www.esbelt.com

esbelt
Conveyor belts

BELTS FOR BUCKET ELEVATORS

ISO 9001:2008

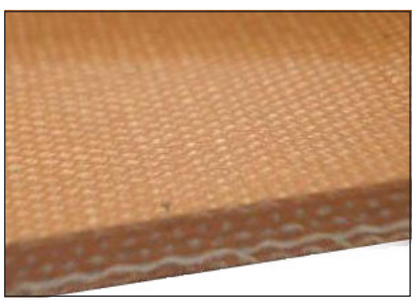
At **esbelt** we have been working for many years in this sector, so we understand its needs and constantly develop the most suitable, specific products. Thus, our belts for bucket elevators are undoubtedly the best on the market.

Elevator Belts

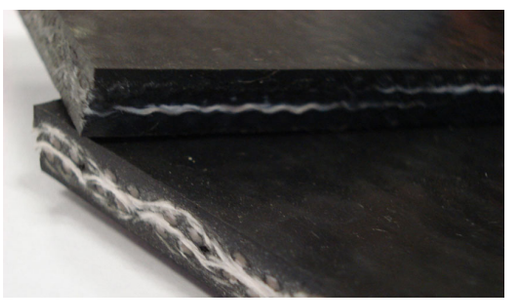
The elevator belts for the movement of bulk product in granular or lump/rock form, are a combination of high strength belting and metal or plastic buckets attached to it. The belt is installed in an elevator shaft, a close structure that elevates the material vertically to a higher point or upper floor, for unloading into a hopper or silo.

The installation of an elevator belt and buckets is a task that requires skill, experience and time. Selecting and installing the belt in the proper manner will lead to an efficient operation of the elevator leg. Jams, broken belts and bucket failures can all be the result of a poor installation.

Early designs used multi-layered cotton belts, or plied rubber belts, in which the high work loads were reached by means of accumulating fabrics with layers of rubber in between. In a later evolution solid woven PVC types have also been used. But systems evolve and energy consumption, or better said, "energy conservation" has become an important issue, demanding for news designs to come to the forefront. The ability to manufacture elevator belts with higher capacities has placed **esbelt** in a leadership role.



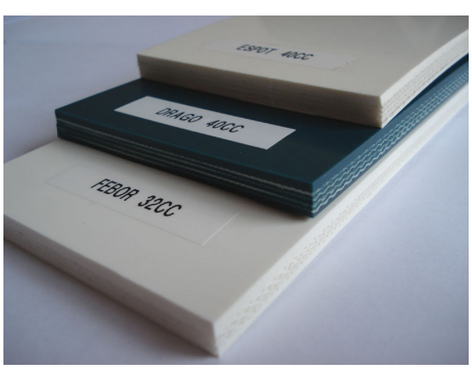
Examples of rubber-canvas belts



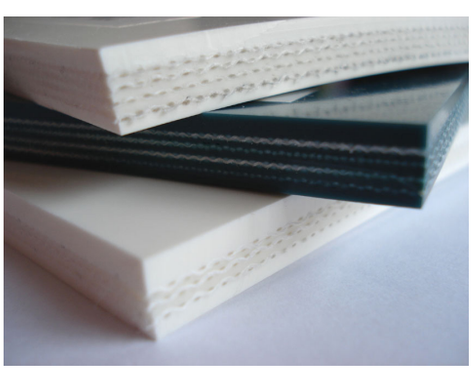
E.g. PVC belt with braided fabric

We have a wide variety of belt types for use in Grain, Chemicals, Mining, Food and specially applications. Buckets have evolved as well, with metal and plastic the dominant materials used. We understand the combination of Belt and Bucket working in tandem is critical to system longevity and performance.

Following are some of the features and benefits of **esbelt** types used in Elevatory applications.



Esbelt belts for elevators



Detail of fabric layers

Structural characteristics of esbelt elevator belts:

- "Heat set" o pretensioned light weight fabrics, able to provide the highest degree of load capacity.

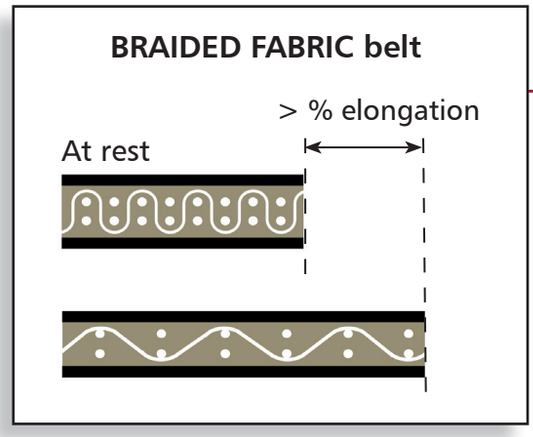
  BENEFIT: lower energy consumption, reduced maintenance cost, longer life: load bearing capacities equal to heavier multi-plied belts, with lower operating costs through reduced energy consumption and wear on mechanical parts.

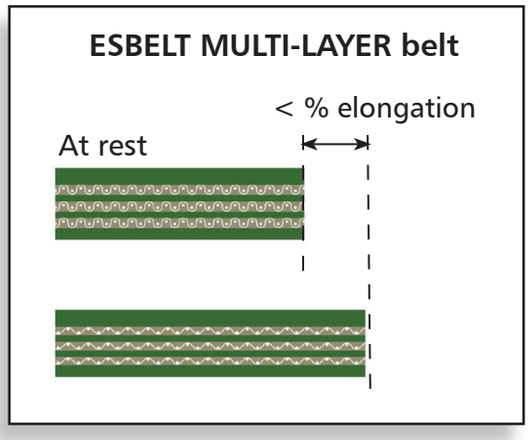
- Multi-plied fabric construction distributes the load evenly, reducing elongation.

  BENEFIT: reduced maintenance costs (less time spent in retensioning the belt), increased productivity.

- All polyester fabrics with excellent resistance to difficult operation conditions such as temperature, humidity and shock loads. Improved mechanical performance over conventional fabrics (cotton compounds) and less risk of fabric threads getting mixed with the product.

  BENEFIT: longer belt service life, reduced unforeseen maintenance times and disruptions to production.





Cover properties of esbelt elevator belts:

Another key element of elevator belts are the covers. The cover comes in contact with the conveyed product and also offers protection to the fabric structure.

No product is equal, each has its specific properties and characteristics. This is why it is extremely important to find the belt cover that best matches the product. Operational performance and reliability will decline if the correct cover is not chosen. Like- wise, when the correct cover is chosen, performance can improve dramatically.

Esbelt manufactures elevator belting using high quality PVC compounds to ensure the elasticity and weight reduction of the belt. Depending on the characteristics of the product to be transported the belt could be forced to defend against chemical, abrasive or impact attack. **Esbelt** offers the following compounds by belt series to ensure the best performance and duration:

- **ESPOT SERIES:** food products in general, specially recommended when high resistance to animal and vegetable oils and fats is needed (animal feed, soy, oily cereals, sunflower and sesame seeds...).

- **FEBOR SERIES:** non-oily food products in general (flour, coffee,) and abrasive food products (sugar, salt).

- **DRAGO SERIES:** industrial (non food) products, in special when resistance to abrasion and mineral oils is needed (inorganic fertilizers, detergents, clays, coal...).

Belts without protection will exhibit any of the following problems:

- Surface cracking, chipping or flaking and loss of belt cover.
- Hardening of the cover and loss of grip on the drive pulley.

Using the proper **esbelt** elevator belt will avoid these problems.

BENEFIT: helps avoiding the risk of contaminating the product by cover fragments. The fact of conserving a good belt's cover elasticity, facilitates the adherence with the drive pulley, reducing the risk of breakage or damage by excessive friction. All result in reduction of incidents and improvement in times of maintenance, which are translated into improved costs.

Additional properties and guarantees.

Besides the advantages and benefits in their formulation and structure, **esbelt** elevator belts have additional properties that enable them to comply with the current security regulations in product handling in elevator systems:

ESPOT belts:

- Atoxic/food grade according to FDA and EU 10/2011 Regulation.
- Antistatic according to ISO 284 norm.
- Vegetal oil and animal fat resistant.
- Compliant with **ATEX** norm (EX II 2GDc) for the prevention of potentially explosive environments (94/9/CE Directive)

Type	Top cover			Bottom cover			Special characteristics	Constant temperature ºC	Fabrics		Total thickness mm	Total weight Kg/m2	at 20ºC A ⟷ B		Working load at 1% elong. N/mm	Max. roll width mm
	Material	Colour	Thickness mm	Material	Colour	Thickness mm			Nº of plies	Weft			Ø mm	Ø mm		
ESPOT 30CC	PVC	White	2,00	PVC	White	1,00	FDA EU	-15 +80	3	Flexible	6,20	7,70	200	250	30	2000
ESPOT 40CC	PVC	White	2,00	PVC	White	1,00	FDA EU	-15 +80	4	Flexible	7,40	9,20	300	350	35	2000
ESPOT 81CC	PVC	White	1,00	PVC	White	1,00	FDA EU	-15 +80	3	Flexible	7,80	9,60	400	400	65	2000
ESPOT 90CC	PVC	White	2,00	PVC	White	1,00	FDA EU	-15 +80	3	Flexible	9,00	11,20	400	500	75	2000

FEBOR belts (sugar):

- Atoxic/food grade according to FDA and EU 10/2011 Regulation. Abrasion resistant.
- Antistatic according to ISO 284 norm.
- Flame retardant according to ISO 340 norm..
- Compliant with **ATEX** norm (EX II 2GDc) for the prevention of potentially explosive environments (94/9/CE Directive).

Type	Top cover			Bottom cover			Special characteristics	Constant temperature ºC	Fabrics		Total thickness mm	Total weight Kg/m2	at 20ºC A ⟷ B		Working load at 1% elong. N/mm	Max. roll width mm
	Material	Colour	Thickness mm	Material	Colour	Thickness mm			Nº of plies	Weft			Ø mm	Ø mm		
FEBOR 31CC	PVC	White	2,00	PVC	White	1,00	FDA EU	-15 +80	3	Flexible	6,10	7,60	200	250	30	2000
FEBOR 32CC	PVC	White	2,75	PVC	White	1,50	FDA EU	-15 +80	3	Flexible	7,40	9,40	300	350	30	2000
FEBOR 41CC	PVC	White	2,00	PVC	White	1,00	FDA EU	-15 +80	4	Flexible	7,40	9,20	300	350	35	2000
FEBOR 91CC	PVC	White	3,00	PVC	White	1,00	FDA EU	-15 +80	3	Flexible	9,60	11,90	400	500	75	2000

These belts are also available in **FDA quality only.**

FEBOR 35CC	PVC	White	1,00	PVC	White	0,70	FDA EU	-15 +80	4	Flexible	6,30	7,90	250	250	35	2000
FEBOR 75CC	PVC	White	1,00	PVC	White	0,70	FDA EU	-15 +80	3	Flexible	6,00	7,40	350	350	65	2000

These belts are only available in **whole roll (not cut belt)**

DRAGO belts:

- Abrasion and cut resistant, also to mineral oils.
- Antistatic according to ISO 284 norm.
- Compliant with **ATEX** norm (EX II 2GDc) for the prevention of potentially explosive environments (94/9/CE Directive).

Type	Top cover			Bottom cover			Special characteristics	Constant temperature ºC	Fabrics		Total thickness mm	Total weight Kg/m2	at 20ºC A ⟷ B		Working load at 1% elong. N/mm	Max. roll width mm
	Material	Colour	Thickness mm	Material	Colour	Thickness mm			Nº of plies	Weft			Ø mm	Ø mm		
DRAGO 30CC	PVC	Green	2,00	PVC	Green	1,00		-15 +80	3	Flexible	6,20	7,70	200	250	30	2000
DRAGO 40CC	PVC	Green	2,00	PVC	Green	1,00		-15 +80	4	Flexible	7,40	9,20	300	350	35	2000
DRAGO 81CC	PVC	Green	1,00	PVC	Green	1,00		-15 +80	3	Flexible	7,80	9,60	400	400	65	2000

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