

VIP- Length Adjustment > VLE <



User Manual

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

Translation of the Original instructions

This assembly instruction is valid in addition to the safety instructions for RUD Sling chains
RUD-No. 7101649.



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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: Längeneinstellung

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:
Michael Betzler, RUD Ketten, 73432 Aalen

Aalen, den 26.09.2016 Dr.-Ing. Arne Kriegsmann, (Prokurist/QMB) *Arne Kriegsmann*
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: Length adjustment

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:
Michael Betzler, RUD Ketten, 73432 Aalen

Aalen, den 26.09.2016 Dr.-Ing. Arne Kriegsmann, (Prokurist/QMB) *Arne Kriegsmann*
Name, function and signature of the responsible person



Please read user instruction before initial operation of the VIP-Length Adjustment (herein after referred to as VLE). Make sure that you have comprehend all subjected matters. Non observance can lead to serious personal injuries and material damage and eliminates warranty. In doubt or in misconception please note that the German version of this document is decisive.

1 Safety instructions



ATTENTION

Incorrect usage as well as wrong assembled or damaged components for length adjustment can lead to injuries of persons and property damage when loads fall down.

Control every component of VLE carefully before each usage.

- Remove all body parts (fingers, hands, arms, etc.) out of the hazard area (danger of crushing or squeezing) during the lifting process.
- The VLE must be used only by authorised and trained people in adherence to BGR/DGUV regulations 100-500, Chapter 2.8 and, outside Germany, when observing the relevant specific national regulations.
- No technical alterations must be implemented on the VLE.
- 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.
- Damaged or worn VLE must never be utilised
- Be aware of extreme circumstances or shock loads when selecting the used components.
- At sling chains equipped with VLE, length adjustments under load are not possible.
- Sling chains (for lifting) with VIP length adjustments should not be turned under load because components could either become loose or untwine.

2 Intended use

VLE must only be used with chain slings.

- Assembled into chain slings they allow an exact length adjustment.
- VLE can be assembled to VIP chain diameters 20 mm, 22 mm and 28 mm.



HINT

VLE is not bound to be used with lashing chains.

- The VLE components must only be loaded in pulling direction. Bending forces are prohibited.
- VLE must only be used in the here described way.

3 Installation and user information

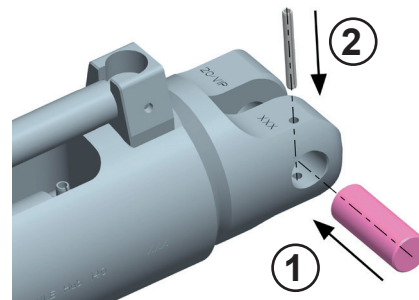
3.1 General information

- Capability of temperature usage:
Usage at higher temperatures is not recommended due to the grease filling in the ball bearing. Should this though be necessary, the working load limit (WLL) of the VLE must be reduced as follows:
-40°C up to 200°C ==> no reduction
200°C up to 300°C ==> minus 10 %
300°C up to 380°C ==> minus 40 %
Temperatures above 380°C are prohibited!
- VLE must not be used together with aggressive chemicals, acids and vapours.

3.2 Hints for the assembly

Basically essential:

- Assemble the roller pin for securing of the load pin into the tensioning elements resp. into the length adjustment in such a way that the groove can be seen from the outside (Pic. 1).



Pic. 1: Assembly

- Use retaining pins only once.
- Assemble only connecting bolts with H1-10 embossment.
- Use only original RUD spare parts.
- Check finally the correct assembly (see chapter 4 Inspection / repair).

3.3 Hints for the usage

3.3.1 General information

- The whole VLE must be inspected regularly by a competent person in regard of proper installation, strong corrosion, cracks at load bearing parts and deformations (e.g. by the person responsible for attachment). See section 4 *Inspection / repair*.



ATTENTION

Incorrect usage as well as wrong assembled or damaged components for length adjustment can lead to injuries of persons and property damage when loads fall down.

Control every component carefully before each 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 chain slings with a higher working load limit.
- Always pay attention, that lifting means are installed and used at the „free“ chain strand.
- Make sure that the tensioner does not get in touch with edges or other obstacles.
- Make sure that the load force happens in the straight leg without being twisted, fold-over or kinked.
- The spindle must not be turned against the turn-out-securing device with an increased expenditure of force. There is a risk of damaging the thread.
- Use toggle always in the original serial version (without extension). At VLE 28 mm it's allowed to use a wrench in size 120.



ATTENTION

The VLE components must only be loaded in pulling direction. Bending forces are prohibited.

- Leave hazardous area whenever possible.
- Watch always attached loads.
- For all lifting means read the RUD sling chain and safety instructions.

3.3.2 Usage with sling chains (for lifting or fine adjustment)

- VLE must only be used for lifting actions in combination with sling chains for vernier adjustment. Turn VLE before lifting into the shortest possible position (T_{close}) to allow lengthening of the chain strand.



HINT

Length adjustment is only possible when chain is not loaded. When chain is loaded only very small loads can be adjusted or lowered. Turning while loaded should be avoided.

3.3.3 Regularly lubrication

To ensure ability of function, the threaded spindle should be lubricated regularly with multi-purpose-grease.

4 Inspection / repair

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).

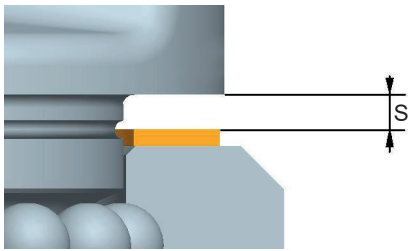
The continuing suitability of the lifting mean must be checked at least 1x year by an expert.

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 VLE
- Complete, readable nominal size and existing manufacturer's sign
- Deformation at load bearing parts like thread (spindle) and clevis connection.
- mechanical damage like strong notches, especially in areas where tensile stress occurs
- Smooth running of the threads
- The maximum allowance for clearance of $s = 4$ mm, between upper and base part must not be exceeded, respectively the proof groove in the ring connection must not be visible.



Pic. 2: Distance between upper and base part

4.3 Additional test criteria for the competent person / repair worker

- Cross-section alterations caused by wear > 10 %
- 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 Hints for repairing

- Repairs must only be carried out by competent persons who have approved knowledge and technical skills.
- Use only original RUD spare parts and register any made repairing in the lifting means file card of the complete chain sling card file (of the complete lifting mean) or use the RUD BLUE-ID-System.

Chain Ø VIP	Type	WLL Lifting chain [kg] Lifting	T _{close} [mm]	A [mm]	weight [kg/pc.]	Ref.-No.
20	VLE-20	16,000	~ 363	140	18.1	7997322
22	VLE-22	20,000	~ 363	140	18.3	7994668
28	VLE-28	31,500	~ 478	172	44	7900772

Table 1: Dimensioning VLE

Subject to technical alterations

