



## OPERATING INSTRUCTIONS

# Gas Soldering/Brazing Set

Item-No. MTD48

## Intended Use

The product produces an adjustable jet-flame with a max. temperature of 1300°C. It has an built-in piezo-ignition mechanism. The amount of gas (and thus the flame) to the gas soldering/brazing torch can be adjusted. The exchangeable tips enable the product can be used for various purposes, e.g. soft or hard soldering. The gas soldering/brazing torch is to be filled and operated with lighter gas (ISO-butane gas).

No part of the product may be modified or rebuilt!

The safety instructions are to be observed without fail!

Any other use, than that described above, could lead to damage to this product and involves a risk for fire and explosion etc.

This product complies with the applicable National and European requirements. All names of companies and products are the trademarks of the respective owner. All rights reserved.

## Safety Instructions



**The warranty will be void in the event of damage caused by failure to observe these safety instructions! We do not assume any liability for any consequential damage!**

**Nor do we assume any liability for material and personal damage caused by improper use or non-compliance with the safety instructions! The warranty will be null and void in such cases.**

### a) In general

- For safety reasons, any unauthorized conversion and/or modification to the product is not permitted.
- The product is not a toy and it should be kept out of the reach of children. Keep the product out of the reach of children during as well as after use. Keep the product in a place inaccessible to children! The same applies to the gas container, which is used for refilling.
- The casing of the gas soldering/brazing torch must not be opened or damaged. It must not be placed in, or thrown into, a fire or naked flames! Risk of explosion!
- Do not expose the gas soldering/brazing torch to any mechanical stress. The gas cylinder could start to leak (danger of fire and explosion!).
- If the product should become damaged or defective, dispose of it correctly. If gas is still contained and is leaking, the product may have to be kept in an appropriate outside location for a while, so the gas can escape. Ensure there is adequate ventilation, keep a safe distance to all naked flames or ignition sources (risk of fire and explosion!). Keep a safe distance from flammable objects, risk of fire!
- The gas soldering/brazing torch must not be operated, filled or stored in areas where explosive, easily flammable materials, combustible gases, vapors, dust, or inflammable liquids (solvents, alcohol, benzene etc.) are stored or could be stored.
- Protect the product from dirt and damp. This may damage the product or cause corrosion.
- Only move the gas soldering iron only when it has cooled down completely; risk of burns or of fire! The same applies to the storage of the product.
- For use in commercial institutions, the accident prevention regulations of the Employer's Liability Insurance Association are to be observed.
- In schools, educational centre's, hobby and self-help workshops the operation of the product is to be supervised by trained employees.

### b) Filling

- The gas soldering/brazing torch must only be filled after it has cooled down completely; otherwise, there is a risk of explosion!
- If the gas soldering/brazing torch is damaged, it must not be refilled! There is a risk of fire and explosion!



- Only fill the gas soldering/brazing torch with commercial lighter gas in an adequately ventilated environment. Avoid naked flames (explosion hazard!). Observe the manufacturer's safety and operating instructions, when refilling the empty gas cartridge.
- Stop the filling process immediately, if gas escapes. A gas-air mixture could mix and cause an explosion. Make sure that the room is well ventilated before you ignite the gas soldering/brazing torch or other sources of ignition.
- After filling, the gas soldering/brazing torch contains butane gas. Therefore, it must be kept away from sources of heat and sunlight (>40°C); otherwise, there is a risk of explosion!
- Do not remove or open the filling valves to allow the gas to escape. Risk of fire and explosion!

## c) Operation

- Only hold the gas soldering/brazing torch by the grip. Always hold it so the flame points away from you.
- When igniting and using the gas soldering/brazing torch, keep it away from your body and clothing.
- Never reach into the naked flame! Never touch the hot metal parts on the front of the gas soldering/brazing torch! This will cause serious burns!
- During shorter breaks, the gas, soldering/brazing torch can be put down on the fold-out foot. If necessary, turn out the flame beforehand.
- Never leave the gas soldering/brazing torch unattended while it is in use. There is risk of fire.
- Let the product cool down completely before replacing the soldering tip, storing the product (e.g. in the supplied storage box) or attaching the supplied protective plastic cap. Otherwise, there is a danger of fire!
- During breaks, put the gas soldering/brazing torch on a stable, even and heat/fire resistant surface to cool down; make sure that it cannot roll or fall, risk of fire!
- Always ignite the flame for no more than 15 minutes at any one time, otherwise the casing of the gas-fired soldering/brazing torch could heat up too much (danger burns!).
- Never ignite liquid or gaseous fuels (e.g. benzene, spirits, etc.) with the gas soldering/brazing torch, risk of explosion!
- Very hot air escapes from the side of the soldering bit. Therefore, take care that no objects, cables, boards etc. in the vicinity are burnt during soldering.
- Never work on electrical components that are LIVE. Disconnect the device you want to solder from the power supply and check that it is current-free.
- Protect your body and eyes from soldering sparks and liquid tin solder. Wear suitable protective clothes and protective glasses.
- Vapours that are generated during soldering are hazardous to the health. If necessary, use a suitable venting system or ventilate.

## Controls



- Filling valve (self-closing)
- Grip with integrated gas tank
- Regulator for the gas flow
- Sliding switch for gas outlet
- Catch
- Fold-out foot
- Fixing ring; fixes the metal sleeve (8) to the gas-fired soldering/brazing torch
- Metal sleeve; after unscrewing the fixing ring (7), the soldering bit can be attached here; various soldering tips can be screwed on to the soldering bit
- Soldering tip (various screw bits are included in the delivery)
- Soldering bit (with thread for attaching various soldering tips)
- Button for „Flame off“ necessary, when using the soldering bit with a soldering tip)
- Slider for piezo ignition

## Filling

The gas soldering/brazing torch is not filled when delivered, due to safety reasons. When using for the first time, you must first fill the gas soldering/brazing torch's tank before using the product.



### Warning!

Only use commercial lighter gas (ISO butane gas) to fill the tank. Suitable refill cartridges are available for purchase (MTD1) (300ml cartridges) for this purpose. In case of doubt, consult Major Tech. NEVER fill the product with other gases/fluids. Never use unsuitable cartridges or hose connections when filling! There is a great risk of fire or explosion! Only fill the gas tank of the product in a well ventilated environment and avoid naked flames. (Risk of explosion!) Only fill the product after it has cooled down completely.

## To fill, proceed as follows:

- Turn the gas soldering/brazing torch so the filling valve (1) points vertically upwards.
- Attach the filling tip of the lighter gas cartridge vertically to the filling valve (1). If necessary, use a suitable adapter (usually supplied with the lighter gas cartridge).
- Press the lighter gas cartridge down, on to the filling valve. The gas flows into the gas tank of the gas soldering/brazing torch. End the procedure after 2 to 3 seconds.



Stop the filling process immediately, if gas escapes. A gas-air mixture can become combustible. Make sure that the room is well ventilated before you ignite the gas soldering/brazing torch or other sources of ignition. Wait for a few minutes after filling, before using the product, so the gas refill can stabilize.

## Use with soldering bit (catalyst burning)

The soldering bit (10) with attached soldering tip (9) is included in the delivery. The soldering tip (9) can be replaced with differently shaped soldering tips (e.g. spatula shape).

When removing the soldering bit, the fixing ring (7) has to be unscrewed. Then, the soldering bit (10) can be removed from the metal sleeve (8) (if the spatula shaped soldering tip is attached to the soldering bit, it must be unscrewed first).

The gas burns without a flame due to the catalyst located in the soldering bit (10). For this reason, the flame must be extinguished after ignition.

## Proceed as follows:

- Turn the gas soldering/brazing torch so the soldering tip points upwards.
- Adjust the amount of gas to medium, with the regulator for the gas flow (3).
- Slide the slider switch (4) towards the tip, so the catch (5) engages. Gas is released, with can be heard as a clear hissing.
- The gas must be ignited immediately, with the slider for the piezo ignition (12). The slider can be pressed twice or three times, to ensure safe ignition.
- Now, extinguish the flame, by pressing the button (11) firmly, for about one second.

Gas continues to escape. The gas burns without a flame, due to the catalyst located inside the soldering bit (10). The heat generated heats up the soldering tip after approx. 20-30 seconds (depending on the size of the soldering tip), and it can now be used for soldering.



There is an opening in the side of the soldering bit (10). An orange glow must be visible here, indicating that, at the catalyst, the gas is now „burning“ without a flame.

When using the soldering bit (10) with soldering tip attached, there must not be a naked flame, as this will damage the soldering bit.

## Adjusting the gas flow

- The amount of gas released can be adjusted with the regulator (3).
- If the regulator is moved to the left (imprint „-“) (soldering tip pointing upwards or away from you), the amount of gas, and hence the temperature of the soldering tip, is decreased.
- If the regulator is moved to the right (imprint „+“) (soldering tip pointing upwards or away from you), the amount of gas, and hence the temperature of the soldering tip, is increased.

## Switching off

- Press the catch (5) and move the sliding switch (4) all the way back, towards the grip.
- The gas valve closes, the gas is no longer released. A hissing noise should not be heard.

## Use with naked flame

The gas soldering/brazing torch can also be used without a soldering tip, for example, when it is to be used for hard-soldering or other work that requires a hot flame (up to 1300 °C).

### Note:

If the soldering bit (10) is inserted in the metal sleeve (8), it must be removed first.

The soldering bit (10) with inserted soldering tip, as well as the gas soldering /brazing torch, must have cooled down completely! Risk of burns!

Unscrew the fixing ring (7), remove the soldering bit (10) with the soldering tip attached. Reattach the fixing ring (7) to the thread on the gas soldering/brazing torch and screw it tight (do not catch an edge).

## Proceed as follows:

- Turn the gas soldering/brazing torch, so the metal sleeve (8) points upwards.
- Adjust the amount of gas to medium, with the regulator for the gas flow (3).
- Slide the slider switch (4) towards the metal sleeve, so the catch (5) engages. Gas is released, with can be heard as a clear hissing. The gas must be ignited immediately, with the slider for the piezo ignition (12). The slider can be pressed twice or three times, to ensure safe ignition.

## Adjusting the gas flow

- The amount of gas released can be adjusted with the regulator (3).
- If the regulator is moved to the left (imprint „-“) (soldering tip pointing upwards or away from you), the amount of gas is decreased and the flame becomes weaker.
- If the regulator is moved to the right (imprint „+“) (soldering tip points upwards or away from you), the amount of gas is increased and the flame becomes stronger.
- Press the catch (5) and move the sliding switch (4) all the way back, towards the grip.
- The gas valve closes, the gas is no longer released. A hissing noise should not be heard.

## Tips and Notes

- The foot (6) can be folded out during breaks. Place the gas soldering/brazing torch on an even, stable surface! Use a suitable heat and fire resistant underlay (e.g. a ceramic tile).

- A small bowl and a sponge are supplied for cleaning the soldering tip. Moisten the sponge well! Flux residues can now be easily removed by wiping the soldering tip on the wet sponge.

## Disposal

Please dispose of the device when it is no longer of use, according to the current statutory requirements.

## Technical Data

Flame temperature:.....max. ca. 1300 °C; with soldering tip ca. 400 °C  
Gas tank:.....22 ml  
Operating time with 22 ml:.....Ca. 50 min  
Operating temperature:.....0 °C to +40 °C  
Dimensions (L x W x H):.....197 x 30 x 37mm