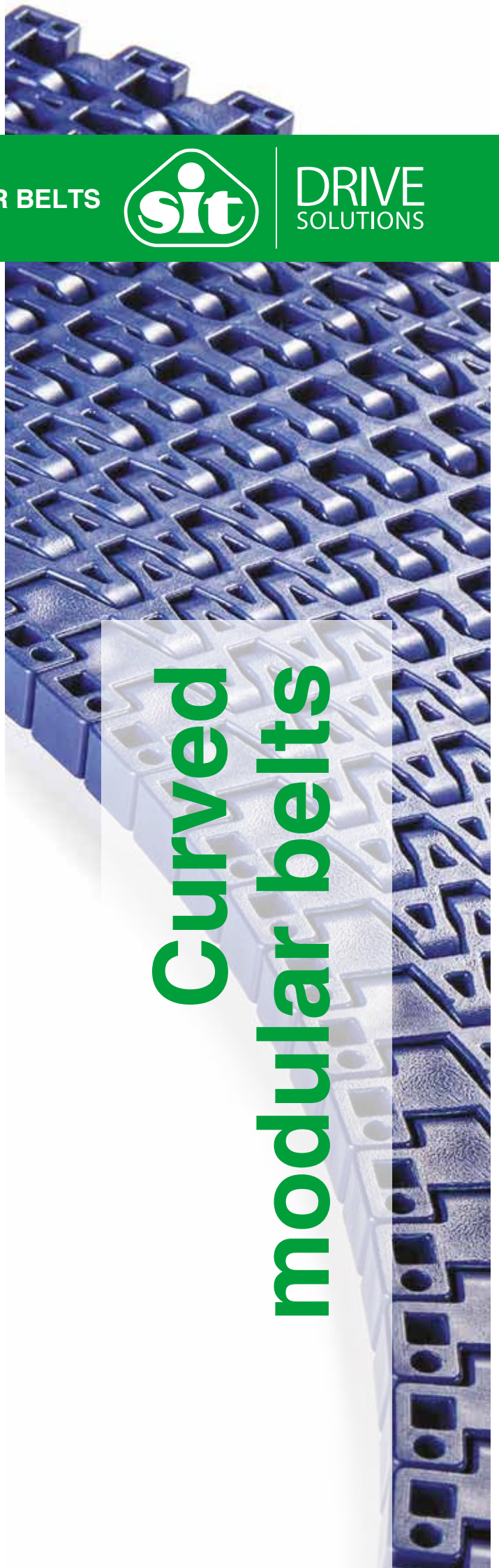


CURVED MODULAR BELTS



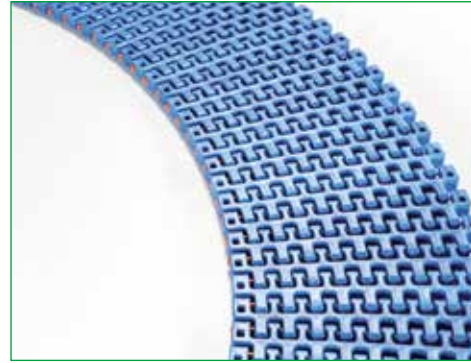
DRIVE  
SOLUTIONS

# Curved modular belts



PITCH 25,4 mm / 1''

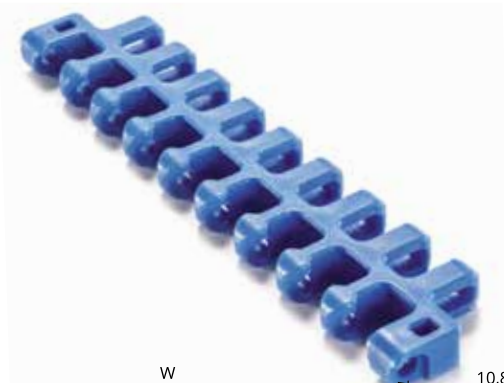
**Belt type:** open flat surface  
**Pin diameter:** Ø 5 mm  
**Open area:** 38%  
**Hole openings:** 7,5x12  
**Minimum width:** 83 mm  
**Thickness:** 10,8 mm  
**Accessories:** flights  
**Food Certification:** FDA - EU  
**Collapse factor:** 2,1 - 2,4



**Standard executions**

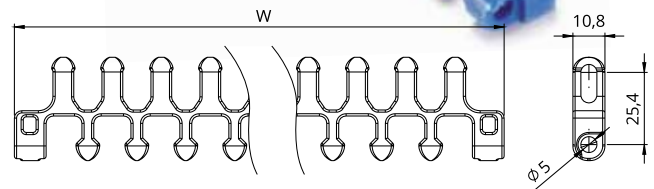
Belt material	Belt color	Pin
PP	Blue - white	POM
POM	Blue - white	POM

Other materials and colors are available upon request.



Materiale del nastro	Materiale del Pin	Belt performance [N/m]		Range di temperature [°C]	Certification	Weight [Kg/m²]
		Dritto	In curva			
PP	PP	9000	1200	+5 ÷ +90	FDA - EU	5,1
POM	POM	16250	1600	-43 ÷ +70	FDA - EU	6,9
POM	PA	17600	1700	-40 ÷ +80	FDA - EU	6,6
POM	PP	14300	1400	+5 ÷ +70	FDA - EU	6,6

PP = polypropylene - PE = polyethylene - POM = acetal resin - PA = polyamide



**Belt width [W]**

Minimum [mm]	Standard increment [mm]	Special increment [mm]	Width tolerance* [mm]
83	200 + Multiple: 50	Multiple: 16,7	+/-2 fino a 300
			+/-3 fino a 600
			+/-4 oltre 600

\*It is advisable to consider dimensional variations in width based on operating temperatures and humidity when the belt is made of polyamide.

<b>Part number</b>	<b>NMREC 254 R -POM -W</b>
Type	
Pitch	
Open flat surface	
Belt material: POM = acetal resin / PP = polypropylene PA = polyamide	
Belt color: W = white / B = blue	

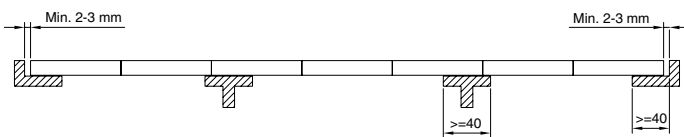
# Hold down and TAB for NMREC254R type

Layout of guides in different belt types:

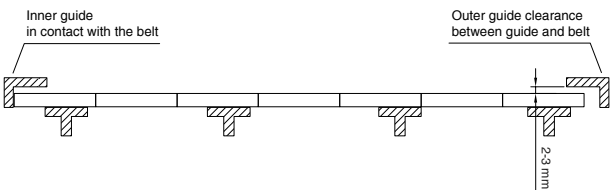
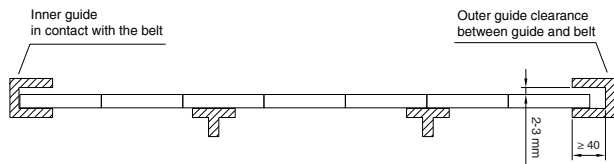
## STANDARD TYPE



Example of guiding system on straight strand



Example of guiding system on curved strand

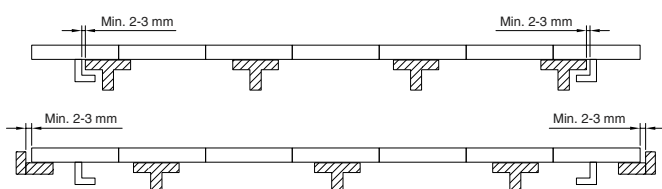


## TAB RETENTION SYSTEM



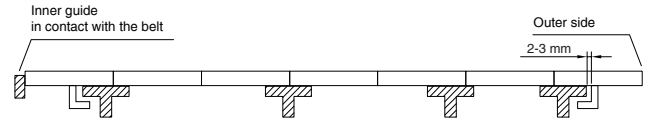
The TAB system is available on one or both sides of the belt depending on whether the belt curves in one or both directions. The system is designed primarily to avoid belt lifting in the curves and minimize belt width with respect to the size of the objects carried that may be wider than the belt itself. You can use the hook as contact surface and let them slide on the guides. It is important to evaluate the strength capacity of the TAB system combined with belt tension, speed, and belt radius.

Example of guiding system on straight strand

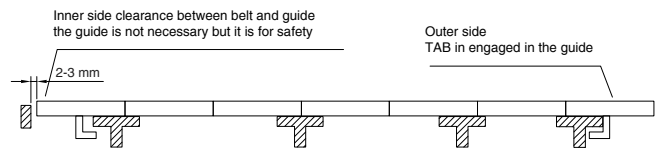


Configuration suitable for significant forces on the belt and sustained speeds:

Example of guiding system on curved strand



Configuration suitable for limited forces on the belt and speed up to 20m / min. In this configuration you can also make larger curves without collapsing the belt.



## HOLD DOWN EXECUTION

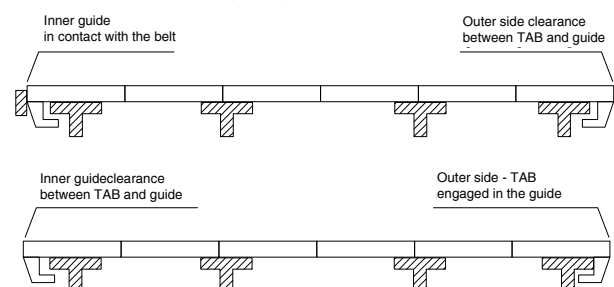


The HOLD DOWN system can be applied on one or both sides of the belt as required. The system is designed and manufactured to prevent lifting of the belt on bends and at the same time allow the conveyed objects to be wider than the belt itself. This allows the dimensions of the belt to be contained. The hook is strong enough and sized to be used in contact with Sliding guides, as a stop

Example of guiding system on straight strand



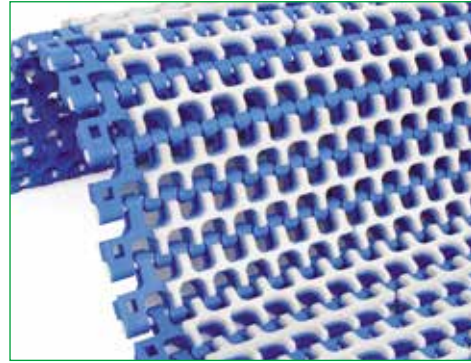
Example of guiding system on curved strand



# NMREC254RT

PITCH 25,4 mm / 1"

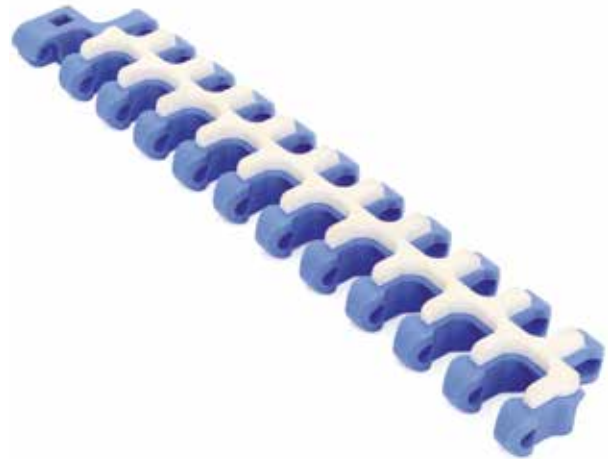
- Belt type:** rubber top open surface
- Pin diameter:** Ø 5 mm
- Open area:** 38%
- Hole openings:** 7,5x12
- Minimum width:** 83 mm
- Thickness:** 10,8 mm + 5 mm
- Accessories:** flights
- Food Certification:** FDA - EU
- Collapse factor:** 2,1 - 2,4 (vedere pagina 90)



### Standard executions

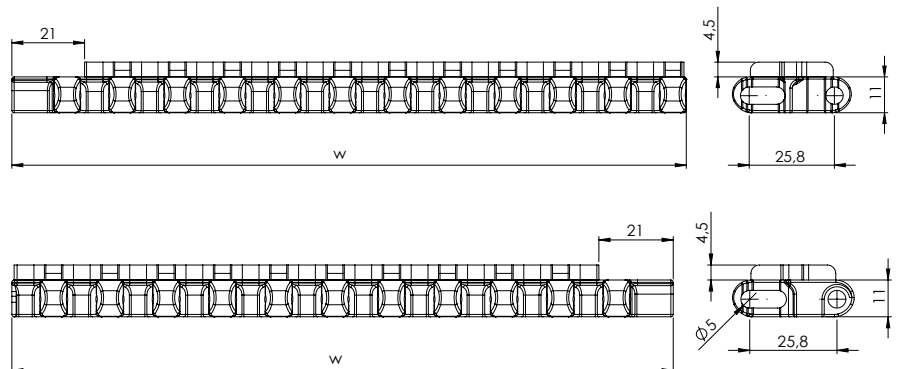
Belt material	Belt color	Pin
PP	Blue - white	POM

Other materials and colors are available upon request.



Materiale del nastro	Materiale del Pin	Belt performance [N/m]		Range di temperature [°C]	Certification	Weight [Kg/m²]
		Dritto	In curva			
PP	PP	9000	1200	+5 ÷ +90	FDA - EU	5,1
POM	POM	16250	1600	-43 ÷ +70	FDA - EU	6,9
POM	PA	17600	1700	-40 ÷ +80	FDA - EU	6,6
POM	PP	14300	1400	+5 ÷ +70	FDA - EU	6,6

PP = polypropylene - PE = polyethylene - POM = acetal resin - PA = polyamide



### Part number

NMREC 254 RT -PO -W

Type

Pitch

Rubber top open surface

Belt color: W = white / B = blue

Belt material:  
POM = acetal resin / PP = polypropylene  
PA = polyamide

# Sprockets for NMREC254R type



Teeth nr.	Dp [mm]	Do [mm]	A [mm] Solid	C [mm] Split	B [mm]	Available standard bore	
						Square [mm]	Ø round + set-screw UNI
8	68,4	67,7	30	40	7	25x25*	25*
10	82,8	85,7	30	40	7	40x40*	25 - 30*
12	98,9	102,0	30	40	7	40x40*	25 - 30*
15	123,1	126,0	30	40	7	40x40*	25 - 30*
16	134,1	134,0	30	40	7	40x40*	25 - 30*
18	147,4	150,6	30	40	7	40x40*	25 - 30*
20	162,4	166,4	30	40	7	40x40*	30*

\*Molded split version available.  
 Standard material: nylon PA6 fiberglass.  
 It is possible to supply sprocket with any number of teeth or any material by CNC machining  
 Dp = Pitch diameter  
 Do = External tooth diameter

**Part number** NSEC254TR -R 25 K -Z8

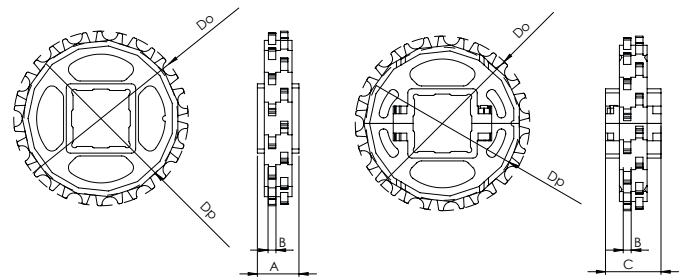
Type \_\_\_\_\_

Bore type: R = round / Q = square \_\_\_\_\_

Bore dimension (mm) \_\_\_\_\_

K = with set-screw \_\_\_\_\_

Teeth nr. \_\_\_\_\_



Molded version in one piece.

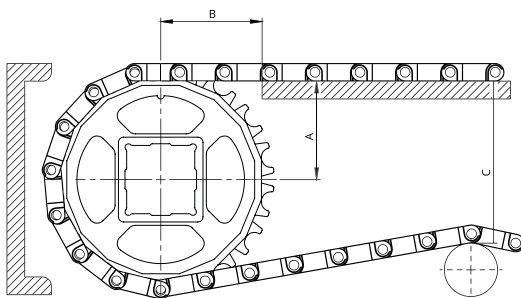
Split version molded in two parts.

Belt width W [mm]		167	200	250	300	350	400	450	500	550	600	700	800	900	1000		
Number of sprockes	Drive shaft	Belt tension ≤ 50% of the capacity		2	2	2	3	3	4	4	4	5	6	6	7	8	8
		Belt tension = 100% of the capacity		2	2	3	4	5	5	5	5	7	8	9	11	13	14
	Driven shaft	2	2	2	2	3	3	3	4	4	4	4	4	5	5	5	5
	Sliding guides	2	2	2	3	3	4	4	4	4	5	6	7	7	8	8	8

Non-standard width increments: 16,7 mm

## Mounting

When mounting the sprockets, make sure that you have mounted all sprockets oriented in the same phase. Only axially lock the central sprocket and leave the other sprockets free to move axially.



Teeth nr.	A <sub>max</sub> [mm]	A <sub>min</sub> [mm]	B1 [mm]	B2 [mm]	C <sub>max</sub> [mm]
8	27,8	25,7	38	28	54
10	35,8	34,1	40	28	75
12	43,9	42,4	44	28	91
15	56,0	54,8	50	28	116
16	60,0	58,9	57	28	140
18	68,1	67,0	65	28	155
20	76,1	75,2	74	28	170

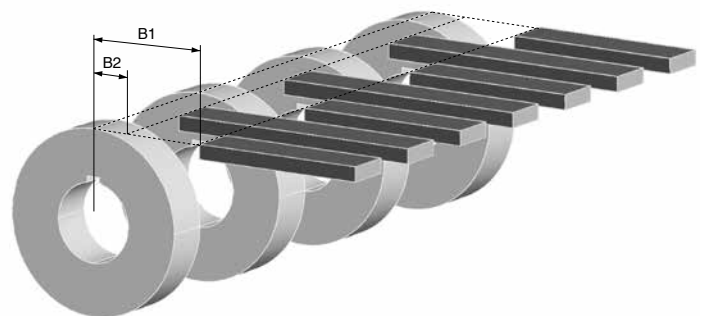
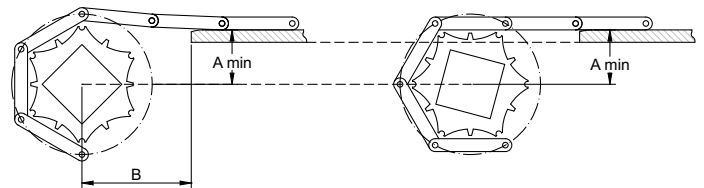
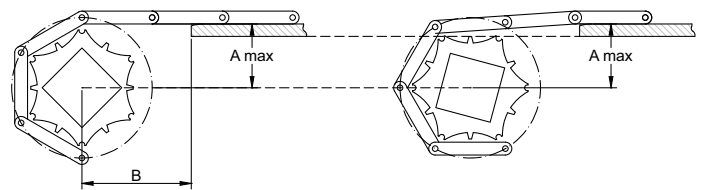
## Sprockets for NMREC254R type

$A_{max}$  = sliding surface position so that the height of the belt engaging the sprocket oscillates between the sliding surface height and a lower one. The height variation depends on the number of teeth and the pitch of the sprocket.

$A_{min}$  = sliding surface position so that the height of the belt engaging the sprocket oscillates between the sliding surface height and a higher one. The height variation depends on the number of teeth and the pitch of the sprocket.

The choice of A dimensions depends on the items you have to carry. It is always suggested to make a chamfer at the end of the sliding guides.

In order to avoid any subsidence of the belt in the area between the guiding strip and the sprockets, it is possible to locate the guides between the sprockets. Two minimum B1 and B2 dimensions are defined.



A = belt width

B = straight strand before the drive shaft.

Min. 2 x belt width

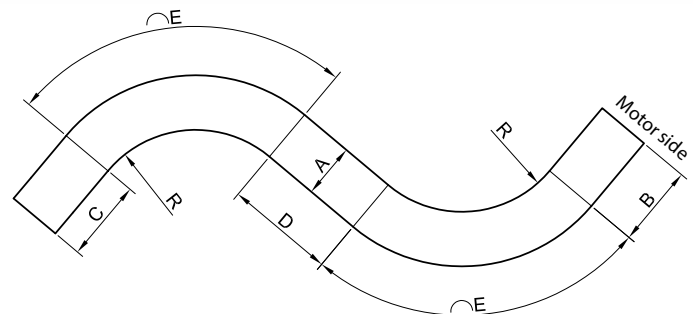
C = straight strand before return shaft. Min. 1,5 x belt width

D = straight strand between two curves. Min. 2 x belt width

E = curved belt length =  $(R + A) \times \text{angle in radians}$

R = internal radius. R minimum = belt width x collapsing factor.

Collapsing factor variable from 2,1 to 2,4 depending on belt width.



### Example:

A = 200 mm

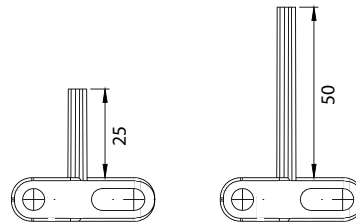
R =  $200 \cdot 2,1 = 420$  mm

E =  $(420 + 200) \cdot \frac{\pi}{2} = 973$  mm

Larghezza nastro [mm]	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
Fattore di curva $f_c$	2,05	2,07	2,1	2,12	2,14	2,15	2,16	2,17	2,18	2,18	2,19	2,19	2,19	2,2	2,2
Minimo raggio interno [mm]	410	517,5	630	742	856	967,5	1080	1193,5	1308	1417	1533	1642,5	1752	1870	1980

## Accessories for NMREC254R type

### Flights



Caution: Consider that in the curves the guides get closer to each other. If possible, always specify the distance of the guides from the belt edge.

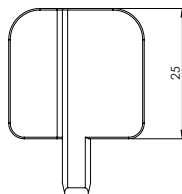
In case of need of flights the following table shows the standard indent. It is possible to have a special indent according to specific customer request.



Standard indent [mm]	Z	25,0	37,5	54,3

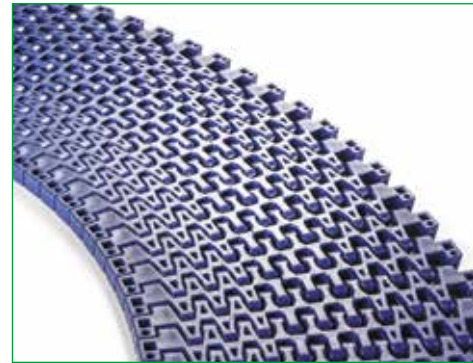
In the case of wide belts, one or more gaps is recommended between flights to allow the belt to be supported on the return path. The maximum width not supported by guides depends on several factors such as the load on the belt, possible incline of the conveyor, and belt or pin material.

### Side wall



PITCH 25,4 mm / 1"

**Belt type:** open flat surface  
**Pin diameter:** Ø 5 mm  
**Open area:** 38%  
**Hole openings:** 6,5x12  
**Minimum width:** 167 mm  
**Thickness:** 13 mm  
**Accessories:** tab esterno  
**Food Certification:** FDA - EU  
**Collapse factor:** 1,4 - 1,6 (vedere pagina 95)



**Standard executions**

Belt material	Belt color	Pin
PP	Blue - white	POM
POM	Blue - white	POM

Other materials and colors are available upon request.



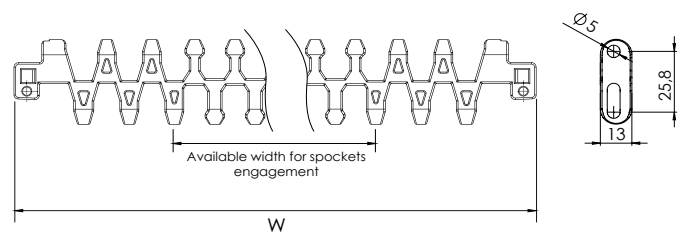
Materiale del nastro	Materiale del Pin	Belt performance [N/m]		Range di temperature [°C]	Certification	Weight [Kg/m²]
		Dritto	In curva			
PP	PP	9400	1250	+5 ÷ +90	FDA - EU	5,6
POM	POM	17050	1680	-43 ÷ +70	FDA - EU	7,2
POM	PA	18400	1800	-40 ÷ +80	FDA - EU	7,1
POM	PP	15000	1500	+5 ÷ +70	FDA - EU	7,1

PP = polypropylene - PE = polyethylene - POM = acetal resin - PA = polyamide

**Belt width [W]**

Minimum [mm]	Standard increment [mm]	Special increment [mm]	Width tolerance* [mm]
83	200 + Multiple: 50	Multiple: 16,7	+/-2 fino a 300
			+/-3 fino a 600
			+/-4 oltre 600

\*It is advisable to consider dimensional variations in width based on operating temperatures and humidity when the belt is made of polyamide.



**Part number**

NMREC 254 TR -POM -W

Type  
 Pitch  
 open flat surface

Belt color: W = white / B = blue

Belt material:  
 POM = acetal resin / PP = polypropylene  
 PA = polyamide

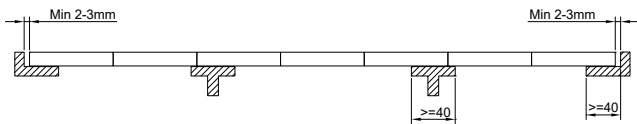


# TAB EXT for NMREC254TR type

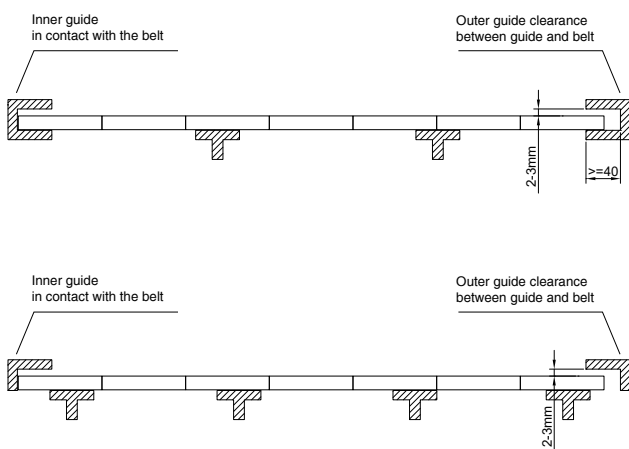
Layout of guides in different belt types:

## STANDARD TYPE

Example of guiding system on straight strand



Example of guiding system on curved strand

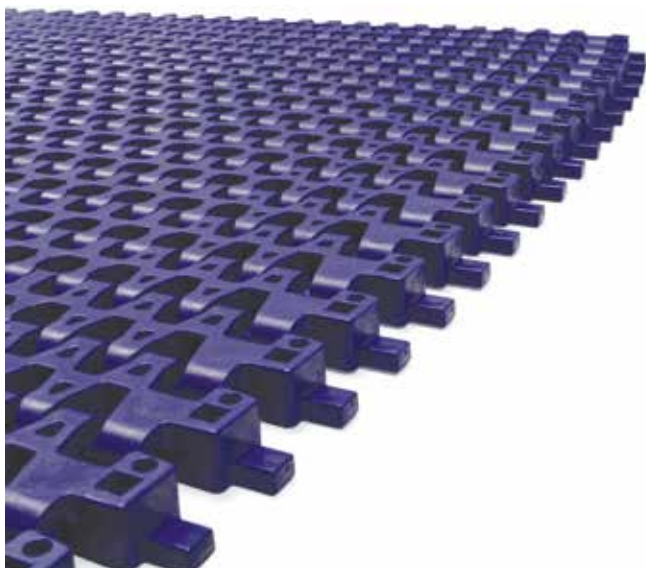


TAB EXT execution can be applied to one or both edge of the belt according to specific need.

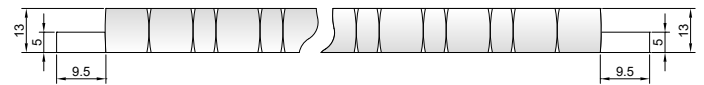
This system is primarily used to minimize the belt width compared to the object to be conveyed, infact the object can protrude from the belt side since there is no need of lateral guide higher or hooking the belt side.

By reducing the width of the belt it is also possible to reduce its the inner radius. This is common in example for carton boxes.

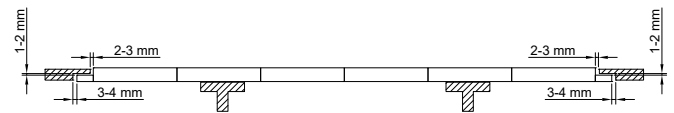
The TAB EXT system can be applied also in case it is needed to let the conveyed goods leave the belt laterally.



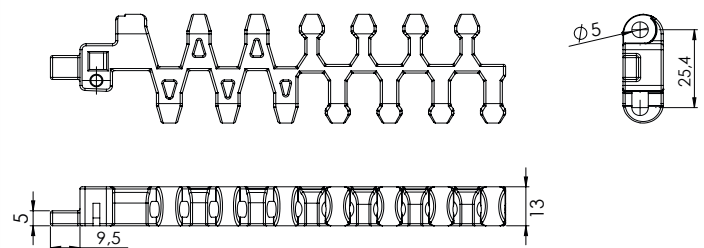
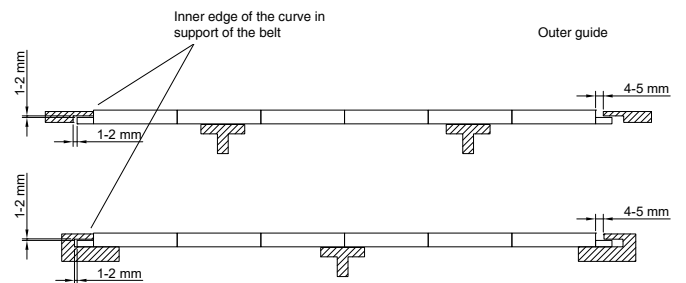
## TAB EXT RETENTION SYSTEM



Example of guiding system on straight strand



Example of guiding system on curved strand



CURVED MODULAR BELTS

# Sprockets for NMREC254TR type



Teeth nr.	Dp [mm]	Do [mm]	A [mm] Solid	C [mm] Split	B [mm]	Available standard bore	
						Square [mm]	Ø round + set-screw UNI
8	68,4	67,7	30	40	7	25x25*	25*
10	82,8	85,7	30	40	7	40x40*	25 - 30*
12	98,9	102,0	30	40	7	40x40*	25 - 30*
15	123,1	126,0	30	40	7	40x40*	25 - 30*
16	134,1	134,0	30	40	7	40x40*	25 - 30*
18	147,4	150,6	30	40	7	40x40*	25 - 30*
20	162,4	166,4	30	40	7	40x40*	30*

\*Disponibile versione split.  
 Standard material: nylon PA6 fiberglass.  
 It is possible to supply sprocket with any number of teeth or any material by CNC machining  
 Dp = Pitch diameter  
 Do = External tooth diameter

**Part number** NSEC254TR -R 25 K -Z12

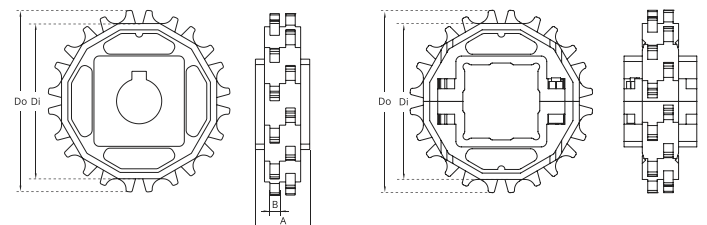
Type \_\_\_\_\_

Bore type: R = round / Q = square \_\_\_\_\_

Bore dimension (mm) \_\_\_\_\_

K = with set-screw \_\_\_\_\_

Teeth nr. \_\_\_\_\_



Molded version in one piece.

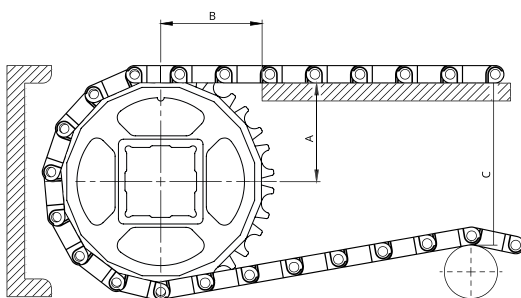
Split version molded in two parts.

Belt width W [mm]		167	200	250	300	350	400	450	500	550	600	700	800	900	1000	
Number of sprockets	Drive shaft	Belt tension ≤ 50% of the capacity	2	2	2	3	3	4	4	4	5	6	6	7	8	8
		Belt tension = 100% of the capacity	2	2	3	4	5	5	5	5	7	8	9	11	13	14
	Driven shaft		2	2	2	2	3	3	3	4	4	4	5	5	5	
	Sliding guides		2	2	2	3	3	4	4	4	4	5	6	7	7	8

Non-standard width increments: 16,7 mm

## Mounting

When mounting the sprockets, make sure that you have mounted all sprockets oriented in the same phase. Only axially lock the central sprocket and leave the other sprockets free to move axially.



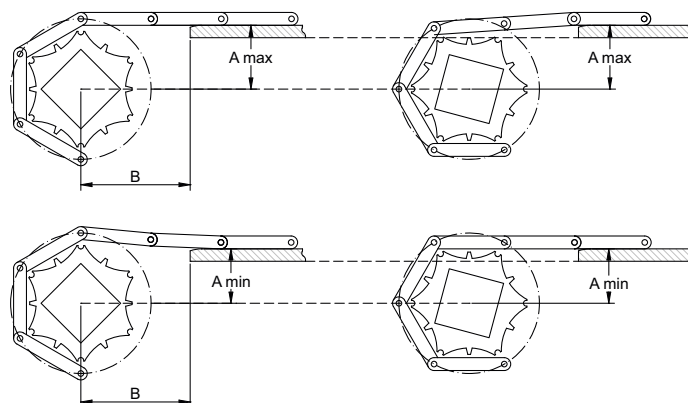
Teeth nr.	A <sub>max</sub> [mm]	A <sub>min</sub> [mm]	B1 [mm]	B2 [mm]	C <sub>max</sub> [mm]
8	27,8	25,7	38	28	54
10	35,8	34,1	40	28	75
12	43,9	42,4	44	28	91
15	56,0	54,8	50	28	116
16	60,0	58,9	57	28	140
18	68,1	67,0	65	28	155
20	76,1	75,2	74	28	170

## Sprockets for NMREC254TR type

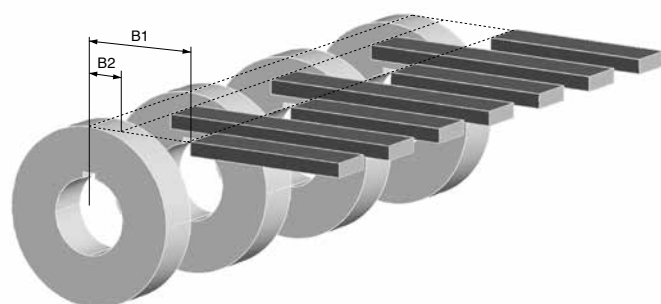
$A_{max}$  = sliding surface position so that the height of the belt engaging the sprocket oscillates between the sliding surface height and a lower one. The height variation depends on the number of teeth and the pitch of the sprocket.

$A_{min}$  = sliding surface position so that the height of the belt engaging the sprocket oscillates between the sliding surface height and a higher one. The height variation depends on the number of teeth and the pitch of the sprocket.

The choice of A dimensions depends on the items you have to carry.  
It is always suggested to make a chamfer at the end of the sliding guides.



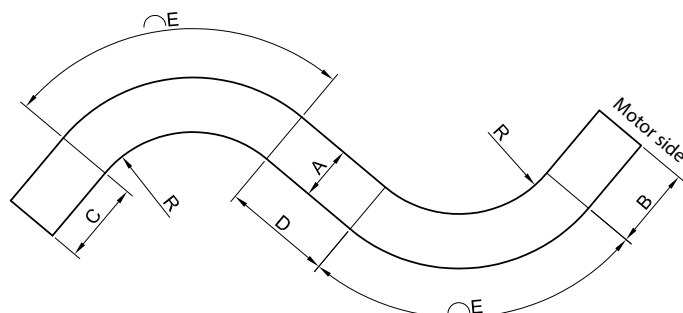
In order to avoid any subsidence of the belt in the area between the guiding strip and the sprockets, it is possible to locate the guides between the sprockets. Two minimum B1 and B2 dimensions are defined.



- A = belt width
- B = straight strand before the drive shaft.  
Min. 2 x belt width
- C = straight strand before return shaft. Min. 1,5 x belt width
- D = straight strand between two curves. Min. 1 x belt width
- E = curved belt length =  $(R + A) \times \text{angle in radians}$
- R = internal radius. R minimum = belt width x collapsing factor.  
collapsing factor variable from 1,4 to 1,6 depending on belt width.

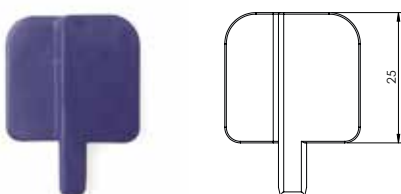
**Example:**

A = 200 mm  
 $R = 200 \cdot 1,4 = 280 \text{ mm}$   
 $E = (280 + 200) \cdot \frac{\pi}{2} = 753 \text{ mm}$



Belt width [mm]	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
Collapsing factor $f_c$	1,4	1,43	1,47	1,5	1,52	1,54	1,55	1,56	1,57	1,58	1,58	1,59	1,61	1,62	1,63
Minimum internal radius [mm]	280	357,5	441	525	608	693	775	858	942	1027	1106	1192,5	1288	1377	1467

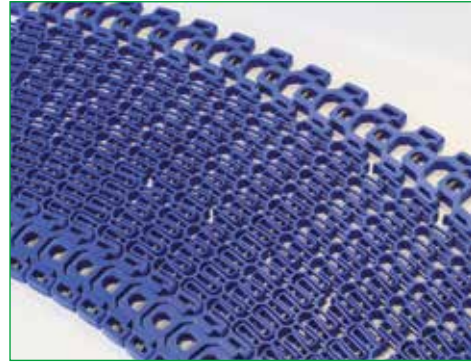
**Side wall**



**CURVED MODULAR BELTS**

PITCH 50,8 mm / 2"

**Belt type:** open flat surface  
**Pin diameter:** Ø 6 mm  
**Open area:** 58% rettilineo - 47% minimo in curva  
**Hole openings:** 15x17 mm  
**Minimum width:** 406 mm - 16"  
**Thickness:** 16 mm  
**Accessories:** side wall laterali  
**Food Certification:** FDA - EU  
**Collapse factor:** 1,5 - 1,7



**Standard executions**

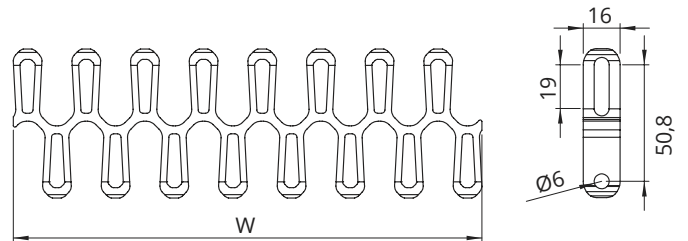
Belt material	Belt color	Pin
PP	Blue	POM
POM	Blue	POM-PA

Other materials and colors are available upon request.



Materiale del nastro	Materiale del Pin	Resistenza del nastro [N/m]		Range di temperature [°C]
		Dritto	In curva	
PP	PP	16500	2560	+5 ÷ +90
POM	PA	23100	3520	-43 ÷ +110

PP = polypropylene - POM = acetal resin - PA = polyamide



**Part number**

**NMREC 508 TR -POM -B**

Type

Pitch

Superficie del nastro aperta liscia

Belt color: B = blue

Belt material: POM = acetal resin  
 PPH = high temperature polypropylene  
 PPF = loaded polypropylene FV

# Sprockets and accessories for NMREC508TR belt



Teeth nr.	Di [mm]	Do [mm]	A [mm]	B [mm]	Available standard bore	
					Square [mm]	Ø round + set-screw UNI
8	99,7	127,3	30	22	40x40	25x30
10	133,6	160,4	30	22	40x40	25x30
12	167,1	193,2	30	22	40x40	25x30

Standard material: nylon PA6 fiberglass.  
 It is possible to supply sprocket with any number of teeth or any material by CNC machining  
 Dp = Pitch diameter  
 Do = External tooth diameter

**Part number** NSEC508TR -R 25 K -Z12

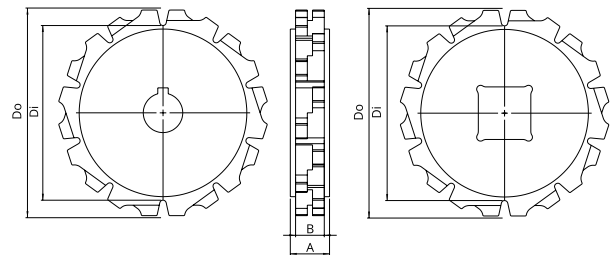
Type \_\_\_\_\_

Bore type: R = round / Q = square \_\_\_\_\_

Bore dimension (mm) \_\_\_\_\_

K = with set-screw \_\_\_\_\_

Teeth nr. \_\_\_\_\_



Belt width W [mm]		406	457	508	558	609	660	711	762	812	863	914	965	1016
Belt width W [pollici]		16"	18"	20"	22"	24"	26"	28"	30"	32"	34"	36"	38"	40"
Number of sprockes	Drive shaft	4	5	5	6	6	6	7	7	7	8	8	8	9
	Albero tenditore	3	4	4	4	5	5	5	5	6	6	6	6	6

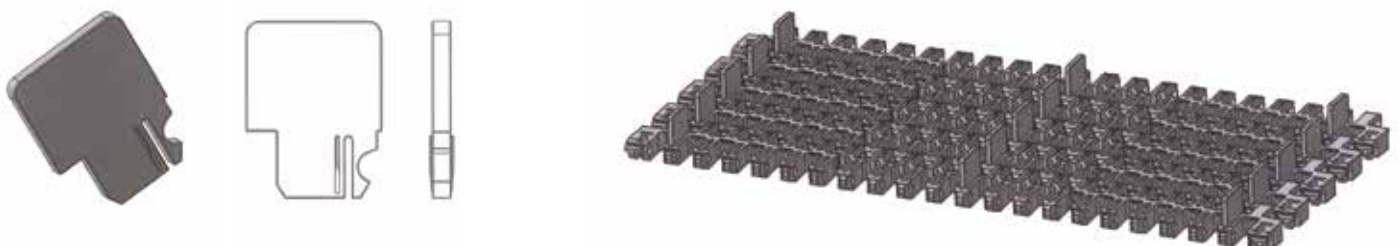
Non-standard width increments: 25,4 mm / 1"

## Radius of curvature

Larghezza nastro		[mm]	406	457	508	558	609	660	711	762	812	863	914	965	1016
		[pollici]	16	18	20	22	24	26	28	30	32	34	36	38	40
Raggio interno	RC 1,6	[mm]	650	732	813	893	975	96	1138	1220	1300	1381	1463	1544	1626
		[pollici]	25,6	28,8	32	35,2	38,4	3,8	44,8	48	51,2	54,4	57,6	60,8	64

## Interlocking side wall

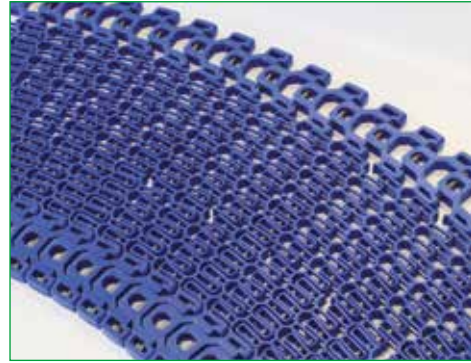
The bank can be positioned from 36 mm from the side of the belt in 1/2" increments.



CURVED MODULAR BELTS

PITCH 50,8 mm / 2"

**Execution:** open flat surface  
**Pin diameter:** Ø 6 mm - inox AISI 304  
**Open area:** 66% straight - 47% collapsed area hole  
**Size:** 14x18 mm  
**Minimum width:** 406 mm - 16"  
**Thickness:** 14,5 mm  
**Accessories:** sidewall - space liner  
**Food certification:** FDA - EU  
**Collapse factor:** 1,6 - 1,9 - 2,2



**Standard executions**

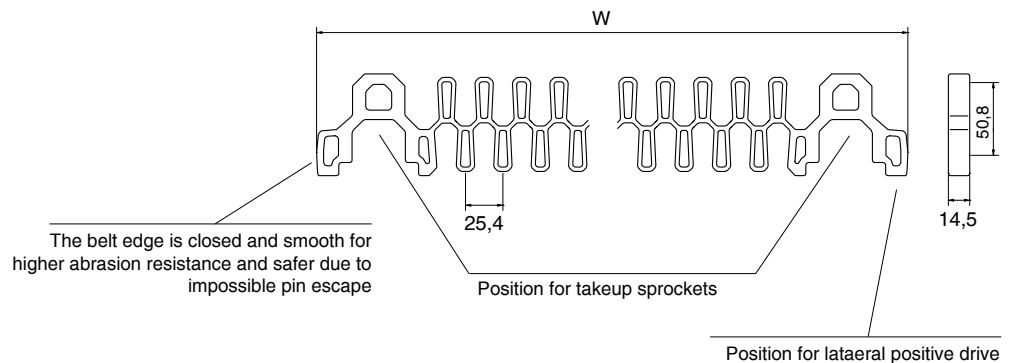
Belt material	Belt color	Pin
PPH	White	Inox AISI 304
PPF	White	Inox AISI 304
POM	Blue	Inox AISI 304

Other materials and colors are available upon request.



Belt material	Pin material	Belt strength [N/m]		Temperature range [°C]
		Straight	Cornering	
PPH	Inox AISI 304	4200	1900	+20 ÷ +70 humid condition
PPF	Inox AISI 304	6400	2900	+20 ÷ +105 humid condition
POM	Inox AISI 304	6000	2700	-40 ÷ +70

PPH = polypropylene for high temperature - PPF = polypropylene FG loaded  
 POM = acetal resin



**Part number**

NMREC 508 S -POM -B

Type  
 Pitch  
 Open flat surface

Belt color: W = white / B = blue

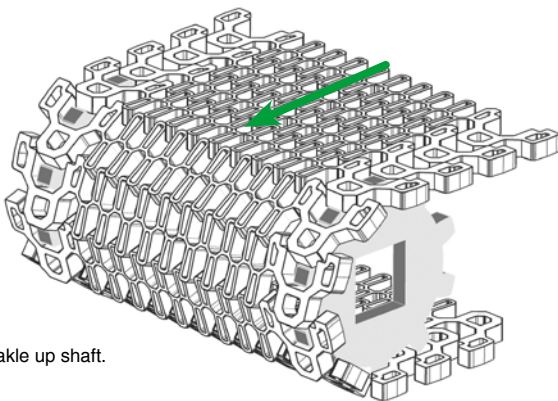
Belt material: PO = POM - acetal resin  
 PPH = polypropylene for high temperature  
 PPF = polypropylene FG loaded

# Sprockets and accessories for NMREC508S belt

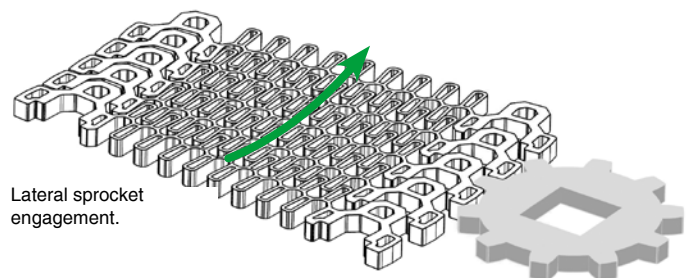
<b>Part number</b>	<b>NSEC508S</b>	<b>-R</b>	<b>25</b>	<b>K</b>	<b>-Z12</b>
Type					
Bore type: R = round / Q = square					
Bore dimension (mm)					
K = with set-screw					
Teeth nr.					

Belt width W [mm]		406	457	508	558	609	660	711	762	812	863	914	965	1016
Belt width W [pollici]		16"	18"	20"	22"	24"	26"	28"	30"	32"	34"	36"	38"	40"
Number of sprockets	Take up shaft	2	2	2	2	2	2	2	2	2	2	2	2	2
	Tensioner shaft	2	2	2	2	2	2	2	2	2	2	2	2	2
	Lateral sprocket on spiral turns	1 each turn												

Non-standard width increments: 25,4 mm / 1"



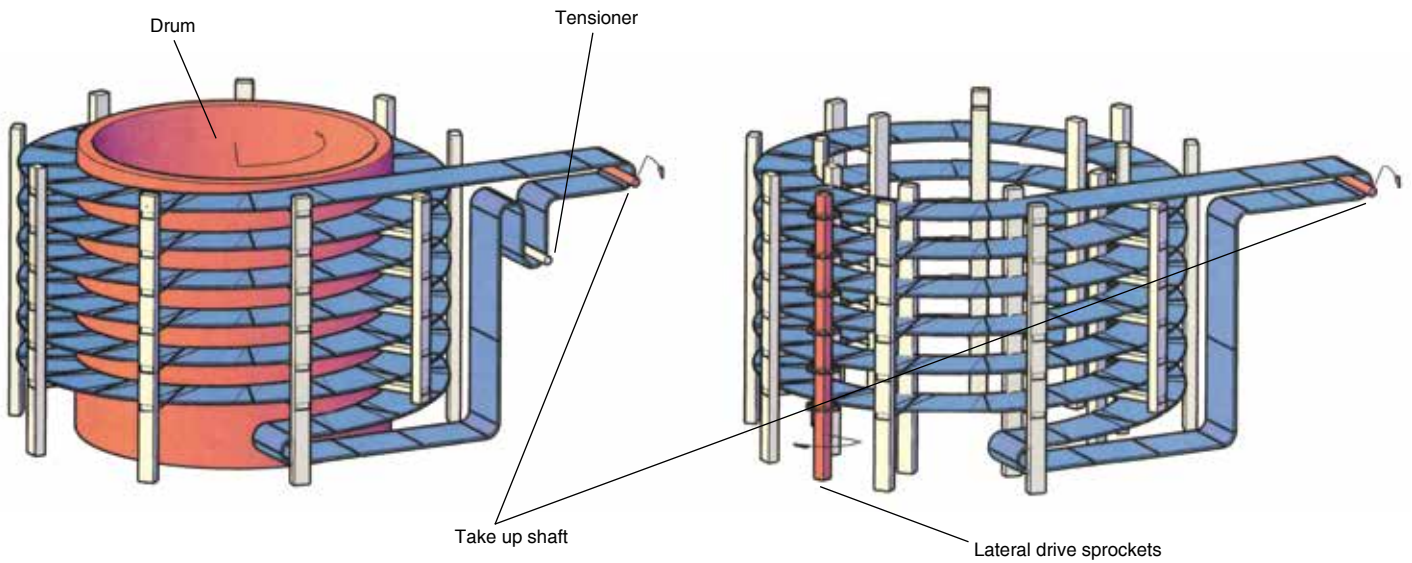
Take up shaft.



Lateral sprocket engagement.

## Standard width and collaps factor

Belt width	[mm]	406	457	508	558	609	660	711	762	812	863	914	965	1016	
	[inch]	16	18	20	22	24	26	28	30	32	34	36	38	40	
Inner radius	RC 1,6	[mm]	650	732	813	893	975	96	1138	1220	1300	1381	1463	1544	1626
		[inch]	25,6	28,8	32	35,2	38,4	3,8	44,8	48	51,2	54,4	57,6	60,8	64
	RC 1,9	[mm]	772	869	966	1061	1158	114	1351	1448	1543	1640	1737	1834	1931
		[inch]	30,4	34,2	38	41,8	45,6	4,5	53,2	57	60,7	64,6	68,4	72,2	76
	RC 2,2	[mm]	894	1006	1118	1228	1340	132	1565	1677	1787	1899	2011	2123	2236
		[inch]	35,2	39,6	44	48,3	52,8	5,2	61,6	66	70,4	74,8	79,2	83,6	88
Carry way	Conveyng side	2	2	2	2	2	2	2-3	2-3	2-3	2-3	3	3	3	
	Return side	2	2	2	2	2	2	2	2	2	2	2	2	2	



Thanks to the strength and rigidity of the stainless steel pins, the number of guides / supports can be drastically reduced compared to other belts with plastic pins.

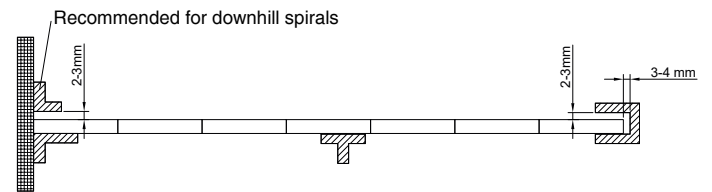
The distance between the guides is determined on the basis of the weight of the product and its distribution on the belt.

In most cases, this distance is between 450 and 800 mm.

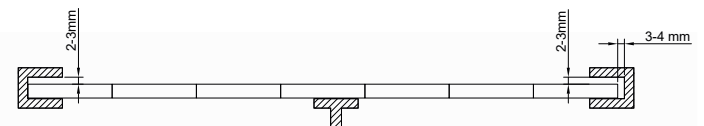
On the way back, the guides can be spaced 1 meter apart.

Thanks to the tight tolerance of the belt width, the lateral space between the belt and the guides can be a few millimeters, however it is important to take into account the thermal expansion of the belt which corresponds to the expansion of the stainless steel pin.

#### Drum drive



#### Lateral drive



#### Sidewall and line spacer

The belt is available with 25 or 50 mm sidewall integrally molded. Also available are removable line spacer 25 mm high.

The line spacer can be positioned every 1/2" along the width of the belt.

