

USER MANUAL

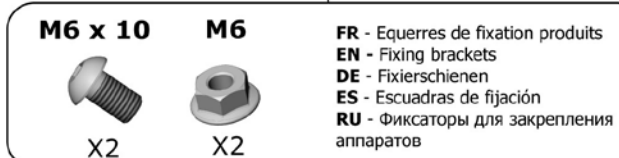
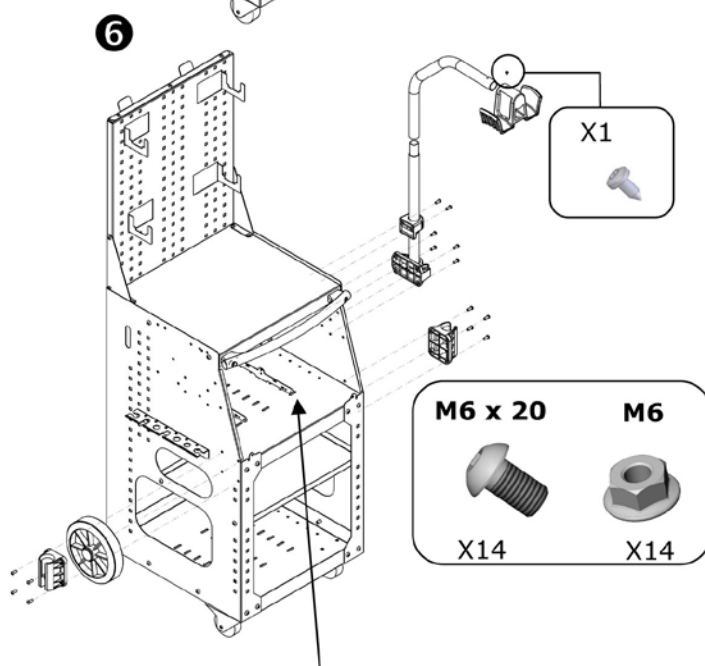
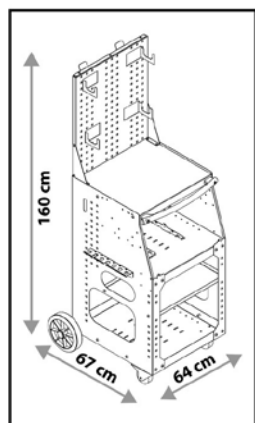
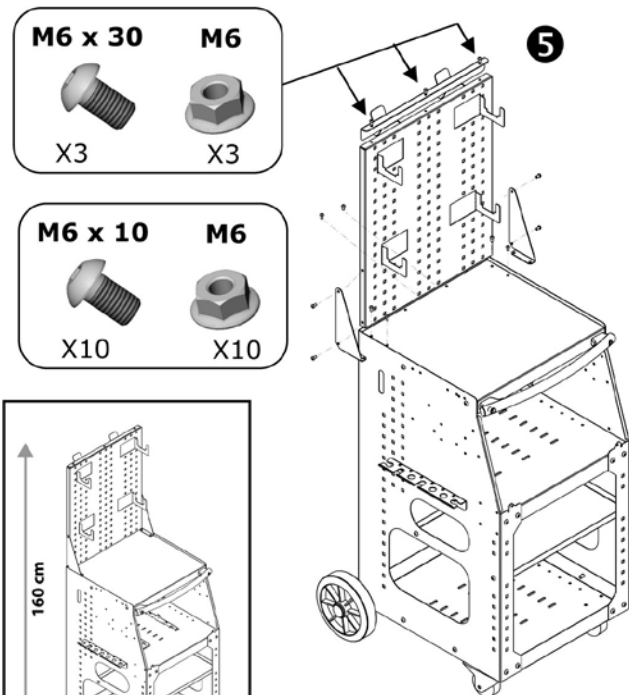
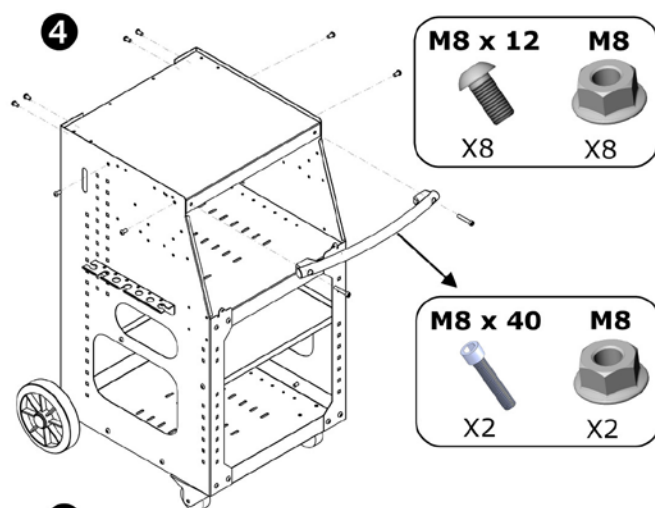
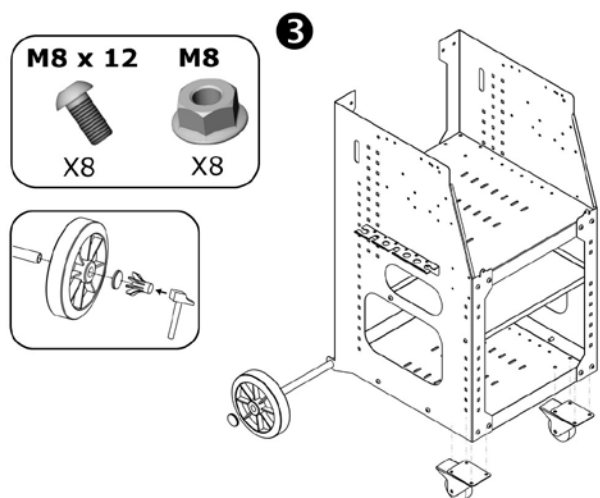
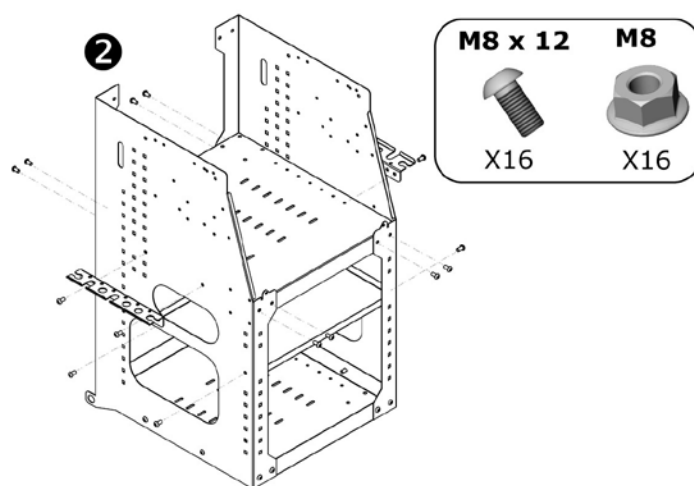
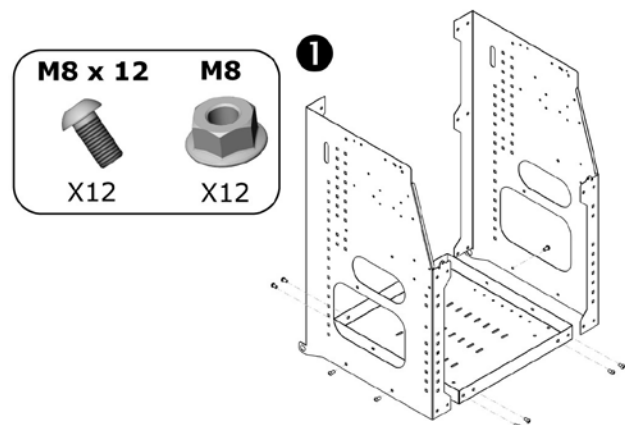


SMARTLINER 3900 - 230V / 3900 - 400V
SMARTLINER PRO 400V
SMARTLINER COMBI 230V

SUMMARY

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ASSEMBLY



COMPOSITION



3900-230V / 3900-400V / PRO 400 / COMBI 230V

XXXXX	Generator	1
034259	Spot PRO XL trolley	1
050679	Manuspot (with Easy gun)	1
050686	Levelling lever	1
050693	Levelling bar	1
050792	3 pulling rods	1
049758	4 hooks claw	1
049734	6 hooks claw	1
049666	Magnetic earth	1
051515	Steel consumables	1
052451	Extension joints 55 mm	2

+ PRO 400 ONLY

052154	Ringmatic	1
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+ COMBI 230V ONLY

052284	Cable hanger	1
050921	Alu Puller	1
050945	Additive kit for Alu dent pulling	1
052154	Ringmatic	1

STRAIGHTENING LEVER AND BAR

CHOOSE YOUR BAR OR YOUR LEVER

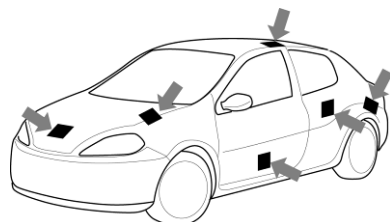
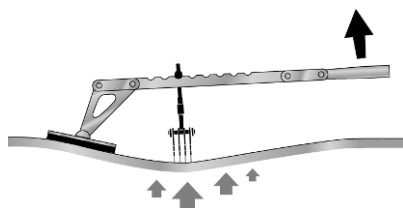


Straightening lever

ref.050686



For areas when the sheets are thin. Ex: door, fender...

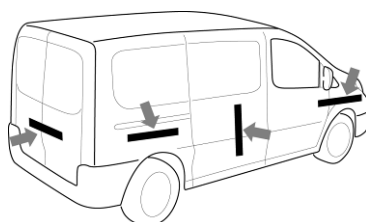
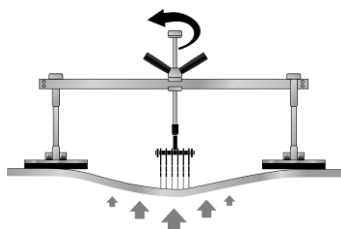


Straightening bar

ref.050693



To straighten or maintain a sheet under stress after using the pulling bar

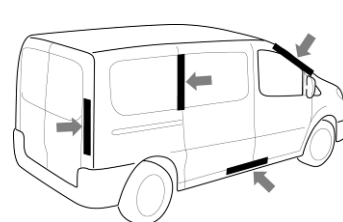
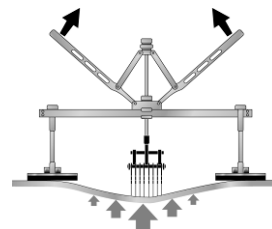


OPTION: Pulling bar

ref.050716



To straighten or maintain a sheet under stress after using the pulling bar



For angles and rounded corners (OPTION)

Change the original pads for the double ones (ref.050723)



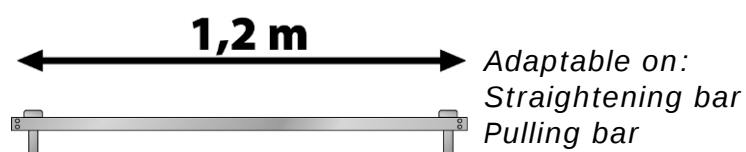
Adaptable on:

- Straightening bar
- Pulling bar



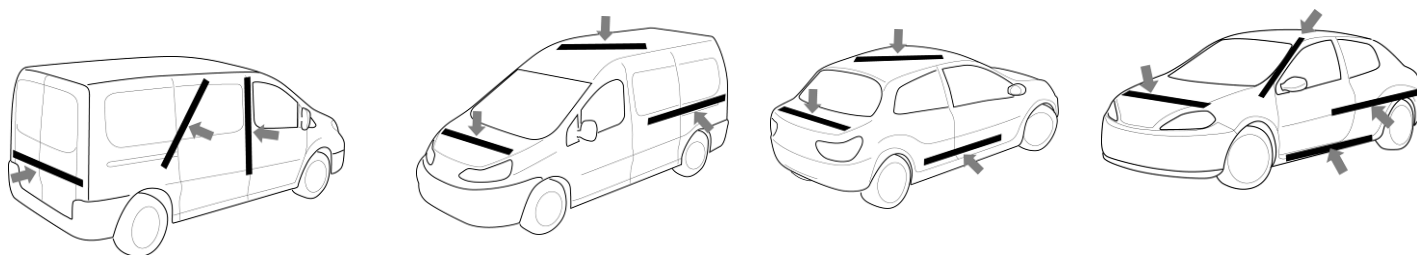
For wide areas (ex. utility vehicle side panel) (OPTION)

Replace the original traction bar (0,8m) by the 1,2 m bar (ref.050730)



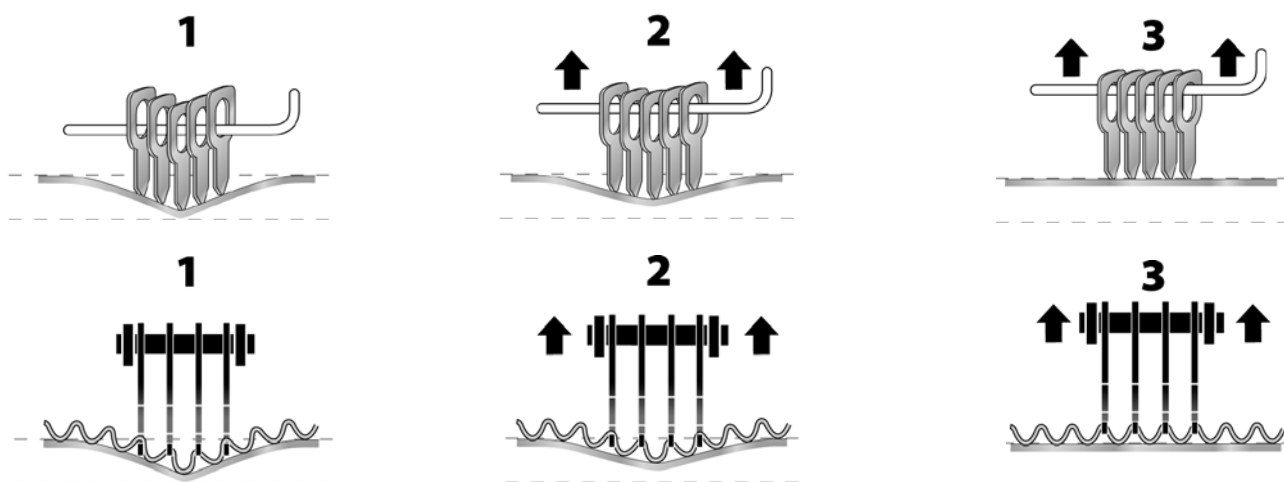
Adaptable on:
Straightening bar
Pulling bar

Exemple of application:



CHOOSE THE RIGHT STRAIGHTENING PROCESS

Principles

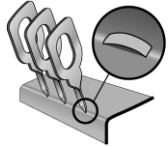


Comparison

Rings or wavy wire?

	 Rings 	 Wavy wire x50 ref.049727
Use	To straighten all the bumps, middle to big bumps	To straighten light and middle bumps
Advantages	- Versatility - Pulling strength - Ideal for sills	- Fast set-up - Ideal for rounded areas (example : wheel arch ...)
Disadvantages	Long set-up	Standard space between welded points
To be used with	Traction rod + hooks (4 – 6 - 8 claws)	Hooks (4 - 6 - 8 claws)
Possible tools	- Lever - Straightening bar - Pulling bar	- Lever - Straightening bar - Pulling bar

Straight or twisted rings?

	 Straight rings X100 ref.050648	 Twisted rings X50 ref.050631
Use	To straighten a flat or rounded surface	To pull in the plane of the edge NO  OK 

Set up:

Rings

To weld the rings, use the ring « accessory welder » of the Manuspot (page 6)



Advice

It is possible to weld the rings at a slight angle and to manually position them vertically afterwards.

When the straightening is finished, twisting the rings will enable to easily remove them.

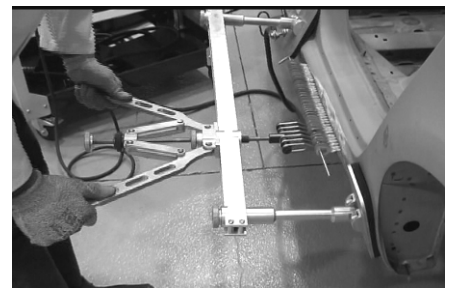
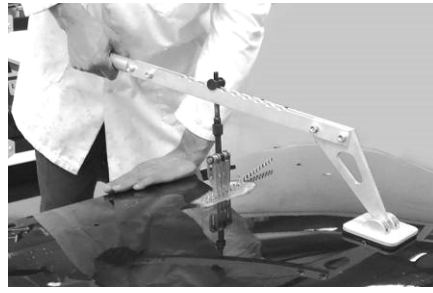
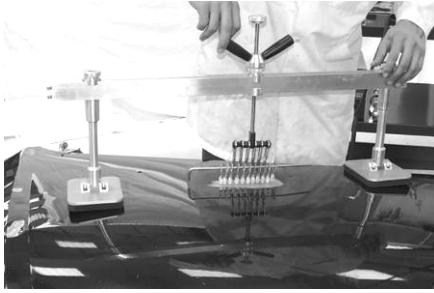
Wavy wire

To weld the wavy wire, use wavy wire « accessory welder » for Manuspot (page 6)

To unweld the wavy wire, use pliers to move the wire sideways until the weld breaks off.

Note: the rings or wavy wires can be reused, and should only be replaced if worn out.

APPLICATION EXAMPLES

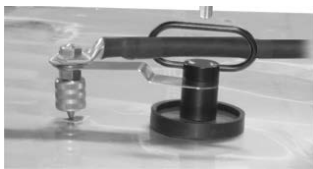


MAGNETIC EARTH

Principle and Application

This system « welded earth » system allows to fix an earth on a small stripped part (less than 2mm against 20mm with a standard earth).

Its magnets allows you to use it in every position (horizontal or vertical)



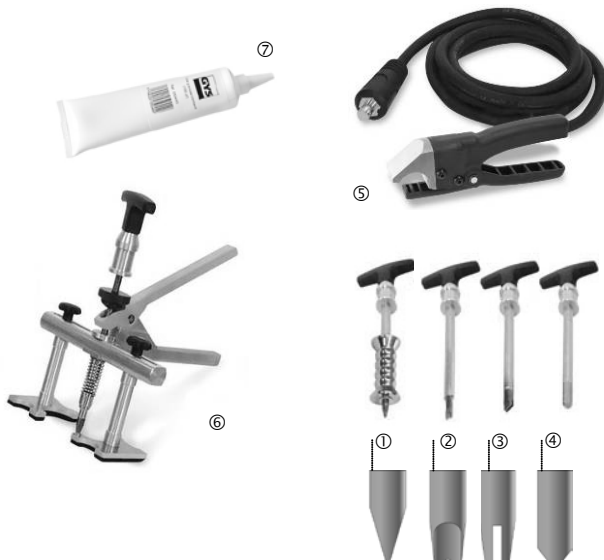
❶ Weld the earth thanks to contact shrinking tool (p8)



❷ Screw the earth to the metal sheet

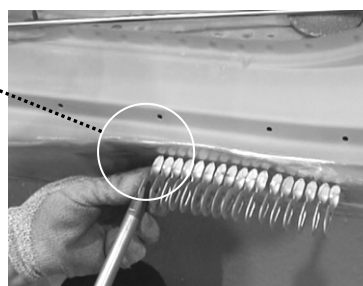
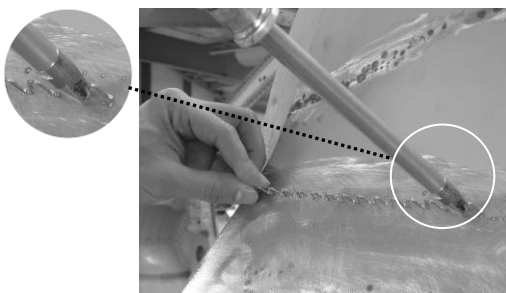


MANUSPOT ref.050679



Manuspot: Complete concept including:

- 1 universal dent pulling clamp ❹
- 1 pulling handle ❶
- 2 « accessory welder » tools:
wavy ❷ + rings ❸
- 1 contact shrinking tool ❹
- contact clamp with 3m cable ❺
- copper grease tube ❷ ref.050440
- 1 Easy Gun



CONNECTION OF DIFFERENT TOOLS

Connect the contact clamp as follows:



❶ Connect to the generator



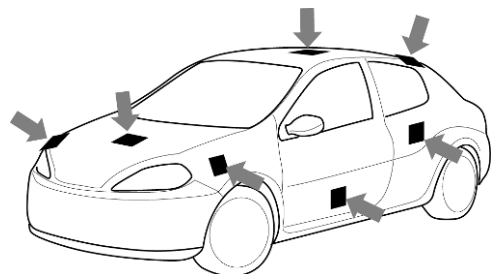
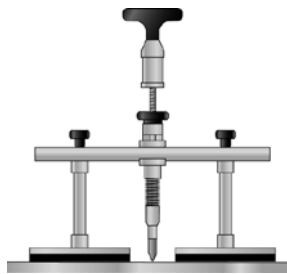
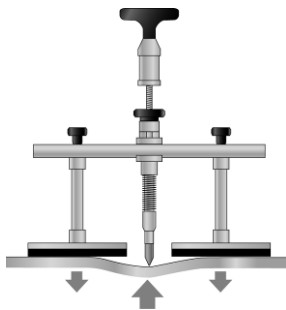
❷ Add copper grease on the inside of the clamp and on the axis of the tool.



❸ Fit the clamp on the tool

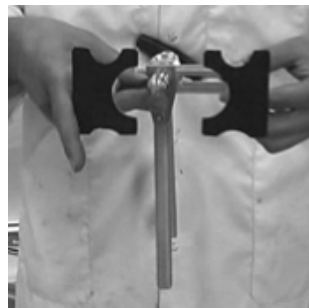
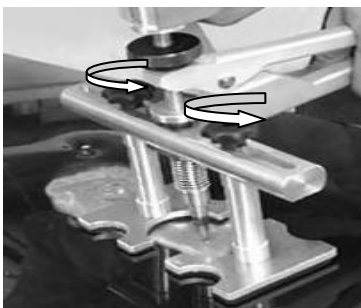
II- UNIVERSAL DENT PULLING CLAMP

Principle

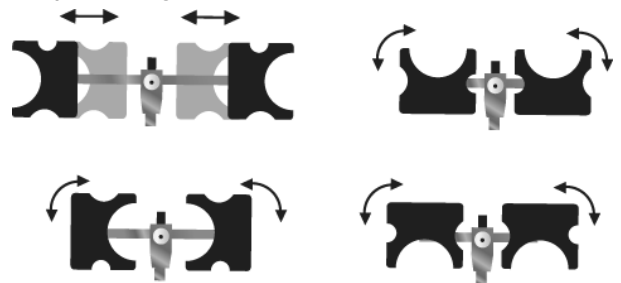


Adjustment and positioning of the pads

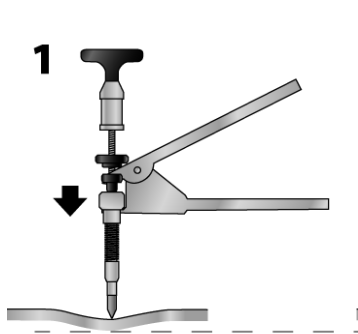
❶ Unscrew the nuts on both sides



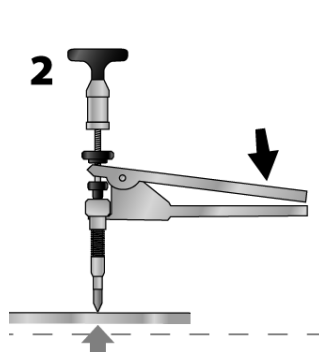
❷ Then choose the position of the pads depending on the area to work on



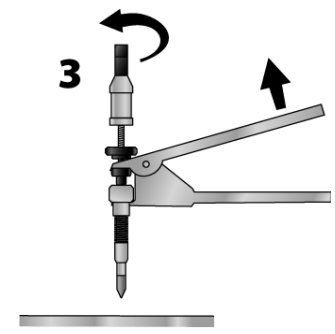
Use



❶ Weld the tip



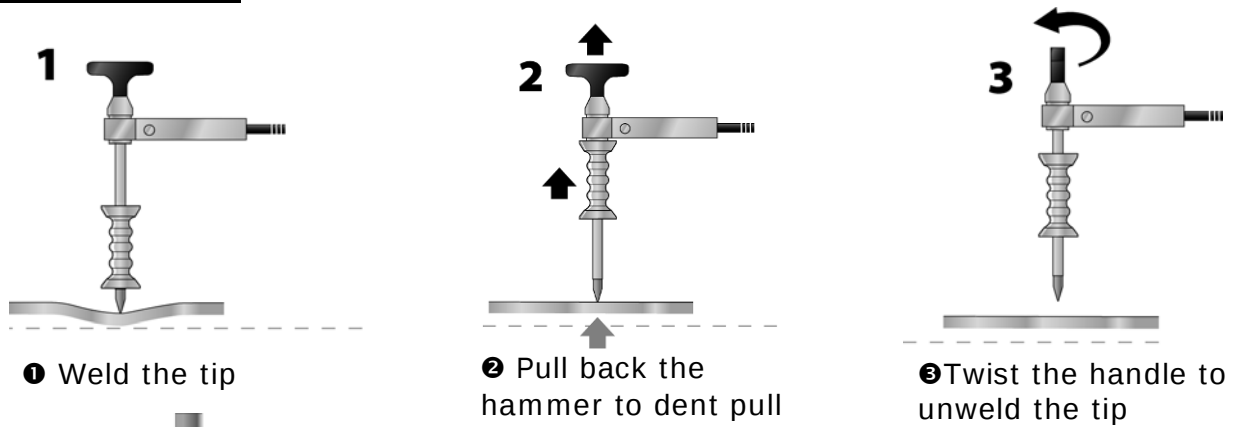
❷ Tighten the handle to dent pull



❸ Twist the handle to unwind the tip

Consumables:  3 electrodes for Manuspot handles ref.050822

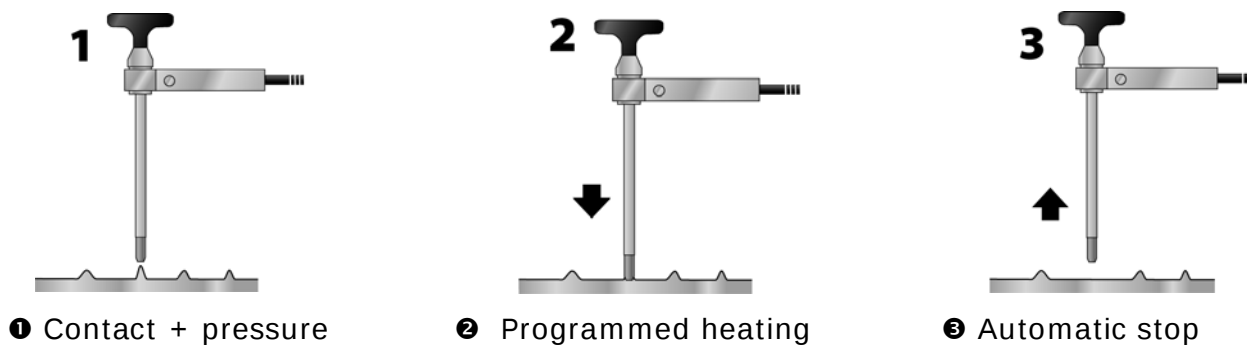
PULLING HANDLES



Consommable :  5 électrodes de tirage ref.050839

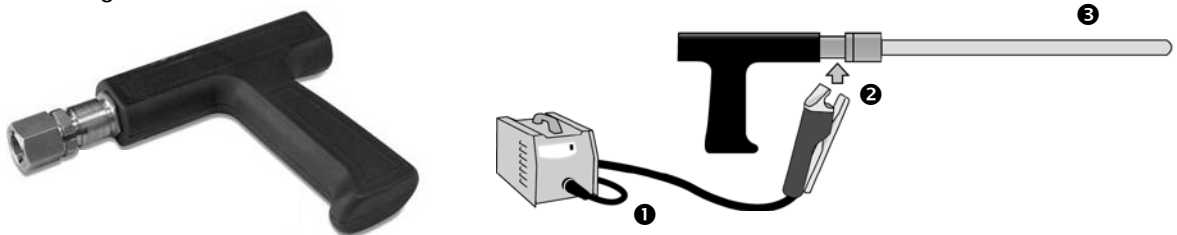
CONTACT SHRINKING TOOL

Essential tool for the finishing enables to eliminate the spikes created by the dent pulling operations.



EASY GUN

- ❶ Connect the Manuliner contact clamp to the unit.
- ❷ Install the tool at the end of the Easy gun then connect the Manuliner contact clamp to the Easy Gun.
- ❸ Weld: The welding point is made automatically by a simple contact between the tool and the metal piece to straighten.



ALU PULLER ref 051003
(+alu hook 1 ref 050938 + alu hook 2 ref 050945)

- 1- Weld the studs to the aluminium sheet with the Combi 230 Pro.
- 2- Fix the hooks on the studs.
- 3- Pull on the hooks with the Mini Puller (diagram)

