



CM20

FAQ_CM20_002 – Wire breaks, hot welding seam!

Machine basics:

- Overlap 6.0 mm
- Copper wire diameter 1.8 mm
- Galvanized metals 0.7 mm

1. Maintenance:

1.1. Make sure the whole Z-bar area (also the inner part) is **free of small swarfs, steel dust and other**. This little dirt can reduce the function of several isolations, and the weld power starts to become uncontrolled! Sometimes more, sometimes less power could be the negative effect!

1.2. Run one or more metals without current, and **feel any slight vibrations / acc - decelerations** while moving forward!

2. First, basic adjustment:

2.1. **Copper wire profile (width not thickness!)** after the profiler must be between **2.20 - 2.25 mm**. Use the delivered micro-meter to measure the copper wire, if needed adjust the profiler, see the manual.

2.2. **Wire tension**: On the main aluminium plate you see an air regulator. **Set the pressure to 3.0 - 3.5 bar** by turning the handle on top of air regulator. If the copper wire is running, the wire must be well tensioned. You can imagine, if the copper wire has a low tension, he likes to get welded with the metal. If the tension is to high, then the copper wire like to get stretched, and can break frequently.

2.3. **Welding pressure**: Close the welding wheels by turning the turn-switch on the panel. Near to the upper welding wheel you see a spring. Close to the spring you see an aluminium welding pressure. The lower end of the spring shows the value on the scale: **Should be between 60 - 70 daN**.

3. Second adjustment:

3.1. **Start and end timing weld power**: Both potentiometers should be zero. Weld a sample. Now you should have minimum 1 mm unwelded in the beginning / end. If not, adjust S63 and S64 until you see it. Now we are sure that the copper wire can not get damaged due to burned beginning / end!



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3.2. **Reduce weld power:** Probably the weld power is too high. Reduce, and check if the welding is still enough, or the metals start to break off. Go back to origin value.

3.3. **Increase welding pressure:** Go up in 5 daN steps, and proof the metals. Target has to be, that the zinc - craters around the welded areas are getting reduced. This means that the metals got melted closer to their contact - point.

3.4. **Increase weld speed:** Turn the potentiometer 10 by 10 units (not over 30 for galvanized metals!), and weld some metals. Possibly you may adjust S63 and S64 again.

4. Others:

4.1. **Two copper wires:** If you can not get successful, use two copper wires (control also on the second wire the profile!), and weld some metals. If the wire breaks has stopped, send us more pictures of your last welded metals. Now you can continue your production, while we can rethink next steps to help you.