PICOTE
LIFE FOR PIPES

MIDI STEAMER

OPERATION & SAFETY MANUAL

PICOTE ORIGINAL INSTRUCTIONS SOLUTIONS

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.

TABLE OF CONTENTS

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

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, TRANSPORT, STORAGE & DISPOSAL

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

WARNING **This section contains important safety information.**
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ENVIRONMENT:

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

Storage Ambient Temperature Range: Minus-5 °C to Plus+50 °C (41 °F to 122 °F) in a condensation-free environment**.**

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:

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). Water freezing 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

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

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

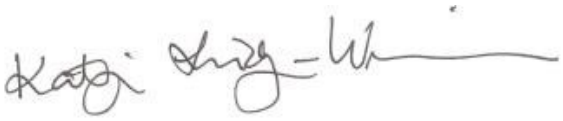
And is manufactured in accordance with the following standards or standardised documents:

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



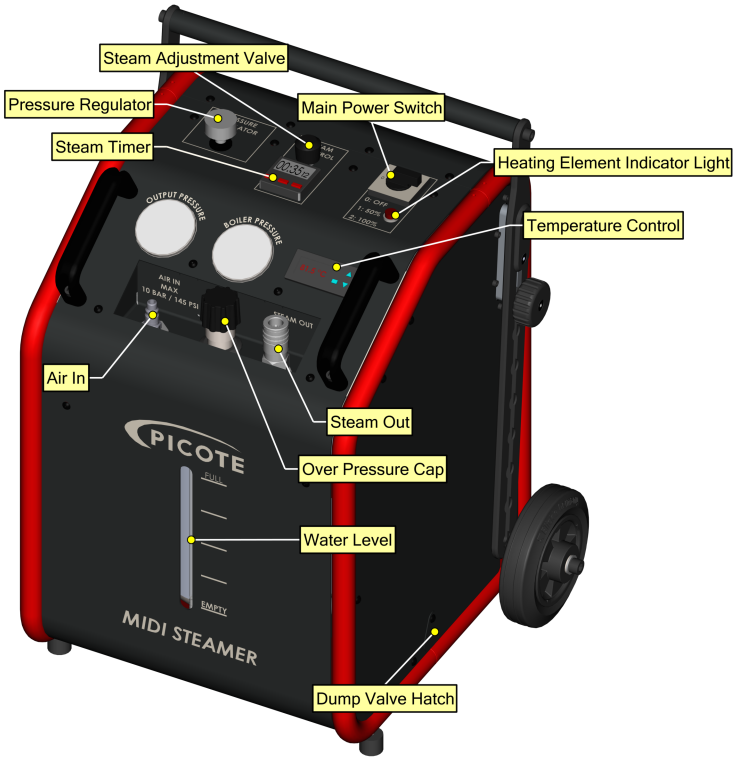
Katja Lindy-Wilkinson
C.E.O.
Picote Solutions Oy Ltd
Pienteollisuustie 24, 06450 Porvoo, Finland

GENERAL INFORMATION

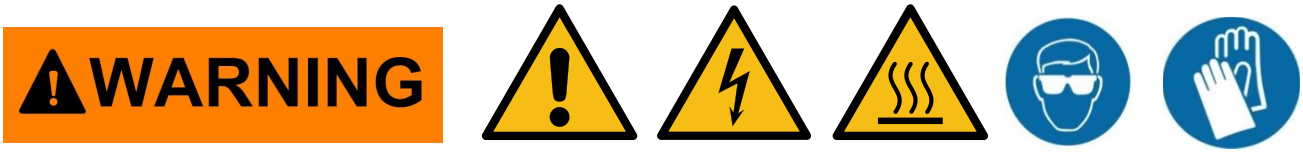
SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

Midi Steamer Specifications	
Operation Pressure	Steam: 3 bar ±0,2 bar (43.5 PSI ±2.9 PSI) Air in: 10 bar (145 PSI)
Voltage	110-125 VAC & 220-240 VAC
Power	3200W@230V, 2850W@120V
Volume	10L (2.6 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 US 2x110V / 15A+15A *Two Sperate Power Plugs. 15A each.*
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


Steam Adjustment Valve
Pressure Regulator
Main Power Switch
Steam Timer
Heating Element Indicator Light
Temperature Control
Air In
Steam Out
Over Pressure Cap
Water Level
Dump Valve Hatch
PICOTE
MIDI STEAMER


Cooling Fan and Filter
Pull Handle Lock
230 VAC Power Connector
230VAC



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).
   - Check the steam hand valve is not opened too much. Refer to page 15.
   - Contact Picote, your Picote Reseller or Picote Authorised Service Centre for repairs.

Safety Cap:

The Midi Steamer is equipped with a Safety Cap which opens automatically if overpressure occurs inside the boiler.

Another function of the Safety 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.

Opening the Safety Cap too much will cause steam to escape rapidly which can cause severe burns!

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

Tighten the Safety Cap by hand, do not use tools.

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).

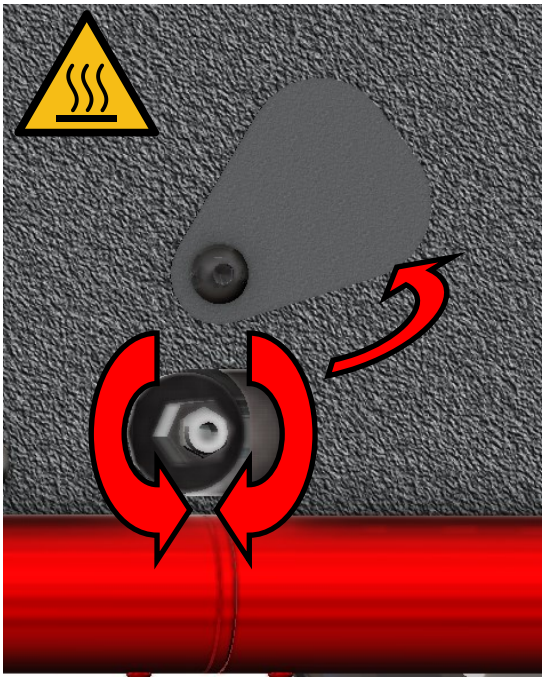
Dump Valve Operation:

The Dump Valve is located underneath the Midi Steamer.
It 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 anti-clockwise using a 10mm (⅜”) socket to open the Dump Valve.
3. The water will drain underneath the unit.
4. To speed up the emptying process, open the Safety Cap.



Pull Handle Operation:

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

To determine the correct pressure and temperature targets for Picote Push Rods and Connection Collar 2.0, refer to Connection Collar 2.0 operating manual

Steaming Process:

1. Fill up the boiler as instructed on **page 12**.
2. Turn on the machine to pre-heat the water as instructed on **page 12**.
3. Check that the Steam Hand Valve is **closed** as instructed on **page 15**.
4. Check the steaming temperature is correct as instructed on **page 19**.
5. Install the Connection Collar, Patch, or Liner.
6. Connect the air compressor to the Midi Steamer.
7. Connect steaming hose to the Midi Steamer and Connection Collar or Lining.
8. Adjust the pressure as instructed on **page 13**.
9. Open the valve at Connection Collar, Patch, or Liner to re-pressurise it through the Midi Steamer.
10. Set the curing time and start the Timer as instructed on **page 14**.
11. Open Steam Hand Valve as instructed on **page 15**.
12. **After curing has finished, wait for the Connection Collar, Patch, or Liner to cool down before disconnecting the air supply.**

Connecting the Air Supply:

The air compressor connection can be found on top front side of the Midi Steamer.
Maximum supply pressure is 10 bar (145 PSI).

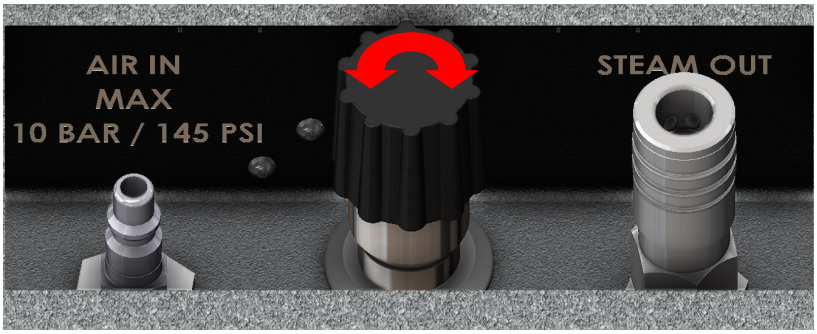
Connecting the Steaming Hose:

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

1. Ensure the steam valve is closed before making any connections.
2. Connect the steaming hose to the Midi Steamer steam output.
3. Connect the steaming hose to the Connection Collar System, Patch, or Liner. If there isn't a valve between Steaming Hose and Connection Collar, Patch, or Liner, first set the desired pressure from the Midi Steamer to avoid unnecessary collapse.

Filling the Boiler:

1. Ensure Dump Valve is closed.
2. Open filling cap and pour clean, cold water inside. **Do not overfill the boiler**.
3. Tighten the filling cap.



Heating up Using the Single Plug Version:

1. Plug in the power cord.
2. Turn on the machine with the main power switch. Setting 1 is half power and setting 2 is full power.
3. Red indicator light will turn ON. After desired pressure has been reached, it will turn OFF with the heating elements.

P/N: 2400000001, 2400000001AUS, 2400000001US, 2400000001UK, 2400000003US

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.

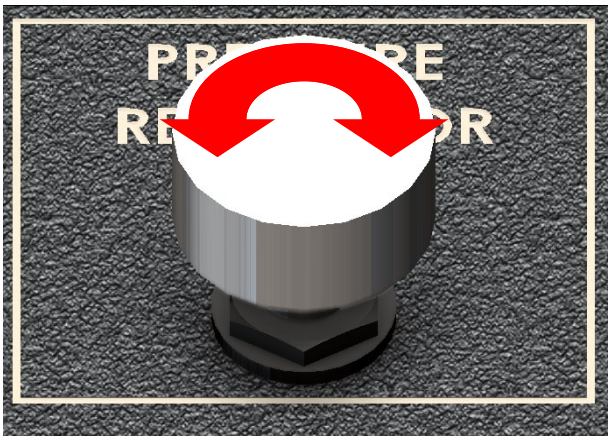
1. Plug in the power cord(s).
2. Turn on the Midi Steamer with the main power switch.
3. Setting 1 is half power and setting 2 is full power.

P/N: 2400000002US

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 machine is able to maintain.

Setting the Pressure:

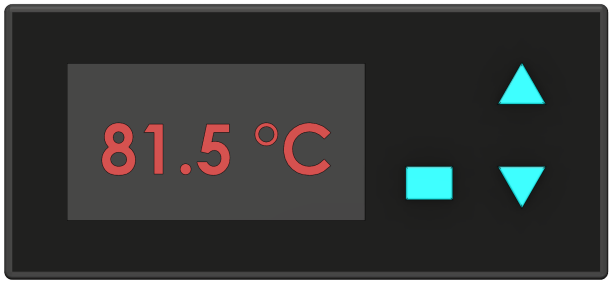
1. To **increase** the pressure, turn the pressure regulator knob **clockwise**.
2. To **decrease** the pressure, turn the pressure regulator knob **anti-clockwise.**



Setting the Temperature:

Temperature is measured at the steam output, not at the Connection Collar, Patch, or Liner.

1. To adjust the temperature, press 
2. Press  to start changing the temperature value.
3. Use  and  buttons to select desired temperature.



Setting the Curing Time:

1. To set the time, press **PROG** button once. The hour digits will begin flashing.
2. Pressing **PROG** button repeatedly to cycle through hours, minutes and seconds.
3. Use + and — to adjust the time.
4. Press **START/STOP** button to start/stop the timer.
5. Pressing **RESET** will set the time back to the start time.
   - Pressing all three buttons at the same time will set timer to zero.
   - Pressing and holding all thee buttons for four (4) seconds will perform a total reset.
   - On loss of power, the countdown will stop and the steam valve will close. The time remaining will be stored. When power is resumed, the remaining time will be shown and the timer will need to be restarted.
   - **NOTE:** If the START/STOP button is pressed when the time is zero, a bell symbol is shown on the display and the relay will open the steam valve. Pressing the button again will close the valve.

Adjusting the Steam Flow:

WARNING! The steam hand valve may get hot during use!

NOTE! Opening the steam hand 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.

1. Use hand valve to fine-tune steam flow.
2. Always go from closed to open position.
3. The steam valve should not be opened too much.
4. Temperature should rise steadily to target temperature and shouldn't overshoot the temperature more than 7 °C or 12 °F.
5. If all parameters are set correctly and there is sufficient flow, the temperature should fluctuate between ± 5 °C or ± 9 °F.

Cooling Down

The Midi Steamer starts the cooling process automatically after the curing timer goes to 0. The timer will give an audible sound when the cooling process starts.

MAINTENANCE

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WARNING

RISK OF ELECTROCUTION OR SEVERE BURNS! Do not open the panelling and attempt to fix the electronics or pressurised parts by yourself!

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. Add 9-10L/ 2.3-2.5 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.

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 10L (2.5 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 let steam out for 5 mins. For example, a Picote Push Rod can be used to let the steam out.
8. Let it cool down and open the Dump Valve once the pressure has dropped.
9. Rinse the machine once again with 4L (1 gal) of clean water.

Cleaning the Air Filter

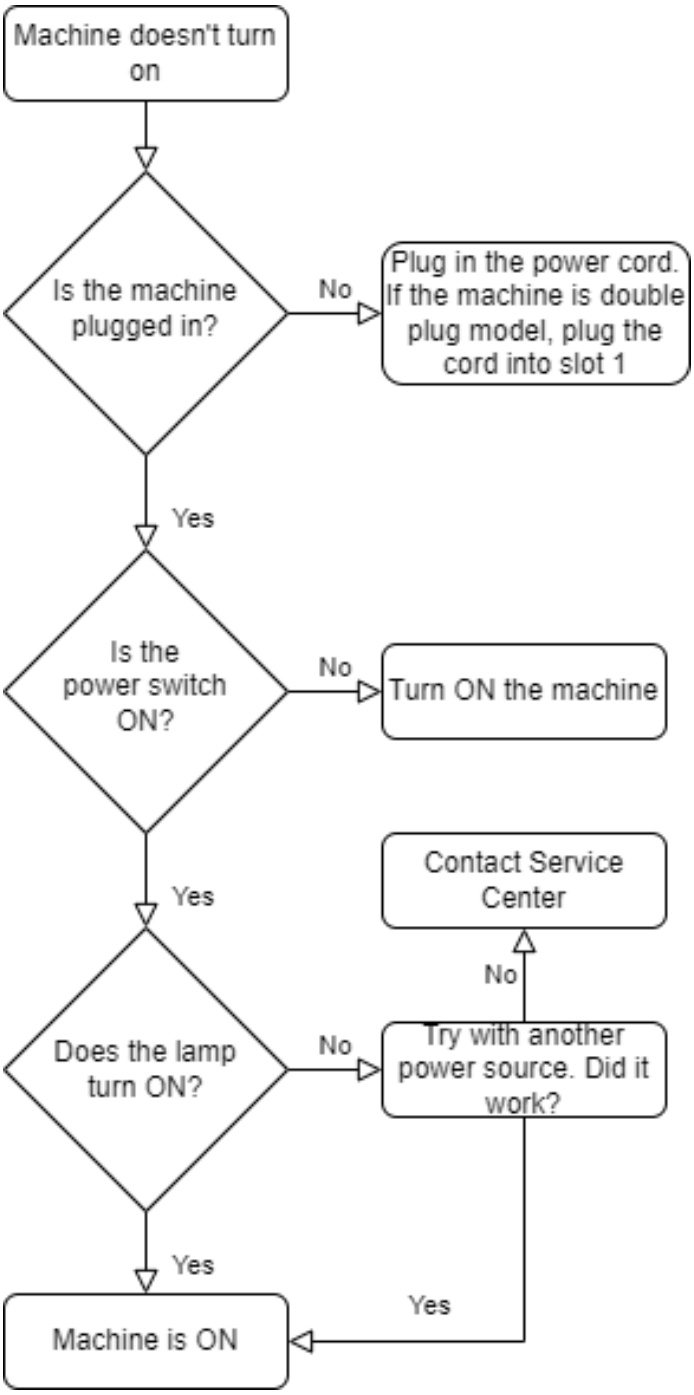
Check the Cooling Fan Air Filter once a month. The filter should be cleaned when it gets clogged. Clean it by removing the protective grill by hand. After this, the filter can then be washed and dried, or vacuumed.

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

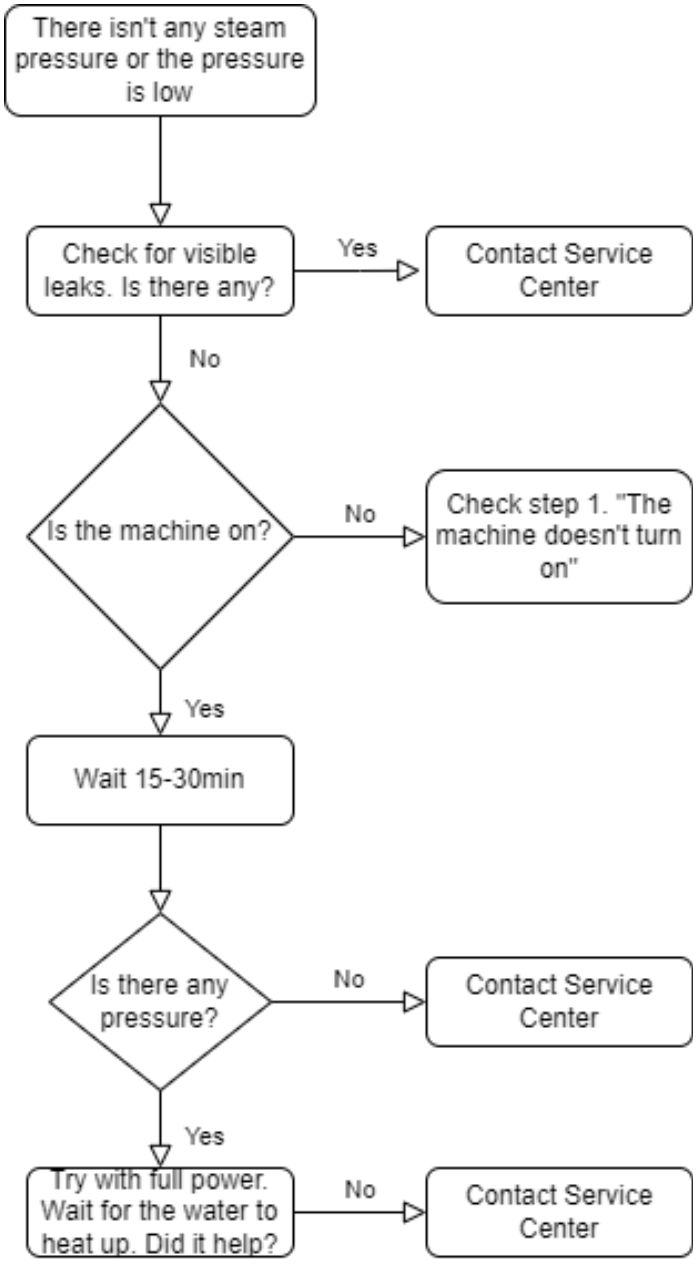
FAULT FINDING CHARTS

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

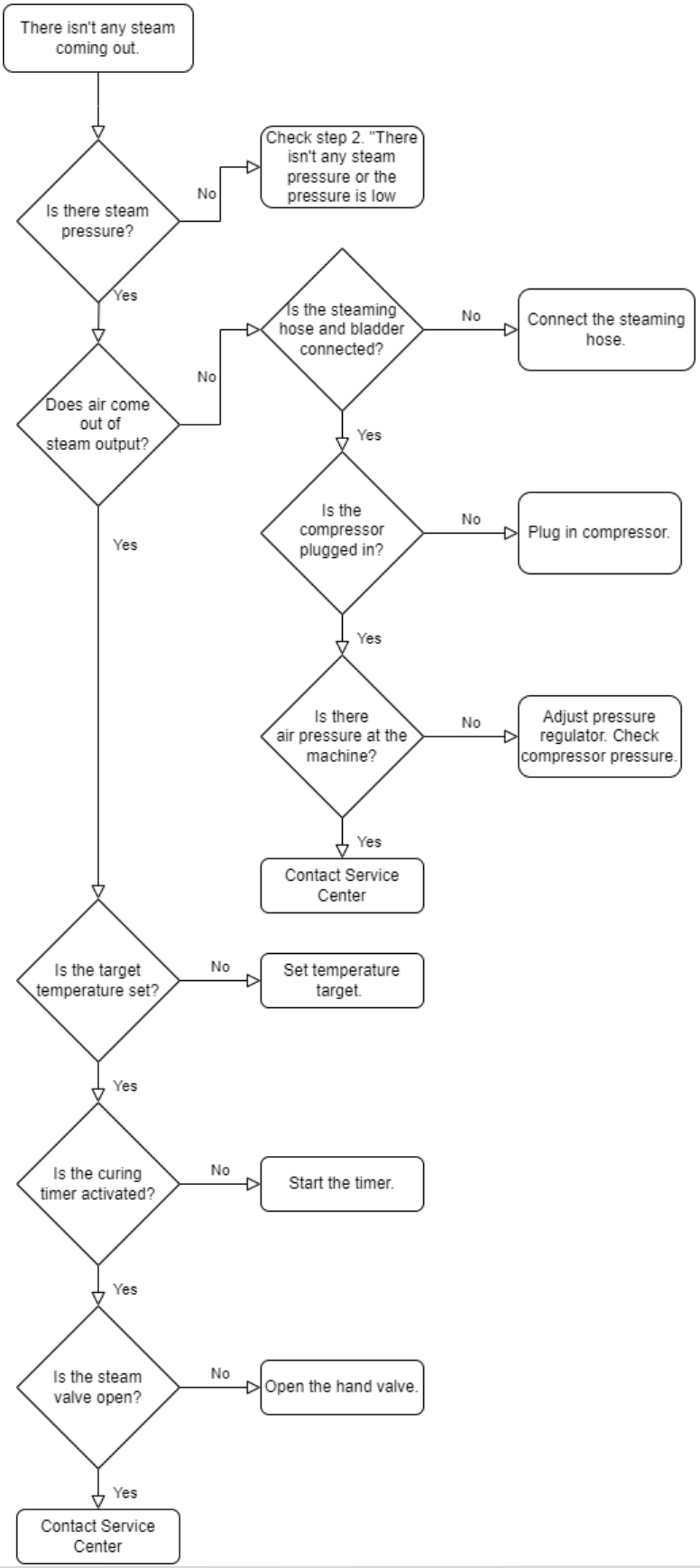
1 - Midi Steamer Does Not Turn ON



2 - No Steam or Low Pressure



3 - No Steam Coming Out



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.

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Author:
Accepted: Dawn Greig 20/07/23

Date: May 3, 2023

Please Contact:
Your Reseller / Salesperson or Picote

www.picotegroup.com

PICOTE
LIFE FOR PIPES

International Offices
Finland. United Kingdom. USA.

Technical Support
support@picotesolutions.com

Production & R&D
Pienteollisuustie 24
06450 Porvoo, Finland
support@picotesolutions.com

E-Learning
Free Connection Collar 2.0 - Equipment 101 E-learning course is available at:
www.picoteinstitute.com

Claims
claims@picotesolutions.com

Authorised Resellers:
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