

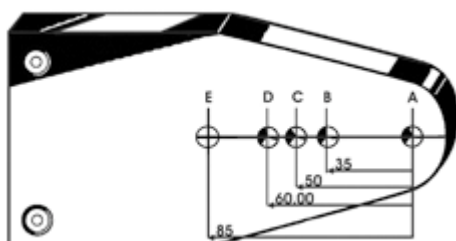
Basic welding tool



1. **IMPORTANT!** Use only aquatherm recommended tools and welding devices. They are designed with the proper temperatures and dimensions for working with aquatherm products.
2. Loosely assemble the cold welding tools by hand. Do not fully tighten the welding heads until the iron has reached its operating temperature.
3. Before fusing a distribution block, in which two connections are fused simultaneously, the welding tools have to be placed into the respective holes as shown.
4. All welding tools must be free from impurities. Make sure they are clean before assembling. If necessary, clean the welding tools with a coarse, non-fibrous tissue and with rubbing alcohol.
5. Place the welding heads on the welding device so that there is full surface contact between the welding head and the heating plate. Welding heads over 1 1/4" (40 mm) must always be fitted to the rear position of the heating plate.

Electric supply

Make sure that the electrical supply used is fully compatible with the welding iron being used. Improper use of any electrical device can cause harm to both the tool and the operator. Make sure any extension cords used are compatible with the power input of the welding devices. Note that fluctuations in the power supply can cause the tool to go through



longer heating

Art.-No.	Passage	Hole	Branch	Hole
30115	3/4" (25 mm)	A + E	1/2" (20 mm)	A + C
85123	1/2" (20 mm)	A + B	3/8" (16 mm)	A + C
85124	1/2" (20 mm)	A + B	3/8" (16 mm)	A + C

cycles.

6. Plug in the welding device. Depending on the ambient temperature, it will take 10-30 minutes to heat up the heating plate.

Heating phase

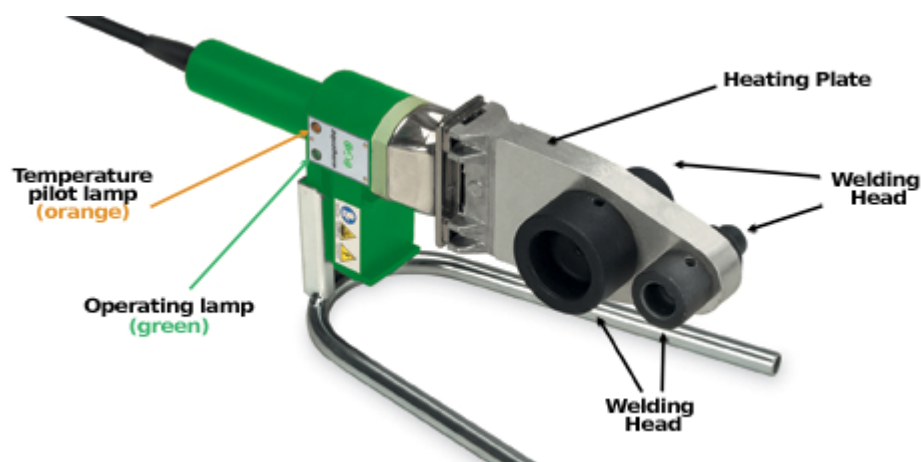
7. During the heating phase, tighten the welding heads carefully with the hex wrench.

Take care that the heads completely contact the heating plate. Never use pliers or any other unsuitable tools, as this will damage the coating of the welding tools.

8. The temperature of 500 °F (260 °C) is required for welding with the aquatherm greenpipe system. The temperature of the welding device must be checked before starting the welding process. This can be done with a fast-indicating surface thermometer (see “Fusion part B, item 2”).

Important: If the pipe or the air around it is below 40°F (5°C) remember that heating times are increased by 50%. Remember to take greater care with the pipe as it can become brittle in cold temperatures. Using power cutters on cold pipe can cause cracking and is not recommended. Use standard ratchet or wheel cutters instead. Never pre-heat the pipe beyond 100°F (38°C).

Handling



9. A head change on a heated device requires another check of the welding temperature on the new head (after heating it up).
10. If the device has been unplugged (e.g. during longer breaks) the heating process must be restarted (see item 6).
11. After use, unplug the welding device and let it cool down. Never use water to cool the welding device, as this will destroy the temper of the metal. Always keep the welding heads dry.
12. Protect aquatherm greenpipe welding devices and tools against impurities. Residue from previous fusions may lead to an incorrect connection. After cooling, the tools should be cleaned with aquatherm greenpipe cleansing cloths, Art.-No.50193.
13. For a perfect fusion, damaged or dirty welding heads must be replaced, as only impeccable heads guarantee a perfect connection.
14. Never attempt to open or repair a defective device. Return the defective device to the supplier for repair.
15. Check the operating temperature of aquatherm greenpipe welding devices regularly by means of suitable measuring instruments.

Guidelines

16. Fusion welding of joints in aquatherm greenpipe and climatherm® piping systems must be done in accordance with the instructions in this manual. Additional information is available, and should be followed where applicable and not in conflict with these instructions:

ASTM D 2657 - Standard practice for heat fusion joining of polyolefin pipe and fittings

ASTM F 1290 - Standard practice for electrofusion joining polyolefin pipe and fitting

Safety precautions

By using a non-hazardous material and an emission-free joining process, aquatherm has eliminated many of the hazards of installing a piping system. However, there will always be a certain level of risk involved in pipe installation, so it is imperative to always follow the appropriate safety precautions.

The primary concern is the irons themselves. The surface temperature of the welding iron and heads will normally be between 400°F (240°C) and 500°F (260°C) during operation, and they can remain at these temperatures for as long 30 minutes after being unplugged.

When working with the welding irons, always wear the appropriate hand and arm protection to avoid the risk of burns. Protective eyewear is also recommended.

During operation, always be aware of the location of the iron. Do not leave the iron hanging loosely or allow it to brush up against flammable materials. Make sure to keep the iron clear of other people. Inform those working nearby that the iron is hot and could pose a safety risk to them.

Do not leave the iron unattended while it is plugged in. After unplugging the iron, protect it with a heat-resistant covering or place the iron back in its container. Do not allow the cord to contact the welding surfaces.