

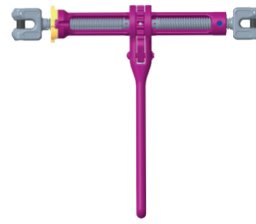
Length adjustment
>ICE-CURT-GAKO<
>ICE-CURT-K-GAKO<

User instruction

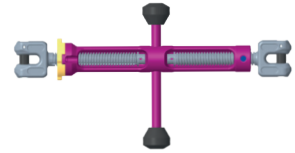
This safety instruction/declaration has to be kept on file for the whole lifetime of the product and forwarded with the product.

Translation of the original 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)



ratchet tensioner
>ICE-CURT-GAKO<



toggle tensioner
>ICE-CURT-K-GAKO<



RUD Ketten
Rieger & Dietz GmbH u. Co. KG
 73432 Aalen
 Tel. +49 7361 504-1370
 sling@rud.com
 www.rud.com

RUD-Art.-Nr.: 7902769 - EN / V04 / 06.024

Length adjustment
(with clevis connection)

RUD

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:

<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>DGUV-R 109-017 : 2020-12</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:
 Michael Betzler, RUD Ketten, 73432 Aalen

Aalen, den 01.06.2022 Hermann Kolb, Bereichsleitung MA *Hermann Kolb*
 Name, Funktion und Unterschrift Verantwortlicher

RUD

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
 Germany

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:

<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>DGUV-R 109-017 : 2020-12</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:
 Michael Betzler, RUD Ketten, 73432 Aalen

Aalen, den 01.06.2022 Hermann Kolb, Bereichsleitung MA *Hermann Kolb*
 Name, function and signature of the responsible person



Before use or assembly of length adjustment ICE-CURT-GAKO / ICE-CURT-K-GAKO (hereinafter referred to as 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 ICE-CURT-(K)-GAKO as well as improper usage can lead to injuries of persons and damage of items when loads fall down. Please inspect all ICE-CURT-(K)-GAKO before each use.

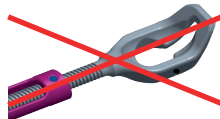
- The securing disc at the ICE-CURT-(K)-GAKO includes strong magnets. The usage of these lashing system is due to safety requirements therefore strictly forbidden for people with heart pacemaker or any other implanted defibrillators.
- During the lifting process, remove all body parts (fingers, hands, arms, etc.) from the danger zone, arms, etc.) out of the danger zone (danger of squeezing).
- Bear in mind extreme circumstances or shock loads when choosing the used components.
- When using sling chains (for lifting) with ICE-CURT-(K)-GAKO a turning of the threaded tube must be avoided.
- When using sling chains (for lifting) ICE-CURT-(K)-GAKO an adjustment under load must be avoided.
- **Restriction of usage:**
ICE-CURT-(K)-GAKO 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-CURT-(K)-GAKO must only be used by designated and trained persons by observing the DGUV 109-017, and outside Germany acc. to the country specific regulations.



WARNING

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

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



- No technical modifications must be made to ICE-CURT-(K)-GAKO.
- No persons are allowed in the danger zone.
- Jerky lifting (strong impacts) must be avoided.
- Ensure a stable position of the load during lifting. Swinging must be avoided.
- Damaged or worn ICE-CURT-(K)-GAKO may not be used.

2 Intended use

ICE-CURT-(K)-GAKO 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 can be used for the following ICE/VIP chain diameters, 6, 8, 10, 13 and 16 mm. ICE-CURT-(K)-GAKO can be assembled as a spare part for VIP length adjustments. The VIP-WLL has to be used.



WARNING

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

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

3 Assembly- and instruction manual

3.1 General information



ATTENTION

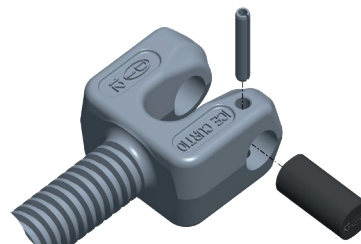
The securing disc at the ICE-CURT-(K)-GAKO has strong magnets. The usage of these lashing system is due to safety requirements therefore strictly forbidden for people with a heart pacemaker or any other implanted defibrillator.

- Capability of temperature usage:
-40°C up to 100°C
- ICE-CURT-(K)-GAKO 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 / Repair / Disposal*).

3.3 General user information

3.3.1 General information

- Control frequently and before each operation the total ICE-CURT-(K)-GAKO in regard of ongoing ability, strong corrosion, wear, deformation etc. (see chapter 4 *Inspection / Repair / Disposal*).



WARNING

Wrong assembled or damaged ICE-CURT-(K)-GAKO as well as improper usage can lead to injuries of persons and damage of items when loads fall down. Please inspect all ICE-CURT-(K)-GAKO before each use.

- RUD components are designed according to DIN EN 818 and DIN EN 1677 for a dynamic WLL of 20,000 load cycles.
 - Please note that during one lifting process there might be several stress cycles.
 - Please note that due to the high dynamic load with high numbers of stress cycles there is the risk of damage to the product.
 - The DGUV recommends: At high dynamic WLL with high stress cycles (permanent operation), the working load must be reduced according to the engine group 1Bm (M3 according to DIN EN 818-7). Use lifting means with a higher WLL.
- Pay always attention that the ICE-CURT-(K)-GAKO will be mounted and used in the strand which has no contact with the load.
- Make sure that ICE-CURT-(K)-GAKO 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 of the thread may occur.



ATTENTION

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

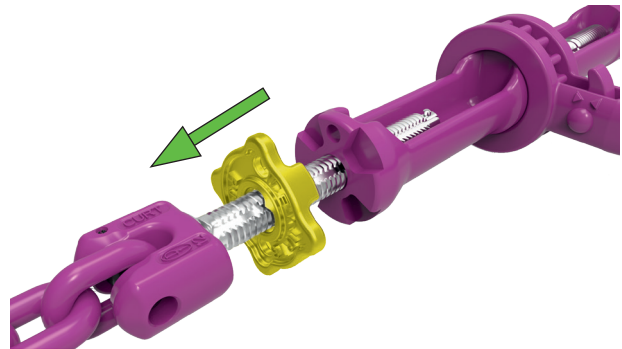
- ICE-CURT-(K)-GAKO can be used for fine adjustment of sling chains.



HINT LIMITATION OF USE:

ICE-CURT-(K)-GAKO 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 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 and the spindle. The securing disc prevents the thread from loosening when engaged.



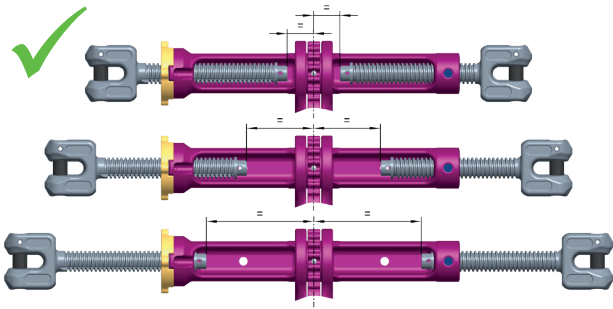
HINT

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 before lifting into the shortest possible position (T) to enable a prolongation of the chain strand.

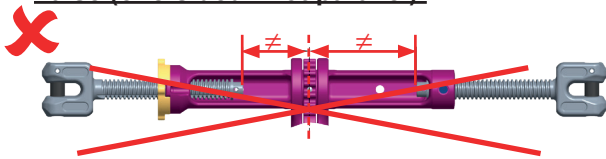
- Always ensure parallel turning in and out of the spindles (*Pic. 4*).

Correct (parallel):



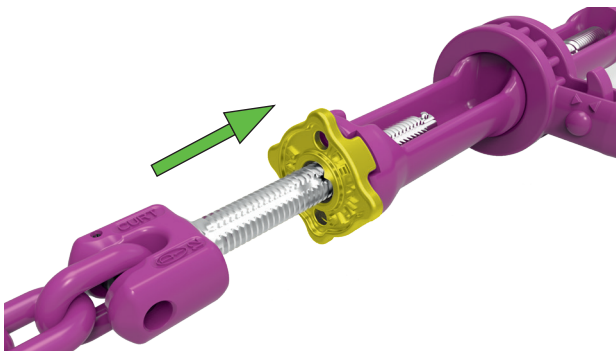
Pic. 4: Correct turning in or out (parallel)

False (one-sided / not parallel):



Pic. 5: Incorrect turning in or out (one side not parallel)

- 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 threaded tube (*Pic. 6*). 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 ICE-CURT-(K)-GAKO when vibrations occur.



Pic. 6: Closing of the securing disc

3.3.3 Use at lashing chains (load securing)

When used with lashing chains the ICE-CURT-(K)-GAKO must be positioned in the opened condition (A). Only in this way the entire tension (B | adjustment) can be used (*Pic. 8*).

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

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

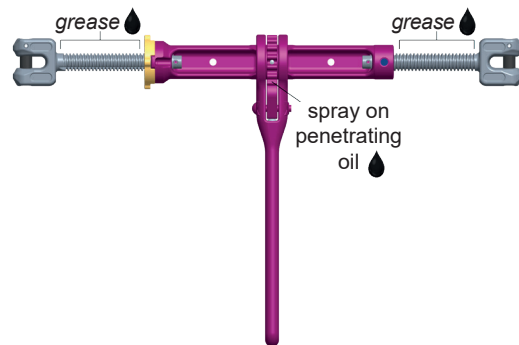
- 1 For lubrication open up the ICE-CURT-(K)-GAKO towards the turn-out securing.



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-CURT-(K)-GAKO at the marked lubrication points (see *Pic. 7*).
- 3 Once lubrication is finished turn spindles back.



Pic. 7: Lubrication using the example of the ICE-CURT-GAKO

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 continuous suitability of the RUD length adjustment must be checked at least once per year by an expert.

Depending on the application conditions, e.g. when used frequently or if there is a higher level of wear occurrence or corrosion, it may be necessary to carry out inspections at intervals of less than a year. This inspection is also absolutely necessary after damage and special incidents.

The inspection cycles must be specified by the operator.

4.2 Test criteria for the regular visual inspection by the user

- Completeness of the ICE-CURT-(K)-GAKO.
- 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
- Free movement of the thread.

4.3 Additional test criteria for the competent person / repair worker

- Strong corrosion
- Additional inspections may be necessary, depending on the result of the risk assessment (e.g. check for cracks in load-bearing parts).

4.4 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 complete sling) into the chain card file resp. use the RUD BLUE-ID-SYSTEM.

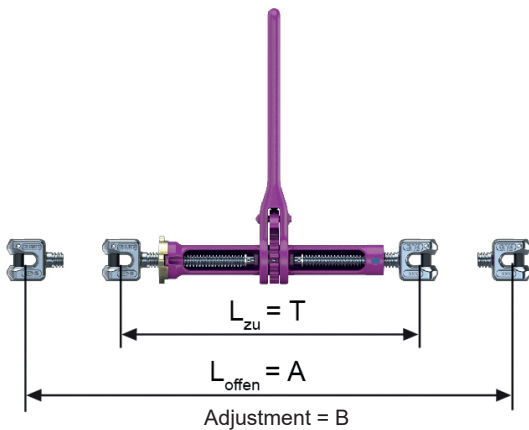
4.5 Disposal

Dispose of the discarded components / accessories or packaging in line with local regulations.

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

Table 1: Dimensioning

Subject to technical modifications



Pic. 8: Dimensioning using the example of the ICE-CURT-GAKO