

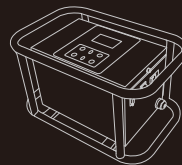


[www.tehtools.com](http://www.tehtools.com)

Plastic Pipe Welding Machine

**TWE315**

Electro Fusion Machine



**TEH**



## TECHNICAL SPECIFICATION

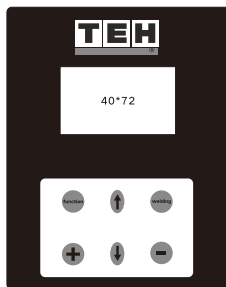
Model	TWE315
Rated voltage	220V 50Hz
Rated input power	3500w
Working environment	-20°C~40°C
Output current	8-55A
Output voltage	10-65V
Welding capacity	20-315mm
Relative humidity	≤80%
Time adjustment range	1 ~ 9999 seconds
Time resolution	1 second
Time error	≤1%
Data storage capacity	500 times
Weight	26KG

Welcome to choose Automatic Electro-fusion Welding Machine, it is used for polyethylene pipe fusion weld. With voltage & current control, the built-in resistance wire will be heating, and then the machine could meet the welding requirements for various electric welding pipes and fittings. This welding machine has the following functions and features:

1. Designed according to ISO12176 electro-fusion welder international standard.
2. High level MCU is used as control core, equipped with LCD display, all welding parameters could be displayed.
3. User-friendly interface, easy operation.
4. By real-time monitoring weld status, abnormal welding process could be terminated in short time.
5. Equipped with automatic voltage stabilization and over voltage protection function.
6. With automatic temperature compensation to eliminate the impact from ambient temperature during welding.
7. Built-in memory, can record more than 500 welding records
8. Welding records could be download to USB flash disk via the USB interface. (Optional Function)
9. Welding wiring is easy and simple to avoid wiring error.
10. Welding parameters input modes:
  - (1) Manually set.
  - (2) Read in by bar code scanner (Optional function, adapt to ISO 13950 standard pipe fittings barcode).

## OPERATION

### OPERATION PANEL INTRODUCTION



Button/Icon	Function	Description
+		Raise the numerical value / YES
-		Reduce the numerical value / CANCEL
▲		Move forward one character / Menu up
▼		Move forward one character / Menu down
function		Enter the next level of menu / Back to previous menu
welding		Start welding

### OPERATION STEPS

#### 1. Preparation

(1) Make sure Electro-fusion fittings and pipe have been properly installed.

(2) Properly connect the output plugs of Electro-fusion welder with electrodes of Electro-fusion fitting.

#### 2 Power On

Switch on the power, the welder enters the "Standby Mode", display shows as blow:

```

U-MODE           25°C
ELECTRO-FUSION
WELDING MACHINE
06/23/2013      6:26:16
  
```

#### 3. Enter Setting menu

Press to enter Setting Menu as blow:

```

View/Output weld record
Operator/date/time
Weld parameters  1Steps
Supplement
  
```

After entered the Setting Menu, press to select

Weld parameters:

1 steps: Option will be high-lighted if it was selected.

```

View/Output weld record
Operator/date/time
Weld parameters  1 steps
Supplement
  
```

Press **+** & **-** to set the steps of welding.  
For example: If you want single stage weld, set the number to "1". If you want multistage weld, set the number to "2" ~ "6", the steps could be set up to "6".

#### 4. Welding Parameter Setting:

After finished the setting of welding steps, press **Enter** to enter Parameters setting menu as blow:

#### PARAMETERS SETTING1/1

Output Voltage: 9.5V  
Fusion Time: 0090s  
Cooling Time: 01min

Press **↓** & **↑** to select the digit you want to modify, the digit will be flashing when it is selected. Then modify the digit value by press **+** & **-**. In multistage welding mode, after finished parameter set of one welding step, press **Enter** to save and enter to the setting menu of next welding step, the welding step of parameter setting could be up to 6 (it depends on your set in Setting Menu).

#### NOTICE

**Without operation last for 8 seconds, the machine will automatically return to Standby Mode.**

**Welding time must be more than 0000 s.**

**Cooling time must be more than 00min.**

#### 5. Start Welding

Press **Enter** to enter the "Welding Parameter Confirm" interface.

#### Confirm Welding Parameter 1/1

Output Voltage 039.5 V  
Fusion Tim 0100s  
Cooling Time 15min

After confirmed the parameters, press **Enter** once again to start welding. In welding process, valid values of voltage & current, remaining time will beshown as blow:

#### 1)Welding

Output Voltage 015.0V  
Output Cument 18.2A  
Remaining Time 0123s

In the cooling process, remaining time will be shown as blow:

#### 1)Cooing...

Remaining time 10m21s

#### NOTICE

**During the welding process, could STOP welding and back to the Standby Mode at any time by press **Enter** or **ESC**.**

#### 6. Input by Bar-code Scanner (optional function)

Connect the bar-code scanner with electro-fusion machine, and make sure pipes and fitting are properly connected.

Then scan the bar-code on the fitting, the display will enter "Welding Parameter Confirm" interface as shown blow:

#### Bar-code Input Parameters

Output Voltage 039.5V  
Fusion Time 0100s  
Cooling Time 15min

After confirm the parameters correctly, press to start welding.

Bar-code scanner input mode only support 1 step welding mode & constant voltage control mode.

Parameters inputted by bar-code scanner couldn't be saved and modified.

### 7. View/Output weld record

In Standby Mode, Press to enter Setting Menu, and then press to select 'View/Output weld record'

Press to enter the menu as blow:

View/Output weld record

Operator/ date/time

Weld parameters 1 steps

Supplement

VIEW/OUPPUT WELD RECORD

View Record

Output from 000 to 000

Delete all records

Select by press & , and press to enter submenu.

**Output from 000 to 000:** With USB flash disk inserted, Press to save the records to USB flash disk.

**Delete all records:** Press to delete all the records which saved in the machine. Please note the records could not be restored after deleted.

### 8. Supplement

In Standby Mode, Press to enter Setting Menu, and then press to select 'Supplement':

View/Output weld record

Operator/ date/time

Weld parameters 1 steps

Supplement

Press to enter the menu as blow:

SUPPLEMENT

Temp compensation ON/OFF

Auto print record ON/OFF

Out-put control U-MODE

Select by press & , and press to enter submenu.

**Temp compensation:** Turn on / off by press & .

Automatic temperature compensation (ATC) will eliminate the impact from ambient temperature during welding.

**Auto print record:** Turn on / off by press & . With connected with a printer, the weld record will be automatically print. (optional function)

**Control Mode:** select constant voltage / current by press & .

## SAFETY WARNING

1. During using, the operator shall not leave the device.
2. Must be confirmed the voltage of power is 220V, 380V is strictly prohibited.
3. Since the welder is work as a voltage source, Short circuit prohibited during it working.
4. Welder is forbidden to be splashed or placed in the water . Rainy use, should be added coverings.
5. Welder should be connected with voltage stabilizer when it is generator-powered.

6. Prohibited use in flammable and explosive areas.
7. Please handled it carefully, No Impact and Collision.
8. Please protect the monitor and control panel, to avoid scratches.
9. As the output cable containing the line of control, modification is strictly prohibited, it will break the control system, and cause damage to the machine.
10. Non-authorized person should not open the case without permission.

## MAINTENANCE

1. Keep the welding machine clean.
2. Pay attention to protecting the bar-code scanner, Output cable is placed around the welder after use, to avoid trampling.
3. During welding, ensure welding machine vertically, to facilitate heat dissipation.
4. Handle with care.
5. Regular maintenance.

## TROUBLESHOOTING

During the welding process, if a fault occurs, the machine will alarm and display the fault as blow:

output open circuit fault

Fault symptom	Remedy
Output Open	Pipes and fittings are not connected in right way / there are strong electric main circuit break / possibly faulty. components: silicon controlled rectifier, relays, transformers.
Output over current	Fault fittings or the resistance of fittings is too low.
Insufficient power supply	Et the output voltage too high or the power grid voltage is too low, may be fault components: silicon controlled rectifier, transformers.
Uncontrolled voltage	Thyristor bad.
Error Bar-code	Bars-codes could not be read or supported (adapt to ISO 13950 standard pipe fittings barcode), re-scan the bar-code or change the fittings.
Synchronization failure	Chip failure, to be returned for repair.
Other failure	Chip failure, to be returned for repair.

## WARRANTY CARD

Dear customers, the warranty service for purchasing TEH products is as follows:

Under normal use, within 3 months from the date of purchase. It is guaranteed that the damage is caused by the quality of the tool.

The following conditions occur during the warranty period, not covered by the warranty:

- a. Any valid legal document (single ticket) certifying the date of purchase
- b. Any damage caused by natural wear and overload
- c. Any damage caused by the use of low-priced inferior accessories
- d. Any damage caused by improper carrying, transportation or storage
- e. Any product that has been opened, repaired, replaced, or modified by itself
- f. Any damage caused by misuse, beyond the scope of use of the tool, and failure to use and maintain in accordance with the instructions

-----  
 ladies/gentlemen: \_\_\_\_\_ employer: \_\_\_\_\_

contact number: \_\_\_\_\_ fax number: \_\_\_\_\_

contact address: \_\_\_\_\_

warranty record: \_\_\_\_\_

post code: \_\_\_\_\_

### IMPORTANT NOTE

1. The invoice and warranty card must be presented at the time of warranty.
2. The fuselage number on the invoice is the same as the fuselage number on the warranty card.
3. Once this warranty card is issued, if it is lost, it will not be reissued. Please keep it properly.

Note: The company reserves the right to amend the above provisions and has the final interpretation right in the case that the warranty service does not violate national laws.