pewag lifting solutions

Translation of Original operating manual

pewag winner profilift

PLZW pewag winner profilift zeta lifting point



Read this operating manual carefully before using this product, paying particular attention to the sections on safety and assembly. This product is suitable for the lifting and holding of loads, provided that the instructions of this operating manual and all the national regulations are complied with. This product may only be used once this operating manual has been read and understood in full.

This operating manual is part of the product and must be made available to users throughout the lifetime of the product.

The operating manual must be passed on to later owners or users together with the product. This product as well as the operating manual may only be sold in countries where English is the national language. This operating manual is subject to an ongoing improvement process and is therefore only valid in its most recent version, available for download at www.pewag.com.

The highlighted sections in this operating manual contain information on areas with a particularly high risk potential. Disregarding this information may cause serious injuries or death.
Please pay particular attention to these sections.

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This operating manual is valid for:
PLZW pewag winner profilift zeta
Dismountable lifting point



PLZW pewag winner profilift zeta lifting point

Sizes (from – to)	Thread sizes (from – to)
PLZW 0,4 t - 15 t	M8 - M48
PLZW-FIX 0,4 t - 15 t	M8 - M48
PLZW-FIX U 5/16“ - U 1 ½“	5/16“ - 1 ½“

For details, see table 1 at the end of the manual

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1. SAFETY INSTRUCTIONS

WARNING **An improperly mounted or damaged lifting point or improper use may cause accidents that lead to severe injuries and/or death! Damaged lifting points (see maintenance instructions) may fail even during normal conditions of use. Such lifting points may not be used.**

- This product may only be operated by properly trained persons who must comply with all relevant standards and country-specific regulations.
- Users of this product must be in a good physical condition. Users of this product must not be under the influence of drugs, alcohol or medication.
- You must ensure that a plan that specifies emergency measures is available and that it covers all emergencies that may occur during use.
- The product may not been modified in any way.
- All repair and maintenance activities must be performed in accordance with the instructions given by pewag.
- Check for visible damage (deformations, cracks, damaged threads) prior to each use and ensure that the product is functioning correctly – lifting points have to be rotatable (alignable with the load direction).
- This product may not be used for the lifting or securing of persons.

2. Intended use

Purpose: The pewag PLZW is a lifting point that is screwed onto loads so that lifting chain components (hooks, shackles...) may be attached to enable the load to be lifted. This lifting point may also be disassembled, which makes it possible to attach closed lifting devices (e.g. eyes sling hooks, rope loops) to the lifting point (does not apply for PLZW-FIX).
The turning of loads is admissible; however, continuous rotation under load is not permitted.
Lashing: The lifting points may also be used as lashing points. Since only a safety factor of 2 has to be taken into account when lashing, the admissible lashing capacity is twice the nominal load capacity: LC in daN = 2x nominal load capacity in kg (e.g. nominal load capacity 4,000 kg when lifting -> 8000 daN admissible lashing capacity). This product may only be used either for lifting or for lashing. Once a lifting point has been used for lashing, it may no longer be used for lifting (and vice versa).
Products that are marked with the admissible lashing capacity instead of the rated load capacity may only be used for lashing and never for lifting.
Target groups: This product may only be used and serviced by properly trained personnel, provided that the instructions of this operating manual and all relevant country-specific regulations are complied with. Repairs, regular inspections and the exchange of parts may only be performed by competent personnel.
Also see point 4 of this operating manual.
Load: The lifting point may only be loaded in the direction specified (fig. 1), at the maximum load capacity according to table 1 and in accordance with the conditions use specified in this manual.
Operating temperature: The long-term permitted operating range is -20 °C to +200 °C. In case of usage outside this temperature range, the reduction factors outlined in table 2 must be taken into account.

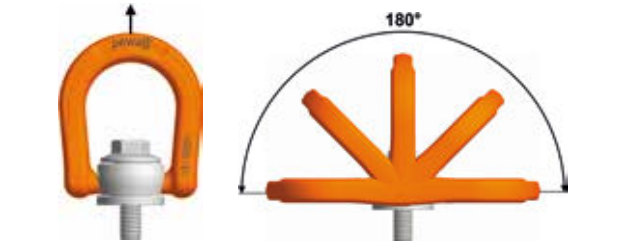


Fig. 1: Permitted directions of load that occur during correct use.

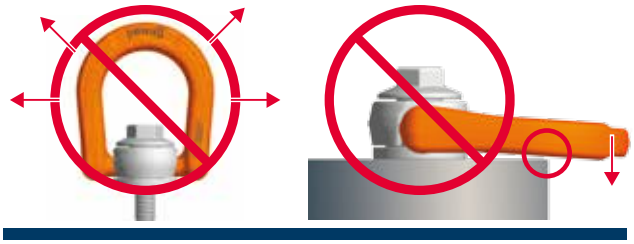


Fig. 2: Non-permitted usage

Shock loading: Slight shocks, such as the kind that is caused by acceleration during lifting and lowering of the load, may be disregarded. Stronger shocks are not permitted.

Other information: The lifting point may only be mounted with original parts. The ring is 360° rotatable around the screw and must be aligned with the expected direction of pull prior to loading.
This product has a safety factor of 5.

For exact dimensions, refer to our website at www.pewag.com

2.1 Restrictions on use

- These lifting points are not suitable for use in areas with strong corrosive influences (e.g. in the vicinity of sewage water or chemicals). Lifting points must not be exposed to acids or caustic solutions and their vapours. For use in environments containing chemicals, please consult our technical service.
- The lifting points are not suitable for edge- or corner-loading.
- Do not use this product for the lifting or securing of persons.
- Do not use lifting points as a choke-hitch.
- For the load capacities of pewag lifting chains to apply, it is assumed that the individual lifting points are placed under load symmetrically. When the load is lifted, this will result in the same angles of inclination of the individual chain legs.
- In case of asymmetrical loads, you must take into account the following:
  1. The load is less than 80% of the indicated load capacity.
  2. The angles of inclination of all chain strands are not lower than 15° and are very similar (i.e. only differ by a maximum of 5°).
  3. For three- and four-stranded lifting chains, it must be ensured that the corresponding plan angles are within 15° of each other. If any of these conditions are not met, only one strand may be considered load-bearing (see load capacity table).
- The lifting points may not be rotated while under load.
- The ring may not be folded up and down continuously while under load.

WARNING **The information contained in this operating manual is based on the assumption that no particularly hazardous conditions apply.**
Such conditions include offshore use and use in areas with nuclear contamination.
In such cases, please contact pewag to determine the permissibility of the application and the degree of danger.

2.2 Foreseeable misuse

- Use by improperly trained personnel.
- Use by personnel who is unable to fully comprehend the language of this operating manual.
- Attachment to components for which no operating manual or proof of strength exists.
- Attachment of inappropriate lifting devices.
- Attachment of lifting devices for which no operating manual or inspection report according to currently valid standards exists.

2.3 Labelling and identification

Every pewag lifting point is labelled with its maximum load capacity for adverse loading conditions as well as the manufacturer's code and batch number. The following image shows the part number and the precise identification details on the product.

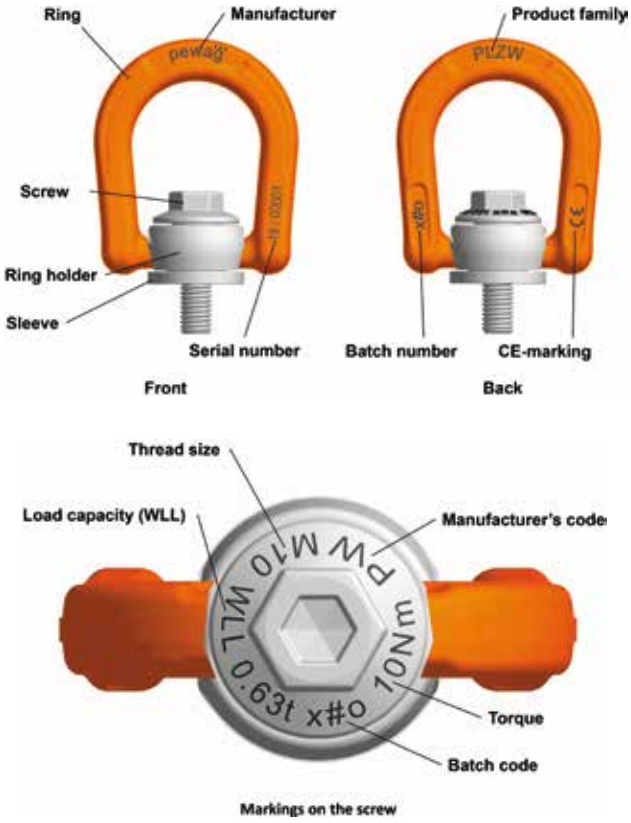


Fig. 3: Part number and location of the identification details on the product.

3. Assembly instructions

3.1 General information

- This product may only be assembled by persons who were instructed in the safe use of the product and have the required knowledge and skills.
- Only original pewag parts may be used.
  – These are recognisable from the stamp (batch number, manufacturer logo or code PW...)
- Only mount lifting points that are free from defects.
- Used lifting points must be inspected prior to each use as specified by the maintenance instructions.
- Check that the lifting point has been attached according to the assembly instructions during each use.
- Attach lifting points in such a way that they may be reached easily and without obstruction when attaching or removing the connecting element. Check that no hazardous points are created that could endanger the user or impede correct usage (risk of crushing, pinching or collision).

- The attached lifting device must be free to move in the ring.
- Keep lifting points clean and dry. Treat lifting points carefully even after use. Do not let lifting points drop to the floor as this may damage the thread or other parts.
- The base material of the object to which the lifting points are to be attached must be strong enough to absorb the forces that occur without deformations (proof of safety).
- Always choose lifting points with the correct dimension acc. to the load capacity table, depending on the size of the load and the constellation of the lifting devices.
- Choose the constellation of lifting points in such a way that symmetrical loading is assured and the centre of the load is positioned under the lifting point(s).
- When choosing your constellation, check that there is no risk of improper loading due to any of the following factors:
  - direction of pull is obstructed
  - direction of pull is not within the indicated area (fig.1)
- Any severe conditions (see restrictions on use) must be taken into account.
- Always take into account the user and assembly instructions of the lifting devices used and, where applicable, also those of the load to be lifted.
- For custom-made designs: Take into account the additional information provided and the specifications on the customer‘s drawings (where applicable).
- The condition as delivered must not be altered. Surface treatments that may damage the material, welding, heat treatments etc. are not permitted.
- The length of the thread may not be shortened.

3.2 Protective measures to be taken by the user

Always take into account the restrictions on use and the maximum load capacity of the lifting points used. Always wear safety gloves when attaching the lifting device.
Align the lifting point in the expected direction of pull and leave the hazard area before lifting the load. Slightly tension the chain sling and check that the lifting devices are correctly fitted to the lifting points and that all lifting points are correctly aligned in the direction of pull before lifting the load.

WARNING **Keep a sufficient safety distance during the lifting operation and ensure that the load has been lowered safely before removing the lifting device. Do not overload lifting points! Falling loads may cause injury and/or death!**

3.3 Remaining risks

Overloading caused by non-compliance with the maximum load capacity or adverse environmental factors (temperature...). Incorrect assembly of the lifting points may lead to failure, as may the use of non-authorised or damaged parts of the attached lifting device.

3.4 Mounting

- The screw-on surface must be level and have at least the diameter of the contact surface of the lifting point. The sufficiently deep, threaded hole must be at the centre of the contact surface, at a right angle.
  It must be possible to insert the screw fully (with blind holes).
- Clean the threaded hole prior to each use and check for damage.
- The minimum screw penetration values are:
  1 x M for steel (Rm > 360N/mm²)
  1.25 x M for cast steel
  2 x M for aluminium
  (M = thread size, e.g. M20 = 20 mm)
- Additional elements (such as washers) between the lifting point and the load are not permitted.
- Prior to each use, ensure that the lifting point is fully screwed in and that the contact surface is flush with the load.
- For one-off transport, it is admissible to tighten the screw by hand using a spanner.
- If the lifting point is intended to remain permanently attached to the load, it must be tightened with an appropriate tool with a torque as listed in table 1. If necessary (i.e. in case of vibrations), the thread must be secured with a liquid threadlock (e.g. Loctite).
- After assembly, ensure that there is no risk of incorrect loading by aligning the lifting point in the expected load direction by moving the ring.

3.5 Dismounting

To remove the lifting point, unscrew it with a suitable tool. Store the lifting point as described in „Storage“. Take appropriate measures to protect the thread on the load from damage and dirt.

3.6 Attaching closed lifting devices to the lifting point (does not apply for PLZW-FIX)

NOTICE **As this lifting point is dismountable, the screw is relatively easy to remove. Always store the lifting point carefully and correctly after use (e.g. attached to the ring).**

This lifting point may be dismounted by the user in such a way that a closed lifting device (e.g. rope loop, eye sling hooks) may be fitted to the ring. This process does not require any tools and may only be performed when the lifting point is not attached to a load.
Always wear safety gloves and work at a table so you do not lose any parts.

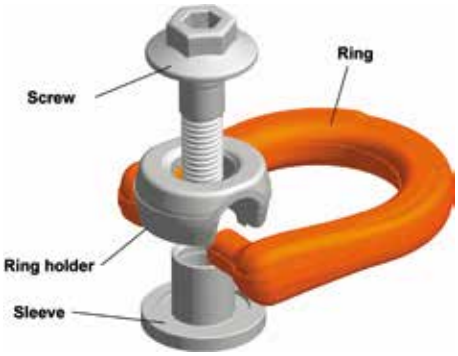


Fig. 4: Exploded view of the individual parts

A. Fold the ring vertically to the screw axis. Holding the lifting point with two hands (with the screw head facing down), press against the end of the screw until it may be removed from the sleeve. (It can be helpful to move the screw slightly back and forth.) Remove the sleeve and the ring from the ring holder. You may now hook the lifting device into the ring. The eye/loop of the lifting device must be large enough for the device to move freely in the ring.
B. For assembly, place the sleeve on a level surface (with the collar facing downwards) and position the ring on top as shown in the image (the nubs on the ring are positioned on each side of the sleeve).
C. Place the ring holder onto the sleeve so that the nubs of the ring fit neatly into the hollows of the ring holder. Make sure the sleeve is mounted correctly (see fig. 6).
D. Now insert the screw into the sleeve.
E. Hold the lifting point firmly with both hands and push hard against the screw head until the screw locks into the sleeve with a click. Check that the assembly process was completed correctly. Attach the lifting point to the load as described in the „assembly“ section.

WARNING

You may attach up to two lifting devices to the ring (e.g. to form a loop as shown in fig. 7). Take into account the maximum spread angle of the two strands of 60°. The attached lifting devices must be strong enough to absorb the forces that occur (important: 2-leg chain slings!) Always refer to the operating manuals of the lifting devices used.

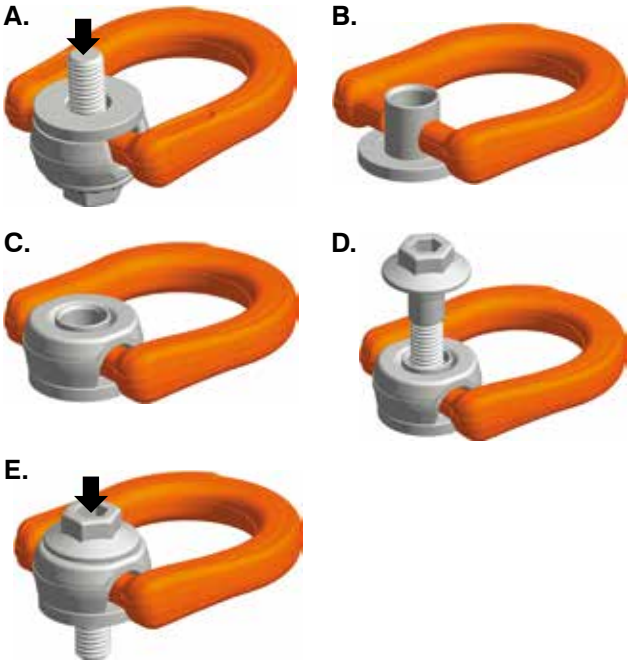


Fig. 5: Assembly steps

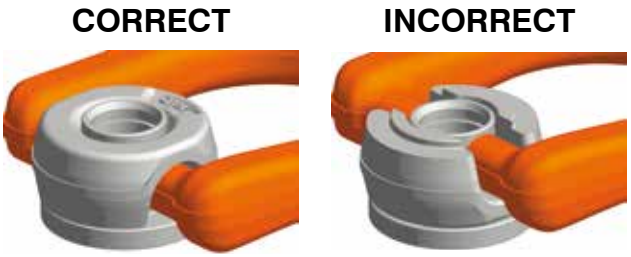


Fig. 6: Correct assembly of the sleeve



Fig. 7: Application example

4. Inspection, maintenance, repair

WARNING **The safety of the user is contingent upon the effectiveness and durability of the equipment used. For this reason, ensure that inspections are performed regularly. Damaged lifting points may fail during normal conditions of use, causing the load to fall. Such lifting points may not be used.**

- This product must be inspected by a competent person at least once a year and in accordance with the manufacturer's instructions. Depending on the conditions of use and legal stipulations, this interval may be shorter. In case of frequent use, we recommend a crack test every two years.
- During tests, all parts must be checked for damage that could impact safety and function.
- For the regular inspection and the crack test, all parts must be free from oil, dirt and rust.
  Appropriate cleaning processes include those that do not cause overheating, cover up surface defects or cause hydrogen embrittlement or stress crack corrosion.
- Load testing all the way up to the proof force is not permitted for these lifting points.
- **Competent persons** are persons who are capable of assessing the operationality and correct usage of this product, either based on their technical qualifications (e.g. training) or their experience with and sufficient knowledge of the use of lifting equipment, and who are familiar with the relevant standards and regulations.

If you are interested in an expert training module, please contact our technical service.

4.1 Inspection

Before each use, the following checks should be performed:
The lifting points were selected correctly, based on the size of the load and the lifting devices used (chain sling, angle of inclination, etc.).

- The lifting point is functioning correctly (ring is rotatable and/or foldable) and none of the parts look damaged, (this is particular relevant for the threads).
- The contact surface must fully rest on the load after the lifting point has been screwed in.
- The ring of the lifting point used must be aligned with the expected load direction.

Regular inspection:
Regular inspections must be performed by the manufacturer or a competent person, in strict accordance with the manufacturer's instructions.

4.2 Discard criteria

- Breakage, deformations, sharp notches or cracks of any kind.
- Signs of excessive heat exposure (e.g. black discolouration, burn marks in the coating).
- Visible damage to the thread that could impair the correct functioning of the product.
- Any doubt on the correct functioning/safety of the lifting point.
- Illegible markings.
- Wear or excessive corrosion,
  if the admissible cross-sectional reduction of 10 % is exceeded.
- If it is not possible to freely rotate and/or fold the ring after assembly.

CAUTION **If there is any doubt on the correct functioning/ safety of the lifting point, it must be discarded!**

4.3 Procedure in case of accidents or faults

If the lifting device gets jammed in the ring of the lifting point, do not use force to release it as this may cause damage.
If the lifting point shows signs of deformation (e.g. due to overloading or other unusual events), the product must be removed from service and handed to a competent person for inspection or repair.

4.4 Maintenance

- If necessary, clean all the parts using a damp cloth. Leave the lifting point to air-dry.
- The thread may be cleaned using a wire brush.

4.5 Repairs

- Records must be kept of all inspections and repairs for the entire lifespan of the product. A sample documentation sheet is available for download at www.pewag.com.
- Repairs may only be performed by the manufacturer or a competent person.
- Refer to the latest catalogue for spare parts such as screws. Alternatively, contact our technical service.
- Small cuts, notches and grooves may be removed by careful grinding or filing. After the repair, the treated area must merge smoothly with the surrounding area, without the cross-section changing abruptly. By fully removing the defect, the dimension of the area must not be reduced by more than 5 %.
- Welding and heat treatment is not permitted.

This product is labelled with an individual number in the format „YY/xxxx“. „YY“ is the year (e.g. 18 for 2018) and „xxxx“ is the continuous number that clearly identifies each lifting point of a certain type (e. g. type PLZW 1,8t M16).

5. Storage

This product must be stored in a clean and dry condition and protected against corrosion (e.g. lightly oiled).
The lifting point must not be exposed to corrosive, thermal or mechanical influences during storage or transport.
The thread should be protected by an appropriate protective cap or net.

6. Removal from service

The product has a high metal content and is fully recyclable. At the end of its lifespan, the product must be recycled in accordance with local regulations.
Prior to using this product for the first time, the operating manual must have been read and understood in full.

Declaration of conformity



pewag
STRONG IS NOT ENOUGH
www.pewag.com

Translation of original declaration of conformity

as defined by EC directive 2006/42/EC, Annex II A

We,
pewag austria GmbH, A-8605 Kapfenberg, Mariazellerstraße 143a
declare herewith that the product

PLZW pewag winner profilift zeta lifting point

complies with all the provisions of the EC machinery directive 2006/42/EC.

Applied harmonized standards in particular:
EN 1677-1: Components for slings-safety – part 1:
Forged steel components but mechanical values acc. to pewag internal standard

EN ISO 12100: Safety of machinery. General principles for design.
Risk assessment and risk reduction

Other applied technical standards and specifications:
DGUV GS-HM-36: Principles of testing and certification of lifting points

Authorized person for the configuration of the declaration documents:
Ranko Ivanic, pewag austria GmbH, A-8605 Kapfenberg, Mariazellerstraße 143a

Kapfenberg, 01-01-2023

Stefan Duller
General Manager

pewag austria GmbH, Mariazeller Straße 143, 8605 Kapfenberg

Method of lifting											
Number of legs	**1**	**1**	**2**	**2**	**2**	**2**	**3+4**	**3+4**	**2**	**3+4**
Angle of inclination	**0°**	**90°**	**0°**	**90°**	**0°–45°**	**45°–60°**	**0°–45°**	**45°–60°**	**asymm.**	**asymm.**

Code	**Thread [mm]**	**Torque [Nm]**	**Load capacity [kg]**									
PLZW 0,4 t	M8	10	800	400	1.600	800	560	400	840	600	400	400
PLZW 0,63 t	M10	10	1.100	630	2.200	1.260	890	630	1.330	940	630	630
PLZW 0,95 t	M12	15	1.100	950	2.200	1.900	1.340	950	2.010	1.420	950	950
PLZW 1,3 t	M14	30	2.900	1.300	5.800	2.600	1.830	1.300	2.750	1.950	1.300	1.300
PLZW 1,8 t	M16	50	2.900	1.800	5.800	3.600	2.540	1.800	3.810	2.700	1.800	1.800
PLZW 2,2 t	M18	70	2.900	2.200	5.800	4.400	3.110	2.200	4.660	3.300	2.200	2.200
PLZW 2,5 t	M20	100	2.900	2.500	5.800	5.000	3.530	2.500	5.300	3.750	2.500	2.500
PLZW 3,7 t	M22	120	6.500	3.700	13.000	7.400	5.230	3.700	7.840	5.550	3.700	3.700
PLZW 4 t	M24	160	6.500	4.000	13.000	8.000	5.650	4.000	8.480	6.000	4.000	4.000
PLZW-FIX 5,4 t	M27	200	6.500	5.400	13.000	10.800	7.630	5.400	11.450	8.100	5.400	5.400
PLZW-FIX 6,3 t	M30	250	6.500	6.300	13.000	12.600	8.900	6.300	13.360	9.450	6.300	6.300
PLZW-FIX 8 t	M33	270	15.000	8.000	30.000	16.000	11.300	8.000	16.900	12.000	8.000	8.000
PLZW-FIX 10 t	M36	320	15.000	10.000	30.000	20.000	14.100	10.000	21.200	15.000	10.000	10.000
PLZW-FIX 13 t	M42	400	15.000	13.000	30.000	26.000	18.300	13.000	27.500	19.500	13.000	13.000
PLZW-FIX 15 t	M48	600	15.000	15.000	30.000	30.000	21.200	15.000	31.800	22.500	15.000	15.000

Method of lifting										
Number of legs	1	1	2	2	2	2	3+4	3+4	2	3+4
Angle of inclination	0°	90°	0°	90°	0°–45°	45°–60°	0°–45°	45°–60°	asymm.	asymm.

Code	Thread [inch]	Fastening torque [lb-ft]	Load capacity [lbs]									
PLZW-FIX U5/16	5/16"-18	4,5	1,100	660	2,200	1,320	930	660	1,400	990	660	660
PLZW-FIX U3/8	3/8"-16	7,5	2,200	1,300	4,400	2,600	1,830	1,300	2,750	1,950	1,300	1,300
PLZW-FIX U7/16	7/16"-14	11	2,400	2,200	4,800	4,400	3,100	2,200	4,600	3,300	2,200	2,200
PLZW-FIX U1/2	1/2"-13	11	2,400	2,200	4,800	4,400	3,100	2,200	4,600	3,300	2,200	2,200
PLZW-FIX U9/16	9/16"-12	22	4,400	3,000	8,800	6,000	4,200	3,000	6,300	4,500	3,000	3,000
PLZW-FIX U 5/8	5/8"-11	37	5,500	3,500	11,000	7,000	4,900	3,500	7,400	5,200	3,500	3,500
PLZW-FIX U 3/4 [1]	3/4"-10	74	6,600	5,500	11,200	11,000	7,700	5,500	11,600	8,200	5,500	5,500
PLZW-FIX U 7/8 [1]	7/8"-9	118	12,000	8,800	24,000	17,600	12,400	8,800	18,600	13,200	8,800	8,800
PLZW-FIX U 1 [1]	1"-8	148	13,000	11,000	26,000	22,000	15,500	11,000	23,300	16,500	11,000	11,000
PLZW-FIX U 1 1/8 [1]	1 1/8"-7	185	14,300	13,500	28,600	27,000	19,000	13,500	28,600	20,200	13,500	13,500
PLZW-FIX U 1 1/4 [1]	1 1/4"-7	200	20,000	17,500	40,000	35,000	24,700	17,500	37,100	26,200	17,500	17,500
PLZW-FIX U 1 3/8 [1]	1 3/8"-6	236	24,000	22,000	48,000	44,000	31,100	22,000	46,600	33,000	22,000	22,000
PLZW-FIX U 1 1/2 [1]	1 1/2"-6	295	25,000	24,000	50,000	48,000	33,900	24,000	50,900	36,000	24,000	24,000

[1] Safety factor 4:1

Table 1

Straight pull 0°	Lateral load direction permitted (ring is aligned) 90°	Lateral load direction not permitted (ring is not aligned)
		
Higher load capacities for loading along the screw axis (column „0°“ in the load capacity table)	Nominal load capacity for loading vertically to the screw axis (column „90°“ in the load capacity table)	Application not permitted due to unstable conditions. The ring could turn suddenly while under load - high risk for load and/or persons!

Reduction factors

Operating temperature	less than -20 °C	-20 °C to 200 °C	200 °C to 300 °C	300 °C to 400 °C	more than 400 °C
Reduction factor	Not permitted	1	0.9	0.75	Not permitted
Shock loading	Light shocks	Moderate shocks	Strong shocks		
Reduction factor	1	0.7	Not permitted		

Table 2

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A-8041 Graz, Gaslaternenweg 4, Phone: +43 (0) 50 50 11-0, Fax: +43 (0) 50 50 11-100
saleinfo@pewag.com, **www.pewag.com**

Technical changes and misprints excepted.

BG/00250