



MIDI STEAMER

OPERATION & SAFETY MANUAL



WARNING

These instructions are for your personal safety. Always ensure that you have read and understood these instructions before using the equipment.
SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

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SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

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To watch practical demonstration videos, take a course, or to download an electronic copy of these Instructions, please visit www.picoteinstitute.com. Please note that videos and courses are not intended as a replacement or alternative to this operating and safety manual, but only as an additional learning tool.

SAFETY INFORMATION

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

WARNING

This section contains important safety information.
Failure to comply could result in serious injury or death.

Safety Symbols

Safety symbols are used throughout this manual to draw attention to potential hazards.



Danger risk of serious injury, follow instructions.



Danger hot surfaces risk of serious injury, follow instructions.



Danger risk of electrocution, follow instructions.

Personal Protective Equipment (PPE)

Safety symbols are used throughout this manual to draw attention to potential hazards.



Suitable eye protection to protect against injuries and chemicals from irritating eyes.



Suitable heat resistant gloves. Do not use gloves which can become entangled.



Suitable respirator to prevent any dust or fumes being inhaled or consumed, which could cause occupational asthma or dermatitis.

Operational Safety



1. **Always wear eye protection and heat resistant gloves.** Other personal protective equipment, such as dust mask, chemical resistant gloves and protective clothing should be worn when necessary.
2. **Before each use** inspect the Midi Steamer carefully for any potential damage.
3. Only use the Midi Steamer with the official accessories and spare parts offered by Picote Solutions. Accessories and spare parts should only be used in the manner intended and as described by Picote Solutions.
4. Some parts of the Midi Steamer can get hot when steam curing.
Avoid touching these areas while steam curing.
5. Never leave the Midi Steamer operating unattended all day or overnight.

ENVIRONMENT:

Operational Ambient Temperature Range: -5°C to +40°C (23 to 104°F)

TRANSPORT:

Always transport the Picote Midi Steamer in the vertical/upright position and secured to prevent any movement. The Midi Steamer should be empty if transported in temperatures below 0°C (32°F).

STORAGE:

Storage Ambient Temperature Range: -5°C to +50°C (41 to 122°F)

Store in a condensation-free environment.

Always store the Picote Midi Steamer empty and in a vertical/upright position.

When storing for extended periods of time, leave Dump Valve and/or safety fill cap open to allow air to circulate inside the boiler.

Never store the Midi Steamer below 0°C (32°F). Freezing water can damage the Midi Steamer.

DISPOSAL:

The boiler and frame can be disposed of as metal waste. Electrical cords and components can be recycled at electrical waste collection sites.

Always check and follow local waste handling rules and regulations!

CE DECLARATION OF CONFORMITY

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We Picote Solutions Oy Ltd as the responsible manufacturer, declare that the following Picote Solutions Oy Ltd steam generator:

Midi Steamer

Model No: 110V/120V & 230V/240V

is of series production and

Conforms to the following EU Directive:

2014/68/eu

And is manufactured in accordance with the following standards or standardised documents:

ISO 16528-1:2007

The technical documentation is kept by our authorised representative in Europe who is:

Picote Solutions Oy Ltd, Pienteollisuustie 24
06450 Porvoo, Finland

4th April 2023



Katja Lindy-Wilkinson
C.E.O.

Picote Solutions Oy Ltd
Pienteollisuustie 24, 06450 Porvoo, Finland

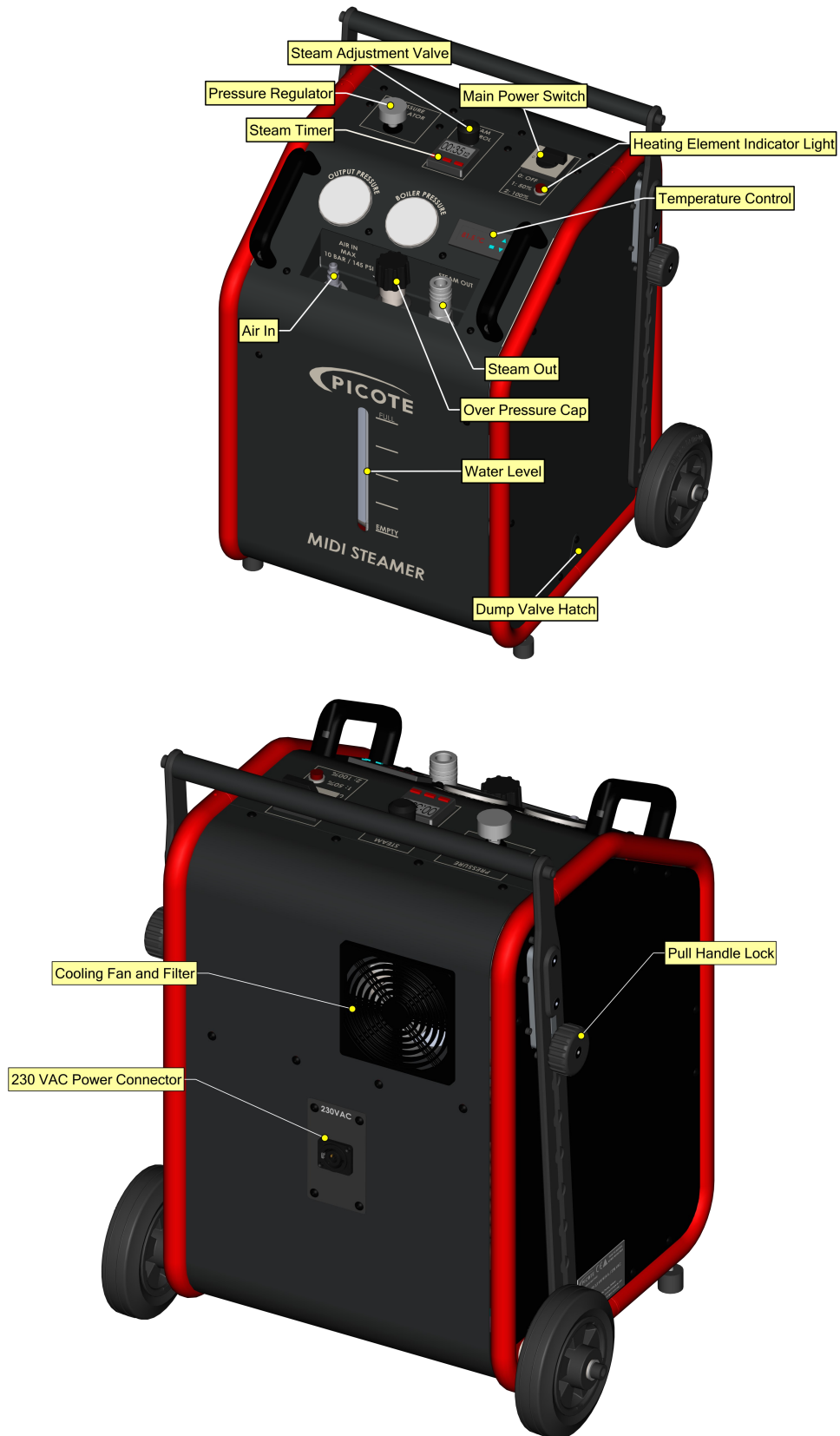
GENERAL INFORMATION

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Midi Steamer Specifications	
Operation Pressure	Steam: 3 Bar \pm 0.2 Bar (43.5 PSI \pm 2.9 PSI) Air in (maximum): 10 Bar (145 PSI)
Voltage	110-125 VAC & 220-240 VAC
Power	3200W@230V, 2850W@120V
Volume	Total: 10L (2.6 gal) / Usable: 8.1L (2.1 gal)
Weight (empty)	25.5kg (56.2 lbs)
Midi Steamer Products	
Part Number	Product
2400000001	Picote Midi Steamer 240V / 15A EU
2400000001AUS	Picote Midi Steamer 240V / 15A AUS
2400000001US	Picote Midi Steamer 240V / 15A US
2400000002US	Picote Midi Steamer 2x110V / 15A + 15A US <i>Two Seperate Power Plugs. 15A each.</i>
2400000001UK	Picote Midi Steamer UK 110V / 30A
2400000003US	Picote Midi Steamer US 110V / 30A
2400000005	Steamer Air Hose 2m
2400000005US	Steamer Air Hose 6.5ft US

GENERAL INFORMATION

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PULL HANDLE OPERATION

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Pull Handle Operation:

1. To **unlock** the pull handle extension, turn the locking knobs on each side **counterclockwise**.
2. To **lock** the pull handle to the desired elevation, turn the locking knobs on each side **clockwise**.



OPERATING INSTRUCTIONS

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Before Operation:

1. Always use clean, cold water. Dirty water can result in blockages and extensive scaling of boiler and valves.
2. Always do all necessary connections before turning on the Midi Steamer!
3. Unplug the Midi Steamer when filling or emptying the boiler.
4. Always wait for the pressure to drop inside the boiler before opening the Safety Cap or the Dump Valve!
5. If steam starts to come out of the bottom left hand side port, turn off the steam and check the following:
 - Check that there are no blockages between Midi Steamer steam output and steam port on the tool head assembly. Steam needs to flow freely, otherwise backflow will occur.
 - Check there is air pressure coming into the Midi Steamer.
 - Check that the pressure regulator is set correctly. The minimum air pressure is 3 Bar (45 PSI).
 - Contact Picote, your Picote Reseller or Picote Authorised Service Centre for repairs.

OPERATING INSTRUCTIONS

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Safety Fill Cap:

The Midi Steamer is equipped with a Safety Fill Cap which opens automatically if overpressure occurs inside the boiler. Another function of the Cap is to release steam if opened whilst there is still pressure inside the boiler. The steam is directed away from users hands in a controlled way. This is to warn the user that there is still pressure inside the boiler and to stop opening the cap. Tighten the Safety Cap by hand, do not use tools to prevent damaging the cap and/or seal.

Opening the Safety Fill Cap too quickly while under pressure will cause steam to escape rapidly which can cause severe burns!

If the Safety Fill Cap is damaged it should always be replaced with a new cap before using the unit. Never make any modifications, changes, or repairs to the Safety Cap!

Cooling Fan Operation:

The Midi Steamer is equipped with an automatic cooling fan. The cooling fan will turn on when internal component temperatures reach 40°C (104°F) and will turn off when the unit cools down to 25°C (77°F).

Dump Valve Operation:

The Dump Valve is located underneath the Midi Steamer and is used to drain the water from the boiler.

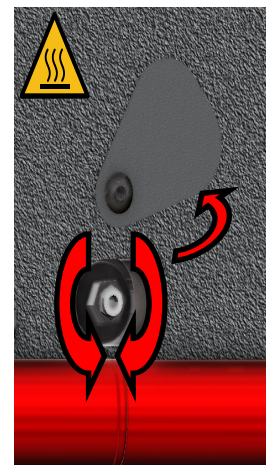


ALWAYS wait for the pressure to drop inside the boiler before opening the Dump Valve!



NOTE: Water will be hot for a long time even after the pressure drops!

1. Move the Dump Valve cover to the side.
2. Turn the valve counter clockwise using a 10mm ($\frac{3}{8}$ ") socket to open.
3. The water will drain underneath the Midi Steamer
4. To speed up the emptying process, open the Safety Fill Cap.



OPERATING INSTRUCTIONS - STEAMING PROCESS

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Fill the Boiler:

1. Ensure Dump Valve is closed.
2. Open Safety Fill Cap and pour clean, cold water inside.
3. Fill the boiler to the Maximum level on the level indicator.
4. **Do not overfill the boiler.** If the boiler is overfilled, there will be no room for steam. When turned on, the initial pressure reading will drop immediately and the Steamer will push boiling water through the unit and into the steamer hoses potentially causing damage.
5. Hand tighten the Safety Fill Cap lightly to avoid damaging the seal.



Preheating the Steamer:

1. Connect the power cord(s) and turn the Steamer to the desired power level (see below).
2. Check that the Steam Control Valve is **closed**.
3. Make sure the timer is not running.
4. The steam box is ready to go once the Boiler Pressure Guage reaches 3.0 Bar (44 PSI)
(At this stage ignore the temperature gauge reading)



Heating up Using the Single Plug Version:

- Plug in the power cord.
- Turn on the Midi Steamer via the main power switch.
- Setting 1 is half power and setting 2 is full power.
- Red indicator light will turn ON.
- After the desired boiler pressure has been reached, the light will turn OFF along with the heating elements.



Heating up Using the Double Plug Version:

The 110V/120V Double Plug Midi Steamer can be used with one or two power cords. Power input marked with the #1 is the master input and should always be used. Power input marked with the #2 feeds power to the secondary heating element which doubles the power. The power outlets used should be on different fuses.

- Plug in the power cord(s).
- Turn on the Midi Steamer via the main power switch.
- Setting 1 is half power and setting 2 is full power **(you can't use setting 2 if only using one plug)**.
- Red indicator light will turn ON.
- After desired boiler pressure has been reached, light will turn OFF along with the heating elements.
- Half power is most suitable for connection collars and patches.
- Using full power heats up the water faster and is recommended if the Midi Steamer is not able to produce enough heat due to long installation distance or when steam curing linings.

It is okay to use full power in all situations.

- If the desired temperature can't be reached, a longer cure time is needed. In this case, adjust the temperature to a value the Midi Steamer is able to maintain.

OPERATING INSTRUCTIONS

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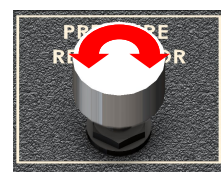
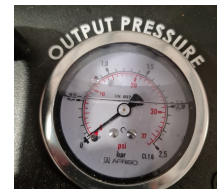
Steaming:

1. Connect Air Supply:





- Connect air compressor hose to the Midi Steamer.
- Maximum incoming air supply pressure is 10 Bar (145 PSI)
- Air compressor connection can be found on top front side of the Midi Steamer.

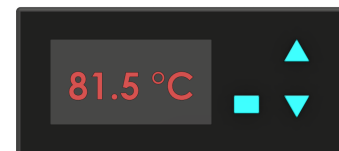
2. Set Air Pressure:

- Adjust the air pressure (Output Pressure Guage) using Pressure Regulator Knob.
- Pressure should be set based on the correct setting for the collar, patch or liner being installed and cured.
- To **increase** the pressure, turn the Pressure Regulator Knob **clockwise**.
- To **decrease** the pressure, turn the Pressure Regulator Knob **counterclockwise**.
- **If the air pressure is too low steam could enter the Air Pressure Regulator and damage it. If too high it could damage the repair being steam cured.**



3. Set Temperature:

- Temperature is measured at Steamer outlet, not at the Collar, Patch, or Liner.
- To adjust the temperature, press the SET button 
- Press  to start changing the temperature value.
- Use  and  buttons to select desired temperature.



4. Connecting Steam Hose:



NOTE! The steam output connector may get hot during use!



- Ensure the steam valve is closed before making any connections.
- Connect steaming hose to the Midi Steamer steam output connection.
- Connect other end of steaming hose to connection collar, patch, or liner.
- If there isn't a valve between the Steaming Hose and connection collar, patch, or liner, be sure air pressure is already set from Midi Steamer to avoid a collapse.



5. Setting Curing Time:

- To set the time, press **PROG** button once. The hour digits will begin flashing.
- Press **PROG** button repeatedly to cycle through hours, minutes and seconds.
- Use + and - buttons to adjust the Timer.
- Pressing the **START/STOP** button will start/stop the timer.
- Press/hold **RESET** to reset the Timer back to the original time.
- Pressing all three buttons at the same time will set timer to 0:00.
- Pressing and holding all three buttons for 4 seconds will perform a total Timer reset.

OPERATING INSTRUCTIONS

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

Steaming Continued:

Set the Curing Time (continued):

- On loss of power, countdown will stop and steam valve will close.
 - Time remaining will be stored.
 - When power is restored, remaining time will be shown but timer will need to be restarted to continue.
 - **NOTE:** If START/STOP button is pressed when the timer is 0, a bell symbol is displayed and relay will open steam valve. Pressing button again will close the valve.
7. Start Timer and steam valve relay will open.
 8. Slowly open the Steam Control Knob 4 full turns to allow steam flow.
 9. Temperature gauge will now start to show the correct temperature.
 10. Boiler pressure will fall, and temperature will steadily rise.
 11. If the pressure falls below 1.5 Bar (21.75 PSI) pause Timer and let Steamer re-heat.
 12. Adjust Steam Flow via Steam Control Valve if pressure is fluctuating/unstable.
- Note: There will be a time delay between the Steamer and the repair area receiving the heat. This is dependent on installation distance and ambient ground conditions.



Adjusting Steam Flow:



- Use the Steam Control Valve to fine-tune steam flow.
- Temperature should rise steadily to target temperature and shouldn't overshoot the temperature more than 7°C or 12°F.
- If all parameters are set correctly and there is sufficient flow, the temperature should fluctuate between $\pm 5^{\circ}\text{C}$ or $\pm 9^{\circ}\text{F}$.



WARNING! Steam Control Valve may get hot during use!

Opening the Steam Control Valve too much may cause steam backflow to the air regulator, limiting its performance. Excess steam is directed under the Midi Steamer's left-hand side.



Cooling Down:

1. After curing has finished, wait for the connection collar, patch, or liner to cool down before disconnecting the air supply.
2. The Midi Steamer starts the cooling process automatically after the Timer goes to 0:00.
3. Timer will give an audible sound when the cooling process starts.

MAINTENANCE

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RISK OF ELECTROCUTION OR SEVERE BURNS!

Do not open the panelling and attempt to fix the electronics or pressurised parts. Any repairs or adjustments to the electronics, system components or the pressurized vessel must be done by authorised personnel only!

Descaling the Boiler:

The boiler should be descaled with diluted citric acid every 2 months. If the local water source has hard water, or the Midi Steamer is used extensively, perform descaling monthly.

Preparing the 5-7% Citric Acid Solution:

1. 8L (2.1 gal) of water into a bucket.
2. Add approximately 0.5kg (1.1lbs) of citric acid powder in to the water.
3. Once the citric acid has dissolved, pour the solution into the boiler.
4. Be careful to not overfill.

Rinsing and Descaling:

1. Before adding the acid solution, rinse the boiler with clean water.
2. Add 4L (1 gal) of clean water and shake the machine gently.
3. Open Dump Valve and let the water out.
4. Close the Dump Valve.
5. Prepare 8L (2.1 gal) citric acid mixture and fill up the boiler (do not overfill the boiler).
6. Let the citric acid mixture sit in the boiler for 15 minutes.
7. Heat up the boiler and release steam for 5 minutes.
8. Let the boiler cool down and open the Dump Valve once the pressure has dropped.
9. Rinse the boiler once again with 4L (1 gal) of clean water.
10. Drain the boiler.

Cleaning the Air Filter:

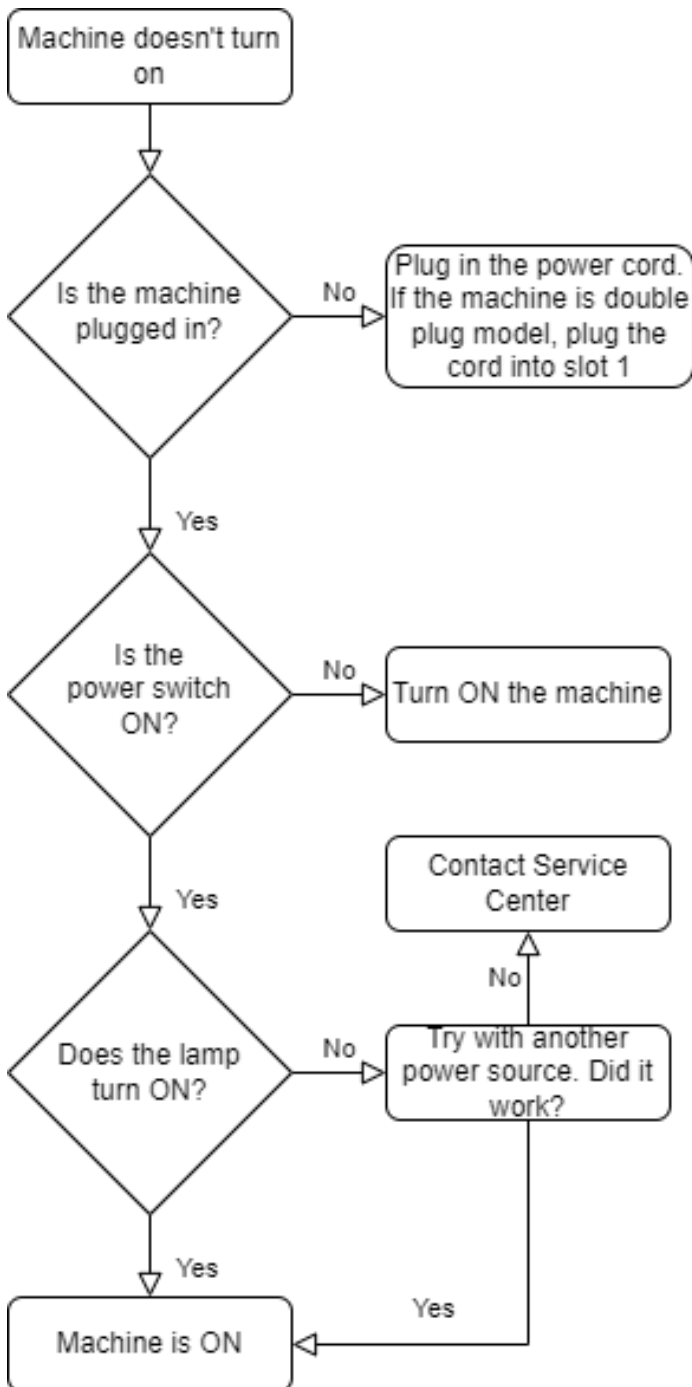
Check the Cooling Fan Air Filter once a month. The filter should be cleaned when it gets clogged. Clean it by removing the protective grill by hand. After this, the filter can then be washed and dried, or vacuumed.

Do not vacuum through the fan while the filter is still on the Midi Steamer!

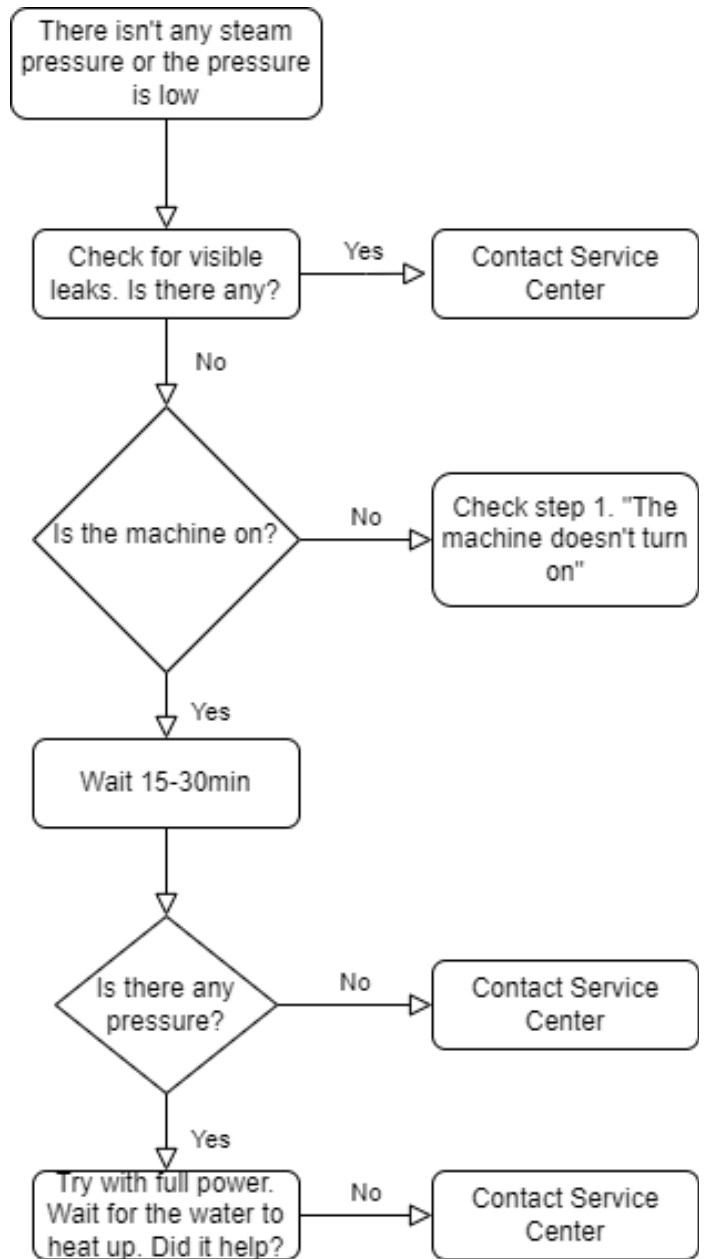
FAULT FINDING CHARTS

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1 - Midi Steamer Does Not Turn ON



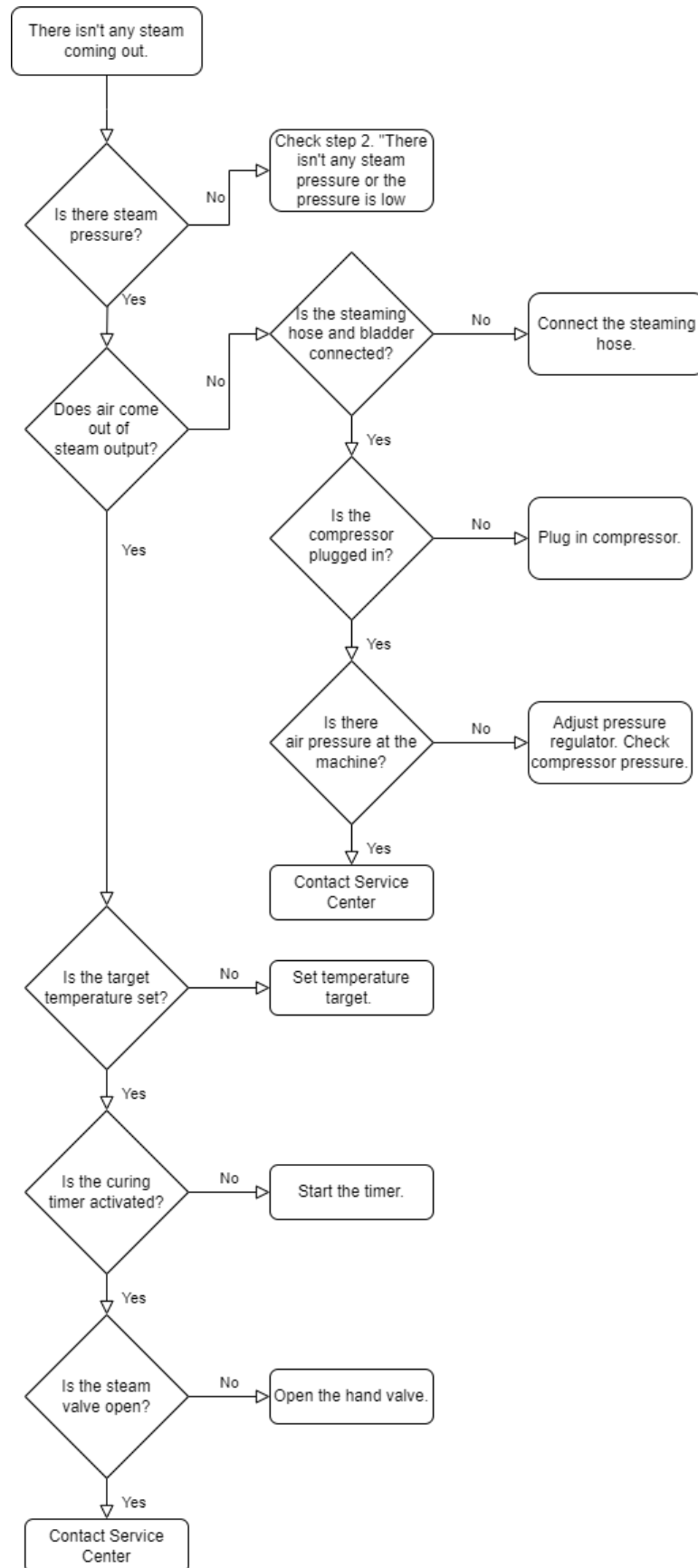
2 - No Steam or Low Pressure



FAULT FINDING CHARTS

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

3 - No Steam Coming Out



WARRANTY POLICY & PROCEDURE

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Limited Warranty:

Picote warrants to the original End User that the Product purchased by such End User will operate in accordance with, and substantially conform to their published specifications when shipped or otherwise delivered to the End User and for a period of one (1) year, except electric motors and batteries for which the warranty period shall be six (6) months, provided, however, that Picote does not warrant any claim or damage under this Warranty if such claim or damage results from:

1. Consumable parts or normal wear and tear resulting from use of the Products,
2. Regular periodic maintenance of Products,
3. Misuse, neglect, or improper installation or maintenance of the Products, or use of Products not for their intended purpose,
4. Products that have been altered, modified, repaired, opened or tampered with by anyone other than Picote or an authorized Picote Service Centre, or unsuitable or unauthorized spare parts, accessories or third party products when using the Products or;
5. the use of the Products not in compliance with their respective Documentation, user manuals, safety and maintenance instructions, and any usage restrictions contained therein, or
7. accident, fire, power failure, power surge, or other hazard.

Otherwise, the Products are sold AS IS. End User is responsible for using the Products within their specifications and instructions as contained in the Documentation.

EXCEPT AS SPECIFIED IN THIS WARRANTY, ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS, AND WARRANTIES INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON INFRINGEMENT, SATISFACTORY QUALITY OR ARISING FROM A COURSE OF DEALING, LAW, USAGE, OR TRADE PRACTICE, ARE HEREBY EXCLUDED TO THE EXTENT ALLOWED BY APPLICABLE LAW. TO THE EXTENT AN IMPLIED WARRANTY CANNOT BE EXCLUDED, SUCH WARRANTY IS LIMITED IN DURATION TO THE WARRANTY PERIOD. BECAUSE SOME STATES OR JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, THE ABOVE LIMITATION MAY NOT APPLY. This disclaimer and exclusion shall apply even if the express warranty set forth above fails of its essential purpose.

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Free Connection Collar 2.0 - Equipment
101 E-learning course is available at:
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