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at work!**

## WELDY PLAST

Multi functional hot air tool  
for plastic welding



**Temperature range 100–650°C**

**Airflow 100–250 l/min.**

**Capacity max. 2000 W**

**Weight 620 g**

## 2 Function programmes



The function programmes contain **STANDARD VALUES** for temperature and airflow to make processing of plastics easier for the operator – especially welding. The programme **SET** enables individual programming of temperature and airflow.



Manual programmable.

**Temperature** 100–650°C stepless.

Air flow 100–250 l/min. with 6 steps (min. airflow 2 steps)



**Shrinking**

of heat shrink sleeves or films.

Accessories: Reflector nozzle, wide-slot nozzle.



**Forming**

of thermoplastics loosening of glued joints.

Accessories: Wide-slot nozzle.



Rod welding of plastic materials, which are specified in the function programme: Bumpers made from PPEPDM, water and other containers made from HD-PE, housings made from PP, containers made from PVC-U or ABS, headlight covers made from PC, etc.

Accessories: Welding nozzle.

Repair welding of PVC **floor coverings**.

Accessories: Welding nozzle.

**Overlap welding** of films and tarpaulins i.e. liners on building sites. Tarpaulins for trucks or tents, films for greenhouses.

Accessories: Overlap welding nozzle, pressure roller.

### Memory function

The hot air tool WELDY PLAST contains a memory function. When the tool is switched off, the values or function programme which were programmed last, are stored in the memory. When the WELDY PLAST is switched on again, these stored functions can be activated again by pressing the SELECT key.

### Stand-by for ECO drive

During any interruption of work, the tool can be switched to Stand-by function. This reduces energy consumption and airflow.

Always check, that the chosen function programme corresponds with the material of the part to be repaired. Compare this with the material identification code.

# 3 Basic rules for welding plastics



The majority of plastics used are thermoplastics, which as a rule, are suitable for plastic repair without any difficulties. The following basic rules should be observed.

## 1. Identifying Plastics

Check whether the plastic part to be welded has a plastic identification code. If the code is missing or unrecognisable, easily conducted tests can be helpful:

### **Floating test in water**

Take a small piece of plastic from the part to be repaired and test if this will float on the water surface (PPEPDM, HD-PE, PP) or sink (PVC-U, PVC-P, ABS, PC).

### **Surface condition**

The surface of plastics can be differentiated from hornlike (PVC-U, PVC-P) to waxy (PPEPDM, HD-PE).

### **Adhesion test with welding rod**

Heat up the welding rod, which is marked with the material identification code, and the plastic part by applying hot air. Press the welding rod onto the plastic part to be welded. If the cooled down rod stays firmly in place or can only be pulled off with difficulty, both plastic materials are the same. Welding rods made of PPEPDM, HD-PE or PP can be stringy when pulled off.

## 2. Four basic rules for plastic welding

### **Weld like with like material**

Only materials which are the same can be welded, i.e. PP with PP. A weld of PP with PVC or other plastics is not possible!

### **Correct temperature**

The plastic must be heated up until it is plastized (doughy). The function programme will help you to choose the right temperature matched to the material.

### **Even pressure**

When welding with rods, the pressure is applied by pressing on the welding rod. For overlap welding of films and tarpaulins, the necessary pressure is applied with the help of the pressure roller.

### **Constant welding speed**

To achieve a good weld, an even working speed should be maintained.

## 4 WELDY PLAST – the hot air tool for repair welding with welding rod

Repairs of containers, parts of vehicles, pipes, floorcoverings and divers other plastic parts.



Repair welding cracks or damage to containers made from HD-PE.



Repair welding an outlet pipe made from HD-PE. Pipes made from other plastics can also be repaired.



Repairing a PVC-P floorcovering.



Welding a damaged bumper. Vehicles contain many parts which are made from thermoplastics, which can easily be repaired.

## 5 WELDY PLAST – the hot air tool for repair welding of films and tarpaulins

Repairs of swimming pool covers, biotopes, greenhouse materials, tarpaulins and plastic pockets can easily be carried out with the WELDY PLAST.



Welding a damaged PVC cover.



Repairing a tarpaulin by welding on a patch.



Welding a Biotope film made of PVC.

## 6 Welding with rods: Repair welding of cracks



### Operating steps:

**Function programme:** Choose according to the material code

**Accessories:** Welding nozzle  
Choose appropriate welding rod

**Note:** The material of the welding rod and the part to be repaired should be the same.

### Repair welding a plastic tank



### Note:

The welding groove should be clean and free of grease. For PP and PE materials, the oxydation layer on the surface should be removed. (Scraping, sanding, grinding).

- 1 Sand the surrounding area to remove dirt and remnants of paint. Drill a hole at the end of the crack to prevent it spreading.



### Note:

To stabilise the crack, a cross weld can be added on the under side.

- 2 Cracks should be drilled out to achieve an even welding groove. Angle  $60^{\circ}$ –  $90^{\circ}$ .

- 3 Chamfer the end of the welding rod.



- 4 At the start of the welding process heat up the welding rod and apply pressure to the welding rod. Heat up the welding rod and the part to be welded evenly by using a pendulum motion and press the welding rod into the plasticised welding groove.

# 7 Repair welding of PVC floorcoverings



## Operating steps:

**Function programme:** FLOOR

**Accessories:** Welding nozzle

**Note:** Faulty welding grooves are easily repaired with the WELDY PLAST.  
The welding rod must be soft PVC (PVC-P).

Observe **four basic rules** for plastic welding.



- 1 Cut out the damaged welding groove with a V shaped blade.
- 2 Fit the welding nozzle onto the WELDY PLAST.
- 3 Chamfer the end of the welding rod.
- 4 Heat up the welding rod and the welding groove evenly by using a pendulum motion and press the welding rod into the plasticised welding groove. When welding floorcoverings, the welding nozzle must be angled back at 45°.
- 5 When the welded joint is cool, the projecting bead of weld material should be removed with a sharp blade.

# 8 Overlap welding: Repair welding of films and tarpaulins



## Operating steps:

**Function programme:** Foil

**Accessories:** Overlap welding nozzle and pressure roller

**Note:** Cracks and holes can easily be repaired by welding on a patch

When overlapping films and tarpaulins, the following **basic rules** apply:

- **Weld like with like material**
- **Correct temperature**
- **Even pressure**
- **Constant welding speed**

Choose a patch large enough to cover the hole well.



1 Cut the patch to shape, round off the corners

2 Fix the patch

3 Weld the patch on:  
Go around the patch with the overlap welding nozzle to the width of nozzle and apply even pressure with the pressure roller



# 9 Forming, Shrinking and Accessories



## Forming

Thermoplastics pipes, profiles and sheet can be easily formed with hot air.

**Function programme:** Form

**Accessories:** Wide slot nozzle as required



## Shrinking

**Function programme:** Shrink

Shrinking of heat shrink sleeve and moulded parts

**Accessories:** Reflector nozzle

Shrinking of shrink wrap film

**Accessories:** Wide slot nozzle as required



## Accessories: Welding



Welding rod nozzle for welding pipes, sheet, containers, floor-coverings, etc.  
Ord.-no. 990805



Overlap welding nozzle for welding films and sheet.  
Ord.-no. 990806

## Accessories: Shrinking



Reflector nozzle for shrinking heat-shrink sleeves.  
Ord.-no. 990804



Wide slot nozzle for shaping and shrinking shrink wrap film.  
Ord.-no. 990802



Pressure roller for welding films and sheet.  
Ord.-no. 990807

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# 10 Technical Data

WELDY PLAST EURO-Plug	Order No.	999124
GB-Plug	Order No.	999324
CH-Plug	Order No.	999424
Voltage	V~	230
Power consumption	W	2000
Temperature range	°C	100–650
Air flow	l/min.	100–250
Max. static pressure	Pa	2000
Weight	g	620
On/off switch		●
LCD-Display		●
Electronics Flicker conformity		●
Stand-by for Eco-drive		●
Memory function		●
Temperature and airflow adjustment: terminal with menu control		●
<b>Function programmes</b>		
Temperature in °C/Airflow		
Set	100–650/2–6	●
Shrink	450/6	●
Form	500/5	●
PPEPDM	280/6	●
HD-PE	300/4	●
PP	320/4	●
PVC-U	340/4	●
ABS	360/4	●
PC	370/4	●
Floor	450/4	●
Foil	480/4	●
<b>Accessories</b>		
Wide slot nozzle	Order No. 990804	●
Reflector nozzle	Order No. 990803	●
Welding nozzle	Order No. 990806	●
Overlap welding nozzle	Order No. 990802	●
Pressure roller	Order No. 990807	●

 CCA certified  
CE conformity

ISO 9001



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Preliminary data!