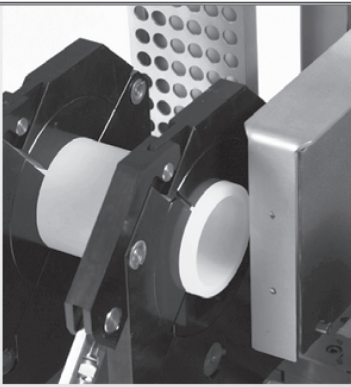


HÜRNER



**HÜRNER**

SCHWEISSTECHNIK

User's Manual

# HST – S – 160

*Inliegende deutsche Fassung der Anleitung ist der Urtext, welchen inliegende Übersetzungen wiedergeben.  
The German version of the manual enclosed herein is the original copy, reflected in the translations herein.  
La version allemande ci-après représente le texte original du manuel, rendu par les traductions ci-joint.*



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# 1 Introduction

Dear Customer:

Thank you very much for purchasing our product. We are confident that it will meet your expectations.

The HST – S – 160 Electrofusion Welding Unit is designed exclusively for jointing PE discharge lines assembled with electrofusion fittings.

The product was manufactured and checked according to state-of-the-art technology and widely recognized safety regulations and is equipped with the appropriate safety features.

Before shipment, it was checked for operation reliability and safety. In the event of errors of handling or misuse, however, the following may be exposed to hazards:

- the operator's health,
- the product and other hardware of the operator,
- the efficient work of the product.

All persons involved in the installation, operation, maintenance, and service of the product have to

- be properly qualified,
- operate the product only when observed,
- read carefully and conform to the User's Manual before working with the product.

Thank you.

## 2 Safety Messages

### 2.1 Improper Use of the Welding and Power Supply Cables

Do not carry the product by one of its cables and do not pull the power cord to unplug the unit from the socket. Protect the cables against heat, oil, and cutting edges.

### 2.2 Securing the Fitting and the Joint

Use appropriate clamps where necessary to secure the fitting and the joint before welding. The welding unit is intended exclusively for applications where contact with water is not possible. It must not be used in the rain.

In particular for buried/in-backfill installations, verify against the relevant local standards that the welder may be used for the intended application and that all drains and pipelines comply with the requirements stipulated by such standards for the intended application.

### 2.3 Cleaning the Welding Unit

The product must not be sprayed with or immersed in water.

## 2.4 Opening the Unit



The cover of the product may be removed only by specialized staff of the company HÜRNER Schweißtechnik or of a partner organization properly trained and approved by it.

## 2.5 Checking for Damage

Every time before operating the product, carefully check safety features or possibly existing parts with minor damage for intended and proper function. Make sure that the push-on connection terminals work properly, that contact is fully established, and that the contact surfaces are clean. All parts have to be installed correctly and properly conform to all conditions in order for the operator to be sure that the product works as intended. Damaged safety features or functional parts should be properly repaired or replaced by a qualified organization/service shop.

## 2.6 Mains Power Supply

Utility suppliers' wiring requirements, VDE provisions, occupational safety rules, DIN/CEN regulations, and national codes have to be respected.

Mains power fuse protection should be max. 10 A.

The product has to be protected against rain and humidity.

# 3 Service

## 3.1 Maintenance and Repair

As the product is used in applications that are sensitive to safety considerations, it may be serviced and repaired only by the manufacturer or its duly authorized and trained partners. Thus, constantly high standards of operation quality and safety are maintained.



Failure to comply with this provision will dispense the manufacturer from any warranty and liability claims for the Important product, including any consequential damage.

When serviced, the unit is upgraded automatically to the technical specifications of the product at the moment it is serviced, and we grant a three-month functional warranty on the serviced unit.

We recommend having the product serviced at least every twelve months.

In Germany, do not neglect that the occupational safety check-up under rule DGUV Vorschr. 3 is mandatory.

## 3.2 Transport, Storage, Shipment

The product is shipped in a cardboard box.

Store the product in the box dry and protected against humidity.

When shipped, the product should be placed into the box at any time.

## 4 Principle of Operation

The HST – S – 160 welding unit allows using electrofusion fittings to join discharge lines routed indoors and made of PE, of the makes Gerberit, Akatherm-Euro, Coes, Valsir, Waviduo, and Vulcathene-Euro.

The microprocessor-controlled unit:-

- controls and monitors the welding process in a fully automated fashion,
- determines welding duration depending on ambient temperature,
- indicates all information with three LEDs and a seven-segment display screen.

*Other optional accessories*

- **Transport Box**
- **Handheld Scraper**

## 5 Operation

### 5.1 Turning the Welding Unit On

After connecting the power supply cord to 230V mains power, turn the welding unit on at the On/Off switch. The unit then performs an auto-test. All three LEDs light up briefly and simultaneously to indicate that the unit is ready for operation. Furthermore, the seven-segment characters show the welding mode *H00* for approximately 1 second. After this, both the LEDs and the screen characters go off again.

### 5.2 Connecting the Electrofusion Fitting

Connect the connection terminals to the fitting and check for proper fit. The contact surfaces of the connection terminals and the fitting have to be clean. Dirty terminals may lead to improper welding and also to overheated and fused terminal plugs.



When using the so-called multi-adapter for the simultaneous welding with two fittings, make sure to connect it properly, as described in Sect. 5.8.

**Important**

After the fitting was connected, the yellow LED (Fitting connected) lights up. At the same time, the screen displays the welding time. The welding process can now be started by pressing the START key.

The welding time is counted down from about 80 s.

### 5.3 Welding Process

The welding process is monitored for its entire duration, applying the welding parameters computed for the electrofusion fitting.

### 5.4 End of Welding

The welding process was completed successfully if the actual welding time is 0 s (*000* on the display screen), the green LED (End) lights up at that point, and the audible signal beeps twice.

## 5.5 Aborted Welding

The welding process has caused errors if the red LED (Fault) is on and the audible signal beeps intermittently. Additionally, an error code is displayed on the screen.

An error has to be acknowledged by pressing the STOP key.

## 5.6 Cooling Time

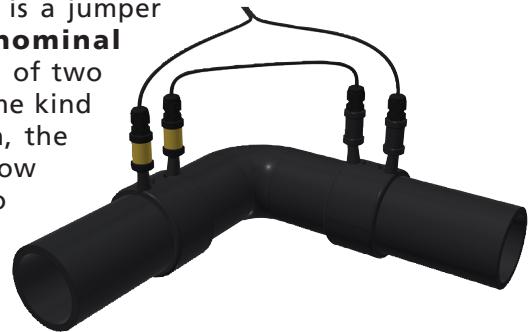
The cooling time as given in the fitting manufacturer's instructions has to be respected. Note that for that time the pipe/fitting joint which is still warm must not be subjected to an external force.

## 5.7 Returning to the Start of Welding

After welding is finished, disconnecting the welded fitting from the welding unit will cause the unit to return to the start of welding. An additional safety feature prevents a given electrofusion fitting from being welded twice inadvertently: after a properly completed or an aborted welding operation, the welding unit has to be disconnected from the fitting first, in order to be ready for the next welding.

## 5.8 Using the Optional Multi-adapter

The so-called multi-adapter, which is an optional extra, is a jumper cable which, **for electrofusion fittings with a nominal size  $\leq$  DA 110 mm**, allows the simultaneous processing of two fittings. Both electrofusion fittings have to be of the same kind and have to require identical welding parameters. Then, the adapter cable daisy-chains, as it were, the fittings. The yellow connection terminal is meant to go to that one of the two fittings where the yellow connector of the welding cable/adapter is, accordingly the black connection terminal of the multi-adapter, to the same fitting as the black connector of the welding cable/adapter.



## 6 Self-Monitoring Functions Overview

### 6.1 System Error



Caution

The welding unit must be disconnected immediately from the power supply and the fitting. The auto-test has found an error in the system. The unit must no longer be operated and has to be turned in for check and repair.

E00

### 6.2 Power Supply Failure

The last welding is incomplete. The welding unit was disconnected from the power supply. This error has to be acknowledged by pressing the STOP key.

E01

### 6.3 No Contact

There is no properly established electrical contact between the welding unit and the fitting (check push-on terminal on fitting), or the heater coil is defective.

E02



## 6.4 Low Voltage

The input voltage is below 180 volts. Adjust generator output voltage.



## 6.5 Overvoltage

The input voltage is above 280 volts. Adjust generator output voltage.



## 6.6 Temperature Error or Temperature Sensor Defective

The measured ambient temperature is outside the operating range of the welding unit, i.e., below  $-5^{\circ}\text{C}$  or over  $+40^{\circ}\text{C}$ .

If this error is displayed during the unit's auto-test, the temperature sensor is defective.



## 6.7 Frequency Error

The frequency of the input voltage is out of tolerance (40 Hz - 70 Hz).



## 6.8 Low or Excess Current

The message is displayed if there is a momentary current failure or if the current regulator is defective.



## 6.9 Emergency Off

The welding process was interrupted by pressing the STOP key.



## 6.10 Used Fitting Error

After welding, the unit was not disconnected from the electrofusion fitting, and the user tried to weld the same fitting a second time.

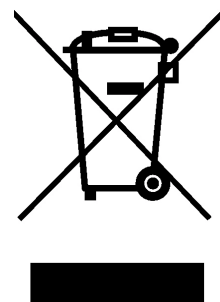


# 7 Technical Specifications of the Product

Nominal Voltage	230 V
Frequency	50 / 60 Hz
Power	1200 VA, 80 % duty cy.
Ingress Protection	IP 54
Primary Current	max. 10 A
Ambient Temperature	$-5^{\circ}\text{C}$ to $+70^{\circ}\text{C}$
Max. Output Current	5 A
Tolerances:	
Temperature	$\pm 5\%$
Current	$\pm 2\%$

Pursuant to the directive 2012/19/EU on Waste Electrical and Electronic Equipment (so-called WEEE Directive), equipment that was manufactured or distributed by ourselves may be returned to us. To discuss the exact procedure we will follow, please contact us with the details below.

We also declare that equipment manufacture complies to the directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (so-called RoHS Directive).



## 8 Service and Repair Contact

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E-mail: [info@huerner.de](mailto:info@huerner.de)



We reserve the right to change technical specifications of the product without prior notice.

## 9 Accessories for the Product

Multi-adapter HST – S for simultaneous welding      402-300-002

**KONFORMITÄTSERKLÄRUNG**  
**Declaration of Conformity**  
**Déclaration de conformité**

Wir / We / Nous

**HÜRNER Schweisstechnik GmbH**  
**Nieder-Ohmener Str. 26**  
**D-35325 Mücke-Atzenhain**

erklären in alleiniger Verantwortung, dass das Produkt  
declare under our sole responsibility that the product  
déclarons sous notre seule responsabilité que le produit

**HÜRNER HST – S – 160**

Heizwendelschweißautomat für die Verschweißung von Haustechnik-PE-Rohren mit Fitting  
Electrofusion Unit for Jointing Indoor PE Pipes with the Help of Electrofusion Fittings  
Poste d'électrosoudage pour l'assemblage des tubes en PE à l'intérieur avec raccord électrosoudable

auf die sich diese Erklärung bezieht, mit den folgenden Normen oder normativen Dokumenten  
übereinstimmen  
to which this declaration relates, are in conformity with the following standards or standardizing  
documents  
auxquels se réfère cette déclaration, sont conformes aux normes et documents de normalisation  
suivants

**CE-Konformität / CE Conformity / Conformité CE**

Richtlinie 2014/30/EU

Richtlinie 2014/35/EU

**Andere Normen / Other Standards / Autres normes**

DIN EN 61000-6-2

DIN EN 60529

DIN EN 61000-6-3

ISO 12176-2

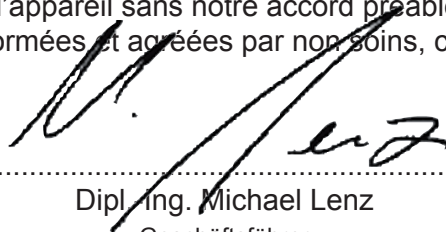
DIN EN IEC 60335-1

Bei einer nicht mit uns abgestimmten Änderung der Maschine oder einer Reparatur von Personen,  
die nicht von uns im Hause geschult und autorisiert wurden, verliert diese Erklärung ihre Gültigkeit.  
Any and all modifications of the device without our prior approval, and any repairs by persons who  
were not trained and authorized by us, shall cause this declaration to become void.

En cas de modification apportée à l'appareil sans notre accord préalable ainsi que de réparation  
effectuée par des personnes non formées et agréées par nous, cette déclaration deviendra  
caduque.

Mücke-Atzenhain

CE Marking Date 18.06.2018



Dipl.-Ing. Michael Lenz

Geschäftsführer  
General Manager  
Directeur général