

SO-VIP octopus suspension

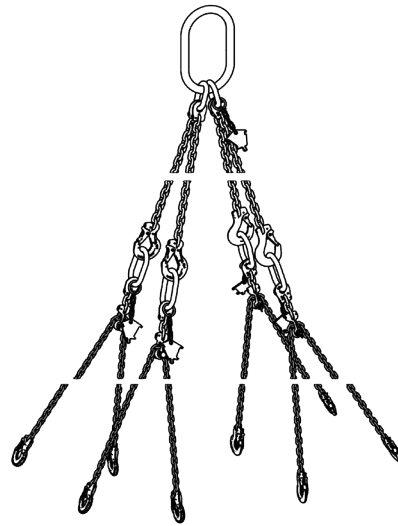


Assembly instructions

This User Manual must be kept for the entire usage time and forwarded with the product.

ORIGINAL ASSEMBLY INSTRUCTIONS

This user manual applies in addition to the VIP operating instructions for RUD sling chains (VIP-no. 7101649).



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RUD item no.: 7914104-ENV02 / 05.024

SO-VIP
octopus suspension
 for lifting
 element ceilings of
 6 to 9 m in length
 (according to specification)

EG-Konformitätserklärung

entsprechend der EG-Maschinenrichtlinie 2006/42/EG, Anhang II A und ihren Änderungen

Hersteller: **RUD Ketten**
Rieger & Dietz GmbH u. Co. KG
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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: VIP-Krake

Folgende harmonisierten Normen wurden angewandt:
 DIN EN 1677-1 : 2009-03 _____

Folgende nationalen Normen und technische Spezifikationen wurden außerdem angewandt:
 DGUV-R 109-017 : 2020-12 _____

Für die Zusammenstellung der Konformitätsdokumentation bevollmächtigte Person:
 Michael Betzler, RUD Ketten, 73432 Aalen

Aalen, den 11.04.2024 Hermann Kolb, Bereichsleitung MA *Hermann Kolb*
 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**
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 73432 Aalen
 Germany

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: VIP-Krake

The following harmonized norms were applied:
 DIN EN 1677-1 : 2009-03 _____

The following national norms and technical specifications were applied:
 DGUV-R 109-017 : 2020-12 _____

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

Aalen, den 11.04.2024 Hermann Kolb, Bereichsleitung MA *Hermann Kolb*
 Name, function and signature of the responsible person

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These operating instructions are valid for the SO-VIP octopus suspension. The entire suspension for lifting element ceilings (6 to 9 m in length, according to specification) consisting of the following associated components (see *Pic. 2, Pic. 9, Table 1*):

- **ABOVE** (RUD item no. 8600211):
1x VIP 4-strand suspension 8 mm, grade 100
- **BELOW** (RUD item no. 7914062):
4x SO-VIP octopus suspensions each with V-GSCH8 with deflection roll, VIP chain 6x18 (137 links), VCGH6 and associated special identification tag.
The lower SO-VIP octopus suspension may not be used individually, but must always be used in combination with the upper VIP 4-strand suspension.



Carefully read the assembly instructions before using the SO-VIP octopus suspension. Ensure that you have understood all the contents.

Non-observation of the instructions can lead to injuries or damage and will invalidate the guarantee.

1 Safety instructions



WARNING

Danger of tipping due to uneven load distribution!

Incorrectly mounted, used, overloaded or damaged SO-VIP octopus suspension and improper use can lead to injuries and damage to objects after a fall.

Only use the SO-VIP octopus suspension with even load distribution.

Check all SO-VIP octopus suspensions carefully every time before use.



WARNING

Standing below suspended loads is prohibited.

No persons are allowed in the danger zone.

- Withdraw all body parts (fingers, hands, arms etc.) from the danger zone during the lifting process (risk of crushing).
- The SO-VIP octopus suspensions may only be used by authorised and instructed persons in compliance with the DGUV Regulations chapter 109-017 and in compliance with any valid national regulations if used outside Germany.
- SO-VIP octopus suspensions may only be used in combination with the VIP 4-strand suspension according to these operating instructions. A different use or partial use is strictly forbidden.
- The specified angle ranges must be observed.
- SO-VIP octopus suspensions are always marked with the corresponding special identification tags.
- Prior to use, always ensure that the individual components match (see identification tags).
- Only RUD round steel link chains of the associated nominal thickness and grade 100 must be used in the SO-VIP octopus suspension.
- Jerky lifting (strong impacts) must be avoided.
- Ensure a stable position of the load during lifting. Swinging must be avoided.
- Take extreme circumstances or impact loads into consideration when choosing the used SO-VIP octopus suspension and the components.
- No persons are allowed in the danger zone.
- Standing below suspended loads is prohibited.
- No technical modifications must be made to the SO-VIP octopus suspensions.
- Damaged or worn SO-VIP octopus suspensions may not be used.

2 Intended use

SO-VIP octopus suspensions may only be used in combination with the VIP 4-strand suspension according to these operating instructions.

The following angle range must be observed (see *Pic. 5*):

- The angle between the upper VIP 4-strand suspension and the vertical one may be max. 45°.
- The inside angle in the lower SO-VIP octopus suspension may be max. 70°. Use chains with sufficient length!

The described SO-VIP octopus suspensions may only be used to lift and transport element plates ranging between 6 and 9 m in length (according to specification).

SO-VIP octopus suspensions not suitable for transport above persons.

SO-VIP octopus suspensions may only be used for the purposes described here.

3 Instructions for mounting and use

3.1 General information

- **Temperature suitability:**
When used at temperatures exceeding 200°C, the WLL of the SO-VIP octopus suspension must be reduced as follows:
 - -40°C to 200°C no reduction
 - 200°C to 300°C minus 10 %
 - 300°C to 380°C minus 40 %
 - Temperatures over 380°C are not permissible!
- The special fluorescent pink powder coating of the connecting parts changes its shade permanently at higher temperatures. A jet black colour signals use above 380°C.



NOTE

After being used at above 380°C (chain turns jet black in colour), further use is prohibited. The chain quality is no longer guaranteed.

- SO-VIP octopus suspensions may not be allowed to come into contact with aggressive chemicals, acids and their vapours.

3.2 Classification and labelling

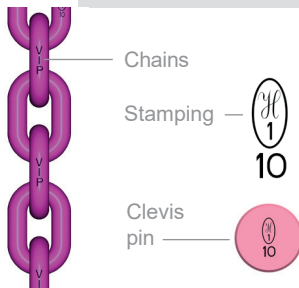
3.2.1 Grade

When assembling the SO-VIP octopus suspension pay attention to the correct assignment of chain to component. The grades/nominal sizes of the components can be identified by the labelling/stamping in the component/bolt/chain or by the colour.



NOTE

It is important to pay attention to the grade assignment of the components. For SO-VIP octopus suspensions or the components, only mount clevis pins with H1-10 stamping. Mixing of system parts of different grades/nominal sizes is not permitted.



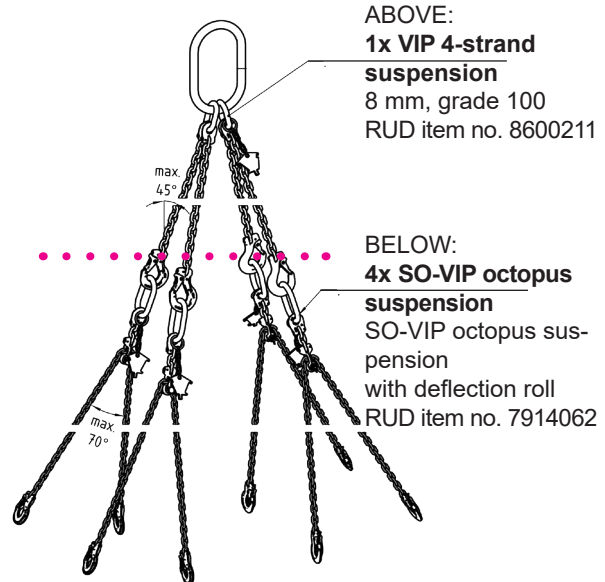
Pic. 1: Grade 100 | VIP chain | Stamping H1-10 | Round clevis pin H1-10

3.2.2 Integral parts

The entire suspension consists of the following associated components:

- **ABOVE (RUD item no. 8600211):**
1x VIP 4-strand suspension 8 mm, grade 100 (shortening possible, see note)

- **BELOW (RUD item no. 7914062):**
4x SO-VIP octopus suspensions each with V-GSCH8 with deflection roll, VIP chain 6x18 (137 links), VCGH6 and associated special identification tag. The lower SO-VIP octopus suspension may not be used individually, but must always be used in combination with the upper VIP 4-strand suspension.



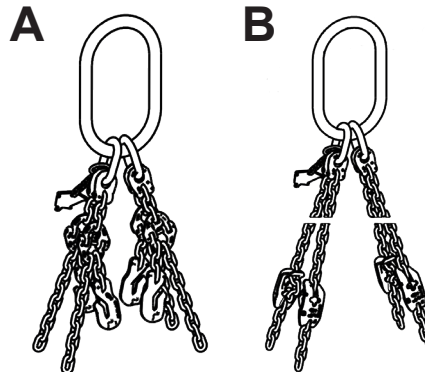
Pic. 2: Entire suspension



NOTE

The upper VIP 4-strand suspension may also be used in the following variants that can be shortened (please include details of the suspension definition/shortening on order):

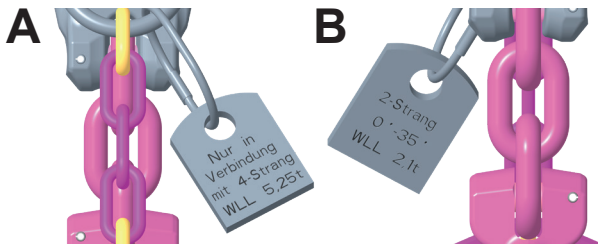
- Not shortened RUD item no.: 8600211)
- Shortened with VIP shortening hook (A - Pic. 3) RUD item no.: 8600211)
- Shortened with VIP multi-shortening claw (B - Pic. 3) RUD item no.: 8600211)



Pic. 3: Permissible shortening options
A: Shortening with VIP shortening hook
B: VIP multi-shortening claw

3.2.3 Identification tag

The SO-VIP octopus suspension may only be used for the described application and with the corresponding special identification tags.

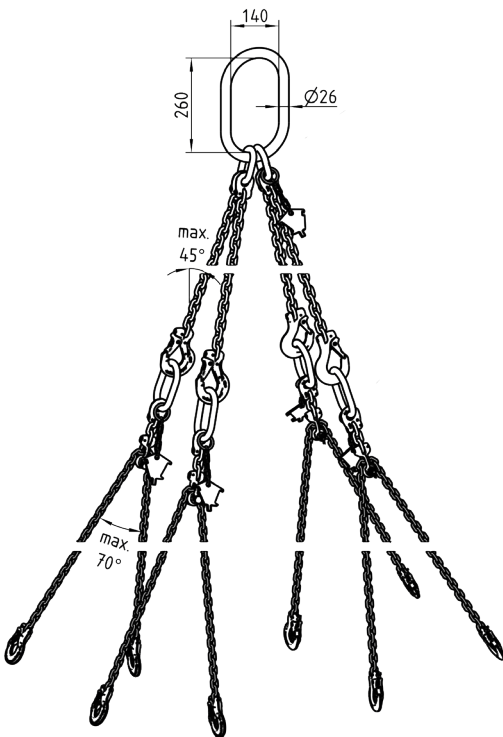


Pic. 4: Special identification tag
 A: Special identification tag | front
 B: Special identification tag | rear

3.3 Assembly notes

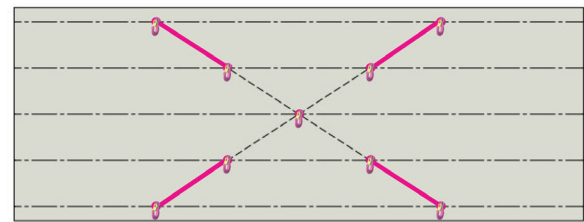
The following points must be considered during assembly:

- The described SO-VIP octopus suspensions may only be used to lift and transport element plates ranging between 6 and 9 m in length.
- For this, a 4-strand sling chain with corresponding balance suspension with 8 VCGH hooks must be used (see component assignment Pic. 9). This ensures an even load distribution of the dead weight on the mesh girders.
- Strictly observe the following angle ranges:
 - The angle between the upper VIP 4-strand suspension and the vertical one may be max. 45°.
 - The inside angle in the lower SO-VIP octopus suspension may be max. 70°. Use chains with sufficient length!



Pic. 5: Entire suspension angle ranges

- When attaching, observe the following symmetrical arrangement/position of the 8 VCGH hooks on the mesh girders (see Pic. 6).



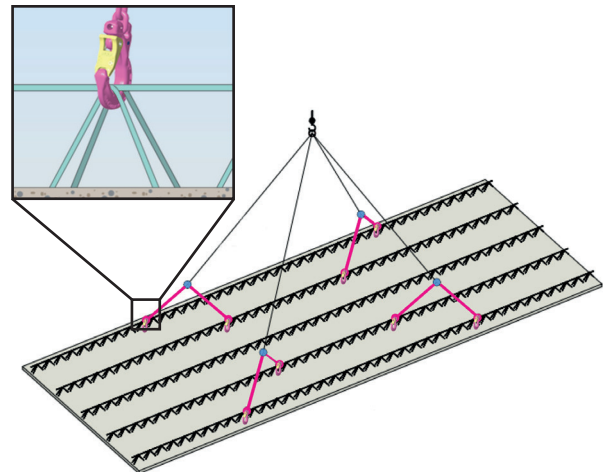
Pic. 6: Symmetrical suspension of VCGH hooks

- Hang the 8 VCGH hooks only in the diagonal loops (see Pic. 7). Proceed as appropriate for narrower plates.



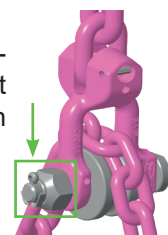
NOTE

Make sure that the chain of the lower SO-VIP octopus suspension is not twisted when hanging in the diagonal loops. The balancing function within the clevis shackles with deflection roll must be ensured.



Pic. 7: Hanging in diagonal loops

- Pay attention that the securing nut on the clevis shackles with deflection roll is tight. The securing nut must be additionally secured with the splint.



Pic. 8: Securing with splint

- Then check that everything has been mounted correctly (see Section 4 Inspection / Repair / Disposal).

3.4 General information on use

- At regular intervals and every time before putting into service, check the entire lifting means to ensure that they are still suitable for their purpose, for heavy corrosion, wear occurrence, deformations etc. (see Section 4 Inspection / Repair / Disposal).



WARNING

Danger of tipping due to uneven load distribution!

Incorrectly mounted, used, overloaded or damaged SO-VIP octopus suspension and improper use can lead to injuries and damage to objects after a fall.

Only use the SO-VIP octopus suspension with even load distribution.

Check all SO-VIP octopus suspensions carefully every time before 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 BG/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 or reduce the WLL of the suspension.
- If possible, leave the immediate danger zone.
- Always supervise your suspended loads.
- Ensure the same pull on the suspensions during lifting.
- Pay attention to slow lifting and lowering.
- Pay attention to horizontal lifting and swinging.
- Avoid jerky movements.
- Ensure a horizontal position of the element plates.
- Make sure that the flow of forces happens in the straight cable without twisting, buckling or kinking.
- For all lifting means, pay attention to the operating instructions for RUD sling chains or the equivalent WLL (VIP grade 100).

4 Inspection / Repair / Disposal

4.1 Notes on regular checks

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 lifting means must be checked at least 1x 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 SO-VIP octopus suspension (including corresponding special identification tags)
- Pay attention that the securing nut on the clevis shackles with deflection roll is tight. The securing nut must be additionally secured with the splint.
- Full, readable size and manufacturer symbols
- Deformations or expansion of the component
- Mechanical damage such as large notches, in particular in areas subject to tensile loads
- Cracks or other damage

4.3 Additional test criteria for the expert / repairer

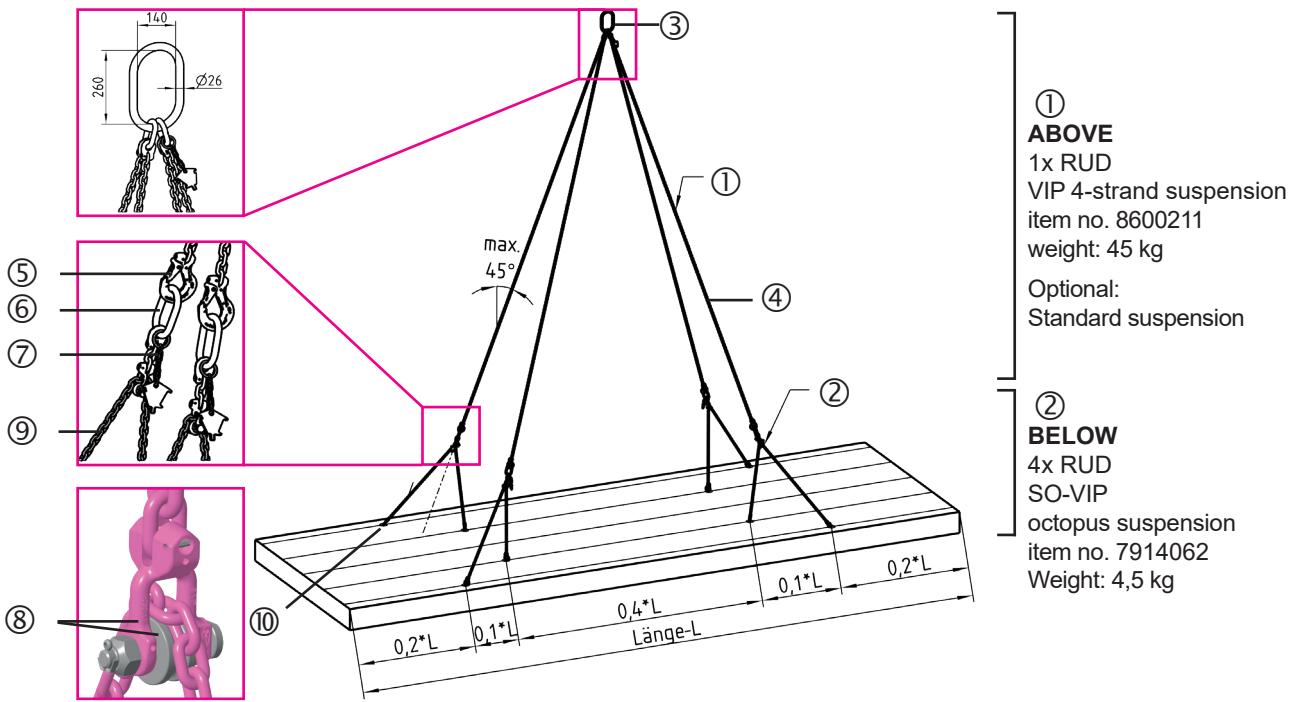
- Cross-section changes due to wear occurrence > 10%
- Heavy corrosion
- Additional inspections may be necessary, depending on the result of the risk assessment (e.g. check for cracks in load-bearing parts).

4.4 Notes on servicing/repairs

- Repairs may only be carried out by experts who have the required skills and expertise.
- Keep the test protocols and records at least until the next inspection.
- Use only original RUD replacement parts and enter the repairs carried out in the chain index card (of the complete lifting means) and use the AYE-D.NET system.
- The SO-VIP octopus suspensions are equipped with a RUD ID-Point® and can be assigned reliably via the unique identification number. This can be identified using the RUD ID-EASY-CHECK® (readers) and transferred to the AYE-D.NET. This application supports you with the administration and documentation of your components.
- Further information on this is available online or from your RUD contact person.

4.5 Disposal

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



Pic. 9: Component assignment

Entire suspension (WLL 5.25 t) for lifting element ceilings consisting of:					
Quantity	Component	Dimensions	Item no.	Position	
ABOVE: 1x 4-strand suspension 8 mm - minimum Grade 100 (RUD or standard)				①	
Option 1 RUD VIP 4-strand suspension	RUD VIP 4-strand suspension (RUD item no.: 8600211) consisting of: Please state suspension definition/shortening on order (size of suspension head, not shortened, shortened with shortening claw or shortened with multi-shortening claw).				
	1x	Special suspension head VSAK 4-8 / 140	Ø 26 Height: 260 Width: 140	7100749	③
	4x	RUD VIP round steel link chain VMK	8x24 pink 6 m	7100478	④
	4x	RUD VIP clevis hooks VCGH-8		7100499	⑤
Option 2 Standard suspension	1x	Standard chain suspension minimum grade 100, 8 mm, WLL 5.25 t	6 m		
BELOW: 4x RUD SO-VIP octopus suspension				②	
RUD SO-VIP octopus suspension RUD item no. 7914062	RUD SO-VIP octopus suspension (RUD item no. 7914062) consisting of:				
	1x	Suspension head VAK 1-8 additionally with SO-KZA	Ø 16 Height: 110 Width: 60	7100682	⑥
	1x	VIP chain 3 links		7100478	⑦
	1x	Clevis shackles V-GSCH 8 with deflection roll		7987366	⑧
	1x	VIP chain 6x18	137 links 2.5 m	7100477	⑨
	2x	VIP-Cobra hooks VCGH-6		7100498	⑩

Table 1: Size table

Subject to technical modifications