



PICOTE SMART HEAT MILLER

MODEL:

MINI SMART HEAT MILLER
MAXI SMART HEAT MILLER



OPERATION & SAFETY MANUAL

WARNING

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

Picote Smart Heat Miller

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

SAFETY INFORMATION



WARNING *This section contains important safety information. Failure to comply could result in serious injury.*

Safety Symbols

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



Danger
Electric shock risk

Danger risk of serious injury or death by electrocution, follow instructions.



WARNING
Hot surface
Contact may
cause burn
Do not touch

Danger risk of serious injury from hot parts, follow instructions.



Danger do not touch. Risk of injury from hot parts, follow instructions.

Personal Protective Equipment (PPE)

Always use Personal Protective Equipment when using the Smart Heat Millers, including suitable overalls / protective clothing & footwear and the following:



Always wear suitable heat-resistant gloves when using the Smart Heat Millers to prevent any burn injuries. Any open injuries or skin irritations should be covered at all times to avoid contact with sewage, chemicals or dust.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

GENERAL MACHINE SAFETY WARNING



WARNING

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

Always read all safety warnings and instructions. Failure to follow warnings and instructions may result in electric shock, fire and/or serious injury.

SAFETY REQUIREMENTS



WARNING

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



1. **Always wear heat-resistant gloves.**

2. Make sure the drain pipe has been opened and ventilated to stop any gases forming in the lateral drain where the work takes place.

3. Always ensure that the machine is fully turned off and unplugged before inspection and maintenance. Always follow the instructions in the manufacturer's manual.

4. **Before each use** inspect the machine carefully for any potential break or damage. **Change damaged parts immediately.** It is especially important to check the condition of heat element casing for any signs of damages.

5. When in use, it is very important that the machine is stable and on an even surface at all times.



6. **Do not touch** the heat cable without heat-resistant gloves during and after use, it may be hot and could burn your skin.

7. If the working environment is extremely hot and humid, or badly polluted by conductive dust, use a GFCI-enabled power outlet to ensure the safety of the operator.

8. Ensure that the ventilation openings are kept clear when working in dusty conditions. If it should become necessary to clear dust, first unplug the machine. Avoid damaging internal parts.

9. Do not stand on the machine.

10. Only use this machine with the accessories and spare parts offered by the Picote Solutions. Accessories and spare parts should only be used in the manner intended and as described by the Picote Solutions.

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.*

ENVIRONMENTAL

Operational Ambient Temperature Range:	-20...50 °C (-4...122 °F) frost and condensation free
Storage Ambient Temperature Range:	-20...60 °C (-4...140 °F) frost and condensation free
Maximum Humidity:	95% non-condensing

TRANSPORT

Smart Heat Millers should be transported in car or other vehicle laid down and secured with ratchet straps to prevent any sudden movements or accidents caused by hard braking or accident.

If using pick-up or trailer to transport Picote milling machines, cover the unit to protect it from raining water and dust.

STORAGE

It is recommended that Smart Haet Millers are stored indoors protected from rain and sunlight and in constant ambient temperature. Best way to store the machines is in the same box that the machine has been shipped.

If the Smart Heat Miller will be stored in colder environment than +10 °C (50 °F), the milling machine should be stood at room temperature for 24hours before use.

If Smart Heat Miller has been stored for long periods of time (over 2-3 months), it should be checked and tested before use on site.

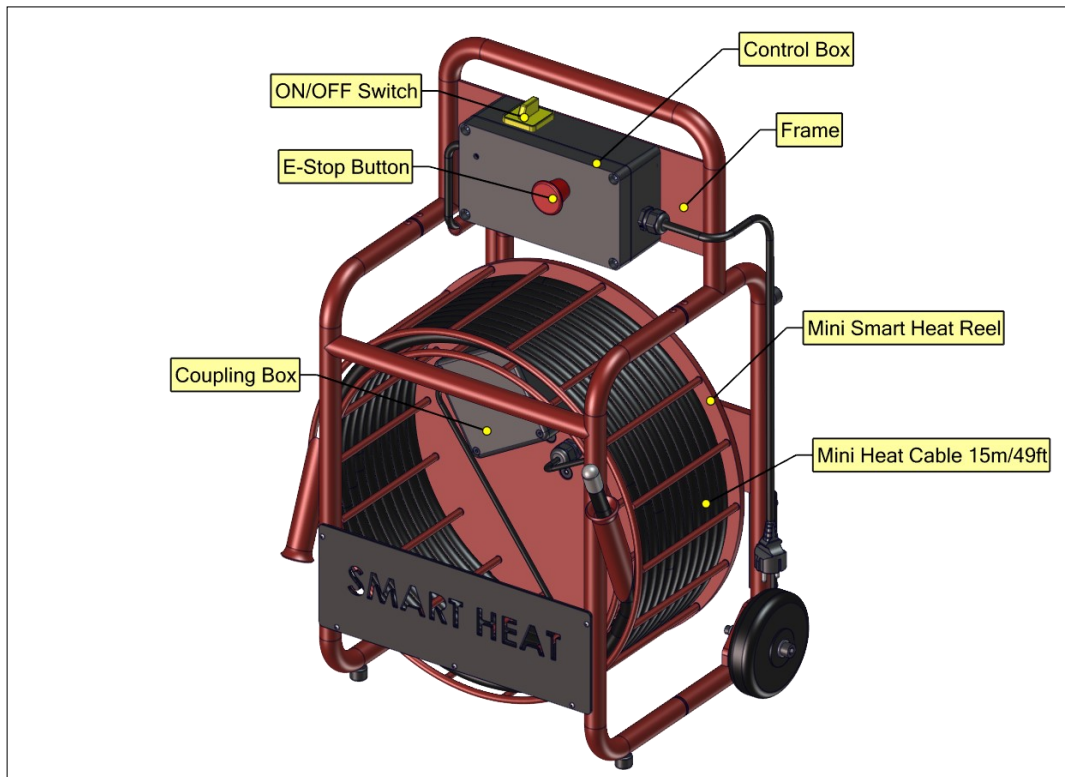
DISPOSAL

Smart Heat Miller heating cable, control box, electric wires and axle package including slip ring can be disposed in Europe at Waste Electrical and Electronic Equipment (WEEE) collection points. Miller frame and reel and can be recycled in metal waste collection points. Plastic components can be separated from the assembly and collected in plastic waste waste collection points.

Always follow the local waste handling rules and regulation.

Picote Mini Smart Heat Miller

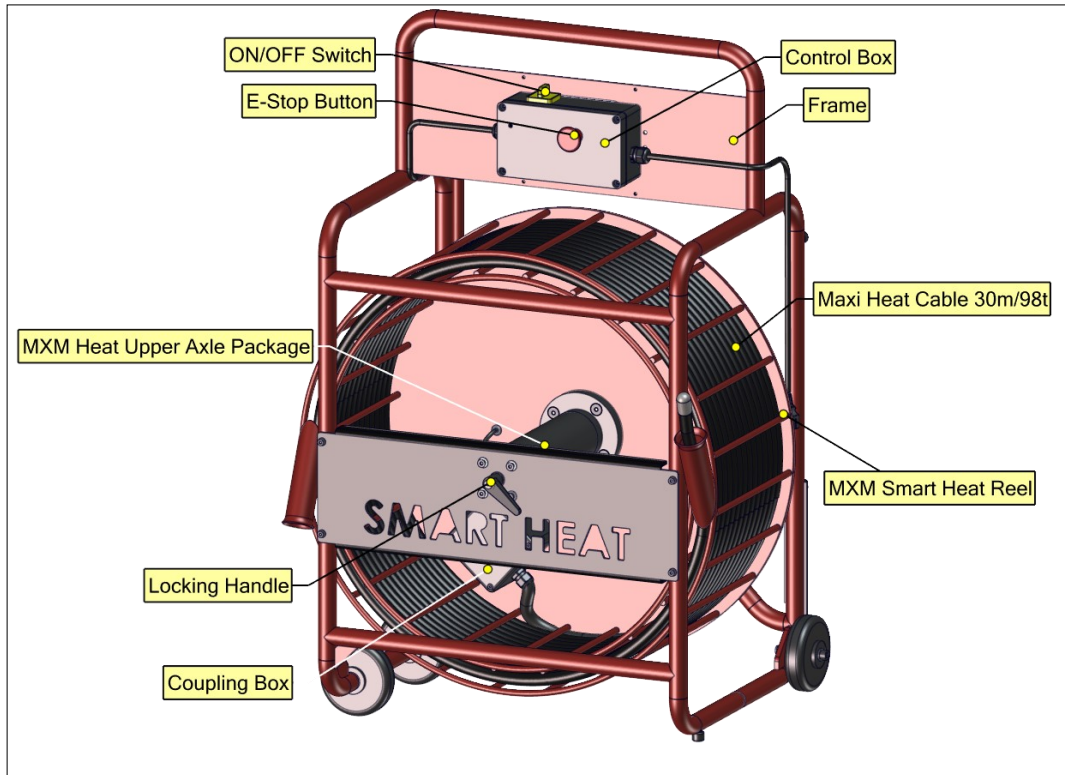
GENERAL INFORMATION



CAUTION When in use, always lay the machine down horizontally on the floor.

Picote Maxi Smart Heat Miller

GENERAL INFORMATION



CAUTION When in use, always lay the machine down horizontally on the floor.

Picote Smart Heat Miller

TECHNICAL DATA—MINI SMART HEAT MILLER

Size (mm/inches)	Range (m/ft)	Drain Diameter (mm/inches)	Output (W)	Power Source	Weight (kg/lbs)
740x519x404 29"x20"x16"	15 / 49	DN50-DN100 / 2"-4"	960	Electric Heating Element	22/49

TECHNICAL DATA—MAXI SMART HEAT MILLER

Size (mm/inches)	Range (m/ft)	Drain Diameter (mm/inches)	Output (W)	Power Source	Weight (kg/lbs)
740x519x404 29"x20"x16"	30 / 98	DN50*-DN100 / 2"-4"	1920	Electric Heating Element	53/117

*If there are several 90° bends in DN50/2" pipes, the Mini Smart Heat Miller cable goes around them better.

INTENDED USE

This machine is intended to shorten the curing time of the lining. The main purpose of the machine is to ensure that during cold season added heating start the curing process so that the lining is cured over night.

Any other usage is forbidden without written acceptance from Picote Solutions.

Picote Smart Heat Miller

VOLTAGE & POWER SUPPLY

Ensure that the supply voltage is correct. The voltage of the power source must match the value given on the nameplate of the machine within the tolerances of $\pm 10\%$. Machines with a 230V plate can be used in 220V mains and 110V machines in the 120V grid.

The machine has been double sealed according to European standards. The power source has to be grounded.

Power plugs

For safety purposes, use only grounded outlets. If the plug does not fit securely or match the outlet, do not force it — contact an electrician to determine required power supply. **Never alter the plug in any way.** Use the plug with an extension cord only if it can be fully inserted into the receptacle. Use the Picote Smart Heat Millers with a heavy duty extension cord only.

If a power generator is used as power source, ensure that the power rating is sufficient.

220-230V: EU Schuko 230V 16A. Power cable lead minimum thickness 2.5mm^2 .

110-125V: The Smart Heat Millers are equipped with a 15 amp (125V) NEMA 5-15 plug. Power cable lead minimum thickness $2,5\text{mm}^2 / 12 \text{ AWG}$. The Smart Heat Millers must be supplied with sufficient power and proper current rating. A minimum of 15 amps are needed to operate it safely and efficiently. When used with an extension cord, the cord must be a 3 prong, 15amp (125V). If power generator is used, minimum 3 kW required. Adapters may be necessary for generator connections. Contact your reseller or Picote technical support for more information.

AUSTRALIA/UK: Smart Heat Millers in these regions have special plugs.

Australia: CEE 16A 230V color blue. Power cable minimum lead thickness 2.5mm^2 .

UK: UK Plug Industrial 3-pin 16A 110V color yellow. Power cable lead minimum thickness $2,5\text{mm}^2$. Smart Heat Millers requires a transformer to comply with the site power regulations and safe usage in UK. For example: 3.3KVA Site Transformer 1 X 16AMP outlet 110V.

SAFETY FEATURES



The machine is equipped with an Emergency Switch Off Button. The power supply to the motor is cut off when the Emergency Switch Off Button is pushed. Always unplug the machine from the power source when performing any maintenance or repairs to the machine.

CE DECLARATION OF CONFORMITY

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

Mini Smart Heat Miller

Model No: 8/15

Maxi Smart Heat Miller

Model No: 12/30

is of series production and

Conforms to the following EU Directive:

ATEX 2014/34/EU & 2006/42/EC

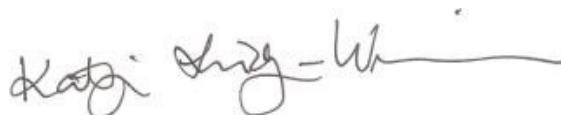
And is manufactured in accordance with the following standards or standardised documents:

IEC 60204-1:2018 & IEC 62395-2:2013

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

Picote Solutions Oy Ltd, Pienteollisuustie 24
06450 Porvoo, Finland

1st July 2019



Katja Lindy-Wilkinson
C.E.O.

Picote Solutions Oy Ltd
Pienteollisuustie 24, 06450 Porvoo, Finland

OPERATING INSTRUCTIONS

Before operation:



- Before installing Smart Heat cable inside the pipe, always make sure that the machine is fully turned off and unplugged to avoid burn injuries.
- Always check the condition of the cable casing before using the machine for any signs of wear and tear.
- The heating cable can be guided directly through the curing cap without need to decompress the lining during the process.

While in operation:

- Always lay the machine down horizontally on the floor.

STARTING & USING THE MACHINE



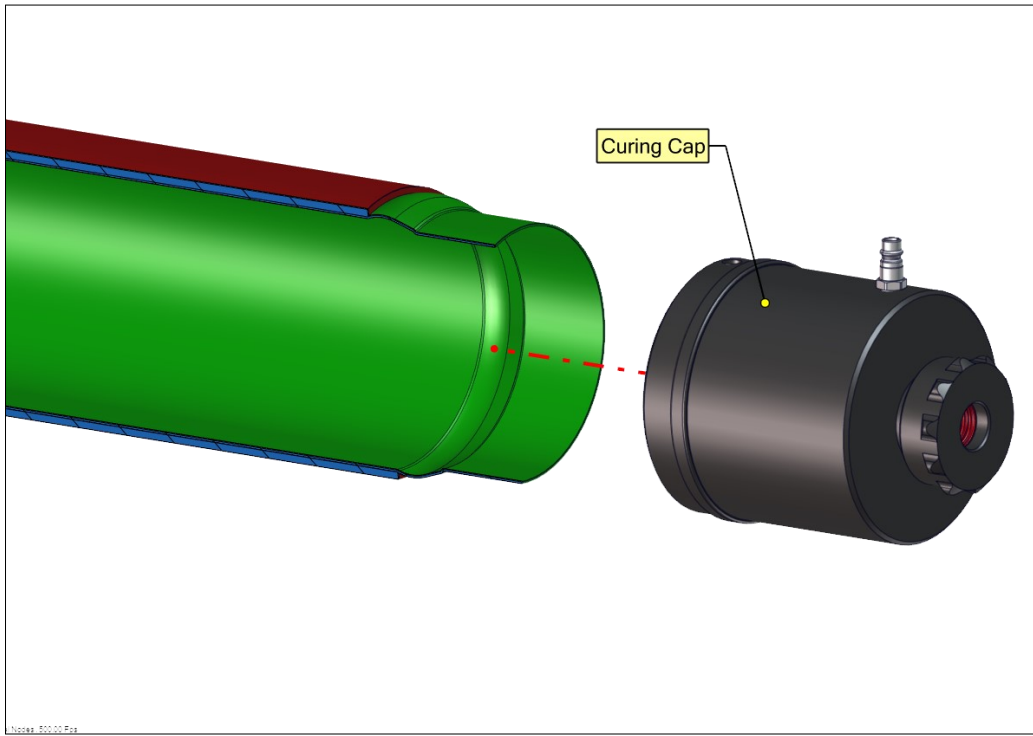
This section contains important safety information. Failure to comply could result in serious injury.

1. Shoot the lining inside the pipe.
2. Place the curing cap in the end of the lining. Liner compressor can be used to prevent the lining from collapsing during this step.
3. Plug the compressed air hose to the curing cap and remove liner compressor.
4. Push the Smart Heat cable through the curing cap.
5. Release E-Stop Button and turn power switch to ON position.
6. After the lining is cured, pull the heating cable to the reel, remove curing cap and finish off the end of the lining.

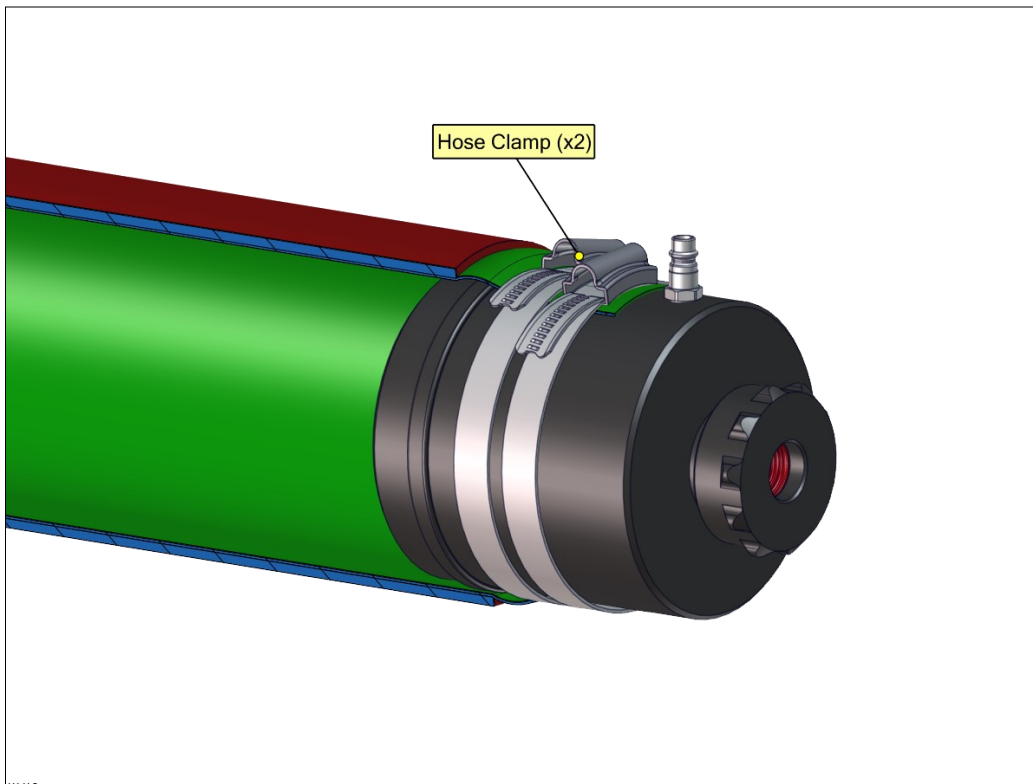
The heating cable used into the Picote Smart Heat Millers is self-adjusting. Heating element observes the temperature constantly and prevents the temperature to rise above +60 °C (+140 F) in the pipe thus preventing any damages to the lining. The heating cable is water-proof.

OPERATING INSTRUCTIONS

Step 1. Shoot the lining, secure the end of the lining with Picote Liner Compressor and add Curing Cap.

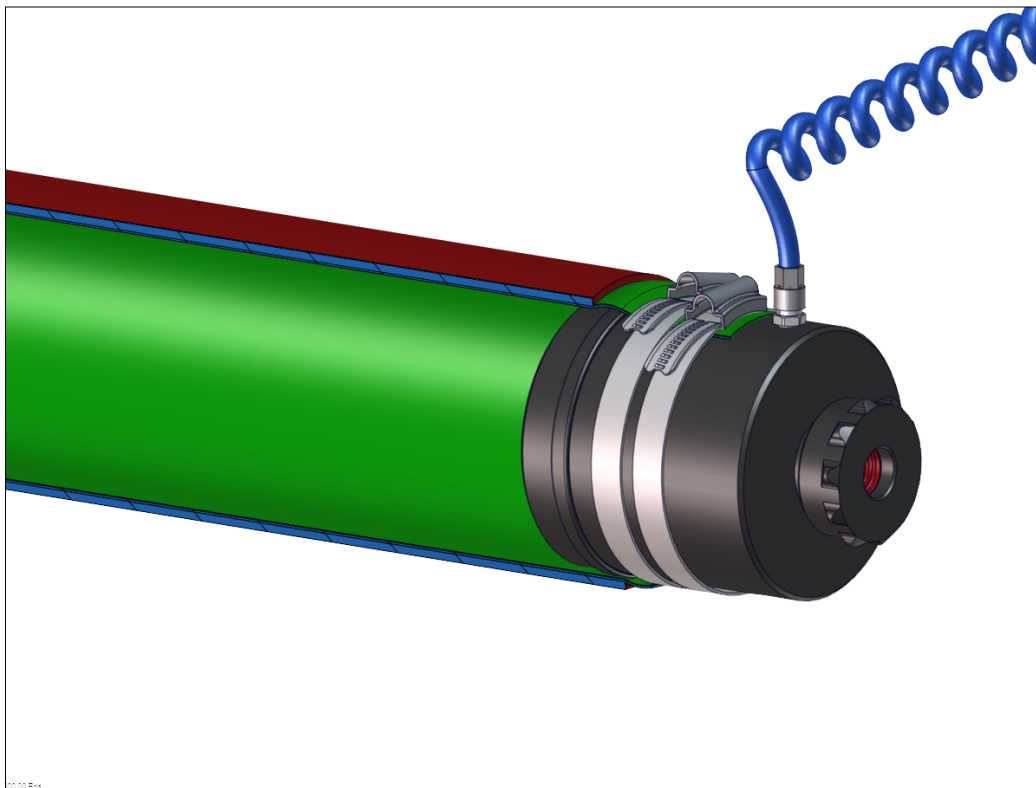


Step 2. Add hose clamps to secure the lining to the Curing Cap.

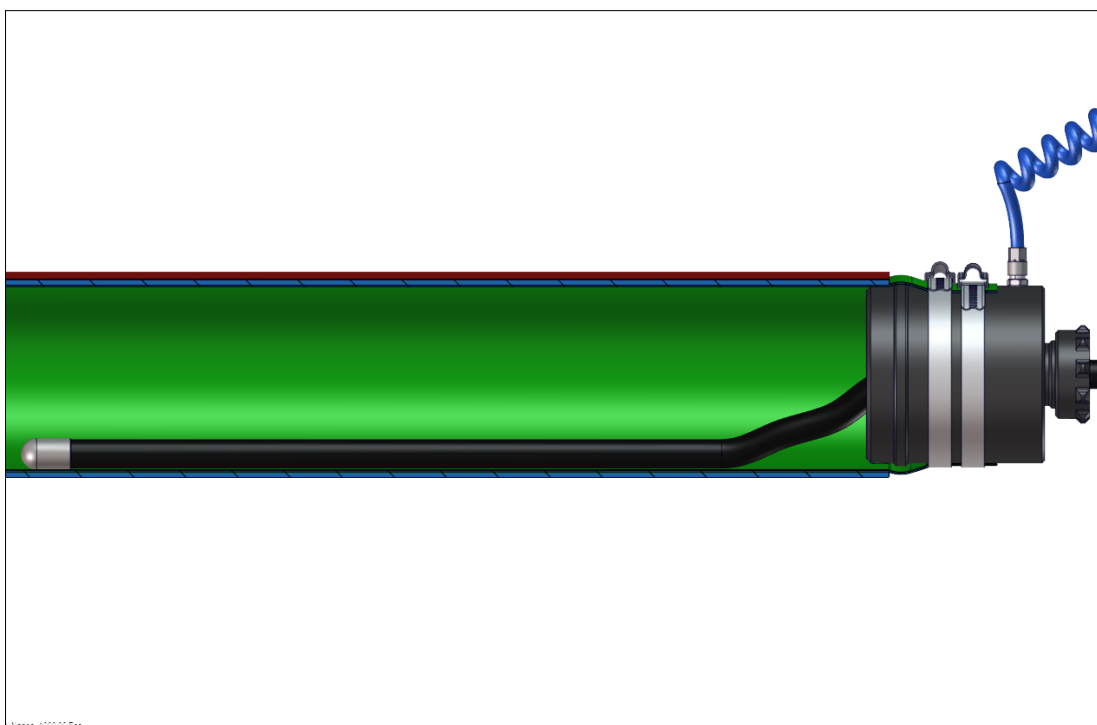


OPERATING INSTRUCTIONS

Step 3. Pressurize the lining again.



Step 4. Push the Heating Cable through the lining and power up the Picote Smart Heat Miller.



SMART HEAT CURING TIME TEMPERATURE CURVE

WARNING

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

The heating effectiveness of the Picote Smart Heat Miller depends on the temperature of the pipe. When external temperature is lower the heating cable is producing heat in more efficient manner. In field tests it has been noted that the curing time of the lining is 35 % faster when the Picote Smart Heat Miller has been used in temperatures below +10 °C (+50 °F).

MAINTENANCE

WARNING



1. Before performing any maintenance always check that the machine is fully turned off and unplugged.

2. Carefully inspect the heating cable on a regular basis to ensure that there are no signs of wear and tear. Change the heating cable as and when required.
3. For safety and efficiency, always keep the machine clean.
4. Check that the cable glands are intact and change for any sign of damages.

REPLACING THE HEATING CABLE

Only use the heating cable specified by Picote Solutions. Order the replacement cable from your reseller.

1. Open the electrical connections.
2. Remove the heating cable from the reel.
3. Insert new heating cable.
4. Connect the electrical wiring.

ACCESSORIES & SPARE PARTS

⚠ WARNING You must use only the Picote Solutions accessories and attachments with the machine described in this operations manual. The use of other accessories or attachments could present a risk of injury or death. The accessories or attachments should only be used in the proper and intended manner, and always follow Picote Solutions instructions.

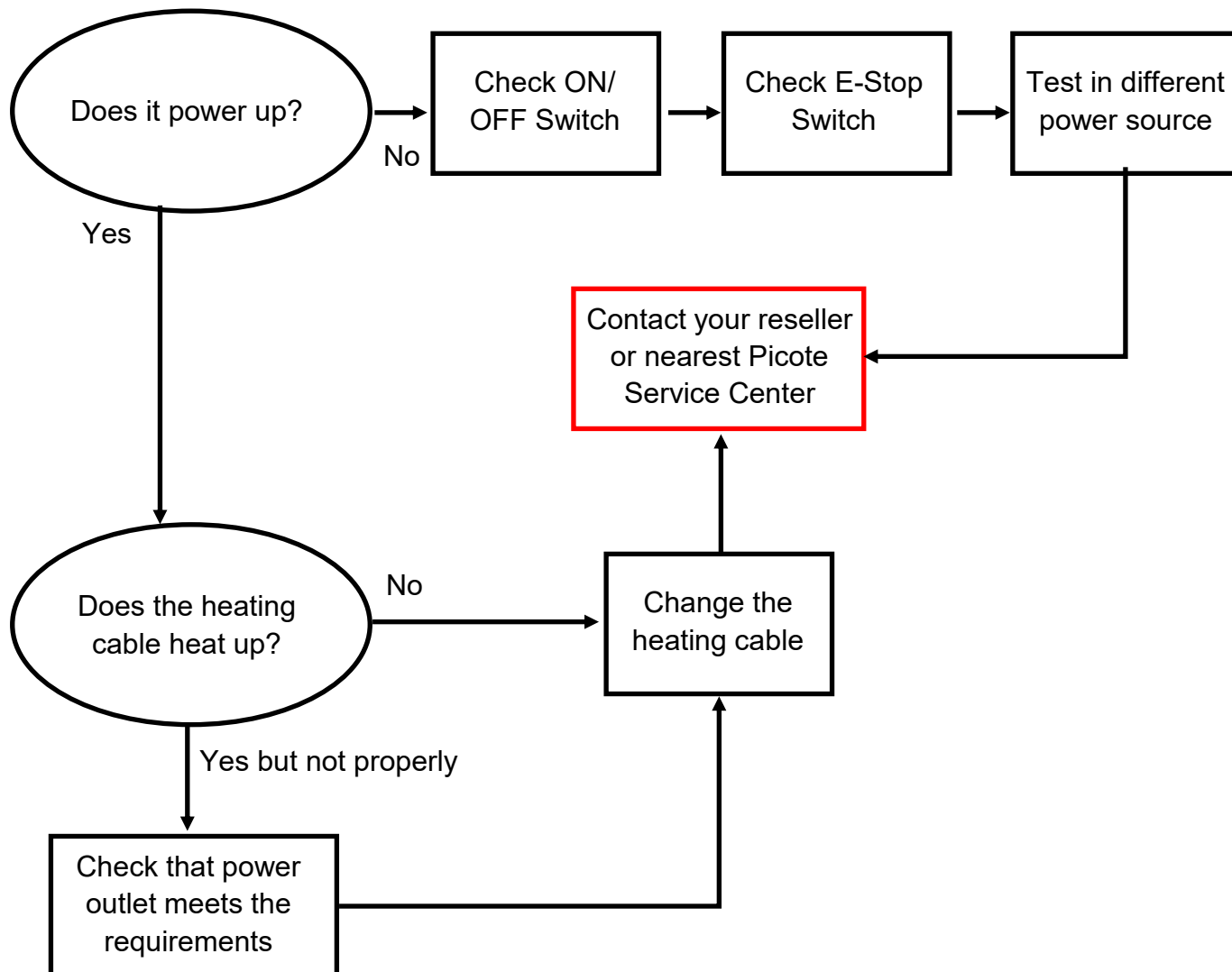
PICOTE SMART HEAT MILLER

3410000000	Picote Mini Smart Heat Miller
3410000000US	Picote Mini Smart Heat Miller US
3410000000UK	Picote Mini Smart Heat Miller UK
3430000000	Picote Maxi Smart Heat Miller
3430000000US	Picote Maxi Smart Heat Miller US
3430000000UK	Picote Maxi Smart Heat Miller UK

SPARE PARTS

2340004050	Mini Smart Heat Curing Cap DN50
2340004070	Mini Smart Heat Curing Cap DN70
2340004100	Mini Smart Heat Curing Cap DN100
2340005050	Maxi Smart Heat Curing Cap DN50
2340005070	Maxi Smart Heat Curing Cap DN70
2340005100	Maxi Smart Heat Curing Cap DN100
2340004050US	Mini Smart Heat Curing Cap DN50 US
2340004070US	Mini Smart Heat Curing Cap DN70 US
2340004100US	Mini Smart Heat Curing Cap DN100 US
2340005050US	Maxi Smart Heat Curing Cap DN50 US
2340005070US	Maxi Smart Heat Curing Cap DN70 US
2340005100US	Maxi Smart Heat Curing Cap DN100 US

TROUBLESHOOTING FLOWCHART



If there is problem that you cannot resolve with this manual, please consult your Picote Reseller or Picote Solutions.

WARRANTY POLICY AND PROCEDURE

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 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. Product overload or overheated motor,
3. Regular periodic maintenance of Products,
4. Misuse, neglect, or improper installation or maintenance of the Products, or use of Products not for their intended purpose,
5. 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;
6. 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, NONINFRINGEMENT, 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.

Revision number: Rev. 1

Author: Mikko Långvik

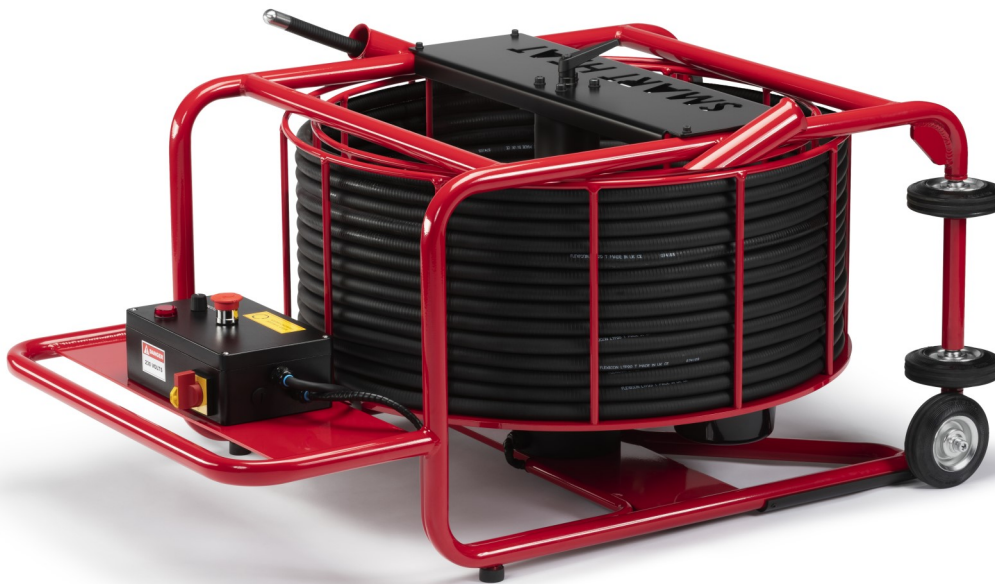
Accepted:

Date: 24 Oct. 2019

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Your Reseller or Picote

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