siegling prolink
modular belts

Series 11/Combo belts
Design guidelines and recommendations for use

Contents Series 11

Contents Combo belts S5 ST and S11

Siegling – total belting solutions

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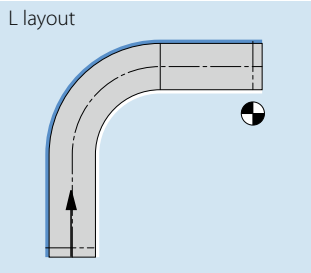
MOVEMENT SYSTEMS

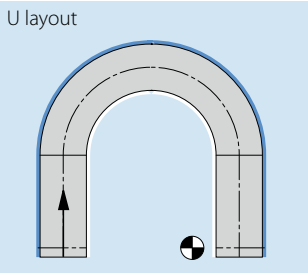
Series 11

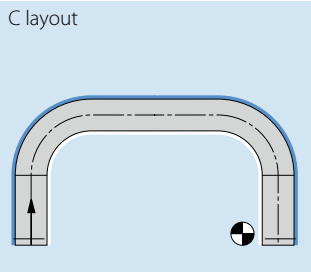
The series 11 belt range has been developed with the focus on ensuring high performance and reliability for all plastic side-flexing conveyors. Series 11 offers unique versatility and can be configured to fit a wide range of applications. To ensure the belt ordered is in line with actual requirements, these guidelines will help explain what this belt series is capable of and ensure orders are placed correctly. To get the most out of these belts it is important that the conveyor is designed and built to suit the belt. Compliance with the guidelines will ensure optimum belt performance.

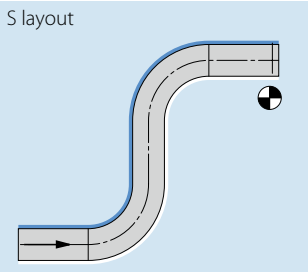
Conveyor layout options

Series 11 is a versatile belt with a wide range of layout options. We will define the most common layouts as L, U, C and S conveyors.









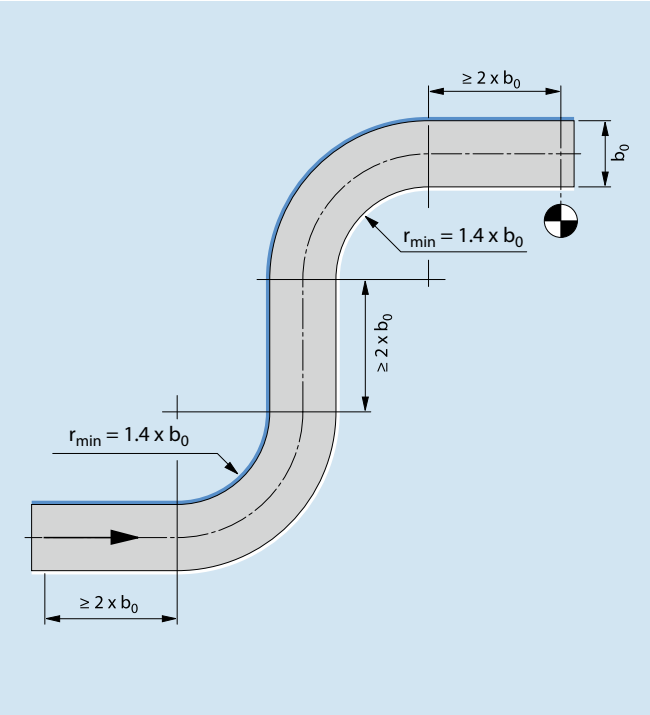
Minimum requirements (straight and curved sections)
For series 11 in widths up to 1000 mm the minimum inside radius is defined as 1.4 times the belt width. For belts wider than 1000 mm the factor is 1.5.

Series 11	Belt width	Collapse factor
	≤ 1000 mm (39.37 in)	1.4
	> 1000 mm (39.37 in)	1.5

Example:
S11 belt width of 450 mm will run in a curve with an inside radius of a minimum 1.4 x 450 = 630 mm

To make sure the belt operates smoothly with a minimum of fluctuation in belt speed and optimum load transmission from the drive sprockets, we recommended observing the following minimum requirements regarding the straight sections before, between and after curves:

- Minimum length of the straight in-feed/out-feed section before and after the curve = 2 x belt width.
- Minimum length of straight section between curves turning in opposite directions is also 2 x belt width. For curves turning in the same directions there are no requirements regarding the length of the sections in between.



Belt properties

Permissible belt pull

Belt type	Materials	Permissible belt pull (Straight)		Permissible belt pull (Curve)	
		N/mm	lb/ft	N	lb
S11-45 GRT	PP	9	617	600	135
	POM-CR	15	1028	1000	225
	PA	15	1028	1000	225
S11-45 GRT HD	PP	9	617	600	135
	POM-CR	15	1028	1000	225
	PA	15	1028	1000	225

Permissible belt speed

A large range of factors will influence the recommended maximum belt speed for a radius conveyor. With increased speed and/or increased belt load, the temperature on the inner belt edge and the inner curve wearstrip will increase. This will lead to accelerated wear, potential dust and eventually the belt edge and/or wearstrip melting.

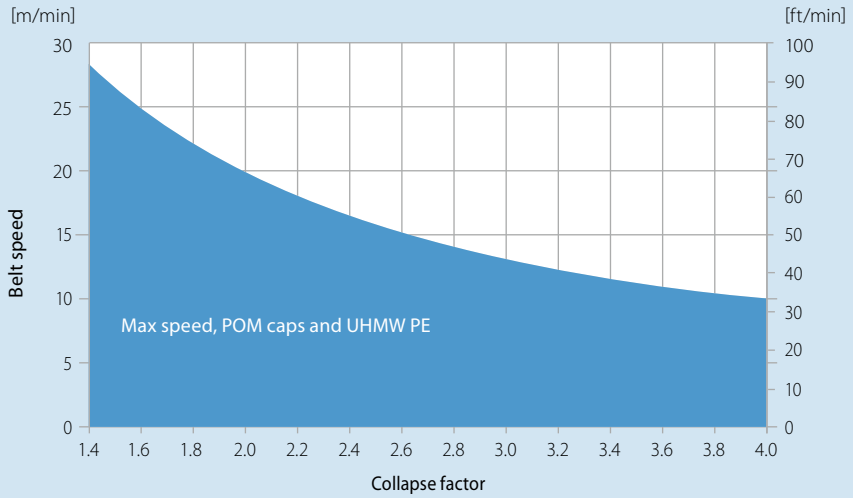
Thin wearstrips with good heat transmission to a steel support structure will increase the permissible belt pull. On the other hand a large solid machined wearstrip will have more problems transmitting the heat generated from the friction between the belt and wearstrip. This will lead to a temperature increase.

Lower friction between the belt and wearstrip will lead to higher permissible belt speed and the material combination (belt edge and wearstrip) will also have a strong impact on the permissible belt speed. Soft materials like PP with relatively high friction coefficients will offer relatively low permissible belt speed before significant wear and dusting occurs. Series 11 is developed with special caps on the belt side, meaning that the material combination on this critical part of a side flexing belt can be optimised.

The belt speed always refers to the speed when running straight. Due to the nature of a side flexing belt this will also be the speed of the belt at the outer radius in the curve. The speed on the inside radius of the belt depends on the collapse factor. The smaller the collapse factor the higher the speed reduction on the inside radius. As a result there is a relationship between the collapse factor and the permissible belt speed.

As describe, several factors influence the permissible belt speed, but some general guidelines are given below.

For the standard S11 belts, the caps or HD on the belt edge are made of POM. For these we recommend using wearstrips in UHMW PE also known as PEHD1000.



Speed limits caps in POM and wearstrip in UHMW PE (PEHD1000)

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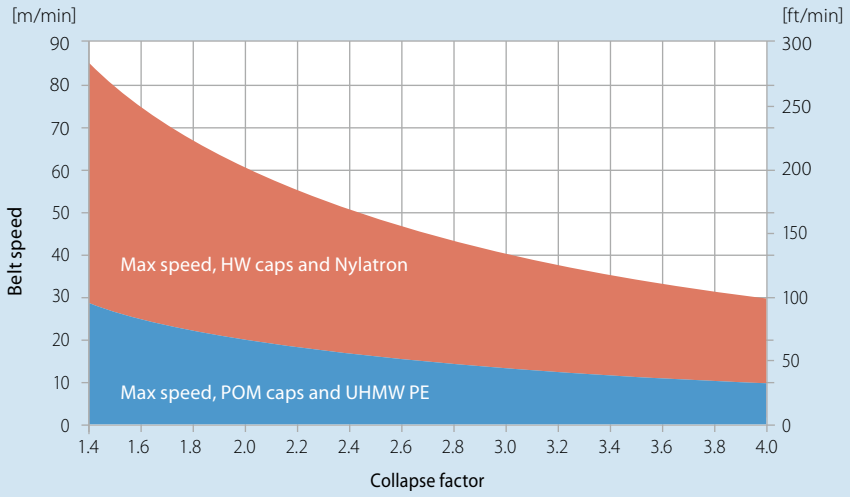
For radius conveyors running at higher speed, S11 offers an alternative with caps or HD on the belt edge made of a special robust, resistant material identified by material code HW. For these we recommend using wearstrips in Nylatron NSM, a special PA material with solid lubricant additives. This material combination will in general offer an extended service life for conveyors with heavy loads or conveyors running in abrasive environments.



Speed limits caps HW and wearstrip in Nylatron

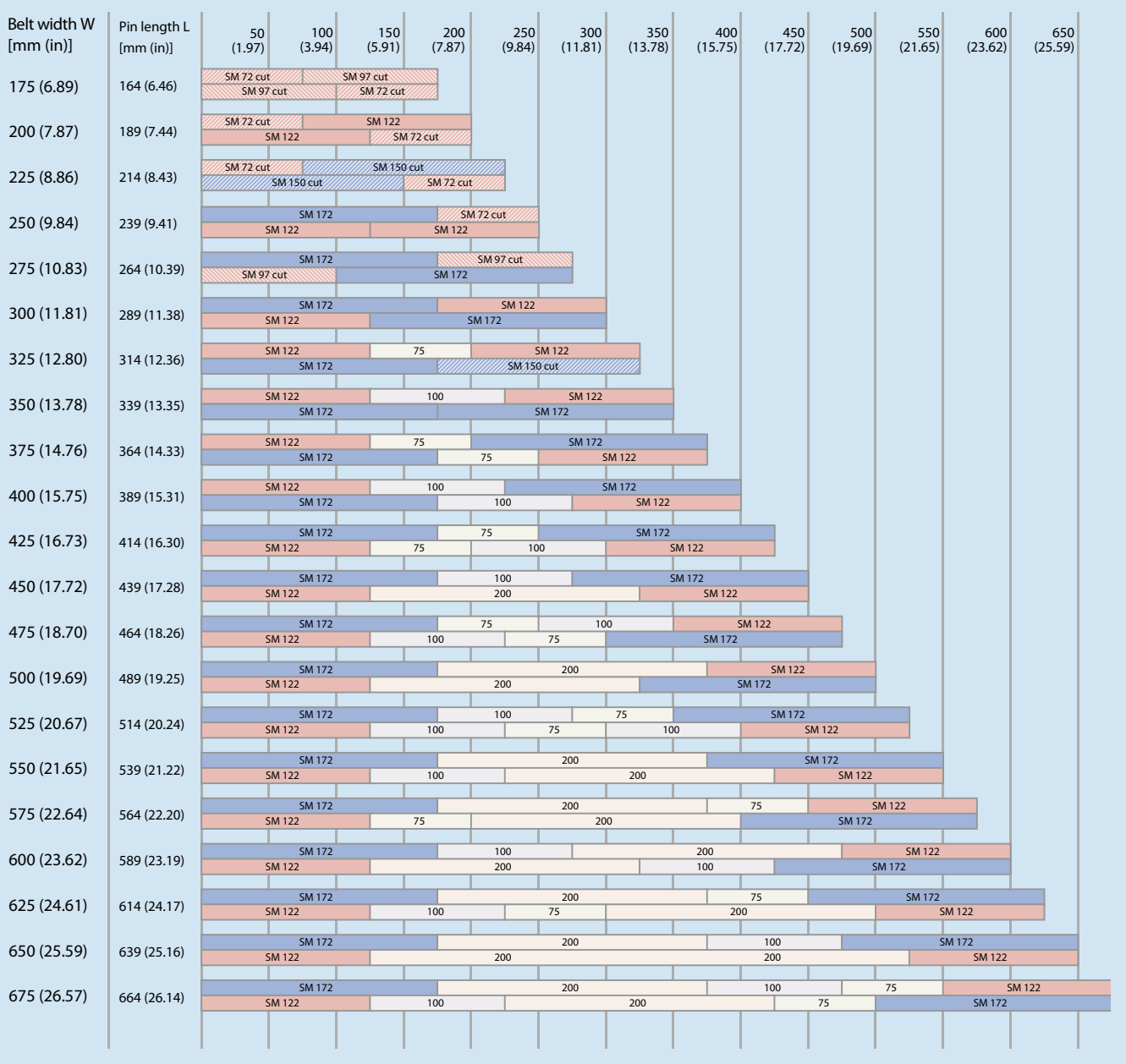
Belt weight

Belt type	Materials	Weight kg/m²	Weight lb/ft²
S11-45 GRT	PP	4.7	1.0
	POM-CR	6.7	1.4
	PA	5.7	1.2
S11-45 GRT HD	PP	4.7	1.0
	POM-CR	6.7	1.4
	PA	5.7	1.2

Belt configurations

S11 Belt width options

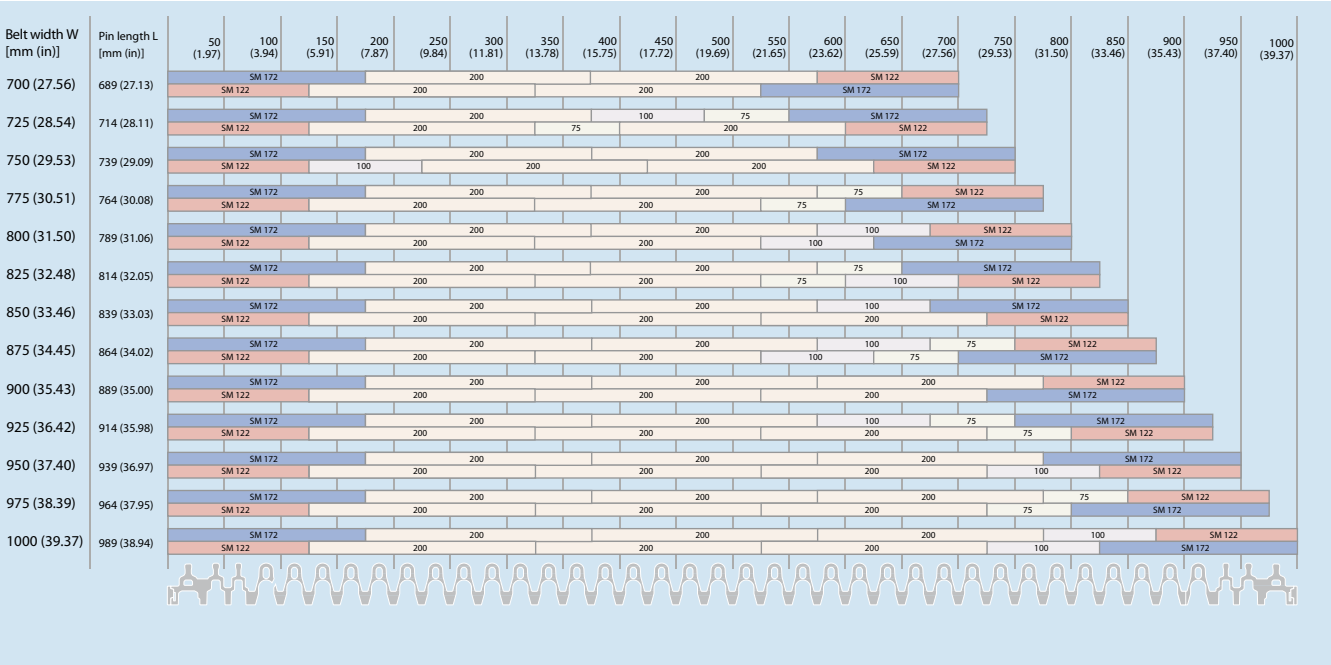
The minimum belt width for series 11 is 175 mm (6.89 in) and then in 25 mm (0.98 in) increments. Please note that the belt edge cap or Hold Down cap (each adding 3 mm (0.12 in)) is not shown in the part configuration below but is included in the belt width (Wxxx).



Dimensions in mm and inches (in).
All imperial dimensions (inches) are rounded off.

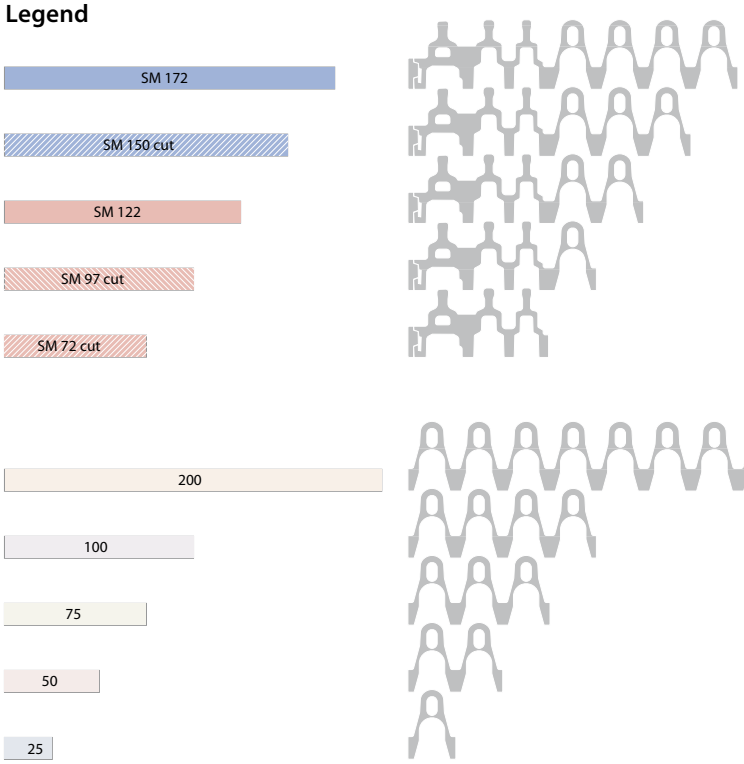
More options on the following page

Series 11



Dimensions in mm and inches (in).
All imperial dimensions (inches) are rounded off.

Legend



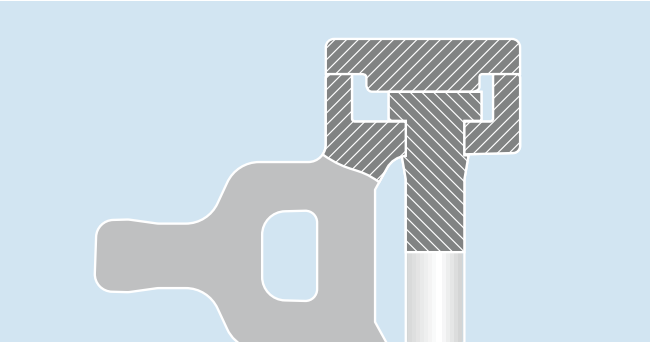
Belt edge colour codes

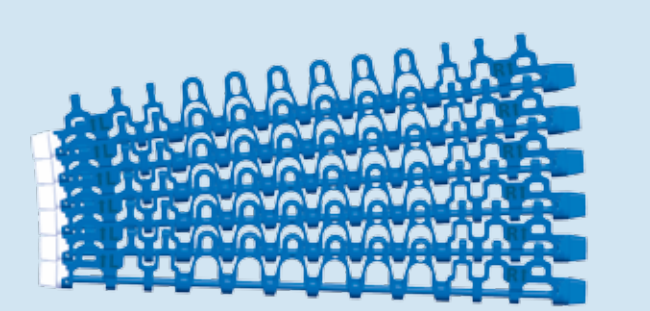
To optimise the performance and ensure consistent belt pull capacity, S11 utilises a headed hinge pin, ensuring the pins are always in contact with the outermost hinge.

To benefit from this feature it is important that the pin head is located on the outer radius in the last curve. This is made easy by the unique colour coding on S11. The position of the pin head is marked by blue side caps/HD caps (the opposite side is marked in white).

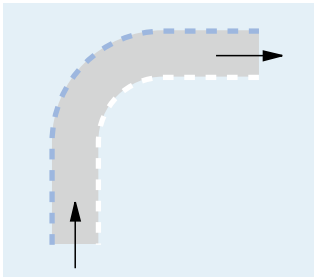
When fitting the belt it is important to remember this code – blue always on the outside (of the last curve).

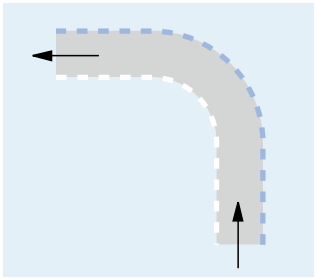
For high speed applications the caps and Hold Down caps are made in a special robust resistant material (HW material) these can be identified by a darker shade, so that the outside in HW will be dark blue and the inside will be light grey.

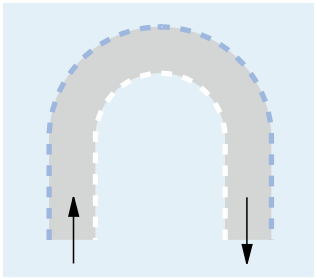


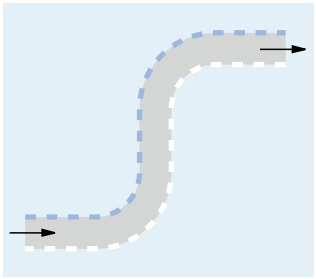


Inside (White) Outside (Blue)

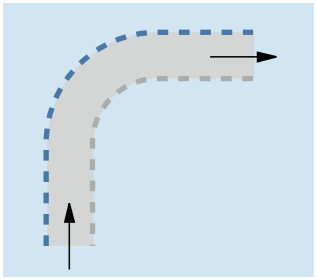


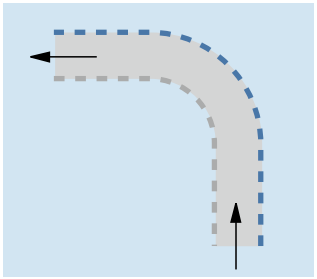


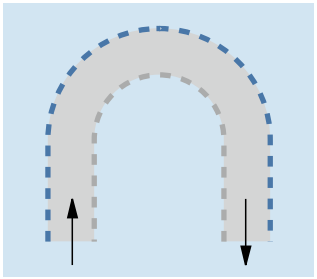


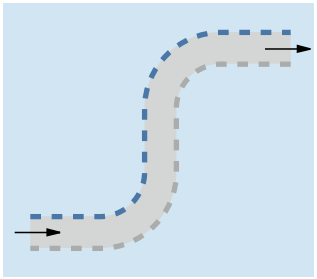


Belt with POM Caps, blue outside, white inside









Belt with HW Caps, Dark blue on the outside, Light grey on the inside

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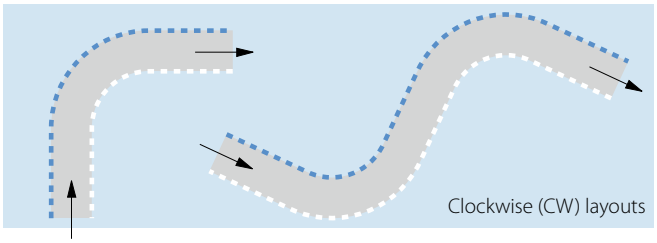
Belt nomenclature and ordering guidelines

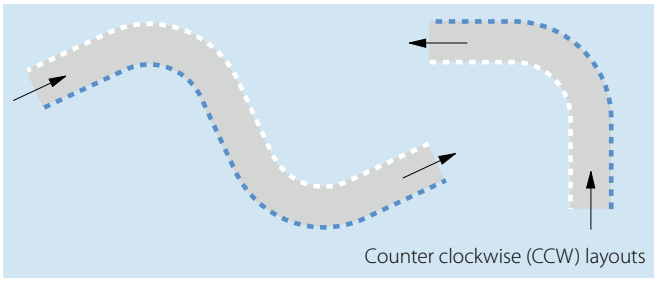
When ordering it is important to consider the layout of the side flexing conveyor so the belt is built to fit.
The pattern will depend on the direction of the last curve:

- If the last curve turns right a clockwise belt needs to be ordered for the curve
- If the last curve turns left a counter clockwise belt needs to be ordered for the curve

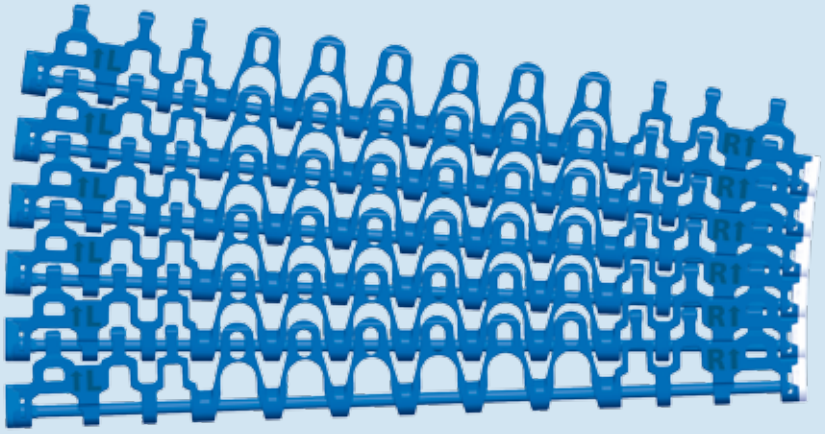
To state if a belt is to be used for a left hand or right hand curve, the belt description will include a CW or a CCW code.

CW = Clockwise or right hand curve and
CCW = Counter clockwise or left hand curve

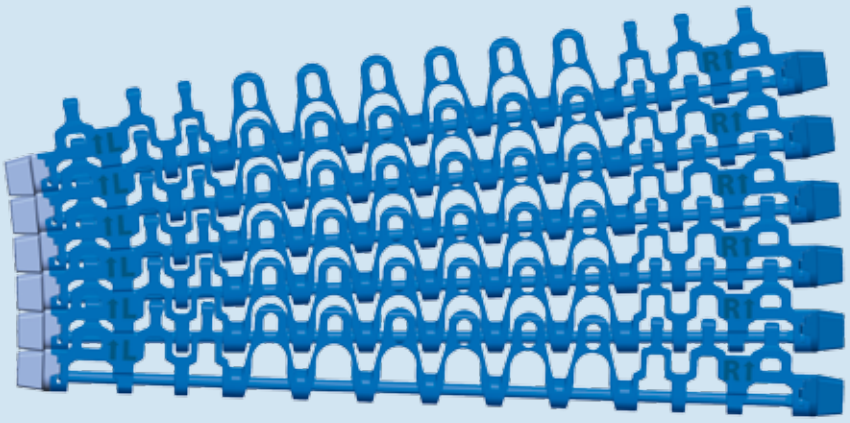




S11 with caps

Sketch	
Belt designations	**S11-45 GRT CW POM-CR BL (POM BL/WT)** **S11-45 GRT CCW POM-CR BL (POM WT/BL)**
Description	CW = Clockwise (= Pin head is located on left-hand side/outer radius on the last curve) CCW = Counter clockwise (= Pin head is located on right-hand side/outer radius on the last curve) POM-CR = All side modules (blue) in POM-CR, centre modules (white) in POM with flat cover caps on both sides (POM BL/WT) = Caps in POM BL on the left hand side and POM WT on the right hand side
Components	S11 CAP POM BL (or WT for CCW) S11-45 GRT SML POM-CR BL W172 S11-45 GRT SML POM-CR BL W122 S5/S11-45 GRT CM POM BL W100 S4.1/S8/S11 PIN PBT BL D5 S11 CAP POM WT (or BL for CCW) S11-45 GRT SMR POM-CR BL W122 S11-45 GRT SMR POM-CR BL W172
Belt width	Minimum belt width: 175 mm (6.89 in) Width increment: 25 mm (0.98 in)

S11 with Hold Down caps in HW

Sketch	
Belt designations	**S11-45 GRT CW HD POM-CR BL (HW DB/LG)** **S11-45 GRT CCW HD POM-CR BL (HW LG/DB)**
Description	CW = Clockwise (= Pin head is located on left-hand side/outer radius on the last curve) CCW = Counter clockwise (= Pin head is located on right-hand side/outer radius on the last curve) HD = Hold Down cap on both sides POM-CR = All side modules (blue) in POM-CR, centre modules (white) in POM (HW DB/LG) = Hold Down caps in HW DB on the left hand side and HW LG on the right hand side
Components	S11 CAP HDL HW DB (LG for CCW) S11-45 GRT SML POM-CR BL W172 S11-45 GRT SML POM-CR BL W122 S5/S11-45 GRT CM POM BL W100 S4.1/S8/S11 PIN PBT BL D5 S11 CAP HDR HW LG (DB for CCW) S11-45 GRT SMR POM-CR BL W122 S11-45 GRT SMR POM-CR BL W172
Belt width	Minimum belt width: 175 mm (6.89 in) Width increment: 25 mm (0.98 in) Belt width is excluding the extending caps of each 10 mm (0.39 in), overall belt width is width (Wxxx) + 20 mm (0.79 in).

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Belt assembly/disassembly

Pin length (Plastic and SS)
Pin length "L" for S11 is defined by the actual belt width minus 11 mm (0.43 in) (or measured belt width without caps minus 5 mm (0.20 in)) ± 0.5 mm (0.02 in). For combo belts S5 ST/S11 the length of the SS pin is defined by the actual belt width minus 17 mm (0.67 in) (or measured belt width without caps minus 14 mm (0.55 in)) ± 0.3 mm (0.01 in).

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. 1).
The Hold Down caps are mounted from the top by "hanging" the HD on the top and then gently pushing them into place (fig. 2).

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. 3).
The Hold Down caps are removed in a similar way, but from the bottom of the belt (fig. 4).

Removing the pin
Removing the pin is easily done by inserting a screwdriver behind the pin head (fig. 5).

fig. 1

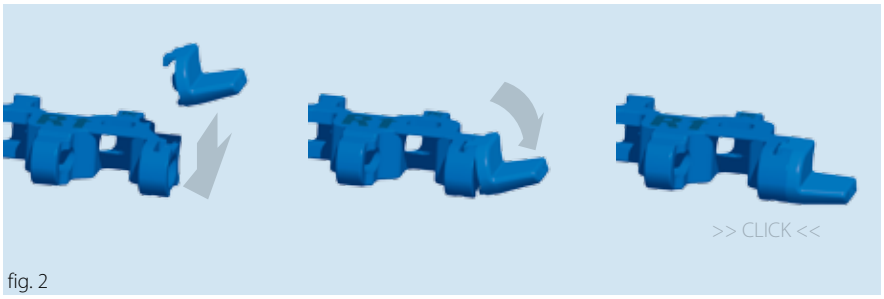


fig. 2

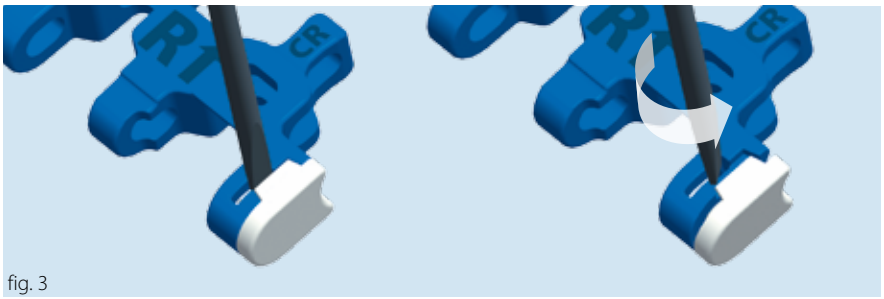


fig. 3

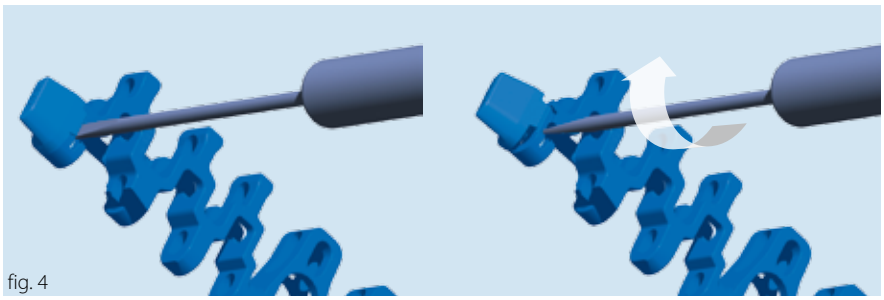


fig. 4

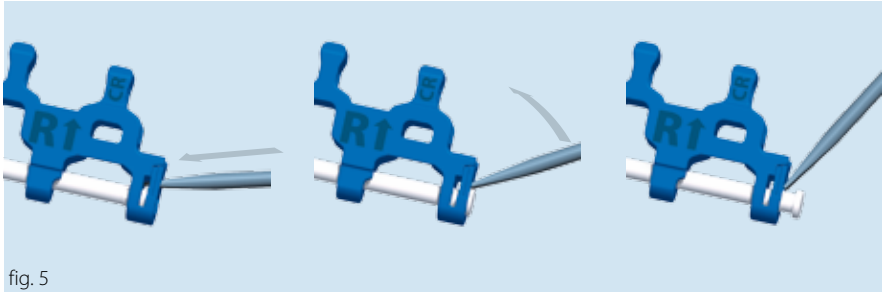


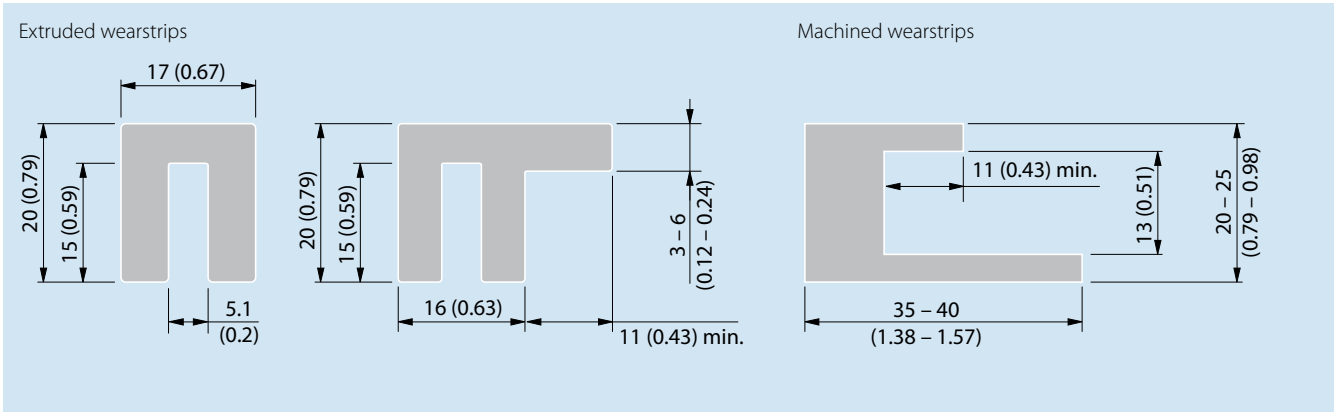
fig. 5

Belt guiding and tracking

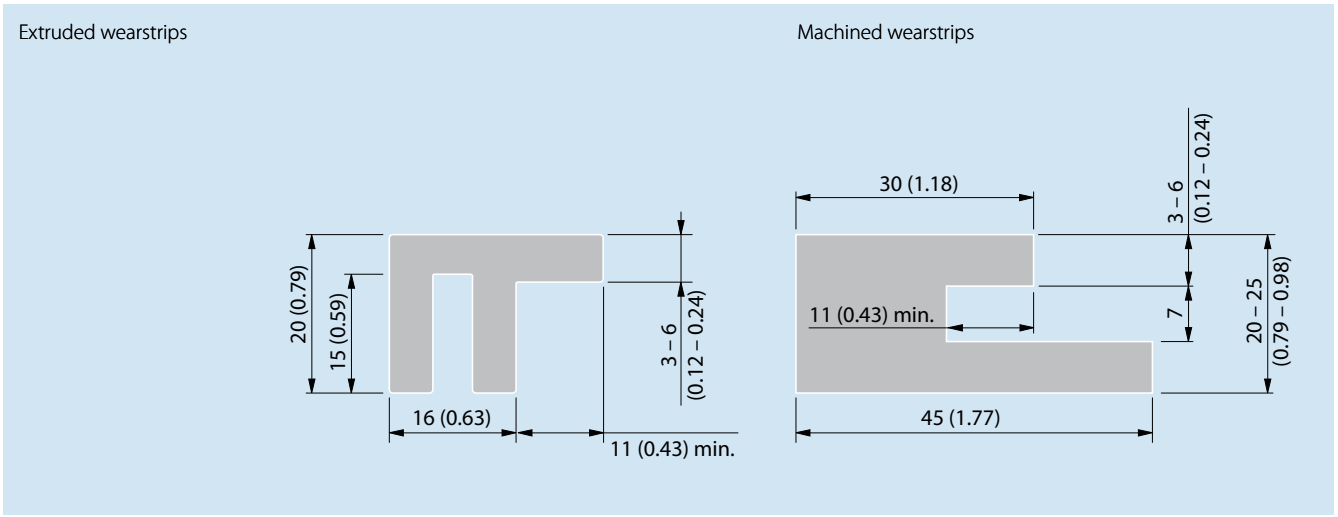
A key criterion for a successful radius conveyor is to ensure and maintain the correct distances between the parallel curve and straight segments guiding the belt. The distance between the outer wearstrips is especially important. The wider the belts the greater the effort required to keep the exact distances through the whole running track of the belt (both on the carry and the return side).
Secondly it is important to make the wearstrip prevent possible belt lift.

Position and dimensions of wearstrips
S11 utilizes floating sprockets (see "Sprocket positions and installation" on page 15). It is recommended to fully guide both sides of the belt by extending the wear strips as far as possible towards the drive shaft and the idler shaft.
The following illustrations show the recommended critical dimensions:

Guideline for wearstrip dimensions S11 with caps:



Guideline for wearstrip dimensions S11 with HD caps:

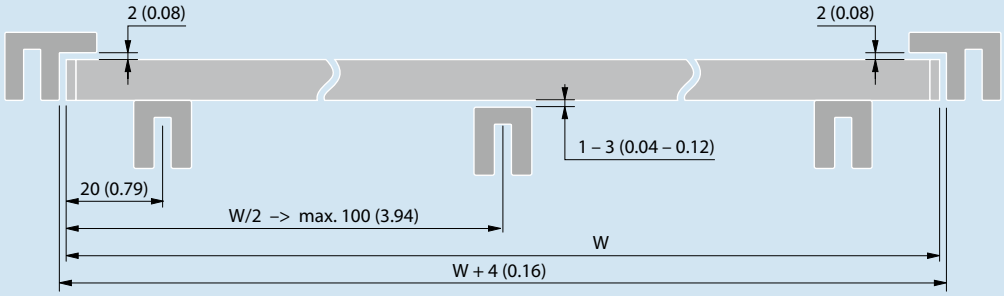


Dimensions in mm and inches (in).
All imperial dimensions (inches) are rounded off.

Dimensions in mm and inches (in).
All imperial dimensions (inches) are rounded off.

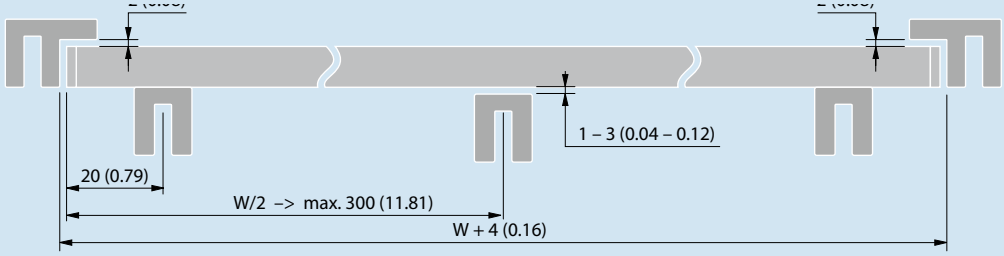
Wearstrip setup, S11 with caps

Carryway, extruded wearstrips:

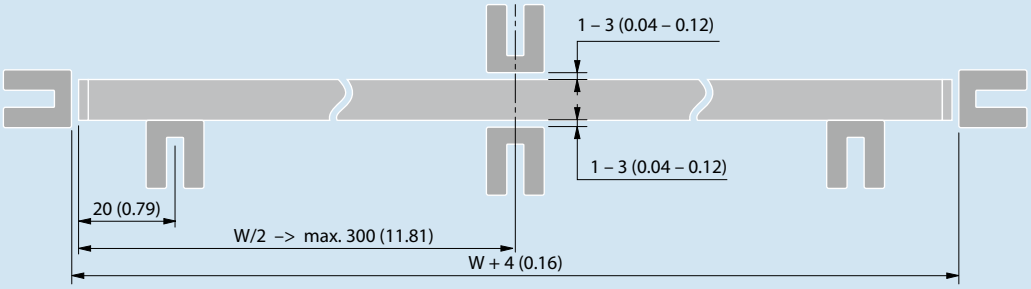


Returnway, extruded wearstrips:

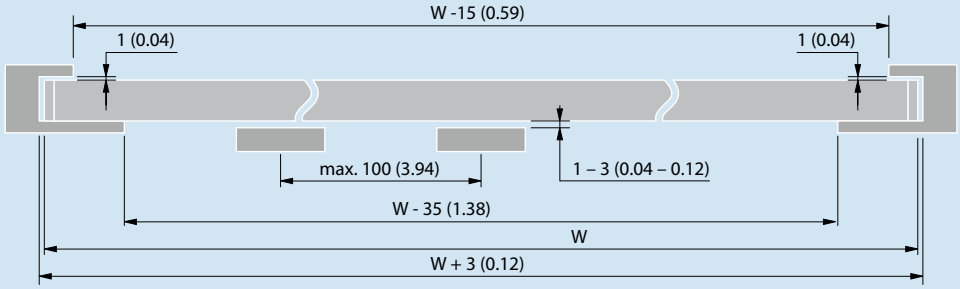
Option 1



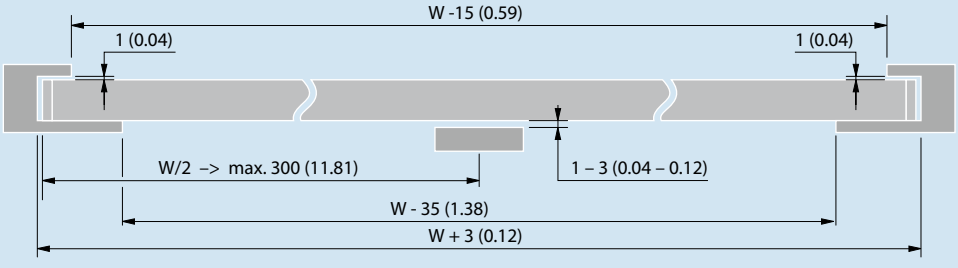
Option 2



Carryway, machined wearstrips:



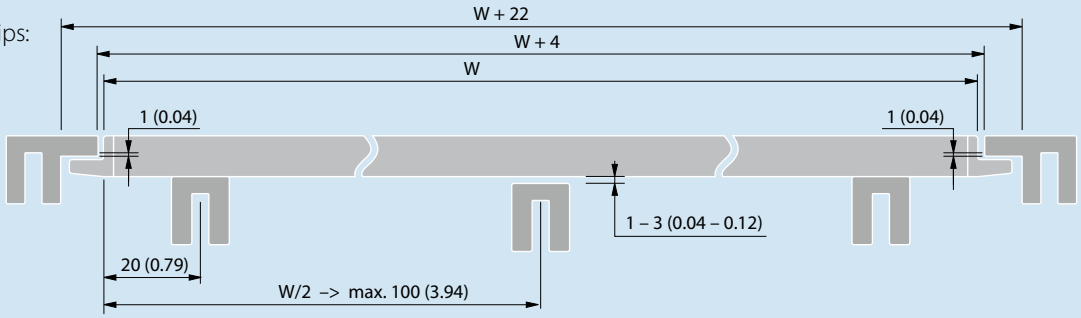
Returnway, machined wearstrips:



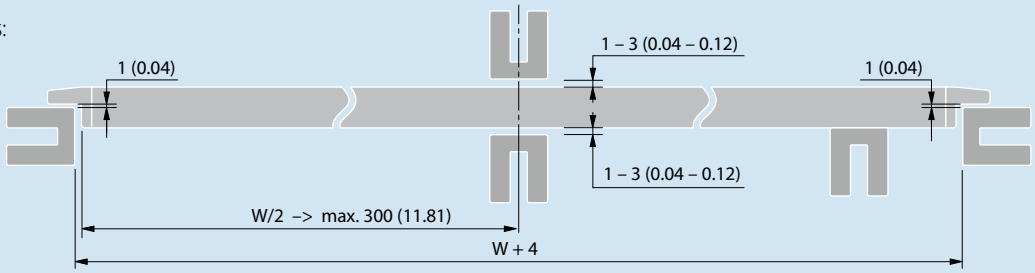
Dimensions in mm and inches (in).
All imperial dimensions (inches) are rounded off.

Wearstrip setup, S11 with Hold Down caps

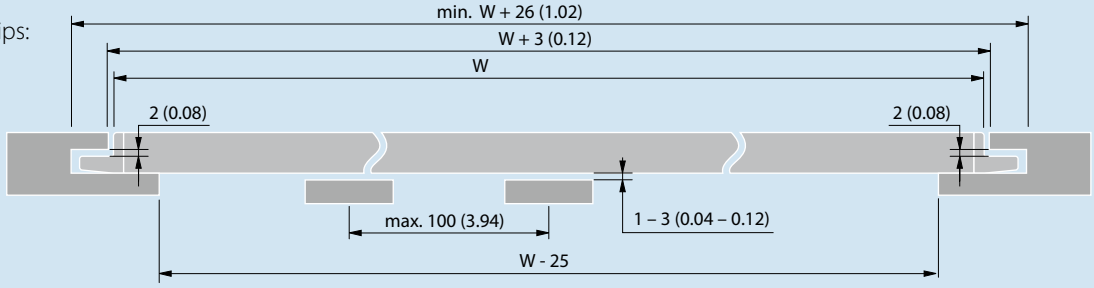
Carryway,
extruded wearstrips:



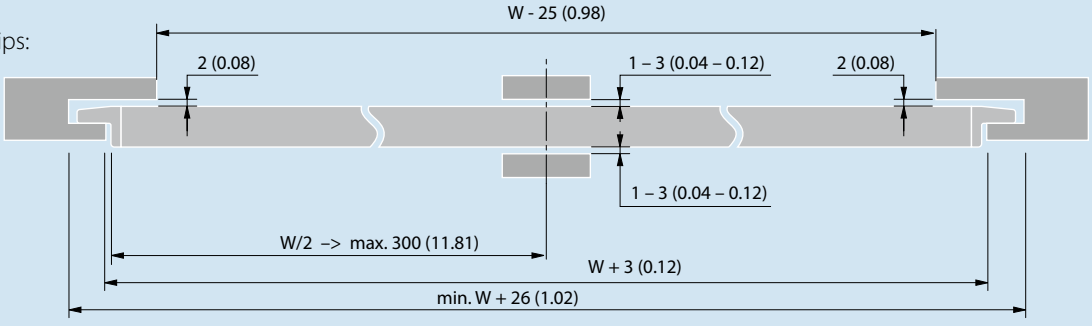
Returnway,
extruded wearstrips:



Carryway,
machined wearstrips:



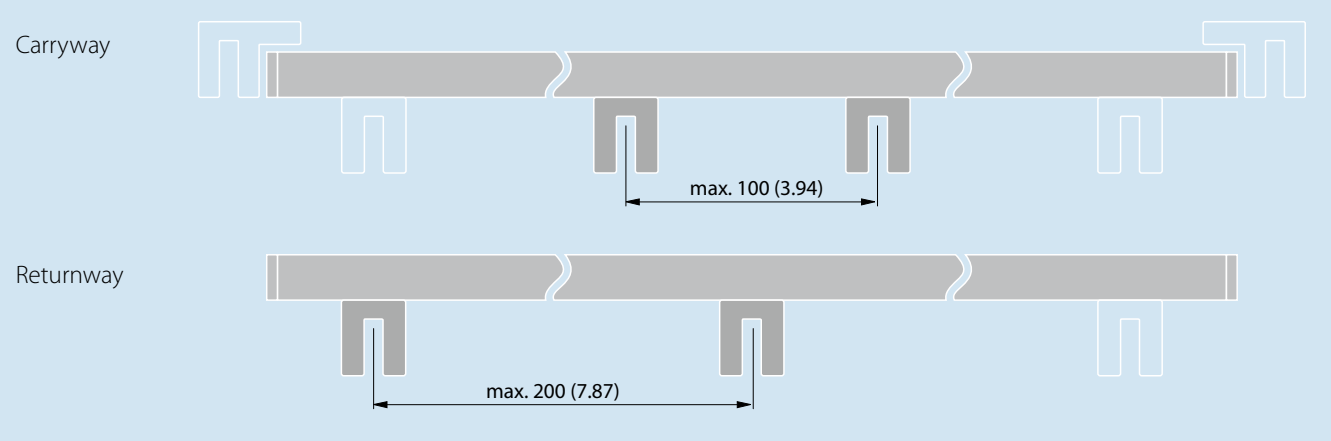
Returnway,
machined wearstrips:



Spacing between belt support wearstrips

Between the outer and inner guiding wearstrips the belt must be supported by a number of belt support wearstrips.

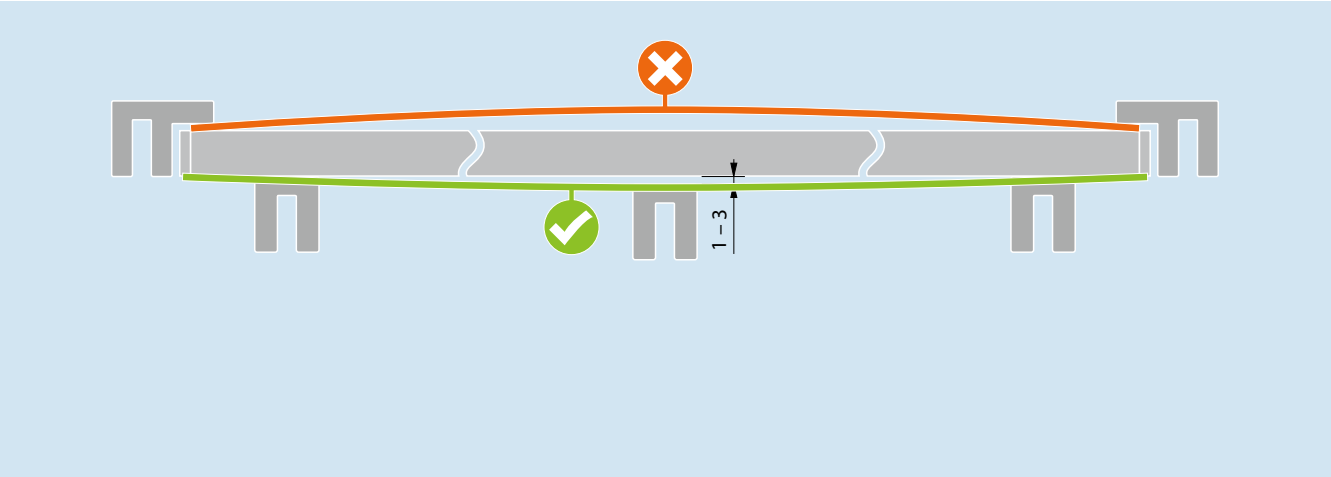
As rules of thumb we recommend allowing a maximum of 100 mm (3.94 in) of free belt between the supports on the carryway and 200 mm (7.87 in) on the returnway.



Preventing belt lift

If the centre supports are positioned above the outmost support, the belt may form a slight convex surface with the highest point in the middle (red line below). On heavily loaded conveyors this may lead to the belt lifting out of the guides. It is therefore vital to ensure that the centre supports are level with or lower than the outermost belt supports. To prevent any peak loads from forcing the belt out of the guides, Forbo recommends positioning the centre supports 1 – 3 mm (0.04 – 0.12 in) below the outer support surfaces.

This ensures that any peak load that causes high radial pressure on the belt will push the belt towards the centre support (green line below) and not push the belt up and out of the guides.

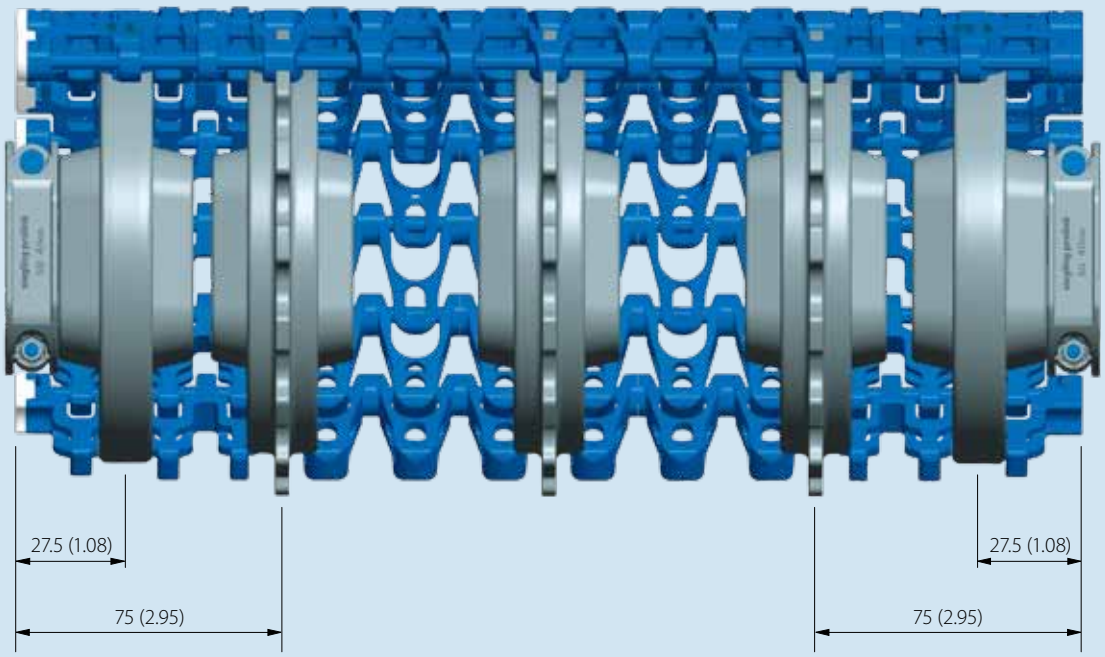


Sprocket positions and installation

S11 features a special concept where the load is distributed over the outermost hinges by moving the outermost sprocket 75 mm (2.95 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.
Forbo recommends fixing the outer idlers on the shaft and preventing them from moving sideways by using retainer rings or other methods. 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.

The following tables will show the actual sprocket position depending on the belt width.

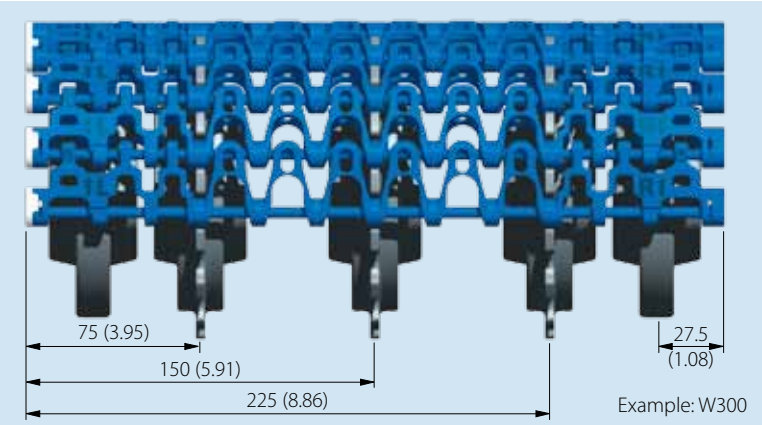
Sprocket and idler positions



Example: W300

Dimensions in mm and inches (in).
All imperial dimensions (inches) are rounded off.

S11 sprocket positions, single row sprocket

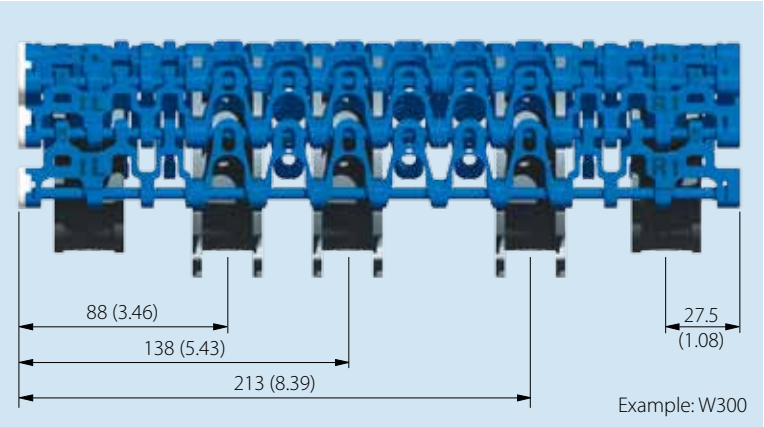


Dimensions in mm and inches (in).
All imperial dimensions (inches) are rounded off.

Belt width [mm (in)]	Sprocket positions in mm (in) measured from the left belt edge to sprocket center																																						
	0 (0)	25 (0.98)	50 (1.97)	75 (2.95)	100 (3.94)	125 (4.92)	150 (5.91)	175 (6.89)	200 (7.87)	225 (8.86)	250 (9.84)	275 (10.83)	300 (11.81)	325 (12.80)	350 (13.78)	375 (14.76)	400 (15.75)	425 (16.73)	450 (17.72)	475 (18.70)	500 (19.69)	525 (20.67)	550 (21.65)	575 (22.64)	600 (23.62)	625 (24.61)	650 (25.59)	675 (26.57)	700 (27.56)	725 (28.54)	750 (29.53)	775 (30.51)	800 (31.50)	825 (32.48)	850 (33.46)	875 (34.45)	900 (35.43)	925 (36.42)
175 (6.89)				●*	●*																																		
200 (7.87)				●*	●*	●*																																		
225 (8.86)				●*	●*	●*	●*																																	
250 (9.84)				●		●		●																															
275 (10.83)				●			●		●																														
300 (11.81)				●			●			●																													
325 (12.80)				●			●		●		●																												
350 (13.78)				●			●		●			●																											
375 (14.76)				●			●			●			●																										
400 (15.75)				●			●		●		●			●																									
425 (16.73)				●			●			●		●			●																								
450 (17.72)				●			●			●			●			●																							
475 (18.70)				●			●		●			●		●			●																						
500 (19.69)				●			●		●			●			●			●																					
525 (20.67)				●			●		●		●			●		●			●																				
550 (21.65)				●			●		●			●		●			●			●																			
575 (22.64)				●			●			●		●			●			●			●																		
600 (23.62)				●			●		●		●		●		●		●		●			●																	
625 (24.61)				●			●		●			●			●			●		●			●																
650 (25.59)				●			●			●			●		●			●			●			●															
675 (26.57)				●			●		●		●			●			●		●			●			●														
700 (27.56)				●			●		●			●			●		●			●			●			●													
725 (28.54)				●			●			●			●			●			●			●		●			●												
750 (29.53)				●			●		●		●			●			●		●			●			●			●											
775 (30.51)				●			●			●			●		●		●			●			●			●			●										
800 (31.50)				●			●			●			●		●		●			●			●		●		●			●									
825 (32.48)				●			●			●			●		●		●			●			●			●		●			●								
850 (33.46)				●			●			●			●		●		●			●			●			●			●			●							
875 (34.45)				●			●			●			●		●		●			●			●		●		●			●			●						
900 (35.43)				●			●			●			●		●			●			●		●		●			●			●			●					
925 (36.42)				●			●			●			●		●		●			●			●			●			●			●			●				
950 (37.40)				●			●			●			●		●		●			●			●			●			●			●		●		●			
975 (38.39)				●			●			●			●		●		●			●			●			●		●			●			●			●		
1000 (39.37)				●			●			●			●		●		●			●			●		●			●			●		●		●			●

* = Sprocket with reduced hub width. B = 24.5 mm (1 in)

S11 sprocket positions, double row sprocket



Example: W300

Dimensions in mm and inches (in).
All imperial dimensions (inches) are rounded off.

Belt width [mm (in)]	Sprocket positions in mm (in) measured from the left belt edge to sprocket center																																		
	0 (0)	88 (3.46)	113 (4.45)	138 (5.43)	163 (6.42)	188 (7.40)	213 (8.39)	238 (9.37)	263 (10.35)	288 (11.34)	313 (12.32)	338 (13.30)	363 (14.29)	388 (15.28)	413 (16.26)	438 (17.24)	463 (18.23)	488 (19.21)	513 (20.20)	538 (21.18)	563 (22.17)	588 (23.15)	613 (24.13)	638 (25.12)	663 (26.10)	688 (27.09)	713 (28.07)	738 (29.06)	763 (30.04)	788 (31.02)	813 (32.01)	838 (32.99)	863 (33.98)	888 (34.96)	913 (35.94)
175 (6.89)		●																																	
200 (7.87)		●	●*																																
225 (8.86)		●		●																															
250 (9.84)		●			●																														
275 (10.83)		●		●		●																													
300 (11.81)		●		●			●																												
325 (12.80)		●			●			●																											
350 (13.78)		●			●				●																										
375 (14.76)		●				●				●																									
400 (15.75)		●			●			●			●																								
425 (16.73)		●			●				●			●																							
450 (17.72)		●			●				●				●																						
475 (18.70)		●				●				●				●																					
500 (19.69)		●				●			●			●			●																				
525 (20.67)		●				●				●			●			●																			
550 (21.65)		●				●				●				●			●																		
575 (22.64)		●				●				●				●				●																	
600 (23.62)		●				●				●			●			●			●																
625 (24.61)		●				●				●				●			●			●															
650 (25.59)		●				●				●				●				●			●														
675 (26.57)		●				●				●			●			●			●			●													
700 (27.56)		●				●				●				●			●			●			●												
725 (28.54)		●				●			●			●			●			●			●				●										
750 (29.53)		●				●				●			●			●			●			●				●									
775 (30.51)		●				●				●				●			●			●			●				●								
800 (31.50)		●				●				●				●				●			●			●				●							
825 (32.48)		●				●				●				●				●			●				●				●						
850 (33.46)		●				●				●				●				●				●				●				●					
875 (34.45)		●				●				●				●				●			●			●			●				●				
900 (35.43)		●				●				●				●				●				●			●			●				●			
925 (36.42)		●				●				●				●				●				●				●			●			●			
950 (37.40)		●				●				●				●				●				●				●				●			●		
975 (38.39)		●				●				●				●				●				●			●			●			●			●	
1000 (39.37)		●				●				●				●				●				●				●			●			●			●

* = Use ½ double row sprocket.

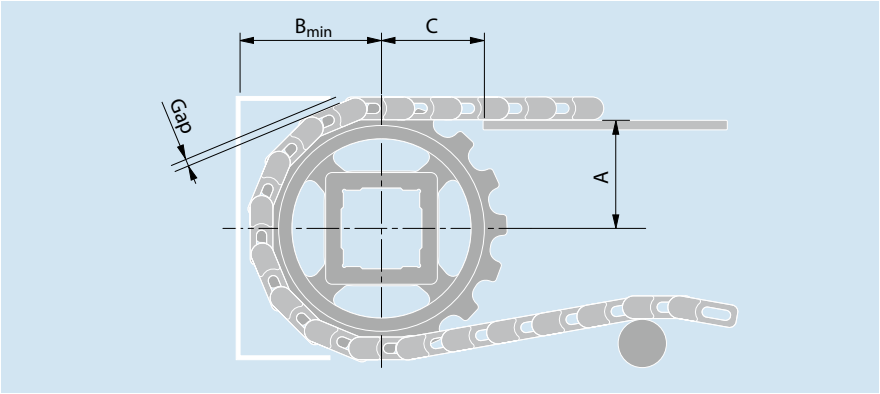
Series 11

Positioning drive and idler shaft
A: The vertical distance from the belt support surface to the centre of the drive and idler shaft.

B_{min}: The smallest recommended horizontal distance from the shaft centre to any conveyor or transfer structure.

C: The minimum horizontal distance from the slider bed/wearstrip to the centre of the drive shaft. For products prone to falling over, wearstrips can be inserted between the sprockets.

Gap: The minimum distance from the transfer plate to the top surface of the middle part of the belt modules.



No. of teeth	D_0	A	B_{min}	C	Gap
Z11	89 (3.50)	38 (1.50)	53 (2.09)	42 (1.65)	3.3 (0.13)
Z16	129 (5.08)	59 (2.32)	73 (2.87)	47 (1.85)	2.7 (0.11)
Z20	161 (6.34)	75 (2.95)	89 (3.50)	51 (2.01)	2.4 (0.09)

Dimensions in mm and inches (in).
All imperial dimensions (inches) are rounded off.

Fitting checklist before first start-up

All parts of a conveyor should be inspected before fitting the belt to ensure the longest service life possible of the belt and wearstrips.

Inspect the following prior to fitting the belt:

1. Check that the wearstrips are clean and free of waste, dust or other abrasive particles

2. Check that the points where the wearstrips meet are correctly aligned so the belt can move smoothly from one wearstrip to the next

3. Try out a section of the belt to ensure that the belt can run freely between the wearstrips on the entire belt path, both on the carryway and the returnway

4. Check that hold-down wearstrips are correctly positioned to prevent the belt from lifting when the belt is pushed against the inside wearstrip

5. Try out a section of the belt to check that the belt can run freely around the sprockets (drive and idler end) without touching transfer plates etc.

6. Ensure the driveshaft is positioned correctly by checking alignment between belt support wearstrips and the sprockets with a section of the belt

Once the belt has been fitted and prior to starting the drive-motor check the following:

1. The belt can move freely between wearstrips (i.e. there are constricted areas) on the carryway and returnway sections
2. Verify that all sprockets on all shafts are engaging with the belt correctly

When starting up, if possible start at low speed until the belt is clearly running smoothly, is engaging the sprockets correctly and no belt lift is occurring.

Part overview and nomenclature for S11

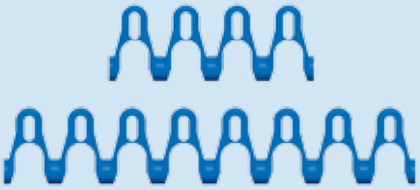
S11-45 GRT SML W122
Side module left hand side

S5/S11-45 GRT CM W25, W50 and W75

S11-45 GRT SMR W172
Side module right hand side

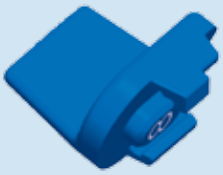
S11-45 GRT SML W172
Side module left hand side

S5/S11-45 GRT CM W100 and W200



S11-45 GRT SMR W122
Side module right hand side

S11 CAP HDL
Hold Down cap left hand side



S11 CAP

S11 CAP HDR
Hold Down cap right hand side

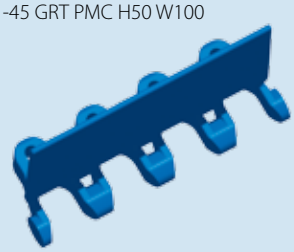
S4.1/S8/S11 PIN

S5/S11-45 FRT1 CM W100

S5/S11 SPR (sprocket)

S5/S11-45 GRT PMC H25 W100

S5/S11-45 GRT PMC H50 W100



S11 Idler

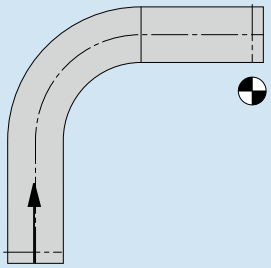
Combo belts S5 ST and S11

S11 and S5/S5 ST can be combined. Combos will always have pins in stainless steel (SS). A combo can ensure the strength of the S5/S5 ST combined with the narrow radius of S11.

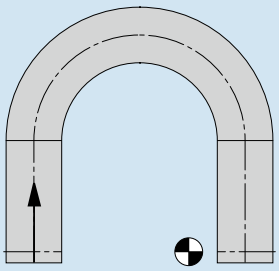
Conveyor layout options, combo belts

Combo belts combining the tight radius feature of S11 with the extreme strength of S5 ST will normally only be used for one-directional layouts (L, U and C) as the curve factor will depend on the direction of the turn.

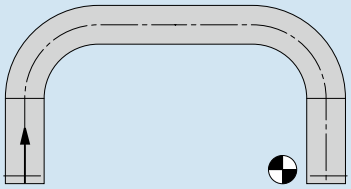
L layout



U layout



C layout



Minimum requirements (straight and curved sections), combo belts

A curve with S11 modules on the inside will have a factor 0.05 higher than a normal S11.

Series 5 ST/11 combo

Belt width	Curve factor (S11 inside)
≤ 1000 mm (39.37 in)	1.45
> 1000 mm (39.37 in)	1.55

To ensure the belt operates smoothly with a minimum of fluctuations in belt speed and optimum load transmission from the drive sprockets, we recommend observing the following minimum requirements as regards the straight sections before, between and after curves:

– Minimum length of the straight in-feed/out-feed section before and after the curve = 2 x belt width.

– For curves there are no requirements regarding the length of the sections in between.

Combo belt properties

The data below is based on an S5 ST design on the outside and an S11 on the inside.

Permissible belt pull, combo belt

Belt type	Materials	Permissible belt pull (Straight)		Permissible belt pull (Curve)	
		N/mm	lb/ft	N	lb
S5 ST/S11-45 GRT	PP	18	1233	1200	270
	POM-CR	25	1713	2100	473
	PA	20	1370	1680	378

Belt weight

Belt type	Materials	Weight	
		kg/m^2	lb/ft^2
S5 ST/S11-45 GRT S11/S5 ST-45 GRT	PP	10	2.1
	POM-CR	13	2.7
	PA	12	2.5

Combo belts S5 ST and S11

Belt nomenclature and ordering guidelines, combo belts

To state if a belt is to be used for a left hand or right hand curve the belt description will include a CW or a CCW code.

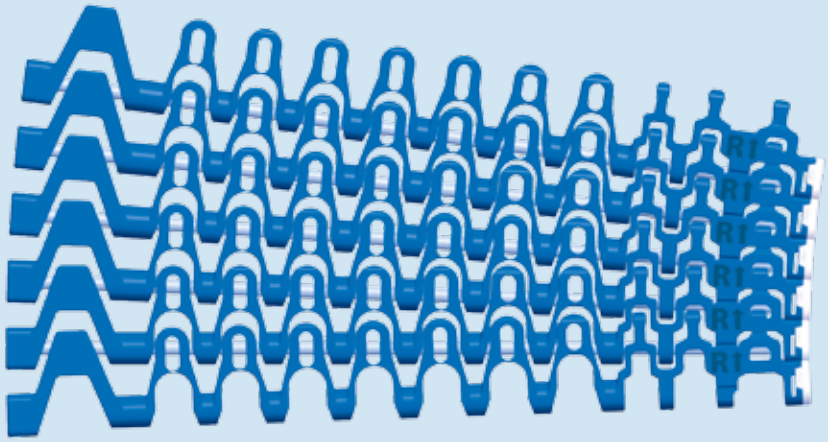
CW = Clockwise or right hand curve and
CCW = Counter Clockwise or left hand curve.

Furthermore for combo belts the text description shows how the belt is combined:

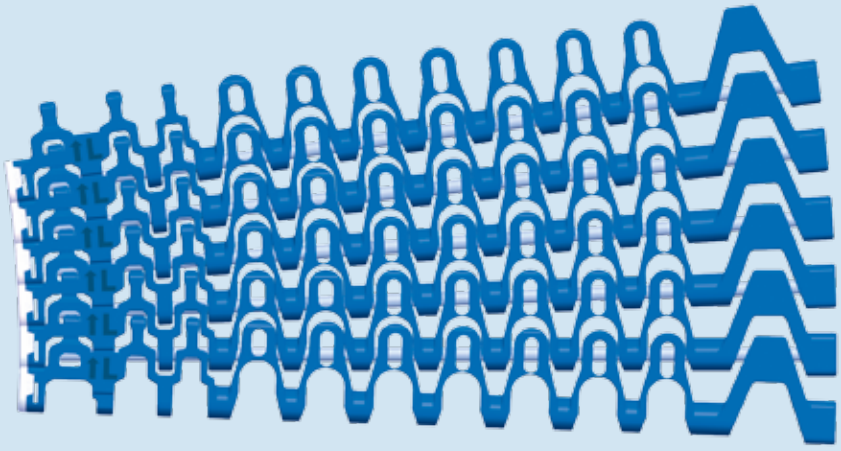
– S5 ST/S11 = S5 ST on the left hand side and
S11 on the right hand side = a clockwise belt

– S11/S5 ST = S11 on the left hand side and
S5 ST on the right hand = a counter clockwise belt

S5 ST/S11 combo (clockwise)

Sketch	
Belt designation	**S5 ST/S11-45 GRT CW POM-CR BL (POM WT)**
Description	CW = Clockwise (= S5 pin with groove locked in the S5 ST module with clips on left-hand side) With flat cover caps on right hand side (inside radius on last curve) (in POM WT) POM-CR = All side modules (blue) in POM-CR, centre modules (blue) in POM First listed name will be the left-hand side belt type (seen from above in travel direction)
Components	S5 CLP ST POM WT S5-45 GRT SML ST POM-CR DB W100 S5-45 GRT SML ST POM-CR DB W75 S5/S11-45 GRT CM POM BL W100 S5/S11-45 GRT CM POM BL W25 S5/S11 PIN ST SS D5 S11 CAP POM WT S11-45 GRT SMR POM-CR BL W122 S11-45 GRT SMR POM-CR BL W172
Belt width	Minimum belt width: 175 mm (6.89 in) Width increment: 25 mm (0.98 in)

S11/S5 ST combo (counter clockwise)

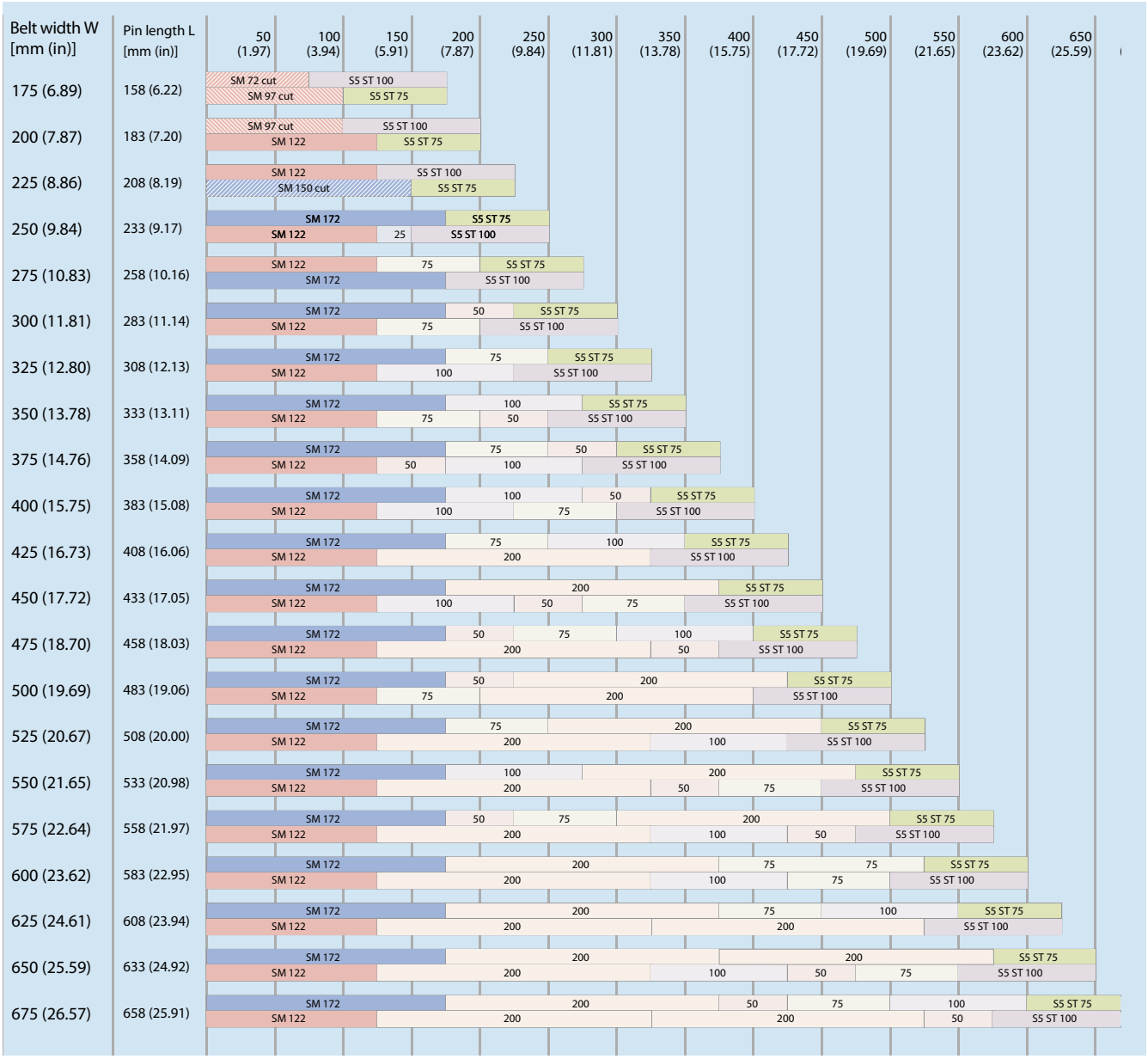
Sketch	
Belt designation	**S11/S5 ST-45 GRT CCW POM-CR BL (POM WT)**
Description	CCW = Counter clockwise (= S5 pin with groove locked in the S5 ST module with clips on right-hand side) With flat cover caps on left hand side (inside radius on last curve) (in POM WT) POM-CR = All side modules (blue) in POM-CR, centre modules (blue) in POM First listed name will be the left-hand side belt type (seen from above in travel direction)
Components	S11 CAP POM WT S11-45 GRT SML POM-CR BL W122 S11-45 GRT SML POM-CR BL W172 S5/S11-45 GRT CM POM BL W100 S5/S11-45 GRT CM POM BL W25 S5/S11 PIN ST SS D5 S5 CLP ST POM WT S5-45 GRT SMR ST POM-CR DB W100 S5-45 GRT SMR ST POM-CR DB W75
Belt width	Minimum belt width: 175 mm (6.89 in) Width increment: 25 mm (0.98 in)

Combo belts S5 ST and S11

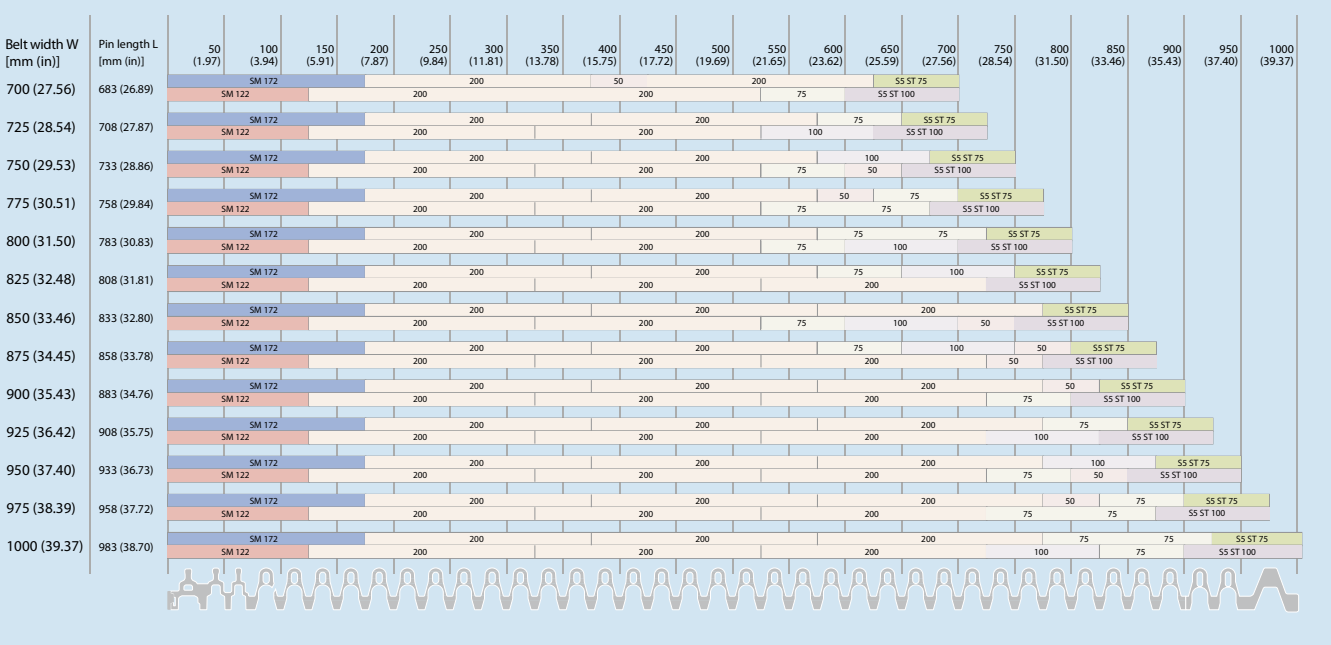
Combo belt configurations

Combo belt width options

Minimum belt width for series 11 is 175 mm and then in 25 mm increments. Please note that the belt edge cap or Hold Down cap is not shown but is included in the belt width (add 3 mm in each case).

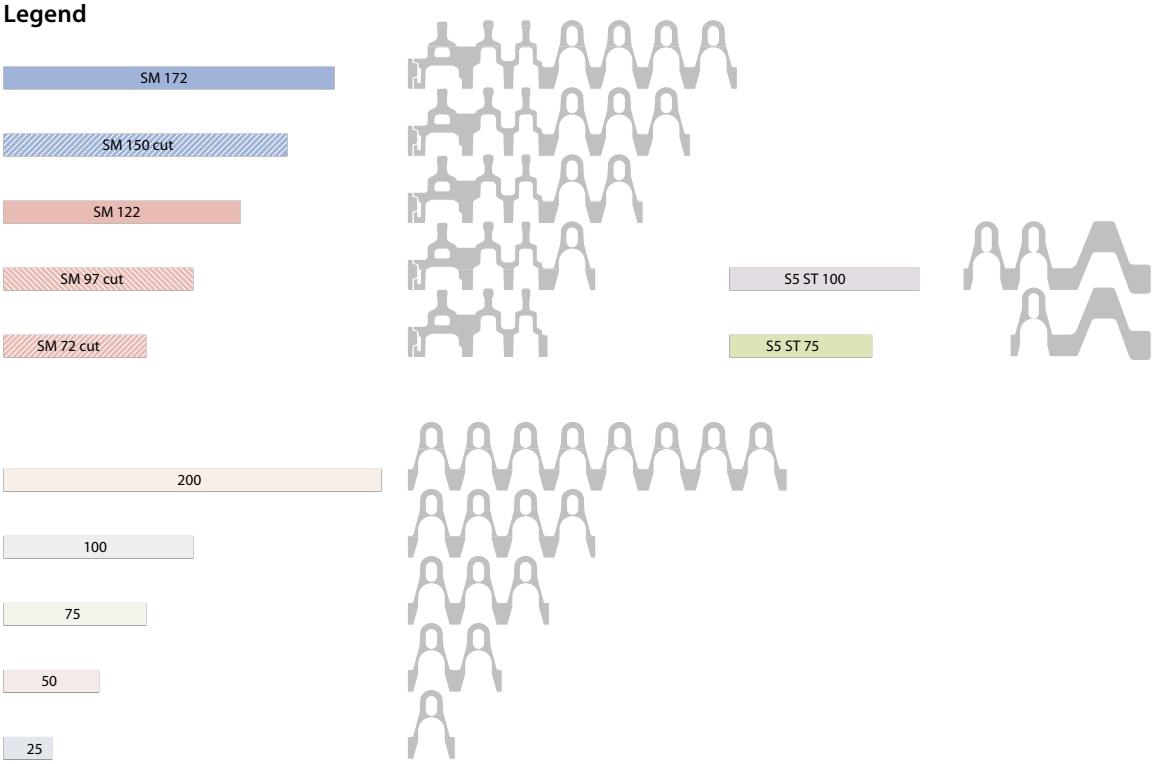


Dimensions in mm and inches (in).
All imperial dimensions (inches) are rounded off.



Dimensions in mm and inches (in).
All imperial dimensions (inches) are rounded off.

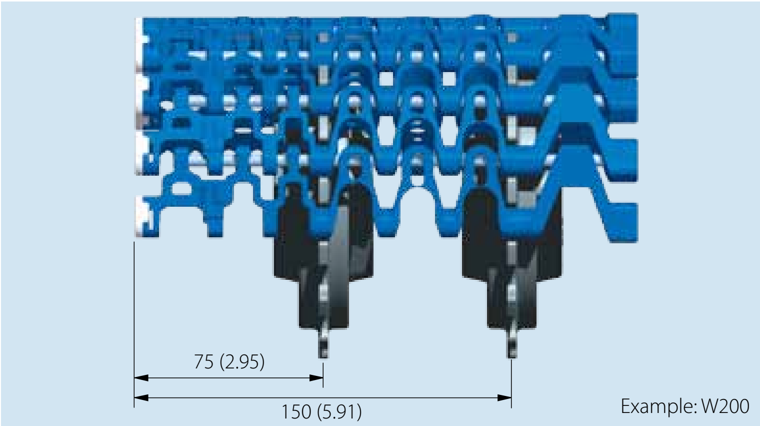
Legend



Combo belts S5 ST and S11

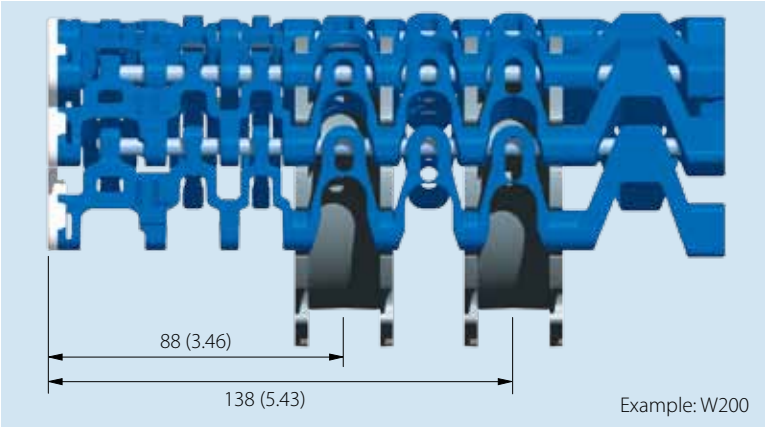
S5 ST/S11 Sprocket positions, single row sprocket

Dimensions in mm and inches (in).
All imperial dimensions (inches) are rounded off.



Belt width [mm (in)]	Sprocket positions in mm (in) measured from the left belt edge to sprocket center																																					
	0 (0)	25 (0.98)	50 (1.97)	75 (2.95)	100 (3.94)	125 (4.92)	150 (5.91)	175 (6.89)	200 (7.87)	225 (8.86)	250 (9.84)	275 (10.83)	300 (11.81)	325 (12.80)	350 (13.78)	375 (14.76)	400 (15.75)	425 (16.73)	450 (17.72)	475 (18.70)	500 (19.69)	525 (20.67)	550 (21.65)	575 (22.64)	600 (23.62)	625 (24.61)	650 (25.59)	675 (26.57)	700 (27.56)	725 (28.54)	750 (29.53)	775 (30.51)	800 (31.50)	825 (32.48)	850 (33.46)	875 (34.45)	900 (35.43)	925 (36.42)	950 (36.40)
200 (7.87)				●			●																																
225 (8.86)				●		●		●																															
250 (9.84)				●			●		●																														
275 (10.83)				●			●			●																													
300 (11.81)				●			●		●		●																												
325 (12.80)				●			●		●			●																											
350 (13.78)				●			●			●			●																										
375 (14.76)				●			●		●		●			●																									
400 (15.75)				●			●		●		●		●		●																								
425 (16.73)				●			●			●			●			●																							
450 (17.72)				●			●		●		●			●			●																						
475 (18.70)				●			●		●			●			●			●																					
500 (19.69)				●			●			●			●			●			●																				
525 (20.67)				●			●			●			●		●		●			●																			
550 (21.65)				●			●			●			●		●			●			●																		
575 (22.64)				●			●			●			●			●			●			●																	
600 (23.62)				●			●			●			●		●		●			●			●																
625 (24.61)				●			●			●			●		●			●			●			●															
650 (25.59)				●			●			●			●		●		●		●			●			●														
675 (26.57)				●			●			●			●		●		●			●			●			●													
700 (27.56)				●			●			●			●		●		●		●		●			●			●												
725 (28.54)				●			●			●			●		●			●			●		●		●			●											
750 (29.53)				●			●			●			●		●			●			●		●			●			●										
775 (30.51)				●			●			●			●		●			●			●		●		●		●			●									
800 (31.50)				●			●			●			●		●			●			●		●			●		●			●								
825 (32.48)				●			●			●			●		●			●			●		●			●			●			●							
850 (33.46)				●			●			●			●		●			●			●		●			●		●		●			●						
875 (34.45)				●			●			●			●		●			●			●		●			●			●			●		●					
900 (35.43)				●			●			●			●		●			●			●		●			●			●			●			●				
925 (36.42)				●			●			●			●		●			●			●		●			●			●		●		●			●			
950 (37.40)				●			●			●			●		●			●			●		●			●			●		●			●			●		
975 (38.39)				●			●			●			●		●			●			●		●			●			●			●			●			●	
1000 (39.37)				●			●			●			●		●			●			●		●			●			●		●		●			●			●

S5 ST/S11 Sprocket positions, double row sprocket



Example: W200

Dimensions in mm and inches (in).
All imperial dimensions (inches) are rounded off.

Belt width [mm (in)]	Sprocket positions in mm (in) measured from the left belt edge to sprocket center																																				
	0 (0)	88 (3.46)	113 (4.45)	138 (5.43)	163 (6.42)	188 (7.40)	213 (8.39)	238 (9.37)	263 (10.35)	288 (11.34)	313 (12.32)	338 (13.30)	363 (14.29)	388 (15.28)	413 (16.26)	438 (17.24)	463 (18.23)	488 (19.21)	513 (20.20)	538 (21.18)	563 (22.17)	588 (23.15)	613 (24.13)	638 (25.12)	663 (26.10)	688 (27.09)	713 (28.07)	738 (29.06)	763 (30.04)	788 (31.02)	813 (32.01)	838 (32.99)	863 (33.98)	888 (34.96)	913 (35.94)	938 (36.93)
175 (6.89)		●		●*																																	
200 (7.87)		●		●																																	
225 (8.86)		●			●																																
250 (9.84)		●		●		●																															
275 (10.83)		●			●		●																														
300 (11.81)		●			●			●																													
325 (12.80)		●				●			●																												
350 (13.78)		●				●				●																											
375 (14.76)		●			●			●			●																										
400 (15.75)		●			●				●			●																									
425 (16.73)		●			●		●			●			●																									
450 (17.72)		●			●			●			●			●																								
475 (18.70)		●			●				●			●			●																							
500 (19.69)		●			●				●			●				●																						
525 (20.67)		●			●				●				●				●																					
550 (21.65)		●				●				●				●				●																				
575 (22.64)		●				●			●				●			●			●																			
600 (23.62)		●				●				●				●			●			●																		
625 (24.61)		●				●				●				●				●			●																	
650 (25.59)		●				●				●				●				●				●																
675 (26.57)		●				●				●				●			●			●			●															
700 (27.56)		●				●				●				●			●				●			●														
725 (28.54)		●				●				●				●				●				●			●													
750 (29.53)		●				●				●				●				●			●		●			●												
775 (30.51)		●				●				●				●				●			●			●			●											
800 (31.50)		●				●				●				●				●			●				●			●										
825 (32.48)		●				●				●				●				●				●				●			●									
850 (33.46)		●				●				●				●				●				●				●				●								
875 (34.45)		●				●				●				●				●					●			●					●							
900 (35.43)		●				●				●				●				●					●			●						●						
925 (36.42)		●				●				●				●				●				●				●					●			●				
950 (37.40)		●				●				●				●				●				●				●			●						●			
975 (38.39)		●				●				●				●				●				●				●			●							●		
1000 (39.37)		●				●				●				●				●				●				●			●				●				●

* = Use ½ double row sprocket.

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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.

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MOVEMENT SYSTEMS

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