



## Felt Products

Total solution for Aluminum Extrusion Industry



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# Aluminum Extruding Process

## Felt Products for Aluminum Extrusion Industry

- Truly endless felt belt / Felt tube / Felt pad / Spacing material
- Felt timing belt
- Truly endless coil wrapper belt



### NOMENCLATURE

Product type	Hardness	Material	Total thickness (mm)	Size (mm*mm*mm)	Other info
FTB	0	PK(3)	8	300 * 2000 * 8	100 AT10

- FB : Felt Belt  
FP : Felt Pad  
FT : Felt Tube
- 0 : non-hardened  
00 : semi-hardened  
000 : fully-hardened
- PK (x) Brown PBO outside (thickness in mm) + Kevlar inside  
K Yellow 100% Kevlar  
N Ivory 100% Nomex  
P White 100% Polyester
- Felt Belt : Width (mm) x Length (mm) x Thickness (mm)  
Felt Pad : Width (mm) x Length (mm) x Thickness (mm)  
Felt Tube : Inside diameter (mm) x Length (mm) x Thickness (mm)  
Spacing Material : Width (mm) x Length (mm) x Thickness (mm)  
Felt Timing Belt : Width (mm) x Length (mm) x Thickness (mm)
- Felt Timing Belt : Timing Belt width (mm) and Pitch

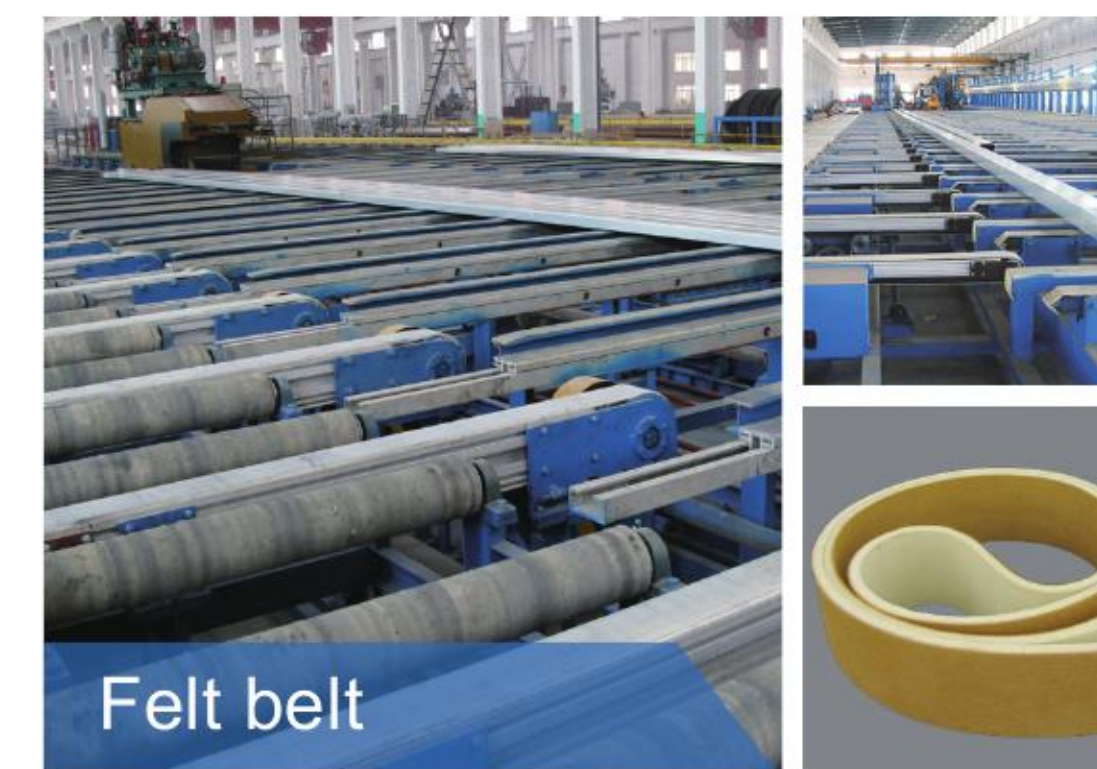
SM : Spacing Material  
FTB : Felt Timing Belt

Material	Colour	Temperature resistance short (Cont. Temperature resistance)
PBO	Brown	600 °C (500 °C)
KEVLAR	Yellow	500 °C (400°C)
NOMEX	Ivory	280 °C (210 °C)
POLYESTER	White	210 °C



Felt tube

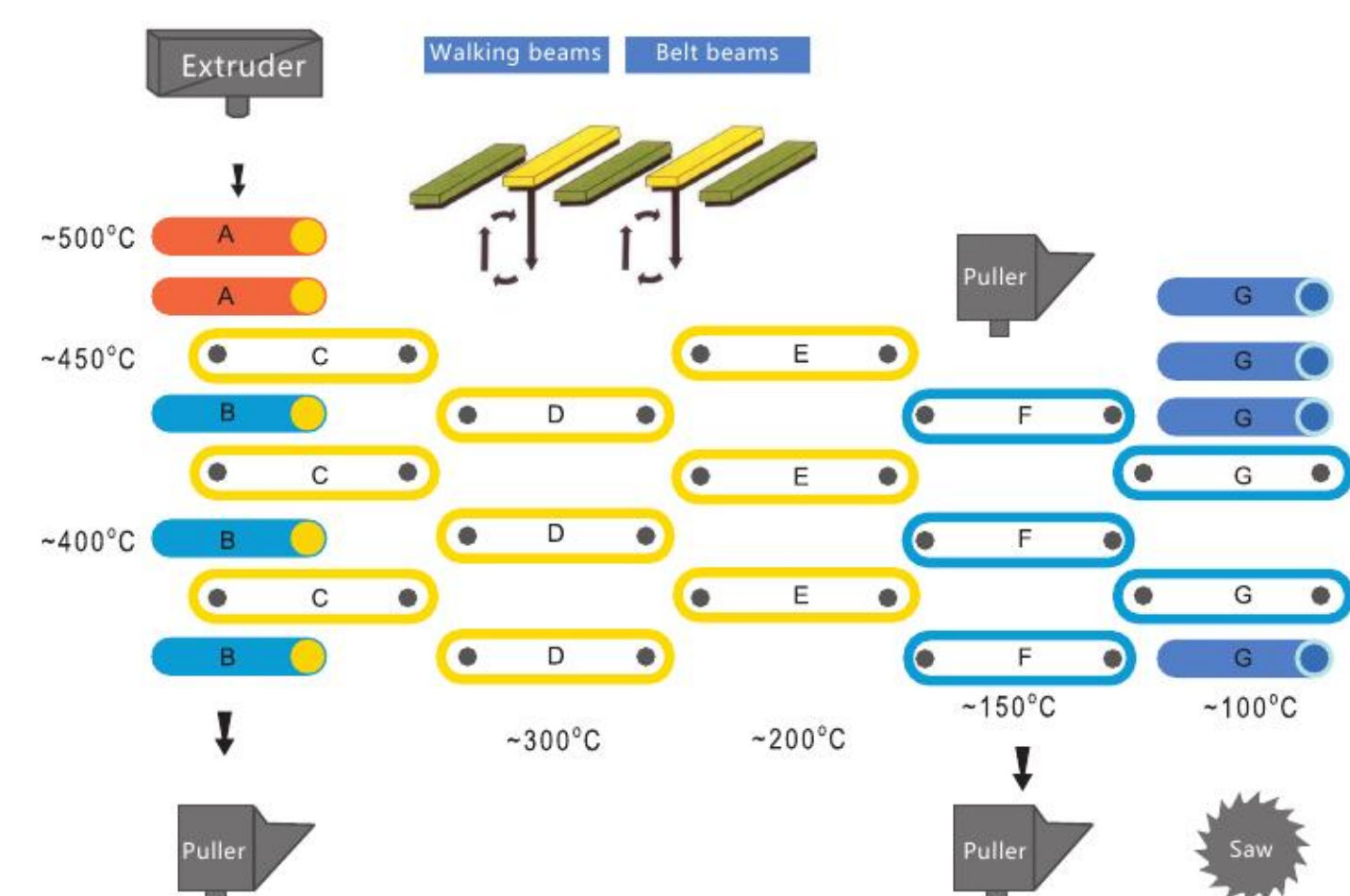
Inside D	(mm)	18, 19, 20, 24, 25, 28, 30, 38, 39, 40, 43, 45, 49, 50, 55, 60, 70, 76, 77, 77.3, 77.6, 78.7, 80, 86, 89, 95, 96, 100, 101.8, 102, 103, 105, 110, 112, 115, 116, 120, 127, 129, 130, 133, 140, 145
Length	(mm)	Any length
Thickness	(mm)	3 - 12
Density	(g/m <sup>2</sup> .mm)	(non-hardened) : 380 ± 5 (semi-hardened) : 420 ± 5 (fully-hardened) : 550 ± 5
Hardness	(Shore A)	(non-hardened) : 50 ± 5 (semi-hardened) : 60 ± 5 (fully-hardened) : 85 ± 5
Hardness		With silica



Felt belt

Width	(mm)	20 - 2,000
Length	(mm)	1,900 - 30,000
Thickness	(mm)	6 - 12
Density	(g/m <sup>2</sup> .mm)	450 ± 5
Hardness	(Shore A)	PBO : 60 ± 5 Kevlar / Nomex / Polyester : 55 ± 5

## The Aluminium Extruding Process



- A : PK Felt Tube      PK : PBO + Kevlar tension member
- B : K Felt Tube      KK : Kevlar + Kevlar tension member
- C : KK Felt Belt      PKN : PBO + Kevlar + Nomex tension member
- KN : Kevlar + Nomex tension member
- D : KK Felt Pad      NP : Nomex + Polyester tension member
- PP : Polyester + Polyester tension member
- E : NP Felt Belt
- F : PP Felt Belt
- PP Felt Pad
- G : PP Felt Tube      PP Felt Belt

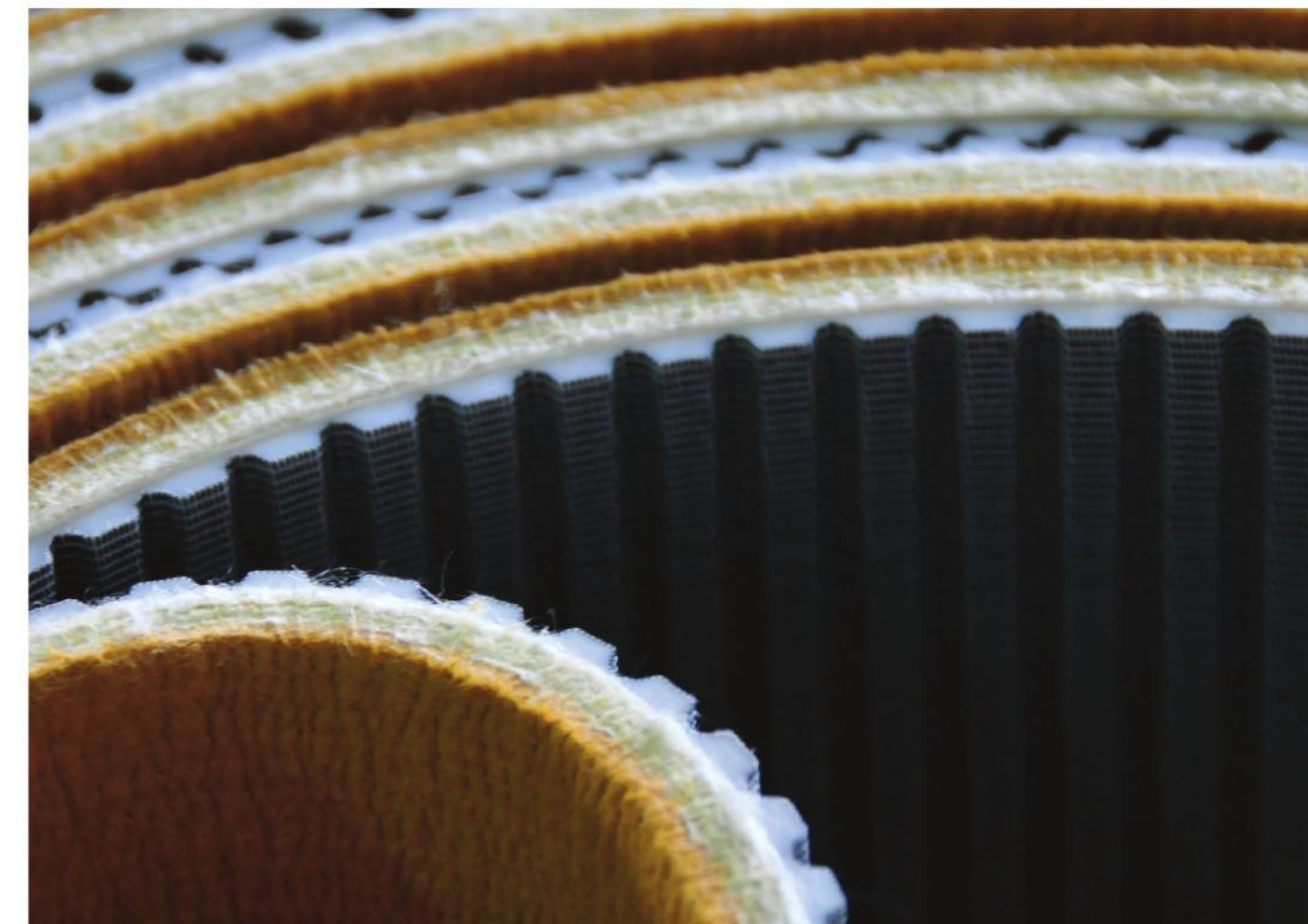


Felt pad

Width	(mm)	10 - 2,000
Length	(mm)	up to 25,000
Thickness	(mm)	6 - 12
Density	(g/m <sup>2</sup> .mm)	PBO (non-hardened) : 370 ± 5 (semi-hardened) : 420 ± 5 (fully-hardened) : 520 ± 5 Kevlar/Nomex/Polyester (non-hardened) : 340 ± 5 (semi-hardened) : 360 ± 5 (fully-hardened) : 440 ± 5
Hardness	(Shore A)	(non-hardened) : 45 ± 5 (semi-hardened) : 60 ± 5 (fully-hardened) : 85 ± 5
Hardness		With silica

# Felt Timing Belt

Best quality fulfills tough requirements  
 Wide range of timing belts for selection  
 The Right partner for belt solutions



## Felt Timing Belt construction

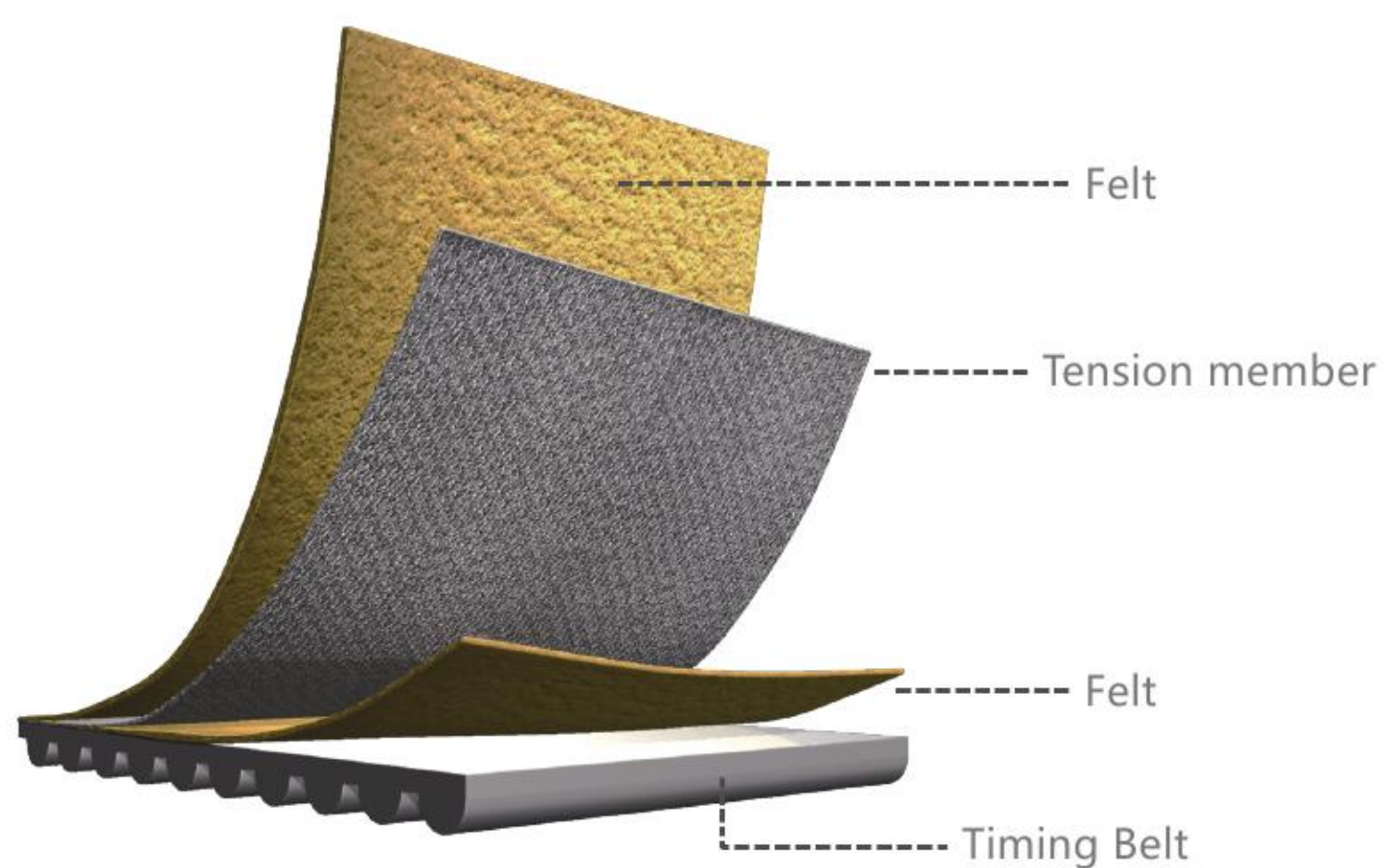
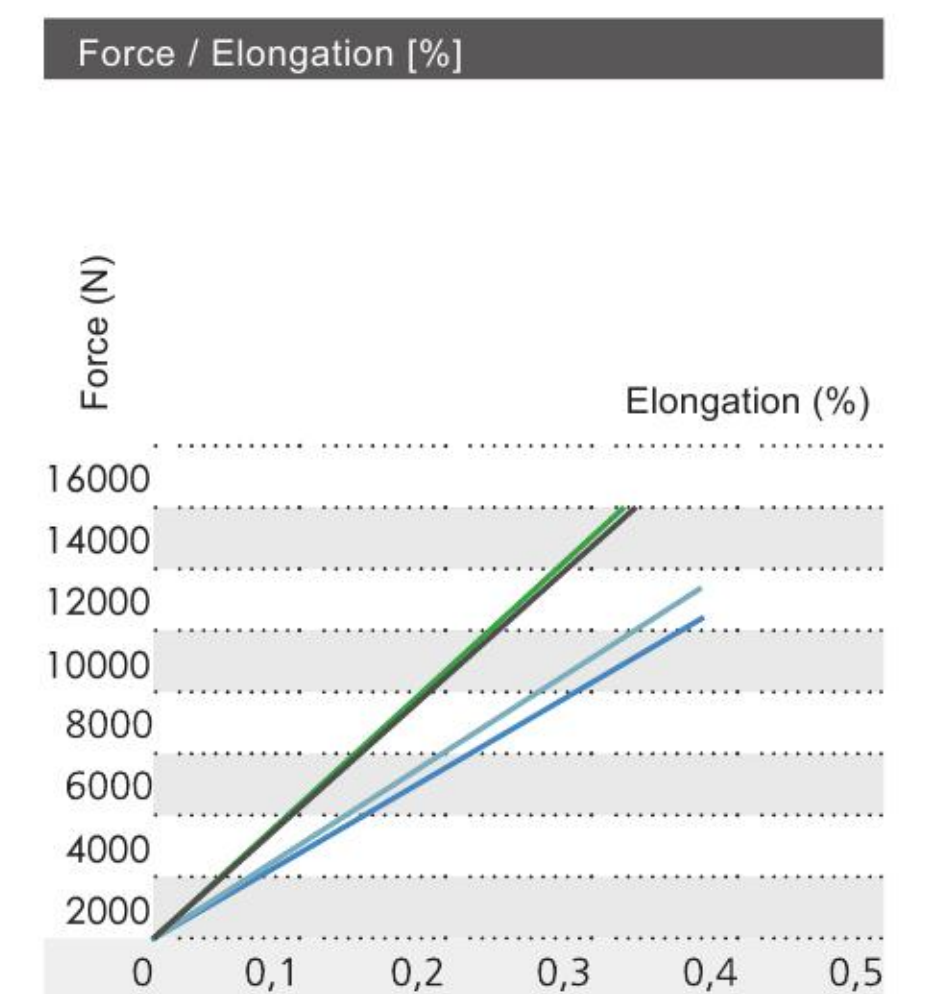
Best quality fulfills tough requirements

- No skidding even with heavily loaded aluminum profiles
- All the aluminum profiles are perfectly straight while transporting due to the positive synchronous drive characteristics of timing belts
- No delamination possible as we use a special high potential heat absorption TPU as our material for timing belt
- Rubber is a thermo-setting material; therefore, glue is required for the rubber felt lamination process. The glue will melt when exposed to temperature higher than 120 oC causing delamination. TPU is a thermo-plastic material and no glue is needed for timing felt belt lamination.

Wide range of timing belts for selection

Timing Belt Tech info				
Most common types	Breakig Str. (N)	Max. Allowable Str. (N)	Max. Allowable Str. (Jointed)(N)	Weight (kg/m)
100 T20	48000	13500	6750	0.77
100 AT10	60000	16000	8000	0.64
100 AT10-K13	60000	16000	8000	0.71
100 AT20	65000	25200	12600	0.97
100 HTD14M	84100	24700	12350	1.13
100 HTD14M-K13	84100	24700	12350	1.20

(This data only applies to Ino Belt Timing Belt products)



# Truly endless coil wrapper belt

Precision manufacturing with excellent Germany quality material  
 Patented endless weaving pattern and felt tension member design  
 Patented spiral construction design for special requirements



Precision manufacturing with Excellent Germany quality material  
 Ino Belt is the pioneer in the design, innovation, development and execution of the coil wrapper belts, that are used primarily in the steel and aluminum industries for the purpose of coil wrapping steel or aluminum sheets.

Currently there are four types of coil wrapper belts offered :

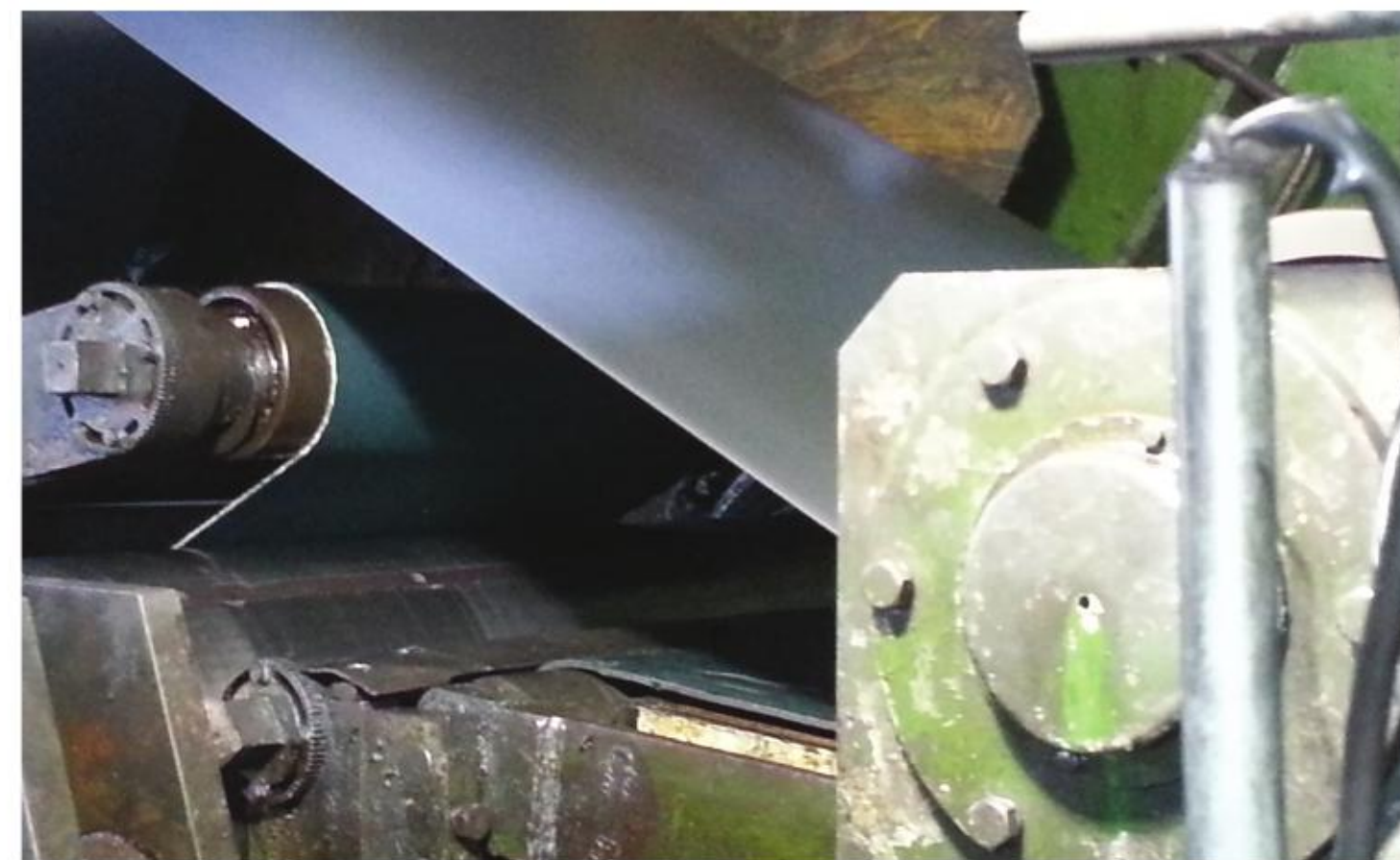
- Solid woven type (CMU-SW series)
- Felt type (CMU-EK series)
- EZLock spiral type (CMU-EZLock series)
- High temperature resistant type (CMU-HSW series)

Ino Belt coil wrapper belts have the following characteristics:

- Completely truly endless, no joint
- Great resistance to cut, impact, oil grease, weak acid, base and salt
- High force of elongation

Patented Truly Endless Design

- Solid woven type (CMU-SW series)
  - Excellent elastic characteristics
  - High force of elongation
  - Suitable for steel sheet wrapping
- Felt type (CMU-EK series)
  - Provides high flexibility, accuracy of dimensions and excellent uniform thickness
  - Suitable for aluminum plate coil wrapping
- EZLock spiral type (CMU-EZLock series)
  - Excellent uniform thickness
  - Perfect for on-site jointing, no hassle for disassembling machines
- High temperature resistant type (CMU-HSW series)
  - Excellent elastic characteristics
  - High force of elongation
  - High temperature resistance (400 °C)
  - Suitable for hot rolled aluminum wrapping



Wide range of coil wrapper belts for selection

Coil Wrapper Belt Tech info								
Coil Wrapper Belt types	Total Thickness (mm)	Tension member	Top Coating Material	Top Coating Thickness(mm)	Top Coating Colour	3% Elongation Str. (N/mm)	Temperature range(°C)	
■ CMU-SW series	4.0 - 8.0	Solid woven	PU	0.5 - 2.5	Green	90 - 100	-20 - 90	
■ CMU-EK series	4.0 - 10.0	Felt	PU	0.5 - 2.0	Green	70 - 80	-20 - 90	
■ CMU-EZLock series	4.0 - 6.0	Spiral belt	PU	0.5 - 1.5	Green	N/A	-20 - 90	
■ CMU-HSW series	6.0 - 10.0	Kevlar woven	Kevlar	N/A	Yellow	100 - 120	-20 - 500	

(This data only applies to Ino Belt Coil Wrapper Belt products)