

OPERATOR MANUAL

SADDLE WASHERS MSW WxA TYPE

No. OM_MSW

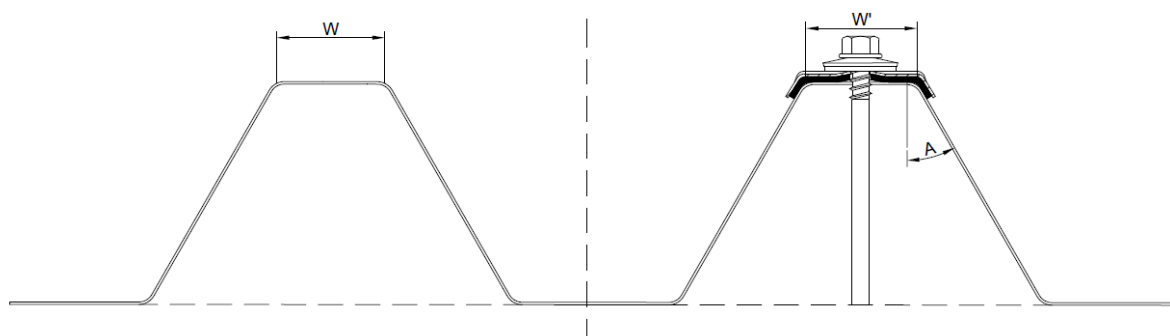
Installation carried out in an appropriate way, using professional tools is extremely important for proper and safe use of building fasteners. Always follow all instructions listed in this operator manual.

General rules:

- The operator manual, apply only to original products of Baltic Fasteners Sp. z o.o. bearing the Manufacturer's logo, which allows for their identification;
- The use of saddle washers shall be confirmed by a fixing plan made on the basis of complete building data;
- When carrying out the fixing plan, observe the mounting parameters and take into account the loads of the connections given in manufacturer materials;
- When carrying out the fixing plan, comply with applicable laws and standards;
- Saddle washers can only be used with roofing sandwich panels or steel sheets. Manufacturer's recommendations for those products must be taken into account;
- **MSW** saddle washers may only be used with screws supplied by Baltic Fasteners Sp. z o.o.;
- The number and type of screws must be in line with the information given in the fixing plan;
- Only tools that are equipped with clutch adjustment should be use;
- Modification of **MSW** saddle washers is not permitted;
- Products may only be used for their intended purpose.

Product selection rules:

- The saddle washer size should be selected to the width of the upper wave of the sandwich panel or steel sheet **W** and its angle **A**;



- Ideally selected width of the saddle washer **W'** should be **1mm** wider than the wave width **W**, and the saddle washer angle should be the same as the wave angle **A**;

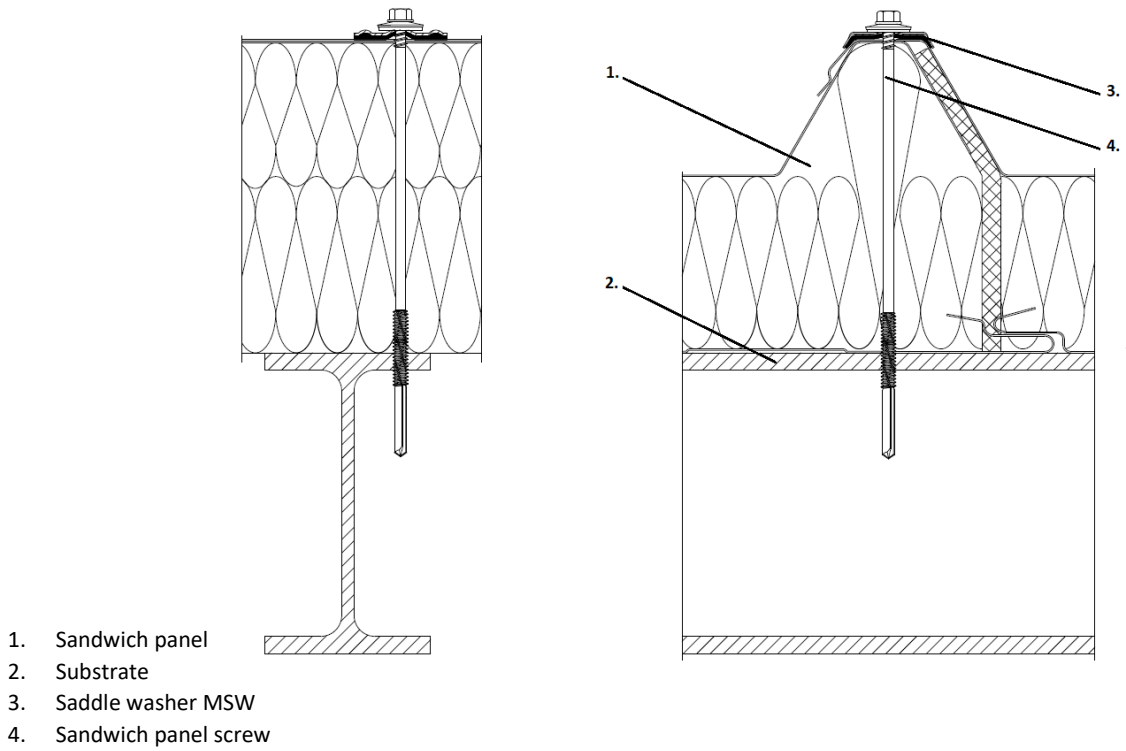
- Saddle washer material should be suitably selected for the corrosive environment in which it will be used. Saddle washer made of aluminum can be used in class **C3** environments;
- For mounting of the saddle washers, screws with a washer of **min. 16mm / max. 19mm** diameter must be used;
- Thickness of saddle washers should be taken into consideration when choosing the length of the screws used to install the sandwich panels. **MSW** saddle washers are **4mm** thick;
- Screws should be selected according to the latest catalog of Baltic Fasteners Sp. z o.o.. In addition, observe the rules and guidelines for the selection and assembling of the screws contained in the operator manual created for each type of screw.

Installation process:

- Place the sandwich panel or steel sheet, following instruction provided by the Manufacturer. Use of **PES** insulating tapes at the contact surface between panel / support is recommended;
- Properly selected **MSW** saddle washer should be set on the sandwich panel or steel sheet wave. The saddle washer must fit tightly against the wave (**Picture 1**);
- The panel or sheet and saddle washer should be screwed to the substrate with the selected screws. It is imperative to observe all the rules set out in the operator manual for selected screws. The number of screws must be in line with the fixing plan.
 - a) Screws must always be fixed perpendicular to the substrate.
 - b) The EPDM washer should be properly tightened as shown in the drawing below;

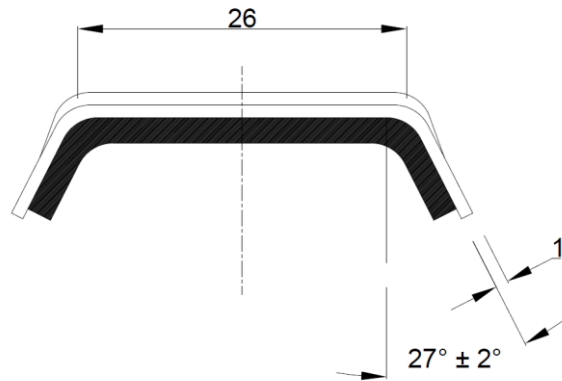


- In case of damage to the corrosion or paint coating on the screws or saddle washers, the defects must be further secured;
- When installing roofing sandwich panels, waves of the upper lining (overlap) should be connected longitudinally by using overlapping screws with washer, for example **MO 4,8x20**. The distance between screws should be **max. 250mm**;
- Once you have fixed the panel, proceed to assemble the next one by following the procedure given above.

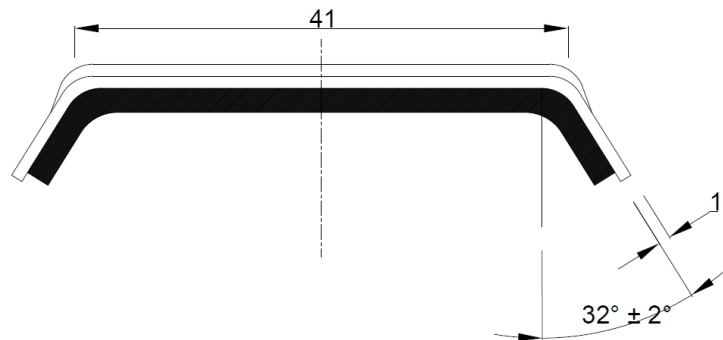


Picture 1. Example - assembling of the MSW saddle washer on the wave of the sandwich panel - cross section across the sandwich panel.

Basic dimensions of MSW saddle washers:



Picture 2. **MSW 25x27**



Picture 3. **MSW 41x32**