Gouging with MAGYS 450 WS

The MAGYS 450 WS is a MIG-MAG water cooled semi-automatic welding generator designed for industry purposes. This machine offers in addition to its conventional use, the gouging function.

Gouging is an operation applied to steels and carbon. It enables to dig a trench to remove a weld or repair external or internal weld default. The gouging feature offered by the MAGYS 450 WS is performed by a thermal process Arc-Air®. This process eliminates the metal locally, along a groove, creating a welding pool with the electric arc. This molten metal is then ejected with a compressed air jet.

Torch connection

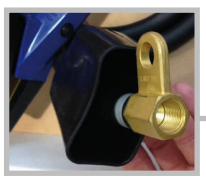
The special gouging torch has an electrical power connection and a connection for a compressed air supply. A 5m connection cable (ref. 040670) connects the torch to the MAGYS 450 WS and to the compressed air supply.

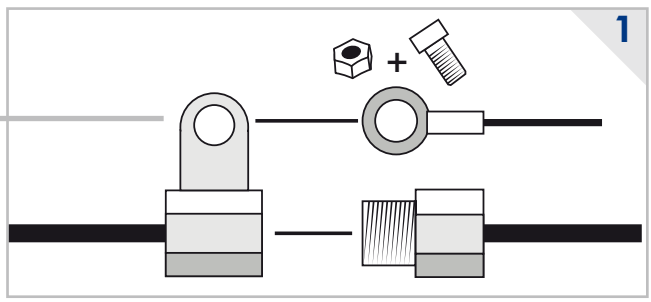
1 - Screw the air connector to the brass fitting of the torch. This connector will be connected to the compressed air supply (image 1)

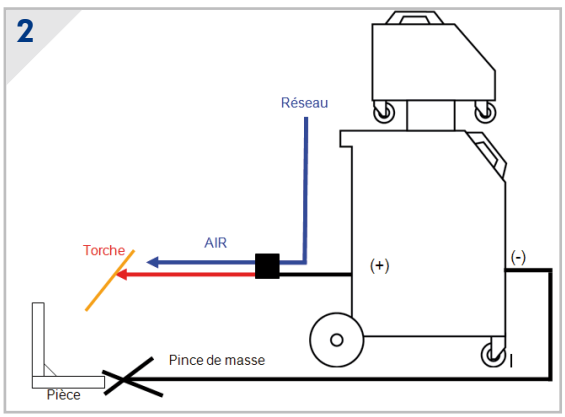
2 - Then screw the 5m connection cable lug on the torch brass connector using the nut and screw provided. (image 1)

3 - Connect the 5m connection cable to the back of the MAGYS 450 WS. (image 2)

4- The earth clamp connects to the front of the generator, in the same way as for welding (image 2)



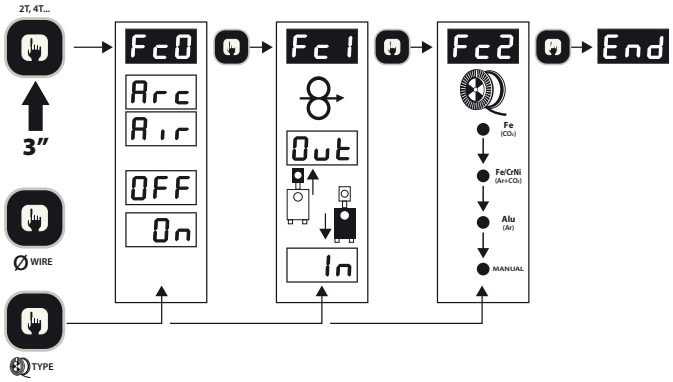




Machine setting up

Instructions to access the Gouging mode are written on the inside of the door of the separate wire feeder, you can easily reach the Arc-Air® mode. To activate the Gouging function hold the MODE button for 3 seconds and then press the TYPE button.

WARNING ! Once the function on the torch is switched on. Contact with earth will produce an electric arc !



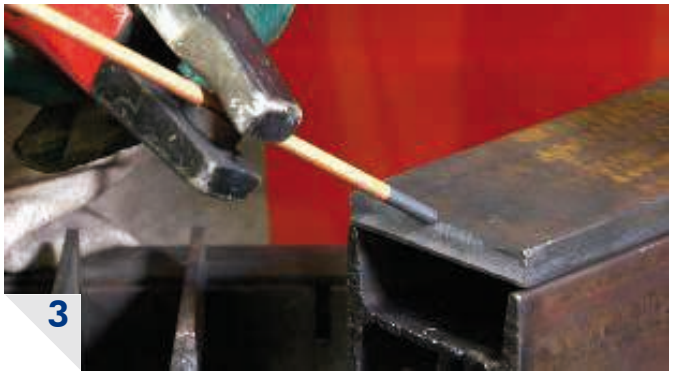
Instructions for gouging

Gounging is a similar process to arc welding (MMA). Place the electrode in the torch so that it protrudes for about 15cm (Picture 3). Turn the switch to full power and open the air valve of the torch. The contact of the electrode on the metal part will create a short-circuit that will immediately produce a welding pool. The air in the torch will remove the metal from the welding pool. The process is carried out by `pushing' moving the electrode in the opposite method than for MMA. This results in the removal of material in a U shape (Picture 4).

WARNING ! Spatters due to the operation can be extremly dangerous. It is mandatory to use protective equipment as well as clear the working area to ensure the safety of others.

Informations :
The MAGYS 450 WS can perform this operation with electrodes with a maximum diameter of 8 mm.

Diameter	Current	Gouging	
ø mm	A max	Width	Depth
4	250	6-8	3-4
5	300	7-9	3-5
6.5	400	9-11	4-6
8	450	11-13	6-9


3


4