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Lifting eye bolt

1. Lifting points "Lifting eye bolt Z725/..."

These lifting points are designed for use in accordance with these operating instructions and the respective national regulations governing the lifting and holding of loads. They may only be brought into operation after the instructions for use have been read and understood.

The instructions for use must be made available to the user until such time as the lifting points are taken out of service.

The instructions are subject to a continuous improvement process and are only valid in their latest version.

They are available to download at www.hasco.com.

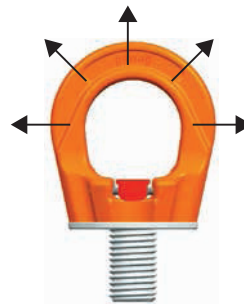


Fig. 1: permitted



Fig. 2: not permitted

Lifting method	1 leg		2 legs		2 legs		3+4 legs		3+4 legs		2 legs		3+4 legs	
Number of legs	1	1	2	2	2	2	3+4	3+4	2	3+4	3+4	2	3+4	3+4
Angle of inclination	0°	90°	0°	90°	0°-45°	45°-60°	0°-45°	45°-60°	asymm.	asymm.	asymm.	asymm.	asymm.	asymm.

No.	Thread [mm]	Tightening torque [Nm]	Load capacity [kg]											
Z 725 / 8	M8	Can be tightened manually	1.000	300	2.000	600	400	300	600	400	300	300		
10	M10		1.500	500	3.000	1.000	700	500	1.000	700	500	500		
12	M12		2.000	700	4.000	1.400	1.000	700	1.400	1.000	700	700		
16	M16		4.000	1.500	8.000	3.000	2.100	1.500	3.000	2.200	1.500	1.500		
20	M20		5.000	2.300	10.000	4.600	3.200	2.300	4.800	3.400	2.300	2.300		
24	M24		6.500	3.200	13.000	6.400	4.500	3.200	6.700	4.800	3.200	3.200		
30	M30		12.000	4.900	24.000	9.800	6.900	4.900	10.300	7.300	4.900	4.900		
36	M36		15.000	7.000	30.000	14.000	9.800	7.000	14.700	10.500	7.000	7.000		
42	M42		22.000	9.000	44.000	18.000	12.600	9.000	18.900	13.500	9.000	9.000		
48	M48		30.000	12.000	60.000	24.000	16.800	12.000	25.000	18.000	12.000	12.000		

Demanding conditions

Temperature	below -40 °C	-40 °C to 200 °C	200 °C to 250 °C	250 °C to 350 °C	above 350 °C
Load factor	not permitted	1	0,8	0,75	not permitted
Shock	slight shocks	medium shocks	medium shocks	strong shocks	strong shocks
Load factor	1	0,7	0,7	not permitted	not permitted

* use at temperatures below -40 °C and above 350 °C is forbidden!

2. Intended use

Load

The load capacity is as per the test certificate or load limit table in the specified directions of tension – see Fig. 1

Operating temperature

-40°C to 200°C (note the reduction factors for higher temperatures).

Impacts

Impacts which occur through acceleration during raising and lowering, for example, do not need to be taken into consideration.

Additional instructions

The lifting points may only be mounted with the screw provided with them. The basic body rotates through 360°. Prior to loading, the ring must be aligned in a permitted direction of tension.

3. Instructions for use

- Lifting points are to be used only by competent, authorised personnel.
- A visual inspection must be performed before first usage (see maintenance instructions).
- Check for evidence of defects and the ease of movement prior to each use – lifting points must be rotatable.
- Load only in the specified direction (see Fig. 1) with the load capacity as per the table.
- Prior to each use, ensure that the lifting point is hand-tightened (with the latch system and/or an Allen key).
- Pay attention to any load obstructions as per the restrictions on use.
- The end attachment inserted in the ring (e.g. hook) must be able to move freely within the ring.
- Lifting points must be kept dry and clean.
- The lifting points are not designed to be rotated under load.

Please note:

- Do not overload lifting points. A falling load can cause injury and/or death.
- Damaged lifting points (see maintenance instructions) can fail under normal operating conditions – the load may fall. These lifting points must not be used.

4. Restrictions on use

Under abnormal operating conditions (see above), lifting points can only be used with limitations.

- Lifting points must not be exposed to acids and alkalis or their vapours.
Please contact our technical service regarding use in environments containing chemicals.
- The lifting points must not be loaded via corners or edges etc.
- People must not be lifted.
- If the load distribution is asymmetrical (the individual legs of the lifting gear have different angles of inclination), only count one leg as load-bearing (see load capacity table).

5. Mounting instructions

Installation may only be carried out by a competent person.

This lifting point has a simple system for tool-free installation:

- To screw in the lifting point, you move the two latches into the upright position so they are resting fully against the side surfaces of the screw (position 'A' - see Fig. 3). The latches are held in this position by a spring.
- Now screw the lifting point into the anchorage system until the lower face is fully in contact with the surface.
- Hand-tighten the lifting point.
- Now move the latches downward into position 'B' as shown in Fig. 4. The latches are held in place by the springs in this position.

After installation, make sure that incorrect loading is avoided by rotating the ring to move the lifting point into the expected load direction.

- The overall system, on which the lifting points are mounted, must meet the requirements of Directive 2006/42/EC.
- Select the arrangement of the lifting points to ensure symmetric loading, with the centre of gravity beneath the lifting point(s).
- The base material of the object, on which the lifting points are to be mounted, must be sufficiently strong to absorb the induced forces without deformation.
- Lifting points with a sufficient load capacity must be selected - see load capacity table.



Picture 3:
Supreme dis-/assembly



Picture 4:
Supreme rotatable

- The surface to which the lifting point is to be screwed must be flat and be at least the diameter of the lower face of the lifting point. The threaded hole must be in the centre of the surface, at right angles to it and sufficiently deep for the screw to be fully screwed in (blind holes).
- The minimum screw-in length is as follows: 1 x M in steel (M = thread size e.g. M20 = 20 mm), 1.25 x M in cast steel and 2 x M in aluminium
- The threaded hole must be cleaned prior to insertion of the screw.
- Lifting eye bolts can also be tightened with an Allen key.
- If necessary (e.g. in the event of vibrations), use a liquid thread-locking agent, observing the manufacturer's instructions.
- When selecting the configuration, make sure that no incorrect loading can result, for example if:
 - > unrestricted alignment is not possible in the direction of tension
 - > the direction of tension is not within the specified range as per Fig. 1
- Only original Pewag screws may be used – recognisable by the stamped marking (load capacity, thread).
- No changes may be made to the delivered item. It is not permitted, for example, to perform welding, heat treatment or other surface treatments that damage the material (e.g. galvanic zinc coating), or to shorten the screw.
- Only mount defect-free lifting points.
- Check used lifting points prior to installation as per the maintenance instructions.
- After mounting, lifting points must be fully rotatable.
- Do not use an extension during assembly.

6. Maintenance, checks

- Lifting points must be checked at least once a year by a competent person.
The time period may be shorter depending on the operating conditions. For frequent use, we recommend carrying out a crack test every two years. The screw must be removed from the body when doing this.
- The parts must be free from oil, dirt and rust for the regular inspection and crack test.
Suitable cleaning methods are those that do not overheat, do not conceal surface defects and do not cause hydrogen embrittlement or stress corrosion cracking.
- During inspections, all components that influence safety and function must be checked for damage – e.g.:
 - fracture, notches, cracks, deformation
 - noticeable signs of excessive heat
 - abrasion or corrosion of more than 10% of the cross section

If there is any doubt as to the function and/or safety of the lifting point, it is essential to stop using it.

7. EC Declaration of Conformity (No.: Lastaufnahmemittel_EN_EG-2019-04)

This declaration of conformity is issued under the sole responsibility of:

HASCO Hasenclever GmbH + Co KG, Römerweg 4, D-58513 Lüdenscheid, +49 2351 957-0, info@hasco.com

Object of the declaration:

References to the relevant harmonised standards are taken as a basis or references to the specifications for which conformity is declared: Reference number of the standard

No.	EN ISO 12100	EN 1677-1	DIN 580	DIN 582	DGUV 100-500 (BGR 500, 2.8)
Z70/..., Z701/...	X				
Z710/...	X		X		X
Z711/...	X	X			X
Z7120/...	X			X	X
Z715/...	X	X			
Z721/...	X				
Z725/...	X	X			

The object of the declaration described above complies with the relevant Community harmonisation legislation: 2006/42/EG

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