

Assembly instructions DIY SE I TPE Moulding technology

DIY: A finished Safety Element SE I TPE in just 8 steps

Before beginning, first switch on the temperature regulating device ($260\text{ °C} \pm 10\text{ °C}$) for heating the cartridges – it takes the smelter 10 min to warm up!

1. Cut contact tubing

- Measure off required length of contact tubing (see instruction card 09/99)
- Place into double cutting device; point of origin: middle blade
- Make sure that the strands are central to the V-cutouts in the blades and only then cut.

Caution: Do not damage the strands!

2. Soldering

- Strip the insulation of the contact tubing
 - Caution:** Do not damage the strands when doing so! If as much as one strand gets cut, the element may not be used further (reject).
 - Insert PCB into contact tubing up to the centre of the bore holes
 - Solder strand to PCB (see diagram)
 - Solder other strand in the same way
- Use soldering tin as per DIN 8516 F-SW 32

3. Insert injection moulds

Where should injection-moulds be?

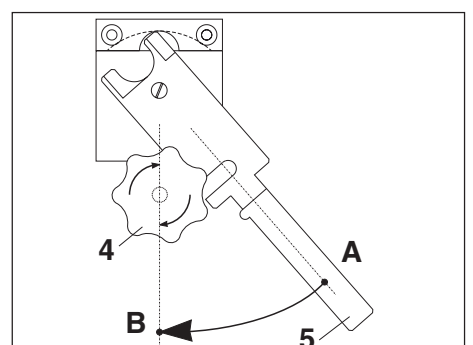
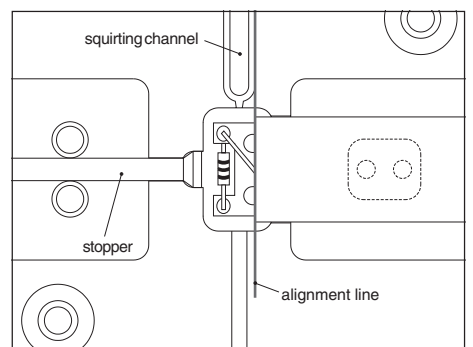
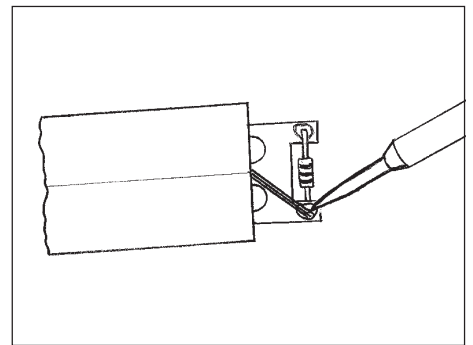
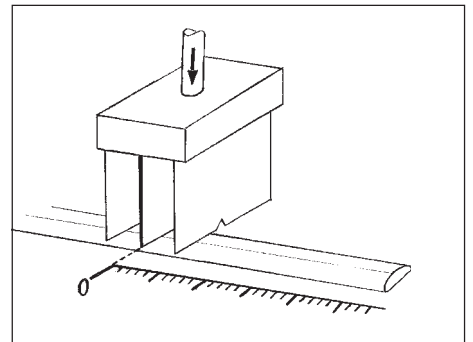
Cable end: without stopper

W-/D-end: insert stopper

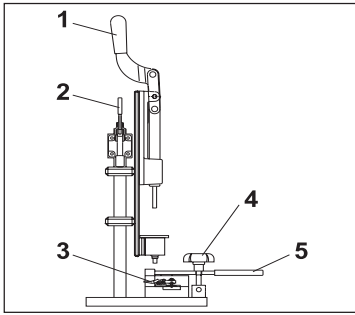
- Insert contact tubing, cambering surface facing upwards
- Position in tool: line contact tubing up to right edge of squirting channel (see diagram)
- Close the small quick-action catch device **3**

4. Close tool

- Place top part of tool in position, keeping turning lever **5** in position **A**
- Put straining screw with star grip **4** into upright position (with left hand)
- Turn turning lever **5** from position **A** to position **B** as far as straining screw stop (with right hand)
- Tighten straining screw using star grip **4**



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5. Insert squirting cartridge



Caution: Melting period of 2 min is imperative! Melting process otherwise not complete.

6. Injection moulds

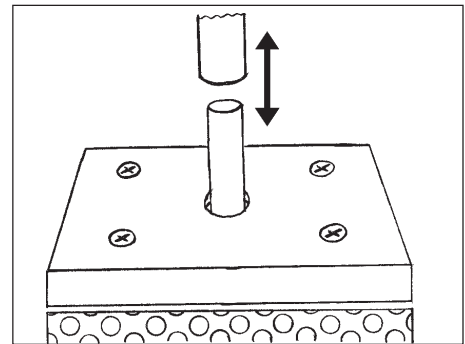
7. Remove from tool

8. Retouch work and testing

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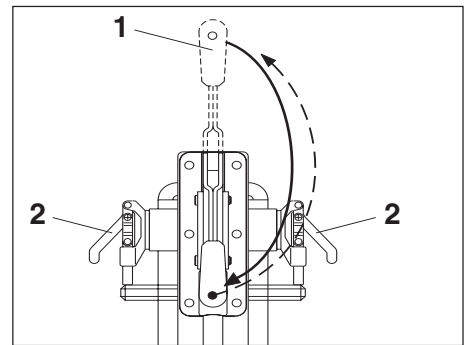
The cartridge must disappear completely into the smelter opening.

- Put in cartridge and press in gently with finger; using lever **1**, insert cartridge totally into smelter, exit lever **1** immediately
- Allow for 2 min melting period
Melting period > 5 min: squirt out material used, clean tool and insert new cartridge

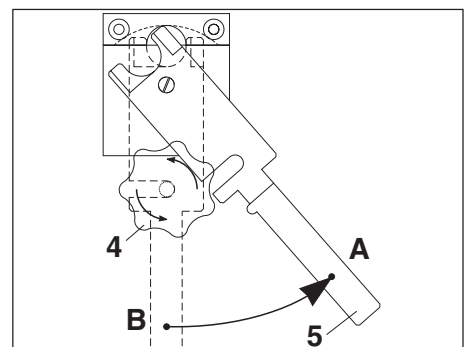


For good injection mould results, carry out the following briskly:

- Conduct the moving component downwards using quick-action catch devices **2**, until quick-action catch devices can be felt latching
- Push lever **1** downwards – in one impetus – at a constantly fast speed
- Return lever **1** to starting point



- Conduct the moving component back up again using quick-action catch devices **2**
- Unscrew straining screw using star grip **4**
- Set turning lever from position **B** to position **A**
- Unscrew top part of tool and lift off
Tip: use lever action
- Open the small quick-action catch devices **3** and take out contact tubing



- Using a side cutting tool remove protruding sprue and, if applicable, any flashes
- Clean tool completely of any remaining sprue
- Check visually for all round total injection
- Test function according to criteria in box opposite

Test for function:

- SE1 W with 1.2 kΩ and/or SE1 BK
3.9 V < U_{OK} < 4.1 V
- SE1 W with 8.2 kΩ
OK: green LED lights up
- SE1 W with 22.1 kΩ
OK: green LED lights up