DYSTRYBUTOR

TECHNICAL

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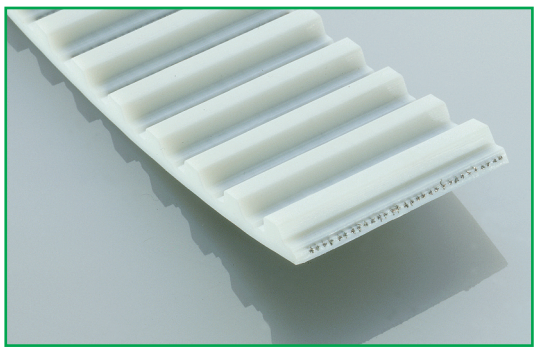
Antriebselemente

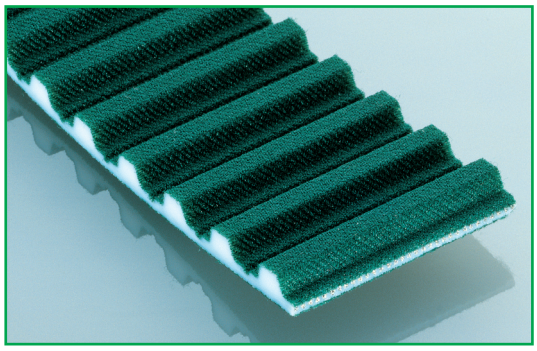
ELATECH® M and V

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:

Standard Cord | HFE Cord | HPL Cord

- **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

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= inox 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

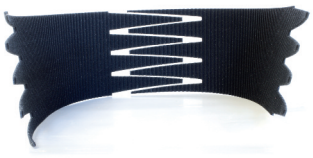
Ordering example profile H cut to length:

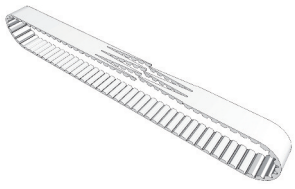
ELATECH® "M" cut to length **M 100 H A 01000 / Z**

- ELATECH® timing belt type "M"
- Width (x 0,254 = mm) - 3 digits
- Profile "H"
- A= stainless steel cords
  S= inox cords
  K= Kevlar® cords
  F= high flexiblity cords
  P= high power cords
- Length 1000 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**

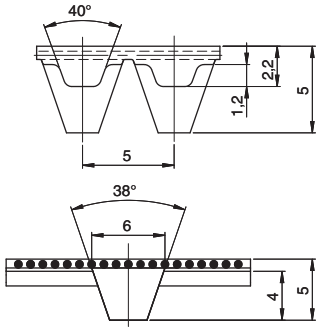
- ELATECH timing belt type "V" jointed
- Width 20 mm (3 digits)
- Profile "AT" - Pitch 5 mm
- A= stainless steel cords
  S= inox cords
  K= Kevlar® cords
  F= high flexiblity cords
  P= high power cords
- Length 3410 mm (5 digits)
- Z= fabric on teeth (PAZ)
  R= fabric on back (PAR)
  D= fabric on PAZ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

Ordering example profile XL :

ELATECH® "V" jointed **V 150 XL A 00750 / Z**

- ELATECH timing belt type "V" jointed
- Width (x 0,254 = mm) - 3 digits
- Profile "XL"
- A= stainless steel cords
  S= inox cords
  K= Kevlar® cords
  F= high flexiblity cords
  P= high power cords
- Length 750 mm (5 digits)
- Z= fabric on teeth (PAZ)
  R= fabric on back (PAR)
  D= fabric on PAZ + PAR

TK 5
K6



Belt characteristics

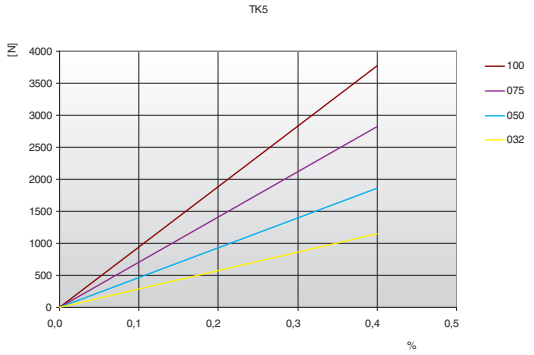
- Polyurethane self tracking timing belt with steel tension cords
- Profile T5 with central guide - K6 x 4 mm
- Central guide height 4,0 mm
- Allow to use pulleys without flanges
- The central guide is notched in order to maximize belt flexibility
- Ideal for conveying applications where a side load 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	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

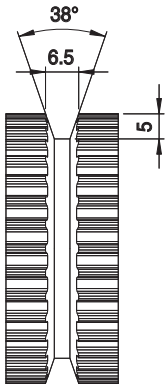
Load / Elongation [%]



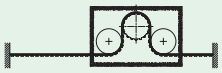
Specialties

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

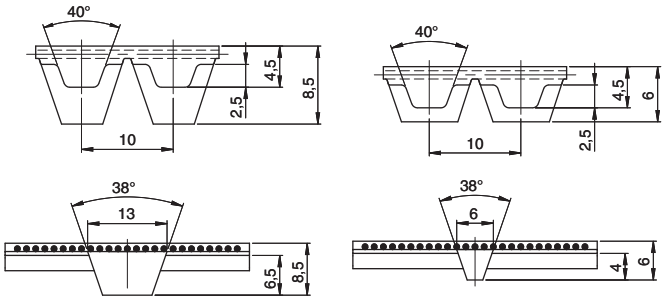
Pulley profile



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 track timing belt with steel tension cords
- Profile T10 with central guide - K13 x 6,5
- Profile T10 with central guide - K6 x 4,0
- Central guide height 6,5 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

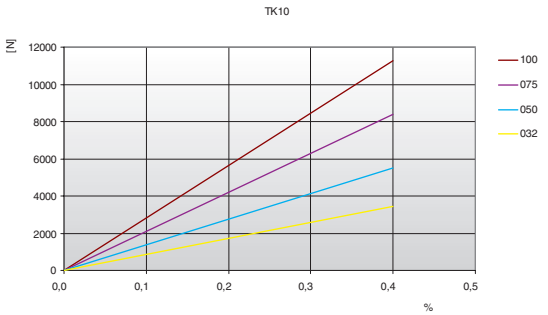
- Width tolerance: ±0,5 [mm]
- Length tolerance: ±0,5 [mm/m]

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.

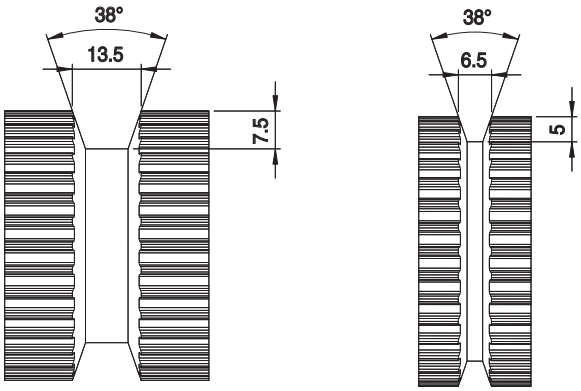
Load / Elongation [%]



Specialties

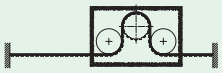
Belt width b [mm]	ARAMID CORD	
	F_{Tzul} [N] **M type**	F_{Br} [N]
32	3300	13500
50	8280	21600
75	8030	32850
100	10780	44100
150	16280	66600

Pulley profile

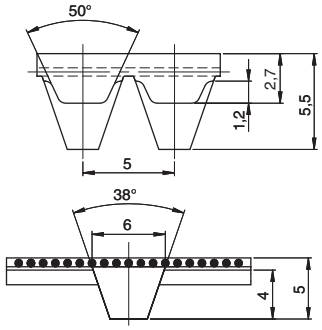


K13 **K6**

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

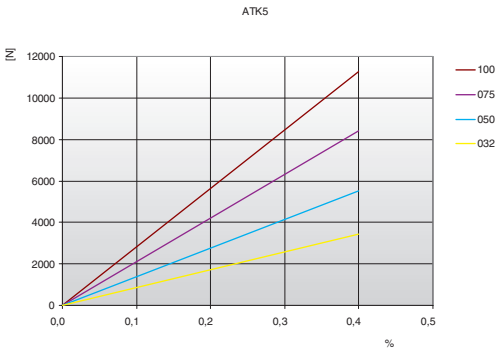
- Polyurethane self track timing belt with steel tension cords
- Profile AT5 with central guide - K6 x 4 mm
- Central guide height 4,0 mm
- Allow to use pulleys without flanges
- The central guide is notched in order to maximize belt flexibility
- Ideal for conveying applications where a side load is 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	0,11
50	5520	2760	20160	1380000	0,19
75	8400	4200	30660	2100000	0,29
100	11270	5635	41160	2817500	0,38

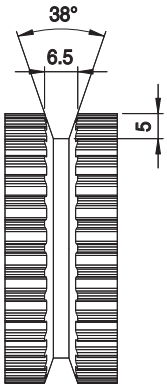
Load / Elongation [%]



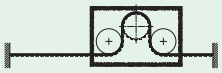
Specialties

Belt width b [mm]	ARAMID CORD	
	F_{Tzul} [N] **M type**	F_{Br} [N]
32	3300	13500
50	8280	21600
75	8030	32850
100	10780	44100

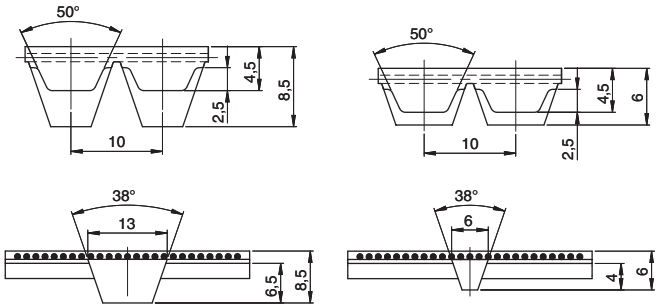
Pulley profile



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 track timing belt with steel tension cords
- Profile AT10 with central guide - K13 x 6,5 mm
- Profile AT10 with central guide - K6 x 4 mm
- Central guide height 6,5 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

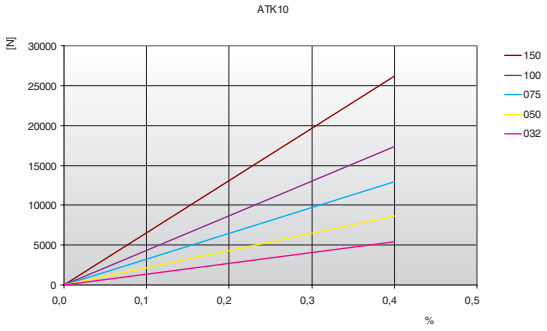
- Width tolerance: ±0,5 [mm]
- Length tolerance: ±0,5 [mm/m]

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	25970	13110	100700	6492500	1,08

150 mm width available only in K13 execution.

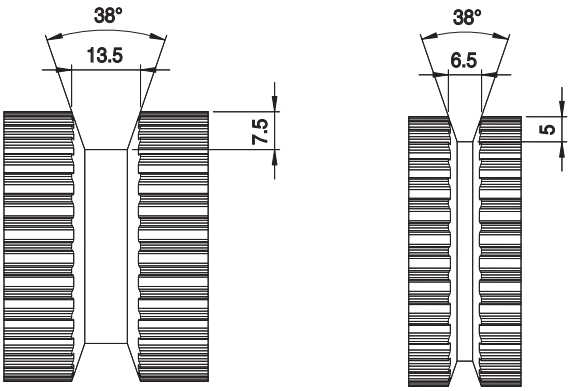
Load / Elongation [%]



Specialties

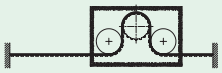
Belt width b [mm]	ARAMID CORD	
	F_{Tzul} [N] **M type**	F_{Br} [N]
32	4180	17380
50	6650	27650
75	10070	41870
100	13490	56090
150	20330	84530

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