



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_{p} .

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 steelPolyamide on steel	$\mu = 0.7$ $\mu = 0.35$
Polyurethane on aluminiumPolyamide on aluminium	$\mu = 0.8$ $\mu = 0.45$

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

ancy diameter. O _D			
Elatech Code	CFX	PY50	PY70
Description	CELLOFLEX	PU YELLOW 50	PUYELLOW 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
Max contact temperature	+80°C	+70°C	+80°C
Oil and fat resistance	medium	high	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: \mathbf{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
Max contact temperature	+70°C	+70°C	+70°C
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





Elatech Code	POR	
Description	POROL	
Material	Cellular rubber	
Colour	black	
Hardness [Sh.A]	ca 15	
Standard thickness [mm]	3 - 5 - 8 - 10 - 15	
Max contact temperature	+70°C	
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
Max contact temperature	+70°C	+80°C	+70°C
Oil and fat resistance	medium	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	ca 65	ca 40
Standard thickness [mm]	2 - 5	2,3	1,0
Max contact temperature	+70°C	+90°C	+90°C
Oil and fat resistance	high	medium	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



Elatech Code	SG50R	SG60	SG70
Description	SUPERGRIP 50 R	SUPERGRIP 60 GL	SUPERGRIP 70 Y
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
Max contact temperature	+80°C	+90°C	+80°C
Oil and fat resistance	medium	medium	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: $\mathbf{C}_{\mathrm{D}}^{}$ • Backing Thickness

Elatech Code	MG	
Description	MINIGRIP PVC	
Material	PVC	
Colour	green	
Hardness [Sh.A]	ca 65	
Standard thickness [mm]	1,5	
Max contact temperature	+100°C	
Oil and fat resistance	medium	
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	SG50T	LTX	LNP
Description	SUPERGRIP 50 RT	LINATEX	LINAPLUS
Material	Natural rubber	Natural rubber	Natural rubber
Colour	red	red	white
Hardness [Sh.A]	40	ca 40	ca 40
Standard thickness [mm]	4,5	2,4 - 3,2 - 4,8 - 6,4 - 8,0 - 9,6	2,4 - 3,2 - 4,8 - 6, 4 - 8,0 - 9,6
Max contact temperature	+80°C	+70°C	+70°C
Oil and fat resistance	low	low	low
Coefficient of static friction on steel	1,0	1,1	1,1
FDA food grade	No	No	Yes
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]	ca 55	65	65
Standard thickness [mm]	3 - 6	-	-
Max contact temperature	+110°C	+110°C	+80°C
Oil and fat resistance	medium	high	high
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



Elatech Code	TNX	VTN	RP400				
Description	TENAX / ISOGUM	VITON	YELLOW RUBBER				
Material	Rubber	FKM Fluoroelastomer	Natural rubber				
Colour	red	black	yellow				
Hardness [Sh.A]	40	ca 75	са 35				
Standard thickness [mm]	2 - 15	2 - 4	3 - 4 - 5 - 6 - 8 - 10 - 12 - 15 20 - 25 - 30				
Max contact temperature	+60°C	+275°C	+65°C				
Oil and fat resistance	low	high	low				
Coefficient of static friction on steel	0,75	0,7	1,2				
FDA food grade	No	No	No				
Pulley multiplier C _D	15	30	13				

Pulley diameter: \mathbf{C}_{D} • Backing Thickness

Elatech Code	CRX
Description	CORREX
Material	Para rubber
Colour	brown
Hardness [Sh.A]	ca 40
Standard thickness [mm]	6 - 10
Max contact temperature	+60°C
Oil and fat resistance	low
Coefficient of static friction on steel	0,9
FDA food grade	No
Pulley multiplier C _D	15



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	SILICONE	SILICONE				
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				
Max contact temperature	+60°C	+200°C	+120°C				
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: \mathbf{C}_{D} • Backing Thickness

Elatech Code	SLCF	TG50	TG70				
Description	SILICONE FDA	TECNOGUM 50	TECNOGUM 70				
Material	Silicon	Thermoplastic rubber compound	Thermoplastic rubber compound				
Colour	blue	red	red				
Hardness [Sh.A]	30	ca 50	ca 70				
Standard thickness [mm]	3 - 10	1 - 6	1 - 6				
Max contact temperature	+220°C	+80°C	+80°C				
Oil and fat resistance	high	high	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				





Elatech Code	CHRL	TZ26	RIB-H-APL				
Description	CHROME LEATHE	TZ PAR	MULTIRIB				
Material	Chrome leather	HDPE	Thermoplastic compound				
Colour	grey / blue	green	red				
Hardness [Sh.A]	-	-	60				
Standard thickness [mm]	3	0,3	3,5				
Max contact temperature	+80°C	+80°C	+80°C				
Oil and fat resistance	high	high	medium				
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^{\bullet} • Backing Thickness

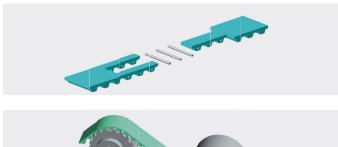
Elatech Code	RIB-H-PU70
Description	MULTIRIB
Material	PU
Colour	trasparent
Hardness [Sh.A]	70
Standard thickness [mm]	3,5
Max contact temperature	+70°C
Oil and fat resistance	medium
Coefficient of static friction on steel	-
FDA food grade	No
Pulley multiplier C _D	-



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.



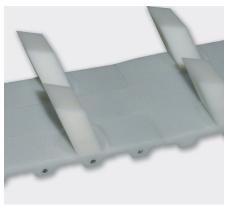




- EMF has no exposed metal parts, therefore no metal contact is made with pulleys, so it runs very quietly. Since there are no exposed metal parts, EMF will not damage conveyed products like competing metal based mechanical fastening alternatives.
- EMF maintains the same minimum pulley requirements 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.









ELATECH® EMF

Profile	Width [mm]	Number of pins	Max working tension [N]	Carbon pin
	10	5	96	
Т5	16	5 8	144 224	
	20	5	176	
	20	8	232	
	25	5 8	176 256	
	32	5	304	
	32	8	450	
	50	5 8	360 480	
	40	4	216	
	16	8 12	320 640	
	20	4	240	
	25	4	304	•
	25	8 11	504 680	•
		4	400	•
T 10	32	8 12	576 880	•
1 10		4	624	•
	50	8	1120	•
		11 4	1480	•
	75	8	800 1600	
		11	1760	
	400	4	1040	
	100	8 11	2000 2280	
	25	4	536	
	25	11	1600	
	32	6	784 1200	
T 20	50	4	960	
1 20	50	11	3040	
	75	4 11	1600 3560	
	100	4	2130	
	10	11 5	7600 144	
	16	5	168	
	10	8	240	
	20	5 8	280 320	
AT 5	25	5	208	
	25	8	288	
	32	5 8	320 380	
	50	5	440	
	30	8	600	
	16	8	256 500	
		12	960	
	20	4	344	_
	25	8	384 624	•
	-	11	904	•
	22	8	640	•
AT 10	32	12	800 1200	•
AT 10		4	880	•
	50	8 11	1680	•
		4	2160 1040	•
	75	8	2320	
		11 4	2640 1440	
	100	8	2720	
1		11	3440	

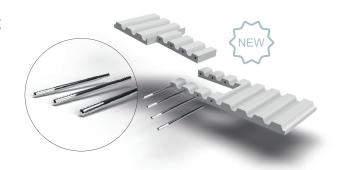
HT 14 Table Factor Fac					
AT 20 AT	Profile	Width [mm]	Number of pins	Max working tension [N]	Carbon pin
AT 20 AT 2700 AT 2700 AT 2700 AT 2700 AT 2700 AT 20		25	_		
AT 20 50	AT 20				
AT 20		32			
HT 50 11					
HT 5 To To To To To To To T	AT 20	50			
HT 5 11 6080 100 4 2700 11 7700 11 7700 15 120 15 5 168 8 240 20 8 296 25 5 280 8 376 • 100 8 510 5 480 6 5 480 6 5 800 75 4 728 8 1096 75 8 1096 100 8 1520 15 5 256 20 5 360 8 1520 15 5 256 20 5 376 14 960 14 960 14 960 17 960 14 2880 85 9 2320 100 1440 14 2880 85 9 2320 100 100 3200 110 3600 100 100 3200 114 3600 100 100 3200 114 3600 100 100 3200 114 3600 100 100 3200 114 3600 114 3600 114 3600 115 1120 116 1120 117 140 118 1120 119 1120 119 1120 110 1120 111 1120					
HT 5 100		75			
HT 5 100					
HT 14 10 5 120		100			
HT 5 15		10			
HT 5 15					
HT 5 HT 5 20 32 5 320 8 376 - 32 8 5 320 8 5 320 8 5 320 8 5 400 - 75 4 728 8 1096 - 100 5 8 1006 - 100 8 15 5 360 5 376 - 20 5 360 5 376 - 20 5 360 5 376 - 25 10 784 - 40 11 960 - 10 11 960 - 11 960 - 10 11 960 - 10 11 960 - 10 11 960 - 10 11 960 - 10 1440 - 14 280 - 22 2300 - 10 14 280 - 10 14 280 85 9 2320 10 10 14 280 85 9 2320 10 10 10 10 2400 11 2400 11 2400 11 2400 11 2400 11 3600 10 10 3200 11 40 55 10 10 10 3200 11 40 55 5 1600	HT 5	15			
HT 5 100 8 296					
HT 5 32 5 320 • 32 8 510 • 50 8 640 • 75 4 728 75 8 1096 100 5 800 8 1520 15 5 256 20 5 360 5 376 • 25 10 784 • 14 960 • 30 11 960 11 960 11 960 11 960 11 960 11 960 12 2300 • 5 1320 75 10 2400 14 2880 85 9 2320 5 1760 100 10 3200 14 3600 HT 14 55 5 1600		20			
HT 5 32 32 33 35 320 30 38 510 50 40 75 44 728 88 1096 100 88 1520 15 5 5 360 5 5 376 20 5 360 5 5 376 20 5 300 11 960 11 960 11 960 11 960 11 960 11 960 11 960 11 960 11 960 11 960 11 960 11 960 11 960 11 960 10 14 280 9 75 10 2400 14 2880 85 9 2320 10 10 14 2880 85 9 2320 10 10 10 10 2400 11 2400 11 2400 11 2400 11 3600 10 10 10 3200 11 40 5 100 10 3200 11 40 5 1120 HT 14		0.5	5	280	•
HT 8 32 8 510 • 50 8 640 • 75 4 728 8 1096 100 5 800 8 1520 15 5 256 20 5 360 5 376 • 25 10 784 • 14 960 • 30 5 400 11 960 5 800 • 5 800 • 10 1440 • 14 2080 • 22 2300 • 75 10 2400 14 2880 85 9 2320 100 10 3200 14 3600 HT 14 55 5 1600		25	8	376	•
HT 8 So		22	5	320	•
HT 8 So 8		32	8	510	•
HT 8 8		EO	5	480	•
HT 8 75		50	8	640	•
HT 8 100 5 800 8 1520 155 256 5 360 5 376 • 10 784 • 14 960 • 14 2080 • 14 2080 • 14 2080 • 14 2880 85 9 2320 100 100 3200 14 3600 40 5 1120 HT 14 55 5 1600		75			
HT 8 100 8 1520		75	8	1096	
HT 8 15 5 256		100			
HT 8 20 5 360 5 376 • 10 784 • 14 960 • 30 5 400 11 960 5 800 • 10 1440 • 14 2080 • 22 2300 • 75 10 2400 14 2880 85 9 2320 100 14 2880 85 9 2320 100 10 3200 14 3600 HT 14 55 5 1600					
HT 8 20 5 376 • 25 10 784 • 14 960 • 30 5 400 11 960 5 800 • 10 1440 • 14 2080 • 22 2300 • 5 1320 75 10 2400 14 2880 85 9 2320 5 1760 100 10 3200 14 3600 HT 14 55 5 1600		15			
HT 8		20			
HT 8 14 960 • 30 5 400 11 960 • 5 800 • 14 2080 • 14 2080 • 22 2300 • 5 1320 75 10 2400 14 2880 85 9 2320 5 1760 100 10 3200 14 3600 HT 14 55 5 1600					
HT 8 30 5 400 11 960 5 800 10 1440 14 2080 5 1320 75 10 2400 14 2880 85 9 2320 5 1760 100 10 3200 14 3600 HT 14 55 5 1600		25			
HT 8 11 960					•
HT 8		30			
HT 8 50 10 1440 • 144 2080 • 22 2300 • 5 1320 75 10 2400 14 2880 85 9 2320 5 1760 100 10 3200 14 3600 14 3600 14 55 5 5 1600					
14 2080 • 22 2300 • 5 1320 75 10 2400 14 2880 85 9 2320 5 1760 100 10 3200 14 3600 HT 14 55 5 1600					
22 2300 •	HT 8	50			•
The state of the					•
75 10 2400 14 2880 85 9 2320 5 1760 100 10 3200 14 3600 HT 14 55 5 1600					
85 9 2320 100 5 1760 100 3200 14 3600 HT 14 55 5 1600		75			
5 1760 100 10 3200 14 3600 40 5 1120 HT 14 55 5 1600			14	2880	
100 10 3200 14 3600 40 5 1120 HT 14 55 5 1600		85	9	2320	
14 3600 40 5 1120 HT 14 55 5 1600			5	1760	
40 5 1120 HT 14 55 5 1600		100	10	3200	
HT 14 55 5 1600			14		
		40	5	1120	
85 5 2400	HT 14				
		85	5	2400	

Profile	Width [mm]	Number of pins	Max working tension [N]	Carbon pin
	10	5	120	
	15	5	168	
		8	240	
	20	5	224	
		8	296	
	25	5	280	•
RP 5		8	376	•
	32	5	320	•
		8	510	•
	50	5	480	•
		8	640	•
	75	4	728	
		8	1096	
	100	5	800	
		8	1520	
	15	5	256	
	20	5	360	
		5	376	•
	25	10	784	•
		14	960	•
	30	5	400	
RP 8		11	960	
		5	800	•
RP 8	50	10	1440	•
•		14	2080	•
		22	2300	•
		5	1320	
	75	10	2400	
		14	2880	
	85	9	2320	
		5	1760	
	100	10	3200	
		14	3600	
	40	5	1120	
RP 14	55	5	1600	
	85	5	2400	

Profile	Width [mm]	Number of pins	Max working tension [N]	Carbon pin
	10	5	120	
	15	5	168	
	13	8	240	
	20	5	224	
ST 5		8		
	25	5	280	•
ST 5		8	376	•
0.0	32	5		
	50	5		
		8		•
	75	4		
		8		
	100	5		
		8		
	15	5		
	20	5		
		5		
	25	10		
ST 8		14		•
	30	5		
		11		
		5		•
	50	10		•
	30	14		•
		22		•
		5		
	75	10	2400	
		14	2880	
	85	9		
		5		
	100	10		
		14	3600	
	40	5	168	
ST 14	55	5		
	85	5		
	12,7	4		
	19,05	5		
	25,4	5		•
L	38,1	5		
	50,8	5		•
	76,2	5		
	101,6	5		
Н	12,7	4		
	19,05	4		
	25,4	4		•
	38,1	4		
	50,8	4		•
	76,2	4		
	101,6	4		
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





ELATECH® EFT – Mechanical Fastening 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



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.

Embedded tooth design



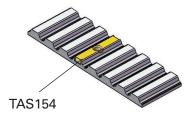
- EFT is flexible, allowing customers to reposition cleats for regularly scheduled application changes
- EFT is economical because customers can replace worn profiles without having to replace the entire belt.
- EFT is available in any of the following profiles: AT10, AT20, H, XH with or without self-tracking quide.
- 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.







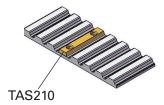
TAS154 - suitable for AT10 and H profile 25 mm wide, one pin





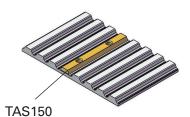


TAS210 - suitable for AT10 profile 32 mm wide, two pins at 20 mm centre distance





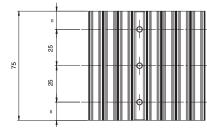
TAS150 - suitable for AT10 profile, 50 mm wide, two pins at 25 mm centre distance



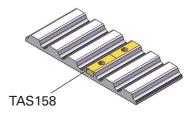


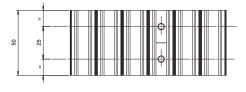
TAS155 - suitable for AT10 profile, 75 mm wide, three pins at 25 mm centre distance



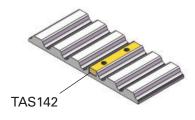


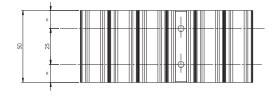
TAS158 - suitable for AT20 and XH profile, 25-50-75-100 mm wide, number of pins multiple of 25 mm centre distance





TAS142 - suitable for AT20 and XH profile, 50 mm wide, two pins at 25 mm centre distance







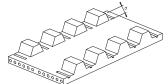
Mechanical processing

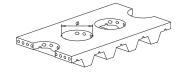
Thanks to top quality, state of the art machinery and techniques such as water jet cutting, ELATECH® timing belts can be mechanically processed to perform special and complex tasks. The extremely precise machining and finishing operations guarantee the respect of the strictest tolerance requirements 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.







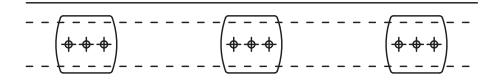


The great precision and the versatility of water jet cutting technology allow the creation of bores of any dimensions and shapes, from the smallest to the largest, from perfectly circular to oval or square.





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.

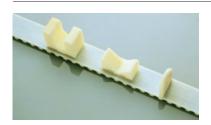




ELATECH® polyurethane belts with profiles

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.

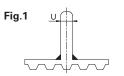


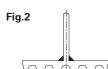
Pitch

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

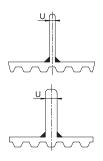
Profile position may be over the tooth or not over the tooth. Belt flexibility is maximized when the profiles are applied over the tooth.





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.

		Profile thickness "U" [mm]																						
Belt type	2 3 5 6 8 10 12 14							16		20		25		30										
type		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	-	-	-	-	-	-
Н	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.



ELACLEATS

download in CAD or PDF format the most suitable cleat

Elatech online cleat selection support at ↓



elatech.com

ELATECH® offers a wide variety of custom-made and standard cleats specially designed for different applications in many industries. ELACLEATS is a web-based tool for quickly selecting among ELATECH® standard cleats by shape, size and features.

2D and 3D drawings can be easily downloaded for the selected cleats.

ALWAYS UPTO DATE

ELACLEATS online version is always up to date with new types and sizes.

RELIABLE SOLUTIONS!

FAST AND EASY

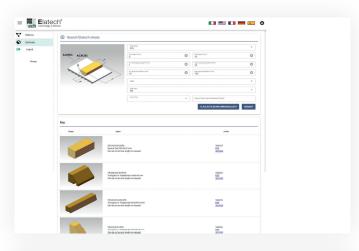
ELACLEATS offers an intelligent search for a quick selection of most suitable cleat with an easy to follow menu for fastest navigation.

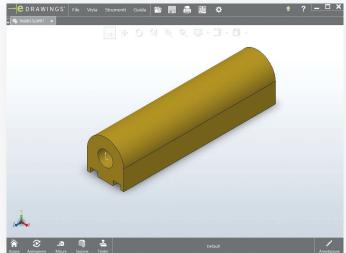
SAVE YOURTIME!

COMPREHENSIVE RANGE

ELACLEATS offers widest range of cleats to optimize your conveying application.

› IMPROVE EFFICIENCY!

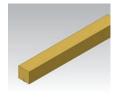


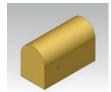


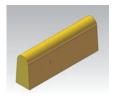


HUNDREDS OF CLEATS AVAILABLE FOR ALL APPLICATIONS!

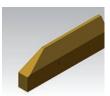








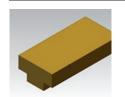




ST = Square Top: flat faces at right angles to each other

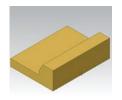
RT = Round Top: the upper part of the cleat has a rounded shape

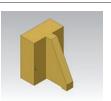
TR = Triangular or Trapezoidal: flat faces, some of which are not at right angles to other faces; cross-sections can be triangular, trapezoidal, pentagonal, etc.











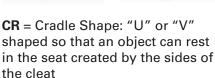


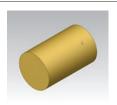
TT = "T" Shaped: a portion of the cleat (usually the upper one) is wider than the rest, so that a cross-section resembles the shape of a capital "T"

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

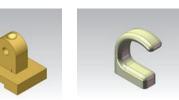






CY = Cylindrical Shape: a cylinder with vertical or horizontal axis





SP = Special Shape: any other shape, usually a structure especially designed for a specific use