



NoDig Norway



Mini Cleaner Training Manual



May 2019

Operators Check List

Picote Mini Cleaner

DO NOT use the equipment if you have not been trained.

! WARNING

For your personal safety always ensure that you have read and understood the Operational and Safety Instructions.

Always follow the manufacturer's instructions when installing and using the machine with accessories.

Use only Picote tools



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 overalls / protective clothing / footwear
Plus:



Suitable eye protection to prevent sewage, chemicals or dust from irritating your eyes.



Suitable ear protection to prevent any hearing loss.



Suitable heat and cut-resistant gloves to 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 can cause occupational asthma or dermatitis as well as eye irritation.

Before Operation

Before installing Picote tools, always make sure that the machine is fully turned off and unplugged.

- Always lay the machine down horizontally on the floor.
- Before use always inspect the flexible shaft. If there are potential weak points or the shaft is damaged, cut off the damaged length using an angle-grinder. This should be done outside in a clear area as the process will generate sparks.
- Round off any sharp edges of the shaft to avoid cuts and to make it easier to insert the shaft into the tool to be used.
- Check that there is sufficient length of flexible shaft, without its plastic casing, at the end of the flexible shaft.
- Check that all screws have been loosened so that the shaft can be easily inserted inside the tool. Position the shaft inside the tool as far as it will go. Tighten the screws.
- When working on pipe diameters DN75 (3") or above use a "Sleeve Bearings" over the end of the outer casing to prevent it from melting unless working through the toilet.

Starting & Using the Machine

- Make sure the pipe has been opened and ventilated to stop any gases forming in any lateral pipe where the work takes place.
- Choose the correct size tool for your job. Always use the largest size that will fit inside the pipe and go around any bends.
- Check that the flexible cable is rotating CLOCKWISE.
- Place the machine as close as possible to the pipe being cleaned.

Do not use if the shaft is rotating in an ANTI-CLOCKWISE direction as it will unravel

- For your own safety attach a visual marker (tape) to the outer casing of the flexible shaft. Place it around half a meter from the end of the shaft. The marker will indicate the tools location and prevent possible injuries, from the rotating parts, when the tool is removed from the pipe.
- Dust produced can be dangerous to your health, inflammable or explosive.
- Ensure water is flowing in pipe or the vacuum extraction is ready (dry cleaning).
- **Do not use** the Mini Cleaner with an extension shaft.

During Use

- **Optimal rotation speed of the Mini Cleaner is in between 2-4 (900-2100 rpm) depending on work.** Minimum rotation speed is normally the best when moving the tool around tight bends. When beginning to work, adjust the speed up to the level which seems to work the best.
- **Do not use larger rotation speed than 4 (2100 rpm) as it may cause the shaft to twist around the operators arm!**
- Do not force the cutters through the pipe — let the tool do the work. If too much force or excessive high speed is used the tool might get stuck resulting in damaging or breaking the tool, shaft or the pipe.
- Use either water or vacuum to remove debris.
- Where water cooling is not used (air / vacuum situations), take breaks every 15 - 20 minutes, as the tool head gets very hot during use.
- 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 machine. Avoid damaging internal parts.
- Move the tool constantly back and forth. Otherwise the outer casing might melt. This is especially important when working in pipes containing tight corners.
- Always observe the temperature of the outer casing and let the Picote Miller cool down after every 30 minute periods of constant work.



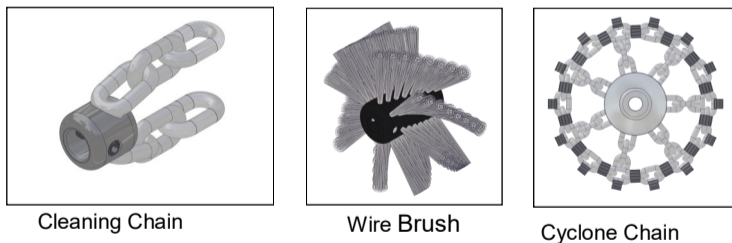
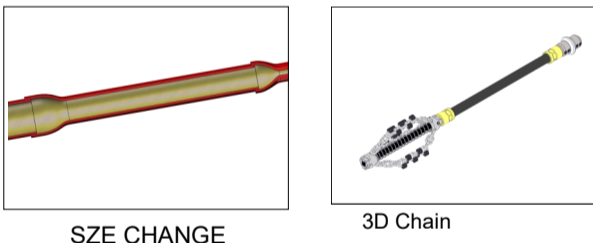
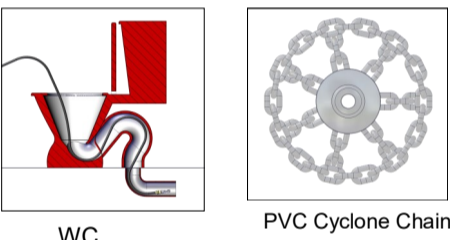
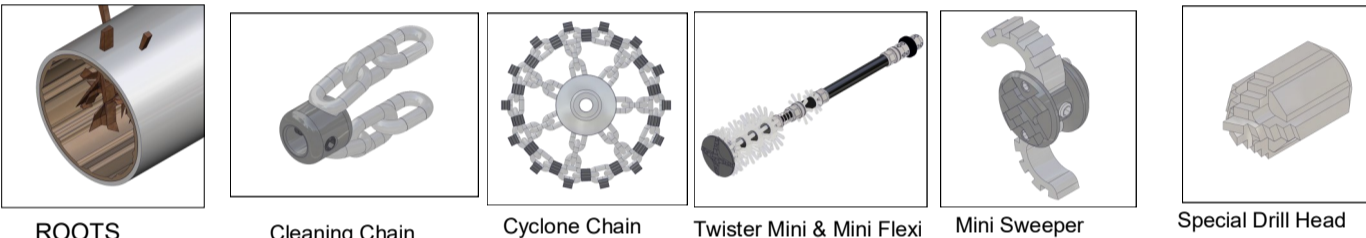
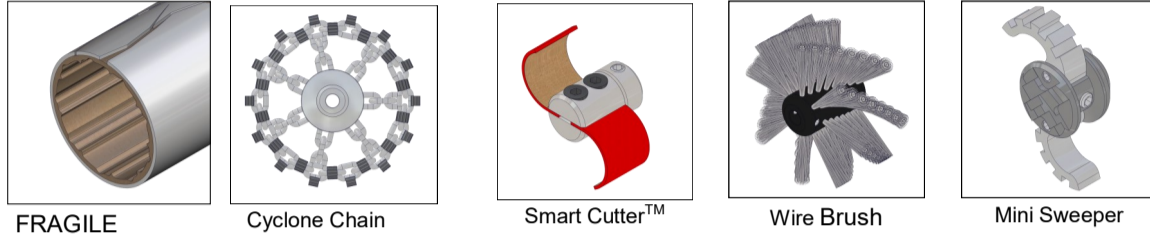
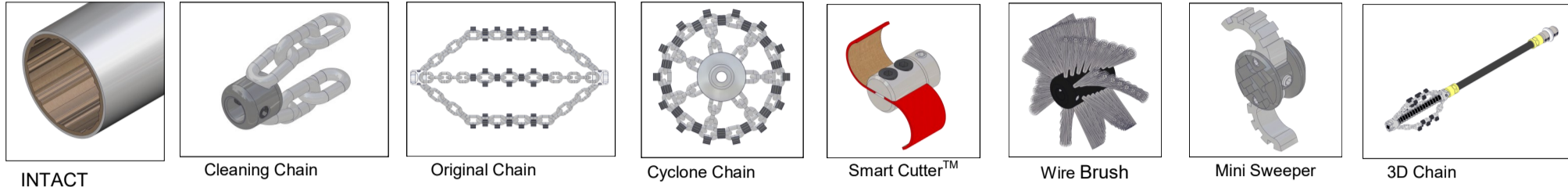
Always wear heat and cut resistant gloves when handling the tools after the machine has been switched off and the power supply isolated. The tools can be cooled down by placing them in a bucket of cold water or left to cool in the open air.

Maintenance

Before performing any maintenance always make sure that the machine is fully turned off and unplugged.

- Always inspect the condition and when required apply Picote Flexible Shaft Lubricant between the flexible shaft and its outer casing. If necessary remove the shaft from its casing to treat. When the casing has been replaced, manually rotate the shaft for even coverage.
- Only use Picote Flexible Shaft Lubricant (available from your reseller).
- When using the “Smart Cutter” replace the fastener screws immediately if you are unable to fully tighten them due to worn out hex socket heads as a panel could detach from the hub during the cutting process and fall into the pipe.
- **Remove and check carbon brushes regularly** and replace when worn down to the limit mark. Keep the carbon brushes clean and free to slip in the holders. Both carbon brushes should be replaced at the same time. Use only identical carbon brushes. Refer to the Operating Manual for further information.

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Mini Cleaner
Shaft Diameter: **8 mm (1/3")**
Range: **16 metres (52 ft)**
Pipe Diameter Range: **DN32 (1.1/4") to DN70 (3")**

Can be used to clean DN100 (4") pipes when used through the toilet

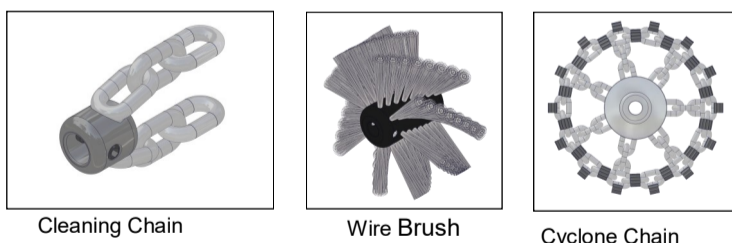
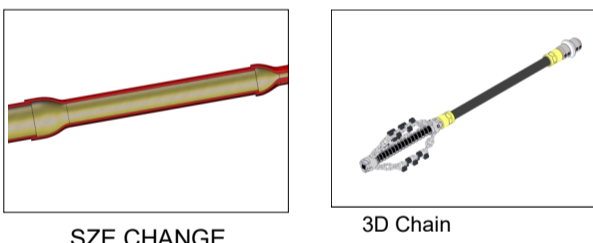
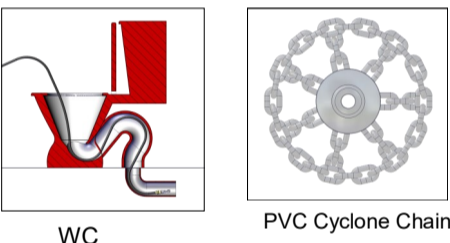
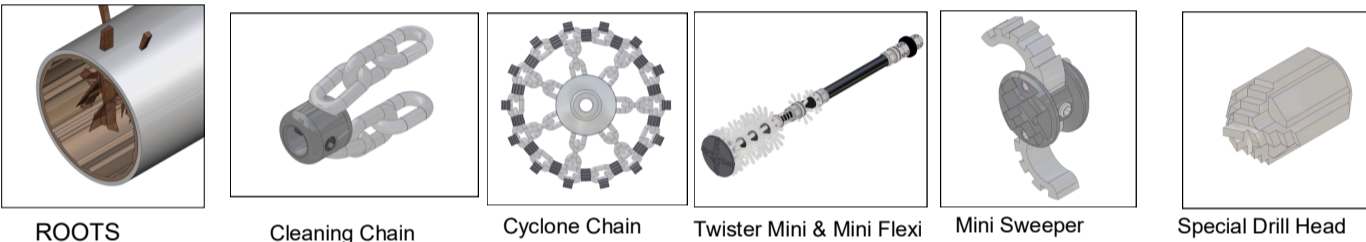
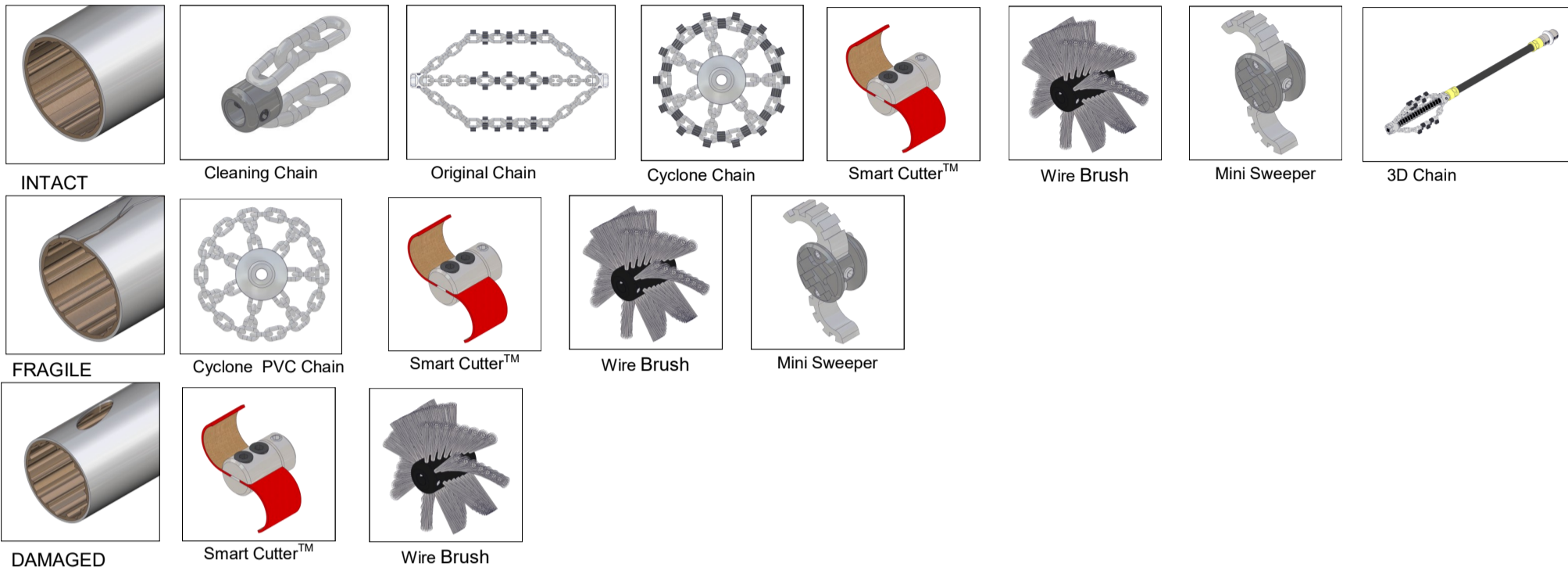
Available Tools	Size Diameter
Cleaning Chain	DN32 (1.1/4") & DN40 (1.1/2")
Original Chain (Standard)	DN50 (2") to DN70 (3")
Original Premium Chain	DN50 (2") to DN70(3")
Cyclone Chain (Standard)	DN70 (3") to DN70 (3")
Cyclone Premium Chain	DN70 (3")
Cyclone PVC Chain	DN70 (3") to DN100 (4")
3D Chain	DN50 (2") to DN70 (3")
Smart Cutter™	DN32 (1.1/4") to DN70 (3")
Wire Cleaning Brush*	DN50 (2") to DN70 (3")
Special Drill Head	DN32 (1¼") to DN70 (3")
Twister Mini & Mini Flexi	DN50 (2") & DN70 (3")
Mini Sweeper	DN40 (1.1/2") to DN70 (3")

* Wire brushes should only be used for cleaning fine dust or light mineral deposits.

Optimal rotation speed of the Mini Cleaner is between 2-4 (900-2100 rpm) depending on work.

Do not use a larger rotation speed than 4 (2100 rpm) as it may cause the shaft to twist around the operators arm!

DESCALING



Mini Cleaner
 Shaft Diameter: **8 mm (1/3")**
 Range: **16 metres (52 ft)**
 Pipe Diameter Range: **DN32 (1.1/4") to DN70 (3")**

Can be used to clean DN100 (4") pipes when used through the toilet

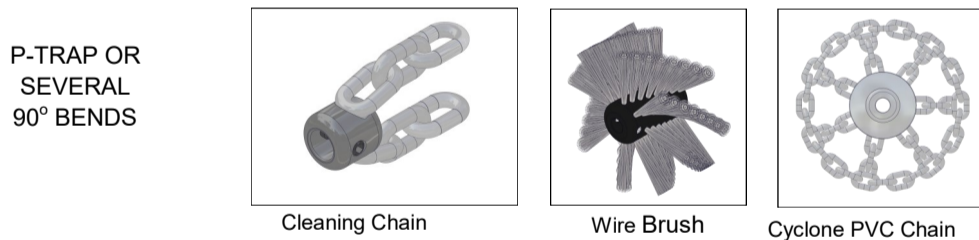
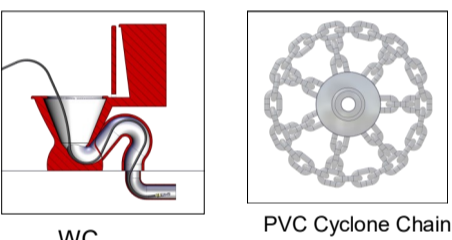
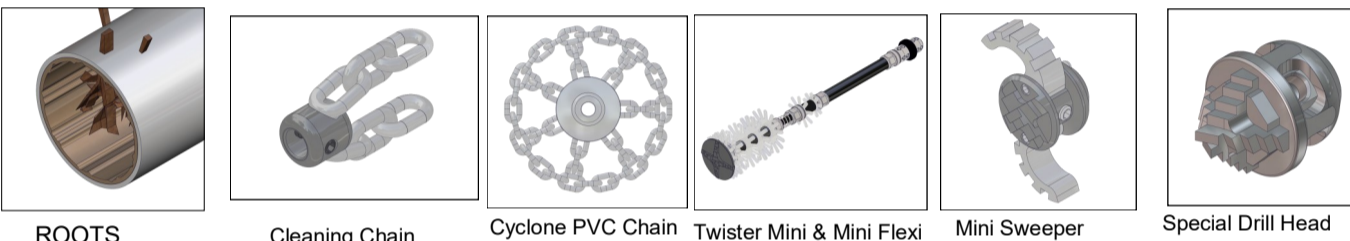
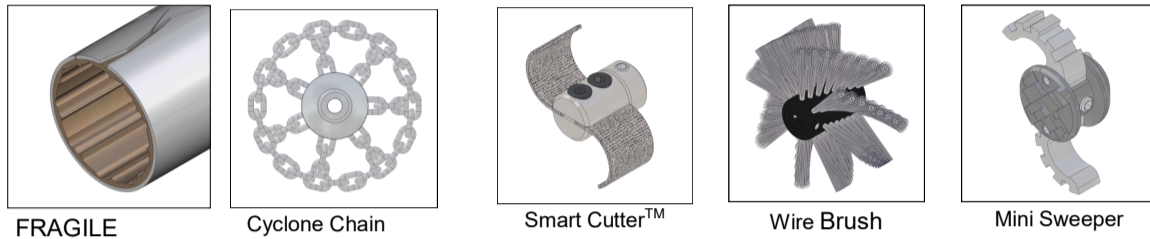
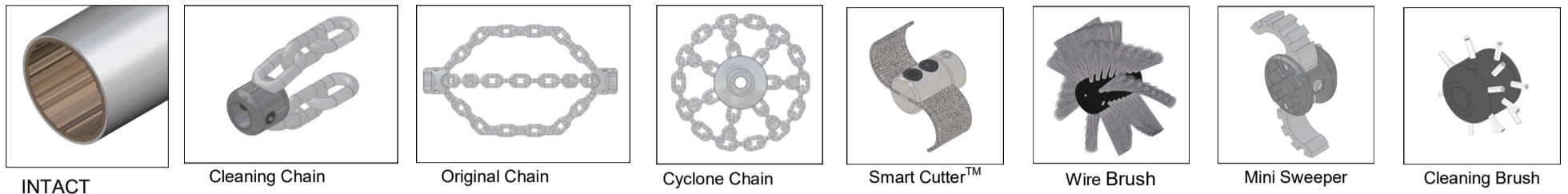
Available Tools	Size Diameter
Cleaning Chain	DN32 (1.1/4") & DN40 (1.1/2")
Original Chain (Standard)	DN50 (2") to DN70 (3")
Original Premium Chain	DN50 (2") to DN70(3")
Cyclone Chain (Standard)	DN70 (3") to DN70 (3")
Cyclone Premium Chain	DN70 (3")
Cyclone PVC Chain	DN70 (3") to DN100 (4")
3D Chain	DN50 (2") to DN70 (3")
Smart Cutter™	DN32 (1.1/4") to DN70 (3")
Wire Cleaning Brush*	DN50 (2") to DN70 (3")
Twister Mini & Mini Flexi	DN50 (2") & DN70 (3")
Special Drill Head	DN32 (1 1/4") to DN70 (3")
Mini Sweeper	DN40 (1.1/2") to DN70 (3")

* Wire brushes should only be used for cleaning fine dust or light mineral deposits.

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Do not use a larger rotation speed than 4 (2100 rpm) as it may cause the shaft to twist around the operators arm!

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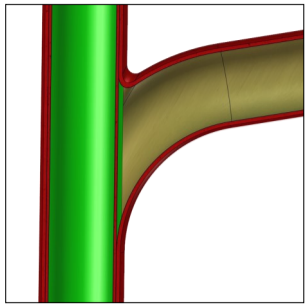
Mini Cleaner
 Shaft Diameter: **8 mm (1/3")**
 Range: **16 metres (52 ft)**
 Pipe Diameter Range: **DN32 (1.1/4") to DN70 (3")**
Can be used to clean DN100 (4") pipes when used through the toilet.
Smart Cutter™ needs to be equipped with polishing panels when used in plastic pipes!

Available Tools	Size Diameter
Cleaning Chain	DN32 (1.1/4") & DN40 (1.1/2")
Original PVC Chain	DN50 (2") to DN70 (3")
Cyclone PVC Chain	DN70 (3") to DN100 (4")
Smart Cutter™	DN32 (1.1/4") to DN70 (3")
Wire Cleaning Brush*	DN50 (2") to DN70 (3")
Cleaning Brush	DN32 (1.1/4") to DN40 (1.1/2")
Twister Mini & Mini Flexi	DN50 (2") & DN70 (3")
Special Drill Head	DN32 (1 1/4") to DN70 (3")
Mini Sweeper	DN40 (1.1/2") to DN70 (3")

* Wire brushes should only be used for cleaning fine dust or light mineral deposits.

Optimal rotation speed of the Mini Cleaner is between 2-4 (900-2100 rpm) depending on work.
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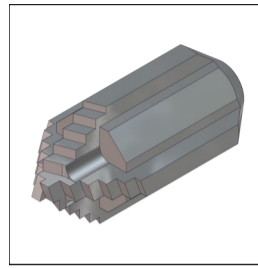
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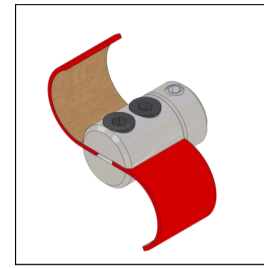
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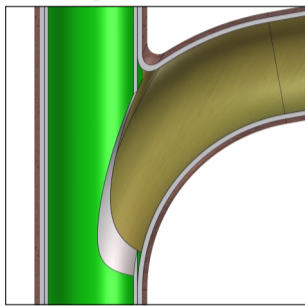
Twister Mini & Mini Flexi



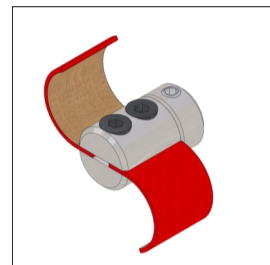
Special Drill Head



Smart Cutter



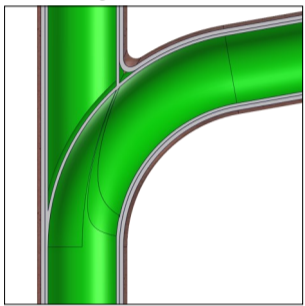
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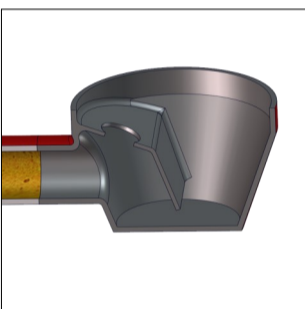
Smart Cutter



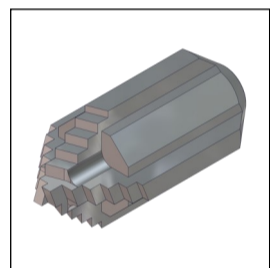
Twister Mini & Mini Flexi



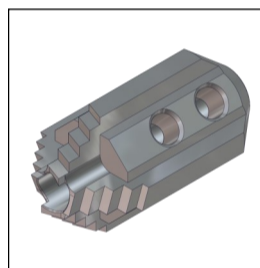
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FLOOR DRAIN



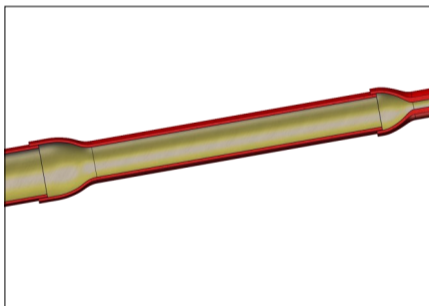
Special Drill Head



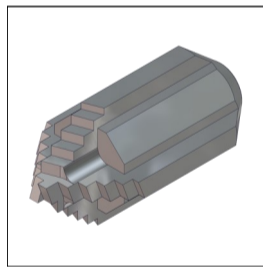
Special Drill Head 3D



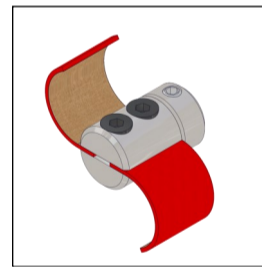
Smart Cutter



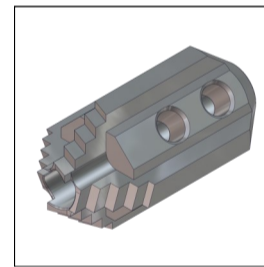
SIZE CHANGE



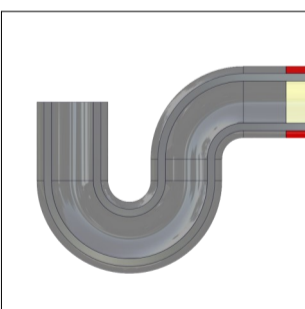
Special Drill Head



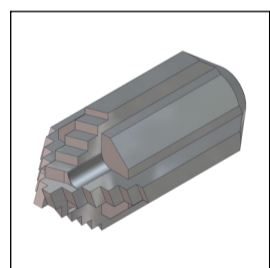
Smart Cutter



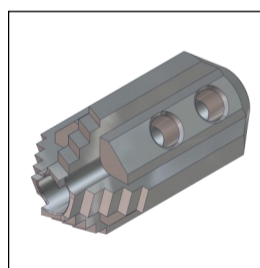
Special Drill Head 3D



P-TRAP



Special Drill Head



Special Drill Head 3D



Smart Cutter



Twister Mini Flexi

Mini Cleaner

Shaft Diameter: **8 mm (1/3")**

Range: **16 metres (52 ft)**

Pipe Diameter Range: **DN32 (1.1/4") to DN70 (3")**

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Optimal rotation speed of the Mini Cleaner is between 2-4 (900-2100 rpm) depending on work.

Do not use a larger rotation speed than 4 (2100 rpm) as it may cause the shaft to twist around the operators arm!

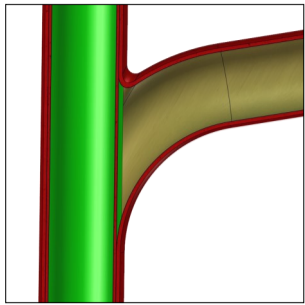
Available Tools

- Smart Cutter™
- Twister Mini & Mini Flexi
- Special Drill Head
- Special Drill Head PVC
- Special Drill Head 3D

Size Diameter

- DN32 (1.1/4") to DN70 (3")
- DN50 (2") & DN70 (3")
- DN32 (1.1/4") to DN70 (3")
- DN32 (1.1/4") to DN70 (3")
- DN50 (2") to DN70 (3")

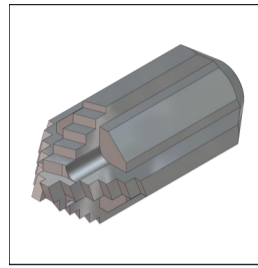
STANDARD



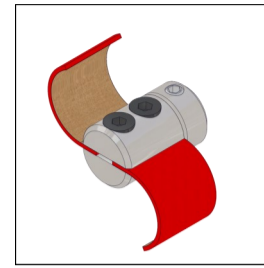
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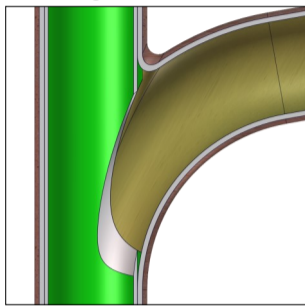
Twister Mini & Mini Flexi



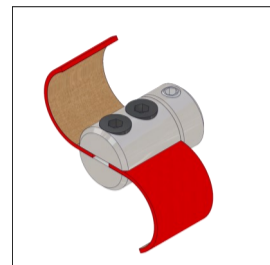
Special Drill Head



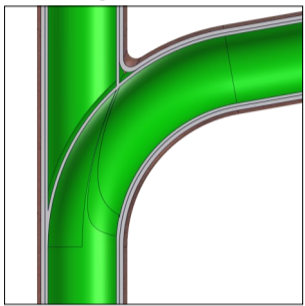
Smart Cutter™



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Smart Cutter™



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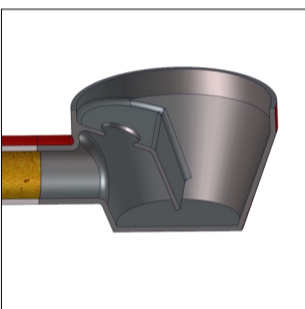
Twister Mini & Mini Flexi

Mini Cleaner

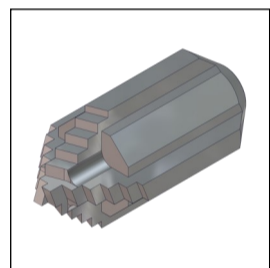
Shaft Diameter: **8 mm (1/3")**

Range: **16 metres (52 ft)**

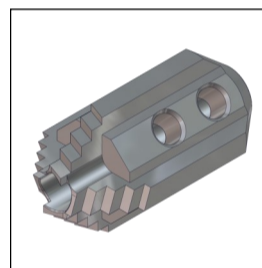
Pipe Diameter Range: **DN32 (1.1/4") to DN70 (3")**



FLOOR DRAIN



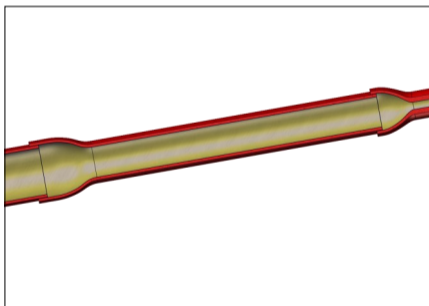
Special Drill Head



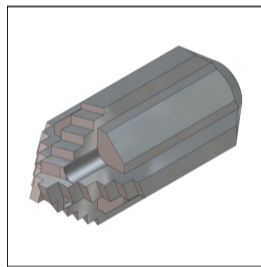
Special Drill Head 3D



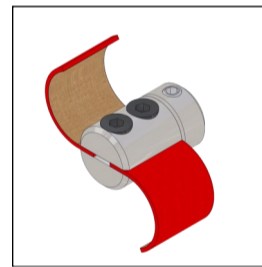
Smart Cutter™



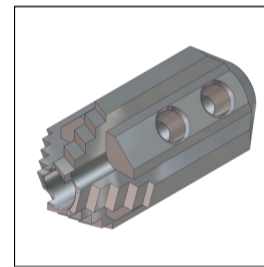
SIZE CHANGE



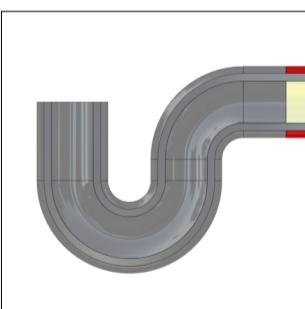
Special Drill Head



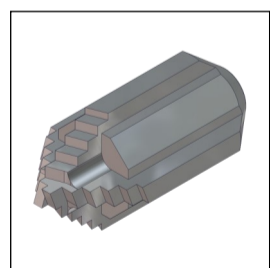
Smart Cutter



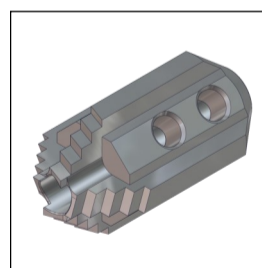
Special Drill Head 3D



P-TRAP



Special Drill Head



Special Drill Head 3D



Smart Cutter™



Twister Mini Flexi

SPECIAL

Optimal rotation speed of the Mini Cleaner is between 2-4 (900-2100 rpm) depending on work.

Do not use a larger rotation speed than 4 (2100 rpm) as it may cause the shaft to twist around the operators arm!

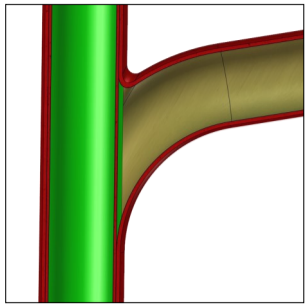
Available Tools

- Smart Cutter™
- Twister Mini & Mini Flexi
- Special Drill Head
- Special Drill Head PVC
- Special Drill Head 3D

Size Diameter

- DN32 (1.1/4") to DN70 (3")
- DN50 (2") & DN70 (3")
- DN32 (1.1/4") to DN70 (3")
- DN32 (1.1/4") to DN70 (3")
- DN50 (2") to DN70 (3")

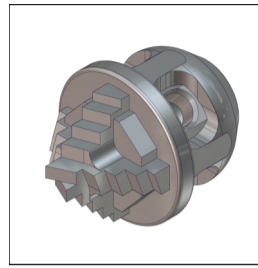
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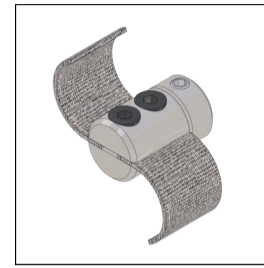
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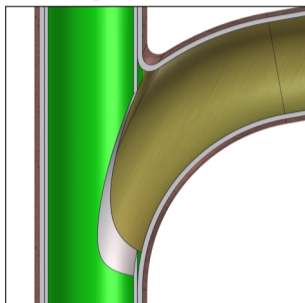
Twister Mini & Mini Flexi



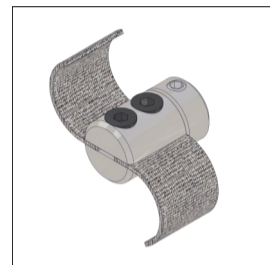
Special Drill Head



Smart Cutter™



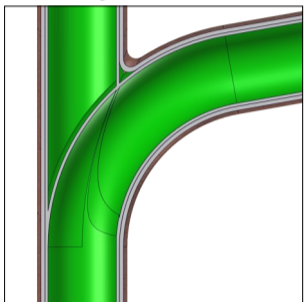
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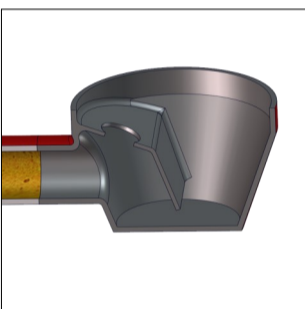
Smart Cutter™



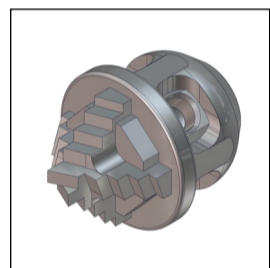
Twister Mini & Mini Flexi



LINED



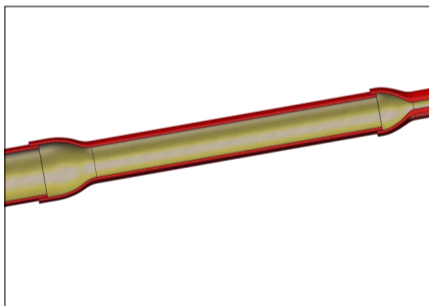
FLOOR DRAIN



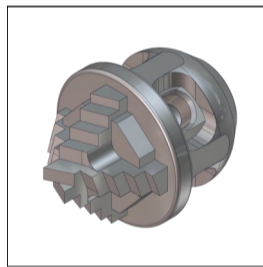
Special Drill Head



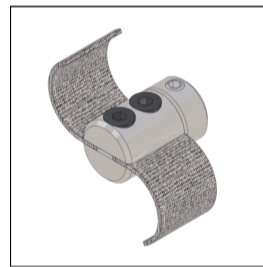
Smart Cutter™



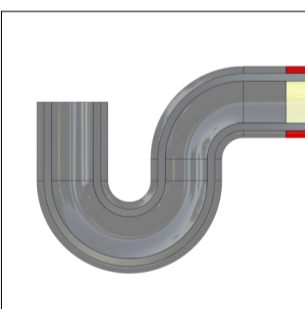
SIZE CHANGE



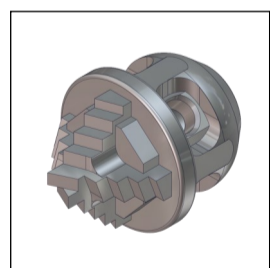
Special Drill Head



Smart Cutter™



P-TRAP



Special Drill Head



Smart Cutter™



Twister Mini Flexi

Mini Cleaner

Shaft Diameter: 8 mm (1/3")

Range: 16 metres (52 ft)

Pipe Diameter Range: DN32 (1.1/4") to DN70 (3")

In plastic pipes Smart Cutter™ needs to be equipped with polishing panels.

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Optimal rotation speed of the Mini Cleaner is between 2-4 (900-2100 rpm) depending on work.

Do not use a larger rotation speed than 4 (2100 rpm) as it may cause the shaft to twist around the operators arm!

Available Tools

Smart Cutter™

Twister Mini & Mini Flexi

Special Drill Head PVC

Size Diameter

DN32 (1.1/4") to DN70 (3")

DN50 (2") & DN70 (3")

DN32 (1¼") to DN70 (3")

Picote Mini Cleaning Machine



Module 2f



Picote Cleaning Range



Machine	Shaft Dia (mm)	Range (m)	Pipe Dia (mm)	Speed (RPM)	Weight (kg)
Mini Cleaner	8	16	32 to 70	500 to 2900	26.5

We will be covering.....



- Health & Safety Requirements
- Identifying the different parts of the machine and tools
- Understand how to operate the machine and the associated benefits
- Shaft Extensions

Safety Information



WARNING

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



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



Danger risk of serious injury from hot parts

Health & Safety - PPE



Always use Personal Protective Equipment (PPE) when using the Mini Cleaning Machine, including suitable overalls / protective clothing & footwear and the following:



Always wear suitable eye protection when using the Mini Cleaning Machine to prevent sewage, chemicals or dust from irritating your eyes.



Always wear suitable ear protection when using the Mini Cleaning Machine to prevent any hearing loss.



Always wear suitable cut and heat resistant gloves when using the Mini Cleaning Machine to prevent any hand injuries. Any open injuries or skin irritations should be covered at all times to avoid contact with sewage, chemicals or dust.



Always wear a suitable ventilation mask when using the Mini Cleaning Machine to prevent any dust or fumes being inhaled or consumed, which can cause occupational asthma or dermatitis as well as eye irritation.

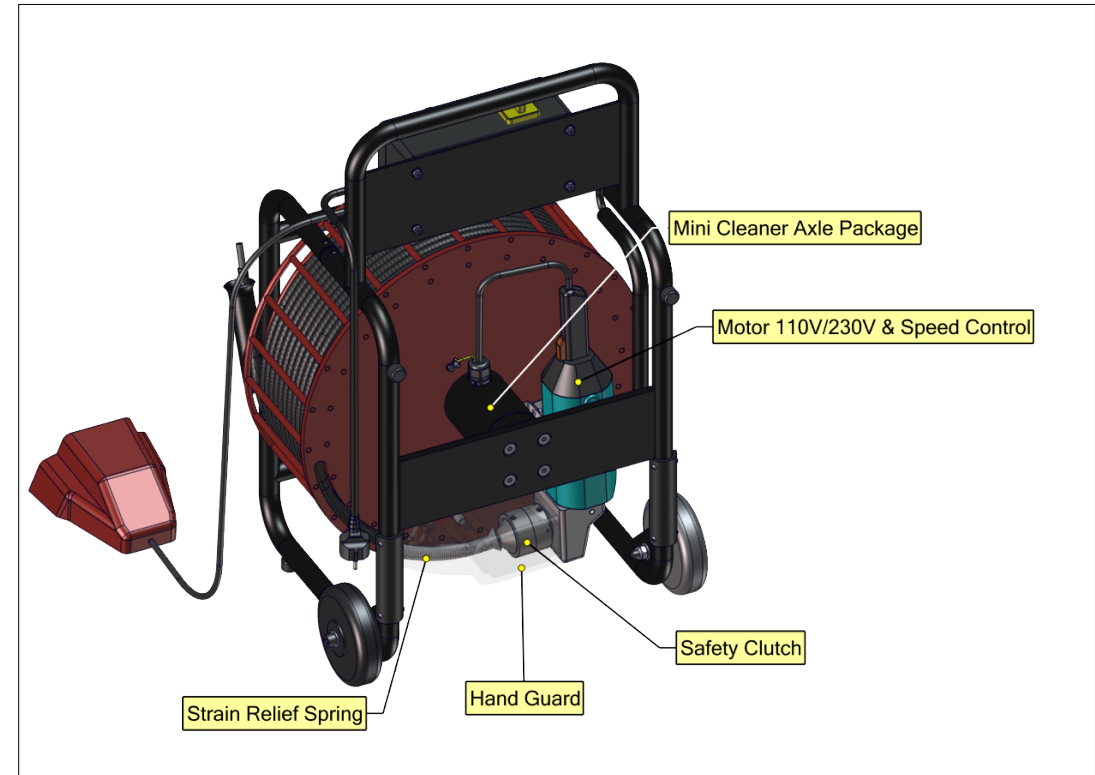
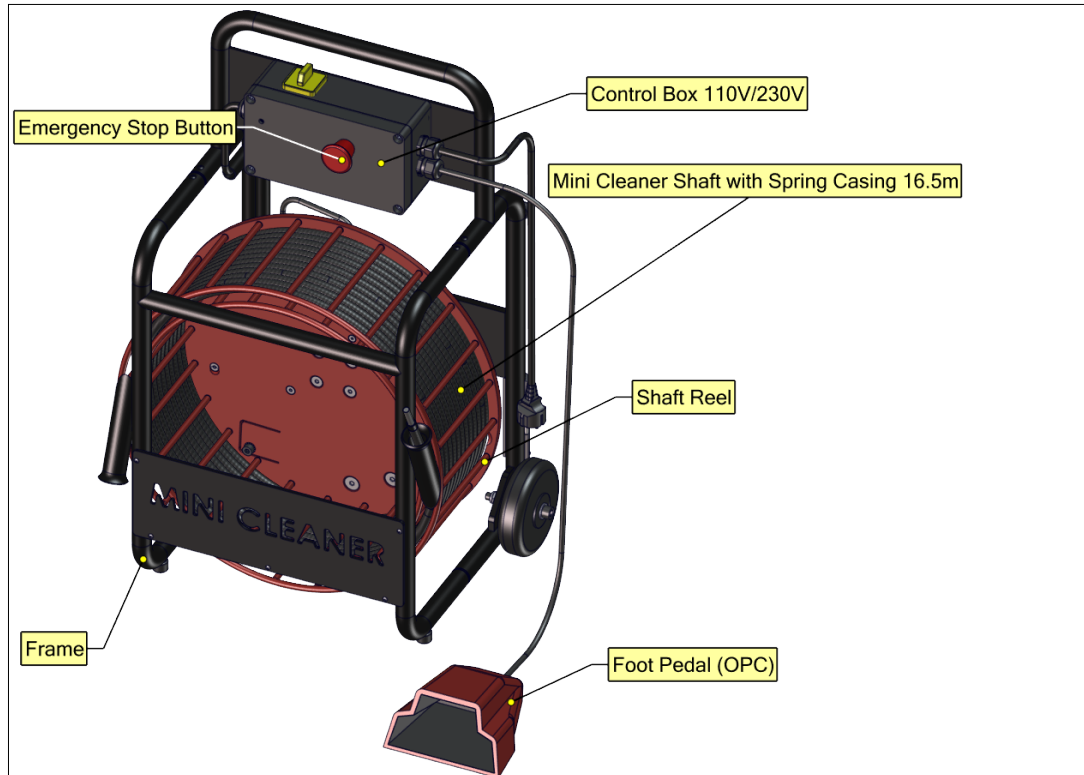
Mini Cleaner Machine 8/16 – Facts



- Shaft Diameter: 8mm (1/3")
- Range: 16 metres (52 ft)
- Pipe Diameter Range: DN32 (1.1/4") to DN70 (3")
- Rotation Speed: 500 to 2900 RPM
- Power Source
 - Europe: 220 / 230 volt
 - UK / North America: 110 /120 volt
- Weight: 26.5 kg (59 lb)



General Description



⚠ CAUTION

When in use, always lay the machine down horizontally on the floor as shown above. When not in use some Picote Flexible Shaft Lubricant might leak from the hand guard.

Intended Use



- Cleaning pipes from DN32 (1.1/4") to DN70 (3") with multiple 90⁰ knuckle bends
- Working through DN50 (2") "P" Traps
- Cleaning DN100 pipes by going through the toilet (with PVC Cyclone Chain). Excludes all types of Syphonic Toilets
- Descaling cast iron pipes
- Reinstating of lined DN50 (2") branches by drilling and grinding

Pipe Cleaning Tool Kit (DN32 & DN40)



DN32 Chain



**DN32 Cleaning
Brush**



DN40 Chain



**DN40 Cleaning
Brush**

**Smart Cleaner
Hub DN32-40**



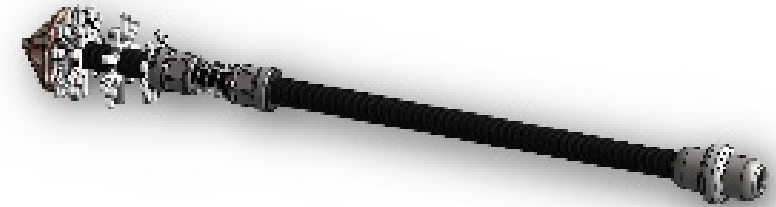
Associated Tools



Cyclone Chain



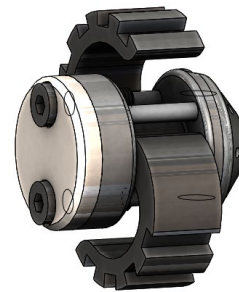
Special Drill Head



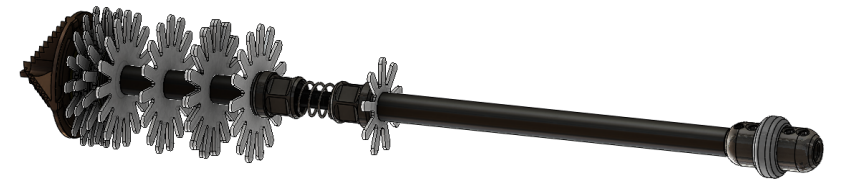
Twister Mini Flexi DN50 (2")



Original Chain



**Smart Sweeper
Head**



Twister Mini Flexi DN75 (3")

Before Use



Before installing Picote tools, always make sure that the machine is fully turned off and unplugged from the power source.

- Inspect the machine carefully for any potential break or damage.
- Change damaged parts immediately.
- Check the end of the flexible power shaft for any signs of wear and tear
- Repeat the process for the outer casing.

Before Use



- Remove damaged parts by cutting the power shaft shorter (min. 50 mm / (2")) if steel strings of the power shaft are broken near the end of the power shaft
- Always round off the sharp edges of the shaft to avoid cuts and to make it easier to insert the shaft into the tool to be used.
- Initially run the machine for a minute and then check that there is the correct length of flexible shaft without its plastic casing at the end of the flexible shaft. Check that all screws have been loosened so that the shaft can be easily inserted inside the tool.

Before Use



- Position the shaft inside the tool as far as it will go. Tighten the screws.
- Always check that the shaft rotates in the clockwise unit direction (=forward), due to its fabrication.
- Never use the machine in reverse (Anti-clockwise rotation direction is strictly for temporary use only!) It may result in shaft failure.
- When in use, it is very important that the machine is stable and on an even surface at all times. Working position is horizontal and lying flat.

Before Use



- Due to the “Flexible” nature of the outer casing place the Mini Cleaner as close to the job as possible.
- Make sure that the job location is well ventilated before grinding or drilling.
- Always use a vacuum extraction system in the pipe to remove dust.
- The operator must wear a respirator mask.

Before Use



- Do not use the machine on any materials containing asbestos.
- Only use this machine with the Picote accessories and spare parts
- Accessories and spare parts should only be used in the manner intended and as described by Picote.
- Only operate the foot pedal or OPC as instructed. Never place anything on it in place of a foot.

Before Use



Do not use shaft extensions:

- The outer casing is too flexible to cope with a shaft extension
- The Shaft Connector **will not go** around the 90⁰ Bends in DN32 (1.1/4") and DN40 (1.1/2") pipes
- The shaft Connector **will not go** around the internal toilet trap

During Use



- Never touch rotating parts. Do not stand on the machine.
- Never leave the machine running unattended.
- Always hold the cable with both hands when operating the machine.
- Check the rotational direction of the shaft and the rpm.
- The natural and intended rotational direction of the shaft should be clockwise, due to its fabrication. When used clockwise the torque is at its optimum. For further information please consult the cutter manual.

During Use



- Place the tool inside the pipe.
- Turn on the power switch.
- Release the Red Emergency Button (if it's pressed down).
- The machine starts when the OPC foot pedal is pressed down. Always hold the flexible shaft firmly while operating the machine.
- Rotating the tool makes it easier to move the tool forward inside the pipe.

Motor Controls



- The motor control is located underneath the drum.
- Yellow toggle switch has 6 settings.
- **Optimal rotation speed of the Mini Cleaner is in between 2-4 (900-2100 rpm) depending on work.** Minimum rotation speed is normally the best when moving the tool around tight bends. When beginning to work, adjust the speed up to the level which seems to work the best.
- **Do not use larger rotation speed than 4 (2100 rpm) as it may cause the shaft to twist around the operators arm!**



During Use



- Do not force the cutters through the pipe — let the tool do the work.
- If too much force or excessive high speed is used the tool might get stuck resulting in damaging or breaking the tool, shaft or the pipe.
- Use either water or vacuum to remove debris.
- Where water cooling is not used (air / vacuum situations), take breaks every 10—15 minutes, as the tool head gets very hot during use.

During Use



- Always observe the temperature of the outer casing and let the Picote Mini Cleaner cool down after every 30 minute periods of constant work.
- Depending on site conditions it may be necessary to cool the outer casing down using cold water.



Always wear heat resistant gloves when handling the tools after the machine has been switched off and the power supply isolated. The tools can be cooled down by placing them in a bucket of cold water or left to cool in the open air.

Cleaning DN32 (1.1/4") Pipe

- Ensure that the speed setting is on 2.
- Always keep the Mini Cleaner as close as possible to the pipe where work takes place.
- Place the tool completely inside the pipe before powering up. Rotating the tool makes it easier to move the tool through tight bends.
- Push and rotate in low speed at the same time. The shaft is flexible enough to navigate through several 90° bends. Move tool constantly back and forth in the pipe.

The special spring outer casing in Mini Cleaner can melt because of the friction heat if tooling is kept long periods of time in the same place.



Insertion through the Toilet (1)

- Carefully feed the PVC Cyclone Chain (DN75 or DN100) around the toilet bowl and flick the chain upwards, and then push through the pan connector.
- Slowly rotate the shaft (Speed setting 2) and push the shaft into the stack pipe.
- Change the speed setting to 4 and clean the stack pipe.

Do not start the machine up whilst the chain is in the porcelain toilet.

(1) Not suitable on Syphonic Toilets.

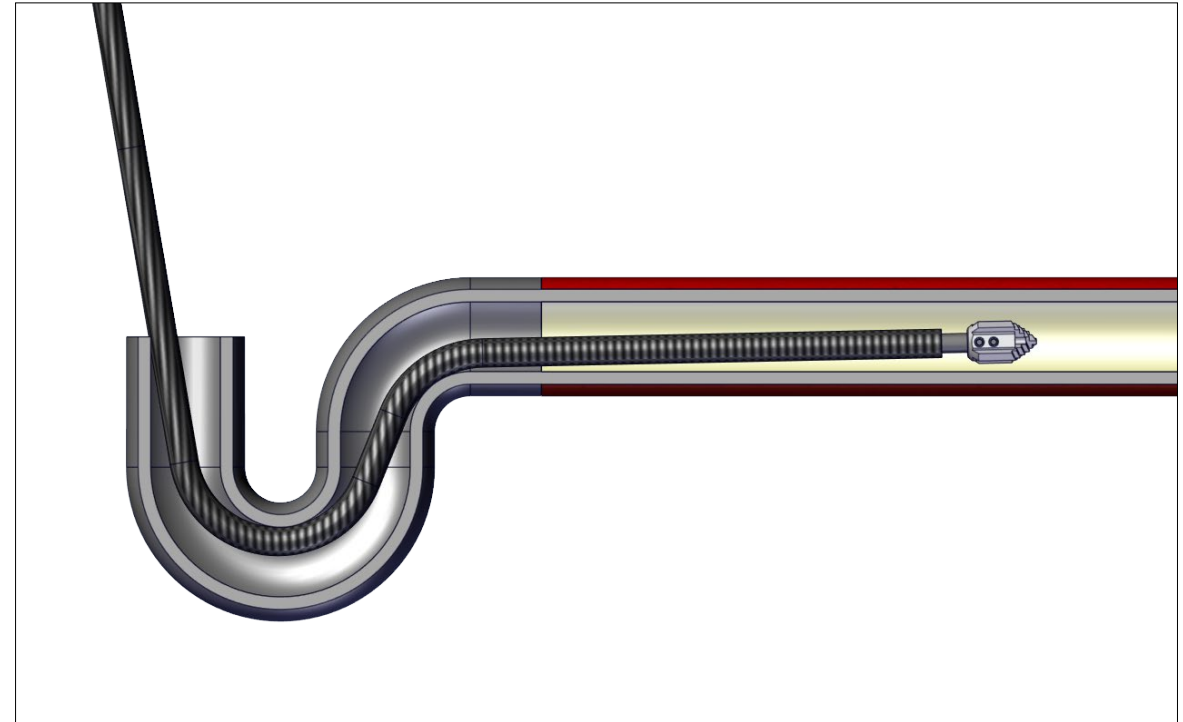


Cleaning through DN50 (2") P-Traps



- Place the tool completely inside the pipe before powering up. Rotating the tool make it easier to navigate through tight bends.
- Move tool constantly back and forth in the pipe.

The special spring outer casing in can melt because of friction heat if tooling is kept long periods of time in the same place.



Maintenance



⚠️ WARNING

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

- Carefully inspect the flexible shaft and its casing on a regular basis to ensure that there are no signs of wear and tear. Change the flexible shaft and casing as and when required.
- For safety and efficiency, always keep the machine and its motor, drive unit, ventilation and cooling slots clean.
- Check that the screws for the shaft socket are securely tightened.
- Check that all the bolts and screws on the machine are securely tightened.



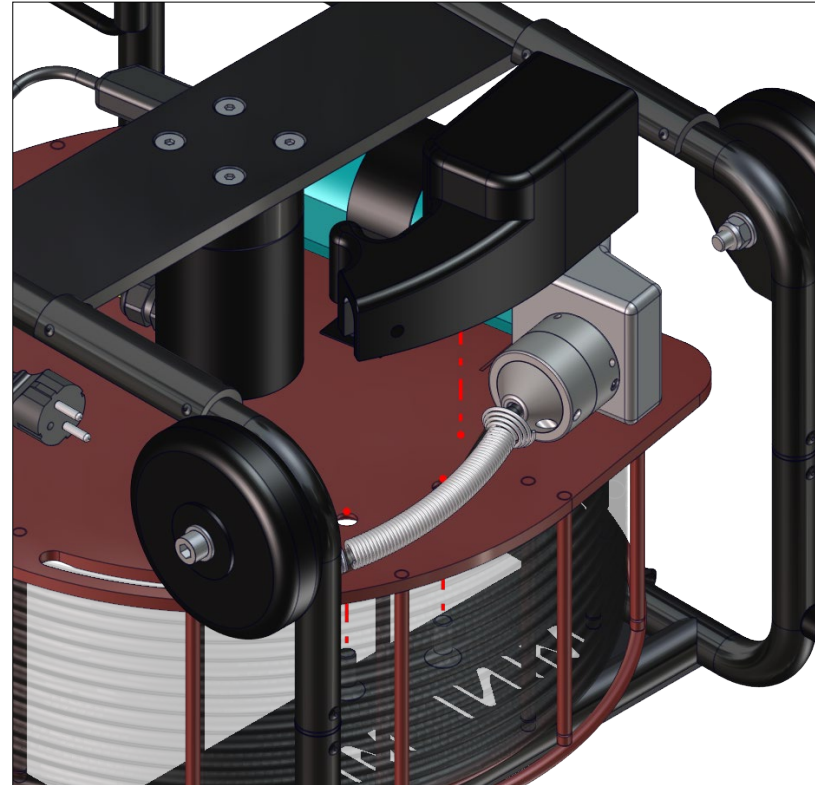
Replacing Carbon Brushes



- The complete motor is needed to be removed in order to change both of the carbon brushes.
- Use a screwdriver to remove the brush holder caps.
- Take out the worn carbon brushes, insert the new ones and secure the brush holder caps.

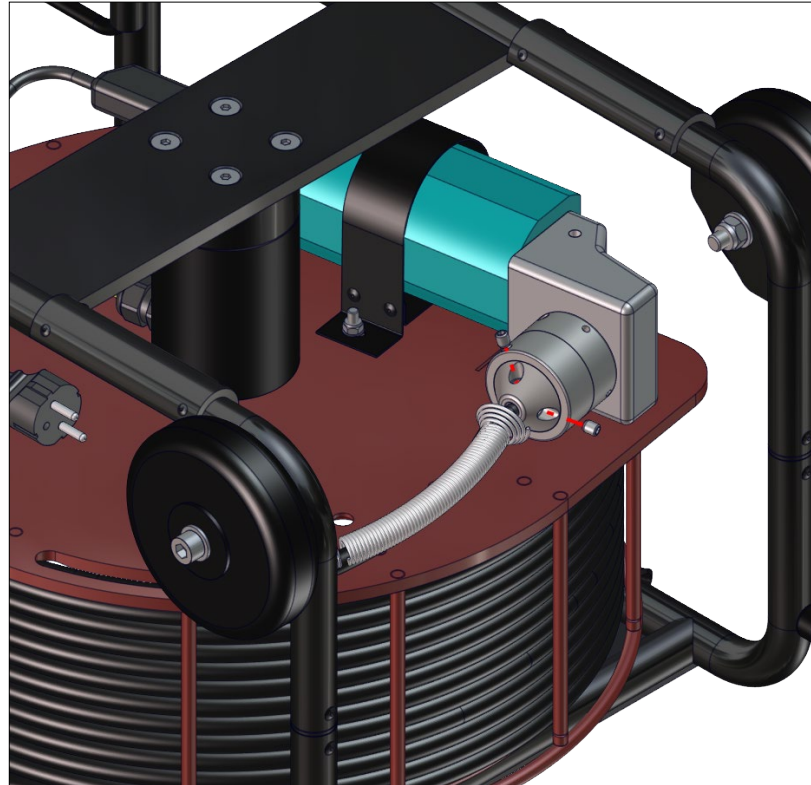
Replacing Carbon Brushes – Step 1

- Undo the Allen Bolts and remove hand guard



Replacing Carbon Brushes – Step 2

- Undo Set Screws and detach the shaft from the Safety Clutch.



Replacing Carbon Brushes – Step 3



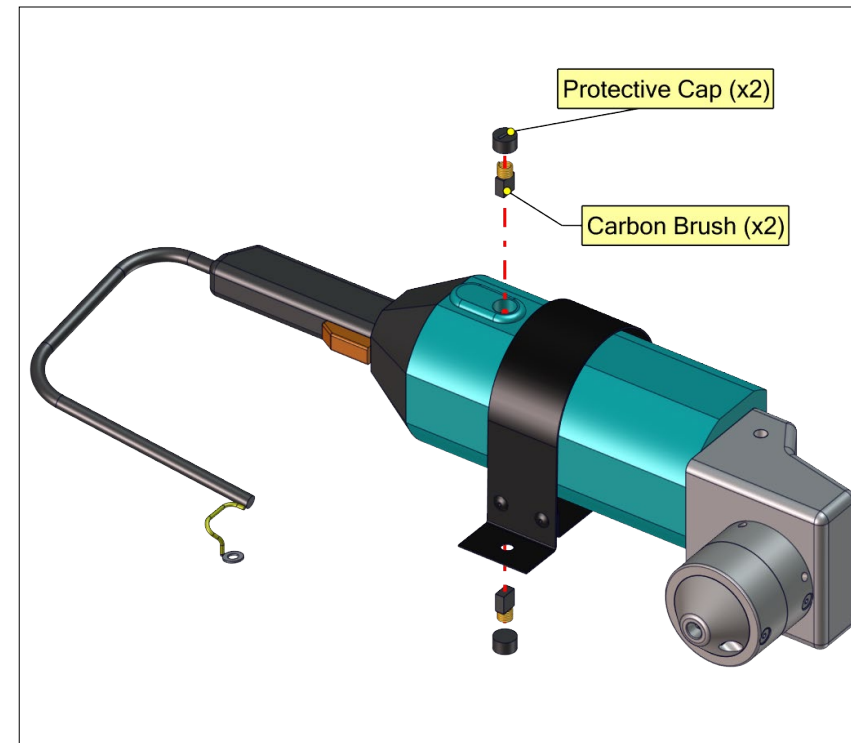
- Undo the Allen Bolts that attach the motor to the reel



Replacing Carbon Brushes – Step 4

- Open the protective caps with screwdriver and replace both of the carbon brushes. Repeat the steps in opposite order to assemble Mini Miller again. Tighten the Hex Bolt M8x25 which is attaching the motor to the reel in torque of 12 Nm

Recommend to use Loctite 542 on the bolts.

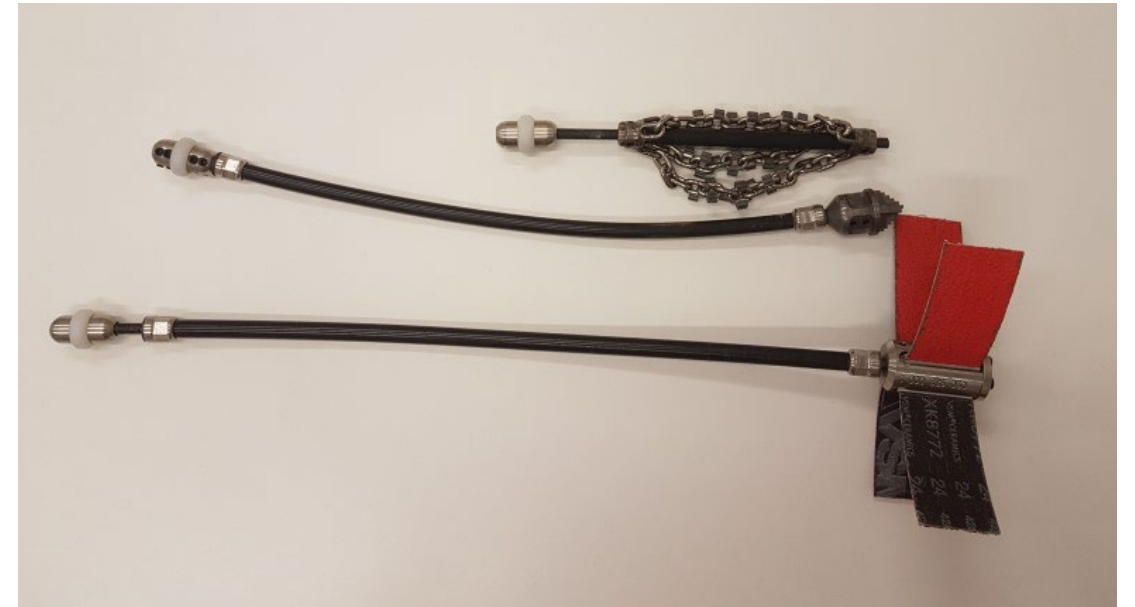


Leaders



You can extend the life of the flexible shaft and increase productivity on site by making individual leaders for the most commonly used tools. This way you easily and quickly switch between tooling.

Leaders cannot be used when working on DN32 (1.1/4") to DN50 (2") with 90° bends.



Replacing the Flexible Shaft



Only fit a Picote shaft and outer casing - The flexible shaft is pre-treated with “Picote Shaft Lubricant”

1. Loosen the bolts holding the hand guard and remove the hand guard.
2. Loosen the screws in the shaft socket that hold the shaft. Pull the old shaft out of the machine.
3. Insert new shaft. When inserting the shaft inside the shaft socket, verify that the shaft goes all the way to the end. Tighten the screws.
4. Make sure that strain relief is attached and contacts the shaft socket before attaching the hand guard.
5. Mount the hand guard. Tighten the bolts to 8 Nm.

Flexible Shaft Maintenance



1. Always inspect the condition of the shaft & casing before and after use
2. Weekly check that the shaft is properly attached under the hand guard to the drive motor
3. Replace the entire shaft if the twine of the shaft has opened from one end to the other (visible holes in the shaft)
4. Keeping the shaft lubricated will prolong its life span and decrease the friction caused by the rotating in the casing
5. Low friction = longer life of the motor

Flexible Shaft Oiling Instructions



1. Detach the shaft from the machine and remove it from the reel
2. Pull 1 metre of the shaft out of the outer casing
3. Pour Picote Shaft Lubricant Oil into the casing – amount depends on shaft diameter & length
4. Oil the shaft by pushing it through the outer casing, Do not let the shaft touch the floor during the maintenance process

STEP 1



Detach the shaft from the machine and remove it from the reel



STEP 2



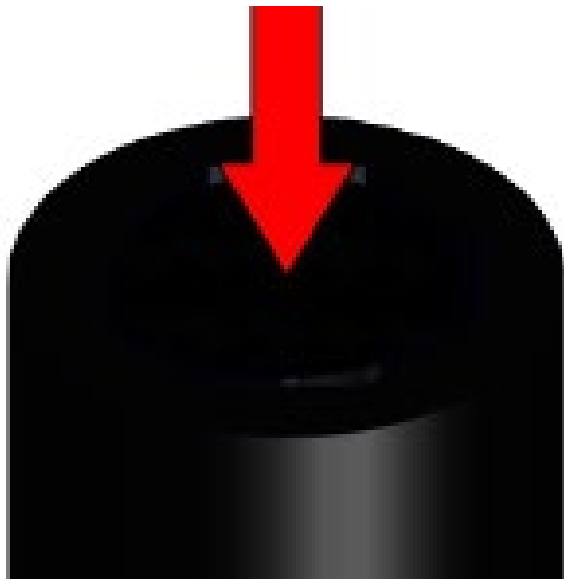
Pull 1 metre of the shaft out of the outer casing



STEP 3



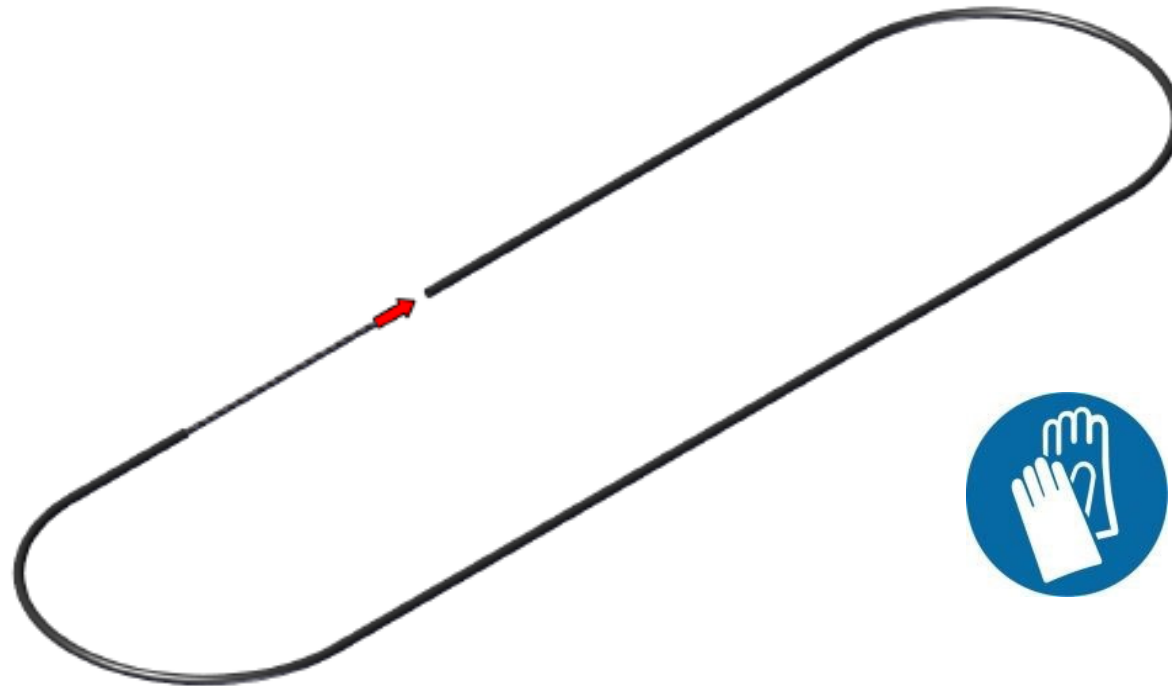
Pour Picote Shaft Lubricant Oil into the casing : 20ml / 20 grams



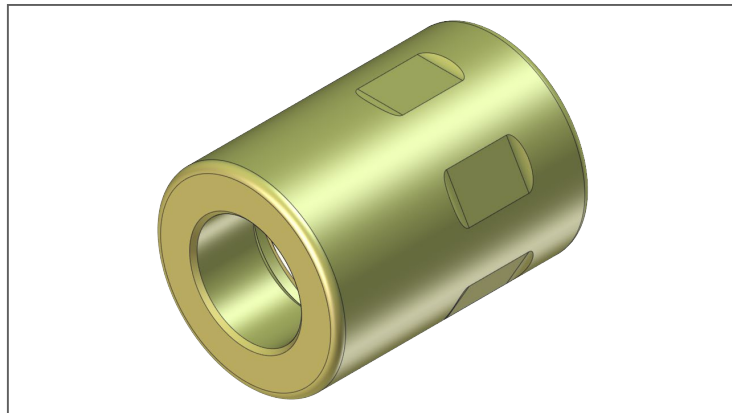
STEP 4



Oil the shaft by pushing it through the outer casing, **Do not let the shaft touch the floor during the maintenance process**



Sleeve Bearings



Always use Sleeve Bearing when using Mini Cleaner. It prolongs the lifetime of the flexible shaft and prevents the outer casing from melting in the tool end. Sleeve bearings can be re-used when outer casing is shortened.

The Sleeve Bearing cannot be used when working on DN32 (1.1/4") to DN50 (2") with 90° bends

Adding a visual marker for safety



For your own safety attach a visual marker (tape) to the outer casing of the flexible shaft. Place it around 500 mm from the end point of the shaft. The mark will indicate the tool's location and prevent possible injuries when a tool is removed from the drain, including injury by rotating parts.



Cutting the Flexible Shaft



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 an angle-grinder. This should be done outside in a clear area as the process will generate sparks.



Shaft Rounder



PRACTICAL TIPS & SAFETY ADVICE

Here are some useful tips on how to get the most out of your Picote system. Always use the recommended tools for maintenance to avoid personal injury.



The shaft rounder smooth's the end of the flexible shaft, preventing the user from being cut by the otherwise sharp metal edge

