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# S E R I E S **E 9 9 9 5 F L U S H** G R I D

CURVES WITH MINIMUM RADIUS

### CHARACTERISTICS OF THE MODULAR SYSTEM

EUROBELT modular conveyor belts are manufactured with technical plastics forming a structure of interlocking injection molded parts in an advanced design whose configuration makes them the ideal support for the transport of food and industrial products.

Their modular configuration allows the belt to be made to measure according to the needs.





P Pitch	E Thickness	Open area	A Belt width	Rod diameter	Retention system	Drive system
25 mm	12 mm	42 %	Multiples of 20 mm	6 mm	Clip	Joint

### **TECHNICAL DATA OF THE BELT** -

Material of Material of the belt the rod		Belt strength (kg/m)		Temperature range (°C)	Belt weight ( kg/m²)	Available colours	
		Straight section	Curved section				
AC - Polyacetal	AC - Polyacetal	3.550	consult	-40 to +90 °C	7,46	Natural - Blue	
PP - Polypropylene	AC - Polyacetal	2.000	consult	+5 to +90 °C	5,32	White - Blue	



### TURNING RADIUSES

Belt nominal width (mm)	Factor	Minimum radius(mm)
100	1,27	127
200	1,60	320
300	1,66	500
400	1,72	690

**Minimum radius =** Belt width (mm) x Factor

With tab, the width of the belt will always be referred to the useful surface of the belt, without taking into account the tabs.

**RETENTION SYSTEM** 





### **SPROCKETS**

#### **ACCESORIES** - SPROCKETS

N° of teeth	Ø Pitch	Bore for square shaft		Hub width	Round	shaft (max)
		mm	inch.		with keyway	without keyway
Z12	96.59 mm	40	1.5"	40	R40	RCH40
Z16	128.15 mm	40	1.5 <sup></sup>	40	R40	RCH40
Z20	Z20 159.81 mm	40	1.5 <sup></sup>	40	R40	RCH40
139.01 1111	60	2.5"	-10		Ronno	

Standard material: Polyacetal

#### SPROCKETS FOR ROUND SHAFT





WITH KEYWAY

### WITHOUT KEYWAY

### **SPROCKET INSTALLATION**



We also offer sprockets for use with **Drum Motors** in applications where special cleanliness is required or for conveyors where it is impossible to position the motor externally due to space or safety problems.







### **CLE RETENTION RING**

These rings are placed on both sides of the central gear to fix it to the shaft, preventing lateral belt displacements. They are fixed by means of a set screw embedded in the ring itself.

1 gear must be placed in the centre, held in place by 2 CLE retaining rings at the ends. Then place the same number of gears on each side of the central gear, without any type of fastening, in order to absorb possible expansions and contractions of the belt.

The same action must be taken on both shafts.

#### **STAINLESS STEEL AISI 316.**

High working temperature range. For 40 mm, 1 1/2" 60 mm or 2 1/2" square shaft.

Bore for square shaft	Screw DIN-913 AISI 316
40	M 6x6
38,5	M 6x6
60	М 6х6
63,5	M 6x6







#### ACCESSORIES - HOLD-DOWN PROFILES



To make the fastening and the support of the belt, EUROBELT offers two types of hold-down profiles with different geometries.

These profiles, with a low coefficient of friction, are placed between the belt and the structure of the conveyor, reducing the wear of the surfaces in contact, which contributes to prolong the life of the belt.

EUROBELT offers all the hold-down profiles in special polyethylenes with very good sliding properties and an excellent resistance to impact.

PROFILES IN U	J
Support	



Accessory	Dimensions	Material
Profiles in L	40 x 20 x 2.000	Dolyothylono
Profiles in U	20 x 14 x 2.000	Polyethylene

#### **ACCESSORIES** - WEARSTRIPS



NORMAL TEMPERATURE AND HUMIDITY ENVIRONMENT: A = 3-5 mm B = 497 - 495 mm The flat wearstrips are fastened by means of flatheaded plastic screws, which contributes to obtain a smooth surface free of any possibility of hooking.

The dimensions of these screws are M 6 x 25 mm. Due to their "dovetail" design, they are able to absorb any longitudinal contractions or expansions that may occur.





### INSTALLATION OF PROFILES AND PLATES

HEAD END 40 MM WITHOUT TAB (SL40)



The clamping shall be carried out on the top of the belt.

The clamping profiles shall not be in contact with the belt.

WITH ONE L-PROFILE AND ONE U-PROFILE

#### **INSTALLATION OF PROFILES AND PLATES** HEAD END 40 MM WITH TAB (SL40)



WITH ONE L-PROFILE AND ONE U-PROFILE

The fastening shall be above the tab and shall be free from interference with the product transport. The clamping profiles shall not be in contact with the belt.

#### **PROTECTION ZONE IN HANDLING APPLICATIONS**



It is recommended to cover the inner and outer radius areas when handling on the belt to avoid entrapment.

#### **CONSTRUCTION DATA - SPROCKETS QUANTITY -**

Belt n width	Minimum quantity of sprockets per shaft	
100	180	1
200	380	3
400	580	5
600	780	7
800	980	9
1.000	1.180	11
1.200	1.320	13

The following formula was used to calculate the minimum number of gears required on both the drive and driven axles:

Minimum quantity = -	Belt width (mm)
	100 mm

	Belt n width	nominal n (mm)	Maximum quantity of sprockets per shaft <sup>(1)</sup>
100		120	1
	140	180	2
	200	240	3
	260	300	4
320		360	5
	380	420	6
	440	480	7
	500	540	8
	560	600	9
	620	660	10
680		720	11
	470	780	12
	800	840	13
	860	900	14

<sup>(1)</sup>Check if it is necessary to fit more gears.

The quantity must always be odd.

#### **CONSTRUCTION DATA - PROFILES AND PLATES QUANTITY -**

Nominal belt width (mm)		Minimum quantity of sliding plates Load side
100	260	1
280	660	3
680	1.060	5
1.080	1.300	7

When calculating the number of supports, the weight of the product to be transported must be taken into account. The distance between supports on the transport route must not exceed 150 mm, and 300 mm on the return.







#### **CONSTRUCTION DATA** - HORIZONTAL CONVEYOR



N° of teeth	Ø Pitch	Α	В	С	
Z12	98,56 mm	42	47	96	
Z16	128,15 mm	58	54	127	
Z20	159,81 mm	73	59	159	

[A] Distance between the sliding surface of the belt and the centre of the shaft.[B] Distance between the vertical of the shaft and the start of the sliding surface.

**[C]** Distance between the sliding surface of the

belt and the support of the return.

**[D]** If gears are used on the inflexion shaft, do not retain the centre one.

## Supporting profiles 2nd Straight section C B Minimum radius of 1st turn A Driven axle Bandwidth

The total length of the belt shall always be calculated using the outside length of the curved parts of the belt.

**A** - The minimum length of the first straight section shall be 1,5 times the belt width. Where a shorter length is required for manufacturing requirements, consult our technical department.

**B** - The turning radius depends on the nominal belt width. See factor table for each case.

**C** - When two consecutive turns are made in opposite directions, the straight section between them (2nd straight section) should be twice the belt width to avoid wear on the side fastenings and high belt tension. If two turns are made in the same direction, no minimum straight length is required between the two turns.

**D** - The minimum length of the last straight run (drive shaft) should be at least 1.5 times the belt width to avoid unnecessary wear on the gears and possible alignment problems.

#### **CONSTRUCTION DATA** - CURVED CONVEYOR



#### MATERIALS

#### STANDARD POLYPROPYLENE (PP)

Base material for the manufacture of conveyor belts for most processes, both in the food and industrial sectors. With good mechanical strength, a temperature range of +5 °C to +104 °C, and a specific weight of 0.9, it has buoyancy in water.

Its excellent chemical resistance to practically all acids, concentrated bases, salts and detergents makes it indispensable in corrosive working environments. It is highly resistant to penetration by micro-organisms. Although it has an impact resistance of about 3.5 kJ/m<sup>2</sup>, below a temperature of 9 °C it becomes slightly brittle, so it is not recommended for processes in which the belt may receive strong impacts.



#### STANDARD POLYACETAL (AC)

With a specific weight of about 1.5, technical acetals are thermoplastics with a low coefficient of friction, high scratch resistance and a high breaking load. As a result, it is the material used in container accumulators, preventing damage to the container surface and crushing under pressure. Its high mechanical strength gives it the ability to carry heavy loads. With a wide temperature range of -40 °C to +90 °C, it is used for the manufacture of conveyor belts for transporting heavy loads and in those applications in which sharp objects are handled on the belt.



It has good chemical resistance to solvents, greases and a wide range of chemical agents.

Temperature range (°C)	Colors	Food contact	Temperature range (°C)	Colors	Food contact
+5 °C a +104 °C	White - Blue	Suitable	-40 °C a + 90 °C	Natural - Blue	Suitable

#### ELECTROCONDUCTIVE

Materials with very low volumetric and surface resistivity values that make it ideal for those applications in which it is necessary to dissipate the electrostatic charges generated on the belt, through the conveyor structure for their elimination.

Particularly suitable for conveyor applications in ATEX classified environments.

Not suitable for direct contact with foodstuffs.

#### POLYPROPYLENE ELECTROCONDUCTIVE (PPE)

Temperature range (°C)	Colors	Food contact
+5 °C a +90 °C	Black	Not suitable

#### POLYACETAL ELECTROCONDUCTIVE (ACE)

Temperature range (°C)	Colors	Food contact
-40 °C a + 80 °C	Black	Not suitable





#### METAL AND X-RAY DETECTABLE

Used in belts for process lines where you want to avoid that it can be mixed with the product, pieces or splinters of the same.

Material easily detectable by all types of metal and X-ray detectors.

It is advisable to test the material in your production environment to determine the detection sensitivity of your equipment. Suitable for direct contact with foodstuffs.

#### DETECTABLE POLYPROPYLENE (PPM)



#### GUARANTEE AND LIMITATION OF LIABILITY

EUROBELT elements are guaranteed for a period of one year from the date of shipment with respect to the repair or substitution of any component whose materials or manufacture is defective, provided it is demonstrated that the work has been done under normal conditions of use.

No other expressed or implicit guarantee is given, unless it were set down in writing and approved by the manufacturer.

EUROBELT elements are manufactured with plastic materials. Consequently, their direct exposure to fire or to higher temperatures than those indicated can produce their deflagration together with the emission of toxic fumes. Any use of the EUROBELT products has to observe the regulations and rules prevailing and the user is the only responsible to make observe these regulations when incorporating those products into any machine.

The data included here are of informative nature. Their applicability to the design of any installation is not guaranteed.

The manufacturer does not assume any responsibility for the repercussions derived from the use of his products, whether it is based or not on the information herein.

#### CONTACT

Eurobelt offers its customers different communication channels, through which they can solve all their doubts related to our solutions in modular belts, as well as access to our recommendations when designing a complete internal transport system.

To the already traditional channels of communication, telephone, fax and email we have also incorporated the WhatsApp Channel and the Eurobelt AR Catalogue app, not forgetting our website, www.eurobelt.com, in whose Client Area you can download numerous documentation, diagrams and technical data of all our products.









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