

NAOMOTO ALL STEAM IRON

HSP series INSTRUCTION MANUAL

HSP - 440



INTRODUCTION

We thank you for your purchase of NAOMOTO Model HSP-440 All Steam Iron.

This Instruction Manual is a guide book for correct use of this iron. Please read this booklet carefully before using the iron to ensure its longest possible life.

This iron features our own Condensate Return System design and is named the “All Steam Iron’ as it has no electric heater built-in.

We would like you to become familiar with the outlined structure and functions of the iron so that you can operate it correctly and efficiently to your satisfaction.

NOTES

- 1. In order to ensure safe and prolonged use of the iron, it is essential that it is used correctly and that regular maintenance checks are carried out. Before undertaking any operation and maintenance work, please read this manual carefully as well as other manuals of related machinery such as ironing tables, etc. that may be used in conjunction with the iron. If the iron is defective in any way, please contact the nearest Naomoto office or agent.
- 2. If the iron is resold or rented to a third party, please ensure that this manual accompanies the iron. If the manual is unavailable, ask us for an extra copy.
- 3. In this manual, those actions or conditions that may cause a fatal accident and/or fire are marked "WARNING", and those that may cause a breakage and or malfunction of the iron as well as damage to the fabric or garment being worked on are marked "CAUTION".
- 4. We do not take any responsibility for injury or damage arising as a result of the user's negligence of the instructions in this manual, particularly those areas marked as "WARNING" and "CAUTION". Any such damage or injury is not covered under the terms of the warranty.

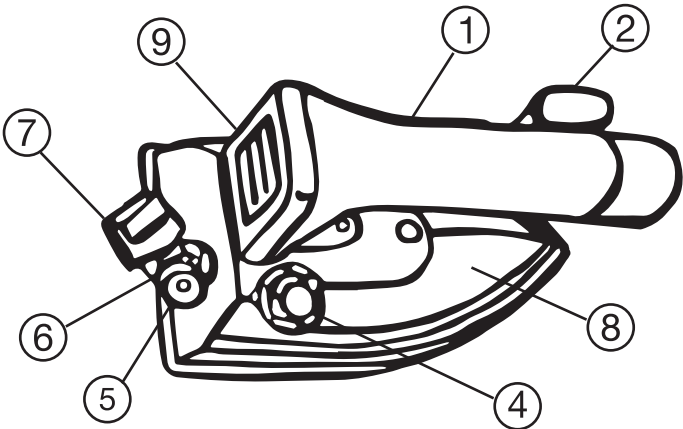
5. Please note that, as a result of our ongoing vigorous efforts to improve our products, some specifications of the machine you have purchased may slightly differ from those mentioned in this manual.

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1. SPECIFICATION

MODEL	HSP-140
WORKING STEAM PRESSURE	0.1 — 0.5 MPa (1 — 5 bar)
STEAM VALVE	PUSH LEVER TYPE
WEIGHT	1.1 kg
BASE-PLATE SIZE	203mm X 99mm
BODY TREATMENT	“TUFRAM”

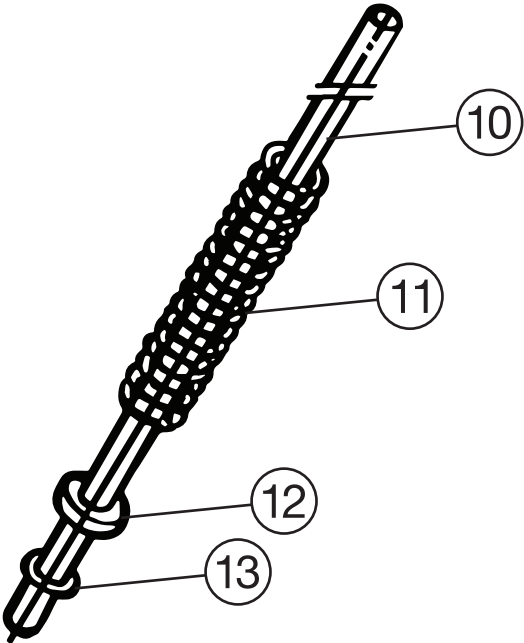
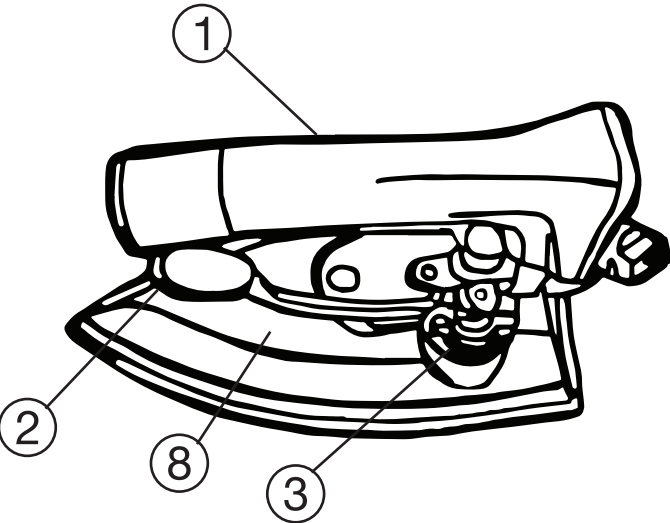


2. ATTACHMENT & ACCESSORIES

The following attachments and accessories are packaged in the same carton as the Iron.

- 1. 1 pc. Silicone Iron Rest
- 2. 1 pc. Mesh Filter
- 3. 2 pc. Packing
- 4. 1 pc. Inner Tube
- 5. 1 pc. O- Ring (P- 4)
- 6. 1 pc. O- Ring Stopper
- 7. 1 pc. Joint Spring
- 8. 1 pc. Instruction Manual (This booklet)

3. NAMES OF COMPONENT PARTS



No.	Name
1	Urethane Grip Handle
2	Push Lever
3	Steam Valve
4	Steam Supply Hose Joint
5	Drain Hose Joint
6	Drain Valve
7	Knob of Drain Valve
8	Plastic Full Cover
9	Name Plate
10	Inner Tube (Ø 3-Ø 4 Dia)
11	Hose Joint Spring
12	O-Ring Stopper
13	O-Ring (P-4)


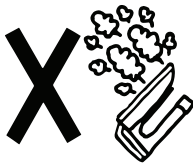







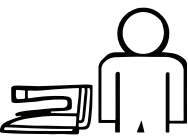



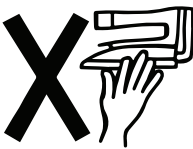
4. PRECAUTIONS BEFORE OPERATION

4.1 Application

This iron is intended to be used exclusively for the ironing of textile fabrics and/or garments. Please do not use it for any purpose other than the above-mentioned.

This iron is for professional and industrial use, not for household use, and it requires steam supplied from a steam-boiler.

4.2 Warning & Cautions in General

 WARNING  Hot steam is gushing from iron! Do not hold iron upside down nor directly toward any person.	 CAUTION  Do not apply the iron to any materials other than textile fabrics. Some materials may easily melt, scorch and/or deform with heat.
 WARNING  Do not place inflammables, chemicals or oils and fats near the iron at any time.	 CAUTION  Provide steam of an appropriate pressure under 0.5 MPa (5 bar) for the iron according to the particular fabric to be worked on.
 WARNING  Be sure to cut the steam source for the iron before leaving the iron unattended.	 CAUTION  Do not drop iron as it may cause injuries and/or damage. Always place it securely on the iron-rest
 WARNING  Iron is hot. Do not touch any part of the iron other than the iron grip with bare hands.	

5. INSTALL & ASSEMBLE

When setting up the iron, be sure also to read carefully instruction manuals of related equipment such as the boiler and ironing table beforehand

5.1 Set Up of Hoses

- 2 (two) hoses for steam-supply and drain are required for this iron. Please purchase each exclusive hose.

If the Inner-Tube is needed to avoid drain water. It is necessary for minor diameter of internal of the steam-supply hose to be more than 5mm at the narrowest part (mouthpiece part).



CAUTION

Please do not use any other steam supply hose than the Naomoto Extra-Hose especially for steam pressure that does not exceed 0.3 MPa (3 bar). Naoflon hose should be used for the drain hose. Use of a non-genuine hose of which proof pressure is not confirmed may cause malfunction.

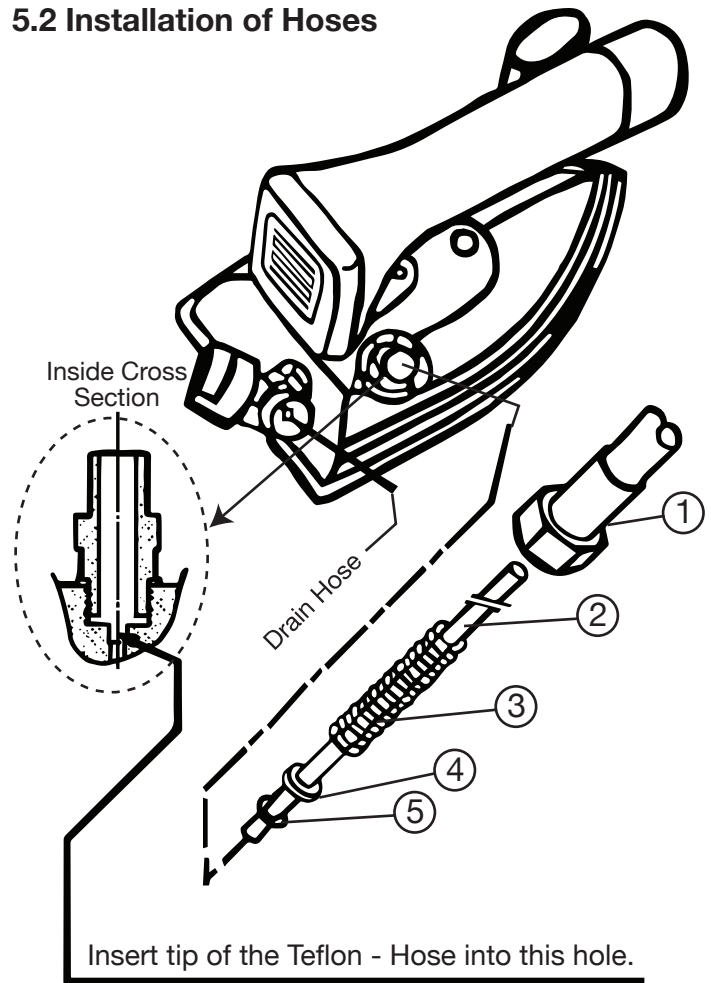
Before setting the Special Extra-Hose to the iron, clean the inside of the hose by washing out any dust and dirt. To do this, first fix the Special Extra-Hose to the boiler, then open the boiler's steam valve, and steam flow will wash out dust and dirt.



CAUTION

While the above cleaning work is being carried out, place a receptacle (like the NAOMOTO cartridge-type water tank at the open end of the Extra Hose to catch the flow of steam gushing out. Do not touch the Hose with bare hands as it can be extremely hot. In addition, take care not to get scalded by the gushing steam

5.2 Installation of Hoses



No.	Name
1	NAOFLON EXTRA HOSE
2	Inner Tube (Teflon Hose with Dia. 3-4 mm.) (Lengthen hose more for more drain water)
3	Hose Joint Spring
4	O-ring Stopper
5	Silicone O-ring (P-4)

When water drops do not come out of the iron while steaming, above inner tube is not necessary.

- Installation of the Steam Supply Hose

Insert the inner tube(2) into the hose joint spring(3), the O-ring stopper(4) and the O-ring(5), then insert the tube-tip into the back hole in the steam supply hose joint of the iron.

Insert the other end of the inner tube into the mouth piece (G1/4) of the steam supply hose.

Screw the cap but of the hose to the joint of the iron and fix it.

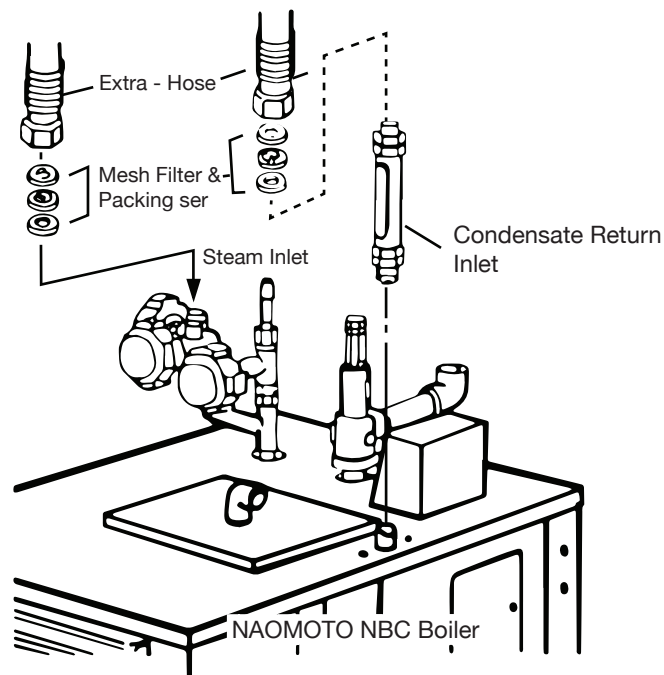
- Installation of the Drain Hose

Connect the mouth piece (G1/4) of the drain hose to the drain hose joint of the iron and fix it.



CAUTION

- Please do not mistake the drain joint for the steam supply joint.
- When fastening or unfastening the cap nut of the Extra-Hose with a spanner, be sure to hold the hex-part of hose joint on the iron firmly with another spanner.



- Connection of the steam supply hose to a steam boiler or a central piping system

Connect the end of the steam supply hose to the steam intake of the boiler.

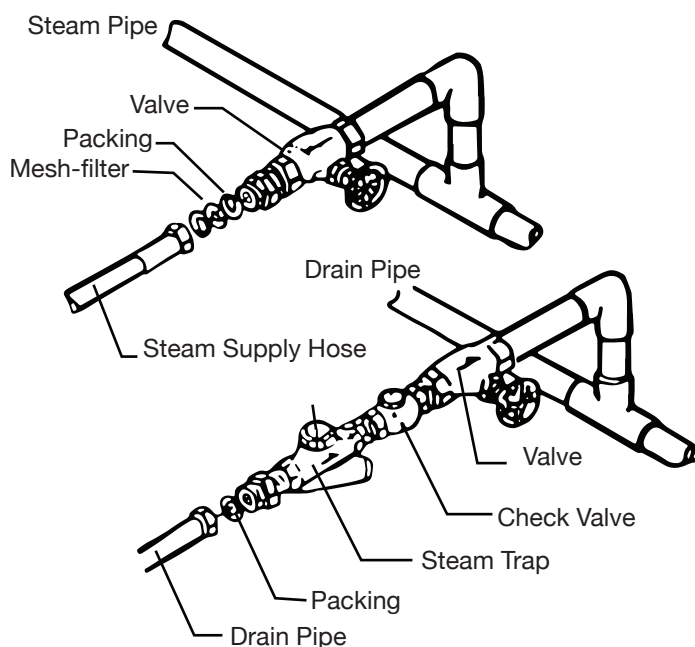
Before screwing in the nut, be sure to place the supplied mesh-filter and packing in the steam intake of the boiler.



CAUTION

Failure to use the mesh-filter will cause suction of dust and impurities into the iron together with steam which may give rise to malfunctions and problems with the iron.

The following drawing is an example to connect to central piping system:



Connect the end of the drain supply hose to the drain intake of the boiler. If a NAOMOTO NBC-series light-type boiler is used, be sure to place a gasket (black color) and mesh-filter in the condensate return inlet of the boiler before connecting the return hose to it. They are available as option.

- Place the Iron

Please see that the iron is placed on the supplied iron-rest when not in use.



WARNING

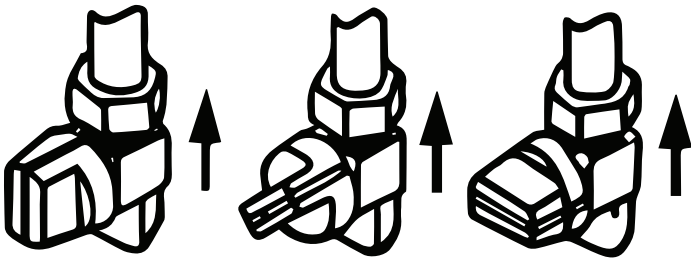
The iron reaches a high temperature after the steaming, so be sure to place it on the iron-rest, and never place it directly on the ironing table or by the flammables.

6. IRONING OPERATION

When starting and finishing operation, follow the instructions below. To ensure the correct operation of the iron, read also the instruction manual of the boiler, which is to be used with the iron

6.1 General Advise

- Check the pressure of the boiler by its pressure gauge and open the steam valve of the boiler.
- Adjustment of the iron drain valve.



(a) Full Open
0.1 MPa

(b) Half Open
0.2 MPa

(c) Closed
More than 0.3 MPa

This valve is not completely closed, so there is clearance with condition of above (c), draining is possible



CAUTION

Be sure to set the drain valve to be opened fully (c) to use a condensate return device or a steam trap



CAUTION

Sole plate temperature of all steam iron as this product is controlled by the steam pressure of the boiler. Refer to the table shown below, and check the steam pressure. However, this table is reference materials, so, the value on the table are not guaranteed.

Steam Pressure (MPa)	Steam Temp. (°C)	Sole Plate Temp. (°C)
0.1	120	113
0.2	133	125
0.3	143	135
0.4	151	142
0.5	158	149

6.3 At the End of Daily Operation

- Close the steam valve of the boiler.
- Open draining valve fully, then keep the lever pushing down until all the remaining steam and water inside the iron and hose have been blown out.

To start new operation, begin it according to the START instructions.

6.2 Start of Operation

Push the push lever to start steam. At first, water drops may come out with steam, good steam comes out in a minute with the condition of appropriate draining.

7. MAINTENANCE & CHECKING

In case any problems occur with the iron or the boiler, contact the nearest NAOMOTO office or agent from whom you purchased the equipment.

In order to ensure your equipment is trouble-free, it is important to operate it correctly and also to keep up regular maintenance checks. Please observe the following procedures.

7.1 Daily Maintenance & Checking

- Clean the iron by removing dust and adhered starch-residues.
- Empty completely remaining steam and condensate in the iron and the hose.
- Check and confirm that there is no steam leakage at the base-plate and the valve while the swing-lever is in normal position (i.e. the valve is closed).

7.1 Troubleshooting

- If you have any problems with the equipment, please check the symptoms and take necessary countermeasures outlined below where applicable.
- If you need to replace any parts, ask the nearest NAOMOTO office or its agent for the replacement parts.



WARNING

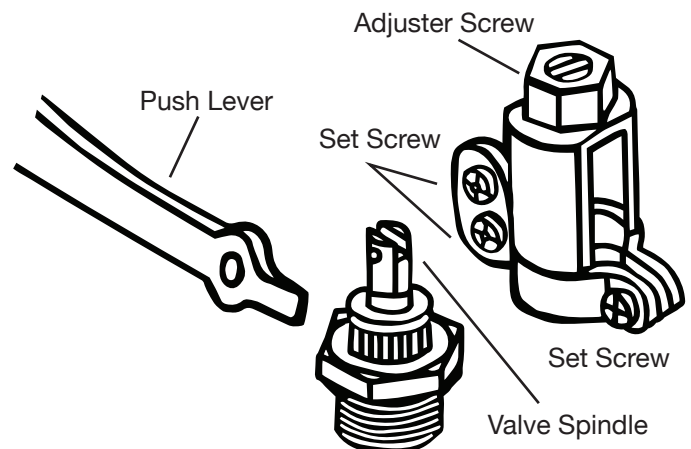
Before making any checks or carrying out any maintenance work on the iron, be sure to cut the steam source and empty out any steam from the iron and the steam hose, then wait until the iron cools down.

- Inconsistent Steam Flow

- In case steam valve cannot be closed enough to stop the steam flow, replace the valve spindle with a new one.
- Also, ascertain that there is no dust or flaw with each packing, valve seat, O-ring, washer etc. In case any part is found damaged, replace it with a new one.

- Disassemble the valve.

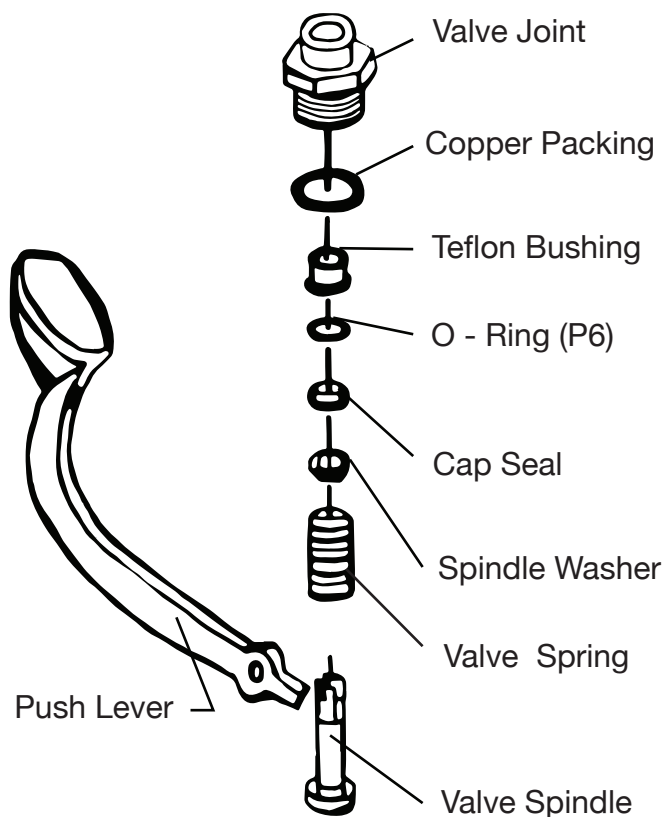
- Insert a wire of dia 1.5mm into the valve spindle while pushing the lever.
- Unscrew 3 stopping screws of the lever, then remove push lever and metal fitting.



- Remove valve joint with spanner.
- Further, remove wire, teflon bushing, O-ring, spindle washer and spring on this turn (see below drawing).
- After finishing checking and replacement, assemble on the reverse turn.
- When assembling finished, install it on the iron as follows:
 - Insert the wire into the spindle again.
 - Install the metal fitting and the lever at last.

Note:

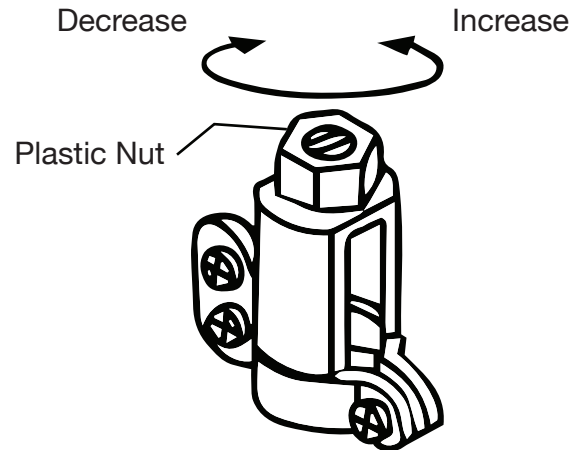
When assembling, be sure to wind the seal tape on the valve joint



- Adjustment of Steam-Flow

This type of iron is so designed that the steam-flow from its base-plate can be adjusted. As shown in the following picture, first unfasten the plastic nut on top of the steam valve. Then, the steam-flow can be decreased by turning the control-screw clockwise with a screwdriver, and vice versa

(ie. the steam-flow can be increased turning the screw counter-clockwise).



Be sure to refasten the plastic nut after the adjustment is completed. Please note that the above adjustment is solely intended for precision control of the steam-flow from the iron base-plate, this is completely separate from the steam pressure adjustment on the boiler.

- Drain if water drops or much drain come out with steam, check and treat as follows.
 - Abnormal pressure of the steam boiler. Consult your agent or our office.
 - Pipe line abnormality occurred. Consult our office.
 - Inconvenience of draining function occurred. Consult our office or refer to drawing below and check the drain valve.

