

AMF-BRUNS

USER AND INSTALLATION MANUAL

SmartRamp



⚠ WARNING ⚠

Carefully read, understand and follow all warnings and instructions provided in this manual, and keep it in a safe place for future reference. If you have any doubt whatsoever regarding the use or maintenance of any AMF-Bruns product, please contact AMF-Bruns. Failure to follow these warnings and instructions can result in product malfunction or loss of control of the vehicle, causing an accident, severe personal injury or death. **This guide contains current information at the time of printing. AMF-Bruns reserves the right to modify systems or content without notice. Please visit our website for updated versions.**



AMF-BRUNS OF AMERICA

www.amfbrunsamerica.com



Dear Purchaser:

Thank you for purchasing an AMF-Bruns of America product. These Installation Instructions provide information for the correct installation of the SmartRamp

After thoroughly reading these Installation Instructions, keep them in a safe place for the entire life of the SmartRamp so that they are available for a possible future re-installation.

In case of a change of ownership of the SmartRamp, the Installation Instructions must be given to the new owner.

This document must not be reproduced or duplicated, in full or in part, without the prior, written permission of the manufacturer.

The SmartRamp must never be converted or modified in any way without seeking the prior, written permission of AMF-Bruns of America - the manufacturer. AMF-Bruns of America will not be held responsible if conversions or modifications are carried out without prior authorization.

Explanation Of Symbol And Signs

1) To improve understanding, the following conventions should be met for this user and installation manual.



DANGER!

Warns of a situation of immediate danger which could lead to serious or fatal injuries if not avoided.



WARNING!

Warns of a potentially dangerous situation which could lead to serious or fatal injuries if not avoided.



CAUTION!

Warns of a potentially dangerous situation, which can lead to slight or minor injuries or material damage if not avoided.



ATTENTION!

Indicates a potentially dangerous situation which can cause material damage if not avoided.



Contains general and useful information.



Reference important information in other sections and documents.

- 2) Some text passages serve a special purpose. These are highlighted as lists and instructional text, i.e. a series of activities.
- 3) Meaning of directions: If directions are given in the text (in front of, front, behind, rear, right, left), these directions relate to the normal direction of travel of the vehicle.



AMF-Bruns of America
User and Installation Manual
SmartRamp

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1) SAFETY

The authorized dealer is responsible for adherence to the safety regulations when installing the SmartRamp. Installation is carried out at the sole risk of the installation company. The manufacturer accepts no liability for damage caused during installation unless such damage is caused by grossly negligent or intentional breach of contract on the part of the manufacturer.

In addition to the information given in these Installation Instructions, local legislative regulations must be taken into consideration, in particular those regarding safety and accident prevention.

Detailed information regarding safety when operating the SmartRamp can be found in the Operating Instructions. The Operating Instructions are also available in PDF format at www.amfbrunsamerica.com.

Personnel Requirements

The SmartRamp must only be installed by specialist personnel who:

- Have read and understood these Installation Instructions.
- Will execute the job entrusted to them in a responsible and reliable manner.
- Have been assigned to install the SmartRamp by the vehicle owner.

2) INSTALLATION

2.1 Safety Information for Installation



DANGER!

Risk of danger through incorrect installation.

If installation is not carried out correctly, the SmartRamp can come loose in a road traffic collision and be thrown forwards. This can cause fatal injuries to all occupants of the vehicle.

- The SmartRamp must only be installed in a vehicle by specialist personnel under adherence to the applicable AMF-Bruns Installation Instructions.
- The vehicle manufacturer's body fitting guidelines must be adhered to.
- The installation plates provided must be used to install the SmartRamp.
- Any additional installation materials used must be properly dimensioned and durable.
- The installation company is responsible for the suitability of the installation materials used.
- Screws/bolts must be tightened to the tightening torques specified in Section 2.3 (Page16).
- If any of the vehicle's original fasteners are loosened or removed to install the SmartRamp, they must be re-tightened to the torque specified by the vehicle manufacturer.
- The SmartRamp must not be used until the above tasks have been completed.



WARNING!

Risk of injury when installing the SmartRamp.

The SmartRamp can fall over or fall to the ground. There is a potential risk of injury through crushing and of material damage.

- Make certain that the vehicle is standing straight and level.
- Only lift the SmartRamp into the vehicle after this is completed.
- Remember that the SmartRamp weighs up to 165 lbs / 75 kg.
- Always lift the SmartRamp with the assistance of a second person.
- Always wear safety footwear and protective gloves when removing or fitting the SmartRamp.
- Do not jack the vehicle up if the SmartRamp is loose inside the vehicle.

Installation



CAUTION!

Material damage can be caused by incorrect installation.

- Read these Installation Instructions thoroughly before installation to become familiar with the entire installation procedure.
- Secure the vehicle, to prevent it from rolling away.
- Do not start installation until this has been done.



NOTE

The figures shown in the text that follow only serve as an example for the installation of the SmartRamp.

2.2 Installation Work



Figure 1: Aligning the SmartRamp

- Lift the SmartRamp into the vehicle.
- Align the SmartRamp into the position in which it will be operated upon installation.



Figure 2: Distance from Tailgate

- Align the SmartRamp to the fore and aft direction of the vehicle so that it has sufficient space to the tailgate / rear doors.
- The tailgate / rear doors must be able to close without making contact with the SmartRamp.
- The SmartRamp must not rattle against the tailgate or rear doors when vehicle is moving.



Figure 3: Marking the Fastening Holes

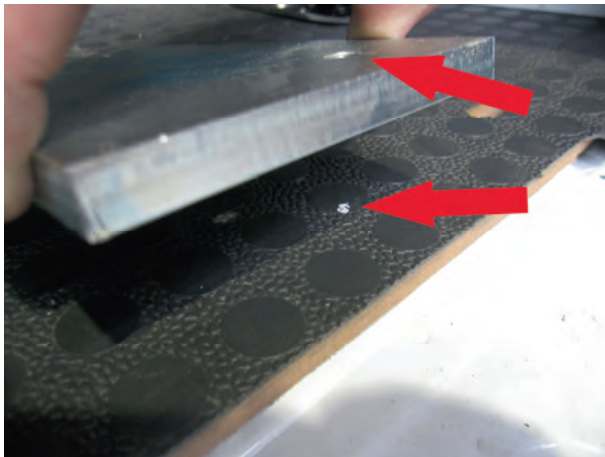


Figure 4: Positioning Installation Plates

- Mark the position of the holes for securing the SmartRamp on the floor covering or vehicle floor.

- Position the installation plates with the threaded holes on the markings. The installation plates must be orientated, such that the threaded holes are on the outer sides.
- Check the underside of the vehicle to ensure that the position of the installation plates is suitable for securing them to the vehicle floor.

Note:

The fastening holes, that will later be drilled through the installation plates, must not be located above cavities, beams, seams or similar parts of the vehicle. This must be ensured by the position of the installation plates on the vehicle's floor. The installation plates can not be fastened correctly if this is not the case.



Figure 5: Marking the Installation Plates

- Correct the position of the SmartRamp if necessary, and mark the holes in the new position.
- Mark the contour of the installation plates on the floor covering of the vehicle.
- Take the installation plates out of the vehicle.
- Drill the fastening holes through the installation plates.
- Drill these holes to correspond with the size of the bolts that will be used to anchor the SmartRamp.
- Countersink the holes.

**DANGER!****Improper SmartRamp Installation Creates Dangerous Situations.**

If the bolts used to anchor the installation plates are not adequately dimensioned, they can shear if a road traffic collision occurs. The SmartRamp can then be thrown towards the front of the vehicle. This can cause fatal injuries to all occupants of the vehicle.

- Each installation plate must be secured by at least four countersunk screws.
- These countersunk screws must be a minimum M8.
- The property class of stainless steel screws must be at least Grade A2-70. The property class of steel screws must be at least 8.8.



Figure 6: Floor Covering with Cut-Out for Installation Plate.

- Cut the floor covering out along the contour of the installation plate that was marked earlier.

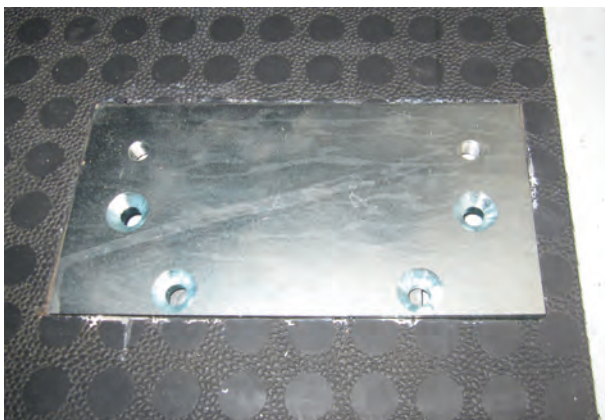


Figure 7: Floor Covering with Installation Plate.

- Place the installation plate into the cut away section.

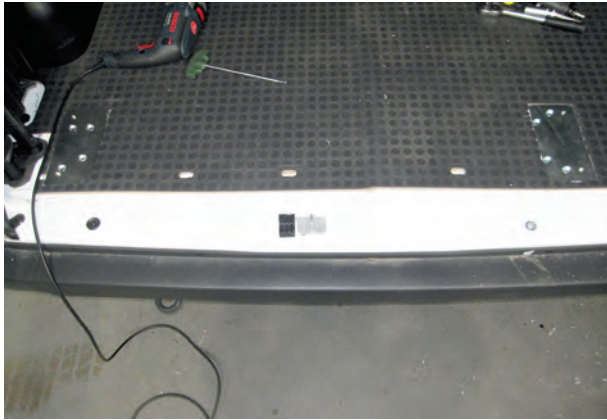


Figure 8: Floor Covering with Installation Plates.

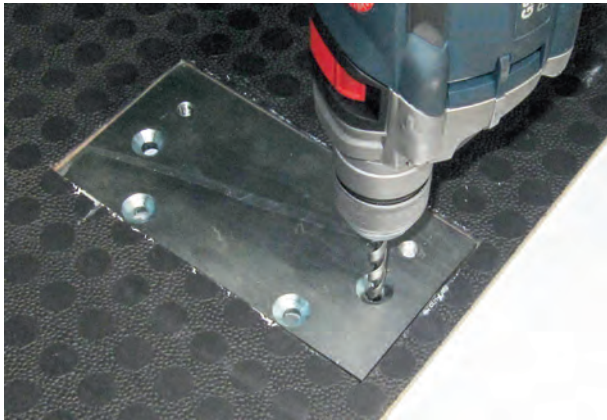


Figure 9: Drilling Holes

- Drill the fastening holes through the floor of the vehicle.

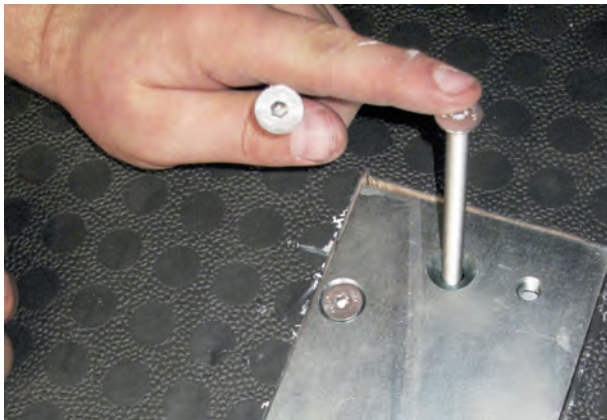


Figure 10: Inserting Securing Screws.

- Insert the securing screws. Use countersunk screws.
- Take the installation plates and screws out of the vehicle.
- Deburr all holes.
- Remove all drilling swarf, i.e. using a vacuum cleaner.



Figure 11: Removing Underseal (1).

- Remove underseal from the underside of the vehicle, at the points at which the SmartRamp will be secured.

Note:

Metal-to-metal contact must be ensured between the bodywork and the parts used to anchor the SmartRamp.



Figure 12: Removing Underseal (2).

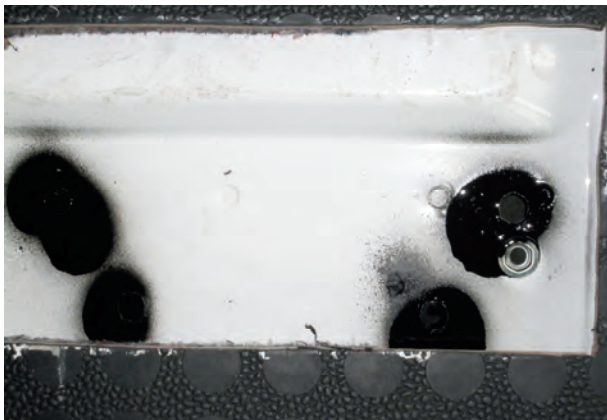


Figure 13: Applying Rust-proofing Paint (1).

- Apply rust-proofing paint to all bare metal surfaces.



Figure 14: Applying Rust-proofing Paint (2).

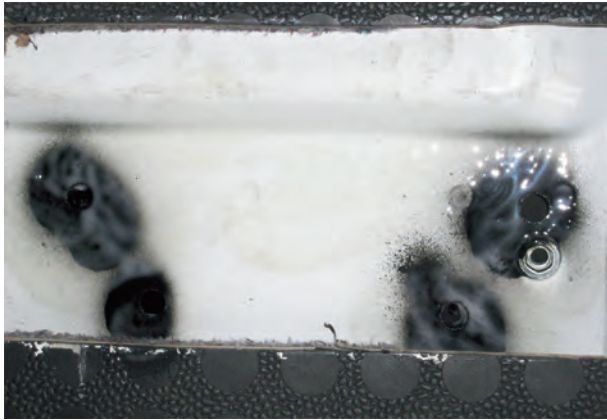


Figure 15: Applying Cavity Sealant

- Allow the paint to dry.
- Apply additional cavity sealant to the top side of the floor of the vehicle.

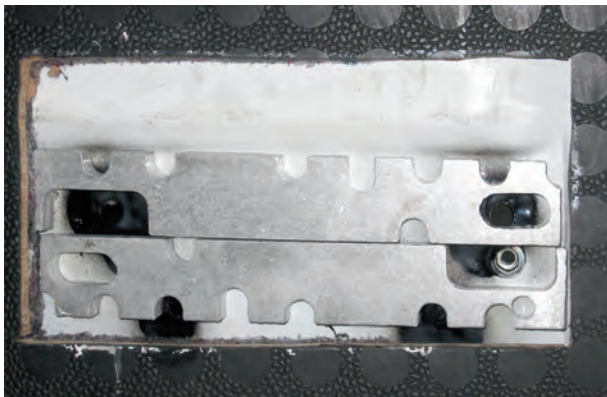


Figure 16: Inserting Shim Plates.

- Compensate for height difference of the vehicle's floor, i.e. beading, using shim plates.

Note:

A metal-to-metal contact must be ensured in the area of the installation plate securing screws and the bodywork. The installation plates must be level and flush with the vehicle's floor.



Figure 17: Screwing the Installation Plates Down (example 1).

- Fit the installation plates and insert the securing screws.
- Screw the installation plates down to the floor of the vehicle.
- Place large diameter washers under the nuts or, if necessary, make suitable washers. Use self-locking nuts.

Note:

Securing the installation plates shown in Figure 17 and Figure 18 is only shown as an example.



Figure 18: Screwing the Installation Plates Down (example 2).



DANGER! Incorrect SmartRamp Securement Creates Dangerous Situations.

If the SmartRamp is not secured correctly, it can come loose in a road traffic collision and be thrown forwards. This can cause fatal injuries to all occupants of the vehicle.

- The SmartRamp must be firmly secured to load bearing parts of the bodywork by the securing screws and the chosen securing materials.
- A metal to metal connection with load bearing parts of the bodywork must be ensured.
- If necessary, make adequately dimensioned custom made securing materials.



Figure 19: Underseal.

- Apply underseal to all relevant parts of the underside of the vehicle.

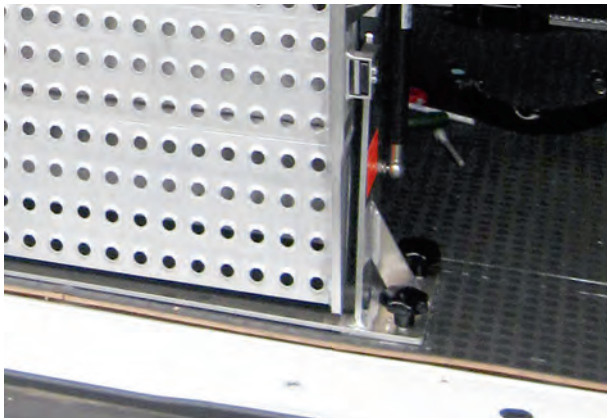


Figure 20: Star handles.

- Place the SmartRamp onto the installation plates.
- Secure the SmartRamp to the installation plates using the star handles provided.
- For pivoting SmartRamp: Secure the SmartRamp to the installation plates using the countersunk screws provided.

2.3 Tightening Torques

2.3.1 Standard-Threaded Steel Screws

Property Class	8.8	10.9
M8	25 Nm	36 Nm
M10	50 Nm	72 Nm
M12	85 Nm	125 Nm

2.3.2 Stainless-Steel Screws

Property Class	A2/A4-70
M5	3.5 Nm
M6	10 Nm
M8	20 Nm
M10	35 Nm
M12	60 Nm
M16	135 Nm

3) DIMENSIONS SHEET

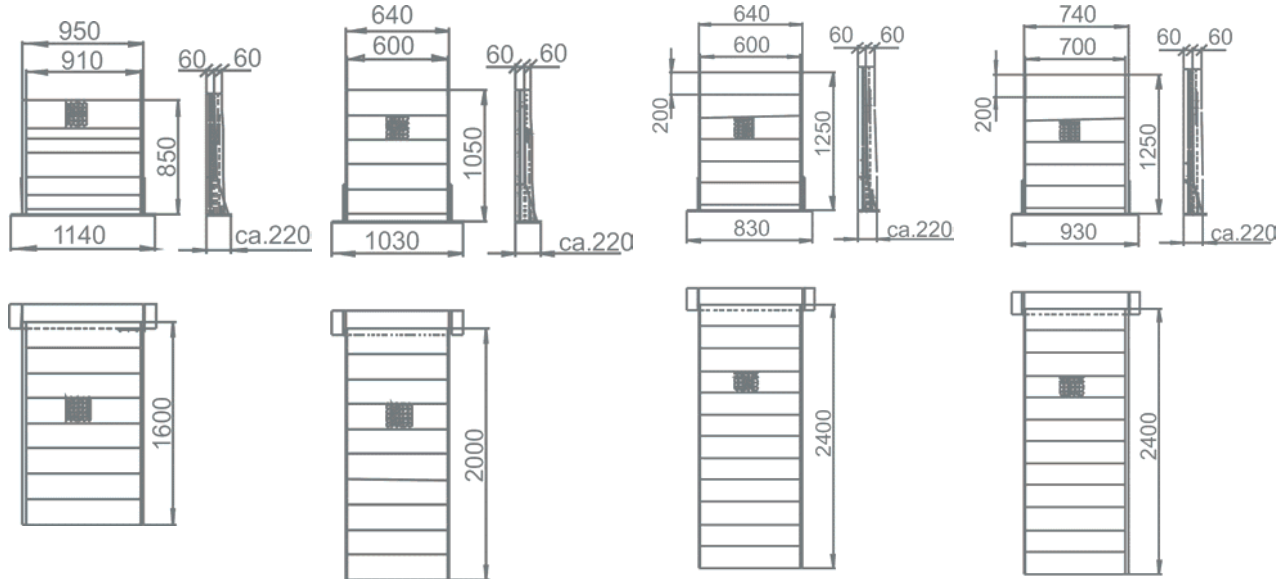
Short Ramp
1.60 m × 0.90 m Part #: H20105
Load bearing capacity 350 kg

Short Ramp
2.00 m × 0.8 m Part #: H20115
Load bearing capacity 350 kg

Standard Ramp
2.40 m × 0.60 m Part #: H20101
Load bearing capacity 300 kg

Standard Ramp
2.40 m × 0.70 m Part #: H20104
Load bearing capacity 300 kg

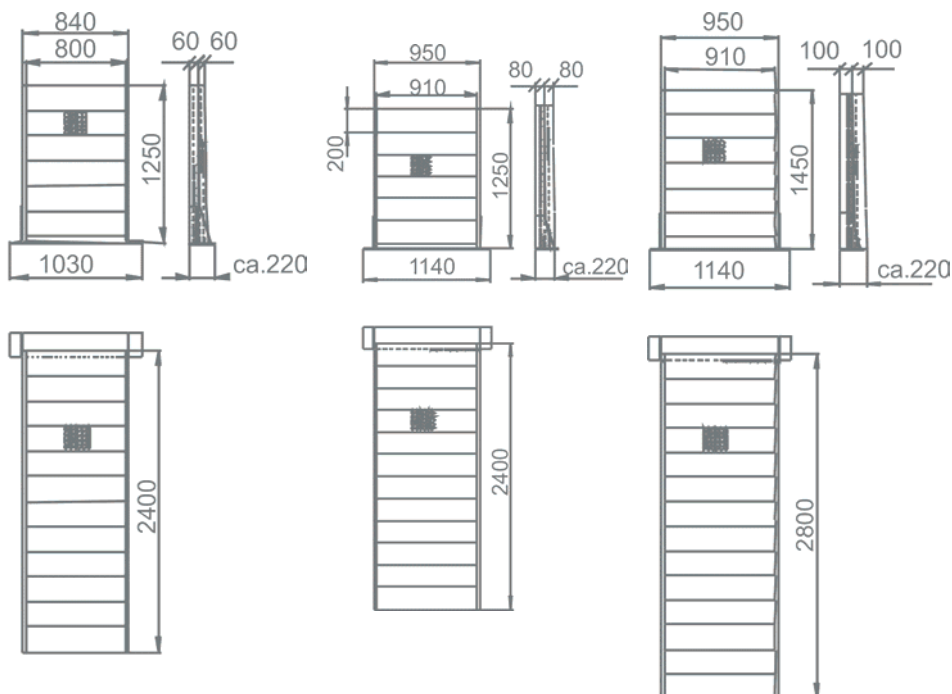
Only with lowering rear suspension



Standard Ramp
2.40 m × 0.80 m Part #: H20110
Load bearing capacity 300 kg

Standard Ramp
2.40 m × 0.90 m Part #: H20107
Load bearing capacity 350 kg

Standard Ramp
2.80 m × 0.90 m Part #: H20114
Load bearing capacity 350 kg



4) FAULTS



WARNING!

Risk of injury and material damage if repair work is carried out incorrectly.

- Only allow specialist personnel to carry out repair work.
- Repair work on load bearing parts must be inspected by a technical expert.

If faults occur when operating the SmartRamp, proceed as described in the troubleshooting table in the Operating Instructions. The Operating Instructions are also available in PDF format at www.amfbrunsamerica.com). Contact AMF-Bruns of America's customer service department (Page 19) if faults are encountered which cannot be remedied using the information given there.

5) CUSTOMER SERVICE

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🌐 Website: www.amfbrunsamerica.com

Business Hours

Monday-Friday: 7:30am to 4:30pm

Saturday & Sunday: Closed



NOTE

Service / warranty work and costs on the SmartRamp requires prior authorization by AMF-Bruns of America.

AMF-Bruns

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