

# LPW

## Lashing Point Welding



### Safety instructions

This safety instruction/declaration must be kept for the entire time usage time and forwarded with the product.  
TRANSLATION OF THE ORIGINAL INSTRUCTIONS



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### Lashing Point Welding **LPW**



### Herstellererklärung

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 Europäischen Union 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 aufgeführten bestimmungsmäßigen Fällen eingesetzt wird.

Hinweis: Beim Zurrpunkt angewendete harmonisierte Normen DIN EN ISO 12100 T1 und T2 sowie in Anlehnung an EN 1677.

Bezeichnung der Ausrüstung:  
**Zurrpunkt**

Type: **Lashing Point Welding - LPW**

Herstellerzeichen:

### Declaration of the manufacturer

We hereby declare (supported by ISO 9001 certification), that the following described equipment based on the concept and design as well as the by us manufactured type corresponds to the current valid Health- and Safety Requirements of the EU. This declarations becomes invalid in case of any modifications not agreed upon with us. Furthermore this declaration becomes invalid if the equipment is not used according to this prescription.

Hint: Utilized harmonized standards for this Lashing Point DIN EN 12 100 T1 and T2 as well as EN 1677.

Designation of the equipment:  
**Lashing point**

Type: **LPW**

Manufacturer's sign:

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Carefully read the operating instructions before using the RUD lashing point LPW. Ensure that you have understood all the contents.

ENGLISH

Non-observation of the instructions can lead to injuries or damage and will invalidate the guarantee.

## 1 Safety instructions



### WARNING

Wrong assembled or damaged lashing points as well as inappropriate use can lead to injuries of persons and property damage. Inspect all lashing points before each use carefully!

- Keep all body parts (fingers, hands, arms etc.) out from the danger zone during the lashing process (risk of squeezing).
- RUD lashing points LPW may only be used by authorised and instructed persons in compliance with the DGUV Regulations 109-017 and in compliance with any valid national regulations if used outside Germany.
- Attention - when suspension ring pivots there is a risk of pinching.
- Do not exceed the LC (Lashing Capacity) indicated on the lashing point.
- No technical modifications must be made to the LPW.
- No persons are allowed in the danger zone.
- Damaged or worn LPW must not be used.

## 2 Intended use

RUD lashing points LPW must only be used to attach lashing means. The LPW can also be used as lashing points for the fixture of lashing means.

In general, lashing points must not be used for lifting.

A full working load in all directions is allowed.

The LPW must only be used in the here described usage purpose.

## 3 Assembly- and instruction

### 3.1 General information

- Effects of temperature:  
RUD lashing points LPW are suitable for the temperature range from  $-40^{\circ}\text{C}$  up to  $400^{\circ}\text{C}$ . For the use within the following temperature range, the LC (Lashing Capacity) must be reduced by the following factors:

$-40^{\circ}\text{C}$  up to  $200^{\circ}\text{C}$  → no reduction

$200^{\circ}\text{C}$  up to  $300^{\circ}\text{C}$  → minus 10 %

$300^{\circ}\text{C}$  up to  $400^{\circ}\text{C}$  → minus 25 %

**Temperatures above  $400^{\circ}\text{C}$  are not permitted!**



### HINT

The lashing points LPW can be stress-relieved one-time in an unloaded condition, together with the connected component (e.g. welded construction): Temperature  $< 600^{\circ}\text{C}$  /  $1100^{\circ}\text{F}$  (max. 1 hour).

The evidence of the suitability of the used weld metal must be mentioned by the respective filler material manufacturer.

- RUD-Lashing Points are marked at the welding block with the permitted lashing capacity „LC“ in daN.
- RUD lashing 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.
- It is recommended, that the places where the lashing points are fixed should be marked with colour.

### 3.2 Hints for the assembly

Basically essential:

- The location for the lashing point must be chosen in such a way that the introduced forces will be absorbed by the base material without safety affecting deformations, if necessary a minimum thickness of the sheet metal must be specified. The contact areas must be free from impurities, oil, colour, ect.  
Material of the lashing point block for welding: S355J2 (1.0577), DIN EN 10025-2
- The lashing points must be positioned on the load in such a way that movement is avoided during lifting.



### WARNUNG

In general, lashing points must not be used for lifting.

- Consider the die ISO 15818 „Earth-moving machinery - Lifting and tying-down attachment points“.

- The quantity and the arrangement of the Lashing Points on vehicles have to be determined acc. EN 12640 or EN 75410 (for RoRo traffic; Roll-on - Roll-off) as long as the vehicles are not designated acc. their design and mechanism for the transport of specific goods with special demands for load securing.
- Determine the required, permitted Lashing Capacity acc. EN 12195-1 „Load restraining on road vehicles - Safety - Part 1: Calculation of securing forces“, acc. VDI 2700-2 „Securing of loads on road vehicles“ and acc. ISO 15818.



#### HINT

The Lashing Points should be arranged (depending on use) as wide as possible to use the full loading area and they should not protrude in steady position.

- Finally check the proper assembly (see chapter 4 *Inspection / Repair / Disposal*).

### 3.3 Hints for the welding

The welding should only be carried out according to DIN EN ISO 9606-1 or AWS Standards by an authorized welder.

Verifications of suitability of the used weld-on material must be checked with the supplier of the welding electrodes.



#### HINTS

- Please note the corresponding user hint in regard of the welding filler materials (see Table 4).
- Weld all seams at the same temperature.
- Do not weld at the quenched and tempered load ring!
- The distance lugs assist in achieving the correct root weld (approx. 3 mm = 0.1 inch). They may not be removed.



Pic. 1: distance lugs

- 1 Start tacking at the center of the weld-on block.
- 2 Check function of the suspension ring (must be able to pivot 180°). If necessary please correct.
- 3 Weld root layer, interlayer and finally top layer.



#### HINT

- Clean carefully the layers before welding of inter- and top layers.
- Remove visible missing sections.

Choose type of weld seam and size according to Table 1 and Pic. 4.



#### HINT

Weld in string beads.

Type	size	length	volume
LPW 3000	HV 5 + a3	2 x 33 mm	ca. 1.1 cm <sup>3</sup>
LPW 5000	HV 7 + a3	2 x 40 mm	ca. 2.6 cm <sup>3</sup>
LPW 8000	HV 8 + a3	2 x 46 mm	ca. 3.2 cm <sup>3</sup>
LPW 13400	HV 12 + a4	2 x 60 mm	ca. 8.7 cm <sup>3</sup>
LPW 20000	HV 16 + a4	2 x 60 mm	ca. 15.5 cm <sup>3</sup>
LPW 32000	HV 25 + a6	2 x 90 mm	ca. 56 cm <sup>3</sup>

Table 1: Weld seam (weld-on block)

- 4 Please check by a competent person after welding the ongoing usage of the weld-on lashing point (see chapter 4 *Inspection / Repair / Disposal*).



#### HINT

By the position of the weld-seam (HV continuous fillet weld seam) the following requirements will be observed:

DIN 18800 steel constructions requires: at outdoor buildings, especially when endanger of particular corrosion may occur, all weld seams shall be carried out as circumferential continuous fillet weld seams.

The continuous fillet weld seam at the LPW weld-on block fulfills the requirements and guarantees a connection through the whole cross section of the material.

### 3.4 Hints for the usage

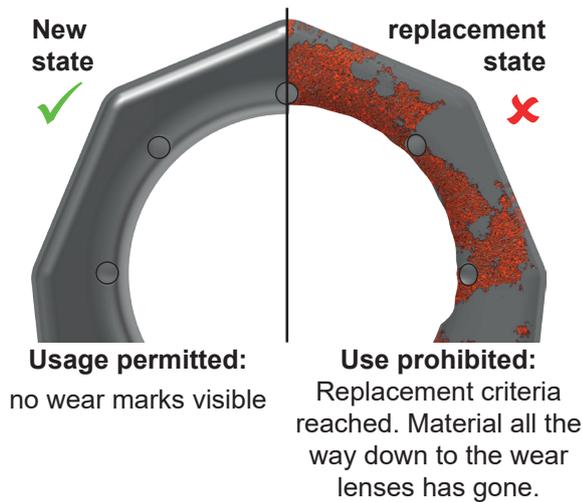
- Take a look on a regular basis before each use on the whole lashing point (tight fit, strong corrosion, cracks at load bearing components, deformations). See section 4 *Inspection / Repair / Disposal*.



#### WARNING

Wrong assembled or damaged lashing points as well as inappropriate use can lead to injuries of persons and property damage. Inspect all lashing points before each use carefully!

- Please check carefully the wear indicator markings of the weld-on lashing point (see Pic. 2):



Pic. 2: Wear indicators

- Please note that the lashing mean must be free moveable within the weld-on lashing point LPW. When lashing means (sling chains) are hinged or unhinged, no pinching, shearing or joint spots must occur during the handling.
- Avoid damage of lashing means resulting from sharp edges.
- If possible, leave the immediate danger zone.

## 4 Inspection / Repair / Disposal

### 4.1 Hints for periodical inspections

The operator must determine and specify the nature and scope of the required tests as well as the periods of repeating tests by means of a risk assessment (see section 4.2 and 4.3).

The continuing suitability of the lashing point must be checked at least 1x year by an expert.

Depending on the application conditions, e.g. when used frequently or if there is a higher level of wear or corrosion, it may be necessary to carry out inspections at intervals of less than a year. This inspection is also absolutely necessary after damage and special incidents.

The inspection cycles must be specified by the operator.

Only RUD original spare parts must be used.

### 4.2 Test criteria for the regular visual inspection by the user

- The lashing point should be complete
- Comprehensive, legible load-bearing information (LC) as well as the manufacturer's identification mark
- No deformations on load-bearing parts such as basic body and load ring
- No mechanical damage, such as notches, particularly in high stress areas.

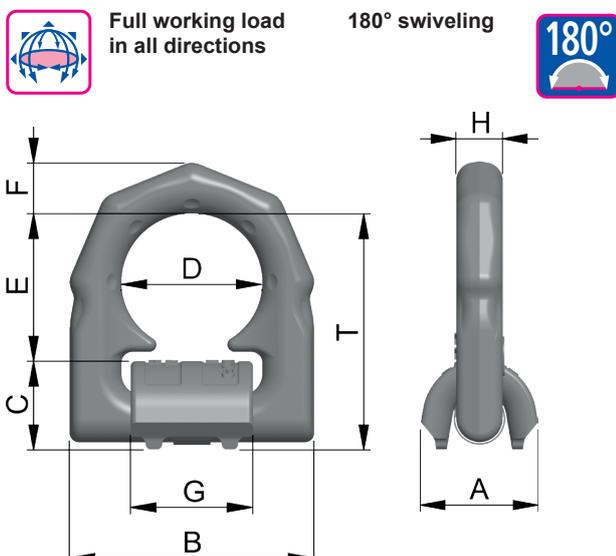
### 4.3 Additional test criteria for the competent person / repair worker

- No cross-section alterations caused by wear > 10 %
- No strong corrosion (pittings)
- Additional inspections may be necessary depending on the result of the risk assessment (e.g. incipient cracks at load bearing parts, weld seam).

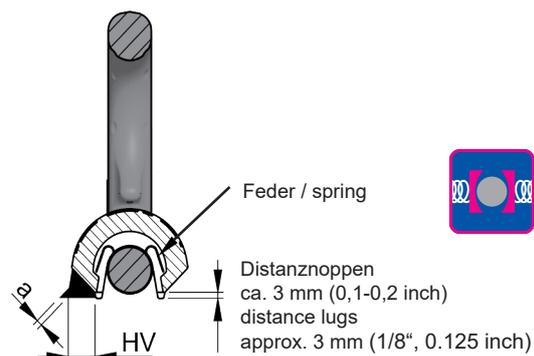
### 4.4 Disposal

Dispose of the discarded components / accessories or packaging in line with local regulations.

## 5 Tables



Pic. 3: Dimensioning



Pic. 4: Welding seam definition

Type	LC [daN]	weight [kg/ pc.]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	T [mm]	Ref.No.				
												LPW complete	without spring	D-ring	welding block	spring
LPW 3000	3000	0.35	33	66	25	38	40	14	33	13.5	65	7992225	7993142	7906588	7991566	7102228
LPW 5000●	5000	0.47	36	77	27	45	48	16	40	13.5	75					
LPW 5000	5000	0.53	38	77	28	45	47	16	40	16	75	7994831	7995430	7906589	7907597	7102232
LPW 8000	8000	0.8	42	87	31	51	52	18	46	16.5	83	7992226	7993143	7906590	7991568	7102232
LPW 13400	13400	1.9	61	115	44	67	73	24	60	22.5	117	7992227	7993144	7906591	7991569	7102236
LPW 20000	20000	2.9	75	129	55	67	71	27	60	26.5	126	7992228	7993145	7906592	7991570	7102133
LPW 32000●	32000	7.1	95	190	69	100	105	40	90	27	174					
LPW 32000	32000	7.1	96	192	70	100	106	40	90	26	176	7906781	7992229	7906593	7906780	7906639

Table 2:

● = Model in round design (up to April 2017) - Discounted part Subject to technical alterations

Type	LC [lbs]	weight [lbs/pc.]	A	B	C	D	E	F	G	H	T	Ref.No.	
												LPW complete	without spring
LPW 3000	6600	0.77	1 5/16"	2 5/8"	63/64"	1 1/2"	1 9/16"	9/16"	1 5/16"	9/16"	2 9/16"	7992225	7993142
LPW 5000●	11000	1.06	1 27/64"	3 1/32"	1 1/16"	1 25/32"	1 7/8"	5/8"	1 9/16"	9/16"	2 15/16"		
LPW 5000	11000	1.16	1 1/2"	3 1/32"	1 1/8"	1 25/32"	1 7/8"	5/8"	1 9/16"	5/8"	2 15/16"	7994831	7995430
LPW 8000	17600	1.76	1 21/32"	3 7/16"	1 7/32"	2"	2 1/16"	23/32"	1 13/16"	21/32"	3 1/4"	7992226	7993143
LPW 13400	29500	4.2	2 13/32"	4 1/2"	1 3/4"	2 5/8"	2 7/8"	61/64"	2 3/8"	7/8"	4 5/8"	7992227	7993144
LPW 20000	44000	6.4	2 15/16"	5"	2 1/8"	2 5/8"	2 13/16"	1 1/16"	2 3/8"	1 3/64"	5"	7992228	7993145
LPW 32000●	70400	15.6	3 3/4"	7 1/2"	2 23/32"	3 15/16"	4 1/8"	1 9/16"	3 9/16"	1 1/16"	6 7/8"	-	
LPW 32000	70400	15.6	3 25/32"	7 9/16"	2 3/4"	3 15/16"	4 3/16"	1 9/16"	3 9/16"	1"	6 15/16"	7906781	7992229

Table 3:

● = Model in round design (up to April 2017) - Discounted part Subject to technical alteration

	Europe, USA, Asia, Australia, Africa
	Baustähle, niedrig legierte Stähle Mild steels, low alloyed steel EN 10025
<b>MIG / MAG (135) Gas shielded wire welding (135)</b>	DIN EN ISO 14341: G4Si1 (G3Si1) z.B. PEGO G4Si1
<b>E-Hand Gleichstrom (111, =) Stick Electrode direct current Poste à souder à courant conting</b>	DIN EN ISO 2560-A: E 42 6 B 3 2 H10 DIN EN ISO 2560-A: E 38 2 B 1 2 H10 z.B. PEGO B Spezial*/ PEGO BR Spezial*
<b>E-Hand (Wechselstrom 111, ~) Stick Electrode alternating current Poste à souder à courant alternatif</b>	DIN EN ISO 2560-A: E 38 2 RB 1 2 DIN EN ISO 2560-A: E 42 0 RC 1 1 z.B. PEGO RC 3 / PEGO RR B 7 Alternativ: DIN EN ISO 3581: E 23 12 2 L R 3 2 z.B. PEGO 309 MoL
<b>WIG (141) TIG Tungsten arc welding Soudures au tungstène</b>	DIN EN ISO 636-A: W 3 Si 1 (W2 Si 1) DIN EN ISO 636-A: W 2 Ni 2 z.B. PEGO WSG 2 / PEGO WSG2Ni2



**HINT**

Please note the corresponding user hint in regard of the welding filler materials and the drying requirements\*.

Table 4:

Welding procedure and Welding filler metals \* Stick dry weld