Logistics

siegling
belting

Siegling – total belting solutions

forbo
MOVEMENT SYSTEMS

A reliable, quick route to the market

Due to the widespread reduction in traditional warehousing and much lower stock levels in supply chains, lead times from production to the consumer are increasingly shorter.

So accurate order picking and distribution are increasingly playing a key role in a company's success.

This places high demands on the performance and reliability of systems and requires first-class components.

Specialised research in close co-operation with users and OEM's, ensures that Forbo Siegling products give maximum performance in the logistics industry.

- **They are totally reliable for all types of conveying.**
- **They can cope with very high demands when conveying different types of goods.**
- **They are particularly economical to operate.**

They are used in all sorts of very different applications. So please draw on the competent experience with applications your Forbo Siegling contact person has to offer.

Reliable fitting:
With the B_Rex calculation programme

B_Rex means that designers and users can simulate nearly every possible conveyor configuration using Forbo Siegling conveyor and power transmission belts.

So calculating how to fit conveyors and belt drives is much easier, quicker and more accurate.

The B_Rex page under www.forbo-siegling.com provides more detailed information on this.

Contents

Detailed information on special applications and extra products can be found in the following Forbo Siegling brochures:

Siegling Belting at Airports
Ref. no. 242

Siegling Transtex Conveyor belts
Ref. no. 214

Siegling Transilon Round belts
Ref. no. 229

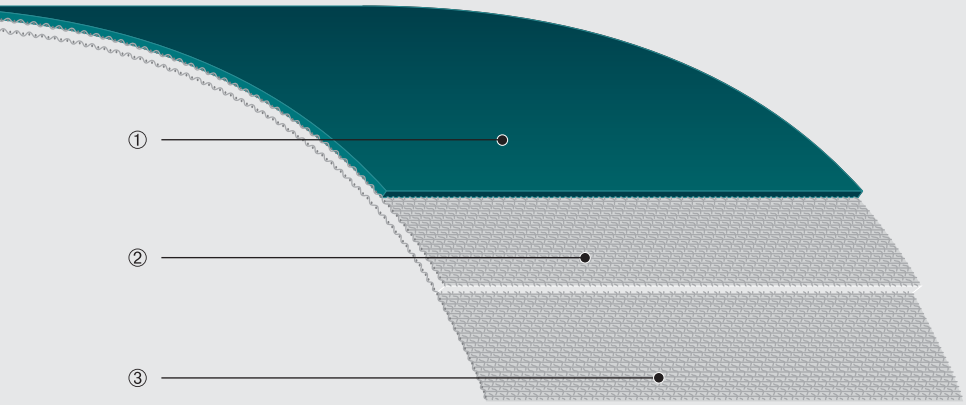
Siegling Transilon · Siegling Prolink
Conveyor and timing belts
for drag band conveyors
Ref. no. 232

Siegling Prolink Modular belts
Ref. no. 223

forbo
MOVEMENT SYSTEMS

siegling transilon

Conveyor and processing belts for dependable conveying



From robust all-rounders to high-tech specialists:

The Siegling Transilon range for logistics has a huge selection of types for the most varied of conveying tasks.

High performance and economical to use, they support smooth operation in all logistics processes.

Siegling Transilon product structure

① **Top face |** Various coating materials, thicknesses and patterns, as well as the chemical, physiological and mechanical properties 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

Horizontal conveying

Even seemingly simple conveying jobs require numerous different belt properties.

For different goods to be conveyed, speeds, types of reversing, stop and go and accumulation operation and other operating conditions, Forbo Siegling supplies ideal belt types.

Curved conveying

Forbo Siegling's curved belts are suitable for all types of belt tracking systems and are used on the conveyors of many renowned manufacturers. Due to almost completely automised manufacturing processes Forbo Siegling can guarantee that geometric accuracy is adhered to when supplying fabricated belts.

The manufacture of **curved belts** from several segments means optimum load distribution in the belt so that even heavy goods can be conveyed reliably.

Telescopic conveyors
(at the top left)
are suitable for counter bending and can also cope with high point loads.

Accumulation
(bottom left)
requires very smooth, durable surfaces.

In **cross belt sorters** high acceleration means extremely high friction coefficients in the belt's top face.

Collection and distribution

When using pushers and dischargers, the lateral stiffness of the belt guarantees it is flat and is directionally stable. Very smooth, tough surfaces make transferring and discharging the goods conveyed possible.

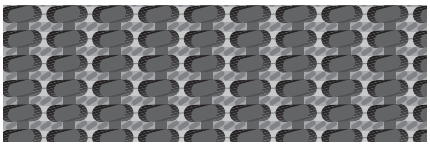
By contrast, cross belt sorters require very thin, flexible belts with high surface friction coefficients. With a special type of tension member, power consumption is very low.

In **merges** the belts that operate in a set, are usually tensioned in one go. This requires particularly low length tolerances.
High friction coefficients on the top face guarantee precise transfer to the sorter.

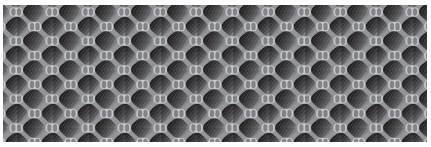
Inclined conveying

Even with smooth belt surfaces the goods can be conveyed on a slope. The conveying angles that can be used here depend on the type of goods, the top face coating and external influences such as dust, moisture etc.

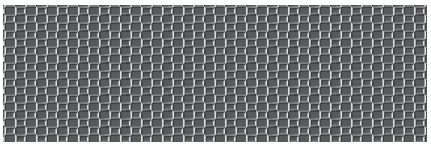
For larger conveying angles and when conveying small components and bulk goods, Forbo Siegling supplies belts with patterns or lateral profiles.



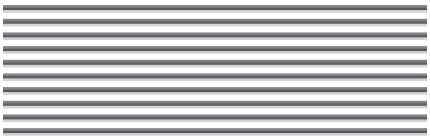
Anti-skid pattern (Scale 1:1)



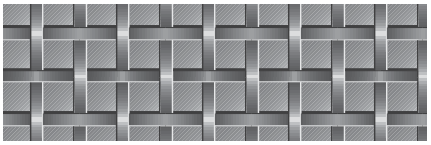
Coarse textured surface (Scale 1:1)



Normal textured pattern (Scale 1:1)



Longitudinal groove (Scale 1:1)



Lattice pattern (Scale 1:1)

Check-in pattern (Scale 1:4)

Rhomboid pattern (Scale 1:2)

Forbo Siegling has developed and optimised a variety of **surface patterns** for very different applications.
With Siegling Transilon patterned belts an angle of incline of up to 30° can be achieved without profiles.

Greater safety with ATEX-compliant processing belts

If required Forbo Siegling can supply belts that are permitted for use in explosive atmospheres.

As we continually add to our ATEX product range, please ask your Forbo Siegling contact person about the types currently available.

Of course we are also available to advise our customers personally on current and future aspects of ATEX.

Product range Logistics

		Technical data, properties and recommendations, applications	Article no.	Overall thickness approx. [mm]	Weight approx. [kg/m²]	Effective pull at 1% elongation ($k_{1\%}$ relaxed) [N/mm width]*	d_{min} approx. [mm]**	Permissible operating temperature [°C]
E 5/2	0/V5	green	900016	1.95	2.3	4.5	25	–10/+70
E 5/2	0/V5H MT	black	906176	1.9	2.2	4.5	40	–10/+70
E 5/2	0/V5 NP-SE	black	999802	2.2	2.2	3	40	–10/+70
E 8/2	U0/U2 MT-C-SE[1)]	black	906391	1.2	1.4	6.5	40	–30/+100
E 8/2	0/U10 S/LG	green	904358	2.2	2.2	8	40	–30/+100
E 8/2	U0/V/U2H MT	green	900170	1.6	1.8	8	40/60[2)]	–10/+70
E 8/2	U0/V/U2H MT-SE	black	906401	1.65	2.0	7	40/60[2)]	–10/+70
E 8/2	U0/V5	green	900025	2.2	2.5	8	40	–10/+70
E 8/2	0/V5 S/GL	black	906343	2.1	2.35	8	60	–10/+70
E 8/2	0/V5H S/MT	black	996141	2.2	2.5	8	50	–10/+70
E 8/2	U0/V5H MT	black	900026	2.2	2.5	8	50	–10/+70
E 8/2	U0/V5H MT-SE	black	999967	2.25	2.7	6.5	60	–10/+70
E 8/H	U0/V6 NP	black	906386	1.85	1.6	12	20	–10/+70
E 8/2	U0/V7 SG	black	906286	2.3	2.45	8	40	–10/+70
E 8/2	U0/V10 SG	green	900086	2.6	2.85	8	60	–10/+70
E 8/2	U0/V10H-M-SE[1)]	black	906538	3.1	3.6	7	60/90[2)]	–10/+70
E 8/H	U0/V10S LG	black	906446	2.15	2.1	12	40	–10/+70
E 8/2	U0/V15 LG	green	900199	3.1	3.4	8	60	–10/+70
E 8/2	U0/V15 LG	black	900275	3.1	3.4	8	60	–10/+70
E 8/2	U0/V15 LG-SE	black	906313	3.1	3.4	7.5	60	–10/+70
E 8/2	U0/V15 LG-M-SE[1)]	black	906539	3.6	3.9	7	60/90[2)]	–10/+70
E 8/2	U0/V20 AR	green	900037	4.9	4.0	8	40/60[2)]	–10/+70
E 8/2	U0/V20 AR	black	900087	4.9	4.0	8	40/60[2)]	–10/+70
E 8/2	U0/V20 AR-SE	black	999532	4.9	4.2	7.5	60	–10/+70
E 8/2	U0/V80 CH-SE[1)]	black	906277	8.2	4.4	8	60/120[2)]	–10/+70
E 8/2	U0/V80 R80-SE	black	996121	8.2	4.7	8	60/120[2)]	–10/+70
E 12/2	U0/U0 FDA	transparent	900040	1.4	1.4	6.5	60	–30/+100
E 12/2	0/UH	green	906509	1.45	1.5	14	40/60[2)]	–30/+100
E 12/2	U0/U2-C FDA	green	900041	1.85	2.0	6.5	60	–30/+100
E 12/2	0/U2 MT-C-SE	black	906479	1.85	1.9	6.5	40	–30/+100
E 12/2	U0/V0/U0	anthracite	906458	2.05	2.2	13	60	–10/+70
E 12/2	U0/V/U0 SE	black	999903	2.0	2.3	10	90	–10/+70
E 12/2	U0/V/U4 GSTR-C	black	999979	2.4	2.3	6.5	60	–10/+70
E 12/2	U0/V3-C	green	900044	2.3	2.7	6.5	60	–10/+70
E 12/2	U0/V3 MT-C	black	900264	2.3	2.7	6.5	60	–10/+70
E 12/2	U0/V6 GSTR-C-SE	black	906495	2.55	2.7	6.5	30/60[2)]	–10/+70
E 12/2	U0/V7	green	900045	2.8	3.3	11	60	–10/+70
E 12/2	V5/V10 STR/GL	green	900053	3.25	3.9	14	60	–10/+70
E 15/M	V1/V10H MT	green	900324	5.0	5.4	12	125	–10/+70
NOVO	40 HC	black	900221	4.0	2.2	12	70	–10/+120
NOVO	60 HC	black	900286	5.5	3.1	12	120	–10/+120

Type key for Siegling Transilon conveying and processing belts

E 8 / 2 U0 / V5H MT black

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

Tension member types	
E	Polyester

Construction	
1, 2, 3	Number of fabric plies
H	HiTech-fabric
M	Solid-woven material
NOVO	Polyester non-woven

Coatings	
V	PVC
VH	Hard PVC
VS	Soft PVC
U	Urethane
UH	Hard urethane
0	Uncoated
U0	Impregnated

Horizontal conveyors	Telescope conveyors	Live roller conveyors	Pre-sorters with in- and outfeed merges	Carrier cell belt sorters	Accumulation/discharge	Coding	Inclined conveying	Curved conveyors	Highly-conductive (HC)	Flame-retardant (SE)	Check-in
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siegling transilon
conveyor and processing belts

For every type listed a data sheet with all relevant technical information is available on request.

Newly developed product innovations are being added to the Siegling Transilon product range constantly to meet the requirements of the market.
The adjacent table was correct at the time of going to press. Please visit **www.forbo-siegling.com** to check the latest data and application examples.

* Established in line with ISO 21181:2005

** Minimum drum diameters were determined at room temperature and do not apply to conveyor belts with mechanical fasteners. Lower temperatures require larger drum diameters. Belts with profiles or sidewalls may require larger drum diameters. Please see brochure ref. no. 318, Siegling Transilon Technical Information 2.

● Yes

❍ On request

1) On request

2) Without/with counter-bending

Top face patterns	
AR	Anti-skid pattern
CH	Check-in pattern
GL	Smooth surface
GSTR	Coarse textured pattern
LG	Longitudinal groove
MT	Matt surface
NP	Inverted pyramid pattern
R	Large diamond pattern
R80	Rhomboid pattern
SG	Lattice pattern
STR	Normal textured pattern

Belt properties	
C	Laterally flexible, suitable for curved belts
FDA	FDA-compliant
HC	Highly-conductive
M	Particularly stiff laterally
S	Very low noise
SE	Flame-retardant

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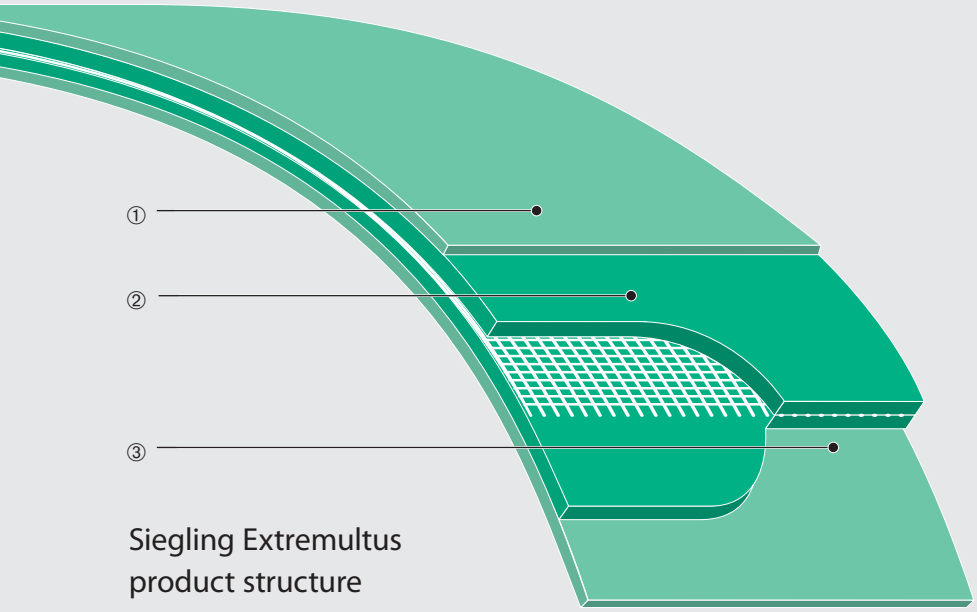
MOVEMENT SYSTEMS

siegling extremultus

Power transmission belts for live roller conveyors



Siegling Extremultus product structure

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

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

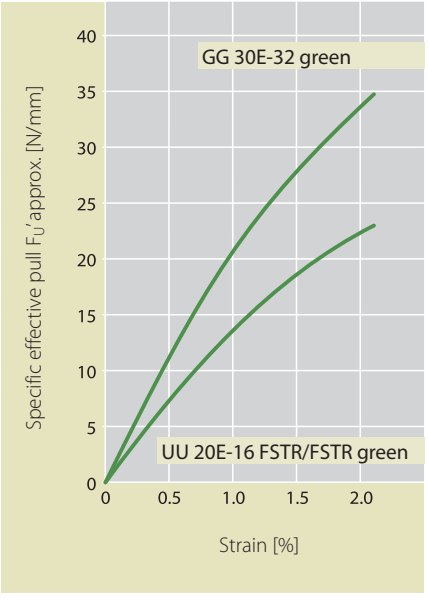
③ **Friction layer |** Rubber elastomer or urethane.

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 consists of polyamide or alternatively of polyester or aramide fabric 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 A and E types.



A comparison of effective pull/strain figures

Product range Logistics

Technical data, properties and recommendations		Article no.	Overall thickness approx. [mm]	Weight approx. [kg/m²]	ε_{max} [%]	F_U ' approx. [N/mm] (ε = 0,5 %; β = 180°)	F_U ' approx. [N/mm] (ε = 2,0 %; β = 180°)	d_{min} approx. [mm]	Permissible operating temperature [°C]
E types – polyester fabric tension members									
GG 20E-20	green	822052	2.0	2.3	2.0	–	20	30	–20/+70
GG 20E-30	green	855538	3.0	3.4	2.0	–	20	40	–20/+70
GG 30E-32	green	822051	3.2	3.4	2.0	–	30	40	–20/+70
UU 20E-16 FSTR/FSTR	green	822055	1.6	1.85	2.0	–	20	40	–20/+70
UU 30E-32 FSTR/FSTR	green	822105	3.2	3.55	2.0	–	30	60	–20/+70
A types – aramide fabric tension members									
GG 25A-20	blue	822042	2.0	2.25	0.8	25	–	40	–20/+70
UU 15A-17 FSTR/FSTR	green	995473	1.7	1.9	0.8	15	–	30	–20/+70
P types – polyamide belt tension members									
GG 14P-30	green	850324	3.0	3.4	3.0	–	14	40	–20/+80

E

Power transmission belts with polyester fabric tension members can transmit high levels of effective pull and have a very good price/performance ratio.

With different fittings, they are the optimum solution for almost all applications.

- They are the ideal combination of elastic modulus and damping,
- are made endless without any adhesives (short fitting times),
- are simple to handle,
- have short take-up ranges.

A

Power transmission belts with aramide fabric tension members are designed for heavy duty service.

- The high elastic modulus means maximum power transmission,
- very short take-up ranges,
- are made endless without adhesives,
- require special design and specific handling.

P

Power transmission belts with polyamide tension members are laterally stiff and have good damping properties.

- They have maximum damping properties,
- are made endless with adhesive,
- strong edges.

Type key for Siegling Extremultus high efficiency flat belts

GG 30E - 32 green
UU 15A - 17 FSTR/FSTR green
GG 14P - 30 green

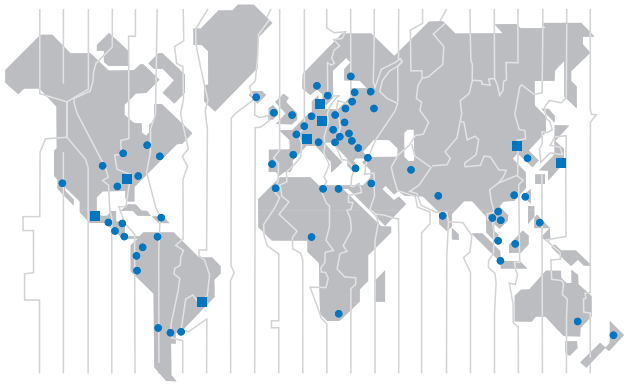
- Colour
- Fine pattern
- Overall thickness [1/10 mm]
- Tension member material
- Specific effective pull [N/mm] belt width
- Conveying roller's coating
- Drive roller's coating

A Aramid
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 DIN EN ISO 9001:2000.

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 1900 people worldwide. Our production facilities are located in eight 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.

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MOVEMENT SYSTEMS

Forbo Movement Systems is part of the Forbo Group, a global leader in flooring, bonding and movement systems.

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