	252,80	254,64
81	255,95	257,82
82	259,15	261,00
83	262,30	264,19
84	265,50	267,37
85	268,70	270,52
86	271,90	273,74
87	275,05	276,92
88	278,25	280,10
89	281,45	283,28
90	284,60	286,47
91	287,80	289,65
92	291,00	292,84
93	294,20	296,02
94	297,35	299,20
95	300,55	302,39
96	303,70	305,57
97	306,90	308,75
98	310,10	311,93
99	313,25	315,12
100	316,45	318,30
101	319,65	321,48
102	322,80	324,66
103	326,00	327,85
104	329,20	331,03

z	da	dw
105	332,35	334,21
106	335,55	337,40
107	338,75	340,58
108	341,90	343,76
109	345,10	346,95
110	348,30	350,13
111	351,45	353,31
112	354,65	356,50
113	357,80	359,68
114	361,00	362,86
115	364,19	366,04
116	367,39	369,23
117	370,56	372,41
118	373,74	375,59
119	376,93	378,78
120	380,11	381,96



AT 20



Belt characteristics

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 20 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 heavy power transmission applications with high axial and angular positioning accuracy
- Double sided tooth construction available

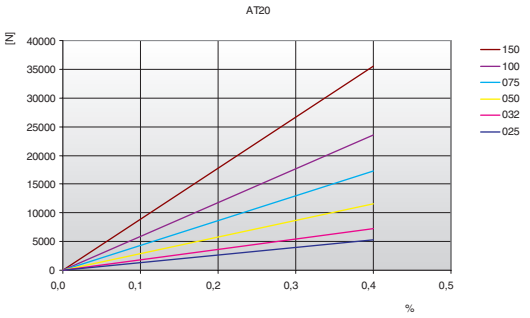
• Width tolerance:	±1,0 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,4 [mm]

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]
25	5280	2640	19250	1320000	0,24
32	7200	3600	26250	1800000	0,31
50	11520	5760	42000	2880000	0,48
75	17280	8640	63000	4320000	0,73
100	23520	11760	85750	5880000	0,97
150	35520	17760	129500	8880000	1,45

Other widths are available on request.

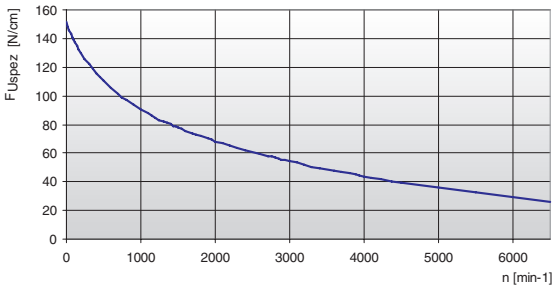
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	151,40	**800**	97,44	**1900**	69,96	**4500**	39,72
20	148,56	**900**	93,93	**2000**	68,22	**5000**	35,90
40	145,89	**1000**	90,73	**2200**	64,97	**5500**	32,42
60	143,38	**1100**	87,77	**2400**	61,98	**6000**	29,23
80	141,01	**1200**	85,02	**2600**	59,20	**6500**	26,29
100	138,78	**1300**	82,47	**2800**	56,62	-	-
200	129,43	**1400**	80,07	**3000**	54,20	-	-
300	122,28	**1440**	79,16	**3200**	51,92	-	-
400	115,96	**1500**	77,82	**3400**	49,77	-	-
500	110,45	**1600**	75,70	**3600**	47,74	-	-
600	105,61	**1700**	73,69	**3800**	45,80	-	-
700	101,31	**1800**	71,77	**4000**	43,96	-	-

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:

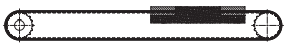
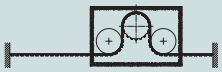
F_U [N] = F_{Uspez} • z_e • b

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]	HFE High Flexibility		ARAMID CORD		STAINLESS STEEL	
	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]
25	5060	21175	2420	11000	3300	15400
32	6900	28875	3300	15000	4500	21000
50	11040	46200	5280	24000	7200	33600
75	16560	69300	7920	36000	10800	50400
100	22540	94325	10780	49000	14700	68600

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord			
		STANDARD	**HFE**	**ARAMID**	**STAINLESS STEEL**
Drive without reverse bending 	Timing pulley z_{min}	18	18	18	20
	Flat idler running on belt teeth d_{min}	120 mm	120 mm	120 mm	125 mm
Drive with reverse bending 	Timing pulley z_{min}	25	25	25	30
	Flat idler running on belt back d_{min}	180 mm	150 mm	160 mm	200 mm

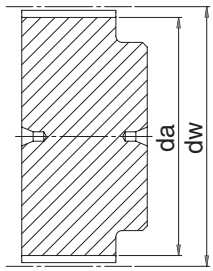
Timing pulleys

z	da	dw
18	111,75	114,59
19	118,10	120,95
20	124,50	127,32
21	130,75	133,69
22	137,20	140,05
23	143,55	146,42
24	149,95	152,78
25	156,30	159,15
26	162,65	165,52
27	169,05	171,88
28	175,40	178,25
29	181,75	184,62
30	188,15	190,99
31	194,50	197,35
32	200,85	203,72
33	207,20	210,09
34	213,60	216,44
35	219,95	222,81
36	226,35	229,18
37	232,70	235,54
38	239,05	241,91
39	245,45	248,27
40	251,80	254,64
41	258,15	261,01
42	264,50	267,37
43	270,90	273,74
44	277,25	280,10
45	283,60	286,47
46	290,00	292,84
47	296,35	299,21

z	da	dw
48	302,70	305,58
49	309,10	311,93
50	315,45	318,30
51	321,80	324,67
52	328,20	331,03
53	334,55	337,40
54	340,90	343,76
55	347,30	350,13
56	353,65	356,50
57	360,00	362,86
58	366,40	369,23
59	372,75	375,59
60	379,10	381,96
61	385,45	388,33
62	391,85	394,69
63	398,20	401,06
64	404,55	407,43
65	410,95	413,79
66	417,30	420,16
67	423,65	426,52
68	430,05	432,89
69	436,40	439,26
70	442,80	445,63
71	449,15	451,99
72	455,50	458,36
73	461,85	464,73
74	468,25	471,08
75	474,60	477,45
76	480,95	483,82
77	487,35	490,19

z	da	dw
78	493,70	496,56
79	500,05	502,91
80	506,45	509,28
81	512,80	515,65
82	519,15	522,02
83	525,55	528,39
84	531,90	534,74
85	538,25	541,11
86	544,60	547,48
87	551,00	553,85
88	557,35	560,22
89	563,70	566,57
90	570,10	572,94
91	576,45	579,31
92	582,85	585,67
93	589,20	592,04
94	595,55	598,40
95	601,90	604,77
96	608,30	611,14
97	614,65	617,50
98	621,00	623,87
99	627,35	630,24
100	633,75	636,60
101	640,10	642,97
102	646,50	649,34
103	652,85	655,71
104	659,20	662,06
105	665,60	668,43
106	671,95	674,80
107	678,30	681,17

z	da	dw
108	684,70	687,54
109	691,05	693,89
110	697,40	700,26
111	703,80	706,63
112	710,15	712,99
113	716,50	719,36
114	722,90	725,72
115	729,24	732,09
116	735,61	738,46
117	741,96	744,83
118	748,34	751,19
119	754,70	757,56
120	761,07	763,93



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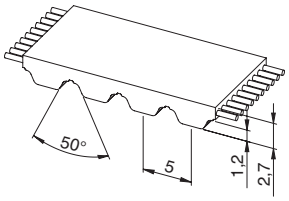


Belt characteristics

- High performance polyurethane timing belt with HPL steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 5 mm
- Specially designed for linear drives
- Tension cords with increased allowable tensile load compared to standard for lower elongation
- Produced with special pretension and pitch tolerance to guarantee high positioning precision in linear drives
- Negative length tolerance available on request

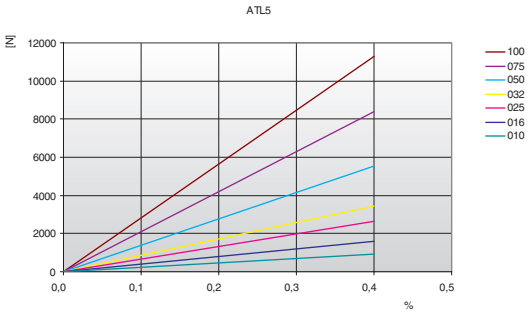
- Width tolerance: ±0,5 [mm]
- Thickness tolerance: ±0,2 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{Tzul} [N]	Breaking load **Type M** F_{Br} [N]	Specific spring rate C_{spez} [N]	Weight [kg/m]
10	920	3360	230000	0,04
16	1610	5880	402500	0,06
25	2650	9660	662500	0,10
32	3450	12600	862500	0,12
50	5520	20160	1380000	0,19
75	8400	30660	2100000	0,29
100	11270	41160	2817500	0,38

Other widths are available on request.

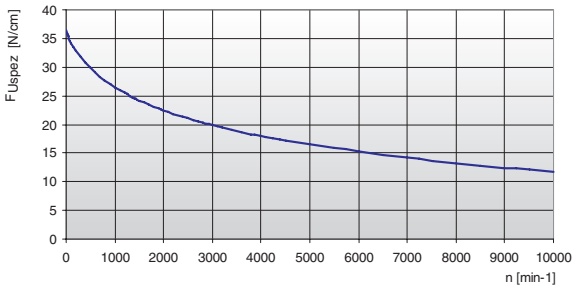
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	36,40	**800**	27,69	**1900**	22,73	**4500**	17,18
20	35,88	**900**	27,06	**2000**	22,42	**5000**	16,47
40	35,40	**1000**	26,49	**2200**	21,82	**5500**	15,83
60	34,97	**1100**	25,96	**2400**	21,28	**6000**	15,24
80	34,59	**1200**	25,47	**2600**	20,77	**6500**	14,69
100	34,24	**1300**	25,01	**2800**	20,29	**7000**	14,18
200	32,92	**1400**	24,57	**3000**	19,85	**7500**	13,71
300	31,92	**1440**	24,41	**3200**	19,43	**8000**	13,26
400	30,89	**1500**	24,16	**3400**	19,03	**8500**	12,85
500	29,95	**1600**	23,78	**3600**	18,66	**9000**	12,45
600	29,12	**1700**	23,41	**3800**	18,30	**9500**	12,07
700	28,37	**1800**	23,07	**4000**	17,96	**10000**	11,72

Tooth shear strength / rpm

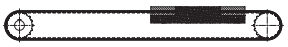
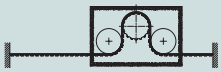


The specific load F_{Uspez} is the maximum load which one single belt tooth 1 cm wide can withstand in all operating conditions.
This force is related to the drive rpm.
The total load F_U transmissible by the belt in the drive is calculated by:

F_U [N] = F_{Uspez} • z_e • 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		Type of cord STANDARD
Drive without reverse bending 	Timing pulley z_{min}	25
	Flat idler running on belt teeth d_{min}	40 mm
Drive with reverse bending 	Timing pulley z_{min}	25
	Flat idler running on belt back d_{min}	60 mm

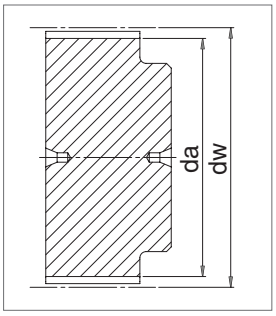
Timing pulleys

z	da	dw
15	22,65	23,88
16	24,20	25,47
17	25,80	27,06
18	27,40	28,65
19	29,00	30,25
20	30,60	31,83
21	32,20	33,43
22	33,80	35,02
23	35,40	36,62
24	37,00	38,21
25	38,60	39,80
26	40,20	41,39
27	41,80	42,98
28	43,35	44,58
29	44,95	46,17
30	46,55	47,76
31	48,15	49,35
32	49,70	50,94
33	51,30	52,54
34	52,85	54,13
35	54,45	55,72
36	56,05	57,31
37	57,65	58,90
38	59,25	60,50
39	60,85	62,09
40	62,45	63,66
41	64,00	65,27
42	65,60	66,86
43	67,30	68,46
44	68,80	70,05

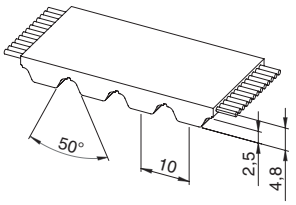
z	da	dw
45	70,40	71,64
46	72,00	73,23
47	73,55	74,82
48	75,15	76,42
49	76,75	78,01
50	78,35	79,60
51	79,95	81,19
52	81,55	82,78
53	83,10	84,38
54	84,70	85,97
55	86,30	87,54
56	87,90	89,15
57	89,50	90,74
58	91,10	92,34
59	92,65	93,93
60	94,25	95,52
61	95,85	97,11
62	97,45	98,70
63	99,05	100,30
64	100,65	101,89
65	102,25	103,48
66	103,80	105,07
67	105,40	106,66
68	107,00	108,26
69	108,60	109,85
70	110,20	111,44
71	111,80	113,03
72	113,35	114,62
73	114,95	116,22
74	116,55	117,81

z	da	dw
75	118,15	119,40
76	119,75	120,99
77	121,35	122,58
78	122,90	124,18
79	124,50	125,77
80	126,10	127,36
81	127,70	128,95
82	129,30	130,54
83	130,90	132,14
84	132,45	133,73
85	134,05	135,32
86	135,65	136,91
87	137,25	138,50
88	138,85	140,10
89	140,45	141,69
90	142,05	143,28
91	143,60	144,87
92	145,20	146,46
93	146,80	148,06
94	148,40	149,65
95	150,00	151,24
96	151,60	152,83
97	153,15	154,42
98	154,75	156,02
99	156,35	157,61
100	157,95	159,20
101	159,55	160,79
102	161,15	162,38
103	162,70	163,97
104	164,30	165,57

z	da	dw
105	165,90	167,16
106	167,50	168,75
107	169,10	170,34
108	170,70	171,94
109	172,25	173,53
110	173,85	175,12
111	175,45	176,71
112	177,05	178,30
113	178,65	179,84
114	180,25	181,49
115	181,85	183,08
116	183,45	184,67
117	185,00	186,26
118	186,60	187,86
119	188,20	189,45
120	189,80	191,04



ATL 10



Belt characteristics

- High performance polyurethane timing belt with HPL steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 10 mm
- Specially designed for linear drives
- Tension cords with increased allowable tensile load compared to standard for lower elongation
- Produced with special pretension and pitch tolerance to guarantee high positioning precision in linear drives
- Negative length tolerance available on request

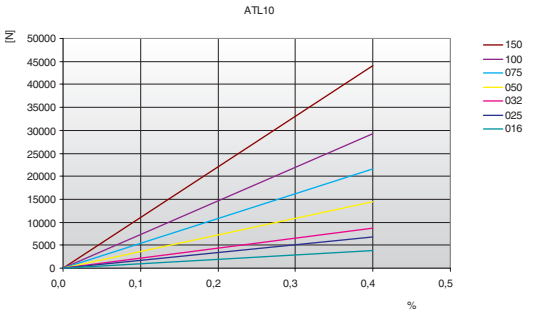
- Width tolerance: ±0,5 [mm]
- Thickness tolerance: ±0,2 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{Tzul} [N]	Breaking load **Type M** F_{Br} [N]	Specific spring rate C_{spez} [N]	Weight [kg/m]
16	3840	14000	960000	0,11
25	6720	24500	1680000	0,17
32	8640	31500	2160000	0,22
50	14400	52500	3600000	0,35
75	21600	78750	5400000	0,52
100	29280	106750	7320000	0,69
150	44160	161000	11040000	0,85

Other widths are available on request.

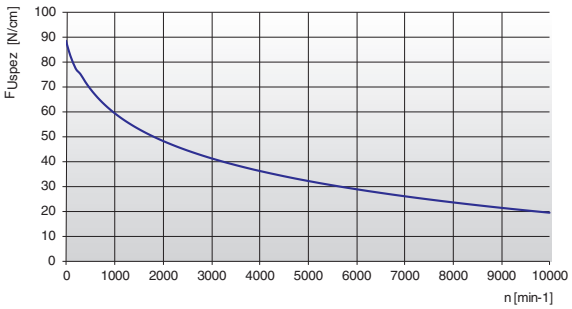
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	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_{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:

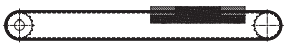
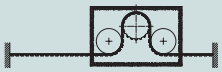
F_U [N] = F_{Uspez} • z_e • b

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]	HFE High Flexibility		STAINLESS STEEL	
	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]
16	3680	15400	2400	11200
25	6440	26950	4200	19600
32	8280	34650	5400	25200
50	13800	57750	9000	42000
75	20700	86625	13500	63000
100	28060	117425	18300	85400
150	42320	177100	27600	128800

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord		
		STANDARD	**HFE**	**STAINLESS**
Drive without reverse bending 	Timing pulley z_{min}	25	20	32
	Flat idler running on belt teeth d_{min}	80 mm	60 mm	100 mm
Drive with reverse bending 	Timing pulley z_{min}	25	20	40
	Flat idler running on belt back d_{min}	150 mm	100 mm	250 mm

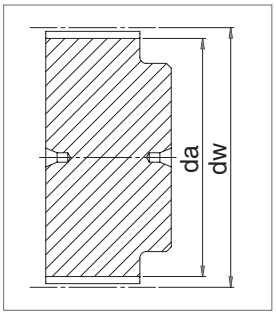
Timing pulleys

z	da	dw
18	55,45	57,29
19	58,60	60,48
20	61,80	63,66
21	65,00	66,84
22	68,15	70,03
23	71,35	73,20
24	74,55	76,39
25	77,70	79,58
26	80,90	82,76
27	84,10	85,95
28	87,25	89,12
29	90,45	92,21
30	93,65	95,49
31	96,80	98,67
32	100,00	101,86
33	103,20	105,04
34	106,40	108,19
35	109,55	111,41
36	112,75	114,59
37	115,90	117,77
38	119,10	120,95
39	122,30	124,14
40	125,45	127,32
41	128,65	130,50
42	131,85	133,69
43	135,00	136,87
44	138,20	140,05
45	141,40	143,24
46	144,55	146,42
47	147,75	149,60

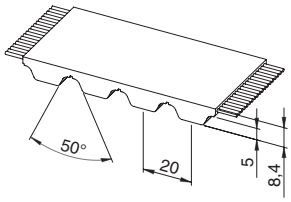
z	da	dw
48	150,95	152,78
49	154,10	155,97
50	157,30	159,15
51	160,50	162,33
52	163,65	165,52
53	166,85	168,70
54	170,05	171,88
55	173,20	175,06
56	176,40	178,25
57	179,60	181,43
58	182,75	184,61
59	185,95	187,80
60	189,10	190,98
61	192,30	194,16
62	195,50	197,35
63	198,65	200,53
64	201,85	203,71
65	205,05	206,90
66	208,20	210,08
67	211,40	213,26
68	214,60	216,44
69	217,75	219,63
70	220,95	222,81
71	224,15	225,99
72	227,30	229,18
73	230,50	232,33
74	233,70	235,54
75	236,90	238,72
76	240,05	241,94
77	243,25	245,09

z	da	dw
78	246,40	248,24
79	249,60	251,46
80	252,80	254,64
81	255,95	257,82
82	259,15	261,00
83	262,30	264,19
84	265,50	267,37
85	268,70	270,52
86	271,90	273,74
87	275,05	276,92
88	278,25	280,10
89	281,45	283,28
90	284,60	286,47
91	287,80	289,65
92	291,00	292,84
93	294,20	296,02
94	297,35	299,20
95	300,55	302,39
96	303,70	305,57
97	306,90	308,75
98	310,10	311,93
99	313,25	315,12
100	316,45	318,30
101	319,65	321,48
102	322,80	324,66
103	326,00	327,85
104	329,20	331,03
105	332,35	334,21
106	335,55	337,40
107	338,75	340,58

z	da	dw
108	341,90	343,76
109	345,10	346,95
110	348,30	350,13
111	351,45	353,31
112	354,65	356,50
113	357,80	359,68
114	361,00	362,86
115	364,19	366,04
116	367,39	369,23
117	370,56	372,41
118	373,74	375,59
119	376,93	378,78
120	380,11	381,96



ATL 20



Belt characteristics

- High performance polyurethane timing belt with HPL steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 20 mm
- Specially designed for linear drives
- Tension cords with increased allowable tensile load compared to standard for lower elongation
- Produced with special pretension and pitch tolerance to guarantee high positioning precision in linear drives

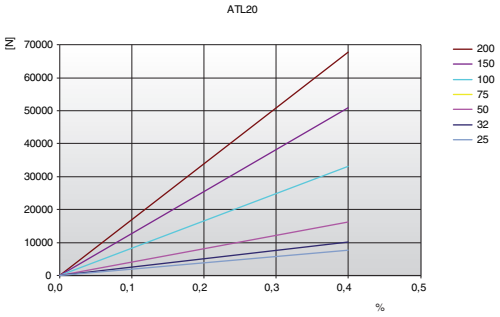
- Width tolerance: ±1,0 [mm]
- Thickness tolerance: ±0,4 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{Tzul} [N]	Breaking load **Type M** F_{Br} [N]	Specific spring rate C_{spez} [N]	Weight [kg/m]
25	7650	28800	1912500	0,28
32	10200	38400	2550000	0,36
50	16150	60800	4037500	0,56
75	24650	92800	6162500	0,84
100	33150	124800	8287500	1,12
150	51000	192000	12750000	1,68
200	68000	256000	17000000	2,25

Other widths are available on request.

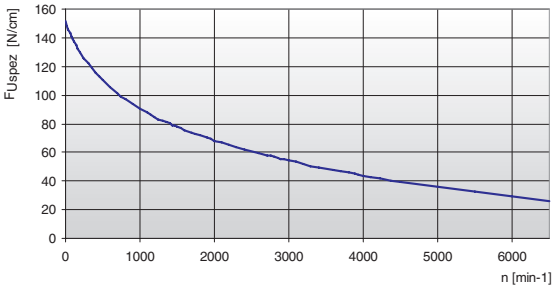
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	151,40	**800**	97,44	**1900**	69,96	**4500**	39,72
20	148,56	**900**	93,93	**2000**	68,22	**5000**	35,90
40	145,89	**1000**	90,73	**2200**	64,97	**5500**	32,42
60	143,38	**1100**	87,77	**2400**	61,98	**6000**	29,23
80	141,01	**1200**	85,02	**2600**	59,20	**6500**	26,29
100	138,78	**1300**	82,47	**2800**	56,62	-	-
200	129,43	**1400**	80,07	**3000**	54,20	-	-
300	122,28	**1440**	79,16	**3200**	51,92	-	-
400	115,96	**1500**	77,82	**3400**	49,77	-	-
500	110,45	**1600**	75,70	**3600**	47,74	-	-
600	105,61	**1700**	73,69	**3800**	45,80	-	-
700	101,31	**1800**	71,77	**4000**	43,96	-	-

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:

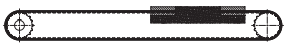
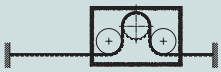
F_U [N] = F_{Uspez} • z_e • b

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]	STAINLESS STEEL	
	F_{Tzul} [N] **M type**	F_{Br} [N]
25	5220	20700
32	6960	27600
50	11020	43700
75	16820	66700
100	22620	89700

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord	
		STANDARD	STAINLESS
Drive without reverse bending 	Timing pulley z_{min}	25	32
	Flat idler running on belt teeth d_{min}	160 mm	200 mm
Drive with reverse bending 	Timing pulley z_{min}	25	40
	Flat idler running on belt back d_{min}	250 mm	250 mm

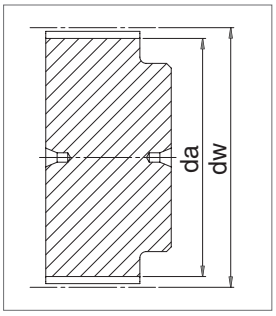
Timing pulleys

z	da	dw
18	111,75	114,59
19	118,10	120,95
20	124,50	127,32
21	130,75	133,69
22	137,20	140,05
23	143,55	146,42
24	149,95	152,78
25	156,30	159,15
26	162,65	165,52
27	169,05	171,88
28	175,40	178,25
29	181,75	184,62
30	188,15	190,99
31	194,50	197,35
32	200,85	203,72
33	207,20	210,09
34	213,60	216,44
35	219,95	222,81
36	226,35	229,18
37	232,70	235,54
38	239,05	241,91
39	245,45	248,27
40	251,80	254,64
41	258,15	261,01
42	264,50	267,37
43	270,90	273,74
44	277,25	280,10
45	283,60	286,47
46	290,00	292,84
47	296,35	299,21

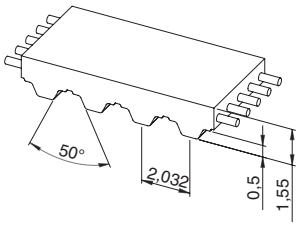
z	da	dw
48	302,70	305,58
49	309,10	311,93
50	315,45	318,30
51	321,80	324,67
52	328,20	331,03
53	334,55	337,40
54	340,90	343,76
55	347,30	350,13
56	353,65	356,50
57	360,00	362,86
58	366,40	369,23
59	372,75	375,59
60	379,10	381,96
61	385,45	388,33
62	391,85	394,69
63	398,20	401,06
64	404,55	407,43
65	410,95	413,79
66	417,30	420,16
67	423,65	426,52
68	430,05	432,89
69	436,40	439,26
70	442,80	445,63
71	449,15	451,99
72	455,50	458,36
73	461,85	464,73
74	468,25	471,08
75	474,60	477,45
76	480,95	483,82
77	487,35	490,19

z	da	dw
78	493,70	496,56
79	500,05	502,91
80	506,45	509,28
81	512,80	515,65
82	519,15	522,02
83	525,55	528,39
84	531,90	534,74
85	538,25	541,11
86	544,60	547,48
87	551,00	553,85
88	557,35	560,22
89	563,70	566,57
90	570,10	572,94
91	576,45	579,31
92	582,85	585,67
93	589,20	592,04
94	595,55	598,40
95	601,90	604,77
96	608,30	611,14
97	614,65	617,50
98	621,00	623,87
99	627,35	630,24
100	633,75	636,60
101	640,10	642,97
102	646,50	649,34
103	652,85	655,71
104	659,20	662,06
105	665,60	668,43
106	671,95	674,80
107	678,30	681,17

z	da	dw
108	684,70	687,54
109	691,05	693,89
110	697,40	700,26
111	703,80	706,63
112	710,15	712,99
113	716,50	719,36
114	722,90	725,72
115	729,24	732,09
116	735,61	738,46
117	741,96	744,83
118	748,34	751,19
119	754,70	757,56
120	761,07	763,93



MXL



Belt characteristics

- Polyurethane timing belt with tooth profile according to UNI/ISO 5296 with steel tension cords
- Imperial pitch 2/25" = 2,032 mm
- Allow to use small diameter pulley
- Mainly used in applications where inch pitch is an advantage (USA / UK)
- Trasparent (natural) PU colour

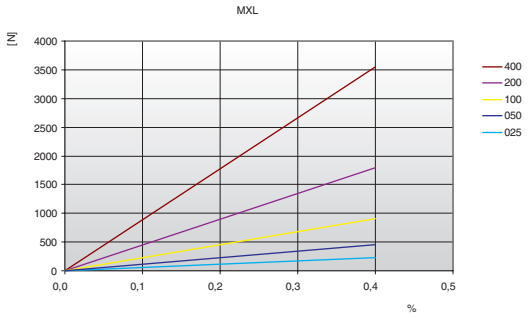
• Width tolerance:	±0,5 [mm]
• Length tolerance:	±0,8 [mm/m]
• Thickness tolerance:	±0,1 [mm]

Technical Data

Belt width b Code / 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]
025 / 6,35	220	110	875	55000	0,014
050 / 12,7	450	225	1750	112500	0,025
100 / 25,4	900	450	3500	225000	0,050
200 / 50,8	1790	895	7000	447500	0,095
400 / 101,6	3580	1790	14000	895000	0,190

Other widths are available on request.

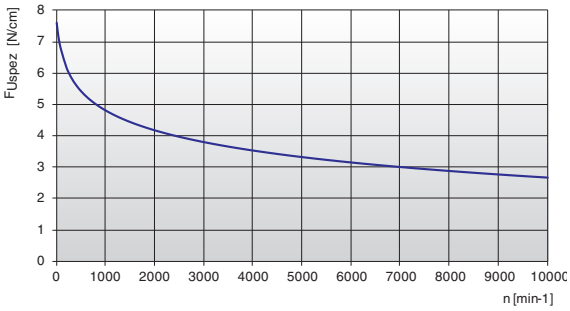
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	7,58	**800**	4,99	**1900**	4,21	**4500**	3,41
20	7,31	**900**	4,88	**2000**	4,16	**5000**	3,31
40	7,09	**1000**	4,79	**2200**	4,07	**5500**	3,22
60	6,92	**1100**	4,70	**2400**	3,99	**6000**	3,14
80	6,78	**1200**	4,62	**2600**	3,92	**6500**	3,06
100	6,67	**1300**	4,55	**2800**	3,85	**7000**	2,99
200	6,15	**1400**	4,48	**3000**	3,78	**7500**	2,93
300	5,83	**1440**	4,46	**3200**	3,72	**8000**	2,86
400	5,59	**1500**	4,42	**3400**	3,67	**8500**	2,81
500	5,40	**1600**	4,36	**3600**	3,61	**9000**	2,75
600	5,24	**1700**	4,31	**3800**	3,56	**9500**	2,70
700	5,11	**1800**	4,25	**4000**	3,52	**10000**	2,65

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} • z_e • 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		Type of cord
		STANDARD
Drive without reverse bending	Timing pulley z_{min}	12
	Flat idler running on belt teeth d_{min}	20 mm
Drive with reverse bending	Timing pulley z_{min}	15
	Flat idler running on belt back d_{min}	25 mm

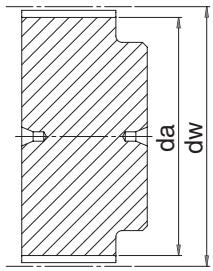
Timing pulleys

z	da	dw
10	5,96	6,47
11	6,61	7,12
12	7,25	7,76
13	7,90	8,41
14	8,55	9,06
15	9,19	9,70
16	9,84	10,35
17	10,49	11,00
18	11,13	11,64
19	11,78	12,29
20	12,43	12,94
21	13,07	13,58
22	13,72	14,23
23	14,37	14,88
24	15,01	15,52
25	15,66	16,17
26	16,31	16,82
27	16,95	17,46
28	17,60	18,11
29	18,25	18,76
30	18,89	19,40
31	19,54	20,05
32	20,19	20,70
33	20,83	21,34
34	21,48	21,99
35	22,13	22,64
36	22,78	23,29
37	23,42	23,93
38	24,07	24,58
39	24,72	25,23
40	25,36	25,87
41	26,01	26,52
42	26,66	27,17
43	27,30	27,81

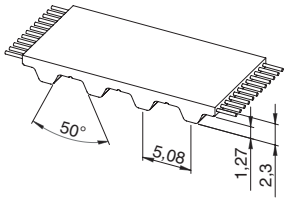
z	da	dw
44	27,95	28,46
45	28,60	29,11
46	29,24	29,75
47	29,89	30,40
48	30,54	31,05
49	31,18	31,69
50	31,83	32,34
51	32,48	32,99
52	33,12	33,63
53	33,77	34,28
54	34,42	34,93
55	35,06	35,57
56	35,71	36,22
57	36,36	36,87
58	37,00	37,51
59	37,65	38,16
60	38,30	38,81
61	38,95	39,46
62	39,59	40,10
63	40,24	40,75
64	40,89	41,40
65	41,53	42,04
66	42,18	42,69
67	42,83	43,34
68	43,47	43,98
69	44,12	44,63
70	44,77	45,28
71	45,41	45,92
72	46,06	46,57
73	46,71	47,22
74	47,35	47,86
75	48,00	48,51
76	48,65	49,16
77	49,20	49,80

z	da	dw
78	49,94	50,45
79	50,59	51,10
80	51,23	51,74
81	51,88	52,39
82	52,53	53,04
83	53,17	53,68
84	53,82	54,33
85	54,47	54,98
86	55,12	55,63
87	55,76	56,27
88	56,41	56,92
89	57,06	57,57
90	57,70	58,21
91	58,36	58,86
92	59,00	59,51
93	59,64	60,15
94	60,29	60,80
95	60,94	61,45
96	61,58	62,09
97	62,23	62,74
98	62,88	63,39
99	63,52	64,03
100	64,17	64,68
101	64,82	65,33
102	65,46	65,97
103	66,11	66,62
104	66,76	67,27
105	67,40	67,91
106	68,05	68,56
107	68,70	69,21
108	69,34	69,85
109	69,99	70,50
110	70,64	71,15
111	71,29	71,80

z	da	dw
112	71,93	72,44
113	72,58	73,09
114	73,23	73,74
115	73,87	74,38
116	74,52	75,03
117	75,17	75,68
118	75,81	76,32
119	76,46	76,97
120	77,11	77,62
121	77,75	78,26
122	78,40	78,91
123	79,05	79,56
124	79,69	80,20
125	80,34	80,85
126	80,99	81,50
127	81,63	82,14
128	82,28	82,79
129	82,93	83,44
130	83,57	84,08
131	84,22	84,73
132	84,87	85,38
133	85,51	86,02
134	86,16	88,67
135	86,81	87,32
136	87,46	87,97
137	88,10	88,61
138	88,75	89,26
139	89,40	89,91
140	90,04	90,55



XL



Belt characteristics

- Polyurethane timing belt with tooth profile according to UNI/ISO 5296 with steel tension cords
- Imperial pitch 1/5" = 5,08 mm
- Allow to use small diameter pulley
- Mainly used in applications where inch pitch is an advantage (USA / UK)

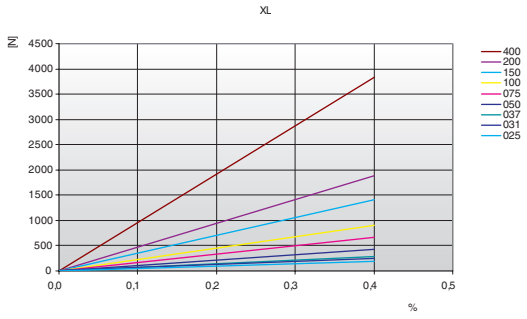
• Width tolerance:	±0,5 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,2 [mm]

Technical Data

Belt width b Code / 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]
025 / 6,35	190	95	750	47500	0,015
031 / 7,94	220	110	875	55000	0,019
037 / 9,53	290	145	1125	72500	0,023
050 / 12,7	420	210	1625	105000	0,031
075 / 19,1	670	335	2625	167500	0,046
100 / 25,4	900	450	3500	225000	0,061
150 / 38,1	1410	705	5500	352500	0,092
200 / 50,8	1890	945	7375	472500	0,122
400 / 101,6	3840	1920	15000	960000	0,244

Other widths are available on request.

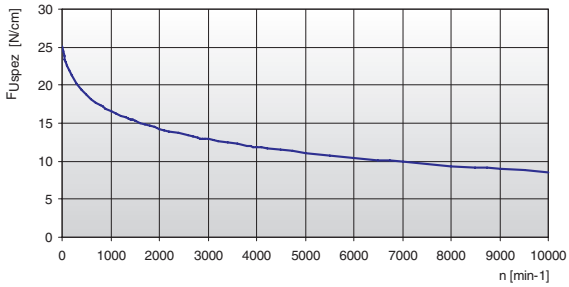
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	25,10	**800**	17,32	**1900**	14,46	**4500**	11,45
20	24,46	**900**	16,94	**2000**	14,28	**5000**	11,08
40	23,90	**1000**	16,60	**2200**	13,96	**5500**	10,74
60	23,42	**1100**	16,29	**2400**	13,66	**6000**	10,43
80	23,00	**1200**	16,01	**2600**	13,38	**6500**	10,14
100	22,63	**1300**	15,74	**2800**	13,12	**7000**	9,87
200	21,24	**1400**	15,49	**3000**	12,88	**7500**	9,63
300	20,22	**1440**	15,40	**3200**	12,65	**8000**	9,39
400	19,42	**1500**	15,26	**3400**	12,44	**8500**	9,17
500	18,77	**1600**	15,04	**3600**	12,24	**9000**	8,97
600	18,22	**1700**	14,84	**3800**	12,05	**9500**	8,77
700	17,74	**1800**	14,64	**4000**	11,87	**10000**	8,59

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} • z_e • 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 Code / mm	ARAMID CORD F_{Tzul} [N] M type	 F_{Br} [N]
025 / 6,35	420	1680
031 / 7,94	490	1960
037 / 9,53	630	2520
050 / 12,7	910	3640
075 / 19,1	1470	5880
100 / 25,4	1960	7840
150 / 38,1	3080	12320
200 / 50,8	4130	16520
400 / 101,6	8400	33600

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord	
		STANDARD	ARAMID
Drive without reverse bending	Timing pulley z_{min}	10	10
	Flat idler running on belt teeth d_{min}	30 mm	30 mm
Drive with reverse bending	Timing pulley z_{min}	15	15
	Flat idler running on belt back d_{min}	30 mm	30 mm

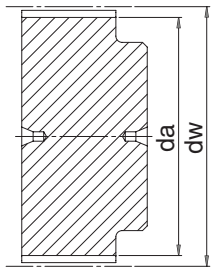
Timing pulleys

z	da	dw
10	15,66	16,17
11	17,28	17,79
12	18,89	19,40
13	20,51	21,02
14	22,13	22,64
15	23,74	24,25
16	25,36	25,87
17	26,98	27,49
18	28,60	29,11
19	30,21	30,72
20	31,83	32,34
21	33,45	33,96
22	35,06	35,57
23	36,68	37,19
24	38,30	38,81
25	39,92	40,43
26	41,53	42,04
27	43,15	43,66
28	44,77	45,28
29	46,38	46,89
30	48,00	48,51
31	49,62	50,13
32	51,23	51,74
33	52,85	53,36
34	54,47	54,98
35	56,09	56,60
36	57,70	58,21
37	59,32	59,83
38	60,94	61,45
39	62,55	63,06

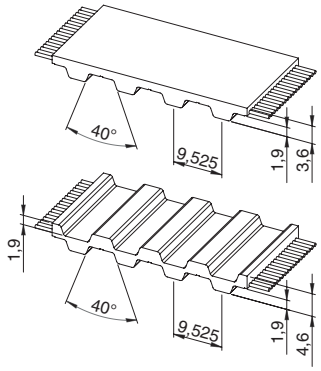
z	da	dw
40	64,17	64,68
41	65,79	66,30
42	67,40	67,91
43	69,02	69,53
44	70,64	71,15
45	72,26	72,77
46	73,87	74,38
47	75,49	76,00
48	77,11	77,62
49	78,72	79,23
50	80,34	80,85
51	81,96	82,47
52	83,57	84,08
53	85,19	85,70
54	86,81	87,32
55	88,42	88,93
56	90,04	90,55
57	91,66	92,17
58	93,28	93,79
59	94,89	95,40
60	96,51	97,02
61	98,13	98,64
62	99,74	100,25
63	101,36	101,87
64	102,98	103,49
65	104,60	105,11
66	106,21	106,72
67	107,83	108,34
68	109,45	109,96
69	111,06	111,57

z	da	dw
70	112,68	113,19
71	114,30	114,81
72	115,92	116,43
73	117,53	118,04
74	119,15	119,66
75	120,77	121,28
76	122,38	122,89
77	124,00	124,51
78	125,62	126,13
79	127,23	127,74
80	128,85	129,36
81	130,47	130,98
82	132,08	132,59
83	133,70	134,21
84	135,32	135,83
85	136,93	137,44
86	138,55	139,06
87	140,17	140,68
88	141,75	142,30
89	143,36	143,91
90	145,02	145,53
91	146,64	147,15
92	148,25	148,76
93	149,87	150,38
94	151,49	152,00
95	153,11	153,62
96	154,72	155,23
97	156,34	156,85
98	157,96	158,47
99	159,57	160,08

z	da	dw
100	161,19	161,70
101	162,81	163,32
102	164,42	164,93
103	166,04	166,55
104	167,66	168,17
105	169,28	169,79
106	170,89	171,40
107	172,51	173,02
108	174,13	174,64
109	175,74	176,25
110	177,36	177,87
111	178,98	179,49
112	180,59	181,10
113	182,21	182,72
114	183,83	184,34
115	185,44	185,95
116	187,06	187,57
117	188,68	189,19
118	190,30	190,81
119	191,91	192,42
120	193,53	194,04



L



Belt characteristics

- Polyurethane timing belt with tooth profile according to UNI/ISO 5296 with steel tension cords
- Imperial pitch 3/8" = 9,525 mm
- Allow to use small diameter pulley
- Mainly used in applications where inch pitch is an advantage (USA / UK)

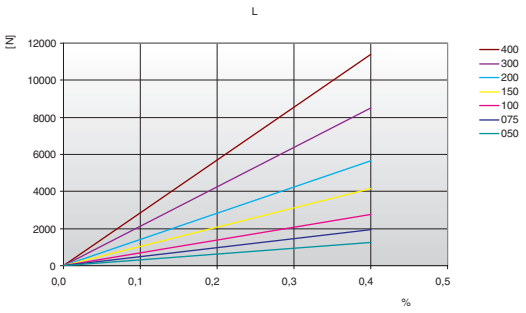
• Width tolerance:	±0,5 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,2 [mm]

Technical Data

Belt width b Code / 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]
050 / 12,7	1270	635	4620	317500	0,049
075 / 19,1	1960	980	7140	490000	0,073
100 / 25,4	2760	1380	10080	690000	0,098
150 / 38,1	4260	2130	15540	1065000	0,146
200 / 50,8	5640	2820	20580	1410000	0,195
300 / 76,2	8510	4255	31080	2127500	0,293
400 / 101,6	11390	5695	41580	2847500	0,390

Other widths are available on request.

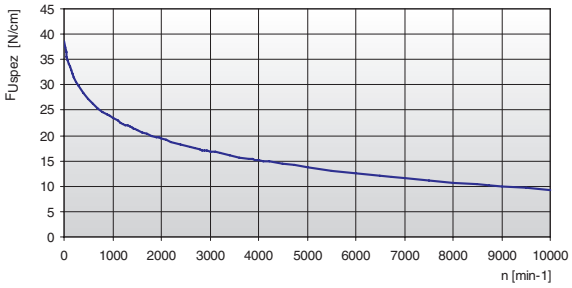
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	38,60	**800**	24,70	**1900**	19,66	**4500**	14,36
20	37,42	**900**	24,04	**2000**	19,35	**5000**	13,70
40	36,40	**1000**	23,44	**2200**	18,77	**5500**	13,10
60	35,51	**1100**	22,89	**2400**	18,24	**6000**	12,55
80	34,74	**1200**	22,38	**2600**	17,76	**6500**	12,05
100	34,07	**1300**	21,91	**2800**	17,30	**7000**	11,58
200	31,59	**1400**	21,48	**3000**	16,88	**7500**	11,14
300	29,79	**1440**	21,31	**3200**	16,48	**8000**	10,73
400	28,39	**1500**	21,07	**3400**	16,10	**8500**	10,35
500	27,25	**1600**	20,69	**3600**	15,75	**9000**	9,98
600	26,28	**1700**	20,33	**3800**	15,41	**9500**	9,64
700	25,44	**1800**	19,98	**4000**	15,09	**10000**	9,31

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:

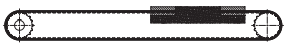
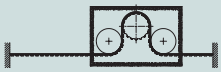
F_U [N] = F_{Uspez} • z_e • b

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 Code / mm	ARAMID CORD		STAINLESS STEEL	
	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]
050 / 12,7	1210	4950	830	3300
075 / 19,1	1870	7650	1280	5100
100 / 25,4	2640	10800	1800	7200
150 / 38,1	4070	16650	2780	11100
200 / 50,8	5390	22050	3680	14700
300 / 76,2	8140	33300	-	-
400 / 101,6	10890	44550	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord		
		STANDARD	ARAMID	STAINLESS
Drive without reverse bending 	Timing pulley z_{min}	15	15	18
	Flat idler running on belt teeth d_{min}	60 mm	60 mm	65 mm
Drive with reverse bending 	Timing pulley z_{min}	20	20	20
	Flat idler running on belt back d_{min}	60 mm	60 mm	65 mm

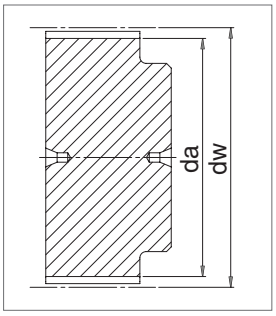
Timing pulleys

z	da	dw
10	29,56	30,32
11	32,59	33,35
12	35,62	36,38
13	38,65	39,41
14	41,68	42,44
15	44,71	45,47
16	47,74	48,50
17	50,77	51,53
18	53,80	54,56
19	56,83	57,61
20	59,88	60,64
21	62,91	63,67
22	65,94	66,70
23	68,97	69,73
24	72,00	72,76
25	75,03	75,80
26	78,06	78,83
27	81,09	81,86
28	84,12	84,89
29	87,15	87,92
30	90,20	90,95
31	93,23	93,98
32	96,26	97,01
33	99,29	100,04
34	102,32	103,07
35	105,35	106,12
36	108,38	109,15
37	111,41	112,18
38	114,44	115,21
39	117,47	118,24

z	da	dw
40	120,52	121,27
41	123,55	124,30
42	126,58	127,33
43	129,61	130,36
44	132,64	133,39
45	135,67	136,44
46	138,70	139,47
47	141,73	142,50
48	144,76	145,53
49	147,80	148,56
50	150,83	151,59
51	153,86	154,62
52	156,89	157,65
53	159,92	160,68
54	162,95	163,71
55	166,00	166,76
56	169,03	169,79
57	172,06	172,82
58	175,09	175,85
59	178,12	178,88
60	181,15	181,91
61	184,18	184,94
62	187,21	187,97
63	190,24	191,00
64	193,27	194,03
65	196,30	197,06
66	199,33	200,11
67	202,38	203,14
68	205,41	206,17
69	208,44	209,20

z	da	dw
70	211,47	212,23
71	214,50	215,26
72	217,53	218,29
73	220,56	221,32
74	223,59	224,35
75	226,62	227,38
76	229,65	230,41
77	232,70	233,46
78	235,73	236,49
79	238,76	239,52
80	241,79	242,55
81	244,82	245,58
82	247,85	248,61
83	250,88	251,64
84	253,91	254,67
85	256,94	257,70
86	259,97	260,73
87	263,02	263,78
88	266,05	266,81
89	269,08	269,84
90	272,11	272,87
91	275,14	275,90
92	278,17	278,93
93	281,20	281,96
94	284,23	285,00
95	287,26	288,03
96	290,30	291,06
97	293,33	294,09
98	296,36	297,12
99	299,40	300,15

z	da	dw
100	302,43	303,18
101	305,46	306,21
102	308,49	309,24
103	311,52	312,29
104	314,55	315,32
105	317,58	318,35
106	320,61	321,38
107	323,64	324,41
108	326,69	327,44
109	329,72	330,47
110	332,75	333,50
111	335,78	336,53
112	338,81	339,56
113	341,84	342,61
114	344,87	345,64
115	347,90	348,67
116	350,93	351,70
117	353,96	354,73
118	357,00	357,76
119	360,03	360,79
120	363,07	363,82



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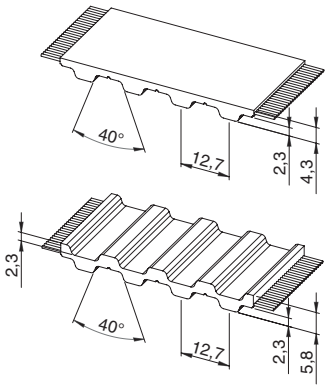


Belt characteristics

- Polyurethane timing belt with tooth profile according to UNI/ISO 5296 with steel tension cords
- Imperial pitch 1/2" = 12,7 mm
- Allow to use small diameter pulley
- Mainly used in applications where inch pitch is an advantage (USA / UK)

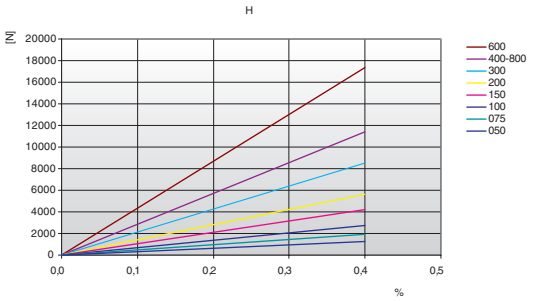
• Width tolerance:	±0,5 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,2 [mm]

Technical Data

Belt width b Code / 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]
050 / 12,7	1270	635	4620	317500	0,05
075 / 19,1	1960	980	7140	490000	0,08
100 / 25,4	2760	1380	10080	690000	0,11
150 / 38,1	4260	2130	15540	1065000	0,16
200 / 50,8	5640	2820	20580	1410000	0,22
300 / 76,2	8510	4255	31080	2127500	0,32
400 / 101,6	11390	5695	41580	2847500	0,43
600 / 152,4	17250	8625	63000	4312500	0,56
800 / 203,2*	11390	5695	41580	2847500	0,65

Other widths are available on request. *= double cords spacing

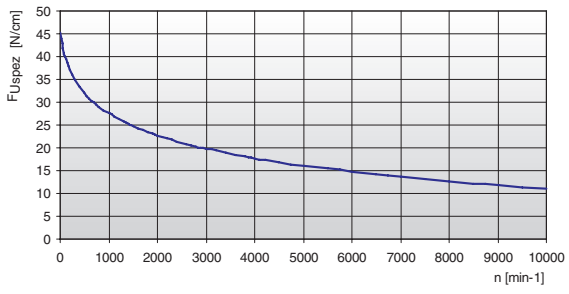
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	45,30	**800**	29,04	**1900**	23,11	**4500**	16,88
20	43,95	**900**	28,26	**2000**	22,74	**5000**	16,11
40	42,78	**1000**	27,55	**2200**	22,07	**5500**	15,41
60	41,77	**1100**	26,90	**2400**	21,44	**6000**	14,76
80	40,88	**1200**	26,31	**2600**	20,87	**6500**	14,17
100	40,11	**1300**	25,76	**2800**	20,34	**7000**	13,62
200	37,22	**1400**	25,25	**3000**	19,84	**7500**	13,11
300	35,07	**1440**	25,05	**3200**	19,37	**8000**	12,63
400	33,41	**1500**	24,77	**3400**	18,93	**8500**	12,18
500	32,05	**1600**	24,32	**3600**	18,51	**9000**	11,75
600	30,90	**1700**	23,89	**3800**	18,12	**9500**	11,35
700	29,91	**1800**	23,49	**4000**	17,75	**10000**	10,96

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} • z_e • 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 Code / mm	ARAMID CORD		STAINLESS STEEL	
	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]
050 / 12,7	1210	4950	830	3300
075 / 19,1	1870	7650	1280	5100
100 / 25,4	2640	10800	1800	7200
150 / 38,1	4070	16650	2780	11100
200 / 50,8	5390	22050	3680	14700
300 / 76,2	8140	33300	-	-
400 / 101,6	10890	44550	-	-
600 / 152,4	16500	67500	-	-
800 / 203,2*	10890	45500	-	-

*= double cords spacing

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord		
		STANDARD	ARAMID	STAINLESS
Drive without reverse bending 	Timing pulley z_{min}	14	14	20
	Flat idler running on belt teeth d_{min}	60 mm	60 mm	80 mm
Drive with reverse bending 	Timing pulley z_{min}	20	20	40
	Flat idler running on belt back d_{min}	80 mm	80 mm	100 mm

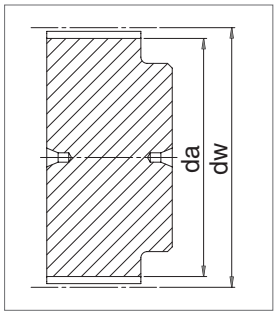
Timing pulleys

z	da	dw
14	55,23	56,60
15	59,27	60,64
16	63,31	64,68
17	67,35	68,72
18	71,40	72,76
19	75,44	76,80
20	79,48	80,84
21	83,52	84,88
22	87,57	88,94
23	91,61	92,98
24	95,65	97,02
25	99,69	101,06
26	103,73	105,10
27	107,77	109,14
28	111,81	113,18
29	115,85	117,22
30	119,91	121,28
31	123,95	125,32
32	127,99	129,36
33	132,03	133,40
34	136,07	137,44
35	140,11	141,48
36	144,15	145,52
37	148,20	149,56
38	152,24	153,62
39	156,28	157,66
40	160,32	161,70
41	164,36	165,74
42	168,42	169,78
43	172,46	173,82

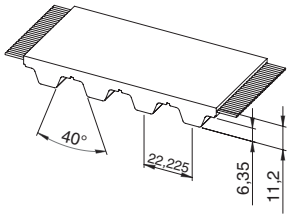
z	da	dw
44	176,50	177,86
45	180,54	181,90
46	184,58	185,96
47	188,62	190,00
48	192,67	194,04
49	196,71	198,08
50	200,75	202,13
51	204,80	206,17
52	208,84	210,21
53	212,88	214,25
54	216,92	218,29
55	220,96	222,33
56	225,00	226,37
57	229,04	230,41
58	233,10	234,47
59	237,14	238,51
60	241,18	242,55
61	245,22	246,59
62	249,26	250,63
63	253,30	254,67
64	257,34	258,71
65	261,38	262,75
66	265,44	266,81
67	269,48	270,85
68	273,52	274,89
69	277,56	278,93
70	281,60	282,97
71	285,64	287,01
72	289,68	291,05
73	293,72	295,10

z	da	dw
74	297,78	299,14
75	301,82	303,18
76	305,86	307,22
77	309,90	311,26
78	313,94	315,32
79	317,98	319,36
80	322,02	323,40
81	326,06	327,44
82	330,12	331,48
83	334,16	335,52
84	338,20	339,56
85	342,24	343,60
86	346,28	347,66
87	350,33	351,70
88	354,37	355,74
89	358,41	359,78
90	362,45	363,82
91	366,50	367,86
92	370,54	371,90
93	374,58	375,94
94	378,62	380,00
95	382,66	384,04
96	386,70	388,08
97	390,74	392,12
98	394,80	396,16
99	398,84	400,20
100	402,88	404,24
101	406,92	408,28
102	410,96	412,34
103	415,00	416,38

z	da	dw
104	419,04	420,42
105	423,08	424,46
106	427,14	428,50
107	431,18	432,54
108	435,22	436,58
109	439,26	440,62
110	443,30	444,68
111	447,34	448,72
112	451,38	452,76
113	455,42	456,80
114	459,48	460,84
115	463,52	464,88
116	467,56	468,92
117	471,60	472,96
118	475,64	477,02
119	479,68	481,06
120	483,72	485,10



XH



Belt characteristics

- Polyurethane timing belt with tooth profile according to UNI/ISO 5296 with steel tension cords
- Imperial pitch 7/8" = 22,225 mm
- Mainly used in applications where inch pitch is an advantage (USA / UK)

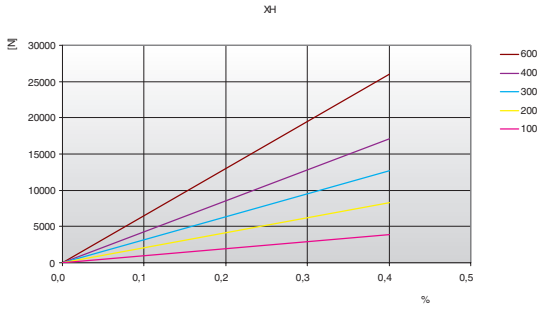
• Width tolerance:	±1,0 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,4 [mm]

Technical Data

Belt width b Code / 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]
100 / 25,4	3920	1960	15200	980000	0,370
200 / 50,8	8330	4165	32300	2082500	0,660
300 / 76,2	12740	6370	49400	3185000	0,990
400 / 101,6	17150	8575	66500	4287500	1,330
600 / 152,4	25970	12985	100700	6492500	1,990

Other widths are available on request.

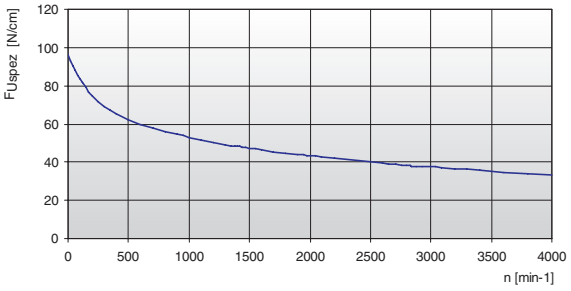
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	96,00	**800**	55,99	**1900**	43,86	**4000**	33,31
20	92,98	**900**	54,35	**2000**	43,14	-	-
40	90,27	**1000**	52,88	**2200**	41,79	-	-
60	87,85	**1100**	51,55	**2400**	40,56	-	-
80	85,68	**1200**	50,33	**2600**	39,43	-	-
100	83,73	**1300**	49,20	**2800**	38,37	-	-
200	74,80	**1400**	48,16	**2880**	37,98	-	-
300	69,42	**1440**	47,77	**3000**	37,40	-	-
400	65,53	**1500**	47,19	**3200**	36,48	-	-
500	62,48	**1600**	46,29	**3400**	35,62	-	-
600	59,97	**1700**	45,43	**3600**	34,81	-	-
700	57,84	**1800**	44,62	**3800**	34,04	-	-

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:

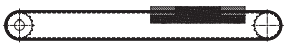
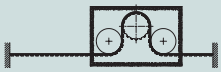
F_U [N] = F_{Uspez} • z_e • b

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 Code / mm	ARAMID CORD		STAINLESS STEEL	
	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]
100 / 25,4	3520	16000	2880	12000
200 / 50,8	7480	34000	6120	25500
300 / 76,2	11440	52000	9360	39000
400 / 101,6	15400	70000	12600	52500
600 / 152,4	23320	106000	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord		
		STANDARD	ARAMID	STAINLESS
Drive without reverse bending 	Timing pulley z_{min}	18	18	24
	Flat idler running on belt teeth d_{min}	150 mm	150 mm	160 mm
Drive with reverse bending 	Timing pulley z_{min}	20	20	30
	Flat idler running on belt back d_{min}	180 mm	180 mm	200 mm

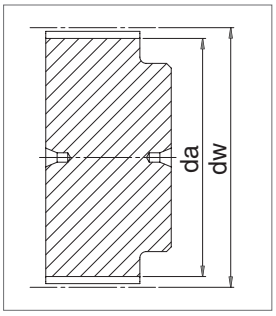
Timing pulleys

z	da	dw
18	124,55	127,34
19	131,62	134,41
20	138,68	141,48
21	145,76	148,55
22	152,84	155,64
23	159,91	162,71
24	167,00	169,78
25	174,07	176,85
26	181,13	183,94
27	188,20	191,01
28	195,27	198,08
29	202,37	205,15
30	209,44	212,22
31	216,51	219,31
32	223,58	226,38
33	230,66	233,45
34	237,73	240,52
35	244,80	247,59
36	251,87	254,68
37	258,94	261,75
38	266,02	268,82
39	273,11	275,89
40	280,18	282,98
41	287,25	290,05
42	294,33	297,12
43	301,40	304,19
44	308,47	311,26
45	315,54	318,35
46	322,61	325,42
47	329,70	332,49

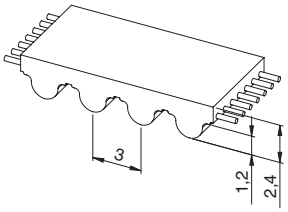
z	da	dw
48	336,77	339,57
49	343,87	346,66
50	350,93	353,73
51	358,00	360,80
52	365,07	367,87
53	372,14	374,94
54	379,21	382,01
55	386,30	389,08
56	393,37	396,17
57	400,44	403,24
58	407,51	410,31
59	414,58	417,38
60	421,68	424,47
61	428,75	431,54
62	435,90	438,61
63	442,90	445,68
64	449,97	452,75
65	457,05	459,84
66	464,10	466,91
67	471,20	473,98
68	478,25	481,05
69	485,32	488,12
70	492,39	495,21
71	499,48	502,28
72	506,57	509,35
73	513,63	516,42
74	520,70	523,51
75	527,77	530,58
76	534,84	537,65
77	541,93	544,72

z	da	dw
78	549,00	551,79
79	556,07	558,88
80	563,15	565,95
81	570,22	573,02
82	577,29	580,09
83	584,36	587,18
84	591,43	594,25
85	598,60	601,32
86	605,61	608,39
87	612,68	615,46
88	619,75	622,55
89	626,82	629,62
90	633,89	636,69
91	640,96	643,76
92	648,04	650,85
93	655,11	657,92
94	662,18	664,99
95	669,25	672,06
96	676,33	679,13
97	683,40	686,22
98	690,47	693,29
99	697,55	700,36
100	704,62	707,43
101	711,70	714,50
102	718,77	721,59
103	725,85	728,66
104	732,92	735,73
105	740,01	742,80
106	747,08	749,87
107	754,15	756,96

z	da	dw
108	761,22	764,03
109	768,30	771,10
110	775,37	778,17
111	782,44	785,26
112	789,51	792,33
113	796,60	799,40
114	803,67	806,47
115	810,74	813,54
116	817,81	820,63
117	824,88	827,70
118	831,95	834,77
119	839,03	841,84
120	846,12	848,93



HTD 3M



Belt characteristics

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile 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

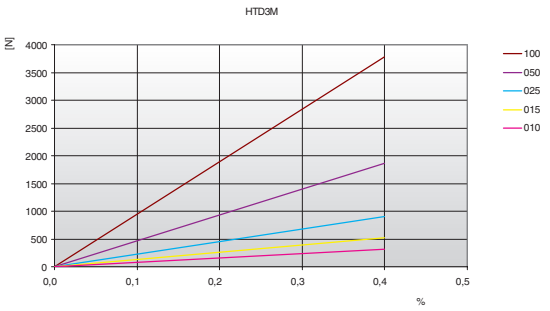
- Width tolerance: ±0,5 [mm]
- Length tolerance: ±0,5 [mm/m]
- Thickness tolerance: ±0,2 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{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	0,06
50	1860	930	7250	465000	0,12
100	3780	1890	14750	945000	0,24

Other widths are available on request.

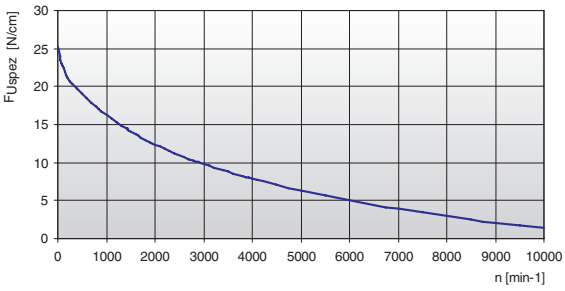
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	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} • z_e • 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		Type of cord STANDARD
Drive without reverse bending	Timing pulley z_{min}	20
	Flat idler running on belt teeth d_{min}	30 mm
Drive with reverse bending	Timing pulley z_{min}	20
	Flat idler running on belt back d_{min}	30 mm

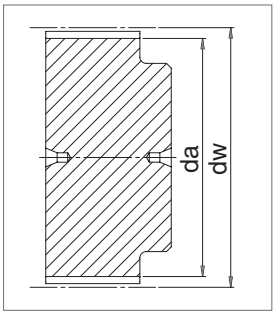
Timing pulleys

z	da	dw
10	8,79	9,55
11	9,74	10,50
12	10,70	11,46
13	11,65	12,41
14	12,61	13,37
15	13,56	14,32
16	14,52	15,28
17	15,47	16,23
18	16,43	17,19
19	17,38	18,14
20	18,34	19,10
21	19,29	20,05
22	20,25	21,01
23	21,20	21,96
24	22,16	22,92
25	23,11	23,87
26	24,07	24,83
27	25,02	25,78
28	25,98	26,74
29	26,93	27,69
30	27,89	28,65
31	28,84	29,60
32	29,80	30,56
33	30,75	31,51
34	31,71	32,47
35	32,66	33,42
36	33,62	34,38
37	34,57	35,33
38	35,53	36,29
39	36,48	37,24
40	37,44	38,20
41	38,39	39,15
42	39,35	40,11
43	40,30	41,06

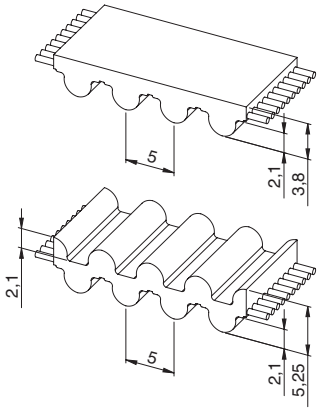
z	da	dw
44	41,26	42,02
45	42,21	42,97
46	43,17	43,93
47	44,12	44,88
48	45,08	45,84
49	46,03	46,79
50	46,99	47,75
51	47,94	48,70
52	48,90	49,66
53	49,85	50,61
54	50,81	51,57
55	51,76	52,52
56	52,72	53,48
57	53,67	54,43
58	54,63	55,39
59	55,58	56,34
60	56,54	57,30
61	57,49	58,25
62	58,45	59,21
63	59,40	60,16
64	60,36	61,12
65	61,31	62,07
66	62,27	63,03
67	63,22	63,98
68	64,18	64,94
69	65,13	65,89
70	66,09	66,85
71	67,04	67,80
72	68,00	68,76
73	68,95	69,71
74	69,91	70,67
75	70,86	71,62
76	71,82	72,58
77	72,77	73,53

z	da	dw
78	73,73	74,49
79	74,68	75,44
80	75,64	76,40
81	76,59	77,35
82	77,55	78,31
83	78,50	79,26
84	79,46	80,22
85	80,41	81,17
86	81,37	82,13
87	82,32	83,08
88	83,28	84,04
89	84,23	84,99
90	85,19	85,95
91	86,14	86,90
92	87,10	87,86
93	88,05	88,81
94	89,01	89,77
95	89,96	90,72
96	90,92	91,68
97	91,87	92,63
98	92,83	93,59
99	93,78	94,54
100	94,74	95,50
101	95,69	96,45
102	96,65	97,41
103	97,60	98,36
104	98,56	99,32
105	99,51	100,27
106	100,47	101,23
107	101,42	102,18
108	102,38	103,14
109	103,33	104,09
110	104,29	105,05
111	105,24	106,00

z	da	dw
112	106,2	106,96
113	107,15	107,91
114	108,11	108,87
115	109,06	109,82
116	110,02	110,78
117	110,97	111,73
118	111,93	112,69
119	112,88	113,64
120	113,83	114,59
121	114,79	115,55
122	115,74	116,50
123	116,70	117,46
124	117,65	118,41
125	118,61	119,37
126	119,56	120,32
127	120,52	121,28
128	121,47	122,23
129	122,43	123,19
130	123,38	124,14
131	124,34	125,10
132	125,29	126,05
133	126,25	127,01
134	127,20	127,96
135	128,16	128,92
136	129,11	129,87
137	130,07	130,83
138	131,02	131,78
139	131,98	132,74
140	132,93	133,69



HTD 5M



Belt characteristics

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile according to ISO 13050
- Metric pitch 5 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
- Double sided tooth construction available

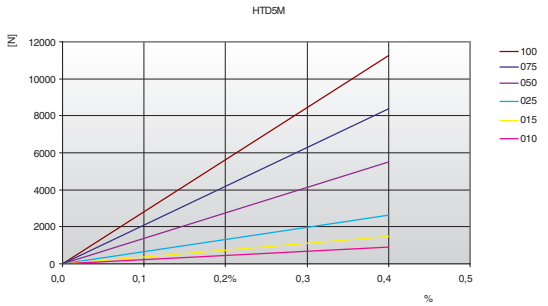
• Width tolerance:	±0,5 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,2 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{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	920	460	3360	230000	0,050
15	1500	750	5460	375000	0,070
25	2650	1325	9660	662500	0,120
50	5520	2760	20160	1380000	0,240
75	8400	4200	30660	2100000	0,360
100	11270	5635	41160	2817500	0,480

Other widths are available on request.

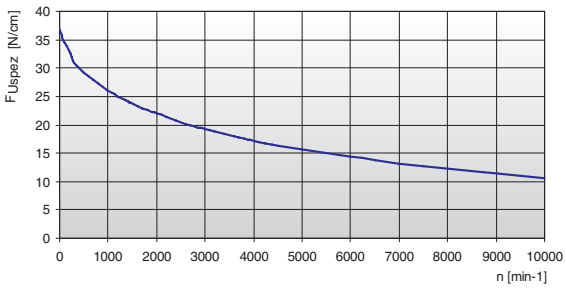
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	36,80	**800**	27,21	**1900**	22,24	**4500**	16,40
20	36,25	**900**	26,61	**2000**	21,91	**5000**	15,64
40	35,75	**1000**	26,05	**2200**	21,30	**5500**	14,95
60	35,30	**1100**	25,52	**2400**	20,72	**6000**	14,32
80	34,89	**1200**	25,03	**2600**	20,19	**6500**	13,74
100	34,52	**1300**	24,56	**2800**	19,69	**7000**	13,19
200	33,13	**1400**	24,13	**3000**	19,23	**7500**	12,68
300	30,87	**1440**	23,96	**3200**	18,78	**8000**	12,20
400	30,10	**1500**	23,71	**3400**	18,37	**8500**	11,75
500	29,31	**1600**	23,32	**3600**	17,97	**9000**	11,33
600	28,56	**1700**	22,94	**3800**	17,59	**9500**	10,92
700	27,86	**1800**	22,58	**4000**	17,23	**10000**	10,53

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:

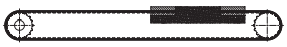
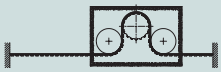
F_U [N] = F_{Uspez} • z_e • b

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	
	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]
10	880	3600	600	2400
15	1430	5850	980	3900
25	2530	10350	1730	6900
50	5280	21600	3600	14400
75	8030	32850	5475	21900
100	10780	44100	7350	29400

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord		
		STANDARD	ARAMID	STAINLESS
Drive without reverse bending 	Timing pulley z_{min}	16	16	18
	Flat idler running on belt teeth d_{min}	30 mm	30 mm	40 mm
Drive with reverse bending 	Timing pulley z_{min}	25	25	25
	Flat idler running on belt back d_{min}	60 mm	60 mm	65 mm

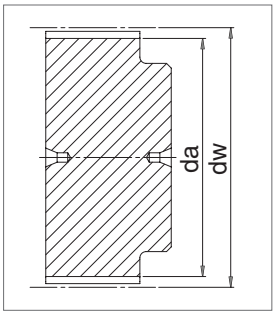
Timing pulleys

z	da	dw
10	14,77	15,91
11	16,36	17,50
12	17,96	19,10
13	19,55	20,69
14	21,14	22,28
15	22,73	23,87
16	24,32	25,46
17	25,91	27,05
18	27,51	28,65
19	29,09	30,23
20	30,69	31,83
21	32,28	33,42
22	33,87	35,01
23	35,46	36,60
24	37,06	38,20
25	38,64	39,78
26	40,24	41,38
27	41,83	42,97
28	43,42	44,56
29	45,01	46,15
30	46,61	47,75
31	48,19	49,33
32	49,79	50,93
33	51,38	52,52
34	52,97	54,11
35	54,56	55,70
36	56,16	57,30
37	57,75	58,89
38	59,34	60,48
39	60,93	62,07

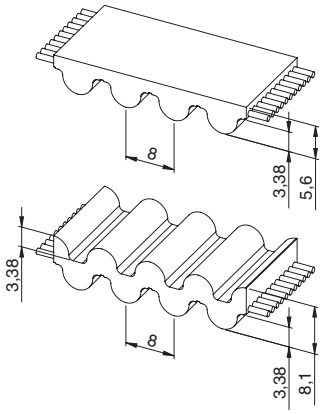
z	da	dw
40	62,52	63,66
41	64,11	65,25
42	65,70	66,84
43	67,29	68,43
44	68,88	70,02
45	70,47	71,61
46	72,06	73,20
47	73,65	74,79
48	75,24	76,38
49	76,84	77,98
50	78,44	79,58
51	80,03	81,17
52	81,62	82,76
53	83,21	84,35
54	84,80	85,94
55	86,39	87,53
56	87,98	89,12
57	89,57	90,71
58	91,17	92,31
59	92,76	93,90
60	94,35	95,49
61	95,94	97,08
62	97,53	98,67
63	99,12	100,26
64	100,72	101,86
65	102,31	103,45
66	103,90	105,04
67	105,49	106,63
68	107,08	108,22
69	108,67	109,81

z	da	dw
70	110,27	111,41
71	111,86	113,00
72	113,45	114,59
73	115,04	116,18
74	116,63	117,77
75	118,22	119,36
76	119,81	120,95
77	121,40	122,54
78	122,99	124,13
79	124,58	125,72
80	126,18	127,32
81	127,77	128,91
82	129,36	130,50
83	130,95	132,09
84	132,54	133,68
85	134,14	135,28
86	135,73	136,87
87	137,32	138,46
88	138,91	140,05
89	140,51	141,65
90	142,10	143,24
91	143,69	144,83
92	145,28	146,42
93	146,87	148,01
94	148,46	149,60
95	150,06	151,20
96	151,64	152,78
97	153,24	154,38
98	154,83	155,97
99	156,42	157,56

z	da	dw
100	158,01	159,15
101	159,61	160,75
102	161,2	162,34
103	162,81	163,95
104	164,38	165,52
105	165,97	167,11
106	167,56	168,70
107	169,09	170,23
108	170,75	171,89
109	172,34	173,48
110	173,93	175,07
111	175,52	176,66
112	177,11	178,25
113	178,70	179,84
114	180,29	181,43
115	181,88	183,02
116	183,47	184,61
117	185,07	186,21
118	186,66	187,80
119	188,25	189,39
120	189,84	190,98



HTD 8M



Belt characteristics

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile according to ISO 13050
- Metric pitch 8 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, medium power transmission applications
- Double sided tooth construction available

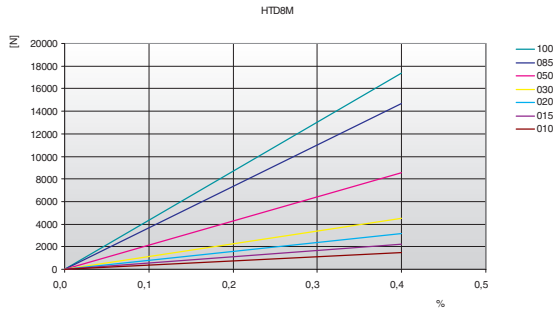
• Width tolerance:	±0,5 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,2 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{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	1470	735	5700	367500	0,07
15	2210	1105	8550	552500	0,10
20	3190	1595	12350	797500	0,14
30	4660	2330	18050	1165000	0,21
50	8580	4290	33250	2145000	0,35
85	14700	7350	57000	3675000	0,59
100	17400	8700	67450	4350000	0,69

Other widths are available on request.

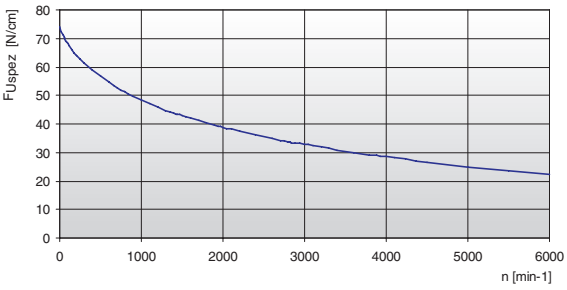
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	74,00	**800**	51,20	**1900**	39,52	**4500**	26,63
20	72,62	**900**	49,71	**2000**	38,78	**5000**	25,00
40	71,34	**1000**	48,35	**2200**	37,39	**5500**	23,51
60	70,16	**1100**	47,09	**2400**	36,12	**6000**	22,15
80	69,07	**1200**	45,93	**2600**	34,94	-	-
100	68,07	**1300**	44,84	**2800**	33,83	-	-
200	64,09	**1400**	43,82	**3000**	32,80	-	-
300	61,68	**1440**	43,43	**3200**	31,83	-	-
400	59,03	**1500**	42,86	**3400**	30,91	-	-
500	56,71	**1600**	41,96	**3600**	30,05	-	-
600	54,66	**1700**	41,10	**3800**	29,22	-	-
700	52,84	**1800**	40,29	**4000**	28,44	-	-

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:

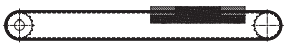
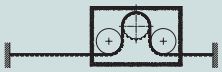
F_U [N] = F_{Uspez} • z_e • b

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]
10	1320	6000	1080	4500	-	-
15	1980	9000	1620	6750	-	-
20	2860	13000	2340	9750	5280	19250
30	4180	19000	3420	14250	8160	29750
50	7700	35000	6300	26250	14400	52500
85	13200	60000	10800	45000	24480	89250
100	15620	71000	12780	53250	29280	106750

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord			
		STANDARD	**ARAMID**	**STAINLESS**	**HPL**
Drive without reverse bending 	Timing pulley z_{min}	18	18	24	30
	Flat idler running on belt teeth d_{min}	50 mm	50 mm	70 mm	80 mm
Drive with reverse bending 	Timing pulley z_{min}	30	30	40	30
	Flat idler running on belt back d_{min}	120 mm	120 mm	120 mm	150 mm

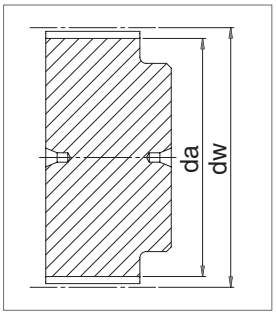
Timing pulleys

z	da	dw
18	44,46	45,83
19	47,01	48,38
20	49,56	50,93
21	52,10	53,47
22	54,65	56,02
23	57,20	58,57
24	59,75	61,12
25	62,29	63,66
26	64,84	66,21
27	67,38	68,75
28	70,08	71,30
29	72,59	73,84
30	75,13	76,39
31	77,65	78,94
32	80,16	81,49
33	82,68	84,03
34	85,21	86,58
35	87,76	89,12
36	90,30	91,67
37	92,85	94,22
38	95,40	96,77
39	97,94	99,31
40	100,49	101,86
41	103,04	104,40
42	105,58	106,95
43	108,13	109,50
44	110,68	112,05
45	113,22	114,59
46	115,77	117,14
47	118,31	119,68

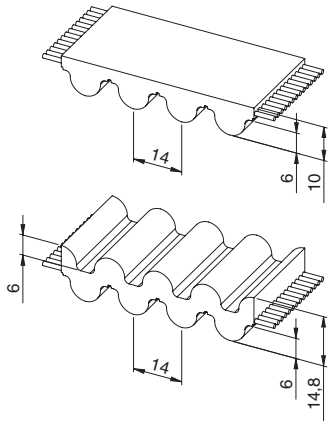
z	da	dw
48	120,86	122,23
49	123,40	124,77
50	125,95	127,32
51	128,50	129,87
52	131,05	132,41
53	133,59	134,96
54	136,14	137,51
55	138,68	140,05
56	141,23	142,60
57	143,78	145,15
58	146,32	147,69
59	148,87	150,24
60	151,42	152,79
61	153,96	155,33
62	156,52	157,89
63	159,06	160,43
64	161,60	162,97
65	164,15	165,52
66	166,69	168,06
67	169,24	170,61
68	171,79	173,16
69	174,33	175,70
70	176,88	178,25
71	179,43	180,80
72	181,98	183,35
73	184,52	185,89
74	187,07	188,44
75	189,61	190,98
76	192,16	193,53
77	194,71	196,08

z	da	dw
78	197,25	198,62
79	199,80	201,17
80	202,35	203,72
81	204,89	206,26
82	207,44	208,81
83	209,98	211,35
84	212,53	213,90
85	215,08	216,45
86	217,63	219,00
87	220,17	221,54
88	222,72	224,09
89	225,26	226,63
90	227,81	229,18
91	230,35	231,72
92	232,90	234,27
93	235,45	236,82
94	238,00	239,37
95	240,54	241,91
96	243,09	244,46
97	245,63	247,00
98	248,18	249,55
99	250,73	252,10
100	253,28	254,67
101	255,82	257,19
102	258,37	259,74
103	260,91	262,28
104	263,46	264,83
105	266,01	267,38
106	268,55	269,92
107	271,10	272,47

z	da	dw
108	273,64	275,01
109	276,19	277,56
110	278,74	280,11
111	281,29	282,66
112	283,84	285,21
113	286,38	287,75
114	288,93	290,30
115	291,47	292,84
116	294,02	295,39
117	296,57	297,94
118	299,11	300,48
119	301,66	303,03
120	304,20	305,57



HTD 14M



Belt characteristics

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile according to ISO 13050
- Metric pitch 14 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, heavy power transmission applications
- Double sided tooth construction available

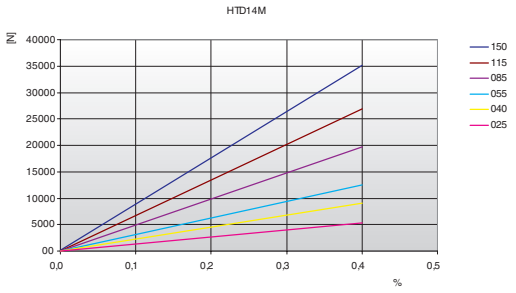
• Width tolerance:	±1,0 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,4 [mm]

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]
25	5280	2640	19250	1320000	0,28
40	9120	4560	33250	2280000	0,44
55	12480	6240	45500	3120000	0,61
85	19680	9840	71750	4920000	0,94
115	26880	13440	98000	6720000	1,25
150	35520	17760	129500	8880000	1,68

Other widths are available on request.

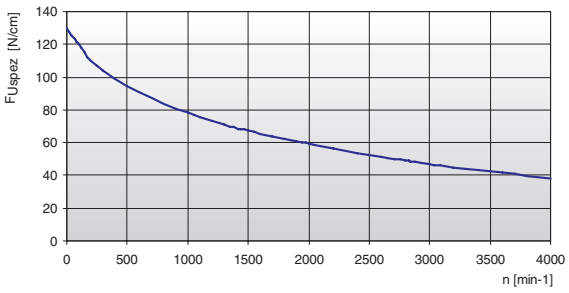
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	130,00	**800**	83,80	**1900**	60,49
20	127,69	**900**	80,85	**2000**	59,01
40	125,56	**1000**	78,14	**2200**	56,23
60	123,60	**1100**	75,63	**2400**	53,68
80	121,78	**1200**	73,31	**2600**	51,30
100	120,11	**1300**	71,14	**2800**	49,09
200	109,77	**1400**	69,11	**3000**	47,01
300	104,29	**1440**	68,33	**3200**	45,06
400	99,19	**1500**	67,19	**3400**	43,22
500	94,65	**1600**	65,38	**3600**	41,48
600	90,64	**1700**	63,67	**3800**	39,82
700	87,04	**1800**	62,04	**4000**	38,24

Tooth shear strength / rpm

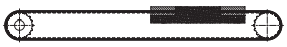
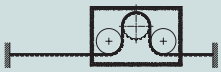


The specific load F_{Uspez} is the maximum load which one single belt tooth 1 cm wide can withstand in all operating conditions.
This force is related to the drive rpm.
The total load F_U transmissible by the belt in the drive is calculated by:

F_U [N] = F_{Uspez} • z_e • 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		Type of cord STANDARD
Drive without reverse bending	Timing pulley z_{min}	28
	Flat idler running on belt teeth d_{min}	120 mm
Drive with reverse bending	Timing pulley z_{min}	28
	Flat idler running on belt back d_{min}	180 mm

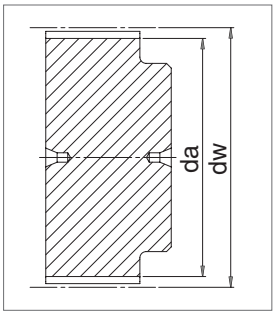
Timing pulleys

z	da	dw
28	122,12	124,77
29	126,58	129,22
30	130,99	133,69
31	135,45	138,14
32	139,88	142,59
33	144,35	147,06
34	148,79	151,51
35	153,25	155,96
36	157,68	160,41
37	162,14	164,88
38	166,60	169,34
39	171,02	173,79
40	175,48	178,24
41	179,92	182,71
42	184,37	187,16
43	188,83	191,61
44	193,29	196,08
45	197,75	200,53
46	202,21	204,98
47	206,65	209,43
48	211,11	213,90
49	215,57	218,35
50	220,03	222,80
51	224,49	227,27
52	228,95	231,72
53	233,39	236,18
54	237,85	240,64
55	242,30	245,09
56	246,76	249,55
57	251,22	254,01

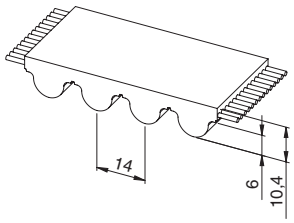
z	da	dw
58	255,68	258,46
59	260,14	262,91
60	264,60	267,38
61	269,04	271,83
62	273,50	276,28
63	277,96	280,75
64	282,42	285,20
65	286,88	289,65
66	291,32	294,11
67	295,78	298,56
68	300,24	303,03
69	304,70	307,48
70	309,16	311,93
71	313,61	316,40
72	318,07	320,85
73	322,53	325,30
74	326,98	329,77
75	331,44	334,22
76	335,90	338,67
77	340,34	343,12
78	344,80	347,59
79	349,26	352,04
80	353,72	356,49
81	358,17	360,96
82	362,63	365,41
83	367,09	369,86
84	371,54	374,33
85	376,00	378,78
86	380,46	383,23
87	384,91	387,70

z	da	dw
88	389,37	392,15
89	393,83	396,60
90	398,29	401,07
91	402,73	405,52
92	407,19	409,97
93	411,65	414,44
94	416,10	418,89
95	420,56	423,35
96	425,02	427,80
97	429,48	432,25
98	433,94	436,72
99	438,38	441,17
100	442,84	445,62
101	447,30	450,09
102	451,76	454,54
103	456,21	459,00
104	460,67	463,45
105	465,13	467,90
106	469,58	472,37
107	474,03	476,82
108	478,49	481,28
109	482,95	485,74
110	487,41	490,19
111	491,87	494,64
112	496,32	499,10
113	500,78	503,55
114	505,23	508,02
116	514,14	516,93
117	518,60	521,38
118	523,06	525,83

z	da	dw
119	527,51	530,30
120	531,97	534,75



HTD 14M
XHPL



Belt characteristics

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile according to ISO 13050
- Metric pitch 14 mm
- The round tooth profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- **HTD14M - XHPL is the ideal belt for heavy duty synchronous lifting applications**
- **Black color and PAZ fabric as standard for XHPL execution**

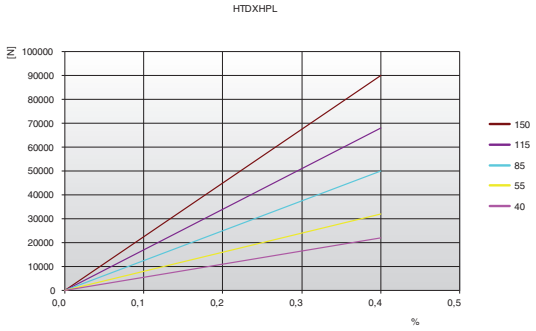
• Width tolerance:	±1,0 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,5 [mm]

Technical Data - HTD14M XHPL

Belt width b [mm]	Allowable tensile load **Type M** F_{Tzul} [N]	Breaking load **Type M** F_{Br} [N]	Specific spring rate C_{spez} [N]	Weight [kg/m]
40	22000	77000	5500000	0,59
55	32000	112000	8000000	0,75
85	50000	175000	12500000	1,29
115	68000	238000	17000000	1,75
150	90000	315000	22500000	2,21

Other widths are available on request.

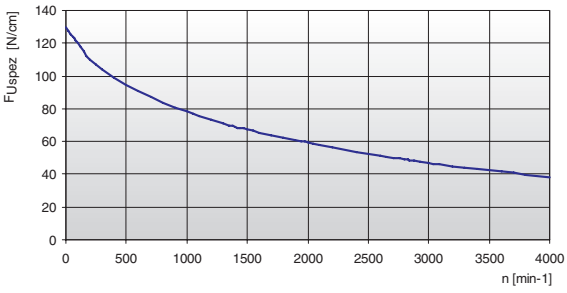
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	130,00	**800**	83,80	**1900**	60,49
20	127,69	**900**	80,85	**2000**	59,01
40	125,56	**1000**	78,14	**2200**	56,23
60	123,60	**1100**	75,63	**2400**	53,68
80	121,78	**1200**	73,31	**2600**	51,30
100	120,11	**1300**	71,14	**2800**	49,09
200	109,77	**1400**	69,11	**3000**	47,01
300	104,29	**1440**	68,33	**3200**	45,06
400	99,19	**1500**	67,19	**3400**	43,22
500	94,65	**1600**	65,38	**3600**	41,48
600	90,64	**1700**	63,67	**3800**	39,82
700	87,04	**1800**	62,04	**4000**	38,24

Tooth shear strength / rpm

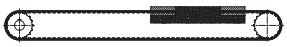
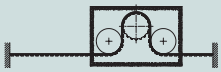


The specific load F_{Uspez} is the maximum load which one single belt tooth 1 cm wide can withstand in all operating conditions.
This force is related to the drive rpm.
The total load F_U transmissible by the belt in the drive is calculated by:

F_U [N] = F_{Uspez} • z_e • 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		Type of cord STANDARD
Drive without reverse bending	Timing pulley z_{min}	34
	Flat idler running on belt teeth d_{min}	140 mm
Drive with reverse bending	Timing pulley z_{min}	34
	Flat idler running on belt back d_{min}	200 mm

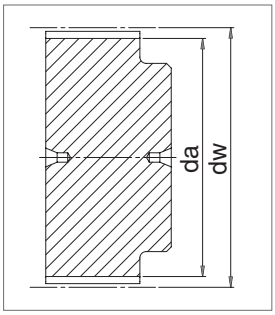
Timing pulleys

z	da	dw
28	122,12	124,77
29	126,58	129,22
30	130,99	133,69
31	135,45	138,14
32	139,88	142,59
33	144,35	147,06
34	148,79	151,51
35	153,25	155,96
36	157,68	160,41
37	162,14	164,88
38	166,60	169,34
39	171,02	173,79
40	175,48	178,24
41	179,92	182,71
42	184,37	187,16
43	188,83	191,61
44	193,29	196,08
45	197,75	200,53
46	202,21	204,98
47	206,65	209,43
48	211,11	213,90
49	215,57	218,35
50	220,03	222,80
51	224,49	227,27
52	228,95	231,72
53	233,39	236,18
54	237,85	240,64
55	242,30	245,09
56	246,76	249,55
57	251,22	254,01

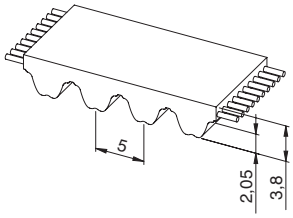
z	da	dw
58	255,68	258,46
59	260,14	262,91
60	264,60	267,38
61	269,04	271,83
62	273,50	276,28
63	277,96	280,75
64	282,42	285,20
65	286,88	289,65
66	291,32	294,11
67	295,78	298,56
68	300,24	303,03
69	304,70	307,48
70	309,16	311,93
71	313,61	316,40
72	318,07	320,85
73	322,53	325,30
74	326,98	329,77
75	331,44	334,22
76	335,90	338,67
77	340,34	343,12
78	344,80	347,59
79	349,26	352,04
80	353,72	356,49
81	358,17	360,96
82	362,63	365,41
83	367,09	369,86
84	371,54	374,33
85	376,00	378,78
86	380,46	383,23
87	384,91	387,70

z	da	dw
88	389,37	392,15
89	393,83	396,60
90	398,29	401,07
91	402,73	405,52
92	407,19	409,97
93	411,65	414,44
94	416,10	418,89
95	420,56	423,35
96	425,02	427,80
97	429,48	432,25
98	433,94	436,72
99	438,38	441,17
100	442,84	445,62
101	447,30	450,09
102	451,76	454,54
103	456,21	459,00
104	460,67	463,45
105	465,13	467,90
106	469,58	472,37
107	474,03	476,82
108	478,49	481,28
109	482,95	485,74
110	487,41	490,19
111	491,87	494,64
112	496,32	499,10
113	500,78	503,55
114	505,23	508,02
116	514,14	516,93
117	518,60	521,38
118	523,06	525,83

z	da	dw
119	527,51	530,30
120	531,97	534,75



RTD 5M



Belt characteristics

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile according to ISO 13050
- Metric pitch 5 mm
- The round tooth profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- PAZ fabric on tooth side delivered as standard reduces noise in the drive
- Widely used in linear positioning, light power transmission applications

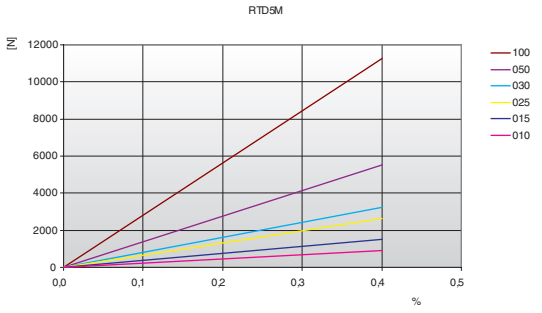
• Width tolerance:	±0,5 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,2 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{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	920	460	3360	230000	0,05
15	1500	750	5460	375000	0,07
25	2650	1325	9660	662500	0,12
30	3220	1610	11760	805000	0,15
50	5520	2760	20160	1380000	0,23
100	11270	5635	41160	2817500	0,46

Other widths are available on request.

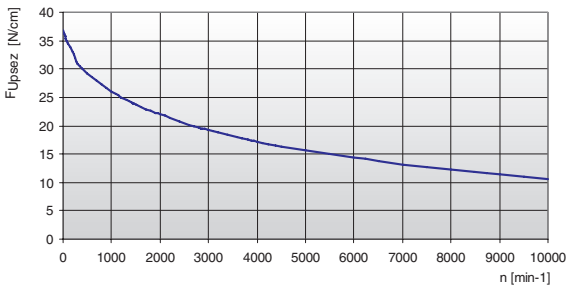
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	37,80	**900**	28,61	**2200**	23,30	**5500**	16,95
20	37,25	**1000**	28,05	**2400**	22,72	**6000**	16,32
40	36,75	**1100**	27,52	**2600**	22,19	**6500**	15,74
60	36,30	**1200**	27,03	**2800**	21,69	**7000**	15,19
80	35,89	**1300**	26,56	**2880**	21,50	**7500**	14,68
100	35,52	**1400**	26,13	**3000**	21,23	**8000**	14,20
200	34,13	**1440**	25,96	**3200**	20,78	**8500**	13,75
300	32,87	**1500**	25,71	**3400**	20,37	**9000**	13,33
400	32,10	**1600**	25,32	**3600**	19,97	**9500**	12,92
500	31,31	**1700**	24,94	**3800**	19,59	**10000**	12,53
600	30,56	**1800**	24,58	**4000**	19,23	**-**	-
700	29,86	**1900**	24,24	**4500**	18,40	**-**	-
800	29,21	**2000**	23,91	**5000**	17,64	**-**	-

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:

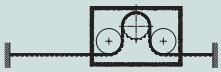
F_U [N] = F_{Uspez} • z_e • b

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		HFE High Flexibility	
	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]
10	880	3600	600	2400	960	3440
15	1430	5850	980	3900	1560	5590
25	2530	10350	1730	6900	2760	9890
30	3080	12600	2100	8400	3360	12040
50	5280	21600	3600	14400	5760	20640
100	10780	44100	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord			
		STANDARD	**ARAMID**	**STAINLESS**	**HFE**
Drive without reverse bending 	Timing pulley z_{min}	16	16	18	15
	Flat idler running on belt teeth d_{min}	30 mm	30 mm	40 mm	25 mm
Drive with reverse bending 	Timing pulley z_{min}	25	25	25	20
	Flat idler running on belt back d_{min}	60 mm	60 mm	65 mm	60 mm

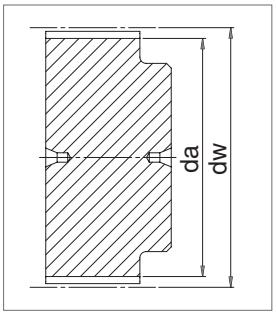
Timing pulleys

z	da	dw
10	14,77	15,91
11	16,36	17,50
12	17,96	19,10
13	19,55	20,69
14	21,14	22,28
15	22,73	23,87
16	24,32	25,46
17	25,91	27,05
18	27,51	28,65
19	29,09	30,23
20	30,69	31,83
21	32,28	33,42
22	33,87	35,01
23	35,46	36,60
24	37,06	38,20
25	38,64	39,78
26	40,24	41,38
27	41,83	42,97
28	43,42	44,56
29	45,01	46,15
30	46,61	47,75
31	48,19	49,33
32	49,79	50,93
33	51,38	52,52
34	52,97	54,11
35	54,56	55,70
36	56,16	57,30
37	57,75	58,89
38	59,34	60,48
39	60,93	62,07

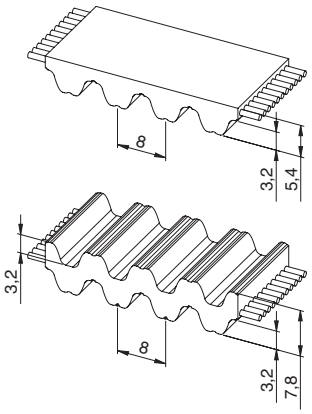
z	da	dw
40	62,52	63,66
41	64,11	65,25
42	65,70	66,84
43	67,29	68,43
44	68,88	70,02
45	70,47	71,61
46	72,06	73,20
47	73,65	74,79
48	75,24	76,38
49	76,84	77,98
50	78,44	79,58
51	80,03	81,17
52	81,62	82,76
53	83,21	84,35
54	84,80	85,94
55	86,39	87,53
56	87,98	89,12
57	89,57	90,71
58	91,17	92,31
59	92,76	93,90
60	94,35	95,49
61	95,94	97,08
62	97,53	98,67
63	99,12	100,26
64	100,72	101,86
65	102,31	103,45
66	103,90	105,04
67	105,49	106,63
68	107,08	108,22
69	108,67	109,81

z	da	dw
70	110,27	111,41
71	111,86	113,00
72	113,45	114,59
73	115,04	116,18
74	116,63	117,77
75	118,22	119,36
76	119,81	120,95
77	121,40	122,54
78	122,99	124,13
79	124,58	125,72
80	126,18	127,32
81	127,77	128,91
82	129,36	130,50
83	130,95	132,09
84	132,54	133,68
85	134,14	135,28
86	135,73	136,87
87	137,32	138,46
88	138,91	140,05
89	140,51	141,65
90	142,10	143,24
91	143,69	144,83
92	145,28	146,42
93	146,87	148,01
94	148,46	149,60
95	150,06	151,20
96	151,64	152,78
97	153,24	154,38
98	154,83	155,97
99	156,42	157,56

z	da	dw
100	158,01	159,15
101	159,61	160,75
102	161,20	162,34
103	162,81	163,95
104	164,38	165,52
105	165,97	167,11
106	167,56	168,70
107	169,09	170,23
108	170,75	171,89
109	172,34	173,48
110	173,93	175,07
111	175,52	176,66
112	177,11	178,25
113	178,70	179,84
114	180,29	181,43
115	181,88	183,02
116	183,47	184,61
117	185,07	186,21
118	186,66	187,80
119	188,25	189,39
120	189,84	190,98



RTD 8M



Belt characteristics

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile according to ISO 13050
- Metric pitch 8 mm
- The round tooth profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- PAZ fabric on tooth side delivered as standard reduces noise in the drive
- Widely used in linear positioning, medium power transmission applications

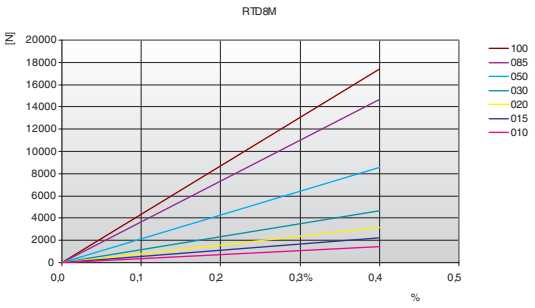
• Width tolerance:	±0,5 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,2 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{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	1470	735	5700	367500	0,07
15	2210	1105	8550	552500	0,10
20	3190	1595	12350	797500	0,14
30	4660	2330	18050	1165000	0,20
50	8580	4290	33250	2145000	0,35
85	14700	7350	57000	3675000	0,60
100	17400	8700	67450	4350000	0,75

Other widths are available on request.

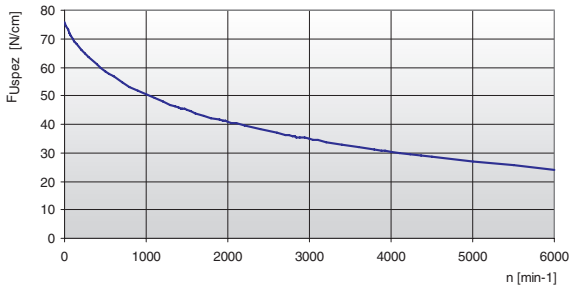
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	76,00	**800**	53,20	**1900**	41,52	**4000**	30,44
20	74,62	**900**	51,71	**2000**	40,78	**4500**	28,63
40	73,34	**1000**	50,35	**2200**	39,39	**5000**	27,00
60	72,16	**1100**	49,09	**2400**	38,12	**5500**	25,51
80	71,07	**1200**	47,93	**2600**	36,94	**6000**	24,15
100	70,07	**1300**	46,84	**2800**	35,83	-	-
200	66,09	**1400**	45,82	**2880**	35,41	-	-
300	63,68	**1440**	45,43	**3000**	34,80	-	-
400	61,03	**1500**	44,86	**3200**	33,83	-	-
500	58,71	**1600**	43,96	**3400**	32,91	-	-
600	56,66	**1700**	43,10	**3600**	32,05	-	-
700	54,84	**1800**	42,29	**3800**	31,22	-	-

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:

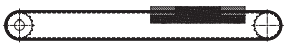
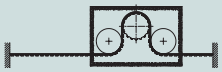
F_U [N] = F_{Uspez} • z_e • b

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]
10	1320	6000	1080	4500	-	-
15	1980	9000	1620	6750	-	-
20	2860	13000	2340	9750	5280	19250
30	4180	19000	3420	14250	8160	29750
50	7700	35000	6300	26250	14400	52500
85	13200	60000	10800	45000	24480	89250
100	15620	71000	12780	53250	29280	106750

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord			
		STANDARD	**ARAMID**	**STAINLESS**	**HPL**
Drive without reverse bending 	Timing pulley z_{min}	18	18	24	30
	Flat idler running on belt teeth d_{min}	50 mm	50 mm	70 mm	80 mm
Drive with reverse bending 	Timing pulley z_{min}	30	30	40	30
	Flat idler running on belt back d_{min}	120 mm	120 mm	120 mm	150 mm

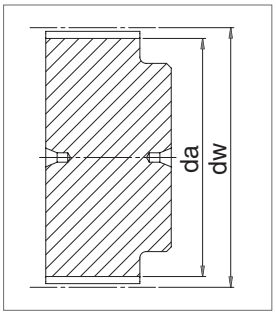
Timing pulleys

z	da	dw
18	44,46	45,83
19	47,01	48,38
20	49,56	50,93
21	52,10	53,47
22	54,65	56,02
23	57,20	58,57
24	59,75	61,12
25	62,29	63,66
26	64,84	66,21
27	67,38	68,75
28	70,08	71,30
29	72,59	73,84
30	75,13	76,39
31	77,65	78,94
32	80,16	81,49
33	82,68	84,03
34	85,21	86,58
35	87,76	89,12
36	90,30	91,67
37	92,85	94,22
38	95,40	96,77
39	97,94	99,31
40	100,49	101,86
41	103,04	104,40
42	105,58	106,95
43	108,13	109,50
44	110,68	112,05
45	113,22	114,59
46	115,77	117,14
47	118,31	119,68

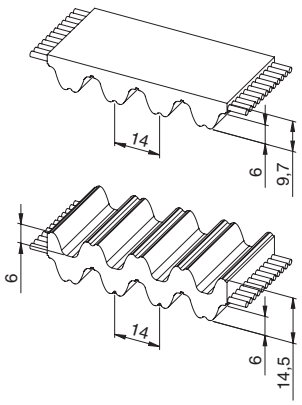
z	da	dw
48	120,86	122,23
49	123,40	124,77
50	125,95	127,32
51	128,50	129,87
52	131,05	132,41
53	133,59	134,96
54	136,14	137,51
55	138,68	140,05
56	141,23	142,60
57	143,78	145,15
58	146,32	147,69
59	148,87	150,24
60	151,42	152,79
61	153,96	155,33
62	156,52	157,89
63	159,06	160,43
64	161,60	162,97
65	164,15	165,52
66	166,69	168,06
67	169,24	170,61
68	171,79	173,16
69	174,33	175,70
70	176,88	178,25
71	179,43	180,80
72	181,98	183,35
73	184,52	185,89
74	187,07	188,44
75	189,61	190,98
76	192,16	193,53
77	194,71	196,08

z	da	dw
78	197,25	198,62
79	199,80	201,17
80	202,35	203,72
81	204,89	206,26
82	207,44	208,81
83	209,98	211,35
84	212,53	213,90
85	215,08	216,45
86	217,63	219,00
87	220,17	221,54
88	222,72	224,09
89	225,26	226,63
90	227,81	229,18
91	230,35	231,72
92	232,90	234,27
93	235,45	236,82
94	238,00	239,37
95	240,54	241,91
96	243,09	244,46
97	245,63	247,00
98	248,18	249,55
99	250,73	252,10
100	253,28	254,67
101	255,82	257,19
102	258,37	259,74
103	260,91	262,28
104	263,46	264,83
105	266,01	267,38
106	268,55	269,92
107	271,10	272,47

z	da	dw
108	273,64	275,01
109	276,19	277,56
110	278,74	280,11
111	281,29	282,66
112	283,84	285,21
113	286,38	287,75
114	288,93	290,30
115	291,47	292,84
116	294,02	295,39
117	296,57	297,94
118	299,11	300,48
119	301,66	303,03
120	304,20	305,57



RTD 14M



Belt characteristics

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile according to ISO 13050
- Metric pitch 14 mm
- The round tooth profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- PAZ fabric on tooth side delivered as standard reduces noise in the drive
- Widely used in linear positioning, heavy power transmission applications

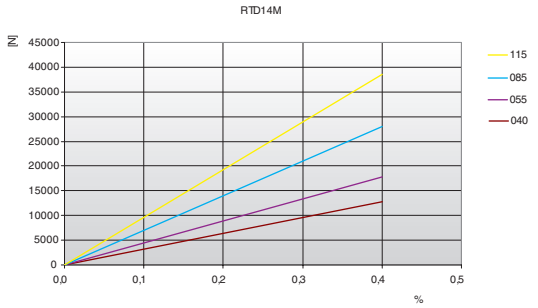
• Width tolerance:	±1,0 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,4 [mm]

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	0,68
85	28050	14025	105600	7012500	1,00
115	39100	19550	147200	9775000	1,40

Other widths are available on request.

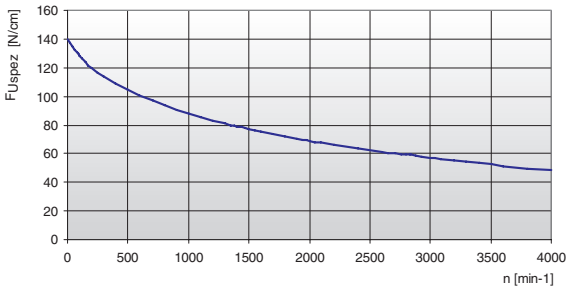
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	140,00	**800**	93,80	**1900**	70,49	**4000**	48,24
20	137,31	**900**	90,85	**2000**	69,01	-	-
40	134,83	**1000**	88,14	**2200**	66,23	-	-
60	132,53	**1100**	85,63	**2400**	63,68	-	-
80	130,42	**1200**	83,31	**2600**	61,30	-	-
100	128,46	**1300**	81,14	**2800**	59,09	-	-
200	119,77	**1400**	79,11	**2880**	58,24	-	-
300	114,29	**1440**	78,33	**3000**	57,01	-	-
400	109,19	**1500**	77,19	**3200**	55,06	-	-
500	104,65	**1600**	75,38	**3400**	53,22	-	-
600	100,64	**1700**	73,67	**3600**	51,48	-	-
700	97,04	**1800**	72,04	**3800**	49,82	-	-

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:

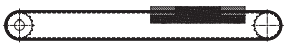
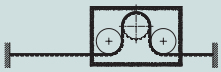
F_U [N] = F_{Uspez} • z_e • b

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]	HPL High Performance	
	F_{Tzul} [N] **M type**	F_{Br} [N]
40	14300	58500
55	19800	81000
75	27500	112500
85	30800	126000
100	35200	144000
115	41800	171000
150	55000	225000

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord	
		STANDARD	HPL
Drive without reverse bending 	Timing pulley z_{min}	32	32
	Flat idler running on belt teeth d_{min}	140 mm	140 mm
Drive with reverse bending 	Timing pulley z_{min}	32	32
	Flat idler running on belt back d_{min}	200 mm	200 mm

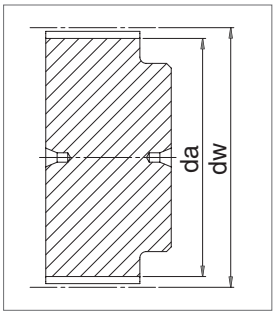
Timing pulleys

z	da	dw
28	122,12	124,77
29	126,58	129,22
30	130,99	133,69
31	135,45	138,14
32	139,88	142,59
33	144,35	147,06
34	148,79	151,51
35	153,25	155,96
36	157,68	160,41
37	162,14	164,88
38	166,60	169,34
39	171,02	173,79
40	175,48	178,24
41	179,92	182,71
42	184,37	187,16
43	188,83	191,61
44	193,29	196,08
45	197,75	200,53
46	202,21	204,98
47	206,65	209,43
48	211,11	213,90
49	215,57	218,35
50	220,03	222,80
51	224,49	227,27
52	228,95	231,72
53	233,39	236,18
54	237,85	240,64
55	242,30	245,09
56	246,76	249,55
57	251,22	254,01

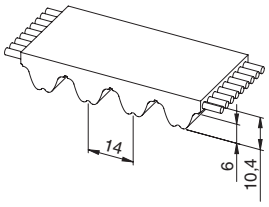
z	da	dw
58	255,68	258,46
59	260,14	262,91
60	264,60	267,38
61	269,04	271,83
62	273,50	276,28
63	277,96	280,75
64	282,42	285,20
65	286,88	289,65
66	291,32	294,11
67	295,78	298,56
68	300,24	303,03
69	304,70	307,48
70	309,16	311,93
71	313,61	316,40
72	318,07	320,85
73	322,53	325,30
74	326,98	329,77
75	331,44	334,22
76	335,90	338,67
77	340,34	343,12
78	344,80	347,59
79	349,26	352,04
80	353,72	356,49
81	358,17	360,96
82	362,63	365,41
83	367,09	369,86
84	371,54	374,33
85	376,00	378,78
86	380,46	383,23
87	384,91	387,70

z	da	dw
88	389,37	392,15
89	393,83	396,60
90	398,29	401,07
91	402,73	405,52
92	407,19	409,97
93	411,65	414,44
94	416,10	418,89
95	420,56	423,35
96	425,02	427,80
97	429,48	432,25
98	433,94	436,72
99	438,38	441,17
100	442,84	445,62
101	447,30	450,09
102	451,76	454,54
103	456,21	459,00
104	460,67	463,45
105	465,13	467,90
106	469,58	472,37
107	474,03	476,82
108	478,49	481,28
109	482,95	485,74
110	487,41	490,19
111	491,87	494,64
112	496,32	499,10
113	500,78	503,55
114	505,23	508,02
116	514,14	516,93
117	518,60	521,38
118	523,06	525,83

z	da	dw
119	527,51	530,30
120	531,97	534,75



RTD 14M
XHPL



Belt characteristics

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile according to ISO 13050
- Metric pitch 14 mm
- The round tooth profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- PAZ fabric on tooth side delivered as standard reduces noise in the drive
- **RTD14M - XHPL is the ideal belt for heavy duty synchronous lifting applications. Black colour as standard.**

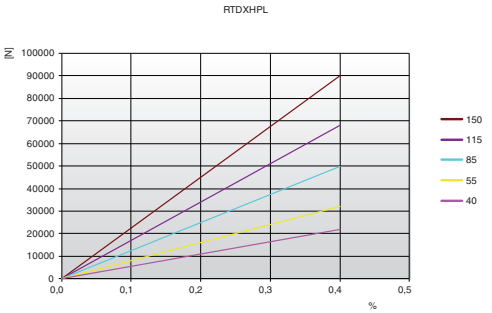
• Width tolerance:	±1,0 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,4 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{Tzul} [N]	Breaking load **Type M** F_{Br} [N]	Specific spring rate C_{spez} [N]	Weight [kg/m]
40	22000	77000	5500000	0,59
55	32000	112000	8000000	0,75
85	50000	175000	12500000	1,29
115	68000	238000	17000000	1,75
150	90000	315000	22500000	2,21

Other widths are available on request.

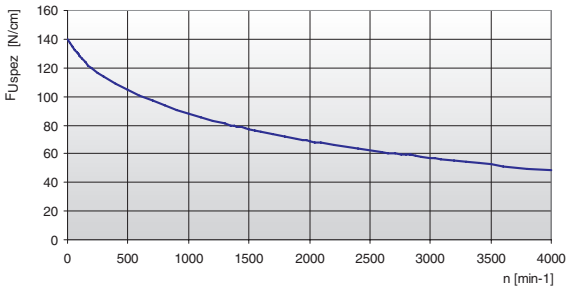
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	140,00	**800**	93,80	**1900**	70,49	**4000**	48,24
20	137,31	**900**	90,85	**2000**	69,01	-	-
40	134,83	**1000**	88,14	**2200**	66,23	-	-
60	132,53	**1100**	85,63	**2400**	63,68	-	-
80	130,42	**1200**	83,31	**2600**	61,30	-	-
100	128,46	**1300**	81,14	**2800**	59,09	-	-
200	119,77	**1400**	79,11	**2880**	58,24	-	-
300	114,29	**1440**	78,33	**3000**	57,01	-	-
400	109,19	**1500**	77,19	**3200**	55,06	-	-
500	104,65	**1600**	75,38	**3400**	53,22	-	-
600	100,64	**1700**	73,67	**3600**	51,48	-	-
700	97,04	**1800**	72,04	**3800**	49,82	-	-

Tooth shear strength / rpm

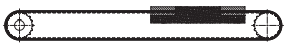
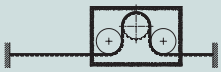


The specific load F_{Uspez} is the maximum load which one single belt tooth 1 cm wide can withstand in all operating conditions.
This force is related to the drive rpm.
The total load F_U transmissible by the belt in the drive is calculated by:

F_U [N] = F_{Uspez} • z_e • 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		Type of cord STANDARD
Drive without reverse bending	Timing pulley z_{min}	34
	Flat idler running on belt teeth d_{min}	140 mm
Drive with reverse bending	Timing pulley z_{min}	34
	Flat idler running on belt back d_{min}	250 mm

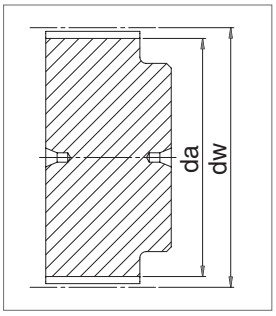
Timing pulleys

z	da	dw
28	122,12	124,77
29	126,58	129,22
30	130,99	133,69
31	135,45	138,14
32	139,88	142,59
33	144,35	147,06
34	148,79	151,51
35	153,25	155,96
36	157,68	160,41
37	162,14	164,88
38	166,60	169,34
39	171,02	173,79
40	175,48	178,24
41	179,92	182,71
42	184,37	187,16
43	188,83	191,61
44	193,29	196,08
45	197,75	200,53
46	202,21	204,98
47	206,65	209,43
48	211,11	213,90
49	215,57	218,35
50	220,03	222,80
51	224,49	227,27
52	228,95	231,72
53	233,39	236,18
54	237,85	240,64
55	242,30	245,09
56	246,76	249,55
57	251,22	254,01

z	da	dw
58	255,68	258,46
59	260,14	262,91
60	264,60	267,38
61	269,04	271,83
62	273,50	276,28
63	277,96	280,75
64	282,42	285,20
65	286,88	289,65
66	291,32	294,11
67	295,78	298,56
68	300,24	303,03
69	304,70	307,48
70	309,16	311,93
71	313,61	316,40
72	318,07	320,85
73	322,53	325,30
74	326,98	329,77
75	331,44	334,22
76	335,90	338,67
77	340,34	343,12
78	344,80	347,59
79	349,26	352,04
80	353,72	356,49
81	358,17	360,96
82	362,63	365,41
83	367,09	369,86
84	371,54	374,33
85	376,00	378,78
86	380,46	383,23
87	384,91	387,70

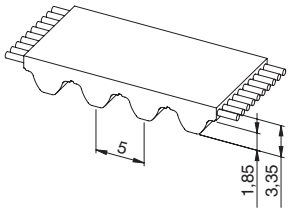
z	da	dw
88	389,37	392,15
89	393,83	396,60
90	398,29	401,07
91	402,73	405,52
92	407,19	409,97
93	411,65	414,44
94	416,10	418,89
95	420,56	423,35
96	425,02	427,80
97	429,48	432,25
98	433,94	436,72
99	438,38	441,17
100	442,84	445,62
101	447,30	450,09
102	451,76	454,54
103	456,21	459,00
104	460,67	463,45
105	465,13	467,90
106	469,58	472,37
107	474,03	476,82
108	478,49	481,28
109	482,95	485,74
110	487,41	490,19
111	491,87	494,64
112	496,32	499,10
113	500,78	503,55
114	505,23	508,02
116	514,14	516,93
117	518,60	521,38
118	523,06	525,83

z	da	dw
119	527,51	530,30
120	531,97	534,75



Note
Special pulley profile required.
Contact ELATECH Technical Dept. for details.

STD 5M



Belt characteristics

- Polyurethane timing belt with involute tooth, high tensile load steel cords and high torque capacity
- Tooth profile according to ISO 13050
- Metric pitch 5 mm
- Low noise generation in high speed drives
- Offers excellent operational reliability in linear positioning and light power transmission applications
- The special profile allows smooth running properties

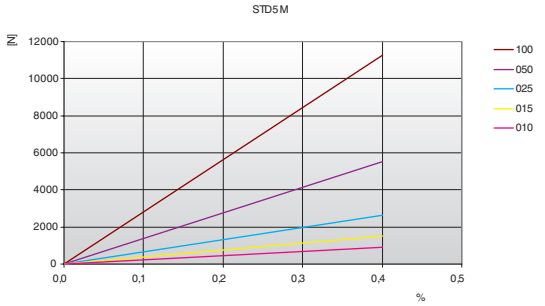
• Width tolerance:	±0,5 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,2 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{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	920	460	3360	230000	0,05
15	1500	750	5460	375000	0,07
25	2650	1325	9660	662500	0,12
50	5520	2760	20160	1380000	0,23
100	11270	5635	41160	2817500	0,46

Other widths are available on request.

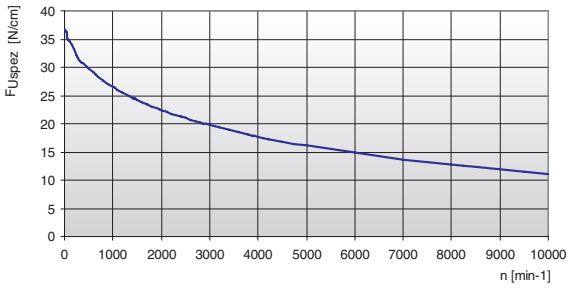
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	36,90	**800**	27,71	**1900**	22,74	**4500**	16,90
20	36,35	**900**	27,11	**2000**	22,41	**5000**	16,14
40	35,85	**1000**	26,55	**2200**	21,80	**5500**	15,45
60	35,40	**1100**	26,02	**2400**	21,22	**6000**	14,82
80	34,99	**1200**	25,53	**2600**	20,69	**6500**	14,24
100	34,62	**1300**	25,06	**2800**	20,19	**7000**	13,69
200	33,23	**1400**	24,63	**3000**	19,73	**7500**	13,18
300	31,37	**1440**	24,46	**3200**	19,28	**8000**	12,70
400	30,60	**1500**	24,21	**3400**	18,87	**8500**	12,25
500	29,81	**1600**	23,82	**3600**	18,47	**9000**	11,83
600	29,06	**1700**	23,44	**3800**	18,09	**9500**	11,42
700	28,36	**1800**	23,08	**4000**	17,73	**10000**	11,03

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:

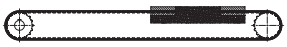
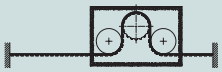
F_U [N] = F_{Uspez} • z_e • b

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		HFE High Flexibility	
	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]
10	880	3600	600	2400	960	3440
15	1430	5850	980	3900	1560	5590
25	2530	10350	1730	6900	2760	9890
50	5280	21600	3600	14400	5760	20640
100	10780	44100	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord			
		STANDARD	ARAMID	STAINLESS	HFE
Drive without reverse bending 	Timing pulley z_{min}	16	16	18	15
	Flat idler running on belt teeth d_{min}	30 mm	30 mm	40 mm	40 mm
Drive with reverse bending 	Timing pulley z_{min}	25	25	25	20
	Flat idler running on belt back d_{min}	60 mm	60 mm	65 mm	40 mm

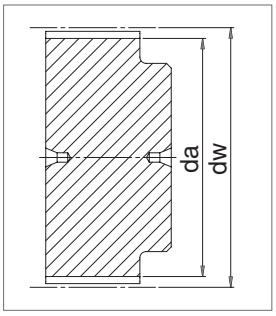
Timing pulleys

z	da	dw
10	14,95	15,91
11	16,54	17,50
12	18,14	19,10
13	19,73	20,69
14	21,32	22,28
15	22,91	23,87
16	24,51	25,47
17	26,10	27,06
18	27,69	28,65
19	29,27	30,23
20	30,87	31,83
21	32,46	33,42
22	34,05	35,01
23	35,65	36,61
24	37,23	38,19
25	38,83	39,79
26	40,42	41,38
27	42,01	42,97
28	43,60	44,56
29	45,19	46,15
30	46,79	47,75
31	48,38	49,34
32	49,97	50,93
33	51,56	52,52
34	53,15	54,11
35	54,75	55,71
36	56,34	57,30
37	57,93	58,89
38	59,52	60,48
39	61,11	62,07

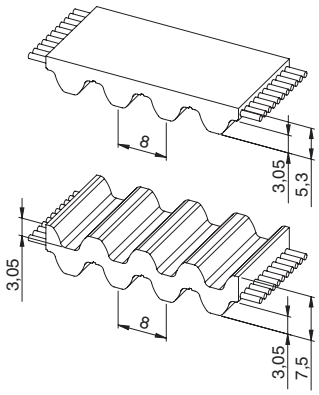
z	da	dw
40	62,70	63,66
41	64,30	65,26
42	65,89	66,85
43	67,48	68,44
44	69,07	70,03
45	70,66	71,62
46	72,25	73,21
47	73,84	74,80
48	75,43	76,39
49	77,03	77,99
50	78,62	79,58
51	80,21	81,17
52	81,80	82,76
53	83,39	84,35
54	84,99	85,95
55	86,58	87,54
56	88,17	89,13
57	89,76	90,72
58	91,35	92,31
59	92,94	93,90
60	94,53	95,49
61	96,13	97,09
62	97,72	98,68
63	99,31	100,27
64	100,90	101,86
65	102,49	103,45
66	104,08	105,04
67	105,67	106,63
68	107,27	108,23
69	108,86	109,82

z	da	dw
70	110,45	111,41
71	112,04	113,00
72	113,63	114,59
73	115,23	116,19
74	116,82	117,78
75	118,41	119,37
76	120,00	120,96
77	121,59	122,55
78	123,18	124,14
79	124,77	125,73
80	126,36	127,32
81	127,95	128,91
82	129,54	130,50
83	131,14	132,10
84	132,73	133,69
85	134,32	135,28
86	135,91	136,87
87	137,51	138,47
88	139,09	140,05
89	140,69	141,65
90	142,28	143,24
91	143,87	144,83
92	145,46	146,42
93	147,05	148,01
94	148,64	149,60
95	150,24	151,20
96	151,83	152,71
97	153,42	154,38
98	155,01	155,97
99	156,60	157,56

z	da	dw
100	158,19	159,15
101	159,79	160,75
102	161,38	162,34
103	162,99	163,95
104	164,56	165,52
105	166,15	167,11
106	167,74	168,70
107	169,34	170,3
108	170,93	171,89
109	172,52	173,48
110	174,10	175,06
111	175,7	176,66
112	177,29	178,25
113	178,88	179,84
114	180,47	181,43
115	182,06	183,02
116	183,65	184,61
117	185,25	186,21
118	186,84	187,8
119	188,43	189,39
120	190,02	190,98



STD 8M



Belt characteristics

- Polyurethane timing belt with involute tooth, high tensile load steel cords and high torque capacity
- Tooth profile according to ISO 13050
- Metric pitch 8 mm
- Low noise generation in high speed drives
- Offers excellent operational reliability in linear positioning and medium power transmission applications
- Widely used in automatic doors
- The special profile allows smooth running properties

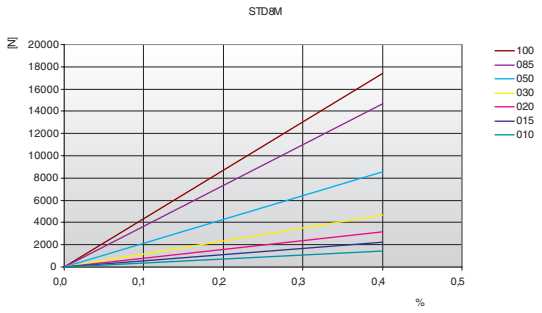
• Width tolerance:	±0,5 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,2 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{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	1470	735	5700	367500	0,07
15	2210	1105	8550	552500	0,10
20	3190	1595	12350	797500	0,13
30	4660	2330	18050	1165000	0,20
50	8580	4290	33250	2145000	0,33
85	14700	7350	57000	3675000	0,56
100	17400	8700	67450	4350000	0,66

Other widths are available on request.

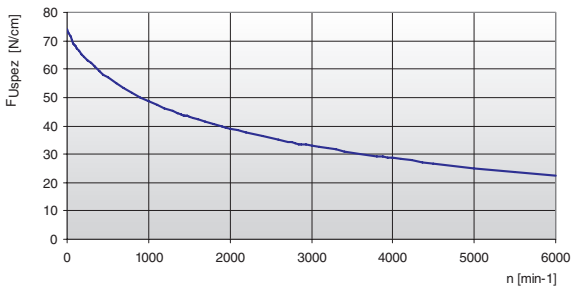
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	74,10	**800**	51,53	**1900**	39,76	**4500**	26,79
20	73,05	**900**	50,03	**2000**	39,02	**5000**	25,14
40	72,06	**1000**	48,66	**2200**	37,62	**5500**	23,65
60	71,13	**1100**	47,39	**2400**	36,34	**6000**	22,28
80	70,26	**1200**	46,22	**2600**	35,15	-	-
100	69,43	**1300**	45,12	**2800**	34,04	-	-
200	65,98	**1400**	44,10	**3000**	33,00	-	-
300	62,11	**1440**	43,70	**3200**	32,02	-	-
400	59,43	**1500**	43,13	**3400**	31,10	-	-
500	57,08	**1600**	42,22	**3600**	30,23	-	-
600	55,02	**1700**	41,36	**3800**	29,40	-	-
700	53,18	**1800**	40,54	**4000**	28,61	-	-

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:

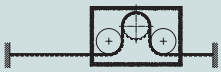
F_U [N] = F_{Uspez} • z_e • b

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]
10	1320	6000	1080	4500	-	-
15	1980	9000	1620	6750	-	-
20	2860	13000	2340	9750	5280	19250
30	4180	19000	3420	14250	8160	29750
50	7700	35000	6300	26250	14400	52500
85	13200	60000	10800	45000	24480	89250
100	15620	71000	12780	53250	29280	106750

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord			
		STANDARD	**ARAMID**	**STAINLESS**	**HPL**
Drive without reverse bending 	Timing pulley z_{min}	18	18	24	30
	Flat idler running on belt teeth d_{min}	50 mm	50 mm	70 mm	80 mm
Drive with reverse bending 	Timing pulley z_{min}	30	30	40	30
	Flat idler running on belt back d_{min}	120 mm	120 mm	120 mm	150 mm

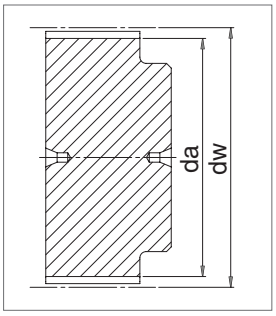
Timing pulleys

z	da	dw
18	44,46	45,83
19	47,01	48,38
20	49,56	50,93
21	52,10	53,47
22	54,65	56,02
23	57,20	58,57
24	59,75	61,12
25	62,29	63,66
26	64,84	66,21
27	67,38	68,75
28	70,08	71,30
29	72,59	73,84
30	75,13	76,39
31	77,65	78,94
32	80,16	81,49
33	82,68	84,03
34	85,21	86,58
35	87,76	89,12
36	90,30	91,67
37	92,85	94,22
38	95,40	96,77
39	97,94	99,31
40	100,49	101,86
41	103,04	104,40
42	105,58	106,95
43	108,13	109,50
44	110,68	112,05
45	113,22	114,59
46	115,77	117,14
47	118,31	119,68

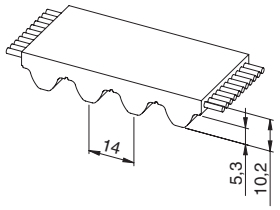
z	da	dw
48	120,86	122,23
49	123,40	124,77
50	125,95	127,32
51	128,50	129,87
52	131,05	132,41
53	133,59	134,96
54	136,14	137,51
55	138,68	140,05
56	141,23	142,60
57	143,78	145,15
58	146,32	147,69
59	148,87	150,24
60	151,42	152,79
61	153,96	155,33
62	156,52	157,89
63	159,06	160,43
64	161,60	162,97
65	164,15	165,52
66	166,69	168,06
67	169,24	170,61
68	171,79	173,16
69	174,33	175,70
70	176,88	178,25
71	179,43	180,8
72	181,98	183,35
73	184,52	185,89
74	187,07	188,44
75	189,61	190,98
76	192,16	193,53
77	194,71	196,08

z	da	dw
78	197,25	198,62
79	199,80	201,17
80	202,35	203,72
81	204,89	206,26
82	207,44	208,81
83	209,98	211,35
84	212,53	213,90
85	215,08	216,45
86	217,63	219,00
87	220,17	221,54
88	222,72	224,09
89	225,26	226,63
90	227,81	229,18
91	230,35	231,72
92	232,90	234,27
93	235,45	236,82
94	238,00	239,37
95	240,54	241,91
96	243,09	244,46
97	245,63	247,00
98	248,18	249,55
99	250,73	252,10
100	253,28	254,67
101	255,82	257,19
102	258,37	259,74
103	260,91	262,28
104	263,46	264,83
105	266,01	267,38
106	268,55	269,92
107	271,10	272,47

z	da	dw
108	273,64	275,01
109	276,19	277,56
110	278,74	280,11
111	281,29	282,66
112	283,84	285,21
113	286,38	287,75
114	288,93	290,30
115	291,47	292,84
116	294,02	295,39
117	296,57	297,94
118	299,11	300,48
119	301,66	303,03
120	304,20	305,57



STD 14M



Belt characteristics

- Polyurethane timing belt with involute tooth, high tensile load steel cords and high torque capacity
- Tooth profile 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 perfomance in lifting applications
- The special profile allows smooth running properties

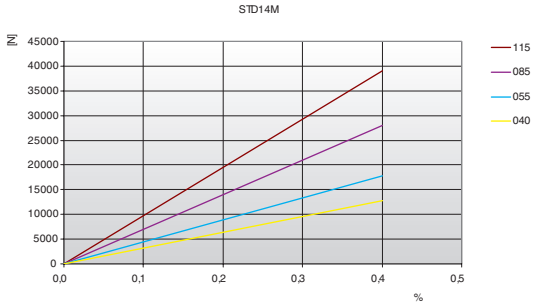
• Width tolerance:	±1,0 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,4 [mm]

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	0,50
55	17850	8925	67200	4462500	0,70
85	28050	14025	105600	7012500	1,08
115	39100	19550	147200	9775000	1,48

Other widths are available on request.

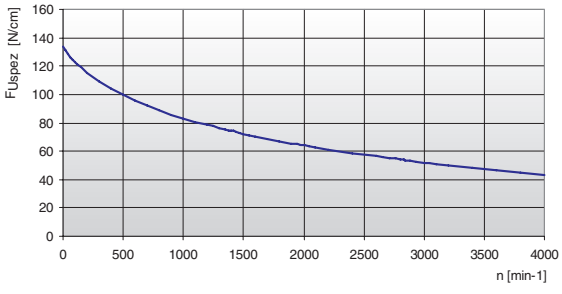
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	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 strength / rpm

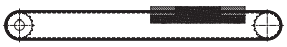
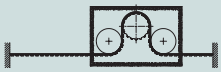


The specific load F_{Uspez} is the maximum load which one single belt tooth 1 cm wide can withstand in all operating conditions.
This force is related to the drive rpm.
The total load F_U transmissible by the belt in the drive is calculated by:

F_U [N] = F_{Uspez} • z_e • 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		Type of cord STANDARD
Drive without reverse bending 	Timing pulley z_{min}	32
	Flat idler running on belt teeth d_{min}	140 mm
Drive with reverse bending 	Timing pulley z_{min}	32
	Flat idler running on belt back d_{min}	250 mm

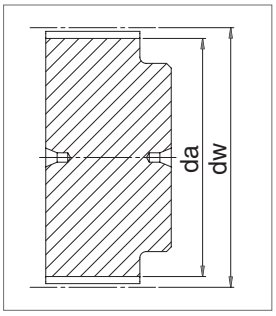
Timing pulleys

z	da	dw
28	122,12	124,77
29	126,58	129,22
30	130,99	133,69
31	135,45	138,14
32	139,88	142,59
33	144,35	147,06
34	148,79	151,51
35	153,25	155,96
36	157,68	160,41
37	162,14	164,88
38	166,60	169,34
39	171,02	173,79
40	175,48	178,24
41	179,92	182,71
42	184,37	187,16
43	188,83	191,61
44	193,29	196,08
45	197,75	200,53
46	202,21	204,98
47	206,65	209,43
48	211,11	213,90
49	215,57	218,35
50	220,03	222,80
51	224,49	227,27
52	228,95	231,72
53	233,39	236,18
54	237,85	240,64
55	242,30	245,09
56	246,76	249,55
57	251,22	254,01

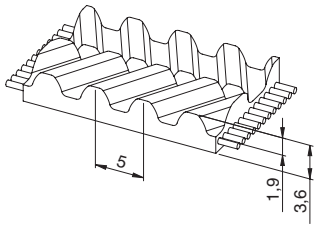
z	da	dw
58	255,68	258,46
59	260,14	262,91
60	264,60	267,38
61	269,04	271,83
62	273,50	276,28
63	277,96	280,75
64	282,42	285,20
65	286,88	289,65
66	291,32	294,11
67	295,78	298,56
68	300,24	303,03
69	304,70	307,48
70	309,16	311,93
71	313,61	316,40
72	318,07	320,85
73	322,53	325,30
74	326,98	329,77
75	331,44	334,22
76	335,90	338,67
77	340,34	343,12
78	344,80	347,59
79	349,26	352,04
80	353,72	356,49
81	358,17	360,96
82	362,63	365,41
83	367,09	369,86
84	371,54	374,33
85	376,00	378,78
86	380,46	383,23
87	384,91	387,70

z	da	dw
88	389,37	392,15
89	393,83	396,60
90	398,29	401,07
91	402,73	405,52
92	407,19	409,97
93	411,65	414,44
94	416,10	418,89
95	420,56	423,35
96	425,02	427,80
97	429,48	432,25
98	433,94	436,72
99	438,38	441,17
100	442,84	445,62
101	447,30	450,09
102	451,76	454,54
103	456,21	459,00
104	460,67	463,45
105	465,13	467,90
106	469,58	472,37
107	474,03	476,82
108	478,49	481,28
109	482,95	485,74
110	487,41	490,19
111	491,87	494,64
112	496,32	499,10
113	500,78	503,55
114	505,23	508,02
116	514,14	516,93
117	518,60	521,38
118	523,06	525,83

z	da	dw
119	527,51	530,30
120	531,97	534,75



EAGLE 5M



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 5 mm
- **Extremely reduced noise generation**
- Offers excellent operational reliability in linear positioning and medium power transmission applications
- The special profile allows most compact drive
- Black colour and black fabric on tooth side (PAZ) as standard

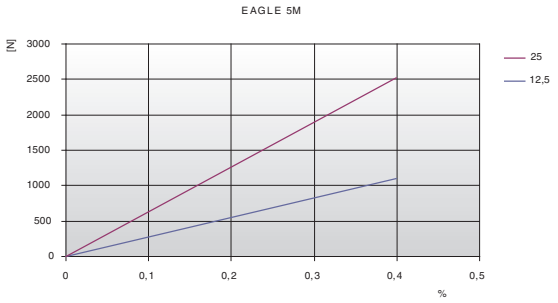
- Width tolerance: ±0,5 [mm]
- Length tolerance: ±0,5 [mm/m]
- Thickness tolerance: ±0,2 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{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]
12,5	1150	575	4200	287500	0,06
25	2530	1265	9240	632500	0,12

Other widths are available on request.

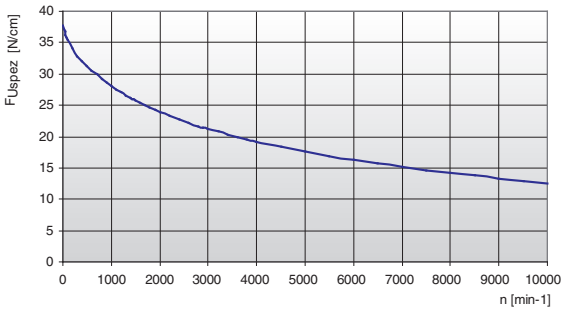
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	37,80	**900**	28,61	**2200**	23,30	**5500**	16,95
20	37,25	**1000**	28,05	**2400**	22,72	**6000**	16,32
40	36,75	**1100**	27,52	**2600**	22,19	**6500**	15,74
60	36,30	**1200**	27,03	**2800**	21,69	**7000**	15,19
80	35,89	**1300**	26,56	**2880**	21,50	**7500**	14,68
100	35,52	**1400**	26,13	**3000**	21,23	**8000**	14,20
200	34,13	**1440**	25,96	**3200**	20,78	**8500**	13,75
300	32,87	**1500**	25,71	**3400**	20,37	**9000**	13,33
400	32,10	**1600**	25,32	**3600**	19,97	**9500**	12,92
500	31,31	**1700**	24,94	**3800**	19,59	**10000**	12,53
600	30,56	**1800**	24,58	**4000**	19,23	-	-
700	29,86	**1900**	24,24	**4500**	18,40	-	-
800	29,21	**2000**	23,91	**5000**	17,64	-	-

Tooth shear strength / rpm

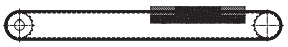
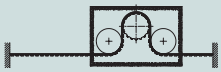


The specific load F_{Uspez} is the maximum load which one single belt tooth 1 cm wide can withstand in all operating conditions.
This force is related to the drive rpm.
The total load F_U transmissible by the belt in the drive is calculated by:

F_U [N] = F_{Uspez} • z_e • 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		Type of cord STANDARD
Drive without reverse bending 	Timing pulley z_{min}	16
	Flat idler running on belt teeth d_{min}	30 mm
Drive with reverse bending 	Timing pulley z_{min}	25
	Flat idler running on belt back d_{min}	60 mm

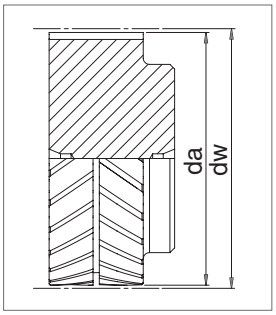
Timing pulleys

z	da	dw
10	14,95	15,91
11	16,54	17,50
12	18,14	19,10
13	19,73	20,69
14	21,32	22,28
15	22,91	23,87
16	24,51	25,47
17	26,10	27,06
18	27,69	28,65
19	29,27	30,23
20	30,87	31,83
21	32,46	33,42
22	34,05	35,01
23	35,65	36,61
24	37,23	38,19
25	38,83	39,79
26	40,42	41,38
27	42,01	42,97
28	43,60	44,56
29	45,19	46,15
30	46,79	47,75
31	48,38	49,34
32	49,97	50,93
33	51,56	52,52
34	53,15	54,11
35	54,75	55,71
36	56,34	57,30
37	57,93	58,89
38	59,52	60,48
39	61,11	62,07

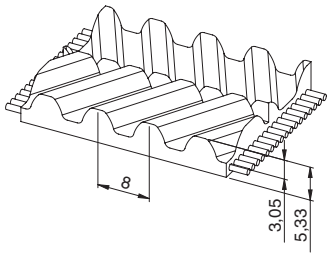
z	da	dw
40	62,70	63,66
41	64,30	65,26
42	65,89	66,85
43	67,48	68,44
44	69,07	70,03
45	70,66	71,62
46	72,25	73,21
47	73,84	74,80
48	75,43	76,39
49	77,03	77,99
50	78,62	79,58
51	80,21	81,17
52	81,80	82,76
53	83,39	84,35
54	84,99	85,95
55	86,58	87,54
56	88,17	89,13
57	89,76	90,72
58	91,35	92,31
59	92,94	93,90
60	94,53	95,49
61	96,13	97,09
62	97,72	98,68
63	99,31	100,27
64	100,90	101,86
65	102,49	103,45
66	104,08	105,04
67	105,67	106,63
68	107,27	108,23
69	108,86	109,82

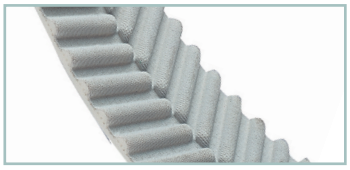
z	da	dw
70	110,45	111,41
71	112,04	113,00
72	113,63	114,59
73	115,23	116,19
74	116,82	117,78
75	118,41	119,37
76	120,00	120,96
77	121,59	122,55
78	123,18	124,14
79	124,77	125,73
80	126,36	127,32
81	127,95	128,91
82	129,54	130,50
83	131,14	132,10
84	132,73	133,69
85	134,32	135,28
86	135,91	136,87
87	137,51	138,47
88	139,09	140,05
89	140,69	141,65
90	142,28	143,24
91	143,87	144,83
92	145,46	146,42
93	147,05	148,01
94	148,64	149,60
95	150,24	151,20
96	151,83	152,71
97	153,42	154,38
98	155,01	155,97
99	156,60	157,56

z	da	dw
100	158,19	159,15
101	159,79	160,75
102	161,38	162,34
103	162,99	163,95
104	164,56	165,52
105	166,15	167,11
106	167,74	168,70
107	169,34	170,30
108	170,93	171,89
109	172,52	173,48
110	174,1	175,06
111	175,7	176,66
112	177,29	178,25
113	178,88	179,84
114	180,47	181,43
115	182,06	183,02
116	183,65	184,61
117	185,25	186,21
118	186,84	187,8
119	188,43	189,39
120	190,02	190,98



EAGLE 8M





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

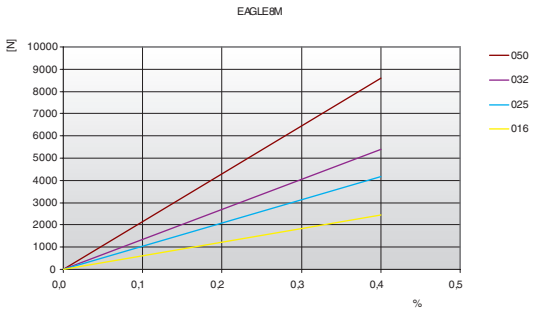
• Width tolerance:	±0,8 [mm]
• Length tolerance:	±0,8 [mm/m]
• Thickness tolerance:	±0,3 [mm]

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.

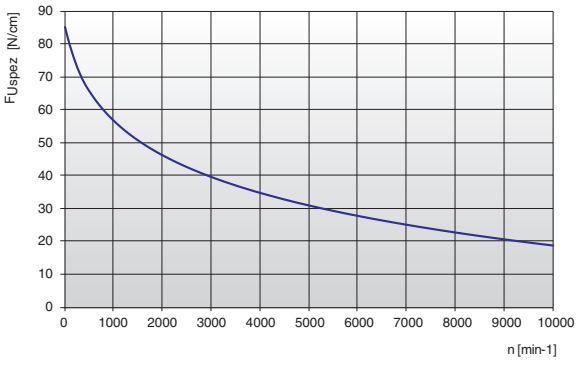
Load / Elongation [%]



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:

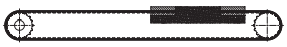
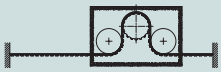
F_U [N] = F_{Uspez} • z_e • b

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

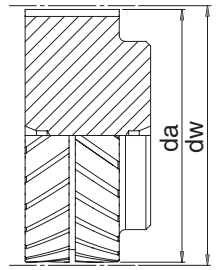
Timing pulleys

z	da	dw
18	44,46	45,83
19	47,01	48,38
20	49,56	50,93
21	52,10	53,47
22	54,65	56,02
23	57,20	58,57
24	59,75	61,12
25	62,29	63,66
26	64,84	66,21
27	67,38	68,75
28	70,08	71,30
29	72,59	73,84
30	75,13	76,39
31	77,65	78,94
32	80,16	81,49
33	82,68	84,03
34	85,21	86,58
35	87,76	89,12
36	90,30	91,67
37	92,85	94,22
38	95,40	96,77
39	97,94	99,31
40	100,49	101,86
41	103,04	104,40
42	105,58	106,95
43	108,13	109,50
44	110,68	112,05
45	113,22	114,59
46	115,77	117,14
47	118,31	119,68

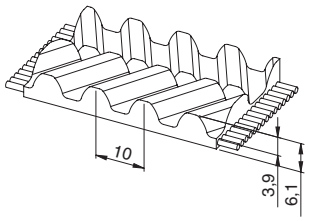
z	da	dw
48	120,86	122,23
49	123,40	124,77
50	125,95	127,32
51	128,50	129,87
52	131,05	132,41
53	133,59	134,96
54	136,14	137,51
55	138,68	140,05
56	141,23	142,60
57	143,78	145,15
58	146,32	147,69
59	148,87	150,24
60	151,42	152,79
61	153,96	155,33
62	156,52	157,89
63	159,06	160,43
64	161,6	162,97
65	164,15	165,52
66	166,69	168,06
67	169,24	170,61
68	171,79	173,16
69	174,33	175,70
70	176,88	178,25
71	179,43	180,80
72	181,98	183,35
73	184,52	185,89
74	187,07	188,44
75	189,61	190,98
76	192,16	193,53
77	194,71	196,08

z	da	dw
78	197,25	198,62
79	199,80	201,17
80	202,35	203,72
81	204,89	206,26
82	207,44	208,81
83	209,98	211,35
84	212,53	213,90
85	215,08	216,45
86	217,63	219,00
87	220,17	221,54
88	222,72	224,09
89	225,26	226,63
90	227,81	229,18
91	230,35	231,72
92	232,90	234,27
93	235,45	236,82
94	238,00	239,37
95	240,54	241,91
96	243,09	244,46
97	245,63	247,00
98	248,18	249,55
99	250,73	252,10
100	253,28	254,67
101	255,82	257,19
102	258,37	259,74
103	260,91	262,28
104	263,46	264,83
105	266,01	267,38
106	268,55	269,92
107	271,1	272,47

z	da	dw
108	273,64	275,01
109	276,19	277,56
110	278,74	280,11
111	281,29	282,66
112	283,84	285,21
113	286,38	287,75
114	288,93	290,30
115	291,47	292,84
116	294,02	295,39
117	296,57	297,94
118	299,11	300,48
119	301,66	303,03
120	304,2	305,57



EAGLE 10M



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 10 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

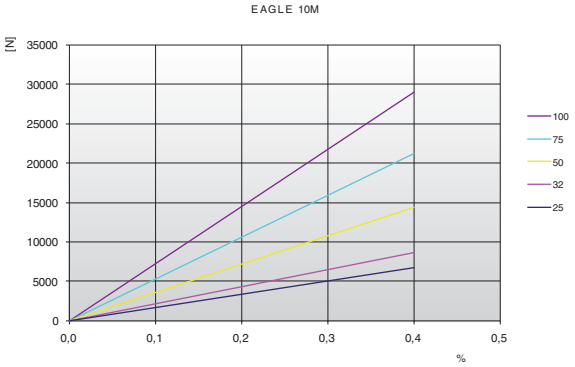
• Width tolerance:	±0,8 [mm]
• Length tolerance:	±0,8 [mm/m]
• Thickness tolerance:	±0,3 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{Tzul} [N]	Breaking load **Type M** F_{Br} [N]	Specific spring rate C_{spez} [N]	Weight [kg/m]
25	6720	24500	1680000	0,18
32	8640	31500	2160000	0,23
50	14400	52500	3600000	0,37
75	21120	77000	5280000	0,54
100	28800	105000	7200000	0,74

Other widths are available on request.

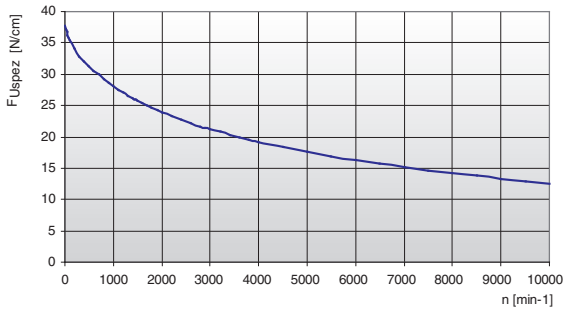
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	93,50	**800**	64,43	**1900**	50,70	**4500**	35,37
20	92,03	**900**	62,70	**2000**	49,83	**5000**	33,42
40	90,63	**1000**	61,11	**2200**	48,19	**5500**	31,65
60	89,28	**1100**	59,63	**2400**	46,67	**6000**	30,02
80	88,00	**1200**	58,27	**2600**	45,27	**6500**	28,51
100	86,77	**1300**	56,99	**2800**	43,96	**7000**	27,12
200	81,36	**1400**	55,79	**3000**	42,73	**7500**	25,81
300	77,02	**1440**	55,33	**3200**	41,57	**8000**	24,59
400	73,54	**1500**	54,66	**3400**	40,48	**8500**	23,43
500	70,76	**1600**	53,59	**3600**	39,45	**9000**	22,34
600	68,43	**1700**	52,58	**3800**	38,46	**9500**	21,31
700	66,33	**1800**	51,62	**4000**	37,53	**10000**	20,33

Tooth shear strength / rpm

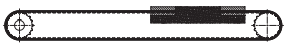
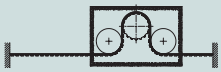


The specific load F_{Uspez} is the maximum load which one single belt tooth 1 cm wide can withstand in all operating conditions.
This force is related to the drive rpm.
The total load F_U transmissible by the belt in the drive is calculated by:

F_U [N] = F_{Uspez} • z_e • 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		Type of cord STANDARD
Drive without reverse bending 	Timing pulley z_{min}	25
	Flat idler running on belt teeth d_{min}	80 mm
Drive with reverse bending 	Timing pulley z_{min}	25
	Flat idler running on belt back d_{min}	150 mm

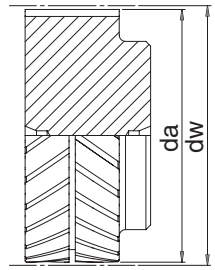
Timing pulleys

z	da	dw
18	55,29	57,29
19	58,48	60,48
20	61,66	63,66
21	64,84	66,84
22	68,03	70,03
23	71,20	73,20
24	74,39	76,39
25	77,58	79,58
26	80,76	82,76
27	83,95	85,95
28	87,12	89,12
29	90,21	92,21
30	93,49	95,49
31	96,67	98,67
32	99,86	101,86
33	103,04	105,04
34	106,19	108,19
35	109,41	111,41
36	112,59	114,59
37	115,77	117,77
38	118,95	120,95
39	122,14	124,14
40	125,32	127,32
41	128,50	130,50
42	131,69	133,69
43	134,87	136,87
44	138,05	140,05
45	141,24	143,24
46	144,42	146,42
47	147,60	149,60

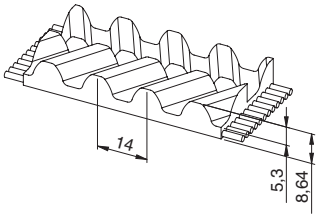
z	da	dw
48	150,78	152,78
49	153,97	155,97
50	157,15	159,15
51	160,33	162,33
52	163,52	165,52
53	166,70	168,70
54	169,88	171,88
55	173,06	175,06
56	176,25	178,25
57	179,43	181,43
58	182,61	184,61
59	185,80	187,80
60	188,98	190,98
61	192,16	194,16
62	195,35	197,35
63	198,53	200,53
64	201,71	203,71
65	204,90	206,90
66	208,08	210,08
67	211,26	213,26
68	214,44	216,44
69	217,63	219,63
70	220,81	222,81
71	223,99	225,99
72	227,18	229,18
73	230,33	232,33
74	233,54	235,54
75	236,72	238,72
76	239,94	241,94
77	243,09	245,09

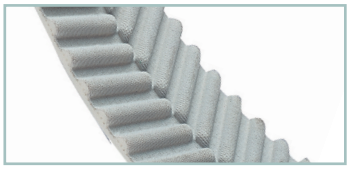
z	da	dw
78	246,24	248,24
79	249,46	251,46
80	252,64	254,64
81	255,82	257,82
82	259,00	261,00
83	262,19	264,19
84	265,37	267,37
85	268,52	270,52
86	271,74	273,74
87	274,92	276,92
88	278,10	280,10
89	281,28	283,28
90	284,47	286,47
91	287,65	289,65
92	290,84	292,84
93	294,02	296,02
94	297,20	299,20
95	300,39	302,39
96	303,57	305,57
97	306,75	308,75
98	309,93	311,93
99	313,12	315,12
100	316,30	318,30
101	319,48	321,48
102	322,66	324,66
103	325,85	327,85
104	329,03	331,03
105	332,21	334,21
106	335,40	337,40
107	338,58	340,58

z	da	dw
108	341,76	343,76
109	344,95	346,95
110	348,13	350,13
111	351,31	353,31
112	354,50	356,50
113	357,68	359,68
114	360,86	362,86
115	364,04	366,04
116	367,23	369,23
117	370,41	372,41
118	373,59	375,59
119	376,78	378,78
120	379,96	381,96



EAGLE 14M





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 14 mm
- **Extremely reduced noise generation**
- Offers excellent operational reliability in linear positioning, heavy power transmission and lifting applications
- The special profile allows most compact drive
- White colour and grey fabric on tooth side (PAZ) as standard

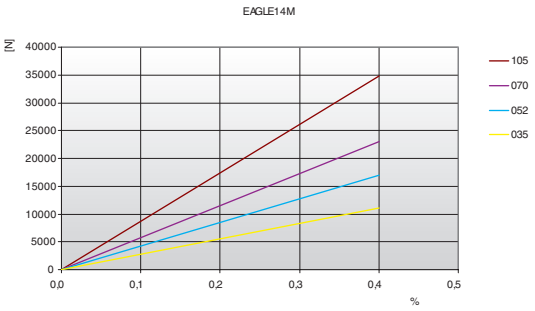
• Width tolerance:	±1,2 [mm]
• Length tolerance:	±0,8 [mm/m]
• Thickness tolerance:	±0,4 [mm]

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]
35	11050	5525	41600	2762500	0,40
52,5	17000	8500	64000	4250000	0,60
70	22950	11475	86400	5737500	0,80
105	34850	17425	131200	8712500	1,20

Other widths are available on request.

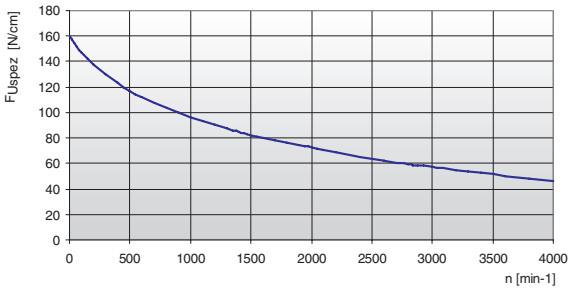
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	160,00	**800**	103,35	**1900**	73,99	**4000**	46,21
20	157,00	**900**	99,60	**2000**	72,13	-	-
40	154,22	**1000**	96,17	**2200**	68,66	-	-
60	151,64	**1100**	93,01	**2400**	65,46	-	-
80	149,24	**1200**	90,08	**2600**	62,50	-	-
100	147,01	**1300**	87,35	**2800**	59,73	-	-
200	138,04	**1400**	84,80	**2880**	58,68	-	-
300	129,87	**1440**	83,82	**3000**	57,15	-	-
400	123,12	**1500**	82,39	**3200**	54,71	-	-
500	117,24	**1600**	80,12	**3400**	52,42	-	-
600	112,07	**1700**	77,97	**3600**	50,24	-	-
700	107,48	**1800**	75,93	**3800**	48,18	-	-

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:

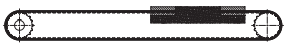
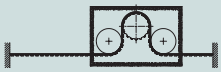
F_U [N] = F_{Uspez} • z_e • b

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]	HPL High Performance	
	F_{Tzul} [N] **M type**	F_{Br} [N]
35	12100	49500
52,5	17600	72000
70	24200	99000
105	37400	153000

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord	
		STANDARD	HPL
Drive without reverse bending 	Timing pulley z_{min}	32	32
	Flat idler running on belt teeth d_{min}	140 mm	140 mm
Drive with reverse bending 	Timing pulley z_{min}	32	32
	Flat idler running on belt back d_{min}	200 mm	200 mm

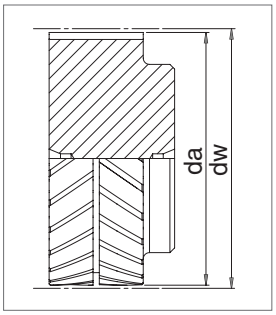
Timing pulleys

z	da	dw
28	122,12	124,77
29	126,58	129,22
30	130,99	133,69
31	135,45	138,14
32	139,88	142,59
33	144,35	147,06
34	148,79	151,51
35	153,25	155,96
36	157,68	160,41
37	162,14	164,88
38	166,60	169,34
39	171,02	173,79
40	175,48	178,24
41	179,92	182,71
42	184,37	187,16
43	188,83	191,61
44	193,29	196,08
45	197,75	200,53
46	202,21	204,98
47	206,65	209,43
48	211,11	213,90
49	215,57	218,35
50	220,03	222,80
51	224,49	227,27
52	228,95	231,72
53	233,39	236,18
54	237,85	240,64
55	242,30	245,09
56	246,76	249,55
57	251,22	254,01

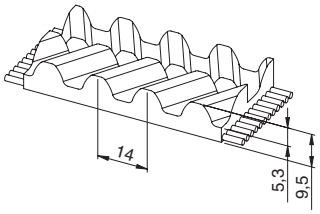
z	da	dw
58	255,68	258,46
59	260,14	262,91
60	264,60	267,38
61	269,04	271,83
62	273,50	276,28
63	277,96	280,75
64	282,42	285,20
65	286,88	289,65
66	291,32	294,11
67	295,78	298,56
68	300,24	303,03
69	304,70	307,48
70	309,16	311,93
71	313,61	316,40
72	318,07	320,85
73	322,53	325,30
74	326,98	329,77
75	331,44	334,22
76	335,90	338,67
77	340,34	343,12
78	344,80	347,59
79	349,26	352,04
80	353,72	356,49
81	358,17	360,96
82	362,63	365,41
83	367,09	369,86
84	371,54	374,33
85	376,00	378,78
86	380,46	383,23
87	384,91	387,70

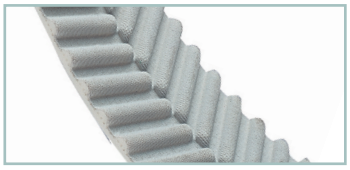
z	da	dw
88	389,37	392,15
89	393,83	396,60
90	398,29	401,07
91	402,73	405,52
92	407,19	409,97
93	411,65	414,44
94	416,10	418,89
95	420,56	423,35
96	425,02	427,80
97	429,48	432,25
98	433,94	436,72
99	438,38	441,17
100	442,84	445,62
101	447,30	450,09
102	451,76	454,54
103	456,21	459,00
104	460,67	463,45
105	465,13	467,90
106	469,58	472,37
107	474,03	476,82
108	478,49	481,28
109	482,95	485,74
110	487,41	490,19
111	491,87	494,64
112	496,32	499,10
113	500,78	503,55
114	505,23	508,02
116	514,14	516,93
117	518,60	521,38
118	523,06	525,83

z	da	dw
119	527,51	530,30
120	531,97	534,75



EAGLE 14M XHPL





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 14 mm
- **Extremely reduced noise generation**
- **E14M - XHPL is the ideal belt for heavy duty synchronous lifting applications.**
- The special profile allows most compact drive
- White colour and grey fabric on tooth side (PAZ) as standard

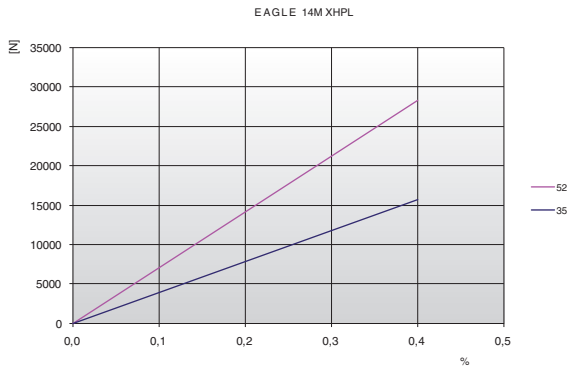
• Width tolerance:	±1,2 [mm]
• Length tolerance:	±1,0 [mm/m]
• Thickness tolerance:	±0,5 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{Tzul} [N]	Breaking load **Type M** F_{Br} [N]	Specific spring rate C_{spez} [N]	Weight [kg/m]
35	16000	56000	4000000	0,50
52,5	28000	98000	7000000	0,70

Other widths are available on request.

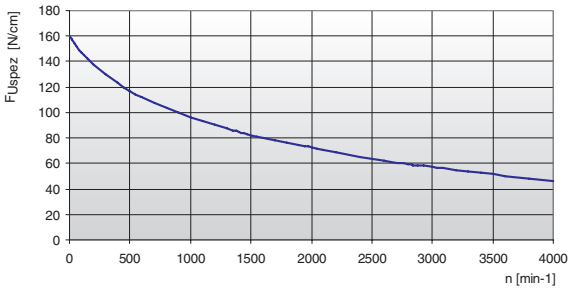
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	160,00	**800**	103,35	**1900**	73,99	**4000**	46,21
20	157,00	**900**	99,60	**2000**	72,13	-	-
40	154,22	**1000**	96,17	**2200**	68,66	-	-
60	151,64	**1100**	93,01	**2400**	65,46	-	-
80	149,24	**1200**	90,08	**2600**	62,50	-	-
100	147,01	**1300**	87,35	**2800**	59,73	-	-
200	138,04	**1400**	84,80	**2880**	58,68	-	-
300	129,87	**1440**	83,82	**3000**	57,15	-	-
400	123,12	**1500**	82,39	**3200**	54,71	-	-
500	117,24	**1600**	80,12	**3400**	52,42	-	-
600	112,07	**1700**	77,97	**3600**	50,24	-	-
700	107,48	**1800**	75,93	**3800**	48,18	-	-

Tooth shear strength / rpm

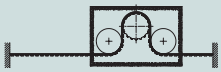


The specific load F_{Uspez} is the maximum load which one single belt tooth 1 cm wide can withstand in all operating conditions.
This force is related to the drive rpm.
The total load F_U transmissible by the belt in the drive is calculated by:

F_U [N] = F_{Uspez} • z_e • 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

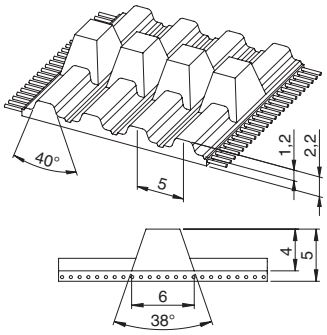
Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord
		STANDARD
Drive without reverse bending	Timing pulley z_{min}	34
	Flat idler running on belt teeth d_{min}	140 mm
Drive with reverse bending	Timing pulley z_{min}	34
	Flat idler running on belt back d_{min}	200 mm

Timing pulleys

Nota
Pulleys with special EAGLE 14M - XHPL profile on request.
Contact our technical department.

TK 5
K6



Belt characteristics

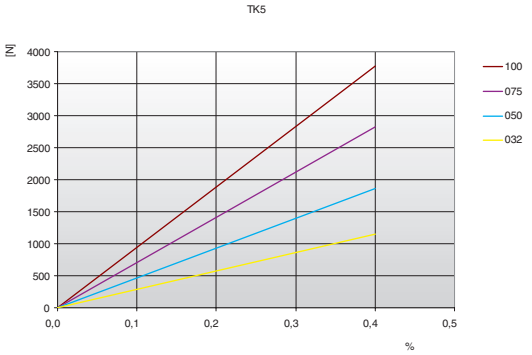
- Polyurethane self tracking timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Profile T5 with central guide - K6 x 4 mm
- Allow to use pulleys without flanges
- The central guide is notched in order to maximize belt flexibility
- Ideal for conveying applications where a side load is generated by loading/unloading transferring a product

- Width tolerance: ±0,5 [mm]
- Length tolerance: ±0,5 [mm/m]

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]
32	1150	575	4500	287500	0,080
50	1860	930	7250	465000	0,130
75	2820	1410	11000	705000	0,200
100	3780	1890	14750	945000	0,260

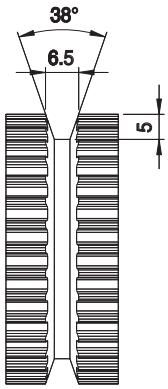
Load / Elongation [%]



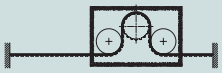
Specialties

Belt width b [mm]	ARAMID CORD	
	F_{Tzul} [N] **M type**	F_{Br} [N]
32	2520	10080
50	4060	16240
75	6160	24640
100	8260	33040

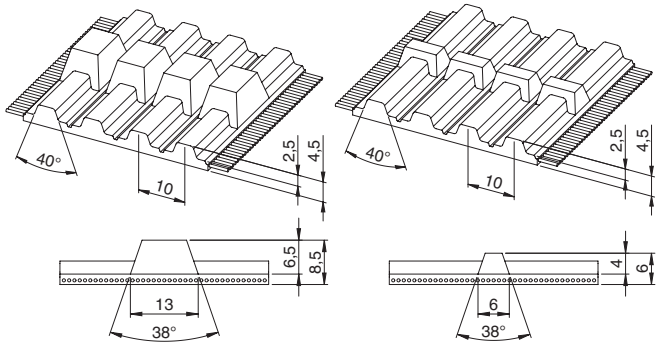
Pulley profile



Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord STANDARD
Drive without reverse bending	Timing pulley z_{min}	14
	Flat idler running on belt teeth d_{min}	40 mm
Drive with reverse bending	Timing pulley z_{min}	15
	Flat idler running on belt back d_{min}	40 mm

TK 10
K13 - K6



K13 K6

Belt characteristics

- Polyurethane self tracking timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Profile T10 with central guide - K13 x 6,5 mm
- Profile T10 with central guide - K6 x 4,0 mm
- Allow to use pulleys without flanges
- The central guide is notched in order to maximize belt flexibility
- Ideal for conveying applications where a side load is generated by loading/unloading transferring a product

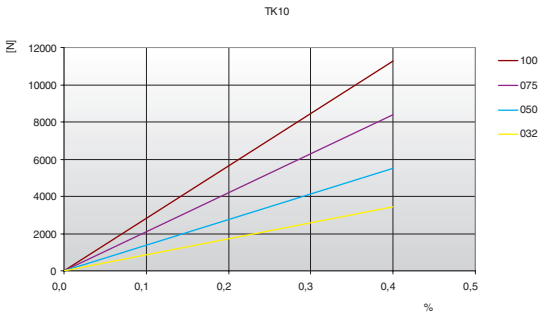
- Width tolerance: ±0,5 [mm]
- Length tolerance: ±0,5 [mm/m]

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]
32	3450	1725	12600	862500	0,220
50	5520	2760	20160	1380000	0,300
75	8400	4200	30660	2100000	0,410
100	11270	5635	41160	2817500	0,530
150	17020	8510	62160	4255000	0,850

150 mm width available only in K6 execution.

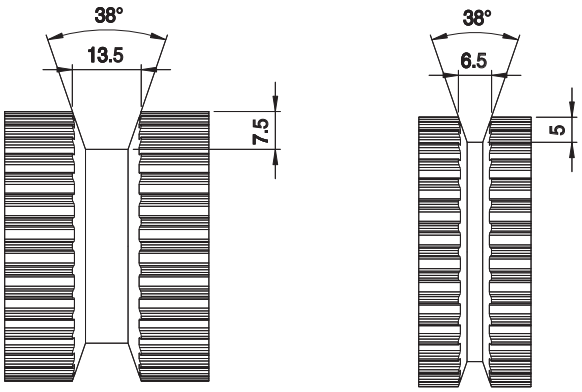
Load / Elongation [%]



Specialties

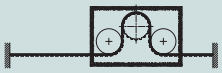
Belt width b [mm]	ARAMID CORD	
	F_{Tzul} [N] **M type**	F_{Br} [N]
32	3300	13500
50	5280	21600
75	8030	32850
100	10780	44100
150	16280	66600

Pulley profile

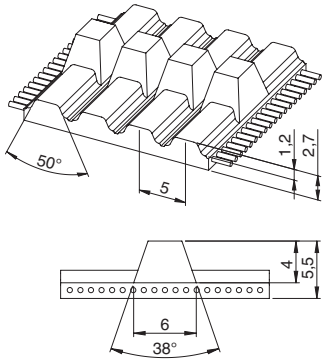


K13 K6

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Guide K6	Guide K13
Drive without reverse bending	Timing pulley z_{min}	14	16
	Flat idler running on belt teeth d_{min}	60 mm	80 mm
Drive with reverse bending	Timing pulley z_{min}	20	20
	Flat idler running on belt back d_{min}	60 mm	60 mm

ATK 5
K6



Belt characteristics

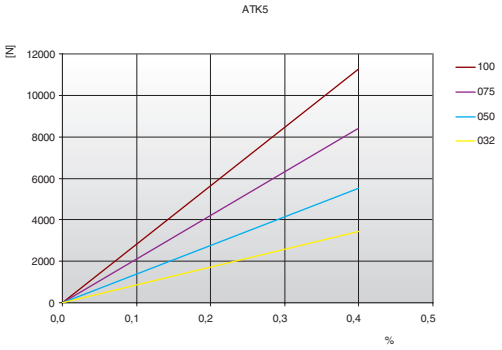
- Polyurethane self tracking timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Profile AT5 with central guide - K6 x 4 mm
- Allow to use pulleys without flanges
- The central guide is notched in order to maximize belt flexibility
- Ideal for conveying applications where a side load is generated by loading/unloading transferring a product

- Width tolerance: ±0,5 [mm]
- Length tolerance: ±0,5 [mm/m]

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]
32	3450	1725	12600	862500	0,11
50	5520	2760	20160	1380000	0,19
75	8400	4200	30660	2100000	0,29
100	11270	5635	41160	2817500	0,38

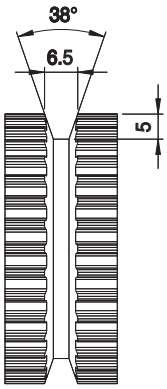
Load / Elongation [%]



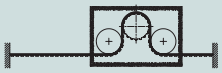
Specialties

Belt width b [mm]	ARAMID CORD	
	F_{Tzul} [N] **M type**	F_{Br} [N]
32	3300	13500
50	5280	21600
75	8030	32850
100	10780	44100

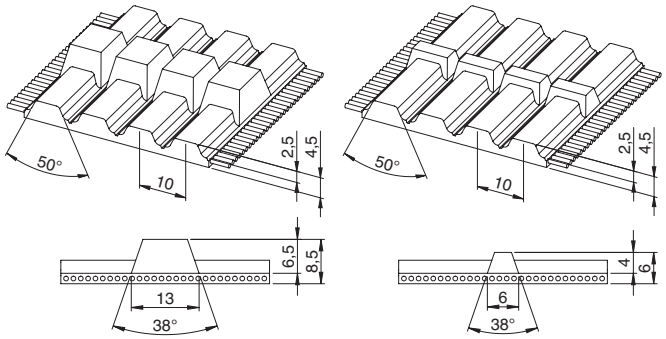
Pulley profile



Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord STANDARD
Drive without reverse bending	Timing pulley z_{min}	25
	Flat idler running on belt teeth d_{min}	60 mm
Drive with reverse bending	Timing pulley z_{min}	25
	Flat idler running on belt back d_{min}	80 mm

ATK 10
K13 - K6



K13 K6

Belt characteristics

- Polyurethane self tracking timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Profile AT10 with central guide - K13 x 6,5 mm
- Profile AT10 with central guide - K6 x 4 mm
- Allow to use pulleys without flanges
- The central guide is notched in order to maximize belt flexibility
- Ideal for conveying applications where a side load is generated by loading/unloading transferring a product

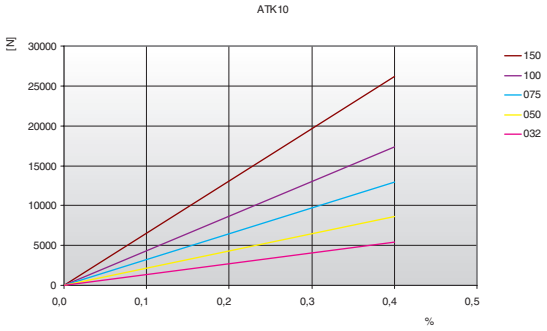
- Width tolerance: ±0,5 [mm]
- Length tolerance: ±0,5 [mm/m]

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]
32	5390	2695	20900	1347500	0,27
50	8580	4290	33250	2145000	0,36
75	12990	6495	50350	3247500	0,50
100	17400	8700	67450	4350000	0,72
150	26220	13110	101650	6555000	1,08

150 mm width available only in K13 execution.

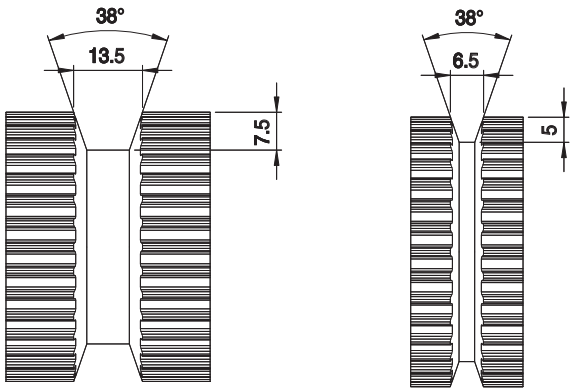
Load / Elongation [%]



Specialties

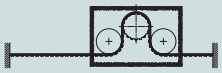
Belt width b [mm]	ARAMID CORD	
	F_{Tzul} [N] **M type**	F_{Br} [N]
32	4840	22000
50	7700	35000
75	11660	53000
100	15620	71000
150	23540	107000

Pulley profile

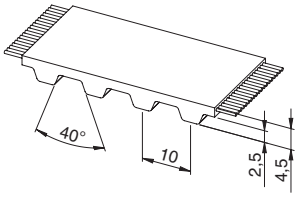


K13 K6

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Guide K6	Guide K13
Drive without reverse bending	Timing pulley z_{min}	15	17
	Flat idler running on belt teeth d_{min}	50 mm	50 mm
Drive with reverse bending	Timing pulley z_{min}	25	25
	Flat idler running on belt back d_{min}	120 mm	120 mm

T 10
TOTAL PROTECTION



Belt characteristics
- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 10 mm
- **TP (Total Protection) belt. The absence of tooth gap makes the belt cords protected against corrosion**
- **Widely used in applications with corrosive enviroment, high humidity**
- Light blue color available on request

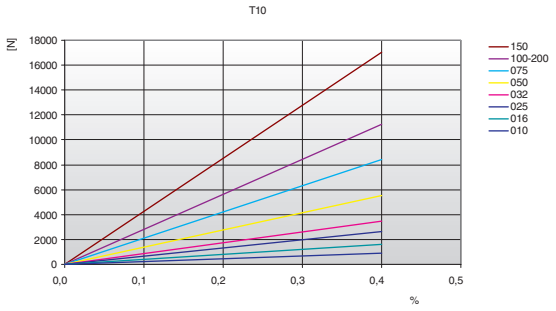
- Width tolerance: ±0,5 [mm]
- Length tolerance: ±0,5 [mm/m]
- Thickness tolerance: ±0,2 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{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	920	460	3360	230000	0,05
16	1610	805	5880	402500	0,07
25	2650	1325	9660	662500	0,11
32	3450	1725	12600	862500	0,15
50	5520	2760	20160	1380000	0,23
75	8400	4200	30660	2100000	0,34
100	11270	5635	41160	2817500	0,45

Other widths are available on request.

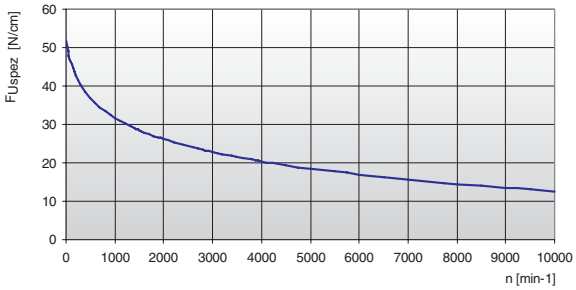
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	51,80	**800**	33,34	**1900**	26,53	**4500**	19,40
20	50,32	**900**	32,44	**2000**	26,12	**5000**	18,51
40	49,04	**1000**	31,63	**2200**	25,34	**5500**	17,70
60	47,92	**1100**	30,89	**2400**	24,63	**6000**	16,97
80	46,95	**1200**	30,21	**2600**	23,97	**6500**	16,29
100	46,11	**1300**	29,58	**2800**	23,36	**7000**	15,66
200	42,75	**1400**	28,99	**3000**	22,78	**7500**	15,07
300	40,28	**1440**	28,76	**3200**	22,25	**8000**	14,52
400	38,36	**1500**	28,44	**3400**	21,74	**8500**	14,00
500	36,80	**1600**	27,92	**3600**	21,27	**9000**	13,51
600	35,49	**1700**	27,43	**3800**	20,81	**9500**	13,05
700	34,35	**1800**	26,97	**4000**	20,39	**10000**	12,61

Tooth shear strength / rpm

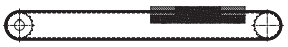
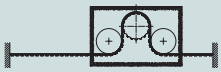


The specific load F_{Uspez} is the maximum load which one single belt tooth 1 cm wide can withstand in all operating conditions.
This force is related to the drive rpm.
The total load F_U transmissible by the belt in the drive is calculated by:

F_U [N] = F_{Uspez} • z_e • 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		Type of cord STANDARD
Drive without reverse bending 	Timing pulley z_{min}	12
	Flat idler running on belt teeth d_{min}	60 mm
Drive with reverse bending 	Timing pulley z_{min}	20
	Flat idler running on belt back d_{min}	60 mm

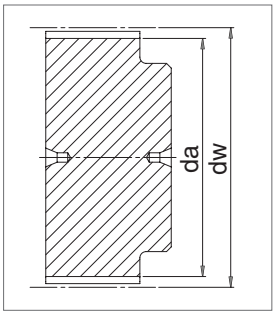
Timing pulleys

z	da	dw
10	30,05	31,84
11	33,25	35,02
12	36,35	38,20
13	39,50	41,38
14	42,70	44,56
15	45,90	47,75
16	49,05	50,93
17	52,25	54,11
18	55,45	57,29
19	58,65	60,48
20	61,80	63,66
21	65,00	66,84
22	68,15	70,03
23	71,35	73,20
24	74,55	76,39
25	77,70	79,58
26	80,90	82,76
27	84,10	85,95
28	87,25	89,12
29	90,45	92,21
30	93,65	95,49
31	96,85	98,67
32	100,00	101,86
33	103,20	105,04
34	106,40	108,22
35	109,55	111,41
36	112,75	114,59
37	115,90	117,77
38	119,10	120,95
39	122,30	124,14

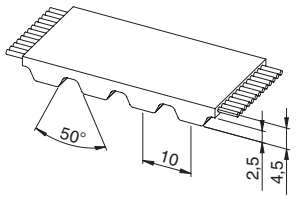
z	da	dw
40	125,45	127,32
41	128,65	130,50
42	131,85	133,69
44	138,20	140,05
45	141,40	143,24
46	144,60	146,42
47	147,75	149,60
48	150,95	152,78
49	154,10	155,97
50	157,30	159,15
51	160,50	162,33
52	163,65	165,52
53	166,85	168,70
54	170,05	171,88
55	173,20	175,06
56	176,40	178,25
57	179,60	181,43
58	182,75	184,61
59	185,95	187,80
60	189,10	190,98
61	192,30	194,16
62	195,50	197,35
63	198,65	200,53
64	201,85	203,71
65	205,05	206,90
66	208,20	210,08
67	211,40	213,26
68	214,60	216,44
69	217,75	219,63
70	220,95	222,81

z	da	dw
71	224,15	225,99
72	227,30	229,18
73	230,50	232,36
74	233,70	235,54
75	236,90	238,72
76	240,05	241,94
77	243,25	245,09
78	246,40	248,27
79	249,60	251,46
80	252,80	254,64
81	256,00	257,82
82	259,15	261,00
83	262,30	264,19
84	265,50	267,37
85	268,70	270,55
86	271,90	273,74
87	275,05	276,92
88	278,25	280,10
89	281,45	283,28
90	284,60	286,47
91	287,80	289,65
92	291,00	292,84
93	294,20	296,02
94	297,35	299,20
95	300,55	302,39
96	303,75	305,57
97	306,90	308,75
98	310,10	311,93
99	313,25	315,12
100	316,45	318,30

z	da	dw
101	319,65	321,48
102	322,80	324,66
103	326,00	327,85
104	329,20	331,03
105	332,35	334,21
106	335,55	337,40
107	338,75	340,58
108	341,95	343,76
109	345,15	346,95
110	348,30	350,13
111	351,45	353,31
112	354,65	356,50
113	357,80	359,68
114	361,00	362,86
115	364,19	366,04
116	367,39	369,23
117	370,56	372,41
118	373,76	375,59
119	376,93	378,78
120	380,11	381,96



AT 10
TOTAL PROTECTION



Belt characteristics

- Polyurethane timing belt with steel tension cords
- Metric pitch 10 mm
- Tooth profile according to ISO 17396
- Tooth profile and dimension are optimised to guarantee uni form 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
- **TP (Total Protection) belt. The absence of tooth gap makes the belt cords protected against corrosion**
- **Widely used in applications with corrosive enviroment, high humidity**
- Light blue color available on request

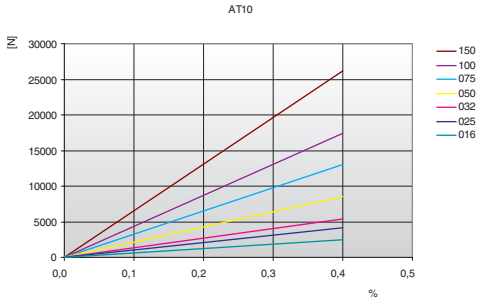
• Width tolerance:	±0,5 [mm]
• Length tolerance:	±0,8 [mm/m]
• Thickness tolerance:	±0,2 [mm]

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]
16	2450	1225	9500	612500	0,09
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

Other widths are available on request.

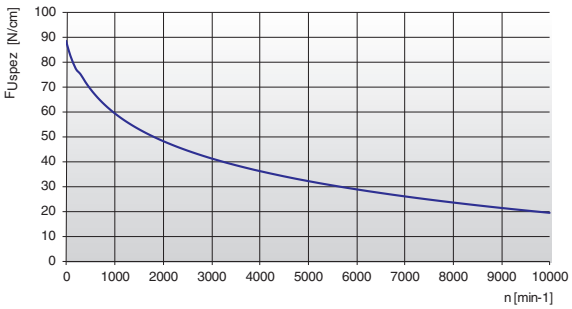
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	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

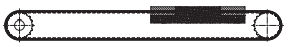
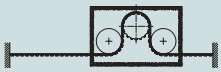


The specific load F_{Uspez} is the maximum load which one single belt tooth 1 cm wide can withstand in all operating conditions.
This force is related to the drive rpm.
The total load F_U transmissible by the belt in the drive is calculated by:

F_U [N] = F_{Uspez} • z_e • 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		Type of cord STANDARD
Drive without reverse bending 	Timing pulley z_{min}	15
	Flat idler running on belt teeth d_{min}	50 mm
Drive with reverse bending 	Timing pulley z_{min}	25
	Flat idler running on belt back d_{min}	120 mm

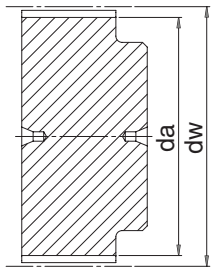
Timing pulleys

z	da	dw
18	55,45	57,29
19	58,60	60,48
20	61,80	63,66
21	65,00	66,84
22	68,15	70,03
23	71,35	73,20
24	74,55	76,39
25	77,70	79,58
26	80,90	82,76
27	84,10	85,95
28	87,25	89,12
29	90,45	92,21
30	93,65	95,49
31	96,80	98,67
32	100,00	101,86
33	103,20	105,04
34	106,40	108,19
35	109,55	111,41
36	112,75	114,59
37	115,90	117,77
38	119,10	120,95
39	122,30	124,14
40	125,45	127,32
41	128,65	130,50
42	131,85	133,69
43	135,00	136,87
44	138,20	140,05
45	141,40	143,24
46	144,55	146,42
47	147,75	149,60

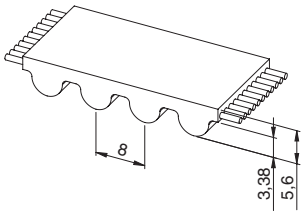
z	da	dw
48	150,95	152,78
49	154,10	155,97
50	157,30	159,15
51	160,50	162,33
52	163,65	165,52
53	166,85	168,70
54	170,05	171,88
55	173,20	175,06
56	176,40	178,25
57	179,60	181,43
58	182,75	184,61
59	185,95	187,80
60	189,10	190,98
61	192,30	194,16
62	195,50	197,35
63	198,65	200,53
64	201,85	203,71
65	205,05	206,90
66	208,20	210,08
67	211,40	213,26
68	214,60	216,44
69	217,75	219,63
70	220,95	222,81
71	224,15	225,99
72	227,30	229,18
73	230,50	232,33
74	233,70	235,54
75	236,90	238,72
76	240,05	241,94
77	243,25	245,09

z	da	dw
78	246,40	248,24
79	249,60	251,46
80	252,80	254,64
81	255,95	257,82
82	259,15	261,00
83	262,30	264,19
84	265,50	267,37
85	268,70	270,52
86	271,90	273,74
87	275,05	276,92
88	278,25	280,10
89	281,45	283,28
90	284,60	286,47
91	287,80	289,65
92	291,00	292,84
93	294,20	296,02
94	297,35	299,20
95	300,55	302,39
96	303,70	305,57
97	306,90	308,75
98	310,10	311,93
99	313,25	315,12
100	316,45	318,30
101	319,65	321,48
102	322,80	324,66
103	326,00	327,85
104	329,20	331,03
105	332,35	334,21
106	335,55	337,40
107	338,75	340,58

z	da	dw
108	341,90	343,76
109	345,10	346,95
110	348,30	350,13
111	351,45	353,31
112	354,65	356,50
113	357,80	359,68
114	361,00	362,86
115	364,19	366,04
116	367,39	369,23
117	370,56	372,41
118	373,74	375,59
119	376,93	378,78
120	380,11	381,96



HTD 8M
TOTAL PROTECTION



Belt characteristics

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile according to ISO 13050
- Metric pitch 8 mm
- The round tooth profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- **TP (Total Protection) belt. The absence of tooth gap makes the belt protected against corrosion**
- **Widely used in applications with corrosive enviroment**
- Light blue color available on request

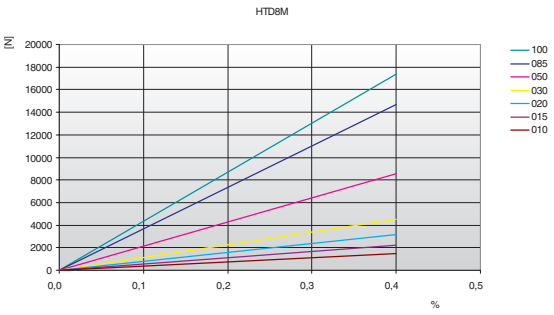
• Width tolerance:	±0,5 [mm]
• Length tolerance:	±0,5 [mm/m]
• Thickness tolerance:	±0,2 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{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	1470	735	5700	367500	0,07
15	2210	1105	8550	552500	0,11
20	3190	1595	12350	797500	0,14
30	4660	2330	18050	1165000	0,21
50	8580	4290	33250	2145000	0,35
85	14700	7350	57000	3675000	0,60
100	17400	8700	67450	4350000	0,70

Other widths are available on request.

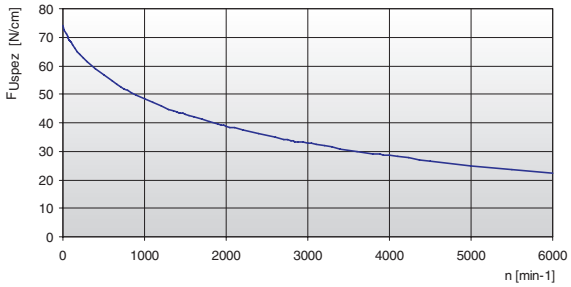
Load / Elongation [%]



Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	74,00	**800**	51,20	**1900**	39,52	**4500**	26,63
20	72,62	**900**	49,71	**2000**	38,78	**5000**	25,00
40	71,34	**1000**	48,35	**2200**	37,39	**5500**	23,51
60	70,16	**1100**	47,09	**2400**	36,12	**6000**	22,15
80	69,07	**1200**	45,93	**2600**	34,94	-	-
100	68,07	**1300**	44,84	**2800**	33,83	-	-
200	64,09	**1400**	43,82	**3000**	32,80	-	-
300	61,68	**1440**	43,43	**3200**	31,83	-	-
400	59,03	**1500**	42,86	**3400**	30,91	-	-
500	56,71	**1600**	41,96	**3600**	30,05	-	-
600	54,66	**1700**	41,10	**3800**	29,22	-	-
700	52,84	**1800**	40,29	**4000**	28,44	-	-

Tooth shear strength / rpm

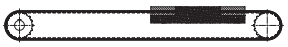
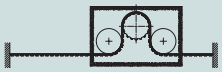


The specific load F_{Uspez} is the maximum load which one single belt tooth 1 cm wide can withstand in all operating conditions.
This force is related to the drive rpm.
The total load F_U transmissible by the belt in the drive is calculated by:

F_U [N] = F_{Uspez} • z_e • 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		Type of cord STANDARD
Drive without reverse bending	Timing pulley z_{min}	18
	Flat idler running on belt teeth d_{min}	50 mm
Drive with reverse bending	Timing pulley z_{min}	18
	Flat idler running on belt back d_{min}	120 mm

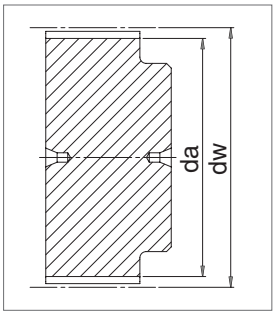
Timing pulleys

z	da	dw
18	44,46	45,83
19	47,01	48,38
20	49,56	50,93
21	52,10	53,47
22	54,65	56,02
23	57,20	58,57
24	59,75	61,12
25	62,29	63,66
26	64,84	66,21
27	67,38	68,75
28	70,08	71,30
29	72,59	73,84
30	75,13	76,39
31	77,65	78,94
32	80,16	81,49
33	82,68	84,03
34	85,21	86,58
35	87,76	89,12
36	90,30	91,67
37	92,85	94,22
38	95,40	96,77
39	97,94	99,31
40	100,49	101,86
41	103,04	104,40
42	105,58	106,95
43	108,13	109,50
44	110,68	112,05
45	113,22	114,59
46	115,77	117,14
47	118,31	119,68

z	da	dw
48	120,86	122,23
49	123,40	124,77
50	125,95	127,32
51	128,50	129,87
52	131,05	132,41
53	133,59	134,96
54	136,14	137,51
55	138,68	140,05
56	141,23	142,60
57	143,78	145,15
58	146,32	147,69
59	148,87	150,24
60	151,42	152,79
61	153,96	155,33
62	156,52	157,89
63	159,06	160,43
64	161,60	162,97
65	164,15	165,52
66	166,69	168,06
67	169,24	170,61
68	171,79	173,16
69	174,33	175,70
70	176,88	178,25
71	179,43	180,80
72	181,98	183,35
73	184,52	185,89
74	187,07	188,44
75	189,61	190,98
76	192,16	193,53
77	194,71	196,08

z	da	dw
78	197,25	198,62
79	199,80	201,17
80	202,35	203,72
81	204,89	206,26
82	207,44	208,81
83	209,98	211,35
84	212,53	213,90
85	215,08	216,45
86	217,63	219,00
87	220,17	221,54
88	222,72	224,09
89	225,26	226,63
90	227,81	229,18
91	230,35	231,72
92	232,90	234,27
93	235,45	236,82
94	238,00	239,37
95	240,54	241,91
96	243,09	244,46
97	245,63	247,00
98	248,18	249,55
99	250,73	252,10
100	253,28	254,67
101	255,82	257,19
102	258,37	259,74
103	260,91	262,28
104	263,46	264,83
105	266,01	267,38
106	268,55	269,92
107	271,10	272,47

z	da	dw
108	273,64	275,01
109	276,19	277,56
110	278,74	280,11
111	281,29	282,66
112	283,84	285,21
113	286,38	287,75
114	288,93	290,30
115	291,47	292,84
116	294,02	295,39
117	296,57	297,94
118	299,11	300,48
119	301,66	303,03
120	304,20	305,57



ELATECH® flat belts

ELATECH® flat belt's superior construction makes them the best solution in a wide range of lifting applications. Compared to steel cable they offer proven reliability, highly compact drives, maintenance-free operation and excellent dynamic properties.

Compact size and maintenance-free operation allow:

- low inertia, space savings and therefore lower manufacturing cost solutions
- lower power consumption in operation and therefore reduced running costs

In order to optimize the application in load and flexibility, ELATECH® flat belts are produced in a range of different thicknesses and steel cord diameters.

Pulleys
In some cases it is also possible to use guiding pulleys with a convex barrel shape. In this case we recommend following the specifications of the ISO R22 - DIN 111 norms. The use of the convex barrel pulleys, will result in an uneven force distribution in the belt. Therefore the allowable forces in the belt need to be revised.

Belt storage
Belts must be stored in a dry environment (max 60% relative humidity) with a temperature from 5 to 35 °C.

Belt installation
For a correct belt installation it is important that the belt's ends are securely and firmly fastened by the use of the correct belt end attachments. It is also recommended to use a very rigid and accurate assembly with perfectly parallel and rigid shafts. Belts and pulleys must be free from oil and grease and any dust or residual material which may affect the belt integrity during operation.

Pulley diameter depends on the type of belt and on the design load required by the application. Our catalogue suggests minimum diameters for use with the maximum allowable load. For an accurate pulley diameter calculation under different load conditions please contact our technical department.
The recommended pulley geometry is cylindrical with side flanges.
Proper design of belt ends is recommended to ensure application safety. Some possible design solutions for belt end clamping are shown here as examples.
ELATECH® flat belts are produced with a polyurethane body ensuring very high wear resistance. Steel tension cords of opposite construction (Z and S) are laid out in pairs to maximize dynamic properties. They provide excellent operational performance with low noise and vibrations and long lifetime.

In applications with more belts acting in parallel it is suggested to use belts from the same manufacturing batch with minimum belt thickness tolerance. The belt drive must be started up only when the entire machine or assembly has the necessary protective systems which meetsthe machine's safety guidelines. Belts are maintenance free, however, an accurate visual inspection of the belts and end attachments must be taken at least once per year.

TP (Total Protection) Belts
TP flat belts (without tooth gap) are available on demand.
Ask our technical Department for product specifications.

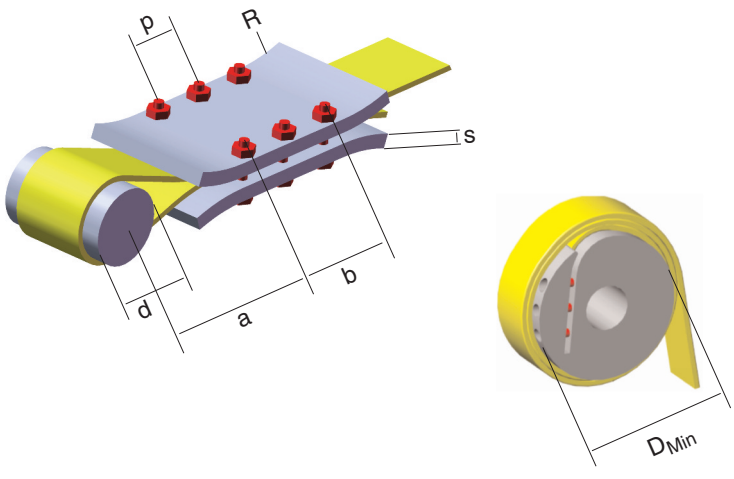
Belt life
Due to the wide application range and considering the fact that belts are one component of complex equipment, the loads in the belt itself are very seldom precisely predictable. This fact makes it impossible to confirm a precise belt service life. In order to optimize the belt life, it is important to follow the catalogue technical specifications related to pulley geometry and belt storage and installation. When all the catalogues of specifications are followed, a belt life of 3 million reverse bending cycles occurring over 10 years can be expected. This value was measured in tests under laboratory conditions.

Belt fastening guidelines

Belt type [mm]	F1	F2	F2,5	F3
a	25	45	50	75
b	40	60	80	125
p	20	20	20	25
s	3	5	5	5
d	15	30	30	50
Bolt	M5	M6	M8	M8
R (Radius)	12	12	12	20

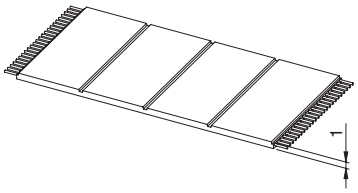
Pulley [mm]	F1	F2	F2,5	F3
D	50	60	80	120

It's recommended to have at least 2 turns on pulley.



Picture is not representative of real number of minimum required bolts.

F1



Belt characteristics

- Polyurethane self tracking timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Profile T10 with central guide - K13 x 6,5 mm
- Profile T10 with central guide - K6 x 4,0 mm
- Allow to use pulleys without flanges
- The central guide is notched in order to maximize belt flexibility
- Ideal for conveying applications where a side load is generated by loading/unloading transferring a product

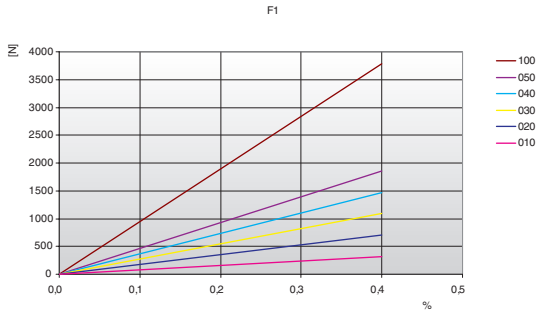
- Width tolerance: ±0,5 [mm]
- Thickness tolerance: ±0,2 [mm]

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
20	700	350	2750	175000	0,04
30	1090	545	4250	272500	0,05
40	1470	735	5750	367500	0,08
50	1860	930	7250	465000	0,09
100	3780	1890	14750	945000	0,21

Other widths are available on request.

Load / Elongation [%]

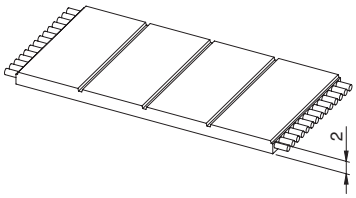


Minimum pulley diameter	Drive without reverse bending [mm]	Drive with reverse bending [mm]
	16	30

Specialties

Belt width b [mm]	ARAMID CORD	
	F_{Tzul} [N] **M type**	F_{Br} [N]
10	700	2800
20	1540	6160
30	2380	9520
40	3220	12880
50	4060	16240
100	8260	33040

F2



Belt characteristics

- Polyurethane flat belt with steel tension cords
- It is mainly used in lifting application where there is no need for synchronization
- Allows the use of small diameter pulleys
- Black colour as standard
- Maintenance free
- Reduced thickness tolerance available on request

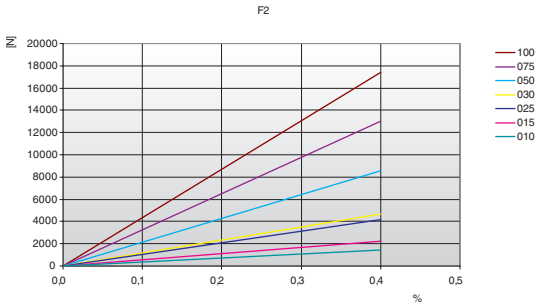
- Width tolerance: ±0,5 [mm]
- Thickness tolerance: ±0,2 [mm]

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	1470	735	5700	367500	0,03
15	2210	1105	8550	552500	0,05
25	4170	2085	16150	1042500	0,08
30	4660	2330	18050	1165000	0,10
50	8580	4290	33250	2145000	0,17
75	12990	6495	50350	3247500	0,25
100	17400	8700	67450	4350000	0,34

Other widths are available on request.

Load / Elongation [%]

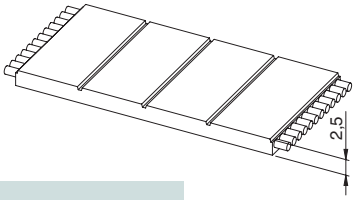


Minimum pulley diameter	Drive without reverse bending [mm]	Drive with reverse bending [mm]
	50	100

Specialties

Belt width b [mm]	ARAMID CORD		STAINLESS STEEL	
	F_{Tzul} [N] **M type**	F_{Br} [N]	F_{Tzul} [N] **M type**	F_{Br} [N]
10	1320	6000	1080	4500
15	1980	9000	1620	6750
25	3740	17000	3060	12750
30	4180	19000	3420	14250
50	7700	35000	6300	26250
75	11660	53000	9540	39750
100	15620	71000	12780	53250

F2,5



- Width tolerance: ±0,5 [mm]
- Thickness tolerance: ±0,2 [mm]

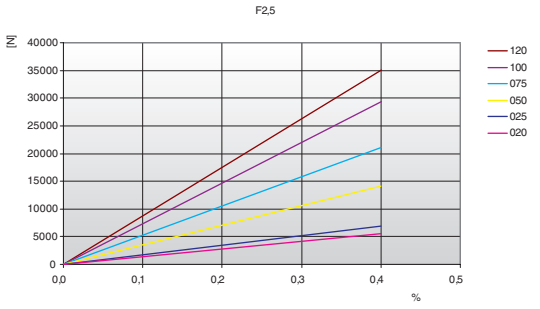
Belt characteristics
- Polyurethane flat belt with steel tension cords
- It is mainly used in lifting application where there is no need for synchronization
- Allows the use of small diameter pulleys
- Black colour as standard
- Maintenance free
- Reduced thickness tolerance available on request

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]
20	5280	2640	19250	1320000	0,08
25	6720	3360	24500	1680000	0,09
50	14400	7200	52500	3600000	0,18
75	21600	10800	78750	5400000	0,27
100	29280	14640	106750	7320000	0,36
120	35040	17520	127750	8760000	0,42

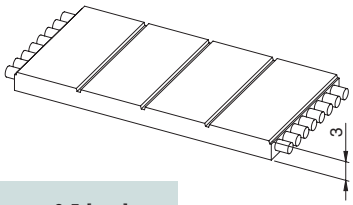
Other widths are available on request.

Load / Elongation [%]



Minimum pulley diameter	Drive without reverse bending [mm]	Drive with reverse bending [mm]
	80	150

F3



- Width tolerance: ±0,5 [mm]
- Thickness tolerance: ±0,2 [mm]

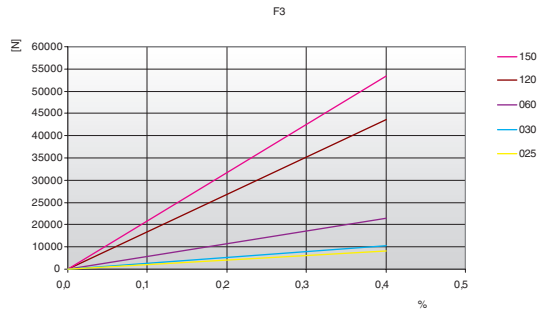
Belt characteristics
- Polyurethane flat belt with steel tension cords
- It is mainly used in lifting application where there is no need for synchronization
- Allows the use of small diameter pulleys
- Black colour as standard
- Maintenance free
- Reduced thickness tolerance available on request

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]
25	8500	4250	32000	2125000	0,11
30	10200	5100	38400	2550000	0,12
60	21250	10625	80000	5312500	0,24
120	43350	21675	163200	10837500	0,48
150	53550	26775	201600	13387500	0,60

Other widths are available on request.

Load / Elongation [%]

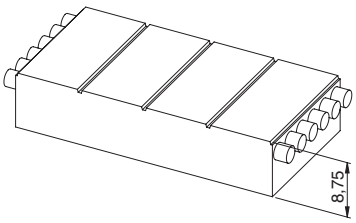


Minimum pulley diameter	Drive without reverse bending [mm]	Drive with reverse bending [mm]
	120	180

FLAT
Heavy Series

ELATECH® FLAT belt heavy series has been developed for the need in the automotive industry. They are used to lift car bodies in production lines or to convey car bodies or finished cars (skid supporting belt). They are made with 85 Sh A polyurethane body to ensure high grip on the motor pulley and with high performance steel tension member.

F9



Belt characteristics
- Polyurethane flat belt with steel tension cords
- Long service life
- Black colour as standard
- Maintenance free
- Minimum elastic elongation
- No cords exposed

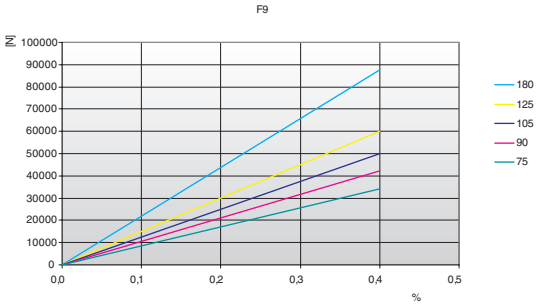
F9 - Technical Data

- Width tolerance: ±1,0 [mm]
- Thickness tolerance: ±0,5 [mm]

Belt width b [mm]	Allowable tensile load **Type M** F_{Tzul} [N]	Breaking load **Type M** F_{Br} [N]	Specific spring rate C_{spez} [N]	Weight [kg/m]
75	34000	119000	8500000	1,1
90	42000	147000	10500000	1,6
105	50000	175000	12500000	1,6
125	60000	210000	15000000	1,9
180	88000	308000	22000000	2,8

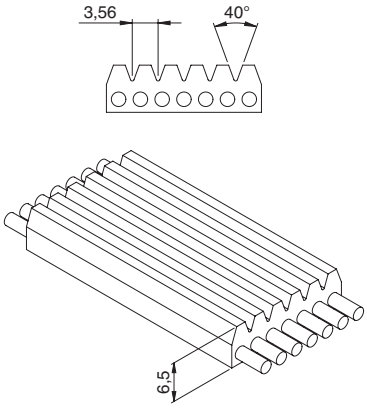
Other widths are available on request.

Load / Elongation [%]



Minimum pulley diameter	Drive without reverse bending [mm]	Drive with reverse bending [mm]
	200	300

POLY-V K



Belt characteristics

- Polyurethane Poly-V belt with K profile and high tensile load steel cords for high performance and increased flexibility
- The Poly-V profile allows torque high transmission, small pulley diameter
- Low noise generation
- Widely used in lifting applications
- Special cords available on request

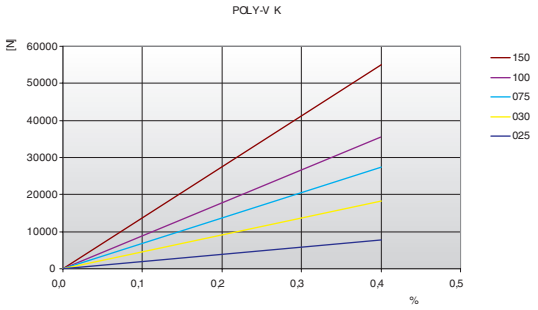
- Width tolerance: ±1,0 [mm]
- Thickness tolerance: ±0,4 [mm]

Technical Data

Belt width b [mm]	Allowable tensile load **Type M** F_{Tzul} [N]	Breaking load **Type M** F_{Br} [N]	Specific spring rate C_{spez} [N]	Weight [kg/m]
25	7700	31500	1925000	0,28
30	9900	40500	2475000	0,34
75	27500	112500	6875000	0,89
100	35200	144000	8800000	1,11
150	55000	225000	13750000	1,67

Other widths are available on request.

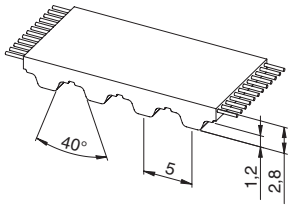
Load / Elongation [%]



Minimum pulley diameter	Drive without reverse bending [mm]	Drive with reverse bending [mm]
	150	250

TT5 Polyurethane timing belts

ELATECH® manufactures special TT5 belts which have been expressly designed for application in circular knitting machines drives.



Belt characteristics
- Trapezoidal tooth profile according to ISO 17396
- Metric pitch 5 mm
- Standard colour: blue with kevlar® cords, white with steel cords, other colours available on request
- Polyurethane 88 Sh A

- Width tolerance: ±0,5 [mm]
- Length tolerance: ±0,5 [mm/m]
- Thickness tolerance: ±0,2 [mm]

Technical Data

ELATECH® belts TT5 are available in the following executions:

ELATECH® - V
- A special splicing and welding process offers superior traction load resistance
- They are available both with steel and aramid cords
- Special colours available on demand
- Available in any length tooth by tooth

ELA-flex SD® truly endless
- ELA-flex SD® TT5 have no splice and welding and therefore offer best traction resistance load
- They are available both with steel and aramid cords
- Special colours available on demand
- Available in all lengths tooth by tooth up to a length of 17900 mm

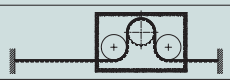
Belt width b [mm]	Allowable tensile load **Type M** F_{Tzul} [N]	Allowable tensile load **Type V** F_{Tzul} [N]	Breaking load **Type M** F_{Br} [N]	Weight [kg/m]
ARAMID (Kevlar) cords				
10	840	420	3360	0,019
STEEL cords				
10	320	190	1250	0,021

Type	Belt length [mm]
10TT5/4800K	4800
10TT5/5000K	5000
10TT5/5200K	5200
10TT5/5600K	5600
10TT5/5800K	5800
10TT5/6000K	6000
10TT5/6200K	6200
10TT5/6400K	6400
10TT5/6600K	6600
10TT5/6800K	6800
10TT5/7000K	7000
10TT5/7200K	7200
10TT5/7400K	7400
10TT5/7500K	7500
10TT5/7600K	7600
10TT5/7800K	7800
10TT5/8000K	8000
10TT5/8200K	8200
10TT5/8300K	8300
10TT5/8400K	8400
10TT5/8600K	8600
10TT5/8800K	8800
10TT5/8900K	8900
10TT5/9000K	9000

Type	Belt length [mm]
10TT5/9200K	9200
10TT5/9400K	9400
10TT5/9600K	9600
10TT5/9800K	9800
10TT5/10000K	10000
10TT5/10200K	10200
10TT5/10300K	10300
10TT5/10400K	10400
10TT5/10600K	10600
10TT5/10800K	10800
10TT5/11200K	11200
10TT5/11300K	11300
10TT5/11800K	11800
10TT5/12000K	12000
10TT5/12300K	12300
10TT5/12700K	12700
10TT5/12800K	12800
10TT5/13000K	13000
10TT5/13200K	13200
10TT5/13400K	13400
10TT5/13600K	13600
10TT5/15400K	15400
10TT5/17900K	17900

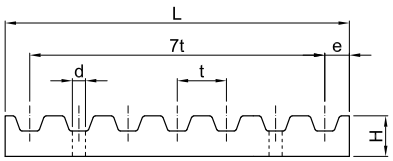
Note: Steel tensile cord member available upon request

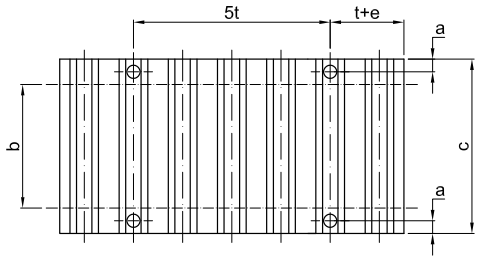
Flexibility

Minimum pulley number of teeth and minimum idler diameter		Type of cord	
		STANDARD	ARAMID
Drive without reverse bending	Timing pulley z_{min}	12	12
	Flat idler running on belt teeth d_{min}	30 mm	30 mm
Drive with reverse bending	Timing pulley z_{min}	15	15
	Flat idler running on belt back d_{min}	30 mm	30 mm

Clamp plates

Clamp plates may be used as positive attachment of the belt ends in numerous applications in linear drives. Clamp plates must have the correct belt profile, guarantee a uniform clamping force on all the clamped belt surface and must be rigid.
For **standard applications** a minimum of **7 teeth** in clamp is recommended.
For use with timing belts with **HPL cords**, a minumum of **12 teeth** in clamp is recommended.
EAGLE clamp plates are available as semi finished product. Standard material for clamp plates is aluminium.





Type	a [mm]	d [mm]	e [mm]	L [mm]	H [mm]	Belt width [mm]							
						6	10	16	25	32	50	75	100
						C							
T5	6	5,5	3,2	41,8	8	-	29	35	44	-	-	-	-
AT5	6	5,5	3,2	41,8	8	-	29	35	44	-	-	-	-
T10	8	9	5	80	15	-	-	41	50	57	75	100	125
AT10	8	9	5	80	15	-	-	41	50	57	75	100	125
T20	10	11	10	160	20	-	-	-	56	63	81	106	132
AT20	10	11	10	160	20	-	-	-	56	63	81	106	132

Type	a [mm]	d [mm]	e [mm]	L [mm]	H [mm]	Belt width [inch/100]							
						025	032	037	050	075	100	150	200
						C [mm]							
XL	6	5,5	3,5	42,5	8	25,5	27	28,5	-	-	-	-	-
L	8	9	6	76,6	15	-	-	36	39	45	51,5	64	77
H	10	11	9	106,9	22	-	-	-	45	51	57,5	70	83

Type	a [mm]	d [mm]	e [mm]	L [mm]	H [mm]	Belt width [mm]								
						15	20	25	30	40	50	55	85	115
						C [mm]								
3M	5	4,5	2	25	5	21	24	30	-	-	-	-	-	-
5M	6	5,5	3,4	41,8	8	34	-	44	-	-	-	-	-	-
8M	8	9	5	66	15	40	45	-	55	-	75	-	110	-
14M	10	11	9	116	22	-	-	56	-	71	-	86	116	146

EAGLE Belts	Clamp plates					Belt width [mm]									
Pitch	b	d	f	Length [mm]	H	12,5	25	16	25	32	50	35	52,5	70	105
						Clamp plate width [mm]									
EAGLE 5	6	5,5	8,5	47	7,5	30	-	-	-	-	-	-	-	-	-
	7					-	45	-	-	-	-	-	-	-	-
EAGLE 8	7,5	9	13	74	14,5	-	-	40	-	-	-	-	-	-	-
	8					-	-	-	50	57	75	-	-	-	-
EAGLE 10	8	9	17	94	14,5	-	-	-	50	57	75	-	-	-	-
EAGLE 14	9,5	11	23	130	22	-	-	-	-	-	-	65	82,5	100	-
	10					-	-	-	-	-	-	-	-	-	136