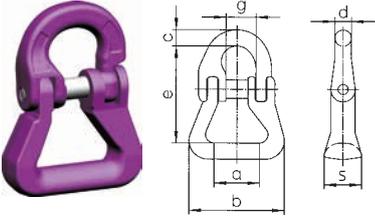


Original operating manual for Webbing Coupling Link RSK/S

Webbing Coupling Link RSK/S												
	Chain		Code	Dimensions							Weight	Working Load Limit
	mm	inch		a	e	c	d	b	s	g		
	mm	inch		mm							kg	kg
	8	5/16	RSK/S 8	29	66	12	10	68	18	18	0.30	2,500
	10	3/8	RSK/S 10	40	81	15	13	82	21	23	0.55	4,000
	13	1/2	RSK/S 13	44	104	20	17	101	28	28	1.20	6,700
	16	5/8	RSK/S 16	47	113	21	21	110	40	33	2.00	10,000
	22	7/8	RSK/S 22	110	190	34	25	215	58	51	6.50	19,000

Link for webbing slings mounted in one V/S-half. Reduced risk of damage due to wide surface.

Static test coefficient = 2.5; Safety factor = 4

These Webbing Coupling Links RSK/S are designed for the assembly of lifting slings and after reading the operating manual as well as the current national norms, for lifting and transporting purposes. Webbing Coupling Links RSK/S serve as attachment of textile lifting means when assembling lifting systems. They are provided with 1 RSK/S half and 1 V/S half. This product meets the requirements of the EU Machinery Directive 2006/42/EC and is only to be used when taking into consideration the declaration of incorporation and after reading and understanding the operating manual. The operating manual must always be available to the user until the Webbing Coupling Links RSK/S are discarded. It is updated continuously and is only valid in its latest version, which can be downloaded from the following link www.kwb-ketten.at.

Conditions of use

Use purposes: Webbing Coupling Links RSK/S serve as a linking element of chain sling components for welded and connecting link systems, or of KWB Star Alloy chains of the same nominal size with round slings and webbing slings.

Load: the load must only act in the longitudinal direction and on the center of the radius on the bow with a maximum working load limit described in the table above. Webbing Coupling Links RSK/S must be completely aligned in the load direction. If 2 parts are mounted on one half of the connecting link, only one of the parts shall be loaded during the lifting process. This part must be free to move to the center of the radius on the bow when loaded.

Admissible operating temperature: -40 °C to 200 °C.

Impacts: the load must be applied without any impact or shock loading.

- Webbing Coupling Links RSK/S must only be used by competent personnel
- Webbing Coupling Links RSK/S must be checked before each use for visible signs of damage

Restrictions of use

Under certain conditions, the use of Webbing Coupling Links RSK/S is restricted (see table below). The table below describes certain loads with their corresponding reduction factors. Safe working load values are calculated by multiplying the working load limit with the reduction factor defined in the table. If more restrictions of use are applicable during a lifting process, all corresponding reduction factors must be taken into account.

Reduction factors			
Temperature*	-40 °C to 200 °C	above 200 °C to 300 °C	above 300 °C to 380 °C
Reduction factor	1	0.9	0.75
Impact Load	Slight impacts created, for example, when accelerating during the lifting or lowering movement	Medium impacts created, for example, when the chain is loaded but it slips while adjusting to the shape of the load	Strong impacts created, for example, when the load falls onto an unloaded chain
Reduction factor	1	0.7	Impermissible

* The use at temperatures below -40 °C and above 380 °C is forbidden!

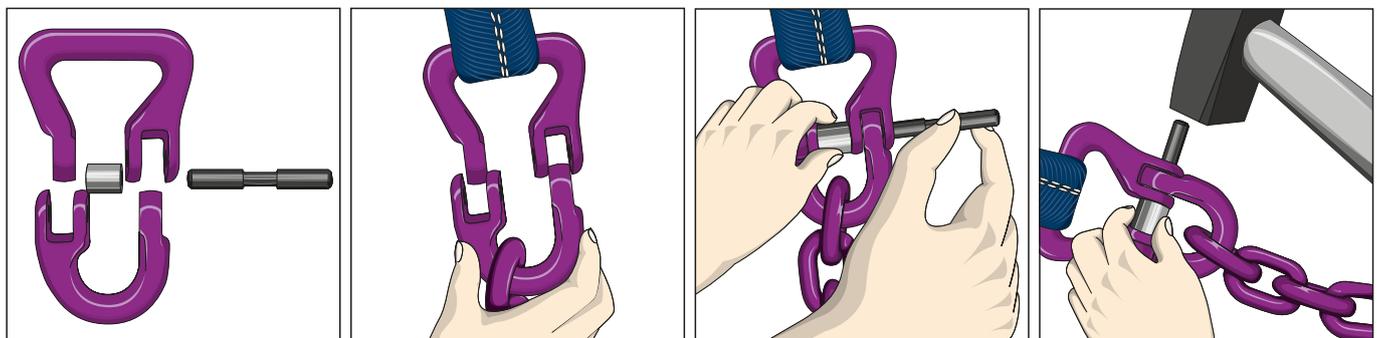
All instructions given in this operating manual assume the absence of extremely dangerous conditions. Such extremely dangerous conditions include offshore activities, lifting of people and potentially dangerous loads, such as liquid metals or nuclear material. In these cases, the admissibility and extent of the risks are to be assessed by KWB.

Reasonably foreseeable misuse

Webbing Coupling Links RSK/S are not designed to be used with food, cosmetics or pharmaceutical products, and must not be subjected to severe corrosive influences (e.g. acids, sewage...). They must not be used in explosion-protected areas or exposed to the fumes released by acids or chemicals. They also must not be used under other circumstances as the one described in Conditions of use and Restrictions of use – e.g. transverse, flexural loading or tilting. A maximum of two chains or one chain and one component can be assembled on a connecting link half. Only one chain or one component can be loaded or used for lifting at any time. If the wrong parts are assembled, there may be not enough room on the connecting link half and the parts could interfere with each other, resulting in the loaded chain or component not being in the center of the radius of the connecting link, which would create a side load. If more than one textile sling is attached to the RSK/S half, the round sling connecting link will be loaded incorrectly. Do not apply any surface coating procedure with damaging effects on the materials (e.g. hot galvanizing or electrogalvanizing) and do not subject them to heat, welding or drilling processes.

Assembly instructions

The assembly process may only be executed by a qualified person. Round slings and webbing slings must be attached to the RSK/S half; KWB Star Alloy chains, master links/sub-assemblies and hooks are to be mounted on the V/S half. More than one, but a maximum of two components, can be assembled on a connecting link half as long as there is sufficient space for each component to move freely to the center of the radius on the connecting link (highest or lowest point on the bow, respectively) when loaded.



After the assembly process, the round sling connecting link itself must also have sufficient mobility in order to be aligned in the load direction. The assignment of the right chain dimension is determined by the product code (e.g. V/S 13 or RSK/S 13, respectively) and the grade (10), with which the parts are also marked. For example, V/S 13 must be used with Star Alloy 13 mm chains and their accessories. 13 indicates the diameter of the material which the chains are made of, 10 points out the grade. Round slings or webbing slings must be chosen in accordance with the WLL. Only one textile mean may be connected to the RSK/S half. The webbing sling or round sling must be well seated on the whole width of the horizontal supporting surface – otherwise tilting will occur. Webbing Coupling Links RSK/S are only to be assembled with the original accessories

provided by KWB. It is vital to pay attention to the right working load limit marking of the whole system (WLL on identification tag). The weakest part will determine the working load limit. The lifting accessory into which the webbing coupling link is to be incorporated must be declared in conformity with the provisions of the Directive 2006/42/EC. Only non-damaged parts must be assembled. Defective Webbing Coupling Links RSK/S must not be assembled and used Webbing Coupling Links RSK/S must be inspected before the assembly process as described below under the section Maintenance, Inspections and Repairs.

Replacement part

BG-V/S Bolts and Safety Bush – the same replacement part as for V/S Connecting Link.

Safety precautions to be taken by the user

Safety glasses must be worn during the whole assembly process and gloves must always be worn when using webbing coupling links. When conditions with restrictions of use take place, working load limit values must be reduced by the above reduction factors in order to assure the required security level.

Residual risks

Overloading because of exceeding the working load limit or not reducing the working load limit when influences under severe conditions such as temperature, asymmetry, edge load or impact occur, can lead to failure on the webbing coupling link. Other factors are unsatisfactory adjustment, transgression of the permitted angle of inclination, high vibrations with high load, transverse loading, and the use of uninspected parts or no original accessories. In such cases, the load could fall causing injuries or fatalities among the workers who operate and work near the lifting equipment.

How to act in case of accidents or damages

After deformation of individual parts of the webbing coupling link because of overloading or other extraordinary events, take the lifting assembly out of service for inspection or repair by a qualified person. If one webbing coupling link is not aligned in the load direction, under no circumstances should force be used in order to avoid damages. In this case, remove the load and eliminate the fault by means of hand force.

Maintenance, Inspections and Repairs

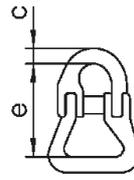
Maintenance: Webbing Coupling Links RSK/S shall be cleaned regularly, dried when in contact with wet atmospheres and protected from corrosion, e.g. lightly oiled.

Inspections: Webbing Coupling Links RSK/S including their bolts and safety bushes need to be inspected in a clean condition – they must not contain oil, dirt or rust. Painting is only permissible if an evaluation of the webbing coupling link condition is possible. When cleaning, do not subject webbing coupling links to processes which cause material embrittlement (e.g. pickling), overheating (e.g. flame cleaning), material abrasion (e.g. sand blasting), etc. Surface cracks or other defects must not be covered. Webbing Coupling Links RSK/S must be checked before each use for visible signs of damage. Once a year an inspection of the webbing coupling link – including its bolts – must be carried out by a competent person. However, this period must be shortened in view of the conditions of use – e.g. because of frequent use with maximum load capacity or under conditions with restrictions of use, wear or corrosion. It is recommended to subject Webbing Coupling Links RSK/S every two years to a crack test. There are different ways of crack testing: subjecting the webbing coupling link to a load test with 2 times the working load limit, followed by a visual inspection, a magnetic crack test or a dye-penetration method.

Withdrawal:

- Broken parts, deformation, notches, cracks of all types
- Signs of heat (e.g. discoloration or coating-burn off)
- In the case of doubts about the safety and correct functioning of the webbing coupling links
- Unrecognizable identification marking
- If wear or excessive corrosion occurs and the tolerable change of measurement is transgressed (see following table)
- Bolts that are not completely assembled or secured by the bush

Measure	Maximal permitted change
Halbs must move freely	Shall be provided
Diameter bolts	-10 %
e	+5 %
c	-10 %



Repair:

Webbing Coupling Links RSK/S are only to be repaired by a qualified person. Damaged accessories can be replaced by new, original replacement parts. Welding, heat treatments, as well as the straightening of bent webbing coupling links are not permitted. Inspections and repairs have to be documented and the corresponding reports have to be retained during the service life of the Webbing Coupling Link RSK/S.

Storage

KWB Star Alloy Webbing Coupling Links RSK/S shall be stored cleaned, dried, protected from corrosion, e.g. lightly oiled. While stored, they must not be exposed to corrosive, mechanical or thermal influences.

Declaration of incorporation

In accordance with the requirements established in Annex II, part B, of the EU Machinery Directive 2006/42/EC for components in lifting accessories:

This is to inform you that the product mentioned in this original operating manual is designed to be incorporated in lifting accessories complying with all essential requirements of the EU Machinery Directive 2006/42/EC. This product must not be put into service until the final lifting accessory into which it is to be incorporated has been declared in conformity with the provisions of the Directive 2006/42/EC. Moreover, it is a precondition that this operating manual has been read and understood. This declaration has no legal effect if any changes to the product are introduced without KWB's approval.

Following essential safety and health requirements of Annex I of the Directive are applied and fulfilled:
1.1.3, 1.3.4, 1.5.4, 4.1.2.3, 4.1.2.5, 4.3, 4.4.1.

Additionally, we declare that the relevant technical documentation is compiled in accordance with part B of Annex VII and will be transmitted electronically due to a well-founded request by the national competent authority.

The person authorised to compile the technical documentation:
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Klagenfurt, 2011-09-01

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