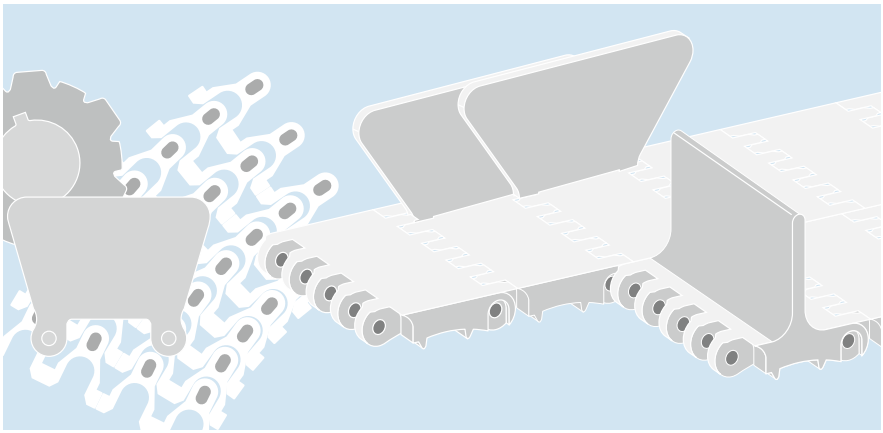
siegling prolink
modular belts

Technical information

Storage · Pre-fitting · Fitting and operation



Contents

Siegling – total belting solutions

Forbo MOVEMENT SYSTEMS

Product range

The series in the Siegling Prolink range have been developed for different conveying and processing jobs.

Series 1 – Pitch 50 mm (2 in)
For conveying medium-weight and heavy products in tough conditions and at high levels of pull.

Series 2 – Pitch 25 mm (1 in)
For conveying lightweight products in the food sector, in container handling and industrial applications.

Series 3 – Pitch 50 mm (2 in)
With a very flat surface for stable conveying of medium-weight products in food and non-food sectors. Easy to clean, open hinge design.

Series 4.1 – Pitch 14 mm (0.6 in)
For conveying lightweight to medium-weight products. The small pitch enables small returns and knife edges.

Series 5 – Pitch 25 mm (1 in)
Strong and versatile radius and spiral belt with a high level of permeability for conveying medium-weight products.

Series 6.1 – Pitch 50 mm (2 in)
For conveying medium-weight products in hygiene-critical areas. With easy-to-clean module design minus any dirt traps.

Series 7 – Pitch 40 mm (1.6 in)
Very robust and strong types for industrial applications. Ideal for heavy-duty usage in tough conditions.

Series 8 – Pitch 25 mm (1 in)
For conveying medium-weight and heavy goods in industrial applications.

Series 9 – Pitch 50 mm (2 in)
Strong and versatile radius and spiral belt with a high level of permeability for conveying medium-weight products.

Series 10 – Pitch 25 mm (1 in)
For conveying lightweight to medium-weight products in hygiene-sensitive areas. With easy-to-clean module design minus any dirt traps.

Series 11 – Pitch 25 mm (1 in)
Curved belt for conveying lightweight products. The belt is particularly light and has a small curve radius.

Series 13 – Pitch 8 mm (0.31 in)
Straight running belt for light and medium-duty food and non-food nosebar applications.

Please note:
For pre-fitting and fitting of Combo belts (a combination of Prolink Series 5 ST and Prolink series 11) please refer to:
Series 11/Combo belts · Design guidelines and recommendations for use (ref. no. 201).

Pre-fitting the modular belts

Siegling Prolink belts are pre-fitted on a clean, smooth surface with the top face towards the top.

Longitudinal modules that are to be fitted with side guards must be prepared in the way described below.
The modules are placed according to how the belt is to be set up and each row is connected with hinge pins.
(See "Fitting/removing the hinge pins").

When fitting them please note the following:

- Fit modules so that they are staggered (fig. 1)
- Position the profiles and side modules correctly. In series 5, 7 and 9 the hinge pins are locked with clips. The side modules have to be positioned in such a way that the locks on the clips face towards the outside (fig 2). In series 5 and 9 (radius belts) the side modules on the right and left are different and can have side guards added to them. In series 11 the heads of the hinge pins are always located on the outer radius of the last curve. Fix with blue or dark blue caps on the outer radius, with white/light grey caps on the inner radius (fig. 3).
- Side guards in series 1, 2, 3 and 6.1 can be used on both sides. Series 8 and 10 have side guards for the left and right-hand sides. When fitting the belt, ensure the side guards overlap correctly (fig. 4).

Depending on the belt size, the accessibility of the conveyor and other factors, it is sometimes advisable to prefix several sections and connect them on the conveyor itself (see "Fitting").

The effect of module tolerances

For belts running parallel on one shaft, modules of the same width and batch should be used, to ensure that belts are aligned and run synchronously.
The same applies to belts that run parallel on different shafts and have parallel belt sections (e.g. with profiles).

Side guard preparation

A slot must be applied to the modular belt at the position of the side guards (fig. 5).

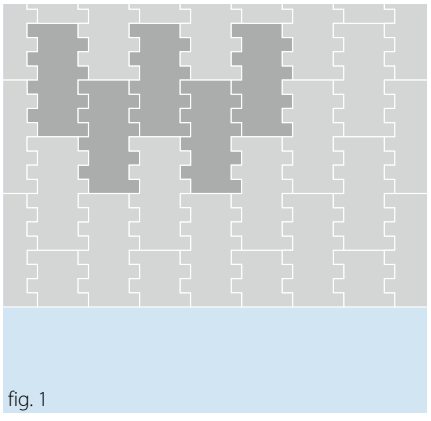


fig. 1

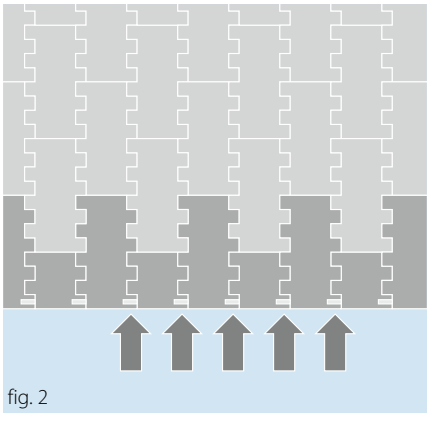


fig. 2

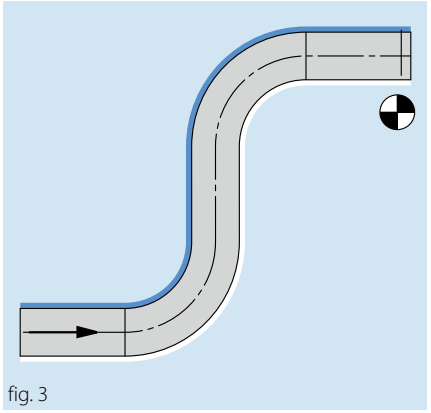


fig. 3

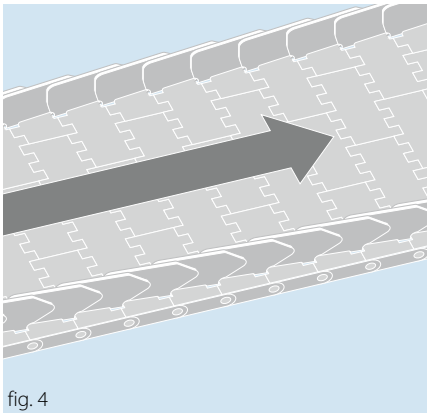


fig. 4

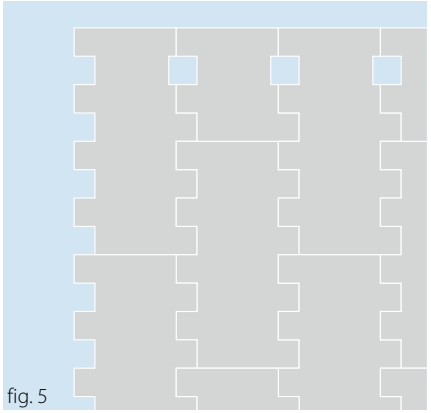


fig. 5

Fitting/removing the hinge pins

Caution: only fit or remove hinge pins in untensioned belt sections.

Series 1, 2, 3, 4.1 and 8

Hinge pins with head

Fitting:
Cut hinge pins to length and press till the stop in the hinge eyelets (fig. 6). A section with slightly increased diameter around the head helps to fix them and reduces play on the side of the belt in question. To prevent this effect from accumulating, insert the hinge pins alternating left and right.

Removing:
Pull/or press out the hinge pin from the head side.

Hinge pin without head

Fitting:
Cut the hinge pin without head to length and put into the hinge eyelet. Secure at both sides with the hinge pin with head (fig. 7).

Removing:
Lever or pull out hinge pin at the head. Press out the extruded part with suitable rod.

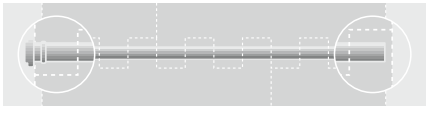


fig. 6

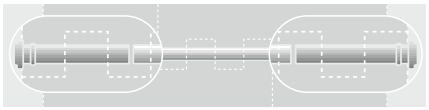


fig. 7

Series 5/Series 9

Stainless steel hinge pins

Fitting:
Put the hinge pin in hinge eyelets. Press the safety clip on both sides of the belts into the clip lock (fig. 8/9). The clips must lock in the grooves on the hinge pin.

Removing the unguided version:
Lever out safety clips with a thin screw-driver blade or mandril from the clip locks (fig. 10) and remove the hinge end from the side.

Removing guided version:
Select a screwdriver that fits exactly. Put the screwdriver in the side openings of the click locks and loosen the clips by slightly turning the hinge pin (fig. 11). Lever out the clips properly and remove the hinge pin from the side.

Plastic hinge pins

Plastic extruded hinge pins are only used for linear belts of series 5 and 9.

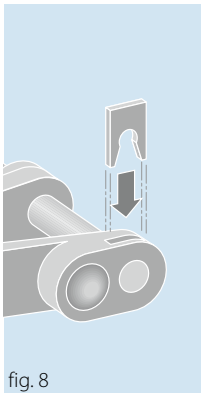


fig. 8

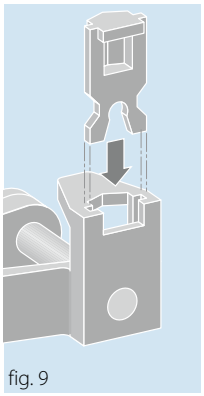


fig. 9

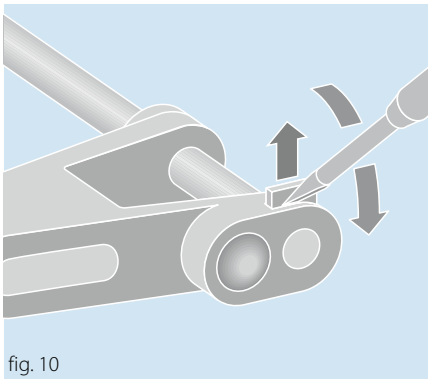


fig. 10

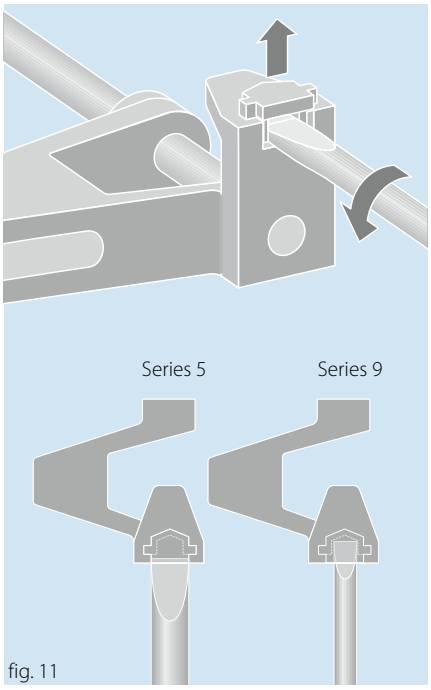


fig. 11

Series 6.1, 10 and 13

Hinge pins with shoulder

Fitting:
Cut the hinge pin to length and press it completely into the hinge eyelet (fig. 12). A shoulder (1) at the end of the pin helps to affix and decreases the play on that side of the belt. To prevent this effect from accumulating, insert the hinge pins alternating left and right.

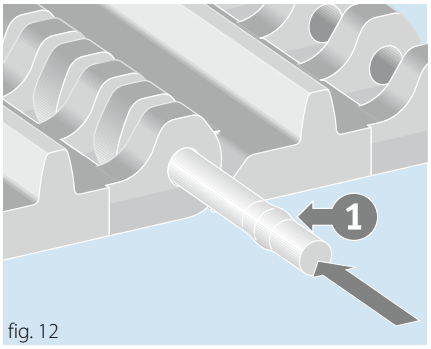


fig. 12

Removing:
Press out the hinge pin to the shoulder side (fig. 13).

Please note: In series 10, a triangle shows the shoulder side of the hinge pin (fig 13a).

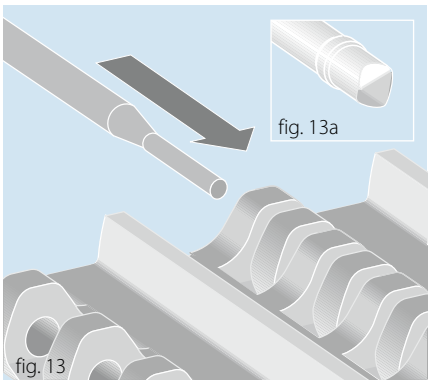


fig. 13

Series 7

Hinge pins for belts > 120 mm

Fitting:
Cut hinge pin to length and put it in the hinge eyelets. Insert the clip into the module on both sides of the belt with the safety spring (1) towards the outside (fig. 14).

Removing:
Press the safety spring on the clips with a small screwdriver towards the inside and lever out the clips (fig. 15). Press out the hinge pin with suitable rod.

Hinge pins for belts ≤ 120 mm

Fitting:
Place the hinge pin in hinge eyelets. Press the safety clips with the smooth side towards the outside on both sides of the belts into the clip lock (fig. 16). The clips must lock into the grooves on the hinge pin.

Removing:
Using a wide screwdriver lever out the clips towards the top side of the module out of the clip locks. Pull or press out the hinge pin.

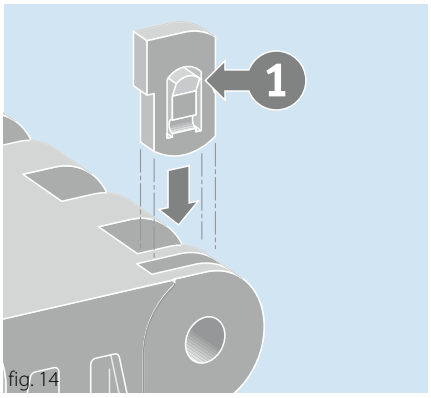


fig. 14

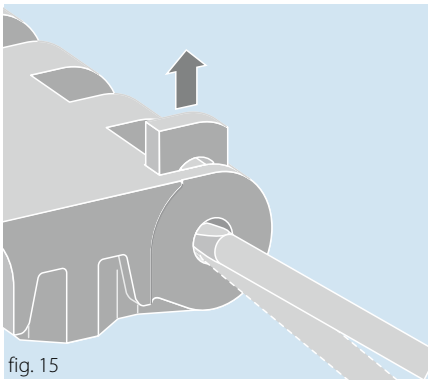


fig. 15

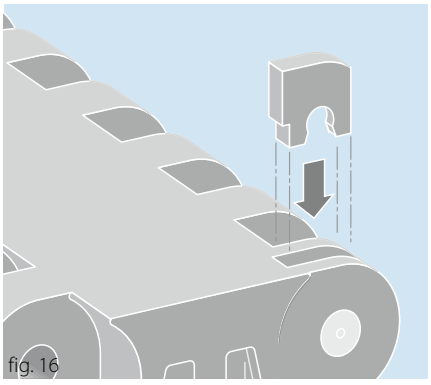


fig. 16

Fitting/removing the hinge pins

Series 11

Hinge pins with head

Fitting pins:
Cut hinge pins to length and press till the stop in the hinge eyelets. Pin length "L" for S11 is defined by the actual belt width minus 11 mm (or measured belt width without caps minus 5) ± 0.5 mm.

Mounting caps and Hold Down caps:
Fit the cap to the bottom of the outer hinge and push the top until the cap clicks into place (fig. 17). The Hold Down caps are mounted from the top by "hanging" the HD on the top and then gently pushing them into place (fig. 18).

Removing/replacing caps and Hold Down caps:
To remove the caps, place a screwdriver in the groove behind the cap on the top of the belt. Then turn the screwdriver and the cap will pop off (fig. 19). The Hold Down caps are removed in a similar way, but from the bottom of the belt (fig. 20).

Removing pins:
Removing the pin is easily done by inserting a screwdriver behind the pin head (fig. 21).

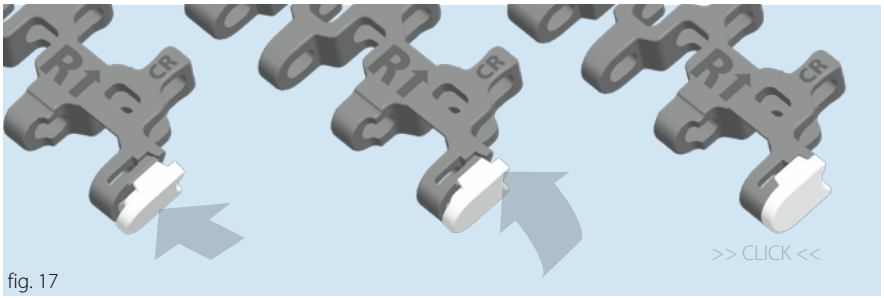


fig. 17

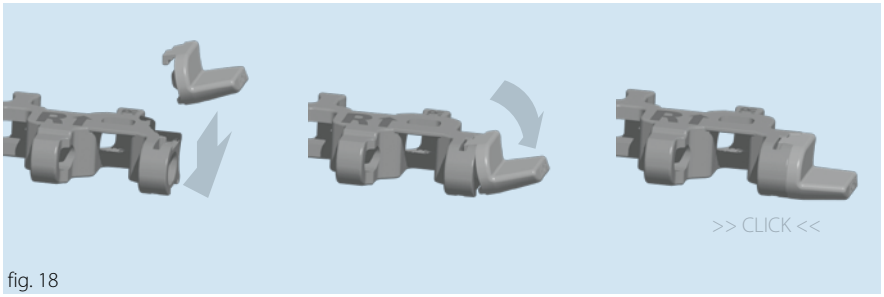


fig. 18

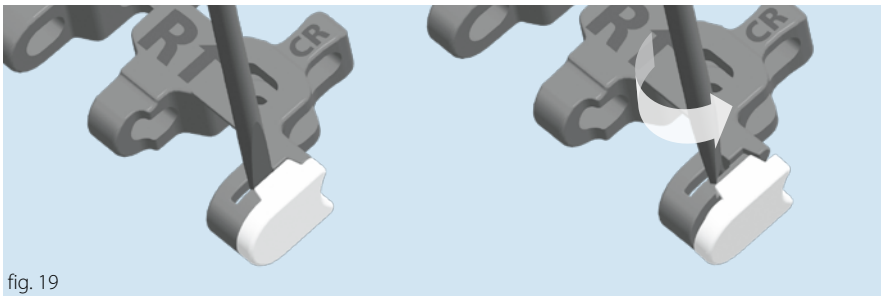


fig. 19

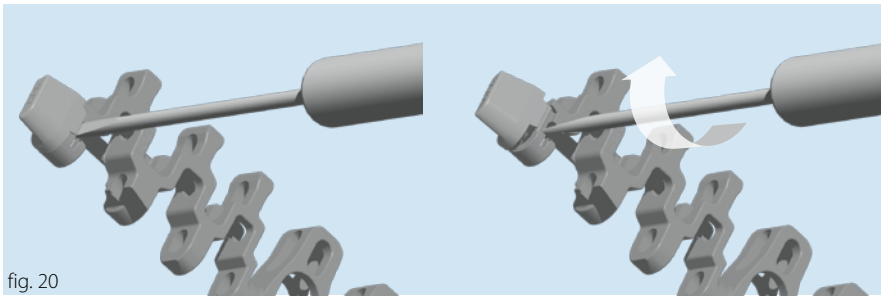


fig. 20

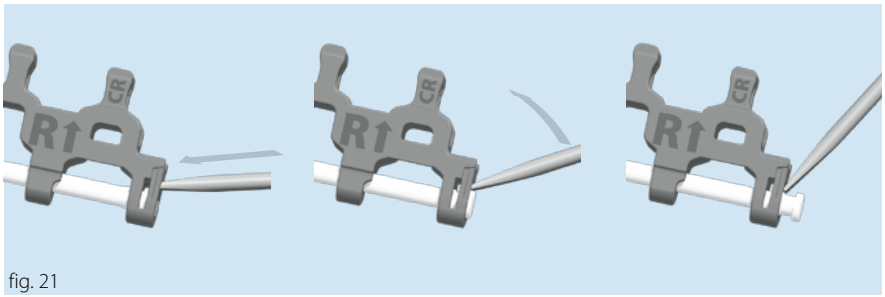


fig. 21

Inserting sprockets

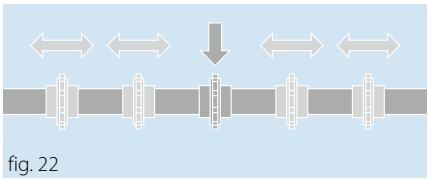


fig. 22

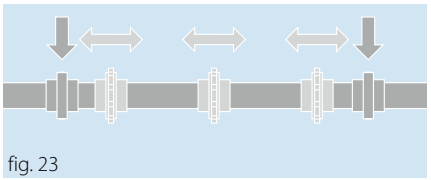


fig. 23

Except for series 11 we recommend fixing the middle sprocket (please also see our brochure: Recommendations for constructing and calculating conveyors – ref. no. 206). The affixed sprocket ensures perfect tracking within the conveyor. Since the belt's width changes with temperature, the remaining sprockets must be free to move sideways (fig. 22).

For series 11 we recommend fixing the outer idlers on the shaft and preventing them from moving sideways by using retainer rings or other methods (please also see our brochure: Series 11/Combo belts · Design guidelines and recommendations for use – ref. no. 201). As the belt is guided by the wearstrips, the sprockets are not to be fixed and should be free to move sideways on the shaft (fig. 23).

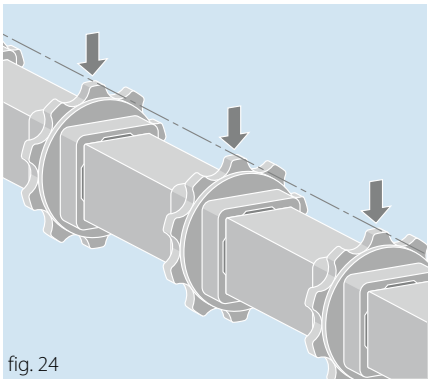


fig. 24

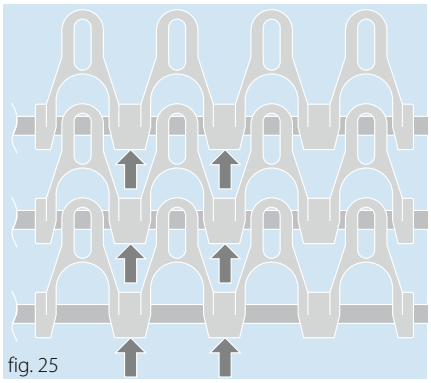


fig. 25

Please note: the sprockets must be attached in such a way that the teeth are aligned in axial direction (fig. 24).

In series 5 and 9: the teeth must engage in the belts as shown by the arrows (fig. 25).

Series 5 (does not apply to S5 ST): the single-row Z16/Z20 sprockets must not be fitted to the outside of the belt (in the area between the outside and centre module). As a result, the minimum band width increases to 175 mm.

Series 6.1 and 10: no sprockets can be positioned directly underneath the side guards.

Series 11 features a special concept where the load is distributed over the outermost hinges by allowing the outermost sprocket to move 75 mm in from the belt edge. At the outermost part of the belt it is supported by idlers (sprocket without teeth) preventing the belt from deflecting at the transfer point. The teeth must engage in the belts as shown by the arrows (fig. 26).

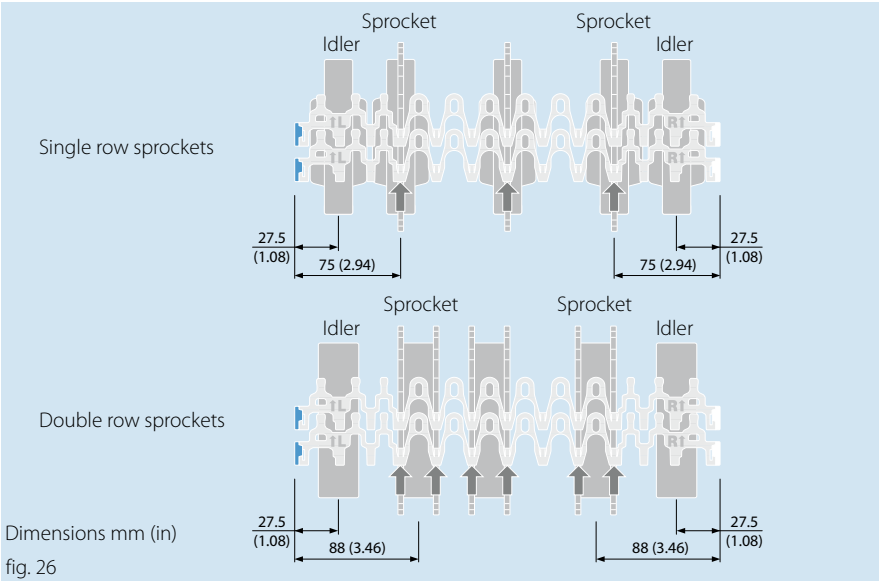


fig. 26

Properties/Resistances/Storage

Properties

Siegling Prolink is totally food safe. Resistant to rot and decomposition.
Where belts come into contact with chemicals please refer to the resistances sheet,
to prevent the belt from becoming damaged.

Resistances

(www.forbo-siegling.com >> Products/Plastic-modular belts/Chemical resistance)

Storage

Siegling Prolink modules should be stored in a cardboard
or a wooden box on a palette or on the shelf.

Conditions of storage:

- No direct exposure to sun
- Temperature: +10 to +40 °C;
  Humidity: 50 % (±5 %)
- Protect from chemical or mechanical influences.
- Don't store together with chemicals.

Fitting and operating the modular belts

When operating and doing any work on the conveyor, ensure that the conveyor manufacturer's operating instructions and all the relevant statutory and safety regulations are complied with.
Caution: Do not put hands into modular belts during operation. Risk of injury!

Fitting

- Check perfect state of all conveyor works components (sprockets, bearings, supports, wearstrips etc)
- If necessary clean the conveyor, remove damaged or worn out parts and align wearstrips.
- If possible don't remove the packaging until it arrives on-site
- Don't roll or pull belts or sections of belts over rough or dirty floors
- Insert belts or belt sections into the conveyor and splice or make them endless (please see the section on "Pre-fitting"). In doing so avoid impacts to the belts, sprockets etc. and make sure the sprockets engage properly.
  (See the section on "Fitting sprockets").
- When fitting belts with side guards or profiles make sure that the modules are facing in the correct direction.
- When joining together or inserting or removing sections of belts, make sure that the belt is untensioned and affixed.
- Use the snub rollers or support drums or the appropriate belt sag to set the arc of contact or "pre-tensioning" of the modular belt (please also see the brochure Recommendations for constructing and calculating conveyors – ref. no. 206).
- Please follow the conveyor manufacturer's instructions on how to operate the belts or the conveyor.

Maintenance and servicing

It is possible that the length of the belt might have to be readjusted once the belt has been in operation for a certain period of time. This can happen when the following has been done:

- The take-up unit has been readjusted
- One or several modules have been removed

Inspections must be carried out at regular intervals and documented to make sure belts work properly and look perfect.
How often inspections take place, depends on the load that is placed on the belt. The following parts of each individual modular belt are checked for damage, abrasion, alignment and proper function:

- Sprockets
- Supports and wearstrips
- Modules including profiles and side guards
- Hinge pins

Broken and/or torn parts must be exchanged immediately. To change the modules please refer to the appropriate sections ("prefitting"/"fitting").

Fitting and operating the modular belts

Cleaning

We recommend cleaning the belt regularly so that it will always work perfectly. Soiling means more wear and tear on the modules, sprockets and other accessories. How often cleaning is carried out and the methods and cleaning agents depend on the level of soiling and the type of soiling. Particularly in the food industry attention must be paid to the applicable regulations on hygiene, current legislation and the specifications laid down by the manufacturer of the conveyor.

You can find more information on Siegling Prolink modular belts in:

- the overview of the range (ref. no. 800) and in brochures on the series (ref. nos.: 810 – 930);
- the recommendations for machine design (ref. nos. 206 and 201).

On request:

- TecInfo 07: "Recommended disinfectants for the HACCP types";
- TecInfo 09: "Cleaning and disinfection of modular belts in the food industry".

Siegling – total belting solutions

Because our products are used in so many applications and because of the individual factors involved, our operating instructions, details and information on the suitability and use of the products are only general guidelines and do not absolve the ordering party from carrying out checks and tests themselves. When we provide technical support on the application, the ordering party bears the risk of the machinery functioning properly.

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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