

Weller®

Magnastat - Soldering iron



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Always place the soldering tool in the safety rest while not in use.



1. Caution!

Please read these Operating Instructions and the safety informations carefully prior to initial operation. Failure to observe the safety regulations results in a risk to life and limb.

The manufacturer shall not be liable for damage resulting from misuse of the machine or unauthorised alterations.

Safety Informations

- Remove all inflammable objects from the proximity of the hot soldering tool.
- Use suitable protective clothing. Risk of burns from liquid solder.
- Never leave the hot soldering iron unsupervised.
- Never work on voltage-carrying parts.

2. Description

Magnastat System: Control principle

The metal cap that is firmly secured to the back of the soldering tip is the temperature sensor of this system; the Magnastat. It is ferromagnetic, i.e. it attracts iron as does a magnet. The number on the cap is the code for the control temperature, when the iron is heated. When this control temperature is reached, the Magnastat loses its magnetic property. Physicists call this the Curie effect. Once the temperature falls below the control temperature, the Magnastat regains its magnetism which reheats the iron again to its control temperature.

This sudden changeover facility of the Magnastat is extremely stable, it does not deteriorate through aging or metal fatigue.

The temperature reaction of the Magnastat either attracts or repels a permanent magnet, this movement is transmitted to the contact bridge switch via a push rod to switch the heating current on or off.

The switch is hermetically sealed and since the Magnastat is a part of the soldering tip, the energy loss caused through radiation or during soldering, is made up. A further advantage of this design is that the soldering iron is completely switched off while the tip is being changed so that the heating element can not burn out in the absence of a tip.

Switching temperatures are:

5 = 260°C

6 = 310°C

7 = 370°C

8 = 425°C

Defects caused by external influences can affect the switch and so the following rules should be followed:

Technical data

	TCP 12	TCP 24 / S	TCP 42
Voltage:	12 V	24 V	42 V DC (only DC)
Power Rating:	35 W	50 W	45 W
Control:	2-point control with temperature sensor using Curie effect.		

- The soldering iron rest should not be made of iron or similar material (it is preferable to use the original Weller rest).

- The heating element should not be subjected to any alternating field nor should it be moved in immediate contact with iron as this could block the control system.

Only use Weller "Longlife" tips. The use of types of other tips could lead to premature deterioration of the system.

3. Commissioning

Put the soldering iron in the safety stand. Remove all flammable materials from the immediate vicinity of the soldering iron. Plug the connector into the supply unit and lock. Switch on the supply unit. Once the warm up period is over, wet the tip with some solder.

4. Maintenance instructions

- When first heating, the soldering tip should be wetted with solder to remove any coating of oxide developed during storage or any dirt from the soldering tip. Before using the iron the tip should be cleaned with the wet sponge. So not use aggressive fluxes, etc. Any mechanical treatment of the soldering tip damages the galvanic protective layer and will reduce the life of the tip.
- The heating element has a maximum heating effect on the tip. This is effected through precision in the heating element material, the heater winding and insulation. It follows that the heating element should never be gripped with pliers or be hammered in any way. It is quite sufficient to secure the soldering tip by tightening it into the tip sleeve by hand (when the iron is cold).
- The soldering temperature can be set relatively low because of the powerful heat control. It should be set between 300°C and 380°C depending on the quality of solder used and the soldering location. Higher temperatures only bring appreciably higher cycle times which affect soldering quality, the life of the soldering iron tip and all components suffer.
- The soldering operation should be effected in the following order: Soldering position - solder - soldering tip.
The solder should never be applied to the tip and then to the soldering position. This causes "dry" joints.
- Do not clean hot soldering iron tip on a dry sponge.
Regularly tin the soldering iron tip with sufficient solder. Never place the soldering iron in the holder with the tip insufficiently tinned.
Soldering bits figure LT and PT-Tips see pages 24 - 28 .

If the soldering equipment is used in combination with other Weller devices, the warning notes mentioned in those operating instructions are appliance as well.

5. Scope of supply

Magnastat Soldering

Operating Instructions

Subject to technical alterations and amendments!

See the updated operating instructions at

www.weller-tools.com.