

>ICE Connecting link-IVS<



Safety instruction

This safety instruction/declaration has to be kept on file for the whole lifetime of 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 / 02.016



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:

<u>DIN EN 1677-1 : 2009-03</u>	<u>DIN EN ISO 12100 : 2011-03</u>
_____	_____
_____	_____
_____	_____

The following national norms and technical specifications were applied:

<u>BGR 500, KAP2.8 : 2008-04</u>	_____
_____	_____
_____	_____
_____	_____

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:
Reinhard Smetz, RUD Ketten, 73432 Aalen

Aalen, den 27.06.2014 Dr.-Ing. Arne Kriegsmann (Prokurist/QMB) *Arne Kriegsmann*
Name, function and signature of the responsible person



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:

<u>DIN EN 1677-1 : 2009-03</u>	<u>DIN EN ISO 12100 : 2011-03</u>
_____	_____
_____	_____
_____	_____

Folgende nationalen Normen und technische Spezifikationen wurden außerdem angewandt:

<u>BGR 500, KAP2.8 : 2008-04</u>	_____
_____	_____
_____	_____
_____	_____

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:
Reinhard Smetz, RUD Ketten, 73432 Aalen

Aalen, den 27.06.2014 Dr.-Ing. Arne Kriegsmann (Prokurist/QMB) *Arne Kriegsmann*
Name, Funktion und Unterschrift Verantwortlicher



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 points before each use.

- Please be also aware of extreme circumstances or shock loads when selecting the used Connecting link or the components.
- In each half of the connecting link only one load bearing strand or a corresponding component must be attached.
- ICE-Connecting links must only be used by instructed and competent persons considering BGR 500 (DGUV 100-500) and outside Germany noticing the country specific statutory regulations.

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° up to 250°C minus 10 %
 - 250° up to 300°C minus 40 %
 - Temperatures exceeding 300°C are prohibited!
- 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.



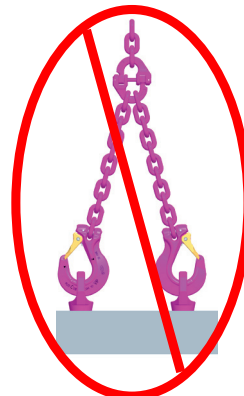
ATTENTION

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

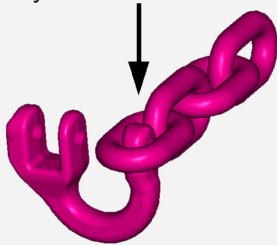
Basically essential:

- Only IVS-connecting link components with D1-12 stamping must be assembled
- Observe in any case during assembly the correct dimensioning of the connecting parts
- Use only original RUD spare parts.
- Check finally the correct assembly (see chapter 4 Inspection criteria).

3.3 Sequence of assembly

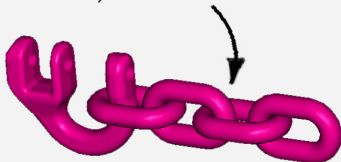
In the following description the assembly of the connecting link will be described exemplarily with the example of a masterlink and an ICE chain.

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

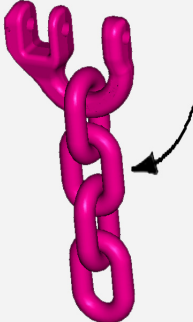


HINT

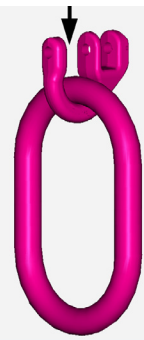
At the beginning of the bow rounding, chain link can be turned by 90° within the bow (Pic. 4)



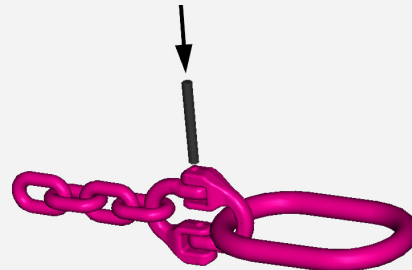
2. Position chain strand to the bottom of the bow part (Picture 5).



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



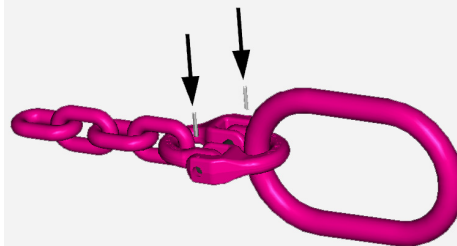
4. Assemble both bow parts together in such a way that components are aligned (Picture 7).



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 criteria).

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.
- Control frequently and before each operation the total lifting in regard of ongoing ability, strong corrosion, wear, deformation etc. (see chapter 4 Inspection criteria).



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 points before each use.

- Leave hazardous area when possible.
- Watch always attached loads.
- Read for all lifting means the RUD sling chain Safety instructions for ICE lifting means.

3.5 Hints for regular inspection

Check by a competent person in periods, which are determined by usage but at least 1x year, the continuous appropriateness of the lifting means (see chapter 4 Inspection criteria).

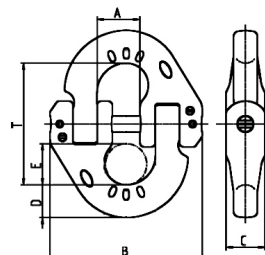
Depending on the working conditions, f.e. when often used, or if increased wear or corrosion occurs, inspections could be necessary in shorter periods than one year.

Denomination	WLL [kg]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	T [mm]	weight [kg/Stk.]	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

RUD components are acc. To DIN EN 818 and 1677 for a dynamical load of 20.000 cycles designed. At high dynamical loads with high number of load cycles the bearing stress must be reduced acc. to FEM Group 1Bm (M3 acc. To DIN EN 818-7).



Pic. 10: IVS 6 up to 16



Pic. 11: spare part-set IVS

4 Inspection criteria

Check and control the following points before each initial operation, in periodical periods after the assembly and after special incidents:

- Completeness of the ICE Connecting link
- Readable size and manufacturer sign
- Mechanical damage like strong notches, especially in areas where tensile stress occurs
- Damaging and reduction of cross section caused by wear > 10 %, especially at connecting pins and at the eyes of the IVS bows.
- Cracks or other damage

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 RUD-ID-System®.