

Conveyor belts in waste sorting & treatment plants.



Multi-use belts, for working in adverse conditions:

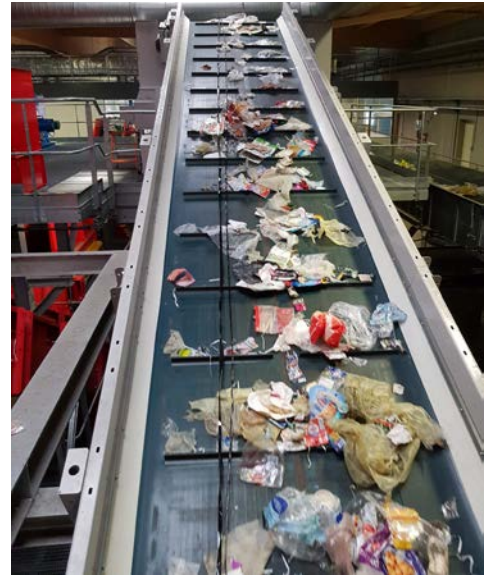
- High mechanical resistance to tear and abrasion.
- Excellent performance with chemical aggression from mineral oils, soaps, solvents, organic components and more..
- High breaking load.



Solid waste (plastic, cardboard, glass, metal, etc.).

DRAGO Belts

- Designed for flat or troughed roller conveyors (flexible weft).
- Dimensional stability, reduced stretching and easy tracking.
- Low wear, high resistant to abrasion.
- Formulated to resist mineral oils and chemical products in general.



BREDA and KERAM Belts

- Conveyors with continuous or roller beds.
- High transverse rigidity, the belts remain completely flat on the conveyor.
- Light belts with excellent slide coefficient on the support bench, permitting the use of conveyors with lighter structures, smaller pulley diameters and less powerful motors with less energy consumption.
- Highly resistant to cuts, abrasion and tears. Versions with polyurethane covers for more demanding areas/processes.
- Excellent chemical resistance to all types of liquid waste found in numerous recycled plastic and metal containers (detergents, oil, etc.).
- Widely used belts on manual separation benches, magnetic separators and visual separators. They normally last an average of three times longer than generic belts.





Organic waste

ESPOT Belts

- Designed for flat or troughed roller conveyors (flexible weft).
- Polyester fabrics, resistance to moisture and tear, protected and covered by thick PVC covers. Good resistance to abrasion.
- Good dimensional stability, reduced stretching and easy tracking.
- Chemical resistance to organic waste (vegetable oils, animal fats, acid or alkaline solutions).



Light thermoplastic belt: alternative to rubber belts.

Classic rubber belts are less flexible and heavier than PVC belts. Consequently they need more robust and expensive conveyors, with larger pulley diameters and rollers, as well as more powerful motors and higher energy consumption.

Conversely, PVC belts match the mechanical specifications of rubber belts in working load, resistance to tear, low stretching, etc., while offering resistance to chemical and organic products.

However, the main problem with rubber belts is that **the cleats come off easily** regardless of the conveyed product, causing lines to be stopped for repairs.

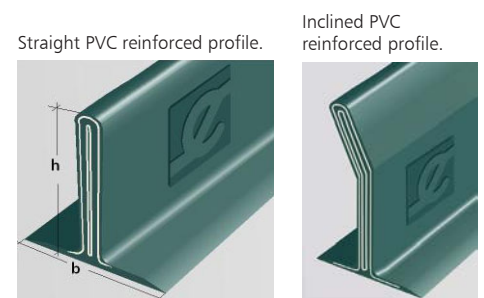
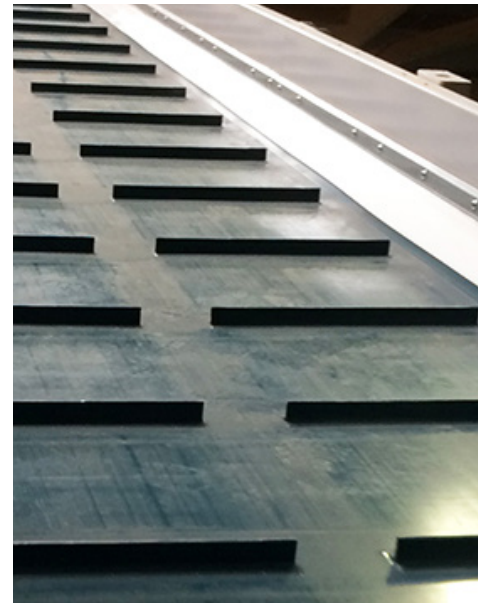




Straight and inclined reinforced profiles.

- Especially designed for difficult working conditions. Highly resistant to impact on receiving and conveying waste.
- They increase transverse rigidity of the belt, allowing for greater stability on the conveyor.
- They have the same technical specifications as the belt.
- With high frequency welding, they fuse perfectly with the belt resulting in greater resistance to fatigue and flexibility.

Profile	Dimensions		Transverse attachment		Length mm	Color
	b mm	h mm	Minimum pitch mm	Minimum diam. mm		
NRR30	50	50	70	120	2000 mm strips	Blue 06, White and Green 00
NRR50		50				
NRR70		70				
NRR100		100				
NIR070		68				
NIR100		97				



Report: Waste classification centre in the south of France*:

Application: primary separation

Belt type, dimensions and cleats.	**Number of breakdowns per year due to detached cleats.
Rubber belt (type 400/3 2+00AA abrasion resist.) 1400mm x 27.8m + 45 Reinforced cleats (type TX Charbonnier) in lines of 3.	1 - 2 per year (duration: 6 hours)
BREDA 30CF 1400mm x 27.8m + 45 Reinforced cleats NRR50 in lines of 3.	0

*Approx. line capacity: 28 T/h.

**Same working and maintenance conditions.

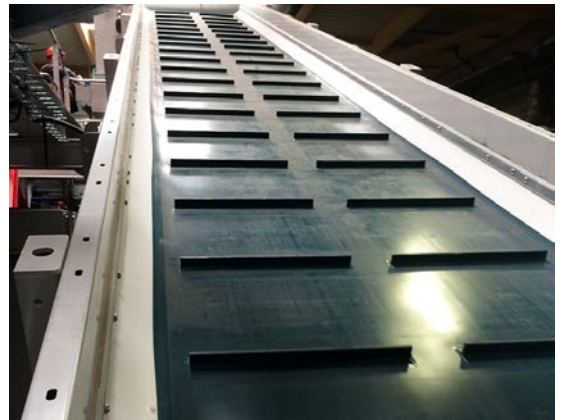


Testimony: A study to optimize electricity consumption to reduce environmental problems in a waste sorting facility in France

Esbelt replaced 6 cleated rubber belts with **Breda 30CF**, which is much lighter, of 1200mm x73m with 3 rows of 121 **NRR50 reinforced cleats** (50mm high/250mm long).

Belt type	Time	Electricity consumption kWh	Time of production h	Electricity consumption / production hour kWh.h-1	Electricity consumption. Conclusion
Rubber belt	1 year	1.784.414	4.466	400	
BREDA 30CF	1 year	1.821.006	4.725	385	-4%

CONCLUSION: Reduction of almost 106,000 kWh or -4% less electricity consumption during the process. Reduction of 3t of CO₂.



Why choose esbelt belts + cleats?

ADVANTAGES

Wide range of PVC and PU belts to accurately meet your needs.



BENEFITS

Solution to different needs in each application and product.

Excellent resistance to chemical and mechanical harm (abrasion, cuts, etc.).



Longer life expectancy. Our belts last 2 to 5 years (50% more than rubber under identical conditions).

Belts with a solid structure but lighter than traditional rubber.



Lower energy consumption in the process and reduction of CO₂ emission.

More flexible, smaller pulley diameters needed for the belt to operate.



Lighter and more economical conveyors.

Reinforced cleats welded to the belt by high frequency; they do not detach and offer high resistance to impact and tear.



Fewer or no stoppage times. In rubber belts, the cleats often come off easily.

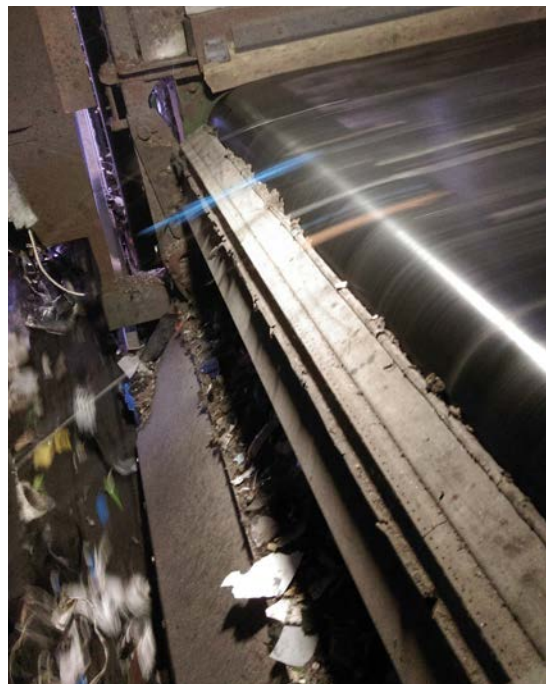


Esbelt belts in different parts of the process.

BREDA 21UFMT-BK for high speed optical sorter:

- Black PU matt belt.
- Facilitates identification, good guidance and centering and high stability, keeping the belt completely flat.
- Unlike the rubber belts, our **BREDA 21UFMT-BK** work perfectly at **speeds > +4m/s** for materials coming from the plastic* bins.

**Bear in mind that these belts are not suitable for applications in areas with heavy impacts from materials such as cement or metal.*



ADVANTAGES

BENEFITS

PU belt is matt, flat, rigid and homogenous.



Facilitates material classification as the top cover is completely flat and regular.

PU belt joint is a continuation of the rest of the belt. The belt thickness is uniform with identical thickness and finishing throughout the entire belt and does not present any thickness irregularity.



As the PU belt is totally uniform, it does not vibrate during its course of motion. Therefore, there is no distortion to the identification of the optical sorter.

The higher the speed of the belt, the higher the need for its uniformity and to stay completely centered and without any oscillation or skips.



Error-free, smooth and continuous flow during the material classification.

PU belt has strong fabric and is lighter and longitudinally more flexible than rubber belts.
PU belt has less coefficient of friction on slider bed.



Less energy consumption, reduction of CO₂, and less stress on moving conveyor elements (rollers, motors, gears).

PU belt has excellent resistance to chemical and mechanical harm (oils, abrasions, impacts).



Belt can last longer.



Esbelt belts in different parts of the process.

BREDA 30CF with reinforced profiles.	Initial sorting of recovered waste.
DRAGO 30AR/CR flexible weft.	Transfer of dry and wet residue (industrial and household waste).
KERAM 40RF/ UF and AF.	Metal/ Sharp waste sorting.
BREDA 30CF with reinforced profiles = pulley diameter 120 mm. Lighter conveyor and much lighter support structure, therefore more economical.	Primary separation.
BREDA 22UF-TR Thinner belt than rubber. Better transfer of the magnetic charge and much more resistant to abrasion.	Magnetic separators.

Main features:

Belt type	Top cover				Bottom cover				Special characteristics	Constant Temperature °C	Fabrics		Belt thickness mm	Belt weight Kg/m ²	at 20°C		Working load at 1% elong. N/mm	Max. roll width mm
	Material	Color	Thickness mm	Finish	Material	Color	Thickness mm	Finish			N° plies	Weft			Ø mm	Ø mm		
BREDA 20CF	PVC	Green 00	1,0	Smooth		Natural		Fabric	☉ ▼ □	-5 +80	2	Rigid	2,90	3,50	55	75	15	3000
BREDA 21UFMTBK	PU	Black 01	1,5	Mat	PU	Natural	0,10	Impregn	☉ ▼ ▽ □ ■ ●	-5 +80	2	Rigid	4,00	4,30	100	200	12	3000
BREDA 22CF	PVC	Green 00	2,0	Smooth		Natural		Fabric	☉ ▼ □ ■	-5 +80	2	Rigid	4,00	4,80	80	100	17	3000
BREDA 22UF-TR	PU	Transp.	1,8	Smooth	hard PVC	White	0,10	Impregn	☉ FDA EU ▼ ▽ □ ■ ●	-5 +80	2	Rigid	4,30	5,10	100	200	15	3000
BREDA 30CF	PVC	Green 00	2,0	Smooth		Natural		Fabric	☉ ▼ □ ■	-5 +80	3	Rigid	4,90	5,80	120	150	22	3000
DRAGO 20CC	PVC	Green 00	1,0	Smooth	PVC	Green 00	1,0		☉ ▼ □ ☼	-15 +80	2	Flexible	4.10	5.10	140	140	20	2000
DRAGO 30CC	PVC	Green 00	2,0	Smooth	PVC	Green 00	1,0		☉ ▼ □ ■ ☼	-15 +80	3	Flexible	6.20	7.70	200	250	30	2000
DRAGO 40CC	PVC	Green 00	2,0	Smooth	PVC	Green 00	1,0		☉ ▼ □ ■ ☼	-15 +80	4	Flexible	7.40	9.20	300	350	35	2000
ESPOT 20CC	PVC	White	1,0	Smooth	PVC	White	1,0	Smooth	☉ FDA EU ☼ ☼	-15 +80	2	Flexible	4.10	5.00	140	140	20	2000
ESPOT 30CC	PVC	White	2,0	Smooth	PVC	White	1,0	Smooth	☉ FDA EU ☼ ☼	-15 +80	3	Flexible	6.20	7.70	200	250	30	2000
ESPOT 40CC	PVC	White	2,0	Smooth	PVC	White	1,0	Smooth	☉ FDA EU ☼ ☼	-15 +80	4	Flexible	7.40	9.20	300	350	35	2000
KERAM 40RF	PVC	Black	0,10	Impr.		Natural		Fabric	☉ ▼ ■ SW	-5 +80	2	Rigid	4.00	4.20	80	100	22	2000
KERAM 40UF	PU	Green 09	1,00	Smooth		Natural		Fabric	☉ FDA EU ▼ ▽ □ ■ ● SW	-10 +80	2	Rigid	4.00	4.20	140	330	22	2000



Espot 40CC in initial sorting.



Overband with Keram 40UF & PU reinforced cleats. Separation of metallic waste from wood.



Breda 21UFMT-BK in sorting system with a speed of +4m/s.



Breda 30CF with reinforced profiles



Breda 21UFMT-BK in optical sorter.



Drago 30CC conveying plastics.



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