

# STARPOINT Eyenut

## Safety instructions

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



## STARPOINT-eyenut VRM for bolts with min. quality class 10.9



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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 landesspezifischen 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. Bei Starpoint angewendete harmonisierte Normen DIN EN ISO 12100 T1 und T2 in Anlehnung an EN 1677. Dies gilt nur für Mitgliedstaaten der EU und EFTA.

bezeichnung der Ausrüstung:

**Anschlagpunkt**

Type: Ringmutter STARPOINT - VRM

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: Eyenut STARPOINT - VRM

Manufacturer's sign:



## User instructions

- Reference should be made to German Standards accord. BGR 500 or other country specific statutory regulations and inspections are to be carried out by competent persons only.
- Before installing and every use, inspect visually RUD lifting points, paying particular attention to any evidence of corrosion, wear and weld cracks and deformations. Please ensure compatibility of bolt thread and tapped hole.
- STARPOINT-eyenuts should only be used with bolts or threaded studs with a min. quality class 10.9. **Non certified bolts or threaded studs are not allowed.** The material construction to which the lifting point will be attached should be of adequate strength to withstand forces during lifting without deformation.
- The lifting points must be positioned on the load in such a way that movement is avoided during lifting.
  - For single leg lifts, the lifting point should be 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.
- 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  
 $G$  = load weight (kg)  
 $n$  = number of load bearing legs  
 $\beta$  = 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. A plane bolting surface must be guaranteed. The internal thread has to be 100% engaged on the bolt thread. The threaded stud must guarantee that the plane area of the eyenut can completely flat down to the work piece.

7. For assembly and tighten we recommend using the suitable ring spanner.

When using the STARPOINT-eyenut perpendicular only, the WLL from table no. 1 can be used.

8. The STARPOINT-eyenut has to be adjustable through 360° when fitted. Adjust to direction of pull before attaching of the lifting means.

**Attention: STARPOINT-eyenut are not suited for turning under load!**



9. All fittings connected to the STARPOINT-eyenut 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.

10. To prevent unintended dismounting through shock loading, rotation or vibration, thread locking fluid such as Loctite (depending on the application, please pay attention to the manufacturer's instruction) should be used to secure the nut.

For lifting points which remains on the construction we basically recommend to secure with liquid locking device.

**Attention: Body must still be turnable!**

11. Effects of temperature:

Starpoint nuts can be used in a temperature range of -40°C to max 100°C (-40°F up to 210°F).

12. 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.

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

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

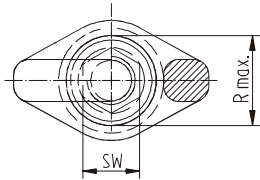
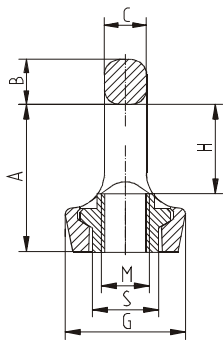
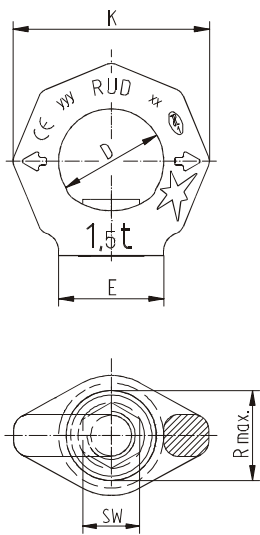
**Inspection criteria concerning paragraphs 2 and 14:**

- Ensure tightness
- The plane area of the eyenut must properly flat down on the work piece.
- 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 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.
- The body of the STARPOINT-eyenut must be free to rotate.

*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 and 4	3 and 4	3 and 4
Angle of inclination <math>\beta</math>	0°	90°	0°	90°	0-45°	45-60°	unsymm.	0-45°	45-60°	unsymm.
Factor		1		2	1,4	1	1	2,1	1,5	1
Type	<b>STARPOINT VRM - Max weight of load in metric-tonnes, bolted and adjusted to the direction of pull</b>									
VRM-M 8	0,8 t	<b>0,4 t</b>	1,6 t	0,8 t	0,56 t	0,4 t	0,4 t	0,84 t	0,6 t	0,4 t
VRM-M 10	1 t	<b>0,4 t</b>	2 t	0,8 t	0,56 t	0,4 t	0,4 t	0,84 t	0,6 t	0,4 t
VRM-M 12	2 t	<b>0,75 t</b>	4 t	1,5 t	1,0 t	0,75 t	0,75 t	1,6 t	1,12 t	0,75 t
VRM-M 16	4 t	<b>1,5 t</b>	8 t	3 t	2,1 t	1,5 t	1,5 t	3,15 t	2,25 t	1,5 t
VRM-M 20	6 t	<b>2,3 t</b>	12 t	4,6 t	3,22 t	2,3 t	2,3 t	4,83 t	3,45 t	2,3 t
VRM-M 24	8 t	<b>3,2 t</b>	16 t	6,4 t	4,48 t	3,2 t	3,2 t	6,7 t	4,8 t	3,2 t
VRM-M 30	12 t	<b>4,5 t</b>	24 t	9 t	6,3 t	4,5 t	4,5 t	9,4 t	6,7 t	4,5 t

Table 1



Type	WLL	weight	A	B	C	D	E	G	H	K	M	Rmax	S	SW	reference
VRM-M 8	0,4 t	0,1	34	11	8,5	25	25	28	20	47	M 8	20	16	12	7992989
VRM-M10	0,4 t	0,1	34	11	8,5	25	25	28	20	47	M10	20	16	12	7990311
VRM-M12	0,75 t	0,2	42	13	10	30	30	34	25	56	M12	24	19	14	7990312
VRM-M16	1,5 t	0,3	49	15	14	35	35	40	30	65	M16	30	23	19	7990314
VRM-M20	2,3 t	0,5	57	17	16	40	40	50	34	75	M20	37	29	24	7990315
VRM-M24	3,2 t	0,9	69	21	19	48	50	60	41	90	M24	45	35	30	7990316
VRM-M30	4,5t t	1,5	86	26	24	60	60	75	51	112	M30	56	44	36	7993008
VRM-M 8	0,4 t	0,1	1 <sup>11/32</sup> "	7/16"	11/32"	1"	1"	17/64"	25/32"	17/8"	M 8	25/32"	5/8"	15/32"	7992989
VRM-M10	0,4 t	0,1	1 <sup>11/32</sup> "	7/16"	11/32"	1"	1"	17/64"	25/32"	17/8"	M10	25/32"	5/8"	15/32"	7990311
VRM-M12	0,75 t	0,2	1 <sup>21/32</sup> "	1/2"	25/64"	13/16"	13/16"	111/32"	1"	23/8"	M12	15/16"	3/4"	9/16"	7990312
VRM-M16	1,5 t	0,3	1 <sup>15/16</sup> "	19/32"	9/16"	13/8"	13/8"	19/16"	13/16"	29/16"	M16	13/16"	29/32"	3/4"	7990314
VRM-M20	2,3 t	0,5	2 <sup>1/4</sup> "	43/64"	5/8"	19/16"	19/16"	131/32"	111/32"	215/16"	M20	129/64"	19/32"	15/16"	7990315
VRM-M24	3,2 t	0,9	2 <sup>23/32</sup> "	53/64"	3/4"	17/8"	131/32"	23/8"	15/8"	39/16"	M24	125/32"	13/8"	13/16"	7990316
VRM-M30	4,5t t	1,5	33/8"	11/32"	15/16"	23/8"	23/8"	215/16"	2"	413/32"	M30	23/16"	13/4"	113/32"	7993008

Table 2

Method of lift										
Number of legs	1	1	2	2	2	2	2	3 and 4	3 and 4	3 and 4
Angle of inclination <math>\alpha</math>	0°	90°	0°	90°	0-45°	45-60°	unsymm.	0-45°	45-60°	unsymm.
Factor		1		2	1,4	1	1	2,1	1,5	1
Type	<b>STARPOINT VRM - Max weight of load in lbs, bolted and adjusted to the direction of pull</b>									
VRM-M 8	1750 lbs	<b>880 lbs</b>	3500 lbs	1760 lbs	1235 lbs	880 lbs	880 lbs	1850 lbs	1320 lbs	880 lbs
VRM-M 10	2200 lbs	<b>880 lbs</b>	4400 lbs	1760 lbs	1235 lbs	880 lbs	880 lbs	1850 lbs	1320 lbs	880 lbs
VRM-M 12	4400 lbs	<b>1650 lbs</b>	8800 lbs	3300 lbs	2200 lbs	1650 lbs	1650 lbs	3460 lbs	2470 lbs	1650 lbs
VRM-M 16	8800 lbs	<b>3300 lbs</b>	17640 lbs	6610 lbs	4630 lbs	3300 lbs	3300 lbs	6940 lbs	4960 lbs	3300 lbs
VRM-M 20	13250 lbs	<b>5070 lbs</b>	26500 lbs	10140 lbs	7100 lbs	5070 lbs	5070 lbs	10650 lbs	7600 lbs	5070 lbs
VRM-M 24	17630 lbs	<b>7050 lbs</b>	35260 lbs	14100 lbs	9880 lbs	7050 lbs	7050 lbs	14800 lbs	10580 lbs	7050 lbs
VRM-M 30	26455 lbs	<b>9920 lbs</b>	52910 lbs	19840 lbs	13888 lbs	9920 lbs	9920 lbs	20832 lbs	14880 lbs	9920 lbs

Table 3