



UsFlex[®]

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unrivalled impact, rip and tear resistance

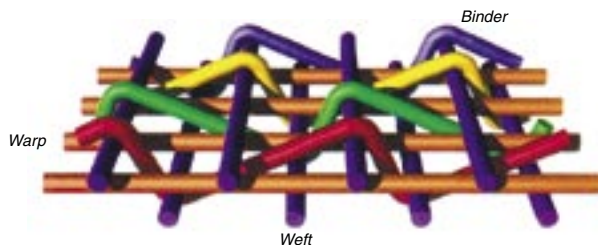
Heavy duty at its heaviest

Fenner Dunlop introduces the new standard in industrial conveyor belts. UsFlex[®], an innovative, heavy duty carcass that surpasses traditional multi-ply belts on all fronts. UsFlex[®] is characterised by an extremely sound straight-warp construction, giving a conveyor belt at the top end of the spectrum for operational performance and life span.

- **Superior impact, rip and tear resistance**
- **High strength**
- **Excellent load support**
- **Outstanding throughability**
- **Lightweight**

A single UsFlex[®] ply provides the strength of many traditional multiply layers

Ultra-strong straight-warp construction



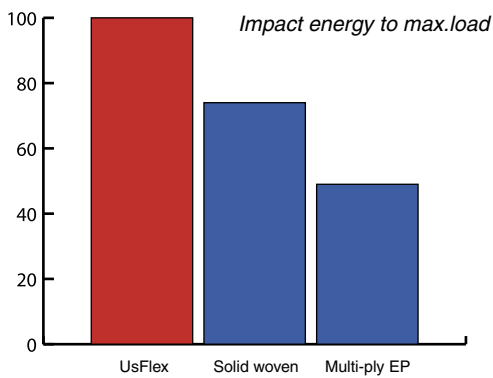
UsFlex[®] owes its outstanding characteristics to the innovative straight-warp carcass construction of Fenner Dunlop. This construction consists of extra heavy strands of polyester running lengthwise, with nylon running crosswise. The strands are completely straight in both directions and therefore not bent over each other as in traditional woven carcasses.



This has resulted in maximum protection of the warp through the weft, with maximum tensile strength and minimal stretch, both lengthwise and crosswise, and a lightweight belt, as there are no multiple plies.

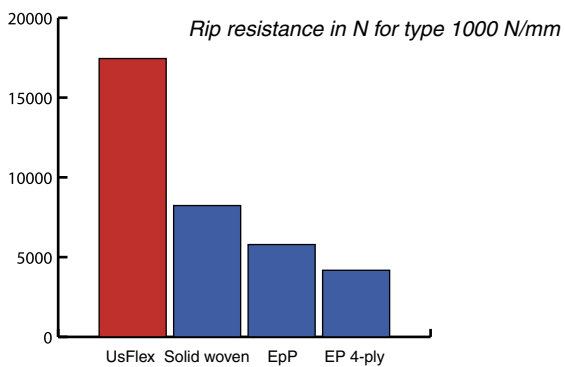
Superior impact resistance

Compared to conventional multi-ply belts with comparable tensile strength, the UsFlex® stands out with its greatly increased impact resistance. The maximum impact energy of a 1-ply UsFlex® type 630/1 can be compared, for instance, with that of a 4-ply EP belt type 1600/4 or an EpP 1250/2.



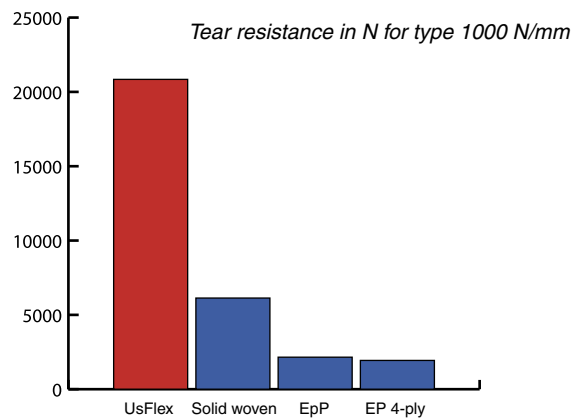
Superior rip resistance

UsFlex® has over five times the rip resistance of conventional multi-ply belts with a similar tensile strength. The rip resistance is not only superior in relation to multi-ply EP belts, but also in relation to Solid Woven or EpP constructions. The rip resistance of the lightest UsFlex® model, 400/1, is even superior to the heaviest type of EP 2000/4 or Solid Woven DB 630.



Superior tear resistance

The tear resistance of the UsFlex® also leaves conventional multi-ply belts with comparable tensile strength far behind.



Low costs per ton...and therefore more attractive for numerous regular applications

As far as price is concerned, the UsFlex[®] is an attractive alternative in every sense. Not only because of its favourable purchase price, but also because of the unprecedented operating performance and life span. This all translates to exceptionally low costs per ton. A lighter type of belt can be used in many applications due to the excellent characteristics of the UsFlex[®] belt and the finger splice efficiency, which contribute to a favourable purchase price.

“UsFlex[®] reduces operational costs at large stone quarries”

UsFlex[®] is a proven concept in the US for many years. A large stone quarry, for instance, used traditional “second-hand”

conveyor belts for the most demanding application, namely the breaker. The life of these belts was an average of 4 months. These belts were then replaced with a heavier type of multi-ply EP belt. The operational costs per ton were greatly reduced as a result, but the life span of the belt remained below 12 months. After a thorough inspection by Fenner Dunlop’s Application Engineers, the UsFlex[®] was recommended and installed, with remarkable results. After 3 years, the UsFlex[®] belt was still operational, which means a reduction in the cost per ton from \$ 0,049 to \$ 0,0098. This is over 80% reduction in costs!



***Strong, stronger, strongest:
straight-warp construction
with finger splices***

In conventional multi-ply belts, the splice joint to a large degree determines the strength of the belt. At Fenner Dunlop we are putting an end to this tradition with UsFlex®. Instead of either a hot or cold-vulcanised step splice, we use the finger splice method. With most spectacular results. The Fenner Dunlop finger splice is characterised by an efficiency of over 90%, partly due to the splice materials, which have been specially developed for UsFlex®. In comparison, a step splice has an efficiency of “only” 66% for a 3-ply belt type. A good finger splice is easy to learn, but requires technical training. At Fenner Dunlop we are happy to share our know-how with you.

***UsFlex® , the best possible guarantee for
continuity in:***

- **Quarries**
- **Mining industry**
- **Cement industry**
- **Wood industry**
- **Recycling industry**

With reason we call UsFlex® the ‘new standard in industrial conveyor belts’. With its robust construction, UsFlex® is not only the ideal conveyor belt for particularly heavy applications - the low cost per ton also makes UsFlex® the ideal cost-effective alternative for many common applications.



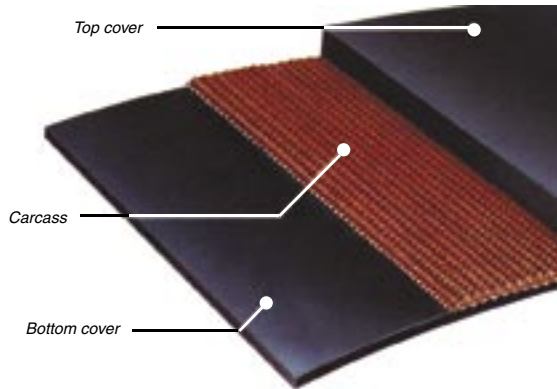
***UsFlex® with finger splice joint has excep-
tional operating performance and durability***

Although the UsFlex® with finger splice joint is the pinnacle of reliability, the usual step- and mechanical joints can also be used for this innovative carcass. Ask our Application Engineering department for the best joint for your application.



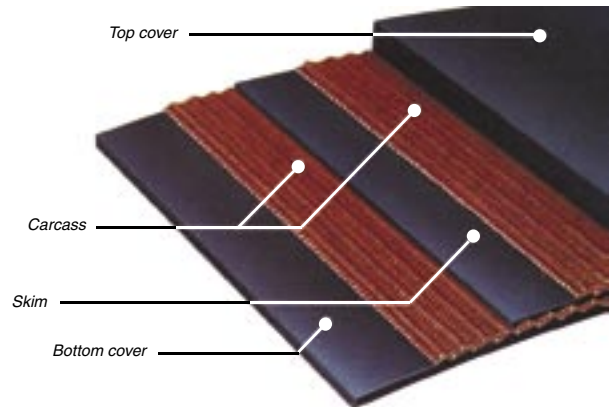
The UsFlex® programme

Fenner Dunlop offers a choice of the single UsFlex® I and the double UsFlex® II carcass. Naturally, Fenner Dunlop offers a wide range of top quality covers for all possible operating conditions.



Available tensile strengths

UsFlex® I: 400 – 800 N/mm
 UsFlex® II: 1000 – 2000 N/mm



Carcass thickness and drum diameters

The carcass thicknesses of both the UsFlex® I & II are similar or smaller than those of comparable multi-ply EP conveyor belts from Fenner Dunlop. The UsFlex® 400/1 carcass, for instance, has a thickness of 2.4 mm, compared to 2.8 mm for the EP 400/3. As a result, the required drum diameter may in some cases be smaller. Until research has shown that this is the case, we would recommend the same drum diameters as that of multi-layer EP conveyor belts.

Type	Head	Tail/Tension	Bend (90 °)	Snub
400/1	315	250	200	160
500/1	400	315	250	200
630/1	500	400	315	250
800/1	630	500	400	315
1000/2	800	630	500	400


* With a working tension below 60% of the maximum permissible tension, the head-drum diameter can be reduced to one size smaller.

Cover qualities

UsFlex® comes as standard with RS cover quality. This compound is extra wear resistant. Other cover qualities, such as oil resistant, fire resistant and heat resistant are available on request.

Available from stock

Nobody is waiting for downtime when your old multi-ply belt is suddenly damaged. For this reason, it is good to know that the standard UsFlex® belts are always available from stock.

A large industrial machine, likely a log processing mill, is shown in motion. A large, dark, rotating drum is on the left, and a conveyor belt carries several large logs from the drum towards the right. The scene is filled with motion blur, suggesting a fast-paced industrial environment. The lighting is bright, highlighting the textures of the wood and the machinery.

Expert advice

If you would like more information on the heavy duty UsFlex[®] belt, please contact our Application Engineering department, without obligation, for expert and free advice: tel. +31 512 585 555 or visit www.fennerdunlop.com/europe

General comments

Selecting the correct belt type and quality depends on a number of factors. It is advisable, therefore, to provide us with as much information as possible, so that the correct belt type is selected. The ultimate choice for the different types depends on the operating conditions, which vary with each company.

If you are in any doubt, we would urge you to contact the Application Engineers at Fenner Dunlop. The Application Engineering department can provide you with advice and practical support in selecting the right belt for your specific application. The department provides expertise in conveyor belt technology and advanced computer systems for calculating belt specifications.

Our own service and vulcanising company is available for training and on-site splicing of our conveyor belts. For more detailed information about Fenner Dunlop products, please consult our individual product brochures.

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