

Load ring for 90° corners VRBK - for welding

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
for 90°-corners - VRBK



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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/EC 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 Kante - VRBK**

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 - VRBK - 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 impurities, oil, colour, etc.

The material of the forged welding block is S355J2+N (St52-3 1.0577+N), 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:

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

W_{LL} = working load limit
 G = load weight (kg)
 n = number of load bearing legs
 β = 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)

6. All fittings connected to the VRBK 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 places where the lifting points are fixed should be marked with colour.

9. At outdoor sites or in case of special danger of corrosion, the welds should only be designed as continuous, fillet welds. The HV weld at the VRBK guarantees a connection via the whole cross section of the material. This corresponds to a closed weld showing no signs of removed.

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

11. 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 be avoided, please contact the manufacturer indicating the concentration, period of penetration and temperature of use.

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

$$LC = 2 \times WLL$$

13. After welding, an annual inspection or sooner if conditions dictate should be undertaken by a competent person paying particular attention to the following.

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, particularly 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											
Number of legs	1	1	2	2	2	2	2	3 und 4	3 und 4	3 und 4	
Angle of inclination β	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 tonnes (total weight)										
	VRBK 4 t	4 t (8800 lbs)	4 t (8800 lbs)	8 t (17600 lbs)	8 t (17600 lbs)	5,6 t (12320 lbs)	4 t (8800 lbs)	4 t (8800 lbs)	8,4 t (18480 lbs)	6 t (13200 lbs)	4 t (8800 lbs)
	VRBK 6,7 t	6,7 t (14750 lbs)	6,7 t (14750 lbs)	13,4 t (29500 lbs)	13,4 t (29500 lbs)	9,4 t (20650 lbs)	6,7 t (14750 lbs)	6,7 t (14750 lbs)	14 t (30900 lbs)	10 t (22000 lbs)	6,7 t (14750 lbs)
	VRBK 10 t	10 t (22000 lbs)	10 t (22000 lbs)	20 t (44000 lbs)	20 t (44000 lbs)	14 t (30800 lbs)	10 t (22000 lbs)	10 t (22000 lbs)	21 t (46200 lbs)	15 t (33000 lbs)	10 t (22000 lbs)

Table 1

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

Welding sequence:

① Welding of welding block VRBK.

The distance lugs serve as distance measurement for required gap for the root welding. Start of root and fillet weld at point „S“ (see drawing). Before carrying out the fillet weld, carefully clean the root. Possibly filled weld. Fix size „a“ acc. the table 3. The complete weld should be carried out in one heat.

② Insert ring in welding block. Attach second welding block as tight as possible to the ring, in order to still guarantee moveability of same. Only fasten provisionally.

③ Examine on 180° tilting ability. Possibly make corrections.

④ Weld on second welding block, as described under ①.

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

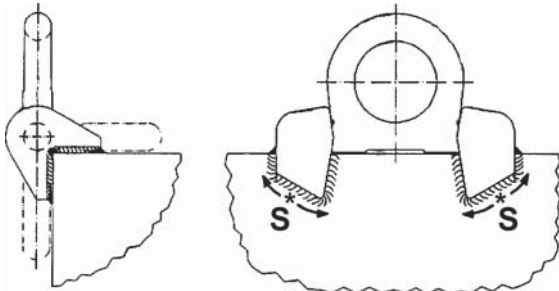
Welding procedure + Welding filler metals :

	Europe (BRD, 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 3 * Follow the drying instructions !

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

Welding seam definition:



weld size (per welding block) :

	welding beam		
	size	length	volume
VRBK 4 t	HV 4 + a 3	approx. 85mm	approx. 3,2 cm ³
VRBK 6,7 t	HV 5 + a 3	approx. 95mm	approx. 6 cm ³
VRBK 10 t	HV 8 + a 3	approx. 155mm	approx. 11 cm ³

Table 2

Type	WLL t	weight kg	A	B	C	D	E	F	G	a	Ref-No.
VRBK 4	4	1,1	32	138	48	30	67	16	30	4+3	7992879
VRBK 6,7	6,7	2,1	40	176	60	37	86	20	34	5+3	7992880
VRBK 10	10	4,3	52	208	65	50	98	22	46	8+3	7992881

Table 5