

## Shredders Belt for recycling

The modern shredders are using innovative designs and materials in order to achieve the highest performance requested by the market.

Currently the most important manufacturers produce machines which require the use of special conveyor belts made of rubber with different types of reinforcements to ensure wear resistance, cut resistance and to improve the reliability in their applications.

The conveyor belts in these machines are used for the recycling treatment of different materials ranging from wood, biomass, metal and generally constitute a mixture of materials.

BeltTS is specialized in the production of belts for shredders with particular profiles adopted by the major manufacturers.

The profile is directly realized by mold as shown in the below pictures. In the drawing it is possible to identify four longitudinal guides which increase the stability and the elastic resistance of the belts. This particular drawing is used by the most important OEMs.

The carcass in the belt is realized using pure fabric textile or if requested adding a metal breaker as additive layer to avoid tears and cuts propagation in the belt.



Figure 1: metal mold used to obtain the chevron profile and the guides on the belt



### TECHNICAL SPECIFICATION OF THE BELT

#### 1. Manufacturing method

The belts for shredders realized by BeltTS are manufactured using a mold which allows to obtain:

- Rolls
- Endless

#### 2. Dimensions and Tolerances

Belt dimensions	Std sizes	Std tolerances
<b>Total length</b>	No limit (rolls/endless)	± 150mm
<b>Maximum width</b>	1400 mm	± 10mm
<b>Total thickness</b>	10 mm (11.5mm*)	± 1mm

\* Version with metallic breaker

V Cleats & Guides (SP 216)	Std sizes
<b>Pitch</b>	530 mm
<b>Width</b>	1070 mm
<b>Section (bxh)</b>	16x25 mm



Figure 2: chevron profile of the belt obtained by mold

### 3. Material

The belt is realized in rubber compound and textile/metallic reinforcement

Rubber std type

Type	Breaking strength	Elongation at break	Hardness	Abrasion (DIN 53516)
	MPa	%	Shore A	mm3
SBR/NR antiabrasive	18	500	65 ± 5	80

*Oil resistant rubber compound can be used accordingly to the specification requested*

### Carcass std type (typical values)

Type	Breaking strength	Working load at 10% breaking strength	Load at 1% of elongation	Elongation at break
	N/mm	N/mm	N/mm	%
500/3 3 polyester fabrics 1 metallic breaker	500	50	15	24
400/3 3 polyester fabrics	400	40	12	24

### 4. Working conditions for standard materials above

Working Conditions	Nominal Values
Minimum diameter of the pulley	250 mm
Temperature resistance	50 °C continuous working temperature
	70 °C peaks conditions

*Our belts, adopting special techniques in the realization of the splice, can also be used on pulleys with diameters up to a minimum dimension of 150mm*

### 5. Research and developments

Our Laboratories are always looking for new materials and technologies.

BeltTS offer high level of customization and possibility to design unique and special solutions fully compliance with customer requirements.

*A crew of skilled technicians is always available to provide the necessary support for customized designs and installation on site.*



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Cap. Soc. € 100.000,00 i.v.  
C.F P.iva e Reg. Impr. CO 03289090130  
www.BeltTS.com

**Operational & Legal Address**  
Via Risorgimento, 8  
22044 Inverigo (CO)  
Italy

Tel. +39 031.604111  
Fax. +39 031.604399  
info@winwingomma.com  
info@beltts.com