> ICE Connecting link-IVS <

EN

Safety instruction

This safety instruction/declaration has to be kept on file for the whole lifetime of the product and forwarded with the product.

TRANSLATION OF THE ORIGINAL SAFETY INSTRUCTION

This safety instruction is valid in addition to the safety instructions for RUD Sling chains (ICE-Nr. 7995555)

ICE Connecting link-IVS

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RUD-Art.-Nr.: 7901507-EN V02 / 03.022

EG-Einbauerklärung

entsprechend der EG-Maschinenrichtlinie 2006/42/EG, Anhang II B und ihren Änderungen

Hersteller: **RUD Ketten**
Rieger & Dietz GmbH u. Co. KG
Friedensinsel
73432 Aalen

Hiermit erklären wir, dass die nachfolgend bezeichnete unvollständige Maschine den grundlegenden Anforderungen der Maschinenrichtlinie 2006/42/EG (Anhang 1) entspricht. Die nachfolgend bezeichnete unvollständige Maschine darf, in der gelieferten Ausführung erst dann in Betrieb genommen werden, wenn festgestellt wurde, dass die Maschine, in die diese unvollständige Maschine eingebaut werden soll, den Anforderungen der EG-Maschinenrichtlinie 2006/42/EG entspricht.

Produktbezeichnung: ICE-Verbindungsschloß
IVS

Folgende harmonisierten Normen wurden angewandt:

DIN EN 1677-1 : 2009-03	DIN EN ISO 12100 : 2011-03

Folgende nationalen Normen und technische Spezifikationen wurden außerdem angewandt:

DGUV-R 109-017 : 2020-12

Die speziellen Unterlagen zur unvollständigen Maschine nach Anhang VII Teil B wurden erstellt und werden auf begründetes Verlangen in geeigneter Form übermittelt.

Für die Zusammenstellung der Konformitätsdokumentation bevollmächtigte Person:
Michael Betzler, RUD Ketten, 73432 Aalen

Aalen, den 01.03.2022 Hermann Kolb, Bereichsleitung MA

Name, Funktion und Unterschrift Verantwortlicher

EC-Mounting declaration

According to the EC-Machinery Directive 2006/42/EC, annex II B and amendments

Manufacturer: **RUD Ketten**
Rieger & Dietz GmbH u. Co. KG
Friedensinsel
73432 Aalen

We hereby declare that the following incomplete machines correspond to the basic requirements of the Machinery Directive 2006/42/EC (annex 1). The following incomplete machine, in the delivered machine, may only be put into operation when the machine in which the incomplete machine shall be assembled, has been tested according to the requirements of the EC-Machinery Directive 2006/42/EC.

Product name: ICE-Chain coupling
IVS

The following harmonized norms were applied:

DIN EN 1677-1 : 2009-03	DIN EN ISO 12100 : 2011-03

The following national norms and technical specifications were applied:

DGUV-R 109-017 : 2020-12

The special documents about the incomplete machine according to annex VII part B have been created and can be handed over in a suitable form on request.

Authorized person for the configuration of the declaration documents:
Michael Betzler, RUD Ketten, 73432 Aalen

Aalen, den 01.03.2022 Hermann Kolb, Bereichsleitung MA

Name, function and signature of the responsible person

Before initial usage of the ICE-Connecting link, please read carefully the safety instructions. Make sure that you understand all subjected matters. Nonobservance can lead to serious personal injuries and material damage and eliminates warranty.

1 Safety instructions

ATTENTION
Wrong assembled or damaged lifting and lashing means as well as improper use can lead to injuries of persons and damage of objects when load drops down. Please inspect all lifting and lashing means before each use.

- Remove all body parts (fingers, hands, arms, etc.) out of the hazard area (danger of crushing or squeezing) during the lifting process resp. for the transport of loads.
- ICE connecting links must be used only by authorised and trained people in adherence to BGR/DGUV regulations 109-017 and, outside Germany, when observing the relevant specific national regulations.
- In each half of the connecting link only one load bearing strand or a corresponding component must be attached.
- No technical alterations must be implemented on the ICE connecting links.
- No people may stay in the danger zone.
- Jerky lifting (strong impacts) should be prevented.
- Please be also aware of extreme circumstances or shock loads when selecting the used Connecting link or the components.
- Always ensure a stable position of the load when lifting. Swinging must be prevented.
- Damaged or worn ICE connecting links must never be utilised.

2 Intended use

ICE connecting links are designed to connect components with an eye to sling chains or wire rope fittings.

They must only be used in the hereby described operation purpose for lifting resp. for the transport of loads and as lashing component in combination with ICE lashing chains.

3 Assembly- and instruction manual

3.1 General information

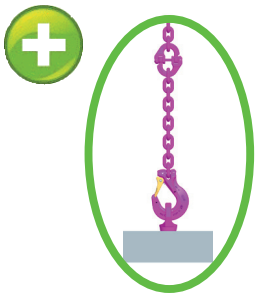
- Capability of temperature usage:
  When using the ICE-Connecting links at temperatures beyond 200°C the permissible WLL of the ICE-Connecting links has to be reduced as follows:
  - -60°C up to 200°C no reduction
  - 200°C up to 250°C minus 10 %
  - 250°C up to 300°C minus 40 %
  - Temperatures exceeding 300°C are prohibited!

  The temperature characteristics of the whole sling assembly depends in the properties of the sling components. F.e. polyester round slings, and other components with an eye.
- ICE-Connecting links must not be used with aggressive chemicals such as acids, alkaline solutions and their vapours.

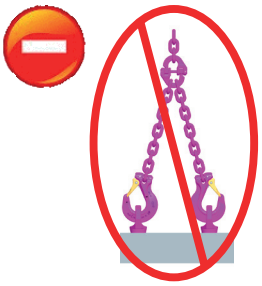
3.2 Hints for the assembly

Please observe the following during the assembly of the IVS: At the max. an eye with a diameter of a 2-leg-ICE Masterlink can be assembled.

ATTENTION
Overloading or wrong loading of the connecting link can lead to fall of load. Doing this serious injuries or property damage can occur.
*In each half of the connecting link **only one load bearing strand** or a corresponding component must be attached*



Pic 1:
Correct assembly and usage



Pic. 2:
Wrong assembly and usage.
Only one load bearing strand is permissible

HINT
Lifting points, shakles and plate clamps can be attached into the halves of the connecting link.

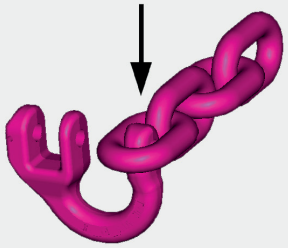
Basically essential:

- Observe in any case during assembly the correct dimensioning of the connecting parts.
- Permitted loading of the complete compound depends on the single component with the lowest working load limit.
- Only IVS-connecting link components with D1-12 stamping must be assembled
- Use only original RUD spare parts.
- Check finally the correct assembly (see chapter *4 Inspection / Repair / Disposal*).

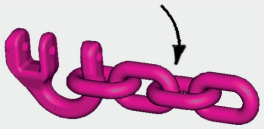
3.3 Sequence of assembly

In the following description the assembly of the connecting link will be described exemplarily with the example of a masterlink and an ICE chain.

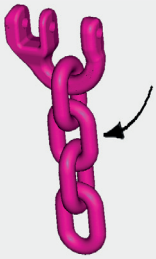
1. Install last chain link into the single bow eye (Pic. 3). In this case there is no additional connector necessary.



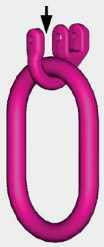
HINT
At the beginning of the bow rounding, chain link can be turned by 90° within the bow (Pic. 4).



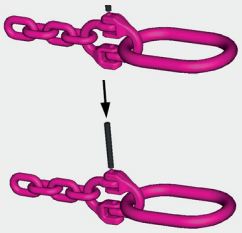
2. Position chain strand to the bottom of the bow part (Picture 5).



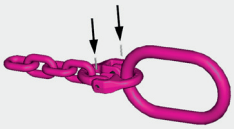
3. Put into the second bow part a desired connecting part, f.e. a masterlink (Picture 6).



4. Assemble both bow parts together in such a way that components are aligned (Picture 7).



5. Install pin into the bore of the eye (Picture 8). Both bow parts are now connected with each other.
6. Secure the assembled connecting link as follows (Picture 9):
   - Position the securing pin resp. the sleeve pin in such a way, that the slot faces the outside.
   - Knock sleeve pin in with a hammer.



7. Finally Check the correct assembly (see chapter *4 Inspection / Repair / Disposal*).

3.4 User instructions

- Check before each loading of the connecting link, that connecting pin is installed correct in the bow eye. Secure pin by hammering the sleeve pin in.
- Make sure that the load force happens in the straight leg without being twisted, fold-over or kinked.
- Always regularly observe the appearance of the whole lifting mean (e.g. by the person responsible für attachment) before using it (strong corrosion, wear, cracks on load-bearing parts, deformations). Refer to chapter *4 Inspection / Repair / Disposal*.

ATTENTION
Wrong assembled or damaged lifting and lashing means as well as improper use can lead to injuries of persons and damage of objects when load drops down. Please inspect all lifting and lashing means before each use.

- RUD components are designed according to DIN EN 818 and DIN EN 1677 for a dynamic load of 20,000 load cycles.
  - Keep in mind that several load cycles can occur with a lifting procedure.
  - Keep in mind that, due to the high dynamic stress with high numbers of load cycles, that there is a danger that the product will be damaged
  - The BG/DGUV recommends: For higher dynamic loading with a high number of load cycles (continuous operation), the working load stress must be reduced according to the driving mechanism group 1Bm (M3 in accordance with DIN EN 818-7). Use a lifting mean with a higher working load limit.
- Leave hazardous area when possible.
- Watch always attached loads.
- Read for all lifting means the RUD sling chain Safety instructions for ICE lifting means.

4 Inspection / Repair / Disposal

4.1 Hints for periodical inspections

The operator must determine and specify the nature and scope of the required tests as well as the periods of repeating tests by means of a risk assessment (see sections 4.2 and 4.3).

The continuing suitability of the lifting mean must be checked at least 1x year by an expert.

Depending on the usage conditions, f.e. frequent usage, increased wear or corrosion, it might be necessary to check in shorter periods than one year. The inspection has also to be carried out after accidents and special incidents. The operator must specify the test cycles.

4.2 Test criteria for the regular visual inspection by the user

- Completeness of the ICE Connecting link
- Complete readable size and manufacturer sign
- Deformations on load-bearing parts
- Mechanical damage like strong notches, especially in areas where tensile stress occurs

4.3 Additional test criteria for the competent person / repair worker

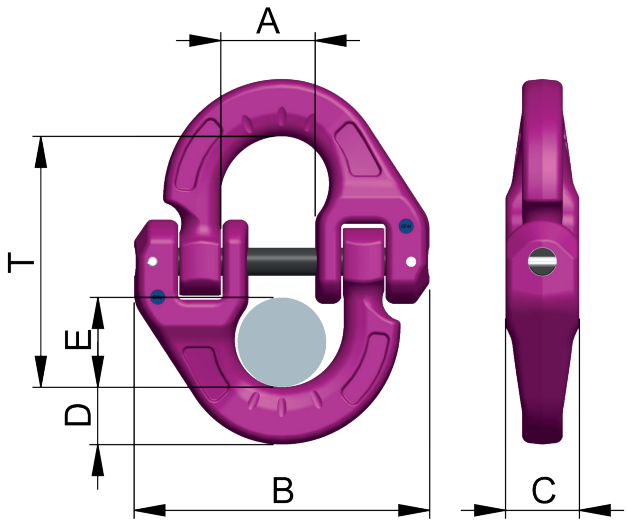
- Damaging and reduction of cross section caused by wear > 10 %, especially at connecting pins and at the eyes of the IVS bows.
- Strong corrosion
- further checks may be required, depending on the result of the risk assessment (e.g. testing for cracks in load-bearing parts).

4.4 Disposal

Dispose worn out components / attachments or packaging according to the local waste removal requirements.

5 Hints for repairing

- Repairings must only be carried out by competent persons, which can show that they have the therefor necessary skills.
- Only RUD original spare parts (spare part set consists of 1x bolt and 2 pins, see chart 1 and pic. 11) must be used and all repairing and overhauling operations must be documented in the chain card file (of the complete lifting mean) or use the AYE-D. NET-System.



Pic. 10: IVS 6 up to 16

Pic. 11: spare part set IVS

Type	WLL [t]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	T [mm]	weight [kg/pc.]	Ref.-no.	spare part set Ref.-No.
IVS 6	1.8	18	55	13	11	17	46	0.12	7901471	7903886
IVS 8	3.0	24	70	18	14	23	61	0.29	7901472	7903887
IVS 10	5.0	28	88	22	17	27	74	0.57	7901473	7903888
IVS 13	8.0	34	111	28	23	33	93	1.2	7901474	7903889
IVS 16	12.5	39	130	33	27	37	108	2.0	7901475	7903890

Chart 1: Dimensioning

Technical alterations subject to change