Polyurethane Belts

2025

Elatech®

Technology in Motion.

Contents

ELATECH® Profiles table chart

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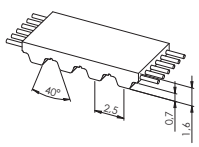
FAMILY TYPES

- **M** Open end
- **F** ELA-Flex SD®
- **W** Syncro Max®
- **U** iSync®
- * Dual tooth available (on request for special cords)

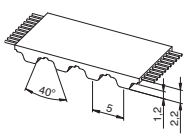
TRAPEZOIDAL T - METRIC PROFILE

T 2,5



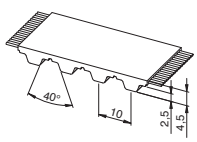
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	•			•	
F	•	•			
U	•				

T 5



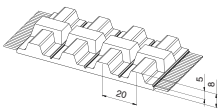
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M*	•	•		•	•
F*	•	•	•	•	
U*	•				

T 10



CORDS	A	K	S	HFE	HPL
AVAILABLE IN M*	•	•	•	•	•
F*	•	•	•	•	•
W		•			
U*	•				

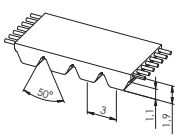
TK20 K13



CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	•				

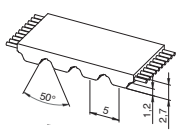
TRAPEZOIDAL AT - METRIC PROFILE

AT3



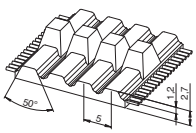
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	•			•	
F	•				

AT5



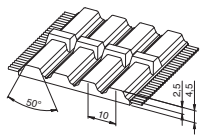
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M*	•	•	•	•	•
F*	•	•	•	•	•
U	•				

ATK5 K6



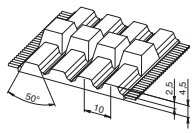
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	•	•			
F	•	•	•	•	•

ATK10 K6



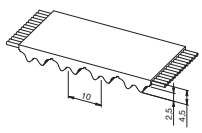
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	•	•			
F	•	•	•	•	

ATK10 K13



CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	•	•			

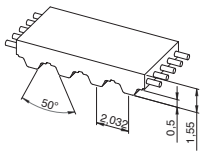
ATM10



CORDS	A	K	S	HFE	HPL
AVAILABLE IN F	•	•			

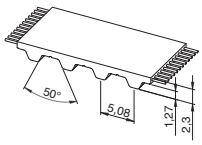
TRAPEZOIDAL IMPERIAL PROFILE

MXL



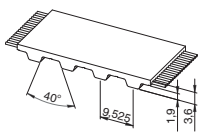
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	•			•	

XL



CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	•	•		•	
F	•	•		•	
U	•				

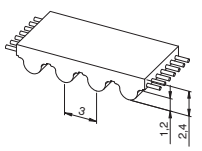
L



CORDS	A	K	S	HFE	HPL
AVAILABLE IN M*	•	•	•		
F*	•	•	•	•	
U	•				

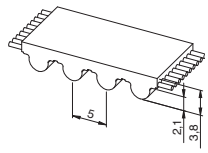
HIGH TORQUE DRIVE PROFILE

HTD3M



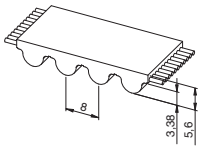
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	•			•	

HTD5M



CORDS	A	K	S	HFE	HPL
AVAILABLE IN M*	•	•	•		
F*	•	•	•	•	

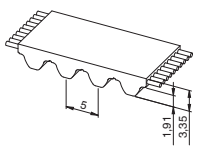
HTD8M



CORDS	A	K	S	HFE	HPL
AVAILABLE IN M*	•	•	•		•
F*	•	•	•	•	

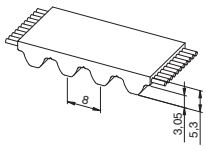
SUPER TORQUE DRIVE PROFILE

STD5M



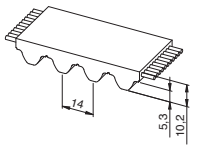
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	•	•	•	•	
F	•	•	•	•	

STD8M



CORDS	A	K	S	HFE	HPL
AVAILABLE IN M*	•	•	•		•
F*	•	•	•	•	

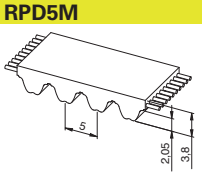
STD14M



CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	•	•			
F	•	•	•		

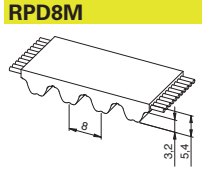
PARABOLIC PROFILE

RPD5M



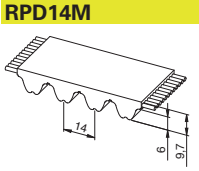
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	•	•	•	•	
F	•	•	•	•	

RPD8M



CORDS	A	K	S	HFE	HPL
AVAILABLE IN M*	•	•	•		•
F*	•	•	•	•	

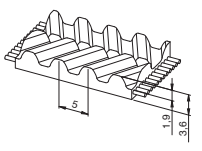
RPD14M



CORDS	A	K	S	HPF	XHPL
AVAILABLE IN M*	•	•		•	•
F*	•	•	•	•	

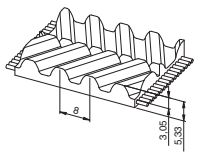
HELICAL OFFSET TOOTH PROFILE

EAGLE 5M



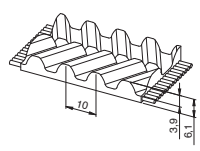
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	•				
F	•				

EAGLE 8M



CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	•	•	•		•
F	•				

EAGLE 10M



CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	•				
F	•				

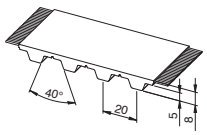
CORD TYPES

A	Steel
K	Aramid
S	Stainless Steel
HFE	High Flexibility
HPF	High Flexibility and Performance
HPL	High Performance
XHPL	Extra High Performance

PITCH/PROFILE

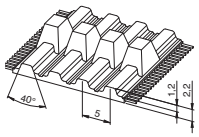
- T
- AT
- IMPERIAL
- HTD
- STD
- RPD
- EAGLE
- PG
- FLAT
- TOTAL PROTECTION
- TT5
- SPECIAL

T 20



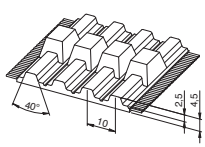
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M*	●	●	●	●	
AVAILABLE IN F*	●	●	●	●	

TK5 K6



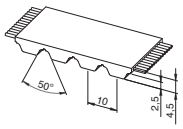
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	●	●			

TK10 K6 K13



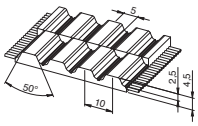
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	●	●			

AT10



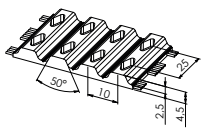
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M*	●	●	●	●	●
AVAILABLE IN F*	●	●	●	●	●
AVAILABLE IN U	●				

SAT10



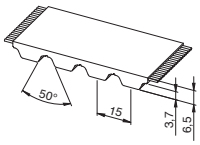
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	●		●	●	

ATF10



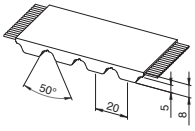
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	●				

AT15



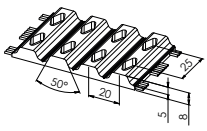
CORDS	A	K	S	HFE	HPL
AVAILABLE IN F	●	●			

AT20



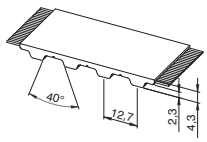
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M*	●	●	●	●	●
AVAILABLE IN F*	●	●	●	●	●

ATF20



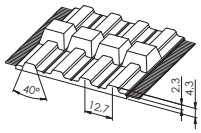
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	●				

H



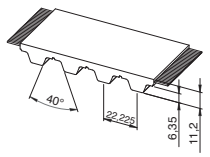
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M*	●	●	●		
AVAILABLE IN F*	●	●	●	●	
AVAILABLE IN W		●			

H K13



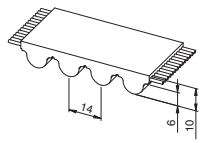
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	●				

XH



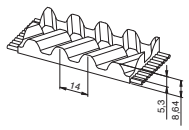
CORDS	A	K	S	HFE	HPL
AVAILABLE IN M	●	●	●		
AVAILABLE IN F	●	●	●	●	

HTD14M



CORDS	A	K	S	HFE	HPL	XHPL
AVAILABLE IN M*	●	●				●
AVAILABLE IN F*	●	●	●	●	●	

EAGLE 14M



CORDS	A	K	S	HFE	HPF	XHPL
AVAILABLE IN M	●				●	●
AVAILABLE IN F	●					

ELATECH® Profiles table chart

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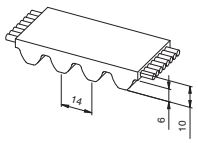
FAMILY TYPES

- **M** Open end
- **F** ELA-Flex SD®
- **W** Syncro Max®
- **U** iSync®
- * Dual tooth available (on request for special cords)

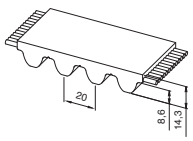
PG ROUNDED PROFILE

PG14M



AVAILABLE IN	CORDS	A	K	S	HFE	HPL
	M	•				

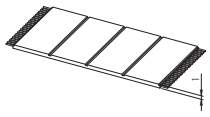
PG20M



AVAILABLE IN	CORDS	A	K	S	HFE	HPL
	M	•				

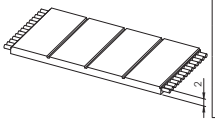
FLAT TOOTH PROFILE

F1



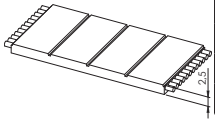
AVAILABLE IN	CORDS	A	K	S	HFE	HPL
	M	•	•		•	

F2



AVAILABLE IN	CORDS	A	K	S	HFE	HPL
	M	•	•	•		
	F	•				

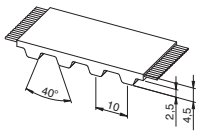
F2.5



AVAILABLE IN	CORDS	A	K	S	HFE	HPL
	M	•	•	•		
	F	•				

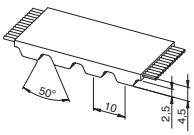
TOTAL PROTECTION TOOTH PROFILE

T10 TP Total Protection



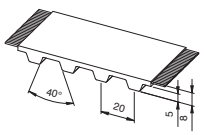
AVAILABLE IN	CORDS	A	K	S	HFE	HPL
	M	•				

AT10 TP Total Protection



AVAILABLE IN	CORDS	A	K	S	HFE	HPL
	M	•				

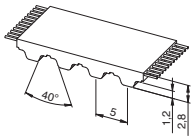
T20 TP Total Protection



AVAILABLE IN	CORDS	A	K	S	HFE	HPL
	M	•				

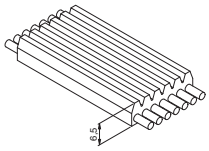
SPECIAL PROFILE

TT5



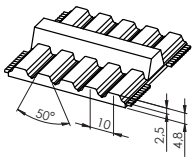
AVAILABLE IN	CORDS	A	K	S	HFE	HPL
	M	•	•			

POLY-V K



AVAILABLE IN	CORDS	A	K	S	HFE	HPL
	M	•				

ATK10P K13 Solid



AVAILABLE IN	CORDS	A	K	S	HFE	HPL
	M					•

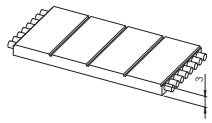
CORD TYPES

A	Steel
K	Aramid
S	Stainless Steel
HFE	High Flexibility
HPF	High Flexibility and Performance
HPL	High Performance
XHPL	Extra High Performance

PITCH/PROFILE

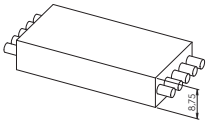
T	STD	FLAT
AT	RPD	TOTAL PROTECTION
IMPERIAL	EAGLE	TT5
HTD	PG	SPECIAL

F3



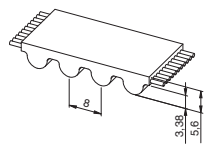
AVAILABLE IN	CORDS	A	K	S	HFE	HPL
	M	•	•			
	F	•				

F8.75



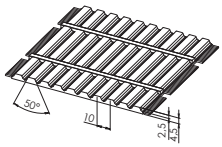
AVAILABLE IN	CORDS	A	K	S	HFE	HPL
	M	•				•

HTD8M TP Total Protection

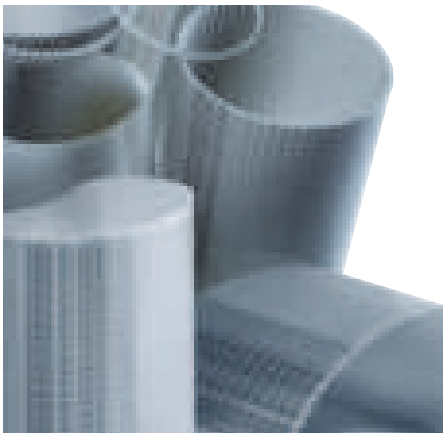


AVAILABLE IN	CORDS	A	K	S	HFE	HPL
	M	•				

ATKK10



AVAILABLE IN	CORDS	A	K	S	HFE	HPL
	M		•			



ELATECH® is a Company fully dedicated to the research, development and manufacture of polyurethane belts for industrial applications.
The unique manufacturing processes, made possible with the newest generation of technologies, the modern and efficient test and control equipment and a unique team of qualified technicians and engineers, allow **ELATECH®** to offer superior products with highest flexible service.

Global Presence

With 6 sister Companies on 3 continents and a wide range of qualified distributors, **ELATECH®** guarantees superior technical and delivery service worldwide.

Our Mission

Constantly growing, together with our customers, in product and process innovation to develop the best polyurethane belt for every industrial application.

Designed for **Performance** Engineered for **Excellence**

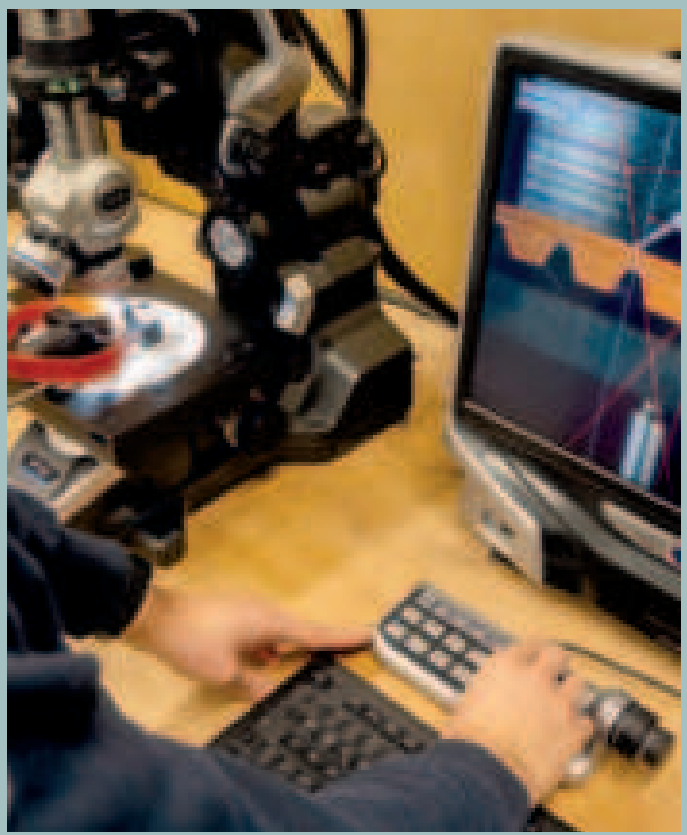
Research & Development

We strongly believe that innovation is the key to success for our customers. We are totally committed to quality and close cooperation with our customers to solve the problems of design engineers in the most advanced and economical way.

Our qualified technicians and our advanced test laboratory with the most modern resources allow us to offer the most effective solutions in all conveying, lifting or power transmission applications.

Total Quality

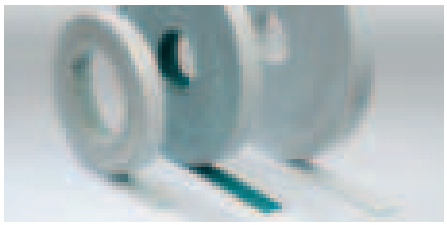
In **ELATECH®** the term "quality" is not only limited to the product. We offer professional and competent consulting services with fast and reliable deliveries. The certification of our quality system confirms the quality consciousness of our Company and of all our employees. Our management system is certified according to ISO 9001.



Introduction

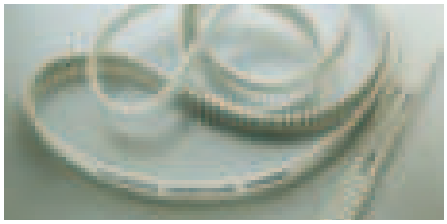
ELATECH® manufactures polyurethane belts for linear motion, conveying, lifting and power transmission applications. The combination of a polyurethane body reinforced with special steel or aramid tension members, allows the belt to fulfil the most severe requirements in all industrial applications. The unique manufacturing processes developed with the newest generation technologies such as test and control equipment, give us the ability to deliver superior products with the highest flexibility of service. ELATECH® offers the widest range of tooth profile to enable the design engineer the use of the best drive for every application. In addition to that, for special applications, ELATECH® studies and delivers innovative and unique solutions for even the most complex requirements.

Product range



ELATECH® M - OPEN END

ELATECH® M belts are produced in standard roll length of 100 m and delivered to any desired length. The excellent precision and dimensional stability and the high abrasion resistance make them ideal in all linear motion applications.



ELATECH® V - JOINED

They are joined belts made from open-end belts. Our special manufacturing process allows any required length to be made. The high flexibility offers unique precision positioning, "ELATECH® V" joined belts are ideal for all conveying applications where synchronisation is needed. ELATECH® V have been designed specifically for transport applications with linear speeds up to 2 m/s. They cannot be used for power transmission applications.

ELATECH® SYNCRO MAX®

ELATECH® SYNCRO MAX® are extra wide polyurethane timing belts with aramid tension members that extend the advantages of synchronous belts to wider surfaces, suitable for typical applications of flat or modular conveyor belts. They are available in the most common range with a maximum width up to 500mm.

ELATECH® ELA-FLEX SD®

ELA-flex SD® Synchro Drive belts are manufactured with truly endless steel tension cords. Having no splice or welding, they have no weak cross section and are therefore ideal for power transmission and high load conveying applications. They are available in a wide range of profiles and pitches and in any length tooth by tooth from 800 mm to 24.000 mm.

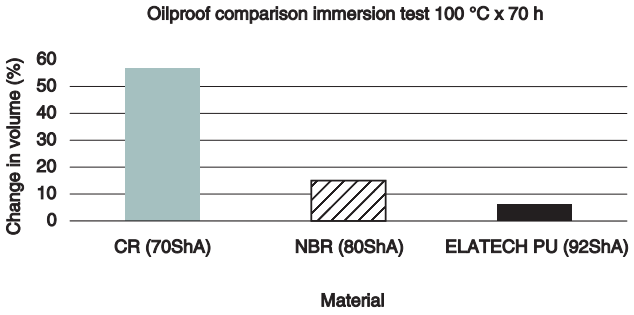
ELATECH® iSync®

ELATECH® iSync® belts are made with a special polyurethane compound and high resistance steel tension cords which are processed with a unique and highly sophisticated technology to obtain a superior polyurethane belt. iSync® belts offer optimal performances on all type of industrial applications and particularly where high precision and accuracy are needed. iSync® belts are able to transmit up to 30% more than conventional T, AT type of belts in the same space or same power with a more compact drive.

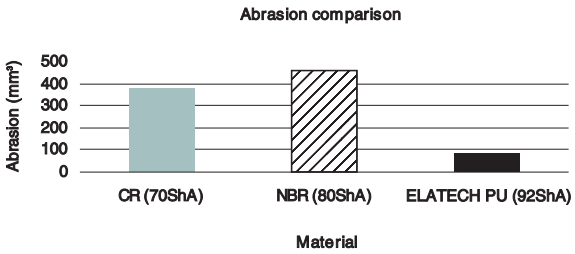
Material characteristics

ELATECH® belts are manufactured as standard in thermoplastic polyurethane 92 Sh. A hardness. Non standard material and compounds are available for applications in special environments or for special specifications. Standard colour, unless differently specified, is white. Other colours are available upon request.

Resistance to oils
ELATECH® polyurethane has an high resistance to most oils. The following graph compares synthetic rubber CR and NBR with ELATECH® polyurethane.



Abrasion resistance
ELATECH® polyurethane has excellent abrasion resistance properties. The graph below shows comparison with synthetic rubber.



Food Compliance
Standard material is not suitable for food contact. For applications where food compliance approval is required, a special material will be used.

Chemical resistance
The impact of chemicals on ELATECH® polyurethane results in different modification of the material's properties. As the resistance mainly depends on the concentration and the temperatures used, the information provided can only be general. If further detailed information is required please contact our technical department.

Oil and Grease
ELATECH® polyurethane is well-resistant to oil and grease and specifically to pure oils even at 80°C.

Acids and alkaline solutions
The resistance to acids and alkaline solutions of the ELATECH® polyurethane is limited. It has shown to be moderately resistant to diluted acids and alkaline solutions at room temperature and to be resistant for a very a short time with high concentration solutions. Special compounds are available on specific request.

Bacteria and microbes
In case of high exposure to microbe attack it is recommended to use a special material. Please contact our technical department.

UV resistance
ELATECH® polyurethane is UV resistant. A long exposure to UV radiation (sunlight) will slightly change the color of the belt. However the technical performances of the product will remain unchanged.

Low temperature compound
For low temperature use special compound (-30 +80 °C) can be supplied.

High temperature compound
For high temperature use special compound (-20 +110 °C) can be supplied.

Chemical resistance

Chemical reference	20°C
Acetic acid	B
Acetone	D
Aluminum chloride	A
Ammonia	B
Amyl acetate	D
Aniline	D
ASTM Fuel A	A
ASTM Fuel B	C
ASTM Fuel C	C
Baking Soda	A
Benzene	C
Blood	B
Brine	B
Butyl acetate	C
Butanol	B
Butter	A
Butyric acid	C
Chloro benzene	C
Chloroform	D
Cyclohexanol	B
Cyclohexanone	C
Dibutylphthalate	B
Lubricant oil	A
Dibutyl phthalate	B
Dichloromethane	C
Dimethylformamide	D
Dioctyl phthalate	B
Ethanol	B
Ethyl acetate	C
Ethyl ether	B
Ethylene dichloride	D
Ethylene glycol	A
Fe chloride	B
Formaldehyde	B
Fructose	A
Fruit juice	A
Gasoline	B
Glycerol	B
Glysantin / water	B
Honey	A
Hydrochloric acid	C
Hydrogen peroxide	B
IRM 901 (ASTM oil 1)	A
IRM 902 (ASTM oil 2)	A
IRM 903 (ASTM oil 3)	A
Isopropanol	B
Kerosene	A
Lactic acid	B
Methanol	C
Methyl ethyl ketone (MEK)	C
Milk	A
Mineral oil	A
Molasses	A

Chemical reference	20°C
N-methylpyrrolidone	D
Nicotine	B
Nitric acid	C
Oils and fats	A
Oleic acid	C
Ozone	A
Paraffin	B
Petroleum ether	B
Pyridine	D
Sea water	A
Silicone fluid	A
Soap solution	B
Sodium chloride	A
Sodium hydroxide	B
Starch	A
Styrene	B
Sugar	A
Sulfuric acid	C
Tannic acid	B
Tar oil	B
Tetrachloroethylene	C
Tetrahydrofuran	D
Toluene	B
Trichloroethylene	C
Tricresyl phosphate	C
Turpentine	C
Vaseline	A
Vegetable oils	A
Water	A
Wax	A

A = excellent
B = good
C = limited
D = not recommended

For any request please contact
our technical department.

Material overview

Materials for standard applications

Material type	Belt Type	Color	Hardness	Temperature range
TPU11	ELATECH® M ELA-flex SD®	White	92 Sh.A	-10°C up to +80°C
TPU13	ELATECH® M ELA-flex SD®	Black	92 Sh.A	-10°C up to +80°C
TPU12	ELATECH® M ELA-flex SD®	Transparent	92 Sh.A	-10°C up to +80°C
TPU22	ELATECH® M ELA-flex SD®	Transparent	85 Sh.A	0°C up to +60°C
PU51	iSync®	Transparent	90 Sh.A	-10°C up to +80°C

Materials for applications involving contact with food

Material type	Belt Type	Color	Hardness	Temperature range
TPU17	ELATECH® M ELA-flex SD®	Transparent	92 Sh.A	0°C up to +80°C
TPU16	ELATECH® M ELA-flex SD®	White	92 Sh.A	0°C up to +80°C
TPU19	ELATECH® M ELA-flex SD®	Blue	92 Sh.A	0°C up to +80°C
PU52	iSync®	Transparent	90 Sh.A	-10°C up to +80°C

Materials for high temperature applications

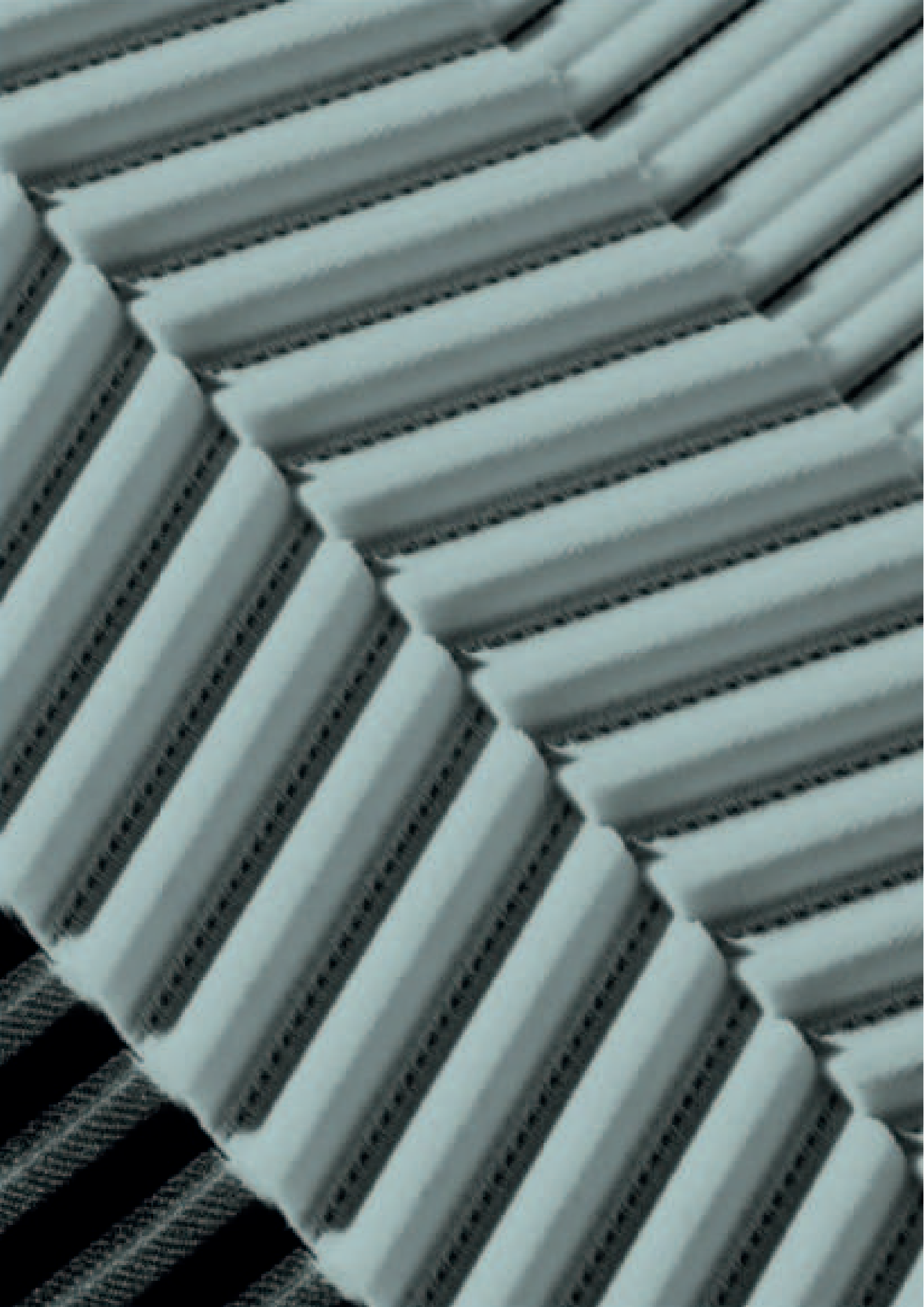
Material type	Belt Type	Color	Hardness	Temperature range
TPU32	ELATECH® M ELA-flex SD®	White	95 Sh.A	-20°C up to +110°C
PU53	iSync®	Transparent	90 Sh.A	-20°C up to +125°C

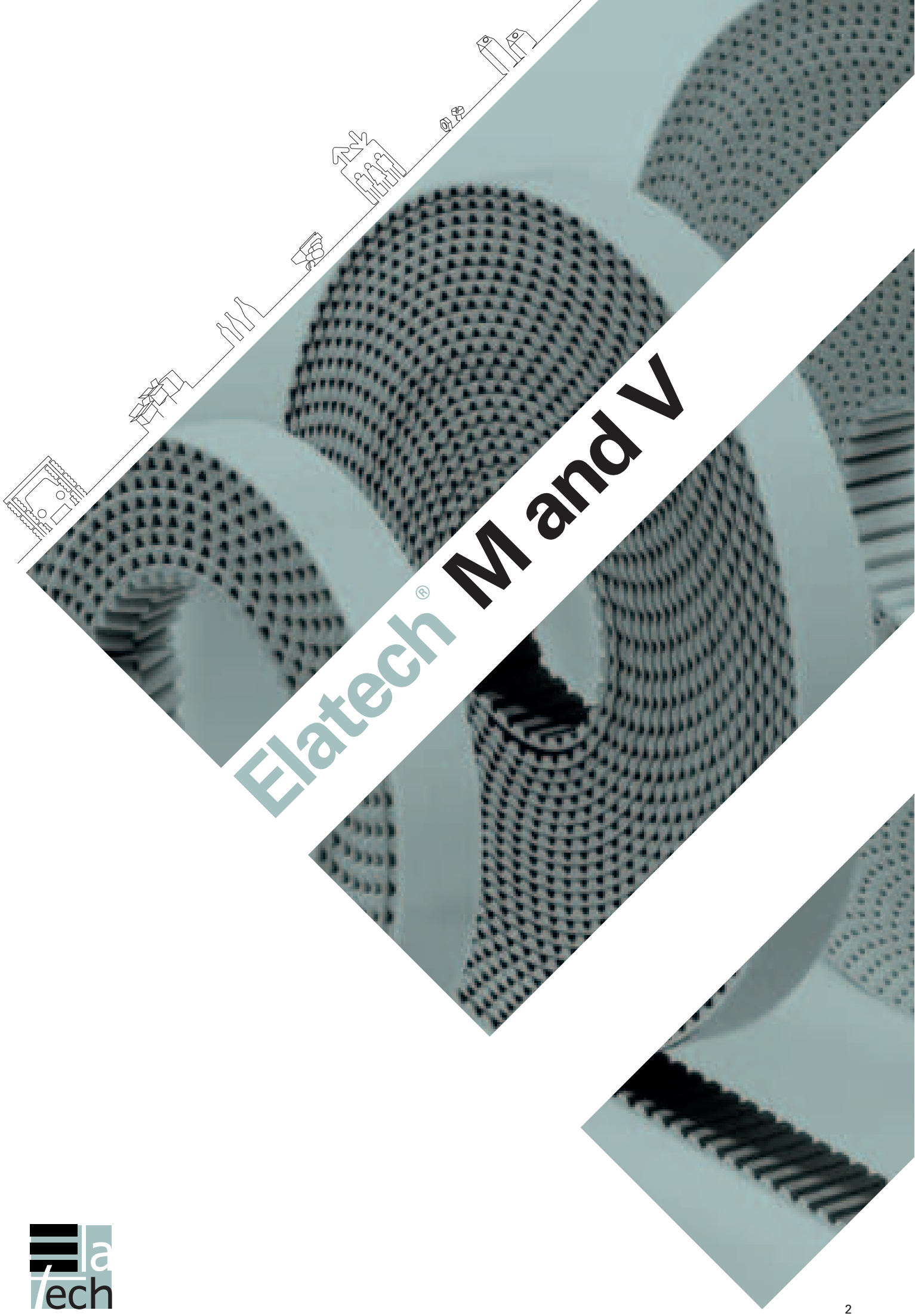
Materials for low temperature applications

Material type	Belt Type	Color	Hardness	Temperature range
TPU18	ELATECH® M ELA-flex SD®	Transparent	92 Sh.A	-30°C up to +80°C
TPU27	ELATECH® M ELA-flex SD®	Transparent	85 Sh.A	-30°C up to +80°C
PU54	iSync®	Transparent	90 Sh.A	-30°C up to +80°C

Materials for applications where antistatic properties are required - Static conductive materials

→ Available on request, please contact our sales department.



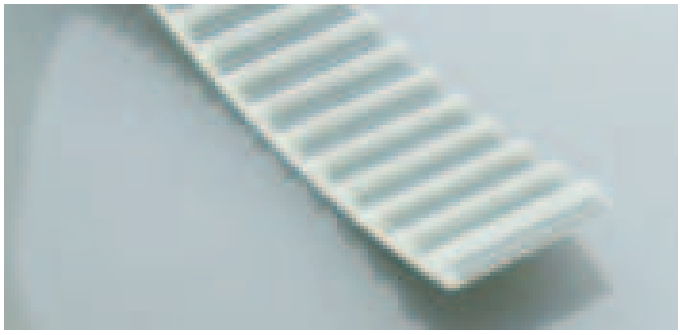


Elatech® M and V

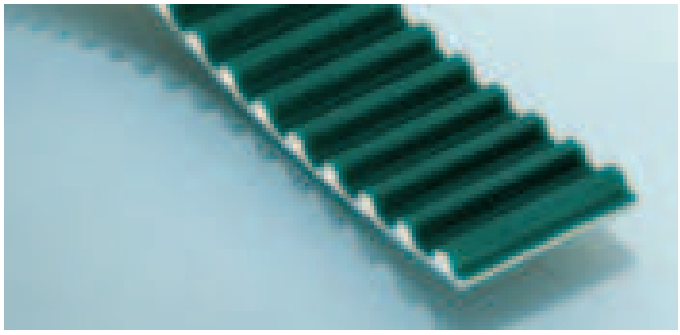
ELATECH® Open End - M and V

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.
- **STAINLESS STEEL (INOX)** 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) 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**

- R: ELATECH® timing belt type "R"
- 025: Width 25 mm (3 digits)
- T: Profile "T"
- 10: Pitch 10 mm
- A: A= steel cords; S= stainless steel cords; K= aramid cords; F= high flexibility cords; H= high flexibility and performance cords; P= high performance cords
- Z: Z= fabric on teeth (PAZ); R= fabric on back (PAR); D= fabric PAZ + PAR

Ordering example profile H cut to length:

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

- M: ELATECH timing belt type "M"
- 100: Width (x 0,254 = mm) - 3 digits
- H: Profile "H"
- A: A= steel cords; S= stainless steel cords; K= aramid cords; F= high flexibility cords; H= high flexibility and performance cords; P= high performance cords
- 01270: Length 1270 mm (5 digits)
- Z: Z= fabric on teeth (PAZ); R= fabric on back (PAR); D= fabric PAZ + PAR

ELATECH® V

They are joined 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" joined **V 020 AT5 A 03410 / Z**

- V: ELATECH timing belt type "V" joined
- 020: Width 20 mm (3 digits)
- AT5: Profile "AT" - Pitch 5 mm
- A: A= steel cords; S= stainless steel cords; K= aramid cords; F= high flexibility cords; H= high flexibility and performance cords; P= high performance cords
- 03410: Length 3410 mm (5 digits)
- Z: Z= fabric on teeth (PAZ); R= fabric on back (PAR); D= fabric PAZ + PAR

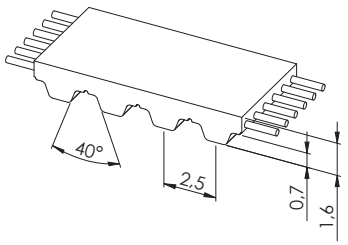
Ordering example profile XL:

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

- V: ELATECH timing belt type "V" joined
- 150: Width (x 0,254 = mm) - 3 digits
- XL: Profile "XL"
- A: A= steel cords; S= stainless steel cords; K= aramid cords; F= high flexibility cords; H= high flexibility and performance cords; P= high performance cords
- 00762: Length 762 mm (5 digits)
- Z: Z= fabric on teeth (PAZ); R= fabric on back (PAR); D= fabric PAZ + PAR

T2,5

Elatech® M and V



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

STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,3 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,15 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		4	6	10	20	50	100
Allowable tensile load	F_{Tzul} [N]*	100	190	320	700	1860	3780
Breaking load	F_{Br} [N]	375	750	1250	2750	7250	14750
Specific spring rate	C_{spez} [N]	24000	47500	80000	175000	465000	945000
Weight	[kg/m]	0,004	0,007	0,011	0,022	0,055	0,110

Other widths are available on request

Specialties

Belt width b [mm]		4	6	10	20	50	100
HFE High Flexibility	F_{Tzul} [N]*	110	215	360	790	2090	4250
	F_{Br} [N]	450	900	1500	3300	8700	17700

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	9,10	8,77	8,51	8,30	8,13	8,00	7,39	7,00	6,71	6,48	6,29	6,13	5,99	5,86	5,75	5,64

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	5,55	5,46	5,38	5,35	5,31	5,24	5,17	5,11	5,05	4,99	4,88	4,79	4,70	4,62	4,54	4,47

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	4,40	4,34	4,28	4,22	4,09	3,97	3,86	3,76	3,67	3,59	3,51	3,44	3,37	3,30	3,24	3,18

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	15	15 mm	18	18 mm
HFE	10	15 mm	18	15 mm

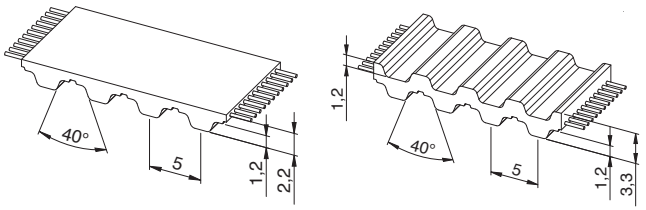
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 160

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 available (on request for special cords)



STANDARD TOLERANCES

WIDTH TOLERANCE:	±0,5 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,15 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		10	16	25	32	50	75	100
Allowable tensile load	F_{Tzul} [N]*	320	540	900	1150	1860	2820	3780
Breaking load	F_{Br} [N]	1250	2125	3500	4500	7250	11000	14750
Specific spring rate	C_{spez} [N]	80000	135000	225000	287500	465000	705000	945000
Weight	[kg/m]	0,021	0,034	0,053	0,067	0,105	0,158	0,210

Other widths are available on request

Specialties

Belt width b [mm]		10	16	25	32	50	75	100	150
ARAMID CORD	F_{Tzul} [N]*	700	1190	1960	2520	4060	6160	8260	-
	F_{Br} [N]	2800	4760	7840	10080	16240	24640	33040	-
HFE High Flexibility	F_{Tzul} [N]*	360	610	1010	1295	2090	3170	4250	-
	F_{Br} [N]	1500	2550	4200	5400	8700	13200	17700	-
HPL High Performance	F_{Tzul} [N]	920	1610	2645	3450	5520	8395	11270	16905
	F_{Br} [N]	3360	5880	9660	12600	20160	30660	41160	61740

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	24,70	24,07	23,53	23,05	22,64	22,28	20,90	19,89	19,10	18,45	17,91	17,44	17,02	16,65	16,32	16,01

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	15,73	15,47	15,22	15,13	15,00	14,78	14,58	14,39	14,21	14,03	13,71	13,42	13,14	12,89	12,65	12,43

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	12,22	12,03	11,84	11,66	11,25	10,88	10,55	10,24	9,96	9,70	9,46	9,23	9,01	8,81	8,62	8,44

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	10	30 mm	15	30 mm
ARAMID	10	30 mm	15	30 mm
HFE	10	30 mm	12	30 mm
HPL	24	60 mm	38	60 mm

Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

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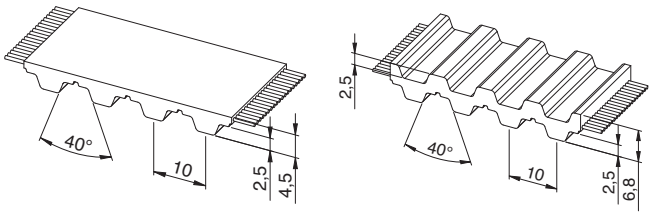
T10

Elatech® M and V



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 available (on request for special cords)

STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,5 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		10	16	25	32	50	75	100	150	200**
Allowable tensile load	F_{Tzul} [N]*	920	1610	2650	3450	5520	8400	11270	17020	11270
Breaking load	F_{Br} [N]	3360	5880	9660	12600	20160	30660	41160	62160	41160
Specific spring rate	C_{spez} [N]	230000	402500	662500	862500	1380000	2100000	2817500	4255000	2817500
Weight	[kg/m]	0,05	0,07	0,11	0,15	0,23	0,34	0,45	0,68	0,60

Other widths are available on request

** = double cords spacing

Specialties

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

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	51,80	50,32	49,04	47,92	46,95	46,11	42,75	40,28	38,36	36,80	35,49	34,35	33,34	32,44	31,63	30,89

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	30,21	29,58	28,99	28,76	28,44	27,92	27,43	26,97	26,53	26,12	25,34	24,63	23,97	23,36	22,78	22,25

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	21,74	21,27	20,81	20,39	19,40	18,51	17,70	16,97	16,29	15,66	15,07	14,52	14,00	13,51	13,05	12,61

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	12	60 mm	20	60 mm
ARAMID	15	60 mm	20	60 mm
STAINLESS	15	60 mm	25	70 mm
HFE	10	50 mm	15	50 mm
HPL	15	100 mm	30	100 mm

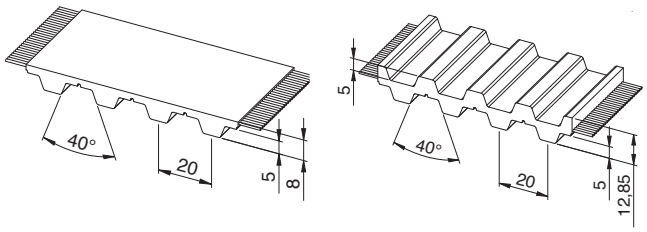
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 162

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 available (on request for special cords)



STANDARD TOLERANCES

WIDTH TOLERANCE:	±1,0 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,4 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		25	32	50	75	100	150
Allowable tensile load	F_{Tzul} [N]*	4170	5390	8580	12990	17400	26220
Breaking load	F_{Br} [N]	16150	20900	33250	50350	67450	101650
Specific spring rate	C_{spez} [N]	1042500	1347500	2145000	3247500	4350000	6555000
Weight	[kg/m]	0,20	0,26	0,41	0,61	0,82	1,23

Other widths are available on request

Specialties

Belt width b [mm]		25	32	50	75	100	150
ARAMID CORD	F_{Tzul} [N]*	3740	4840	7700	11660	15620	23540
	F_{Br} [N]	17000	22000	35000	53000	71000	107000
STAINLESS STEEL	F_{Tzul} [N]*	3060	3960	6300	-	-	-
	F_{Br} [N]	12750	16500	26250	-	-	-
HFE High Flexibility	F_{Tzul} [N]*	3400	4400	7000	-	-	-
	F_{Br} [N]	14450	18700	29750	-	-	-

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	104,50	101,10	98,15	95,58	93,35	91,41	83,50	77,84	73,49	69,96	66,98	64,41	62,15	60,13	58,31	56,64

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	55,11	53,7	52,38	51,87	51,14	49,98	48,89	47,86	46,88	45,94	44,2	42,61	41,13	39,77	38,49	37,29

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	-	-	-	-	-	-	-
F_{Uspez} [N/cm]	36,16	35,10	34,09	33,13	30,92	28,93	27,14	25,49	23,97	-	-	-	-	-	-	-

Flexibility

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

Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

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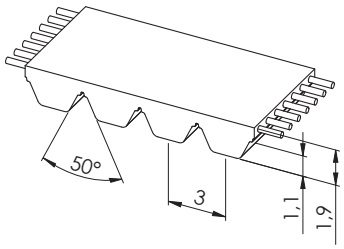
AT3

Elatech® M and V



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 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
- Negative length tolerance available on request

STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,5 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		8	10	12	16	20	25	50	100
Allowable tensile load	F_{Tzul} [N]*	260	320	416	540	700	900	1860	3780
Breaking load	F_{Br} [N]	1000	1250	1625	2125	2750	3500	7250	14750
Specific spring rate	C_{spez} [N]	65000	80000	104000	135000	175000	225000	465000	945000
Weight	[kg/m]	0,018	0,022	0,026	0,035	0,044	0,054	0,110	0,220

Other widths are available on request

Specialties

Belt width b [mm]		8	10	12	16	20	25	50	100
HFE High Flexibility	F_{Tzul} [N]*	290	360	470	610	790	1010	2090	4250
	F_{Br} [N]	1200	1500	1950	2550	3300	4200	8700	17700

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	32,50	32,13	31,79	31,48	31,19	30,92	29,86	29,15	28,47	27,66	26,92	26,25	25,62	25,05	24,52	24,02

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	23,56	23,13	22,72	22,57	22,34	21,97	21,63	21,29	20,98	20,68	20,11	19,59	19,1	18,64	18,22	17,81

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	17,43	17,07	16,73	16,40	15,64	14,96	14,33	13,76	13,23	12,74	12,28	11,84	11,43	11,05	10,68	10,34

Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	15	20 mm	20	20 mm
HFE	12	15 mm	15	18 mm

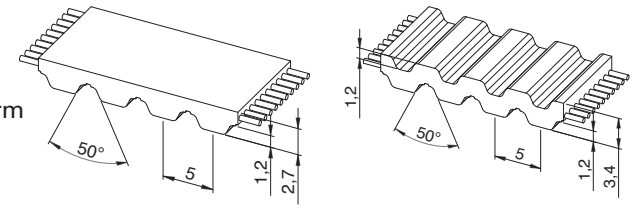
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 164

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 available (on request for special cords)
- Negative length tolerance available on request



STANDARD TOLERANCES

WIDTH TOLERANCE:	±0,5 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		10	16	25	32	50	75	100	150
Allowable tensile load	F_{Tzul} [N]*	640	1120	1840	2400	3840	5840	7840	11840
Breaking load	F_{Br} [N]	2160	3780	6210	8100	12960	19710	26460	39960
Specific spring rate	C_{spez} [N]	160000	280000	460000	600000	960000	1460000	1960000	2960000
Weight	[kg/m]	0,03	0,05	0,09	0,11	0,17	0,26	0,34	0,57

Other widths are available on request

Specialties

Belt width b [mm]		10	16	25	32	50	75	100	150
ARAMID CORD	F_{Tzul} [N]*	880	1540	2530	3300	5280	8030	10780	16280
	F_{Br} [N]	3600	6300	10350	13500	21600	32850	44100	66600
STAINLESS STEEL	F_{Tzul} [N]*	600	1050	1725	2250	3600	5475	7350	-
	F_{Br} [N]	2400	4200	6900	9000	14400	21900	29400	-
HFE High Flexibility	F_{Tzul} [N]*	960	1680	2760	3600	5760	8760	11760	-
	F_{Br} [N]	3440	6020	9890	12900	20640	31390	42140	-

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	36,40	35,88	35,40	34,97	34,59	34,24	32,92	31,92	30,89	29,95	29,12	28,37	27,69	27,06	26,49	25,96

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	25,47	25,01	24,57	24,41	24,16	23,78	23,41	23,07	22,73	22,42	21,82	21,28	20,77	20,29	19,85	19,43

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	19,03	18,66	18,30	17,96	17,18	16,47	15,83	15,24	14,69	14,18	13,71	13,26	12,85	12,45	12,07	11,72

Flexibility

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

Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

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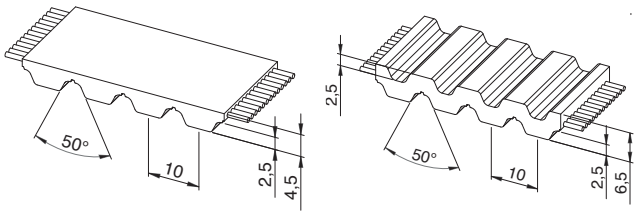
AT10

Elatech® M and V



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 available (on request for special cords)
- Negative length tolerance available on request

STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,5 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		16	25	32	50	75	100	150
Allowable tensile load	F_{Tzul} [N]*	2450	4170	5390	8580	12990	17400	26220
Breaking load	F_{Br} [N]	9500	16150	20900	33250	50350	67450	101650
Specific spring rate	C_{spez} [N]	612500	1042500	1347500	2145000	3247500	4350000	6555000
Weight	[kg/m]	0,09	0,15	0,19	0,30	0,44	0,59	0,90

Other widths are available on request

Specialties

Belt width b [mm]		16	25	32	50	75	100	150
ARAMID CORD	F_{Tzul} [N]*	2200	3740	4840	7700	11660	15620	23540
	F_{Br} [N]	10000	17000	22000	35000	53000	71000	107000
STAINLESS STEEL	F_{Tzul} [N]*	1800	3060	3960	6300	9540	12780	-
	F_{Br} [N]	7500	12750	16500	26250	39750	53250	-
HFE High Flexibility	F_{Tzul} [N]*	2000	3400	4400	7000	-	-	-
	F_{Br} [N]	8500	14450	18700	29750	-	-	-

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	88,57	87,06	85,66	84,35	83,13	81,99	77,36	75,09	71,99	69,27	66,88	64,75	62,83	61,09	59,49	58,02

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	56,66	55,39	54,20	53,74	53,08	52,02	51,02	50,06	49,16	48,29	46,67	45,18	43,80	42,51	41,30	40,17

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	39,09	38,08	37,11	36,20	34,08	32,17	30,43	28,84	27,37	26,01	24,73	23,53	22,41	21,34	20,33	19,37

Flexibility

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

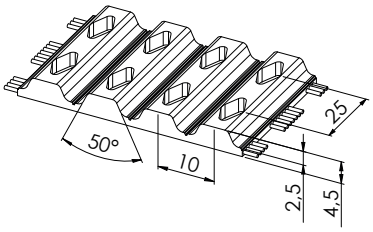
Elatech® V Joined informations

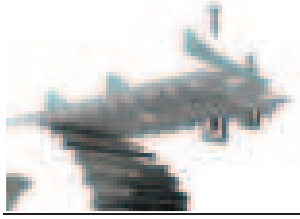
Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 166

BELT CHARACTERISTICS

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 10 mm
- Particularly suitable for linear drives
- Rapid and easy configuration of cleat attachment with simple hand tool
- Stainless steel insert M4 available





STANDARD TOLERANCES

WIDTH TOLERANCE:	±0,5 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,2 [mm]

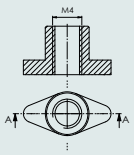
TECHNICAL DATA

Standard steel cord

Belt width b [mm]		25	50	75	100
Allowable tensile load	F_{Tzul} [N]*	2940	5880	8820	11760
Breaking load	F_{Br} [N]	11400	22800	34200	45600
Specific spring rate	C_{spez} [N]	735000	1470000	2205000	2940000
Weight	[kg/m]	0,15	0,30	0,44	0,59

Other widths are available on request

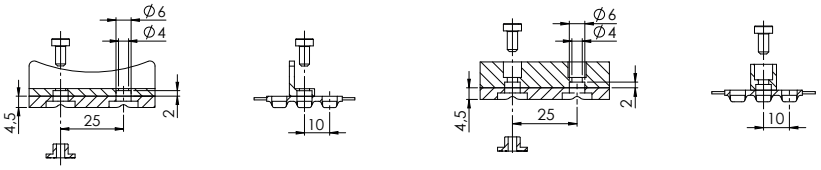
Insert Types

Insert Profile	Dimensions	Thread size	Material	Applications
		M4	Stainless Steel	- Small loads - Low dynamic loads

ATF Advantages:

- Variable cleat pitch
- Different cleat materials can be used
- Standard timing belt pulleys can be used
- High shear strength
- Quick and easy cleat change
- Cleats spacing is extremely precise
- No cleat welding beads
- Reduced downtime

Example of cleat configurations



Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	-
F_{Uspez} [N/cm]	61,00	59,96	58,99	58,09	57,25	56,47	53,28	51,72	49,58	47,71	46,06	44,59	43,27	42,07	40,97	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending	
	z_{min}	idler d_{min}
STANDARD	25	80 mm

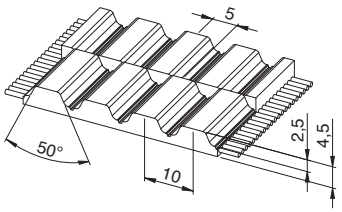
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 167

SAT10

Elatech® M and V



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

STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,5 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		50	75	100
Allowable tensile load	F_{Tzul} [N]*	8330	12740	17150
Breaking load	F_{Br} [N]	32300	49400	66500
Specific spring rate	C_{spez} [N]	2082500	3185000	4287500
Weight	[kg/m]	0,29	0,43	0,57

Other widths are available on request

Specialties

Belt width b [mm]		50
STAINLESS STEEL	F_{Tzul} [N]*	6120
	F_{Br} [N]	25500
HFE High Flexibility	F_{Tzul} [N]*	6800
	F_{Br} [N]	28900

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	88,57	87,06	85,66	84,35	83,13	81,99	77,36	75,09	71,99	69,27	66,88	64,75	62,83	61,09	59,49	58,02

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	56,66	55,39	54,20	53,74	53,08	52,02	51,02	50,06	49,16	48,29	46,67	45,18	43,80	42,51	41,30	40,17

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	39,09	38,08	37,11	36,20	34,08	32,17	30,43	28,84	27,37	26,01	24,73	23,53	22,41	21,34	20,33	19,37

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	15	50 mm	25	120 mm
STAINLESS	20	70 mm	40	120 mm
HFE	12	50 mm	20	80 mm

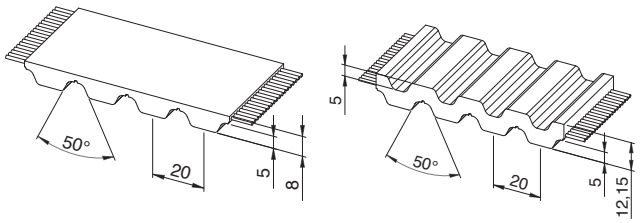
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 168

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 available (on request for special cords)



STANDARD TOLERANCES

WIDTH TOLERANCE:	±1,0 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,4 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		25	32	50	75	100	150
Allowable tensile load	F_{Tzul} [N]*	5280	7200	11520	17280	23520	35520
Breaking load	F_{Br} [N]	19250	26250	42000	63000	85750	129500
Specific spring rate	C_{spez} [N]	1320000	1800000	2880000	4320000	5880000	8880000
Weight	[kg/m]	0,24	0,31	0,48	0,73	0,97	1,45

Other widths are available on request

Specialties

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

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	151,40	148,56	145,89	143,38	141,01	138,78	129,43	122,28	115,96	110,45	105,61	101,31	97,44	93,93	90,73	87,77

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	85,02	82,47	80,07	79,16	77,82	75,70	73,69	71,77	69,96	68,22	64,97	61,98	59,20	56,62	54,20	51,92

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	-	-	-	-	-	-	-
F_{Uspez} [N/cm]	49,77	47,74	45,80	43,96	39,72	35,90	32,42	29,23	26,29	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	18	120 mm	25	180 mm
ARAMID	18	120 mm	25	160 mm
STAINLESS	20	125 mm	30	200 mm
HFE	18	120 mm	25	150 mm

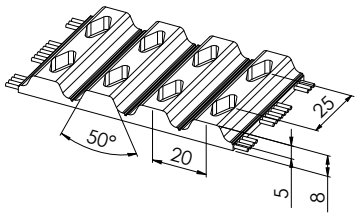
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 169

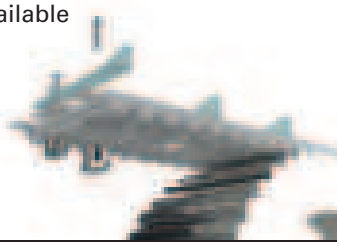
ATF20

Elatech® M and V



BELT CHARACTERISTICS

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 20 mm
- Particularly suitable for linear drives
- Rapid and easy configuration of cleat attachment with simple hand tool
- Stainless steel insert M5 available



STANDARD TOLERANCES

WIDTH TOLERANCE: ±1,0 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,4 [mm]

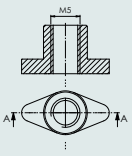
TECHNICAL DATA

Standard steel cord

Belt width b [mm]		50	75	100
Allowable tensile load	F_{Tzul} [N]*	9600	14400	19200
Breaking load	F_{Br} [N]	35000	52500	70000
Specific spring rate	C_{spez} [N]	2400000	3600000	4800000
Weight	[kg/m]	0,48	0,73	0,97

Other widths are available on request

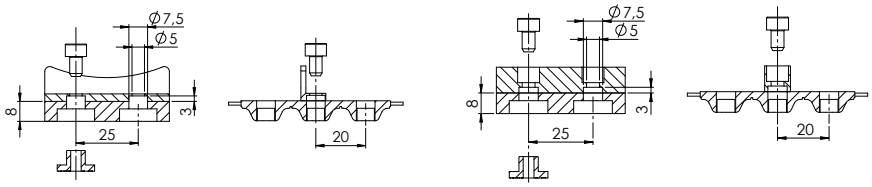
Insert Types

Insert Profile	Dimensions	Thread size	Material	Applications
		M5	Stainless Steel	- Medium and large loads - High dynamic loads

ATF Advantages:

- Variable cleat pitch
- Different cleat materials can be used
- Standard timing belt pulleys can be used
- High shear strength
- Quick and easy cleat change
- Cleats spacing is extremely precise
- No cleat welding beads
- Reduced downtime

Example of cleat configurations



Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	-
F_{Uspez} [N/cm]	100,00	98,13	96,36	94,70	93,14	91,66	85,49	80,77	76,59	72,95	69,75	66,91	64,36	62,04	59,92	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending	
	z_{min}	idler d_{min}
STANDARD	20	130 mm

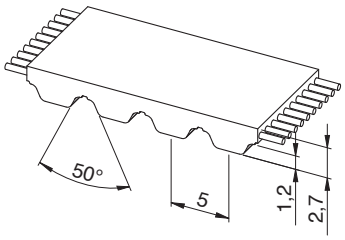
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 170

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



STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		10	16	25	32	50	75	100	150
Allowable tensile load	F_{Tzul} [N]	920	1610	2650	3450	5520	8400	11270	17020
Breaking load	F_{Br} [N]	3360	5880	9660	12600	20160	30660	41160	62160
Specific spring rate	C_{spez} [N]	230000	402500	662500	862500	1380000	2100000	2817500	4255000
Weight	[kg/m]	0,04	0,06	0,1	0,12	0,19	0,29	0,38	0,57

Other widths are available on request

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	36,40	35,88	35,40	34,97	34,59	34,24	32,92	31,92	30,89	29,95	29,12	28,37	27,69	27,06	26,49	25,96

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	25,47	25,01	24,57	24,41	24,16	23,78	23,41	23,07	22,73	22,42	21,82	21,28	20,77	20,29	19,85	19,43

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	19,03	18,66	18,30	17,96	17,18	16,47	15,83	15,24	14,69	14,18	13,71	13,26	12,85	12,45	12,07	11,72

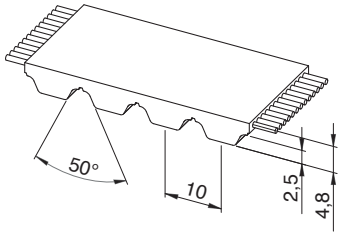
Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	25	40 mm	25	60 mm

Timing pulleys → page 171

ATL10

Elatech® M and V



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

STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
LENGTH TOLLERANCE: ±0,1 [mm/m]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		16	25	32	50	75	100	150
Allowable tensile load	F_{Tzul} [N]	3840	6720	8640	14400	21600	29280	44160
Breaking load	F_{Br} [N]	14000	24500	31500	52500	78750	106750	161000
Specific spring rate	C_{spez} [N]	960000	1680000	2160000	3600000	5400000	7320000	11040000
Weight	[kg/m]	0,11	0,17	0,22	0,35	0,52	0,69	1,04

Other widths are available on request

Specialties

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

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	88,57	87,06	85,66	84,35	83,13	81,99	77,36	75,09	71,99	69,27	66,88	64,75	62,83	61,09	59,49	58,02

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	56,66	55,39	54,20	53,74	53,08	52,02	51,02	50,06	49,16	48,29	46,67	45,18	43,80	42,51	41,30	40,17

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	39,09	38,08	37,11	36,20	34,08	32,17	30,43	28,84	27,37	26,01	24,73	23,53	22,41	21,34	20,33	19,37

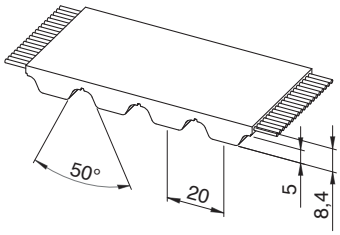
Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	25	80 mm	25	150 mm
STAINLESS	32	100 mm	40	250 mm
HFE	20	60 mm	20	100 mm

Timing pulleys → page 172

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



STANDARD TOLERANCES

WIDTH TOLERANCE:	±1,0 [mm]
LENGTH TOLLERANCE:	±0,1 [mm/m]
THICKNESS TOLERANCE:	±0,4 [mm]

TECHNICAL DATA

Standard steel cord

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

Other widths are available on request

Specialties

Belt width b [mm]		25	32	50	75	100
STAINLESS STEEL	F_{Tzul} [N]	5220	6960	11020	16820	22620
	F_{Br} [N]	20700	27600	43700	66700	89700

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	151,40	148,56	145,89	143,38	141,01	138,78	129,43	122,28	115,96	110,45	105,61	101,31	97,44	93,93	90,73	87,77

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	85,02	82,47	80,07	79,16	77,82	75,70	73,69	71,77	69,96	68,22	64,97	61,98	59,20	56,62	54,20	51,92

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	-	-	-	-	-	-	-
F_{Uspez} [N/cm]	49,77	47,74	45,8	43,96	39,72	35,90	32,42	29,23	26,29	-	-	-	-	-	-	-

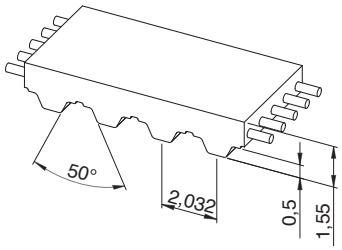
Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	25	160 mm	25	250 mm
STAINLESS	32	200 mm	40	250 mm

Timing pulleys → page 173

MXL

Elatech® M and V



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

STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,5 [mm]
LENGTH TOLERANCE: ±0,8 [mm/m]
THICKNESS TOLERANCE: ±0,1 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [inch]/[mm]		0,25 / 6,35	0,50 / 12,7	1,00 / 25,4	2,00 / 50,8	4,00 / 101,6
Allowable tensile load	F_{Tzul} [N]*	220	450	900	1790	3580
Breaking load	F_{Br} [N]	875	1750	3500	7000	14000
Specific spring rate	C_{spez} [N]	55000	112500	225000	447500	895000
Weight	[kg/m]	0,014	0,025	0,05	0,095	0,19

Other widths are available on request

Specialties

Belt width b [mm]		0,25 / 6,35	0,50 / 12,7	1,00 / 25,4	2,00 / 50,8	4,00 / 101,6
HFE High Flexibility	F_{Tzul} [N]*	250	505	1010	2015	4030
	F_{Br} [N]	1050	2100	4200	8400	16800

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	7,58	7,31	7,09	6,92	6,78	6,67	6,15	5,83	5,59	5,40	5,24	5,11	4,99	4,88	4,79	4,70

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	4,62	4,55	4,48	4,46	4,42	4,36	4,31	4,25	4,21	4,16	4,07	3,99	3,92	3,85	3,78	3,72

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	3,67	3,61	3,56	3,52	3,41	3,31	3,22	3,14	3,06	2,99	2,93	2,86	2,81	2,75	2,70	2,65

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	12	20 mm	15	25 mm
HFE	12	15 mm	15	20 mm

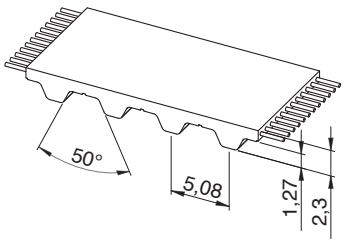
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 174

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)



STANDARD CORDS TOLERANCES

WIDTH TOLERANCE:	±0,5 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [inch]/[mm]		0,25 / 6,35	0,31 / 7,94	0,37 / 9,53	0,50 / 12,7	0,75 / 19,1	1,00 / 25,4	1,50 / 38,1	2,00 / 50,8	4,00 / 101,6
Allowable tensile load	F_{Tzul} [N]*	190	220	290	420	670	900	1410	1890	3840
Breaking load	F_{Br} [N]	750	875	1125	1625	2625	3500	5500	7375	15000
Specific spring rate	C_{spez} [N]	47500	55000	72500	105000	167500	225000	352500	472500	960000
Weight	[kg/m]	0,015	0,019	0,023	0,031	0,046	0,061	0,092	0,122	0,244

Other widths are available on request

Specialties

Belt width b [inch]/[mm]		0,25 / 6,35	0,31 / 7,94	0,37 / 9,53	0,50 / 12,7	0,75 / 19,1	1,00 / 25,4	1,50 / 38,1	2,00 / 50,8	4,00 / 101,6
ARAMID CORD	F_{Tzul} [N]*	420	490	630	910	1470	1960	3080	4130	8400
	F_{Br} [N]	1680	1960	2520	3640	5880	7840	12320	16520	33600
HFE High Flexibility	F_{Tzul} [N]*	215	250	325	470	755	1010	1585	2125	4320
	F_{Br} [N]	900	1050	1350	1950	3150	4200	6600	8850	18000

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	25,10	24,46	23,90	23,42	23,00	22,63	21,24	20,22	19,42	18,77	18,22	17,74	17,32	16,94	16,60	16,29

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	16,01	15,74	15,49	15,40	15,26	15,04	14,84	14,64	14,46	14,28	13,96	13,66	13,38	13,12	12,88	12,65

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	12,44	12,24	12,05	11,87	11,45	11,08	10,74	10,43	10,14	9,87	9,63	9,39	9,17	8,97	8,77	8,59

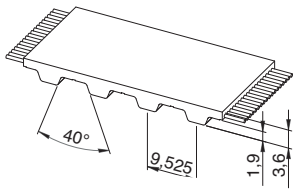
Flexibility

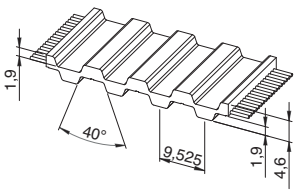
Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	10	30 mm	15	30 mm
ARAMID	10	30 mm	15	30 mm
HFE	10	30 mm	12	30 mm

Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 175





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)
- Double sided tooth available (on request for special cords)

STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [inch]/[mm]		0,50 / 12,7	0,75 / 19,1	1,00 / 25,4	1,50 / 38,1	2,00 / 50,8	3,00 / 76,2	4,00 / 101,6
Allowable tensile load	F_{Tzul} [N]*	1270	1960	2760	4260	5640	8510	11390
Breaking load	F_{Br} [N]	4620	7140	10080	15540	20580	31080	41580
Specific spring rate	C_{spez} [N]	317500	490000	690000	1065000	1410000	2127500	2847500
Weight	[kg/m]	0,049	0,073	0,098	0,146	0,195	0,293	0,39

Other widths are available on request

Specialties

Belt width b [inch]/[mm]		0,50 / 12,7	0,75 / 19,1	1,00 / 25,4	1,50 / 38,1	2,00 / 50,8	3,00 / 76,2	4,00 / 101,6
ARAMID CORD	F_{Tzul} [N]*	1210	1870	2640	4070	5390	8140	10890
	F_{Br} [N]	4950	7650	10800	16650	22050	33300	44550
STAINLESS STEEL	F_{Tzul} [N]*	830	1280	1800	2780	3680	-	-
	F_{Br} [N]	3300	5100	7200	11100	14700	-	-

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	38,60	37,42	36,40	35,51	34,74	34,07	31,59	29,79	28,39	27,25	26,28	25,44	24,70	24,04	23,44	22,89

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	22,38	21,91	21,48	21,31	21,07	20,69	20,33	19,98	19,66	19,35	18,77	18,24	17,76	17,30	16,88	16,48

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	16,10	15,75	15,41	15,09	14,36	13,70	13,10	12,55	12,05	11,58	11,14	10,73	10,35	9,98	9,64	9,31

Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	15	60 mm	20	60 mm
ARAMID	15	60 mm	20	60 mm
STAINLESS	18	65 mm	20	65 mm

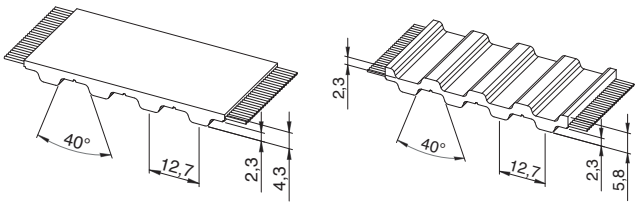
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 176

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)
- Double sided tooth available (on request for special cords)



STANDARD TOLERANCES

WIDTH TOLERANCE:	±0,5 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [inch]/[mm]		0,50 / 12,7	0,75 / 19,1	1,00 / 25,4	1,50 / 38,1	2,00 / 50,8	3,00 / 76,2	4,00 / 101,6	6,00 / 152,4	8,00/203,2**
Allowable tensile load	F_{Tzul} [N]*	1270	1960	2760	4260	5640	8510	11390	17370	11390
Breaking load	F_{Br} [N]	4620	7140	10080	15540	20580	31080	41580	63420	41580
Specific spring rate	C_{spez} [N]	317500	490000	690000	1065000	1410000	2127500	2847500	4342500	2847500
Weight	[kg/m]	0,05	0,08	0,11	0,16	0,22	0,32	0,43	0,56	0,65

Other widths are available on request

** = double cords spacing

Specialties

Belt width b [inch]/[mm]		0,50 / 12,7	0,75 / 19,1	1,00 / 25,4	1,50 / 38,1	2,00 / 50,8	3,00 / 76,2	4,00 / 101,6	6,00 / 152,4	8,00/203,2**
ARAMID CORD	F_{Tzul} [N]*	1210	1870	2640	4070	5390	8140	10890	16610	10890
	F_{Br} [N]	4950	7650	10800	16650	22050	33300	44550	67950	44500
STAINLESS STEEL	F_{Tzul} [N]*	830	1280	1800	2780	3680	-	-	-	-
	F_{Br} [N]	3300	5100	7200	11100	14700	-	-	-	-

** = double cords spacing

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	45,30	43,95	42,78	41,77	40,88	40,11	37,22	35,07	33,41	32,05	30,90	29,91	29,04	28,26	27,55	26,90

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	26,31	25,76	25,25	25,05	24,77	24,32	23,89	23,49	23,11	22,74	22,07	21,44	20,87	20,34	19,84	19,37

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	18,93	18,51	18,12	17,75	16,88	16,11	15,41	14,76	14,17	13,62	13,11	12,63	12,18	11,75	11,35	10,96

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	14	60 mm	20	80 mm
ARAMID	14	60 mm	20	80 mm
STAINLESS	20	80 mm	40	100 mm

Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

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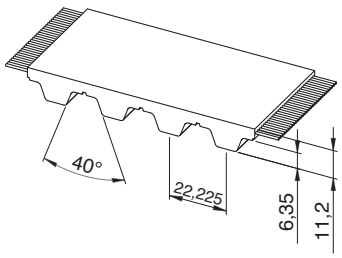
XH

Elatech® M and V



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)

STANDARD TOLERANCES

WIDTH TOLERANCE: ±1,0 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,4 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [inch]/[mm]		1,00 / 25,4	2,00 / 50,8	3,00 / 76,2	4,00 / 101,6	6,00 / 152,4
Allowable tensile load	F_{Tzul} [N]*	3920	8330	12740	17150	25970
Breaking load	F_{Br} [N]	15200	32300	49400	66500	100700
Specific spring rate	C_{spez} [N]	980000	2082500	3185000	4287500	6492500
Weight	[kg/m]	0,37	0,66	0,99	1,33	1,99

Other widths are available on request

Specialties

Belt width b [inch]/[mm]		1,00 / 25,4	2,00 / 50,8	3,00 / 76,2	4,00 / 101,6	6,00 / 152,4
ARAMID CORD	F_{Tzul} [N]*	3520	7480	11440	15400	23320
	F_{Br} [N]	16000	34000	52000	70000	106000
STAINLESS STEEL	F_{Tzul} [N]*	2880	6120	9360	12600	-
	F_{Br} [N]	12000	25500	39000	52500	-

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	96,00	92,98	90,27	87,85	85,68	83,73	74,80	69,42	65,53	62,48	59,97	57,84	55,99	54,35	52,88	51,55

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	50,33	49,20	48,16	47,77	47,19	46,29	45,43	44,62	43,86	43,14	41,79	40,56	39,43	38,37	37,40	36,48

rpm	3400	3600	3800	4000	-	-	-	-	-	-	-	-	-	-	-	-
F_{Uspez} [N/cm]	35,62	34,81	34,04	33,31	-	-	-	-	-	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	18	150 mm	20	180 mm
ARAMID	18	150 mm	20	180 mm
STAINLESS	24	160 mm	30	200 mm

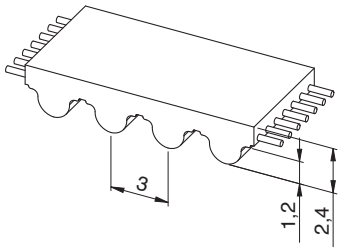
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 178

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



STANDARD TOLERANCES

WIDTH TOLERANCE:	±0,5 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		10	15	25	50	100
Allowable tensile load	F_{Tzul} [N]*	320	510	900	1860	3780
Breaking load	F_{Br} [N]	1250	2000	3500	7250	14750
Specific spring rate	C_{spez} [N]	80000	127500	225000	465000	945000
Weight	[kg/m]	0,02	0,03	0,06	0,12	0,24

Other widths are available on request

Specialties

Belt width b [mm]		10	15	25	50	100
HFE High Flexibility	F_{Tzul} [N]*	360	575	1010	2090	4250
	F_{Br} [N]	1500	2400	4200	8700	17700

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	25,20	24,60	24,06	23,57	23,12	22,72	21,22	20,31	19,75	19,14	18,50	17,88	17,30	16,75	16,24	15,75

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	15,29	14,86	14,45	14,29	14,06	13,69	13,33	12,99	12,67	12,36	11,77	11,22	10,71	10,24	9,79	9,36

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	8,96	8,57	8,21	7,86	7,05	6,32	5,66	5,04	4,47	3,94	3,44	2,98	2,54	2,12	1,72	1,35

Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	20	30 mm	20	30 mm
HFE	15	20 mm	20	30 mm

Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

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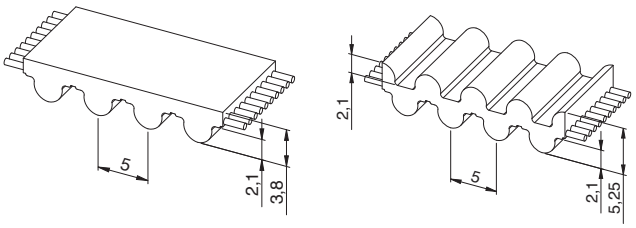
HTD5M

Elatech® M and V



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 available (on request for special cords)

STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,5 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		10	15	25	50	75	100
Allowable tensile load	F_{Tzul} [N]*	920	1500	2650	5520	8400	11270
Breaking load	F_{Br} [N]	3360	5460	9660	20160	30660	41160
Specific spring rate	C_{spez} [N]	230000	375000	662500	1380000	2100000	2817500
Weight	[kg/m]	0,05	0,07	0,12	0,24	0,36	0,48

Other widths are available on request

Specialties

Belt width b [mm]		10	15	25	50	75	100
ARAMID CORD	F_{Tzul} [N]*	880	1430	2530	5280	8030	10780
	F_{Br} [N]	3600	5850	10350	21600	32850	44100
STAINLESS STEEL	F_{Tzul} [N]*	600	980	1730	3600	5475	7350
	F_{Br} [N]	2400	3900	6900	14400	21900	29400

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	36,80	36,25	35,75	35,30	34,89	34,52	33,13	30,87	30,10	29,31	28,56	27,86	27,21	26,61	26,05	25,52

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	25,03	24,56	24,13	23,96	23,71	23,32	22,94	22,58	22,24	21,91	21,30	20,72	20,19	19,69	19,23	18,78

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	18,37	17,97	17,59	17,23	16,40	15,64	14,95	14,32	13,74	13,19	12,68	12,20	11,75	11,33	10,92	10,53

Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	16	30 mm	25	60 mm
ARAMID	16	30 mm	25	60 mm
STAINLESS	18	40 mm	25	65 mm

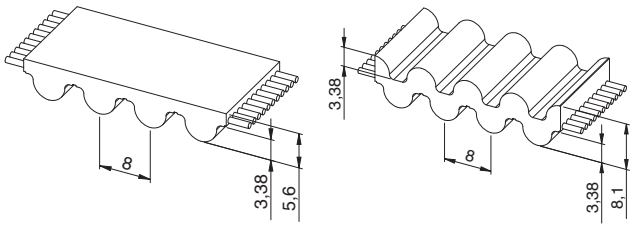
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 180

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 available (on request for special cords)



STANDARD TOLERANCES

WIDTH TOLERANCE:	±0,5 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		10	15	20	30	50	85	100	150
Allowable tensile load	F_{Tzul} [N]*	1470	2210	3190	4660	8580	14700	17400	26220
Breaking load	F_{Br} [N]	5700	8550	12350	18050	33250	57000	67450	101650
Specific spring rate	C_{spez} [N]	367500	552500	797500	1165000	2145000	3675000	4350000	6555000
Weight	[kg/m]	0,07	0,10	0,14	0,21	0,35	0,59	0,69	0,95

Other widths are available on request

Specialties

Belt width b [mm]		10	15	20	30	50	85	100	150
ARAMID CORD	F_{Tzul} [N]*	1320	1980	2860	4180	7700	13200	15620	23540
	F_{Br} [N]	6000	9000	13000	19000	35000	60000	71000	107000
STAINLESS STEEL	F_{Tzul} [N]*	1080	1620	2340	3420	6300	10800	12780	-
	F_{Br} [N]	4500	6750	9750	14250	26250	45000	53250	-
HPL High performance	F_{Tzul} [N]	-	-	5280	8160	14400	24480	29280	44160
	F_{Br} [N]	-	-	19250	29750	52500	89250	106750	161000

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	74,00	72,62	71,34	70,16	69,07	68,07	64,09	61,68	59,03	56,71	54,66	52,84	51,20	49,71	48,35	47,09

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	45,93	44,84	43,82	43,43	42,86	41,96	41,10	40,29	39,52	38,78	37,39	36,12	34,94	33,83	32,80	31,83

rpm	3400	3600	3800	4000	4500	5000	5500	6000	-	-	-	-	-	-	-	-
F_{Uspez} [N/cm]	30,91	30,05	29,22	28,44	26,63	25,00	23,51	22,15	-	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	18	50 mm	30	120 mm
ARAMID	18	50 mm	30	120 mm
STAINLESS	24	70 mm	40	120 mm
HPL	30	80 mm	30	150 mm

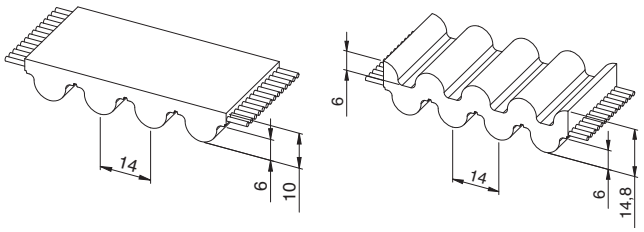
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 181

HTD14M

Elatech® M and V



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 available (on request for special cords)

STANDARD TOLERANCES

WIDTH TOLERANCE: ±1,0 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,4 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		25	40	55	85	115	150
Allowable tensile load	F_{Tzul} [N]*	5280	9120	12480	19680	26880	35520
Breaking load	F_{Br} [N]	19250	33250	45500	71750	98000	129500
Specific spring rate	C_{spez} [N]	1320000	2280000	3120000	4920000	6720000	8880000
Weight	[kg/m]	0,28	0,44	0,61	0,94	1,25	1,68

Other widths are available on request

Specialties

Belt width b [mm]		25	40	55	85	115	150
ARAMID CORD	F_{Tzul} [N]*	2420	4180	5720	9020	12320	16280
	F_{Br} [N]	11000	19000	26000	41000	56000	74000

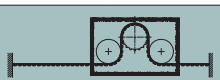
Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	130,00	127,69	125,56	123,60	121,78	120,11	109,77	104,29	99,19	94,65	90,64	87,04	83,80	80,85	78,14	75,63

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	73,31	71,14	69,11	68,33	67,19	65,38	63,67	62,04	60,49	59,01	56,23	53,68	51,30	49,09	47,01	45,06

rpm	3400	3600	3800	4000	-	-	-	-	-	-	-	-	-	-	-	-
F_{Uspez} [N/cm]	43,22	41,48	39,82	38,24	-	-	-	-	-	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	28	120 mm	28	180 mm
ARAMID	28	120 mm	28	180 mm

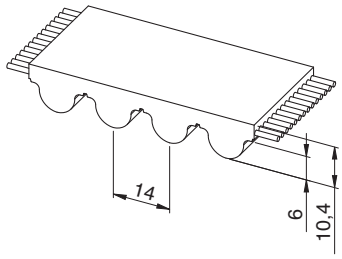
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 182

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



STANDARD TOLERANCES

WIDTH TOLERANCE:	±1,0 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,5 [mm]

TECHNICAL DATA

Standard steel cord

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

Other widths are available on request

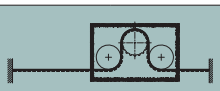
Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	130,00	127,69	125,56	123,60	121,78	120,11	109,77	104,29	99,19	94,65	90,64	87,04	83,80	80,85	78,14	75,63

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	73,31	71,14	69,11	68,33	67,19	65,38	63,67	62,04	60,49	59,01	56,23	53,68	51,30	49,09	47,01	45,06

rpm	3400	3600	3800	4000	-	-	-	-	-	-	-	-	-	-	-	-
F_{Uspez} [N/cm]	43,22	41,48	39,82	38,24	-	-	-	-	-	-	-	-	-	-	-	-

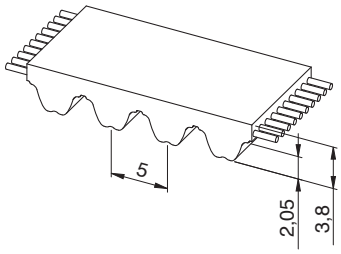
Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	34	140 mm	34	200 mm

Timing pulleys → page 183

RPD5M

Elatech® M and V



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

STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,5 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		10	15	25	30	50	100
Allowable tensile load	F_{Tzul} [N]*	920	1500	2650	3220	5520	11270
Breaking load	F_{Br} [N]	3360	5460	9660	11760	20160	41160
Specific spring rate	C_{spez} [N]	230000	375000	662500	805000	1380000	2817500
Weight	[kg/m]	0,05	0,07	0,12	0,15	0,23	0,46

Other widths are available on request

Specialties

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

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	37,80	37,25	36,75	36,30	35,89	35,52	34,13	32,87	32,10	31,31	30,56	29,86	29,21	28,61	28,05	27,52

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	27,03	26,56	26,13	25,96	25,71	25,32	24,94	24,58	24,24	23,91	23,30	22,72	22,19	21,69	21,23	20,78

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	20,37	19,97	19,59	19,23	18,40	17,64	16,95	16,32	15,74	15,19	14,68	14,20	13,75	13,33	12,92	12,53

Flexibility

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

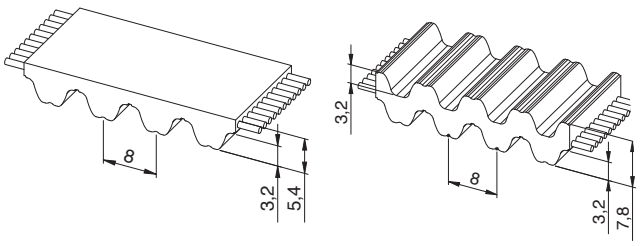
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 184

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
- Double sided tooth available (on request for special cords)



STANDARD TOLERANCES

WIDTH TOLERANCE:	±0,5 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		10	15	20	30	50	85	100
Allowable tensile load	F_{Tzul} [N]*	1470	2210	3190	4660	8580	14700	17400
Breaking load	F_{Br} [N]	5700	8550	12350	18050	33250	57000	67450
Specific spring rate	C_{spez} [N]	367500	552500	797500	1165000	2145000	3675000	4350000
Weight	[kg/m]	0,07	0,10	0,14	0,20	0,35	0,60	0,75

Other widths are available on request

Specialties

Belt width b [mm]		10	15	20	30	50	85	100
ARAMID CORD	F_{Tzul} [N]*	1320	1980	2860	4180	7700	13200	15620
	F_{Br} [N]	6000	9000	13000	19000	35000	60000	71000
STAINLESS STEEL	F_{Tzul} [N]*	1080	1620	2340	3420	6300	10800	12780
	F_{Br} [N]	4500	6750	9750	14250	26250	45000	53250
HPL High Performance	F_{Tzul} [N]	-	-	5280	8160	14400	24480	29280
	F_{Br} [N]	-	-	19250	29750	52500	89250	106750

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	76,00	74,62	73,34	72,16	71,07	70,07	66,09	63,68	61,03	58,71	56,66	54,84	53,20	51,71	50,35	49,09

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	47,93	46,84	45,82	45,43	44,86	43,96	43,10	42,29	41,52	40,78	39,39	38,12	36,94	35,83	34,80	33,83

rpm	3400	3600	3800	4000	4500	5000	5500	6000	-	-	-	-	-	-	-	-
F_{Uspez} [N/cm]	32,91	32,05	31,22	30,44	28,63	27,00	25,51	24,15	-	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	18	50 mm	30	120 mm
ARAMID	18	50 mm	30	120 mm
STAINLESS	24	70 mm	40	120 mm
HPL	30	80 mm	30	150 mm

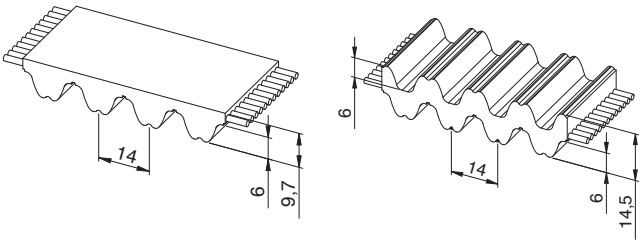
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 185

RPD14M

Elatech® M and V



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
- Double sided tooth available (on request for special cords)

STANDARD TOLERANCES

WIDTH TOLERANCE: ±1,0 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,4 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		40	55	85	115
Allowable tensile load	F_{Tzul} [N]*	12750	17850	28050	39100
Breaking load	F_{Br} [N]	48000	67200	105600	147200
Specific spring rate	C_{spez} [N]	3187500	4462500	7012500	9775000
Weight	[kg/m]	0,48	0,68	1,00	1,40

Other widths are available on request

Specialties

Belt width b [mm]		40	55	85	115
ARAMID CORD	F_{Tzul} [N]*	11250	15750	24750	34500
	F_{Br} [N]	45000	63000	99000	138000
HPF High flexibility and performance	F_{Tzul} [N]	15000	21000	33000	46000
	F_{Br} [N]	60000	84000	132000	184000

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	140,00	137,31	134,83	132,53	130,42	128,46	119,77	114,29	109,19	104,65	100,64	97,04	93,80	90,85	88,14	85,63

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	83,31	81,14	79,11	78,33	77,19	75,38	73,67	72,04	70,49	69,01	66,23	63,68	61,30	59,09	57,01	55,06

rpm	3400	3600	3800	4000	-	-	-	-	-	-	-	-	-	-	-	-
F_{Uspez} [N/cm]	53,22	51,48	49,82	48,24	-	-	-	-	-	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	32	140 mm	32	200 mm
ARAMID	28	120 mm	28	150 mm
HPF	30	130 mm	30	180 mm

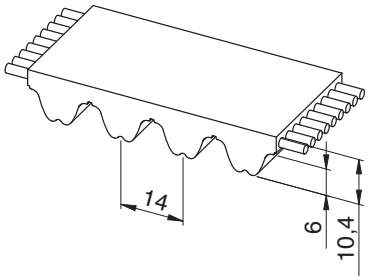
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 186

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.



STANDARD TOLERANCES

WIDTH TOLERANCE:	±1,0 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,4 [mm]

TECHNICAL DATA

Standard steel cord

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

Other widths are available on request

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	140,00	137,31	134,83	132,53	130,42	128,46	119,77	114,29	109,19	104,65	100,64	97,04	93,80	90,85	88,14	85,63

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	83,31	81,14	79,11	78,33	77,19	75,38	73,67	72,04	70,49	69,01	66,23	63,68	61,30	59,09	57,01	55,06

rpm	3400	3600	3800	4000	-	-	-	-	-	-	-	-	-	-	-	-
F_{Uspez} [N/cm]	53,22	51,48	49,82	48,24	-	-	-	-	-	-	-	-	-	-	-	-

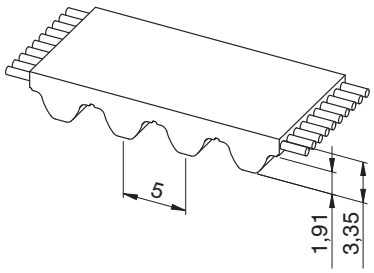
Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	34	140 mm	34	250 mm

Timing pulleys → page 187

STD5M

Elatech® M and V



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

STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,5 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		10	15	25	50	100	150
Allowable tensile load	F_{Tzul} [N]*	920	1500	2650	5520	11270	17020
Breaking load	F_{Br} [N]	3360	5460	9660	20160	41160	62160
Specific spring rate	C_{spez} [N]	230000	375000	662500	1380000	2817500	4255000
Weight	[kg/m]	0,05	0,07	0,12	0,23	0,46	0,69

Other widths are available on request

Specialties

Belt width b [mm]		10	15	25	50	100	150
ARAMID CORD	F_{Tzul} [N]*	880	1430	2530	5280	10780	16280
	F_{Br} [N]	3600	5850	10350	21600	44100	66600
STAINLESS STEEL	F_{Tzul} [N]*	600	980	1730	3600	-	-
	F_{Br} [N]	2400	3900	6900	14400	-	-
HFE High Flexibility	F_{Tzul} [N]*	960	1560	2760	5760	-	-
	F_{Br} [N]	3440	5590	9890	20640	-	-

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	36,90	36,35	35,85	35,40	34,99	34,62	33,23	31,37	30,60	29,81	29,06	28,36	27,71	27,11	26,55	26,02

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	25,53	25,06	24,63	24,46	24,21	23,82	23,44	23,08	22,74	22,41	21,80	21,22	20,69	20,19	19,73	19,28

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	18,87	18,47	18,09	17,73	16,90	16,14	15,45	14,82	14,24	13,69	13,18	12,70	12,25	11,83	11,42	11,03

Flexibility

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

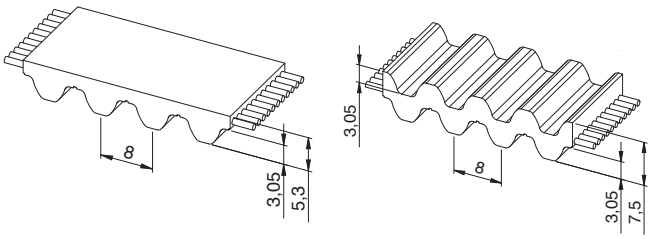
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 188

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
- Double sided tooth available (on request for special cords)



STANDARD TOLERANCES

WIDTH TOLERANCE:	±0,5 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		10	15	20	30	50	85	100
Allowable tensile load	F_{Tzul} [N]*	1470	2210	3190	4660	8580	14700	17400
Breaking load	F_{Br} [N]	5700	8550	12350	18050	33250	57000	67450
Specific spring rate	C_{spez} [N]	367500	552500	797500	1165000	2145000	3675000	4350000
Weight	[kg/m]	0,07	0,10	0,13	0,20	0,33	0,56	0,66

Other widths are available on request

Specialties

Belt width b [mm]		10	15	20	30	50	85	100
ARAMID CORD	F_{Tzul} [N]*	1320	1980	2860	4180	7700	13200	15620
	F_{Br} [N]	6000	9000	13000	19000	35000	60000	71000
STAINLESS STEEL	F_{Tzul} [N]*	1080	1620	2340	3420	6300	10800	12780
	F_{Br} [N]	4500	6750	9750	14250	26250	45000	53250
HPL High Performance	F_{Tzul} [N]	-	-	5280	8160	14400	24480	29280
	F_{Br} [N]	-	-	19250	29750	52500	89250	106750

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	74,10	73,05	72,06	71,13	70,26	69,43	65,98	62,11	59,43	57,08	55,02	53,18	51,53	50,03	48,66	47,39

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	46,22	45,12	44,10	43,70	43,13	42,22	41,36	40,54	39,76	39,02	37,62	36,34	35,15	34,04	33,00	32,02

rpm	3400	3600	3800	4000	4500	5000	5500	6000	-	-	-	-	-	-	-	-
F_{Uspez} [N/cm]	31,10	30,23	29,40	28,61	26,79	25,14	23,65	22,28	-	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	18	50 mm	30	120 mm
ARAMID	18	50 mm	30	120 mm
STAINLESS	24	70 mm	40	120 mm
HPL	30	80 mm	30	150 mm

Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

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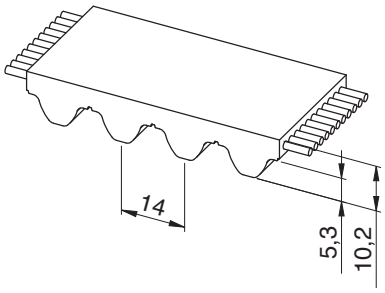
STD14M

Elatech® M and V



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 performance in lifting applications
- The special profile allows smooth running properties

STANDARD TOLERANCES

WIDTH TOLERANCE: ±1,0 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,4 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		40	55	85	115
Allowable tensile load	F_{Tzul} [N]*	12750	17850	28050	39100
Breaking load	F_{Br} [N]	48000	67200	105600	147200
Specific spring rate	C_{spez} [N]	3187500	4462500	7012500	9775000
Weight	[kg/m]	0,50	0,70	1,08	1,48

Other widths are available on request

Specialties

Belt width b [mm]		40	55	85	115
ARAMID CORD	F_{Tzul} [N]*	11250	15750	24750	34500
	F_{Br} [N]	45000	63000	99000	138000

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	134,00	131,31	128,83	126,53	124,42	122,46	114,77	109,29	104,19	99,65	95,64	92,04	88,80	85,85	83,14	80,63

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	78,31	76,14	74,11	73,33	72,19	70,38	68,67	67,04	65,49	64,01	61,23	58,68	56,30	54,09	52,01	50,06

rpm	3400	3600	3800	4000	-	-	-	-	-	-	-	-	-	-	-	-
F_{Uspez} [N/cm]	48,22	46,48	44,82	43,24	-	-	-	-	-	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	32	140 mm	32	250 mm
ARAMID	28	120 mm	28	150 mm

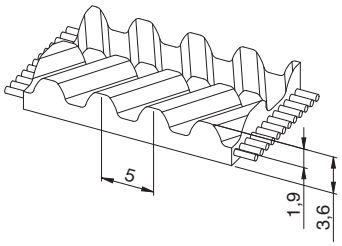
Elatech® V Joined informations

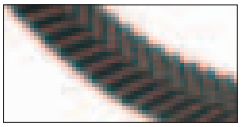
Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 190

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





STANDARD TOLERANCES

WIDTH TOLERANCE:	±0,5 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		12,5	25
Allowable tensile load	F_{Tzul} [N]*	1150	2530
Breaking load	F_{Br} [N]	4200	9240
Specific spring rate	C_{spez} [N]	287500	632500
Weight	[kg/m]	0,06	0,12

Other widths are available on request

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	37,80	37,25	36,75	36,30	35,89	35,52	34,13	32,87	32,10	31,31	30,56	29,86	29,21	28,61	28,05	27,52

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	27,03	26,56	26,13	25,96	25,71	25,32	24,94	24,58	24,24	23,91	23,30	22,72	22,19	21,69	21,23	20,78

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	20,37	19,97	19,59	19,23	18,40	17,64	16,95	16,32	15,74	15,19	14,68	14,20	13,75	13,33	12,92	12,53

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	16	30 mm	25	60 mm

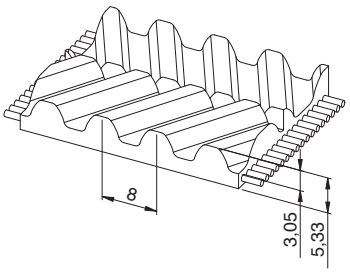
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 191

EAGLE8M

Elatech® M and V



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

STANDARD TOLERANCES

WIDTH TOLERANCE:	±0,8 [mm]
LENGTH TOLERANCE:	±0,8 [mm/m]
THICKNESS TOLERANCE:	±0,3 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		16	25	32	50
Allowable tensile load	F_{Tzul} [N]*	2450	4170	5390	8580
Breaking load	F_{Br} [N]	9500	16150	20900	33250
Specific spring rate	C_{spez} [N]	612500	1042500	1347500	2145000
Weight	[kg/m]	0,085	0,145	0,180	0,300

Other widths are available on request

Specialties

Belt width b [mm]		16	25	32	50
ARAMID CORD	F_{Tzul} [N]*	2200	3740	4840	7700
	F_{Br} [N]	10000	17000	22000	35000
STAINLESS STEEL	F_{Tzul} [N]*	1800	3060	3960	6300
	F_{Br} [N]	7500	12750	16500	26250
HPL High Performance	F_{Tzul} [N]	3840	6720	8640	14400
	F_{Br} [N]	14000	24500	31500	52500

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	85,00	83,78	82,62	81,49	80,42	79,38	74,78	71,01	67,93	65,52	63,36	61,42	59,66	58,05	56,58	55,22

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	53,95	52,77	51,66	51,23	50,61	49,62	48,69	47,80	46,95	46,14	44,62	43,22	41,91	40,70	39,56	38,49

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	37,48	36,52	35,61	34,75	32,75	30,94	29,30	27,79	26,40	25,11	23,90	22,77	21,70	20,69	19,73	18,82

Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	20	50 mm	30	120 mm
ARAMID	20	50 mm	30	120 mm
STAINLESS	24	70 mm	40	120 mm
HPL	30	80 mm	30	150 mm

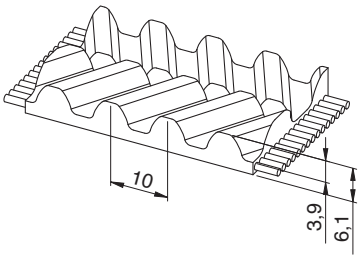
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 192

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



STANDARD TOLERANCES

WIDTH TOLERANCE:	±0,8 [mm]
LENGTH TOLERANCE:	±0,8 [mm/m]
THICKNESS TOLERANCE:	±0,3 [mm]

TECHNICAL DATA

Standard steel cord

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

Other widths are available on request

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	93,50	92,03	90,63	89,28	88,00	86,77	81,36	77,02	73,54	70,76	68,43	66,33	64,43	62,70	61,11	59,63

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	58,27	56,99	55,79	55,33	54,66	53,59	52,58	51,62	50,70	49,83	48,19	46,67	45,27	43,96	42,73	41,57

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	40,48	39,45	38,46	37,53	35,37	33,42	31,65	30,02	28,51	27,12	25,81	24,59	23,43	22,34	21,31	20,33

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	25	80 mm	25	150 mm

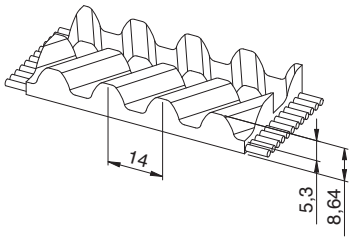
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 193

EAGLE14M

Elatech® M and V



STANDARD TOLERANCES

WIDTH TOLERANCE:	±1,2 [mm]
LENGTH TOLERANCE:	±0,8 [mm/m]
THICKNESS TOLERANCE:	±0,4 [mm]

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

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		35	52,5	70	105
Allowable tensile load	F_{Tzul} [N]*	11900	17000	23800	35700
Breaking load	F_{Br} [N]	44800	64000	89600	134400
Specific spring rate	C_{spez} [N]	2975000	4250000	5950000	8925000
Weight	[kg/m]	0,40	0,60	0,80	1,20

Other widths are available on request

Specialties

Belt width b [mm]		35	52,5	70	105
HPF High flexibility and performance	F_{Tzul} [N]	14000	20000	28000	42000
	F_{Br} [N]	56000	80000	112000	168000

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	160,00	157,00	154,22	151,64	149,24	147,01	138,04	129,87	123,12	117,24	112,07	107,48	103,35	99,60	96,17	93,01

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	90,08	87,35	84,80	83,82	82,39	80,12	77,97	75,93	73,99	72,13	68,66	65,46	62,50	59,73	57,15	54,71

rpm	3400	3600	3800	4000	-	-	-	-	-	-	-	-	-	-	-	-
F_{Uspez} [N/cm]	52,42	50,24	48,18	46,21	-	-	-	-	-	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	32	140 mm	32	200 mm
HPF	30	130 mm	30	180 mm

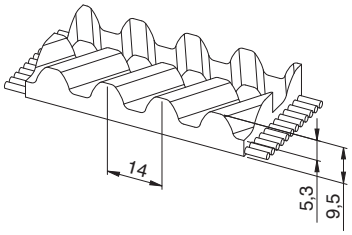
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 194

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



STANDARD TOLERANCES

WIDTH TOLERANCE:	±1,2 [mm]
LENGTH TOLERANCE:	±1,0 [mm/m]
THICKNESS TOLERANCE:	±0,5 [mm]

TECHNICAL DATA

Standard steel cord

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

Other widths are available on request

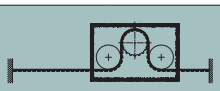
Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	160,00	157,00	154,22	151,64	149,24	147,01	138,04	129,87	123,12	117,24	112,07	107,48	103,35	99,60	96,17	93,01

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	90,08	87,35	84,80	83,82	82,39	80,12	77,97	75,93	73,99	72,13	68,66	65,46	62,50	59,73	57,15	54,71

rpm	3400	3600	3800	4000	-	-	-	-	-	-	-	-	-	-	-	-
F_{Uspez} [N/cm]	52,42	50,24	48,18	46,21	-	-	-	-	-	-	-	-	-	-	-	-

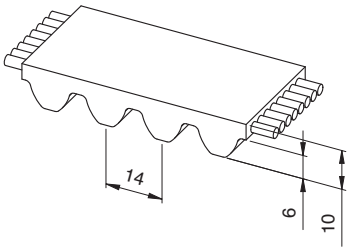
Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	34	140 mm	34	200 mm

Note
Special pulley profile required.
Contact Elatech® technical dept. for details.

PG14M

Elatech® M and V



BELT CHARACTERISTICS

- Polyurethane timing belt with curvilinear tooth profile and high tensile load steel cords
- Tooth profile according to ISO 13050
- Metric pitch 14 mm
- Offers excellent operational reliability heavy lifting applications
- The special profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- Black colour and black fabric on tooth side (PAZ) as standard

STANDARD TOLERANCES

WIDTH TOLERANCE: ±1,0 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,4 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		50	100	150	180
Allowable tensile load	F_{Tzul} [N]	32000	64000	96000	114000
Breaking load	F_{Br} [N]	112000	224000	336000	399000
Specific spring rate	C_{spez} [N]	8000000	16000000	24000000	28500000
Weight	[kg/m]	0,74	1,50	2,25	2,70

Other widths are available on request

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	156,00	153,23	150,68	148,32	146,14	144,13	131,72	125,15	119,02	113,59	108,76	104,45	100,56	97,01	93,76	90,76

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	87,97	85,37	82,93	81,99	80,63	78,46	76,40	74,45	72,59	70,81	67,48	64,41	61,56	58,91	56,42	54,08

rpm	3400	3600	3800	4000	-	-	-	-	-	-	-	-	-	-	-	-
F_{Uspez} [N/cm]	51,86	49,77	47,78	45,89	-	-	-	-	-	-	-	-	-	-	-	-

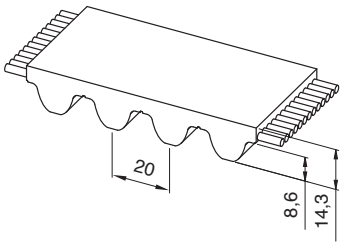
Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	34	140 mm	34	250 mm

Note
Special pulley profile required.
Contact Elatech® technical dept. for details.

BELT CHARACTERISTICS

- Polyurethane timing belt with curvilinear tooth profile and high tensile load steel cords
- Metric pitch 20 mm
- Offers excellent operational reliability heavy lifting applications
- The special profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- Black colour and black fabric on tooth side (PAZ) as standard



STANDARD TOLERANCES

WIDTH TOLERANCE:	±1,0 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,4 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		50	100	150	180
Allowable tensile load	F_{Tzul} [N]	40000	80000	120000	142500
Breaking load	F_{Br} [N]	152000	304000	456000	541500
Specific spring rate	C_{spez} [N]	10000000	20000000	30000000	35625000
Weight	[kg/m]	1,05	2,03	3,04	3,65

Other widths are available on request

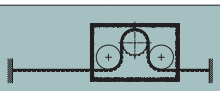
Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	212,00	208,03	204,29	200,76	197,45	194,32	181,23	171,22	162,37	154,65	147,88	141,85	136,44	131,53	127,04	122,90

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	119,06	115,48	112,12	110,84	108,97	106,00	103,18	100,50	97,96	95,53	90,98	86,79	82,9	79,28	75,89	72,70

rpm	3400	3600	3800	4000	-	-	-	-	-	-	-	-	-	-	-	-
F_{Uspez} [N/cm]	69,69	66,84	64,14	61,56	-	-	-	-	-	-	-	-	-	-	-	-

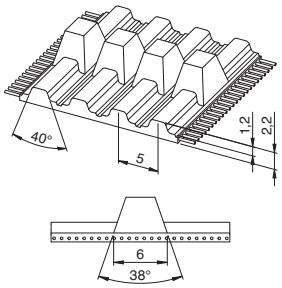
Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	30	190 mm	34	280 mm

Note
Special pulley profile required.
Contact Elatech® technical dept. for details.

TK5 K6

Elatech® M and V



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 (+0/-1)
- 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

STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,5 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		32	50	75	100
Allowable tensile load	F_{Tzul} [N]*	1150	1860	2820	3780
Breaking load	F_{Br} [N]	4500	7250	11000	14750
Specific spring rate	C_{spez} [N]	287500	465000	705000	945000
Weight	[kg/m]	0,080	0,130	0,200	0,260

Other widths are available on request

Specialties

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

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Drive without reverse bending		Drive with reverse bending	
		z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	Guide K6	14	40 mm	15	50 mm
ARAMID	Guide K6	14	40 mm	15	50 mm

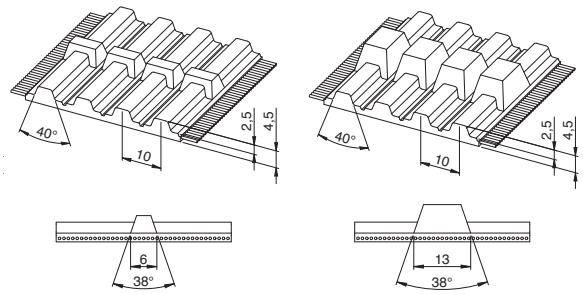
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 195

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 (+0/-1)
- Profile T10 with central guide - K6 x 4,0 mm (+0/-1)
- 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



STANDARD TOLERANCES

WIDTH TOLERANCE:	±0,5 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	± 0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		32	50	75	100	150
Allowable tensile load	F_{Tzul} [N]*	3450	5520	8400	11270	17020
Breaking load	F_{Br} [N]	12600	20160	30660	41160	62160
Specific spring rate	C_{spez} [N]	862500	1380000	2100000	2817500	4255000
Weight	[kg/m]	0,220	0,300	0,410	0,530	0,850

Other widths are available on request

Specialties

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

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Drive without reverse bending		Drive with reverse bending	
		z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	Guide K6	14	60 mm	20	60 mm
	Guide K13	16	80 mm	20	60 mm
ARAMID	Guide K6	14	60 mm	20	60 mm
	Guide K13	16	80 mm	20	60 mm

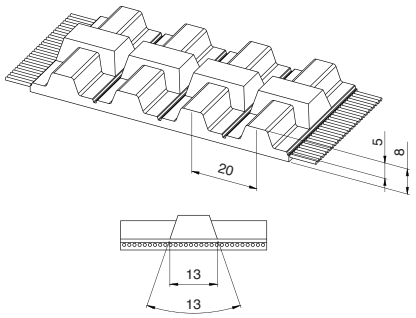
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 196

TK20 K13

Elatech® M and V



BELT CHARACTERISTICS

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Profile T20 with central guide K13 x 6,5 mm (+0/-1)
- 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

STANDARD TOLERANCES

WIDTH TOLERANCE: ±1,0 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,4 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		32	50
Allowable tensile load	F_{Tzul} [N]	5390	8580
Breaking load	F_{Br} [N]	20900	33250
Specific spring rate	C_{spez} [N]	1347500	2145000
Weight	[kg/m]	0,29	0,45

Other widths are available on request

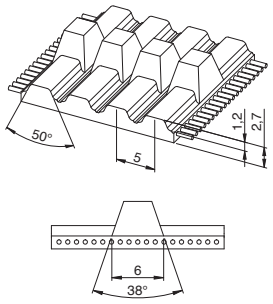
Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	20	120 mm	25	180 mm

Timing pulleys → page 197

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 (+0/-1)
- 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



STANDARD TOLERANCES

WIDTH TOLERANCE:	±0,5 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		32	50	75	100
Allowable tensile load	F_{Tzul} [N]*	3450	5520	8400	11270
Breaking load	F_{Br} [N]	12600	20160	30660	41160
Specific spring rate	C_{spez} [N]	862500	1380000	2100000	2817500
Weight	[kg/m]	0,11	0,19	0,29	0,38

Other widths are available on request

Specialties

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

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Drive without reverse bending		Drive with reverse bending	
		z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	Guide K6	15	60 mm	25	80 mm
ARAMID	Guide K6	15	60 mm	25	80 mm

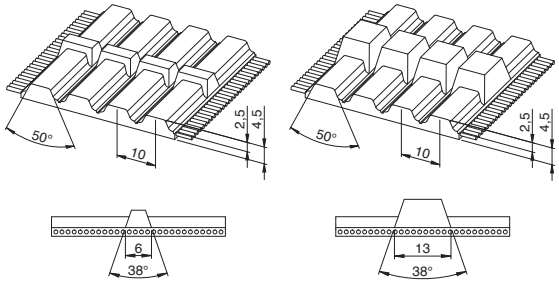
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 198

ATK10 K6 - K13

Elatech® M and V



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 (+0/-1)
- Profile AT10 with central guide - K6 x 4 mm (+0/-1)
- 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

STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,5 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		32	50	75	100	150
Allowable tensile load	F_{Tzul} [N]*	5390	8580	12990	17400	26220
Breaking load	F_{Br} [N]	20900	33250	50350	67450	101650
Specific spring rate	C_{spez} [N]	1347500	2145000	3247500	4350000	6555000
Weight	[kg/m]	0,27	0,36	0,50	0,72	1,08

Other widths are available on request

Specialties

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

Flexibility

Minimum pulley number of teeth and minimum idler diameter		Drive without reverse bending		Drive with reverse bending	
		z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	Guide K6	15	50 mm	25	120 mm
	Guide K13	20	50 mm	25	120 mm
ARAMID	Guide K6	15	50 mm	20	120 mm
	Guide K13	20	50 mm	20	120 mm

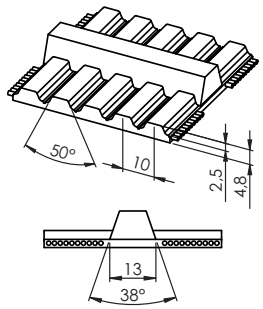
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 199

BELT CHARACTERISTICS

- Polyurethane self tracking timing belt with HPL steel tension cords
- Tooth profile according to ISO 17396
- Profile AT10 with central guide - K13 x 8 mm (+0/-1)
- Self tracking no need of pulley flanges
- Metric pitch 10 mm



STANDARD TOLERANCES

WIDTH TOLERANCE:	±0,5 [mm]
LENGTH TOLERANCE:	±0,2 [mm/m]
THICKNESS TOLERANCE:	±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		**50**
Allowable tensile load	F_{Tzul} [N]*	9600
Breaking load	F_{Br} [N]	35000
Specific spring rate	C_{spez} [N]	2400000
Weight	[kg/m]	0,40

Other widths are available on request

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	**idler d_{min}**	**z_{min}**	**idler d_{min}**
STANDARD	30	95 mm	30	180 mm

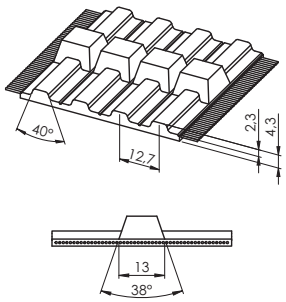
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 200

H K13

Elatech® M and V



BELT CHARACTERISTICS

- Polyurethane self tracking timing belt with steel tension cords
- Tooth profile according to UNI/ISO 5296
- Profile H with central guide - K13 x 6,5 mm (+0/-1)
- Self tracking no need of pulley flanges
- 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)

STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,5 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [inch]/[mm]		1,00 / 25,4	2,00 / 50,8	3,00 / 76,2	4,00 / 101,6	6,00 / 152,4
Allowable tensile load	F_{Tzul} [N]*	2760	5640	8510	11390	17370
Breaking load	F_{Br} [N]	10080	20580	31080	41580	63420
Specific spring rate	C_{spez} [N]	690000	1410000	2127500	2847500	4342500
Weight	[kg/m]	0,16	0,30	0,38	0,51	0,70

Other widths are available on request

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	20	80 mm	22	160 mm

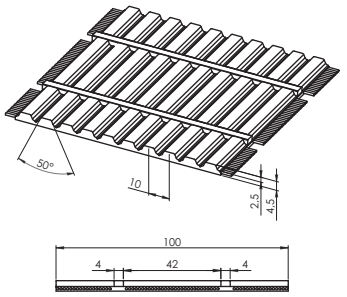
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 201

BELT CHARACTERISTICS

- Polyurethane self tracking timing belt available only with aramid tension cords
- Tooth profile according to ISO 17396
- Self tracking no need of pulley flanges
- Metric pitch 10 mm
- Allow to use small diameter pulley
- Grey fabric on tooth side (PAZ) as standard



STANDARD TOLERANCES

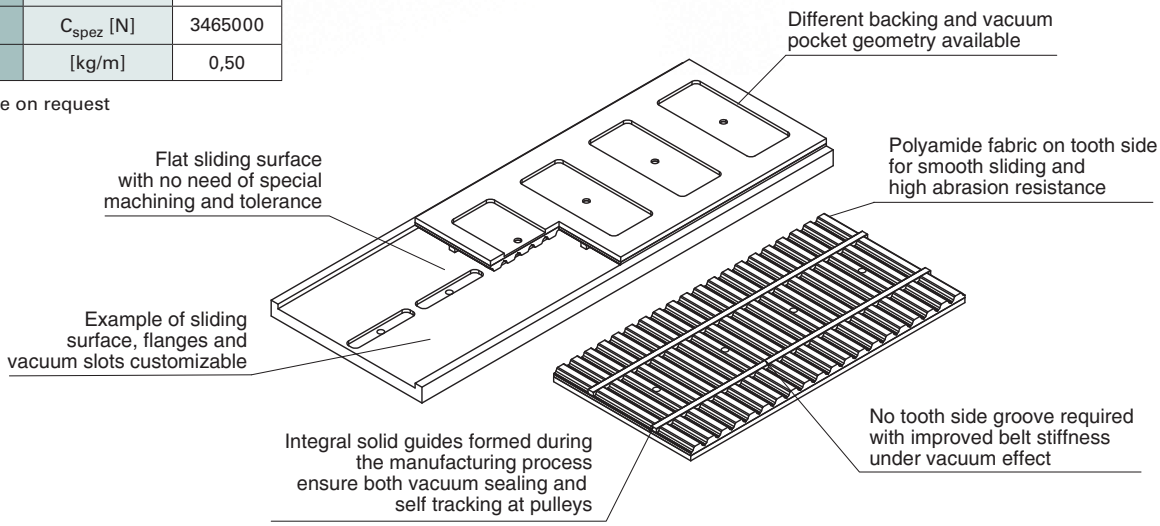
WIDTH TOLERANCE:	±0,5 [mm]
THICKNESS TOLERANCE:	±0,2 [mm]

TECHNICAL DATA

Standard aramid cord

Belt width b [mm]		100
Allowable tensile load	F_{Tzul} [N]*	13860
Breaking load	F_{Br} [N]	63000
Specific spring rate	C_{spez} [N]	3465000
Weight	[kg/m]	0,50

Other widths are available on request



Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	81,48	80,10	78,80	77,60	76,48	75,43	71,17	69,09	66,23	63,73	61,53	59,57	57,80	56,20	54,73	53,38

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	52,12	50,95	49,86	49,44	48,83	47,85	46,93	46,06	45,22	44,43	42,94	41,56	40,29	39,10	37,99	36,95

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	35,96	35,03	34,14	33,29	31,34	29,59	27,99	26,53	25,17	23,92	22,74	21,64	20,60	19,63	18,70	17,81

Flexibility

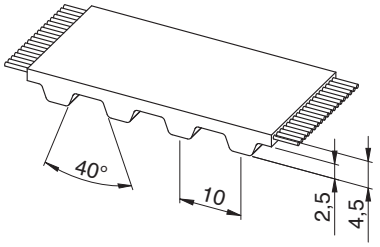
Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
ARAMID	17	50 mm	25	120 mm

Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Note
Special pulley profile required.
Contact Elatech® technical dept. for details.

T10
TOTAL PROTECTION - Elatech® M and V



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 environment, high humidity**
- Light blue colour available on request

STANDARD TOLERANCES

WIDTH TOLERANCE:	±0,5 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		10	16	25	32	50	75	100
Allowable tensile load	F_{Tzul} [N]*	920	1610	2650	3450	5520	8400	11270
Breaking load	F_{Br} [N]	3360	5880	9660	12600	20160	30660	41160
Specific spring rate	C_{spez} [N]	230000	402500	662500	862500	1380000	2100000	2817500
Weight	[kg/m]	0,05	0,07	0,11	0,15	0,23	0,34	0,45

Other widths are available on request

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	51,80	50,32	49,04	47,92	46,95	46,11	42,75	40,28	38,36	36,80	35,49	34,35	33,34	32,44	31,63	30,89

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	30,21	29,58	28,99	28,76	28,44	27,92	27,43	26,97	26,53	26,12	25,34	24,63	23,97	23,36	22,78	22,25

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	21,74	21,27	20,81	20,39	19,40	18,51	17,70	16,97	16,29	15,66	15,07	14,52	14,00	13,51	13,05	12,61

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	12	60 mm	20	60 mm

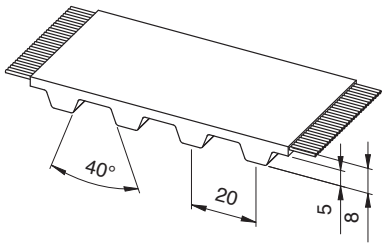
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 202

BELT CHARACTERISTICS

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 20 mm
- **TP (Total Protection) belt. The absence of tooth gap makes the belt cords protected against corrosion**
- **Widely used in applications with corrosive environment, high humidity**



STANDARD TOLERANCES

WIDTH TOLERANCE:	±0,5 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		50	100
Allowable tensile load	F_{Tzul} [N]*	8580	17400
Breaking load	F_{Br} [N]	33250	67450
Specific spring rate	C_{spez} [N]	2145000	4350000
Weight	[kg/m]	0,41	0,82

Other widths are available on request

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	104,50	101,10	98,15	95,58	93,35	91,41	83,50	77,84	73,49	69,96	66,98	64,41	62,15	60,13	58,31	56,64

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	55,11	53,70	52,38	51,87	51,14	49,98	48,89	47,86	46,88	45,94	44,20	42,61	41,13	39,77	38,49	37,29

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	-	-	-	-	-	-	-
F_{Uspez} [N/cm]	36,16	35,10	34,09	33,13	30,92	28,93	27,14	25,49	23,97	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	15	120 mm	25	120 mm

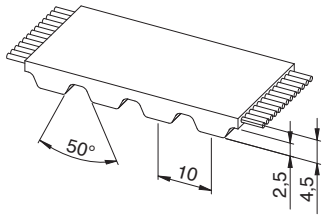
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 203

AT10

TOTAL PROTECTION - Elatech® M and V



STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,5 [mm]
LENGTH TOLERANCE: ±0,5 [mm/m]
THICKNESS TOLERANCE: ±0,2 [mm]

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
- **TP (Total Protection) belt. The absence of tooth gap makes the belt cords protected against corrosion**
- **Widely used in applications with corrosive environment, high humidity**
- Light blue colour available on request

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		16	25	32	50	75	100	120
Allowable tensile load	F_{Tzul} [N]*	2450	4170	5390	8580	12990	17400	20830
Breaking load	F_{Br} [N]	9500	16150	20900	33250	50350	67450	80750
Specific spring rate	C_{spez} [N]	612500	1042500	1347500	2145000	3247500	4350000	5207500
Weight	[kg/m]	0,09	0,15	0,19	0,30	0,44	0,59	0,71

Other widths are available on request

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	88,57	87,06	85,66	84,35	83,13	81,99	77,36	75,09	71,99	69,27	66,88	64,75	62,83	61,09	59,49	58,02

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	56,66	55,39	54,20	53,74	53,08	52,02	51,02	50,06	49,16	48,29	46,67	45,18	43,80	42,51	41,30	40,17

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	39,09	38,08	37,11	36,20	34,08	32,17	30,43	28,84	27,37	26,01	24,73	23,53	22,41	21,34	20,33	19,37

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	15	50 mm	25	120 mm

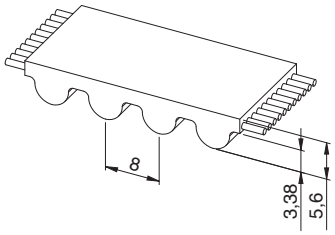
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 204

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 environment**
- Light blue colour available on request



STANDARD TOLERANCES

WIDTH TOLERANCE:	±0,5 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		10	15	20	30	50	85	100
Allowable tensile load	F_{Tzul} [N]*	1470	2210	3190	4660	8580	14700	17400
Breaking load	F_{Br} [N]	5700	8550	12350	18050	33250	57000	67450
Specific spring rate	C_{spez} [N]	367500	552500	797500	1165000	2145000	3675000	4350000
Weight	[kg/m]	0,07	0,11	0,14	0,21	0,35	0,60	0,70

Other widths are available on request

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	74,00	72,62	71,34	70,16	69,07	68,07	64,09	61,68	59,03	56,71	54,66	52,84	51,20	49,71	48,35	47,09

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	45,93	44,84	43,82	43,43	42,86	41,96	41,10	40,29	39,52	38,78	37,39	36,12	34,94	33,83	32,80	31,83

rpm	3400	3600	3800	4000	4500	5000	5500	6000	-	-	-	-	-	-	-	-
F_{Uspez} [N/cm]	30,91	30,05	29,22	28,44	26,63	25,00	23,51	22,15	-	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	18	50 mm	18	120 mm

Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

Timing pulleys → page 205

ELATECH® flat belts®

ELATECH® flat belt's superior construction makes them the best solution in a wide range of lifting applications. Compared to steel rope 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 meet the 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

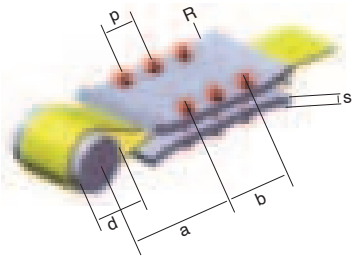
TP flat belts (without tooth gap) are available on demand. Ask our technical department for product specifications.

Belt life

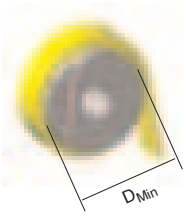
Due to the wide application range and considering the fact that belts are one component of complex equipment, the loads in the belt itself are very seldom precisely predictable. This fact makes it impossible to confirm a precise belt service life. In order to optimize the belt life, it is important to 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.

ELATECH® FLAT belt heavy series

These belts have 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.



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



Belt fastening guidelines

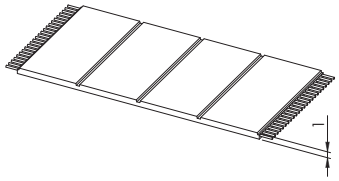
Belt width b [mm]	F1	F2	F2,5	F3
a	25	45	50	75
b	40	60	80	125
p	20	20	20	25
s	3	5	5	5
d	15	30	30	50
Bolt	M5	M6	M8	M8
R (Radius)	12	12	12	20

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

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

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



STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		10	20	30	40	50	100
Allowable tensile load	F_{Tzul} [N]*	320	700	1090	1470	1860	3780
Breaking load	F_{Br} [N]	1250	2750	4250	5750	7250	14750
Specific spring rate	C_{spez} [N]	80000	175000	272500	367500	465000	945000
Weight	[kg/m]	0,02	0,04	0,05	0,08	0,09	0,21

Other widths are available on request

Specialties

Belt width b [mm]		10	20	30	40	50	100
ARAMID CORD	F_{Tzul} [N]*	700	1540	2380	3220	4060	8260
	F_{Br} [N]	2800	6160	9520	12880	16240	33040
HFE High Flexibility	F_{Tzul} [N]*	360	790	1225	1655	2090	4250
	F_{Br} [N]	1500	3300	5100	6900	8700	17700

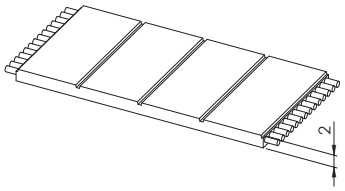
Flexibility

Minimum pulley diameter	Drive without reverse bending	Drive with reverse bending
	idler d_{min}	idler d_{min}
STANDARD	16 mm	30 mm
ARAMID	16 mm	30 mm
HFE	15 mm	15 mm

Elatech® V Joined informations
Allowable tensile load of joined belt is 50% of M - open end [*]

F2

Elatech® M and V



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

STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		10	15	25	30	50	75	100
Allowable tensile load	F_{Tzul} [N]*	1470	2210	4170	4660	8580	12990	17400
Breaking load	F_{Br} [N]	5700	8550	16150	18050	33250	50350	67450
Specific spring rate	C_{spez} [N]	367500	552500	1042500	1165000	2145000	3247500	4350000
Weight	[kg/m]	0,03	0,05	0,08	0,10	0,17	0,25	0,34

Other widths are available on request

Specialties

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

Flexibility

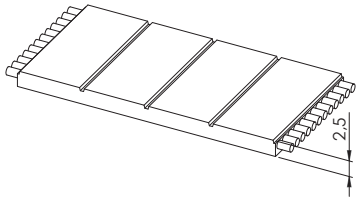
Minimum pulley diameter	Drive without reverse bending	Drive with reverse bending
	idler d_{min}	idler d_{min}
STANDARD	50 mm	100 mm
ARAMID	50 mm	100 mm
STAINLESS	70 mm	120 mm

Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

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



STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		20	25	50	75	100	120
Allowable tensile load	F_{Tzul} [N]*	5280	6720	14400	21600	29280	35040
Breaking load	F_{Br} [N]	19250	24500	52500	78750	106750	127750
Specific spring rate	C_{spez} [N]	1320000	1680000	3600000	5400000	7320000	8760000
Weight	[kg/m]	0,08	0,09	0,18	0,27	0,36	0,42

Other widths are available on request

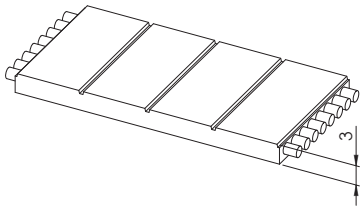
Flexibility

Minimum pulley diameter	Drive without reverse bending	Drive with reverse bending
	idler d_{min}	idler d_{min}
STANDARD	80 mm	150 mm

Elatech® V Joined informations
Allowable tensile load of joined belt is 50% of M - open end [*]

F3

Elatech® M and V



BELT CHARACTERISTICS

- Polyurethane flat belt with HPL 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

STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		25	30	60	120	150
Allowable tensile load	F_{Tzul} [N]*	8500	10200	21250	43350	53550
Breaking load	F_{Br} [N]	32000	38400	80000	163200	201600
Specific spring rate	C_{spez} [N]	2125000	2550000	5312500	10837500	13387500
Weight	[kg/m]	0,11	0,12	0,24	0,48	0,60

Other widths are available on request

Specialties

Belt width b [mm]		25	30	60	120	150
ARAMID CORD	F_{Tzul} [N]*	10000	12000	25000	51000	63000
	F_{Br} [N]	40000	48000	100000	204000	252000

Flexibility

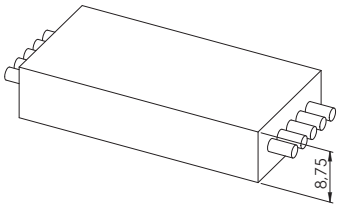
Minimum pulley diameter	Drive without reverse bending	Drive with reverse bending
	idler d_{min}	idler d_{min}
STANDARD	120 mm	180 mm
ARAMID	120 mm	180 m

Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

BELT CHARACTERISTICS

- Polyurethane flat belt with steel tension cords
- Long service life
- Maintenance free
- No cord exposed
- Black colour as standard



STANDARD TOLERANCES
WIDTH TOLERANCE: ±1,0 [mm]
THICKNESS TOLERANCE: ±0,5 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		75	150
Allowable tensile load	F_{Tzul} [N]	27500	55000
Breaking load	F_{Br} [N]	112500	225000
Specific spring rate	C_{spez} [N]	6875000	13750000
Weight	[kg/m]	0,93	1,85

Other widths are available on request

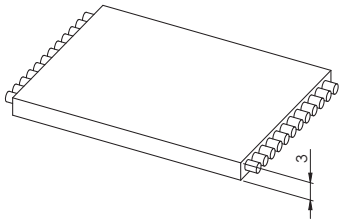
Specialties

Belt width b [mm]		75	90	150	180
HPL High Performance	F_{Tzul} [N]	34000	42000	72000	88000
	F_{Br} [N]	119000	147000	252000	308000
	C_{spez} [N]	8500000	10500000	18000000	22000000
	[kg/m]	1,10	1,60	2,30	2,80

Other widths are available on request

Flexibility

Minimum pulley diameter	Drive without reverse bending [mm]	Drive with reverse bending [mm]
	idler d_{min}	idler d_{min}
STANDARD	200	260
HPL	250	300



BELT CHARACTERISTICS

- Polyurethane flat belt with steel tension cords certified according to 2014/33EU
- Long service life
- Black colour as standard
- Maintenance free
- No cord exposed

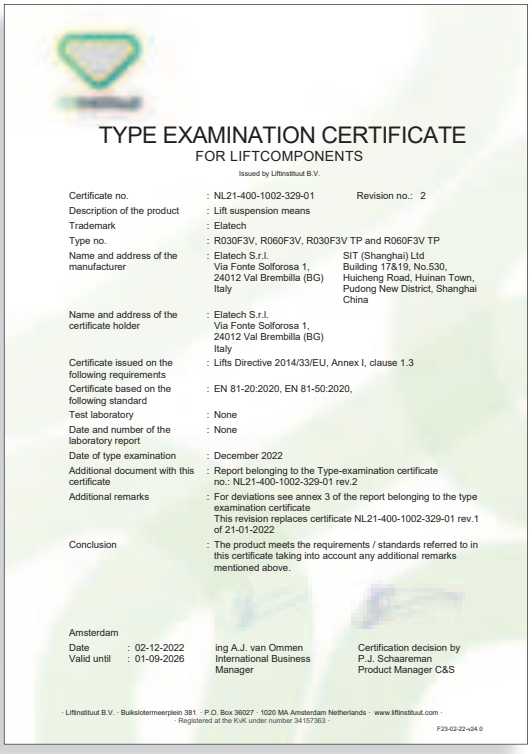
STANDARD TOLERANCES
WIDTH TOLERANCE: ±1,0 [mm]
THICKNESS TOLERANCE: ±0,5 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]		30	60
Breaking load	F_{Br} [N]	45000	90000
Weight	[kg/m]	0,24	0,48

Other widths are available on request



TYPE EXAMINATION CERTIFICATE
FOR LIFTCOMPONENTS
Issued by Liftinstituut B.V.

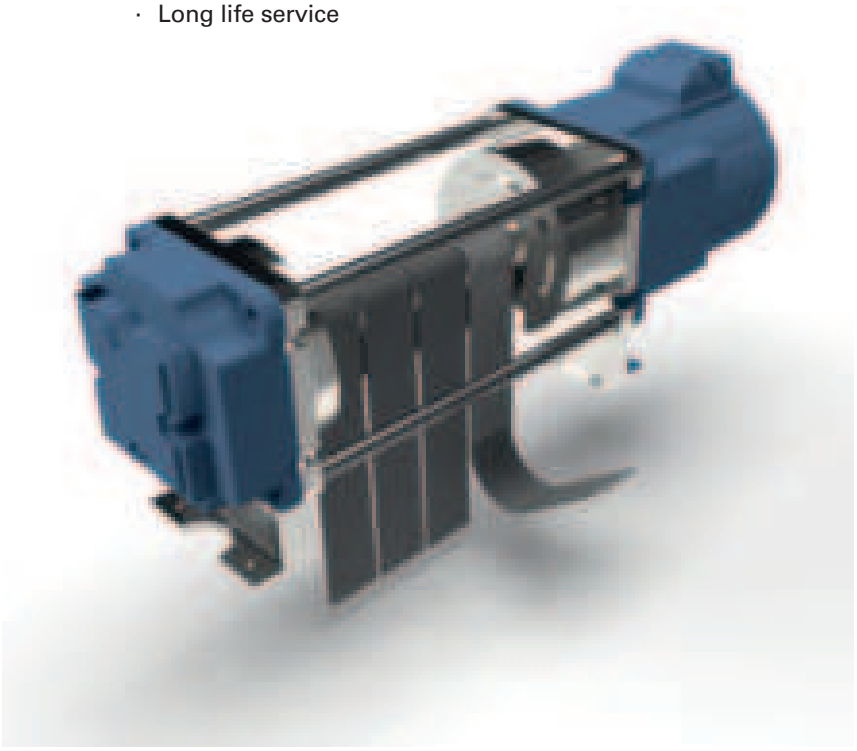
Certificate no.	: NL21-400-1002-329-01	Revision no.: 2
Description of the product	: Lift suspension means	
Trademark	: Elatech	
Type no.	: R030F3V, R060F3V, R030F3V TP and R060F3V TP	
Name and address of the manufacturer	: Elatech S.r.l. Via Fonte Solforosa 1, 24012 Val Brembilla (BG) Italy	SIT (Shanghai) Ltd Building 17&19, No.530, Huicheng Road, Huinan Town, Pudong New District, Shanghai China
Name and address of the certificate holder	: Elatech S.r.l. Via Fonte Solforosa 1, 24012 Val Brembilla (BG) Italy	
Certificate issued on the following requirements	: Lifts Directive 2014/33/EU, Annex I, clause 1.3	
Certificate based on the following standard	: EN 81-20:2020, EN 81-50:2020,	
Test laboratory	: None	
Date and number of the laboratory report	: None	
Date of type examination	: December 2022	
Additional document with this certificate	: Report belonging to the Type-examination certificate no.: NL21-400-1002-329-01 rev.2	
Additional remarks	: For deviations see annex 3 of the report belonging to the type examination certificate This revision replaces certificate NL21-400-1002-329-01 rev.1 of 21-01-2022	
Conclusion	: The product meets the requirements / standards referred to in this certificate taking into account any additional remarks mentioned above.	

Amsterdam
Date : 02-12-2022
Valid until : 01-09-2026
ing A.J. van Ommen
International Business Manager
Certification decision by
P.J. Schaareman
Product Manager C&S

· Liftinstituut B.V. · Buikslotermeerplein 381 · P.O. Box 36027 · 1020 MA Amsterdam Netherlands · www.liftinstituut.com ·
· Registered at the KvK under number 34157363 ·
F23-02-22-v24.0

BELTS ADVANTAGES

- Reduced pulley diameter
- Reduced encumbrance in the machine room
- No lubrication
- Low energy consumption
- Low noise level
- Abrasion resistance
- Long life service

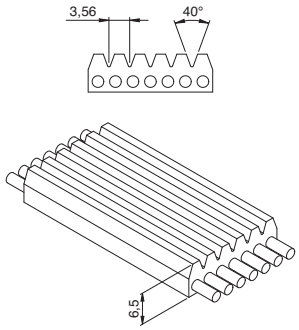


Flexibility

Minimum pulley diameter	Drive without reverse bending [mm]
	idler d_{min}
STANDARD	75

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



STANDARD TOLERANCES

WIDTH TOLERANCE:	±1,0 [mm]
THICKNESS TOLERANCE:	±0,4 [mm]

TECHNICAL DATA

Standard steel cord

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

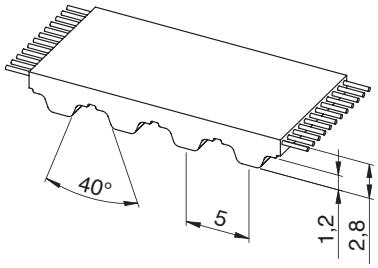
Other widths are available on request

Flexibility

Minimum pulley diameter	Drive without reverse bending [mm]	Drive with reverse bending [mm]
	idler d_{min}	idler d_{min}
STANDARD	150	250

TT5

Elatech® M and V



BELT CHARACTERISTICS

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

STANDARD TOLERANCES

WIDTH TOLERANCE:	±0,5 [mm]
LENGTH TOLERANCE:	±0,5 [mm/m]
THICKNESS TOLERANCE:	±0,2 [mm]

TECHNICAL DATA

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

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

Cords		ARAMID	STEEL
Belt width b [mm]		**10**	**10**
Allowable tensile load	F_{Tzul} [N]*	840	320
Breaking load	F_{Br} [N]	3360	1250
Weight	[kg/m]	0,019	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	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	12	30 mm	15	30 mm
ARAMID	12	30 mm	15	30 mm

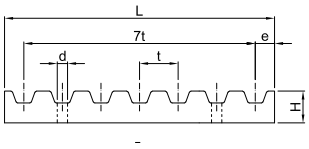
Elatech® V Joined informations

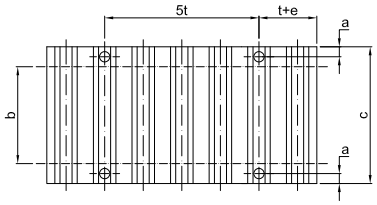
Allowable tensile load of joined belt is 50% of M - open end [*]

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 minimum of **12 teeth** in clamp is recommended.
EAGLE clamp plates are available as semi finished product.
Standard material for clamp plates is aluminium.



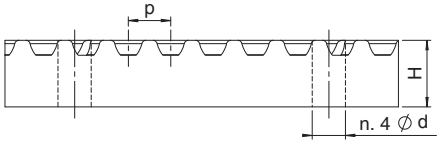


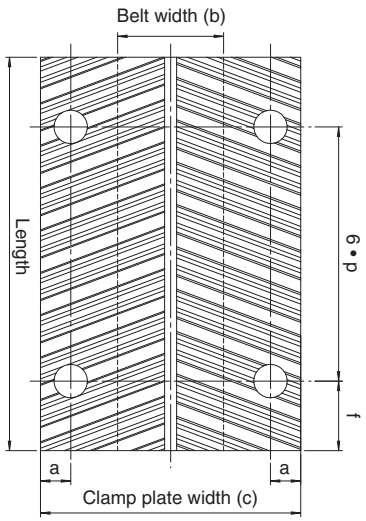
Type	a [mm]	d [mm]	e [mm]	L [mm]	H [mm]	Belt width - b [mm]							
						6	10	16	25	32	50	75	100
						Clamp plate width - c [mm]							
T5	6	5,5	3,2	41,8	8	-	29	35	44	-	-	-	-
AT5	6	5,5	3,2	41,8	8	-	29	35	44	-	-	-	-
T10	8	9	5	80	15	-	-	41	50	57	75	100	125
AT10	8	9	5	80	15	-	-	41	50	57	75	100	125
T20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

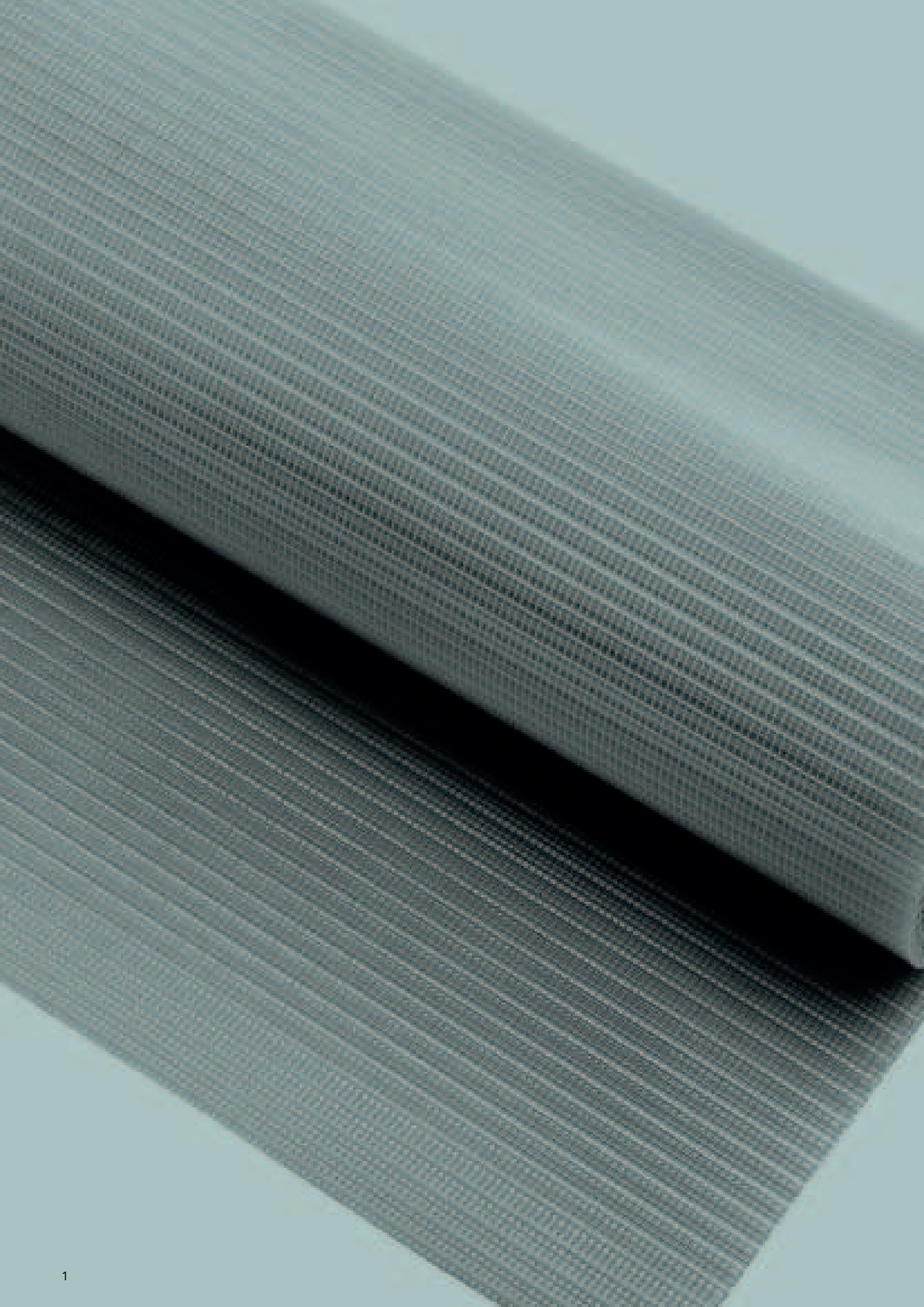
Type	a [mm]	d [mm]	e [mm]	L [mm]	H [mm]	Belt width - b [inch/100]							
						25	32	37	50	75	100	150	200
						Clamp plate width - c [mm]							
XL	6	5,5	3,5	42,5	8	25,5	27	28,5	-	-	-	-	-
L	8	9	6	76,6	15	-	-	36	39	45	51,5	64	77
H	10	11	9	106,9	22	-	-	-	45	51	57,5	70	83

Type	a [mm]	d [mm]	e [mm]	L [mm]	H [mm]	Belt width - b [mm]								
						15	20	25	30	40	50	55	85	115
						Clamp plate width - 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 b [mm]								
Pitch	a	d	f	Length [mm]	H	12,5	16	25	32	35	50	52,5	70	105
						Clamp plate width - c [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







Elatech® SYNCRO MAX®

ELATECH® SYNCRO MAX® – Extra-wide

ELATECH® SYNCRO MAX® Extra-wide Polyurethane Belts extend the advantages of synchronous timing belts to wider surfaces and to the typical applications of flat and modular conveyor belts.
Made of polyurethane and reinforced with aramid cords, ELATECH® SYNCRO MAX® Extra-wide Belts provide positive drive and synchronous conveying resulting in no slippage, better tracking, higher indexing/positioning precision, smaller drive pulley requirements, lower belt tension, lower shaft loads and consequently power saving.
Open or joined, coated with Silicon, Rubber, PU or PVC backings, perforated or grooved with complex design, and equipped with a wide range of tracking guides and profiles of different shapes and dimensions.
ELATECH® SYNCRO MAX® Extra-wide Belts offer the best solution for a great number of applications such as the production of baby diapers and feminine hygiene products and the production of tires as well as in many other industrial fields like food, tobacco, metal, wood, glass, and of course conveying and packaging.

Product overview

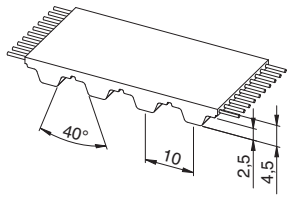
- Natural colour PU compound material
- High durability
- Cut resistant
- Grease, chemicals and water resistant
- Non-marking
- Kevlar (Aramid) parallel cord reinforcement
- No cords exposure on belt edges
- Even cord tension

Available options

- PU compound for food contact
- PAZ/PAR for noise reduction
- Tracking guides on teeth and/or on back
- Silicon, PU, PVC and rubber backings
- Wide range of cleats, flights and profiles
- Perforation by high precision water-jet cutting technology

BELT CHARACTERISTICS

- Polyurethane timing belt with aramid tension cords
- Tooth profile according to ISO 17396
- Metric pitch 10 mm
- Natural colour PU compound 92 Sh A
- Standard roll length = 50 m



STANDARD TOLERANCES
WIDTH TOLERANCE: ±1,0 [mm]
THICKNESS TOLERANCE: ±0,3 [mm]

TECHNICAL DATA

Standard aramid cord

Belt width b [mm]		250	300	350	400	450	500/510
Allowable tensile load	F_{Tzul} [N]*	10210	12280	14360	16430	18500	20570
Breaking load	F_{Br} [N]	39088	47016	54945	62874	70802	78731
Specific spring rate	C_{spez} [N]	1276250	1535000	1795000	2053750	2312500	2571250
Weight	[kg/m]	0,95	1,14	1,33	1,52	1,71	1,90

Other widths are available on request

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	51,80	50,32	49,04	47,92	46,95	46,11	42,75	40,28	38,36	36,80	35,49	34,35	33,34	32,44	31,63	30,89

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	30,21	29,58	28,99	28,76	28,44	27,92	27,43	26,97	26,53	26,12	25,34	24,63	23,97	23,36	22,78	22,25

rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	21,74	21,27	20,81	20,39	19,40	18,51	17,70	16,97	16,29	15,66	15,07	14,52	14,00	13,51	13,05	12,61

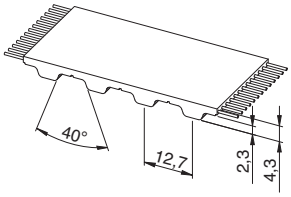
Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	15	60 mm	20	60 mm

Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]

W-H
SYNCRO MAX®



BELT CHARACTERISTICS

- Polyurethane timing belt with aramid tension cord
- Tooth profile according to UNI/ISO 5296
- Imperial pitch 1/2" = 12,7 mm
- Natural colour PU compound 92 Sh A
- Standard roll length = 50 m

STANDARD TOLERANCES
WIDTH TOLERANCE: ±1,0 [mm]
THICKNESS TOLERANCE: ±0,3 [mm]

TECHNICAL DATA

Standard aramid cord

Belt width b [inch]/[mm]		10 / 254	12 / 304,8	14 / 355,6	16 / 406,4	18 / 457,2	20 / 508
Allowable tensile load	F_{Tzul} [N]*	10210	12280	14360	16430	18500	20570
Breaking load	F_{Br} [N]	39088	47016	54945	62874	70802	78731
Specific spring rate	C_{spez} [N]	1276250	1535000	1795000	2053750	2312500	2571250
Weight	[kg/m]	0,90	1,05	1,24	1,42	1,60	1,80

Other widths are available on request

Tooth shear strength

rpm	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
F_{Uspez} [N/cm]	45,30	43,95	42,78	41,77	40,88	40,11	37,22	35,07	33,41	32,05	30,90	29,91	29,04	28,26	27,55	26,90

rpm	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
F_{Uspez} [N/cm]	26,31	25,76	25,25	25,05	24,77	24,32	23,89	23,49	23,11	22,74	22,07	21,44	20,87	20,34	19,84	19,37

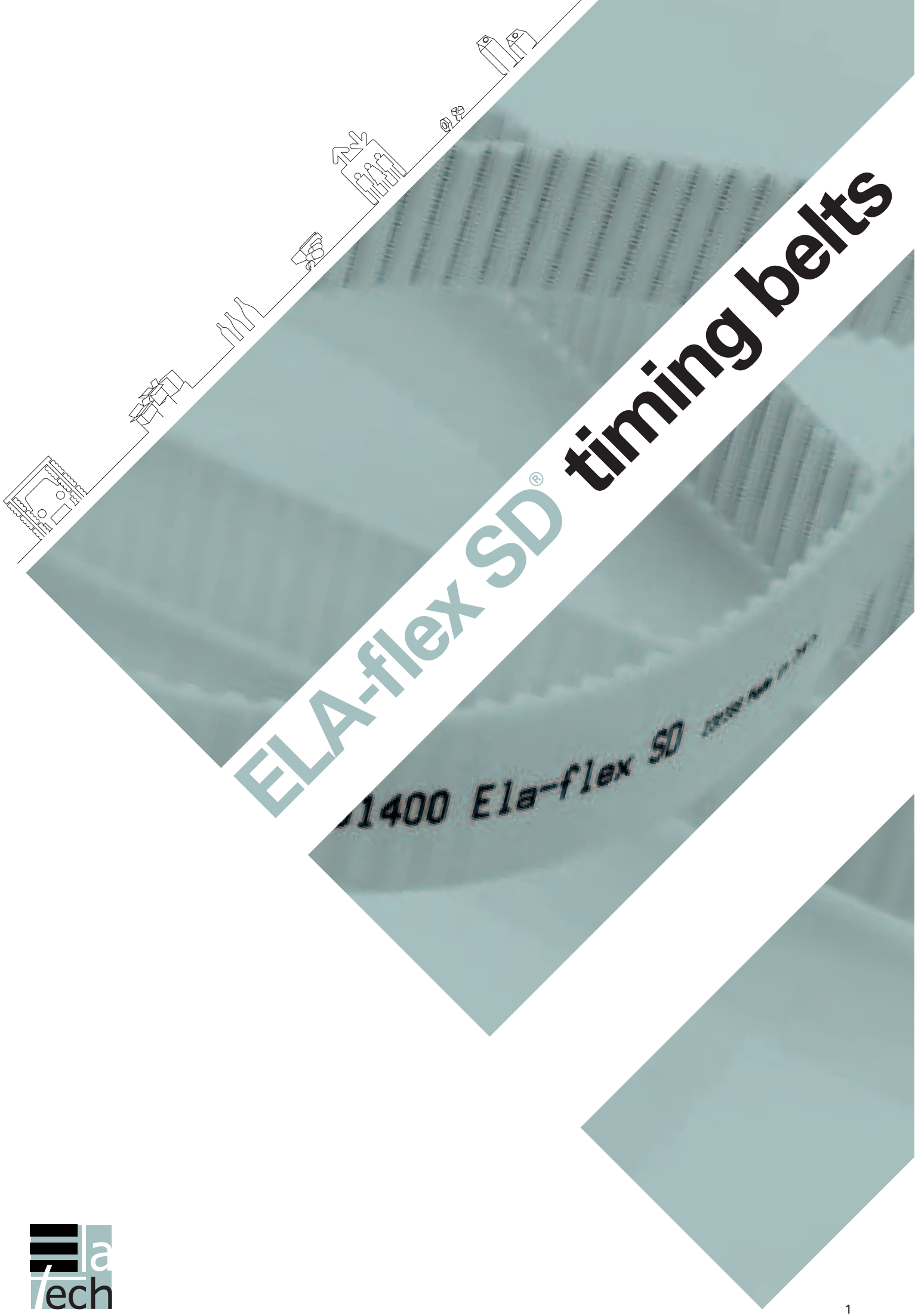
rpm	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
F_{Uspez} [N/cm]	18,93	18,51	18,12	17,75	16,88	16,11	15,41	14,76	14,17	13,62	13,11	12,63	12,18	11,75	11,35	10,96

Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	14	60 mm	20	80 mm

Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [*]


ELA-flex SD® timing belts
1400 Ela-flex SD

ELA-flex SD® Synchro Drive timing belts

ELA-flex SD® timing belts are manufactured with truly endless high tension strength steel tension cords and high wear, abrasion and tear resistant polyurethane.

Having no splice or welding, the belts have no weak cross sections. ELA-flex SD® timing belts are therefore ideal for high speed power transmission and high load conveying applications.

The unique high tech manufacturing process designed by our research and development allows the production of every belt length, tooth by tooth from a **minimum 800 mm** to a maximum of 24.000 mm to permit the best flexibility in application.

Double sided timing belts
On demand it is possible to supply ELA-flex SD® as double sided belts. Please ask for the minimum quantity.

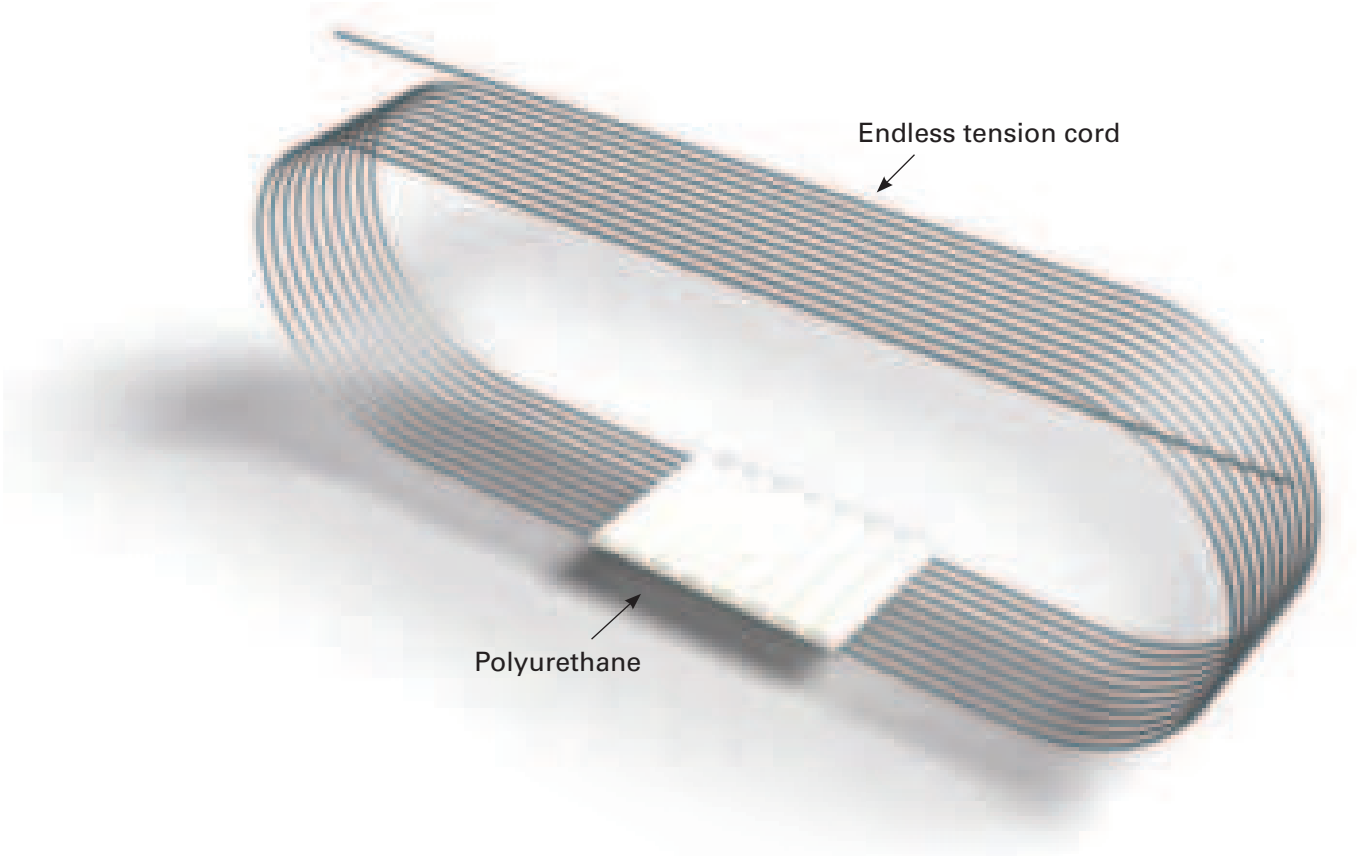
STANDARD CORD	HFE CORD	HPL CORD
		

Special cords
In order to solve any design needs, ELA-flex SD® belts may be produced with special cords:

HPL high performance
HFE high flexibility
INOX stainless steel for high aggressive environments
ARAMID low weight, non magnetic
(Bifilar cords construction available on request)

Antistatic belts
On request it is possible to deliver ELA-flex SD® belts with anti-static properties by using a specific electrically conductive coating or a special compound. A minimum quantity is applied.

Product certification
· ELATECH® belts are certified according to RoHS 2011/65/UE



Thickness and width tolerance

Standard ELA-flex SD® belts are ground on the back and are manufactured at precise width (see technical tables).

For special application needs, special thickness and width tolerances can be produced.

Length tolerances

Belt length [mm]	Length tolerance (+/-) [mm]	Belt length [mm]	Length tolerance (+/-) [mm]
900	0,75	4000	2,11
1100	0,85	4250	2,24
1300	0,95	4500	2,32
1500	1,04	4750	2,40
1700	1,13	5000	2,52
1900	1,22	5300	2,64
2120	1,30	5600	2,72
2240	1,35	6000	2,92
2360	1,44	6300	3,04
2500	1,49	6700	3,19
2650	1,57	7100	3,35
2800	1,61	7500	3,51
3000	1,70	8000	3,70
3550	1,91	9000	4,09
3750	2,03	more	on request

Belt designation

Ordering example “AT” metric pitch:

ELA-flex SD® metric pitch **F 075 AT20 A 11200 / Z**

- F = ELA-flex SD® Belt
- 075 = Width mm (3 digits)
- AT20 = Profile “AT” pitch 20 mm
- A = A= steel cords; S= stainless steel cords; K= aramid cords; F= high flexibility cords; H= high flexibility and performance cords; P= high power cords
- 11200 = Length 11200 mm (5 digits)
- Z = Z= fabric on teeth (PAZ); R= fabric on back (PAR); D= fabric PAZ + PAR

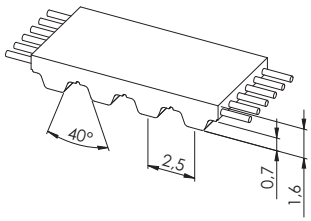
Ordering example “H” inch pitch:

ELA-flex SD® inch pitch **F 200 H A 01702 / Z**

- F = ELA-flex SD® Belt
- 200 = Width (x 0,254 = mm) - 3 digits
- H = Profile “H”
- A = A= steel cords; S= stainless steel cords; K= aramid cords; F= high flexibility cords; H= high flexibility and performance cords; P= high power cords
- 01702 = Length 1702 mm (5 digits)
- Z = Z= fabric on teeth (PAZ); R= fabric on back (PAR); D= fabric PAZ + PAR

T2,5

ELA-flex SD®



BELT CHARACTERISTICS

- Truly endless 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
- Allows the use of small diameter pulleys

STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,3 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	4	6	10	20	50	100
Allowable tensile load [N]	128	224	352	736	1856	3744
Weight [kg/m]	0,004	0,007	0,011	0,022	0,055	0,110

Other widths are available on request

Specialties

Belt width b [mm]		4	6	10	20	50	100
ARAMID	F_{Tzul} [N]	280	490	770	1610	4060	8190

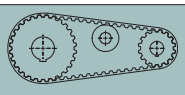
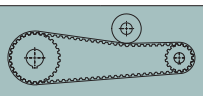
Tooth shear strength

rpm [min⁻¹]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	0,362	0,349	0,339	0,330	0,324	0,318	0,294	0,278	0,267	0,258	0,250	0,244	0,238	0,233	0,229	0,225
P_{spez} [W/cm]	0,000	0,007	0,014	0,021	0,027	0,033	0,062	0,087	0,112	0,135	0,157	0,179	0,199	0,220	0,239	0,259

rpm [min⁻¹]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	0,221	0,217	0,214	0,213	0,211	0,208	0,206	0,203	0,201	0,199	0,194	0,191	0,187	0,184	0,181	0,178
P_{spez} [W/cm]	0,277	0,296	0,314	0,321	0,332	0,349	0,366	0,383	0,399	0,416	0,448	0,479	0,509	0,539	0,567	0,596

rpm [min⁻¹]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	0,175	0,173	0,170	0,168	0,163	0,158	0,154	0,150	0,146	0,143	0,140	0,137	0,134	0,131	0,129	0,127
P_{spez} [W/cm]	0,623	0,650	0,677	0,703	0,766	0,827	0,885	0,940	0,994	1,046	1,097	1,146	1,193	1,239	1,283	1,725

Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	15	15 mm	18	18 mm
ARAMID	15	15 mm	18	18 mm

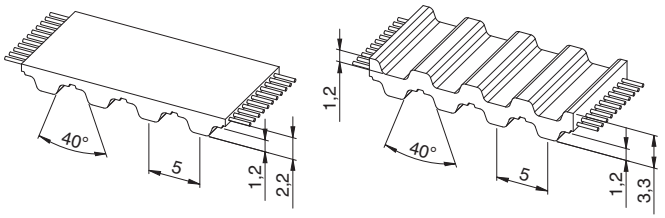
Min. available length

Max width	Execution	
	Standard	PAZ
100 mm	≥ 800 mm	≥ 900 mm
150 mm	≥ 1600 mm	≥ 1800 mm

Timing pulleys → page 160

BELT CHARACTERISTICS

- Truly endless 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 required
- Allows the use of small diameter pulleys
- Transmissible power up to 5 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**



STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	10	16	25	32	50	75	100	150
Allowable tensile load [N]	384	610	930	1215	1890	2815	3775	5665
Weight [kg/m]	0,02	0,03	0,05	0,07	0,11	0,16	0,21	0,32

Other widths are available on request

Specialties

Belt width b [mm]		10	16	25	32	50	75	100	150
ARAMID CORD	F_{Tzul} [N]	770	1260	2030	2590	4060	6160	8260	12320
STAINLESS STEEL	F_{Tzul} [N]	220	360	580	740	1160	1760	2340	3520
HFE High Flexibility	F_{Tzul} [N]	396	648	1044	1332	2088	3160	4212	6336

Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	1,966	1,915	1,872	1,834	1,802	1,773	1,663	1,583	1,520	1,468	1,425	1,388	1,354	1,325	1,299	1,274
P_{spez} [W/cm]	0,000	0,040	0,078	0,115	0,151	0,186	0,348	0,497	0,637	0,769	0,895	1,017	1,135	1,249	1,360	1,467

rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	1,252	1,231	1,211	1,204	1,194	1,176	1,160	1,145	1,131	1,116	1,091	1,068	1,046	1,026	1,007	0,989
P_{spez} [W/cm]	1,573	1,676	1,776	1,815	1,875	1,971	2,065	2,158	2,250	2,338	2,513	2,684	2,847	3,007	3,162	3,314

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	0,972	0,957	0,942	0,928	0,895	0,866	0,840	0,815	0,793	0,772	0,753	0,735	0,717	0,701	0,686	0,672
P_{spez} [W/cm]	3,462	3,609	3,749	3,886	4,218	4,533	4,835	5,120	5,395	5,658	5,912	6,153	6,382	6,607	6,824	7,033

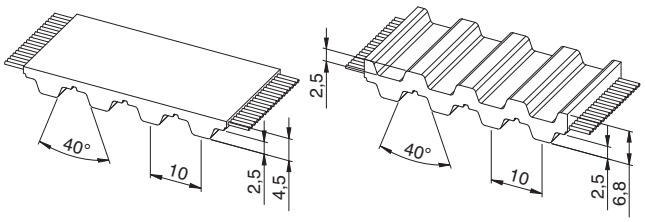
Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	10	30 mm	15	30 mm
ARAMID	10	30 mm	15	30 mm
STAINLESS	15	30 mm	20	40 mm
HFE	10	30 mm	15	30 mm

Min. available length

Max width	Execution	
	Standard	PAZ
100 mm	≥ 800 mm	≥ 900 mm
150 mm	≥ 1600 mm	≥ 1800 mm

Timing pulleys → page 161



BELT CHARACTERISTICS

- Truly endless 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 required
- Allows the use of small diameter pulleys
- Transmissible power up to 30 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**

STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	10	16	25	32	50	75	100	150
Allowable tensile load [N]	1150	1840	2760	3570	5640	8400	11160	16790
Weight [kg/m]	0,05	0,07	0,12	0,15	0,23	0,35	0,46	0,69

Other widths are available on request

Specialties

Belt width b [mm]		10	16	25	32	50	75	100	150
ARAMID CORD	F_{Tzul} [N]	770	1210	1980	2530	3960	6050	8030	12100
STAINLESS STEEL	F_{Tzul} [N]	675	1125	1800	2325	3600	5475	7275	10950
HFE High Flexibility	F_{Tzul} [N]	1080	1800	2880	3720	5760	8670	11640	17520
HPL High Performance	F_{Tzul} [N]	1470	2695	4165	5390	8330	12740	16905	25480

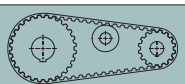
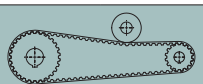
Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	8,244	8,009	7,805	7,627	7,472	7,339	6,804	6,411	6,105	5,857	5,648	5,467	5,306	5,163	5,034	4,916
P_{spez} [W/cm]	0,000	0,168	0,327	0,479	0,626	0,768	1,425	2,014	2,557	3,066	3,549	4,007	4,445	4,866	5,271	5,663

rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	4,808	4,708	4,614	4,577	4,526	4,444	4,366	4,292	4,222	4,157	4,033	3,920	3,815	3,718	3,626	3,541
P_{spez} [W/cm]	6,042	6,409	6,764	6,902	7,109	7,445	7,771	8,090	8,401	8,706	9,291	9,851	10,386	10,901	11,389	11,866

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	3,460	3,385	3,312	3,245	3,088	2,946	2,817	2,701	2,593	2,492	2,398	2,311	2,228	2,150	2,077	2,007
P_{spez} [W/cm]	12,318	12,761	13,179	13,592	14,549	15,424	16,224	16,969	17,646	18,269	18,836	19,359	19,832	20,264	20,661	21,015

Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	12	60 mm	20	60 mm
ARAMID	15	60 mm	20	60 mm
STAINLESS	15	60 mm	25	70 mm
HFE	10	50 mm	15	50 mm
HPL	15	100 mm	30	100 mm

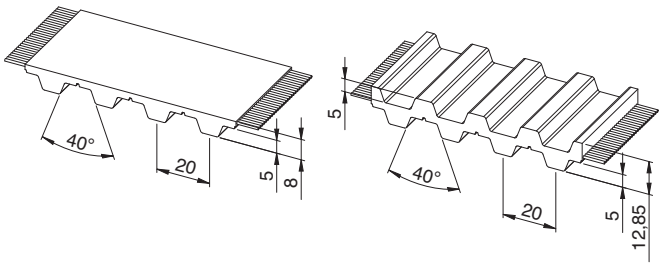
Min. available length

Max width	Execution	
	Standard	PAZ
100 mm	≥ 800 mm	≥ 900 mm
150 mm	≥ 1600 mm	≥ 1800 mm

Timing pulleys → page 162

BELT CHARACTERISTICS

- Truly endless 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 required
- Transmissible power up to 100 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**
- **HPL cord execution available**



STANDARD TOLERANCES
WIDTH TOLERANCE: ±1,0 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	25	32	50	75	100	150
Allowable tensile load [N]	4165	5390	8330	12740	16905	25480
Weight [kg/m]	0,18	0,23	0,37	0,55	0,73	1,10

Other widths are available on request

Specialties

Belt width b [mm]		25	32	50	75	100	150
ARAMID CORD	F_{Tzul} [N]	3080	4180	6380	9680	12980	19580
STAINLESS STEEL	F_{Tzul} [N]	3060	3960	6120	9360	12420	18720
HFE High Flexibility	F_{Tzul} [N]	3400	4400	6800	10400	13800	20800

Tooth shear strength

rpm [min⁻¹]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	33,263	32,181	31,242	30,424	29,714	29,097	26,579	24,777	23,393	22,269	21,320	20,502	19,783	19,140	18,561	18,029
P_{spez} [W/cm]	0,000	0,674	1,309	1,911	2,489	3,047	5,566	7,783	9,798	11,659	13,395	15,028	16,572	18,038	19,435	20,766

rpm [min⁻¹]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	17,542	17,093	16,673	16,511	16,278	15,909	15,562	15,234	14,922	14,623	14,069	13,563	13,092	12,659	12,252	11,870
P_{spez} [W/cm]	22,042	23,268	24,442	24,896	25,568	26,654	27,702	28,714	29,689	30,624	32,411	34,086	35,643	37,116	38,487	39,773

rpm [min⁻¹]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	11,510	11,173	10,851	10,546	9,842	9,209	8,639	8,114	7,630	-	-	-	-	-	-	-
P_{spez} [W/cm]	40,978	42,117	43,178	44,170	46,377	48,213	49,753	50,976	51,931	-	-	-	-	-	-	-

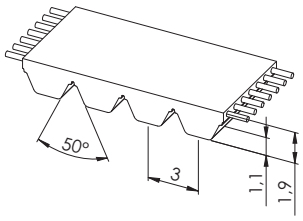
Flexibility

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

Min. available length

Max width	Execution	
	Standard	PAZ
100 mm	≥ 900 mm	≥ 900 mm
150 mm	≥ 1600 mm	≥ 1800 mm

Timing pulleys → page 163



BELT CHARACTERISTICS

- Truly endless 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 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 vibration & noise
- Transmissible power up to 5 kW
- **Max. length 2400 mm**

STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	8	10	12	16	20	25	32	50	75	100
Allowable tensile load [N]	225	290	350	480	610	770	990	1535	2305	3105
Weight [kg/m]	0,018	0,022	0,026	0,035	0,044	0,054	0,070	0,108	0,162	0,216

Other widths are available on request

Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	1,550	1,530	1,520	1,500	1,490	1,470	1,420	1,390	1,360	1,320	1,290	1,250	1,224	1,196	1,170	1,147
P_{spez} [W/cm]	0,000	0,032	0,064	0,094	0,125	0,154	0,298	0,437	0,571	0,693	0,809	0,919	1,025	1,127	1,226	1,321

rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	1,124	1,104	1,084	1,077	1,066	1,048	1,031	1,016	1,001	0,986	0,959	0,934	0,911	0,889	0,868	0,849
P_{spez} [W/cm]	1,413	1,502	1,589	1,623	1,674	1,756	1,836	1,914	1,991	2,065	2,209	2,347	2,479	2,606	2,728	2,845

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	0,831	0,814	0,797	0,782	0,746	0,713	0,683	0,656	0,631	0,607	0,585	0,565	0,545	0,527	0,510	0,493
P_{spez} [W/cm]	2,958	3,068	3,173	3,274	3,513	3,733	3,935	4,122	4,293	4,452	4,597	4,732	4,855	4,967	5,070	5,164

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	15	20 mm	20	20 mm

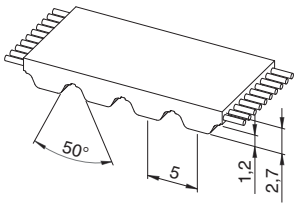
Min. available length

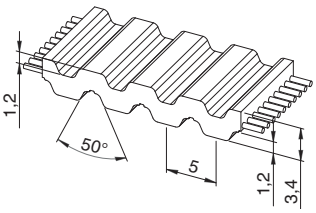
Max width	Execution	
	Standard	PAZ
100 mm	≥ 800 mm	≥ 900 mm

Timing pulleys → page 164

BELT CHARACTERISTICS

- Truly endless 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 vibration & noise
- Transmissible power up to 15 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**





STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	10	16	25	32	50	75	100	150
Allowable tensile load [N]	1150	1840	2760	3570	5640	8400	11160	16790
Weight [kg/m]	0,03	0,05	0,08	0,11	0,17	0,25	0,33	0,50

Other widths are available on request

Specialties

Belt width b [mm]		10	16	25	32	50	75	100	150
ARAMID CORD	F_{Tzul} [N]	770	1210	1980	2530	3960	6050	8030	12100
STAINLESS STEEL	F_{Tzul} [N]	525	825	1350	1725	2700	4125	5475	8250
HFE High Flexibility	F_{Tzul} [N]	840	1320	2160	2760	4320	6600	8760	13200
HPL High Performance	F_{Tzul} [N]	1270	2030	3040	3930	6200	9240	12280	18470

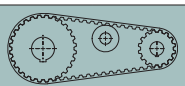
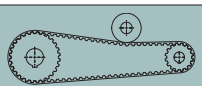
Tooth shear strength

rpm [min⁻¹]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	2,897	2,855	2,817	2,783	2,753	2,725	2,62	2,54	2,458	2,383	2,317	2,258	2,204	2,153	2,108	2,066
P_{spez} [W/cm]	0,000	0,060	0,118	0,175	0,231	0,285	0,549	0,798	1,030	1,248	1,456	1,655	1,846	2,029	2,207	2,379

rpm [min⁻¹]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	2,027	1,990	1,955	1,942	1,923	1,892	1,863	1,836	1,809	1,784	1,736	1,693	1,653	1,615	1,580	1,546
P_{spez} [W/cm]	2,547	2,709	2,866	2,929	3,020	3,170	3,316	3,460	3,599	3,736	4,000	4,256	4,500	4,734	4,962	5,181

rpm [min⁻¹]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	1,514	1,485	1,456	1,429	1,367	1,311	1,260	1,213	1,169	1,128	1,091	1,055	1,023	0,991	0,961	0,933
P_{spez} [W/cm]	5,391	5,598	5,795	5,986	6,442	6,862	7,255	7,619	7,957	8,271	8,568	8,839	9,101	9,337	9,555	9,766

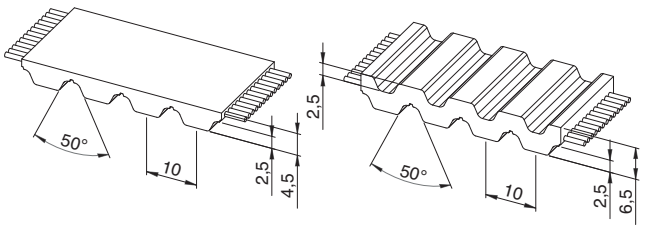
Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	15	30 mm	25	60 mm
ARAMID	15	30 mm	25	60 mm
STAINLESS	18	40 mm	25	65 mm
HFE	15	25 mm	20	50 mm
HPL	25	40 mm	25	60 mm

Min. available length

Max width	Execution	
	Standard	PAZ
100 mm	≥ 800 mm	≥ 900 mm
150 mm	≥ 1600 mm	≥ 1800 mm

Timing pulleys → page 165



STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

BELT CHARACTERISTICS

- Truly endless 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 vibration & noise
- Transmissible power up to 70 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**
- **HPL cord execution available**

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	16	25	32	50	75	100	150
Allowable tensile load [N]	2695	4165	5390	8330	12740	16905	25480
Weight [kg/m]	0,09	0,14	0,18	0,29	0,43	0,57	0,86

Other widths are available on request

Specialties

Belt width b [mm]		16	25	32	50	75	100	150
ARAMID CORD	F_{Tzul} [N]	1980	3080	4180	6380	9680	12980	19580
STAINLESS STEEL	F_{Tzul} [N]	1980	3060	3960	6120	9360	12420	18720
HFE High Flexibility	F_{Tzul} [N]	2200	3400	4400	6800	10400	13800	20800
HPL High Performance	F_{Tzul} [N]	3360	5760	7200	11520	17280	23040	34560

Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	14,096	13,856	13,633	13,424	13,23	13,049	12,312	11,951	11,457	11,025	10,644	10,305	10,000	9,723	9,469	9,235
P_{spez} [W/cm]	0,000	0,290	0,571	0,843	1,108	1,366	2,578	3,754	4,799	5,772	6,687	7,553	8,377	9,163	9,915	10,637

rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	9,018	8,815	8,626	8,553	8,447	8,279	8,119	7,968	7,824	7,686	7,429	7,191	6,971	6,766	6,573	6,393
P_{spez} [W/cm]	11,331	12,000	12,645	12,897	13,268	13,871	14,454	15,018	15,566	16,097	17,113	18,072	18,978	19,836	20,649	21,420

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	6,222	6,060	5,907	5,761	5,424	5,120	4,844	4,591	4,357	4,139	3,936	3,746	3,566	3,397	3,236	3,084
P_{spez} [W/cm]	22,152	22,846	23,504	24,130	25,557	26,807	27,897	28,841	29,652	30,339	30,912	31,377	31,742	32,012	32,193	32,289

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	15	50 mm	25	120 mm
ARAMID	15	50 mm	20	120 mm
STAINLESS	20	70 mm	40	120 mm
HFE	12	50 mm	20	80 mm
HPL	25	80 mm	25	150 mm

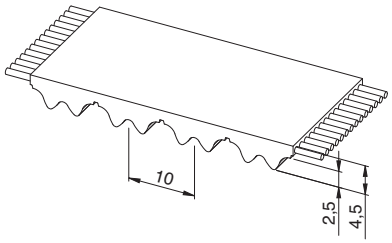
Min. available length

Max width	Execution	
	Standard	PAZ
100 mm	≥ 800 mm	≥ 900 mm
150 mm	≥ 1600 mm	≥ 1800 mm

Timing pulleys → page 166

BELT CHARACTERISTICS

- Truly endless 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 vibration & noise
- Transmissible power up to 70 kW
- **Max. length 2400 mm**



STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	16	25	32	50	75	100
Allowable tensile load [N]	2430	4040	5120	8090	12400	16440
Weight [kg/m]	0,09	0,14	0,18	0,29	0,43	0,57

Other widths are available on request

Specialties

Belt width b [mm]		16	25	32	50	75	100
ARAMID CORD	F_{Tzul} [N]	1980	3080	4180	6380	9680	12980

Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	15,510	15,220	14,950	14,700	14,470	14,260	13,410	13,150	12,600	12,130	11,710	11,340	11,000	10,690	10,420	10,160
P_{spez} [W/cm]	0,000	0,320	0,630	0,920	1,210	1,490	2,810	4,130	5,280	6,350	7,360	8,310	9,210	10,080	10,910	11,700

rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	9,920	9,700	9,490	9,410	9,290	9,110	8,930	8,760	8,610	8,450	8,170	7,910	7,670	7,440	7,230	7,030
P_{spez} [W/cm]	12,460	13,200	13,910	14,190	14,590	15,260	15,900	16,520	17,120	17,710	18,820	19,880	20,880	21,820	22,710	23,560

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	6,840	6,670	6,500	6,340	5,970	5,630	5,330	5,050	4,790	4,550	4,330	4,120	3,920	3,740	3,560	3,390
P_{spez} [W/cm]	24,370	25,130	25,850	26,540	28,110	29,490	30,690	31,730	32,620	33,370	34,000	34,510	34,920	35,210	35,410	35,520

Flexibility

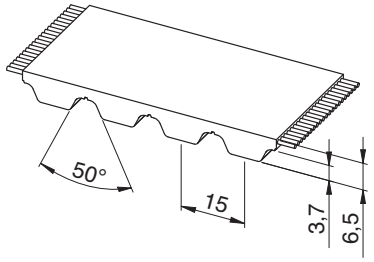
Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	15	50 mm	25	120 mm
ARAMID	15	50 mm	20	120 mm

Min. available length

Max width	Execution	
	Standard	PAZ
100 mm	≥ 800 mm	≥ 900 mm

Note
Special pulley profile required.
Contact Elatech® technical dept. for details.

AT15
ELA-flex SD®



BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords.
- Metric pitch 15 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 vibration & noise
- Transmissible power up to 200 kW

STANDARD TOLERANCES
WIDTH TOLERANCE: ±1,0 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	25	32	50	75	100	150
Allowable tensile load [N]	5760	7200	11520	17280	23040	34560
Weight [kg/m]	0,22	0,28	0,44	0,66	0,88	1,33

Other widths are available on request

Specialties

Belt width b [mm]		25	32	50	75	100	150
ARAMID CORD	F_{Tzul} [N]	3080	4180	6380	9680	12980	19580

Tooth shear strength

rpm [min⁻¹]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	34,33	33,874	33,435	33,012	32,606	32,217	30,489	27,999	26,49	25,174	24,019	22,992	22,068	21,230	20,467	19,760
P_{spez} [W/cm]	0,000	0,709	1,400	2,074	2,731	3,374	6,385	8,795	11,095	13,180	15,090	16,853	18,487	20,008	21,431	22,760

rpm [min⁻¹]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	19,103	18,495	17,922	17,704	17,385	16,878	16,399	15,940	15,508	15,093	14,317	13,603	12,939	12,323	11,746	11,201
P_{spez} [W/cm]	24,004	25,176	26,273	26,696	27,306	28,278	29,191	30,044	30,854	31,608	32,981	34,186	35,227	36,131	36,897	37,533

rpm [min⁻¹]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	10,688	10,203	9,740	9,301	8,289	7,377	6,546	5,784	-	-	-	-	-	-	-	-
P_{spez} [W/cm]	38,052	38,463	38,757	38,957	39,057	38,622	37,700	36,342	-	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	25	120 mm	40	180 mm
ARAMID	25	120 mm	35	180 mm

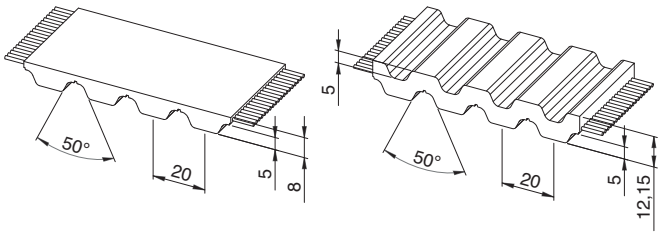
Min. available length

Max width	Execution	
	Standard	PAZ
150 mm	≥ 1600 mm	≥ 1800 mm

Note
Special pulley profile required.
Contact Elatech® technical dept. for details.

BELT CHARACTERISTICS

- Truly endless 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 minmum deformation under load
- High resistance and low stretch steel cords to guarantee high stability and low elongation
- Reduced polygonal effect with reduced vibration & noise
- Transmissible power up to 200 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**



STANDARD TOLERANCES
WIDTH TOLERANCE: ±1,0 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	25	32	50	75	100	150
Allowable tensile load [N]	5760	7200	11520	17280	23040	34560
Weight [kg/m]	0,24	0,31	0,48	0,73	0,97	1,45

Other widths are available on request

Specialties

Belt width b [mm]		25	32	50	75	100	150
ARAMID CORD	F_{Tzul} [N]	3080	4180	6380	9680	12980	19580
STAINLESS STEEL	F_{Tzul} [N]	3600	4500	7200	10800	14400	21600
HFE High Flexibility	F_{Tzul} [N]	5520	6900	11040	16560	22080	33120
HPL High Performance	F_{Tzul} [N]	7650	10200	16150	24650	32300	49300

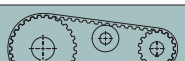
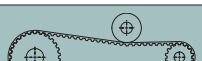
Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	48,192	47,288	46,438	45,639	44,885	44,175	41,199	38,923	36,911	35,157	33,617	32,248	31,016	29,899	28,880	27,938
P_{spez} [W/cm]	0,000	0,990	1,945	2,867	3,760	4,626	8,628	12,227	15,460	18,407	21,120	23,637	25,982	28,177	30,241	32,180

rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	27,063	26,251	25,487	25,197	24,771	24,096	23,456	22,845	22,269	21,715	20,681	19,729	18,844	18,023	17,252	16,527
P_{spez} [W/cm]	34,006	35,734	37,363	37,994	38,907	40,370	41,755	43,059	44,305	45,477	47,641	49,58	51,303	52,841	54,196	55,377

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	15,842	15,196	14,579	13,993	12,643	11,427	10,320	9,304	-	-	-	-	-	-	-	-
P_{spez} [W/cm]	56,402	57,284	58,009	58,609	59,576	59,829	59,432	58,456	-	-	-	-	-	-	-	-

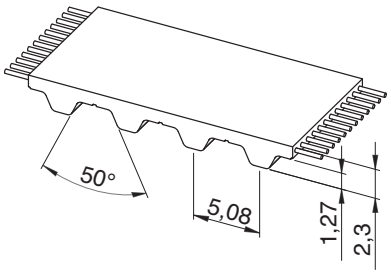
Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	18	120 mm	25	180 mm
ARAMID	18	120 mm	25	160 mm
STAINLESS	20	125 mm	30	200 mm
HFE	18	120 mm	25	150 mm
HPL	25	160 mm	25	250 mm

Min. available length

Max width	Execution	
	Standard	PAZ
100 mm	≥ 900 mm	≥ 900 mm
150 mm	≥ 1600 mm	≥ 1800 mm

Timing pulleys → page 169



BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to UNI/ISO 5296
- Imperial pitch 1/5" = 5,08 mm
- Allow to use small diameter pulley
- Transmissible power up to 5 kW

STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [inch]/[mm]	0,25 / 6,35	0,37 / 9,53	0,50 / 12,7	0,75 / 19,1	1,00 / 25,4	1,50 / 38,1	2,00 / 50,8	4,00 / 101,6
Allowable tensile load [N]	224	352	480	704	960	1440	1920	3840
Weight [kg/m]	0,016	0,024	0,033	0,049	0,065	0,098	0,130	0,260

Other widths are available on request

Specialties

Belt width b [inch]/[mm]		0,25 / 6,35	0,31 / 7,94	0,37 / 9,53	0,50 / 12,7	0,75 / 19,1	1,00 / 25,4	1,50 / 38,1	2,00 / 50,8	4,00 / 101,6
ARAMID CORD	F_{Tzul} [N]	490	770	980	1540	2030	3080	4130	8330	8400
HFE High Flexibility	F_{Tzul} [N]	252	396	504	792	1044	1584	2124	4284	4320

Tooth shear strength

rpm [min⁻¹]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	2,029	1,978	1,932	1,894	1,860	1,830	1,717	1,635	1,570	1,518	1,473	1,434	1,400	1,370	1,342	1,317
P_{spez} [W/cm]	0,000	0,041	0,081	0,119	0,156	0,192	0,360	0,514	0,658	0,795	0,926	1,051	1,173	1,291	1,405	1,517

rpm [min⁻¹]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	1,294	1,273	1,252	1,245	1,234	1,216	1,200	1,184	1,169	1,155	1,129	1,104	1,082	1,061	1,041	1,023
P_{spez} [W/cm]	1,626	1,732	1,836	1,877	1,938	2,037	2,136	2,231	2,326	2,418	2,600	2,776	2,945	3,110	3,271	3,427

rpm [min⁻¹]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	1,006	0,990	0,974	0,960	0,926	0,896	0,868	0,843	0,820	0,798	0,779	0,759	0,741	0,725	0,709	0,695
P_{spez} [W/cm]	3,581	3,730	3,877	4,020	4,362	4,690	5,001	5,298	5,580	5,849	6,115	6,360	6,599	6,835	7,053	7,272

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	10	30 mm	15	30 mm
ARAMID	10	30 mm	15	30 mm
HFE	10	30 mm	12	30 mm

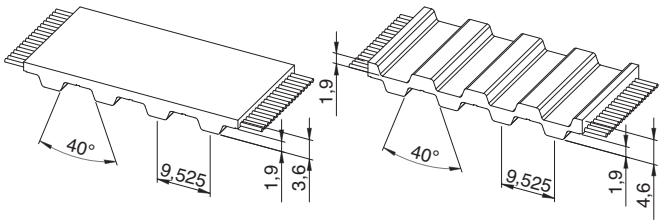
Min. available length

Max width	Execution	
	Standard	PAZ
4"	≥ 800 mm	≥ 900 mm

Timing pulleys → page 175

BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to UNI/ISO 5296
- Imperial pitch 3/8" = 9,525 mm
- Transmissible power up to 20 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**



STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [inch]/[mm]	0,50 / 12,7	0,75 / 19,1	1,00 / 25,4	1,50 / 38,1	2,00 / 50,8	3,00 / 76,2	4,00 / 101,6
Allowable tensile load [N]	1380	2185	2875	4255	5635	8510	11385
Weight [kg/m]	0,05	0,08	0,10	0,15	0,20	0,30	0,40

Other widths are available on request

Specialties

Belt width b [inch]/[mm]		0,50 / 12,7	0,75 / 19,1	1,00 / 25,4	1,50 / 38,1	2,00 / 50,8	3,00 / 76,2	4,00 / 101,6
ARAMID CORD	F_{Tzul} [N]	990	1540	1980	3080	4070	6160	8250
STAINLESS STEEL	F_{Tzul} [N]	900	1350	1800	2775	3675	5550	7350
HFE High Flexibility	F_{Tzul} [N]	1440	2160	2880	4440	5880	8880	11760

Tooth shear strength

rpm [min⁻¹]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	5,852	5,673	5,518	5,383	5,266	5,165	4,789	4,516	4,304	4,131	3,984	3,857	3,744	3,644	3,553	3,470
P_{spez} [W/cm]	0,000	0,119	0,231	0,338	0,441	0,541	1,003	1,419	1,803	2,163	2,503	2,827	3,137	3,434	3,721	3,997

rpm [min⁻¹]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	3,393	3,321	3,256	3,230	3,194	3,137	3,082	3,029	2,980	2,933	2,845	2,765	2,692	2,623	2,559	2,498
P_{spez} [W/cm]	4,263	4,521	4,774	4,871	5,017	5,255	5,486	5,709	5,930	6,143	6,555	6,949	7,330	7,689	8,039	8,371

rpm [min⁻¹]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	2,441	2,388	2,336	2,288	2,177	2,077	1,986	1,903	1,827	1,755	1,689	1,627	1,569	1,513	1,461	1,411
P_{spez} [W/cm]	8,689	9,000	9,295	9,581	10,258	10,874	11,437	11,953	12,433	12,867	13,263	13,626	13,965	14,258	14,537	14,779

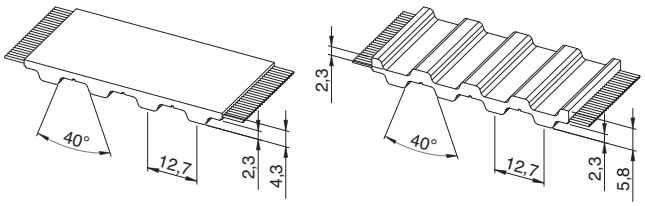
Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	15	60 mm	20	60 mm
ARAMID	15	60 mm	20	60 mm
STAINLESS	18	65 mm	20	65 mm
HFE	15	60 mm	18	60 mm

Min. available length

Max width	Execution	
	Standard	PAZ
4"	≥ 800 mm	≥ 900 mm

Timing pulleys → page 176



BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to UNI/ISO 5296
- Imperial pitch 1/2" = 12,7 mm
- Allow to use small diameter pulley
- Transmissible power up to 30 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**

STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [inch]/[mm]	0,50 / 12,7	0,75 / 19,1	1,00 / 25,4	1,50 / 38,1	2,00 / 50,8	3,00 / 76,2	4,00 / 101,6
Allowable tensile load [N]	1380	2185	2875	4255	5635	8510	11385
Weight [kg/m]	0,056	0,084	0,113	0,169	0,225	0,338	0,450

Other widths are available on request

Specialties

Belt width b [inch]/[mm]		0,50 / 12,7	0,75 / 19,1	1,00 / 25,4	1,50 / 38,1	2,00 / 50,8	3,00 / 76,2	4,00 / 101,6
ARAMID CORD	F_{Tzul} [N]	990	1540	1980	3080	4070	6160	8250
STAINLESS STEEL	F_{Tzul} [N]	900	1350	1800	2775	3675	5550	7350
HFE High Flexibility	F_{Tzul} [N]	1440	2160	2880	4440	5880	8880	11760

Tooth shear strength

rpm [min⁻¹]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	9,156	8,883	8,647	8,443	8,263	8,107	7,523	7,089	6,753	6,478	6,246	6,046	5,870	5,712	5,569	5,437
P_{spez} [W/cm]	0,000	0,186	0,362	0,530	0,692	0,849	1,576	2,227	2,829	3,392	3,924	4,431	4,917	5,383	5,831	6,263

rpm [min⁻¹]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	5,318	5,207	5,104	5,063	5,007	4,916	4,829	4,748	4,671	4,596	4,461	4,334	4,218	4,111	4,010	3,915
P_{spez} [W/cm]	6,682	7,088	7,482	7,635	7,864	8,236	8,596	8,949	9,293	9,626	10,277	10,891	11,485	12,054	12,597	13,119

rpm [min⁻¹]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	3,826	3,741	3,663	3,588	3,412	3,256	3,115	2,983	2,864	2,753	2,650	2,553	2,462	2,375	2,294	2,215
P_{spez} [W/cm]	13,622	14,104	14,573	15,027	16,077	17,049	17,939	18,744	19,494	20,179	20,811	21,385	21,912	22,382	22,821	23,197

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	14	60 mm	20	80 mm
ARAMID	14	60 mm	20	80 mm
STAINLESS	20	80 mm	40	100 mm
HFE	14	60 mm	18	80 mm

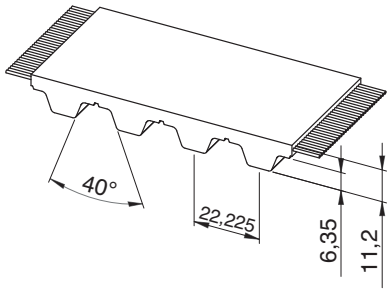
Min. available length

Max width	Execution	
	Standard	PAZ
4"	≥ 800 mm	≥ 900 mm

Timing pulleys → page 177

BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to UNI/ISO 5296
- Imperial pitch 7/8" = 22,225 mm
- Transmissible power up to 100 kW



STANDARD TOLERANCES
WIDTH TOLERANCE: ±1,0 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [inch]/[mm]	1,00 / 25,4	2,00 / 50,8	3,00 / 76,2	4,00 / 101,6	6,00 / 152,4
Allowable tensile load [N]	4165	8575	12985	17150	25970
Weight [kg/m]	0,27	0,53	0,80	1,06	1,59

Other widths are available on request

Specialties

Belt width b [inch]/[mm]		1,00 / 25,4	2,00 / 50,8	3,00 / 76,2	4,00 / 101,6	6,00 / 152,4
ARAMID CORD	F_{Tzul} [N]	3300	6600	9900	13200	20020
HFE High Flexibility	F_{Tzul} [N]	3400	7000	10600	14000	21200

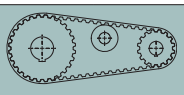
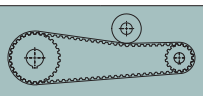
Tooth shear strength

rpm [min⁻¹]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	33,957	32,889	31,932	31,074	30,306	29,618	26,46	24,554	23,178	22,100	21,213	20,459	19,804	19,224	18,704	18,233
P_{spez} [W/cm]	0,000	0,689	1,337	1,952	2,539	3,101	5,541	7,713	9,708	11,571	13,327	14,996	16,590	18,117	19,586	21,001

rpm [min⁻¹]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	17,802	17,405	17,037	16,897	16,693	16,372	16,070	15,785	15,515	15,259	14,782	14,347	13,946	13,574	13,228	12,904
P_{spez} [W/cm]	22,369	23,692	24,975	25,477	26,22	27,43	28,606	29,752	30,867	31,955	34,053	36,054	37,967	39,798	41,553	43,237

rpm [min⁻¹]	3400	3600	3800	4000	-	-	-	-	-	-	-	-	-	-	-	-
M_{spez} [Ncm/cm]	12,599	12,312	12,040	11,782	-	-	-	-	-	-	-	-	-	-	-	-
P_{spez} [W/cm]	44,855	46,411	47,907	49,347	-	-	-	-	-	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	18	150 mm	20	180 mm
KEVLAR	18	150 mm	20	180 mm
HFE	18	150 mm	18	180 mm

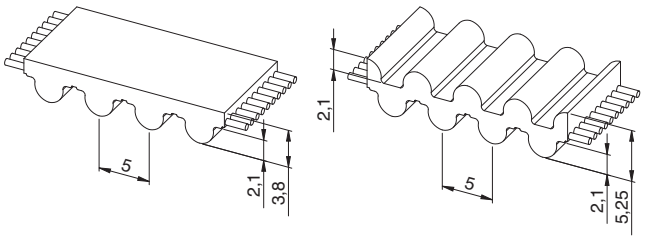
Min. available length

Max width	Execution	
	Standard	PAZ
4"	≥ 900 mm	≥ 900 mm
6"	≥ 1600 mm	≥ 1800 mm

Timing pulleys → page 178

HTD5M

ELA-flex SD®



BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with round tooth profile and steel tension cords
- Tooth profile according to ISO 13050
- Metric pitch 5 mm
- The round tooth profile allows a uniform load distribution that guarantees high performance, high transmissible torque and precise tooth engagement
- Transmissible power up to 6 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**

STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	10	15	25	50	100	150
Allowable tensile load [N]	1150	1725	2760	5635	11155	16790
Weight [kg/m]	0,05	0,07	0,11	0,23	0,46	0,68

Other widths are available on request

Specialties

Belt width b [mm]		10	15	25	50	75	100
ARAMID CORD	F_{Tzul} [N]	770	1210	1980	3960	8030	12100
STAINLESS STEEL	F_{Tzul} [N]	675	1050	1800	3600	7275	10950
HFE High Flexibility	F_{Tzul} [N]	1080	1680	2880	5760	11640	17520

Tooth shear strength

rpm [min⁻¹]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	2,928	2,885	2,845	2,809	2,776	2,747	2,637	2,457	2,395	2,333	2,273	2,217	2,166	2,118	2,073	2,031
P_{spez} [W/cm]	0,000	0,060	0,119	0,176	0,233	0,288	0,552	0,772	1,003	1,221	1,428	1,625	1,814	1,996	2,170	2,339

rpm [min⁻¹]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	1,992	1,955	1,920	1,906	1,887	1,855	1,826	1,797	1,770	1,744	1,695	1,649	1,607	1,567	1,530	1,495
P_{spez} [W/cm]	2,503	2,661	2,814	2,875	2,964	3,109	3,25	3,387	3,521	3,652	3,904	4,145	4,375	4,595	4,806	5,009

rpm [min⁻¹]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	1,461	1,430	1,400	1,371	1,305	1,245	1,190	1,140	1,093	1,050	1,009	0,971	0,935	0,901	0,869	0,838
P_{spez} [W/cm]	5,203	5,390	5,570	5,743	6,148	6,517	6,854	7,161	7,440	7,695	7,926	8,135	8,324	8,493	8,644	8,778

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	16	30 mm	25	60 mm
ARAMID	16	30 mm	25	60 mm
STAINLESS	18	40 mm	25	65 mm
HFE	16	30 mm	20	60 mm

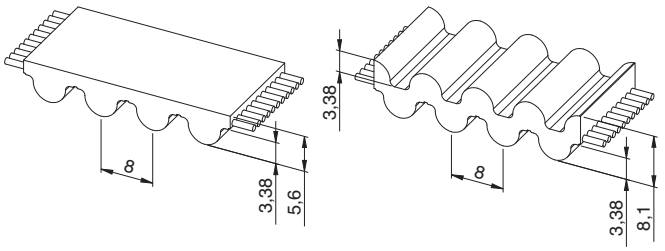
Min. available length

Max width	Execution	
	Standard	PAZ
100 mm	≥ 800 mm	≥ 900 mm
150 mm	≥ 1600 mm	≥ 1800 mm

Timing pulleys → page 180

BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with round tooth profile and steel tension cords
- Tooth profile according to ISO 13050
- Metric pitch 8 mm
- The round tooth profile allows a uniform load distribution that guarantees high performance, high transmissible torque and precise tooth engagement
- Transmissible power up to 80 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**



STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	10	15	20	30	50	85	100	150
Allowable tensile load [N]	1715	2450	3185	4900	8330	14455	16905	25480
Weight [kg/m]	0,07	0,10	0,13	0,20	0,33	0,56	0,66	1,00

Other widths are available on request

Specialties

Belt width b [mm]		10	15	20	30	50	85	100	150
ARAMID CORD	F_{Tzul} [N]	1100	1760	2420	3740	6380	11000	12980	19580
STAINLESS STEEL	F_{Tzul} [N]	720	1260	1620	2520	4320	14760	17460	26280
HFE High Flexibility	F_{Tzul} [N]	1800	2800	3800	4000	6800	11800	13800	20800

Tooth shear strength

rpm [min⁻¹]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	9,422	9,246	9,083	8,933	8,794	8,666	8,160	7,853	7,516	7,220	6,959	6,728	6,519	6,330	6,156	5,996
P_{spez} [W/cm]	0,000	0,194	0,380	0,561	0,737	0,907	1,709	2,467	3,148	3,780	4,372	4,931	5,461	5,965	6,446	6,907

rpm [min⁻¹]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	5,848	5,709	5,580	5,530	5,458	5,343	5,233	5,130	5,031	4,937	4,761	4,599	4,448	4,308	4,176	4,053
P_{spez} [W/cm]	7,348	7,772	8,180	8,338	8,572	8,951	9,316	9,669	10,010	10,340	10,968	11,557	12,110	12,630	13,119	13,580

rpm [min⁻¹]	3400	3600	3800	4000	4500	5000	5500	6000	-	-	-	-	-	-	-	-
M_{spez} [Ncm/cm]	3,936	3,826	3,721	3,621	3,390	3,183	2,994	2,821	-	-	-	-	-	-	-	-
P_{spez} [W/cm]	14,013	14,421	14,805	15,166	15,975	16,663	17,241	17,720	-	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	18	50 mm	30	120 mm
ARAMID	18	50 mm	30	120 mm
STAINLESS	24	70 mm	40	120 mm
HFE	18	50 mm	25	120 mm

Min. available length

Max width	Execution	
	Standard	PAZ
100 mm	≥ 800 mm	≥ 900 mm
150 mm	≥ 1600 mm	≥ 1800 mm

Timing pulleys → page 181

HTD14M

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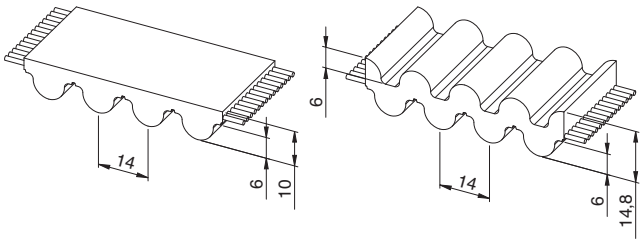


BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with round tooth profile and steel tension cords
- Tooth profile according to ISO 13050
- Metric pitch 14 mm
- The round tooth profile allows a uniform load distribution that guarantees high performance, high transmissible torque and precise tooth engagement
- Transmissible power up to 200 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**

STANDARD TOLERANCES
WIDTH TOLERANCE: ±1,0 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	40	55	85	115	150
Allowable tensile load [N]	9120	12480	19680	26400	34560
Weight [kg/m]	0,42	0,57	0,89	1,24	1,70

Other widths are available on request

Specialties

Belt width b [mm]		40	55	85	115	150
ARAMID CORD	F_{Tzul} [N]	5060	7040	11000	14960	19580
STAINLESS STEEL	F_{Tzul} [N]	5700	7800	12000	16500	21600
HFE High Flexibility	F_{Tzul} [N]	8740	11960	18400	25300	33120
HPL High Performance	F_{Tzul} [N]	12750	17850	28050	37400	-

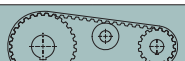
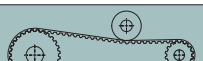
Tooth shear strength

rpm [min⁻¹]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	28,966	28,452	27,978	27,540	27,136	26,762	24,458	23,239	22,100	21,091	20,195	19,394	18,672	18,014	17,410	16,853
P_{spez} [W/cm]	0,000	0,596	1,172	1,730	2,273	2,802	5,122	7,300	9,257	11,042	12,688	14,216	15,641	16,976	18,230	19,411

rpm [min⁻¹]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	16,335	15,852	15,398	15,225	14,972	14,569	14,187	13,824	13,478	13,148	12,530	11,960	11,431	10,938	10,476	10,041
P_{spez} [W/cm]	20,526	21,578	22,573	22,957	23,516	24,408	25,254	26,056	26,816	27,536	28,865	30,056	31,121	32,069	32,908	33,645

rpm [min⁻¹]	3400	3600	3800	4000	-	-	-	-	-	-	-	-	-	-	-	-
M_{spez} [Ncm/cm]	9,630	9,242	8,872	8,521	-	-	-	-	-	-	-	-	-	-	-	-
P_{spez} [W/cm]	34,286	34,837	35,303	35,688	-	-	-	-	-	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	28	120 mm	28	180 mm
ARAMID	28	120 mm	28	180 mm
STAINLESS	34	150 mm	34	200 mm
HFE	22	100 mm	22	120 mm
HPL	32	140 mm	32	200 mm

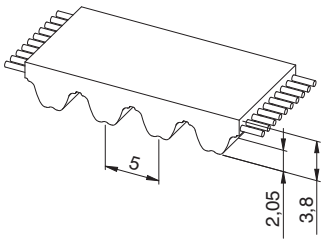
Min. available length

Max width	Execution	
	Standard	PAZ
100 mm	≥ 800 mm	≥ 900 mm
150 mm	≥ 1600 mm	≥ 1800 mm

Timing pulleys → page 182

BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with round tooth profile and steel tension cords
- Tooth profile according to ISO 13050
- Metric pitch 5 mm
- PAZ fabric on tooth delivered as standard decreases noise in high speed drives
- Transmissible power up to 6 kW



STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	10	15	25	50	100	150
Allowable tensile load [N]	1150	1725	2760	5635	11155	16790
Weight [kg/m]	0,05	0,07	0,11	0,23	0,46	0,69

Other widths are available on request

Specialties

Belt width b [mm]		10	15	25	50	100	150
ARAMID CORD	F_{Tzul} [N]	770	1210	1980	3960	8030	12100
STAINLESS STEEL	F_{Tzul} [N]	675	1050	1800	3600	7275	10950
HFE High Flexibility	F_{Tzul} [N]	1080	1680	2880	5760	11640	17520

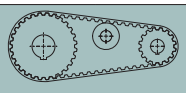
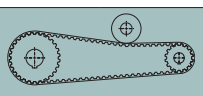
Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	3,008	2,964	2,924	2,888	2,856	2,826	2,716	2,616	2,555	2,492	2,432	2,376	2,325	2,277	2,232	2,190
P_{spez} [W/cm]	0,000	0,062	0,122	0,181	0,239	0,296	0,569	0,822	1,070	1,305	1,528	1,742	1,947	2,146	2,337	2,523

rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	2,151	2,114	2,079	2,066	2,046	2,015	1,985	1,956	1,929	1,903	1,854	1,808	1,766	1,726	1,689	1,654
P_{spez} [W/cm]	2,703	2,878	3,048	3,115	3,214	3,375	3,533	3,687	3,838	3,985	4,271	4,545	4,808	5,062	5,306	5,542

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	1,621	1,589	1,559	1,530	1,464	1,404	1,349	1,299	1,252	1,209	1,168	1,130	1,094	1,060	1,028	0,997
P_{spez} [W/cm]	5,770	5,990	6,203	6,410	6,898	7,351	7,770	8,161	8,524	8,861	9,176	9,468	9,740	9,993	10,228	10,445

Flexibility

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

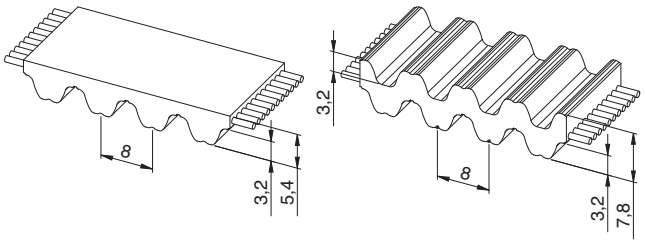
Min. available length

Max width	Execution	
	Standard	PAZ
150 mm	≥ 1600 mm	≥ 1800 mm

Timing pulleys → page 184

RPD8M

ELA-flex SD®



BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with round tooth profile and steel tension cords
- Tooth profile according to ISO 13050
- Metric pitch 8 mm
- PAZ fabric on tooth delivered as standard decreases noise in high speed drives
- Transmissible power up to 80 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**

STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	10	15	20	30	50	85	100	150
Allowable tensile load [N]	1715	2450	3185	4900	8330	14455	16905	25480
Weight [kg/m]	0,07	0,10	0,13	0,20	0,33	0,56	0,66	1,00

Other widths are available on request

Specialties

Belt width b [mm]		10	15	20	30	50	85	100	150
ARAMID CORD	F_{Tzul} [N]	1100	1760	2420	3740	6380	11000	12980	19580
STAINLESS STEEL	F_{Tzul} [N]	1080	1800	2340	3600	6120	10620	12420	18720
HPL High Performance	F_{Tzul} [N]	1200	2000	2600	4000	6800	11800	13800	20800

Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	9,677	9,500	9,338	9,188	9,049	8,921	8,415	8,108	7,770	7,475	7,214	6,982	6,774	6,584	6,411	6,251
P_{spez} [W/cm]	0,000	0,199	0,391	0,577	0,758	0,934	1,762	2,547	3,255	3,913	4,532	5,118	5,674	6,205	6,713	7,200

rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	6,102	5,964	5,834	5,785	5,712	5,597	5,488	5,385	5,296	5,192	5,016	4,853	4,703	4,562	4,431	4,307
P_{spez} [W/cm]	7,668	8,118	8,553	8,722	8,972	9,377	9,769	10,149	10,517	10,873	11,554	12,197	12,803	13,377	13,919	14,433

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	-	-	-	-	-	-	-	-
M_{spez} [Ncm/cm]	4,191	4,080	3,975	3,875	3,645	3,437	3,248	3,075	-	-	-	-	-	-	-	-
P_{spez} [W/cm]	14,920	15,381	15,818	16,232	17,175	17,996	18,708	19,320	-	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	18	50 mm	30	120 mm
ARAMID	18	50 mm	30	120 mm
STAINLESS	24	70 mm	40	120 mm
HPL	30	80 mm	30	150 mm

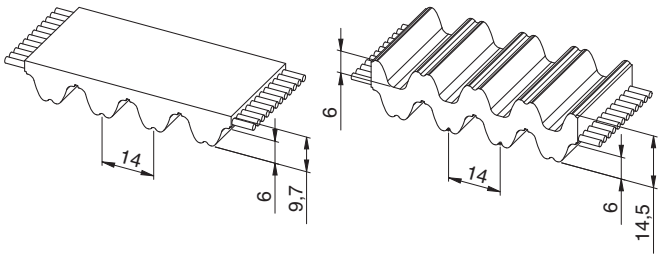
Min. available length

Max width	Execution	
	Standard	PAZ
100 mm	≥ 900 mm	≥ 900 mm
150 mm	≥ 1800 mm	≥ 1800 mm

Timing pulleys → page 185

BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with round tooth profile and steel tension cords
- Tooth profile according to ISO 13050
- Metric pitch 14 mm
- PAZ fabric on tooth delivered as standard decreases noise in high speed drives
- Transmissible power up to 200 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**



STANDARD TOLERANCES
WIDTH TOLERANCE: ±1,0 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	40	55	85	115	150
Allowable tensile load [N]	13600	17850	28050	38250	49300
Weight [kg/m]	0,48	0,63	1,00	1,40	1,85

Other widths are available on request

Specialties

Belt width b [mm]		40	55	85	115	150
ARAMID CORD	F_{Tzul} [N]	11250	15750	24750	33000	43500
STAINLESS STEEL	F_{Tzul} [N]	8700	12180	19140	25520	33640
HFE High Flexibility	F_{Tzul} [N]	15000	21000	33000	44000	58000

Tooth shear strength

rpm [min⁻¹]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	31,194	30,595	30,041	29,530	29,059	28,623	26,687	25,467	24,328	23,319	22,423	21,623	20,900	20,242	19,638	19,081
P_{spez} [W/cm]	0,000	0,641	1,258	1,855	2,434	2,997	5,589	8,000	10,190	12,209	14,088	15,849	17,508	19,076	20,564	21,978

rpm [min⁻¹]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	18,563	18,080	17,626	17,453	17,200	16,797	16,415	16,052	15,707	15,377	14,758	14,188	13,659	13,166	12,704	12,269
P_{spez} [W/cm]	23,325	24,611	25,84	26,316	27,016	28,141	29,22	30,255	31,249	32,202	33,998	35,656	37,187	38,602	39,907	41,111

rpm [min⁻¹]	3400	3600	3800	4000	-	-	-	-	-	-	-	-	-	-	-	-
M_{spez} [Ncm/cm]	11,858	11,470	11,100	10,749	-	-	-	-	-	-	-	-	-	-	-	-
P_{spez} [W/cm]	42,219	43,237	44,169	45,021	-	-	-	-	-	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	32	140 mm	32	200 mm
ARAMID	28	120 mm	28	150 mm
STAINLESS	40	180 mm	40	220 mm
HFE	30	130 mm	30	180 mm

Min. available length

Max width	Execution	
	Standard	PAZ
100 mm	≥ 900 mm	≥ 900 mm
150 mm	≥ 1600 mm	≥ 1800 mm

Timing pulleys → page 186

STD5M

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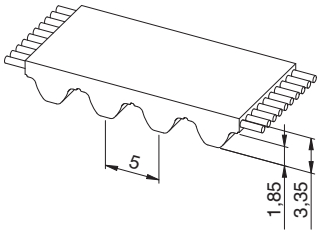


BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with 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
- Offer excellent operational reliability
- The special profile allows smooth running properties
- Transmissible power up to 6 kW

STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	10	15	25	50	100	150
Allowable tensile load [N]	1150	1725	2760	5635	11155	16790
Weight [kg/m]	0,046	0,068	0,114	0,228	0,456	0,684

Other widths are available on request

Specialties

Belt width b [mm]		10	15	25	50	100	150
ARAMID CORD	F_{Tzul} [N]	770	1210	1980	3960	8030	12100
STAINLESS STEEL	F_{Tzul} [N]	675	1050	1800	3600	7275	10950
HFE High Flexibility	F_{Tzul} [N]	1080	1680	2880	5760	11640	17520

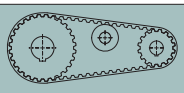
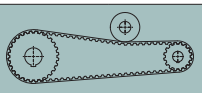
Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	2,936	2,892	2,853	2,817	2,784	2,755	2,645	2,497	2,435	2,372	2,313	2,257	2,205	2,157	2,113	2,071
P_{spez} [W/cm]	0,000	0,061	0,119	0,177	0,233	0,288	0,554	0,784	1,020	1,242	1,453	1,654	1,847	2,033	2,212	2,385

rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	2,031	1,995	1,960	1,946	1,927	1,895	1,865	1,837	1,810	1,784	1,734	1,689	1,647	1,607	1,570	1,535
P_{spez} [W/cm]	2,553	2,715	2,873	2,935	3,026	3,175	3,321	3,462	3,600	3,735	3,996	4,245	4,483	4,712	4,931	5,142

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	1,501	1,470	1,440	1,411	1,345	1,285	1,230	1,180	1,133	1,090	1,049	1,011	0,975	0,941	0,909	0,878
P_{spez} [W/cm]	5,345	5,54	5,728	5,910	6,336	6,726	7,083	7,411	7,711	7,987	8,238	8,469	8,678	8,868	9,040	9,195

Flexibility

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

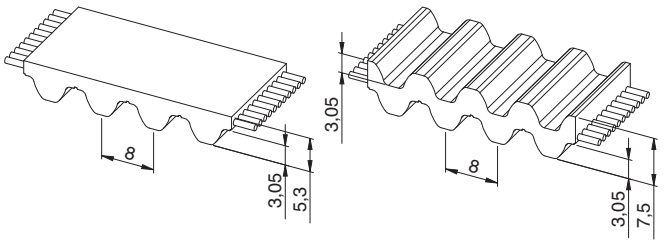
Min. available length

Max width	Execution	
	Standard	PAZ
100 mm	≥ 800 mm	≥ 900 mm

Timing pulleys → page 188

BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with 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
- Offer excellent operational reliability
- The special profile allows smooth running properties
- Transmissible power up to 80 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**



STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	10	15	20	30	50	85	100	150
Allowable tensile load [N]	1715	2490	3185	4900	8330	14455	16905	25480
Weight [kg/m]	0,07	0,10	0,13	0,20	0,33	0,56	0,66	1,00

Other widths are available on request

Specialties

Belt width b [mm]		10	15	20	30	50	85	100	150
ARAMID CORD	F_{Tzul} [N]	1100	1760	2420	3740	6380	11000	12980	19580
STAINLESS STEEL	F_{Tzul} [N]	1080	1800	2340	3600	6120	10620	12420	18720
HFE High Flexibility	F_{Tzul} [N]	1200	2000	2600	4000	6800	11800	13800	20800

Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	9,435	9,301	9,176	9,057	8,946	8,841	8,401	7,908	7,567	7,268	7,005	6,772	6,561	6,370	6,195	6,034
P_{spez} [W/cm]	0,000	0,195	0,384	0,569	0,749	0,926	1,759	2,484	3,169	3,805	4,401	4,963	5,496	6,003	6,487	6,950

rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	5,885	5,745	5,615	5,565	5,492	5,376	5,266	5,162	5,063	4,968	4,790	4,627	4,475	4,334	4,202	4,077
P_{spez} [W/cm]	7,394	7,821	8,231	8,391	8,626	9,007	9,374	9,729	10,072	10,404	11,035	11,628	12,184	12,707	13,199	13,662

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	-	-	-	-	-	-	-	-
M_{spez} [Ncm/cm]	3,960	3,849	3,743	3,643	3,410	3,201	3,011	2,837	-	-	-	-	-	-	-	-
P_{spez} [W/cm]	14,098	14,508	14,894	15,257	16,07	16,762	17,343	17,824	-	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	18	50 mm	30	120 mm
ARAMID	18	50 mm	30	120 mm
STAINLESS	24	70 mm	40	120 mm
HFE	30	80 mm	30	150 mm

Min. available length

Max width	Execution	
	Standard	PAZ
150 mm	≥ 1600 mm	≥ 1800 mm

Timing pulleys → page 189

STD14M

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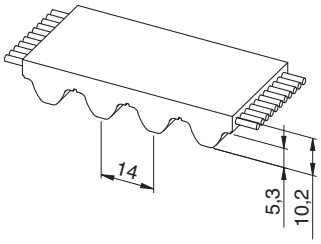


BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with 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
- Offer excellent operational reliability
- The special profile allows smooth running properties
- Transmissible power up to 200 kW

STANDARD TOLERANCES
WIDTH TOLERANCE: ±1,0 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	40	55	85	100
Allowable tensile load [N]	13600	17850	28050	33150
Weight [kg/m]	0,48	0,85	1,10	1,54

Other widths are available on request

Specialties

Belt width b [mm]		40	55	85	100
ARAMID CORD	F_{Tzul} [N]	11250	15750	24750	28500
STAINLESS STEEL	F_{Tzul} [N]	8700	12180	19140	22040

Tooth shear strength

rpm [min⁻¹]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	29,857	29,258	28,704	28,193	27,722	27,286	25,572	24,353	23,214	22,205	21,309	20,509	19,786	19,128	18,524	17,967
P_{spez} [W/cm]	0,000	0,613	1,202	1,771	2,322	2,857	5,355	7,650	9,723	11,626	13,388	15,032	16,575	18,026	19,397	20,695

rpm [min⁻¹]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	17,449	16,966	16,512	16,339	16,086	15,683	15,301	14,938	14,592	14,262	13,644	13,074	12,545	12,052	11,590	11,155
P_{spez} [W/cm]	21,925	23,095	24,207	24,636	25,266	26,275	27,237	28,156	29,032	29,869	31,431	32,856	34,154	35,335	36,408	37,378

rpm [min⁻¹]	3400	3600	3800	4000	-	-	-	-	-	-	-	-	-	-	-	-
M_{spez} [Ncm/cm]	10,744	10,356	9,986	9,63	-	-	-	-	-	-	-	-	-	-	-	-
P_{spez} [W/cm]	38,252	39,037	39,736	40,354	-	-	-	-	-	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	32	140 mm	32	250 mm
ARAMID	28	120 mm	28	150 mm
STAINLESS	40	180 mm	40	220 mm

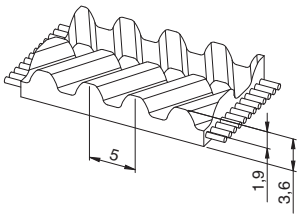
Min. available length

Max width	Execution	
	Standard	PAZ
100 mm	≥ 1600 mm	≥ 1800 mm

Timing pulleys → page 190

BELT CHARACTERISTICS

- Truly endless 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**
- The special profile allows most compact drive



STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,8 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	12,5	25
Allowable tensile load [N]	1380	2760
Weight [kg/m]	0,06	0,12

Other widths or special cords are available on request

Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	3,008	2,964	2,924	2,888	2,856	2,826	2,716	2,616	2,555	2,492	2,432	2,376	2,325	2,277	2,232	2,190
P_{spez} [W/cm]	0,000	0,062	0,122	0,182	0,240	0,296	0,570	0,823	1,068	1,304	1,527	1,745	1,944	2,149	2,335	2,523

rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	2,151	2,114	2,079	2,066	2,046	2,015	1,985	1,956	1,929	1,903	1,854	1,808	1,766	1,726	1,689	1,654
P_{spez} [W/cm]	2,702	2,872	3,049	3,121	3,220	3,368	3,525	3,695	3,840	3,979	4,262	4,549	4,819	5,073	5,306	5,542

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	6500	-	-	-	-	-	-	-
M_{spez} [Ncm/cm]	1,621	1,589	1,559	1,530	1,464	1,404	1,349	1,299	1,252	-	-	-	-	-	-	-
P_{spez} [W/cm]	5,768	5,994	6,208	6,409	6,880	7,330	7,775	8,168	8,508	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	16	30 mm	25	60 mm

Min. available length

Max width	Execution	
	Standard	PAZ
25 mm	≥ 900 mm	≥ 900 mm

Timing pulleys → page 191

EAGLE8M

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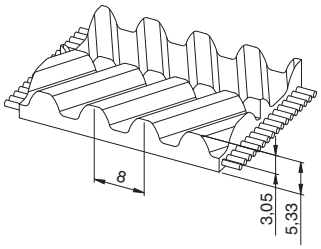


BELT CHARACTERISTICS

- Truly endless 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**
- The special profile allows most compact drive

STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,8 [mm]
THICKNESS TOLERANCE: ±0,3 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	16	25	32	50
Allowable tensile load [N]	2695	4165	5390	8330
Weight [kg/m]	0,085	0,145	0,18	0,30

Other widths or special cords are available on request

Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	10,823	10,668	10,519	10,376	10,239	10,107	9,521	9,042	8,649	8,343	8,067	7,820	7,596	7,392	7,204	7,030
P_{spez} [W/cm]	0,000	0,223	0,441	0,652	0,858	1,058	1,994	2,840	3,623	4,368	5,068	5,732	6,363	6,966	7,543	8,098

rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2880	3000	3200
M_{spez} [Ncm/cm]	6,869	6,719	6,577	6,523	6,444	6,318	6,199	6,086	5,977	5,874	5,681	5,502	5,337	5,182	5,037	4,901
P_{spez} [W/cm]	8,631	9,146	9,642	9,836	10,122	10,585	11,035	11,470	11,892	12,302	13,087	13,828	14,529	15,450	15,824	16,422

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	6500	-	-	-	-	-	-	-
M_{spez} [Ncm/cm]	4,772	4,650	4,535	4,424	4,169	3,940	3,731	3,539	3,362	-	-	-	-	-	-	-
P_{spez} [W/cm]	16,991	17,531	18,044	18,531	19,647	20,627	21,486	22,234	22,880	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	20	50 mm	30	120 mm

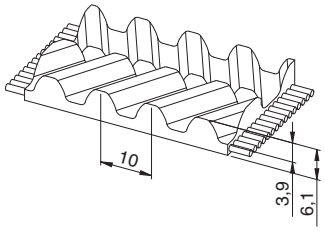
Min. available length

Max width	Execution	
	Standard	PAZ
50 mm	≥ 900 mm	≥ 900 mm

Timing pulleys → page 192

BELT CHARACTERISTICS

- Truly endless 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**
- The special profile allows most compact drive



STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,8 [mm]
THICKNESS TOLERANCE: ±0,3 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	25	32	50
Allowable tensile load [N]	5810	7920	12140
Weight [kg/m]	0,18	0,23	0,37

Other widths or special cords are available on request

Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	14,881	14,647	14,424	14,210	14,005	13,809	12,949	12,259	11,705	11,263	10,890	10,556	10,254	9,979	9,725	9,491
P_{spez} [W/cm]	0,000	0,307	0,604	0,893	1,173	1,446	2,712	3,851	4,903	5,897	6,842	7,738	8,590	9,404	10,184	10,932

rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	9,273	9,070	8,879	8,806	8,699	8,530	8,369	8,215	8,070	7,930	7,669	7,428	7,205	6,996	6,800	6,616
P_{spez} [W/cm]	11,653	12,347	13,017	13,278	13,664	14,290	14,897	15,485	16,055	16,608	17,667	18,668	19,615	20,512	21,363	22,170

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	6,443	6,278	6,122	5,973	5,629	5,319	5,036	4,778	4,540	4,320	4,110	3,910	3,730	3,560	3,390	3,230
P_{spez} [W/cm]	22,937	23,666	24,359	25,017	26,523	27,847	29,006	30,016	30,890	31,630	32,260	32,780	33,190	33,510	33,740	33,870

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	25	80 mm	25	150 mm

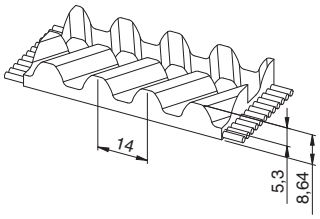
Min. available length

Max width	Execution	
	Standard	PAZ
50 mm	≥ 900 mm	≥ 900 mm

Timing pulleys → page 193

EAGLE14M

ELA-flex SD®



BELT CHARACTERISTICS

- Truly endless 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**
- The special profile allows most compact drive

STANDARD TOLERANCES
WIDTH TOLERANCE: ±1,2 [mm]
THICKNESS TOLERANCE: ±0,4 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	35	52,5	70	105
Allowable tensile load [N]	13090	18700	26180	39270
Weight [kg/m]	0,4	0,6	0,8	1,2

Other widths or special cords are available on request

Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	35,651	34,960	34,330	33,756	33,232	32,756	30,618	28,937	27,434	26,123	24,971	23,948	23,028	22,193	21,429	20,725
P_{spez} [W/cm]	0,000	0,733	1,439	2,123	2,786	3,430	6,441	9,090	11,491	13,677	15,689	17,553	19,290	20,915	22,439	23,872

rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	20,072	19,464	18,894	18,676	18,358	17,852	17,373	16,918	16,485	16,072	15,299	14,586	13,925	13,310	12,733	12,191
P_{spez} [W/cm]	25,222	26,495	27,698	28,160	28,834	29,909	30,926	31,888	32,798	33,659	35,243	36,656	37,912	39,023	39,999	40,849

rpm [min^{-1}]	3400	3600	3800	4000	-	-	-	-	-	-	-	-	-	-	-	-
M_{spez} [Ncm/cm]	11,679	11,195	10,735	10,297	-	-	-	-	-	-	-	-	-	-	-	-
P_{spez} [W/cm]	41,581	42,201	42,715	43,129	-	-	-	-	-	-	-	-	-	-	-	-

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	32	140 mm	32	200 mm

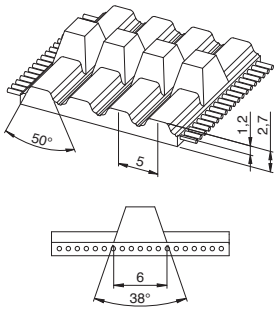
Min. available length

Max width	Execution	
	Standard	PAZ
105 mm	≥ 900 mm	≥ 900 mm

Timing pulleys → page 194

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
- 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
- **Max length 2500 mm**



STANDARD TOLERANCES

WIDTH TOLERANCE:	±0,5 [mm]
THICKNESS TOLERANCE:	±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	25	32	50
Allowable tensile load [N]	2760	3565	5635
Weight [kg/m]	0,08	0,11	0,17

Other widths are available on request

Tooth shear strength

rpm [min⁻¹]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	2,897	2,855	2,817	2,783	2,753	2,725	2,620	2,540	2,458	2,383	2,317	2,258	2,204	2,153	2,108	2,066
P_{spez} [W/cm]	0,000	0,060	0,118	0,175	0,231	0,285	0,549	0,798	1,030	1,248	1,456	1,655	1,846	2,029	2,207	2,379

rpm [min⁻¹]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	2,027	1,990	1,955	1,942	1,923	1,892	1,863	1,836	1,809	1,784	1,736	1,693	1,653	1,615	1,580	1,546
P_{spez} [W/cm]	2,547	2,709	2,866	2,929	3,020	3,170	3,316	3,460	3,599	3,736	4,000	4,256	4,500	4,734	4,962	5,181

rpm [min⁻¹]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	1,514	1,485	1,456	1,429	1,367	1,311	1,260	1,213	1,169	1,128	1,091	1,055	1,023	0,991	0,961	0,933
P_{spez} [W/cm]	5,391	5,598	5,795	5,986	6,442	6,862	7,255	7,619	7,957	8,271	8,568	8,839	9,101	9,337	9,555	9,766

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	25	30 mm	25	60 mm

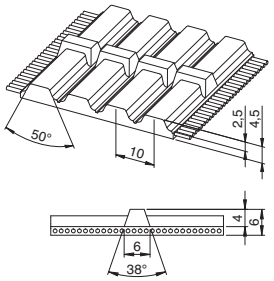
Min. available length

Max width	Execution	
	Standard	PAZ
50 mm	≥ 800 mm	≥ 900 mm

Timing pulleys → page 198

ATK10-K6

ELA-flex SD®



BELT CHARACTERISTICS

- Polyurethane self tracking timing belt with steel tension cords
- Profile AT10 with central guide
- Central guide height 4 mm
- Allows 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 or transferring a product

STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	32	50	75
Allowable tensile load [N]	5390	8330	12740
Weight [kg/m]	0,27	0,36	0,54

Other widths are available on request

Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	12,048	11,871	11,706	11,55	11,403	11,265	10,684	10,215	9,793	9,424	9,097	8,808	8,547	8,309	8,093	7,893
P_{spez} [W/cm]	0,000	0,249	0,490	0,726	0,955	1,180	2,238	3,209	4,102	4,934	5,716	6,456	7,159	7,831	8,474	9,091

rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	7,708	7,534	7,372	7,310	7,219	7,076	6,939	6,810	6,688	6,570	6,349	6,147	5,959	5,782	5,618	5,464
P_{spez} [W/cm]	9,685	10,256	10,807	11,022	11,339	11,855	12,352	12,836	13,305	13,759	14,625	15,447	16,223	16,953	17,649	18,308

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	5,317	5,180	5,048	4,924	4,636	4,377	4,140	3,923	3,724	3,538	3,365	3,202	3,048	2,903	2,766	2,636
P_{spez} [W/cm]	18,931	19,529	20,088	20,625	21,846	22,915	23,841	24,648	25,348	25,933	26,423	26,825	27,127	27,358	27,516	27,598

Flexibility

Minimum pulley number of teeth and minimum idler diameter	Drive without reverse bending		Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	20	50 mm	25	120 mm

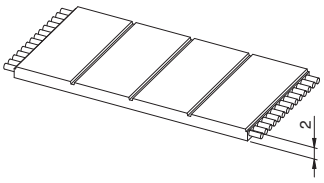
Min. available length

Max width	Execution	
	Standard	PAZ
75 mm	≥ 1600 mm	≥ 1800 mm

Timing pulleys → page 199

BELT CHARACTERISTICS

- Polyurethane flat belt with steel tension cords
- It is mainly used in drive applications where there is no need for synchronization
- Allows the use of small diameter pulleys



STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	25	32	50	75	100
Allowable tensile load [N]	4040	4850	8090	12400	16440
Weight [kg/m]	0,07	0,10	0,16	0,24	0,30

Other widths are available on request

Flexibility

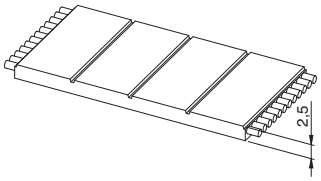
Minimum pulley diameter	Drive without reverse bending	Drive with reverse bending
	idler d_{min}	idler d_{min}
STANDARD	50 mm	100 mm

Min. available length

Max width	Execution	
	Standard	PAZ
100 mm	≥ 1600 mm	≥ 1800 mm

F2,5

ELA-flex SD®



BELT CHARACTERISTICS

- Polyurethane flat belt with steel tension cords
- It is mainly used in drive applications where there is no need for synchronization
- Allows the use of small diameter pulleys

STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,8 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	20	25	50	75	100
Allowable tensile load [N]	4800	5760	11520	17280	23040
Weight [kg/m]	0,08	0,09	0,18	0,27	0,36

Other widths are available on request

Flexibility

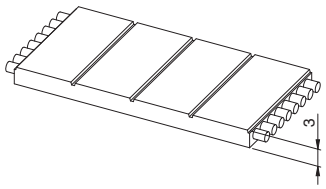
Minimum pulley diameter	Drive without reverse bending	Drive with reverse bending
	idler d_{min}	idler d_{min}
STANDARD	80 mm	150 mm

Min. available length

Max width	Execution	
	Standard	PAZ
100 mm	≥ 1600 mm	≥ 1800 mm

BELT CHARACTERISTICS

- Polyurethane flat belt with steel tension cords
- It is mainly used in drive applications where there is no need for synchronization
- Allows the use of small diameter pulleys



STANDARD TOLERANCES

WIDTH TOLERANCE: ±1,0 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	25	30	60	100
Allowable tensile load [N]	9350	11220	22440	37400
Weight [kg/m]	0,20	0,25	0,50	1,00

Other widths are available on request

Flexibility

Minimum pulley diameter	Drive without reverse bending	Drive with reverse bending
	idler d_{min}	idler d_{min}
STANDARD	120 mm	180 mm

Min. available length

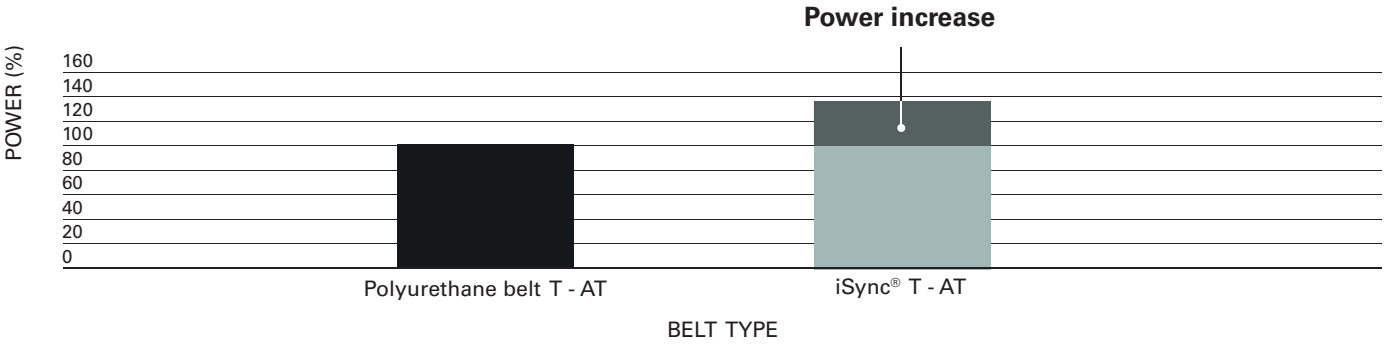
Max width	Execution	
	Standard	PAZ
100 mm	≥ 1600 mm	≥ 1800 mm

Elatech® iSync®

high performance timing belts

ELATECH® iSync®

In the spirit of continuous innovation, in order to answer to the increased need of industry in power transmission, ELATECH® has developed the iSync® range of belts. iSync® belts are made with special polyurethane compound and high resistance steel tension cords which are processed with a unique and highly sophisticated technology to get a superior polyurethane belt. iSync® belts offer optimal performances on all types of industrial applications. **iSync® belts are able to transmit up to 30% more than conventional T, AT type of belts in the same space or same power with a more compact drive.**



Features

- High power transmission capabilities
- Maintenance free
- Superior length stability
- Clean power transmission with no dust dispersion
- No contamination of object in contact
- Very high chemical resistance and particularly to oils, greases and gasoline
- Superior abrasion resistance
- High quality, thermo-set polyurethane designed specifically for timing belt applications
- Available with either steel or Kevlar® reinforcement
- Application temperature -10°C - +80 °C (standard)
- Up to +125 °C with special compound PU 53

Typical application fields

ELATECH® iSync® belts are suitable for power transmission drives where high precision is needed, cleanliness is critical and in difficult environment (presence of chemicals).

- Plotters
- Office automation
- Medical technology
- Packaging machines
- Swimming pool cleaning robots
- Banking machines
- Coin dispenser
- Vending machines
- Optical instruments
- Cameras
- Machine tools
- Robot arms
- Home appliances
- Vacuum systems
- Food processing machines
- Textile machines
- Gardening equipment and machines

Applications with special backing and cleats are specifically designed for special heavy duty conveying drives.

Available profile range

ELATECH® iSync® belts are available in a standard range in the following profile range:

T2,5, T5, T10, AT5, AT10, XL, L

As special the following profile can be manufactured on request **MXL, H, HTD5M, DD double sided executions.**

Tension cords

ELATECH® iSync® timing belts are manufactured with high tensile strength steel cords as standard. All technical data shown in the catalogue are valid for standard cords. Belt with special cords have different mechanical and chemical properties. Special type of tension member such as stainless steel, HFE high flexibility or aramid fiber (Kevlar®) are available on request for special applications.
Aramid (Kevlar®) tension cords are used where non-magnetic drives are requested.
Stainless steel is used where high corrosion resistance is required.
Fiberglass and polyester are used where high flexibility and water resistance are required.

Food contact approved belts - on request

ELATECH® has developed a special formulation for iSync® moulded belts for application in:

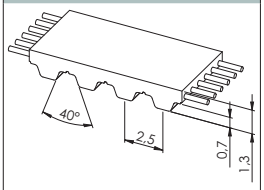
- packing
- conveying
- processing

of dairy, meat and food products which complies to the food contact law and regulations.

Please contact our Sales Department for more details.

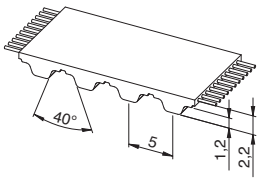
Standard belt sizes - Single toothing

T2,5



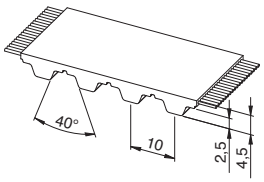
Number of teeth z	Length [mm]
48	120
58	145
64	160
71	177,5
72	180
74	185
80	200
84	210
92	230
98	245
106	265
111	277,5
114	285
116	290
122	305
127	317,5
132	330
137	342,5
152	380
168	420
192	480
200	500
216	540
240	600
248	620
260	650
312	780
366	915
380	950
590	1475

T5



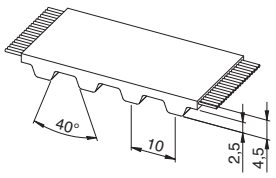
Number of teeth z	Length [mm]	Number of teeth z	Length [mm]
18	90	112	560
33	165	115	575
36	180	118	590
37	185	120	600
40	200	122	610
42	210	124	620
43	215	125	625
44	220	126	630
45	225	128	640
49	245	130	650
50	250	132	660
51	255	135	675
52	260	138	690
54	270	140	700
55	275	144	720
56	280	145	725
59	295	150	750
60	300	153	765
61	305	156	780
64	320	160	800
65	325	163	815
66	330	166	830
68	340	168	840
70	350	170	850
71	355	172	860
72	360	180	900
73	365	188	940
75	375	198	990
78	390	200	1000
80	400	215	1075
82	410	220	1100
84	420	223	1115
85	425	228	1140
86	430	232	1160
88	440	240	1200
89	445	243	1215
90	450	253	1265
91	455	255	1275
92	460	256	1280
95	475	263	1315
96	480	270	1350
100	500	271	1355
102	510	276	1380
105	525	280	1400
109	545	288	1440
110	550	391	1955

T10



Number of teeth z	Length [mm]	Number of teeth z	Length [mm]
26	260	95	950
32	320	96	960
35	350	97	970
37	370	98	980
40	400	100	1000
41	410	101	1010
44	440	105	1050
45	450	108	1080
48	480	110	1100
50	500	111	1110
51	510	114	1140
53	530	115	1150
55	550	120	1200
56	560	121	1210
60	600	124	1240
61	610	125	1250
63	630	130	1300
65	650	132	1320
66	660	135	1350
68	680	139	1390
69	690	140	1400
70	700	142	1420
72	720	144	1440
73	730	145	1450
75	750	146	1460
76	760	150	1500
78	780	156	1560
80	800	160	1600
81	810	161	1610
84	840	170	1700
85	850	175	1750
88	880	178	1780
89	890	180	1800
90	900	188	1880
91	910	196	1960
92	920	225	2250

VACUUM - T10



Number of teeth z	Length [mm]
60	600
63	630
72	720
80	800
92	920

Ordering example metric pitch:

iSync® metric pitch	**U**	**420**	**T5**	**/16**

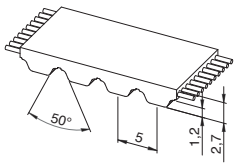
ELATECH® iSync® metric pitch

Length in mm

Profile “T” pitch 5 mm

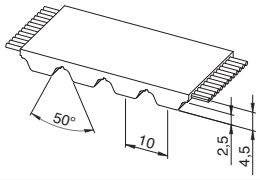
Width in mm

AT5



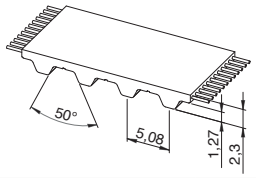
Number of teeth z	Length [mm]
35	175
45	225
51	255
56	280
60	300
64	320
68	340
75	375
78	390
84	420
90	450
91	455
96	480
100	500
105	525
109	545
114	570
120	600
122	610
132	660
142	710
144	720
150	750
156	780
165	825
172	860
180	900
195	975
210	1050
225	1125
257	1285
300	1500

AT10



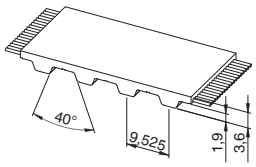
Number of teeth z	Length [mm]
50	500
53	530
56	560
58	580
60	600
61	610
63	630
66	660
70	700
73	730
75	750
78	780
80	800
81	810
84	840
88	880
89	890
92	920
96	960
98	980
100	1000
101	1010
105	1050
108	1080
110	1100
115	1150
120	1200
121	1210
123	1230
124	1240
125	1250
128	1280
130	1300
132	1320
135	1350
136	1360
140	1400
142	1420
148	1480
150	1500
160	1600
170	1700
172	1720
180	1800
186	1860
194	1940

XL



Number of teeth z	Length [mm]	Length [inch]
30	152,4	6,00
35	177,8	7,00
40	203,2	8,00
45	228,6	9,00
50	254,0	10,00
55	279,4	11,00
60	304,8	12,00
65	330,2	13,00
70	355,6	14,00
75	381,0	15,00
80	406,4	16,00
85	431,8	17,00
90	457,2	18,00
95	482,6	19,00
100	508,6	20,00
105	533,4	21,00
110	558,8	22,00
115	584,2	23,00
120	609,6	24,00
125	635,0	25,00
130	660,4	26,00
135	685,8	27,00
140	711,2	28,00
145	736,6	29,00
150	762,0	30,00

L



Number of teeth z	Length [mm]	Length [inch]
33	314,3	12,38
40	381,0	15,00
44	419,1	16,50
46	438,2	17,30
50	476,3	18,75
54	514,4	20,25
56	533,4	21,00
60	571,5	22,50
64	609,6	24,00
68	647,7	25,50
72	685,8	27,00
76	723,9	28,50
80	762,0	30,00
86	819,2	32,25
92	876,3	34,50
98	933,5	36,70
104	990,6	39,00
112	1066,8	42,00
120	1143,0	45,00
128	1219,2	48,00
136	1295,4	51,00
144	1371,6	54,00
160	1524,0	60,00

Ordering example imperial pitch:

iSync® imperial pitch	**U**	**225**	**L**	**/100**

ELATECH® iSync®Timing Belt

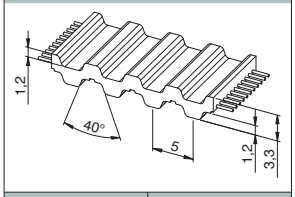
Length x 10 (inches)

Pitch "L"

Width x 100 (inches)

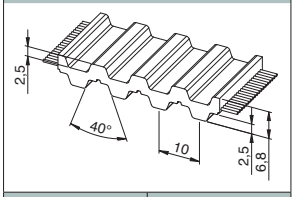
Standard belt sizes - Dual toothing

DT5



Number of teeth z	Length [mm]
82	410
92	460
110	550
118	590
124	620
125	625
130	650
140	700
150	750
160	800
163	815
168	840
172	860
188	940
220	1100

DT10



Number of teeth z	Length [mm]
26	260
53	530
63	630
66	660
70	700
72	720
80	800
81	810
84	840
90	900
92	920
98	980
110	1100
121	1210
124	1240
125	1250
132	1320
135	1350
142	1420
161	1610
188	1880

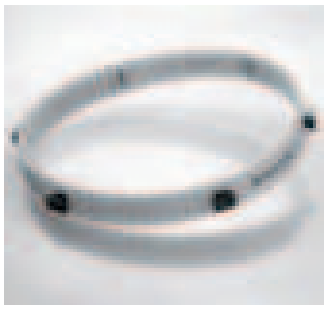
Ordering example dual imperial pitch:

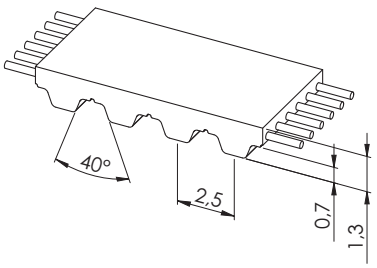
iSync® dual metric pitch	UD	620	DT5	/16

- ELATECH® iSync®Timing Belt
- Length in mm
- Profile “T” pitch 5 mm - DUAL
- Width in mm

Special belts

Special belts with cleats, backing and with special moulded shape are designed and manufactured to maximize application performance.





BELT CHARACTERISTICS

- Truly endless 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 required
- Allows the use of small diameter pulleys
- Transmissible power up to 5 kW

STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,3 [mm]
THICKNESS TOLERANCE: ±0,15 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	4	6	8	10	12	16	25	32
Allowable tensile load [N]	100	160	220	300	360	480	780	1000
Weight [g/m]	6	9	12	15	18	24	37	48

Other widths are available on request

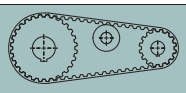
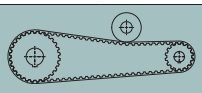
Tooth shear strength

rpm [min⁻¹]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	0,471	0,454	0,440	0,429	0,421	0,414	0,382	0,362	0,347	0,335	0,325	0,317	0,31	0,303	0,297	0,292
P_{spez} [W/cm]	0,000	0,010	0,018	0,027	0,035	0,043	0,080	0,114	0,145	0,175	0,204	0,232	0,259	0,286	0,311	0,336

rpm [min⁻¹]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	0,287	0,283	0,278	0,277	0,274	0,271	0,267	0,264	0,261	0,258	0,253	0,248	0,243	0,239	0,235	0,231
P_{spez} [W/cm]	0,361	0,385	0,408	0,417	0,431	0,454	0,476	0,498	0,519	0,541	0,582	0,622	0,662	0,700	0,715	0,738

rpm [min⁻¹]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	0,228	0,224	0,221	0,218	0,211	0,205	0,200	0,195	0,190	0,186	0,182	0,178	0,174	0,171	0,168	0,165
P_{spez} [W/cm]	0,810	0,845	0,880	0,914	0,996	1,074	1,150	1,223	1,293	1,360	1,426	1,489	1,551	1,611	1,668	1,725

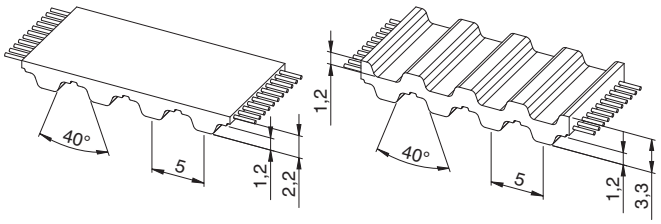
Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	10	15 mm	18	15 mm

Timing pulleys → page 160

BELT CHARACTERISTICS

- Truly endless 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 required
- Allows the use of small diameter pulleys



STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,15 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	10	12	16	25	32	50	75	100
Allowable tensile load [N]	430	520	690	1090	1380	2170	3290	4160
Weight [g/m]	24	28	38	60	77	120	180	240
Weight DT5 [g/m]	27	32	43	68	97	138	210	270

Other widths are available on request

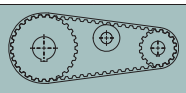
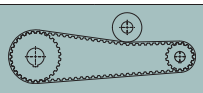
Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	2,523	2,458	2,403	2,354	2,312	2,276	2,135	2,032	1,951	1,884	1,829	1,781	1,738	1,701	1,667	1,635
P_{spez} [W/cm]	0,000	0,051	0,101	0,148	0,194	0,238	0,447	0,638	0,817	0,987	1,149	1,306	1,456	1,603	1,745	1,884

rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	1,607	1,580	1,555	1,545	1,532	1,510	1,489	1,470	1,451	1,433	1,400	1,371	1,342	1,317	1,306	1,292
P_{spez} [W/cm]	2,019	2,151	2,279	2,330	2,406	2,529	2,651	2,770	2,888	3,001	3,226	3,445	3,654	3,860	3,940	4,059

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	1,248	1,229	1,209	1,191	1,149	1,111	1,078	1,046	1,017	0,991	0,966	0,943	0,920	0,900	0,880	0,862
P_{spez} [W/cm]	4,444	4,632	4,812	4,988	5,414	5,818	6,206	6,571	6,924	7,262	7,588	7,897	8,191	8,480	8,758	9,027

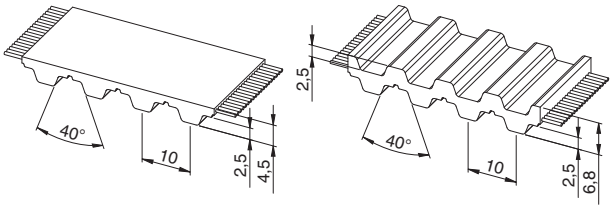
Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	10	30 mm	15	30 mm

Timing pulleys → page 161

T10/T10 Dual

iSync®



BELT CHARACTERISTICS

- Truly endless 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 required
- Allows the use of small diameter pulleys

STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	10	16	25	32	50	75	100	150
Allowable tensile load [N]	890	1520	2280	3040	4680	7080	9490	14170
Weight [g/m]	50	77	120	155	240	365	480	725
Weight DT10 [g/m]	62	92	145	190	290	430	570	900

Other widths are available on request

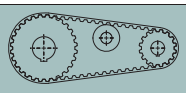
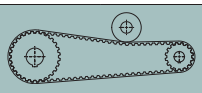
Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	10,717	10,412	10,147	9,916	9,715	9,541	8,846	8,334	7,938	7,615	7,342	7,106	6,899	6,713	6,545	6,391
P_{spez} [W/cm]	0,000	0,218	0,425	0,623	0,814	0,999	1,853	2,618	3,325	3,987	4,613	5,209	5,779	6,326	6,853	7,362

rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	6,250	6,119	5,998	5,951	5,884	5,777	5,676	5,580	5,490	5,404	5,243	5,095	4,959	4,832	4,714	4,603
P_{spez} [W/cm]	7,854	8,330	8,792	8,974	9,242	9,678	10,104	10,518	10,922	11,316	12,077	12,805	13,501	14,168	14,809	15,424

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	4,499	4,400	4,307	4,218	4,013	3,829	3,663	3,510	3,370	3,239	3,118	3,004	2,897	2,795	2,700	2,609
P_{spez} [W/cm]	16,017	16,587	17,136	17,666	18,910	20,049	21,094	22,054	22,935	23,743	24,484	25,162	25,781	26,345	26,855	27,317

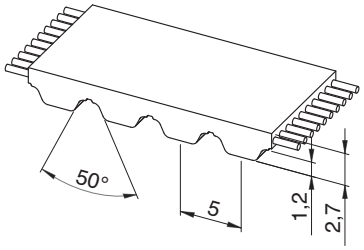
Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	12	60 mm	20	60 mm

Timing pulleys → page 162

BELT CHARACTERISTICS

- Truly endless 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



STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,15 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	6	10	16	25	32	50	75	100
Allowable tensile load [N]	430	790	1350	2200	2950	4700	7100	9500
Weight [g/m]	21	34	54	86	110	175	260	350

Other widths are available on request

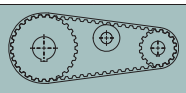
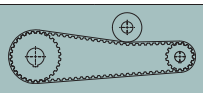
Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	3,813	3,758	3,708	3,663	3,623	3,586	3,448	3,343	3,235	3,137	3,050	2,972	2,900	2,834	2,775	2,719
P_{spez} [W/cm]	0,000	0,079	0,155	0,230	0,304	0,376	0,722	1,050	1,355	1,642	1,916	2,178	2,430	2,671	2,905	3,132

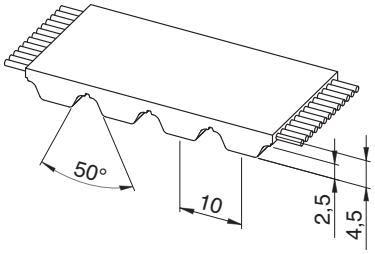
rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	2,668	2,620	2,574	2,557	2,531	2,491	2,452	2,416	2,381	2,348	2,285	2,229	2,175	2,125	2,106	2,079
P_{spez} [W/cm]	3,352	3,566	3,773	3,855	3,975	4,173	4,365	4,554	4,737	4,918	5,265	5,601	5,923	6,231	6,352	6,531

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	1,993	1,954	1,917	1,881	1,799	1,725	1,658	1,596	1,539	1,485	1,436	1,389	1,346	1,304	1,264	1,228
P_{spez} [W/cm]	7,096	7,368	7,627	7,879	8,479	9,032	9,549	10,029	10,473	10,887	11,278	11,635	11,980	12,289	12,576	12,854

Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	15	25 mm	20	60 mm

Timing pulleys → page 165



BELT CHARACTERISTICS

- Truly endless 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

STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [mm]	16	25	32	50	75	100	150
Allowable tensile load [N]	3150	5450	7100	11000	17200	23000	34600
Weight [g/m]	101	158	200	316	475	630	950

Other widths are available on request

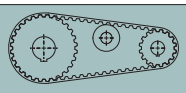
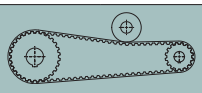
Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	15,903	15,670	15,452	15,246	15,053	14,870	14,103	13,483	12,927	12,439	12,008	11,626	11,282	10,969	10,683	10,418
P_{spez} [W/cm]	0,000	0,328	0,647	0,958	1,261	1,557	2,954	4,236	5,414	6,513	7,545	8,522	9,451	10,337	11,186	12,000

rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	10,174	9,945	9,731	9,649	9,529	9,340	9,160	8,990	8,828	8,672	8,380	8,113	7,866	7,632	7,544	7,416
P_{spez} [W/cm]	12,785	13,538	14,266	14,550	14,968	15,649	16,305	16,944	17,563	18,162	19,305	20,390	21,414	22,378	22,751	23,296

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	7,019	6,838	6,664	6,500	6,120	5,777	5,464	5,179	4,916	4,670	4,441	4,227	4,023	3,832	3,651	3,479
P_{spez} [W/cm]	24,989	25,778	26,516	27,225	28,837	30,248	31,470	32,536	33,460	34,232	34,878	35,409	35,808	36,113	36,322	36,429

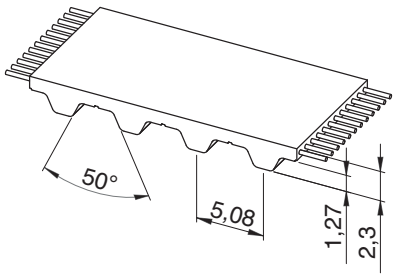
Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	15	50 mm	25	120 mm

Timing pulleys → page 166

BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords and trapezoidal tooth profile according to UNI/ISO 5296
- Imperial pitch 1/5″ = 5,08 mm
- Transmissible power up to 5 kW



STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [inch]/[mm]	0,25/6,35	0,31/7,94	0,37/9,53	0,50/12,7
Allowable tensile load [N]	224	320	384	512
Weight [g/m]	12	16	19	22

Other widths are available on request

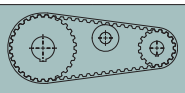
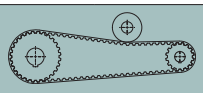
Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	2,638	2,571	2,512	2,462	2,417	2,379	2,233	2,125	2,041	1,973	1,915	1,865	1,821	1,781	1,745	1,712
P_{spez} [W/cm]	0,000	0,054	0,105	0,155	0,202	0,249	0,468	0,668	0,855	1,033	1,203	1,367	1,525	1,678	1,827	1,972

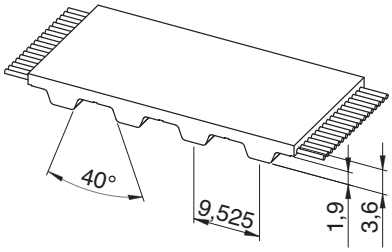
rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	1,682	1,654	1,628	1,618	1,604	1,581	1,560	1,539	1,520	1,501	1,467	1,435	1,406	1,379	1,354	1,330
P_{spez} [W/cm]	2,114	2,252	2,387	2,440	2,519	2,649	2,776	2,901	3,024	3,144	3,379	3,607	3,828	4,043	4,253	4,457

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	1,308	1,287	1,266	1,247	1,204	1,164	1,129	1,096	1,066	1,038	1,012	0,987	0,964	0,943	0,922	0,903
P_{spez} [W/cm]	4,655	4,850	5,039	5,225	5,671	6,095	6,499	6,885	7,253	7,606	7,945	8,270	8,582	8,883	9,172	9,450

Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	10	30 mm	15	30 mm

Timing pulleys → page 175



BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords and trapezoidal tooth profile according to UNI/ISO 5296
- Imperial pitch 3/8" = 9,525 mm
- Transmissible power up to 20 kW

STANDARD TOLERANCES
WIDTH TOLERANCE: ±0,5 [mm]
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

Belt width b [inch]/[mm]	0,50/12,7	0,75/19,1	1,00/25,4	1,50/38,1	2,00/50,8	3,00/76,2	4,00/101,6
Allowable tensile load [N]	880	1280	1760	2720	3600	5440	7280
Weight [g/m]	50	80	100	150	200	300	400

Other widths are available on request

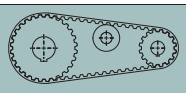
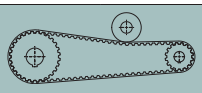
Tooth shear strength

rpm [min^{-1}]	0	20	40	60	80	100	200	300	400	500	600	700	800	900	1000	1100
M_{spez} [Ncm/cm]	7,607	7,375	7,174	6,999	6,847	6,714	6,225	5,872	5,596	5,370	5,179	5,013	4,867	4,737	4,618	4,510
P_{spez} [W/cm]	0,000	0,154	0,300	0,440	0,574	0,703	1,304	1,844	2,344	2,811	3,254	3,675	4,077	4,464	4,836	5,195

rpm [min^{-1}]	1200	1300	1400	1440	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3200
M_{spez} [Ncm/cm]	4,411	4,319	4,233	4,200	4,153	4,077	4,006	3,938	3,874	3,813	3,700	3,596	3,499	3,410	3,326	3,248
P_{spez} [W/cm]	5,543	5,879	6,205	6,333	6,522	6,831	7,131	7,423	7,708	7,986	8,523	9,036	9,527	9,997	10,448	10,882

rpm [min^{-1}]	3400	3600	3800	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000
M_{spez} [Ncm/cm]	3,174	3,104	3,038	2,975	2,830	2,700	2,582	2,474	2,374	2,282	2,196	2,115	2,039	1,967	1,899	1,835
P_{spez} [W/cm]	11,299	11,701	12,087	12,460	13,335	14,135	14,869	15,542	16,159	16,725	17,243	17,716	18,148	18,540	18,894	19,214

Flexibility

Minimum pulley number of teeth and minimum idler diameter	 Drive without reverse bending		 Drive with reverse bending	
	z_{min}	idler d_{min}	z_{min}	idler d_{min}
STANDARD	15	60 mm	20	60 mm

Timing pulleys → page 176

Elatech®

Conveying Applications

Polyurethane belts for conveying applications

Backings

The unique chemical and mechanical features of ELATECH® belts together with the possibility of a wide range of backings in different materials make ELATECH® belts ideal for all conveying applications where synchronization is required. The engineer designer has unlimited possibilities to make a unique design.

Minimum pulley diameter
The minimum pulley diameter can be calculated by means of the "pulley multiplier" shown for each type of backing.

Minimum pulley diameter = backing thickness x pulley multiplier C_D.

As a general rule, we may say that the smaller the pulley, the thinner the backing has to be.
The diameters obtained are valid for application with speed up to 1 m/s and a temperature of 20° C.
If smaller pulley diameters are needed, please contact Elatech technical dept.

Drive with reverse bending
ELATECH® polyurethane timing belts are suitable for drives with reverse bending. Tension should be adjusted, depending on backing hardness.

Temperature range
The choice of the correct backing may allow the conveying of hot items. However, the toothed structure of the belt must not be exposed to temperatures over 80° C.
The minimum contact temperature should be -10° C for all backing materials, however, special material compounds may be available for lower temperatures. In such cases, please check with Elatech technical department.

Coefficient of friction
The values shown in the table refer to the approximate static coefficient of friction against steel.
In order to reduce the pulley's diameter, it is possible to splice the backing allowing a better flexibility. Pulley diameter, should never be smaller than the minimum diameter recommended for the standard belt.
Please ask Elatech technical dept. for further details on coefficient of friction with other materials.

Colours
Standard colours shown in the table may change without notice. Special/personalized colours are available on request.

Chemical resistance
The values given in the table for the resistance to oils and fat of each backing material are purely indicative and may vary depending on the concentration and the temperature of chemical agents. When in doubt, please check with Elatech technical department.

General remarks
Elatech wide range of different backings can be grouped into four main categories: cellular, PVC & PU, rubber, and special. Each different category provides special features and top quality performance and endurance making the various backings especially suitable for specific applications. These features include different degrees of hardness, cellular, fabric, felt or solid material compounds, different levels of grip, FDA-compliant materials, antistatic materials, different resistance to oils and fats, and different resistance to abrasion, tear and wear.
Such variety, combined with top quality mechanical and technical properties and state of the art manufacturing systems and techniques including the application of different flights and cleats, the combination of different backing materials, the slitting and grinding of the final product to match exact dimensions and shapes without any burrs or any other imperfections left on the surface, as well as water jet cutting for extremely precise perforations, make Elatech coated belts the best and the most reliable solution for specific applications in the most diversified fields of industry.

Polyamide fabric backings

The special polyamide fabric backings allow a reduction of the friction coefficient and when applied on teeth, decrease noise in high speed drives. They are very useful in applications with sliding surfaces or product accumulation. Polyamide fabrics with antistatic properties are available.

PAZ	Polyamide backing on tooth side. Reduces coefficient of friction and allows a smoother tooth engagement.
PAR	Polyamide backing on back side. Reduces coefficient of friction.
PAZ–PAR	PAZ-PAR: Polyamide backing on both tooth and back side.

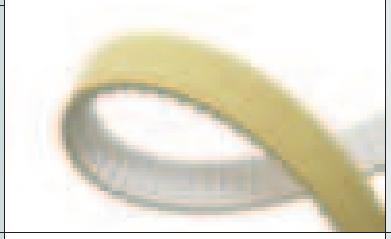
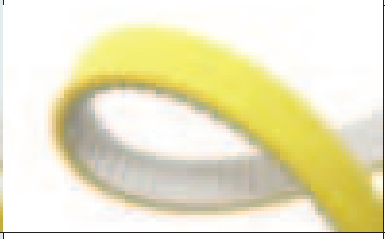
Coefficient of static friction

· Polyurethane on steel	μ = 0,7
· Polyamide on steel	μ = 0,35
· Polyurethane on aluminium	μ = 0,8
· Polyamide on aluminium	μ = 0,45

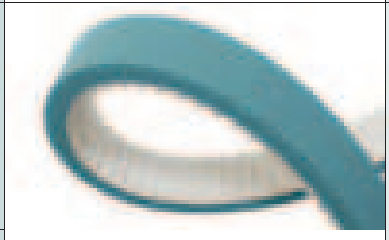
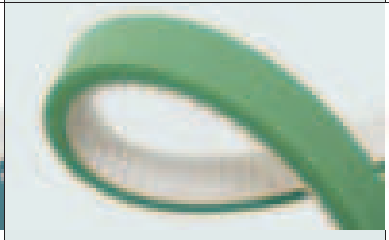
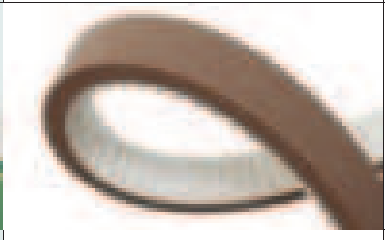
Elatech Code	TZ11	TZ21	TZ15	TZ25
Description	**PAZ Standard**	**PAR Standard**	**PAZ Antistatic**	**PAR Antistatic**
				
	Nylon fabric on teeth	Nylon fabric on back	Antistatic nylon fabric on teeth	Antistatic nylon fabric on back

Polyurethane / Rubber foam backings are easily compressible according to the cellular structure of the material. Due to this main characteristic, common applications are: labelling equipment, light and/or fragile materials conveying, glass and paper industry, vacuum conveyors.

Pulley diameter: C_D • Backing Thickness

Elatech Code	CFX	PY50	PY70
Description	CELLOFLEX	PU YELLOW 50	PU YELLOW 70
			
Material	Microcellular elastomeric polyurethane	Polyurethane	Polyurethane
Colour	brown/yellow	yellow	yellow
Hardness [Sh.A]	-	50	70
Standard thickness [mm]	3 - 10	2 - 3 - 4 - 5 - 6 - 8 - 10	2 - 3 - 4 - 5 - 6 - 8 - 10
Temperature range (°C)	-30 ; +80	-10 ; +70	-20 ; +80
Oil and fat resistance	low	medium	high
Coefficient of static friction on steel	0,3	0,8	0,75
FDA food grade	No	No	No
Pulley multiplier C_D	16	20	25

Pulley diameter: C_D • Backing Thickness

Elatech Code	SYL-B	SYL-V	SYL-M
Description	SYLOMER BLU	SYLOMER GREEN	SYLOMER BROWN
			
Material	Elastomeric PUR	Elastomeric PUR	Elastomeric PUR
Colour	blue	green	brown
Hardness [Sh.A]	-	-	-
Standard thickness [mm]	6 - 12 - 25	6 - 12 - 25	6 - 12 - 25
Temperature range (°C)	-30 ; +70	-30 ; +70	-30 ; +70
Oil and fat resistance	medium	medium	medium
Coefficient of static friction on steel	0,5	0,5	0,5
FDA food grade	No	No	No
Pulley multiplier C_D	12	14	15

Pulley diameter: C_D • Backing Thickness

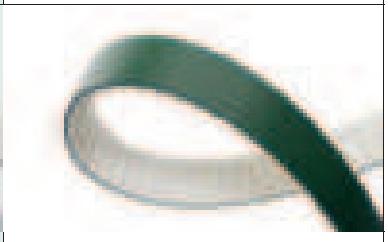
Elatech Code	POR
Description	POROL
	
Material	Cellular rubber
Colour	black
Hardness [Sh.A]	~ 15
Standard thickness [mm]	3 - 5 - 8 - 10 - 15
Temperature range (°C)	-40 ; +70
Oil and fat resistance	medium
Coefficient of static friction on steel	0,8
FDA food grade	No
Pulley multiplier C_D	6

PVC has a high coefficient of friction and a good resistance to acids. Due to its versatility, it is used in many applications in the paper, glass, ceramic industry, labelling and packing equipment. Its quality allows the application in food industry processes.
Among all synthetic materials and rubber compounds, polyurethane is the material which offers the best resistance to abrasion. Polyurethane films of different thickness and different shore hardness, applied on ELATECH® belts, are an ideal solution in many applications in the wood processing, ceramic and glass industry.
On request it is possible to supply polyurethane backings approved for food contact.

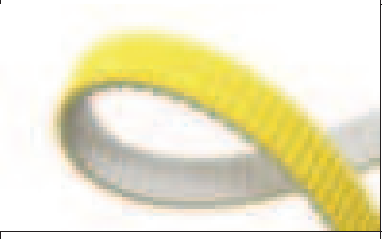
Pulley diameter: C_D • Backing Thickness

Elatech Code	FBPU	FBPVC	PUR70
Description	FISHBONE PU	FISHBONE PVC	PUR70
			
Material	PU	PVC	PU
Colour	transparent	white	transparent
Hardness [Sh.A]	70 / 85	65	70
Standard thickness [mm]	4	4	2 - 5
Temperature range (°C)	-20 ; +80	-10 ; +90	-20 ; +80
Oil and fat resistance	high	high	high
Coefficient of static friction on steel	0,7	0,7	0,7
FDA food grade	No	Yes	No
Pulley multiplier C_D	18	18	25

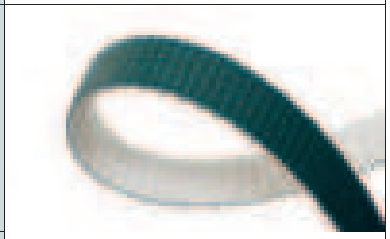
Pulley diameter: C_D • Backing Thickness

Elatech Code	PUR85	PVCW	PVCG
Description	PUR85	PVC WHITE	PVC GREEN
			
Material	PU	PVC	PVC
Colour	transparent	white	green
Hardness [Sh.A]	85	~ 65	~ 40
Standard thickness [mm]	2 - 5	2,3	1,0
Temperature range (°C)	-20 ; +80	-10 ; +90	-10 ; +90
Oil and fat resistance	high	high	high
Coefficient of static friction on steel	0,6	1,0	0,9
FDA food grade	No	Yes	No
Pulley multiplier C_D	30	35	40

Pulley diameter: C_D • Backing Thickness

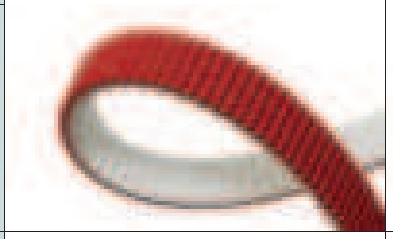
Elatech Code	SG50R	SG60	SG70
Description	SUPERGRIP 50 R	SUPERGRIP 60 GL	SUPERGRIP 70Y
			
Material	Thermoplastic compound	PVC	PU
Colour	red	green	yellow
Hardness [Sh.A]	55	60	70
Standard thickness [mm]	4,5 - 12	4,5	4,5
Temperature range (°C)	-10 ; +70	-10 ; +80	-20 ; +80
Oil and fat resistance	medium	high	high
Coefficient of static friction on steel	0,9	0,9	0,8
FDA food grade	No	No	No
Pulley multiplier C_D	12	12	12

Pulley diameter: C_D • Backing Thickness

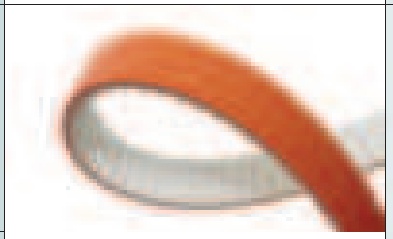
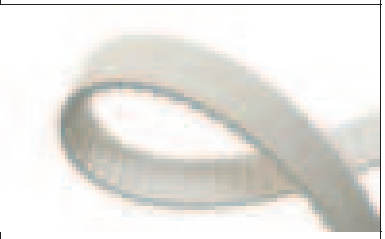
Elatech Code	MG
Description	MINIGRIP PVC
	
Material	PVC
Colour	green
Hardness [Sh.A]	~ 65
Standard thickness [mm]	1,5
Temperature range (°C)	-10 ; +80°
Oil and fat resistance	high
Coefficient of static friction on steel	0,4
FDA food grade	No
Pulley multiplier C_D	40

Many different rubber backings in both synthetic and natural rubber are available. Due to rubber's high friction coefficient and high temperature resistance, ELATECH® polyurethane belt with rubber backing is used in many different conveying application: paper industry, ceramic industry, wood processing industry, glass industry, labelling and packaging machines.

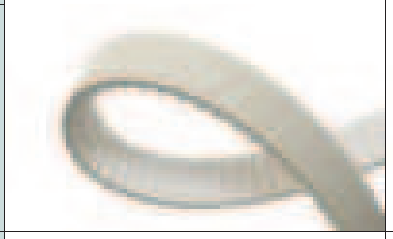
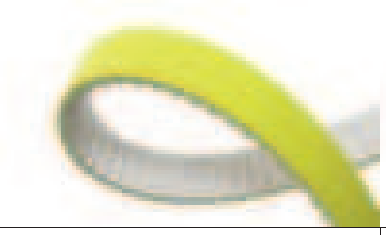
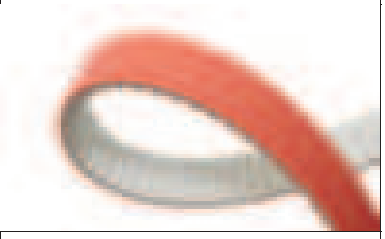
Pulley diameter: C_D • Backing Thickness

Elatech Code	SG40T	SGR40BT	LTX
Description	SUPERGRIP 50 RT	SUPERGRIP 50 RT	LINATEX
			
Material	Natural rubber	Natural rubber	Natural rubber
Colour	red	black	red
Hardness [Sh.A]	40	40	~ 40
Standard thickness [mm]	4,5	4,5	2,4 - 3,2 - 4,8 - 6,4 - 8,0 - 9,6
Temperature range (°C)	-40 ; +70	-40 ; +70	-40 ; +70
Oil and fat resistance	low	low	low
Coefficient of static friction on steel	1,0	1,0	1,1
FDA food grade	No	No	No
Pulley multiplier C_D	15	15	15

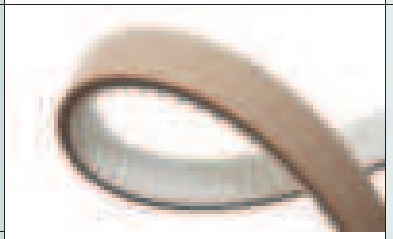
Pulley diameter: C_D • Backing Thickness

Elatech Code	LTR	NBR	NBR-W
Description	LINATRILE	NITRILE	NITRILE
			
Material	Nitrile rubber	Nitrile rubber	Nitrile rubber
Colour	orange	black	white
Hardness [Sh.A]	~ 55	65	65
Standard thickness [mm]	3 - 6	-	-
Temperature range (°C)	-20 ; +110	-20 ; +80	-20 ; +80
Oil and fat resistance	medium	medium	medium
Coefficient of static friction on steel	1,0	0,7	0,7
FDA food grade	No	No	No
Pulley multiplier C_D	20	18	18

Pulley diameter: C_D • Backing Thickness

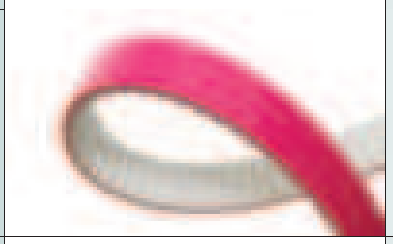
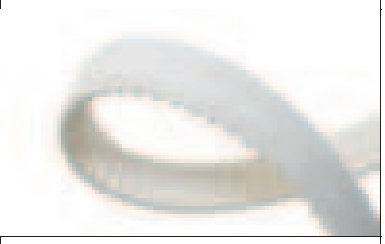
Elatech Code	LNP	RP400	TNX
Description	LINAPLUS	YELLOW RUBBER	TENAX / ISOGUM
			
Material	Natural rubber	Natural rubber	Rubber
Colour	white	yellow	red
Hardness [Sh.A]	~ 40	~ 35	40
Standard thickness [mm]	2,4 - 3,2 - 4,8 - 6, 4 - 8,0 - 9,6	3 - 4 - 5 - 6 - 8 - 10 - 12 - 15 20 - 25 - 30	2 - 15
Temperature range (°C)	-40 ; +70	-35 ; +80	-40 ; +70
Oil and fat resistance	low	low	low
Coefficient of static friction on steel	1,1	1,2	0,75
FDA food grade	Yes	No	No
Pulley multiplier C_D	15	13	15

Pulley diameter: C_D • Backing Thickness

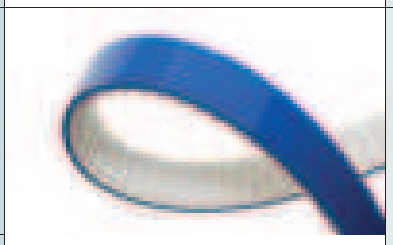
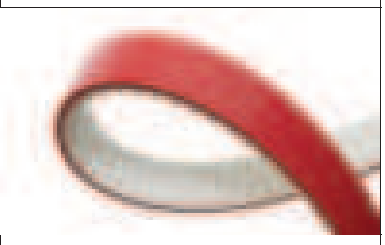
Elatech Code	CRX	VTN
Description	CORREX	VITON
		
Material	Para rubber	FKM Fluoroelastomer
Colour	brown	black
Hardness [Sh.A]	~ 40	~ 75
Standard thickness [mm]	6 - 10	2 - 4
Temperature range (°C)	-10 ; +60	-10 ; +250
Oil and fat resistance	low	high
Coefficient of static friction on steel	0,9	0,7
FDA food grade	No	No
Pulley multiplier C_D	15	30

Special backings are available in quite a different range of materials to cover even the most demanding design requirements.

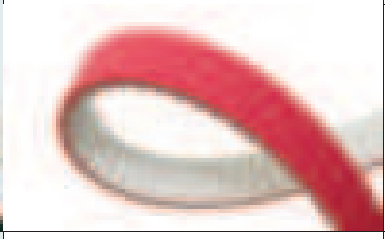
Pulley diameter: C_D • Backing Thickness

Elatech Code	APL	SLC	SLCPU
Description	APL	SILICON	SILICON
			
Material	Thermoplastic compound	Silicon	Special silicon compound
Colour	red-purple	transparent	white
Hardness [Sh.A]	55	30	60
Standard thickness [mm]	3,5	3 - 10	3 - 10
Temperature range (°C)	-20 ; +60	-40 ; +200	-20 ; +120
Oil and fat resistance	high	high	high
Coefficient of static friction on steel	0,7	1,0	0,85
FDA food grade	No	No	No
Pulley multiplier C_D	25	20	20

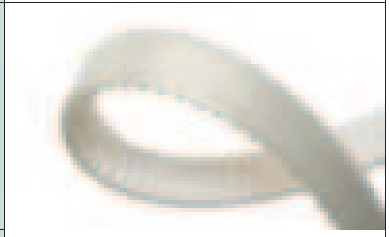
Pulley diameter: C_D • Backing Thickness

Elatech Code	SLCF	TG50	TG70
Description	SILICON FDA	TECNOGUM 50	TECNOGUM 70
			
Material	Silicon	Thermoplastic rubber compound	Thermoplastic rubber compound
Colour	blue	red	red
Hardness [Sh.A]	30	~ 50	~ 70
Standard thickness [mm]	3 - 10	1 - 6	1 - 6
Temperature range (°C)	-40 ; +220	-10 ; +70	-20 ; +80
Oil and fat resistance	high	medium	high
Coefficient of static friction on steel	1,1	0,7	0,6
FDA food grade	Yes	No	No
Pulley multiplier C_D	20	20	25

Pulley diameter: C_D • Backing Thickness

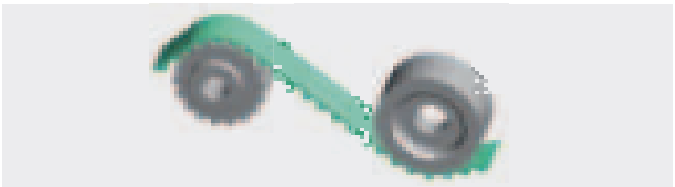
Elatech Code	CHRL	TZ26	RIB-H-APL
Description	CHROME LEATHER	TZ PAR	MULTIRIB
			
Material	Chrome leather	HDPE	Thermoplastic compound
Colour	grey / blue	green	red
Hardness [Sh.A]	65	-	55
Standard thickness [mm]	3	0,3	3,5
Temperature range (°C)	-10 ; +70	-10 ; +80	-20 ; +60
Oil and fat resistance	high	high	high
Coefficient of static friction on steel	0,8	0,18	-
FDA food grade	No	No	No
Pulley multiplier C_D	30	-	-

Pulley diameter: C_D • Backing Thickness

Elatech Code	RIB-H-PU70
Description	MULTIRIB
	
Material	PU
Colour	trasparent
Hardness [Sh.A]	70
Standard thickness [mm]	3,5
Temperature range (°C)	-20 ; +80
Oil and fat resistance	high
Coefficient of static friction on steel	0,7
FDA food grade	No
Pulley multiplier C_D	-

ELATECH® EMF – Mechanical Fastening System

ELATECH® EMF - Mechanical Fastening System allows in many conveying applications cost savings associated with being able to design equipment around the installation principle of EMF.



Features

- EMF has no exposed metal parts, therefore no metal contact is made with pulleys, so it runs very quietly. Since there are no exposed metal parts, EMF will not damage conveyed products like competing metal based mechanical fastening alternatives.
- EMF maintains the same minimum pulley requirements as the belt and can operate with back bend idlers.
- It is excellent for belt applications with special backings such as Linatex, Supergrip, PVC, Fishbone, etc. EMF fits snug, which eliminates gaps otherwise seen in competing designs.
- It is suitable for belts with profiles for quick installation, saving time and money.
- EMF installs in seconds, making it the fastest timing belt installation for product conveyance.
- There is no need for time-consuming field welding.
- It is simple to install and requires no cumbersome or expensive field welding equipment.
- It can be custom designed according to the application strength needed. EMF can reach the same strength as the traditional welding.
- It is available on all pitches, making it a "must have" for all of your customer's conveying applications.
- EMF on double sided tooth is available only on request.

ELATECH® EMF

Profile	Width [mm]	Number of pins	Max working tension [N]	SAFELOCK	Carbon pin
T 5	10	5	96	-	-
	16	5	144	-	-
		8	224	-	-
	20	5	176	-	-
		8	232	-	-
	25	5	176	-	-
		8	256	-	-
	32	5	304	-	-
		8	450	-	-
	50	5	360	-	-
		8	480	-	-
T 10	16	4	216	-	-
		8	320	-	-
		12	640	-	-
	20	4	240	•	-
	25	4	304	•	•
		8	504	•	•
		11	680	•	•
	32	4	400	•	•
		8	576	•	•
		12	880	•	•
	50	4	624	•	•
		8	1120	•	•
		11	1480	•	•
	75	4	800	•	-
		8	1600	•	-
		11	1760	•	-
	100	4	1040	•	-
		8	2000	•	-
		11	2280	•	-
T 20	25	4	536	•	-
		11	1600	•	-
	32	4	784	•	-
		6	1200	•	-
	50	4	960	•	-
		11	3040	•	-
	75	4	1600	•	-
		11	3560	•	-
	100	4	2130	•	-
		11	7600	•	-
AT 5	10	5	144	-	-
	16	5	168	-	-
		8	240	-	-
	20	5	280	-	-
		8	320	-	-
	25	5	208	-	-
		8	288	-	-
	32	5	320	-	-
		8	380	-	-
	50	5	440	-	-
		8	600	-	-
AT 10	16	4	256	-	-
		8	500	-	-
		12	960	-	-
	20	4	344	•	-
	25	4	384	•	•
		8	624	•	•
		11	904	•	•
	32	4	640	•	•
		8	800	•	•
		12	1200	•	•
	50	4	880	•	•
		8	1680	•	•
		11	2160	•	•
	75	4	1040	•	-
		8	2320	•	-
		11	2640	•	-
	100	4	1440	•	-
		8	2720	•	-
		11	3440	•	-

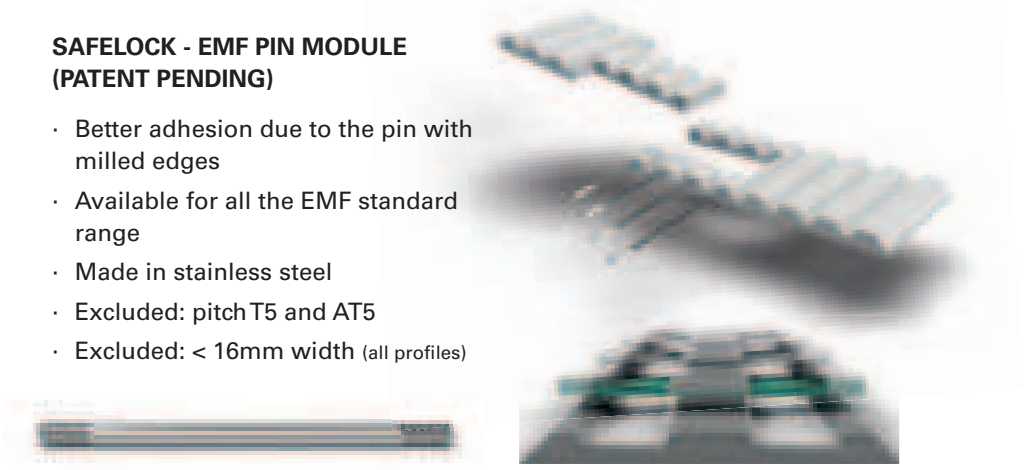
Profile	Width [mm]	Number of pins	Max working tension [N]	SAFELOCK	Carbon pin
AT 20	25	4	800	•	-
		11	1760	•	-
	32	4	1200	•	-
		6	1520	•	-
	50	4	1600	•	-
		11	4400	•	-
	75	4	1920	•	-
		11	6080	•	-
	100	4	2700	•	-
		11	7700	•	-
HT 5	10	5	120	-	-
	15	5	168	-	-
		8	240	-	-
	20	5	224	•	-
		8	296	•	-
	25	5	280	•	•
		8	376	•	•
	32	5	320	•	•
		8	510	•	•
	50	5	480	•	•
		8	640	•	•
	75	4	728	•	-
		8	1096	•	-
	100	5	800	•	-
		8	1520	•	-
HT 8	15	5	256	-	-
	20	5	360	•	-
		5	376	•	•
	25	10	784	•	•
		14	960	•	•
	30	5	400	•	-
		11	960	•	-
	50	5	800	•	•
		10	1440	•	•
		14	2080	•	•
		22	2300	•	•
	75	5	1320	•	-
		10	2400	•	-
		14	2880	•	-
	85	9	2320	•	-
	100	5	1760	•	-
		10	3200	•	-
		14	3600	•	-
HT 14	40	5	1120	•	-
	55	5	1600	•	-
	85	5	2400	•	-

Profile	Width [mm]	Number of pins	Max working tension [N]	SAFELOCK	Carbon pin
RP 5	10	5	120	-	-
	15	5	168	-	-
		8	240	-	-
	20	5	224	•	-
		8	296	•	-
	25	5	280	•	•
		8	376	•	•
	32	5	320	•	•
		8	510	•	•
	50	5	480	•	•
		8	640	•	•
	75	4	728	•	-
		8	1096	•	-
	100	5	800	•	-
		8	1520	•	-
RP 8	15	5	256	-	-
	20	5	360	•	-
	25	5	376	•	•
		10	784	•	•
		14	960	•	•
	30	5	400	•	-
		11	960	•	-
	50	5	800	•	•
		10	1440	•	•
		14	2080	•	•
		22	2300	•	•
	75	5	1320	•	-
		10	2400	•	-
		14	2880	•	-
	85	9	2320	•	-
	100	5	1760	•	-
		10	3200	•	-
		14	3600	•	-
RP 14	40	5	1120	•	-
	55	5	1600	•	-
	85	5	2400	•	-

Profile	Width [mm]	Number of pins	Max working tension [N]	SAFELOCK	Carbon pin
ST 5	10	5	120	-	-
	15	5	168	-	-
		8	240	-	-
	20	5	224	•	-
		8	296	•	-
	25	5	280	•	•
		8	376	•	•
	32	5	320	•	•
	50	5	480	•	•
		8	640	•	•
	75	4	728	•	-
		8	1096	•	-
	100	5	800	•	-
		8	1520	•	-
ST 8	15	5	256	-	-
	20	5	360	•	-
		5	376	•	-
	25	10	784	•	•
		14	960	•	•
	30	5	400	•	-
		11	960	•	-
	50	5	800	•	•
		10	1440	•	•
		14	2080	•	•
		22	2300	•	•
	75	5	1320	•	-
		10	2400	•	-
		14	2880	•	-
	85	9	2320	•	-
	100	5	1760	•	-
		10	3200	•	-
		14	3600	•	-
ST 14	40	5	1120	•	-
	55	5	1600	•	-
	85	5	2400	•	-
L	12,7	4	144	-	-
	19,05	5	256	•	-
	25,4	5	288	•	•
	38,1	5	480	•	-
	50,8	5	560	•	•
	76,2	5	1000	•	-
	101,6	5	1200	•	-
H	12,7	4	160	-	-
	19,05	4	240	•	-
	25,4	4	304	•	•
	38,1	4	520	•	-
	50,8	4	640	•	•
	76,2	4	880	•	-
	101,6	4	1120	•	-
XH	50,8	10	3060	•	-

SAFELOCK - EMF PIN MODULE (PATENT PENDING)

- Better adhesion due to the pin with milled edges
- Available for all the EMF standard range
- Made in stainless steel
- Excluded: pitch T5 and AT5
- Excluded: < 16mm width (all profiles)

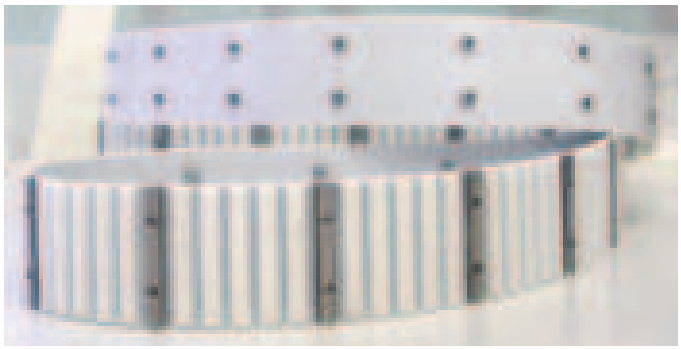


ELATECH® EFT – False Tooth System

EFT is ELATECH mechanical profile application system specially designed for fastening cleats that cannot be welded onto polyurethane timing belts.
Zinc-coated or stainless steel teeth are available, either with our embedded tooth or total tooth design.

With the total tooth design, the EFT replaces the entire tooth of the belt and is safely secured by means of two threaded holes. The embedded tooth design prevents any metal-to-metal contact, ensuring more silent operation.

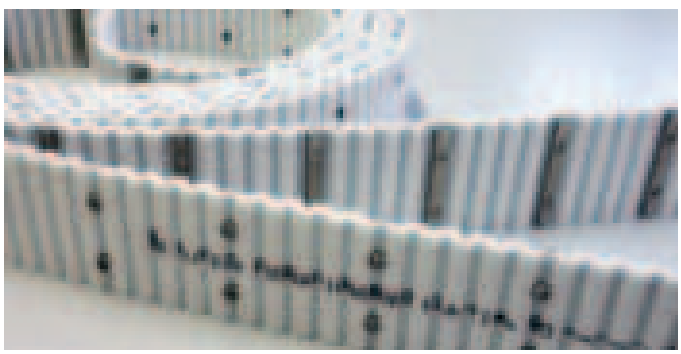
Total tooth design



Embedded tooth design

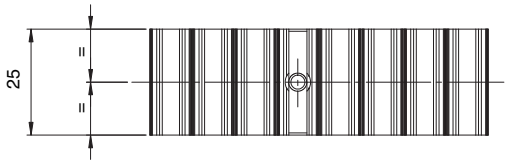
Many are the advantages offered by ELATECH® EFT:

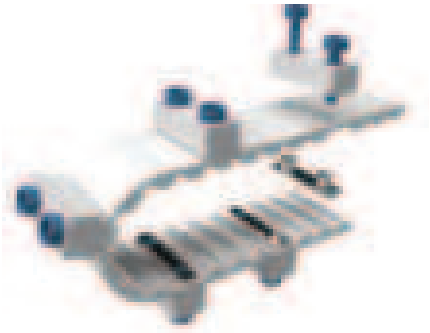
- EFT allows to apply cleats that cannot be welded onto polyurethane timing belts because of their overall dimension and/or material (such as steel, stainless steel, plastic, urethane, wood etc.)
- EFT is in stock in stainless suitable for food and pharmaceutical industry and humid environments.
- EFT design has a self-centering effect on profile positioning, which makes it more precise than welded profiles.
- EFT can handle much higher loads than welded profiles, making it a strong solution.
- EFT is the precise solution eliminating any welded profile positioning tolerances. The profile positioning tolerance for EFT mirrors the ELATECH® timing belt tooth pitch tolerance.
- EFT is flexible, allowing customers to reposition cleats for regularly scheduled application changes
- EFT is economical because customers can replace worn profiles without having to replace the entire belt.
- EFT is available in any of the following profiles: AT10, AT20, H, XH with or without self-tracking guide.
- EFT allows to use basic belts in all their possible executions: Flex, welded, with PAZ or PAR, FDA PU, steel, aramid or stainless steel cord.



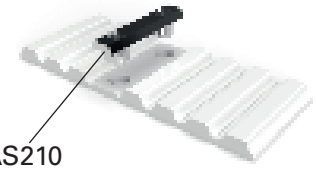
TAS154 - suitable for AT10 and H profile 25 mm wide, one pin

TAS154

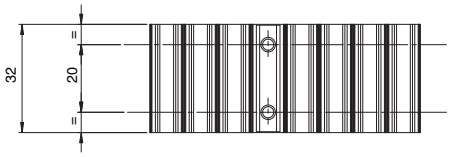




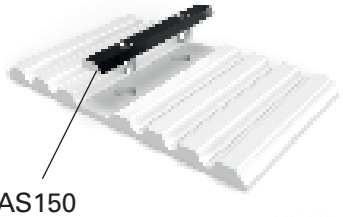
TAS210 - suitable for AT10 profile 32 mm wide, two pins at 20 mm centre distance



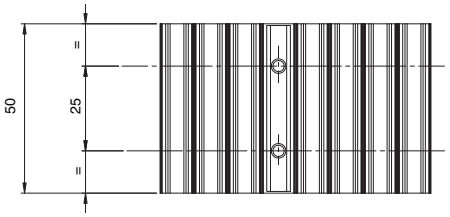
TAS210



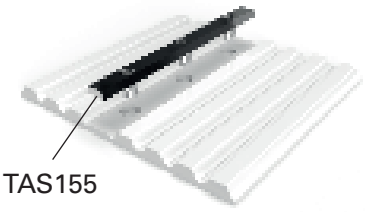
TAS150 - suitable for AT10 profile, 50 mm wide, two pins at 25 mm centre distance



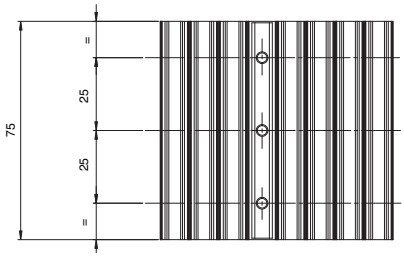
TAS150



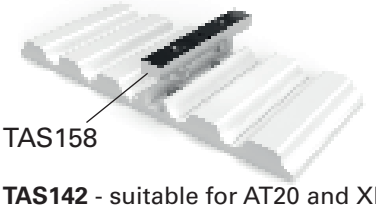
TAS155 - suitable for AT10 profile, 75 mm wide, three pins at 25 mm centre distance



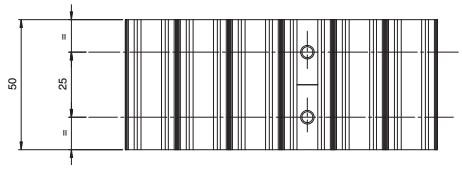
TAS155



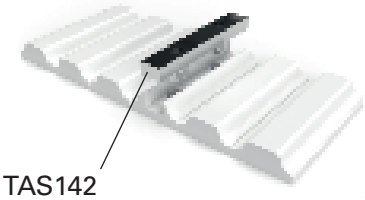
TAS158 - suitable for AT20 and XH profile, 25-50-75-100 mm wide, number of pins multiple of 25 mm centre distance



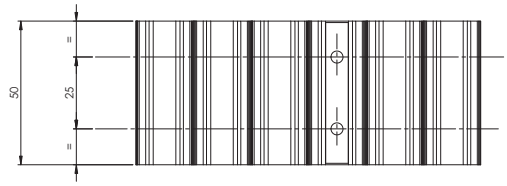
TAS158



TAS142 - suitable for AT20 and XH profile, 50 mm wide, two pins at 25 mm centre distance



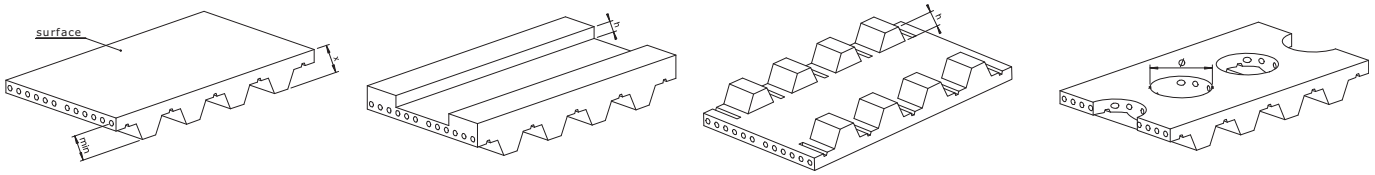
TAS142



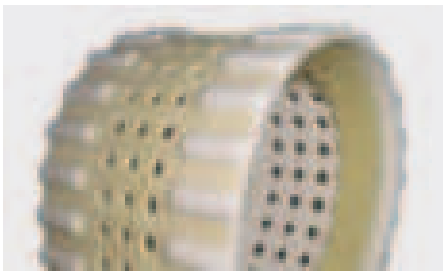
Mechanical processing

Thanks to top quality, state of the art machinery and techniques such as water jet cutting, ELATECH® timing belts can be mechanically processed to perform special and complex tasks. The extremely precise machining and finishing operations guarantee the respect of the strictest tolerance requirements and the maximum reliability of ELATECH® timing belts in all the most complex and demanding industrial applications.

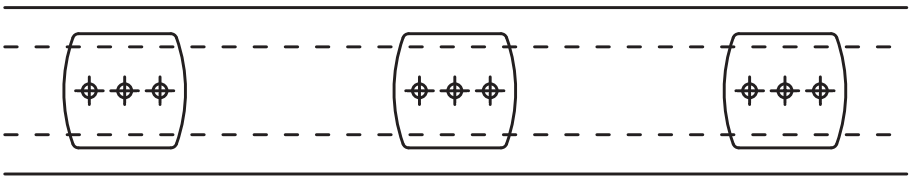
Depending on the application requirements, mechanical processing may include longitudinal milling of the teeth and/or of the back, back and side grinding, teeth removal, belt surface perforation and/or engraving, as well as surface preparation for the application of special profiles.



The great precision and the versatility of water jet cutting technology allow the creation of holes of any dimensions and shapes, from the smallest to the largest, from perfectly circular to oval or square.



Special backings can also be machined to optimize the performance of the belts in special applications. A typical example is the hollow milling of the backing to create a “vacuum cup effect” and maximize the suction provided by water jet cut bores. In this case, perfect suction is also granted by the absence of any tension members within the vacuum areas.

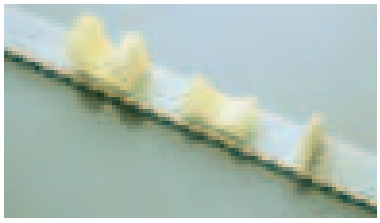


In another application, the thick V-shaped yellow PU backing on a belt used for transporting aluminium bars is slitted transversely to enhance the flexibility of the belt itself and to improve its revolution around smaller pulleys.

ELATECH® polyurethane belts with profiles

It is possible to attach profiles on all ELATECH® M and V, ELA-flex SD® and iSync® polyurethane belts for conveying, handling and positioning applications. The cleats are produced in the same material of the belts in order to guarantee the maximum strength.

The belts with profiles allow a synchronised translation of the products at very high speeds and low noise. A very wide range of profiles is available. If the required profile is not shown in the following pages, please contact our technical office.



Pitch
It is recommended to choose the pitch of the profile corresponding to the belt profile or multiple. This allows to minimize the effects of the belt overall length tolerance on profile spacing.

Position
Profile position may be over the tooth or not over the tooth. Belt flexibility is maximized when the profiles are applied over the tooth (Fig.1).

Fig.1

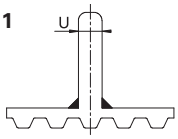
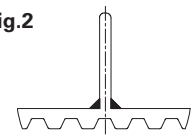
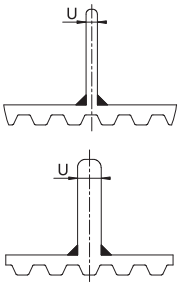


Fig.2



Arc of contact
It is to be noted that the belt's arc of contact may be restricted by the jointed profile. It is therefore recommended to select profiles with the minimum allowable thickness "U".



Tolerances
The tolerance of position of the profiles is +/- 0,5 mm. If required it is possible to reduce the tolerance down to +/- 0,2 mm with an extra machining. During the welding process a bead of polyurethane of about 0,5-1 mm develops at the meeting point between the profile and the belt. Should it be necessary for the application, it is possible to remove the bead with mechanical machining.

Belt type	Profile thickness "U" [mm]																							
	2		3		5		6		8		10		12		14		16		20		25		30	
	Recommended minimum pulley number of teeth z																							
T5	14	20	14	30	20	45	25	50	40	60	60	100	80	-	100	-	-	-	-	-	-	-	-	-
T10	16	20	16	20	16	30	16	40	20	50	25	50	35	60	50	70	80	80	100	100	120	120	-	-
T20	20	20	18	20	18	25	18	40	18	50	20	50	25	50	30	60	40	60	50	60	70	80	-	-
AT5	12	20	12	30	20	45	25	50	40	60	60	100	-	-	100	-	-	-	-	-	-	-	-	-
AT10	18	20	18	20	18	30	18	40	20	50	25	50	35	60	50	70	80	80	100	100	120	120	-	-
AT20	20	20	20	20	20	25	20	40	20	50	20	50	25	50	40	40	50	50	50	60	70	80	100	100
XL	10	20	10	30	20	45	25	50	40	60	50	100	60	100	-	-	-	-	-	-	-	-	-	-
L	12	16	12	20	12	40	20	50	30	60	40	60	50	70	60	80	100	100	-	-	-	-	-	-
H	14	16	14	16	14	25	14	30	20	50	25	50	40	60	50	70	80	80	100	100	120	120	-	-
XH	18	18	18	20	18	20	18	30	18	40	20	50	20	50	25	55	35	60	50	60	70	80	-	-
HTD5M	12	20	12	30	20	45	25	50	40	60	60	100	80	-	100	-	-	-	-	-	-	-	-	-
HTD8M	18	18	18	18	18	24	18	32	18	40	20	40	28	48	40	56	64	64	80	80	100	100	-	-
HTD14M	28	28	28	28	28	28	28	40	28	50	28	50	28	50	30	60	40	50	50	60	100	100	110	110
STD5M	12	20	12	30	20	45	25	50	40	60	60	100	80	-	100	-	-	-	-	-	-	-	-	-
STD8M	18	18	18	18	18	24	18	32	18	40	20	40	28	48	40	56	64	64	80	80	100	100	-	-

Minimum number of teeth when the profile is welded on tooth gap **(fig. 2)**
Minimum number of teeth when the profile is welded on tooth **(fig. 1)**

Ordering
When ordering it is necessary to indicate: type of belt (width, profile, pitch, length), the belt length in number of teeth, the belt and profile drawing with the number and the pitch of the requested profiles.

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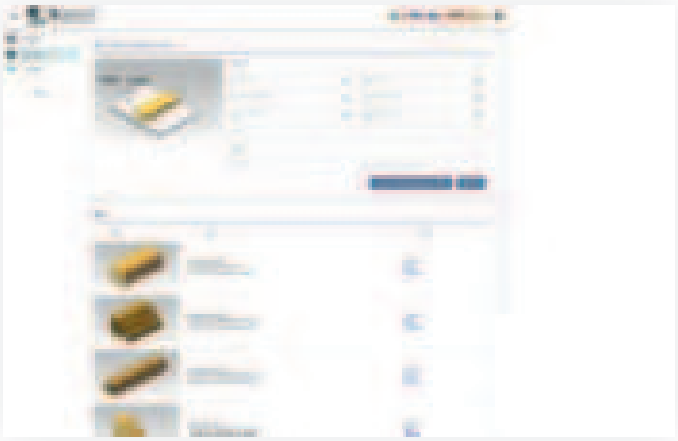

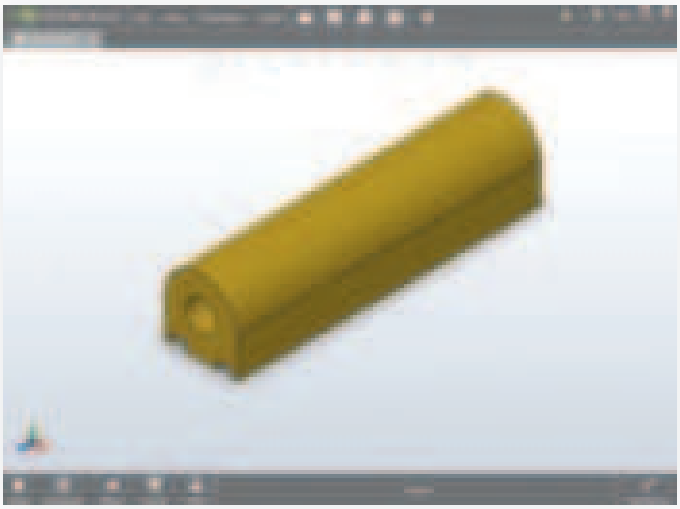

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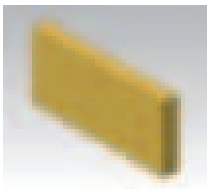
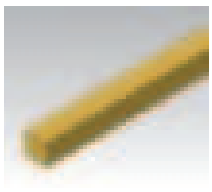
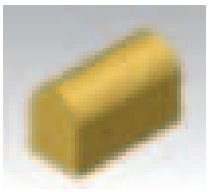
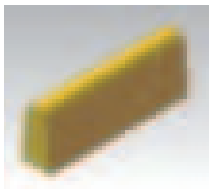
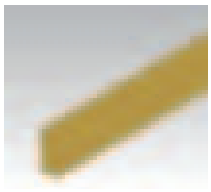



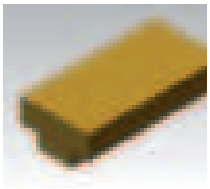
ST = Square Top: flat faces at right angles to each other

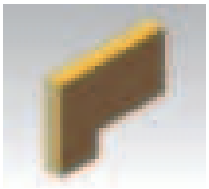
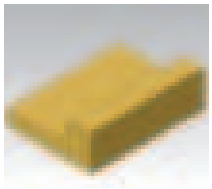
RT = Round Top: the upper part of the cleat has a rounded shape



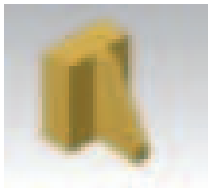

TR = Triangular or Trapezoidal: flat faces, some of which are not at right angles to other faces; cross-sections can be triangular, trapezoidal, pentagonal, etc.



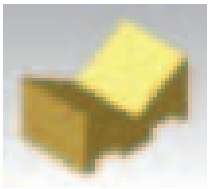
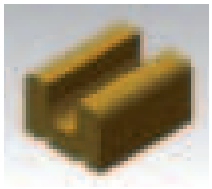

TT = "T" Shaped: a portion of the cleat (usually the upper one) is wider than the rest, so that a cross-section resembles the shape of a capital "T"

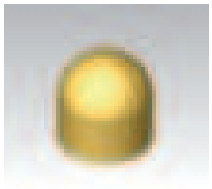
AN = Angular Shape: two portions of the cleat are set at an angle to each other




GB = Gusset Back: having a fin on one side that is not attached to the belt but rests on it and increases rigidity when the cleat is pushed in one direction

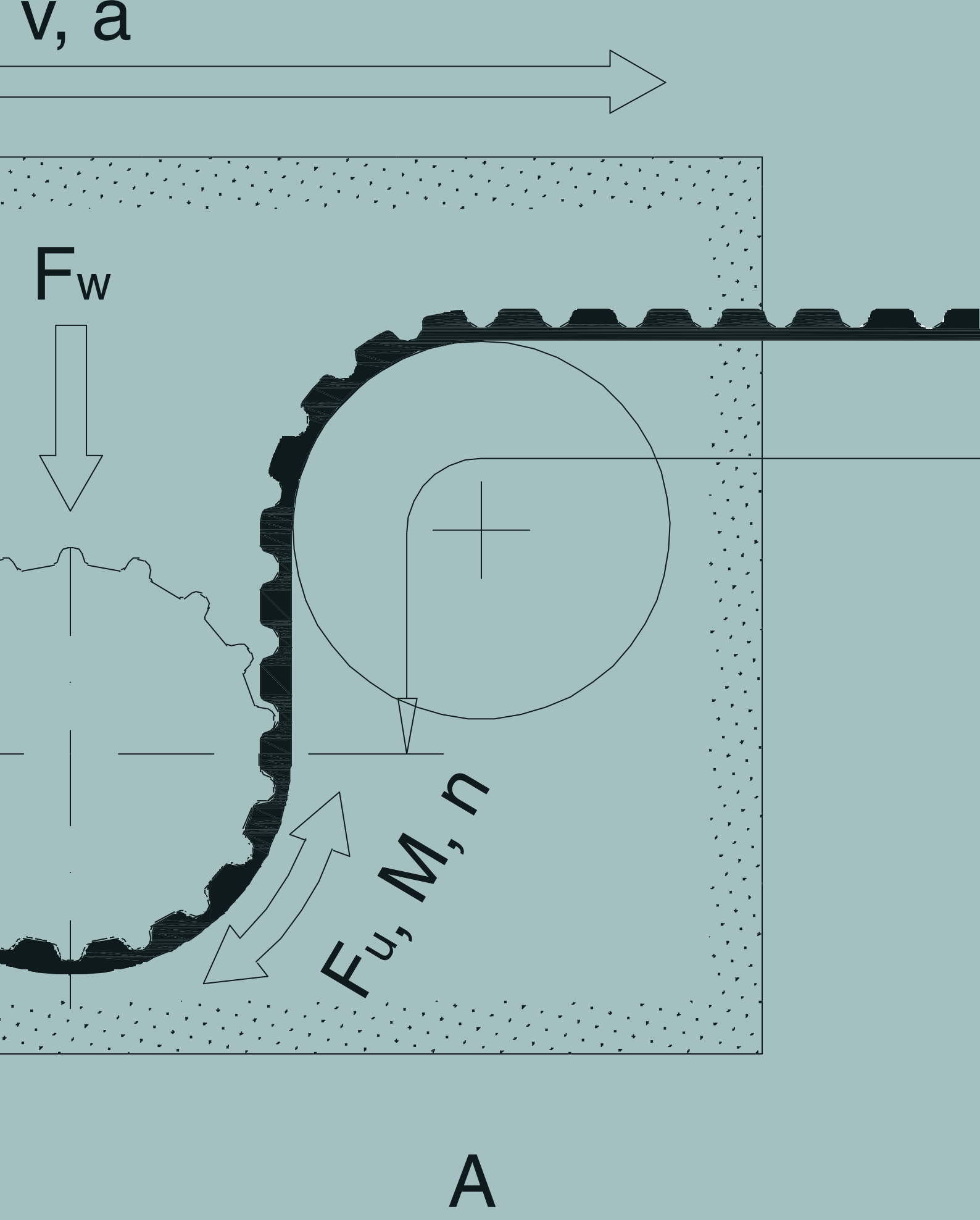



CR = Cradle Shape: "U" or "V" shaped so that an object can rest in the seat created by the sides of the cleat

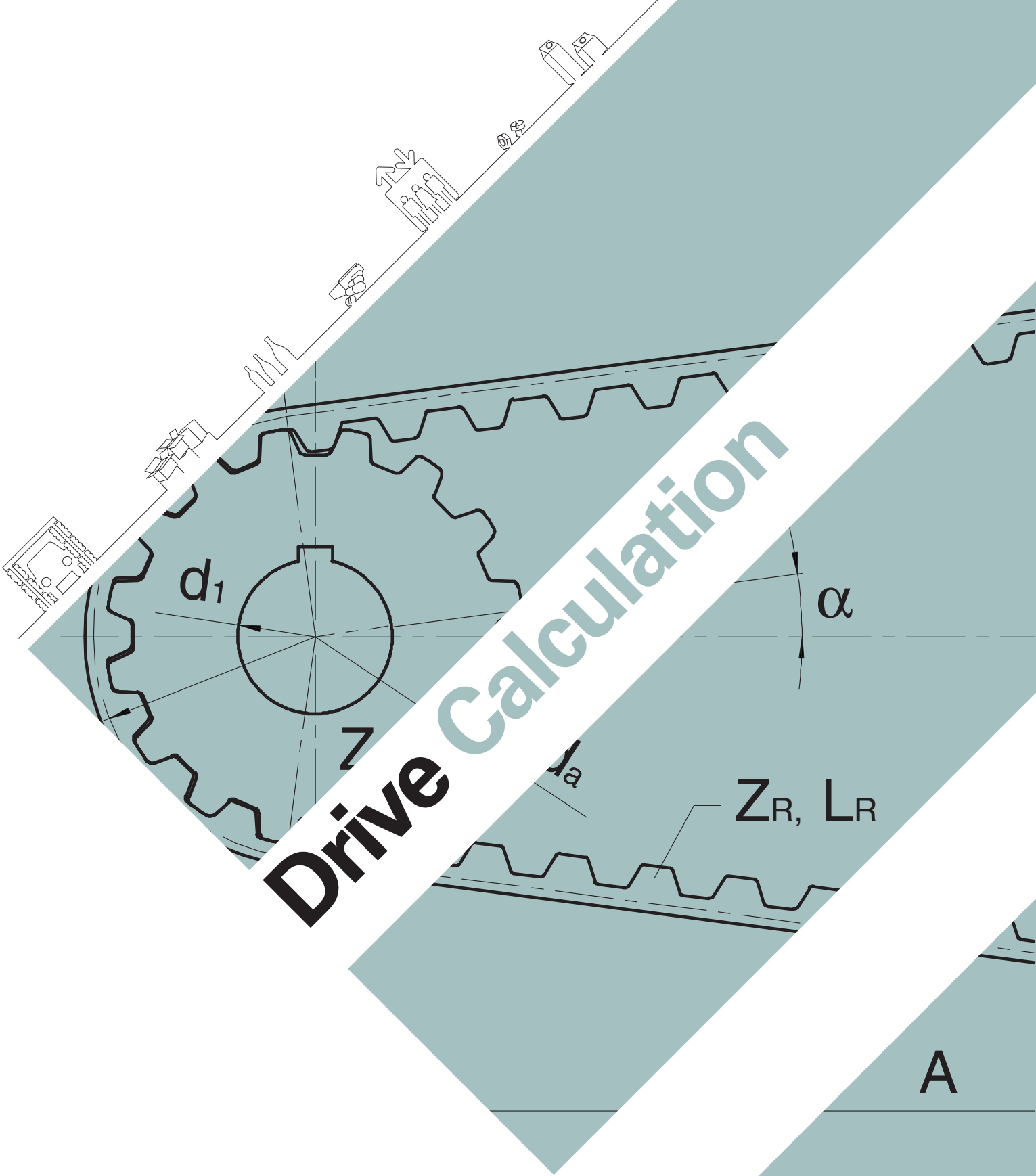



CY = Cylindrical Shape: a cylinder with vertical or horizontal axis


SP = Special Shape: any other shape, usually a structure especially designed for a specific use



A



Drive Calculation

Drive calculation

GUIDELINES

Pulleys
It is recommended to use pulleys with the maximum diameter allowed by the application in order to maximise the number of teeth in mesh and increase the belt peripheral speed. For applications where high positioning precision is required, it might be useful to use zero backlash pulleys.
In order to guarantee a reliable drive, it is recommended to use superior quality pulleys.

Minimum pulley diameter
Minimum pulley diameter depends on belt construction but also on the load and the configuration of the drive. The values reported in the catalogue have been calculated and proven for drives with maximum allowable load and standard configurations. For drives where smaller pulleys are needed, please apply to ELATECH® technical department.

Clamping plates
In case of use of clamping plates, they must have the belt profile, be rigid and guarantee a uniform clamping force on all the surface. It is recommended to have a minimum of 7 teeth in clamp to guarantee catalogue performances. In case of belts with HPL cords, the recommended number of teeth in clamp
is 12.

Machine structure
For a trouble free drive, it is recommended that the structure of application of the timing belt drive is as rigid as possible. That will guarantee high work repeatability.

Angular drives
Elatech belts can be used in angular drives as a "Twisted" drive. In such an application, it is recommended to keep a span length
"lt" > 20 • b (belt width) for 90° twist.

Omega drive
In case of omega drive application it is recommended to keep a span length between driver pulleys and idlers > 3 • b (belt width)

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 belt life of the belts, it is important to follow the catalogue technical specifications related to pulley geometry and belt storage and installation. When all catalogues 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 INSTALLATION

Drive installation
When installing belts on pulleys, before tensioning the drive, check that the belt teeth and pulley grooves correctly match.

Breaking load
Belt breaking load is highly dependent on several factors including pulley alignment, clamping system and others. The data given in the catalogue are average values tested in our laboratory. It is recommended to use adequate safety factors and ask the ELATECH® technical department for minimum guaranteed breaking load in applications where it is needed.

Belt drive tension
Correct belt drive tension and alignment are very important to optimize belt life and minimize noise level. In fact, improper tension in the belt drive will affect belt fit in the pulley grooves while correct tension minimizes belt pulley interference reducing the noise in the drive.

Drive Alignment
Pulley misalignment will result in an unequal tension, edge wear and reduction of belt life. Also, misaligned drives are much noisier than correctly aligned drives due to the amount of interference that is created between the belt teeth and the pulley grooves.
Proper pulley alignement should be checked with a straight edge or by using a laser alignment tool.

Belt width b [mm]	10	16	32 over
Allowable pulley misalignment [°]	0,28	0,16	0,10

Idlers
Idlers are often a means to apply tension to the drive when the centre distance is fixed but also to increase the number of teeth in mesh of the small pulley. A toothed idler on the inside of the belt on the slack side is recommended with respect to a back side idler. Drives with inside flat idlers are not recommended as noise and abnormal belt wear may occur.

- Idler location is on the slack side span of the belt drive
- Diameter for inside toothed idler must be ≥ of the diameter of the small pulley in the drive
- Idler must be mounted on a rigid support
- Idlers both flat and toothed, should be uncrowned with a minimum arc of contact.
- Idler should be positioned respecting: $2 \bullet (d_{wk} + d_{wg}) < A$
- Idler width should be ≥ of pulley width b

Backside idlers, however, increase the teeth in mesh on both pulleys in the drive and force a counter flexure of the belt and thus contributes to premature belt failure.
In case an idler is needed, It is recommended to keep a span length between driver pulleys and idlers >3 • b (belt width) in order to maximise the number of teeth in mesh of the small pulley.

BELT HANDLING AND STORAGE

Proper storage is important in order to avoid damaging the belts which may cause premature belt failure. Do not store belts on the floor unless in a protective container to avoid damages which may be accidentally caused by people or machine traffic. Belts should be stored in order to prevent direct sunlight and in a dry and cool environment without presence of chemicals in the atmosphere.
Avoid belt storage near windows (to avoid sunlight and moisture), near electric motors or devices which generate ozone, near direct airflow of heating/cooling systems.
Do not crimp belts while handling or when stored to avoid damage to tensile cords. Belts must not be hung on small pins to avoid bending to a small diameter. Handle belts with care while moving and installing. On installation, never force the belt over the pulley flange.

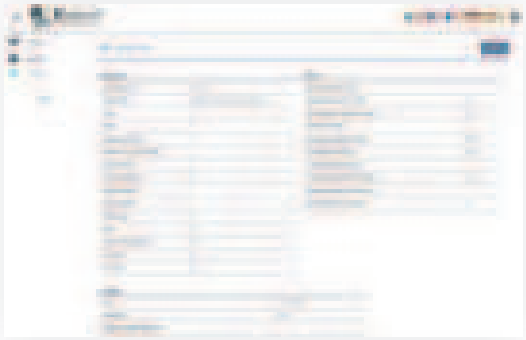
ELADRIVE

online calculation software for quick and reliable drive calculation

Elatech online drive calculation support at ↓

elatech.com

ELATECH's ELADRIVE is a drive calculation program allowing efficient and time saving drive calculation with improved performances.



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COMPREHENSIVE APPLICATION RANGE

ELADRIVE offers a drive calculation for all application technology fields: power transmission, linear, transport. Two pulley drives are calculated and multiple drive design solutions are generated.

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+39 0345 330311
www.elatech.com
info@elatech.com

INPUT DATA

Transmission type	Linear Drive
Product family	ELATECH® - M Open end polyurethane belts
Profile	AT
Pitch	10
Required service factor	1.00
Wagon mass + goods mass [kg]	1
Applied force [N]	10
Friction coefficient (μ)	0.10
Acceleration [m/s²]	1
Linear speed [m/s]	2
Teeth number	30
B [mm]	250
Center-to-center (H) [mm]	1000
A min [mm]	200
A max [mm]	500

RESULT

Required peripheral force [N]	--
Belt installation tension F-TV [N]	11.98
Max belt dynamic workload F-Tmax [N]	23.96
Required power [kW]	--
Allowed belt workload F-TZUL [N]	2450.00
Belt breaking load F-Br [N]	9500.00
Calculated teeth service factor	--
Calculated allowable load service factor	102.25
Calculated breaking load service factor	--
Max elongation due to start [mm]	0.01

BELT

Code	016AT10-02300
Length [mm]	2300.00
Minimum calculated width [mm]	--
Standard width [mm]	16.00

PULLEYS

	Driver	Driven
Solid hub pulley code	PMAT31AT10/30	PMAT31AT10/30
Taper bushing code	--	--
External	No	No
Teeth number	30	30
X [mm]	0.00	1000.00
Y [mm]	0.00	0.00
Pulley diameter [mm]	95.49	95.49
Speed [RPM]	400.03	400.03
Teeth in mesh	15.00	15.00

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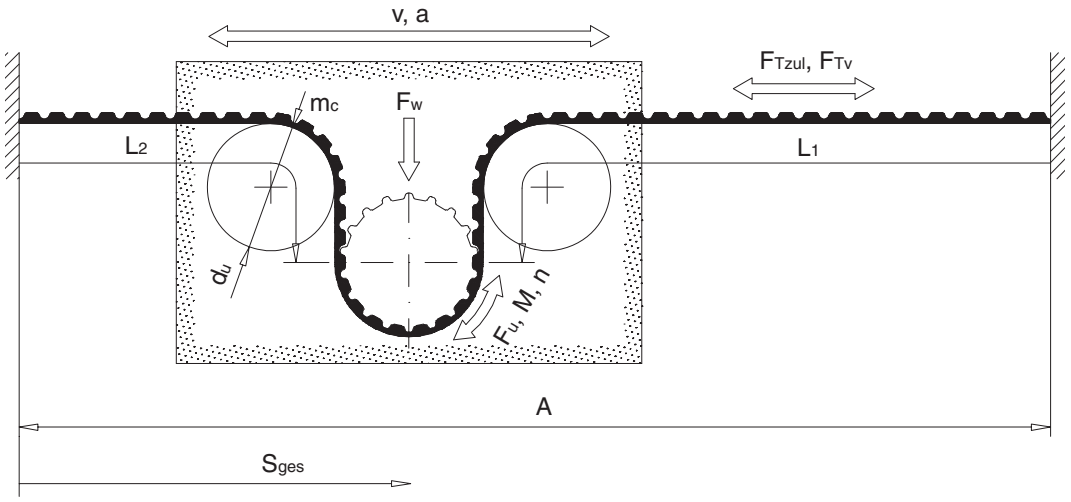
The calculation software is designed according to the latest specifications of mechanical transmissions and the high quality standards of our products. Please consider that similar products, not manufactured by Elatech, or paired with pulleys not matching the international standards, could invalidate calculations and/or negatively affect performances. This software does not cover all possible belt drive conditions. It is responsibility of the belt drive system designer to ensure that Elatech products are appropriate for the application. Elatech declines all responsibility and won't accept claims for errors or application problems caused by using this calculation software. This software specifications and calculation formulas are constantly being developed and Elatech reserves the right to change them without notice.

LINEAR drives calculation

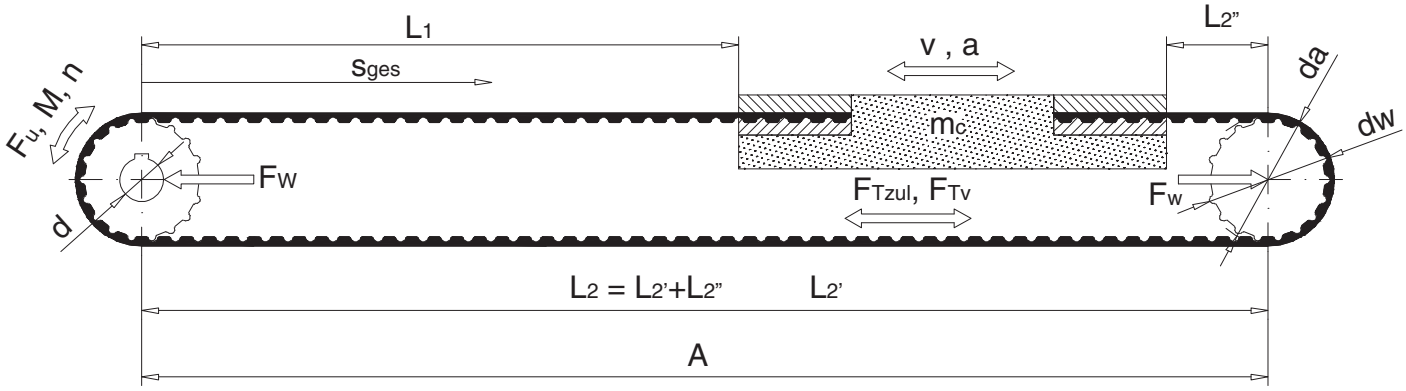
Definitions and transmission cycle

In most cases linear drives may be taken back to one of the two layouts shown, where a specific system of forces acts.

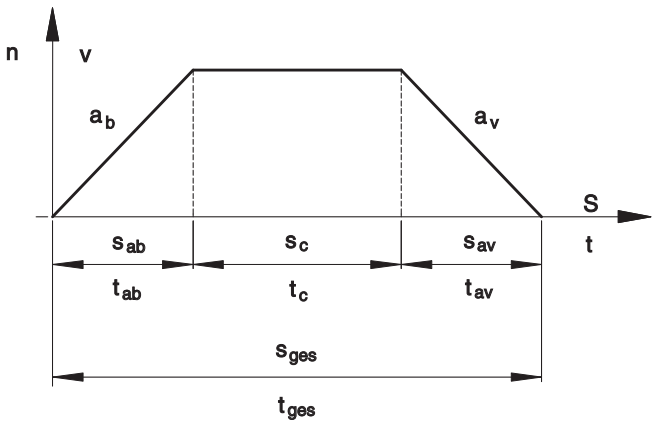
"OMEGA" drive



LINEAR drive



Transmission cycle (rpm/time)



Definitions and abbreviations

a_b	[m/s²]	Acceleration	ρ	[kg/dm³]	Specific weight
a_v	[m/s²]	Deceleration	m	[kg]	Total mass
B	[mm]	Pulley width	m_R	[kg]	Mass of belt
b	[cm]	Belt width	m_c	[kg]	Mass of carriage / slide
b_{min}	[cm]	Belt minimum width	m_S	[kg]	Pulley mass
t	[mm]	Belt pitch	m_{Sred}	[kg]	Pulley reduced mass
C	[N/mm]	Belt modulus / spring rate	m_U	[kg]	Idler mass
C_{spez}	[N]	Specific spring rate	m_{Ured}	[kg]	Idler reduced mass
A	[mm]	Centre distance	n	[min⁻¹]	Rpm
A_{eff}	[mm]	Effective centre distance	n_1	[min⁻¹]	Rpm driver pulley
d	[mm]	Bore diameter	Δ_n	[min⁻¹]	Rpm variation
d_a	[mm]	Outside pulley diameter	c_1	-	Service factor
d_w	[mm]	Pitch circle diameter	P	[kW]	Power
d_U	[mm]	Idler pulley diameter	s_{ges}	[mm]	Total travel
F_{wdyn}	[N]	Dynamic shaft load	s_{ab}	[mm]	Travel during acceleration
F_{wsta}	[N]	Static shaft load	s_{av}	[mm]	Travel during deceleration / braking
$F_{T_{max}}$	[N]	Maximum span force	s_c	[mm]	Travel at constant speed
F_R	[N]	Resisting force of friction	t_{ges}	[sec]	Total time of travel
F_{Uspez}	[N/cm]	Specific tooth shear strength	t_{ab}	[sec]	Acceleration time
F_{Tv}	[N]	Pretension force for belt side	t_{av}	[sec]	Deceleration time / braking time
F_{Tzul}	[N]	Allowable tensile load	t_c	[sec]	Time at constant speed
F_U	[N]	Peripheral force	v	[m/s]	Peripheral speed
F_H	[N]	Vertical lifting force	z	-	No. of teeth of pulley
F_{ab}	[N]	Acceleration force	z_k	-	No. of teeth of small pulley
F_{av}	[N]	Deceleration force	z_g	-	No. of teeth of big pulley
g	[m/s²]	Acceleration due to gravity (= 9,81 m/s²)	z_R	-	No. of teeth of belt
Δl	[mm]	Elongation	z_e	-	No. of teeth in mesh
Δs	[mm]	Difference of position due to force	i	-	Drive ratio
L_1,L_2	[mm]	Length of tight and slack side	ω	[s⁻¹]	Angular velocity
L_R	[mm]	Belt length	μ	-	Coefficient of friction
M	[Nm]	Torque	c_1	-	Safety factor
M_{ab}	[Nm]	Torque during acceleration			
M_{av}	[Nm]	Braking torque			

Calculation formula

Torque

$$M = \frac{F_U \cdot d_W}{2000} = \frac{P \cdot 9550}{n}$$

Power

$$P = \frac{M \cdot n}{9550} = \frac{F_U \cdot v}{1000}$$

Peripheral force

$$F_U = \frac{2000 \cdot M}{d_W} = \frac{P \cdot 1000}{v}$$

Linear speed

$$v = \frac{d_W \cdot n}{19100} = \frac{n \cdot z \cdot t}{60000}$$

Angular velocity

$$\omega = \frac{\pi \cdot n}{30}$$

Rpm

$$n = \frac{19100 \cdot v}{d_W} = \frac{60000 \cdot v}{z \cdot t}$$

Acceleration time

$$t_{ab} = \frac{v}{a_b} = \sqrt{\frac{2 \cdot s_{ab}}{a_b \cdot 1000}}$$

Acceleration travel

$$s_{ab} = \frac{a_b \cdot t_{ab}^2 \cdot 1000}{2} = \frac{v^2 \cdot 1000}{2 \cdot a_b}$$

Braking time

$$t_{av} = \frac{v}{a_v} = \sqrt{\frac{2 \cdot s_{av}}{a_v \cdot 1000}}$$

Braking travel

$$s_{av} = \frac{a_v \cdot t_{av}^2 \cdot 1000}{2} = \frac{v^2 \cdot 1000}{2 \cdot a_v}$$

Total time

$$t_{ges} = t_{ab} + t_c + t_{av}$$

Total travel

$$s_{ges} = s_{ab} + s_c + s_{av}$$

Time at constant speed

$$t_c = \frac{s_c}{v \cdot 1000}$$

Travel at constant speed

$$s_c = v \cdot t_c \cdot 1000$$

Safety factor

ELATECH® belts do not need any safety factor. However if there are unknown peaks or shock loads or swings in the peripheral force unknown at design time, which therefore can not be included in the calculation parameters, a suitable safety factor should be considered by the designer.

Steady load	$c_1 = 1{,}0$
Peak or fluctuating loads:	
Light	$c_1 = 1{,}4$
Medium	$c_1 = 1{,}7$
Heavy	$c_1 = 2{,}0$

Calculation

Linear drives are correctly dimensioned when the total peripheral force, necessary for the requested work, satisfies the 3 technical parameters of the selected belt:

- **tooth shear strength**
- **allowable tensile load**
- **flexibility**

The necessary data for the calculation are: the mass to be moved, the transmission cycle, the drive layout with the related forces, the resisting force of friction.
Friction force is generally determined by the linear bearing manufacturer.
In case of conveying applications, it is resulting from the weight of the conveyed goods and the coefficient of friction between slider bed and belt surface. In case of accumulating conveyors the friction between the conveyed goods and the backside of the belt must be considered additionally.

Select belts and pulleys
For the choice of the pulleys it is recommended to use pulleys with the largest possible diameter.
That will reduce the belt width and optimise drive performances.

Calculate total mass in motion (m)

$$m = m_c + m_R + m_{Sred} + m_{Ured}$$

With:

$$m_{Sred} = \frac{m_S}{2} \cdot \left(1 + \frac{d^2}{d_a{}^2}\right)$$ *inertia of the idler timing pulley*

$$m_{Ured} = \frac{m_U}{2} \cdot \left(1 + \frac{d^2}{d_u{}^2}\right)$$ *inertia of the idler tensioning pulley*

Calculate the necessary total peripheral force F_U and torque M

$$F_U = F_{ab} + F_H + F_R$$

$$F_U = m \cdot a_b + m \cdot g \cdot \sin\alpha + m \cdot g \cdot \mu \cdot \cos\alpha$$

Where α is the angle of incline of the drive (0° = horizontal ; 90° = vertical).

$$M = \frac{F_U \cdot d_w}{2000}$$

Determine the belt width

$$b_{min} = \frac{F_U \cdot c_1}{F_{Uspez} \cdot z_e} \qquad b \geq b_{min}$$

with F_{Uspez} depending on the rpm of the small pulley (see technical data on tooth shear strength for the selected belt type).

Note: z_{emax} = 12 for belts ELATECH® M
z_{emax} = 6 for belts ELATECH® V

The belt width should also be verified to ensure that it can withstand the maximum working load.

Determine installation pretension F_{TV}
Linear motion drives are correctly tensioned when in the slack side a minimum tension is guaranteed in all working conditions and for every value of F_{Tmax} (acceleration, deceleration).
It is recommended a pretension of:

$$F_{TV} \geq F_U$$

Verify of allowable tensile load
The maximum load on the belt will appear when both the pretension F_{TV} and the working load F_U will act at the same time:

$$F_{Tmax} = F_{TV} + F_U$$

The maximum allowable tensile load of the belt F_{tzul} (see technical tables of corresponding selected belt) must be greater than the maximum work load:

$$F_{Tzul} > F_{Tmax} \cdot c_1$$

Verify flexibility
The diameter of the chosen pulleys, must be greater or equal to the minimum recommended diameter for the specific belt profile chosen (see technical data).

Calculate shaft load
The shaft load under static conditions is:

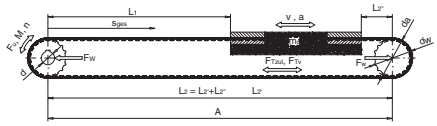
$$F_{Wsta} = 2 \cdot F_{TV}$$

The shaft load under dynamic conditions is:

$$F_{Wdyn} = 2 \cdot F_{TV} + F_U$$

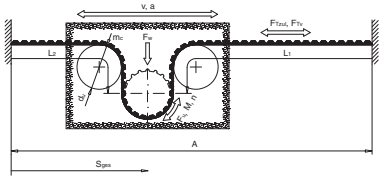
Calculate necessary static elongation
Installation tension generates a belt elongation "Δl" between the shafts (for linear drives) or the clamping plates (for "Omega" drives).

Linear drive



$$\Delta l = \frac{F_{TV} \cdot L_R}{2 \cdot C_{spez}}$$

Omega" drive



$$\Delta l = \frac{F_{TV} \cdot L_R}{C_{spez}}$$

If the resulting elongation is not acceptable for the application, it is possible to reduce it by increasing the belt width or by increasing belt rigidity (HPL cords).

Determine the positioning accuracy
The stiffness coefficient of linear drives depends on the length of slack and tight side in the drive. Every position of the system has its own stiffness coefficient calculated with the formula:

$$C = \frac{L_R}{L_1 \cdot L_2} \cdot C_{spez} \qquad L_R = L_1 + L_2$$

For C_{spez} value see technical data of selected belt type.

Stiffness coefficient will be minimum when slack and tight side will have the same length during the working cycle.

$$C_{min} = \frac{4 \cdot C_{spez}}{L_R}$$

With L_R equal to the belt length free to elongate (excluding contact length on timing pulleys).

Being F_U the resulting force on the slide, the positioning deviation generated by belt elongation is:

$$\Delta_S = \frac{F_U}{C}$$

The positioning accuracy is also depending on other parameters and therefore for an accurate calculation, please consult our technical department. When positioning is reached from both directions the actual position is affected by an error caused by backlash between belt and pulley. The use of zero backlash pulleys helps reduce the positioning error.

Installation and drive pre-tensioning:
In order to pretension a drive it is possible to use one of the following methods:

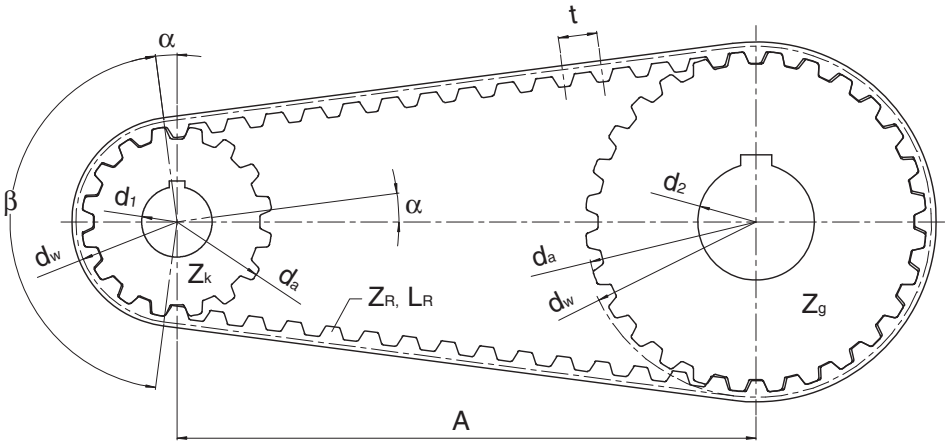
1. Measuring elongation
ELATECH® timing belts with steel cords have a constant elongation to the maximum allowable load F_{Tzul}. Therefore the correct pretension can be set by measuring the belt elongation with a gauge and using as a reference the graph load/elongation of the selected belt type. This is a simple method but requires good accessibility of the drive.

2. Using span deflection
The pretension is checked by applying a force in the centre of the span length and measuring the span deflection

3. Measuring frequency
The tension of the belt is calculated from the natural frequency of vibration of the belt span which is measured by means of a special belt tension meter. This is the most accurate and easiest method.

A suitable belt tension meter is available from ELATECH®

Power transmission drives ELA-flex SD® and iSync®



Definitions

b	[cm]	Belt width	M_{spez}	[Nm]	Specific Torque
b_{min}	[cm]	Belt minimum width	P	[kW]	Power
L_R	[mm]	Belt length	P_{spez}	[kW]	Specific Power
z_R	-	Number of teeth of the belt	t_{ab}	[s]	Acceleration time
B	[mm]	Pulley width	t_{av}	[s]	Deceleration time
A	[mm]	Center distance	v	[m/s]	Peripheral speed
A_{eff}	[mm]	Effective center distance	z_e	-	N. of teeth in mesh
d	[mm]	Pulley bore diameter	z_k	-	Number of teeth of the small pulley
d_a	[mm]	Pulley outside diameter	z_g	-	Number of teeth of the large pulley
d_{ak}	[mm]	Small pulley outside diameter	i	-	Drive ratio [n1 : n2]
d_{ag}	[mm]	Large pulley outside diameter	ρ	[kg/dm³]	Specific weight
d_w	[mm]	Pulley pitch diameter	J	[kgm²]	Moment of inertia
d_{wk}	[mm]	Small pulley pitch circle diameter	t	[mm]	Pitch
d_{wg}	[mm]	Large pulley pitch circle diameter	n	[min⁻¹]	Rpm
F_{Wsta}	[N]	Static shafts load	n_1	[min⁻¹]	Rpm of driver pulley
F_{TV}	[N]	Pretension force per belt side	ω	[s⁻¹]	Angular speed
F_{Tzul}	[N]	Allowable tensile load	β	[°]	Wrap angle
F_U	[N]	Peripheral force	c_0 / c_1 / c_2	-	Safety factor
M	[Nm]	Torque			

Calculation formula

Power

$$P = \frac{M \cdot n}{9550}$$

$$P = \frac{F_u \cdot d_w \cdot n}{19100 \cdot 10^3}$$

Peripheral force

$$F_u = \frac{19100 \cdot P \cdot 10^3}{n \cdot d_w}$$

$$F_u = \frac{2000 \cdot M}{d_w}$$

Torque

$$M = \frac{F_U \cdot d_w}{2000}$$

$$M = \frac{9550 \cdot P}{n}$$

Moment of inertia

$$J = 98{,}2 \cdot 10^{-15} \cdot B \cdot \rho \cdot \left(d_a^4 - d^4\right)$$

Angular speed

$$\omega = \frac{\pi \cdot n}{30}$$

Peripheral speed

$$v = \frac{d_w \cdot n}{19100}$$

Acceleration torque

$$M_{ab} = \frac{J \cdot \Delta n}{9{,}55 \cdot t_{ab}}$$

Rpm

$$n = \frac{19100 \cdot v}{d_w}$$

Torque
Belt selection is made according to a constant working load. For start up torque and in case of peak loads and vibrations a safety factor c_1 must be considered.

Transmission with steady load	$c_1 = 1,0$

Transmission with peak or fluctuating loads:

Light	$c_1 = 1,4$
Medium	$c_1 = 1,7$
Heavy	$c_1 = 2,0$

For speed up driver factor c_2 must be considered:

i = from 0,66 to 1	$c_2 = 1,1$
i = from 0,40 to 0,66	$c_2 = 1,2$
i < 0,40	$c_2 = 1,3$

The resulting total safety factor is:

$c_0 = c_1 \cdot c_2$

Drive calculation

The necessary data for drive calculation are:

· Power to be transmitted	P	[kW]
· Driver rpm	n_1	[min^{-1}]
· Motor starting torque	M_{ab}	[Nm]
· Required center distance	A	[mm]
· Maximum driver pulley diameter	d_{w1}	[mm]

Select type of belt
For the initial drive selection, use the selection graphs illustrated in the relative ELA-flex SD® catalog section. For initial pulley choice, it is recommended to use the driver pulley with maximum diameter allowable in the application.

Calculate drive ratio

$$i = \frac{n_{driver}}{n_{driven}}$$

Calculate belt length
Belt length for drive with ratio i ≠1

$$L_R \approx \frac{t}{2} \cdot (z_g + z_k) + 2A + \frac{1}{4A} \cdot \left[\frac{(z_g - z_k) \cdot t}{\pi} \right]^2$$

and more precisely:

$$L_R = 2A \cdot \sin \cdot \frac{\beta}{2} + \frac{t}{2} \cdot \left[z_g + z_k + \left(1 - \frac{\beta}{180} \right) \cdot (z_g - z_k) \right]$$

Belt length for drive with ratio i = 1

$$L_R = 2 \cdot A + \pi \cdot d_w = 2 \cdot A + z \cdot t$$

Calculate teeth in mesh

$$z_e = \frac{\beta}{360} \cdot z_k$$

with β [°]= wrap angle

$$\beta = 2 \cdot \arccos \cdot \left[\frac{t \cdot (z_g - z_k)}{2 \cdot \pi \cdot A} \right]$$

Determine belt width

$$b_{min} = \frac{P \cdot 1000 \cdot c_0}{z_k \cdot z_e \cdot P_{spez}} \qquad b_{min} = \frac{100 \cdot M}{z_k \cdot z_e \cdot M_{spez}} \qquad b \geq b_{min}$$

Note: z_{emax} = 12 for belts ELA-Flex SD® or iSync®
z_{emax} = 6 for belts ELATECH® V

The belt width should also be verified to ensure that it can withstand the maximum working load.

Determine the total power "P" and the total torque "M" transmitted
The total power "P" and the total torque "M" transmitted by the belt, are calculated with the following formulas:

$P = P_{spez} \cdot z_e \cdot z_k \cdot b / 1000$
$M = M_{spez} \cdot z_e \cdot z_k \cdot b / 100$

Determine installation pretension
The drive is correctly tensioned when the belt slack side is tensioned in all working conditions. It is also important to use the minimum necessary tension to minimize shaft loads. Belt tension is dependent also on belt length L_R and its number of teeth Z_R. According to belt number of teeth, following tension is suggested:

2 shafts drive

$Z_R < 75$	$F_{TV} = 1/3\ F_U$
$75 < Z_R < 150$	$F_{TV} = 1/2\ F_U$
$Z_R > 150$	$F_{TV} = 2/3\ F_U$

More than 2 shafts drive

$F_{TV} > F_U$

Verify of allowable tensile load
The allowable tensile load of the belt must be higher than the total corrected peripheral force.

$$F_{Tzul} \geq \left[F_{TV} + \frac{1}{2} \cdot F_U \right] \cdot c_0 \quad \text{with} \quad F_u = \frac{2000 \cdot M}{d_w}$$

Calculate shaft load

$F_{Wsta} = 2 \cdot F_{Tv} \cdot \sin(\beta/2)$
$F_{Wsta} = 2 \cdot F_{Tv}$ (for i = 1)

In order to ensure the correct drive installation tension, it is recommended to use the special belt tension meter available from ELATECH®.

Timing pulleys

T2,5

z	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
d_a [mm]	11,44	12,23	13,03	13,82	14,62	15,42	16,21	17,01	17,80	18,60	19,39	20,19	20,99	21,78	22,58	23,37	24,17	24,97
d_w [mm]	11,94	12,73	13,53	14,32	15,12	15,92	16,71	17,51	18,30	19,10	19,89	20,69	21,49	22,28	23,08	23,87	24,67	25,47

z	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
d_a [mm]	25,76	26,56	27,35	28,15	28,94	29,74	30,54	31,33	32,13	32,92	33,72	34,52	35,31	36,11	36,90	37,70	38,49	39,29
d_w [mm]	26,26	27,06	27,85	28,65	29,44	30,24	31,04	31,83	32,63	33,42	34,22	35,02	35,81	36,61	37,40	38,20	38,99	39,79

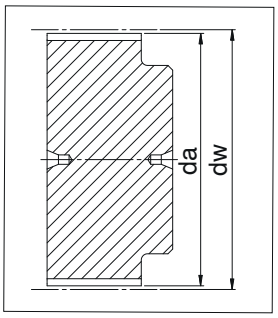
z	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
d_a [mm]	40,09	40,88	41,68	42,47	43,27	44,06	44,86	45,66	46,45	47,25	48,04	48,84	49,64	50,43	51,23	52,02	52,82	53,61
d_w [mm]	40,59	41,38	42,18	42,97	43,77	44,56	45,36	46,16	46,95	47,75	48,54	49,34	50,14	50,93	51,73	52,52	53,32	54,11

z	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
d_a [mm]	54,41	55,21	56,00	56,80	57,59	58,39	59,18	59,98	60,78	61,57	62,37	63,16	63,96	64,76	65,55	66,35	67,14	67,94
d_w [mm]	54,91	55,71	56,50	57,30	58,09	58,89	59,68	60,48	61,28	62,07	62,87	63,66	64,46	65,26	66,05	66,85	67,64	68,44

z	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
d_a [mm]	68,73	69,53	70,33	71,12	71,92	72,71	73,51	74,31	75,10	75,90	76,69	77,49	78,28	79,08	79,88	80,67	81,47	82,26
d_w [mm]	69,23	70,03	70,83	71,62	72,42	73,21	74,01	74,81	75,60	76,40	77,19	77,99	78,78	79,58	80,38	81,17	81,97	82,76

z	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122
d_a [mm]	83,06	83,85	84,65	85,45	86,24	87,04	87,83	88,63	89,43	90,22	91,02	91,81	92,61	93,40	94,20	95,00	95,79	96,59
d_w [mm]	83,56	84,35	85,15	85,95	86,74	87,54	88,33	89,13	89,93	90,72	91,52	92,31	93,11	93,90	94,70	95,50	96,29	97,09

z	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
d_a [mm]	97,38	98,18	98,97	99,77	100,57	101,36	102,16	102,95	103,75	104,55	105,34	106,14	106,93	107,73	108,52	109,32	110,12	110,91
d_w [mm]	97,88	98,68	99,47	100,27	101,07	101,86	102,66	103,45	104,25	105,05	105,84	106,64	107,43	108,23	109,02	109,82	110,62	111,41



Timing pulleys

T5

z	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
d_a [mm]	15,05	16,65	18,25	19,85	21,45	23,05	24,60	26,20	27,80	29,40	31,00	32,70	34,25	35,85	37,40	39,00	40,60	42,20
d_w [mm]	15,92	17,51	19,10	20,70	22,29	23,88	25,47	27,06	28,65	30,25	31,83	33,43	35,02	36,62	38,21	39,80	41,39	42,98

z	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
d_a [mm]	43,75	45,35	46,95	48,55	50,10	51,70	53,25	54,85	56,45	58,05	59,65	61,25	62,85	64,40	66,00	67,70	69,20	70,80
d_w [mm]	44,58	46,17	47,76	49,35	50,94	52,54	54,13	55,72	57,31	58,90	60,50	62,09	63,66	65,27	66,86	68,46	70,05	71,64

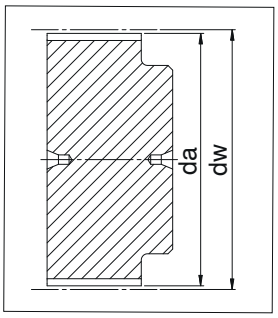
z	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
d_a [mm]	72,40	73,95	75,55	77,15	78,75	80,35	81,95	83,50	85,10	86,70	88,30	89,90	91,50	93,05	94,65	96,25	97,85	99,45
d_w [mm]	73,23	74,82	76,42	78,01	79,60	81,19	82,78	84,38	85,97	87,54	89,15	90,74	92,34	93,93	95,52	97,11	98,70	100,30

z	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81
d_a [mm]	101,05	102,65	104,20	105,800	107,40	109,00	110,60	112,20	113,75	115,35	116,95	118,55	120,15	121,75	123,30	124,90	126,50	128,10
d_w [mm]	101,89	103,48	105,07	106,66	108,26	109,85	111,44	113,03	114,62	116,22	117,81	119,40	120,99	122,58	124,18	125,77	127,36	128,95

z	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99
d_a [mm]	129,70	131,30	132,85	134,45	136,05	137,65	139,25	140,85	142,45	144,00	145,60	147,20	148,80	150,40	152,00	153,55	155,15	156,75
d_w [mm]	130,54	132,14	133,73	135,32	136,91	138,50	140,10	141,69	143,28	144,87	146,46	148,06	149,65	151,24	152,83	154,42	156,02	157,61

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

z	118	119	120
d_a [mm]	187,01	188,61	190,21
d_w [mm]	187,86	189,45	191,04



Timing pulleys

T10

z	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
d_a [mm]	36,35	39,50	42,70	45,90	49,05	52,25	55,45	58,65	61,80	65,00	68,15	71,35	74,55	77,70	80,90	84,10	87,25	90,45
d_w [mm]	38,20	41,38	44,56	47,75	50,93	54,11	57,29	60,48	63,66	66,84	70,03	73,20	76,39	79,58	82,76	85,95	89,12	92,21

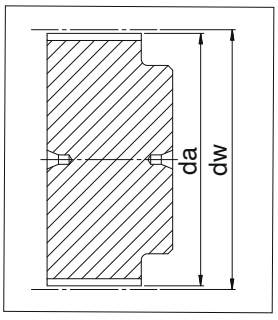
z	30	31	32	33	34	35	36	37	38	39	40	41	42	44	45	46	47	48
d_a [mm]	93,65	96,85	100,00	103,20	106,40	109,55	112,75	115,90	119,10	122,30	125,45	128,65	131,85	138,20	141,40	144,60	147,75	150,95
d_w [mm]	95,49	98,67	101,86	105,04	108,22	111,41	114,59	117,77	120,95	124,14	127,32	130,50	133,69	140,05	143,24	146,42	149,60	152,78

z	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66
d_a [mm]	154,10	157,30	160,50	163,65	166,85	170,05	173,20	176,40	179,60	182,75	185,95	189,10	192,30	195,50	198,65	201,85	205,05	208,20
d_w [mm]	155,97	159,15	162,33	165,52	168,70	171,88	175,06	178,25	181,43	184,61	187,80	190,98	194,16	197,35	200,53	203,71	206,90	210,08

z	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84
d_a [mm]	211,40	214,60	217,75	220,95	224,15	227,30	230,50	233,70	236,90	240,05	243,25	246,40	249,60	252,80	256,00	259,15	262,30	265,50
d_w [mm]	213,26	216,44	219,63	222,81	225,99	229,18	232,36	235,54	238,72	241,94	245,09	248,27	251,46	254,64	257,82	261,00	264,19	267,37

z	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102
d_a [mm]	268,70	271,90	275,05	278,25	281,45	284,60	287,80	291,00	294,20	297,35	300,55	303,75	306,90	310,10	313,25	316,45	319,65	322,80
d_w [mm]	270,55	273,74	276,92	280,10	283,28	286,47	289,65	292,84	296,02	299,20	302,39	305,57	308,75	311,93	315,12	318,30	321,48	324,66

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



Timing pulleys

T20

z	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
d_a [mm]	92,65	99,00	105,40	111,75	118,10	124,50	130,75	137,20	143,55	149,95	156,30	162,65	169,00	175,40	181,75	188,10	194,50	200,85
d_w [mm]	95,49	101,86	108,22	114,59	120,96	127,32	133,69	140,06	146,43	152,78	159,15	165,52	171,89	178,25	184,62	190,99	197,35	203,72

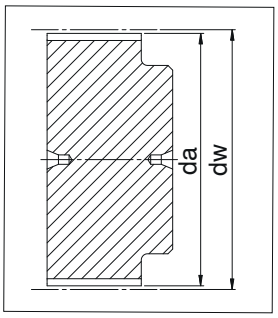
z	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
d_a [mm]	207,20	213,60	219,95	226,35	232,70	239,05	245,40	251,75	258,15	264,50	270,85	277,25	283,60	289,95	296,35	302,70	309,10	315,45
d_w [mm]	210,09	216,44	222,81	229,18	235,54	241,91	248,28	254,65	261,02	267,37	273,74	280,10	286,47	292,84	299,21	305,58	311,93	318,30

z	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
d_a [mm]	321,80	328,15	334,50	340,90	347,25	353,60	360,00	366,35	372,75	379,10	385,45	391,85	398,20	404,55	410,95	417,30	423,65	430,05
d_w [mm]	324,67	331,03	337,40	343,76	350,13	356,50	362,86	369,23	375,59	381,96	388,33	394,70	401,06	407,43	413,80	420,17	426,52	432,89

z	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
d_a [mm]	436,40	442,80	449,15	455,50	461,85	468,25	474,60	480,95	487,35	493,70	500,05	506,45	512,80	519,15	525,55	531,90	538,25	544,60
d_w [mm]	439,26	445,63	451,99	458,36	464,73	471,08	477,45	483,82	490,19	496,56	502,91	509,28	515,65	522,02	528,39	534,74	541,11	547,48

z	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
d_a [mm]	551,00	557,35	563,70	570,10	576,45	582,85	589,20	595,55	601,90	608,30	614,65	621,00	627,35	633,75	640,10	646,50	652,85	659,20
d_w [mm]	553,85	560,22	566,57	572,94	579,31	585,67	592,04	598,41	604,77	611,14	617,51	623,88	630,25	636,60	642,97	649,34	655,71	662,06

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



Timing pulleys

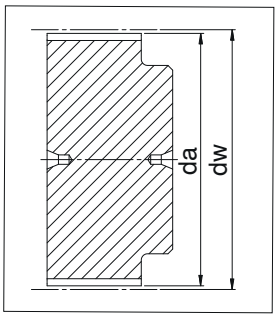
AT3

z	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
d_a [mm]	13,92	14,87	15,82	16,78	17,73	18,69	19,64	20,60	21,55	22,51	23,46	24,42	25,37	26,33	27,28	28,24	29,19	30,15
d_w [mm]	14,32	15,28	16,23	17,19	18,14	19,10	20,05	21,01	21,96	22,92	23,87	24,83	25,78	26,74	27,69	28,65	29,60	30,56

z	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
d_a [mm]	31,10	32,06	33,01	33,97	34,92	35,88	36,83	37,79	38,74	39,70	40,65	41,61	42,56	43,52	44,47	45,43	46,38	47,34
d_w [mm]	31,51	32,47	33,42	34,38	35,33	36,29	37,24	38,20	39,15	40,11	41,06	42,02	42,97	43,93	44,88	45,84	46,79	47,75

z	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
d_a [mm]	48,29	49,25	50,20	51,16	52,11	53,07	54,02	54,98	55,93	56,89	57,84	58,80	59,75	60,71	61,66	62,62	63,57	64,53
d_w [mm]	48,70	49,66	50,61	51,57	52,52	53,48	54,43	55,39	56,34	57,30	58,25	59,21	60,16	61,12	62,07	63,03	63,98	64,94

z	69	70	71	72
d_a [mm]	65,48	66,44	67,39	68,35
d_w [mm]	65,89	66,85	67,80	68,75



Timing pulleys

AT5

z	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
d_a [mm]	22,65	24,20	25,80	27,40	29,00	30,60	32,20	33,80	35,40	37,00	38,60	40,20	41,80	43,35	44,95	46,55	48,15	49,70
d_w [mm]	23,88	25,47	27,06	28,65	30,25	31,83	33,43	35,02	36,62	38,21	39,80	41,39	42,98	44,58	46,17	47,76	49,35	50,94

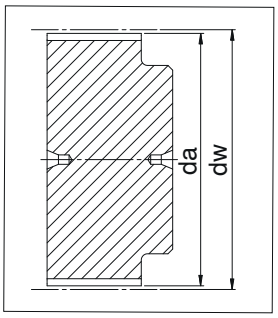
z	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
d_a [mm]	51,30	52,85	54,45	56,05	57,65	59,25	60,85	62,45	64,00	65,60	67,30	68,80	70,40	72,00	73,55	75,15	76,75	78,35
d_w [mm]	52,54	54,13	55,72	57,31	58,90	60,50	62,09	63,66	65,27	66,86	68,46	70,05	71,64	73,23	74,82	76,42	78,01	79,60

z	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
d_a [mm]	79,95	81,55	83,10	84,70	86,30	87,90	89,50	91,10	92,65	94,25	95,85	97,45	99,05	100,65	102,25	103,80	105,40	107,00
d_w [mm]	81,19	82,78	84,38	85,97	87,54	89,15	90,74	92,34	93,93	95,52	97,11	98,70	100,30	101,89	103,48	105,07	106,66	108,26

z	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
d_a [mm]	108,60	110,20	111,80	113,35	114,95	116,55	118,15	119,75	121,35	122,90	124,50	126,10	127,70	129,30	130,90	132,45	134,05	135,65
d_w [mm]	109,85	111,44	113,03	114,62	116,22	117,81	119,40	120,99	122,58	124,18	125,77	127,36	128,95	130,54	132,14	133,73	135,32	136,91

z	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
d_a [mm]	137,25	138,85	140,45	142,05	143,60	145,20	146,80	148,40	150,00	151,60	153,15	154,75	156,35	157,95	159,55	161,15	162,70	164,30
d_w [mm]	138,50	140,10	141,69	143,28	144,87	146,46	148,06	149,65	151,24	152,83	154,42	156,02	157,61	159,20	160,79	162,38	163,97	165,57

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



Timing pulleys

AT10

z	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
d_a [mm]	45,70	49,05	52,25	55,45	58,60	61,80	65,00	68,15	71,35	74,55	77,70	80,90	84,10	87,25	90,45	93,65	96,80	100,00
d_w [mm]	47,75	50,93	54,11	57,29	60,48	63,66	66,84	70,03	73,20	76,39	79,58	82,76	85,95	89,12	92,21	95,49	98,67	101,86

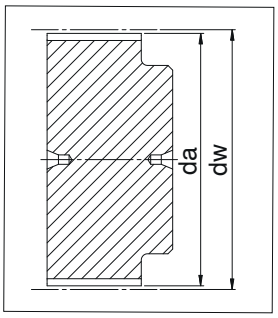
z	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
d_a [mm]	103,20	106,40	109,55	112,75	115,90	119,10	122,30	125,45	128,65	131,85	135,00	138,20	141,40	144,55	147,75	150,95	154,10	157,30
d_w [mm]	105,04	108,19	111,41	114,59	117,77	120,95	124,14	127,32	130,50	133,69	136,87	140,05	143,24	146,42	149,60	152,78	155,97	159,15

z	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
d_a [mm]	160,50	163,65	166,85	170,05	173,20	176,40	179,60	182,75	185,95	189,10	192,30	195,50	198,65	201,85	205,05	208,20	211,40	214,60
d_w [mm]	162,33	165,52	168,70	171,88	175,06	178,25	181,43	184,61	187,80	190,98	194,16	197,35	200,53	203,71	206,90	210,08	213,26	216,44

z	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
d_a [mm]	217,75	220,95	224,15	227,30	230,50	233,70	236,90	240,05	243,25	246,40	249,60	252,80	255,95	259,15	262,30	265,50	268,70	271,90
d_w [mm]	219,63	222,81	225,99	229,18	232,33	235,54	238,72	241,94	245,09	248,24	251,46	254,64	257,82	261,00	264,19	267,37	270,52	273,74

z	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
d_a [mm]	275,05	278,25	281,45	284,60	287,80	291,00	294,20	297,35	300,55	303,70	306,90	310,10	313,25	316,45	319,65	322,80	326,00	329,20
d_w [mm]	276,92	280,10	283,28	286,47	289,65	292,84	296,02	299,20	302,39	305,57	308,75	311,93	315,12	318,30	321,48	324,66	327,85	331,03

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



Timing pulleys

ATF10

z	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
d_a [mm]	45,70	49,05	52,25	55,45	58,60	61,80	65,00	68,15	71,35	74,55	77,70	80,90	84,10	87,25	90,45	93,65	96,80	100,00
d_w [mm]	47,75	50,93	54,11	57,29	60,48	63,66	66,84	70,03	73,20	76,39	79,58	82,76	85,95	89,12	92,21	95,49	98,67	101,86

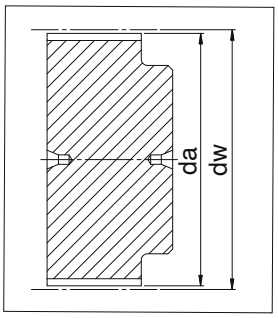
z	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
d_a [mm]	103,20	106,40	109,55	112,75	115,90	119,10	122,30	125,45	128,65	131,85	135,00	138,20	141,40	144,55	147,75	150,95	154,10	157,30
d_w [mm]	105,04	108,19	111,41	114,59	117,77	120,95	124,14	127,32	130,50	133,69	136,87	140,05	143,24	146,42	149,60	152,78	155,97	159,15

z	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
d_a [mm]	160,50	163,65	166,85	170,05	173,20	176,40	179,60	182,75	185,95	189,10	192,30	195,50	198,65	201,85	205,05	208,20	211,40	214,60
d_w [mm]	162,33	165,52	168,70	171,88	175,06	178,25	181,43	184,61	187,80	190,98	194,16	197,35	200,53	203,71	206,90	210,08	213,26	216,44

z	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
d_a [mm]	217,75	220,95	224,15	227,30	230,50	233,70	236,90	240,05	243,25	246,40	249,60	252,80	255,95	259,15	262,30	265,50	268,70	271,90
d_w [mm]	219,63	222,81	225,99	229,18	232,33	235,54	238,72	241,94	245,09	248,24	251,46	254,64	257,82	261,00	264,19	267,37	270,52	273,74

z	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
d_a [mm]	275,05	278,25	281,45	284,60	287,80	291,00	294,20	297,35	300,55	303,70	306,90	310,10	313,25	316,45	319,65	322,80	326,00	329,20
d_w [mm]	276,92	280,10	283,28	286,47	289,65	292,84	296,02	299,20	302,39	305,57	308,75	311,93	315,12	318,30	321,48	324,66	327,85	331,03

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



Timing pulleys

SAT10

z	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
d_a [mm]	45,70	49,05	52,25	55,45	58,60	61,80	65,00	68,15	71,35	74,55	77,70	80,90	84,10	87,25	90,45	93,65	96,80	100,00
d_w [mm]	47,75	50,93	54,11	57,29	60,48	63,66	66,84	70,03	73,20	76,39	79,58	82,76	85,95	89,12	92,21	95,49	98,67	101,86

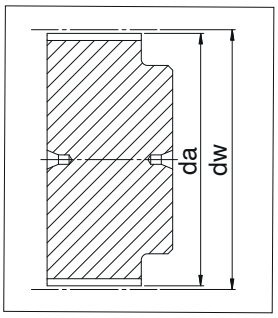
z	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
d_a [mm]	103,20	106,40	109,55	112,75	115,90	119,10	122,30	125,45	128,65	131,85	135,00	138,20	141,40	144,55	147,75	150,95	154,10	157,30
d_w [mm]	105,04	108,19	111,41	114,59	117,77	120,95	124,14	127,32	130,50	133,69	136,87	140,05	143,24	146,42	149,60	152,78	155,97	159,15

z	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
d_a [mm]	160,50	163,65	166,85	170,05	173,20	176,40	179,60	182,75	185,95	189,10	192,30	195,50	198,65	201,85	205,05	208,20	211,40	214,60
d_w [mm]	162,33	165,52	168,70	171,88	175,06	178,25	181,43	184,61	187,80	190,98	194,16	197,35	200,53	203,71	206,90	210,08	213,26	216,44

z	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
d_a [mm]	217,75	220,95	224,15	227,30	230,50	233,70	236,90	240,05	243,25	246,40	249,60	252,80	255,95	259,15	262,30	265,50	268,70	271,90
d_w [mm]	219,63	222,81	225,99	229,18	232,33	235,54	238,72	241,94	245,09	248,24	251,46	254,64	257,82	261,00	264,19	267,37	270,52	273,74

z	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
d_a [mm]	275,05	278,25	281,45	284,60	287,80	291,00	294,20	297,35	300,55	303,70	306,90	310,10	313,25	316,45	319,65	322,80	326,00	329,20
d_w [mm]	276,92	280,10	283,28	286,47	289,65	292,84	296,02	299,20	302,39	305,57	308,75	311,93	315,12	318,30	321,48	324,66	327,85	331,03

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



Timing pulleys

AT20

z	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
d_a [mm]	111,75	118,10	124,50	130,75	137,20	143,55	149,95	156,30	162,65	169,05	175,40	181,75	188,15	194,50	200,85	207,20	213,60	219,95
d_w [mm]	114,59	120,95	127,32	133,69	140,05	146,42	152,78	159,15	165,52	171,88	178,25	184,62	190,99	197,35	203,72	210,09	216,44	222,81

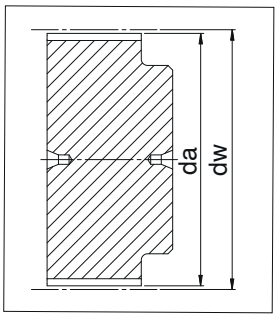
z	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
d_a [mm]	226,35	232,70	239,05	245,45	251,80	258,15	264,50	270,90	277,25	283,60	290,00	296,35	302,70	309,10	315,45	321,80	328,20	334,55
d_w [mm]	229,18	235,54	241,91	248,27	254,64	261,01	267,37	273,74	280,10	286,47	292,84	299,21	305,58	311,93	318,30	324,67	331,03	337,40

z	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
d_a [mm]	340,90	347,30	353,65	360,00	366,40	372,75	379,10	385,45	391,85	398,20	404,55	410,95	417,30	423,65	430,05	436,40	442,80	449,15
d_w [mm]	343,76	350,13	356,50	362,86	369,23	375,59	381,96	388,33	394,69	401,06	407,43	413,79	420,16	426,52	432,89	439,26	445,63	451,99

z	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89
d_a [mm]	455,50	461,85	468,25	474,60	480,95	487,35	493,70	500,05	506,45	512,80	519,15	525,55	531,90	538,25	544,60	551,00	557,35	563,70
d_w [mm]	458,36	464,73	471,08	477,45	483,82	490,19	496,56	502,91	509,28	515,65	522,02	528,39	534,74	541,11	547,48	553,85	560,22	566,57

z	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107
d_a [mm]	570,10	576,45	582,85	589,20	595,55	601,90	608,30	614,65	621,00	627,35	633,75	640,10	646,50	652,85	659,20	665,60	671,95	678,30
d_w [mm]	572,94	579,31	585,67	592,04	598,40	604,77	611,14	617,50	623,87	630,24	636,60	642,97	649,34	655,71	662,06	668,43	674,80	681,17

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



Timing pulleys

ATF20

z	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
d_a [mm]	111,75	118,10	124,50	130,75	137,20	143,55	149,95	156,30	162,65	169,05	175,40	181,75	188,15	194,50	200,85	207,20	213,60	219,95
d_w [mm]	114,59	120,95	127,32	133,69	140,05	146,42	152,78	159,15	165,52	171,88	178,25	184,62	190,99	197,35	203,72	210,09	216,44	222,81

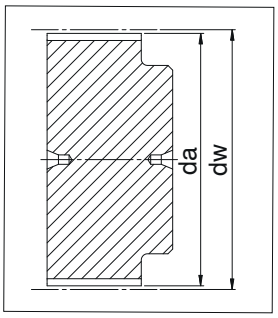
z	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
d_a [mm]	226,35	232,70	239,05	245,45	251,80	258,15	264,50	270,90	277,25	283,60	290,00	296,35	302,70	309,10	315,45	321,80	328,20	334,55
d_w [mm]	229,18	235,54	241,91	248,27	254,64	261,01	267,37	273,74	280,10	286,47	292,84	299,21	305,58	311,93	318,30	324,67	331,03	337,40

z	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
d_a [mm]	340,90	347,30	353,65	360,00	366,40	372,75	379,10	385,45	391,85	398,20	404,55	410,95	417,30	423,65	430,05	436,40	442,80	449,15
d_w [mm]	343,76	350,13	356,50	362,86	369,23	375,59	381,96	388,33	394,69	401,06	407,43	413,79	420,16	426,52	432,89	439,26	445,63	451,99

z	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89
d_a [mm]	455,50	461,85	468,25	474,60	480,95	487,35	493,70	500,05	506,45	512,80	519,15	525,55	531,90	538,25	544,60	551,00	557,35	563,70
d_w [mm]	458,36	464,73	471,08	477,45	483,82	490,19	496,56	502,91	509,28	515,65	522,02	528,39	534,74	541,11	547,48	553,85	560,22	566,57

z	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107
d_a [mm]	570,10	576,45	582,85	589,20	595,55	601,90	608,30	614,65	621,00	627,35	633,75	640,10	646,50	652,85	659,20	665,60	671,95	678,30
d_w [mm]	572,94	579,31	585,67	592,04	598,40	604,77	611,14	617,50	623,87	630,24	636,60	642,97	649,34	655,71	662,06	668,43	674,80	681,17

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



Timing pulleys

ATL5

z	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
d_a [mm]	38,60	40,20	41,80	43,35	44,95	46,55	48,15	49,70	51,30	52,85	54,45	56,05	57,65	59,25	60,85	62,45	64,00	65,60
d_w [mm]	39,80	41,39	42,98	44,58	46,17	47,76	49,35	50,94	52,54	54,13	55,72	57,31	58,90	60,50	62,09	63,66	65,27	66,86

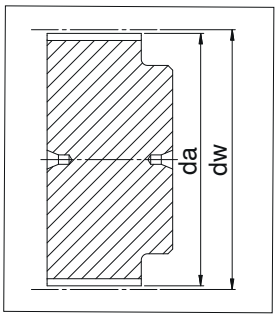
z	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
d_a [mm]	67,30	68,80	70,40	72,00	73,55	75,15	76,75	78,35	79,95	81,55	83,10	84,70	86,30	87,90	89,50	91,10	92,65	94,25
d_w [mm]	68,46	70,05	71,64	73,23	74,82	76,42	78,01	79,60	81,19	82,78	84,38	85,97	87,54	89,15	90,74	92,34	93,93	95,52

z	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78
d_a [mm]	95,85	97,45	99,05	100,65	102,25	103,80	105,40	107,00	108,60	110,20	111,80	113,35	114,95	116,55	118,15	119,75	121,35	122,90
d_w [mm]	97,11	98,70	100,30	101,89	103,48	105,07	106,66	108,26	109,85	111,44	113,03	114,62	116,22	117,81	119,40	120,99	122,58	124,18

z	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
d_a [mm]	124,50	126,10	127,70	129,30	130,90	132,45	134,05	135,65	137,25	138,85	140,45	142,05	143,60	145,20	146,80	148,40	150,00	151,60
d_w [mm]	125,77	127,36	128,95	130,54	132,14	133,73	135,32	136,91	138,50	140,10	141,69	143,28	144,87	146,46	148,06	149,65	151,24	152,83

z	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114
d_a [mm]	153,15	154,75	156,35	157,95	159,55	161,15	162,70	164,30	165,90	167,50	169,10	170,70	172,25	173,85	175,45	177,05	178,65	180,25
d_w [mm]	154,42	156,02	157,61	159,20	160,79	162,38	163,97	165,57	167,16	168,75	170,34	171,94	173,53	175,12	176,71	178,30	179,84	181,49

z	115	116	117	118	119	120
d_a [mm]	181,85	183,45	185,00	186,60	188,20	189,80
d_w [mm]	183,08	184,67	186,26	187,86	189,45	191,04



Timing pulleys

ATL10

z	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
d_a [mm]	77,7	80,9	84,1	87,25	90,45	93,65	96,8	100	103,2	106,4	109,55	112,75	115,9	119,1	122,3	125,45	128,65	131,85
d_w [mm]	79,58	82,76	85,95	89,12	92,21	95,49	98,67	101,86	105,04	108,19	111,41	114,59	117,77	120,95	124,14	127,32	130,5	133,69

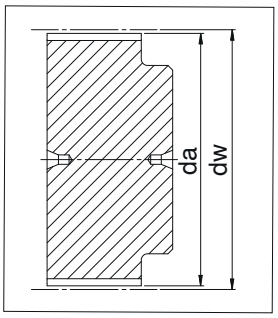
z	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
d_a [mm]	135	138,2	141,4	144,55	147,75	150,95	154,1	157,3	160,5	163,65	166,85	170,05	173,2	176,4	179,6	182,75	185,95	189,1
d_w [mm]	136,87	140,05	143,24	146,42	149,6	152,78	155,97	159,15	162,33	165,52	168,7	171,88	175,06	178,25	181,43	184,61	187,8	190,98

z	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78
d_a [mm]	192,3	195,5	198,65	201,85	205,05	208,2	211,4	214,6	217,75	220,95	224,15	227,3	230,5	233,7	236,9	240,05	243,25	246,4
d_w [mm]	194,16	197,35	200,53	203,71	206,9	210,08	213,26	216,44	219,63	222,81	225,99	229,18	232,33	235,54	238,72	241,94	245,09	248,24

z	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
d_a [mm]	249,6	252,8	255,95	259,15	262,3	265,5	268,7	271,9	275,05	278,25	281,45	284,6	287,8	291	294,2	297,35	300,55	303,7
d_w [mm]	251,46	254,64	257,82	261	264,19	267,37	270,52	273,74	276,92	280,1	283,28	286,47	289,65	292,84	296,02	299,2	302,39	305,57

z	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114
d_a [mm]	306,9	310,1	313,25	316,45	319,65	322,8	326	329,2	332,35	335,55	338,75	341,9	345,1	348,3	351,45	354,65	357,8	361
d_w [mm]	308,75	311,93	315,12	318,3	321,48	324,66	327,85	331,03	334,21	337,4	340,58	343,76	346,95	350,13	353,31	356,5	359,68	362,86

z	115	116	117	118	119	120
d_a [mm]	364,19	367,39	370,56	373,74	376,93	380,11
d_w [mm]	366,04	369,23	372,41	375,59	378,78	381,96



Timing pulleys

ATL20

z	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
d_a [mm]	156,30	162,65	169,05	175,40	181,75	188,15	194,50	200,85	207,20	213,60	219,95	226,35	232,70	239,05	245,45	251,80	258,15	264,50
d_w [mm]	159,15	165,52	171,88	178,25	184,62	190,99	197,35	203,72	210,09	216,44	222,81	229,18	235,54	241,91	248,27	254,64	261,01	267,37

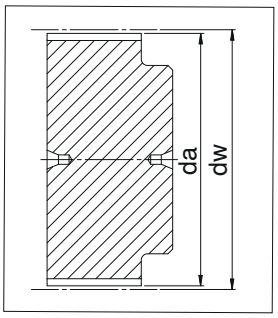
z	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
d_a [mm]	270,90	277,25	283,60	290,00	296,35	302,70	309,10	315,45	321,80	328,20	334,55	340,90	347,30	353,65	360,00	366,40	372,75	379,10
d_w [mm]	273,74	280,10	286,47	292,84	299,21	305,58	311,93	318,30	324,67	331,03	337,40	343,76	350,13	356,50	362,86	369,23	375,59	381,96

z	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78
d_a [mm]	385,45	391,85	398,20	404,55	410,95	417,30	423,65	430,05	436,40	442,80	449,15	455,50	461,85	468,25	474,60	480,95	487,35	493,70
d_w [mm]	388,33	394,69	401,06	407,43	413,79	420,16	426,52	432,89	439,26	445,63	451,99	458,36	464,73	471,08	477,45	483,82	490,19	496,56

z	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
d_a [mm]	500,05	506,45	512,80	519,15	525,55	531,90	538,25	544,60	551,00	557,35	563,70	570,10	576,45	582,85	589,20	595,55	601,90	608,30
d_w [mm]	502,91	509,28	515,65	522,02	528,39	534,74	541,11	547,48	553,85	560,22	566,57	572,94	579,31	585,67	592,04	598,40	604,77	611,14

z	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114
d_a [mm]	614,65	621,00	627,35	633,75	640,10	646,50	652,85	659,20	665,60	671,95	678,30	684,70	691,05	697,40	703,80	710,15	716,50	722,90
d_w [mm]	617,50	623,87	630,24	636,60	642,97	649,34	655,71	662,06	668,43	674,80	681,17	687,54	693,89	700,26	706,63	712,99	719,36	725,72

z	115	116	117	118	119	120
d_a [mm]	729,24	735,61	741,96	748,34	754,70	761,07
d_w [mm]	732,09	738,46	744,83	751,19	757,56	763,93



Timing pulleys

MXL

z	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
d_a [mm]	7,25	7,90	8,55	9,19	9,84	10,49	11,13	11,78	12,43	13,07	13,72	14,37	15,01	15,66	16,31	16,95	17,60	18,25
d_w [mm]	7,76	8,41	9,06	9,70	10,35	11,00	11,64	12,29	12,94	13,58	14,23	14,88	15,52	16,17	16,82	17,46	18,11	18,76

z	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
d_a [mm]	18,89	19,54	20,19	20,83	21,48	22,13	22,78	23,42	24,07	24,72	25,36	26,01	26,66	27,30	27,95	28,60	29,24	29,89
d_w [mm]	19,40	20,05	20,70	21,34	21,99	22,64	23,29	23,93	24,58	25,23	25,87	26,52	27,17	27,81	28,46	29,11	29,75	30,40

z	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
d_a [mm]	30,54	31,18	31,83	32,48	33,12	33,77	34,42	35,06	35,71	36,36	37,00	37,65	38,30	38,95	39,59	40,24	40,89	41,53
d_w [mm]	31,05	31,69	32,34	32,99	33,63	34,28	34,93	35,57	36,22	36,87	37,51	38,16	38,81	39,46	40,10	40,75	41,40	42,04

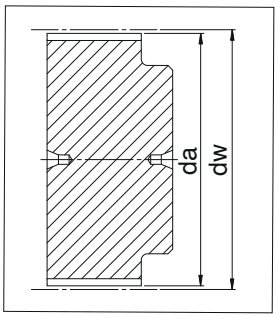
z	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
d_a [mm]	42,18	42,83	43,47	44,12	44,77	45,41	46,06	46,71	47,35	48,00	48,65	49,20	49,94	50,59	51,23	51,88	52,53	53,17
d_w [mm]	42,69	43,34	43,98	44,63	45,28	45,92	46,57	47,22	47,86	48,51	49,16	49,80	50,45	51,10	51,74	52,39	53,04	53,68

z	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101
d_a [mm]	53,82	54,47	55,12	55,76	56,41	57,06	57,70	58,36	59,00	59,64	60,29	60,94	61,58	62,23	62,88	63,52	64,17	64,82
d_w [mm]	54,33	54,98	55,63	56,27	56,92	57,57	58,21	58,86	59,51	60,15	60,80	61,45	62,09	62,74	63,39	64,03	64,68	65,33

z	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119
d_a [mm]	65,46	66,11	66,76	67,40	68,05	68,70	69,34	69,99	70,64	71,29	71,93	72,58	73,23	73,87	74,52	75,17	75,81	76,46
d_w [mm]	65,97	66,62	67,27	67,91	68,56	69,21	69,85	70,50	71,15	71,80	72,44	73,09	73,74	74,38	75,03	75,68	76,32	76,97

z	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137
d_a [mm]	77,11	77,75	78,40	79,05	79,69	80,34	80,99	81,63	82,28	82,93	83,57	84,22	84,87	85,51	86,16	86,81	87,46	88,10
d_w [mm]	77,62	78,26	78,91	79,56	80,20	80,85	81,50	82,14	82,79	83,44	84,08	84,73	85,38	86,02	88,67	87,32	87,97	88,61

z	138	139	140
d_a [mm]	88,75	89,40	90,04
d_w [mm]	89,26	89,91	90,55



Timing pulleys

XL

z	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
d_a [mm]	15,66	17,28	18,89	20,51	22,13	23,74	25,36	26,98	28,60	30,21	31,83	33,45	35,06	36,68	38,30	39,92	41,53	43,15
d_w [mm]	16,17	17,79	19,40	21,02	22,64	24,25	25,87	27,49	29,11	30,72	32,34	33,96	35,57	37,19	38,81	40,43	42,04	43,66

z	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
d_a [mm]	44,77	46,38	48,00	49,62	51,23	52,85	54,47	56,09	57,70	59,32	60,94	62,55	64,17	65,79	67,40	69,02	70,64	72,26
d_w [mm]	45,28	46,89	48,51	50,13	51,74	53,36	54,98	56,60	58,21	59,83	61,45	63,06	64,68	66,30	67,91	69,53	71,15	72,77

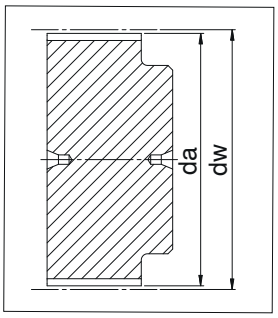
z	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
d_a [mm]	73,87	75,49	77,11	78,72	80,34	81,96	83,57	85,19	86,81	88,42	90,04	91,66	93,28	94,89	96,51	98,13	99,74	101,36
d_w [mm]	74,38	76,00	77,62	79,23	80,85	82,47	84,08	85,70	87,32	88,93	90,55	92,17	93,79	95,40	97,02	98,64	100,25	101,87

z	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81
d_a [mm]	102,98	104,60	106,21	107,83	109,45	111,06	112,68	114,30	115,92	117,53	119,15	120,77	122,38	124,00	125,62	127,23	128,85	130,47
d_w [mm]	103,49	105,11	106,72	108,34	109,96	111,57	113,19	114,81	116,43	118,04	119,66	121,28	122,89	124,51	126,13	127,74	129,36	130,98

z	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99
d_a [mm]	132,08	133,70	135,32	136,93	138,55	140,17	141,75	143,36	145,02	146,64	148,25	149,87	151,49	153,11	154,72	156,34	157,96	159,57
d_w [mm]	132,59	134,21	135,83	137,44	139,06	140,68	142,30	143,91	145,53	147,15	148,76	150,38	152,00	153,62	155,23	156,85	158,47	160,08

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

z	118	119	120
d_a [mm]	190,30	191,91	193,53
d_w [mm]	190,81	192,42	194,04



Timing pulleys

L

z	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
d_a [mm]	44,71	47,74	50,77	53,80	56,83	59,88	62,91	65,94	68,97	72,00	75,03	78,06	81,09	84,12	87,15	90,20	93,23	96,26
d_w [mm]	45,47	48,50	51,53	54,56	57,61	60,64	63,67	66,70	69,73	72,76	75,80	78,83	81,86	84,89	87,92	90,95	93,98	97,01

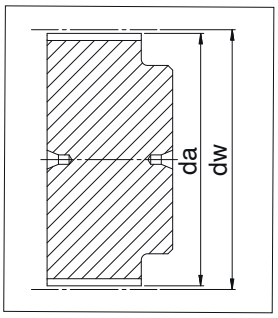
z	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
d_a [mm]	99,29	102,32	105,35	108,38	111,41	114,44	117,47	120,52	123,55	126,58	129,61	132,64	135,67	138,70	141,73	144,76	147,80	150,83
d_w [mm]	100,04	103,07	106,12	109,15	112,18	115,21	118,24	121,27	124,30	127,33	130,36	133,39	136,44	139,47	142,50	145,53	148,56	151,59

z	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
d_a [mm]	153,86	156,89	159,92	162,95	166,00	169,03	172,06	175,09	178,12	181,15	184,18	187,21	190,24	193,27	196,30	199,33	202,38	205,41
d_w [mm]	154,62	157,65	160,68	163,71	166,76	169,79	172,82	175,85	178,88	181,91	184,94	187,97	191,00	194,03	197,06	200,11	203,14	206,17

z	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
d_a [mm]	208,44	211,47	214,50	217,53	220,56	223,59	226,62	229,65	232,70	235,73	238,76	241,79	244,82	247,85	250,88	253,91	256,94	259,97
d_w [mm]	209,20	212,23	215,26	218,29	221,32	224,35	227,38	230,41	233,46	236,49	239,52	242,55	245,58	248,61	251,64	254,67	257,70	260,73

z	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
d_a [mm]	263,02	266,05	269,08	272,11	275,14	278,17	281,20	284,23	287,26	290,30	293,33	296,36	299,40	302,43	305,46	308,49	311,52	314,55
d_w [mm]	263,78	266,81	269,84	272,87	275,90	278,93	281,96	285,00	288,03	291,06	294,09	297,12	300,15	303,18	306,21	309,24	312,29	315,32

z	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
d_a [mm]	317,58	320,61	323,64	326,69	329,72	332,75	335,78	338,81	341,84	344,87	347,90	350,93	353,96	357,00	360,03	363,07
d_w [mm]	318,35	321,38	324,41	327,44	330,47	333,50	336,53	339,56	342,61	345,64	348,67	351,70	354,73	357,76	360,79	363,82



Timing pulleys

H

z	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
d_a [mm]	55,23	59,27	63,31	67,35	71,40	75,44	79,48	83,52	87,57	91,61	95,65	99,69	103,73	107,77	111,81	115,85	119,91	123,95
d_w [mm]	56,60	60,64	64,68	68,72	72,76	76,80	80,84	84,88	88,94	92,98	97,02	101,06	105,10	109,14	113,18	117,22	121,28	125,32

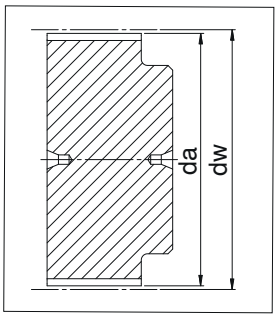
z	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
d_a [mm]	127,99	132,03	136,07	140,11	144,15	148,20	152,24	156,28	160,32	164,36	168,42	172,46	176,50	180,54	184,58	188,62	192,67	196,71
d_w [mm]	129,36	133,40	137,44	141,48	145,52	149,56	153,62	157,66	161,70	165,74	169,78	173,82	177,86	181,90	185,96	190,00	194,04	198,08

z	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67
d_a [mm]	200,75	204,80	208,84	212,88	216,92	220,96	225,00	229,04	233,10	237,14	241,18	245,22	249,26	253,30	257,34	261,38	265,44	269,48
d_w [mm]	202,13	206,17	210,21	214,25	218,29	222,33	226,37	230,41	234,47	238,51	242,55	246,59	250,63	254,67	258,71	262,75	266,81	270,85

z	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
d_a [mm]	273,52	277,56	281,60	285,64	289,68	293,72	297,78	301,82	305,86	309,90	313,94	317,98	322,02	326,06	330,12	334,16	338,20	342,24
d_w [mm]	274,89	278,93	282,97	287,01	291,05	295,10	299,14	303,18	307,22	311,26	315,32	319,36	323,40	327,44	331,48	335,52	339,56	343,60

z	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103
d_a [mm]	346,28	350,33	354,37	358,41	362,45	366,50	370,54	374,58	378,62	382,66	386,70	390,74	394,80	398,84	402,88	406,92	410,96	415,00
d_w [mm]	347,66	351,70	355,74	359,78	363,82	367,86	371,90	375,94	380,00	384,04	388,08	392,12	396,16	400,20	404,24	408,28	412,34	416,38

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



Timing pulleys

XH

z	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
d_a [mm]	124,55	131,62	138,68	145,76	152,84	159,91	167,00	174,07	181,13	188,20	195,27	202,37	209,44	216,51	223,58	230,66	237,73	244,80
d_w [mm]	127,34	134,41	141,48	148,55	155,64	162,71	169,78	176,85	183,94	191,01	198,08	205,15	212,22	219,31	226,38	233,45	240,52	247,59

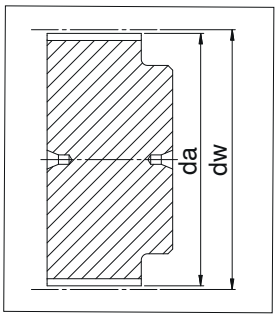
z	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
d_a [mm]	251,87	258,94	266,02	273,11	280,18	287,25	294,33	301,40	308,47	315,54	322,61	329,70	336,77	343,87	350,93	358,00	365,07	372,14
d_w [mm]	254,68	261,75	268,82	275,89	282,98	290,05	297,12	304,19	311,26	318,35	325,42	332,49	339,57	346,66	353,73	360,80	367,87	374,94

z	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
d_a [mm]	379,21	386,30	393,37	400,44	407,51	414,58	421,68	428,75	435,90	442,90	449,97	457,05	464,10	471,20	478,25	485,32	492,39	499,48
d_w [mm]	382,01	389,08	396,17	403,24	410,31	417,38	424,47	431,54	438,61	445,68	452,75	459,84	466,91	473,98	481,05	488,12	495,21	502,28

z	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89
d_a [mm]	506,57	513,63	520,70	527,77	534,84	541,93	549,00	556,07	563,15	570,22	577,29	584,36	591,43	598,60	605,61	612,68	619,75	626,82
d_w [mm]	509,35	516,42	523,51	530,58	537,65	544,72	551,79	558,88	565,95	573,02	580,09	587,18	594,25	601,32	608,39	615,46	622,55	629,62

z	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107
d_a [mm]	633,89	640,96	648,04	655,11	662,18	669,25	676,33	683,40	690,47	697,55	704,62	711,70	718,77	725,85	732,92	740,01	747,08	754,15
d_w [mm]	636,69	643,76	650,85	657,92	664,99	672,06	679,13	686,22	693,29	700,36	707,43	714,50	721,59	728,66	735,73	742,80	749,87	756,96

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



Timing pulleys

HTD3M

z	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
d_a [mm]	18,34	19,29	20,25	21,20	22,16	23,11	24,07	25,02	25,98	26,93	27,89	28,84	29,80	30,75	31,71	32,66	33,62	34,57
d_w [mm]	19,10	20,05	21,01	21,96	22,92	23,87	24,83	25,78	26,74	27,69	28,65	29,60	30,56	31,51	32,47	33,42	34,38	35,33

z	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
d_a [mm]	35,53	36,48	37,44	38,39	39,35	40,30	41,26	42,21	43,17	44,12	45,08	46,03	46,99	47,94	48,90	49,85	50,81	51,76
d_w [mm]	36,29	37,24	38,20	39,15	40,11	41,06	42,02	42,97	43,93	44,88	45,84	46,79	47,75	48,70	49,66	50,61	51,57	52,52

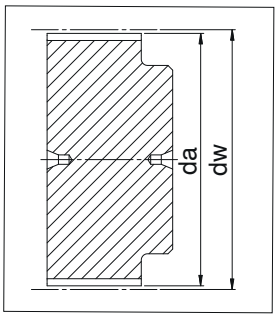
z	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73
d_a [mm]	52,72	53,67	54,63	55,58	56,54	57,49	58,45	59,40	60,36	61,31	62,27	63,22	64,18	65,13	66,09	67,04	68,00	68,95
d_w [mm]	53,48	54,43	55,39	56,34	57,30	58,25	59,21	60,16	61,12	62,07	63,03	63,98	64,94	65,89	66,85	67,80	68,76	69,71

z	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91
d_a [mm]	69,91	70,86	71,82	72,77	73,73	74,68	75,64	76,59	77,55	78,50	79,46	80,41	81,37	82,32	83,28	84,23	85,19	86,14
d_w [mm]	70,67	71,62	72,58	73,53	74,49	75,44	76,40	77,35	78,31	79,26	80,22	81,17	82,13	83,08	84,04	84,99	85,95	86,90

z	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109
d_a [mm]	87,10	88,05	89,01	89,96	90,92	91,87	92,83	93,78	94,74	95,69	96,65	97,60	98,56	99,51	100,47	101,42	102,38	103,33
d_w [mm]	87,86	88,81	89,77	90,72	91,68	92,63	93,59	94,54	95,50	96,45	97,41	98,36	99,32	100,27	101,23	102,18	103,14	104,09

z	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
d_a [mm]	104,29	105,24	106,20	107,15	108,11	109,06	110,02	110,97	111,93	112,88	113,83	114,79	115,74	116,70	117,65	118,61	119,56	120,52
d_w [mm]	105,05	106,00	106,96	107,91	108,87	109,82	110,78	111,73	112,69	113,64	114,59	115,55	116,50	117,46	118,41	119,37	120,32	121,28

z	128	129	130	131	132	133	134	135	136	137	138	139	140
d_a [mm]	121,47	122,43	123,38	124,34	125,29	126,25	127,20	128,16	129,11	130,07	131,02	131,98	132,93
d_w [mm]	122,23	123,19	124,14	125,10	126,05	127,01	127,96	128,92	129,87	130,83	131,78	132,74	133,69



Timing pulleys

HTD5M

z	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
d_a [mm]	24,32	25,91	27,51	29,09	30,69	32,28	33,87	35,46	37,06	38,64	40,24	41,83	43,42	45,01	46,61	48,19	49,79	51,38
d_w [mm]	25,46	27,05	28,65	30,23	31,83	33,42	35,01	36,60	38,20	39,78	41,38	42,97	44,56	46,15	47,75	49,33	50,93	52,52

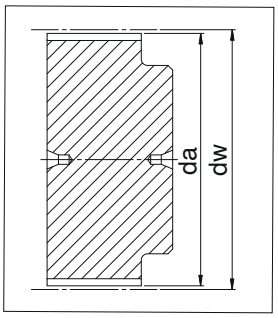
z	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
d_a [mm]	52,97	54,56	56,16	57,75	59,34	60,93	62,52	64,11	65,70	67,29	68,88	70,47	72,06	73,65	75,24	76,84	78,44	80,03
d_w [mm]	54,11	55,70	57,30	58,89	60,48	62,07	63,66	65,25	66,84	68,43	70,02	71,61	73,20	74,79	76,38	77,98	79,58	81,17

z	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69
d_a [mm]	81,62	83,21	84,80	86,39	87,98	89,57	91,17	92,76	94,35	95,94	97,53	99,12	100,72	102,31	103,90	105,49	107,08	108,67
d_w [mm]	82,76	84,35	85,94	87,53	89,12	90,71	92,31	93,90	95,49	97,08	98,67	100,26	101,86	103,45	105,04	106,63	108,22	109,81

z	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87
d_a [mm]	110,27	111,86	113,45	115,04	116,63	118,22	119,81	121,40	122,99	124,58	126,18	127,77	129,36	130,95	132,54	134,14	135,73	137,32
d_w [mm]	111,41	113,00	114,59	116,18	117,77	119,36	120,95	122,54	124,13	125,72	127,32	128,91	130,50	132,09	133,68	135,28	136,87	138,46

z	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
d_a [mm]	138,91	140,51	142,10	143,69	145,28	146,87	148,46	150,06	151,64	153,24	154,83	156,42	158,01	159,61	161,20	162,81	164,38	165,97
d_w [mm]	140,05	141,65	143,24	144,83	146,42	148,01	149,60	151,20	152,78	154,38	155,97	157,56	159,15	160,75	162,34	163,95	165,52	167,11

z	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
d_a [mm]	167,56	169,09	170,75	172,34	173,93	175,52	177,11	178,70	180,29	181,88	183,47	185,07	186,66	188,25	189,84
d_w [mm]	168,70	170,23	171,89	173,48	175,07	176,66	178,25	179,84	181,43	183,02	184,61	186,21	187,80	189,39	190,98



Timing pulleys

HTD8M

z	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
d_a [mm]	44,46	47,01	49,56	52,10	54,65	57,20	59,75	62,29	64,84	67,38	70,08	72,59	75,13	77,65	80,16	82,68	85,21	87,76
d_w [mm]	45,83	48,38	50,93	53,47	56,02	58,57	61,12	63,66	66,21	68,75	71,30	73,84	76,39	78,94	81,49	84,03	86,58	89,12

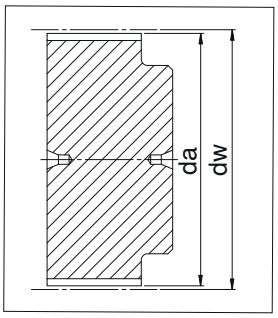
z	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
d_a [mm]	90,30	92,85	95,40	97,94	100,49	103,04	105,58	108,13	110,68	113,22	115,77	118,31	120,86	123,40	125,95	128,50	131,05	133,59
d_w [mm]	91,67	94,22	96,77	99,31	101,86	104,40	106,95	109,50	112,05	114,59	117,14	119,68	122,23	124,77	127,32	129,87	132,41	134,96

z	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
d_a [mm]	136,14	138,68	141,23	143,78	146,32	148,87	151,42	153,96	156,52	159,06	161,60	164,15	166,69	169,24	171,79	174,33	176,88	179,43
d_w [mm]	137,51	140,05	142,60	145,15	147,69	150,24	152,79	155,33	157,89	160,43	162,97	165,52	168,06	170,61	173,16	175,70	178,25	180,80

z	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89
d_a [mm]	181,98	184,52	187,07	189,61	192,16	194,71	197,25	199,80	202,35	204,89	207,44	209,98	212,53	215,08	217,63	220,17	222,72	225,26
d_w [mm]	183,35	185,89	188,44	190,98	193,53	196,08	198,62	201,17	203,72	206,26	208,81	211,35	213,90	216,45	219,00	221,54	224,09	226,63

z	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107
d_a [mm]	227,81	230,35	232,90	235,45	238,00	240,54	243,09	245,63	248,18	250,73	253,28	255,82	258,37	260,91	263,46	266,01	268,55	271,10
d_w [mm]	229,18	231,72	234,27	236,82	239,37	241,91	244,46	247,00	249,55	252,10	254,67	257,19	259,74	262,28	264,83	267,38	269,92	272,47

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



Timing pulleys

HTD14M

z	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
d_a [mm]	122,12	126,58	130,99	135,45	139,88	144,35	148,79	153,25	157,68	162,14	166,60	171,02	175,48	179,92	184,37	188,83	193,29	197,75
d_w [mm]	124,77	129,22	133,69	138,14	142,59	147,06	151,51	155,96	160,41	164,88	169,34	173,79	178,24	182,71	187,16	191,61	196,08	200,53

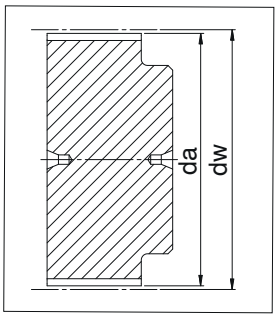
z	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
d_a [mm]	202,21	206,65	211,11	215,57	220,03	224,49	228,95	233,39	237,85	242,30	246,76	251,22	255,68	260,14	264,60	269,04	273,50	277,96
d_w [mm]	204,98	209,43	213,90	218,35	222,80	227,27	231,72	236,18	240,64	245,09	249,55	254,01	258,46	262,91	267,38	271,83	276,28	280,75

z	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81
d_a [mm]	282,42	286,88	291,32	295,78	300,24	304,70	309,16	313,61	318,07	322,53	326,98	331,44	335,90	340,34	344,80	349,26	353,72	358,17
d_w [mm]	285,20	289,65	294,11	298,56	303,03	307,48	311,93	316,40	320,85	325,30	329,77	334,22	338,67	343,12	347,59	352,04	356,49	360,96

z	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99
d_a [mm]	362,63	367,09	371,54	376,00	380,46	384,91	389,37	393,83	398,29	402,73	407,19	411,65	416,10	420,56	425,02	429,48	433,94	438,38
d_w [mm]	365,41	369,86	374,33	378,78	383,23	387,70	392,15	396,60	401,07	405,52	409,97	414,44	418,89	423,35	427,80	432,25	436,72	441,17

z	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	116	117	118
d_a [mm]	442,84	447,30	451,76	456,21	460,67	465,13	469,58	474,03	478,49	482,95	487,41	491,87	496,32	500,78	505,23	514,14	518,60	523,06
d_w [mm]	445,62	450,09	454,54	459,00	463,45	467,90	472,37	476,82	481,28	485,74	490,19	494,64	499,10	503,55	508,02	516,93	521,38	525,83

z	119	120
d_a [mm]	527,51	531,97
d_w [mm]	530,30	534,75



Timing pulleys

HTD14M XHPL

z	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
d_a [mm]	148,79	153,25	157,68	162,14	166,60	171,02	175,48	179,92	184,37	188,83	193,29	197,75	202,21	206,65	211,11	215,57	220,03	224,49
d_w [mm]	151,51	155,96	160,41	164,88	169,34	173,79	178,24	182,71	187,16	191,61	196,08	200,53	204,98	209,43	213,90	218,35	222,80	227,27

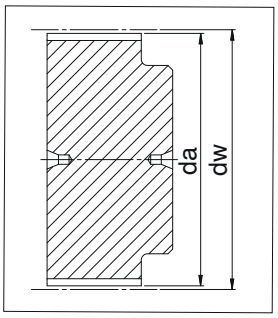
z	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69
d_a [mm]	228,95	233,39	237,85	242,30	246,76	251,22	255,68	260,14	264,60	269,04	273,50	277,96	282,42	286,88	291,32	295,78	300,24	304,70
d_w [mm]	231,72	236,18	240,64	245,09	249,55	254,01	258,46	262,91	267,38	271,83	276,28	280,75	285,20	289,65	294,11	298,56	303,03	307,48

z	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87
d_a [mm]	309,16	313,61	318,07	322,53	326,98	331,44	335,90	340,34	344,80	349,26	353,72	358,17	362,63	367,09	371,54	376,00	380,46	384,91
d_w [mm]	311,93	316,40	320,85	325,30	329,77	334,22	338,67	343,12	347,59	352,04	356,49	360,96	365,41	369,86	374,33	378,78	383,23	387,70

z	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
d_a [mm]	389,37	393,83	398,29	402,73	407,19	411,65	416,10	420,56	425,02	429,48	433,94	438,38	442,84	447,30	451,76	456,21	460,67	465,13
d_w [mm]	392,15	396,60	401,07	405,52	409,97	414,44	418,89	423,35	427,80	432,25	436,72	441,17	445,62	450,09	454,54	459,00	463,45	467,90

z	106	107	108	109	110	111	112	113	114	116	117	118	119	120
d_a [mm]	469,58	474,03	478,49	482,95	487,41	491,87	496,32	500,78	505,23	514,14	518,60	523,06	527,51	531,97
d_w [mm]	472,37	476,82	481,28	485,74	490,19	494,64	499,10	503,55	508,02	516,93	521,38	525,83	530,30	534,75

Note
Special pulley profile required.
Contact Elatech® technical dept. for details.



Timing pulleys

RPD5M

z	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
d_a [mm]	24,32	25,91	27,51	29,09	30,69	32,28	33,87	35,46	37,06	38,64	40,24	41,83	43,42	45,01	46,61	48,19	49,79	51,38
d_w [mm]	25,46	27,05	28,65	30,23	31,83	33,42	35,01	36,60	38,20	39,78	41,38	42,97	44,56	46,15	47,75	49,33	50,93	52,52

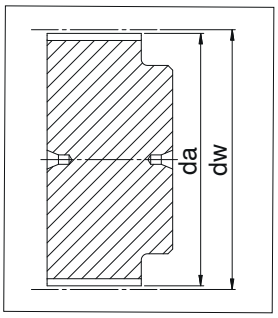
z	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
d_a [mm]	52,97	54,56	56,16	57,75	59,34	60,93	62,52	64,11	65,70	67,29	68,88	70,47	72,06	73,65	75,24	76,84	78,44	80,03
d_w [mm]	54,11	55,70	57,30	58,89	60,48	62,07	63,66	65,25	66,84	68,43	70,02	71,61	73,20	74,79	76,38	77,98	79,58	81,17

z	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69
d_a [mm]	81,62	83,21	84,80	86,39	87,98	89,57	91,17	92,76	94,35	95,94	97,53	99,12	100,72	102,31	103,90	105,49	107,08	108,67
d_w [mm]	82,76	84,35	85,94	87,53	89,12	90,71	92,31	93,90	95,49	97,08	98,67	100,26	101,86	103,45	105,04	106,63	108,22	109,81

z	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87
d_a [mm]	110,27	111,86	113,45	115,04	116,63	118,22	119,81	121,40	122,99	124,58	126,18	127,77	129,36	130,95	132,54	134,14	135,73	137,32
d_w [mm]	111,41	113,00	114,59	116,18	117,77	119,36	120,95	122,54	124,13	125,72	127,32	128,91	130,50	132,09	133,68	135,28	136,87	138,46

z	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
d_a [mm]	138,91	140,51	142,10	143,69	145,28	146,87	148,46	150,06	151,64	153,24	154,83	156,42	158,01	159,61	161,20	162,81	164,38	165,97
d_w [mm]	140,05	141,65	143,24	144,83	146,42	148,01	149,60	151,20	152,78	154,38	155,97	157,56	159,15	160,75	162,34	163,95	165,52	167,11

z	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
d_a [mm]	167,56	169,09	170,75	172,34	173,93	175,52	177,11	178,70	180,29	181,88	183,47	185,07	186,66	188,25	189,84
d_w [mm]	168,70	170,23	171,89	173,48	175,07	176,66	178,25	179,84	181,43	183,02	184,61	186,21	187,80	189,39	190,98



Timing pulleys

RPD8M

z	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
d_a [mm]	44,46	47,01	49,56	52,10	54,65	57,20	59,75	62,29	64,84	67,38	70,08	72,59	75,13	77,65	80,16	82,68	85,21	87,76
d_w [mm]	45,83	48,38	50,93	53,47	56,02	58,57	61,12	63,66	66,21	68,75	71,30	73,84	76,39	78,94	81,49	84,03	86,58	89,12

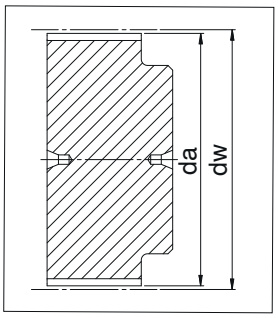
z	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
d_a [mm]	90,30	92,85	95,40	97,94	100,49	103,04	105,58	108,13	110,68	113,22	115,77	118,31	120,86	123,40	125,95	128,50	131,05	133,59
d_w [mm]	91,67	94,22	96,77	99,31	101,86	104,40	106,95	109,50	112,05	114,59	117,14	119,68	122,23	124,77	127,32	129,87	132,41	134,96

z	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
d_a [mm]	136,14	138,68	141,23	143,78	146,32	148,87	151,42	153,96	156,52	159,06	161,60	164,15	166,69	169,24	171,79	174,33	176,88	179,43
d_w [mm]	137,51	140,05	142,60	145,15	147,69	150,24	152,79	155,33	157,89	160,43	162,97	165,52	168,06	170,61	173,16	175,70	178,25	180,80

z	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89
d_a [mm]	181,98	184,52	187,07	189,61	192,16	194,71	197,25	199,80	202,35	204,89	207,44	209,98	212,53	215,08	217,63	220,17	222,72	225,26
d_w [mm]	183,35	185,89	188,44	190,98	193,53	196,08	198,62	201,17	203,72	206,26	208,81	211,35	213,90	216,45	219,00	221,54	224,09	226,63

z	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107
d_a [mm]	227,81	230,35	232,90	235,45	238,00	240,54	243,09	245,63	248,18	250,73	253,28	255,82	258,37	260,91	263,46	266,01	268,55	271,10
d_w [mm]	229,18	231,72	234,27	236,82	239,37	241,91	244,46	247,00	249,55	252,10	254,67	257,19	259,74	262,28	264,83	267,38	269,92	272,47

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



Timing pulleys

RPD14M

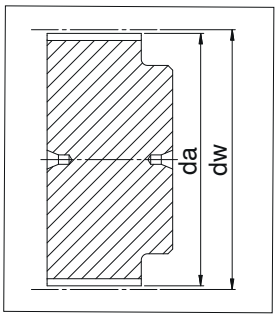
z	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
d_a [mm]	139,88	144,35	148,79	153,25	157,68	162,14	166,60	171,02	175,48	179,92	184,37	188,83	193,29	197,75	202,21	206,65	211,11	215,57
d_w [mm]	142,59	147,06	151,51	155,96	160,41	164,88	169,34	173,79	178,24	182,71	187,16	191,61	196,08	200,53	204,98	209,43	213,90	218,35

z	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67
d_a [mm]	220,03	224,49	228,95	233,39	237,85	242,30	246,76	251,22	255,68	260,14	264,60	269,04	273,50	277,96	282,42	286,88	291,32	295,78
d_w [mm]	222,80	227,27	231,72	236,18	240,64	245,09	249,55	254,01	258,46	262,91	267,38	271,83	276,28	280,75	285,20	289,65	294,11	298,56

z	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
d_a [mm]	300,24	304,70	309,16	313,61	318,07	322,53	326,98	331,44	335,90	340,34	344,80	349,26	353,72	358,17	362,63	367,09	371,54	376,00
d_w [mm]	303,03	307,48	311,93	316,40	320,85	325,30	329,77	334,22	338,67	343,12	347,59	352,04	356,49	360,96	365,41	369,86	374,33	378,78

z	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103
d_a [mm]	380,46	384,91	389,37	393,83	398,29	402,73	407,19	411,65	416,10	420,56	425,02	429,48	433,94	438,38	442,84	447,30	451,76	456,21
d_w [mm]	383,23	387,70	392,15	396,60	401,07	405,52	409,97	414,44	418,89	423,35	427,80	432,25	436,72	441,17	445,62	450,09	454,54	459,00

z	104	105	106	107	108	109	110	111	112	113	114	116	117	118	119	120
d_a [mm]	460,67	465,13	469,58	474,03	478,49	482,95	487,41	491,87	496,32	500,78	505,23	514,14	518,60	523,06	527,51	531,97
d_w [mm]	463,45	467,90	472,37	476,82	481,28	485,74	490,19	494,64	499,10	503,55	508,02	516,93	521,38	525,83	530,30	534,75



Timing pulleys

RPD14M XHPL

z	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
d_a [mm]	148,79	153,25	157,68	162,14	166,60	171,02	175,48	179,92	184,37	188,83	193,29	197,75	202,21	206,65	211,11	215,57	220,03	224,49
d_w [mm]	151,51	155,96	160,41	164,88	169,34	173,79	178,24	182,71	187,16	191,61	196,08	200,53	204,98	209,43	213,90	218,35	222,80	227,27

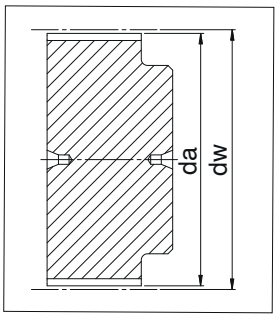
z	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69
d_a [mm]	228,95	233,39	237,85	242,30	246,76	251,22	255,68	260,14	264,60	269,04	273,50	277,96	282,42	286,88	291,32	295,78	300,24	304,70
d_w [mm]	231,72	236,18	240,64	245,09	249,55	254,01	258,46	262,91	267,38	271,83	276,28	280,75	285,20	289,65	294,11	298,56	303,03	307,48

z	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87
d_a [mm]	309,16	313,61	318,07	322,53	326,98	331,44	335,90	340,34	344,80	349,26	353,72	358,17	362,63	367,09	371,54	376,00	380,46	384,91
d_w [mm]	311,93	316,40	320,85	325,30	329,77	334,22	338,67	343,12	347,59	352,04	356,49	360,96	365,41	369,86	374,33	378,78	383,23	387,70

z	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
d_a [mm]	389,37	393,83	398,29	402,73	407,19	411,65	416,10	420,56	425,02	429,48	433,94	438,38	442,84	447,30	451,76	456,21	460,67	465,13
d_w [mm]	392,15	396,60	401,07	405,52	409,97	414,44	418,89	423,35	427,80	432,25	436,72	441,17	445,62	450,09	454,54	459,00	463,45	467,90

z	106	107	108	109	110	111	112	113	114	116	117	118	119	120
d_a [mm]	469,58	474,03	478,49	482,95	487,41	491,87	496,32	500,78	505,23	514,14	518,60	523,06	527,51	531,97
d_w [mm]	472,37	476,82	481,28	485,74	490,19	494,64	499,10	503,55	508,02	516,93	521,38	525,83	530,30	534,75

Note
Special pulley profile required.
Contact Elatech® technical dept. for details.



Timing pulleys

STD5M

z	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
d_a [mm]	24,51	26,10	27,69	29,27	30,87	32,46	34,05	35,65	37,23	38,83	40,42	42,01	43,60	45,19	46,79	48,38	49,97	51,56
d_w [mm]	25,47	27,06	28,65	30,23	31,83	33,42	35,01	36,61	38,19	39,79	41,38	42,97	44,56	46,15	47,75	49,34	50,93	52,52

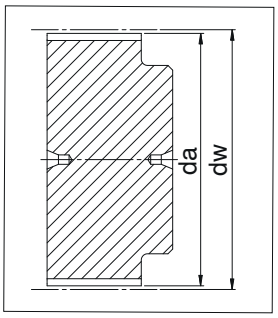
z	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
d_a [mm]	53,15	54,75	56,34	57,93	59,52	61,11	62,70	64,30	65,89	67,48	69,07	70,66	72,25	73,84	75,43	77,03	78,62	80,21
d_w [mm]	54,11	55,71	57,30	58,89	60,48	62,07	63,66	65,26	66,85	68,44	70,03	71,62	73,21	74,80	76,39	77,99	79,58	81,17

z	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69
d_a [mm]	81,80	83,39	84,99	86,58	88,17	89,76	91,35	92,94	94,53	96,13	97,72	99,31	100,90	102,49	104,08	105,67	107,27	108,86
d_w [mm]	82,76	84,35	85,95	87,54	89,13	90,72	92,31	93,90	95,49	97,09	98,68	100,27	101,86	103,45	105,04	106,63	108,23	109,82

z	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87
d_a [mm]	110,45	112,04	113,63	115,23	116,82	118,41	120,00	121,59	123,18	124,77	126,36	127,95	129,54	131,14	132,73	134,32	135,91	137,51
d_w [mm]	111,41	113,00	114,59	116,19	117,78	119,37	120,96	122,55	124,14	125,73	127,32	128,91	130,50	132,10	133,69	135,28	136,87	138,47

z	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
d_a [mm]	139,09	140,69	142,28	143,87	145,46	147,05	148,64	150,24	151,83	153,42	155,01	156,60	158,19	159,79	161,38	162,99	164,56	166,15
d_w [mm]	140,05	141,65	143,24	144,83	146,42	148,01	149,60	151,20	152,71	154,38	155,97	157,56	159,15	160,75	162,34	163,95	165,52	167,11

z	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
d_a [mm]	167,74	169,34	170,93	172,52	174,10	175,70	177,29	178,88	180,47	182,06	183,65	185,25	186,84	188,43	190,02
d_w [mm]	168,70	170,30	171,89	173,48	175,06	176,66	178,25	179,84	181,43	183,02	184,61	186,21	187,80	189,39	190,98



Timing pulleys

STD8M

z	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
d_a [mm]	44,46	47,01	49,56	52,10	54,65	57,20	59,75	62,29	64,84	67,38	70,08	72,59	75,13	77,65	80,16	82,68	85,21	87,76
d_w [mm]	45,83	48,38	50,93	53,47	56,02	58,57	61,12	63,66	66,21	68,75	71,30	73,84	76,39	78,94	81,49	84,03	86,58	89,12

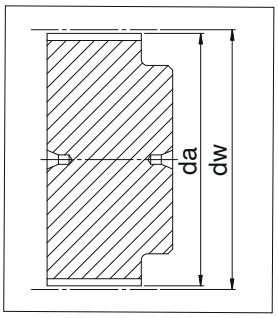
z	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
d_a [mm]	90,30	92,85	95,40	97,94	100,49	103,04	105,58	108,13	110,68	113,22	115,77	118,31	120,86	123,40	125,95	128,50	131,05	133,59
d_w [mm]	91,67	94,22	96,77	99,31	101,86	104,40	106,95	109,50	112,05	114,59	117,14	119,68	122,23	124,77	127,32	129,87	132,41	134,96

z	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
d_a [mm]	136,14	138,68	141,23	143,78	146,32	148,87	151,42	153,96	156,52	159,06	161,60	164,15	166,69	169,24	171,79	174,33	176,88	179,43
d_w [mm]	137,51	140,05	142,60	145,15	147,69	150,24	152,79	155,33	157,89	160,43	162,97	165,52	168,06	170,61	173,16	175,70	178,25	180,80

z	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89
d_a [mm]	181,98	184,52	187,07	189,61	192,16	194,71	197,25	199,80	202,35	204,89	207,44	209,98	212,53	215,08	217,63	220,17	222,72	225,26
d_w [mm]	183,35	185,89	188,44	190,98	193,53	196,08	198,62	201,17	203,72	206,26	208,81	211,35	213,90	216,45	219,00	221,54	224,09	226,63

z	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107
d_a [mm]	227,81	230,35	232,90	235,45	238,00	240,54	243,09	245,63	248,18	250,73	253,28	255,82	258,37	260,91	263,46	266,01	268,55	271,10
d_w [mm]	229,18	231,72	234,27	236,82	239,37	241,91	244,46	247,00	249,55	252,10	254,67	257,19	259,74	262,28	264,83	267,38	269,92	272,47

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



Timing pulleys

STD14M

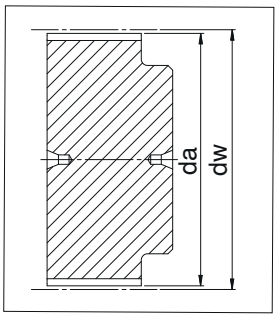
z	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
d_a [mm]	139,88	144,35	148,79	153,25	157,68	162,14	166,60	171,02	175,48	179,92	184,37	188,83	193,29	197,75	202,21	206,65	211,11	215,57
d_w [mm]	142,59	147,06	151,51	155,96	160,41	164,88	169,34	173,79	178,24	182,71	187,16	191,61	196,08	200,53	204,98	209,43	213,90	218,35

z	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67
d_a [mm]	220,03	224,49	228,95	233,39	237,85	242,30	246,76	251,22	255,68	260,14	264,60	269,04	273,50	277,96	282,42	286,88	291,32	295,78
d_w [mm]	222,80	227,27	231,72	236,18	240,64	245,09	249,55	254,01	258,46	262,91	267,38	271,83	276,28	280,75	285,20	289,65	294,11	298,56

z	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
d_a [mm]	300,24	304,70	309,16	313,61	318,07	322,53	326,98	331,44	335,90	340,34	344,80	349,26	353,72	358,17	362,63	367,09	371,54	376,00
d_w [mm]	303,03	307,48	311,93	316,40	320,85	325,30	329,77	334,22	338,67	343,12	347,59	352,04	356,49	360,96	365,41	369,86	374,33	378,78

z	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103
d_a [mm]	380,46	384,91	389,37	393,83	398,29	402,73	407,19	411,65	416,10	420,56	425,02	429,48	433,94	438,38	442,84	447,30	451,76	456,21
d_w [mm]	383,23	387,70	392,15	396,60	401,07	405,52	409,97	414,44	418,89	423,35	427,80	432,25	436,72	441,17	445,62	450,09	454,54	459,00

z	104	105	106	107	108	109	110	111	112	113	114	116	117	118	119	120
d_a [mm]	460,67	465,13	469,58	474,03	478,49	482,95	487,41	491,87	496,32	500,78	505,23	514,14	518,60	523,06	527,51	531,97
d_w [mm]	463,45	467,90	472,37	476,82	481,28	485,74	490,19	494,64	499,10	503,55	508,02	516,93	521,38	525,83	530,30	534,75



Timing pulleys

EAGLE5M

z	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
d_a [mm]	24,51	26,10	27,69	29,27	30,87	32,46	34,05	35,65	37,23	38,83	40,42	42,01	43,60	45,19	46,79	48,38	49,97	51,56
d_w [mm]	25,47	27,06	28,65	30,23	31,83	33,42	35,01	36,61	38,19	39,79	41,38	42,97	44,56	46,15	47,75	49,34	50,93	52,52

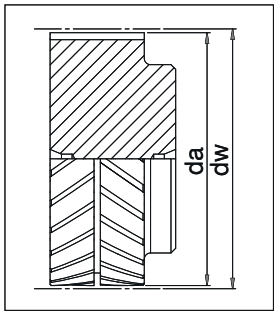
z	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
d_a [mm]	53,15	54,75	56,34	57,93	59,52	61,11	62,70	64,30	65,89	67,48	69,07	70,66	72,25	73,84	75,43	77,03	78,62	80,21
d_w [mm]	54,11	55,71	57,30	58,89	60,48	62,07	63,66	65,26	66,85	68,44	70,03	71,62	73,21	74,80	76,39	77,99	79,58	81,17

z	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69
d_a [mm]	81,80	83,39	84,99	86,58	88,17	89,76	91,35	92,94	94,53	96,13	97,72	99,31	100,90	102,49	104,08	105,67	107,27	108,86
d_w [mm]	82,76	84,35	85,95	87,54	89,13	90,72	92,31	93,90	95,49	97,09	98,68	100,27	101,86	103,45	105,04	106,63	108,23	109,82

z	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87
d_a [mm]	110,45	112,04	113,63	115,23	116,82	118,41	120,00	121,59	123,18	124,77	126,36	127,95	129,54	131,14	132,73	134,32	135,91	137,51
d_w [mm]	111,41	113,00	114,59	116,19	117,78	119,37	120,96	122,55	124,14	125,73	127,32	128,91	130,50	132,10	133,69	135,28	136,87	138,47

z	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
d_a [mm]	139,09	140,69	142,28	143,87	145,46	147,05	148,64	150,24	151,83	153,42	155,01	156,60	158,19	159,79	161,38	162,99	164,56	166,15
d_w [mm]	140,05	141,65	143,24	144,83	146,42	148,01	149,60	151,20	152,71	154,38	155,97	157,56	159,15	160,75	162,34	163,95	165,52	167,11

z	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
d_a [mm]	167,74	169,34	170,93	172,52	174,10	175,70	177,29	178,88	180,47	182,06	183,65	185,25	186,84	188,43	190,02
d_w [mm]	168,70	170,30	171,89	173,48	175,06	176,66	178,25	179,84	181,43	183,02	184,61	186,21	187,80	189,39	190,98



Timing pulleys

EAGLE8M

z	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
d_a [mm]	49,56	52,10	54,65	57,20	59,75	62,29	64,84	67,38	70,08	72,59	75,13	77,65	80,16	82,68	85,21	87,76	90,30	92,85
d_w [mm]	50,93	53,47	56,02	58,57	61,12	63,66	66,21	68,75	71,30	73,84	76,39	78,94	81,49	84,03	86,58	89,12	91,67	94,22

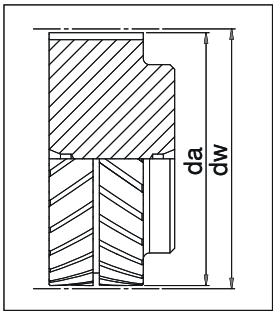
z	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
d_a [mm]	95,40	97,94	100,49	103,04	105,58	108,13	110,68	113,22	115,77	118,31	120,86	123,40	125,95	128,50	131,05	133,59	136,14	138,68
d_w [mm]	96,77	99,31	101,86	104,40	106,95	109,50	112,05	114,59	117,14	119,68	122,23	124,77	127,32	129,87	132,41	134,96	137,51	140,05

z	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73
d_a [mm]	141,23	143,78	146,32	148,87	151,42	153,96	156,52	159,06	161,60	164,15	166,69	169,24	171,79	174,33	176,88	179,43	181,98	184,52
d_w [mm]	142,60	145,15	147,69	150,24	152,79	155,33	157,89	160,43	162,97	165,52	168,06	170,61	173,16	175,70	178,25	180,80	183,35	185,89

z	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91
d_a [mm]	187,07	189,61	192,16	194,71	197,25	199,80	202,35	204,89	207,44	209,98	212,53	215,08	217,63	220,17	222,72	225,26	227,81	230,35
d_w [mm]	188,44	190,98	193,53	196,08	198,62	201,17	203,72	206,26	208,81	211,35	213,90	216,45	219,00	221,54	224,09	226,63	229,18	231,72

z	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109
d_a [mm]	232,90	235,45	238	240,54	243,09	245,63	248,18	250,73	253,28	255,82	258,37	260,91	263,46	266,01	268,55	271,10	273,64	276,19
d_w [mm]	234,27	236,82	239,37	241,91	244,46	247,00	249,55	252,10	254,67	257,19	259,74	262,28	264,83	267,38	269,92	272,47	275,01	277,56

z	110	111	112	113	114	115	116	117	118	119	120
d_a [mm]	278,74	281,29	283,84	286,38	288,93	291,47	294,02	296,57	299,11	301,66	304,20
d_w [mm]	280,11	282,66	285,21	287,75	290,30	292,84	295,39	297,94	300,48	303,03	305,57



Timing pulleys

EAGLE10M

z	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
d_a [mm]	77,58	80,76	83,95	87,12	90,21	93,49	96,67	99,86	103,04	106,19	109,41	112,59	115,77	118,95	122,14	125,32	128,50	131,69
d_w [mm]	79,58	82,76	85,95	89,12	92,21	95,49	98,67	101,86	105,04	108,19	111,41	114,59	117,77	120,95	124,14	127,32	130,50	133,69

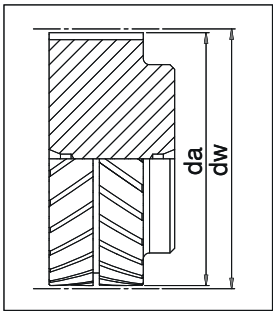
z	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
d_a [mm]	134,87	138,05	141,24	144,42	147,60	150,78	153,97	157,15	160,33	163,52	166,70	169,88	173,06	176,25	179,43	182,61	185,80	188,98
d_w [mm]	136,87	140,05	143,24	146,42	149,60	152,78	155,97	159,15	162,33	165,52	168,70	171,88	175,06	178,25	181,43	184,61	187,80	190,98

z	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78
d_a [mm]	192,16	195,35	198,53	201,71	204,90	208,08	211,26	214,44	217,63	220,81	223,99	227,18	230,33	233,54	236,72	239,94	243,09	246,24
d_w [mm]	194,16	197,35	200,53	203,71	206,90	210,08	213,26	216,44	219,63	222,81	225,99	229,18	232,33	235,54	238,72	241,94	245,09	248,24

z	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
d_a [mm]	249,46	252,64	255,82	259,00	262,19	265,37	268,52	271,74	274,92	278,10	281,28	284,47	287,65	290,84	294,02	297,20	300,39	303,57
d_w [mm]	251,46	254,64	257,82	261,00	264,19	267,37	270,52	273,74	276,92	280,10	283,28	286,47	289,65	292,84	296,02	299,20	302,39	305,57

z	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114
d_a [mm]	306,75	309,93	313,12	316,30	319,48	322,66	325,85	329,03	332,21	335,40	338,58	341,76	344,95	348,13	351,31	354,50	357,68	360,86
d_w [mm]	308,75	311,93	315,12	318,30	321,48	324,66	327,85	331,03	334,21	337,40	340,58	343,76	346,95	350,13	353,31	356,50	359,68	362,86

z	115	116	117	118	119	120
d_a [mm]	364,04	367,23	370,41	373,59	376,78	379,96
d_w [mm]	366,04	369,23	372,41	375,59	378,78	381,96



Timing pulleys

EAGLE14M

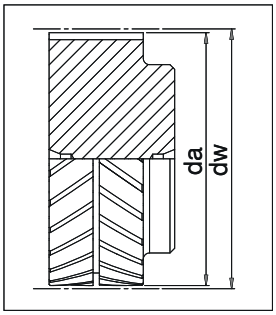
z	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
d_a [mm]	139,88	144,35	148,79	153,25	157,68	162,14	166,60	171,02	175,48	179,92	184,37	188,83	193,29	197,75	202,21	206,65	211,11	215,57
d_w [mm]	142,59	147,06	151,51	155,96	160,41	164,88	169,34	173,79	178,24	182,71	187,16	191,61	196,08	200,53	204,98	209,43	213,90	218,35

z	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67
d_a [mm]	220,03	224,49	228,95	233,39	237,85	242,30	246,76	251,22	255,68	260,14	264,60	269,04	273,50	277,96	282,42	286,88	291,32	295,78
d_w [mm]	222,80	227,27	231,72	236,18	240,64	245,09	249,55	254,01	258,46	262,91	267,38	271,83	276,28	280,75	285,20	289,65	294,11	298,56

z	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
d_a [mm]	300,24	304,70	309,16	313,61	318,07	322,53	326,98	331,44	335,90	340,34	344,80	349,26	353,72	358,17	362,63	367,09	371,54	376,00
d_w [mm]	303,03	307,48	311,93	316,40	320,85	325,30	329,77	334,22	338,67	343,12	347,59	352,04	356,49	360,96	365,41	369,86	374,33	378,78

z	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103
d_a [mm]	380,46	384,91	389,37	393,83	398,29	402,73	407,19	411,65	416,10	420,56	425,02	429,48	433,94	438,38	442,84	447,30	451,76	456,21
d_w [mm]	383,23	387,70	392,15	396,60	401,07	405,52	409,97	414,44	418,89	423,35	427,80	432,25	436,72	441,17	445,62	450,09	454,54	459,00

z	104	105	106	107	108	109	110	111	112	113	114	116	117	118	119	120
d_a [mm]	460,67	465,13	469,58	474,03	478,49	482,95	487,41	491,87	496,32	500,78	505,23	514,14	518,60	523,06	527,51	531,97
d_w [mm]	463,45	467,90	472,37	476,82	481,28	485,74	490,19	494,64	499,10	503,55	508,02	516,93	521,38	525,83	530,30	534,75



Timing pulleys

TK5 K6

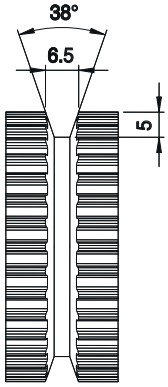
z	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
d_a [mm]	21,45	23,05	24,6	26,20	27,80	29,40	31,00	32,70	34,25	35,85	37,40	39,00	40,60	42,20	43,75	45,35	46,95	48,55
d_w [mm]	22,29	23,88	25,47	27,06	28,65	30,25	31,83	33,43	35,02	36,62	38,21	39,8	41,39	42,98	44,58	46,17	47,76	49,35

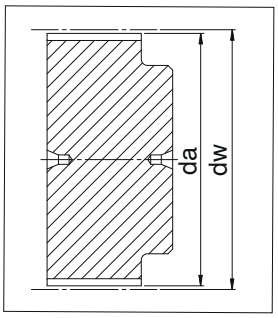
z	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
d_a [mm]	50,10	51,70	53,25	54,85	56,45	58,05	59,65	61,25	62,85	64,40	66,00	67,70	69,20	70,80	72,40	73,95	75,55	77,15
d_w [mm]	50,94	52,54	54,13	55,72	57,31	58,90	60,50	62,09	63,66	65,27	66,86	68,46	70,05	71,64	73,23	74,82	76,42	78,01

z	50	51	52	53	54	55	56	57	58	59	60	61	62	63	82	83	84	85
d_a [mm]	78,75	80,35	81,95	83,5	85,10	86,70	88,30	89,90	91,50	93,05	94,65	96,25	97,85	99,45	129,70	131,30	132,85	134,45
d_w [mm]	79,60	81,19	82,78	84,38	85,97	87,54	89,15	90,74	92,34	93,93	95,52	97,11	98,70	100,30	130,54	132,14	133,73	135,32

z	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103
d_a [mm]	136,05	137,65	139,25	140,85	142,45	144,00	145,60	147,20	148,80	150,40	152,00	153,55	155,15	156,75	158,35	159,95	161,55	163,10
d_w [mm]	136,91	138,50	140,10	141,69	143,28	144,87	146,46	148,06	149,65	151,24	152,83	154,42	156,02	157,61	159,20	160,79	162,38	163,97

z	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
d_a [mm]	164,70	166,30	167,90	169,50	171,10	172,65	174,25	175,85	177,45	179,05	180,65	182,23	183,82	185,42	187,01	188,61	190,21
d_w [mm]	165,57	167,16	168,75	170,34	171,94	173,53	175,12	176,71	178,30	179,84	181,49	183,08	184,67	186,26	187,86	189,45	191,04





Timing pulleys

TK10 K6 - K13

z	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
d_a [mm]	42,70	45,90	49,05	52,25	55,45	58,65	61,80	65,00	68,15	71,35	74,55	77,70	80,90	84,10	87,25	90,45	93,65	96,85
d_w [mm]	44,56	47,75	50,93	54,11	57,29	60,48	63,66	66,84	70,03	73,20	76,39	79,58	82,76	85,95	89,12	92,21	95,49	98,67

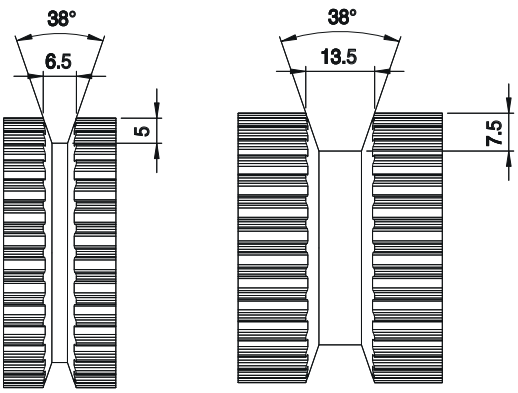
z	32	33	34	35	36	37	38	39	40	41	42	44	45	46	47	48	49	50
d_a [mm]	100,00	103,20	106,40	109,55	112,75	115,90	119,10	122,30	125,45	128,65	131,85	138,20	141,40	144,60	147,75	150,95	154,10	157,30
d_w [mm]	101,86	105,04	108,22	111,41	114,59	117,77	120,95	124,14	127,32	130,50	133,69	140,05	143,24	146,42	149,60	152,78	155,97	159,15

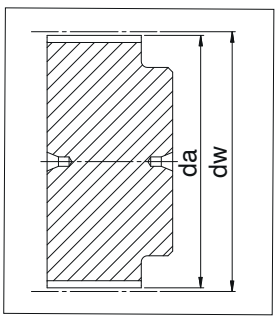
z	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
d_a [mm]	160,50	163,65	166,85	170,05	173,20	176,40	179,60	182,75	185,95	189,10	192,30	195,50	198,65	201,85	205,05	208,20	211,40	214,60
d_w [mm]	162,33	165,52	168,70	171,88	175,06	178,25	181,43	184,61	187,80	190,98	194,16	197,35	200,53	203,71	206,90	210,08	213,26	216,44

z	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
d_a [mm]	217,75	220,95	224,15	227,30	230,50	233,70	236,90	240,05	243,25	246,40	249,60	252,80	256,00	259,15	262,30	265,50	268,70	271,90
d_w [mm]	219,63	222,81	225,99	229,18	232,36	235,54	238,72	241,94	245,09	248,27	251,46	254,64	257,82	261,00	264,19	267,37	270,55	273,74

z	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
d_a [mm]	275,05	278,25	281,45	284,60	287,80	291,00	294,20	297,35	300,55	303,75	306,90	310,10	313,25	316,45	319,65	322,80	326,00	329,20
d_w [mm]	276,92	280,10	283,28	286,47	289,65	292,84	296,02	299,20	302,39	305,57	308,75	311,93	315,12	318,30	321,48	324,66	327,85	331,03

z	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
d_a [mm]	332,35	335,55	338,75	341,95	345,15	348,30	351,45	354,65	357,80	361,00	364,19	367,39	370,56	373,76	376,93	380,11
d_w [mm]	334,21	337,40	340,58	343,76	346,95	350,13	353,31	356,50	359,68	362,86	366,04	369,23	372,41	375,59	378,78	381,96





Timing pulleys

TK20 K13

z	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
d_a [mm]	92,65	99,00	105,40	111,75	118,10	124,50	130,75	137,20	143,55	149,95	156,30	162,65	169,00	175,40	181,75	188,10	194,50	200,85
d_w [mm]	95,49	101,86	108,22	114,59	120,96	127,32	133,69	140,06	146,43	152,78	159,15	165,52	171,89	178,25	184,62	190,99	197,35	203,72

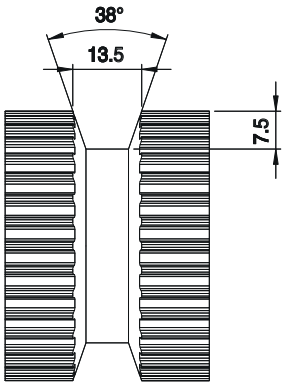
z	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
d_a [mm]	207,20	213,60	219,95	226,35	232,70	239,05	245,40	251,75	258,15	264,50	270,85	277,25	283,60	289,95	296,35	302,70	309,10	315,45
d_w [mm]	210,09	216,44	222,81	229,18	235,54	241,91	248,28	254,65	261,02	267,37	273,74	280,10	286,47	292,84	299,21	305,58	311,93	318,30

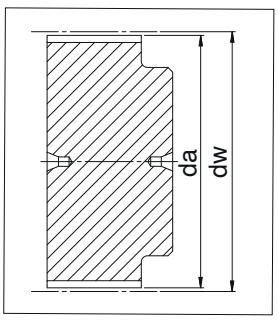
z	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
d_a [mm]	321,80	328,15	334,50	340,90	347,25	353,60	360,00	366,35	372,75	379,10	385,45	391,85	398,20	404,55	410,95	417,30	423,65	430,05
d_w [mm]	324,67	331,03	337,40	343,76	350,13	356,50	362,86	369,23	375,59	381,96	388,33	394,70	401,06	407,43	413,80	420,17	426,52	432,89

z	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
d_a [mm]	436,40	442,80	449,15	455,50	461,85	468,25	474,60	480,95	487,35	493,70	500,05	506,45	512,80	519,15	525,55	531,90	538,25	544,60
d_w [mm]	439,26	445,63	451,99	458,36	464,73	471,08	477,45	483,82	490,19	496,56	502,91	509,28	515,65	522,02	528,39	534,74	541,11	547,48

z	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
d_a [mm]	551,00	557,35	563,70	570,10	576,45	582,85	589,20	595,55	601,90	608,30	614,65	621,00	627,35	633,75	640,10	646,50	652,85	659,20
d_w [mm]	553,85	560,22	566,57	572,94	579,31	585,67	592,04	598,41	604,77	611,14	617,51	623,88	630,25	636,60	642,97	649,34	655,71	662,06

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





Timing pulleys

ATK5 K6

z	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
d_a [mm]	38,60	40,20	41,80	43,35	44,95	46,55	48,15	49,70	51,30	52,85	54,45	56,05	57,65	59,25	60,85	62,45	64,00	65,60
d_w [mm]	39,80	41,39	42,98	44,58	46,17	47,76	49,35	50,94	52,54	54,13	55,72	57,31	58,90	60,50	62,09	63,66	65,27	66,86

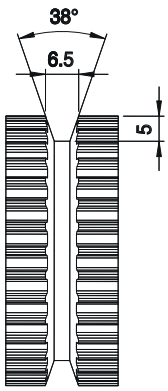
z	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
d_a [mm]	67,30	68,80	70,40	72,00	73,55	75,15	76,75	78,35	79,95	81,55	83,10	84,70	86,30	87,90	89,50	91,10	92,65	94,25
d_w [mm]	68,46	70,05	71,64	73,23	74,82	76,42	78,01	79,60	81,19	82,78	84,38	85,97	87,54	89,15	90,74	92,34	93,93	95,52

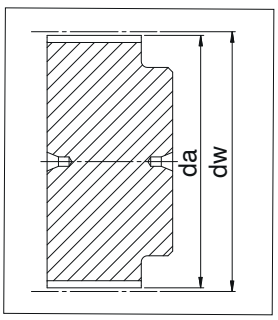
z	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78
d_a [mm]	95,85	97,45	99,05	100,65	102,25	103,80	105,40	107,00	108,60	110,20	111,80	113,35	114,95	116,55	118,15	119,75	121,35	122,90
d_w [mm]	97,11	98,70	100,30	101,89	103,48	105,07	106,66	108,26	109,85	111,44	113,03	114,62	116,22	117,81	119,40	120,99	122,58	124,18

z	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
d_a [mm]	124,50	126,10	127,70	129,30	130,90	132,45	134,05	135,65	137,25	138,85	140,45	142,05	143,60	145,20	146,80	148,40	150,00	151,60
d_w [mm]	125,77	127,36	128,95	130,54	132,14	133,73	135,32	136,91	138,50	140,10	141,69	143,28	144,87	146,46	148,06	149,65	151,24	152,83

z	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114
d_a [mm]	153,15	154,75	156,35	157,95	159,55	161,15	162,70	164,30	165,90	167,50	169,10	170,70	172,25	173,85	175,45	177,05	178,65	180,25
d_w [mm]	154,42	156,02	157,61	159,20	160,79	162,38	163,97	165,57	167,16	168,75	170,34	171,94	173,53	175,12	176,71	178,30	179,84	181,49

z	115	116	117	118	119	120
d_a [mm]	181,85	183,45	185,00	186,60	188,20	189,80
d_w [mm]	183,08	184,67	186,26	187,86	189,45	191,04





Timing pulleys

ATK10 K6 - K13

z	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
d_a [mm]	45,70	49,05	52,25	55,45	58,60	61,80	65,00	68,15	71,35	74,55	77,70	80,90	84,10	87,25	90,45	93,65	96,80	100,00
d_w [mm]	47,75	50,93	54,11	57,29	60,48	63,66	66,84	70,03	73,20	76,39	79,58	82,76	85,95	89,12	92,21	95,49	98,67	101,86

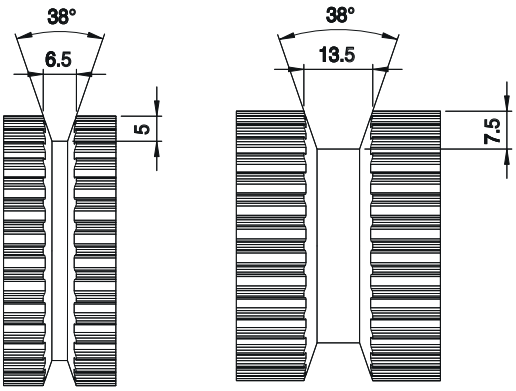
z	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
d_a [mm]	103,20	106,40	109,55	112,75	115,90	119,10	122,30	125,45	128,65	131,85	135,00	138,20	141,40	144,55	147,75	150,95	154,10	157,30
d_w [mm]	105,04	108,19	111,41	114,59	117,77	120,95	124,14	127,32	130,50	133,69	136,87	140,05	143,24	146,42	149,60	152,78	155,97	159,15

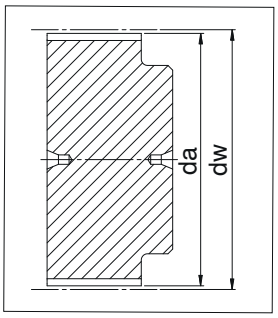
z	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
d_a [mm]	160,50	163,65	166,85	170,05	173,20	176,40	179,60	182,75	185,95	189,10	192,30	195,50	198,65	201,85	205,05	208,20	211,40	214,60
d_w [mm]	162,33	165,52	168,70	171,88	175,06	178,25	181,43	184,61	187,80	190,98	194,16	197,35	200,53	203,71	206,90	210,08	213,26	216,44

z	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
d_a [mm]	217,75	220,95	224,15	227,30	230,50	233,70	236,90	240,05	243,25	246,40	249,60	252,80	255,95	259,15	262,30	265,50	268,70	271,90
d_w [mm]	219,63	222,81	225,99	229,18	232,33	235,54	238,72	241,94	245,09	248,24	251,46	254,64	257,82	261,00	264,19	267,37	270,52	273,74

z	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
d_a [mm]	275,05	278,25	281,45	284,60	287,80	291,00	294,20	297,35	300,55	303,70	306,90	310,10	313,25	316,45	319,65	322,80	326,00	329,20
d_w [mm]	276,92	280,10	283,28	286,47	289,65	292,84	296,02	299,20	302,39	305,57	308,75	311,93	315,12	318,30	321,48	324,66	327,85	331,03

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





Timing pulleys

ATK10P K13 SOLID

z	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
d_a [mm]	93,65	96,80	100,00	103,20	106,40	109,55	112,75	115,90	119,10	122,30	125,45	128,65	131,85	135,00	138,20	141,40	144,55	147,75
d_w [mm]	95,49	98,67	101,86	105,04	108,19	111,41	114,59	117,77	120,95	124,14	127,32	130,50	133,69	136,87	140,05	143,24	146,42	149,60

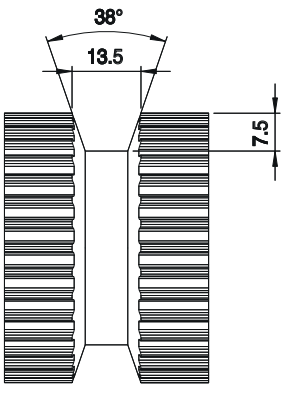
z	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
d_a [mm]	150,95	154,10	157,30	160,50	163,65	166,85	170,05	173,20	176,40	179,60	182,75	185,95	189,10	192,30	195,50	198,65	201,85	205,05
d_w [mm]	152,78	155,97	159,15	162,33	165,52	168,70	171,88	175,06	178,25	181,43	184,61	187,80	190,98	194,16	197,35	200,53	203,71	206,90

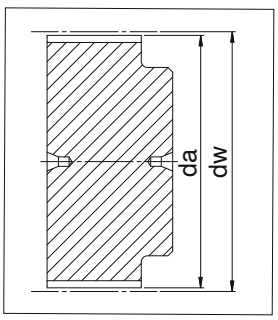
z	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
d_a [mm]	208,20	211,40	214,60	217,75	220,95	224,15	227,30	230,50	233,70	236,90	240,05	243,25	246,40	249,60	252,80	255,95	259,15	262,30
d_w [mm]	210,08	213,26	216,44	219,63	222,81	225,99	229,18	232,33	235,54	238,72	241,94	245,09	248,24	251,46	254,64	257,82	261,00	264,19

z	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101
d_a [mm]	265,50	268,70	271,90	275,05	278,25	281,45	284,60	287,80	291,00	294,20	297,35	300,55	303,70	306,90	310,10	313,25	316,45	319,65
d_w [mm]	267,37	270,52	273,74	276,92	280,10	283,28	286,47	289,65	292,84	296,02	299,20	302,39	305,57	308,75	311,93	315,12	318,30	321,48

z	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119
d_a [mm]	322,80	326,00	329,20	332,35	335,55	338,75	341,90	345,10	348,30	351,45	354,65	357,80	361,00	364,19	367,39	370,56	373,74	376,93
d_w [mm]	324,66	327,85	331,03	334,21	337,40	340,58	343,76	346,95	350,13	353,31	356,50	359,68	362,86	366,04	369,23	372,41	375,59	378,78

z	120
d_a [mm]	380,11
d_w [mm]	381,96





Timing pulleys

H K13

z	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
d_a [mm]	79,48	83,52	87,57	91,61	95,65	99,69	103,73	107,77	111,81	115,85	119,91	123,95	127,99	132,03	136,07	140,11	144,15	148,20
d_w [mm]	80,84	84,88	88,94	92,98	97,02	101,06	105,10	109,14	113,18	117,22	121,28	125,32	129,36	133,40	137,44	141,48	145,52	149,56

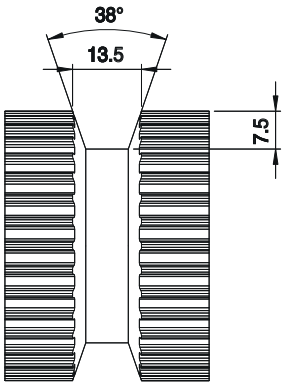
z	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
d_a [mm]	152,24	156,28	160,32	164,36	168,42	172,46	176,50	180,54	184,58	188,62	192,67	196,71	200,75	204,80	208,84	212,88	216,92	220,96
d_w [mm]	153,62	157,66	161,70	165,74	169,78	173,82	177,86	181,90	185,96	190,00	194,04	198,08	202,13	206,17	210,21	214,25	218,29	222,33

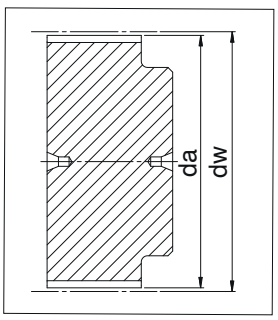
z	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73
d_a [mm]	225,00	229,04	233,10	237,14	241,18	245,22	249,26	253,30	257,34	261,38	265,44	269,48	273,52	277,56	281,60	285,64	289,68	293,72
d_w [mm]	226,37	230,41	234,47	238,51	242,55	246,59	250,63	254,67	258,71	262,75	266,81	270,85	274,89	278,93	282,97	287,01	291,05	295,10

z	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91
d_a [mm]	297,78	301,82	305,86	309,90	313,94	317,98	322,02	326,06	330,12	334,16	338,20	342,24	346,28	350,33	354,37	358,41	362,45	366,50
d_w [mm]	299,14	303,18	307,22	311,26	315,32	319,36	323,40	327,44	331,48	335,52	339,56	343,60	347,66	351,70	355,74	359,78	363,82	367,86

z	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109
d_a [mm]	370,54	374,58	378,62	382,66	386,70	390,74	394,80	398,84	402,88	406,92	410,96	415,00	419,04	423,08	427,14	431,18	435,22	439,26
d_w [mm]	371,90	375,94	380,00	384,04	388,08	392,12	396,16	400,20	404,24	408,28	412,34	416,38	420,42	424,46	428,50	432,54	436,58	440,62

z	110	111	112	113	114	115	116	117	118	119	120
d_a [mm]	443,30	447,34	451,38	455,42	459,48	463,52	467,56	471,60	475,64	479,68	483,72
d_w [mm]	444,68	448,72	452,76	456,80	460,84	464,88	468,92	472,96	477,02	481,06	485,10





Timing pulleys

T10 TOTAL PROTECTION

z	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
d_a [mm]	36,35	39,50	42,70	45,90	49,05	52,25	55,45	58,65	61,80	65,00	68,15	71,35	74,55	77,70	80,90	84,10	87,25	90,45
d_w [mm]	38,20	41,38	44,56	47,75	50,93	54,11	57,29	60,48	63,66	66,84	70,03	73,20	76,39	79,58	82,76	85,95	89,12	92,21

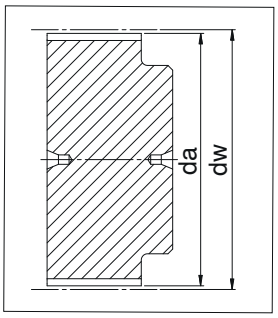
z	30	31	32	33	34	35	36	37	38	39	40	41	42	44	45	46	47	48
d_a [mm]	93,65	96,85	100,00	103,20	106,40	109,55	112,75	115,90	119,10	122,30	125,45	128,65	131,85	138,20	141,40	144,60	147,75	150,95
d_w [mm]	95,49	98,67	101,86	105,04	108,22	111,41	114,59	117,77	120,95	124,14	127,32	130,50	133,69	140,05	143,24	146,42	149,60	152,78

z	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66
d_a [mm]	154,10	157,30	160,50	163,65	166,85	170,05	173,20	176,40	179,60	182,75	185,95	189,10	192,30	195,50	198,65	201,85	205,05	208,20
d_w [mm]	155,97	159,15	162,33	165,52	168,70	171,88	175,06	178,25	181,43	184,61	187,80	190,98	194,16	197,35	200,53	203,71	206,90	210,08

z	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84
d_a [mm]	211,40	214,60	217,75	220,95	224,15	227,30	230,50	233,70	236,90	240,05	243,25	246,40	249,60	252,80	256,00	259,15	262,30	265,50
d_w [mm]	213,26	216,44	219,63	222,81	225,99	229,18	232,36	235,54	238,72	241,94	245,09	248,27	251,46	254,64	257,82	261,00	264,19	267,37

z	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102
d_a [mm]	268,70	271,90	275,05	278,25	281,45	284,60	287,80	291,00	294,20	297,35	300,55	303,75	306,90	310,10	313,25	316,45	319,65	322,80
d_w [mm]	270,55	273,74	276,92	280,10	283,28	286,47	289,65	292,84	296,02	299,20	302,39	305,57	308,75	311,93	315,12	318,30	321,48	324,66

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



Timing pulleys

T20 TOTAL PROTECTION

z	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
d_a [mm]	92,65	99,00	105,40	111,75	118,10	124,50	130,75	137,20	143,55	149,95	156,30	162,65	169,00	175,40	181,75	188,10	194,50	200,85
d_w [mm]	95,49	101,86	108,22	114,59	120,96	127,32	133,69	140,06	146,43	152,78	159,15	165,52	171,89	178,25	184,62	190,99	197,35	203,72

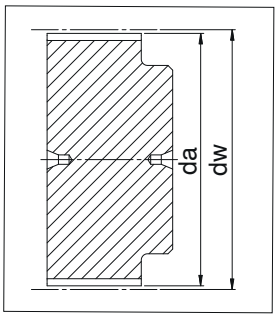
z	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
d_a [mm]	207,20	213,60	219,95	226,35	232,70	239,05	245,40	251,75	258,15	264,50	270,85	277,25	283,60	289,95	296,35	302,70	309,10	315,45
d_w [mm]	210,09	216,44	222,81	229,18	235,54	241,91	248,28	254,65	261,02	267,37	273,74	280,10	286,47	292,84	299,21	305,58	311,93	318,30

z	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
d_a [mm]	321,80	328,15	334,50	340,90	347,25	353,60	360,00	366,35	372,75	379,10	385,45	391,85	398,20	404,55	410,95	417,30	423,65	430,05
d_w [mm]	324,67	331,03	337,40	343,76	350,13	356,50	362,86	369,23	375,59	381,96	388,33	394,70	401,06	407,43	413,80	420,17	426,52	432,89

z	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
d_a [mm]	436,40	442,80	449,15	455,50	461,85	468,25	474,60	480,95	487,35	493,70	500,05	506,45	512,80	519,15	525,55	531,90	538,25	544,60
d_w [mm]	439,26	445,63	451,99	458,36	464,73	471,08	477,45	483,82	490,19	496,56	502,91	509,28	515,65	522,02	528,39	534,74	541,11	547,48

z	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
d_a [mm]	551,00	557,35	563,70	570,10	576,45	582,85	589,20	595,55	601,90	608,30	614,65	621,00	627,35	633,75	640,10	646,50	652,85	659,20
d_w [mm]	553,85	560,22	566,57	572,94	579,31	585,67	592,04	598,41	604,77	611,14	617,51	623,88	630,25	636,60	642,97	649,34	655,71	662,06

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



Timing pulleys

AT10 TOTAL PROTECTION

z	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
d_a [mm]	45,70	49,05	52,25	55,45	58,60	61,80	65,00	68,15	71,35	74,55	77,70	80,90	84,10	87,25	90,45	93,65	96,80	100,00
d_w [mm]	47,75	50,93	54,11	57,29	60,48	63,66	66,84	70,03	73,20	76,39	79,58	82,76	85,95	89,12	92,21	95,49	98,67	101,86

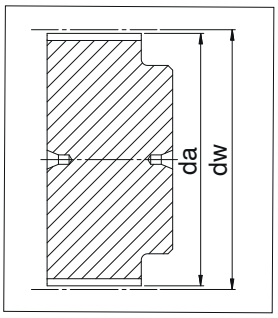
z	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
d_a [mm]	103,20	106,40	109,55	112,75	115,90	119,10	122,30	125,45	128,65	131,85	135	138,20	141,40	144,55	147,75	150,95	154,10	157,30
d_w [mm]	105,04	108,19	111,41	114,59	117,77	120,95	124,14	127,32	130,50	133,69	136,87	140,05	143,24	146,42	149,60	152,78	155,97	159,15

z	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
d_a [mm]	160,50	163,65	166,85	170,05	173,20	176,40	179,60	182,75	185,95	189,10	192,30	195,50	198,65	201,85	205,05	208,20	211,40	214,60
d_w [mm]	162,33	165,52	168,70	171,88	175,06	178,25	181,43	184,61	187,80	190,98	194,16	197,35	200,53	203,71	206,90	210,08	213,26	216,44

z	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
d_a [mm]	217,75	220,95	224,15	227,30	230,50	233,70	236,90	240,05	243,25	246,40	249,60	252,80	255,95	259,15	262,30	265,50	268,70	271,90
d_w [mm]	219,63	222,81	225,99	229,18	232,33	235,54	238,72	241,94	245,09	248,24	251,46	254,64	257,82	261,00	264,19	267,37	270,52	273,74

z	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
d_a [mm]	275,05	278,25	281,45	284,60	287,80	291,00	294,20	297,35	300,55	303,70	306,90	310,10	313,25	316,45	319,65	322,80	326,00	329,20
d_w [mm]	276,92	280,10	283,28	286,47	289,65	292,84	296,02	299,20	302,39	305,57	308,75	311,93	315,12	318,30	321,48	324,66	327,85	331,03

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



Timing pulleys

HTD8M TOTAL PROTECTION

z	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
d_a [mm]	44,46	47,01	49,56	52,10	54,65	57,20	59,75	62,29	64,84	67,38	70,08	72,59	75,13	77,65	80,16	82,68	85,21	87,76
d_w [mm]	45,83	48,38	50,93	53,47	56,02	58,57	61,12	63,66	66,21	68,75	71,30	73,84	76,39	78,94	81,49	84,03	86,58	89,12

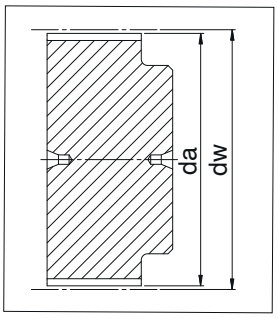
z	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
d_a [mm]	90,30	92,85	95,40	97,94	100,49	103,04	105,58	108,13	110,68	113,22	115,77	118,31	120,86	123,40	125,95	128,50	131,05	133,59
d_w [mm]	91,67	94,22	96,77	99,31	101,86	104,40	106,95	109,50	112,05	114,59	117,14	119,68	122,23	124,77	127,32	129,87	132,41	134,96

z	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
d_a [mm]	136,14	138,68	141,23	143,78	146,32	148,87	151,42	153,96	156,52	159,06	161,60	164,15	166,69	169,24	171,79	174,33	176,88	179,43
d_w [mm]	137,51	140,05	142,60	145,15	147,69	150,24	152,79	155,33	157,89	160,43	162,97	165,52	168,06	170,61	173,16	175,70	178,25	180,80

z	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89
d_a [mm]	181,98	184,52	187,07	189,61	192,16	194,71	197,25	199,80	202,35	204,89	207,44	209,98	212,53	215,08	217,63	220,17	222,72	225,26
d_w [mm]	183,35	185,89	188,44	190,98	193,53	196,08	198,62	201,17	203,72	206,26	208,81	211,35	213,90	216,45	219,00	221,54	224,09	226,63

z	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107
d_a [mm]	227,81	230,35	232,90	235,45	238,00	240,54	243,09	245,63	248,18	250,73	253,28	255,82	258,37	260,91	263,46	266,01	268,55	271,10
d_w [mm]	229,18	231,72	234,27	236,82	239,37	241,91	244,46	247,00	249,55	252,10	254,67	257,19	259,74	262,28	264,83	267,38	269,92	272,47

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



Troubleshooting

DAMAGE	CAUSE	REMEDY
Belt tooth jumping	Over load (shock on the machine) Overload due to machine accident Shortage of teeth in mesh Lack of initial tension Pulley diameter too small Moment of inertia for start and stop is not considered	Increase belt size/modify design Prevent recurrence of the accident Increase teeth in mesh by using an idler Correct initial tension Change design Change design
Abnormal noise level	Bad pulley alignment Incorrect pulley tooth shape Belt wider than pulley diameter Over load Belt over-tension	Adjust alignment Change pulley Change design Change design Correct initial tension
Belt side abrasion	Bad pulley alignment Poor flange shape Pulley flange roughness	Adjust alignment Correct flange shape or change flange Change flange to an appropriate one
Belt tooth abrasion	Presence of particles between belt and pulley Over load Over tension Belt tooth jumping due to lack of initial tension	Improve environment or apply a protective cover Change design (increase belt size) Correct initial tension Correct initial tension
Belt tooth bottom abrasion	Bad pulley profile Over tension	Use correct pulley Correct initial tension
Belt back abrasion	Contact with undesired element (i.e. machine frame)	Eliminate contact
Belt back cracking	Running under too low temperature Pulleys too small	Increase environment temperature or ask for special compound Observe minimum pulley diameter recommendations
Belt breakage	Over load (shock on the machine) Undesired particles in mesh Tension member corrosion Belt run off over pulley flange Not enough belt teeth in clamping plate Clamping plate screws tightened incorrectly	Increase belt size/modify design Improve environment or apply a protective cover Improve environment or use aramid/stainless steel cords Adjust alignment and change pulley flange Use larger clamping plate Apply optimum torque to clamp plate screws
Tension member partial tear	Presence of undesired particles in mesh Improper installation Belt folded or twisted Fatigue on side due to bad alignment	Improve environment or apply a protective cover Exercise care when installing Exercise care in handling Correct alignment
Back covering abnormal abrasion	Aggressive environment	Change belt back cover or improve environment conditions
Pulley tooth abrasion	Presence of undesired particles in mesh Over load Belt over tension Pulley material not adequate (too soft)	Improve environment or apply a protective cover Change design Correct initial tension Change pulley material or adopt surface treatment

Notes:

Notes:

Notes:

The data contained in this publication are for information purposes only and do not enlarge, amend or imply any warranty other than provided by the manufacturer with the product. In the spirit of continuous technical improvement, the specifications in this catalogue are subject to change without notice.

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