

Plastic Repair Set with Gas Soldering Iron



GENERAL INFORMATION

This plastic welding equipment allows for economical repair of plastic parts, such as bumpers, inner wheel arches, headlamp housings, engine covers or motorcycle fairings. The equipment has been designed to remove minor to medium-sized damage. Even thin plastic parts can be welded, as the heat applied is restricted to a small area. Compared to many other machines on the market, the advantage of this equipment is that the exhaust gases are diverted in the welding direction which, in turn, accelerates the heating of the material. The plastic welding equipment is supplied with two welding heads of different sizes, reinforcing stainless steel fabric and plastic welding rods, suited for acrylonitrile butadiene styrene (ABS), polypropylene (PP), polyethylene (PE) and polystyrene (PS), including a cleaning brush and cleaning rod.

Our products are designed for their intended use only and are to be handled carefully.

BGS technic assumes no liability for material damage and injuries caused by improper use, in which case the warranty is voided also.

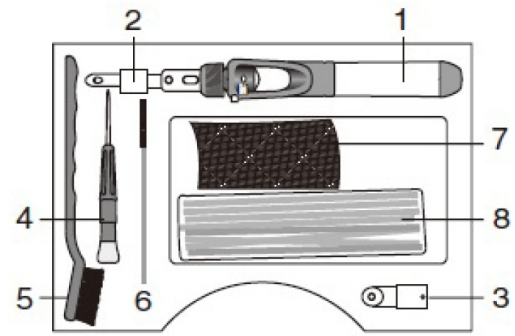
Please carefully read the operating manual and safety instructions.

SAFETY INSTRUCTIONS

- Improper use of the plastic welding equipment may lead to fire and injuries.
- Keep all body parts away from the welding head. Caution: Risk of burns.
- Never leave plastic welding equipment unattended when switched on.
- Keep the plastic welding equipment dry and never cool down the welding head in water.
- The plastic welding equipment contains pressurised combustible gas, therefore handle with extreme care.
- Never fill the equipment near a naked flame or combustible materials.
- Do not keep the equipment near a naked flame.
- Only use high-quality butane gas.
- Caution when handling butane gas, as butane is inflammable.
- Do not drop the equipment.
- Do not open the equipment and do not make modifications to the equipment.
- Do not use the equipment at temperatures above 50°C.
- Store the equipment in a dry and cool place.
- Keep the equipment out of the reach of children.
- Let the equipment welding equipment cool down completely before putting it back in the protective case.
- Please note: No liability is assumed for improper use of the plastic welding equipment.
- Use the equipment in well-ventilated places only.
- Do not use the equipment if it is damaged or shows any wear of the seals.
- Do not use the equipment if it is not working properly.
- Please note that butane flames are hardly visible under certain lighting conditions.
- Always keep a fire extinguisher and a bucket of water ready near the working area.
- Let the equipment cool down sufficiently after use before leaving it unattended.

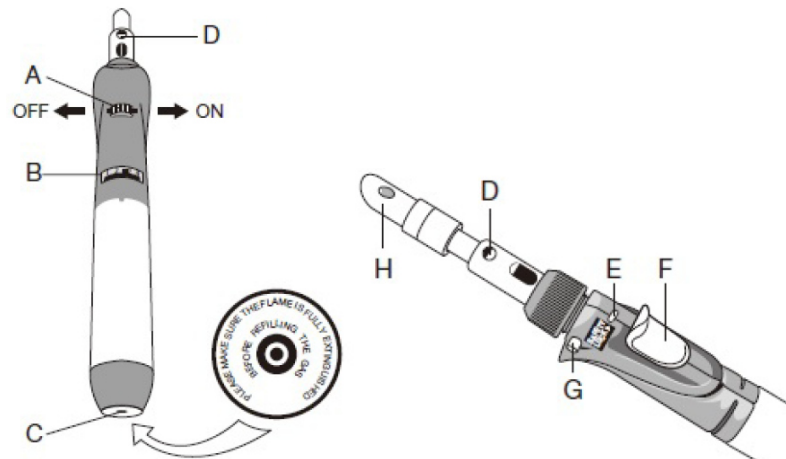
COMPONENTS

Item	Component
1	Plastic welding equipment
2	Welding head, 9 mm
3	Welding head, 12 mm
4	Screwdriver
5	Cleaning brush
6	Cleaning pin
7	Stainless steel fabric
8	Welding rods



OPERATING ELEMENTS

Item	Operating element
A	ON/OFF
B	Gas flow adjuster
C	Gas filling valve
D	Catalyst block
E	Safety interlock
F	Ignition switch
G	Gas off button
H	Welding head



IGNITION PROCESS

1. Mount the required welding head (2 or 3) and tighten with the screwdriver. The size of the welding head depends on the application.
2. Set the gas flow adjuster (B) to position 3.
3. Slide the ON/OFF switch (A) to position ON with one hand whilst pressing the safety interlock (E) at the same time.
4. Press the ignition switch (F); if the ignition switch (F) is pressed, the ON/OFF switch (A) moves to position ON.
5. Push the gas flow adjuster (B) back to position 2.
6. After some experience, the user will find it easier to set the best position for the heat required and to select the appropriate size of the welding head.
7. As the temperature of the welding head rises, the colour of the catalyst block (D) changes from white (normal colour) to orange.
8. All metal parts of the plastic welding equipment become very hot. **Caution:** Do not touch!
9. Make absolutely sure to keep the welding head and the metal parts away from flammable objects.
10. The exhaust gases are diverted in the welding direction and thus provide a hot air flow to the working area. This hot air flow can be interrupted by pressing the gas off button (G) and be restored by releasing this button.

SWITCHING OFF

Slide the ON/OFF switch (A) to the left in position OFF.

Let the equipment welding equipment cool down completely before putting it back in the protective case.

EXAMPLE OF A REPAIR

Repair of a cracked or broken plastic bumper.

1. Remove the paint and primer in the damage area with a mini grinder or belt sander (grain size 120-180).
2. Slightly flatten the repair area and create smooth transitions.
3. Switch on the plastic welding equipment (see section Ignition Process).
Please note that not only the welding head but also the metal body become very hot during use.
Caution: There is a risk of severe burns if handled carelessly.
4. The environment of the damage area must be heated with the welding head before applying the welding material.
5. Push the welding rod through the hole in the welding head and apply the heated material of the welding rod to the surface.
6. Fuse the welding rod material with the surrounding plastic and smooth with the welding head to achieve the desired shape.
7. Please note that the application is a process based on heat and is independent of any chemical processes due to which the repair can be interrupted and resumed at any time.
8. In case the crack extends up to the edge of the plastic part, it is recommended to reinforce the crack at the upper end with a melted bracket.
9. When melting the bracket, the edge must be kept straight and even.
10. Whilst the plastic welding equipment is warming up, the stainless steel fabric can be cut to the corresponding size, if necessary.
11. For gaps, a band width of approx. 12-25 mm is required, whereas the length of the fabric depends on the length of the crack.
12. Once the plastic welding equipment has reached the required temperature, the fabric is attached to the upper end of the repair area.
13. The plastic welding equipment is used to heat the stainless steel fabric and to soften the plastic. After heating, the stainless steel fabric is pressed into the plastic.
14. Melted plastic penetrating through the plastic can be smoothed with the welding head.
15. In case the crack or the damaged area follow a bent contour, the stainless steel fabric can also be shaped in a way so as to follow the contour.
16. There, the fabric should disappear below the surface entirely and can be smoothed down with the welding head in the further process.
17. If necessary, the repair area can be brought to the level of the surrounding surfaces and be reinforced at the same time by adding material (welding rod).
18. Please make sure to use the correct welding rods for the plastic to be repaired.
19. Now, the repair area is ground in preparation of the painting work.
20. After finishing the repair, clean the welding head with the cleaning brush (5) and the welding rod (6).

