











The butt welding equipment basically consists of:








Monoblock machine housing fixed and movable table, electric trimmer, electronically-regulated heating element, safety guard for heating element, basic clamping set, pipe supports, mobile work and transport frame, adaptor clamping inserts

Power supply is 220-230 V AC, 50/60 Hz, 5 Amp

Power tool plugs must match the outlet. Do not modify the plug in any way.

Use suitable adapter plugs if required.

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| 1. | Put the machine on a level, solid surface.<br>Pull the lock pins to the right and left inwards, swivel the machine upwards and snap the pins into the upper boreholes.   |    |
| 2. | Put the hand wheel onto the shaft on the front side of the machine, secure with threaded pin and release the clamping lever for fixing the shaft   |    |
| 3. | Pull the trimmer lock to the front and swivel the trimmer to the back.   |   |
| 4. | Swivel out the heating plate guard and swivel heating element to the back.   |  |
| 5. | Set temperature control unit of the heating element to 220°C (200°-210°C in hot ambient climate >30°C) and connect it to the power supply.<br>Yellow control light is flashing when 220°C temperature is reached and heating element is ready for welding. |  |
| 6. | Open the hand grip on the basic clamping elements in an upward direction and insert adaptor clamping inserts for corresponding diameter into the support brackets and fasten with the knurled screw.   |  |
| 7. | Put insert adaptor for corresponding diameter into support brackets. Adjust support brackets with multi purpose spanner SW 17 for best pipe support.   |  |
| 8. | Insert pipes and clamp pipe ends to stick into the welding area about 30 +/- 5 mm. Close top clamp to fix the pipes. If necessary, set the required tension force by means of the adjusting screw.   |  |

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| <p>9. Check pipe alignment by moving both pipe ends together using the slide moved with the hand wheel.<br/>Duct welding is recommended in the minirib section of the duct only. Do not weld big rib sections.</p>   |   |
| <p>10. Fix the trimmer start switch by pressing the button to enable use of special black trimmer switch.</p>  |   |
| <p>11. Swivel the electric trimmer between the pipe ends and switch on by pressing the special black trimmer switch.<br/>Move pipe ends against the trimmer using the hand wheel.<br/>Check uniform flat trimmed pipe ends.<br/>Swivel trimmer back by pulling the trimmer lock.<br/>Check pipe end alignment (max 0,5 mm difference) and plane parallelism (gap max 0,5 mm) again.<br/>If necessary adjust pipe ends and repeat the procedure.<br/>Attention: Trimmed pipe end surfaces must not be touched with hands and must keep free of dirt.</p>  |    |
| <p>12. Swivel the heating element between both pipe ends.<br/>Move pipe ends together using the hand wheel and apply adjusting bead force indicated in the welding parameter list until 0,5 welding bead is reached over the entire circumferences.<br/>Reduce the force to the heat up pressure force indicated in the welding parameter list and fix the hand wheel by screwing up the clamping level tightly.<br/>After 45 seconds release the force completely, move pipe ends apart and swivel out the heating element within 5 seconds and move pipe ends together again by within next 5 seconds by slowly increasing force up to full welding force indicated in the welding parameter list.<br/>Fix clamping lever tightly during full cooling time of 6 minutes.</p> | <br> |
| <p>13. Welding is finalized.<br/>Release the clamping lever and the force and unclamp the pipe sections and remove the welded pipe.<br/>Prepare next welding</p>   |   |
| <p>14. Machine packing:<br/>Remove heating element out of guard, swivel trimmer between the clamps, cover trimmer with protection foil, slide clamps against the trimmer and fix with clamping lever. Pull lock pins and swivel machine downwards. Pack all components.</p>  |   |