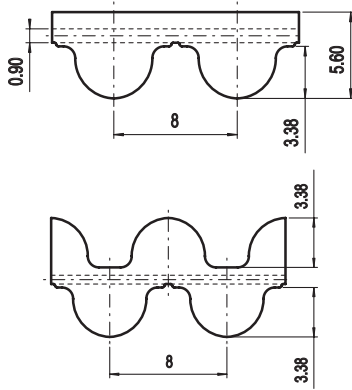


HTD8M



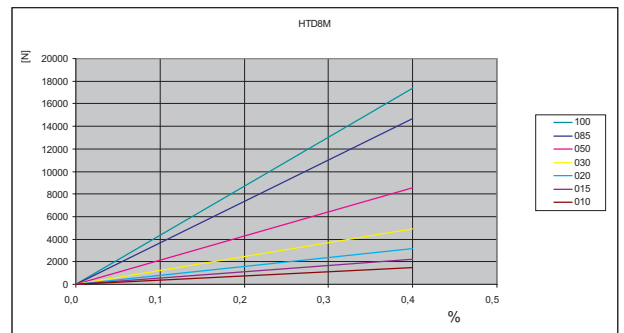
Belt characteristics

- Polyurethane timing belt with round tooth profile and high tensile load tension cords. Produced 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: $\pm 0,5$ [mm]
 - Length tolerance: $\pm 0,5$ [mm/m]
 - Thickness tolerance: $\pm 0,2$ [mm]

Technical data

| Belt width b [mm] | Allowable tensile load Type M F_{Tzul} [N] | Allowable tensile load Type V F_{Tzul} [N] | Breaking load Type M F_{Br} [N] | Specific spring rate C_{spez} [N] | Weight [kg/m] |
|-------------------------|---|---|--|---|------------------|
| 10 | 1470 | 735 | 5700 | 367500 | 0,07 |
| 15 | 2210 | 1105 | 8550 | 552500 | 0,10 |
| 20 | 3190 | 1595 | 12350 | 797500 | 0,14 |
| 30 | 4900 | 2450 | 19000 | 1225000 | 0,21 |
| 50 | 8580 | 4290 | 33250 | 2145000 | 0,35 |
| 85 | 14700 | 7350 | 57000 | 3675000 | 0,59 |
| 100 | 17400 | 8700 | 67450 | 4350000 | 0,69 |

Load / Elongation [%]

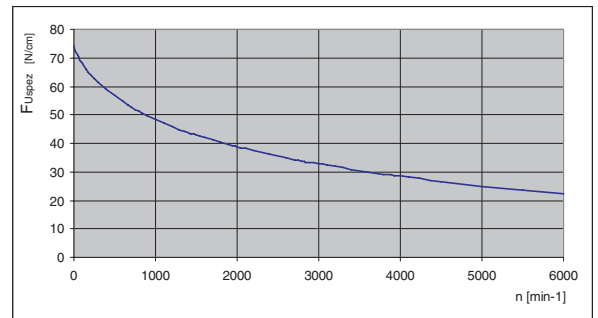


Other widths are available on request.

Tooth shear strength

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


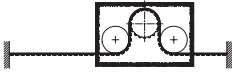
$$F_U \text{ [N]} = F_{Uspez} \cdot Z_e \cdot b$$

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

Specialties

| PROFILE | Belt width b [mm] | ARAMID CORD | | STAINLESS STEEL | |
|---------|----------------------|---------------------------------|---------------------|---------------------------------|---------------------|
| | | F _{Tzul} [N] M type | F _{Br} [N] | F _{Tzul} [N] M type | F _{Br} [N] |
| HTD8M | 010 | 1140 | 4740 | 1080 | 4500 |
| | 015 | 1710 | 7110 | 1620 | 6750 |
| | 025 | 3230 | 13430 | 3060 | 12750 |
| | 050 | 6650 | 27650 | 6300 | 26250 |
| | 085 | 11400 | 47400 | | |
| | 100 | 13490 | 56090 | | |

Flexibility

| Minimum pulley number of teeth and minimum idler diameter | | | | |
|--|--|--------------|--------|-----------|
| HTD8M | | TYPE OF CORD | | |
| | | STANDARD | ARAMID | STAINLESS |
| Drive without reverse bending  | Timing pulley z _{min} | 18 | 18 | 24 |
| | Idler running on belt teeth d _{min} | 50 mm | 50 mm | 80 mm |
| Drive with reverse bending  | Timing pulley z _{min} | 18 | 18 | 24 |
| | Idler running on belt back d _{min} | 120 mm | 120 mm | 100 mm |

Timing pulleys

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

