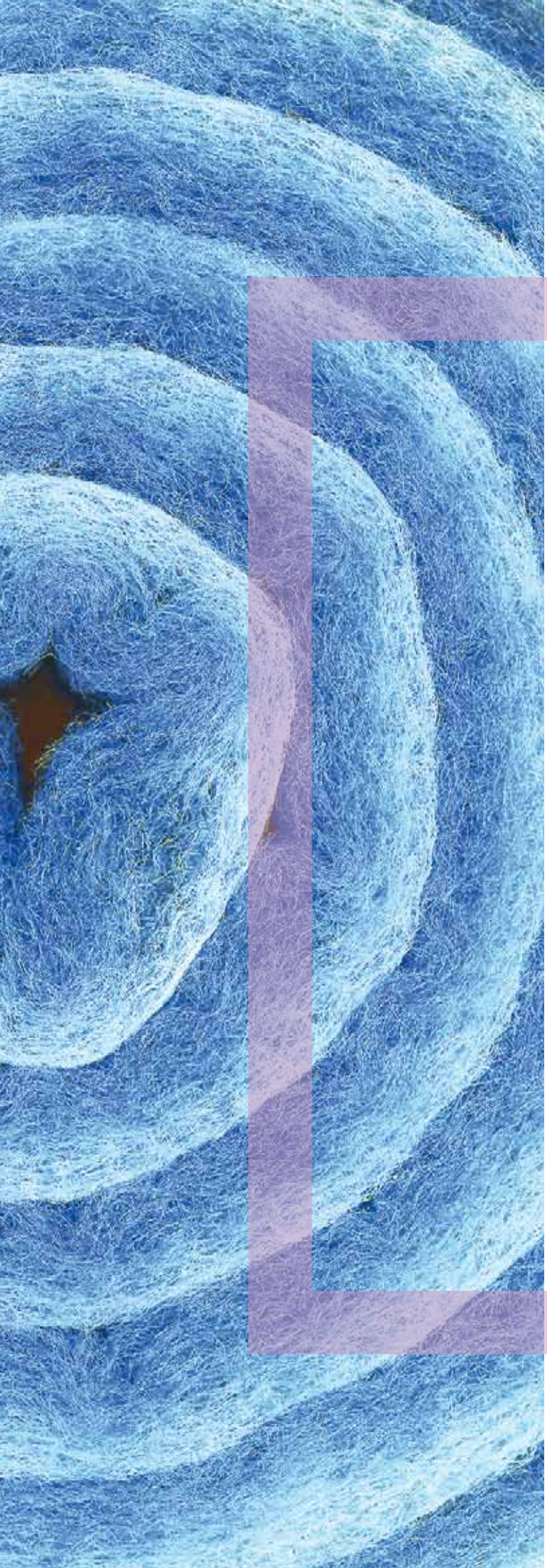
Textiles – Nonwovens

siegling
belting

Web-laying belt with LF coating
NEW

Siegling – total belting solutions

Forbo
MOVEMENT SYSTEMS



siegling transilon in the nonwoven and clothing industry …

As the worldwide leading manufacturer of conveyor and processing belts made of modern synthetics, Forbo Siegling have developed a product range for the special requirements of the nonwoven and clothing industry.

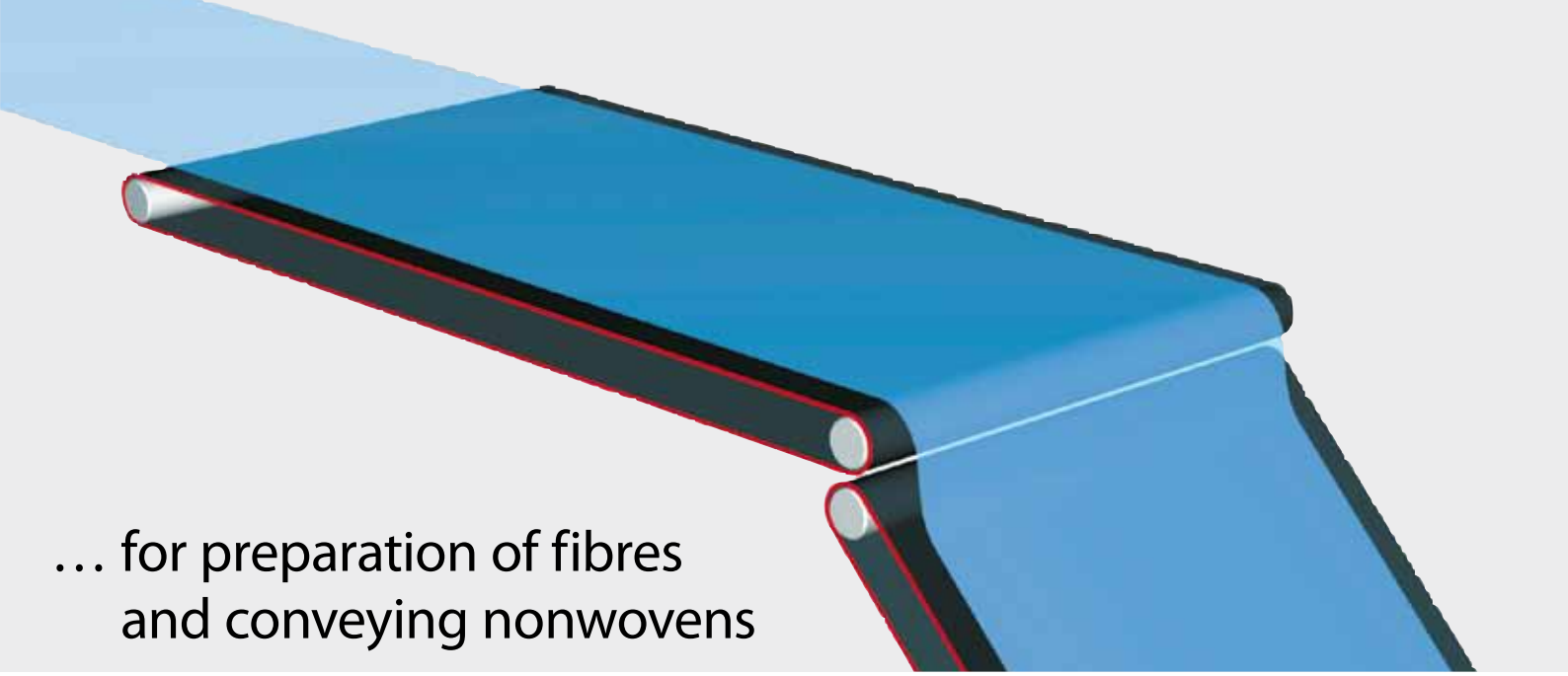
Siegling Transilon can be spliced quickly and simply, is maintenance-free, easy to track and has a long service life. Many types are extremely well suited for various applications:

- strong belts for unravelling machines and blenders
- extremely light-weight and smooth belts for high-speed cross-lappers
- cut-resistant belts for strip-cutting machines
- belts with special top face constructions for gentle conveying in laundry folders

Our close cooperation with original equipment manufacturers and users ensures that Siegling Transilon meets all the requirements for production reliability and productivity.

Simple splicing using practical fitting equipment and reliable splicing methods round off the Forbo Siegling product and service range.

The conditions under which conveyor and processing belts are used are extremely diverse. Even more reason to use Siegling Transilon and take advantage of the experience and competence of your Siegling partner.

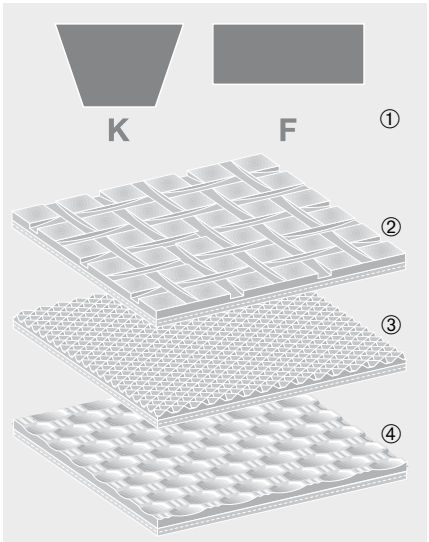


… for preparation of fibres and conveying nonwovens

The Siegling Transilon product range includes numerous fabric designs and coating materials. Combinations of these make it possible to customise the mechanical, chemical and electrostatic properties of each belt type.

Various top face patterns and splice types mean the belts can handle each individual conveying job when conveying fibres and other steps in nonwoven manufacture.

Profiles/patterns

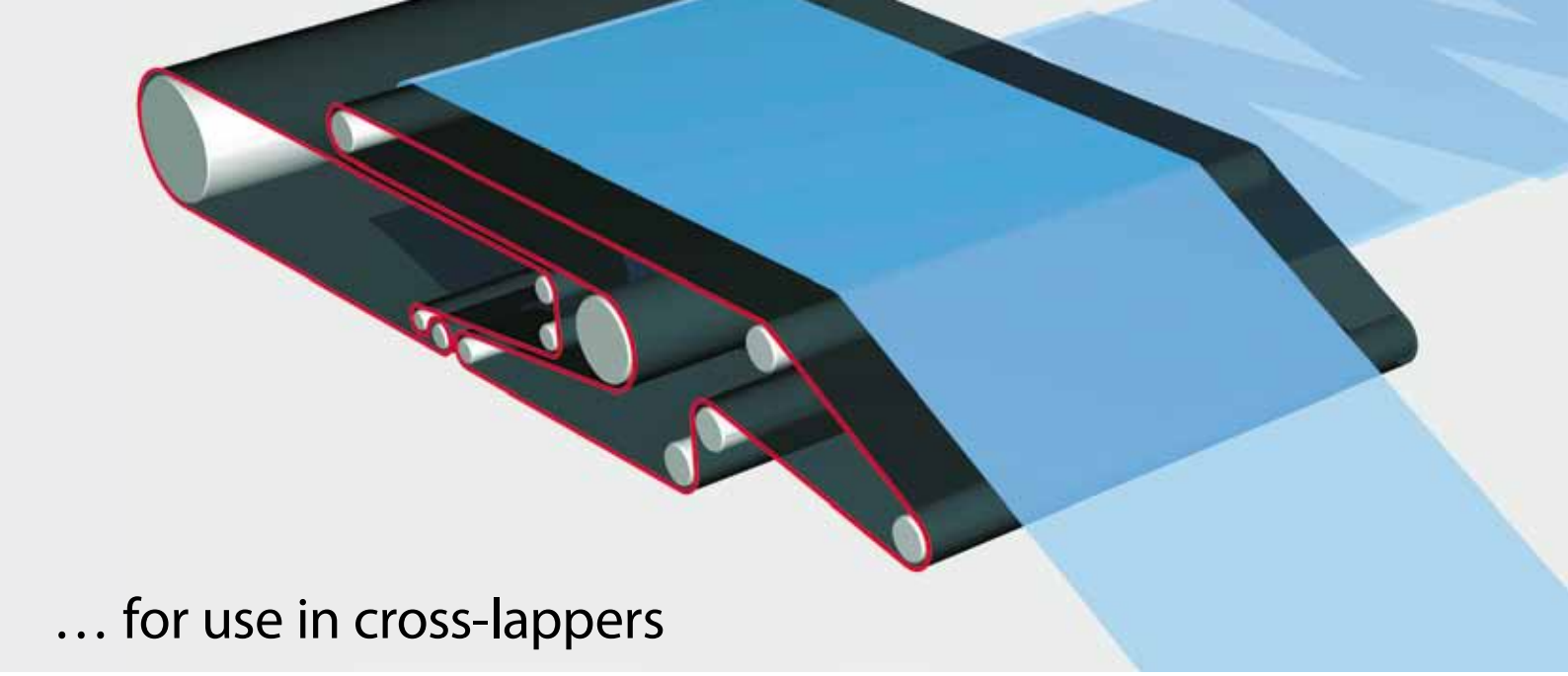


① For machinery without belt-tracking systems with short centre distances, longitudinal tracking profiles are often used. Profiles made of PVC, urethane or polyester are available.

②③④ Siegling Transilon patterned belts with special surface properties: For inclined conveying, pickoff functions and conveying nonwovens without any distortion.

② Lattice pattern (SG)
③ Inverted pyramid pattern (NP)
④ Normal textured surface (STR)

Forbo
MOVEMENT SYSTEMS



… for use in cross-lappers

The technical demands placed on web-laying belts are rising steadily in the face of ever faster machine speeds and the use of finer and more demanding synthetic nonwoven fibres and reduced web weights.

The ideal material combination of dimensionally-stable polyester core fabric and extremely light polyamide coating minimises the belt weight while at the same time improving mechanical properties such as lateral stiffness, tracking, wear-resistance, flatness and dimensional stability.

The coating, using special process technology, is unique. In contrast to belts with conductive top coatings, it is highly conductive over its entire thickness and sets new standards with its electrostatic properties. In addition, it also provides excellent chemical resistance to the oil mist common in the trade.

With the new LF (low friction) coating, the laying belt slides even more easily through the laid-down web – the upper web layer does not become compressed, and the web edges are aligned congruently.

The Properties	The Advantages
highly conductive coating	no malfunctions due to electrostatic build-up
reduced surface friction coefficient, new LF coating	practically no relative motion, possible to dip into web, clean laying pattern
low belt weight	higher laying speeds, smooth reversing motion at web edge
laterally-stiff belt construction	excellent flatness, significantly reduced risk of web creasing
reliable, flexible splice	homogeneous surfaces, no web adhesion, do-it-yourself splicing possible

Forbo Siegling Quality – for the quality of your production

The delivery of the web with almost no relative motion from the reciprocating movement in the cross lapper and a defined laying pattern with a clean edge – even at high laying speeds – are decisive for the quality of your production. It is also necessary to deal with vital system conditions such as air currents and production characteristics specific to the product being manufactured. The lower web ply on the lattice apron may not be pressed together and the edges should be flush.

Thanks to the exceptionally highly-conductive coating with reduced coefficient of friction, the new Transilon web-laying belts make it possible to lay the web perfectly and to dip into the layered web. This new type of homogeneous coating design guarantees constant belt properties and continuously high product quality, even in the case of mechanical wear from clearer flats or occasional minor malfunctions.

And that's why the leading producers of nonwovens place their trust in Forbo Siegling.

E 4/1 P2/P2 MT/MT-HC black

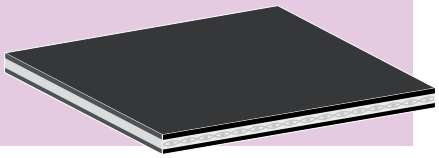
exceptionally light-weight

– for use on high-speed layers with carriages driven separately by either cable or timing belt

Production width	3500 mm
Total thickness	approx. 0.75 mm
Weight	approx. 0.8 kg/m^2
Splice	Z or wedge-overlap

– with highly-conductive coating of black polyamide on both sides

– with single-ply tension member consisting of laterally-stiff polyester fabric



E 4/2 U0/P2 MT-HC black

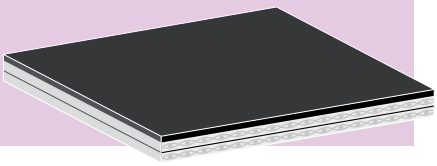
exceptionally robust

– for general applications and as replacement belts on existing machines

Production width	3000 mm
Total thickness	approx. 1.1 mm
Weight	approx. 1.0 kg/m^2
Splice	Z or wedge-overlap

– with highly-conductive coating of black polyamide on one side

– with 2-ply tension member consisting of laterally-stiff polyester fabric



E 4/2 U0/U2 LF-HC black

NEW

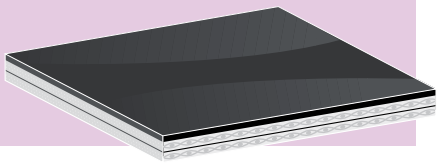
exceptionally low drag

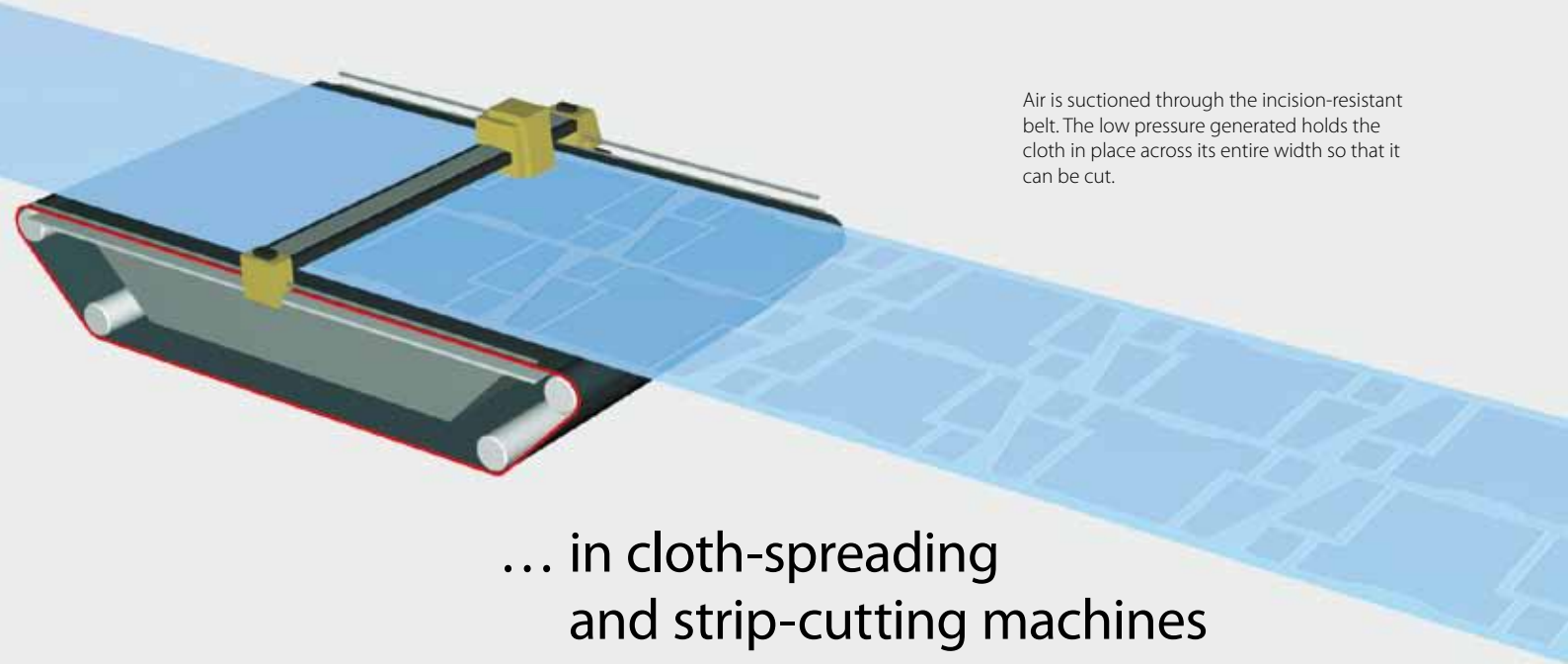
– for use on high-speed systems and for processing ultrafine fibres

Production width	3500 mm
Total thickness	approx. 1.0 mm
Weight	approx. 1.0 kg/m^2
Splice	stepped Z-splice

– with highly-conductive LF coating made of black urethane on one side

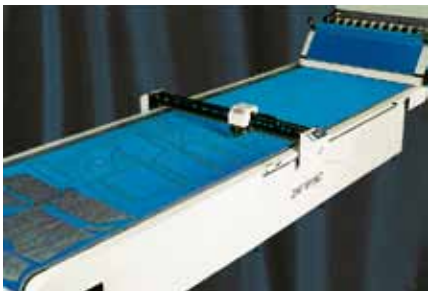
– with 2-ply tension member consisting of laterally-stiff polyester fabric





Air is suctioned through the incision-resistant belt. The low pressure generated holds the cloth in place across its entire width so that it can be cut.

… in cloth-spreading and strip-cutting machines



Continous flow of material: Delivery, cutting discharge on a running conveyor belt.

In automatic cutting machines, NOVO types are used. These belts are made of homogeneous polyester fibre bundle and are exeptional due to the following properties:

- low-noise
- flat surface with good grip for the gentle and reliable conveying of cloth
- exceptionally good cut resistance (cuts into the belts close on their own).
- air-permeable (cloth is suctioned through the belt which holds it in place).

As a smooth base for manual cutting, our belt type E 8/2 U0/U2 LF green is used. Its surface with an extremely low friction coefficient (LF = low friction) has significant advantages over conventional belt surfaces:

- only approximately 1/3 of the drag of standard coatings
- material can be moved and positioned on the surface very easily
- knife runner slides easily on the top face, reducing wear on the runner and belt as well as enabling precise cutting with little effort.

… in laundry folders

The type E 2/1 0/V/NOVO-NA-Q grey is ideal for use on laundry folders.

- good, gentle grip of textiles
- mechanical fasteners possible (hook embeds easily)
- underside fabric of polyester maintains tension and has low drag.

Wherever good grip properties are required, belt types with a lattice pattern (SG) can also be used (see page to the right).

Product Range (Selection)

Technical data, properties and recommendations, possible applications	Total thickness approx. [mm]	Weight approx. [kg/m²]	Effective pull at 1% elongation ($k_{1\%}$ relaxed) [N/mm width]*	d_{min} approx. [mm]	Machinery for unravelling and preparing fibres	Blenders and charging machines	Cards, web conveying in general	Web-layers, cross-lappers	Needle machines	Coating and drying machines	Cloth-spreading and strip-cutting machines	Laundry folders
Polyester types												
E 2/1 0/V/NOVO-NA-Q grey	1.65	1.45	1.5	30								●
NOVO 25-HC black	2.5	1.3	7	40							●	
NOVO 40-HC black	4.0	2.2	7.5	70							●	
Urethane types												
E 3/1 U0/U2 HACCP white FDA	1.15	1.2	3.5	r 3–8					●			
E 3/2 U0/U2 HACCP white FDA	1.45	1.6	5.5	r 3–8	●				●	●		
E 4/2 U0/U2 LF-HC black	1.0	1.0	3	60				●				
E 8/2 U0/U2 LF green	1.45	1.6	6.5	40/25 (Z)[2]			●				●	
PVC types												
E 8/2 U0/V5 green	2.2	2.5	7	40/30 (Z)[2]	●	●	●		●	●	●	●
E 8/2 U0/V5H MT black	2.2	2.5	6.5	50/40 (Z)[2]	●	●	●	●	●	●	●	●
E 8/2 U0/V5 NP white FDA	2.1	2.15	6	40		●	●			●		
E 8/2 U0/V7 SG black	2.3	2.45	6	40		●	●					●
E 8/2 U0/V10 SG green	2.6	2.85	6.5	60		●	●					●
E 8/2 V5/V5 STR/GL green	2.65	3.2	6.5	40	●	●				●		
E 12/2 U0/V7 green	2.85	3.4	10	60		●	●				●	
E 12/2 U0/V20 green	3.35	4.1	10	60		●					●	
Polyamide types												
E 4/1 P2/P2 MT/MT-HC black	0.75	0.8	3.5	80[1]				●				
E 4/2 U0/P2 MT-HC black	1.1	1.0	4	60			●	●				

Abbreviations

* Established in line with ISO 21181:2005

[1] use in cross-lappers

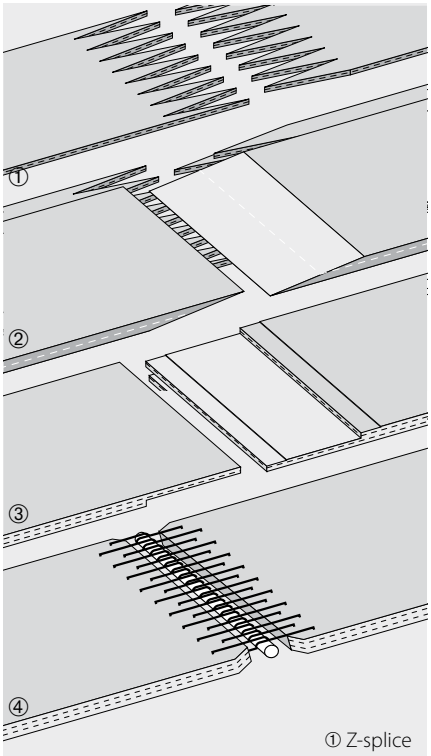
[2] (Z) = only with Z-splice

GL = Smooth surface
MT = Matt surface
NP = Inverted pyramid pattern
SG = Lattice pattern
STR = Normal textured pattern

FDA = FDA-compliant
HACCP = Supports the HACCP concepts
HC = Highly-conductive
LF = Low friction
Q = Laterally soft tension member, not for curved belts

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.

Types of splices

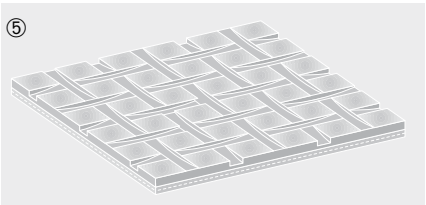


① Z-splice
② Stepped Z-splice
③ Overlap splice
④ Wire hook fastener

Available as

- endless belts
- belts prepared for hot or cold-pressing on site
- roll material for independent belt fabrication
- belts with mechanical fasteners
- belts with sealed edges (Proseal)
- belts with profiles welded on

The Siegling Transilon range is continually supplemented by innovative developments to meet the requirements of the market.

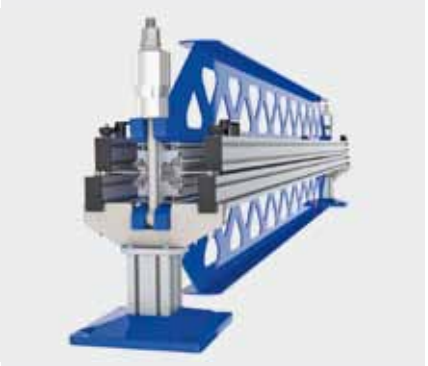


⑤ Lattice pattern

Splice technology

Simple, rapid methods allow on-site splicing while also achieving high splicing reliability.

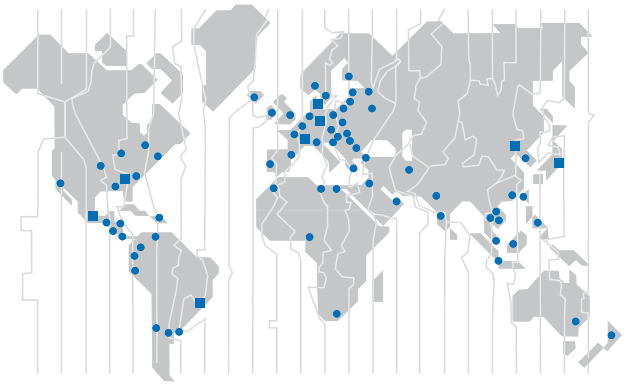
For easier handling directly on the system, Forbo Siegling now supplies an innovative series of presses. One of their top features is their extremely low weight; they can, in their largest version, be used for belt widths of up to 4000 mm. The low press weight makes fitting much easier.



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 DIN EN 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

In the company group, Forbo Siegling employs more than 1800 people worldwide. Our production facilities are located in nine countries; you can find companies and agencies with stock and workshops in more than 50 countries. Forbo Siegling service centres provide qualified assistance at more than 300 locations throughout the world.

MOVEMENT SYSTEMS

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