



This general Plug Welding operation manual is provided to weld all kind of plugs into smooth pipes e.g. closing plugs, anti-noise distance plugs, exit plugs and pipe plugs. The welding equipment consists of 3 parts (welding machine, drill tool and deburring tool). In addition you might use a wood block for intermediate storage of heated welding equipment.







All plugs are available in HDPE and PP material. HDPE and PP parts/pipes are not weldable to each other !! Please check the material you weld first !!

### **Operation Manual**

#### **Welding Parameter Indication**

These values are given as an indication and may vary due to outside temperatures and wind conditions.

<b>Plug Size [mm]</b>	<b>Welding Time 1 [seconds]</b>	<b>Welding Time 2 [seconds]</b>	<b>Chang Over [seconds] max.</b>	<b>Cooling Time [minutes]</b>
16	5	3	4	2
20	5	3	4	2
25	7	4	4	2
32	8	5	6	3
40	12	6	6	4
50	12	7	6	4
63	15	8	8	6
75	15	9	8	6
90	22	11	8	6
110	30	13	10	8
125	35	15	10	8

<p>1. Insert the drill tool of needed size to a standard drilling-machine and drill a hole into the pipe.</p>	
<p>2. Use <b>Deburring Tool</b> to remove drill shavings out of the drill hole.</p>	
<p>3. <b>Set Temperature Control Unit</b> of the welding machine to <b>260°C</b> and connect it to the power supply. Check if you have 110V or 220 V equipment first. Red control light is flashing and turns off when 260°C Temperature is reached and heating tool is ready for welding. Fix welding machine or use wood block to avoid burning other materials.</p>	
<p>4. <b>Prepare Insert Depth Marking</b> of the plug according project requirements. Minimum insert depth of 80% of pipe wall thickness is required.</p>	
<p>5. Press the plug by hand into the female tool part by part up to the marking for listed duration called <b>Welding Time 1</b>.</p>	
<p>6. After <b>Welding Time 1</b> insert the male part of the welding machine (still including the plug at the other end), with very low pressure slowly into the drilled pipe hole until the limits the inserting depth for the duration of indicated <b>Welding Time 2</b>.</p>	
<p>7. Remove the welding tool, after <b>Welding Time 2</b> is finished, without turning during maximal indicated <b>Change Over Time</b>. <b>Remove the plug</b> at the same time out of the tool hole.</p>	
<p>8. Press the plug by hand without turning into the drill hole up to the marking and hold on with low pressure for 10 seconds for perfect fixing. Keep the plug without operation during indicated <b>Cooling Time</b>. Welding is finalized.</p>	