

Cable Holder Type 80 SV III

- English Translation of the German Original Instruction Manual ("Original-Betriebsanleitung") -

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Attention:

All data displayed on the cable holder must be clearly visible and legible at all times (i.e. the data is not permitted to be covered or over-stickered, and it must not exhibit any signs of abrasion etc.). If this requirement is not met, the approval under the German Accident Prevention Regulation "DGUV Vorschrift 17 (BGV C1)" will be forfeited and use of the cable holder will no longer be permitted in this case.

In order to prevent any risk of confusion and to help clearly identify the applicable safe working load (working load limit) in each case of use, cable grippers with coupling threads must only be connected to coupling parts that are not marked with a safe working load label of their own.

Only the safe working loads displayed on the cable gripper and indicated in the table on page 2 of this Instruction Manual apply!

It is the user's sole responsibility to ensure that the safe working load of any coupling parts used is NEVER lower than that of the cable gripper and that all relevant regulations are adhered to at all times.

Reutlinger cable holders (in German "DSH") of the Type 80 SV III series are grip gliders for wire ropes that are available in a variety of designs. The cable holders are conceived for the suspension of different, clearly defined working loads on steel cables (wire ropes); the table on page 2 provides details about maximum permissible loads (safe working loads/working load limits) and approved wire ropes. Safe use of this suspension system requires sufficiently firm attachment/anchorage to a fastening point (ceiling, wall, floor, object) – the responsibility lies with the user. Attachment/anchorage must always be performed by a qualified professional installer.

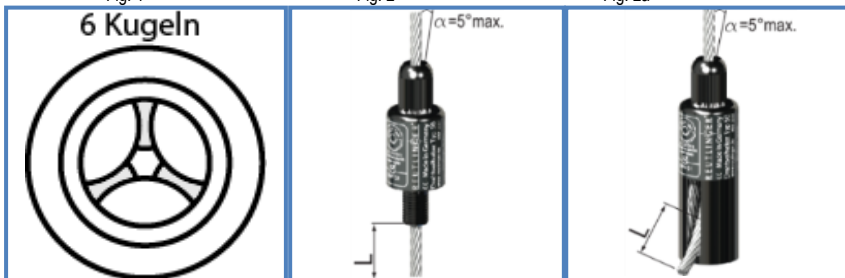
Safety Advice / Precautionary Statements

- Reutlinger cable holders are only approved for indoor use at temperatures ranging between -20°C and +50°C.
- Use of the cable holders in swimming facilities (with a chloric atmosphere) or in any other corrosion-promoting environments (sea water areas or locations with high salt concentration in the atmosphere) is not permitted.
- Any dynamic forces acting, or likely to act, on the cable holder during assembly and disassembly must be taken into account for determining the actual maximum load on a case-by-case basis. The indicated safe working load (working load limit/WLL) is the maximum load that must NEVER be exceeded! The cable holders are not approved for performing dynamic/scenic movements driven by stage machinery installations.
- The casing of the cable holder must be impossible to open and must never be opened. Permanently fixed original parts must not be removed.
- Before the cable holder is used, its nozzle (plunger) (i.e. the threaded nose protruding from the cable holder's top end must be able to be pushed inside with ease against the noticeable pressure of the spring, and it should move out again by itself and return to its original position outside the cable holder when it is released.
- The pass-through channel of the plunger must be free of foreign particles so that proper functioning of the cable holder is ensured.
- When looking through the plunger, part of the circumference of six balls protruding into the plunger's pass-through channel must be visible (cf. Fig. 1). The lighter, central gap formed by the configuration of the six balls is to form a hexagon in the pass-through channel, similar to a star with six points. If the six balls are not visible in the cable holder as described above, the cable holder must not be used, and the Quality Management department ("Abt. Qualitätswesen") of Reutlinger GmbH should be contacted.
- The surface of the wire rope to be threaded into the cable holder must be properly closed (i.e. sealed by tinning, welding, shrink-sleeving, ...) so that an unravelling of the wire rope and thus injury to the user from projecting wires or strands is prevented. If the wire rope needs to be shortened, its ends must be once again permanently sealed after the trimming is complete.
- For safe operation and full load capacity (i.e. up to the working load limit) of the cable holder, the wire ropes must be entirely undamaged and free of dirt or other contamination.
- Wire ropes and wires must not be pulled over edges (e.g. in case of models with side cable exit)!
- The deflection angle of the wire rope from the vertical symmetry axis of the cable holder must not exceed $\alpha=5^\circ$ (cf. Fig. 2 & 2a).
- The plunger of the cable holder must under no circumstances be loaded (e.g. it must not be exposed to buckling or compressive stress etc.), and it must remain accessible at all times.
- The cable holder must be used in pairs as a minimum, i.e. the object to be suspended must be held by a minimum of two wire ropes in order to prevent rotation of the cable holder upon its own axis on the wire rope.
- If a cable holder has been loaded above the indicated safe working load (working load limit), it must not be used again!
- Wire ropes and cable holders must not be damaged!!
 - The "Critical Damage" category includes (but is not limited to):
Cracks, deformations and material loss such as may occur through impact, shock or severe friction/abrasion. Slight abrasion or deformation of the plunger may indicate presence of damage inside the cable holder caused by, for example, an impact on the plunger (e.g. by falling onto a hard surface).
 - If you have any doubts or queries as to whether a particular Reutlinger cable holder exhibits uncritical traces of use or potentially critical damage, please contact the Quality Management department ("Abt. Qualitätswesen") of Reutlinger GmbH to be on the safe side.
- Do NOT use any tools when mounting the cable holder onto its respective mating counterpart or when tightening the lock nut (safety nut)!

Fig. 1

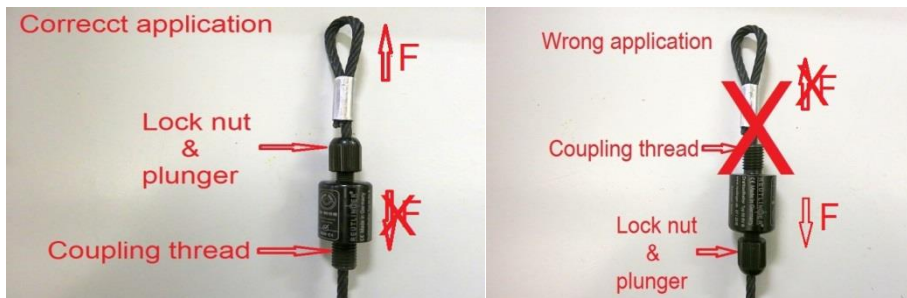
Fig. 2

Fig. 2a



How to safely connect the cable holder to the wire rope:

- First, loosen the lock nut mounted on the threaded nose protruding from the cable holder's top end (plunger) until the end of the thread is reached. Next, insert one end of the wire rope into the cable holder against the slight resistance of the spring-loaded plunger.




- The cable holder can now be slid along the wire rope. As soon as it is pulled in the opposite direction or loaded, the gripping mechanism will be automatically activated. If the gripping mechanism is not triggered as it should, please check whether the wire rope selected for use with the cable holder is appropriate (for example, whether it has a diameter of at least 4.0mm), or whether the cable holder is possibly defective (in order to check the cable holder prior to use, please refer to the Safety Advice/Precautionary Statements section, steps 1 -7). In case of a suspected malfunction or defect, the cable holder concerned must not be used, and the Quality Management Department ("Abt. Qualitätswesen") of Reutlinger GmbH Quality should be contacted immediately.
- Care should be taken that the wire rope, prior to the gripping action being triggered, is properly channelled through the cable holder so that it protrudes under load by at least $L = 8.0\text{cm}$ (3.2 inch) from the coupling thread, coupling part or side exit (ZW) of the cable holder (cf. Fig. 2 & 2a), depending on the model used. In addition, the angle $\alpha = 5^\circ$ max. between the wire rope and the vertical symmetry axis of the cable holder must not be exceeded at the point of exit of the cable from the plunger. If the angle is larger, the lateral pressure exerted by the wire rope on the plunger can cause damage to the plunger or malfunction of the cable holder, thus possibly leading to an accidental release of the gripping mechanism.
- After the cable holder has been adjusted to the required position on the wire rope by a gentle pulling action of the hand (in load direction), the holder will begin to grip.
- Once the cable holder has properly gripped the wire rope, tighten the lock nut by hand (without the use of tools!) until it comes to closely rest again against the top end of the cable holder. The load can now be attached to the cable holder; the gripping force of the cable holder increases in proportion to the work load. Care should be taken to ensure that load attachment to the tensioned wire rope is performed slowly and gradually.
- After proper attachment of the work load, retighten the lock nut further by hand (again without the use of tools!) until it makes full-surface contact with the cable holder.
- Pulse loading (shock loads) may cause the safe working load (working load limit) to be temporarily exceeded and may thus lead to damage of the wire rope and the cable holder. If any such pulse loading (shock load) has occurred, the load must be removed, and the wire rope as well as the cable holder should be checked for damage immediately.

If the cable holder or the load, respectively, is to be relocated on the wire rope, please proceed in just the reverse order:


- Loosen the lock nut, remove the suspended load or secure it expertly to the cable holder to prevent accidental dropping of the load.
- Use your hand to press on the lock nut, thus pushing the plunger into the cable holder, and keep it in that position. The cable holder is now unlocked, which means that the gripping pressure has been released.
- You can now slide the cable holder to the selected position on the wire rope.
- Release the lock nut once again; while you do so, the plunger should move out from the cable holder and return by itself to its original position outside the cable holder.
- For re-applying the load, please proceed once again as described from step 4 of the "How to safely connect the cable holder to the wire rope" section.

Reutlinger cable holders Type 80 SV III are DGUV Vorschrift 17 (BGV C1) and TÜV-GS approved.

In the area of German Accident Prevention Regulation "DGUV Vorschrift 17 (BGV C1)", the following safe working loads (working load limits) apply (safety factor = 10):

 <p>Approved wire ropes</p>	<p>Galvanised steel wire rope – similar to DIN EN 12385-4:2008, 6x7-FC / 6x19M-FC [fibre core], rope grade 1770 or 1960 6x7-WSC / 6x19M-WSC [steel core], rope grade 1770 or 1960 6x37+1 FC [Fibre core] rope grade 1770 or 1960</p>
<p>ø 6,0mm</p>	<p>135 Kg</p>
<p>ø 6,35mm</p>	<p>150 Kg</p>
<p>ø 8,0mm</p>	<p>240 Kg</p>

Outside the area of German Accident Prevention Regulation "DGUV Vorschrift 17 (BGV C1)", the following safe working loads (working load limits) apply (safety factor = 5):

 <p>Approved wire ropes</p>	<p>Galvanised steel wire rope – similar to DIN EN 12385-4:2008, 6x7-FC / 6x19M-FC [fibre core], rope grade 1770 or 1960 6x7-WSC / 6x19M-WSC [steel core], rope grade 1770 or 1960 6x37+1 FC [Fibre core] rope grade 1770 or 1960 Stainless steel wire rope – similar to DIN EN 12385-4:2008; 6x19-WSC [steel core], rope grade 1570</p>
<p>ø 6,0mm</p>	<p>270 Kg</p>
<p>ø 6,35mm</p>	<p>300 Kg</p>
<p>ø 8,0mm</p>	<p>480 Kg</p>

Reutlinger GmbH declares under its sole responsibility that the products covered by this English Translation of the German Original User Manual ("Original-Betriebsanleitung") are in compliance with EC Machinery Directive (2006/42/EC) and that the following standards have been applied:
DIN EN 13411 Parts 5 & 7.

This Instruction Manual applies to Reutlinger cable holders Type 80 SV III with their original coupling parts (e.g. Ring, Fork), side exit designs as well as surfaces (e.g. galvanised, nickel-plated, lacquer-coated finish).

Important: Please keep this Instruction Manual within easy reach for future reference.

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