

Assembly / Handling for VKS-V, VKS-B, VKE-S shortening elements

General principles regarding the utilisation of lifting accessories and their components:

The falling of loads, caused by the failure and / or incorrect utilisation and handling of lifting equipment or its individual parts constitutes a direct risk to the life or health of the people who are present in the danger zone of lifting processes.

These operating instructions contain information with regard to the safe utilisation and handling of the lifting accessories and their components. Before using the lifting equipment, the assigned persons are to be briefed with regard to handling and utilisation by a qualified person.

The following principles apply:

- The Working Load Limit (WLL) (see label) of the lifting equipment must correspond to the load. The lifting equipment may not be used if the label is missing or is illegible.
- No danger areas (e.g. crushing points, cutting points, trapping or impact points) may occur that may hinder or endanger the person carrying out the slinging process and / or the transport.
- The base material and the constructive design of the load must be able to hold the applied forces without deformation.
- Stress that leads to a non-uniform load distribution, e.g. which is caused as a result of an off-centre introduction of force must be taken into account when selecting the lifting accessories and their components.
- In the event that extreme stress or strong dynamic strain (shock influences) may occur, this must be taken into account when selecting the lifting equipment and the Working Load Limit (WLL).
- The lifting equipment may not be used for the transportation of persons. No persons are ever permitted to remain present in the danger area of a suspended load.
- The lifting equipment may not come into contact with acids and other aggressive agents. Attention must also be paid to the fact that acid fumes may occur in certain production processes.
- Never make unauthorised amendments to the lifting equipment (e.g. grinding, welding, bending, and attachment of parts)!
- The lifting equipment may not be exposed to any forbidden manipulation of temperature.
- Only original spare parts may be used.
- The relevant additional regulations must be observed when transporting hazardous substances.
- Lifting accessories and their components must be stored in such a manner that they are protected against being damaged and do not cause any danger.
- If damaged, the lifting equipment must be immediately taken out of circulation and has to undergo maintenance work.
- When ready to be discarded, lifting accessories and their components are to be correctly disposed of. Attention: Any substances present that are hazardous to the environment (e.g. greases and oils) are to be disposed of separately.

Inspection and maintenance:

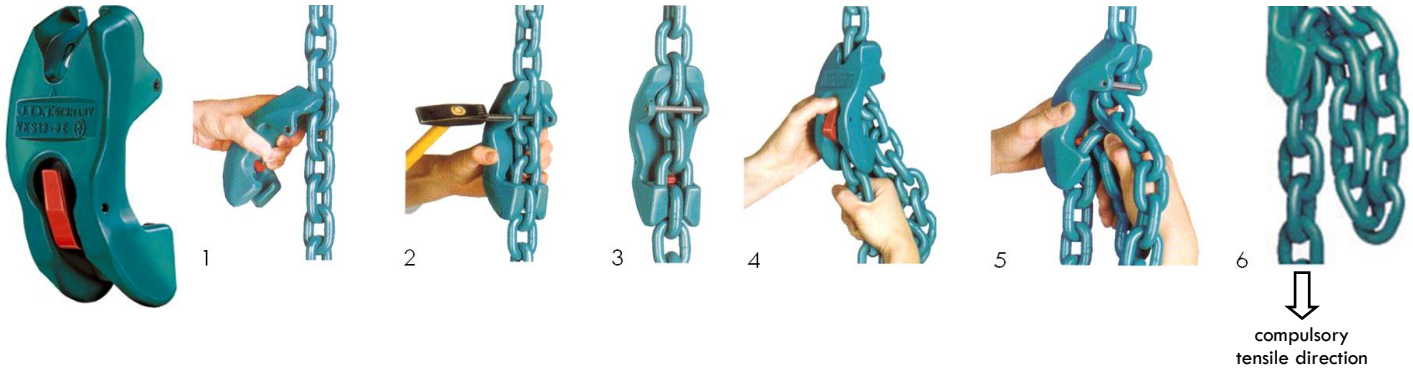
On a regular basis before being used, lifting equipment is to be closely inspected with regard to correct utilisation and faultless condition (e.g. screw fit, absence of strong corrosion and deformation, etc.), for example by the person carrying out the slinging process. Defective lifting equipment may not be used. It has to be tested at least once a year by a qualified person whilst taking the relevant standards and trade association regulations (e.g. BGR 500) into account. Every three years lifting equipment must be tested by a qualified person using a proper testing device in order to check that the product is free of cracks. The user must observe the results of the risk assessment in accordance with the occupational safety directives. The re-testing period is shortened in the event that the products are exposed to critical operating conditions. Inspection records are to be kept.

The testing coefficient (EC-Machinery Directive 2006/42/EC point 4.4.1) is defined according to the respective standards and corresponds to 2.5.

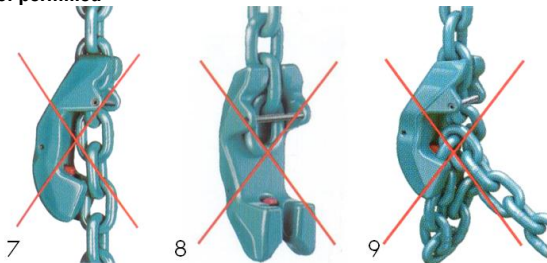
Attention: In the event of violation, the operating permission will become void.

Assembly / Handling:

Assembly of the VKS-V



not permitted



- Latch the VKS-V into the chain using the upper slot of the fork (Fig. 1).
- Drive the supplied locking pin through the drill holes. This pin must align with the drill holes on both sides. Mount the lower chain link into the chain pocket (Fig. 2-3).
- The latch now prevents the chain from unintentionally hanging out of the VKS-V.
- In order to shorten, press the latch (Fig. 5), remove the chain from the pocket, shorten to the desired length and then place the respective chain link into the pocket.
- The VKS-V may only be loaded in the compulsory tensile direction (Fig. 6) and may not be supported on edges.
- In order to hang out the chain, press the latch and remove the chain from the claw pocket by pulling the chain upwards.
- The chain must always be hung in the lower chain pocket and be secured by the latch (as in Fig. 3, not as in Fig. 7).
- This type of utilisation is not permitted (Fig. 8).
- **Never load the chain over the upper end of the pocket (Fig. 9). The pocket can be bent open. The chain link will be stressed to the point of bending. This can lead to personal injury and damage to property.**

Assembly of VKS-B

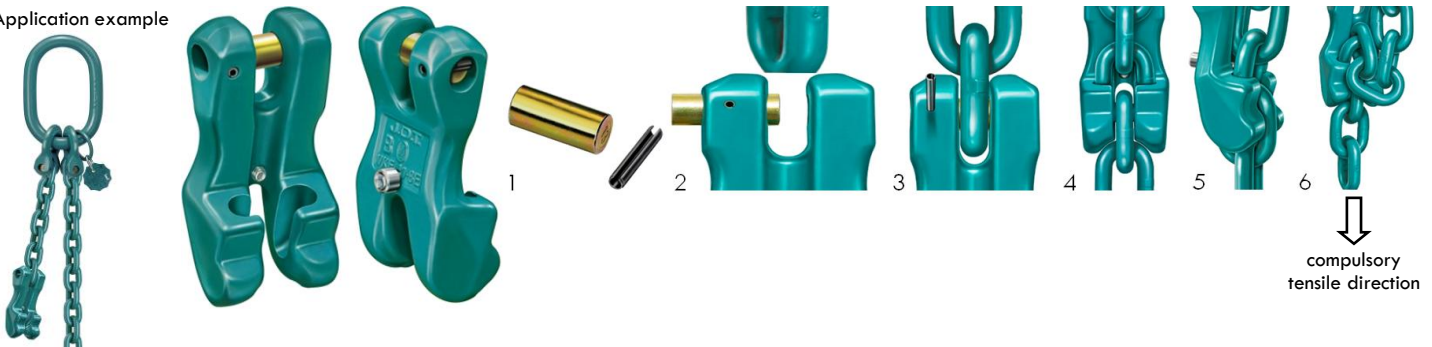
Application example



- Place the supplied bolt into the drill hole accordingly (Fig. 1-4).
- Insert the last chain link into the fork head and completely push the bolt through the chain link as far as it will go (Fig. 5).
- Secure the bolt with the supplied clamping pin (Fig. 6). Push in the locking pin in a flush manner.
- The shortening is carried out in the same manner as shown for VKS-V (see VKS-V Fig. 4-5).
- The VKS-B may only be loaded in the compulsory tensile direction (Fig. 7) and may not be supported on edges.
- **Never** load the chain over the upper end of the pocket (see VKS-V Fig. 9). The pocket can be bent open. The chain link will be stressed to the point of bending. **This can lead to personal injury and damage to property.**

Assembly of the VKE-S

Application example



The use of the VKE-S corresponds to the VKS-B shortening clutch

- Place the supplied bolt into the drill hole accordingly (Fig. 1-3).
- Insert the last chain link into the fork head and completely push the bolt through the chain link as far as it will go.
- Secure the bolt with the supplied clamping pin (Fig. 5). Push in the clamping pin in a flush manner.
- The shortening is carried out in the same manner as when dealing with the VKS-V (see VKS-V Fig. 4-5). However the chain is not secured via the latch in the claw pocket, but rather with the help of the rear-sided screw; tighten by hand (Fig. 5).
- The VKE-S may only be loaded in the compulsory tensile direction (Fig. 6) and may not be supported on edges.
- **Never** load the chain over the upper end of the pocket (see VKS-V Fig. 9). The pocket can be bent open. The chain link will be stressed to the point of bending. **This can lead to personal injury and damage to property.**

The removal of the chain from the claw pocket is carried out after loosening the screw.

Working Load Limit:

The following applies for all shortening clutches: The lifting capacity is tailored to the respective nominal size of the sling chain.

Round steel chains for lifting purposes

ENORM – Grade 10 / PAS 1061



Bezeichnung code	Nenngröße Nominal size [mm]	Tragfähigkeit WLL [t]
ENORM K	6 x 18	1,4
ENORM K	8 x 24	2,5
ENORM K	10 x 30	4
ENORM K	13 x 39	6,7
ENORM K	16 x 48	10
ENORM K	18 x 54	12,5
ENORM K	22 x 66	19



Translation of the original assembly instructions
 In case of doubts or misunderstanding, the German version of the document is decisive.