

A photograph of an underground conveyor belt system. The conveyor belt is a long, dark, solid woven belt running through a dark, rocky tunnel. It is supported by a metal frame with rollers. Several yellow chains are visible, hanging from the ceiling and attached to the belt. The background shows the rough, textured walls of the tunnel, illuminated by bright lights. The overall scene is industrial and dimly lit, emphasizing the scale and safety of the conveyor system.

FENNER

CONVEYOR BELTING

Solid Woven Conveyor Belting

THE SAFEST UNDERGROUND CONVEYOR BELTS

THE WORLD'S LEADING CONVEYOR BELT COMPANY

www.fennerconveyorbelting.com

Over 60 Years of Experience

With over 60 years experience in the manufacture of conveyor belting, coupled with our innovative leadership in product design, manufacturing, application engineering and technical support plus a total dedication to customer service, Fenner is the first choice for conveyor belting products and services.

Fenner is the world's largest manufacturer of conveyor belting for mining

and industrial applications. With twelve manufacturing facilities on five continents, Fenner is uniquely positioned to provide the most comprehensive conveyor belting service available today.

Fenner solid woven belting is manufactured to the same exacting standards in India, South Africa and Australia.

Discover Fenner Brand

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Conveyors >>>

The backbone of a modern mining operation

Without efficient conveying, mine production can be severely affected. The efficiency of any conveyor depends largely on the trouble-free working life of the belt itself, yet the conditions under which it has to operate can be extremely arduous, having to resist ripping, impact, abrasion, bacteria, acid, water and general mechanical damage.

Solid Woven Conveyor Belt

— the advantages

Our extensive knowledge of conveyor belt applications, fabric weaving and polymer technology are combined in our market-leading range that has been at the forefront of development for over half a century.

Fenner solid woven (monoply) belting, the first choice of countless mines throughout the world, has a number of significant advantages.



Fire resistant and anti-static properties which meet the most stringent safety standards in the world



Greater flexibility, making it easier to trough and track when installed



A solid woven single ply carcass with no risk of ply separation



Covers which form an integral bond preventing any form of belt delamination



High resistance to longitudinal tears



High dynamic and static vulcanised joint properties



Excellent retention of mechanical fasteners



High resistance to impact damage

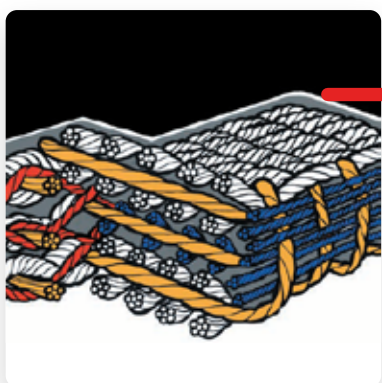


Impervious to attack from acid, water, oil, bacteria and chemicals



High resistance to edge wear

Belt Construction



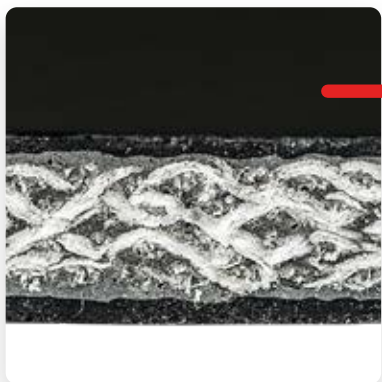
1 Fenner's unique binder warp system

The Fenner solid woven carcass is a highly complex design, utilising warp yarns interlocked and tied into one single mass by means of a uniquely designed binder warp system. The countless options available in the construction of the Fenner carcass enables the end user to define specific operational requirements and receive a custom-built belt exactly suited to a specific application.



2 Solid woven carcass prior to PVC impregnation

The solid woven fabric is 100% impregnated with PVC to make the finished carcass. Fenner's unique, impregnation system renders the carcass impervious to attack from moisture, dirt, chemicals, bacteria and oils.



3 Finished PVC belting

Following the impregnation process, PVC covers are applied to the top (carrying) and bottom (drive) surfaces of the belt to protect the carcass and extend service life. Cover type, quality, and thickness are matched to specific customer requirements.



CARCASS

In many respects the carcass is the most important part of a conveyor belt since it provides the tensile strength necessary to move the loaded belt and absorb the impact of material falling on to it, as well as providing the bulk and lateral stiffness required for load support and the strength required for bolt and/or fastener holding.

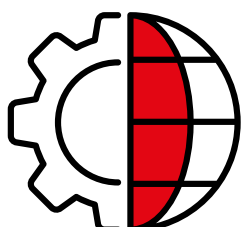
Nylon or polyester load bearing warp yarns and nylon or nylon/cotton weft yarns are used. Various combinations

of these synthetic and natural fibres ensure that the requirements for impact resistance, belt elongation, flexibility (for troughing and wrapping round small diameter pulleys), load support and fastener retention are met. Where there is a specific need, pile warp yarns may be included to further improve impact resistance. An additional edge reinforcement option is available where required.

COVER

PVC covers can be formulated to meet any worldwide fire resistance specification and to offer resistance to other hazards, such as oils and chemicals. Special compounds can also be used to give improved abrasion resistance or a higher coefficient of friction.

For use above and below ground and where a higher coefficient of friction is required, rubber covers are vulcanised to the parent belt. These can be fire-resistant if required. PVC belting is available in a range of colours to assist in belt identification.



SPECIAL APPLICATIONS

Tailor-made, low stretch Fenner belting is also suitable for a variety of specialist applications, including bucket elevators and similar installations where take-up is limited. Other application specific belts can be designed and custom built with the assistance of a Fenner engineer, ensuring the correct selection of belt construction and covers every time.

The Fenner

Belt Range

APPLICATION AREAS:

- Coal
- Salt
- Potash
- Trona
- Gypsum
- Tunnelling
- Limestone

DEVELOPMENT CONVEYORS

Fenner PVC (FR)

Fire retardant

Meeting or, in many cases, exceeding the fire-resistance and anti-static requirements of all worldwide safety standards, Fenner FR belting is designed primarily for use underground and in other potentially hazardous situations. PVC compounds, with cover thicknesses of up to 3mm can be varied to suit any specific application. Fenner FR belting has a proven superior service life in coal mining and similar applications where high, continuous output depends on belt reliability.

The PVC covers give excellent cleaning properties and, together with the advantages of a solid-woven carcass, provide a belt ideal for conveying coal, potash, phosphate, fertiliser, salt, gypsum and clay, as well as for use in the timber industry and other applications where moist, sticky materials are handled.



PVC (FR) can be customised for high visibility which improving safety underground.

PVC is suitable even in the most difficult environment

| Belt designation (lbs/in) | Warp strength (N/mm) | Weft strength (N/mm) | Belt thickness ¹ (mm) | Belt weight ¹ (kg/m ²) | Minimum Recommended Drum Diameters | |
|------------------------------|-------------------------|-------------------------|-------------------------------------|--------------------------------------------------|---------------------------------------|---------------------|
| | | | | | High tension (mm) | Low tension (mm) |
| 3500 | 630 | 275 | 8.1 | 10.5 | 400 | 315 |
| 4000 | 710 | 300 | 8.3 | 11.0 | 400 | 355 |
| 4500 | 800 | 300 | 8.5 | 11.1 | 500 | 355 |
| 5000 | 875 | 300 | 8.8 | 11.2 | 500 | 355 |
| 6000 | 1000 | 350 | 9.4 | 11.9 | 630 | 400 |
| 6500 | 1140 | 350 | 9.5 | 12.0 | 630 | 400 |
| 7000 | 1250 | 350 | 10.4 | 12.2 | 750 | 450 |
| 8000 | 1400 | 350 | 10.5 | 13.2 | 750 | 450 |
| 9000 | 1600 | 425 | 11.9 | 14.8 | 800 | 600 |
| 10000 | 1800 | 425 | 12.9 | 16.1 | 800 | 600 |
| — | 2000 | 425 | 13.9 | 17.6 | 1000 | 750 |
| 12000 | 2100 | 425 | 13.9 | 17.6 | 1000 | 750 |
| — | 2500 | 425 | 13.9 | 17.6 | 1000 | 750 |

¹Nominal values for specific belt constructions with 1+1 PVC covers. Specification sheets detailing the actual data for any belt type supplied can be forwarded on request. For thicker covers add 1.3kg/m²/mm for PVC and 1.4kg/m²/mm for nitrile covers.

Customised Conveyor Belting

Special Carcass Properties

Carcass designs can be customised to include one or more of the following features:

- ✓ Increased fastener holding efficiency for high speed/tonnage applications
- ✓ Improved lateral stability to further enhance resistance to longitudinal splitting on high capacity/deep trough conveyors
- ✓ High tear and rip resistance for arduous applications where belts are difficult to align and maintain
- ✓ Additional carcass mass to allow belts to negotiate small radius catenary curves which would normally require steel cord belt (to prevent the belt lifting off the structure under no load conditions)
- ✓ Improved edge wear protection for extensible and similar applications

Special Covers

Certain applications require conveyor belts with special properties and our highly experienced in-house research and development technicians have developed a range of PVC compounds for covers, all of which are available with fire-resistant properties, including:

- ✓ Easy clean covers for handling wet, sticky materials such as chalk, clay and lignite
- ✓ High coefficient of friction covers for additional grip on pulleys and load retention on inclines
- ✓ Covers suitable for low temperature and arid environments
- ✓ Leach resistant covers

Hi-Vis

High Visibility (Hi-Vis) yellow covered belting provides improved safety and inspection characteristics, particularly on underground conveyors. The enhanced visibility of the yellow covers significantly improves the sighting of the conveyor's moving parts and structure against the belt, allowing easier inspection and making the conveyor itself more conspicuous. Currently installed at mine sites in the UK, Scandinavia, USA and Canada, the advantages of Hi-Vis belting have been recognised by engineers as a useful feature in improving safety around conveyors – always top priority.

Hi-Vis belting is a product innovation driven by the need



high contrast = better safety

for improved safety and is especially advantageous on man-riding conveyors, making the belt edges and conveyor moving parts more obvious to the rider.

Belting is also available in a **range of other colours** to assist in belt identification.



Diamond Edge

Diamond Edge conveyor belt from Fenner is specially designed and manufactured to be used in arduous applications where edge wear and stranding can occur. These issues generally arise due to poor conveyor alignment caused by floor movement or where conveyor structure is 'temporary' eg extensible conveyors.

Less edge wear = increased life

Reduced belt width due to edge wear can lead to fastener holding problems and load spillage. Ultimately the belt becomes unusable whilst the surface of the belt could be perfectly acceptable. With Diamond Edge the width reduction takes much longer leading to a significant increase in useful life

Reduced stranding = improved safety

When the edge of a belt rubs against structure the carcass (fabric) is exposed. In some belts the warp yarns, which run in the length direction and give the belt it's strength, can pull out in long lengths. These yarns can then wrap around rollers causing the rollers to seize. The belt running across these seized rollers can wear

through the idler shells which can then cause significant damage to the belt or the shells and bearings can get very hot leading to potential fires.

Other benefits of Diamond Edge

Internal adhesion, cover adhesion and lateral stiffness are all increased with Diamond Edge giving the added benefit of reducing the chance of idler junction (trough point) failure.

Dynamic fastener holding, as tested in accordance with BS 8407, has been almost doubled over the typical life for 'standard' belt increasing the running time between joint changes and reducing the likelihood of failures.



**FR 6500 E 1/1mm PVC Covers
Extensible belt**

COMPARISON OF PHYSICAL PROPERTIES (WHERE DIFFERENT)

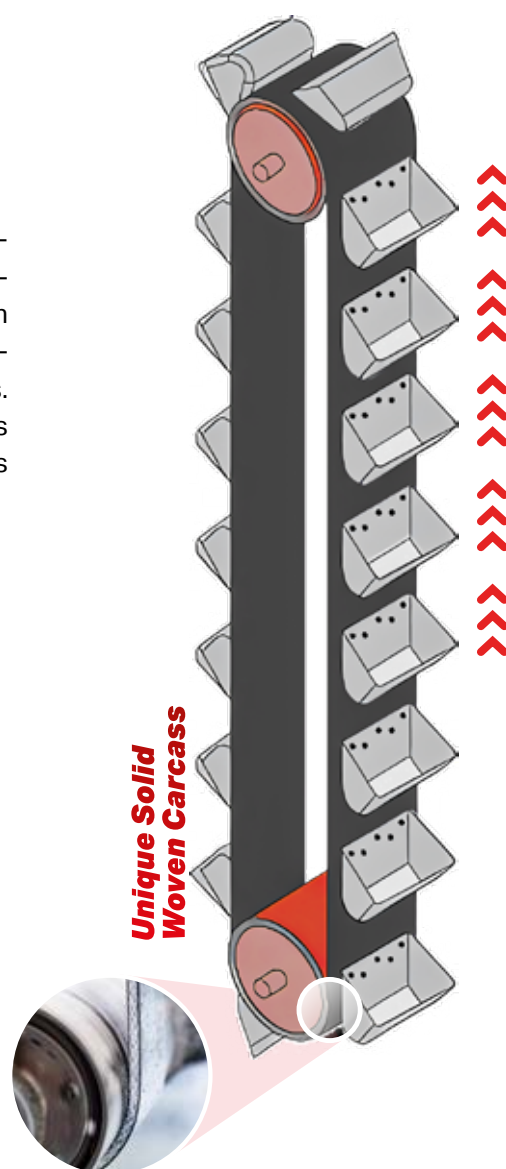
| Property | ISO Standard | FD "Diamond Edge" Belt (Nominal) |
|-------------------------------------|--------------|-------------------------------------|
| Warp Tensile (lbs/in) | 6500 | 7000 |
| Warp Tensile (N/mm) | 1140 | 1250 |
| Weft Tensile (lbs/in) | 1827 | 2700 |
| Weft Tensile (N/mm) | 320 | 470 |
| Internal Adhesion (lbs/in) | - | 100 |
| Internal Adhesion (N/mm) | - | 18 |
| Cover Adhesions (lbs/in) | 23 | 40 |
| Cover Adhesions (N/mm) | 4.0 | 7.0 |
| Steckhert (mm) Stiffness | - | 100 |
| Fastener holding (MATO U37A) | | |
| Static (lbs/in) | - | 5200 |
| Static (N/mm) | - | 911 |
| Dynamic (cycles) BS 4807 | 100,000 | 340,000 |

PVC Solid Woven Elevator Belts

Our unique Solid Woven carcasses are designed and manufactured in-house with our extensive knowledge of fabric weaving and polymer technology. With a complex woven design of polyester warp and nylon or nylon and cotton weft, which are 100% impregnated with PVC, making the finished carcass impervious to attack from moisture, dirt, chemicals and oils. Additional PVC covers are applied to both sides of the impregnated carcass in our unique dipping process, to give additional protection to the carcass and extend the service life.

Advantages of Fenner PVC Solid Woven Elevator Belts

- ✓ High performance oil resistant fire resistant, anti-static covers
Oil and fat resistant for most products with animal and vegetable oils and fats
- ✓ A solid woven single ply carcass with no risk of ply separation or delamination
- ✓ Covers form an integral bond preventing any form of delamination
- ✓ High resistance to bolt pull through and bucket holding
- ✓ High static clamp joint and fastener retention properties
- ✓ High resistance to longitudinal rip and tears
- ✓ High resistance to edge wear
- ✓ Flexibility for smooth running on elevator pulley and ease of tracking when installed





Elevator Belts Features

Fire resistant and anti-static in accordance with EN 14973 Class C1

Complies with ATEX Directive 94/9/EC

Mechanical properties ISO 22721 & ISO 1120

Quality assurance in accordance with ISO 9001:2015

Oil resistant against most animal and vegetable oils, suitable for applications handling grain, feed, fertiliser and seed

Fenner Elevator belts are available in tensile strengths **from 500 N/mm to 1800 N/mm**, slab widths from **200 mm up to 1600 mm** and with cover thicknesses of **1+1mm, 1.5+1.5 mm or 2+2 mm**.

ELEVATOR BELTS PRODUCT RANGE

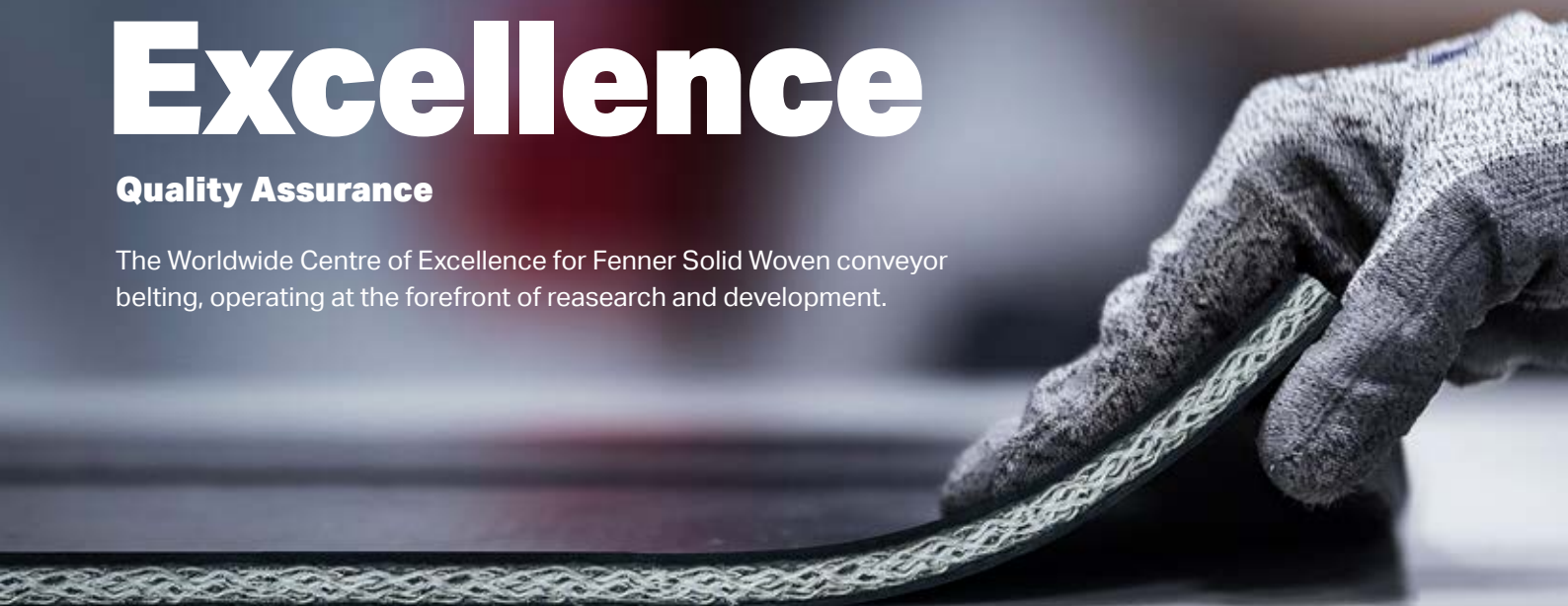
| Belt designation (lbs/in) | Warp strength (N/mm) | Weft strength (N/mm) | Belt thickness ¹ (mm) | Belt weight ¹ (kg/m ²) | Minimum Recommended Drum Diameters | |
|------------------------------|-------------------------|-------------------------|-------------------------------------|--------------------------------------------------|------------------------------------|---------------------|
| | | | | | High tension (mm) | Low tension (mm) |
| 2800 | 500 | 275 | 7.7 | 10.1 | 315 | 250 |
| 3500 | 630 | 275 | 8.1 | 10.5 | 400 | 315 |
| 4000 | 710 | 300 | 8.3 | 11 | 400 | 355 |
| 4500 | 800 | 300 | 8.5 | 11.1 | 500 | 355 |
| 5000 | 875 | 300 | 8.8 | 11.2 | 500 | 355 |
| 6000 | 1000 | 350 | 9.4 | 11.9 | 630 | 400 |
| 6500 | 1140 | 350 | 9.5 | 12 | 630 | 400 |
| 7000 | 1250 | 350 | 10.4 | 12.2 | 750 | 450 |
| 8000 | 1400 | 350 | 10.5 | 13.2 | 750 | 450 |
| 9000 | 1600 | 425 | 11.9 | 14.8 | 800 | 600 |
| 10000 | 1800 | 425 | 12.9 | 16.1 | 800 | 600 |

¹ Nominal values for specific belt constructions. Specification sheets detailing the actual data for any belt type supplied can be forwarded on request.

Centre of Excellence

Quality Assurance

The Worldwide Centre of Excellence for Fenner Solid Woven conveyor belting, operating at the forefront of research and development.



Product Testing

The Centre of Excellence is constantly seeking ways to make product and process improvements as well as researching new manufacturing techniques and materials. It is staffed by experts in engineering, chemistry, polymers and textile technology.

A key function of the Centre of Excellence is the continual testing of products to ensure that the very highest standards are met. Conveyor belting, particularly for use in underground applications, is subject to rigorous safety testing in our state-of-the-art facilities to ensure that all belts meet the most stringent requirements. Our in-house dynamic performance testing ensures that every belt provides the longest life possible.

Quality Testing

All Fenner belting is produced within our own Quality management system. As part of this system, the quality of all belt is verified prior to despatch by a programme of comprehensive testing.

Typically this testing will include:

- ✓ Dimensional measurements
- ✓ Warp and weft tensile strengths
- ✓ Tear strength
- ✓ Elongation
- ✓ Cover adhesion
- ✓ Small scale safety tests (laboratory flame and electrical resistance)
- ✓ Abrasion resistance
- ✓ Transverse stability

Dynamic Performance Testing

It is necessary to ensure that every belt will perform flawlessly throughout its operating life and that the joining technology used, be it mechanical fasteners or vulcanised splices, performs as expected

Our testing facility is equipped with a range of dynamic test rigs enabling us to perform:

- ✓ Accelerated life testing on both the belt and related joining methods
- ✓ Field problem simulation
- ✓ Troughing/transition distance evaluations
- ✓ Product and material development testing
- ✓ Specific belt testing to individual customer requirements.



Safety Testing

The Fenner approach to fire safety testing is based on the premise that a belt should never be the cause of a fire, should be difficult to ignite, and if ignited by an external fire source, should not propagate the fire.

Whilst fire resistance specifications vary from country to country, belts can be formulated to meet any fire performance specifications in the world. The tests carried out on conveyor belts to assess their compliance with fire safety standards are associated with four particular hazards.



Drum Friction Test

The danger associated with a stalled belt and a driven rotating drum or pulley resulting in frictional heat build up.

A test piece of conveyor belt, suitably mounted and tensioned, is wrapped half way around a rotating steel drum, simulating a stalled belt. The test is continued at specified tensions for a given time period, or until the belt breaks. The presence, or absence, of flame or glow is noted and the temperature of the drive drum is measured. The test is conducted in still air and/or in moving air. This test has probably been the major single contributor to mine safety in respect to conveyor fire prevention.



Laboratory Flame Test

The possibility of igniting the considerable mass of a conveyor belt with a relatively small ignition source.

This hazard is usually assessed by the application of a small "Bunsen" type flame to a belt sample and observation of the effect. The time taken for all flame and/or glow to self-extinguish is noted.

Gallery Fire Test

The possibility of a belt, ignited from a larger ignition source, spreading the fire to other areas (often referred to as fire propagation).

This hazard can only be assessed by a gallery fire test, which utilises a sample length of conveyor belt supported by a steel trestle placed in a cabinet of specified dimensions. A continuous flow of air is drawn through the cabinet whilst the sample of belt is ignited at one end by a gas burner for a defined period of time.

Upon removal of the flame source the length of undamaged belt is quantified by physical measurement and/or mathematical means. Fenner's in-house test facility is constructed in accordance with EN 12881-1 (Section 6) Mid Scale Fire Propagation Test.



Electrical Resistance Test

The possible build-up and subsequent discharge of static electrical charge on moving conveyors.

Electrical resistance is determined by passing a current of specified voltage between electrodes placed on the surface of the belt. The internationally recognised acceptance criteria for electrical conductivity is a maximum resistance of 3.0×10^8 Ohms (300M Ohms). Fenner's PVC and rubber compounds are specially formulated to ensure that belts are sufficiently conductive to avoid the build up of static electricity.



SAFETY

Fenner conveyor belting meets the safety requirements of all the major mining nations and has been tested and/or approved by the appropriate national authorities, including:

| Country | Applicable Standards | Country | Applicable Standards |
|----------------|-----------------------|----------------|--------------------------------------|
| Australia | AS 4606 | Poland | PN EN 14973 C1 + PN-93-05013 |
| Belarus | MI 600024712.001-2007 | Portugal | IPQ EN 14973 C1 |
| Canada | CSA M422:14 | South Africa | SABS 971 |
| China | MT914 | Spain | UNE EN 14973 C1 |
| Czech Republic | CS EN 14973 C1 | Russia | PD03-423-01 |
| Germany | DIN EN 14973 C2 | Turkey | TS EN 14973 C1 |
| India | IS3181 | United Kingdom | BS EN 14973 C1 |
| Italy | UNI EN 14973 C1 | Ukraine | GSTU 12.0018579.001-99 |
| Norway | NS EN 14973 C1 | USA | MSHA Title 30 Part 14 & MHSA Part 18 |

Technical Information

Belt designation

Belts can be produced to various tensile specifications, using either polyamide (nylon) or polyester base warp yarn. Some markets still prefer to specify belt types based on tensile strength expressed in lbs/in width, whilst others opt for the preferred ISO nomenclature expressed in N/mm. The table on page 8 shows typical figures for minimum warp and weft strengths, belt thickness and weight for a selection of belt types, based on 1mm PVC covers. For thicker covers, add 1.3 kg/m²/mm for PVC covers.

Alternative constructions are available which give values higher than those in the table. This is particularly relevant to weft strength, where special yarns/designs may be recommended for improved properties such as fastener holding, load support and weft stability.

The use of such special yarns may increase the belt weight and thickness which could be critical for shipping purposes or underground transportation. A Fenner engineer should always be consulted where this is likely to be an issue.

Belt width

Belt widths up to 1600mm can be manufactured. Whilst we recommend customers to follow the ISO range of preferred widths, non-standard widths can be supplied. Slit-edge belting is also available upon request.

Belt thickness

When considering cover thickness, please be aware of the high textile content of solid woven and the properties afforded by the increased carcass bulk compared to rubber plied belting. Consequently, thinner covers may generally be chosen than would normally be associated with an equivalent plied product, the enhanced textile density of a solid woven carcass providing the necessary load support and resistance to impact.

Drum diameters

The drum diameters quoted are the minimum generally recommended. Given specific information regarding wrap configurations, tensions, belt speeds and jointing methods, it may be possible to recommend smaller drums.



Roll lengths

Customers are asked to specify their maximum acceptable roll diameters and weights so that belts can be supplied in the most suitable roll lengths to avoid unnecessary joints. Belts can normally (subject to safe working limits in our factory) be produced in any required roll size to suit handling and transit to site.

Single, double or special double coiled rolls can be supplied with fasteners fitted if required. Short belts can be spliced into endless loops as part of the manufacturing process.

The relationship between roll length and diameter is given by the formula:

$$L = \frac{D^2 - d^2}{K \cdot t} \quad D = \sqrt{K \cdot L \cdot t + d^2}$$

L – length of belt (m) d – core diameter (mm)
 D – rolled belt diameter (mm) t – thickness of belt (mm)
 K – 1275 (constant)

Belt stretch

The unique design and manufacturing process of solid woven belt allows both permanent and elastic stretch to be kept to a minimum. With numerous carcass designs available in both nylon and polyester yarns, it is impracticable to indicate all stretch figures. Further details can be provided on request.

Operating factor or safety

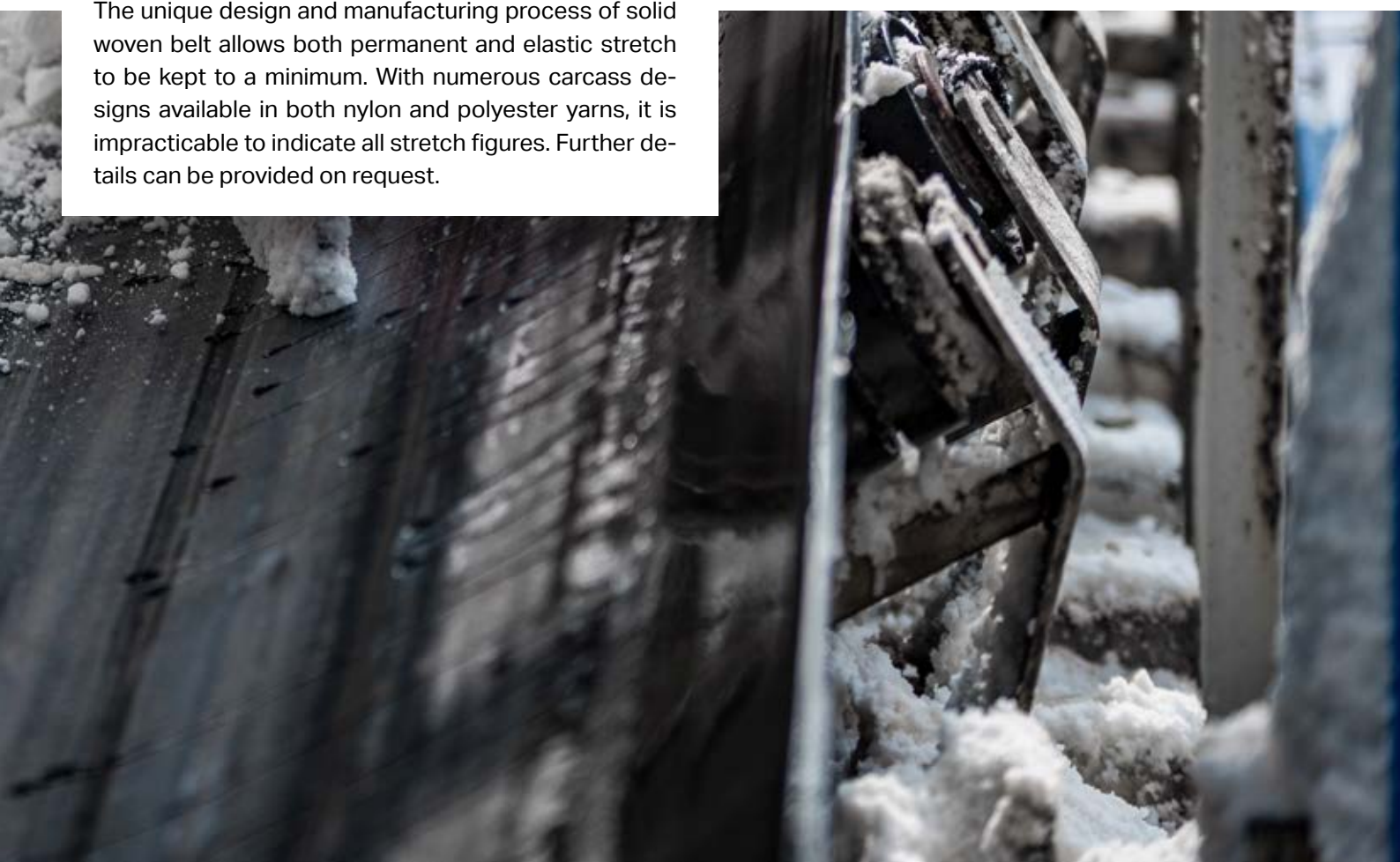
With good quality mechanical fasteners or vulcanised joints a factor of safety of 10:1 is generally acceptable. However we would be pleased to confirm the recommended belt construction and acceptable safety factor for any specific application on receipt of the necessary conveyor details.

Operating temperature range

Above 90°C PVC softens and the belt properties change. PVC belt is therefore not recommended for conveying materials above this temperature. Standard belts can be used in cold climates down to -10°C. Where applicable, cold weather details should be supplied to ensure that belting with suitable coefficient of friction and flexibility characteristics is specified.

Fitted fasteners

Mechanical fasteners to customer requirements can be pre-fitted in the factory. Please advise when ordering the belt.



Joining of Solid Woven Belt

Fenner solid woven conveyor belting can be joined in two ways, either by hot vulcanised finger splicing or by the use of mechanical fasteners.

Hot Vulcanised Finger Splice

Conventional vulcanising presses are used for this process, in conjunction with a variety of polymeric jointing materials developed for maximum joint efficiency. This type of splice enables good quality joints to be made with strengths approaching that of the parent belt. Hot vulcanising offers certain advantages, including:

- ✓ The highest joint strength possible
- ✓ A reduced risk of tearing at the splice area
- ✓ A smooth joint area for superior performance under scrapers, ploughs, deflectors and minimal impact over pulleys and idlers
- ✓ Operation through automatic weighing devices and magnetic separators
- ✓ Reduced maintenance
- ✓ Resistance to moisture and harmful chemicals
- ✓ Superior resistance to abrasion
- ✓ Easier cleaning
- ✓ Reduced spillage

Mechanical Fasteners

The thick, high textile content of the solid woven carcass, combined with the superior PVC impregnation produced by our unique process, gives excellent fastener holding properties. A wide range of fasteners including Mato, Goro, Titan and Flexco are suitable for use with solid woven conveyor belting.

Mechanical fasteners are appropriate in conditions where:

- ✓ Belts are replaced frequently
- ✓ Belts and conveyors are extended regularly
- ✓ Emergency jointing or repairs are required
- ✓ Take up travel is limited.

The following mechanical fasteners can be fitted as standard.



| Brand | Type | Max. Tensile Range | | Belt Thickness (mm) |
|--------|-------|--------------------|-------------------|---------------------|
| | | N/mm (metric) | lbs/in (imperial) | |
| MATO | U35A | 1050 | 6000 | 9 |
| | U35 | 1050 | 6000 | 7-11 |
| | U37A | 1400 | 8000 | 8-12 |
| | U37 | 1400 | 8000 | 8-12 |
| | U38A | 3500 | 20000 | 10-14 |
| | U38 | 3500 | 20000 | 12-15 |
| | U65A | 1250 | 7000 | 15-18 |
| | U65 | 1250 | 7000 | 6-10 |
| | U67A | 1400 | 8000 | 8-12 |
| | U67 | 1400 | 8000 | 10-14 |
| | U68A | 3500 | 20000 | 12-15 |
| | U68 | 3500 | 20000 | 15-18 |
| | H35A | 1050 | 6000 | 6-9 |
| | H35 | 1050 | 6000 | 7-11 |
| | H37A | 1400 | 8000 | 8-11 |
| | H37 | 1400 | 8000 | 10-14 |
| | MH22A | 630 | 3500 | 5-7 |
| | MH22B | 630 | 3500 | 7-9 |
| | MH25A | 1050 | 6500 | 5-7 |
| | MH25B | 1050 | 6500 | 7-9 |
| | MH27A | 1400 | 8000 | 10-12 |
| | MH27B | 1400 | 8000 | 12-14 |
| | MP27 | 800 | 4500 | 8-11 |
| | MP28 | 800 | 4500 | 8.5-14.5 |
| FLEXCO | R5 | 800 | 4500 | 6-11 |
| | R51/2 | 114 | 6500 | 8-15 |
| | R6 | 140 | 8000 | 10.5-17 |
| | F8 | 800 | 4500 | 5-8 |
| | F9 | 1140 | 6500 | 6-9 |
| | F11 | 1140 | 6500 | 8-11 |
| | F12 | 1400 | 8000 | 9-12 |
| | F14 | 1400 | 8000 | 11-14 |

All fasteners should be fitted according to manufacturers instructions



NOTE: All polymeric vulcanising materials deteriorate with age. Most materials have an effective life of six months and unsatisfactory splices may result from using old materials. Storage in warm conditions may reduce effective life further. This warning applies to all splicing materials, regardless of supply source or belt types. We would be pleased to advise further on the storage of such materials.

INSPECTION PACKAGING & **STORAGE**



1. Final inspection

Before shipping, belts are 100% inspected. Double coils and Special Double Coils can be supplied if there are height constraints. At this point, the customer's preferred mechanical fasteners can be fitted.

2. Storage of Conveyor Belting

Belting should be stored coiled with the central axis horizontal. Rolls may be stacked several rolls high providing the resultant pressure does not collapse or distort the centres.

Conveyor belting should be stored and handled in accordance with the guidelines outlined in the following standards:

ISO 2230 — Vulcanised rubber
(Guide to storage)

ISO 5285 — Conveyor belts
(Guide to storage and handling).

3. Temperature

Ideally the storage temperature should be below 25° C though temperatures up to 40° C can be tolerated. The effects of low temperatures are not permanently detrimental though below 0° C belts become stiffer and care should be taken when handling at and below this temperature. When rolls are removed from storage at low temperatures for immediate use, their temperature should be raised to approximately 20° C throughout before being put into service.



4. Light

Conveyor belting should be protected from sunlight, in particular direct sunlight and strong artificial light with a high ultra-violet content.





5. Ozone

As ozone can be particularly damaging to vulcanised rubber, storage rooms should not contain any equipment capable of generating ozone such as high voltage electrical equipment, electric motors or other equipment which may give rise to electric sparks or electrical discharges. Combustion gases and organic vapours should be excluded as they may give rise to ozone via photochemical reactions.

Ozone Threats:



High Voltage



Gases and vapours



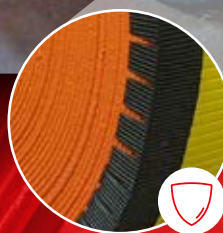
6. Packaging

Belting requiring long term storage should be bound with steel or high tenacity plastic or textile straps and protected with waterproof plastic material. A supporting centre core of suitable dimensions manufactured from wood or steel should be specified at the time of order.



Supporting centre core

Bound plastic strapping



Edge protector packaging supplied on all our rolls prevents damage during transit, storage and installation, protecting your investment.

Technical Support

Fenner's commitment to our customers does not begin or end with the sale of a high quality belt. In addition we offer a comprehensive range of services.

Training

A number of different procedures can be used to splice a solid woven belt and accredited supervision and training, on-site or in-house, ensures that a belt is jointed so as to ensure maximum performance.

Site Surveys & Calculations

Reports on conveyor systems, belting and vulcanised or mechanical joints can be produced and we also offer expert assistance to calculate the parameters of any non standard conveyor.

Destructive Testing & Analysis

Our testing of new belt is extensive. However we can also test used belt to gauge performance in service. A section of belt removed and sent to us can be tested and analysed to check ultimate tensile strength and to check that original design parameters and agreed factors of safety are still being met. We also offer testing for both mechanical and vulcanised joints.

Site Vulcanising

Highly qualified splicing teams are fully equipped to carry out splicing work both underground and on the surface anywhere in the world using our extensive range of sectional vulcanising presses.

Belt Fitting

We offer the complete installation of belts or inserts and assistance with developing method statements and risk assessments to ensure that belt changes are completed safely.

Belt Coiling

Within our factories we have the equipment and capability to coil rolls of belt up to a maximum of 2m wide. Belts can be coiled in a number of ways including Double Coiled and Special Double Coiled when there is limited access, there are height or dimension restrictions or just for ease of installation.

Mechanical Fasteners

Fasteners chosen by or recommended to customers can be supplied and fitted to belts before delivery. Training for on-site fitting can also be arranged.



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