

> VVGSCH <  
> VMKS <



## Safety instructions

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

### Translation of the Original instructions

This user instruction is valid in addition to the safety instructions for RUD Sling chains, RUD Ref. No. 7101649



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RUD-Art.-Nr.: 7900745-EN / 01.016



VIP-Clevis Shackle



### 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:** Gabelkopfschäkel  
VV-GSCH / VMKS

Folgende harmonisierten Normen wurden angewandt:

DIN EN 1677-1 : 2009-03 DIN EN ISO 12100 : 2011-03

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Folgende nationalen Normen und technische Spezifikationen wurden außerdem angewandt:

BGR 500, KAP2.8 : 2008-04

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\_\_\_\_\_  
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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)  
Name, Funktion und Unterschrift Verantwortlicher

*Arne Kriegsmann*



### 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:** Fool proof shackle  
VV-GSCH / VMKS

The following harmonized norms were applied:

DIN EN 1677-1 : 2009-03 DIN EN ISO 12100 : 2011-03

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\_\_\_\_\_  
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The following national norms and technical specifications were applied:

BGR 500, KAP2.8 : 2008-04

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\_\_\_\_\_

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)  
Name, function and signature of the responsible person

*Arne Kriegsmann*



*Please read user instruction carefully before initial operation of VIP clevis shackles.*

*Make sure to understand all volumes.*

*Non-observance of this user's manual can lead to serious physical injury and property damage and eliminates warranty.*

*In doubt or in misconception please note that the German version of this document is decisive.*

*This user instruction is valid in addition to the safety instructions for RUD Sling chains, RUD Ref. No. 7101649.*

## 1 Application and warning information



### ATTENTION

*Wrong assembled or damaged lifting means as well as improper usage can lead to physical injury and damage of property while failing.*

*Inspect lifting means before each use carefully!*

- Consider extreme circumstances or shock loading when choosing the utilised product.
- Side loading is due to the design not allowed.
- VIP clevis shackles must only be used considering the BGR 500 standard, chapter 2.8 (DGUV rules 100-500), and outside Germany acc. to the country specific requirements.

## 2 Intended use

VIP clevis shackles must only be used for the manufacturing / assembly of lifting means in combination with VIP chains and VIP components.

They can be used as an end component for chain slings or lugs. Side loading is not allowed.

VIP clevis shackles must only be used in the here described usage.

## 3 Installation and user information

### 3.1 General information

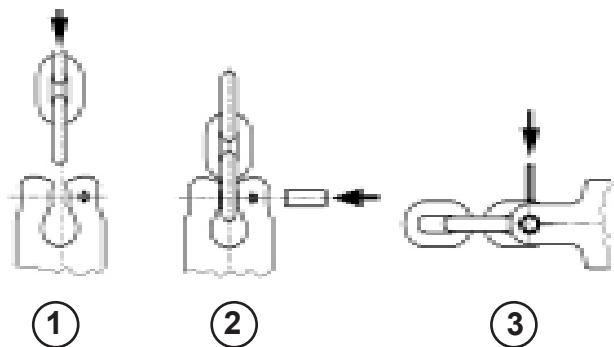
- Capability of temperature usage:  
When used in temperatures higher than 200°C the WLL of the VIP clevis shackles must be reduced as follows:
  - -40°C up to 200°C no reduction
  - 200° up to 300°C minus 10 %
  - 300° up to 400°C minus 25 %
  - Temperatures above 400°C are prohibited!
- VIP clevis shackles must not be used together with aggressive chemicals, acids and vapours.

### 3.2 Hints for the assembly

- VIP chains of the correct size can be directly assembled fool-proof into the RUD-clevis connection.
- Make sure before loading that the shackle bolt is fully engaged. This is the case when the end of the shackle bolt at the thread is in line with the eye of the shackle and the bolt can be turned in the bushing easy.
- When shackle is **permanently** or **more than once used**, please secure bolt by using a hammer to punch the roller pin.

Common rule:

- Assemble only shackle components/connecting bolts with H1-10 embossement.
- The sleeve pin to secure the load pin must be assembled in such a way that the groove can be seen from the outside.
- Use retaining pins only once.
- Use only original RUD spare parts.
- Check finally the correct assembly (see chapter 4 *Inspection criteria*).



Pic.1: Steps of assembly

### 3.3 Hints for the usage

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



#### ATTENTION

*Wrong assembled or damaged lifting means as well as improper usage can result in serious physical injury and property damage when load drops.  
Inspect lifting means before each use carefully!*

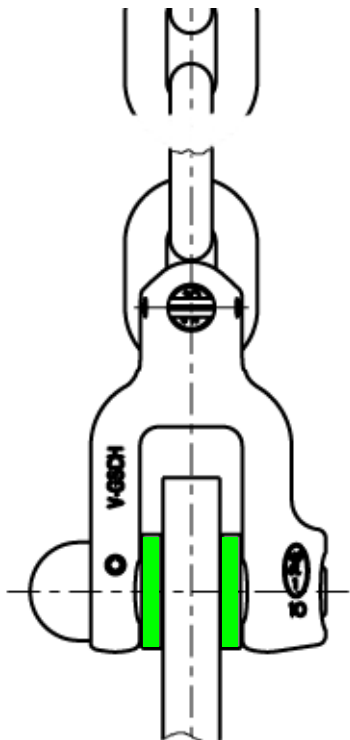
- Assemble the VIP clevis shackle at the load in such a way that the shackle body will be loaded in the longitudinal axle and that no bending stress occurs.



#### HINT

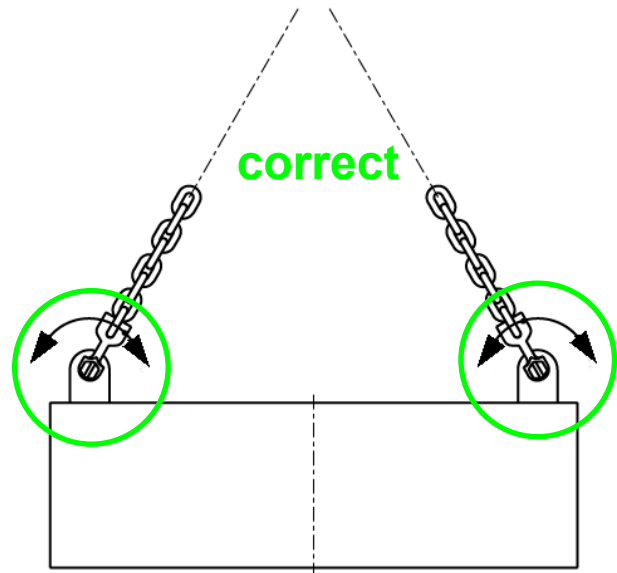
*According to EN 13889 a side pull angle  $\beta$  bigger than  $7^\circ$  is prohibited..*

- To avoid one-sided loading of the shackle, distance washers at both sides of the bolt are allowed to be used (see picture 2)
- Alternatively a shackle with a smaller inside width can be used also. The inside width must not be reduced by using weld-in washers, distance parts or bending of the shackle because this has a negative impact to the mechanical properties of the shackle.

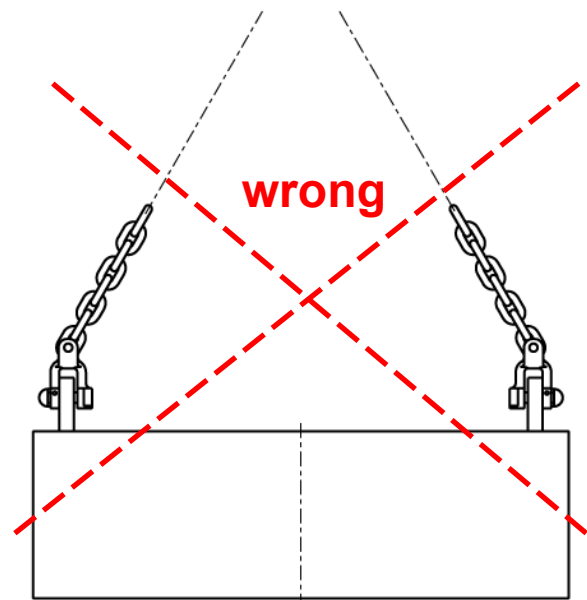


Pic. 2: VVGSCS with washers on both sides

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



Pic. 3: Correct loading



Pic. 4: Wrong loading

### 3.4 Hints for the regularly testing

Check by a experienced competent person in time periods depending on the frequency at least 1x per year, the ongoing usage of the lifting means (see chapter 4 *Inspection criteria*).

Depending on the conditions of use, e.g. increased wear or corrosion, it might be necessary that inspections must to be made in shorter time intervals than one year.

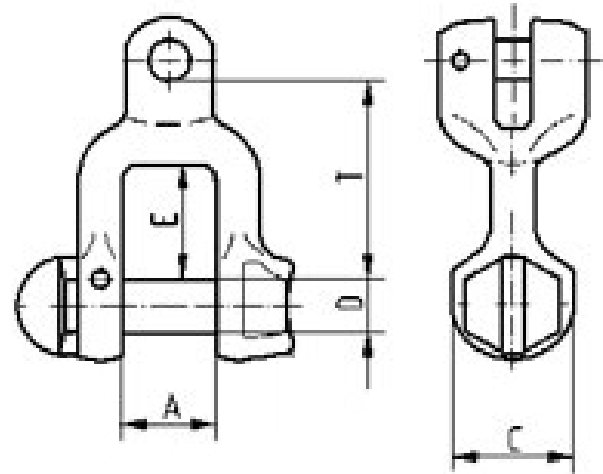
## 4 Inspection criteria

Check and control the following points before each initial operation, in frequent time intervals, after assembly and special incidents:

- completeness of the VIP-Gabelkopfschäkels
- readable size and manufacturer sign
- mechanical damage like strong notches, especially in areas where tensile stress occurs
- Function, damage and wear at the securing sleeve pin, at the thread of the shackle pin and at the eye of the VV-GSCH shackle
- Reduction of cross section caused by wear > 10 %, especially at the connection pin, the shackle pin and at the eye of the shackle.
- Cracks or other damage

## 5 Hints for repairing

- Repairing must only be done by a competent person which has the 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.



| Denomination | WLL<br>[t] | ND<br>[mm] | A<br>[mm] | C<br>[mm] | D<br>[mm] | E<br>[mm] | T<br>[mm] | weight<br>[kg/pc.] | Ref.-No. |
|--------------|------------|------------|-----------|-----------|-----------|-----------|-----------|--------------------|----------|
| VMKS-4       | 0.63       | 4          | 14        | 22        | 10        | 30        | 42        | 0.12               | 7985243  |
| VVGSCHE-6    | 1.5        | 6          | 17        | 22        | 10        | 21        | 36        | 0.15               | 7102022  |
| VVGSCHE-8    | 2.5        | 8          | 21        | 26        | 12        | 32        | 48        | 0.26               | 7102023  |
| VVGSCHE-10   | 4.0        | 10         | 27        | 34        | 16        | 35        | 61        | 0.65               | 7102024  |
| VVGSCHE-13   | 6.7        | 13         | 33        | 42        | 20        | 41        | 78        | 1.35               | 7102025  |
| VVGSCHE-16   | 10         | 16         | 38        | 49        | 24        | 49        | 96        | 2.5                | 7102026  |
| VVGSCHE-20   | 16         | 20         | 47        | 60        | 30        | 57        | 108       | 3.9                | 7104284  |
| VVGSCHE-22   | 20         | 22         | 53        | 76        | 36        | 72        | 132       | 6.7                | 7102027  |

Chart 1: Dimensioning

Subject to technical

RUD components are designed acc. to DIN EN 818 and 1677 for a dynamical loading of 20.000 load cycles. Employers insurance association (German BG) recommends: At high dynamic loading with high load cycle numbers (continuous operation), the bearing stress acc. to load factor group 1Bm (M3 acc. DIN En 818-7) must be reduced.