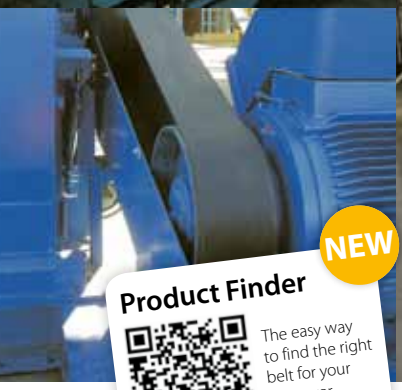
Wood

siegling
belting



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Product Finder

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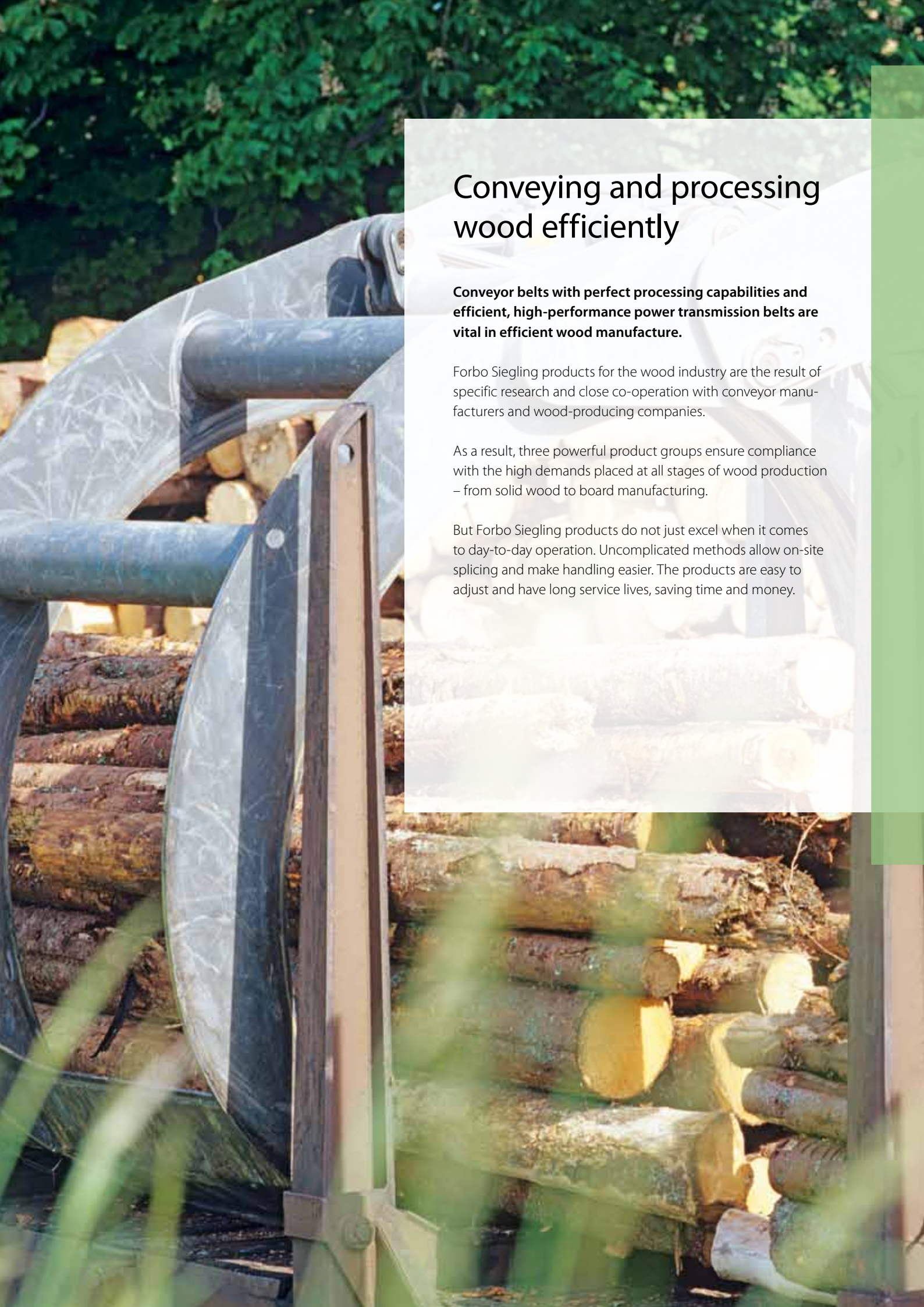

Conveying and processing wood efficiently

Conveyor belts with perfect processing capabilities and efficient, high-performance power transmission belts are vital in efficient wood manufacture.

Forbo Siegling products for the wood industry are the result of specific research and close co-operation with conveyor manufacturers and wood-producing companies.

As a result, three powerful product groups ensure compliance with the high demands placed at all stages of wood production – from solid wood to board manufacturing.

But Forbo Siegling products do not just excel when it comes to day-to-day operation. Uncomplicated methods allow on-site splicing and make handling easier. The products are easy to adjust and have long service lives, saving time and money.

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conveyor and processing belts

siegling propipe
feeder belts

siegling extremultus
flat belts

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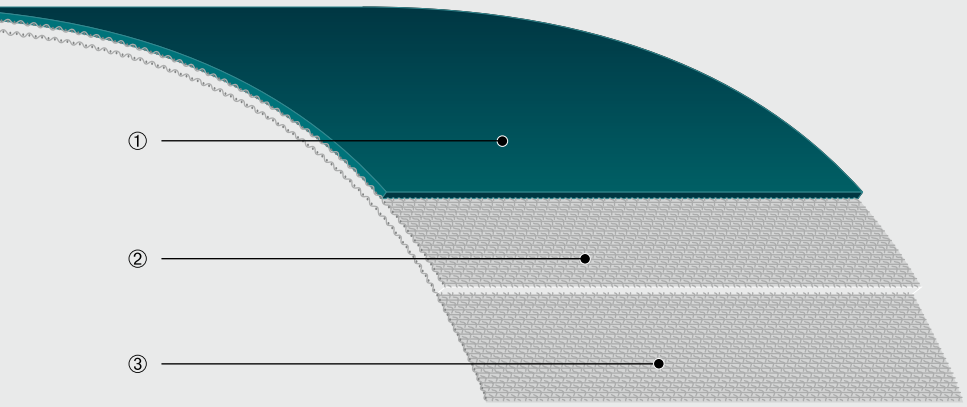
siegling transilon

Conveyor and processing belts for board processing



Siegling Transilon product structure

① **Top face |** Various coating materials, thicknesses and patterns, as well as the chemical, physiological and mechanical characteristics of the belt influence the grip on the goods conveyed.

② **Tension member |** The use of different special fabrics substantially influences the belt's suitability to the application. Belt tracking, elongation under force behaviour, electrostatic properties, how flat the belts are, knife edges and how much they curve all depend directly on the fabric's structure.

③ **Underside |** Different underside types determine the level of noise, energy consumption as well as wear and tear in the belt and whether it can be used for sliding or rolling support.

The properties	The advantages
low elongation	short take-up ranges, space-saving
longitudinally flexible	small drum diameters possible
Dimensions do not alter	maintenance-free, no re-tensioning
low noise during operation	improved working conditions
durable	economical operation
lightweight with low overall thickness	easy to handle/to put into operation

Former, accelerator and transfer belts

The tension member made of high-tech fabric provides a linear, steep load/extension curve. The top face has a microscopically thin, matt coating. All of the belt is very thin and manufactured with low weight tolerances (< ±1 %).

- Minimal load on the chip mat lengthways
- No caking of the chip mat
- Precise manufacture of thin sheets
- Very flexible lengthways
- No elongation during constant operation
- Very good directional stability properties
- Very short lead times, rapidly reaches dynamic operational condition
- Does not tend to deform after standing still for a long time on the drums
- Highly laterally stiff
- Flexible Z-splice.

Ventilation belts

The Forbo Siegling ventilation belts for pre-presses consist of a special blended fabric that is durable and strong. They have a high proportion of warp threads, are highly air permeable and have a very smooth surface. The extremely strong Z-splice, developed by Forbo Siegling leaves absolutely no marks:

- No electrostatic build-up and lower fire risk, uninterrupted production
- No adhesion of chips
- Excellent ventilation of the chip mat
- Very good surface quality of the boards
- Reliable splice.

Pre-press belts

Forbo Siegling pre-press belts have a highly modular tension member, made of aramide fabric with a tensile force of approx. 140 N/mm at operational elongation. So they are suitable for heavy pre-presses with a nip pressure of up to 3000 N/cm and belt pull of up to 1800 N/cm.

- Minimal expansion of the mat between the pressure rollers
- Minimal load on the chip mat lengthways
- Very durable surface
- Low creep
- Very short take-up ranges.

Differences in the thickness of the mat and the resulting different tensile forces over the width of the belt or the lateral forces occurring as a result of the belt tracking are compensated for by

- Higher level of lateral stiffness and
- Higher level of resistance to diagonal warping.

Conveying and finishing

For the subsequent conveying and processing of the boards Siegling Transilon conveyor and processing belts and Siegling Extremultus live roller power transmission belts with different properties are used. From robust all-rounders right up to absolute specialists.

The belts must have low elongation, be durable and need little maintenance for simple conveying tasks and when cutting to size.

In finishing (veneering, varnishing, coating) the demands rapidly increase: the belts used must be able to position accurately, be resistant to heat and solvents and easy to clean.

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Technical Data		Article number	Total thickness approx. [mm]	Weight approx. [kg/m²]	Pull at 1 % elongation (k1 relaxed) approx. [N/mm width] *	d_{min} approx. [mm] **	Permissible operating temperature [°C]	Production width [mm]
AE 140/3 U0/U4H MT	black	906441	3.7	4.2	75.0 [1)]	250	–30/+100	3600
E 3/2 U0/U0	transparent	900009	1.2	1.1	5.0	3-8	–30/+100	4700
E 8/2 U0/U2	green	900320	1.4	1.6	6.5	40/24 (Z) [3)]	–10/+100	3600
E 8/2 U0/U2 MT-NA	white	900277	1.4	1.45	6.5	24	–30/+90	3300
E 8/2 U0/V2H MT	green	900208	1.5	1.65	7.5	40	–10/+70	3000
E 8/2 U0/V5	green	900025	2.2	2.5	7.5	40/30 (Z) [3)]	–10/+70	3000
E 10/2 0/P2 GL	transparent	906459	1.9	1.9	11.0	90/40 (Z) [3)]	–10/+100	1800
E 12/2 U0/V7	green	900045	2.85	3.4	12.0	60	–10/+70	3000
E 15/M V1/V10H	green	900324	5.0	5.4	10.0	125	–10/+70	2500
E 18/3 U0/V5H MT-SE	black	906395	3.0	3.7	16.0	90	–10/+70	3000
E 18/H U0/U2 MT	white	906420	1.75	1.75	19.0	20/16 [4)]	–50/+100	4200
E 4/2 U1/U2 H	black ATEX	906389	1.4	1.55	4.5	40/90 [5)]	–10/+100	3000
Novo 40 HC		900221	4.0	2.2	7.5	90	–10/+120	2000
Novo 60 HC		900286	5.5	3.1	8.0	125	–10/+120	2000
Transvent W01 [2)]	blue	900403	1.9	1.4	7.0	200	–30/+100	4500
Transvent W02 (Conducto 2206) [2)]	blue	900442	1.95	1.55	7.0	200	–30/+100	4500
Transvent W03 (Conducto 5090) [2)]	blue	900441	1.85	1.55	18.0	200	–30/+100	4500

Splicing methods

Key criteria in choosing the method are, in addition to the strength of the splice, its flexibility, the quality of the splice's finish and the effort required to make it. Three types of splice are widespread in the wood processing industry:

Z-splice ①
Fulfils the highest of demands where uniformity of thickness is concerned. Very flexible splice for single and double ply types.

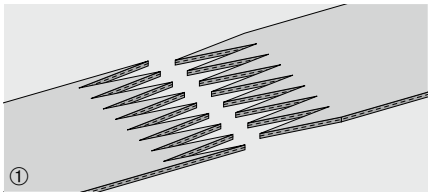
The extremely tough Z-splice, developed for making the Ventilation belts endless, leaves no marks.

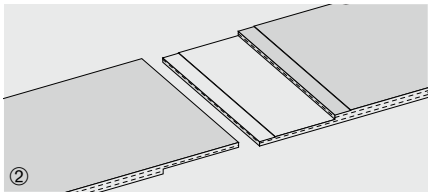
Overlap splice ②
Particularly for two and and three-ply belt types, subjected to a high level of mechanical stress.

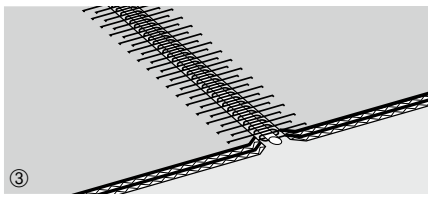
Mechanical fasteners ③
So that the belt can be installed and taken off quickly without disassembling parts of the machinery.

Forbo Siegling offers a comprehensive range of compact fitting devices for all splice methods.

An overview of tools and equipment, tool sheets and instructions is available on request.







Recommendations for use	Fibre/chip bins	Mat former	Spreader/former belt	Accelerator/ transfer belt	Pre-press belt	Ventilation belt	Board conveying	Finishing (feeding, veneering, laminating)	Drying tunnel	Varnishing line, sprayers
					●					
			●	●			●	●	●	
			●	●			●	●	●	●
			●	●						
	●	●	●	●			●	●	●	
	●	●					●	●		
							●			●
	●	●	●	●						
	●	●					●	●		
	●	●								
			●	●						
	●	●								
							●	●	●	
							●	●	●	
						●				
						●				
						●				

Type key for Siegling Transilon conveyor and processing belts

E 8/2 U0/V2H MT green

- Fabric material
- Type class
- Number of plies or special fabric (M or H)
- Underside coating [mm/10]
- Top face coating [mm/10]
- Belt property/ structure
- Colour

Supplied as

– Endless

– Prepared for endless splicing on site

– With mechanical fasteners

– Belts with profiles welded on

– Belts with edge seal

The Siegling Transilon range is constantly being updated with innovative products especially for the market.

Key

* Established in line with ISO 21181:2005

** The smallest permissible pulley (roller) diameters were calculated at normal ambient conditions. Lower temperatures or particularly low levels of humidity require greater diameters.

1) Tensile force at operational elongation

2) Ventilation belt

3) Second figure with Z-splice

4) Second figure applies when using as spreader belt

5) Second figure when used with counter-bending

AE	=	Aramide/polyester blended fabric
E	=	Polyester
G	=	Rubber/elastomer
M	=	Multi-ply fabric
P	=	Polyamide
U	=	Urethane
UH	=	Hard urethane
LF	=	Low friction
NA	=	Non-antistatic
SE	=	Flame-retardant
MT	=	Matt surface
R	=	Large diamond pattern
STR	=	Normal textured pattern
FSTR	=	Fine pattern
ATEX	=	Explosion protection with specific compliance to guidelines

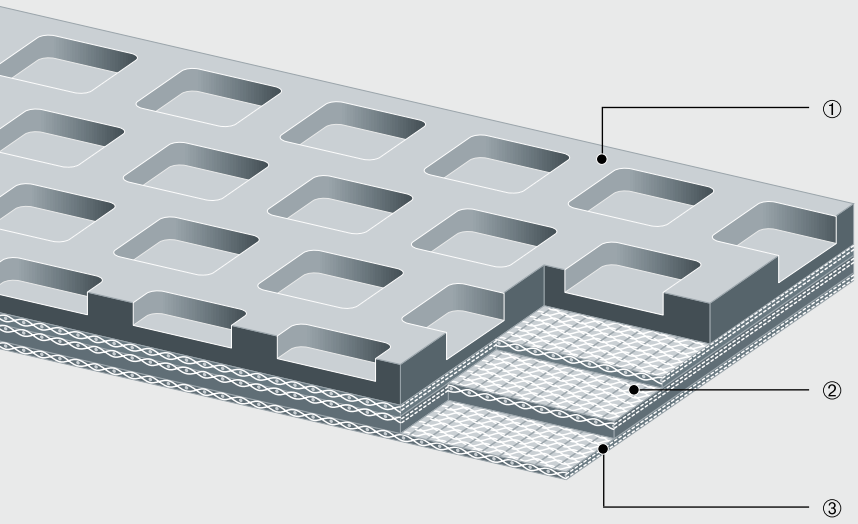
Please note: the values stated are nominal and can fluctuate in a belt whose width is a result of production processes. Our products are constantly adapted to market requirements. Consequently, changes in technical parameters can occasionally occur.

Therefore, please see the current product data sheets for specific information on designs and calculations.

MOVEMENT SYSTEMS

siegling propipe

Feeder belts for board processing



Siegling Propipe product structure

① **Top face |** Perfect adaption of hardness and elasticity to the process concerned, due to different shore hardness and patterns.
Available in natural rubber NR and nitrile butyl rubber NBR.

② **Tension member |** Tension member without splice and low lengthways elongation in four different strengths.

③ **Underside |** Low drag, abrasion-resistant underside.

As a feeder belt for wide belt sanders, planers and brushing machines in the wood and metal working industry, Siegling Propipe plays a key role in the exact and efficient manufacture of board products.

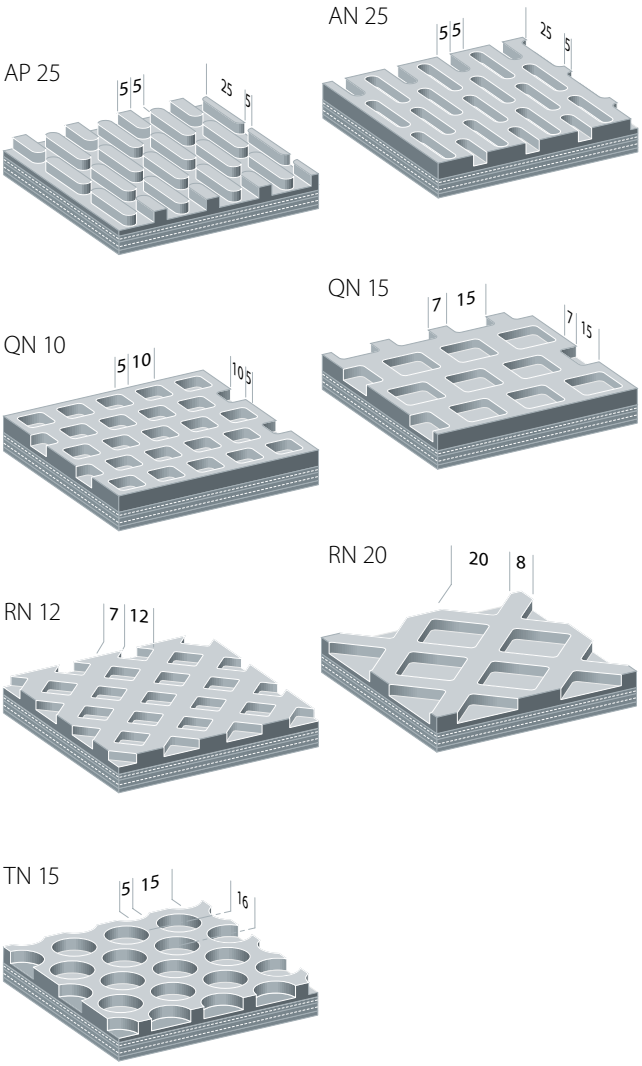
Siegling Propipe belts are totally flat and the same thickness. With different surface patterns and hardness, we have the right belt type for any kind of material or process.

Made to precise tolerances in the dimensions you specify.

The properties	The advantages
high level of drag	excellent grip with no creep
dimensionally stable	reliable and maintenance free
low drag underside	smooth tracking, low energy loss
long service life	economical to run
flexible lengthways	low power consumption

Strength category*	Pattern	Colour**	40 Shore [A]	50 Shore [A]	60 Shore [A]	70 Shore [A]	Thickness [mm]	Work load [N/mm]	Elongation at fitting [%]	d_{min} [mm]
S	AP25	GY		●	●	●	7	12	1.5	90
S	AP25	BK			●		7	12	1.5	90
S	AN25	GY		●	●		7	12	1.5	90
S	QN10	GY		●	●	●	7	12	1.5	90
S	QN15	GY	●	●	●	●	7	12	1.5	90
S	RN12	GY		●	●		7	12	1.5	90
S	RN12	BK			●		7	12	1.5	90
S	RN20	GY		●	●		7	12	1.5	90
L	AP25	GY		●	●	●	8	20	1.4	100
L	AP25	BK			●		8	20	1.4	100
L	AN25	GY		●	●	●	8	20	1.4	100
L	QN10	GY		●	●	●	8	20	1.4	100
L	QN10	BK			●		8	20	1.4	100
L	QN15	GY		●	●	●	8	20	1.4	100
L	RN12	GY		●	●		8	20	1.4	100
L	RN12	BK			●		8	20	1.4	100
L	RN20	GY		●	●		8	20	1.4	100
L	TN15	GY			●		8	20	1.4	100
M	AP25	GY		●	●		10	22	1.2	120
M	AP25	BK			●		10	22	1.2	120
M	AN25	GY		●	●		10	22	1.2	120
M	QN10	GY		●	●	●	10	22	1.2	120
M	QN15	GY		●	●		10	22	1.2	120
M	RN12	GY		●	●		10	22	1.2	120
M	RN20	GY		●	●		10	22	1.2	120
P	AP25	GY		●	●		11	30	1.3	150
P	AN25	GY		●	●	●	11	30	1.3	150
P	QN10	GY		●	●		11	30	1.3	150
P	QN15	GY	●	●	●		11	30	1.3	150
P	RN12	GY		●	●		11	30	1.3	150
P	RN20	GY		●	●		11	30	1.3	150

Patterns (Scale 1:2.5)



Dimensions produced

Length min.	(width ≤ 600 mm)	1740 mm
Length min.	(width > 600 mm)	1870 mm
Length max.	(standard)	5840 mm
Width max.	(standard)	1360 mm
Length max.	(special dimensions)	6000 – 24000 mm
Width max.	(special dimensions)	2200 mm

Tolerances

Internal length	≤ 5000 mm	+ 0.5/–1 %
	> 5000 mm	± 1 %
Width	≤ 2000 mm	± 1 %, min. 3 mm
Thickness		± 0.5 mm

Key

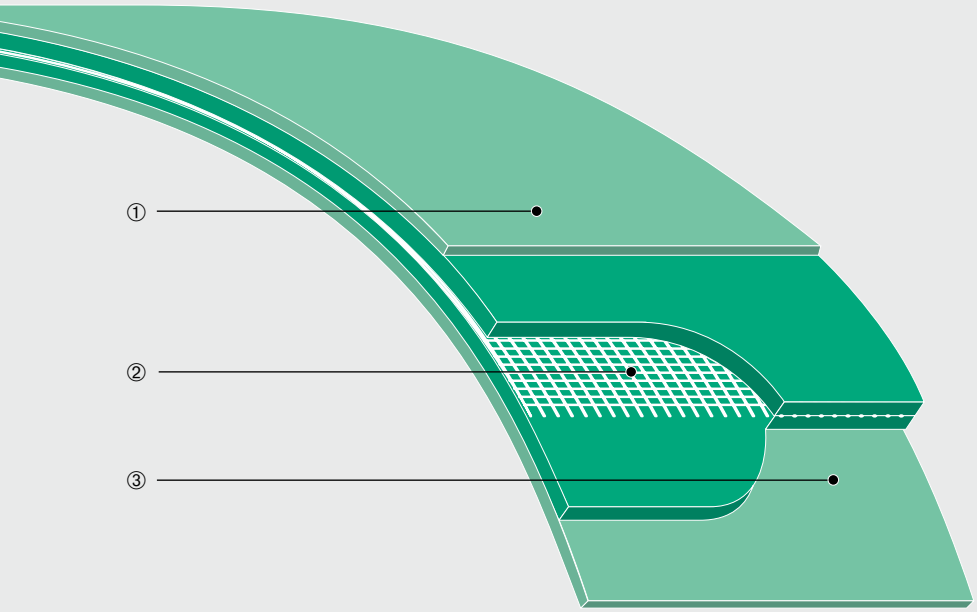
* **Tension member** — **Underside**
- **S** = single-ply polyester fabric + polyester fabric
- **L** = double-ply polyester fabric + polyester fabric
- **M** = double-ply polyester fabric + cotton fabric
- **P** = triple-ply polyester fabric + polyester fabric (cotton on request)

** **GY** = grey
Very shock and tear proof, resists pressure with high level of drag.

BK = black
Same properties as GY, but also antistatic in accordance with DIN 22104.
A further black recipe resistant to oil and grease is also available on request.

siegling extremultus

Power transmission belts for live roller conveyors and processing machines



Siegling Extremultus product structure

① **Friction layer |** Rubber elastomer or urethane.

② **Tension member structure |** with tension member made of polyester fabric or polyamide belt (not shown).

③ **Friction layer |** Rubber elastomer, urethane or fabric as underside (TG 30E-30).

The combination of tension member and coating gives the belts its special profile of properties – customised to the type of conveyor and each type of drive task.

The tension member is made of polyamide sheet, polyester fabric or polyester cord (endless series) and is embedded in a thermoplastic intermediate layer. Highly elastic elastomer or urethane provide the coating materials.

The properties	The advantages
endless splicing without adhesives*	short fitting times
extremely flexible	very small drum diameters possible
does not absorb moisture*	consistent tension, independent of ambient conditions
minimal flexing	low energy consumption

Siegling Extremultus live roller drives are easy to clean and resistant to most oils, grease and many solvents.

* Applies to E types and endless types.

Technical Data		Article number	Total thickness approx. [mm]	Weight approx. [kg/m²]	ε_{max} [%]	F_w value approx. [N/mm] (ε = 1%; β = 180°)	Nominal effective pull approx. [N/mm belt width] (ε = 2%; β = 180°)]*	d_{min} approx. [mm]**	Permissible operating temperature [°C]	Max. width supplied [mm]	Recommendations for use	Board conveying	Wood sanding machines	Live rollers	Flakers, chippers
E types – polyester fabric tension members															
GG 20E-20 NSTR/FSTR	grey/black	822145	2.0	2.2	2.0	20	20	24	–20/+70	500				●	
GG 30E-32 FSTR/FSTR	black	822118	3.2	3.55	2.0	30	30	40	–20/+70	500				●	
TG 30E-30	black/green	822058	3.0	3.2	2.0	30	–	40	–20/+70	500		●		●	
UU 20E-16 FSTR/FSTR	green	822055	1.6	1.85	2.0	20	14	30	–20/+70	500				●	
UU 30E-20 FSTR/FSTR	green	822133	2.0	2.2	2.0	30	20	30	–20/+70	500				●	
UU 30E-32 FSTR/FSTR	green	822105	3.2	3.55	2.0	30	20	30	–20/+70	500				●	
Endless types – polyester cord tension members															
GT 40E	black	810032	2.4	2.5	1.5	80	40 [1)]	160	–20/+60	480 [2)]			●		
P types – polyamide belt tension members															
GG 14P-30	green	850324	3.0	3.4	3.0	14	14	30	–20/+80	500				●	
GT 40P	black	850049	3.65	4.0	3.5	40	40	200	–20/+80	1000					●
GT 54P	black	850050	4.5	4.9	3.5	54	54	300	–20/+80	1000					●
GT 80P	black	850051	6.0	6.4	3.5	80	80	400	–20/+80	1000					●

* The nominal effective pull states the possible power transmission in N/mm belt width (standard ambient conditions 23 °C/50 %) that the belt type can produce at nominal elongation.

** The lowest permissible pulley (roller) diameters were established in standard ambient conditions. Lower temperatures or especially low humidity require bigger diameters.

1) At 1 %

2) Length supplied 420 to 13700 mm

Type key for Siegling Extremultus flat belts

GG 30E - 32 FSTR/FSTR black
GT 40E black
GG 14P - 30 green

- Colour
- Fine pattern
- Overall thickness [1/10 mm]
- Tension member material
- Specific effective pull [N/mm] belt width
- Conveying roller's coating
- Drive roller's coating

A Aramide
E Polyester
G Rubber/elastomer
P Polyamide
U Urethane

Siegling – total belting solutions

Committed staff, quality-orientated organisation and production processes ensure the constantly high standards of our products and services. The Forbo Siegling Quality Management System is certified in accordance with ISO 9001.

In addition to product quality, environmental protection is an important corporate goal. Early on we also introduced an environmental management system, certified in accordance with ISO 14001.

Forbo Siegling service – anytime, anywhere

The Forbo Siegling Group employs more than 2,000 people. Our products are manufactured in nine production facilities across the world. You can find companies and agencies with warehouses and workshops in over 80 countries. Forbo Siegling service points are located in more than 300 places worldwide.

MOVEMENT SYSTEMS

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