

Foundry Hook

>IWH<

>VWH<

Assembly instruction

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

TRANSLATION OF THE ORIGINAL ASSEMBLY INSTRUCTION

This assembly instruction is valid in addition to the safety instructions for RUD Sling chains (ICE-Nr. 7995555 or VIP-Nr. 7101649).



ICE
Grade 120

VIP
Grade 100



RUD Ketten
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RUD-Art.-Nr.: 7905254-EN / V02 / 12.022

Foundry Hook



Simple inspection, administration and documentation of work equipment and components which must be inspected regularly.

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: Weitmaulhaken
VWH / IWH / WH

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

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: Foundry hook
VWH / IWH / WH

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

Name, function and signature of the responsible person

The present user's instruction is valid for the following item variants of the Foundry Hook:

- **IWH** ICE-Foundry Hook in ICE-Pink (Purple colour, quality grade 120, D1 stamping)
- **VWH** VIP-Foundry Hook in VIP-Pink (Magenta, quality grade 100, H1 stamping)



Please read assembly instruction carefully before initial operation of Foundry Hook. Make sure to understand all volumes. Disregard of the assembly 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.

1 Safety instructions



ATTENTION

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



ATTENTION

When using hooks without a safety latch (f.e. the Foundry Hook) increased caution must become affect, resp. before the usage a risk assessment according to Betr.SichV §3 must be carried out. Lifting means with a Foundry Hook must only be used when unintentional unhinge is impossible.



ATTENTION

Foundry Hooks must not be used at construction sites. Detention under a floating load is forbidden. Keep persons out of the hazardous area.

- Keep all body parts like fingers, hands, arms, etc. out of the hazardous area during the lifting operation.
- Any technical modifications at the Foundry Hook are prohibited
- Please be also aware of extreme circumstances or shock loads when selecting the used Foundry Hook.
- Damaged or worn Foundry Hook must no longer be used.
- Only the determined RUD round steel chain of the correct nominal size and quality grade must be used with the Foundry Hook.
- RUD-Foundry Hook must only be used by instructed and competent persons considering DGUV-rules 109-017, and outside Germany noticing the country specific statutory regulations.

2 Intended use

The described Foundry Hooks must only be used for lifting, lashing or transporting of goods, if unintentional unhinge is prohibited. This is not valid, if an unhinge without a rigging person is necessary due to special risks of accidents (f.e. high temperature).

Before the usage, a risk assessment according to Betr.SichV §3 should be carried out.

Foundry Hooks must not be used at construction sites.

Foundry Hooks are not suitable for the transport overhead of people.

3 Assembly- and instruction manual

3.1 General information

- Capability of temperature usage of **ICE-components (IWH)**:

When using the ICE-Foundry Hook at temperatures beyond 200°C the permissible WLL of the ICE-Foundry Hook has to be reduced:

| | |
|-------------------|--------------|
| -60°C up to 200°C | no reduction |
| 200°C up to 250°C | minus 10 % |
| 250°C up to 300°C | minus 40 % |

Temperatures exceeding 300°C are prohibited!

- Capability of temperature usage of **VIP-components (VWH)**: When using the VIP-Foundry Hook at temperatures beyond 200°C the permissible WLL has to be reduced:

| | |
|-------------------|--------------|
| -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 exceeding 380°C are prohibited!

- RUD Foundry Hooks must not be used with aggressive chemicals such as acids, alkaline solutions and their vapours.
- The WLL of components are depending on the following variables:

- Quality grade of component (pictures 1 - 3)
- Nominal size of component
- in the present case

The permissible WLL should be taken out of the according ICE- and VIP user's instruction (or alternatively from the RUD website www.rud.com).

3.2 Hints for the assembly

Please observe correct assignment of chain and component when assembling the Foundry Hook. The quality grade/nominal size or the component can be identified by the stamping at component/bolt/chain resp. by the colour.

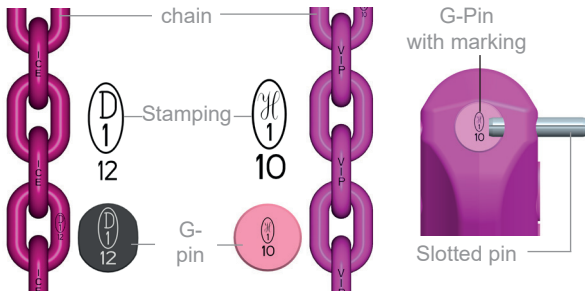


ATTENTION

Observe in any case the quality grade assignment at the components

- Assemble with **ICE components (IWH)** only G-pins with a D1-12 stamping
- Assemble with **VIP components (VWH)** only G-pins with a H1-10 stamping

Mixing of system components from different quality grades is not allowed.



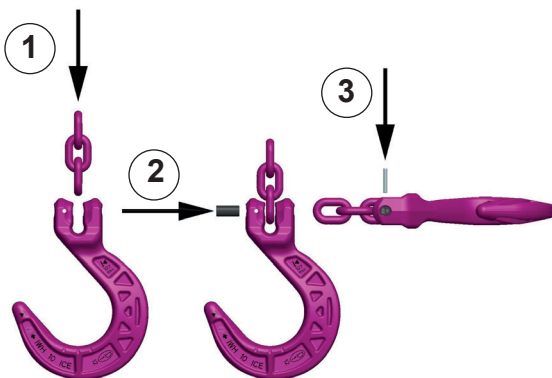
Pic. 1: **Quality grade 120**
ICE-Chain,
Stamping D1-12
Oval pin D1-12

Pic. 2: **Quality grade 10**
VIP-Chain,
Stamping H1-10
Round pin H1-10

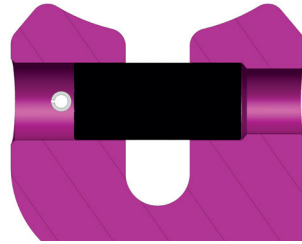
Pic. 3:
VIP-G-Pin
inkl. VIP-
Stamping +
Slotted pin

Basically essential:

- Assemble slotted spring pin for the securing of the G-pin in the clevis in such a way that the slot can be seen resp. faces the outside
- RUD G-pins are fool-proof:
 - For ICE components use only the oval ICE-G-pin (picture 1)
 - For VIP components use only the round VIP-G-pin (picture 2)
- The G-pin must be assembled captive with the slotted pin and with the step hole in the component (picture 5)
- Use slotted pin only once!
- Use only original RUD spare parts.
- Check finally the correct assembly (see chapter 4 *Inspection / repair / disposal*).



Pic. 4: Assembly of connecting pin



Pic. 5: G-pin assembly with slotted pin and step hole (right). G-pin of the next smaller size falls out.

3.3 General user information

- Check before each usage of the self-locking clevis hooks that the securing of the G-pin is in correct position.
- Make sure that the load force happens in the straight leg without being twisted, fold-over or kinked.
- Control frequently and before each operation the total lifting/lashing mean in regard of ongoing ability, strong corrosion, wear, deformation etc. (see chapter 4 *Inspection / repair / disposal*).



WARNING

Wrong assembled or damaged lifting- and lashing means as well as improper usage can lead to physical injury and damage of property when load falls.
Inspect lifting means before each use carefully!

- RUD components have been designed as per DINEN 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.
- Leave hazardous area when possible.
- Watch always attached loads.
- For all lifting/lashing means observe the RUD sling chain Safety instructions for RUD lifting means resp. the relevant WLL (ICE quality grade 120 and VIP quality grade 100).

4 Inspection / repair / disposal

4.1 Hints for the regularly inspection

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 point 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. The operator must specify the test cycles.

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

- Completeness of the Foundry Hook
- Complete and readable size and manufacturer sign
- Deformation or widening of the hook.
- Mechanical damage like strong notches, especially in areas where tensile stress occurs
- Cracks or other defects especially notches at the bearing point of the hook, at the max. until the forged and patented wear markings are reached.

4.3 Additional inspection criteria for the competent person resp. auditor

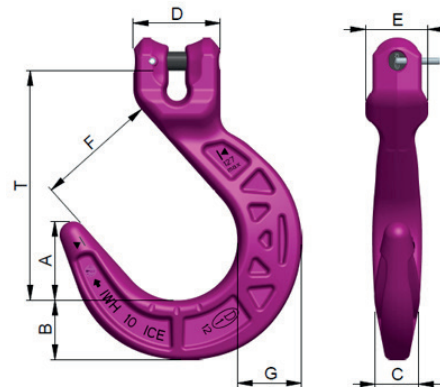
- Reduction of cross section cause by wear of more than 10 %
- Strong corrosion
- Additional inspections may be necessary depending on the result of the risk assessment (e.g. incipient cracks at load bearing parts).

4.4 Hints for inspection/repairing

- Repair work may only be executed by qualified specialists who can verify the necessary skills and training.
- Please keep test protocols and records of the inspection at least until the next inspection takes place.
- Only RUD original spare parts must be used and all repairing and overhauling operations must be documented in the chain card file (of the complete lifting mean) or use the AYE-D.NET-System.
- RUD Foundry Hooks are equipped with a RUD ID-Point® and can be identified by the unique 16 character number. This code can be captured and transferred with the RUD ID-EASY-CHECK® readers into the AYE-D.NET-System. This application supports you with the administration and documentation of your components.
- More information can be found either on the internet or through your local RUD contact person.

4.5 Disposal

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



Pic. 6: Dimensioning

| | Denomination | Chain | WLL [t] | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | F _{max} [mm] | G [mm] | T [mm] | weight [kg/pc.] | Ref.-No. |
|-----|--------------|--------|---------|--------|--------|--------|--------|--------|--------|-----------------------|--------|--------|-----------------|----------|
| ICE | IWH-6 | ICE-6 | 1.8 | 41 | 31 | 24 | 42 | 29 | 64 | 91 | 32 | 121 | 1.0 | 7904360 |
| | IWH-8 | ICE-8 | 3.0 | 49 | 37 | 29 | 50 | 36 | 76 | 108 | 40 | 143 | 1.75 | 7904361 |
| | IWH-10 | ICE-10 | 5.0 | 58 | 44 | 31 | 64 | 46 | 90 | 127 | 47 | 168 | 3.0 | 7903847 |
| | IWH-13 | ICE-13 | 8.0 | 66 | 50 | 39 | 75 | 56 | 100 | 145 | 55 | 193 | 4.7 | 7904362 |
| | IWH-16 | ICE-16 | 12.5 | 75 | 56 | 43 | 90 | 58 | 114 | 177 | 61 | 208 | 6.5 | 7904363 |
| VIP | VWH-6 | VIP-6 | 1.5 | 30 | 22 | 18 | 30 | 22 | 50 | 71 | 22 | 87 | 0.5 | 7100210 |
| | VWH-8 | VIP-8 | 2.5 | 41 | 31 | 24 | 42 | 29 | 64 | 91 | 32 | 121 | 1.0 | 7100211 |
| | VWH-10 | VIP-10 | 4.0 | 49 | 37 | 29 | 50 | 36 | 76 | 108 | 40 | 143 | 1.75 | 7100212 |
| | VWH-13 | VIP-13 | 6.7 | 58 | 44 | 31 | 64 | 46 | 90 | 127 | 47 | 168 | 3.0 | 7100213 |
| | VWH-16 | VIP-16 | 10 | 66 | 50 | 39 | 75 | 56 | 100 | 145 | 55 | 193 | 4.7 | 7100214 |
| | VWH-20 | VIP-20 | 16 | 96 | 80 | 73 | 102 | 80 | 136 | 203 | 80 | 277 | 15.1 | 7998157 |
| | VWH-22 | VIP-22 | 20 | 96 | 80 | 73 | 102 | 80 | 136 | 203 | 80 | 277 | 15.1 | 7998158 |

Chart 1: Dimension chart

Technical alterations subject to change



HINT

The permissible WLL should be taken out of the according ICE- and VIP user's instruction (or alternatively from the RUD website www.rud.com)