

## Elastic device for products loading on belt conveyors



**FLEXAL**® device ( patented A I n° 52 2735759 )

consists of cross belt elastic straps which, through their flexibility and their elongation ability, absorb impact energy and weight of loaded products.

The straps, more or less numerous, are supported by a metal framework, adjustable in all 3 dimensions in order to fit the system to every trough angle, from 20 to 70°. Each strap is fitted with sliding pads made of very high molecular weight HDPE. They are replaceable and their number is flexible, depending on the application.

Pad's fixing to the strap is designed such that its elongation is not hindered. The belt is in contact with a large number of pads which automatically distribute strains and frictions due to elastic supporting.

Pressure is then very low which generates

- very little wear and therefore long lifetime for pads
- negligible energy absorption.

### BENEFITS

The matchless elasticity of the system can effectively contend agressions against the belts, linked to :

- the nature of the product
- the dropping height
- the edge grain angle ( cutting products )
- the belt speed
- the weight of large blocks
- the abrasiveness of the product.

Punching, the main factor of belt deterioration is avoided.

Sealing is improved, because the banks of the device offer to the spill preventing rubbers an almost as continuous supporting area.

With deep trough product centering is improved and spill preventing rubbers are simplified or eliminated.

**FLEXAL**® can be appreciated in all industrial uses, quarrying, cement works, steel industry, recycling, waste treatment, etc...

Its damping capacity fits also wet products ( paper industry ) or corrosive ( salt, fertilizers ).

In every case **FLEXAL**® increases belt lifetime and reduces conveyor's maintenance costs.

### SETTING UP

**FLEXAL**® has always to be set up between 2 idler stations having the same trough angle, ( festoon type or 5 rollers stations ) when troughing angles are more than 45°

These idlers provide trough shaping of the belt respecting the transition zone and limiting strains.

When the transition zone is short, troughing angle must be limited to the same value as the first station located in the impact zone.



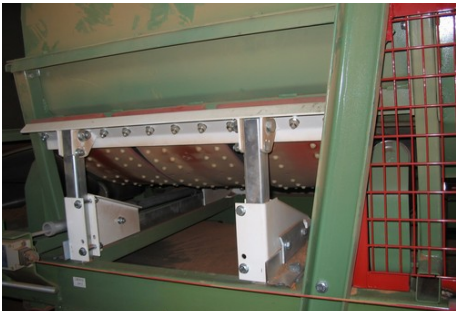
Easy and fast assembling ( 2 cross pieces to be bolted to the conveyor's framework).

### MAINTENANCE

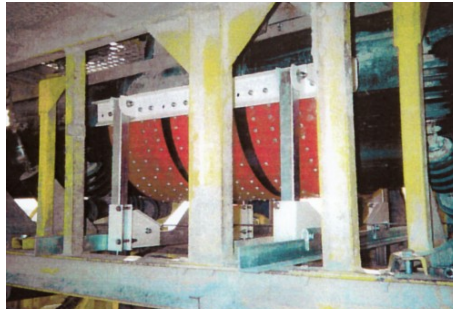
Extremely simple in design, FLEXAL requires no special maintenance.

Working visibility and visual inspection of condition are always possible.

In most cases, pads have a very long lifetime, and their replacement requires no special skill nor special tools.



Silica - 400 tons per hour.  
800 Belt



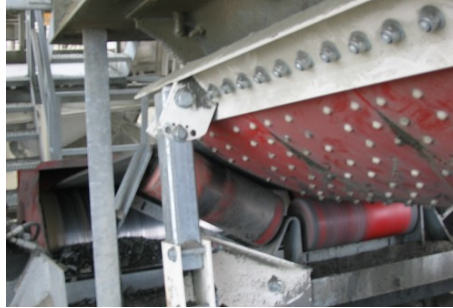
Basalt - 1.000 tons per hour  
1000 Belt ( deep trough )



Cement works - 600 tons per hour  
1.000 Belt



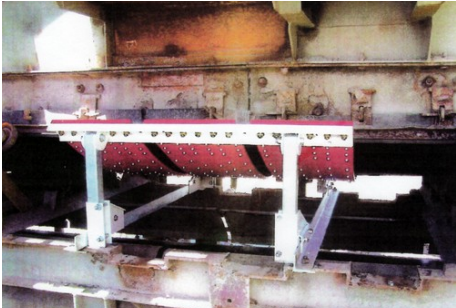
Limestone 300 tons per hour  
800 Belt



Sand lime - 500 tons per hour  
1000 Belt



Coal harbour - 3.200 tons per hour  
1600 Belt - speed 3,2 m / second



Nickel ore - 600 tons per hour  
1200 Belt



Gold ore - 500 tons per hour  
1.200 Belt



Cement works - 800 tons per hour  
1.200 Belt ( 5 hanging straps )

## FLEXAL<sup>®</sup> MANUFACTURING RANGE

TYPE		ELIGIBLE WIDTHS	
<b>FLEXAL<sup>®</sup> 650</b>		500 and 600 mm	20 and 24"
<b>FLEXAL<sup>®</sup> 800</b>		800 mm	28 and 30"
<b>Adjustable trough AR1</b>	3 straps maxi	650 at to 800 mm	20 at to 30"
<b>FLEXAL<sup>®</sup> 1000</b>		1000 mm	36 and 42"
<b>FLEXAL<sup>®</sup> 1200</b>		1200 mm	48"
<b>Adjustable trough AR2</b>	4 straps 1000 maxi 3 straps 1200 maxi	1000 at to 1200 mm	36 at to 48"
<b>FLEXAL<sup>®</sup> 1400</b>		1400 mm	56"
<b>FLEXAL<sup>®</sup> 1600</b>		1600 mm	60"
<b>FLEXAL<sup>®</sup> 1800 / 2000</b>		1800 and 2000 mm	70 and 80"
<b>Adjustable trough AR3</b> Available for straps 1000 et 1200	6 straps 1000 maxi 5 straps 1200 maxi	1400 at to 2000 mm	70 at to 80"

**The more efficient system to prevent belt attacks,  
to increase lifetime and to reduce operating costs.**