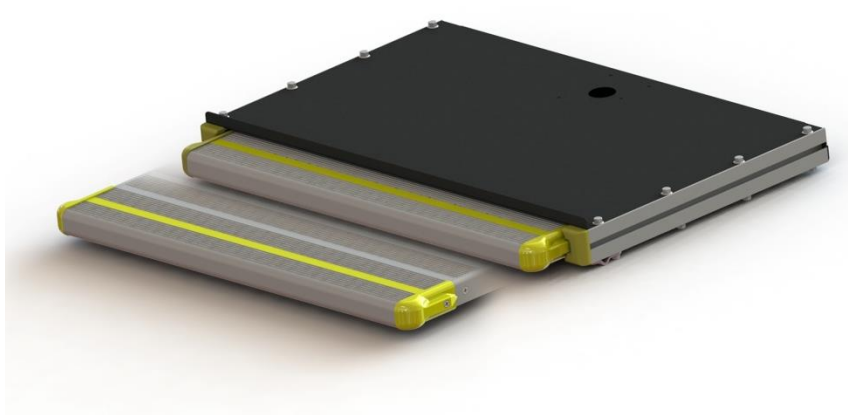


# Condensed Manual

## AXS MD ..... SA (mechanical step)



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Netherlands  
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Date: jul 2018  
Rev. 2.1

# 1 Technical specifications

|                       |   |
|-----------------------|---|
| Product description   | Foot operated step for mounting outside under the floor of a vehicle.   |
| Installation          | Under the vehicle Floor at the front- middle or rear door   |
| Dimensions            | Step depth 300 mm - width depending on model 600, or 900 mm<br>For detailed dimensions please refer to the installation drawings in the rear of the manual. |
| Weight                | total           AXS MD 600 M = 16 Kg<br>AXS MD 900 M = 20 Kg.   |
| Load                  | Maximum load 150 Kg (1500 N) this is always labeled on the Step.  |
| Materials             | Frame; steel with EP corrosion protection and aluminum sliding profile,<br>Step: Aluminum profile and plastic corner pieces.                                |
| Life cycle            | Tested life cycle of the step is 100.000 cycles with a load of 100 KG.  |
| Electrical connection | Waterproof 2 pin connector (IP65) on the step.  |
| Electric signals      | Step closed   |
| Legislation           | The product fulfils R107 UN Bus directive and 98/37 EC Machine directive.   |

## 2 Safety instructions

**These Safety instructions should always be kept with the step. The operator must be made aware of these instructions before operating the Step. Read and follow these safety instructions carefully.**

The step is intended to be an extra step to enter a vehicle. It should be used appropriately by passengers to enter or exit a minibus, taxi camper or other vehicle, and the maximum load should not be exceeded.

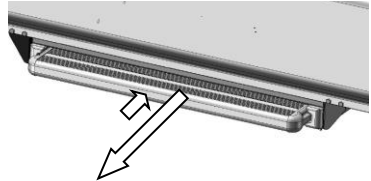
1. **Before operating the step the vehicle must be stationary and the hand brake or parking brake must be applied.**
2. **Before operating the step, ensure that there is nothing obstructing it. Look out for people moving outside the vehicle near the step.**
3. **It is recommended that the step is only operated by the driver or other qualified operators.**
4. **The driver or operator must have a clear view of the step when they are operating it.**
5. **It is recommended that the middle of the platform is used when stepping onto the step.**
6. **NEVER drive away when the RED dashboard LED light is still on, this means that the step is not properly stowed.**
7. **The step platform must be kept clean and free of oil and other greasy materials.**
8. **If there is any doubt about the safety of a passenger when using the step, ensure they are assisted.**
9. **If you have any questions about the safe operation of the step, contact the person responsible directly.**
10. **Never use the step for any other use than described here.**
11. **Never overload the step.**
12. **The step should always be operated until it is fully in or out.**
13. **Repair and maintenance must be done by qualified and trained staff only.**
14. **If any parts need replacing, ensure only original Acdeos Parts are used.**
15. **If the anti slip profile on the step becomes worn, the step platform must be replaced.**
16. **Always use the recommended cleaning materials.**
17. **Report any unsafe aspects of the step to the step supplier.**

### 3 Operation

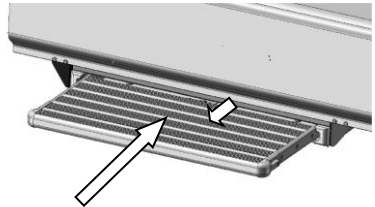
First read safety instructions

This is a mechanical semi-automatic step. You can operate the step by feet.

To open the step; simply push with your feet at the center of the step. The step will move in a little and unlock itself. Take away your feet and the step will come out automatically.



To close the step: push with your feet at the center of the step until the step is completely closed. The step will lock automatically.



## 4 Installation

The installation must only be done by a company that is familiar with bodybuilding or modifying vehicles, and that have the trained technical staff.

### 4.1 Mechanical Installation

Below instruction is based on mounting the step with the optional flexi fit mounting kit which is available under number S130 01 024. Ask your dealer for availability

In order to mount the step you do not need to make any major vehicle adaptations. The step is placed under the floor in the middle of the front, middle or rear door. Chassis modifications are not needed, but you may need to remove some plastic underbody parts.

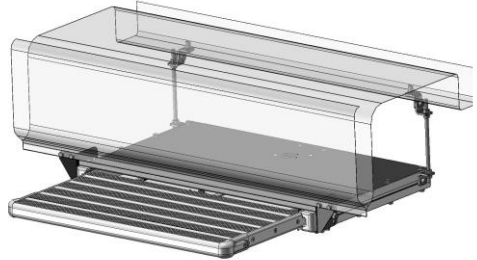
Exact measurements of the product should be taken from the official installation drawings. Ask Aceos for the last revision and official installation drawing. Figures and drawings in this manual are only indicative.

#### Installation:

Create a safe working environment. Raise the vehicle to the appropriate working height.

Identify the location underneath the vehicle where the step will be mounted. Ensure the cassette can be mounted in the required position without being obstructed by the chassis or other vehicle parts.

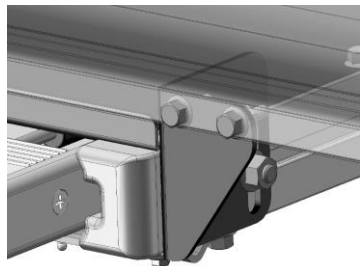
**Make sure that the step is not too close to hot parts such as the exhaust system. This can damage the step.**



The picture shows the basic principles for mounting the step.



Identify where the 4 front mounting bolts will go. The holes for this fixation should be drilled in the lower flange of the outer chassis bar of the vehicle. Drill the holes  $\varnothing 6.5$  mm. Always protect all drilled holes with zinc spray. Make sure there is enough material in the flange under the hole. Place the step with two bolts at the flange and support it at the rear.

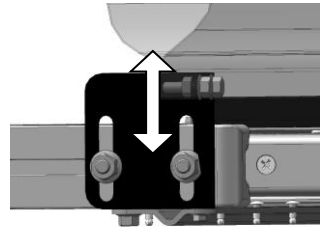


Take the flexible mounting brackets supplied with the step. These brackets can be mounted in several ways. The brackets should be used to fix the rear side of the step to the bottom of the vehicle. It is recommended that a sturdy section of the vehicle floor is used. Mount the brackets so that they bridge the gap between step and vehicle floor / chassis. The M8 studs should be placed as vertical as possible. This fixing requires some technical knowledge and own interpretation.

Always try to go as vertically as possible straight up from the fixing point on the rear of the step to the fixing points on the vehicles floor.

Adjust the step so that it is horizontal under the vehicle. Finally fit all bolts and nuts to complete the mounting of the step.

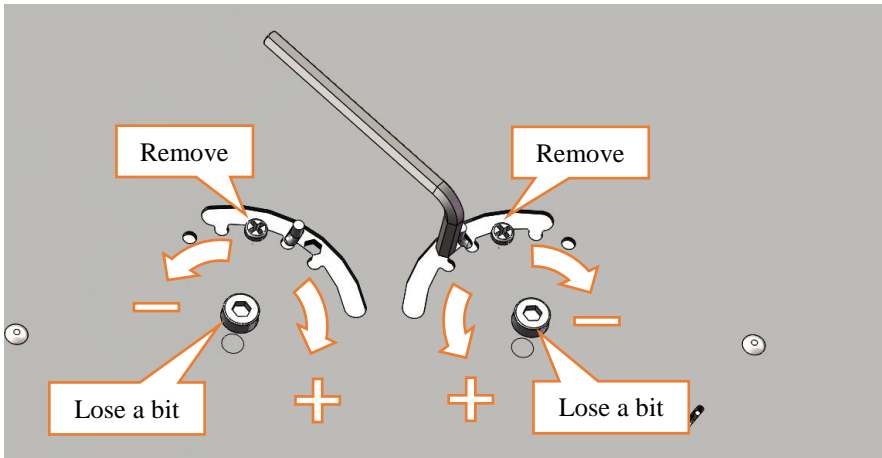
You can adjust the height of the step under the vehicle by adjusting the front brackets in the slot holes.



## 4.2 Mechanical adjustment

The step is being pushed out by two helical springs. The force at the springs can be adjusted at a installed step under the vehicle.

There are two preload adjusters at the bottom plate of the step. To adjust the load, bring the step in "out" position. Lose the two M8 bolts a little. Remove the two locking screws. Place a 6 mm hex key in the hex hole and adjust the load to plus or minus. After adjusting fix the locking screws and M8 bolts. Both sides need to be in the same position after adjustment.



## 4.3 Electrical Installation

The step comes standard without cable loom, only with a simple close switch. A wiring loom should be made according schedule in appendix 1.

Optional original cable loom including connector fuse and dashboard LED is available under number S130 000 Ask your dealer for availability

Pls note that a safety Light at the dashboard in sight of the driver is strongly recommended and in some countries legally required.

The connector used at the step is of the type AMP Super seal 2 pole male C 282080-1

The counter part is AMP SUPERSEAL 2 Way, 1 Row Female Connector Housing 282104-1

## 4.4 Using the Step:

You should test the step after installation. Follow these instructions:

1. **MOUNTING** – Check that all mounting bolts are in place and tightened.
2. **MOUNTING** – Bring the step out and apply a load : Max 150 Kg. Check if the mounting of the step is correct for this weight. The construction of the step means that with a weight of 150 Kg the step will give slightly - this is normal !!
3. **ELECTRICAL INSTALLATION** – Check that the red LED on the dashboard turns red when the step is out

If this small test procedure is successful, the step is ready to be used. If one of the tests fails the problem should be resolved before putting the step in to use..

## 5 Periodic maintenance / Inspection

### 5.1 Cleaning

The step must be cleaned in the normal cleaning schedule of the vehicle, depending on the use of the vehicle and the type of the operation. Normal non-aggressive cleaning materials, as used for cleaning the other parts of the vehicle, should be used.

The use of high-pressure water cleaners to clean the inside of the step is recommended.

Do not use aggressive solvents; these could affect the paint, and rubber as used on the step.

### 5.2 Periodic maintenance / Inspection

#### 5.2.1 Small maintenance

The step has an open cassette. Dirt and other particles will ingress the step. So it will need regular cleaning. It is recommended to spray some thin oil PTFE or silicone spray on the wheels and locking mechanism and other moving parts on a regular basis.

We strongly recommend MOTIP PTFE spray at all parts in the step, **do not** use WD40 spray. Other similar PTFE oil / grease sprays can also be used.

#### 5.2.2 Yearly maintenance / Inspection

Major maintenance should be done once every six months or at every 30.000 cycles. If the number of cycles per year is less than 10.000 the six monthly maintenance interval Will still apply

Following the vehicle inspection schedule, check following points:

1. **MOUNTING** – Check if the all mounting bolts are in place and tightened.
2. **MOUNTING** – Bring the step out and test load Max 150 Kg. Check if the mounting of the step is without deflection for this weight. The construction of the step is such that a weight of 150 Kg will give a little deflection of the step. This is normal !!
3. **ELECTRICAL INSTALLATION** – Move the step out and check if the red LED on the dashboard shines red when the step is out.
4. **Check if the step move out completely.** If needed adjust the preload at the springs following 4.2

## 6 Certification

Product **Product description**  
AXS STEP  
Mechanical Sliding step  
Type AXS MD 600 SA / M  
AXS MD 900 SA / M

Company **Production under responsibility of**  
Acdeos BV  
Address Touwbaan 1A  
City 2352 CZ Leiderdorp  
Country Netherlands  
Website WWW.ACDEOS.COM  
Legal represented by Mr. A de Moes

### Conformity

Product is designed, tested and produced confirm:  
The loading recommendations in the Machine directive 98/37/EG  
step is tested for a maximum weight of 150 Kg

On behalf of producer:

Name / Function

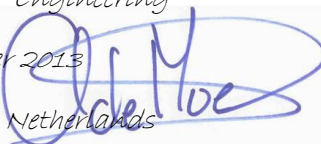
*A de Moes / Engineering*

Date

*10 December 2013*

Place

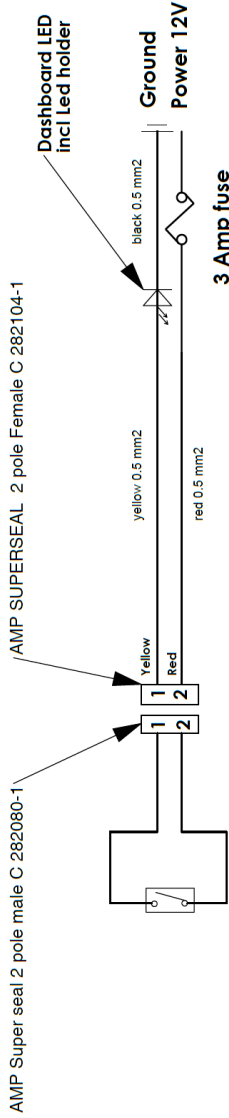
*Leiderdorp, Netherlands*



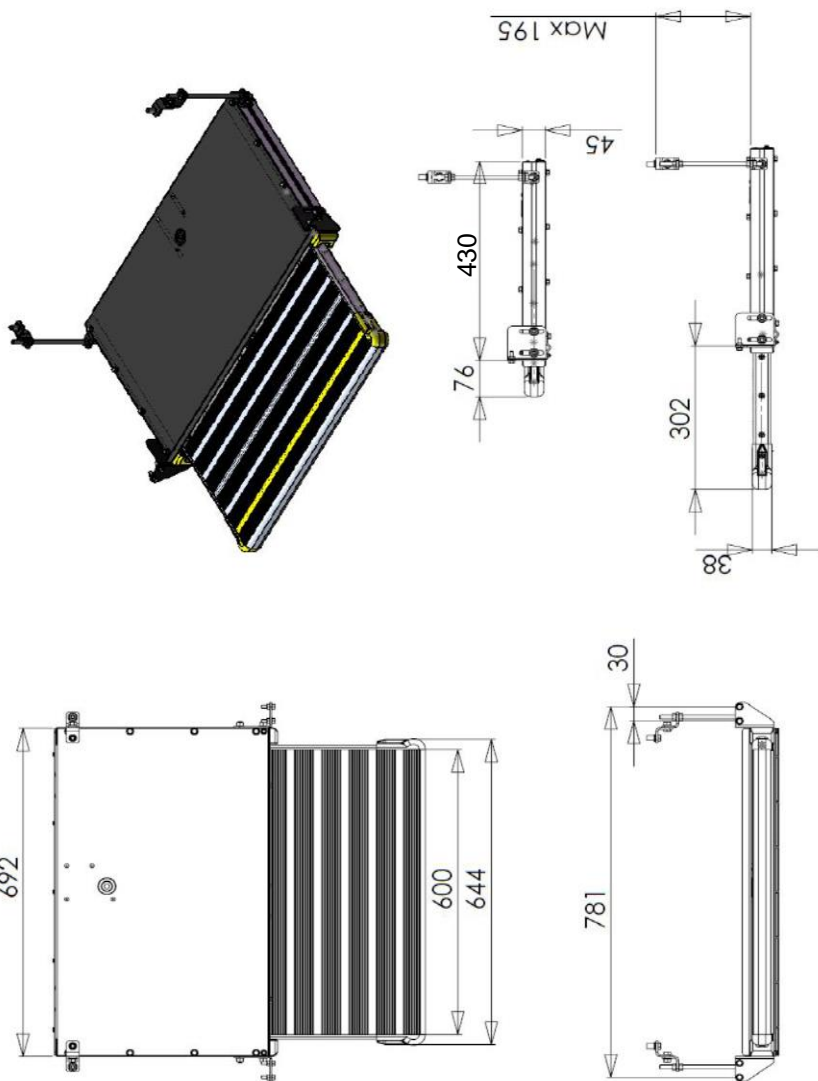


# 7 Appendix 1; electric schedule

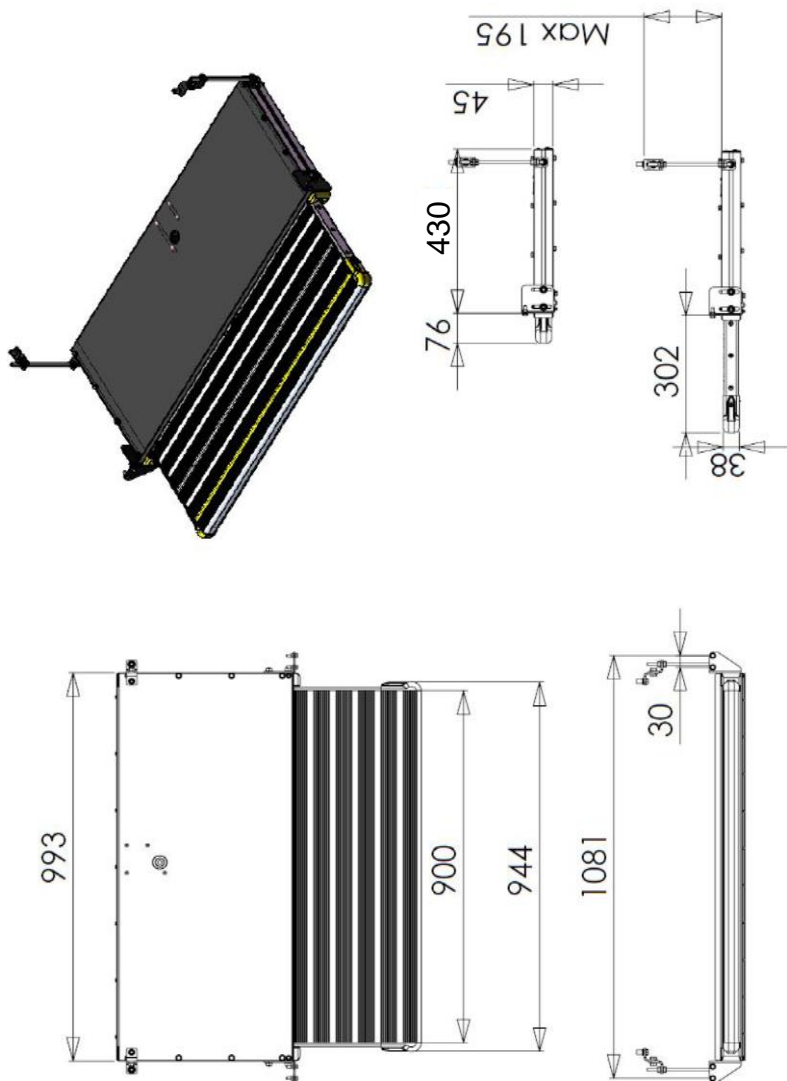
Functions:  
Step closed / No dashboard LED light  
Step Open / Dashboard LED lights up



## Appendix 2; Installation drawings: AXS MD 600 M



# AXS MD 900 M



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