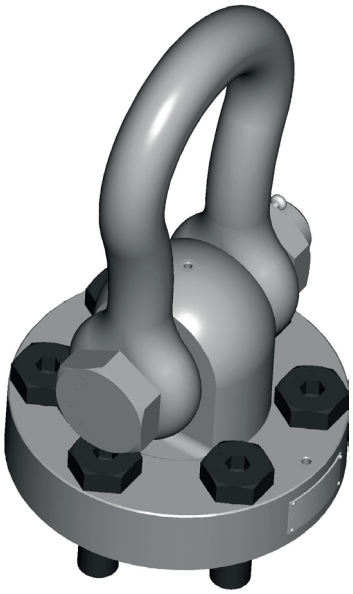
EN

Hoist ring boltable on plate
WBPG

Safety instructions

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



Lifting points bolted
WBPG

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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: Wirbelbock WBPG

Folgende harmonisierten Normen wurden angewandt:

DIN EN 1677-1 : 2009-03	DIN EN ISO 12100 : 2011-03

Folgende nationalen Normen und technische Spezifikationen wurden außerdem angewandt:

BGR 500, KAP2.8 : 2008-04

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

Aalen, den 26.09.2016 Dr.-Ing. Arne Kriegsmann,(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 WBPG

The following harmonized norms were applied:

DIN EN 1677-1 : 2009-03	DIN EN ISO 12100 : 2011-03

The following national norms and technical specifications were applied:

BGR 500, KAP2.8 : 2008-04

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

Aalen, den 26.09.2016 Dr.-Ing. Arne Kriegsmann,(Prokurist/QMB)
Name, function and signature of the responsible person

User Instruction

1. Reference should be made to German Standards accord. BGR 500/DGUV 100-500 or other country specific statutory regulations and inspections are to be carried out by competent persons only.

2. When storing hoist rings make sure that they are protected against atmospheric influence and aggressive substances.

Before installation and every use, inspect visually RUD lifting points, paying particular attention to any evidence of funktion, corrosion, wear, weld cracks and deformations. Please ensure compatibility of bolt thread and tapped hole.

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 German testing authoritiy BG, recommends the following minimum for the bolt lengths:

1 x M in steel (min. quality S235JR [1.0037])
1,25 x M in cast iron (e.g. GG25)
2 x M in aluminium
2,5 x M in aluminium-magnesium alloys
(M = thread Ø, e.g. M20)

When using hoist rings in combination with light metals nonferrous heavy metals and grey cast iron, please inquire a special solution and inform us about the material in detail.

Hint
Acc. to GS-Mo 15-04 only the **provided bolts** must be used.

4. Determine the position of the hoist rings in such a way that forbidden loading like bending of the ring during load turning will be avoided.
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 symmetrical around the centre of gravity, in the same plane if possible.

5. Load symmetry:
The required WLL of the individual RUD lifting point 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 the load bearing legs
ß = angle of inclination of the chain strand to the verical

The calculation of load bearing legs is as follows:

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

(see table 2)

6. For the bolt-on-surface in the area of the screwing zone the following Standard is valid: Flatness tolerance acc. to DIN ISO 2768-H. The surface roughness should be between Rz 100 and Rz 400. Thread hole position tolerance +/- 0,3 mm. All other tolerances acc. to DIN ISO 2768-m. Metric internal screw thread must be machined acc. to DIN 13-6H.

7. At bolt-on positions without form-fit shift protection the contact areas must be free of lubricants, coatings, forging scales. The WBPG must be able to pivot in the bolted condition by 180° and should swivel 360°. The provided bolts must be torqued with a moment of torsion (+/- 10 %) acc. to chart 1. When using multiple head bolts (hexagon bolts with additional hexagon sockets) the outside hexagon must be used for tightening.

8. Shock loads or vibrations, especially at through holes can cause unintended untightening of the bolt connection.
Possibilities for securing: Liquid glue for example Loctite (please read user instruction of manufacturer carefully). For through hole connections please use RUD self securing nuts. Secure in general all boltable connections of the lifting points with srew locking glue.

9. All fittings connected to the WBPG should be free moving. When using round slings, wire ropes or chains directly with the hoist ring an adapter shackle might be necessary to guarantee the prescribed minimum radius of the lifting mean manufacturer. To avoid injuries during work with lifting means, please keep hands and other body parts out of the shackle´s pivot and swiveal area reach. Damage of the lifting means caused by sharp edges should be avoided as well.

10. Effects of temperature:
WBPG hoist rings can be used in temperature areas from -10°C up to 100°C

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 galvanizing plants. If this cannot avoided, please contact the manufacturer indicating the concentration, period of penetration and temperature of use.

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

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

14. After fitting, an annual inspection or sooner if conditions dictate should be under taken by a competent person examining the continued suitability. Also after damage and special occurrences.

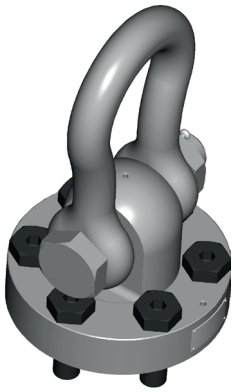
Inspection criteria concerning paragraphs 2 and 14:
- Ensure correct bolt and nut size, bolting quality and bolting length
- Ensure compatibility of bolt thread and tapped hole
- The lifting point should be complete
- The bolt-on surface of the hoist ring must be flat and the full area must be supported
- The working load limit and manufacturers stamp should be clearly visible
- Deformation of the component parts such as body, load ring, bolt or threaded bolt
- 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
- Damage to the bolt, nut and/or thread
- Pivoting- and swivelling must be guaranteed.

Warning:
WBPG Hoist rings are only suiteable for loads in the pivot level of the ring. Because of the ball bearing the swivelling bolt will turn towards the load force most probably. Please remove all influence which prevent the aligning of the ring before loading.

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

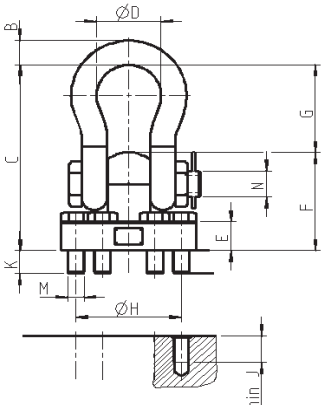
WBPG-80 t

ballbearing
180° pivoting
360° swivelling



WBPG-85 t/400 mm und 100 t/400 mm

ballbearing
360° swivelling
180 ° pivoting



Type	WLL [t]	weight [kg]	A	B	C	D	E	F	G	H	J	K	M	N	Angular pitch	bolts	torque	ref. No.
WBPG 80 t 500 mm *	80	235	500	75	550	190	88	302	250	390	65	63	42	83	60°	6x RUD - Kombikopf (multiple head) M42x128 - 10.9	4000 Nm	7989182
WBPG 85 t/ 400 mm **Standard**	85	170	400	75	577	190	89	304	273	310	73	71	48	83	60°	6x RUD - Kombikopf (multiple head) M48x160 - 10.9	6000 Nm	7993712
WBPG 100 t/ 650 mm *	100	320	650	95	630	230	88	320	310	500	60	59	48	95	36°	ISO 4762 (DIN 912) (Hexagon Socket Head) 10x M48x100 - 8.8	4000 Nm	7993327
WBPG 100 t/ 400 mm **Standard**	100	170	400	83	577	190	89	304	273	310	73	71	48	83	60°	6x RUD - Kombikopf (multiple head) M48x160 - 10.9	6000 Nm	7993245
WBPG 120 t/ 570 mm **Standard**	120	360	571	95	651	238	110	344	307	445	77	75	48	95	60°	6x RUD - Kombikopf (multiple head) M48x160 - 10.9	6000 Nm	7900917
WBPG 150 t/ 570 mm Sling**	150	400	570	100	663	253	110	350	313	420	65	63	42	95	36°	ISO 4762 (DIN 912) (Hexagon Socket Head) 10x M42x130 - 12.9	4000 Nm	7904088
WBPG 200 t/ 650 mm **Standard**	200	680	650	120	880	290	100	460	426	500	73	71	48	130	36°	ISO 4762 (DIN 912) (Hexagon Socket Head) 10x M48x160 - 12.9	6000 Nm	7900383
WBPG 250 t/ 730 mm **Standard**	250	992	730	130	920	305	138	496	424	580	74	72	48	140	30°	ISO 4762 (DIN 912) (Hexagon Socket Head) 12x M48x160 - 12.9	6000 Nm	7905690
WBPG 250 t/ 730 mm Sling**	250	844,3	730	126	894	300	138	452	442	580	74	72	48	120	30°	ISO 4762 (DIN 912) (Hexagon Socket Head) 12x M48x160 - 12.9	6000 Nm	7908891

Table 1 ** Special parts: other thread arrangements on request* *** With Sling-Shackle* *Subject to technical alterations*

Working load limit in dependence of the sling method when loading the WBPG in the direction of the pivoting ring level:

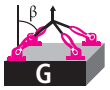
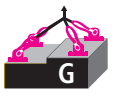
Method of lift										
Number of legs	1	1	2	2	2	2	2	3 & 4	3 & 4	3 & 4
Angle of inclination <ß	0°	90°	0°	90°	0-45°	45-60°	unsymm.	0-45°	45-60°	unsymm.
Factor	1	1	2	2	1.4	1	1	2.1	1.5	1
Type	WLL in metric tonnes									
WBPG- 80 t	80 t	80 t	160 t	160 t	112 t	80 t	80 t	168 t	120 t	80 t
WBPG- 85 t	85 t	85 t	170 t	170 t	119 t	85 t	85 t	178 t	127 t	85 t
WBPG-100 t	100 t	100 t	200 t	200 t	140 t	100 t	100 t	210 t	150 t	100 t
WBPG-120 t	120 t	120 t	240 t	240 t	168 t	120 t	120 t	252 t	180 t	120 t
WBPG-150 t	150 t	150 t	300 t	300 t	210 t	150 t	150 t	315 t	225 t	150 t
WBPG-200 t	200 t	200 t	400 t	400 t	280 t	200 t	200 t	420 t	300 t	200 t
WBPG-250 t	250 t	250 t	500 t	500 t	350 t	250 t	250 t	525 t	375 t	250 t

Table 2

Hint: Type WBPG-85 t/400 mm and 100 t/400 mm:
In the delivered condition the shackles are preassembled. Ring of shackle must be dismantled before WBPG will be attached. Assemble after bolt tightening the shackle ring and secure the nut with the split-pin. When round slings or ropes are directly attached it might be necessary that an adapter shakle with a deviation radius must be used to reach the full WLL.