

## Diskbelt

### ENDLESS RUBBER BELT FOR VACUUM FILTER IN FLAT ROTATING TABLE FILTERS

#### Vacuum table filter

The vacuum table filter is mainly used in dehydrate and hemihydrate processes of filtration for phosphoric acid production.

The filter is formed by a certain number of fixed cells connected to a stationary valve that controls the suction and pressure zones. Each cell has a sloping bottom and is separated from the others by a rubber radial barrier. A variable pitch screw transports the material radially to the discharge zone.

In origin the rotating plate was designed with a rigid outer rim fixed to the structure. In that case the material left on the filter surface could not be removed and caused a loss of efficiency in the filtration process.



UCEGO filter

Furthermore the friction between the fixed rim and the cake could generate high peak of power.

The introduction of a rubber belt as outer barrier that can rotate in independent way respect to the filter, reduces the problem due to the efficiency. Actually the rubber belt acts as a vertical edge, it runs across the table filter avoiding accumulation of material on the edges and facilitating the discharging operations.

The filter cloth of the table filter is easily washed and dried before every charge of slurry increasing its efficiency.



### MAIN PROCESS APPLICATIONS

Inorganic and organic chemistry processes		
Phosphate	Chemical processing	Mining and mineral processing
Phosphoric Acid	Alumina (hydrate)	Linter pulp

## TECHNICAL SPECIFICATION OF THE BELT

### 1. Manufacturing method

- Each Diskbelt is manufactured as single endless belt
- Belt's edges are rubber coated to avoid any contact between ply core and slurry processed;
- Special and advanced technologies are adopted to obtain endless belt avoiding splicing failures;
- Different tensile classes and carcasses are used to grant an high level of customization and provide our customer with the best solution for their applications;

### 2. Dimensions and Tolerances

Belt dimensions	Std sizes	Std tolerances
Length	No limit	+150/- 50mm
Width	300÷400 mm	± 5mm
Thickness	20÷30 mm	± 1,5mm

### 3. Material

#### Rubber standard performance value

Type	Tensile strength	Elongation at break	Hardness	Abrasion (DIN 53516)
	MPa	%	Shore A	mm <sup>3</sup>
NR/SBR	18	400	75 ± 5	90
SBR HT	16.5	630	65 ± 5	180
EP(D)M	15	600	65 (70) ± 5	135
Neoprene	16	400	64 ± 5	110
NBR	16	720	63 ± 5	190
Butyl	12	460	64 ± 5	250

#### Carcass standard performance class

Type	Warp breaking strength	Warp elongation at break	Weft breaking strength	Weft elongation at break
	N/mm	%	N/mm	%
315/3	>315	20 ± 5	>110	30 ± 5
400/4	>400	20 ± 5	>150	30 ± 5

*polyester/polyester – polyester/polyamide – carcass structures can be customized*

### 4. Working conditions for standard materials above

Temperature of processed material up to a maximum value of 130 °C

### 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 compliant 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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