

> Chain Block <

VCB

User manual

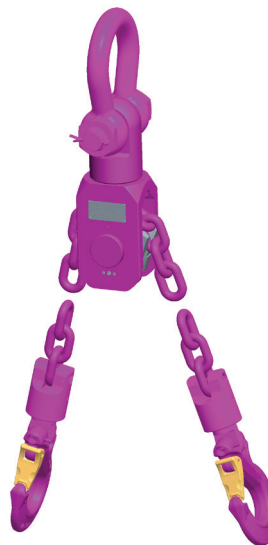
This assembly instruction has to be kept on file for the whole lifetime of the product and forwarded with the product.
Translation of the original user instructions



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RUD-Art.-Nr.: 7901895-EN / V02 / 11.022

Chain Block



VIP-Chain-Block
VCB

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
 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 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

Name, Funktion und Unterschrift Verantwortlicher

EC-Declaration of conformity

According to the EC-Machinery Directive 2006/42/EC, annex II A and amendments

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

We hereby declare that the equipment sold by us because of its design and construction, as mentioned below, corresponds to the appropriate, basic requirements of safety and health of the corresponding EC-Machinery Directive 2006/42/EC as well as to the below mentioned harmonized and national norms as well as technical specifications.
 In case of any modification of the equipment, not being agreed upon with us, this declaration becomes invalid.

Product name: Chain sling Grade 100 - VIP
ND 4-28 mm, adjustable/not adjustable

The following harmonized norms were applied:

<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>
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The following national norms and technical specifications were applied:

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Authorized person for the configuration of the declaration documents:
 Michael Betzler, RUD Ketten, 73432 Aalen

Aalen, den 19.11.2021 Hermann Kolb, Bereichsleitung MA

Name, function and signature of the responsible person



Before initial operation of the RUD Chain Block please read carefully the user instruction. Make sure that you have understood all content. Disregarding of the instructions can lead to personal and material damage und disclaims warranty.

1 Safety instructions



WARNING

Wrong assembled or damaged lifting means as well as improper use can lead to injuries of persons and damage of objects when load drops. Please inspect all lifting means before each use.

- Keep all body parts like fingers, hands, arms, etc. out of the hazardous area during the lifting operation.
- The chain block VCB must only be used by designated and trained persons by respecting the DGUV 109-017 and outside Germany the corresponding country specific regulations.
- The chain block must only be used in combination with the right chain VIP grade 100.
- The chain block VCB is not designed for permanent turning under full load.
- The swivel bolt must not be disassembled.
- When lifting- and turning load both end fittings must be attached to a load. **Unsymmetrical loading is forbidden.**
- The installed brake is only for the fixing of the chain strand designed and attached loads cannot be kept in a certain position.
- Any technical modifications at the chain block VCB are prohibited.
- Keep persons out of the hazardous area.
- Detention under a floating load is forbidden.
- Jerkily lifts with shock loads must be avoided.
- When the lift starts, pay attention to a stable position of the load. Avoid swinging of the load.
- Damaged or worn chain blocks VCB must no longer be used.

2 Intended use of the Chain Block

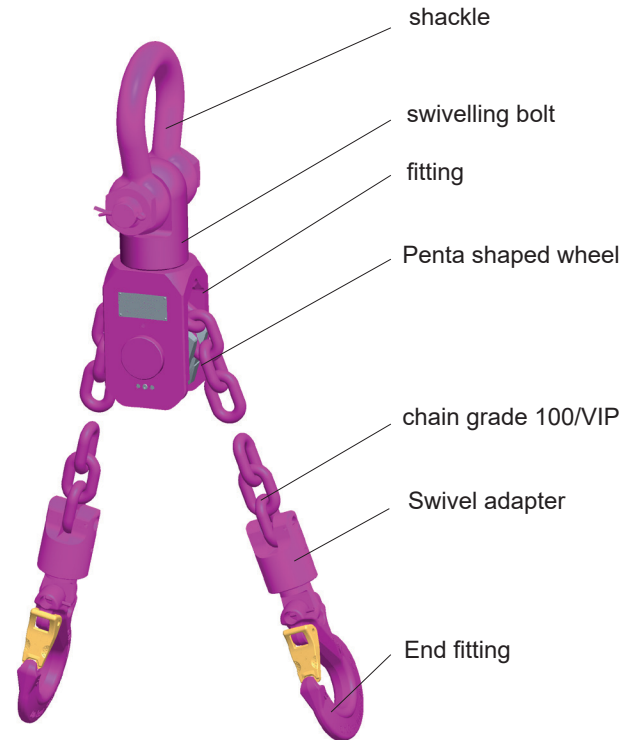
- The chain block should be used as a lifting mean for lifting and turning of loads with a length adjustment of the chain strands.
- The stated WLL must not be exceed.
- Chain must not be bend.
- The chain block can be turned under load. A permanent turning under full load is not permitted.
- Load must be introduced equally to the chain strand. **Unsymmetrical loading is not allowed.**

3 Assembly- and instruction manual

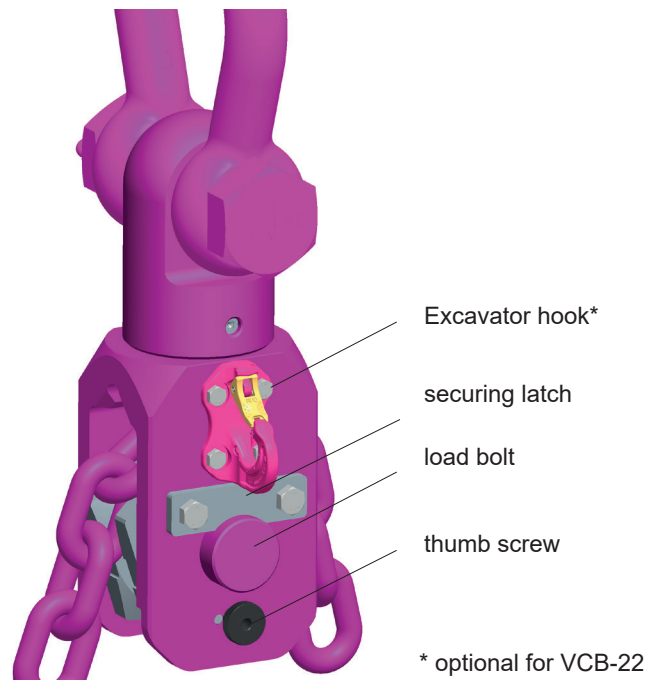
3.1 General information

- Control regularly and before each use the completeness of the lifting means, strong wear, corrosion, deformation etc.
- Avoid impact and jerk during lifting load.
- Capability of temperature usage:
Use between temperature range -40° and 130°C is permitted
Higher temperature on request.
- For a safe handling and to avoid damage of the chain block resp. the chain, swivel adapters must be installed at the end of the chain strands (compare picture 1).

3.2 Overview of the VCB chain block construction



Pic. 1: Overview of chain block VCB



Pic. 2: Detailed structure of chain block VCB

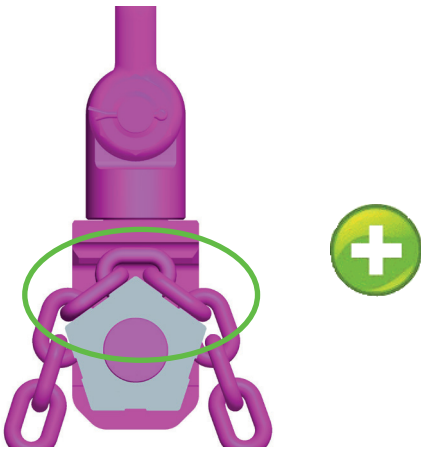
3.3 Hints for the assembly

- Pay attention, that chain is correctly positioned in the penta shaped wheel (Picture 3).



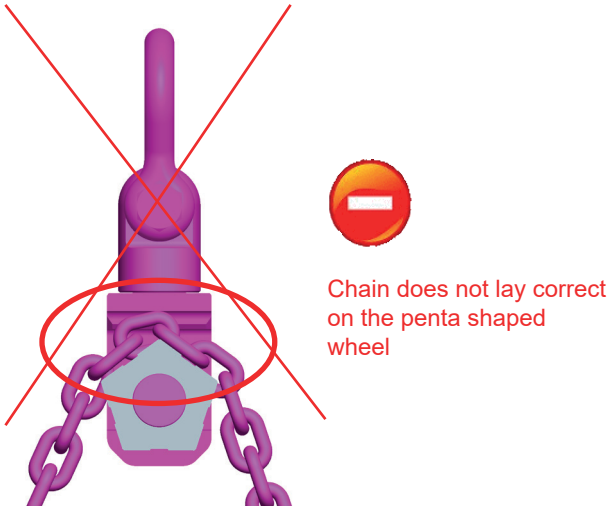
HINT

Chain must not be bend!

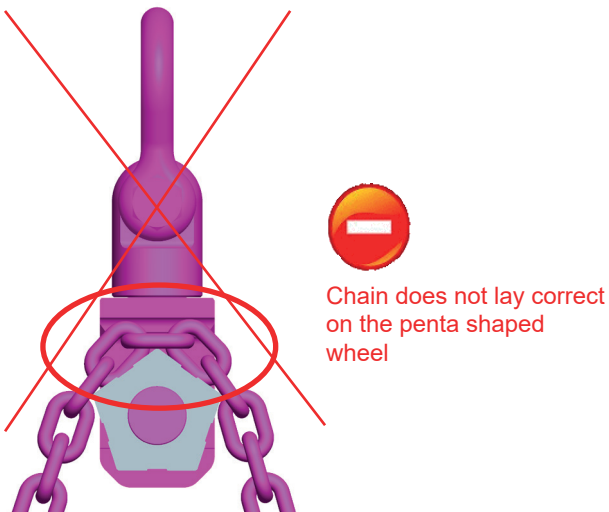


Pic. 3: Correct support position of chain

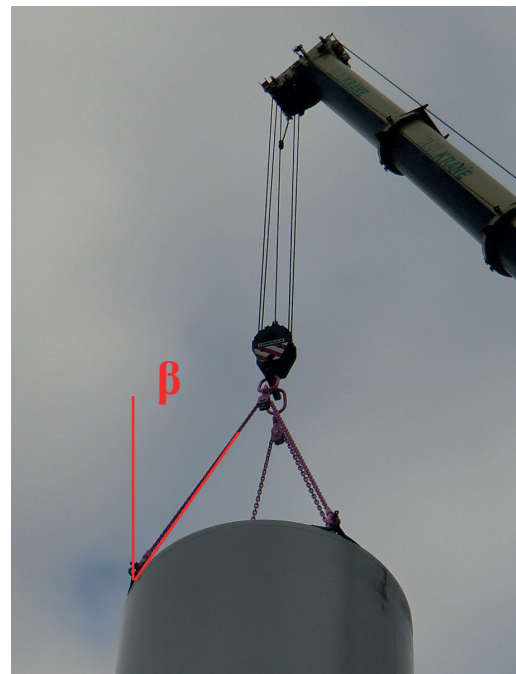
- Pay attention that the max. allowed loading angle β 45° will not exceeded (Pic. 6).



Pic. 4: Wrong support position of chain



Pic. 5: Wrong support position of chain



Pic. 6: Max. allowed loading angle β (= 45°)

- Lift must only be carried out when both end fittings are attached to the load.

3.4 General information regarding use

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

WARNING

Wrong assembled or damaged chain blocks VCB as well as inappropriate usage may lead to injury of persons and property damage when load drops. Please inspect all chain blocks VCB before each use.

- RUD components have been designed as per DIN EN 818 and DIN EN 1677 for a dynamic load of 20,000 load cycles.
 - Observe and be aware that multiple load cycles can occur during a lifting operation.
 - Observe the risk of product damage caused by high dynamical influences at high load cycle numbers.
 - BG/DGUV Germany's employer insurance association recommends: At high dynamical loading with a high number of load cycles (permanent use), the stress at WLL acc. to FEM class 1Bm (M3 acc. to DIN EN 818-7) must be reduced. Use a lifting mean with a higher WLL.

3.5 Use of brake function

With the help of the integrated brake, movement of the chain can be stopped more or less strong.

At lifting- and turning procedures with attached load, the penta-shaped wheel must be able to be turned manually (before load is lifted).

When chain block is moved while hanging on the crane without attached load, attention must be paid to equal chain strand lengths. Hereby the brake should work in such a way that the penta shaped wheel cannot be turned.



WARNING

When brake is working no load must be lifted. This can lead to damages on the chain and at the chain block. In addition to that this can lead to sudden movement, which can cause dropping of the load.

The adjustment of the brake should be done with the thumb screw on the outside (Pic. 2).

Use of thumb screw:

- Turning clockwise: Brake closes
- Turning anticlockwise: Brake opens



WARNING

The installed brake is only designed to fix unloaded chain strand. Attached loads cannot be hold with it in a certain position.

3.6 Use of excavator hook*

At the installed hook (pic. 2) small loads (max. 200 kg) can be attached. This can only be done, when no load is attached to the ends of the chainblock.



HINT

Make sure that lifting of loads with the excavator hook will not cause damages at the chain block.

* The Excavator hook is optional available for the size VCB-22.

4 Inspection / Repair / Disposal

4.1 Hints for periodical inspections

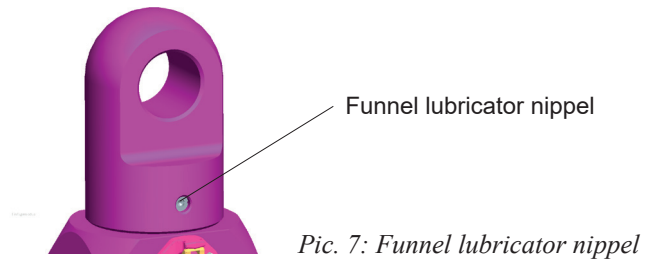
The operator has to determine and dictate the necessary inspection periods and the deadlines by a risk assessment (see sections 4.2 and 4.3).

The persisting appropriateness of the lifting mean must be checked by a competent person (auditor) at least once per year.

Depending on the conditions of use e.g. frequent use, increased wear or corrosion, it may be necessary to carry out inspections at shorter intervals than once per year. A verification is also required following damage and after special events.

4.2 Inspection criteria for the regularly examination carried out by the operator

- Completeness of lifting mean
- Complete and readable WLL statement as well as manufacturer's sign
- Deformation at load bearing parts like swivel bolt, suspension, penta-shaped wheel
- Mechanical damage like strong notches, especially in areas where tensile stress occurs.
- Easy and jerkfree turning of the swivel bolt must be given and the penta-shaped wheel (with open brake) must be guaranteed. If necessary lubricate the bearing of the swivel bolt by using the funnel lubricator nipple (Picture 7).



Pic. 7: Funnel lubricator nipple

4.3 Additional inspection criteria for the competent person resp. auditor

- Strong corrosion
- Cracks at load bearing parts
- Check if the locking of the swivel bolt is given
- The max. gap „S“ between swivel bolt and suspension must not be exceeded (Picture 8):

VCB-16: S = max. 2.5 mm

VCB-22: S = max. 2.5 mm

VCB-28: S = max. 2 mm



Pic. 8: Max. gap „S“

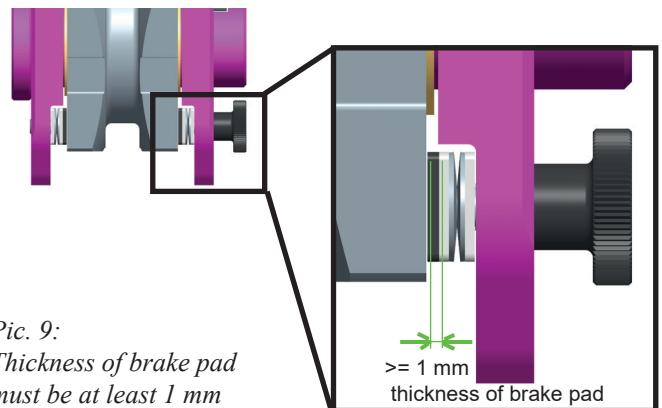
- Reduction of cross section by more than > 10 %



HINT

When the max. gap „S“ (pic. 8) or the reduction of the cross section reaches >10 %, the chain block must be taken out of service. A repairing is not possible.

- Check bearing surface of the penta-shaped reversing wheel in regard of sharp edges, etc.
- Check brake function
- Control of rest thickness of brake pads.
If thickness of the brake pads is less than 1mm, brakes pads must be replaced.
Replacement of brake pads must only be carried out by a competent person at RUD or by an authorized, specialized RUD distributor.



Pic. 9: Thickness of brake pad must be at least 1 mm



HINT

Welding must not be carried out at the chain block at all.

- In addition to the inspection of the chain block, observe chain regarding wear at the rounding and bearing area.
- Observe user instruction of the RUD Grade 10 Sling Chain (RUD Ref.-No.: 710164) for all used lifting means (chain, hooks, swivels, etc.).
- Additional inspections can be necessary, depending on the result of the risk assessment (f.e. crack detection at load bearing components).

4.4 Disposal

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

WLL chart

Loading angle β :	0-7°	>7°-20°	>20°-45°
VCB-16	20 t	18.5 t	14 t
VCB-22	40 t	37.5 t	28 t
VCB-28	63 t	58 t	45 t

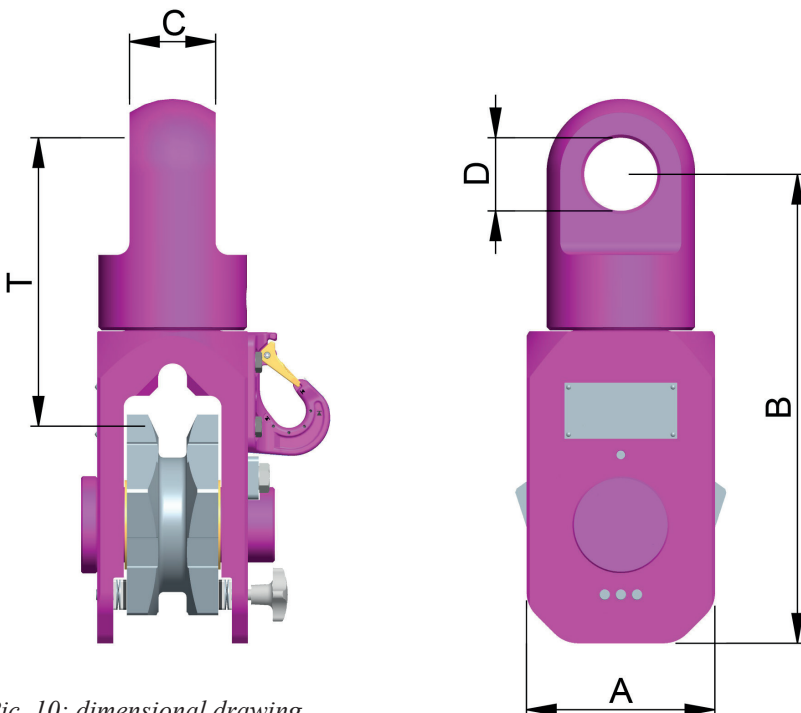
Chart 1: WLL in (t)

Dimensions

nomination	A [mm]	B [mm]	C [mm]	D [mm]	T [mm]	Top connection	weight [kg]	Ref.-No.
VCB 16	135	318	50	45	196	VV-GSCH-22	25.4	7903925
VCB 22	175	436	80	68	270	bow shackle 42.5 t	57	7900835
VCB 28	220	527	100	75	339	bow shackle 85 t	99.9	7906959

Chart 2

Subject to technical alterations



Pic. 10: dimensional drawing