

GB Instruction for use
FR Manuel d'utilisation

POWERTEX



Webbing Slings Endless One-Way
Acc to DIN 60005 PW0

User Manual



POWERTEX PWO - Webbing Slings Endless for One-way use Instruction for use (GB) (Original instructions)



WARNING

- PWO One-way slings are disposable lifting straps made acc to DIN 60005 to be used solely for one-way use i.e for handling goods from the factory to the customer and scrapped upon arrival. As the slings are to be used very limited times the safety factor is lower (SF5) compared to re-usable General use slings acc to EN1492-1 having safety factor 7. The user must assure one-way slings are allowed for use in the country/countries where the slings are to be used. If any doubt we recommend use of Powertex PWS slings acc to EN1492-1.
- Failure to follow national regulations and regulations of this instruction for use may cause serious consequences such as risk of injury.
- Read and understand these instructions before use.

1 Use of textile slings in adverse conditions or hazardous applications

1.1 The material from which the slings are manufactured has selective resistance to chemicals. Polyester (PES) is resistant to most mineral acids but is damaged by alkalis;

Solutions of acids or alkalis which are harmless can become sufficiently concentrated by evaporation to cause damage.

Contaminated slings should be taken out of service at once, soaked in cold water, dried naturally and referred to a competent person for examination.

Slings with grade 8/10 fittings and multi-leg slings with grade 8/10 master links should not be used in acidic conditions. Contact with acids or acidic fumes may cause hydrogen embrittlement to grade 8/10 materials. If exposure to chemicals is likely, the manufacturer or supplier should be consulted.

1.2 Slings are suitable for use and storage in the following temperature ranges:

a) polyester: -40°C to 100°C.

At low temperatures ice formation will take place if moisture is present. This may act as a cutting agent and an abrasive causing internal damage to the sling. Further, ice will lessen the flexibility of the sling, in extreme cases rendering it unserviceable for use.

These ranges vary in a chemical environment, in which case the advice of the manufacturer or supplier should be sought.

Limited indirect ambient heating, within these ranges, is acceptable for drying.

1.3 The man-made fibres from which the slings are produced are susceptible to degradation if exposed to ultra-violet radiation.

Slings should not be stored in direct sunlight or sources of ultra-violet radiation.

2 Inspection of webbing slings in service

2.1 Before first use of the sling it should be ensured that:

- a) the sling corresponds precisely to that specified on the order;
- b) the manufacturer's certificate is available;
- c) the identification and WLL marked on the sling correspond with the information on the certificate.

2.2 Before each use, the sling should be inspected for defects and to ensure that the identification and specification are correct. A sling that is unidentified or defective should never be used but should be referred to a competent person for examination. Ensure EC-Declaration is available.

2.3 During the period of use, frequent checks should be made for defects or damage, including damage concealed by soiling, which might affect the continued safe use of the sling. These checks should extend to any fittings and lifting accessories used in association with the sling. If any doubt exists as to the fitness for use, or if any of the required markings have been lost or become illegible, the sling should be removed from service for examination by a competent person. The following are examples of defects or damage likely to affect the fitness of slings for continued safe use:

a) Surface chafe. In normal use, some chafing will occur to the surface fibres at the place of contact. This is normal and has little effect. Any substantial chafe, particularly localized, should be viewed critically. Local abrasion, as distinct from general wear, can be caused by sharp edges whilst the sling is under tension and can lead to the webbing becoming cut causing serious loss of strength.

b) Cross or longitudinal cuts to the webbing, cuts or chafe damage to edges, cuts to stitching or eyes.

c) Chemical attack. Chemical attack results in local weakening and softening of the material. This is indicated by flaking of the surface which may be plucked or rubbed off. Any signs of chemical attack to the webbing raise serious doubts as to the integrity of the sling.

d) Heat or friction damage. This is indicated by the fibers of the surface material taking on a glazed appearance and in extreme cases, fusion of the fibers can occur.

e) Damaged or deformed fittings.

3 Correct selection and use of webbing slings

3.1 When selecting and specifying slings, the following must be considered:

3.1.1 Slings must have the required working load limit, taking into account the mode of use and the nature of the load to be lifted. Proper selection of a sling is influenced by the size, shape and weight of the load, together with the intended method of use, the working environment and the nature of the load.

3.1.2 The selected sling shall have the correct length for the mode of use. Slings should preferably consist of one length or be extended with the right fittings. Knots and loops in slings - see picture 4a - are not permitted. The termination of the sling should also be considered i.e. whether fittings or soft eyes are required (see picture 4B and 4C).



WARNING



Picture 4A



Picture 4B



Picture 4C

3.1.3 If more than one sling is used to lift a load, these slings should be identical. The material from which the slings is made should not be affected adversely by the environment or the load.

3.2 When connecting a webbing sling to a lifting appliance, the part of the lifting appliance which bears on the sling should be essentially straight, unless the bearing width of the sling is not more than 75 mm in which case the radius of curvature of the lifting appliance attachment should be at least 0,75 times the bearing width of the sling.

Figure D1 illustrates the problem of accommodating webbing on a hook of radius less than 0,75 times the bearing width of the sling. Wide webbings may be affected by the radius of the inside of the hook as a result of the curvature of the hook preventing uniform loading across the width of the webbing.

Figure D1 shows inadequate accommodation of a webbing eye on a hook of too small radius.



Figure D1

3.3 Slings should not be overloaded: the correct mode factor should be used (see table).

	1-leg	U-lift	Laced	1-leg angle		2-leg sling		3-, 4-leg sling	
Angle of inclination									
				0°-45°	45°-60°	0°-45°	45°-60°	0°-45°	45°-60°
Load factor	1	2	0,8	1,4	1	1,4	1	2,1	1,5
Colour	WLL (t)								
White	0,5	1,0	0,4	0,7	0,5	0,7	0,5	1,0	0,7
White	0,7	1,4	0,5	1,0	0,7	1,0	0,7	1,4	1,0
White	1,0	2,0	0,8	1,4	1,0	1,4	1,0	2,1	1,5

Working load limits for some modes may be given on the label. In the case of multi-leg slings the maximum angle to the vertical should not be exceeded.

3.4 Good slinging practices should be followed: the slinging, lifting and lowering operations should be planned before commencing the lift.

3.5 Slings should be correctly positioned and attached to the load in a safe manner. Slings should be placed on the load such that they are able to adopt the flattened form and the loading is uniform across their width. They should never be knotted or twisted. Damage to labels should be prevented by keeping them away from the load, the hook and the angle of choke.

3.6 In the case of multi-leg slings, the WLL values have been determined on the basis that the loading of the sling assembly is symmetrical. This means that when a load is lifted the sling legs are symmetrically disposed in plan and subtended at the same angle to the vertical.

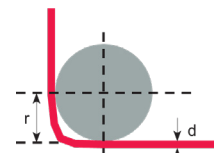
In the case of 3 leg slings, if the legs are not symmetrically disposed in plan the greatest tension is in the leg where the sum of the plan angles to the adjacent legs is greatest. The same effect occurs in 4 leg slings except that the rigidity of the load should also be taken into account.

NOTE With a rigid load the majority of the weight may be taken by only three, or even two, of the legs, with the remaining legs only serving to balance the load.

3.7 Slings should be protected from edges, friction and abrasion, whether from the load or the lifting appliance. Where protection against damage from edges and/or abrasion is supplied as part of the sling, this should be correctly positioned. It may be necessary to supplement this with additional protection.

Definition of a sharp edge:

Radius r (edge) < thickness d of the lifting gear.



3.8 The load should be secured by the sling(s) in such a manner that it cannot topple or fall out of the sling(s) during the lift. Sling(s) should be arranged so that the point of lift is directly above the centre of gravity and the load is balanced and stable. Movement of the sling over the lifting point is possible if the centre of gravity of the load is not below the lifting point.

When using basket hitch U-lift, the load should be secured since there is no gripping action as with choke hitch and the sling can roll through the lifting point. For slings which are used in pairs, the use of a spreader is recommended so that the sling legs hang as vertically as possible and to ensure that the load is equally divided between the legs.

When a sling is used in choke hitch, it should be positioned so as to allow the natural (120°) angle to form and avoid heat being generated by friction. A sling should never be forced into position nor an attempt made to tighten the bite. The correct method of securing a load in a double choke hitch is illustrated in figure 3.A (endless) and 3.B (sling with eyes) double choke hitch provides greater security and helps to prevent the load sliding through the sling.

Figure 3.A



Figure 3.B



3.9 Care should be taken to ensure the safety of personnel during the lift. Persons in the danger area should be warned that the operation is to take place and, if necessary, evacuated from the immediate area. Hands and other parts of the body should be kept away from the sling to prevent injury as the slack is taken up.

The work with lifting devices and equipment's must be planned, organized and executed in order to prevent hazardous situations. In accordance with national statutory regulations lifting devices and equipment's must only be used by someone well familiar with the work and having theoretical and practical knowledge of safe use.

Apart from the instruction manual we refer to existing national regulations on each work place.

3.10 A trial lift should be made. The slack should be taken up until the sling is taut. The load should be raised slightly and a check made that it is secure and assumes the position intended. This is especially important with basket or other loose hitches where friction retains the load.

If the load tends to tilt, it should be lowered and attachments repositioned. The trial lift should be repeated until the stability of the load is ensured.

3.11 Care should be taken when making the lift to ensure that the load is controlled, e.g. to prevent accidental rotation or collision with other objects.

Snatch or shock loading should be avoided as this will increase the forces acting on the sling.

A load in the sling or the sling itself should not be dragged over the ground or rough surfaces.

3.12 The load should be lowered in an equally controlled manner as when lifted.

Trapping the sling when lowering the load should be avoided. The load should not rest on the sling, if this could cause damage. Pulling the sling from beneath the load when the load is resting on it should not be attempted.

3.13 On completion of the lifting operation the sling should be returned to proper storage. When not in use, slings should be stored in clean, dry and well ventilated conditions, at ambient temperature and on a rack, away from any heat sources, contact with chemicals, fumes, corrodible surfaces, direct sunlight or other sources of ultra-violet radiation.

3.14 Prior to placing in storage, slings should be inspected for any damage which may have occurred during use. Slings should never be returned damaged to storage.

3.15 Where lifting slings have come into contact with acids and/or alkalis, dilution with water or neutralization with suitable media is recommended prior to storage. Depending on the material of the lifting sling and on the chemicals referred to in 1, 1.1, it may be necessary in some cases to request from the supplier additional recommendations on the cleaning procedure to be followed after the sling has been used in the presence of chemicals.

3.16 Slings which have become wet in use, or as the result of cleaning, should be hung up and allowed to dry naturally, not near a heat source.

4 Examination and repair

The One-way PWO Webbing slings shall be inspected before each use. The slings must be destroyed and discarded when the goods have reached the final one-way end destination. The slings must not be re-used. Damaged slings must be withdrawn from service. Never attempt to carry out repairs to the slings yourself..

5 Information

We recommend a maximum life span of 10 years, effective from the date of production. This may be extended but depends on a more detailed examination. PWO disposable one-way slings acc to DIN60005 are recognized having white webbing and orange label..

EC Declaration of conformity

SCM Citra OY Asessorinkatu 3-7
20780 Kaarina, Finland
www.powertex-products.com

hereby declares that the POWERTEX product as described above is in compliance with EC Machinery Directive 2006/42/EC & DIN60005.

UK Declaration of conformity

SCM Citra OY Asessorinkatu 3-7
20780 Kaarina, Finland
www.powertex-products.com

hereby declares that the POWERTEX product as described above is in compliance with the Supply of Machinery (Safety) Regulations 2008 & DIN60005.



End of use/Disposal

PowerTex lifting slings shall always be sorted / scrapped as polyester scrap. Main material is polyester.

We will assist you with the disposal, if required.

Disclaimer

We reserve the right to modify product design, materials, specifications or instructions without prior notice and without obligation to others.

If the product is modified in any way, or if it is combined with a non-compatible product/component, we take no responsibility for the consequences in regard to the safety of the product.

CertMax+

The CertMax+ system is a unique leading edge certification management system which is ideal for managing a single asset or large equipment port- folio across multiple sites. Designed by the Lifting Solutions Group, to deliver optimum asset integrity, quality assurance and traceability, the system also improves safety and risk management levels.

**User Manuals**

You can always find the valid and updated User Manuals on the web. The manual is updated continuously and valid only in the latest version.

NB! The English version is the Original instruction.

The manual is available as a download under the following link:
www.powertex-products.com/manuals



POWERTEX