

Length adjustment >ICE-CURT-GAKO< >ICE-CURT-K-GAKO<



User instruction

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

Translation of the original user instruction

This user instruction is valid in addition to the user instructions for RUD-Lifting and RUD-Lashing chains (ICE-No. 7995555 or ICE-VSK-No. 7901203)



Length adjustment (with clevis connection) >ICE-CURT-GAKO<



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>ICE-CURT-K-GAKO<



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-CURT-GAKO/ICE-CURT-K-GAKO

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:

BGR 500, KAP2.8 : 2008-04

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 26.09.2016

Dr.-Ing. Arne Kriegsmann, (Prokurist/QMB)
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-CURT-GAKO/ICE-CURT-K-GAKO

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:

BGR 500, KAP2.8 : 2008-04

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 26.09.2016

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



Before use or assembly of ICE-CURT-GAKO / ICE-CURT-K-GAKO please read user instruction carefully. Make sure that you have understood all subject matters. Non-observance can lead to personal and material damage and eliminates warranty.

1 Safety instructions



ATTENTION

Wrong assembled or damaged tensioners can lead to injuries of persons and damage of items when loads fall down. Please inspect all lashing chains before each use.

- The securing disc at the ICE-CURT tensioning element includes strong magnets. The usage of these lashing system is due to safety requirements therefore strictly forbidden for people with heart pacemaker or any other implanted defibrillators.
- Bear in mind extreme circumstances or shock loads when choosing the used components.
- When using sling chains (for lifting) with ICE tensioners a turning of the threaded tube must be avoided.
- When using sling chains (for lifting) with ICE tensioners an adjustment under load must be avoided.
- **Restriction of usage:**
ICE-CURT-(K)-GAKO tensioners which have been used for lashing **must later not be used** together with sling chains (for lifting) → **Once lashing has been carried out, a lifting usage is not permitted any more.**
- ICE tensioners must only be used by designated and trained persons by observing the BGR 500 requirements / DGUV 100-500, chapter 2.8, and outside Germany acc. to the country specific regulations.



WARNING

ICE-CURT-SL-Tensioning devices (with shortening latch, Pic. 1) must not be used as a length adjustment for lifting operations.



Pic. 1: ICE-CURT-SL not permissible for lifting operations

2 Intended use

ICE-CURT-(K)-GAKO tensioners can be used at sling or lashing chains under the following requirements:

- A precise length adjustment is possible when used with sling chains.
- When used with lashing chains a tightening and fixing of load securing actions is possible.
- ICE-CURT-(K)-GAKO tensioners can be used for the following ICE/VIP chain diameters, 6, 8, 10, 13 and 16 mm. ICE-CURT-(K)-GAKO tensioners can be assembled as a spare part for VIP tensioners. The VIP-WLL has to be used.



WARNING

ICE-CURT-(K)-GAKO-tensioning elements, which have already been used in combination with lashing chains, are prohibited to be used as sling chains for lifting.

- ICE-CURT-(K)-GAKO-GAKO tensioners must only be loaded with tensile stress. Bending stress ist forbidden.
- ICE-CURT-(K)-GAKO tensioners must only be used in the here explained usage.

3 Assembly- and instruction manual

3.1 General information



ATTENTION

The securing disc has strong magnets. The usage of these lashing system is due to safety requirements therefore strictly forbidden for people with a heart pacemaker or any other implanted defibrillator.

- Capability of temperature usage:
-40°C up to 100°C
- ICE-CURT-(K)-GAKO tensioners must not be used with aggressive chemicals such as acids, alkaline solutions and their vapours

3.2 Hints for the assembly

Basically essential:

- Assemble the sleeve pin for securing of the connection pin into the tensioning device of the length adjustment in such a way that the slot of the split pin is positioned in the opposite direction to the connection pin resp. faces to the outside after installation (Pic. 2).



Pic. 2: Assembly of the connection pin and the split pin

- Use slotted pin only once!
- Use only oval ICE-G-pins with D1-12-stamping
- Use only original RUD spare parts.
- Check finally the correct assembly (see chapter 4 Inspection criteria).

3.3 General user information

3.3.1 General information

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

**WARNING**

Wrong assembled or damaged lashing means as well as improper usage can lead to physical injury and damage of property when load falls. Inspect lifting means before each use carefully!

- Pay always attention that the tensioning device will be mounted and used in the strand which has no contact with the load.
- Make sure that tensioning devices do not touch vehicles, edges or likewise
- The spindles must not be turned with increased load force against the turn-out-securing device. A damage off he thread may occur.

**ATTENTION**

ICE-CURT-(K)-GAKO tensioners must only be loaded with tensile stress. Bending stress ist forbidden.

- Use the tensioning lever always in the original condition (without extension).
- Monitor always attached or lashed loads.
- Leave hazardous area when possible.
- Read for all lifting/lashing means the RUD sling chain safety instructions for RUD lifting and lashing means.

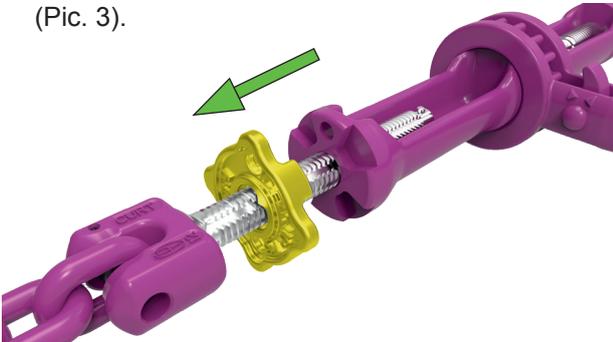
3.3.2 Use of sling chains (for lifting, fine adjustments)

- ICE-CURT-(K)-GAKO tensioners can be used for fine adjustment of sling chains.

**HINT LIMITATION OF USE:**

ICE-CURT-(K)-GAKO tensioners which have been used for lashing must later not be used together with sling chains (for lifting) --> Once lashing has been carried out, a lifting usage is not permitted any more.

- Assemble ICE-CURT-(K)-GAKO tensioners with the securing disc facing the bottom.
- Release the securing disc from the threaded tube (Pic. 3).



Pic. 3: Release of securing disc

**HINT**

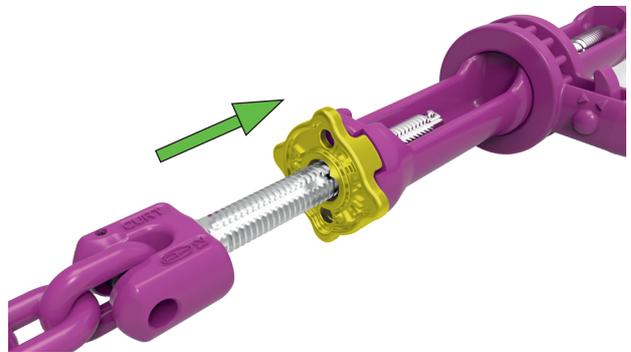
Make sure that the securing disc does not stick to the threaded tube. Otherwise there is a risk of damaging the securing disc.

**HINT**

An adjustment (Prolongation or lowering) is only possible with small strand forces. At heavy forces prolongation or lowering can only be carried out in the released condition. Adjustment under load must be avoided

- Turn ICE-CURT-(K)-GAKO-tensioner before lifting into the shortest possible position (Lzu) to enable a prolongation of the chain strand.
- After you have done the fine adjustment move the securing disc towards the thread tube. The securing disc must engage with form closure and easy into the **cross contour** at the thread tube (Pic. 4).

If this is not the case, turn spindle and threaded tube until both cross contours are congruent. Move securing disc subsequently into the final position. The securing disc is hold by magnet force in position and avoids an self-acting release of the spindle tensioner when vibrations occur.



Pic. 4: Closing of the securing disc

3.3.3 Use at lashing chains (load securing)

When used with lashing chains the ICE-CURT-(K)-GAKO tensioner must be positioned in the opened condition (Lopen).

3.3.4 Lubrication of ICE-CURT-(K)-GAKO

To guarantee the running characteristics, the ICE-CURT-(K)-GAKO tensioner should be lubricated in regular intervals with grease at the lubricating point.

1. For lubrication open up the ICE-CURT-(K)-GAKO tensioner towards the turn-out securing.



IMPORTANT HINT:

Spindles must not be turned out with an increased expenditure of force. There is a risk of damaging the thread.

2. Lubricate the ICE ratched tensioner ICE-CURT-(K)-GAKO at the marked lubrication points (see picture 5).
3. Once lubrication is finished turn spindles back.



Pic. 5: Lubrication of the ICE-CURT-GAKO tensioner

3.4 Hints for regular inspection

In time periods complying to the need or usage, a technical expert must control at least once per year the appropriateness of the lifting/lashing means. This inspection must also be done after each event of damage or special incident (see chapter 4 Inspection criteria).

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

4 Inspection criteria

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

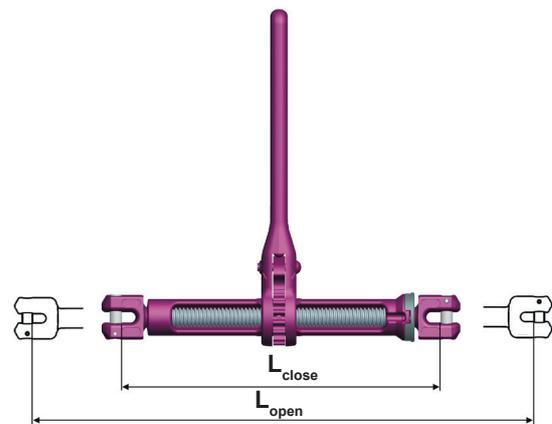
- Completeness of the ICE-CURT-(K)-GAKO tensioner.
- Readable size and manufacturer's mark
- Mechanical damages, like strong notches, especially in areas where tensile stress occurs
- Damages and wear f.e. at the clevis connection
- Cracks or other damages
- Free movement of the thread

5 Hints for the Repairing

- Repair works can only be carried out by the manufacturer or by experts disposing necessary knowledge and required skills.
- Use only original RUD spare parts and record each repairing (of the complet sling) into the chain card file resp. use the RUD BLUE-ID-SYSTEM.

RUD components are tested in accordance with DIN EN 1677, with a minimum of 20.000 load cycles at 1.5 x WLL. The German Employer's insurance Association (BG/DGUV) recommends:

When high dynamic stress combines with high number of load cycles, the bearing stress must be reduced to Mechanism group 1Bm (M3 acc. to EN 818-7).



Pic. 6: Dimensioning of the ICE-CURT-GAKO tensioner

| Chain-Ø ICE | Nomination | WLL Lifting Chain [kg] LIFTING | LC Lashing Chain [daN] LASHING | L _{open} [mm] | L _{close} [mm] | Ad- just ment [mm] | weight [kg/pc.] | Ref.- No. | Ref.- No. |
|----------------|----------------------|--------------------------------------|--------------------------------------|---------------------------|----------------------------|-----------------------------|--------------------|--------------------------|----------------------------|
| | | | | | | | | ICE-CURT-GAKO ratchet | ICE-CURT-(K)GAKO toggle |
| 6 | ICE-CURT-(K)-6-GAKO | 1,800 | 3,600 | 400 | 260 | 140 | 1.49 | 7903439 | 7904448 |
| 8 | ICE-CURT-(K)-8-GAKO | 3,000 | 6,000 | 520 | 350 | 170 | 3.9 | 7901125 | 7904449 |
| 10 | ICE-CURT-(K)-10-GAKO | 5,000 | 10,000 | 532 | 362 | 170 | 4.3 | 7901126 | 7904450 |
| 13 | ICE-CURT-(K)-13-GAKO | 8,000 | 16,000 | 830 | 530 | 300 | 7.6 | 7902624 | 7904451 |
| 16 | ICE-CURT-(K)-16-GAKO | 12,500 | 25,000 | 962 | 612 | 350 | 13.4 | 7902625 | 7904452 |

Chart 1: Dimensioning

Subject to technical modifications