

OPERATOR CHECKLIST



DO NOT USE THIS EQUIPMENT IF YOU HAVE NOT BEEN TRAINED!

For your personal safety always ensure that you have read and understood the **Operation and Safety Manual** and follow the instructions when installing tooling and using the Mini Miller.



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



Danger risk of serious injury, follow instructions



Danger risk of serious injury from rotating parts

Personal Protective Equipment (PPE)

Always use Personal Protective Equipment including suitable protective clothing, footwear plus:



Suitable eye protection to protect against sewage, chemicals or dust from irritating eyes.



Suitable ear protection to protect against hearing loss.



Suitable heat and cut-resistant gloves to help prevent any hand injuries. Any open injuries or skin irritations should always be covered to avoid contact with sewage, chemicals or dust.



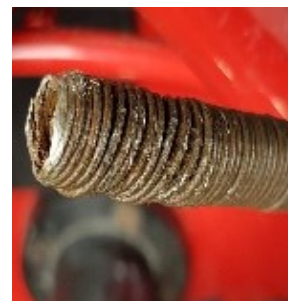
Suitable respirator to prevent any dust or fumes being inhaled or consumed, which could cause occupational asthma or dermatitis.

Please Note: Only use Picote Tools designed for 1/3" Shaft
Recommended diameter range 2-4"

BEFORE OPERATION

Before installing tooling always ensure Mini Miller is turned off & unplugged.

- Always lay the Mini Miller down horizontally on the floor during operation.
- Always inspect the flexible shaft before each use. If there are potential weak points, or the shaft is damaged, cut off the damaged length using a band saw or replace the entire shaft as needed.
- Round off any sharp edges of the shaft to avoid cuts and to make it easier to insert the shaft into the tooling.
- Check that there is sufficient length of exposed flexible shaft, without its outer casing, to attach tooling and allow for shaft movement.
- Check that all tooling screws have been loosened, so that the shaft can be easily inserted inside the tooling. Position the shaft inside the tooling as far as it will go. Tighten screws starting with the screw furthest away from the shaft end.
- Use a Sleeve over the end of the outer casing to prevent it from melting.



Trim back damaged Shaft



Tighten screws starting with the screw furthest away from the shaft end



Sleeve

Please refer to the **Operation and Safety Manual** before undertaking any work.
Ask your Reseller or contact Picote for further information: support@picotesolutions.com

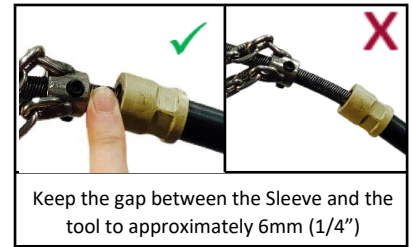
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STARTING & USING THE MINI MILLER

- Make sure pipe has been opened & ventilated to prevent gases accumulating.
- Choose the correct size tool for your job. Always use the largest size that will fit inside the pipe and go around any bends.
- Place the Mini Miller as close as possible to the pipe opening.
- **Attach a visual marker (tape) on the outer casing of the flexible shaft around 20" from the end of the shaft. The marker will indicate the tooling's location and help prevent possible injury from the rotating parts by alerting you when the tooling is about to exit the pipe.**
- Do not extend the shaft by more than one 32' extension. Only use Picote Shaft Extension & Connector.
- Ensure water is flowing in pipe or vacuum extraction is used (dry cleaning).
- Where water cooling is not used (air/vacuum situations), take breaks every 15-20 minutes, as tooling gets very hot during use.
- Observe temperature of outer casing. Let Mini Miller cool down every 30 minutes of constant work.
- Optimal rotation speed of the Mini Miller is between setting 2-4 (900-2100 rpm) depending on work. Minimum rotation speed is normally the best when moving the tooling around tight bends. Adjust the speed up to the level which seems to work the best. **Do not use a higher rotation speed than 4 (2100 rpm) as it may cause overheating between the shaft and the outer casing.**
- **Do not force the tooling through the pipe, let the tool do the work.** Too much force or speed may cause the tooling to get stuck, resulting in tooling or shaft breakage and possible pipe damage.
- Use either water or vacuum to remove debris
- **For safety and efficiency always check** the ventilation openings on the motor are kept clear when working in dusty conditions. If it should become necessary to clear the dust, first unplug the Miller.
- Move the tooling constantly back and forth during operation to prevent overheating the outer casing. This is especially important when working in pipes with tight bends.



Speed selector located on motor

Always wear heat and cut resistant gloves when handling tooling (always be sure Mini Miller has been switched off and unplugged first). Tooling can be cooled down by placing in a bucket of cold water or left to cool in the open air.



MAINTENANCE

Always make sure that the Mini Miller is fully turned off and unplugged.

- Inspect the condition of the shaft.
- Every 3 months (or when needed) lubricate flexible shaft with Picote Flexible Shaft Lubricant.
- Once a week remove the hand guard and check the tightness of the screws on the shaft connection. If loose, apply Loctite 542 to the threads and re-tighten.
- Replace any fastener screws immediately if you are unable to fully tighten them due to worn out hex socket heads as the tooling could fall into the pipe.



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