INDUSTA HF

STANNOL

DE **GEBRAUCHSANWEISUNG**

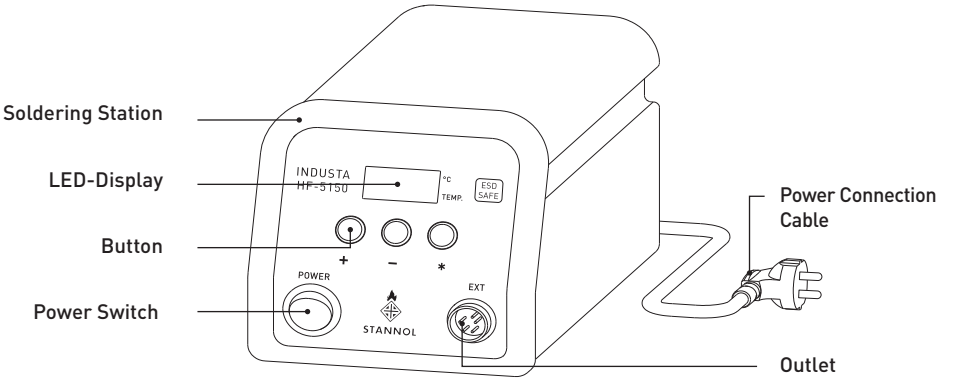
GB **OPERATING INSTRUCTIONS**

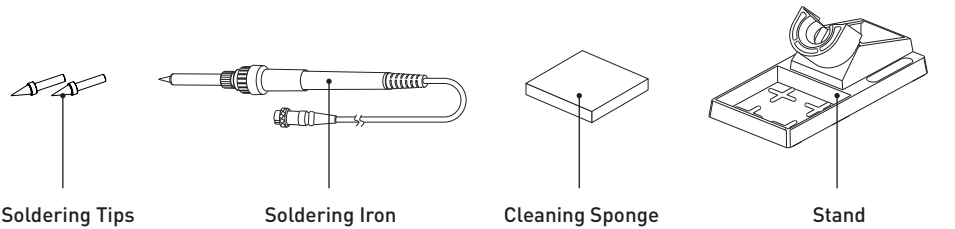
FR **MANUEL D'UTILISATION**

RU **РУКОВОДСТВО ПО ЭКСПЛУАТАЦИИ**

INCLUDED IN DELIVERY

Soldering station, soldering iron, power connection cable, 2 soldering tips, stand, cleaning sponge, manual





Important Note: This soldering station requires special parts. Due to the use of high-frequency electromagnetic induction heating, there are strict requirements for the heater (inductor coil) and the solder tips.
Using incorrect parts can cause serious damage to the soldering station host or different kind of malfunction and relieves the manufacturer from his or her legal liability.

INTENDED USE

When used for its intended purpose, this device corresponds to the state of the art, as well as to the current safety requirements at the time of its introduction. The appliance is designed to produce solder joints with soft solder for electrical and electronic purpose.
Any other type of use is inappropriate. Improper use or modifications to the device or the use of components that are not tested and approved by the manufacturer may result in unforeseen damage! Any use that deviates from its intended use and is not included in these instructions is considered unauthorized use and relieves the manufacturer from his or her legal liability.

GENERAL SAFETY INSTRUCTIONS

- To operate this device safely, the user must have read and understood these instructions for use before using the device for the first time.
- Observe all safety instructions! Failure to do so may cause harm to you and others.
- Retain all instructions for use, and safety instructions for future reference.
- If you sell or pass the device on, you must also hand over these operating instructions.
- The device must only be used when it functions properly. If the product or part of the product is defective, it must be taken out of operation and disposed of correctly.
- Never use the device in a room where there is a danger of explosion or in the vicinity of flammable liquids or gases.

- Always ensure that a device which has been switched off cannot be restarted unintentionally.
- Do not use devices with an on/off switch that does not function correctly.
- Keep children away from the device! Keep the device out of the way of children and other unauthorized persons.
- Do not overload the device. Do not use the device for purposes for which it is not intended.
- Exercise caution and only work when in good condition: If you are tired, ill, if you have ingested alcohol, medication or illegal drugs, do not use the device, as you are not in a condition to use it safely.
- This product is not intended to be used by persons (including children) or who are limited in their physical, sensory or mental capacities or who lack experience and/or knowledge of the product unless they are supervised, or have been instructed on how to use the product, by a person responsible for their safety.
- Ensure that children are not able to play with the device.
- Always comply with all applicable domestic and international safety, health, and working regulations.

ELECTRICAL SAFETY

- The device may only be connected to a socket that is correctly installed and grounded.
- Make sure that the power supply corresponds with the connection specifications of the device before it is connected.
- The tool may only be used within the specified limitations for voltage and power (see type plate).
- Do not touch the mains plug with wet hands! Always pull out the mains plug at the plug and not by the cable.
- Always pull the main plug on plug housing not on the cable.
- Do not bend, crush, pull or drive over the power cable, protect from sharp edges, oil and heat.
- Do not lift the device using the cable or use the cable for purposes other than intended.
- Check the plug and cable before each use.
- If the power cable is damaged immediately disconnect the plug. Never use the device if the power cable is damaged.
- If the device is not in use make sure the plug is pulled out.
- Make sure that the device is switched off before plugging in the mains cable.
- Make sure that the device is switched off before unplugging it.
- Disconnect the power supply before transporting the device.

DEVICE SPECIFIC SAFETY INSTRUCTIONS

- Soldering irons generate a considerable amount of heat. Please ensure that you keep all objects away from the soldering iron that may be destroyed or impaired by it in one way or another. Please use the supplied stands.
- After use, allow the soldering iron to cool down before putting it away.
- The product may not become damp or wet. This brings about the risk of a life threatening electrical shock!
- Only transport the unit when it is completely cooled down, otherwise there is a risk of burns or of ire! The same applies for when you wish to, for example, change the soldering tip.
- Never work on electrical components that are under power. Always ensure that the object you wish to solder is separated from the power supply before you start work, and check to ensure that it is without voltage.
- Protect both your body and eyes from soldering spray and liquid solder. When working, wear suitable protective clothing and goggles.
- The gases that occur during soldering may cause damage to your health. As a result, you should use a suitable extraction unit or ensure sufficient ventilation, as and when required.
- When the soldering iron is being used the whole front area becomes very hot. To avoid burns please only ever take hold of it by the hand grip.
- Don't work with the soldering iron in any area in which there is any risk of an explosion or where there are any inflammable liquids, gases, or dusts.
- Before starting any maintenance or cleaning work, always pull the plug out of the socket and allow the soldering iron to cool down.
- Keep the product out of the reach of children when not being used.
- Do not allow the product to be used by anyone who is not familiar with it or has not read these instructions.

SETUP AND GENERAL INSTRUCTIONS

1. IRON STAND

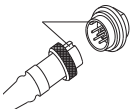
Caution: Before using the sponge, it needs to be moistened. It should not be too wet, so squeeze the sponge before use. Using the sponge dry may cause damage to the sponge and the tip. Instead of a sponge brass wool can be used.

- Place moistened sponge into the front frame of the soldering iron stand.
- Add water to the iron frame from time to time to keep the sponge wet.
- Rinse the sponge from time to time in fresh water.

2. CONNECTION

Caution: Always turn off the soldering station before connecting or disconnecting the soldering iron.

01 Alignment after insertion. Tightened clockwise.



02 Heating lamp

- Connect the plug from soldering iron cable to the output socket of the soldering station (Ext.).The plug is polarized, so it cannot be connected the wrong way. After inserting the plug tighten the lock nut clockwise.
- Place the soldering iron into the iron stand.
- Connect the mains cable to the "Input" socket on the back of the soldering station.
- Plug in the mains cable into the main socket.
- Turn the power switch. The soldering iron will automatically heat up to a stable temperature (factory set to 320 °C). During heating the heating indication in the Display is flashing.
- Press the ⊛ key for less than 1 second, the display will show the current set temperature for 2 seconds.
- ESD protection: if necessary connect a ground terminal antistatic wrist strap to the „ ESD" socket on the back of the station.
- Information: The ESD socket is hard wired to the mains ground.

ESD (ELECTROSTATIC DISCHARGE) PROTECTION

Sensitive electronic components can be damaged by electrostatic discharge (please note the warnings on the packaging, or ask the manufacturer or supplier). This station can be integrated into a ESD- protected workstation to protect these components.
The soldering station is fitted with a grounded ESD socket on the back. Here you can connect for e.g. ESD bracelets or ESD mats.

TEMPERATURE SETTING

The temperature can be set between 200°C and 480°C.
There are two ways to set the temperature.

1. Using the ⊕ or ⊖ buttons:
- Pressing ⊕ button once the temperature will increase by 1°C.
- Holding ⊕ button the temperature setting will run upwards, until you release the button.
- Pressing ⊖ button once the temperature will decrease by 1°C.
- Holding button ⊖ the temperature setting will run downwards, until you release the button.

2. Direct input of desired temperature:
- Press ⊛ button for longer than 2 seconds. Hundreds digit will be flashing.
- Use ⊕ or ⊖ to select the desired value.
- Press ⊛ short. Tens digit will be flashing.
- Use ⊕ or ⊖ to select the desired value.
- Press ⊛ short. Ones digit will be flashing.
- Use ⊕ or ⊖ to select the desired value.
- Press ⊛ short. Desired temperature value will be taken.

If you try to input a non-valid temperature (e.g. 490°C), setup will return to the hundreds digit and you have to repeat the procedure.
If you switch off the soldering station within the setup process the temperature will not be stored.

Note: The soldering station can be password protected. If a password has been assigned, the password has to be entered to change the temperature setting. By default the soldering station is not password protected (see chapter: Password setting).

Enabling temperature setting, if soldering station is password protected:

- Switch off soldering station.
- Press and hold ⊕ and ⊖ buttons and switch on the station (C is flashing in the Display).
- Press ⊛ button (--- will be displayed, first digit is flashing).
- Input first digit of the password using ⊕ or ⊖ button and press ⊛ button (second digit will be flashing).
- Input second digit of the password using ⊕ or ⊖ button and press ⊛ button (third digit will be flashing).
- Input third digit of the password using ⊕ or ⊖ button and press ⊛ button.
- If password was correct O.R. will be displayed, otherwise the display returns to show the temperature and you have to repeat the procedure.
- Waiting for 4 sec brings you to the temperature setup routine. To setup the temperature proceed as described in 1. or 2. above.
- After setting up the temperature switch the soldering station off and on again.
- The soldering station is now heating up to the desired temperature, which cannot be changed by the user.

PARAMETER SETTING

Password settings
The original soldering station password: „000", soldering station temperature setting is allowed in this state, should limit temperature adjustment, you must modify the password.

Enter modifying password mode
- Switch off soldering station.
- Press and hold ⊕ and ⊖ buttons and switch on the station ([C] is flashing in the Display).

Input original password
- Press "*" button ([---] will be displayed, first digit is flashing)
- Input first digit of the password using ⊕ or ⊖ button and press ⊛ button (second digit will be flashing).
- Input second digit of the password using ⊕ or ⊖ button and press ⊛ button (third digit will be flashing).
- Input third digit of the password using ⊕ or ⊖ button and press ⊛ button.

Input wrong password
- The display will return to show the temperature and you have to repeat the procedure.

Input right password
- If the display shows [O.R.] which indicates that the entered password is correct
- Waiting for about 4 seconds soldering station will return to normal working condition.

Input new password

- While display shows [O.R.] press the ⊛ key, button ([---] will be displayed, first digit is flashing).
- Input first digit of the new password using ⊕ or ⊖ button and press ⊛ button (second digit will be flashing).
- Input second digit of the new password using ⊕ or ⊖ button and press ⊛ button (third digit will be flashing).
- Input third digit of the new password using ⊕ or ⊖ button and press ⊛ button.
- If you input an unchanged password, the soldering station returns to normal operation.

Input new password again (same as above!)

- [---] is displayed, first digit is flashing.
- Input first digit of the new password using ⊕ or ⊖ button and press ⊛ button (second digit will be flashing).
- Input second digit of the new password using ⊕ or ⊖ button and press ⊛ button (third digit will be flashing).
- Input third digit of the new password using ⊕ or ⊖ button and press ⊛ button.

If you have re-entered a wrong password, you have to repeat from "Input new Password".

Password protection activation

- The Soldering station is returning to operation mode. Now you are able to setup the temperature setting (see chapter: Temperature setting).
- After setting up the temperature switch the soldering station on and off again. The password protection is now activated and cannot be changed by the user.
- For changing the temperature refer Temperature setting.

To remove password protection renter "000" as a password.

STAND-BY MODE AND AUTOMATIC SHUTDOWN FUNCTION

The stand-by and automatic shutdown mode is activated by default
If the soldering iron is not in use for 20 minutes, the soldering station will be switch to stand-by mode. The soldering iron power supply will be reduced, the temperature set to 200°C and display will show flashing [---].
If the soldering station is not in use for more than 40 minutes the soldering station will send into hibernation mode, which automatically cuts off the power supply.

There are three ways to wake from standby:
1. Turn off / on the soldering station.
2. Press any button on the soldering station.
3. Pick up the iron handle from the stand.

Wake up from hibernation:
Turn off / on the soldering station.

TEMPERATURE CORRECTION

Whenever you replace a soldering iron a heating core or a tip the temperature of the soldering iron should be recalibrated for precise temperature readings. For best results use a soldering iron temperature tester.

- Set the soldering station to a certain temperature value.
- Wait until the temperature reading is stable and measure the temperature of the tip with a soldering iron temperature tester or other appropriate thermal measurement device. Write down the readings.

Enter temperature calibration mode

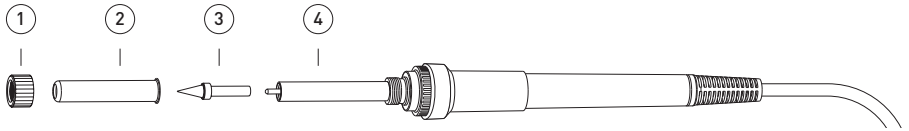
- Press and hold the ⊛ button, and then press the ⊕ and ⊖ buttons.
- Calibration mode is indicated by a dot right beside the hundreds digit.
- While the hundreds digit flashes, press the ⊕ or ⊖ button to enter hundreds digit of your recorded temperature.
- Press ⊛ and press the ⊕ or ⊖ button to enter tens digit of recorded temperature.
- Press ⊛ and press the ⊕ or ⊖ button to enter ones digit of recorded temperature.
- Press ⊛ to return to normal operation.

If the station is password protected, you have to enter the password first (see chapter: Temperature setting: Enabling temperature setting, if soldering station is password protected).

CHANGING SOLDERING TIPS

Caution: This should only be done after switching off the power and the soldering iron has cooled down!

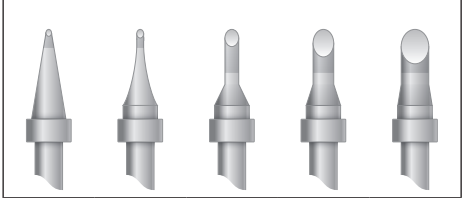
- Switch of the station off.
- Loosen the lock nut ① near the handle.
- Remove the heating element sleeve ②.
- Take off the soldering tip ③.
- Slide the new tip ④ on the heating element.
- Slide the sleeve ② on.
- Fasten the lock nut ①.



CHOICE OF SOLDER TIPS

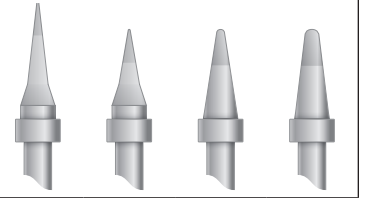
1. Choose a solder tip for maximum contact area, which can produce the most effective heat transfer, so that the operator can produce solder joints as quickly as possible.
2. Choose a good path to transfer heat to the solder tip, the shorter length can get more precise control of the temp of the soldering station, but to solder dense circuit boards you may need to use a profile of solder tip.

FORM **BEVELLED**



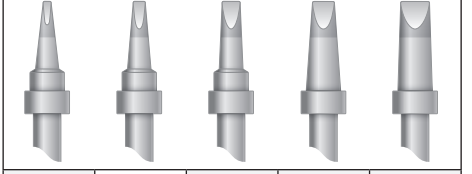
A-0,8-HF	A-1-HF	A-2-HF	A-3-HF	A-4-HF
0,8 mm	1 mm	2 mm	3 mm	4 mm

FORM **PENCIL**



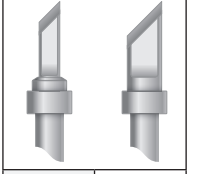
B-0,2-L-HF	B-0,2-HF	B-0,5-HF	B-1-HF
0,2 mm	0,2 mm	0,5 mm	1 mm

FORM **CHISEL**



M-1,2-HF	M-1,6-HF	M-2,4-HF	M-3,2-HF	M-4,2-HF
1,2 mm	1,6 mm	2,4 mm	3,2 mm	4,2 mm

FORM **KNIFE**



K-3-HF	K-4,7-HF
3 mm	4,7 mm

USE OF SOLDER TIPS

- **Tip temperature:** Long lasting high temp will harm the iron tip. Choose low temperatures wherever possible. This soldering station is reheating very quickly, so even at low temperature good solder joints can be achieved and heat sensitive components can be protected.

- **Clean:** The soldering tip should be cleaned regularly. Burned flux residues and oxides can cause poor soldering joints or limit the thermal conductivity of the soldering tip. Also heat transfer from soldering iron to the tip might be affected. Disassemble the tip and clean the complete tip once a week.

- **When not in use:** Leaving the soldering iron at high temperatures for a long period of time will increase the risk of oxidation. This will limit the heat transfer capabilities of the solder tip and result in bad solder joints. Therefore, switch off the soldering iron when not in use for long periods or reduce the heat setting.

- **After usage:** After use, you should clean the tip with a sponge or brass wool and coat it with a fresh layer of tin to prevent the tip from oxidation.

Tip: Using Stannol Tippy tip cleaner will help you to maintain your soldering tips and will extend their lifetime.

Using standard lead free alloys will reduce lifetime of the tips. Higher content of tin makes the solder more aggressive against the soldering tip, causing faster corrosion. Using special lead free alloys like Stannol Flowtin will help to extend the lifetime. For more information visit our website www.stannol.de

SOLDER TIP MAINTENANCE

- Set the temperature to 250°C.
- When the temperature is stable, use a clean sponge or brass wool to clean up the iron tip and check the condition of the iron tip.
- If the tinned part of the tip contains black oxide, it can be plated with the new tin layer. Use a special tip cleaner like STANNOL Tippy or a solder wire with a highly activated flux core. Do not use abrasive materials to clean the tip. This might damage the thin layers of the tip plating.
- Clean with a clean sponge or brass wool and check again.
- Repeat cleaning / plating procedure until solder tip shows no defects.
- If the tip shows deformation or serious corrosion it must be replaced.

EXPLANATION OF ERROR CODE

- When a problem occurs within the soldering station, an error code will be displayed. Please also refer to chapter Troubleshooting.

- **Sensors error**: If any part of the sensor or sensor circuit fails, then the display shows SE , the input power of the iron will be cut off.

- **Attention when temperature is too low:** If the soldering iron temperature is 50°C below the set temperature, the display is flashing to attract the user's attention.

- **Heating core error:** If the soldering iron heater cannot input power, the display shows H-E, this indicates the heating core might be damaged.

Please check Fault Finding for solution.

TROUBLESHOOTING OF SOLDERING STATION

Warning: Before starting any maintenance or cleaning work, always pull the plug out of the socket and allow the soldering iron to cool down. Otherwise electric shock or burns may occur. If the soldering station is not working properly or if any failures occur, please contact the manufacturer or maintenance service agents for service maintenance to avoid personal harm or damage to the parts of the soldering station. Maintenance and repair work should only be done by qualified and competent personal. This manual only contains instruction which could be carry out be the user. For detailed maintenance and repair work, which need components to be disassembled, please refer to the separate available Service Manual.

Soldering station is not working, not heating or no display.

- **Is the mains cable intact and properly installed?**
  a. Plug in mains cable correctly.
  b. Replace mains cable.
- **Fuse blown?**
  Make sure to find the reason why fuse has blown.
  a. Check all cables for damage.
  b. Refer to the service manual.
  Warning: Replace a new fuse with the same specification.

Soldering iron is not heating, sensor or heating core displays error.

- **Is the soldering iron connected to the station correctly?**
- **Check soldering iron cable and plug for any damage.**
  R econnect or refer to the service manual.
- **Refer to service manual.**

Temperature too high.
- **Tip temperature too high?**
  Reset the temperature.
- **Check temperature correction settings of soldering iron?**
  See: „Temperature Correction".
- **Refer to the service manual.**

Filaments at solder tip or solder joint.
- **Tip temperature too high?**
  Reset to appropriate lower temperature.
- **Is solder tip clean?**
  „Maintenance of solder tips".

Tip temperature too low.
- **Is solder tip clean and free of oxides?**
  See: „Maintenance of solder tips".
- **Check temperature correction settings of soldering iron?**
  See: „Temperature Correction".

Display shows H-E.
- **Is the soldering iron cord damaged?**
  Replace soldering iron.
- **Is the soldering iron equipped with a solder tip?**
  Fit an appropriate tip.
- **Refer to the service manual.**

Temperature display flashing.

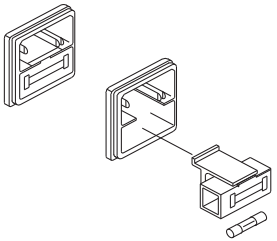
- **Is soldering iron cord damaged?**
  Replace soldering iron.
- **Is the soldering joint too large?**
  Use soldering with higher power or try to continue.

You can not set the temperature.

- **Is password protection enabled?**
  Enter the correct password to unlock.
  If the password is unknown, contact your supervisor.
  Note: If the password is not known, you have to perform a hard reset. Please refer to the service manual.

REPLACING THE FUSE

1. Unplug the power cord from the back of the docking station.
2. Pull out the fuse cover.
3. Remove the bad fuse.
4. Put a new fuse.
   Please be sure to use the same type!
5. Fuse cover fitted.



PRODUCT SPECIFICATION

Soldering station host

MODEL	**HF-5100**	**HF-5150**
POWER	**100 W**	**150 W**
OUTPUT VOLTAGE	**AC36V ~ 380KHZ**	
TEMPERATURE RANGE	**50–480°C** (depending on the mode setting)	
MAX. AMBIENT TEMPERATURE	**42°C**	
TEMPARATURE STABILITY	**±1°C**	
HOUSING MATERIAL	**Aluminium Alloy**	
SIZE	**115 x 114 x 175 mm**	**115 x 114 x 185 mm**
NET WEIGHT	**2,5 kg**	**2,6 kg**

Soldering iron

POWER CONSUMPTION	**95 W**	**145 W**
TIP-TO-GROUND RESISTANCE	**<2Ω**	
TIP-TO-GROUNG VOLTAGE	**<2mV**	
TIP-CHARGED BODY IR	**>5MΩ**	
ELECTROMAGNETIC HEATING CORE	**Electromagnetic heating core**	
IRON CORD	**1,2 m**	
HANDLE LENGTH	**20 cm**	
WEIGHT	**100 g**	**105 g**

DISPOSAL

Appliances which are labelled with the adjacent symbol must not be disposed of in household waste. You must dispose of such old electrical and electronic equipment separatly. For more information check our website: **www.stannol.com**

TIPPY

For reactivation for soldering iron tips. Tippy cleans and tins solder tips easy in one step.

SOLDER GREASE

Solder grease is an emulsion of solder concentrates in mineral greases for general soldering work. The paste-like flux is also used for soldering tin plate, leaded sheet metal, copper and copper alloys and other solderable metals.

SOLDER-EX

Desoldering Wick Solder-Ex, impregnated with flux, extremly absorbent, for problem-free desoldering of components and for the removal of excess solder.

SOLDER WIRE

A long-established solder wire that has been developed for high quality requirements in industrial manufacturing and for quick repair and resoldering.