

## siegling prolink

modular belts

# PRODUCT RANGE



Siegling – total belting solutions



## Traditional conveyor belts are often intended for generic use, but the design features of Siegling Prolink modular belts are aimed at providing specific processing and application benefits. This is why the Siegling Prolink modular belts are a perfect addition to Forbo Movement Systems existing wide range of belting products. Our vast experience in conveying and processing applications, combined with our line of highly specialized belts ensure that we can offer optimized conveying solutions regardless of the application. The Forbo Movement Systems name is synonymous with not only superior product quality, but also

only superior product quality, but also with professional technical support and quality service.

# SIEGLING PROLINK Plastic modular belting

## Modular means adaptable

Siegling Prolink offer a wide product range with many different module designs. Modules within individual product series can easily be combined. As a result, Siegling Prolink modular belts can be customized to suit individual conveying and processing tasks. We will help you identify the optimal solution for your specific needs.

Siegling Prolink is used successfully in a broad range of applications in industries such as:

- fruit and vegetable processing
- baked goods manufacturing
- meat, poultry and seafood processing
- automotive and tire manufacturing
- logistics

In these areas, Siegling Prolink modular belts often play a significant role beyond conveying.

## Benefits of modular belting

Modular belts are robust and durable and can handle conveying and processing tasks which may not be possible with conventional conveyor belting materials and types.

When assembled and installed, modular belts are endless, but if damage occurs, individual modules can quickly be replaced, thereby minimizing down time and maintenance costs. Modular belts can be supplied in any length and width and if needed, functional modules can be added at any time so belt properties can be changed if required.

The Siegling Prolink System – Every belt is a specialist!

#### **Design and quality**

Sophisticated module design, precise manufacturing and high-quality materials ensure optimal belt and application performance.

Page 5

#### **Functions and types**

The right belt for any application! The availability of a wide range of Siegling Prolink belts are shown by pitch, surface options and application (straight running and side-flexing)

Page 7

#### **Materials and properties**

In addition to standard materials, a lot of belt types are made of special materials. An overview.

Page 21

The high quality standards applied to the manufacturing and fabrication of Siegling Prolink modular belts ensure optimal application performance and the highest level of customer satisfaction. Our products are manufactured in accordance with the ISO 9001 QM-system which is audited and updated quarterly. Manufacturing tolerances, on-going testing and monitoring performed by our highly trained staff ensure a consistent and high level of product quality.

# SIEGLING PROLINK **DESIGN AND QUALITY**

## R & D Concepts

When developing Siegling Prolink modular belts and components, we collaborate closely with OEMs and end-users to ensure that customer expectations and application requirements are met. Many Prolink components are designed for particular conveying applications and processing requirements. This is your guarantee for optimal application performance when utilizing Siegling Prolink modular belts.

## Manufacturing quality

Our state-of-the-art design, tooling and processing technology reflect the importance we place on the ability to manufacture flawless components and parts according to specifications. A smooth surface is one of the hallmarks of superior-quality injection molded parts. We place an emphasis on maximizing the quality and consistency of all molded parts.

## Tolerances

Siegling Prolink injection molded modules and components as well as assembled belts are manufactured to tight tolerances. This is an integral part of our overall product design and allows for easy and efficient fabrication, and belt repair if needed. Reliable, actual belt dimensions are easily obtainable and can help simplify conveyor designs.

## Materials

We apply the same stringent requirements and demands from our material suppliers as we do from ourselves. Close collaboration with suppliers and vendors not only guarantees consistently high-quality parts and components when using standard materials but also when special materials are needed from time to time to meet specific application requirements and conditions. This is especially important if application temperatures are excessive or if chemical degradation from sanitizers is likely.

- application-driven module designs for challenging requirements
- efficient and effective R&D processes
- exceptional value
- less contamination risk
- easy to clean
- reliable conveying, even of sensitive products
- actual belt dimensions easily obtainable
- simplified conveyor designs

- superior functionality under all normal conditions
- long service life for belts and components

Siegling Prolink modular belts can be customized by using modules with different surface patterns and openings. Side guards, profiles and other accessories such as friction pads, wheel stoppers and Hold Down tabs can be added to most belt series, thereby optimizing the application.

Special modules and accessories for further customization are available, or can be developed according to customer specifications.

Please contact us if you have a specific request requiring a customized conveying application.

# SIEGLING PROLINK FUNCTIONS AND TYPES

## Straight running belts

#### Pitch 8 mm (0.31 in)



S13 | 0% open | Flat Top



S13 | 0 % open | Negative Pyramid

#### Pitch 12.7 mm (0.5 in)



S14 | 25 % open | Flat Top

#### Pitch 14 mm (0.55 in)



S4.1 | 0 % open | Flat Top



S4.1 | 21 % open | Flat Top



S4.1 | 0% open | Negative Pyramid



S4.1 | 21 % open | Nub Top



S4.1 | 0% open | Friction Top 1

#### Pitch 25 mm (1 in)



S2 | 0% open | Flat Top



S2 | 12% open | Flat Top



S5 | 45 % open | Grid Top



S10 | 36% open | Lateral Rib



S2 | 0% open | Friction Top



S8 | 0% open | Friction Top 1



S8 | 0% open | Flat Top



S10 | 22 % open | Flat Top



S2 | 57 % open | Grid Top



S10 | 0% open | Nub Top



S8 | 0% open | Slip-resistant



S8 | 0% open | Roller Top A90



S10 | 0% open | Flat Top



S10 | 36% open | Flat Top



S2 | 57% open | Raised Rib



S8 | 25 % open | Radius Top



S8 | 0% open | Non Skid



S8 | 0% open | FLT with PRR

#### Pitch 40 mm (1.6 in)



S7 | 0% open | Flat Top

S7 | 0% open | Non Skid



S7 | 6% open | Flat Top



S7 | 6% open | Non Skid



S7 | 0% open | Slip Resistant



S7 | 0% open | Friction Top 1



S7 | 0% open | FLT with PRR

#### Pitch 50 mm (2 in)



S1 | 0% open | Flat Top



S1 | 18% open | Flat Top



S6.1 | 23 % open | Flat Top



S3 | 0% open | Lateral Rib



S6.1 | 0% open | Nub Top



S6.1 | 0% open | FLT with PRR



S3 | 0% open | Flat Top



S3 | 16% open | Flat Top



S6.1 | 36% open | Flat Top



S3 | 16% open | Lateral Rib



S1 | 0% open | Non Skid



S6.1 | 0% open | Flat Top



S6.1 | 21 % open | Flat Top



S9 | 57 % open | Grid Top



S6.1 | 0% open | Cone Top



S1 | 0% open | Friction Top 1

## Side flexing and spiral belts

#### Pitch 25 mm (1 in)



S5 | 45 % open | Grid Top



S5 | 45 % open | Grid Top Reverse Guided



S5 | 45 % open | Grid Top Strong



S11 | 45 % open | Grid Top



S11 | 45 % open | Hold Down Caps



S5 | 39% open | Friction Top 1



S5 | 45 % open | Grid Top Guided



S5 | 45 % open | Nub Top



S5 | 33% open | Friction Top 2



S11 | 33% open | Friction Top 2

#### Pitch 50 mm (2 in)



S9 | 57 % open | Grid Top



S9 | 57% open | Grid Top Guided



S9 | 57 % open | Nub Top

## Modular belt series – Overview

Series	Pitch	Description
1	50 mm (2 in)	Medium to heavy-duty belt for industrial conveying tasks. Closed hinge design.
2	25 mm (1 in)	Light-duty belt for food, container handling and industrial use. Open hinge design.
3	50 mm (2 in)	Medium-duty belt for food and non-food use. Easy to clean. Open hinge design.
4.1	14 mm (0.55 in)	Light to medium-duty belt for food and non-food use. Small pitch allows tight product transfers using nose bars or sprockets. Open hinge design.
5	25 mm (1 in)	Light to medium-duty radius and spiral belt with stainless steel hinge pins. Exceptionally strong and versatile side flexing belt with large open area.
6.1	50 mm (2 in)	Medium to heavy-duty belt designed specifically for tasks requiring the highest hygiene standards in meat, poultry and seafood processing, including cutting, deboning and skinning lines. Easy to clean. Open hinge design.
7	40 mm (1.6 in)	Heavy-duty belt with superior pull strength and excellent durability for industrial applications. Designed for heavy loads, such as worker belts for the automotive industry, vehicle conveying, etc. Closed hinge design.
8	25.4 mm (1 in)	Medium to heavy-duty belt for industrial applications. Closed hinge design.
9	50 mm (2 in)	Medium to heavy-duty radius and spiral belt with stainless steel hinge pins. Exceptionally strong and versatile side flexing belt with large open area.
10	25.4 mm (1 in)	Light to medium-duty belt for hygiene-sensitive products. Easy to clean. Open hinge design.
11	25 mm (1 in)	Side flexing belt for conveying lightweight products. This light-weight belt has an exceptionally low turn radius of 1.4 x belt width.
13	8 mm (0.31 in)	Light to medium-duty micro pitch belt for food and non-food tight-transfer nose bar use. Open hinge design.
14	12.7 mm (0.5 in)	Medium-duty belt for food and non-food use. Small pitch allows tight product transfers. Bottom design optimized for nose bars. Strong closed hinge design.

## Load index

The following table shows the changes in load capacity between different materials and over all available series.

Series	PE	PP	POM	PA	Series	PE	PP	POM	PA
S	traight run	ning belts			S10-22 FLT	10%	17%	37%	
S1	60%	100%	133%		S10-36 FLT, S10-36 LRB	13 %	20%	43%	43 %
S2	10%	17%	23 %	17%	S11		30%	50%	50%
S3	20%	40%	53%		S13			13 %	
S4.1	10%	17%	33%	33%	S14	22%	30%	80%	
S5	33 %	60%	83%						
S6.1	43 %	60%	100%	100%		Side flexir	ng belts		
S7	60%	100%	200%		S5	-	56%	100%	-
S8		67 %	133%	100%	S5 RG, S5 ST	-	67%	117%	-
S8-0 RTP		67%			S9	-	89%	156%	124%
S9	40%	73%	100%	80%	S11	-	33%	56%	56%
S10-0 FLT, S10-0 NTP	20%	27%	67%						

## **Series 1** | Pitch 50 mm (1.97 in)

Belts for medium to heavy-duty industrial conveying applications



#### **Design characteristics**

- Narrow, closed hinge design provides high belt pull capacity
- Rigid module design makes belt suitable for long conveyors
- Closed solid edge design

#### Available surface pattern and opening area



S1-0 FLT Closed, smooth surface

S1-18 FLT Open (18%), smooth surface

S1-0 NSK Closed surface and non-skid pattern

S1-0 FRT1 Closed surface with friction top

## **Series 2** | Pitch 25 mm (0.98 in)

Belts for light-duty food and container handling applications



#### **Design characteristics**

- Hinges that open wide provides an easy-to-clean belt design
- Low belt weight reduces energy consumption
- Open edge design on flat top versions for unhindered drainage and closed edge design on grid top and raised rib versions

#### Available surface pattern and opening area



Open (57%), raised rib surface

Sprockets, profiles and side guards available in different sizes and designs



Sprockets, profiles, side guards and finger plates available in different sizes and designs



## Series 3 | Pitch 50 mm (1.97 in)

Belts for medium-duty food applications



#### **Design characteristics**

- Hinges that open wide, combined with smooth, flat channels on the underside provides an easy-to-clean belt design
- Open edge design for unhindered drainage

#### Available surface pattern and opening area



## Series 4.1 | Pitch 14 mm (0.55 in)

Belts for light to medium-duty food and non-food applications



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#### **Design characteristics**

- Small pitch belt for applications requiring small transfer gaps
- Hinges that open wide and flat channels on the underside ensure the belt is easy to clean
- Unique sprocket design with rounded tooth edges provides ideal load distribution
- Wide sprocket teeth ensure superior sprocket engagement and strength

#### Available surface pattern and opening area

S4.1-0 FLT



S4.1-0 NPY

Closed, smooth surface

Closed surface with inverted pyramid pattern

S4.1-0 FRT1 Closed surface with friction top

**S4.1-21 FLT** Open (21 %), smooth surface

S4.1-21 NTP Open (21 %) surface with round studs. Version available without round studs at the side (25 mm indent)

Sprockets and profiles available in different sizes and designs



Sprockets, profiles and side guards available in different sizes and designs



14

## Series 6.1 | Pitch 50 mm (1.97 in)

Belts for medium to heavy-duty, hygiene-critical applications



#### **Design characteristics**

- Wide modules and eyelets for less soiling
- Hinges that open wide, wide channels on the underside and a continuous drive bar for an easy-to-clean design
- Robust design and smooth, cut-resistant surface (depending on material)
- Special sprocket design with enhanced tooth engagement for excellent force transmission

#### Available surface pattern and opening area

S6.1-0 FLT



Closed, smooth surface

S6.1-0 NTP Closed surface and round studs

S6.1-0 CTP Closed surface and pointed studs

**S6.1-21 FLT** Open (21 %), smooth surface

**S6.1-23 FLT** Open (23 %), smooth surface

S6.1-36 FLT Open (36%), smooth surface

## Series 7 | Pitch 40 mm (1.57 in)

Belts for heavy-duty non-food applications



#### **Design characteristics**

- Closed-hinge design provides high belt pull capacity
- Small-pitch relative to belt thickness makes belt suitable for compact, heavily loaded conveyors
- Robust design with large surface contact area ensures superior wear life
- Closed solid edge
- Flame retardant version available (PXX-HC – in line with DIN EN 13501-1)

#### Available surface pattern and opening area



Sprockets and wheelstoppers available in different sizes and designs

Sprockets, profiles, side guards and Hold Down tabs available in different sizes and designs





<sup>1)</sup> NSF-compliant from the Huntersville plant (US)

## Series 8 | Pitch 25.4 mm (1 in)

Belts for medium to heavy-duty applications



#### **Design characteristics**

- Closed hinge design provides high belt pull capacity
- Rigid module design makes belt suitable for long conveyors
- Robust design guarantees superior durability
- Closed solid edge design
- Flame retardant version available (PXX-HC – in line with DIN EN 13501-1)

#### Available surface pattern and opening area



S8-0 FLT Closed, smooth surface

S8-0 SRS Closed, slip-resistant surface

S8-0 NSK1/S8-0 NSK2 Closed surface with non-skid pattern

S8-25 RAT Open (25%) surface with rounded contact surfaces

S8-0 FRT1 Closed surface with friction top

S8-0 RTP A90 Closed surface with roller top **Series 10** | Pitch 25.4 mm (1 in)

Belts for light to medium-duty hygiene-critical applications



#### **Design characteristics**

- Small number of eyelets ensures easy cleaning
- Hinges that open wide, combined with smooth, flat channels on the underside and a continuous drive bar produce an easy-to-clean design
- Robust design guarantees superior durability
- Optimal design of sprocket teeth and tracking fins provides superior sprocket engagement, safe belt tracking and an easy-to-clean sprocket

#### Available surface pattern and opening area



Sprockets, profiles, side guards and Hold Down tabs available in different sizes and designs





## Series 13 | Pitch 8 mm (0.31 in)

Belts for light to medium-duty food and non-food nose bar applications



NSF. <sup>1)</sup>	
Certified	

#### **Design characteristics**

- Micro pitch belt with small transfer gaps
- Designed to run over nose bars/knife edges or rollers with a radius down to 3 mm (0.12 in) allowing, precise transfer of even the smallest products
- Versatile for conveying, drying and cooling applications
- Optimal design of sprocket teeth, and belt underside provides superior sprocket engagement, safe belt tracking and good cleaning capabilities
- Belt and sprocket design ensures superior load transmission and belt pull capacity
- Headless pin making it very easy to install and remove the belt for maintenance

#### Available surface pattern and opening area



Sprockets available in different sizes and designs



Series 14 | Pitch 12.7 mm (0.50 in)

Belts for medium-duty food and non-food applications



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#### **Design characteristics**

- Mini pitch belt with small transfer gap
- Robust design guarantees superior durability and high belt pull capacity
- Design for smooth run on 19 mm (0.75 in) nose bar
- Headless pin system, making it easy to install and remove the belt for maintenance
- Closed, solid belt edge to prevent belt edge damages

#### Available surface pattern and opening area



Sprockets available in different sizes and designs



<sup>1)</sup> NSF-compliant from the Huntersville plant (US)

## Side flexing and spiral belts

## Series 5 l Pitch 25 mm (0.98 in)

Belts for light to medium-duty food and non-food applications



#### **Design characteristics**

- Suitable for both straight and radius conveying
- uo to 45% open area for excellent air circulation and drainage
- Stainless steel hinge pins for high load capacity, lateral stiffness, fewer belt supports and minimum belt lifting in curves
- No potential belt edge catch points due to safe fixing of hinge pins

#### Available surface pattern and opening area



Sprockets, profiles, side guards and ball-bearing modules available in different sizes and designs



## Series 9 | Pitch 50 mm (1.97 in)

Belts for medium to heavy-duty food and non-food applications



#### **Design characteristics**

- Suitable for both straight and radius conveying
- 57 % open area for excellent air circulation and drainage
- Stainless steel hinge pins for high load capacity, lateral stiffness, fewer belt supports and minimum belt lifting in curves
- No potential belt edge catch points due to safe fixing of hinge pin

#### Available surface pattern and opening area



Sprockets, profiles and side guards available in different sizes and designs



## Series 11 | Pitch 25 mm (0.98 in)

Belts for light-duty food and non-food applications



#### **Design characteristics**

- 45% open area provides excellent cooling and draining capabilities
- All plastic lightweight belts (plastic pins)
- Tight radius belt with minimum curve radius of 1.4 x belt width
- Outermost hinge is fixed to the pin to prevent deflection and elimination of potential belt edge catch points
- Suitable for both straight and radius conveying
- Ideal transmission of force due to sprockets offset inwards. Idlers support the belt on the outside

#### Available surface pattern and opening area



S11-45 GRT Open (45%), lattice-shaped surface with replaceable caps



S11-45 GRT HD Open (45 %), lattice-shaped surface with replaceable Hold Down caps

**S11-33 FRT2** Open (33% for full FRT2 surface area), surface with friction top, flat

Sprockets/idlers and profiles available in different sizes and designs



Apart from designing module and sprocket features for specific applications, selecting the optimal materials is also important in making sure that a belt is well-suited for specific conveying or processing applications.

All materials are tried and tested in the most varied industrial environments. The specific characteristics of the individual materials guarantee ability to handle a wide range of applications.

# SIEGLING PROLINK MATERIALS AND PROPERTIES

## Materials

PA	=	Polyamide	POM-HW	=	POM highly wear resistant
PA-HT	=	PA high temperature resistant	POM-HC	=	POM highly conductive
PBT	=	Polybutylene terephthalate	POM-MD	=	POM metal detectable
PE	=	Polyethylene	PP	=	Polypropylene
PE-MD	=	PE metal detectable	PP-MD	=	PP metal detectable
POM	=	Polyoxymethylene/Polyacetal	PXX-HC	=	PXX self-extinguishing, highly conductive
POM-CR	=	POM cut resistant	TPC1	=	Thermoplastic copolyester

## Material orientation chart

Every material has a unique combination of strengths. The following table provides an overview of all Siegling Prolink materials and their properties rated from 1 (poor) to 10 (good).

	Belt pull capacity	Impact strength	Wear resistance	High temperature	Low temperature	Price	Direct food contact	Submerged in water	Metal detectable	Antistatic	Flame retardant
PE	2	8	2	3	9	9	Yes	Yes	No	No	No
PP	4	3	3	7	3	9	Yes	Yes	No	No	No
POM	8	4	7	6	7	7	Yes	Yes	No	No	No
POM-CR	8	6	7	6	7	7	Yes	Yes	No	No	No
PA	8	4	8	8	6	7	Yes	No	No	No	Yes
PA-HT	7	6	9	9	5	6	No	No	No	No	No
PE-MD	2	7	2	3	9	6	Yes	Yes	Yes	No	No
PP-MD	4	2	3	7	3	8	Yes	Yes	Yes	No	No
POM-MD	7	3	7	6	7	2	Yes	Yes	Yes	No	No
POM-HC	7	3	7	6	7	4	No	Yes	No	Yes	No
PXX-HC	4	3	3	7	3	4	No	Yes	No	Yes	Yes

## Guidelines on material selection

Application environment		Belt modules	Pins
	General conveyor (>10 °C)	PP	PP
	Aggressive chemicals (strong acid etc.)	PP	PP
General conveying	Impact and/or low temperature (<10 °C)	PE	PE
	High load	POM	PBT
	Deboning and trimming	POM-CR	PBT
Alexanium	Wet, light load	PP	PBT
Abrasive	Wet, high load	POM	PBT
	Dry	POM	PBT
	Boiling and steaming, up to 100 °C (212 °F)	PP	PP
	Dry, high load up to 90 °C (194 °F)	POM	PBT
Increased temperature	Wet, high load up to 90 °C (194 °F)	POM	POM
	Dry up to 120°C (248°F), FDA/EU	PA	PBT
	Dry up to 155 °C (311 °F), not FDA/EU	PA-HT	PA-HT

## Temperature ranges



## **HACCP** requirements

New regulatory requirements are forcing food manufacturers to adopt increasingly stringent hygiene standards and sanitation procedures. Conventional conveyor and processing belts often cannot comply with these requirements, but Siegling Prolink modular belts are designed to effectively support your HACCP concept.

## Declaration of compliance

#### FDA/EU

Siegling Prolink modular belts made of the following materials are proven to comply with FDA 21 CFR as well as the (EU) 10/2011 and (EC) 1935/2004 regulations regarding the raw materials used and the migration thresholds:

	wт	LG	BK	LB	BL	DB	UC	BG	OR	Colors*
PE	•	•	٠	•	•	•	•		•	<b>BL</b> = Blue
PP	•	•		•	•	•	•		•	<b>BG</b> = Beige
POM	•	•		•	•	•			•	<b>BK</b> = Black
POM-CR	•	•		•	•	•			•	<b>DB</b> = Dark blue
PA		•			•					<b>LB</b> = Light blue
PE-MD					•					LG = Light gray
PP-MD					•					<b>OR</b> = Orange
POM-MD					•					UC = Uncolored
PBT	•			•	•					WT = White
TPC	•			•						
TPE R7			•					•		
TPE R8								•		

\* Please refer to the table for each series' standard colours. A number of other colors are available on request. Colors can vary from the original due to the print, production processes or material used.

#### Halal

All Siegling POM Prolink modular belts are certified as being compliant with Halal regulations by IFRC Asia (member of the World Halal Council).

Committed staff, quality oriented organization 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 2,300 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.

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