EN

Load ring - for welding - with locking device - VRBSS

Safety instructions

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

Load ring - for welding - with locking device - VRBSS

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EG-Herstellererklärung

im Sinne der EG-Maschinenrichtlinie 98/37/EG,
Anhang II B und ihre Änderungen

Hiermit erklären wir (unterstützt durch die Zertifizierung nach ISO 9001), daß die nachfolgend bezeichnete Ausrüstung aufgrund ihrer Konzipierung und Bauart, sowie der von uns in Verkehr gebrachten Ausführung, den einschlägigen grundlegenden Sicherheits- und Gesundheitsanforderungen der EG-Richtlinie entspricht. Bei einer nicht mit uns abgestimmten Änderung der Ausrüstung verliert diese Erklärung ihre Gültigkeit. Weiterhin verliert diese Erklärung ihre Gültigkeit, wenn die Ausrüstung nicht entsprechend den in der Betriebsanleitung aufgezeigten bestimmungsmäßigen Fällen eingesetzt wird und die regelmäßig durchzuführenden Überprüfungen laut BGR 500, Kapitel 2.8 „Betreiben von Lastaufnahmeeinrichtungen im Hebezeugbetrieb“, und den entsprechenden landesspezifische Vorschriften, nicht vorgenommen werden.

Hinweis: Die Inbetriebnahme der Maschine, an die die gelieferten Bauteile angebaut werden, ist solange untersagt, bis festgestellt wurde, daß sie den Bestimmungen der Maschinenrichtlinie 98/37/EG der Europäischen Gemeinschaft entspricht. Beim Ringbock angewendete harmonisierte Normen DIN EN ISO 12100 T1 und T2 sowie in Anlehnung an EN 1677. Dies gilt nur für Mitgliedstaaten der EU und EFTA.

Bezeichnung der Ausrüstung:
Anschlagpunkt
Type: **Ringbock schweißbar -** VRBSS
Herstellerzeichen:

EC-Declaration of the manufacturer

according to the Machinery Directive 98/37/EC,
annex II B and amendments

We hereby declare (supported by certification as per ISO 9001) that the equipment, as mentioned below, corresponds to the appropriate, basic requirements of safety and health of the corresponding EC regulation in the design as it is sold by us because of its design and construction. In case of any modification of the equipment, not being agreed upon with us, this declaration becomes invalid. Furthermore, this declaration will become invalid if the equipment is not used according to the prescriptions mentioned in the manual and if the necessary examinations are not carried out regularly as per BGR 500.

Hint: The commissioning of the machine in which the delivered components of this consignment will be installed is only permitted if it can be stated that the machine corresponds to the machine directive 98/37/EC of the European Community. Applied standards: DIN EN ISO 12100 T1 and T2 in particular EN 1677. This is only valid for countries which are member of the EC and of the EFTA.

Designation of the equipment:
Lifting point
Type: Load ring - VRBSS - for welding
Manufacturer's sign:

User Instructions

1. Reference should be made to German Standards according BGR 500 or other country specific statutory regulations and inspections are to be carried out by competent persons only.

2. Before installing and every use, visually inspect RUD lifting points, paying particular attention to any evidence of weld cracks, corrosion, wear, deformations, etc.

3. The material construction to which the lifting point will be attached should be of adequate strength to withstand forces during lifting without deformation. The contact areas must be free from inpurities, oil, colour, etc.

The material of the forged welding block is S355J2G3 (St52-3 1.0570), B.S. 4360.50 D or AISI 1019

4. The lifting points must be positioned on the load in such a way that movement is avoided during lifting.
a.) For single leg lifts, the lifting point should be vertically above the centre of gravity of the load.
b.) For two leg lifts, the lifting points must be equidistant to/or above the centre of gravity of the load.
c.) For three and four leg lifts, the lifting points should be arranged symmetrically around the centre of gravity in the same plane.

5. Load Symmetry:
The working load limits of individual RUD lifting points are calculated using the following formula and are based on symmetrical loading:

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

W_{LL} = working load limit
G = load weight (kg)
n = number of load bearing legs
ß = angle of inclination of the chain to the vertical

The calculation of load bearing legs is as follows:

	symmetrical	asymmetrical
two leg	2	1
three / four leg	3	2

(see table 1+ 5)

6. All fittings connected to the VRBSS should be free moving. When connecting and disconnecting the lifting means (sling chain) pinches and impacts should be avoided. Damage of the lifting means caused by sharp edges should be avoided as well.

7. The complete design can be annealed stress-free up to <600°C (1100°F) without reduction of WLL.

8. The distance lugs assist in achieving the correct root weld (approx. 3 mm = 0.1 inch). They may not be removed.

9. RUD-Lifting points must not be used under chemical influences such as acids, alkaline solutions and vapours e.g. in pickling baths or hot dip galvanising plants. If this cannot avoided, please contact the manufacturer indicating the concentration, period of penetration and temperature of use.

10. The inside liying spring is pressing the load ring against the welding block. Due to the friction, the load ring will stay in the requested position. When assemblied in vertical position the load ring can be fold flat so that the danger of accidents will be reduced drastically as well as an unintended hook in. The RUD VRBSS fullfill the guide lines of the RAG No. 815001 „Lifting points on loads Part 1 and 2.

11. The places where the lifting points are fixed should be marked with colour.

12. If the lifting points are used **exclusively** for lashing the value of the working load limit can be doubled.
LC = 2 x WLL

13. After welding, an annual inspection or sooner if conditions dicate should be undertaken by a competent person examining the continued suitability. Also after damage and special occurrences.

Inspection criteria concerning paragraphs 2 and 13:

- The lifting point should be complete.
- The working load limit and manufacturers stamp should be clearly visible.
- Deformation of the component parts such as body and load ring.
- Mechanical damage, such as notches, particulary in high stress areas.
- Wear should be no more than 10% of cross sectional diameter.
- Evidence of corrosion.
- Evidence of cracks.
- Cracks or other damage to the weld.

A non-adherence to this advice may result damages of persons and materials !

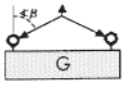
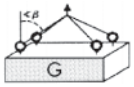
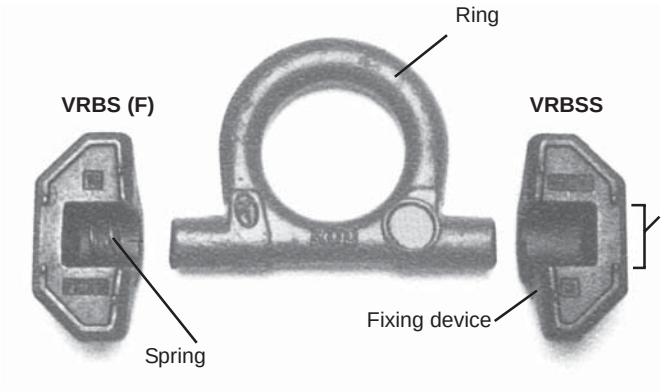
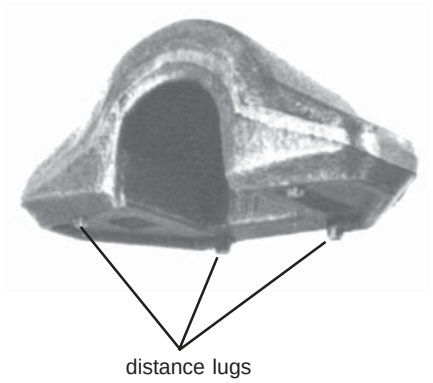
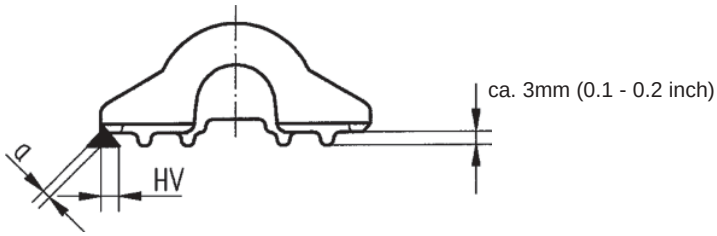
Method of lift	 G1	 G	 2xG1	 G	 G		 G	 G		 G
Number of legs	1	1	2	2	2	2	2	3 and 4	3 and 4	3 and 4
Angle of inclination <ß	0°	90°	0°	90°	0-45°	45-60°	unsymm.	0-45°	45-60°	unsymm.
Factor	1	1	2	2	1,4	1	1	2,1	1,5	1
Type	**WLL in metric tonnes (total weight)**									
 VRBSS 6,7 t	6,7 t	6,7 t	13,4 t	13,4 t	9,4 t	6,7 t	6,7 t	14 t	10 t	6,7 t
VRBSS 10 t	10 t	10 t	20 t	20 t	14 t	10 t	10 t	21 t	15 t	10 t
VRBSS 16 t	16 t	16 t	32 t	32 t	22,4 t	16 t	16 t	33,6 t	24 t	16 t

Tabelle 1





Welding seam definition:



Welding procedure + Welding filler metals :

	Europe (GER, GB, F ..)	**USA, Canada,** ..
	Mild steel, Low alloyed steel,	
GAS SHIELDED WIRE WELDING *MAG / MIG*	EN 440 G4Si1 z.B. Castolin 45250	AWS : A 5.18 ER 70 S-6 z.B. Eutectic MIG-Tec Tic A88
Stick Electrode Direct Current	EN 499 E 426 B32 H5 z.B. Castolin 6666 * 6666 N*	AWS : A 5.5 E 8018-G E 7016 z.B. Eutectic 6666/35066 CP*
Stick Electrode Alternating Current	EN 499 E 380 RR 12 z.B. Castolin 35086 CP 6600	AWS : A 5.1 E 6013 z.B. Eutectic Beauty Weld II
TIG Tungsten Arc Welding *WIG*	DIN 8575 WSG CrMo1 z.B. Castolin 45252 W	AWS : A 5.18 ER 70 S-6 z.B. Eutectic TIG-Tec-Tic: A 88

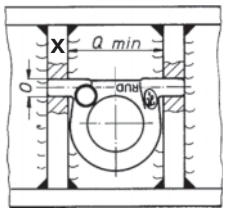
Table 2 ** Follow the drying instructions !*

Weld size (per welding block) **:**

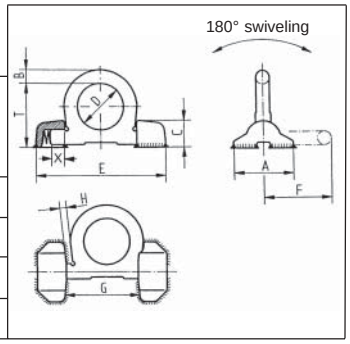
	welding beam size	length	volume
VRBSS 6,7 t	HV 5,5 + a 3 ◺	2 x 165 mm	ca. 8 cm³
VRBSS 10 t	HV 6 + a 4 ◺	2 x 190 mm	ca. 12 cm³
VRBSS 16 t	HV 8,5 + a 4 ◺	2 x 250 mm	ca. 26 cm³

Table 3

Ring integrated in the construction :



The specific processing informations of the welding fillers have to be attended.



Type	WLL t	weight kg	A	B	C	D	E	F	H	T	O	Q	X	ref.-no. **VRBSS**	ref.-no. Ring
VRBSS 6,7	6,7	2,0	88	20	39	60	170	92	7	84	23	101	15	7992875	7991923
VRBSS 10	10	2,8	100	22	46	65	195	100	7	95	28	106	22	7992876	7991890
VRBSS 16	16	6,6	130	30	57	90	266	134	10	127	35	147	28	7992877	7991924

Table 4

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

① To weld the welding block of the types VRBS resp. VRBS(F) (bottom side shows an „Feder“). Due to the distance lugs at the welding block the required gap for the root welding is guaranteed. Start welding of root seam and top run an point „S“ (see picture). Cleaning carefully the root welding before starting with the cover weld. The total weld should be carried out in one heat.

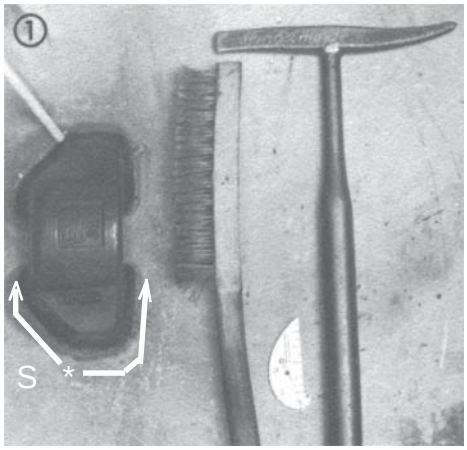
② Fit the spring and the load ring into the welded block.

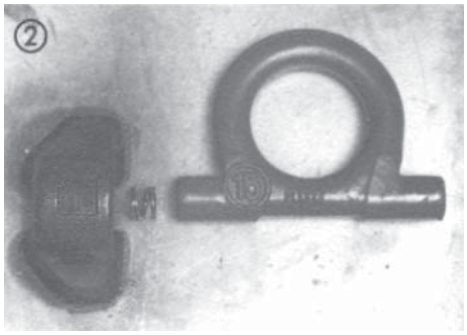
③ Bring the welding block VRBSS (bottom side shows „Rasten“) over the load ring. Load ring must be able to pivot. According to the chart the dimension „x“ between the load ring and the already welded block have to be adjusted. With the dimension „y“ the second block should be welded.

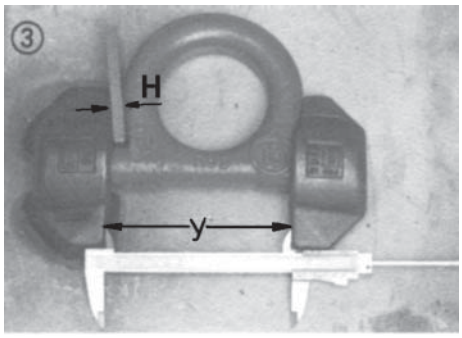
④ Welding block VRBSS have to be tacked by the distance lugs. Check the function (180° and friction). Eventually correction.

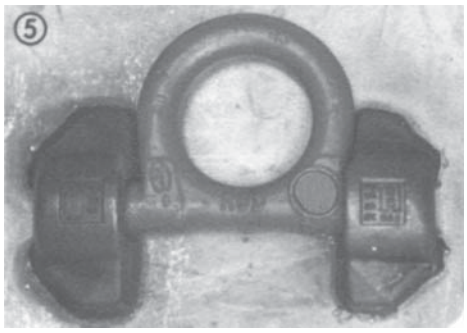
⑤ Welding as mentioned in ① .

● **Attention: Do not weld at the pink powder coated, heat treated load ring.**









Method of lift	G1	G	2xG1	G	G		G	G		G
Number of legs	1	1	2	2	2	2	2	3 and 4	3 and 4	3 and 4
Angle of inclination <ß	0°	90°	0°	90°	0-45°	45-60°	unsymm.	0-45°	45-60°	unsymm.
Factor	1	1	2	2	1,4	1	1	2,1	1,5	1
Type	**WLL in lbs (total weight)**									
VRBSS 6,7	14750 lbs	14750 lbs	29500 lbs	29500 lbs	20650 lbs	14750 lbs	14750 lbs	30900 lbs	22000 lbs	14750 lbs
VRBSS 10	22000 lbs	22000 lbs	44000 lbs	44000 lbs	30800 lbs	22000 lbs	22000 lbs	46200 lbs	33000 lbs	22000 lbs
VRBSS 16	35200 lbs	35200 lbs	70400 lbs	70400 lbs	49300 lbs	35200 lbs	35200 lbs	74000 lbs	52800 lbs	35200 lbs

Table 5