

RUD

> Endless chains <



Safety instructions

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



RUD endless chains



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Simple inspection, administration and documentation of work equipment and components which must be inspected regularly.

EG-Konformitätserklärung

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

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

Hiermit erklären wir, dass die nachfolgend bezeichnete Maschine aufgrund ihrer Konzipierung und Bauart, sowie in der von uns in Verkehr gebrachten Ausführung, den grundlegenden Sicherheits- und Gesundheitsanforderungen der EG-Maschinenrichtlinie 2006/42/EG sowie den unten aufgeführten harmonisierten und nationalen Normen sowie technischen Spezifikationen entspricht.
 Bei einer nicht mit uns abgestimmten Änderung der Maschine verliert diese Erklärung ihre Gültigkeit.

Produktbezeichnung: Anschlagkettengehänge Gk12 ICE
ND 4-16 mm, verkürzbar und unverkürzbar

Folgende harmonisierten Normen wurden angewandt:

<u>DIN EN 1677-1 : 2009-03</u>	<u>DIN EN 1677-2 : 2008-06</u>
<u>DIN EN 1677-3 : 2008-06</u>	<u>DIN EN 1677-4 : 2009-03</u>
<u>DIN EN 818-1 : 2008-12</u>	<u>DIN EN 818-2 : 2008-12</u>
<u>DIN EN 818-4 : 2008-12</u>	<u>DIN EN 818-6 : 2008-12</u>
<u>DIN EN ISO 12100 : 2011-03</u>	

Folgende nationalen Normen und technische Spezifikationen wurden außerdem angewandt:

<u>DGUV-R 109-017 : 2020-12</u>	<u>DIN 15428 : 1978-08</u>
<u>DIN 15429 : 1978-07</u>	<u>DIN 5688-3 : 2007-04</u>
<u>DIN 5692 : 2011-04</u>	<u>PAS 1061 : 2006-04</u>

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

Aalen, den 19.11.2021 Hermann Kolb, Bereichsleitung MA *Hermann Kolb*
 Name, Funktion und Unterschrift Verantwortlicher

EG-Konformitätserklärung

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

Hersteller: **RUD Ketten Rieger & Dietz GmbH u. Co. KG**
 Friedensinsel
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Hiermit erklären wir, dass die nachfolgend bezeichnete Maschine aufgrund ihrer Konzipierung und Bauart, sowie in der von uns in Verkehr gebrachten Ausführung, den grundlegenden Sicherheits- und Gesundheitsanforderungen der EG-Maschinenrichtlinie 2006/42/EG sowie den unten aufgeführten harmonisierten und nationalen Normen sowie technischen Spezifikationen entspricht.
 Bei einer nicht mit uns abgestimmten Änderung der Maschine verliert diese Erklärung ihre Gültigkeit.

Produktbezeichnung: Anschlagkettengehänge Gk10 VIP
ND 4-28 mm, verkürzbar und unverkürzbar

Folgende harmonisierten Normen wurden angewandt:

<u>DIN EN 1677-1 : 2009-03</u>	<u>DIN EN 1677-2 : 2008-06</u>
<u>DIN EN 1677-3 : 2008-06</u>	<u>DIN EN 1677-4 : 2009-03</u>
<u>DIN EN 818-1 : 2008-12</u>	<u>DIN EN 818-2 : 2008-12</u>
<u>DIN EN 818-4 : 2008-12</u>	<u>DIN EN 818-6 : 2008-12</u>
<u>DIN EN ISO 12100 : 2011-03</u>	

Folgende nationalen Normen und technische Spezifikationen wurden außerdem angewandt:

<u>DGUV-R 109-017 : 2020-12</u>	<u>DIN 15428 : 1978-08</u>
<u>DIN 15429 : 1978-07</u>	<u>DIN 5688-3 : 2007-04</u>
<u>DIN 5692 : 2011-04</u>	<u>DIN 685 : 1981-11</u>
<u>PAS 1061 : 2006-04</u>	

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

Aalen, den 19.11.2021 Hermann Kolb, Bereichsleitung MA *Hermann Kolb*
 Name, Funktion und Unterschrift Verantwortlicher



Before initial usage of the RUD endless chains, please read carefully the safety instructions. Make sure that you have understood all subjected matters.

Non-observance can lead to serious personal injuries and material damage and eliminates warranty.

This safety instruction is valid in addition to the user instructions for RUD Lifting chains (RUD Ref.-No. 7101649 and 7995555)

1 Safety instructions



ATTENTION

Wrong positioned or damaged Lifting means as well as improper use can lead to injuries of persons and damage at property, when load falls down.

Please check all Lifting means carefully before every usage.

- Remove all body parts (fingers, hands, arms, etc.) out of the hazard area (danger of crushing or squeezing) during the lifting process.
- RUD endless chains must only be used by instructed and competent persons considering DGUV 109-017, and outside Germany noticing the country specific statutory regulations.
- This type of lifting is not suitable for lifting loose bundles.
- No technical alterations must be implemented on the endless chains.
- No people may stay in the danger zone.
- Detention under a floating load is forbidden.
- Jerky lifting (strong impacts) should be prevented.
- Always ensure a stable position of the load when lifting. Swinging must be prevented.
- Take extreme circumstances or shock loads into account when selecting the RUD endless chains and components to be used.
- Damaged or worn endless chains must never be utilised.

2 Intended use

RUD endless chains are intended for use as basket slings (suspended). Here, one or two chain strands are passed through or under a load and hooked directly into the shortening component.

This type of lifting is not suitable for lifting loose bundles.

If the external shape of the load permits, a single-strand sling chain can also be used. The prerequisite here is that the sling chain is passed through the load above the center of gravity of the load.

Then observe the permissible loads deviating from the identification tag of the single strand chain.

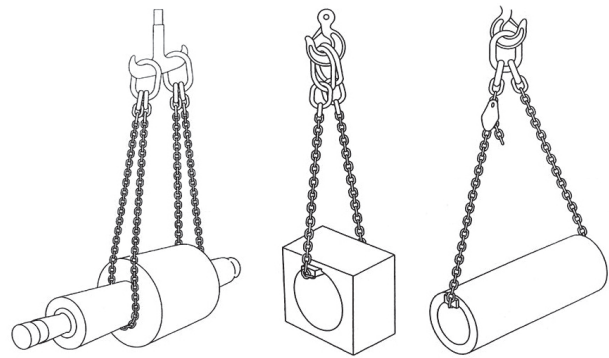


Abb. 1: Example for basket chain slings

3 Assembly- and instruction manual

3.1 General information

- Capability of temperature usage:
If RUD endless chains are used at temperatures above 200°C (e.g. in hot works in steel production, forges, foundries, etc.), the load capacity must be reduced in accordance with the load capacity chart (Table 1 to Table 3).
- RUD endless chains must not be used with aggressive chemicals such as acids, alkaline solutions and their vapours.

3.2 Hints for the assembly

RUD chains of the correct dimensions can be mounted in the corresponding RUD clevis without confusion. The following applies in principle:

- Mixing components from different manufacturers is not permitted.
- Assemble slotted spring pin for the securing of the G-pin in the clevis in such a way that the slot can be seen resp. faces to the outside
- Use slotted pin only once!
- Use only original RUD spare parts.
- Check finally the correct assembly (see chapter 4 Inspection / Repair / Disposal).

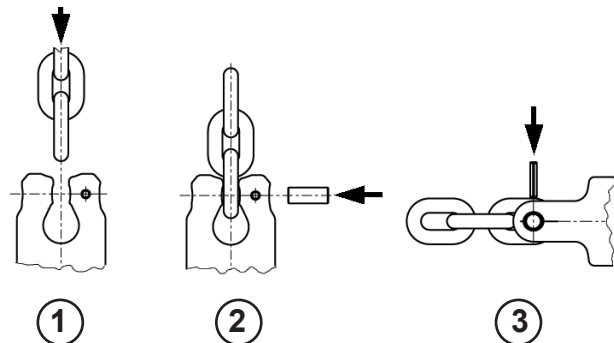


Abb. 2: Assembly sequence

3.3 User instruction

- Check frequently and before each initial operation the whole lifting mean in regard of linger ability as a lifting mean, regarding corrosion, wear, deformation etc. (see user instructions for RUD Lifting chains Chapter 3).



ATTENTION

Wrong positioned or damaged Lifting means as well as improper use can lead to injuries of persons and damage at property, when load falls down.

Please check all Lifting means carefully before every usage.

- 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.
- Pay particular attention to correct hooking into the shortening components.
- If necessary, use a suitable edge protector to prevent damage to the load and/or the chain.
- Leave direct danger zone as far as possible.
- Watch always your hinged loads.
- Avoid impulsive and tiltful loading.
- Please observe for the whole lifting mean the RUD sling chain safety instruction.

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.

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.

Observe and check the points listed in the operating instructions for *RUD Lifting chains Chapter 3* before each usage, at regular intervals, after installation, after cases of damage and after special incidents.

The test cycles are to be determined by the operator.

4.2 Hints for repair

- Repair work must only be carried out by a competent person, which has obtained the necessary knowledge and skills.
- Only RUD original spare parts must be used and all repairing and overhauling operations must be documented in the chain card file (of the complete lifting mean).
- Spare Identification tag (Ref.-No. 7909698)
- Observe the instructions in chapter 4 of the Safety instructions for chain slings.

4.3 Disposal

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

WLL Overview ICE (Grade 120)




				
	singel		double	
	0-45°	45-60°	0-45°	45-60°
4	0.88	0.64	1.36	0.96
6	2.0	1.44	3.1	2.1
8	3.3	2.4	5.1	3.6
10	5.5	4.0	8.5	6.0
13	8.8	6.4	13.6	9.6
16	14.0	10.0	21.2	15
20% reduction for endless chains (sharp edges) is taken into account!				
When using ICE/Grade-120 Lifting means at temperatures beyond 200°C, the permissible WLL has to be reduced to the following percentages (WLL in % at chain temperature of):				
-60 up to +200°C		abouve 200 up to 250°C		abouve 250 up to 300°C
100 %		90 %		60 %

Table 1: WLL overview ICE (Grade 120)

WLL Overview VIP (Grade 100)




				
	singel		double	
	0-45°	45-60°	0-45°	45-60°
4	0.69	0.5	1.1	0.75
6	1.65	1.2	2.55	1.8
8	2.75	2	4.25	3
10	4.4	3.2	6.8	4.8
13	7.5	5.3	11.2	8
16	11	8	17	12
20	17.6	12.8	27.2	19.2
22	22	16	34	24
28	35.5	25	53	37.5
20% reduction for endless chains (sharp edges) is taken into account!				
When using VIP/Grade-100 Lifting means at temperatures beyond 200°C, the permissible WLL has to be reduced to the following percentages (WLL in % at chain temperature of):				
-40 up to +200°C		abouve 200 up to 300°C		abouve 300 up to 380°C
100 %		90 %		60 %

Table 2: WLL overview VIP (Grade 100)

WLL Overview Grade 80


	singel		double	
	0-45°	45-60°	0-45°	45-60°
6	1.2	0.9	1.9	1.3
8	2.2	1.6	3.4	2.4
10	3.5	2.5	5.3	3.8
13	5.8	4	9	6
16	8.8	6.4	13.6	9.6
20 % reduction for endless chains (sharp edges) is taken into account!				
When using Grade 80 Lifting means at temperatures beyond 200°C, the permissible WLL has to be reduced to the following percentages (WLL in % at chain temperature of):				
-40 up to +200°C		abouve 200 up to 300°C		abouve 300 up to 400°C
100 %		90 %		75 %

Table 3: WLL overview Grade 80