



MTG

No limits innovation



INS.3.2.5
PROMET III-Locking for Plate
Lip Shrouds
(Sizes 40-60)
Installation procedure

DISCLAIMER

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1. SAFETY

The practices described in this manual can be taken as guidelines for operating safely in many conditions and in addition to the safety standards that are current and enforceable in your area or region.

Your safety and the safety of third parties is the result of putting into practice your knowledge of the correct operational procedures.

Attention, when performing the work described in these instructions, always work safely and use the personal protection elements required to minimize or avoid injury. Always wear:



To avoid eye injury, always wear safety goggles or a protective mask when using any equipment, hammer or similar tool. When equipment is under pressure or when objects are struck, chips or other debris can be thrown out. Make sure no one gets hurt by the debris that is fired before applying pressure or hitting an object. Wear eye protection that complies with ANSI Z87.1 and OSHA standards. Also wear hearing protection and gloves.

Lifting a heavy object can cause serious or fatal injury. DO NOT exceed the maximum rated capacity of lifting and positioning devices: Stay away from the area under a suspended load.

Make sure that the chain is not damaged and that the load is always balanced.



LIFTING LUG

2. WELDING

Following is a quick reference on consumables that can be used to weld MTG products. For a complete reference on welding procedures, refer to the document entitled "General welding recommendations".

WELDING UNALLOYED FILLER CONSUMABLES

PROCESS	EN CLASS	AWS CLASS
SMAW	EN ISO 2560-S E42X	E70X ACCORDING TO A5.1 OR EQUIVALENT UNDER A5.5
	EN ISO 14341-A G42X	E70C-X ACCORDING TO A5.18 OR EQUIVALENT UNDER A5.28
GMAW	EN ISO 14341-A G46X	E70S-X ACCORDING TO A5.18 OR EQUIVALENT UNDER A5.28
	EN ISO 16834-A T42X	E7XT-X ACCORDING TO A5.20 OR EQUIVALENT UNDER A5.29

WELDING AUSTENITIC STAINLESS FILLER CONSUMABLES

PROCESS	AWS CLASS
SMAW	E307-X ACCORDING TO A5.4
	ER307T-X ACCORDING TO A5.22
GMAW	ER307 ACCORDING TO A5.9
	307-X ACCORDING TO A5.22

NOTE: "X" MAY STAND FOR ONE OR SEVERAL CHARACTERS

3. IMPORTANT

Read the full document prior to start any operation since there may be some steps which may require previous verifications/operations.

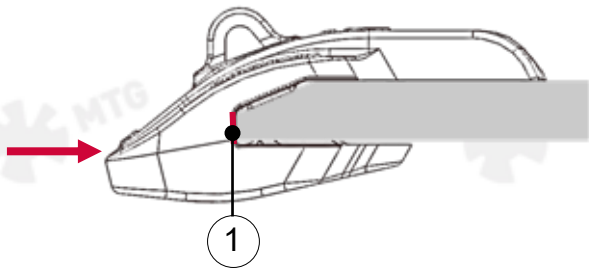


This document only refers to protectors of sizes 40 to 60, for protectors of higher sizes, review the installation procedure INS.3.2.1 PROMET III locking for Plate Lip shrouds (Sizes 70-160).

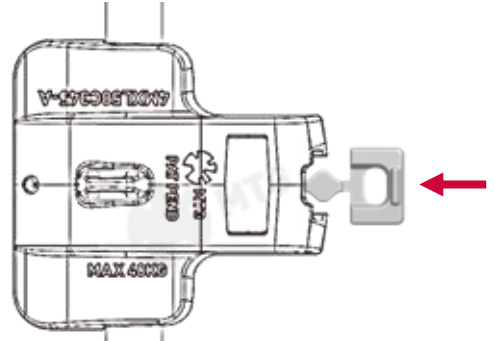
4. WELD-ON BASE INSTALLATION PROCEDURE

Prior to start the welding process, the correct placement of the weld-on base shall be ensured following the steps hereafter described:

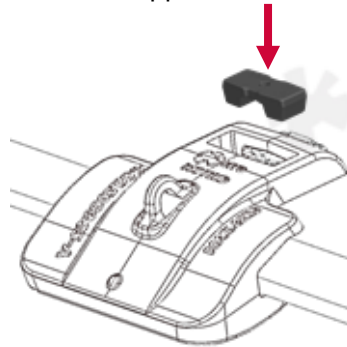
- 4.1** Place the shroud on the blade on its selected location. The shroud must be in contact with the frontal surface of the blade (1).



- 4.2** Insert the weld-on base from the back of the shroud. **Note:** Do not weld the base on this stage yet.

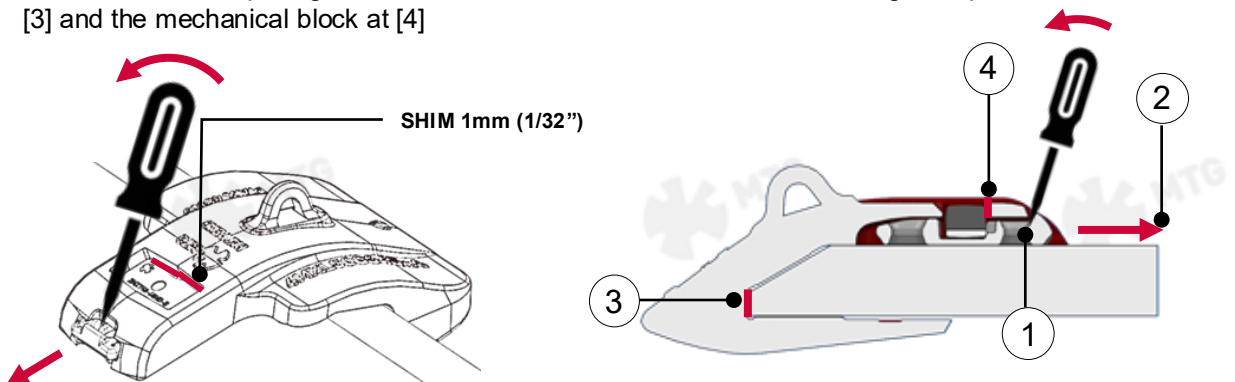


- 4.3** Insert the mechanical block on its housing, with the top side facing down, as shown in the image, being sure that the weld-on base is now trapped between the shroud and the mechanical block.



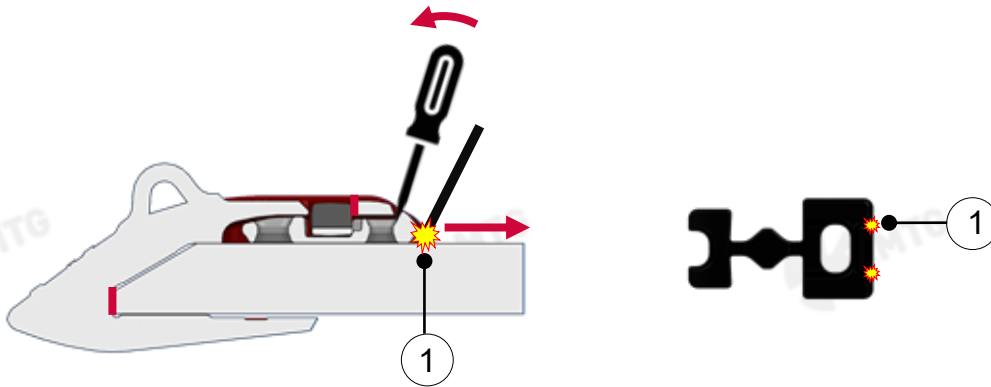
- 4.4** Insert a 1mm (1/32") thickness in the front part of the block (between the block and the weld-on base). Then, insert a pry bar between the shroud and the weld-on base at [1], then pull the weld-on base towards the back of the bucket [2], being sure that the shroud keeps full contact with the front of the lip [3].

Be sure that while pulling the weld-on base back, the shroud is contacting the lip's front surface at [3] and the mechanical block at [4]

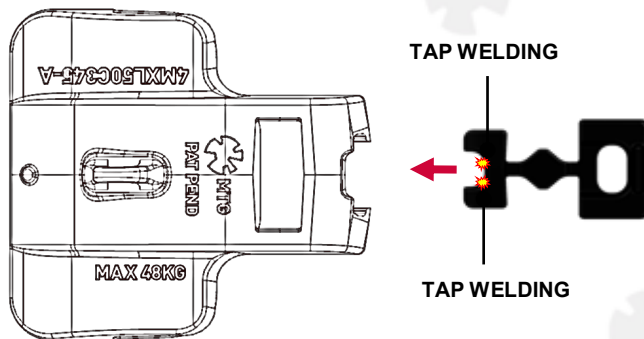


4.5 While pulling the weld-on base back with the pry bar, perform a couple of tack welds [1] at the rear part of the weld-on base (grooves at the external visible part of the weld-on base).

Important: Prior to any weld operation, lip and weld-on base should be pre-heated to a temperature between 175°C and 200°C (347°F and 392°F) in an area of 100mm (4") around. Lip and base should also accomplish the assembly conditions as it is described into the document entitled: "General welding recommendations".

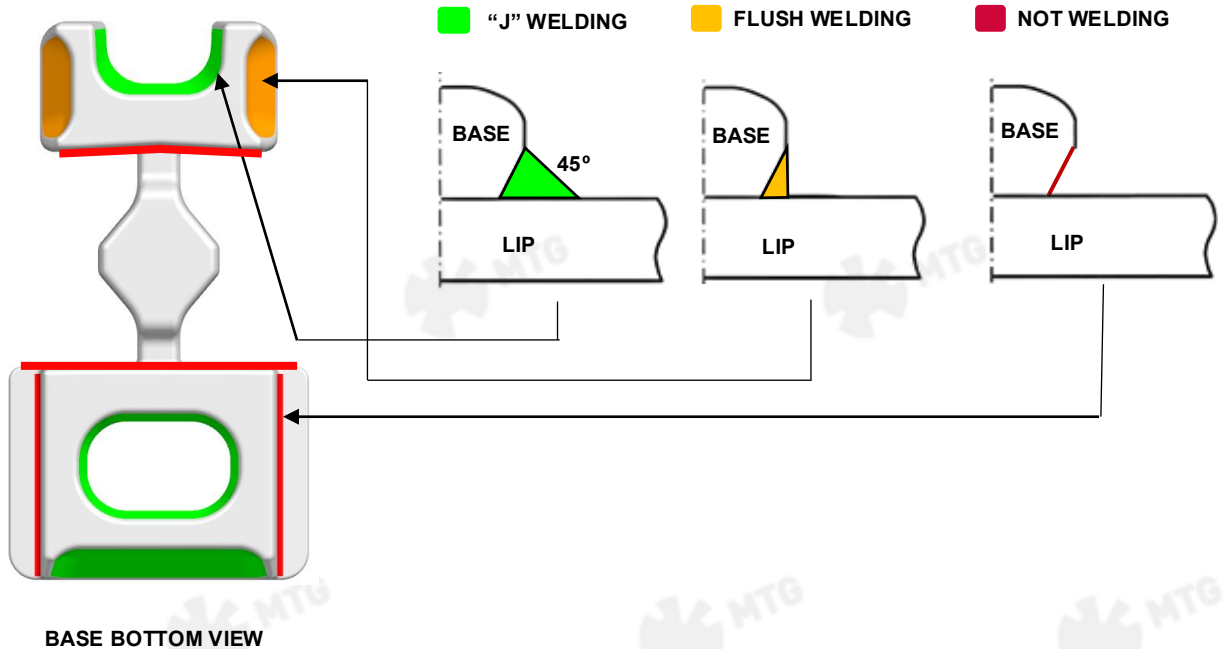


4.6 Remove the shim, the mechanical block and the protector. Verify that the preheat temperature is still within the recommended temperatures and tap the base where shown below. This step will secure the position of the weldon base.

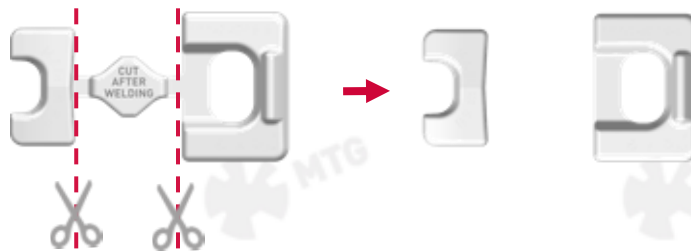


- 4.7** Before proceeding with the welding, verify that both the base and the lip are still at a temperature between 175°C and 200°C (347°F and 392°F) in an area of 100 mm (4") around the area to be welded.

Proceed with the welding of the base filling the welding grooves according to the color code indicated in the following figure. Do not weld outside the marked areas or exceed 250°C (482°F) during the welding process.



- 4.8** Cut the brace flush with the base in the areas indicated below:



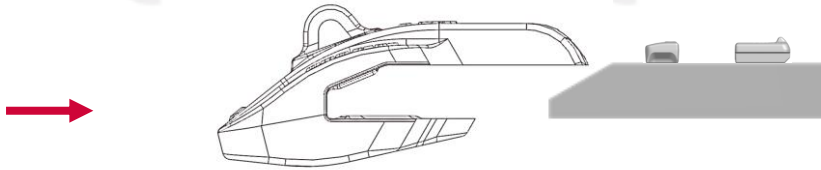
- 4.9** Repeat steps 4.1 through 4.8 to install the desired number of protectors.

- 4.10** Once the welding process has been completed, it should be inspected in accordance with the document entitled: GENERAL WELDING RECOMMENDATIONS. In case of finding any indication of crack, proceed with its repair by grinding and filling with welding. Keep in mind that before any operation involving heat input, preheating to the recommended temperatures is mandatory.

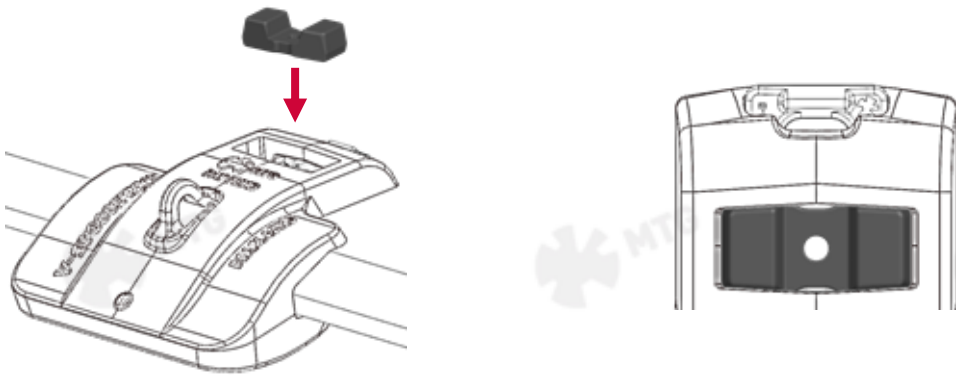
- 4.11** If the weld inspection has been successfully completed, we recommend performing one of the surface improvement processes for welding listed in the GENERAL WELDING RECOMMENDATIONS.

5. SHROUD ASSEMBLY

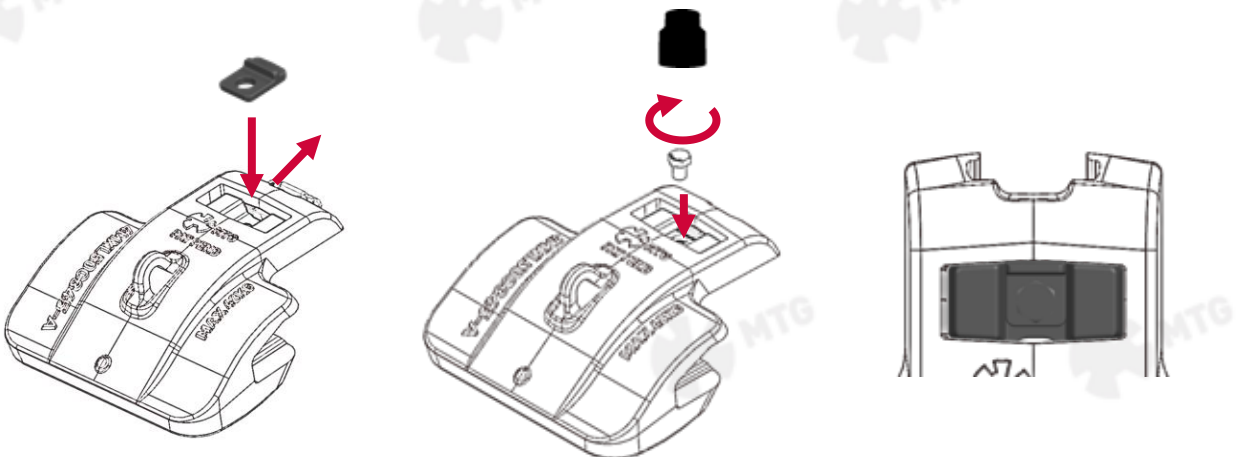
- 5.1** Insert the lip shroud on its station through the weld-on base by hoisting it with a crane and the lifting lug.



- 5.2** Insert the mechanical block on its housing between the weld-on base and the shroud. At this stage, the shroud can no longer move.

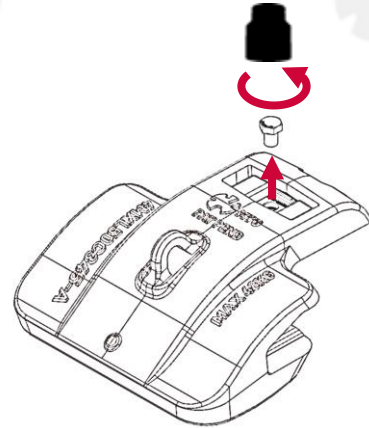
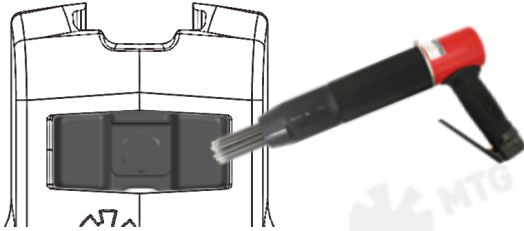


- 5.3** Insert the locking plate into position in the mechanical block and slide it into the bucket until its hole and the hole in the mechanical block are concentric. Then insert the bolt into the hole and tighten it with a 24mm (1") hex impact socket tool to a torque of 300 ± 50 Nm (221,3 \pm 37 lbft).

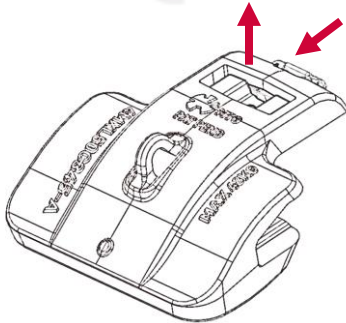


6. SHROUD REMOVAL

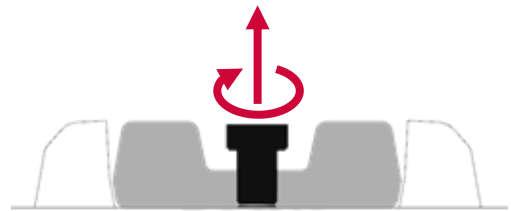
- 6.1** Clean the fine deposits on the back of the locking plate with a needle gun. Unscrew the bolt until it is completely disassembled. An electric or pneumatic rattle gun can ease the operation.



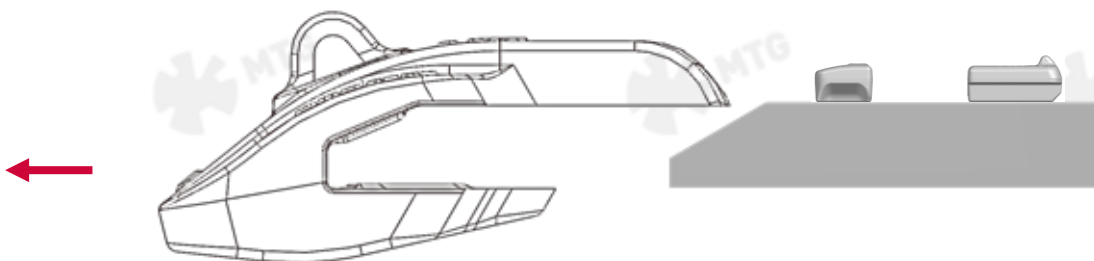
- 6.2** Slide the locking plate back and pull it out. A further cleaning might be necessary to ease the operation.



- 6.3** Remove the mechanical block by threading the screw and pulling it up.



- 6.4** Weld a lifting lug to the shroud and pull it out by means of a crane.





Service Instructions

The latest welding recommendations and assembly / disassembly instructions can be found online:

www.mtgcorp.com/manuals

Please contact Technical Services in case of questions:

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