



Operation Manual for extrusion welding using Weld Max equipment

Extrusion welding should be executed by specialized and skilled staff only.

General extrusion welding guide lines like e.g. international accepted DVS 2207 Part 4 should be followed.

This operation manual is provided to execute minor optical repair works with very limited requirements to welding quality only.

- Use Weld Max Manual and operate with 220 Volt /50-60 Hz only.
- Use HDPE welding rod, Ø 4 mm
 - 1) Switch the power on at equipment bottom.
 - 2) The **Potentiometer** for the **Air Temperature** is to set on **265°** (small number on display). The **Potentiometer** for the **Extrudate Temperature** is to set on **230°** (small number on display). Set **Rod Feed Potentiometer** to **Position 2**.

Note: Warm up of Weld Max equipment unless all inner material is plastizised while flashing display will last several minutes. Rod feed will not start during warm up due to tool protection.
 - 3) Prepare the basic material area by using electric angle grinder with very fine grinding disc and / or scraping tools to plane it and to remove sharp edges to take the melted HDPE stripes for a good optical solution. Scrape unprepared area surface of basic material which will be also over-welded to remove oxygen layer for best welding quality.
 - 4) Unroll Ø 4 mm welding rod from drum to secure continuous rod feed. **Care equipment never runs without rod feed !!!**

- 5) Note: Rod feed switch is self locking. For release switch again.
- 6) Press rod feed switch on the equipment, press rod into the rod feed left handed at the equipment and clean the welding shoe by pull out of first moulded material using a gripper. Repeat the welding shoe cleaning after each welding interruption to always start with best heated material.
- 7) Execute welding quality test first on a test piece.

7.1) Pre-heat the basic HDPE material with the hot air of the equipment in the area you want to start first.

7.2) Press welding shoe to the heated area and push the equipment slowly forward while always pressing continuously.

Note welding is heat + pressure!!

Adjust welding mass output by Rod Feed Potentiometer to approx position 8.

Check welding to be best by getting a wide valley form with little hills right and left.

If temperature is too high the material becomes shinning and glancing and might start burning.

If temperature is too low welding does not get a compound with the HDPE material of the basic material and only lays on the surface of the ground material.

In case of problems to reach satisfying results, try to vary heat at the potentiometer slightly.

7.3) For a second and more layer's beside the first directly continue to weld it by overlapping one of the little hills.

Note: For welding more layer's on top of each other, basic layer must be cooled down first and if necessary planned again.

Continue unless the whole area is filled up. If the welds create too big hills interrupt welding, keep cooling down the welded area for a couple of minutes and plane the area by using the scrap tools or half-moon knife before continuing.

- 8) After successful test, start welding operation by processing same as on welding test.
- 9) After filling the welding area completely, plane the area by using the scrap tools or half-moon knife for best optical finish.