



**Instruction manual rear suspension german : A.® AiR-force SLR**



made and manufactured in germany

Before assembling please read the mounting instructions!

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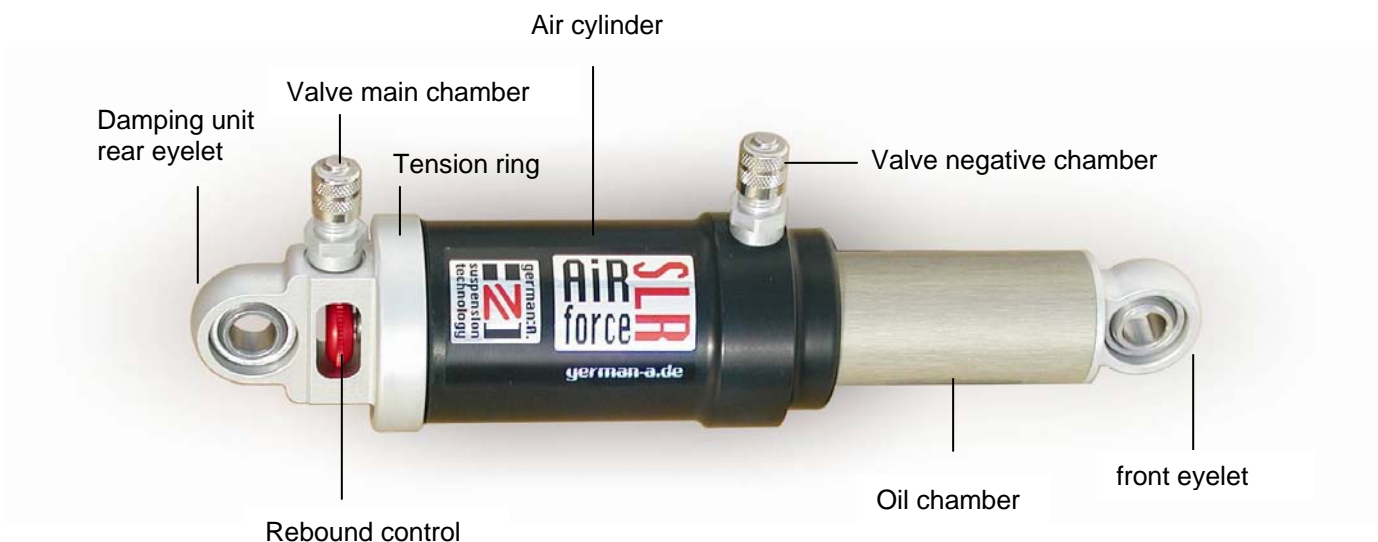
## 1. Safety Instruction

Ignoring the safety instructions will lead to the termination of the warranty.

- 1) Servicing is only to be done by skilled personnel.
  - 2) When servicing always use protective goggles. Because of the construction of the damping unit a sudden pressure release can occur during disassembly.
  - 3) Before filling the damping unit with air please read the manual of the pump you are using.
- 4) The customer is responsible for the collision-free function of the damping unit. The room needed for the function of the damping unit is to be provided in every travel status!
- 5) The damping unit is not to be put under any load when it is not filled with air!  
Compression of the damping unit without the use of force (point 4) is an exception.
  - 6) The fixing eyelets are not to be rotated to each other counter clockwise, because many of these connection points are connected through screws for better servicing that could get loose because of this movement.
  - 7) The eyelets of the damping unit are to be positioned through clockwise rotation.

## 2. Mounting Instruction

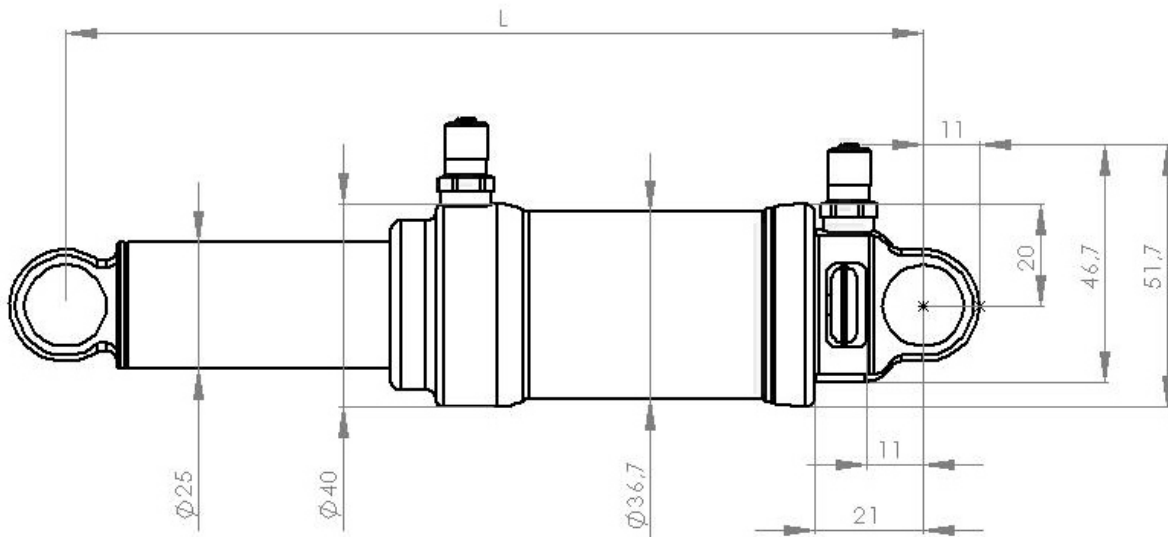
### 2.1. Product description





## 2.2. Assembly dimensions

Before you mount the AiR-force SLR to your bike you have to check that the shock absorber has enough room to work without collision with the frame or other parts of the bike in every state of travel. The following draft shows the most important dimensions:



Dimensions of the AiR-force SLR:

L = Assembly dimensions with 30 mm travel: 153 / 165 mm

L = Assembly dimensions with 40 mm travel: 165 / 170 mm

L = Assembly dimensions with 50 mm travel: 190 / 200 mm

## 2.3. Assembly bearings

The mounting area of the shock absorber should have a minimum width of 11 mm.

There are two types of bearings for your rear shock absorber: a) with standard-bushings b) with radial joints (ball joints). These are especially recommendable if you have a single link rear suspension system, because they compensate the movements coming from the bearing play of the rear suspension what significantly prolongs the life of the shock absorber.

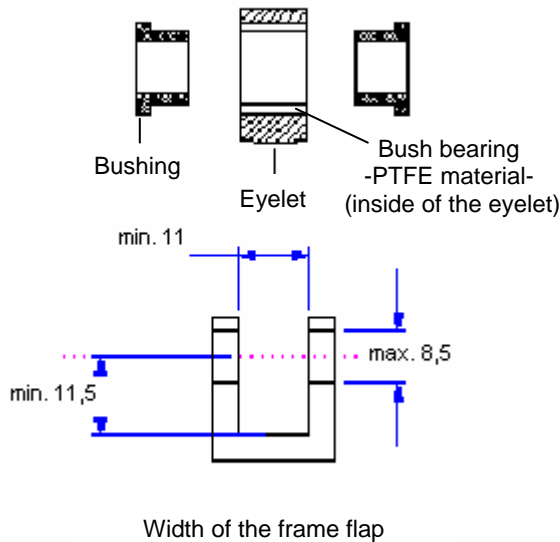
When using radial joints the usage of rubber joint rings is obligatory. When using standard bushings these are optional.



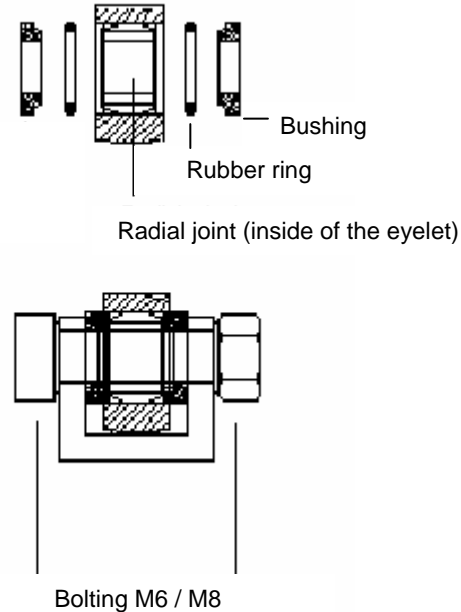
**Figure 1: A set of radial joints together with bushings**



### Bearing with standard-bushings



### Bearing with radial joints



## 2.4. Variation of the valve of the negative chamber

If the shock absorber does not have enough room to work because of the valve position or when this valve position makes the filling of the air chamber impossible, you will have to change this.

The change of the valve position is only possible when the shock absorber is not under any air pressure. (Read chapter 3.1 to learn how to reduce the air chamber pressure.)

When the AiR-force SLR is **absolutely pressure free**, you can unscrew the mounting ring of the air chamber (one rotation is enough – clockwise thread). Now you can rotate the valve clockwise and define its position relatively to the shock absorber fixing eyelets. When you have achieved a satisfying position of the valve you can screw the mounting ring on again by hand. Do not over tighten!

If the position of the shock absorbers eyelets is not aligned, change their position through turning clockwise. Now you can refill the shock absorber with air.

Do not turn parts of the shock absorber counter clockwise to each other because you might unscrew parts of the shock absorber (threaded connections).



### 3. Adjustment

#### 3.1. Primary filling

The AiR-force SLR is already filled with air when you receive it from your dealer. To adjust the pressure or for testing the clearance of the shock absorber or for the adjustment of the valve position it might be necessary, to remove the air from the shock absorber.

When removing air from the shock absorber: First remove air from the negative chamber!

When filling: First fill the main air chamber, then the negative chamber.

**NOTE! Please check, if your air pump has an adapter for filling shock absorbers, which makes the removal of the pump possible without losing air pressure!**

Air pressure Air-force SLR (only recommended values)	
Pressure main chamber in bar	Pressure negative chamber in bar
5	8,5
6	10,2
7	11,9
8	13,6
9	15,3
10	17
11	18,7
12	20,4

The minimum air pressure in the main chamber is 5 bar, the maximum pressure is 20 bar. The negative air chamber should have a minimum pressure equal to the pressure of the main chamber and a maximum pressure of 1,7-fold main chamber pressure (up to 4 bar more than the positive chamber).

#### 3.2. Spring rate

The spring rate defines the firmness of the ride and is varied by changing the air pressure. If you are a marathon or cross-country rider you will probably prefer a firmer ride, while comfort or free rider would prefer a rather soft ride. The best spring rate cannot be precisely defined by the manufacturer because of these different riding styles. If you want to make the shock absorber firmer, you have to increase the air pressure in both chambers. If you want to soften the shock absorber, do vice versa.

Large amount of negative travel = Soft spring rate (for free ride, downhill and comfort)

Small amount of negative travel = Hard spring rate (cross country and marathon)



**3.3. Negative travel**

The negative travel is defined through the compression of the shock absorber when the rider is normally seated on the bike. Using the AiR-force SLR the negative travel is about 20-30% of the maximum travel.

You can use a binder or rubber ring on the oil chamber to measure the negative travel.

Max. travel	Negative travel 15% (at shock absorber)	Negative travel 20% (at shock absorber)	Negative travel 25% (at shock absorber)	Negative travel 30% (at shock absorber)
30 mm	4,5 mm	6 mm	7,5 mm	9 mm
40 mm	6,75 mm	9 mm	11,25 mm	13,5 mm
50 mm	8,25 mm	11 mm	13,75 mm	16,5 mm

Variation of negative travel according to maximum travel

**3.4. Rebound damping**

The rebound damping is adjusted by the adjustment wheel located near the rear eyelet:

- Counter clockwise rotation reduces rebound damping,
- Clock wise rotation increases rebound damping.

**4. Modification and servicing**

**4.1. Cleaning and maintenance**

You can clean the shock absorber with detergents usually used for bicycles. When cleaning the shock absorber, be sure to have valve caps screwed on both air chamber valves. The usage of aggressive detergents and thinner can attack the surfaces and stickers of the shock absorber.

The surfaces of the shock absorber are anodized. These surfaces react to ultra-violet light. Especially at surfaces covered by the frame or under stickers this can lead to “shadows”. This does not reduce the function of the shock absorber in any way.

With the help of a service kit a complete servicing is possible (removal of dirt from the inside).



Service kit for the air chamber of AiR-force SLR



Very extreme example of removal of dirt inside (mud)



## 4.2. Inspection

The rear shock absorber is object to general wear and tear, so that a servicing every year or earlier depending on ride conditions is obligatory.

Even storage of the shock absorber leads to the aging of the seals (oil loss, smacking and slurping sounds, shock absorber failure) and makes a servicing necessary!

An inspection consists of an oil change (silicon oil) as well as a change of all seals and small function parts. This has to be done by professional personnel. To do this you have to send in the shock absorber together with the receipt as well as a assignment in writing either over your local dealer or by directly sending it to german:A.. The time needed for servicing is 5 workdays from the date of arrival. The cost of servicing is posted on our website at <http://www.german-a.de>.

## 4.3. Warranty

Applicable are the general terms and conditions of German Answer as well as the warranty rules defined by law. Above this German Answer is ready to tolerate special cases.

The warranty is not applicable if un-purposeful usage takes place or:

- Ignorance of safety precautions defined by chapter 1
- If the shock absorber is disassembled for reasons that don't include servicing
- Broken valve casings
- Over tightened and therefore broken threads of the valve casings
- Flow and normal function sounds when all seals are working
- Worn bushings
- Parts that are object to wear and tear (seals/bushings/surfaces)
- Mechanical injuries / bent dials
- Mechanical injuries of the surfaces

The warranty also expires when the serial number is removed, the receipt is missing or when the servicing intervals have been ignored.

## 5. Imprint

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