

HAKKO FV-310

HEATING GUN

Heating gun

Instruction Manual

Thank you for purchasing the HAKKO FV-310 HEATING GUN.

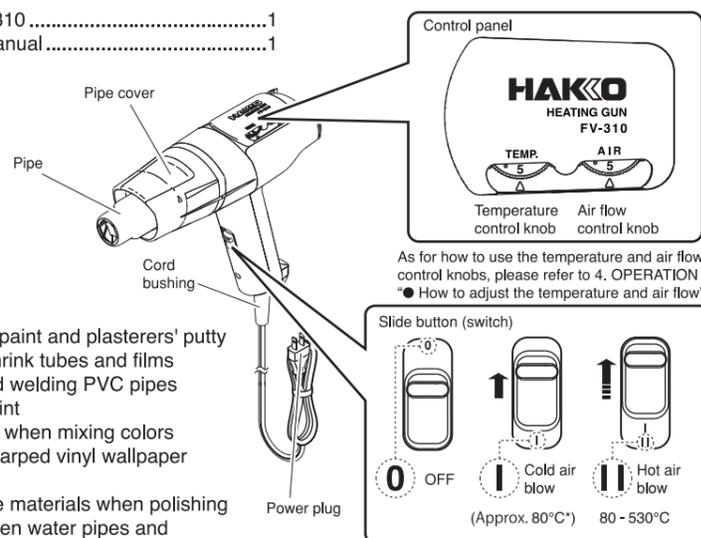
This product has been designed to emit a blast of hot air that can be used for a variety of industrial applications.

Please read this manual before operating the HAKKO FV-310.

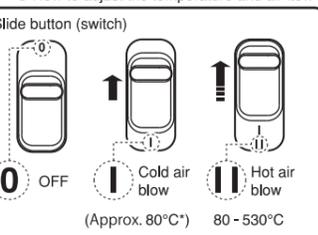
Keep this manual readily accessible for reference.

1. PACKING LIST AND PART NAMES

- HAKKO FV-3101
- Instruction Manual1



As for how to use the temperature and air flow control knobs, please refer to 4. OPERATION



* Since the motor will be in operation, even when the unit is cooled down, its temperature will not go down to as low as room temperature.

• Main Uses

- Spot drying paint and plasterers' putty
- Shrinking shrink tubes and films
- Bending and welding PVC pipes
- Stripping paint
- Drying paint when mixing colors
- Flattening warped vinyl wallpaper and flooring
- Drying stone materials when polishing
- Heating frozen water pipes and machinery

The heating gun can also be used in other drying and heating processes.

2. SPECIFICATIONS

Power Consumption	1000W
Maximum Temperature*	530°C (80 - 530°C continuously variable)
Air Velocity	600 m/min
Air Flow	0.15 - 0.25 m ³ /min
Dimensions (w/o cord)	240 (W) x190 (H) x70 (D) mm
Weight (w/o cord)	0.6 kg

* Measured at the point 10mm from the pipe.

Specifications and design are subject to change without notice.

※ 各言語 (日本語、英語、中国語、フランス語、ドイツ語、韓国語) の取扱説明書は以下のURL、HAKKO Document Portalからダウンロードしてご覧いただけます。
(商品によっては設定の無い言語がありますが、ご了承ください)
* 各言語 (日本語、英語、中文、法語、独語、韓語) の使用説明書可以通过以下网站的HAKKO Document Portal 下载参阅。
(有一部分的产品没有设定外语对应, 请见谅)
* Instruction manual for the language, Japanese, English, Chinese, French, German and Korean can be downloaded from the following URL, HAKKO Document Portal.
(Please note that some language may not be available depending on the product.)

<https://doc.hakko.com>

HAKKO CORPORATION

HEAD OFFICE

4-5, Shiokusa 2-chome, Naniwa-ku, Osaka 556-0024 JAPAN
TEL: +81-6-6561-3225 FAX: +81-6-6561-8466
<http://www.hakko.com> E-mail: sales@hakko.com

OVERSEAS AFFILIATES

U.S.A.: AMERICAN HAKKO PRODUCTS, INC.

TEL: (661) 294-0090 FAX: (661) 294-0096

Toll Free (800)89-HAKKO

<http://www.hakkousa.com>

HONG KONG: HAKKO DEVELOPMENT CO., LTD.

TEL: 2811-5588 FAX: 2590-0217

<http://www.hakko.com.hk>

E-mail: info@hakko.com.hk

SINGAPORE: HAKKO PRODUCTS PTE LTD.

TEL: 6748-2277 FAX: 6744-0033

<http://www.hakko.com.sg>

E-mail: sales@hakko.com.sg

Please access to the following address for the other Sales affiliates.

<http://www.hakko.com>

3. WARNINGS, CAUTIONS AND NOTES

Warnings, cautions and notes are placed at critical points in this manual to direct the operator's attention to significant items. They are defined as follows:

⚠ WARNING: Failure to comply with a WARNING may result in serious injury or death.

⚠ CAUTION: Failure to comply with a CAUTION may result in injury to the operator, or damage to the items involved.

⚠ WARNING

- Do not use the unit near explosives and flammable gases or materials.
- Do not use the unit as a hair dryer.
- Do not use the heating gun on humans or animals.
- Do not touch the metal parts such as the pipe, do not touch the hot air directly.
- Do not touch the surrounding of the pipe during and immediately after use.
- After use, always turn the slide button (switch) to "I" and allow the unit to cool down for at least 90 seconds. Before storing the heating gun, allow it to cool down for at least 5 minutes.
- Repair or disassembling of the unit must be done by a repair technician. Do not make any modification.
- Disconnect the power plug when changing parts or repairing the unit, and start to work after the unit and heating area are well cooled down.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in safe way and understand the hazards involved.
- Children shall not play with the appliance.
- Cleaning and user maintenance shall not be made by children without supervision.

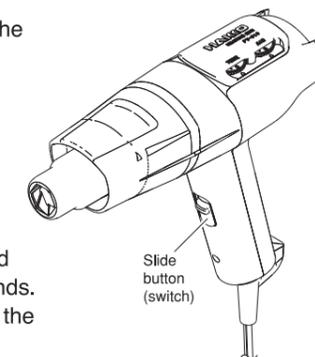
To prevent accidents or damage to the HAKKO FV-310, be sure to observe the following:

⚠ CAUTION

- Do not block the blow outlet or air inlet, put any foreign objects into the unit, or have dust or hot air flow in from the air inlet.
- Do not apply hot air to the same spot for a long time.
- Do not leave the unit downward immediately after use, without cooling the unit.
- Do not leave the unit unattended during use.
- If the fan does not work, do not keep the unit facing down.
- Do not use the unit near children or infants.
- Do not use the unit to dry clothes, as doing so may cause damage.
- Avoid dropping the unit or giving it a sharp jolt.
- Use the unit only with the specified voltage.
- Use only genuine HAKKO replacement parts.
- Use the unit only for its intended purposes.
- Should you notice any abnormality for the unit (abnormally hot, emitting strange sound or smell, etc.), immediately stop using it, and request the distributor you had purchased to have the unit inspected or repaired.
- For safety, wear personal protective equipment, such as safety gloves and goggles, earplugs, and a hard hat, as needed.
- If you secure the unit to a stand or other object and let the unit operate continuously, stay within sight of the unit at all times, and regularly check the safety.
- Do not use the unit in water, put the unit in water, or splash water onto the unit.
- Do not allow the unit to become wet, or use it with wet hands.
- Be aware that the unit may fail to perform adequately in hot, humid climates, or in highland or cold regions.
- Do not switch the unit on and off frequently.
- Always unplug the unit before leaving your work area.
- Always hold the plug when plugging or unplugging the unit.
- Do not place the power cord near heated place, oil, or sharp objects.
- Do not forcibly bend, pull, or twist the power cord.
- Do not use the unit if the power cord or plug is damaged, or if the plug fits loosely into the power outlet.
- Keep the unit out of reach of infants.
- Have a repair technician regularly service the unit and replace parts.
- While using the unit, do not do anything which may cause bodily harm or physical damage.

4. OPERATION

1. Set the slide button (switch) to OFF and insert the plug of the power cord into an outlet.
 - Use a power outlet rated at 12A or greater for 110V, 5A or greater for 220 - 240V .
2. Turn the slide button (switch) to "I" .
Hot air will come out of the pipe.
3. After use, turn the slide button (switch) to "I" and allow the unit to cool down for at least 90 seconds. Cooling the unit down helps reduce damage to the heating element and its surroundings.

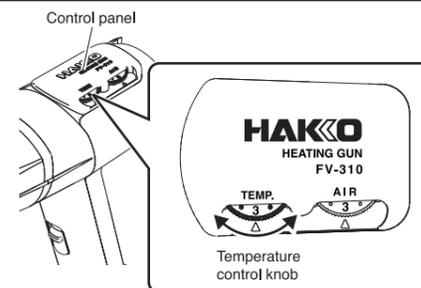


⚠ WARNING

Before storing the heating gun, allow it to cool down for at least 5 minutes.

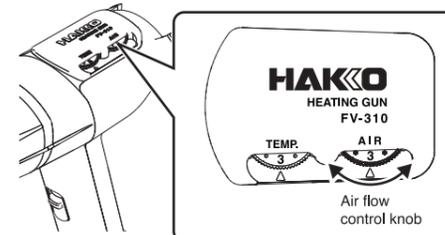
● How to adjust the temperature and air flow

- **Adjusting the temperature**
Turn the temperature control knob on the control panel to adjust the temperature. (Levels 1 to 5 are available.) The larger the number, the higher the temperature.



• Adjusting the air flow

- Turn the air flow control knob on the control panel to adjust the air flow. (Levels 1 to 5 are available.) The larger the number, the higher the air flow rate.



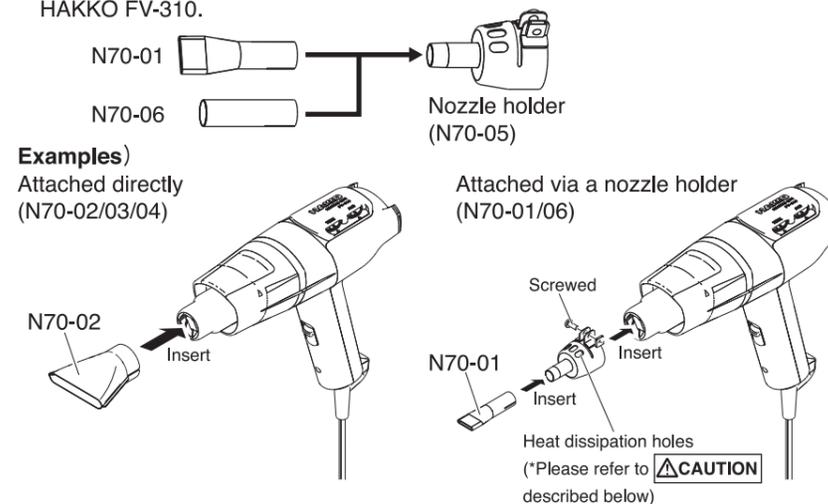
*About the temperature distribution chart

Please refer to "5. TEMPERATURE DISTRIBUTION CHART", which is the graph when operating the temperature and air flow control knobs, and its examples of use are described.

● How to use the optional nozzles

• Attaching a nozzle

The nozzles are divided into two types as shown in the examples below. The smaller type is attached to a nozzle holder, which is then attached to the HAKKO FV-310.

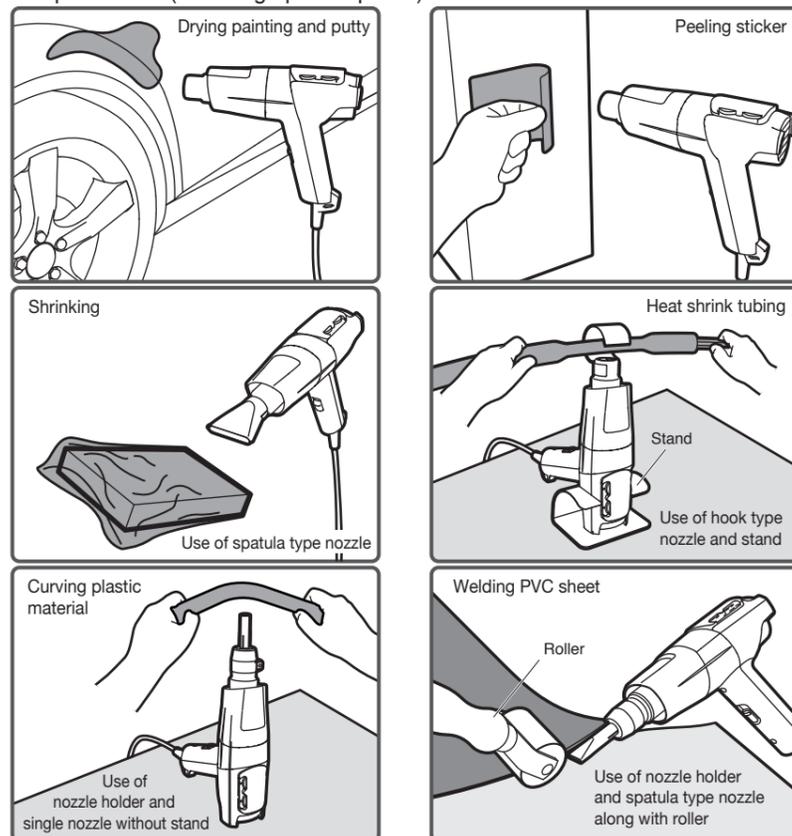


⚠ CAUTION

The nozzle holder has heat dissipation holes on its side, from which air will be exhausted that is at least as hot as the air from the nozzle. When attaching the nozzle holder to the unit, make sure that the holes are oriented to suit your work, being careful to prevent burn injuries.

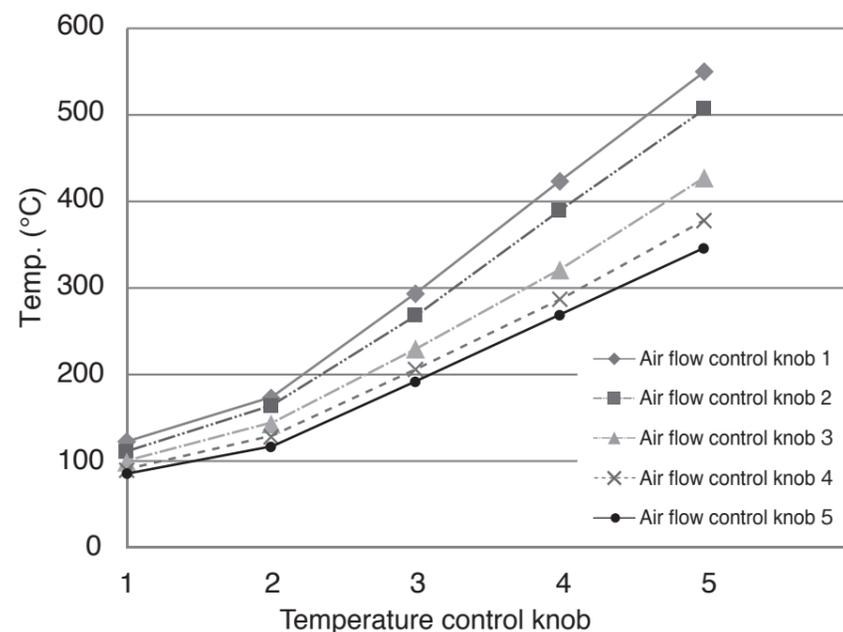
4. OPERATION

Examples of use (Including optional parts)



* Please refer to "8. PARTS LIST".

5. TEMPERATURE DISTRIBUTION CHART



Measured at the point 10mm from the pipe. (without nozzle*)

* When the nozzle is attached, the temperature and air flow volume will change. Please make sure to adjust both of them when using the unit with a nozzle.

5. TEMPERATURE DISTRIBUTION CHART

Temp. / Air flow	1	2	3	4	5
1 (0.15 m³/min)	120°C A,B	175°C A,B,C	295°C C,D,E	425°C D,E	530°C
2 (0.17 m³/min)	110°C A,B	165°C A,B,C	270°C C,D,E	390°C D,E	505°C
3 (0.2 m³/min)	100°C A,B	145°C A,B,C	230°C C,D,E	320°C D,E	425°C
4 (0.23 m³/min)	90°C A	130°C A,B,C	205°C B,C,D,E	285°C C,D,E	380°C D,E
5 (0.25 m³/min)	85°C A	115°C A,B,C	190°C B,C,D,E	270°C C,D,E	345°C D,E

The temperature and air flow volume are reference values; these values will not be guaranteed.

Examples of use) A: Drying painting and putty B: Peeling sticker C: Shrinking D: Heat shrink tubing E: Curving plastic material

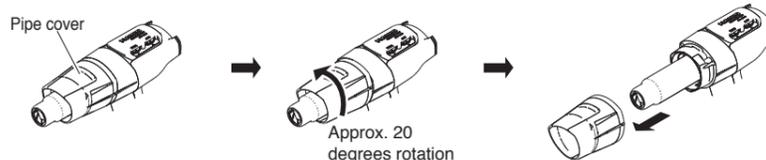
6. MAINTENANCE / INSPECTION

CAUTION

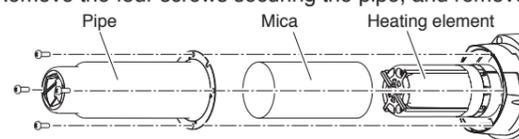
Replacing the heater can be dangerous. When doing so, be sure to unplug the unit and follow the steps below.

A. Removing the heating element

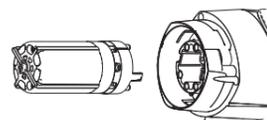
1. Remove the pipe cover by rotating it anti-clockwise for approx. 20 degrees from the position when seen from the front



2. Remove the four screws securing the pipe, and remove the pipe and the mica.



3. Pull the heating element straight out.

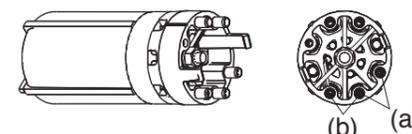


CAUTION

After use, the pipe and heating element are very hot. Please allow them to cool down.

B. Measuring the resistance of the heating element

Measure the resistance of the terminals (a) or (b).



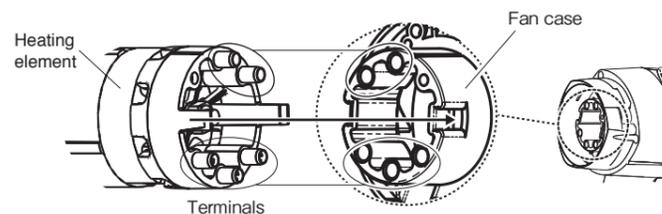
(a) The normal value is 13 Ω (±10% 110V), 56 Ω (±10% 220V), 62 Ω (±10% 230V), 70 Ω (±10% 240V). If the resistance is abnormal, replace the heating element.

(b) The normal value is 115 Ω (± 10% 110V), 300 Ω (±10% 220 - 240V).

If the resistance is abnormal, replace the heating element.

C. Attaching the heating element

Please attach the heating element by following the procedure reverse to that for when removing the heating element.



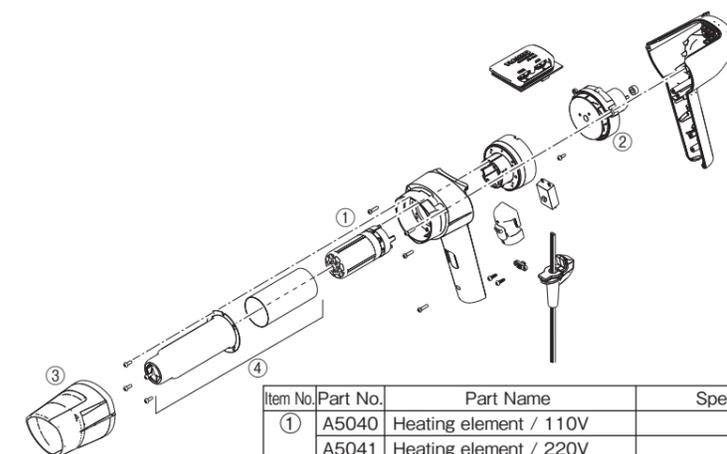
*Please make sure to attach the heating element by aligning the terminals and the holes in the fan case.

7. TROUBLE SHOOTING GUIDE

Problem	Problem Cause	Procedure
No air comes out	Unit is not connected properly to power outlet.	Connect properly.
	Heating element burnout.	In case the resistance value for heater terminal (b) shows an abnormal value, please replace the heating element.
	Motor is broken.	If no air comes out even if there is no abnormality for the heating element, that means that the motor is out of order. Please replace the motor.
The temperature does not increase (or decrease).	Unit is not connected properly to power outlet.	Connect properly.
	Heating element burnout.	In case the resistance value for heater terminal shows an abnormal value, please replace the heating element.
	The slide button (switch) is set to "I".	Turn the slide button (switch) to "II".
	Temperature control knob or PWB is broken.	Please contact the distributor or the agency.
Air flow volume cannot be adjusted.	Air flow control knob or PWB is broken.	Please contact the distributor or the agency.

*If a problem other than those listed above occurs or if the problem continues even after performing the solution, contact the distributor or the agency from which you purchased the unit.

8. PARTS LIST



Item No.	Part No.	Part Name	Specifications
①	A5040	Heating element / 110V	
	A5041	Heating element / 220V	
	A5043	Heating element / 230V	
	A5042	Heating element / 240V	
②	B5154	Fan unit / with motor	
③	B5162	Pipe cover	
④	B5163	Pipe / with mica	

Optional parts

After use, always turn the slide button (switch) to "I" and allow the unit to cool down for at least 90 seconds.

<p>N70-01* Spatula type</p>	<p>* When the unit is used under the condition below, ALWAYS cool down after use. Failure to follow this procedure may result in blown fuse.</p> <p>Temperature control knob: level 5 Air flow control knob: level 2 or lower</p>	<p>N70-02 Spatula type</p>
<p>N70-03 Hook type</p>	<p>N70-04 Hook type</p>	<p>N70-05 Nozzle holder</p>
<p>N70-06 Single</p>	<p>B5166 Stand</p>	<p>A1115 Roller</p>