

# Translation of the Original operating manual

**pewag winner inox**

## AWI 8-6 rust-proof master links VAS 501 013

These AWI master links are suitable for lifting and transporting loads when used according to this operating manual as well as respective national regulations. They are used with suitable lifting tools approved by the Volkswagen Group and 2 retaining straps for removing the high voltage battery. They comply with the requirements of the Machinery Directive 2006/42/EC. Read the operating manual carefully, make sure you understand it and consider the declaration of incorporation before using the master links. The user must have access to the operating manual until withdrawal of the master links from service. The operating manual is updated continuously and valid only in the latest version. The operating manual is available as a download under the following link: [www.pewag.com](http://www.pewag.com)

**For standard use with chains, ropes, belts, strings,  
max. 2 chain legs per link.**

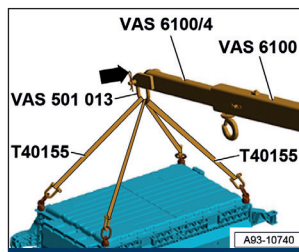
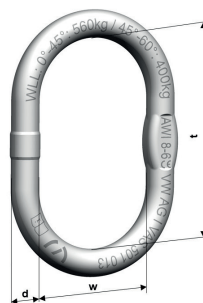
Code	WLL 0°-45° [kg]	WLL 45°-60° [kg]	to be used up to single hook according to DIN15401 No.	d [mm]	t [mm]	w [mm]	weight [kg/piece]
AWI 8-6 VAS 501 013	560	400	0.5	8	60	35	0.08

Coefficient for static test = 2.5; safety factor = 4

**For VW-specific 4 chain leg use according to picture 1:**

Code	WLL 0°-60° [kg]	to be used up to single hook according to DIN15401 No.	d [mm]	t [mm]	w [mm]	weight [kg/piece]
AWI 8-6 VAS 501 013	250	0.5	8	60	35	0.08

VW AG | VAS 501 013



picture 1

## Designated use

**Purpose:** In general, retaining straps such as e.g. T40155 are mounted on AWI master links. They serve as their connection to the lifting tool and are required for the lifting operation when removing the high voltage battery.

**Load capacity:** Loading must take place in the longitudinal direction and within the plane of the master links. The angle of inclination of adjusted retaining straps must be max. 60°.

Maximum load capacity according to table.

AWI master links must be free to move and align in the load direction.




**Admissible operating temperature:** -40 °C to 350 °C.

**Impacts:** The loading must be carried out without impacts.

- AWI master links should be used only by a competent authorized person.
- Check for damages before every use.

## Restrictions on use

Under certain conditions AWI master links can be used with restrictions – see table below. It shows loads with associated reduction factors. The permissible load capacity under these loads results from multiplication of the maximum load capacity with the reduction factor according to the table. In case that multiple restrictions of use for a lifting operation apply, all associated reduction factors must be applied! Chemicals (e.g. acids, alkalis as well as their vapors) can only be used in a limited way and their use must be discussed with and approved by pewag. For surface treatments also contact pewag first.

Temperature load	-40 °C – 350 °C	-40 °C – 350 °C	above 350°C
Load factor	1	1	prohibited
Non-symmetric load distribution	Reduce the load capacity by 1 chain leg, e.g. by classifying III- or IV-chain sling as II-chain sling. In case of doubt assume just I-chain leg as bearing.		
Edge load*	R = greater than 2x d*	R = greater than d*	R = d* or less
			
Load factor	1	0.7	0.5
Impact loading	Slight impacts	Medium impacts	Strong impacts
Load factor	1	0.7	Not permissible

\* d = chain material thickness

The information provided in this operating manual assumes the absence of particularly dangerous conditions. Particularly dangerous conditions include offshore operations, lifting of persons and lifting of potentially dangerous loads such as liquid metals or nuclear contaminated material. In such instances, the permissibility and the degree of danger must be discussed with pewag.

## Improper use

It is not intended to use AWI master links in explosion-protected areas. Do not use them under different conditions than described in “Designated use” and “Restrictions on use” – e.g. no transverse or flexural loading (edges). Do not attach them to crane hooks or the like that are too big. No heat treatment, welding, drilling of boreholes etc. must be performed.

## Assembly instructions

Assembly must only be carried out by a competent authorized person with the required skills. To use the pewag winner inox AWI master links connect them with a lifting tool approved by the Volkswagen Group and, for example, 2 retaining straps T40155. The equipment, onto which the AWI master links are mounted, must meet the requirements of the directive 2006/42/EC. Only use non-defective parts. Defect AWI master links must not be used. Prior to assembly used links are to be checked according to the following point "Maintenance, inspection, repair".

## Protective measures to be taken by the user

Always wear protective gloves. Under conditions with restrictions on use the given reduction factors apply in any case to ensure sufficient safety.

## Remaining risks

Overloading due to ignoring maximum load capacity or not reducing load capacity due to temperature effects, edge or impact loads as well as incorrect adjustment, improper use of chemicals, exceeding permissible angles of inclination, strong vibrations at high loads or the use of not inspected AWI master links may cause failure of the AWI master links. The load may fall down, which poses a direct or indirect danger for the life and health of persons within the danger zone area of lifting devices.

## Procedure in case of accidents or faults

If the AWI master links become deformed (e.g. due to overloading) or other exceptional circumstances arise, they must be removed from operation and handed to a competent authorized person for inspection/repair.

## Maintenance, inspection, repair

**Maintenance:** Regularly clean the AWI master links.

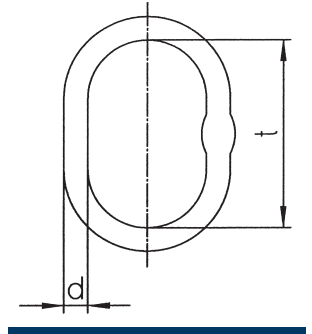
**Inspection:** Inspect the AWI master links in a clean condition – they must be free of lubricant and dirt. Colour shall be permissible as long as an evaluation of the state of the AWI master links is possible. Cleaning must not include methods that cause material embrittlement, overheating (e.g. flame cleaning), material removal (e.g. sand blasting) etc. Do not cover cracks or other deficiencies. The user must check the AWI master links for damages before every use. A competent authorized person must check them at least once a year. Considering the conditions of use this time period may be shorter – e.g. at frequent use with maximum load capacity or under conditions with restrictions of use, increased wear or corrosion. According to national time requirements a crack test must be performed. To do so, the following is possible: Loading with 1.5 times load capacity and subsequent visual inspection, dye-penetration method. Due to lasering the VW-specific marking, the area of the engraving may have a decreased corrosion resistance. This has no implications on the mechanical properties of the link.

### **Discard criteria:**

- Breaking, deformation, sharp notches and/or cracks of any kind
- Any sign of exposure to high heat
- Reasonable doubts on the functionality and/or safety of the AWI master links
- Illegible markings
- Wear, chemical material removal (e.g. pitting), when a permissible change in dimension according to the table below is exceeded.

Dimension	Maximum permissible change
d	-10%
t	+10%

**Repair:** Only a competent authorized person is allowed to perform repairs: You can remove small defects like notches or score marks by carefully polishing or filing. After repairs, the area of repair must be intergradient, without a sudden change in cross-section. Due to the complete elimination of the defect, the material thickness in this area may reduce by max. 10 % of its nominal dimension. Welding, heat treatments as well as aligning of bent AWI master links is prohibited. Inspections and repairs need to be fully documented and remain with the AWI master links for the duration of their operating life.



## Storage

Store the pewag winner inox AWI master links in a clean and dry condition. Components must not be exposed to chemical, thermal or mechanical influences during storage.

## Declaration of Conformity

**In accordance with Appendix II A of Machinery Directive 2006/42/EC 2010 and/or Machinery Safety Order (MSV) 2010 for lifting accessories:**

Authorized representative for technical documents in accordance with Annex VII part A:  
 DI Bernhard Oswald  
 Mariazeller Straße 143  
 A-8605 Kapfenberg

We declare, on sole responsibility, that the products of this operating manual comply with the provisions of the directive 2006/42/EC.

**The following standards were applied:**

EN 1677-4 modified, factory standard

Upon any change not approved by pewag, these declarations lose their validity. Reading and understanding the operating manual is a precondition for commissioning.  
 Kapfenberg, 2019-07-12

pewag austria GmbH  
 ppa. Stefan Duller