

Load ring weldable > VLBS-P< for pipes



Safety instruction

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



RUD Ketten
Rieger & Dietz GmbH u. Co. KG

RUD-Art.-Nr.: 7902244-EN / 08.013



Load ring weldable
VLBS-P
for pipes/tubes
(captive with spring)



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: Lastbock VLBS-P

Folgende harmonisierten Normen wurden angewandt:
EN 12100 EN 1677-1

Folgende nationalen Normen und technische Spezifikationen wurden außerdem angewandt:
BGR 500, KAP2.8

Für die Zusammenstellung der Konformitätsdokumentation bevollmächtigte Person:
Reinhard Smetz, RUD Ketten, 73432 Aalen

Aalen, den 24.10.2011 Dr. Ing. Rolf Sinz (Prokurist/QMB)
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: Load ring VLBS-P

The following harmonized norms were applied:
EN 12100 EN 1677-1

The following national norms and technical specifications were applied:
BGR 500, KAP2.8

Authorized person for the configuration of the declaration documents:
Reinhard Smetz, RUD Ketten, 73432 Aalen

Aalen, 24.10.2011 Dr. Ing. Rolf Sinz (Prokurist/QMB)
Name, function and signature of the responsible person



Please read before initial usage of the VLBS-P insert clevis attachment the user instruction carefully.

Make sure that you have understood all substance. Non-observance of the instruction can result in bodily injury or property damage and eliminates any warranty! If doubtful or misunderstanding the German version of this document is crucial.

1 Safety instructions



ATTENTION

Wrong assembled or damaged lifting points as well as inappropriate use can lead to injuries of persons and property damage when loads falls.

Inspect all lifting points before each use carefully!

The RUD lifting points must only be used by competent and designated persons which have been trained and taking into account the BGR 500, article 2.8, and outside Germany by respecting the country specific regulations.

2 Intended use

The RUD VLBS-P lifting point must only be used for the assembly at loads or lifting means.

The VLBS-P is for the attaching of loads.

The VLBS-P must only be weld on curved interfaces resp. round shaped parts (f.e. tubes) with an outside diameter of Ø 82 mm up to Ø 220 mm, or an outside radius of R41 up to R110.

The VLBS-P must only be positioned and welded in axial direction (f.e. pipe axle - see Picture 1). The pivot axle of the VLBS-P is therefore always parallel to the axle of the curved surface.

The RUD lifting points can also be used as lashing points for the attachment of lashing means.

RUD lifting points must only be used for the intended described usage.

3 Assembly and user instruction

3.1 General information

- Capability of temperature usage:
When used in temperatures higher than 200°C, the WLL of the lifting point must be reduced as follows:
 - -20°C up to 200°C no reduction
 - 200°C up to 300°C minus 10 %
 - 300°C up to 400°C minus 25 %
 - Temperatures higher than 380°C are prohibited!



HINT

VLBS-P lifting points can be stress-relieved one-time together with the load (f.e. as part of a welding construction), when unloaded, one-time stress relieved.

(Temperature <600 °C /1100 °F)

Ability verification of the used welding material must be determined with the corresponding supplier of electrodes resp. welding filler manufacturer.

- RUD lifting points VLBS-P must not be used in combination with aggressive chemicals (acids, alkaline solutions and vapours).
- Make location of lifting points easy observable by using coloured contrast markings.
- VLBS-P will be supplied with pink-powder coated surface.
- The VLBS-P has a protect on the inside positioned spring, which holds the load ring in the desired position.
- The parts of the VLBS-P are connected captive and will be supplied assembled as a complete unit.

3.2 Hints for the installation

Basically essential:

- The material construction to which the lifting point will be attached should be of adequate strength to withstand forces during lifting without deformation. The weld-on material must be suitable for welding and the contact areas must be free from impurities, oil, colour, etc. The material of the forged welding block is: S355J2+N (1.0577+N (St52-3)) B.S. 4360.50 D or AISI 1019
- Determine position of lifting points in such a way that prohibited loading or transaction of load will be avoided:
 - **For single leg lifts:** the load ring should be positioned vertically above the centre of gravity of the load.
 - **For two leg lifts:** the lifting points must be equidistant to/or above the centre of gravity of the load.
 - **For three and four leg lifts:** the lifting points should be arranged symmetrically around the centre of gravity in the same plane, if possible.
- Load Symmetry:
The working load limit of individual RUD lifting points are calculated using the following formula and are based on symmetrical loading:

$$W_{LL} = \frac{G}{n \times \cos \beta}$$

W_{LL} = working load limit / single strand (kg)
 G = Weight of load (kg)
 n = Number of load bearing strands
 β = Inclination angle of single strand

Number of load bearing strands:

	Symmetrical	Unsymmetrical
two leg	2	1
three / four leg	3	1

Chart 1: Load bearing strands (compare also chart 3)

- Finally check correct assembly (see chapter 4 Inspection criteria).

3.3 Hints for welding

The welding should only be carried out according to EN 287 or AWS Standards by an authorized welder.

Suitability evidence of the used welding material must be determined together with the filler material manufacturer.



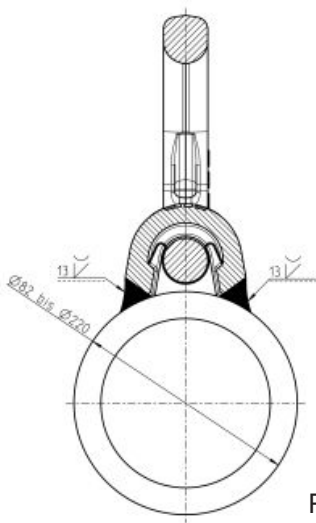
HINTS

- *Attention: Do not weld at the pink powder coated, heat-treated load ring.*
- *All weld seams must be carried out with the same temperature.*

1. Tack-weld the weld-on block.
2. Check function of latch. The latch must be able to pivot by 180°. If necessary please correct.
3. Before carry out top seam remove weld defects or impurity at root weld seam.
4. Weld block on.
Details about weld seam type and size can be taken out of picture 1 and from the chart 2 and 4.

Type	Size	Length	Volume
VLBS-P 4 t	HV13 concave	2 x 46 mm	ca. 5.7 cm³

Chart 2: Weld seam (weld-on block)



Pic 1: HV-seam-concave

5. Check finally after welding the ongoing suitability of the lifting point by a competent person (see chapter 4, Inspection criteria).

3.4 Hints for the usage

- Check regularly and before each use the whole lifting point in regard of ongoing suitability as a lifting mean, paying particular attention to strong corrosion, deformation, wear and cracks at weld seam, etc. (see chapter 4, Inspection criteria).



ATTENTION

Wrong assembled or damaged lifting points as well as inappropriate use can lead to injuries of persons and property damage when loads falls.

Inspect all lifting points before each use carefully!

- Pay attention that the lifting mean in the VLBS-P is free movable. When lifting means (f.e. chain slings) are attached and unhinged, no violent pressure or shearing joint must occur.
- Avoid damage of lifting means caused by sharp edges.
- If the lifting points are used **exclusively** for lashing the value of the working load limit can be doubled. LC (Lashing capacity) = 2 x WLL

3.5 Hints for regular inspection

Check by a competent person in periods, which are determined by usage, but at least 1x year, the continuous appropriateness of the lifting means (see article 4 Inspection criteria). The inspection is also necessary after incidents and special occurrences.

4 Inspection criteria

Check and control the following points before each initial operation, in periodical periods after the assembly and after special incidents:

- Completeness of lifting point
- complete, readable WLL statement as well as existing manufacturer's mark
- Deformation at load bearing parts like base body and latch
- mechanical damage like strong notches, especially at areas with tensile stress
- Damages and cross section reductions caused by wear > 10%
- Strong corrosion (pitting corrosion)
- Cracks at load bearing parts
- Cracks or other damage at weld seam

Lifting methode										
Number of legs	1	1	2	2	2	2	2	3 / 4	3 / 4	3 / 4
Angle of inclination	0°	90°	0°	90°	0-45°	45-60°	Un-symmetry	0-45°	45-60°	Un-symmetry
Factor	1	1	2	2	1.4	1	1	2.1	1.5	1
Type	For a total weight of >G< in tons									
VLBS-P 4 t	4	4	8	8	5.6	4	4	8.4	6	4
Type	total weight of >G< in lbs									
VLBS-P 4 t	8800	8800	17600	17600	12320	8800	8800	18500	13200	8800

Chart 3: WLL overview

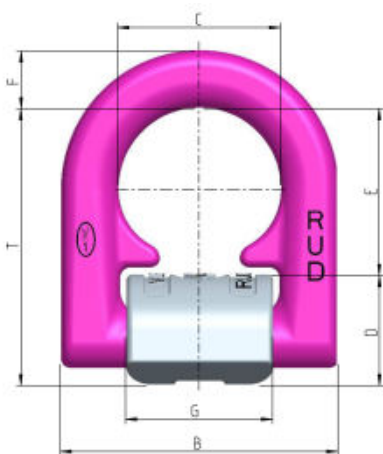
	Europa (DE, GB, FR,) Baustähle, niedrig legierte Stähle	USA, Canada
MAG / MIG (135) GAS SHIELDED WIRE WELDING	ISO 14341: G4 Si 1 z.B. Castolin 45250	ISO 14341: G4 Si 1 AWS A 5.18 : ER 70 S-6 z.B. Eutectic MIG-Tec A88
E-Hand Gleichstrom = (111) Stick Electrode Direct Current	EN ISO 2560-A - E 42 6 B 3 2; EN ISO 2560-A - E 38 2 B 12 H10 z.B. Castolin 6666 * Castolin 6666N *	AWS A 5.5 : E 8018-G AWS A 5.5 : E 7016 EN ISO 2560-A - E 42 6 B 3 2; EN ISO 2560-A - E 38 2 B 12 H10; z.B. Eutectic 6666 / 35066 CP*
E-Hand ~ Wechselstrom (111) Stick Electrode Alternating Current	EN ISO 2560-A - E 38 0 RR 1 2 EN ISO 2560-A - E 42 0 RR 1 2 z.B. Castolin 6600 / Castolin 35086 no-load-voltage 35-48 (max.) V	AWS A 5.1 : E 6013 EN ISO 2560-A - E 38 0 RR 1 2 EN ISO 2560-A - E 42 0 RR 1 2 z.B. Eutectic Beauty Weld II
WIG (141) TIG - Tungsten Arc Welding	ISO 636: W3 Si 1 z.B. Castolin 45255W	ISO 636: W3 Si 1 AWS A 5.18 : ER 70 S-6 z.B. Eutectic TIG-Tec-Tic A 88



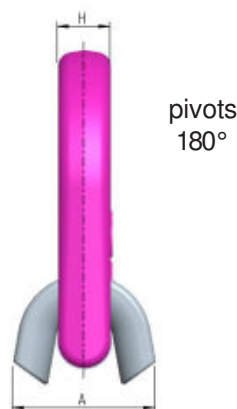
HINTS

Pay attention to the processing instructions of the weld filler materials and to the drying requirements*.

Chart 4: Welding procedure and Welding filler metals



Pic. 2: Dimensioning



Pic. 3: Top view weld-on block

Nomination	WLL	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	T [mm]	Weight [pc.]	VLBS-P complete	D-ring	weld-on block	spring
VLBS-P 4 t	4 t	45	87	51	35	52	18	46	16.5	87	0.8 kg	7995472*	7993029	7995476	7102232
VLBS-P 4 t	8800 lbs	1 ²⁵ / ₃₂ "	3 ⁷ / ₁₆ "	2"	1 ³ / ₈ "	2 ¹ / ₁₆ "	2 ³ / ₃₂ "	1 ¹³ / ₁₆ "	2 ¹ / ₃₂ "	3 ⁷ / ₁₆ "	1.75 lbs	7995472*	7993029	7995476	7102232

Chart 5: Dimensioning

* Packing unit: 10 pieces

Technical alterations are subject to change