

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.

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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



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 risk of serious injury, follow instructions.



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



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



Danger do not touch. Risk of injury, follow instructions.

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.

GENERAL MACHINE 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.

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



1. **Always wear eye and ear protection as well as heat and cut-resistant gloves.**

Other personal protective equipment, such as dust mask, gloves and overalls should be worn when necessary. Dust produced when working can be dangerous to your health, inflammable or explosive. **Always wear appropriate personal protective equipment.**

2. Make sure the pipe has been opened and ventilated to prevent any gases accumulating.
3. Always ensure that the machine is fully turned off before inspection, maintenance, or installing any accessories to the machine. 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 end of the shaft for any signs of wear and tear, and repeat the process for the outer casing.
5. When in use, it is very important that the machine is stable and on an even surface at all times.
6. **Never leave the machine running unattended.** Always hold the cable when operating the machine.
-  7. **Do not touch the Cutter or Grinding Chains immediately after use,** they may be hot and could burn your skin.
8. 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 dust mask when using dry grinding to clean pipes.
9. 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.
10. **Do not use the machine on any pipes containing asbestos fibres.**
11. **Never touch rotating parts.** Do not stand on the machine.
-  12. 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 Picote Solutions.
13. Only operate the foot pedal or OPC as instructed. Never place anything on it in place of a foot.
14. **Do not use the Battery Mini Cleaner or Battery Mini Cleaner +C with an extension.**

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:	-10 °C to +50 °C (+14 °F to +122 °F) frost and condensation free
Storage Ambient Temperature Range:	-20 °C to +60 °C (-4 °F to +140 °F) frost and condensation free
Maximum Altitude:	2000m or 6500 ft. Derate above 1000m or 3280ft: 1% / 100m or 328ft
Maximum Humidity:	95% non-condensing
Camera Maximum Humidity:	90% non-condensing

TRANSPORT

The Battery Mini Cleaner or Battery Mini Cleaner +C should be transported in a car or other vehicle and laid down and secured with ratchet straps to prevent any sudden movements or accidents caused by hard braking or accident.

Never transport the machine with a tool attached to the shaft. Always retract the camera back to its housing for transport. If using a pick-up or trailer to transport a Battery Mini Cleaner or Battery Mini Cleaner +C always suitably cover the unit to protect it from the elements.

STORAGE

Battery Mini Cleaners should be stored indoors to protect them from rain and sunlight, somewhere with a constant ambient temperature. The best way to store the Miller is using the same box that it was shipped in.

If the Battery Mini Cleaner or Battery Mini Cleaner +C has been stored in an environment colder than +10 °C or +50 °F, the machine should be stood at room temperature for 24 hours before use.

If the Battery Mini Cleaner or Battery Mini Cleaner +C has been stored for long periods of time (over 2-3 months), it should be checked and tested according to the maintenance programme before use.

Charge the machine battery to around 80% capacity before storing for long periods. **NEVER leave the battery unit unattended while it is charging.**

Charge the DVR battery fully before storing for long periods. **NEVER leave the DVR unit unattended while it is charging.**

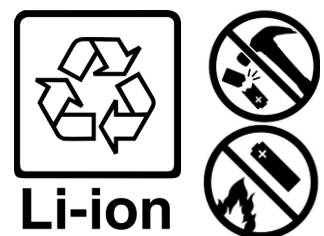
DISPOSAL

Battery Mini Cleaner motor, control box, battery charger, electric wires, axle package including slip ring, camera monitoring box, power supply and camera head can be disposed of in Europe at Waste Electrical and Electronic Equipment (WEEE) collection points.

The Miller frame, reel, flexible shaft, camera cable reel and name plate can be recycled in metal waste collection points. Outer casing of the shaft and the camera plastic supports can be disposed of as plastic waste.

Always follow local waste handling rules and regulations.

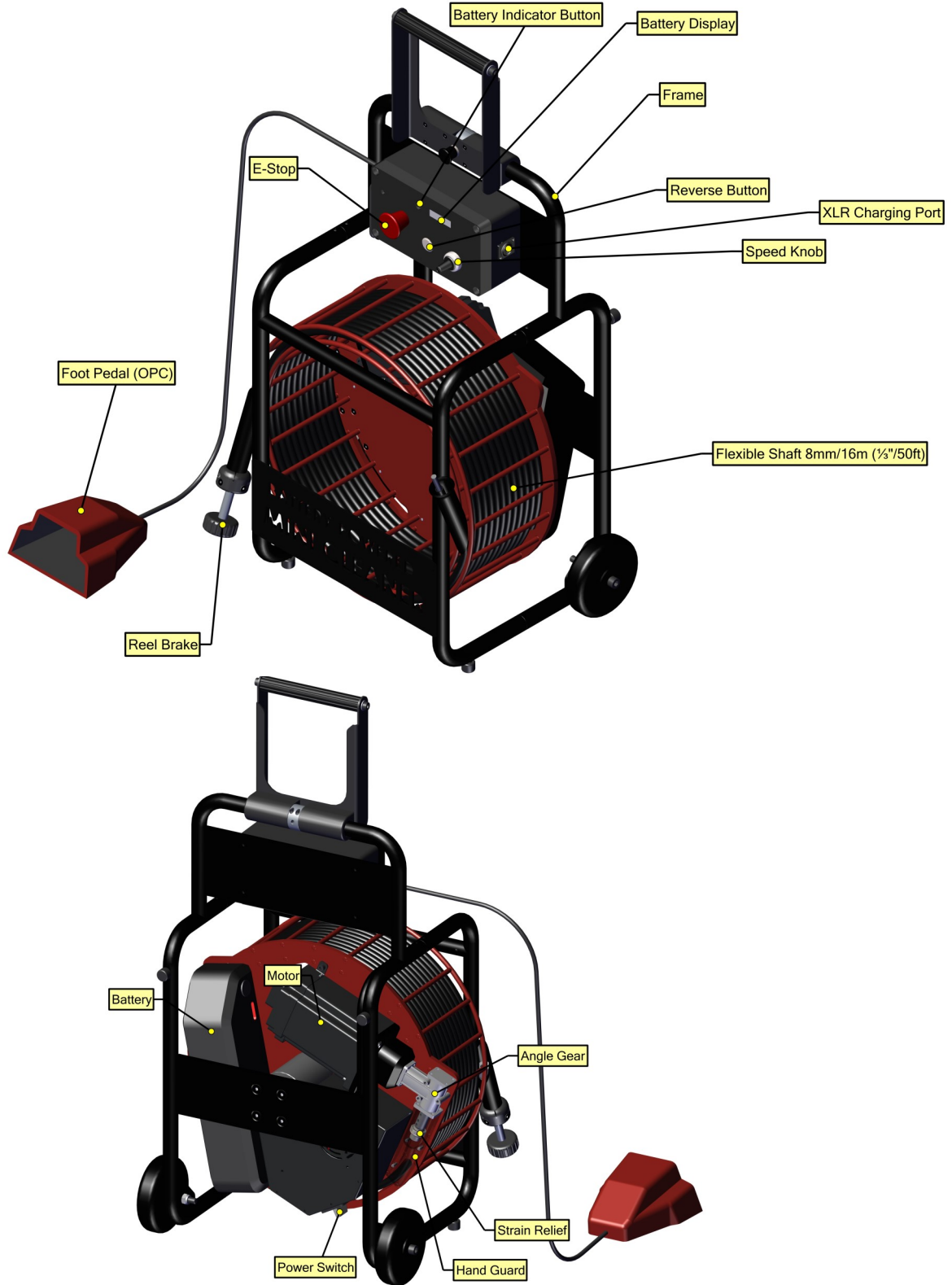
Recycle Li-ion batteries according to local regulations. **Do not dispose of in fire! Do not puncture!**



Li-ion

GENERAL INFORMATION

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE



CAUTION

When in use always lay the machine down horizontally on the ground. When not in use some non-hazardous Picote Flexible Shaft Lubricant might leak from the hand guard.

TECHNICAL DATA

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

Model	Size (mm/inches)	Shaft (mm/ inches)	Range (m/ft)	Pipe Diameter (mm/inches)	Rotating Speed (rpm)	Output (W)	Power Source	Weight (kg/lbs)
Battery Mini Cleaner +Standard Battery +High-Output Battery	740x519x404 29"x20"x16"	8 mm 1/3"	16 m 50 ft	DN50-DN100 / 2" - 4" DN50-DN150 / 2" - 6" for cleaning pipes	550-2200	48V: 1200	Electric Motor	32 / 60 35.3 / 78 36.1 / 79.5
Battery Mini Cleaner +C +Standard Battery +High-Output Battery	740x519x404 29"x20"x16"	8 mm 1/3"	16 m 50 ft	DN50-DN100 / 2" - 4" DN50-DN150 / 2" - 6" for cleaning pipes	550-2200	48V:1200	Electric Motor	35 / 77 38.3 / 84.5 39.1 / 86

INTENDED USE

This machine is intended for the following uses;

1. Cleaning and unblocking pipes, drains and sewers by grinding.
2. Descaling pipes.
3. Opening lateral connections.
4. Internal pipe coating using the Picote Brush Coating™ System and the Mini Coating Pump.

AVAILABLE TOOLING

Always follow the Picote Solutions instructions when installing and using the machine with accessories.

Cleaning Chain	Cyclone Chains	Original Chains
Smart Cutter™	Smart Cutter™ - with Cleaning Panels	Mini Sweeper
3D Chains	Twister Mini Flexi	Special Drill Head
Coating Brushes	Cleaning Brushes	Tiger Bore

Please check Picote Solutions Quick Cleaning Guides and Tool Manuals for more detailed information:

www.picoteinstitute.com

The Battery Mini Cleaner and Battery Mini Cleaner +C come complete with Tool Packages depending on region:

North America (NA) : Mini Cleaner Cleaning Package or Mini Cleaner Cutting Package

Rest of World (ROW) : Mini Cleaner Tool Kit for use on DN32-DN40 or 1¼"-1½" pipes

PACKAGES INCLUDED

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

INCLUDED TOOLS IN MINI CLEANER PACKAGE (ROW)

3540000816TK	Mini Cleaner Tool Kit (ROW)
1000818025	Hub 8.5x18x25 (DN32-40)
1381084032	Cleaning Chain DN32
1381084040	Cleaning Chain DN40
2125000032CL	Cleaning Brush DN32
2125000040CL	Cleaning Brush DN40
1241035045	Cleaning Panel DN32 35x45 (10 pcs)
1241040050	Cleaning Panel DN40 40x50 (10 pcs)

INCLUDED TOOLS IN MINI CLEANER CUTTING PACKAGE (NA)

3540000818CU	Mini Cleaner Cutting Package (NA)
1360080051	Smart Sweeper Head DN40-DN50 (1½"-2")
1000818025	Smart Cleaner Hub 8.5x18x25 DN32-DN40 (1¼"-1½")
1202030050	Side Grinding Panel 30x50 DN40 (1½") Package
1230000054	Twister Mini Flexi DN50 (2")

INCLUDED TOOLS IN MINI CLEANER CLEANING PACKAGE (NA)

3540000818CL	Mini Cleaner Cleaning Package (NA)
1360080051	Smart Sweeper Head DN40-DN50 (1½"-2")
1000818025	Smart Cleaner Hub 8.5x18x25 DN32-DN40 (1¼"-1½")
1202030050	Side Grinding Panel 30x50 DN40 (1½") Package
1381084040	Cleaning Chain DN40 (1½")
1300212025	Front Drill Head 25mm for DN50 (2") pipes

Check out the overall list of the available tools and spare parts from page 21.

VOLTAGE & POWER SUPPLY

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

The Machine is supplied with a universal charger with a voltage range of 110V AC ~ 240V AC. The charger has a voltage switch at the supply side. Choose voltage based on your location.

The Camera power supply can operate with Input: 110V AC ~ 240V AC, Output:12V DC 1200mA .

The DVR unit has in-built 5200 mAh Li-ion battery (7.4 V).

CHARGER POWER PLUGS

220-230V: EU Schuko 230V 16A.
UK Plug 230V 13A
Australia: CEE 16A 230V

110-125V: NEMA 5-15 plug.

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 make sure the Emergency Switch Off Button is pressed or completely turn off the machine when the machine accessories (e.g. Cutter or Grinding Chains) are not inside a pipe. Always remove the machine battery when performing any maintenance or repairs to the machine.

The machine is operated by foot pedal (Operator Presence Control or 'OPC'). When the control is not held down, the machine stops. Never place any kind of object on the pedal in place of a foot (such as a brick).

NOISE LEVELS, VIBRATIONS & EMISSIONS

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE



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

The typical A-weighted noise level determined according to EN60745:



WEAR EAR PROTECTION

Sound pressure level (LpA): 90 dB (A)

Sound power level (LWA): 103 dB (A)

Emissions during actual use of the machine can differ from declared values depending on the ways that the machine is used. Safety measures to protect the operator should be determined by actual conditions, taking into account all aspects of the operating cycle (such as when the machine is switched off and when it is running idle).

Due to continuing product development, the specifications herein are subject to change without notice

VIBRATION

Hand vibration levels depend on the distance from the tool head to the user and working conditions. The vibration levels detailed below have been measured at the Picote training facilities in Finland. Vibration has been determined according to ISO-5349 and EU-directive 2002/44/EG.

Safe daily exposure time for user:

Exposure Action Value (EAV) 2,5 m/s²

Exposure Limit Value (ELV) 5,0 m/s²

Tooling	Working Distance m/ft	EAV	ELV
Original Cleaning Chain DN32 / 1¼"	0-2m / 0-6.6ft	50min	3h 18min
Original Cleaning Chain DN32 / 1¼"	5-7m / 16-23ft	9h 37min	Over 24h
Original Cleaning Chain DN50 / 2"	0-2m / 0-6.6ft	7h 13min	Over 24h
Original Cleaning Chain DN50 / 2"	5-7m / 16-23ft	Over 24h	Over 24h
Mini Smart Sweeper DN50 / 2"	0-2m / 0-6.6ft	Over 24h	Over 24h
Mini Smart Sweeper DN50 / 2"	5-7m / 16-23ft	17min	1h 8min
Special Drill Head DN50 / 2"	0-2m / 0-6.6ft	5h 27min	21h 48min
Special Drill Head DN50 / 2"	5-7m / 16-23ft	Over 24h	Over 24h
Twister Mini Flexi DN50 / 2"	5m / 16ft	6h 9min	Over 24h
Smart Cutter™ DN50 / 2"	5m / 16ft	Over 24h	Over 24h
Cyclone Chain PVC DN100 / 4"	2m / 6.6ft	21h 58min	Over 24h
Cyclone Chain PVC DN100 / 4"	5-7m / 16-23ft	15h 43min	Over 24h

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 drain cleaning machine:

Battery Mini Cleaner

Model No: 8/16

and

Battery Mini Cleaner +C

Model No: 8/16

are of series production and

Conform to the following EU Directive:

2006/42/EY

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

EN62841-1

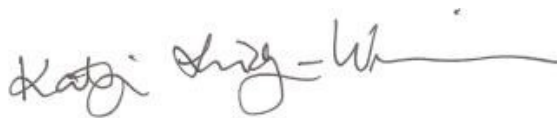
EN62841-13

ISO-5349-1:2001

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

Picote Solutions Oy Ltd, Pienteollisuustie 24
06450 Porvoo, Finland

30th March 2021



Katja Lindy-Wilkinson

C.E.O.

Picote Solutions Oy Ltd

Pienteollisuustie 24, 06450 Porvoo, Finland

OPERATING INSTRUCTIONS

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

Before operation:

⚠ WARNING



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

⚠ CAUTION



- Always round off the sharp edges of the shaft to avoid cuts and to make it easier to insert the shaft into the tool or for a leader to be used.

- Check that there is the correct length of flexible shaft (without its plastic casing) at the end of the flexible shaft and 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, and tighten the screws.

Consult accessory operating manuals (cutters & grinding chains) for detailed information.

While in operation:

Always lay the machine down horizontally on the floor. During drilling, grinding and cutting processes, always use a separate vacuum extraction system or run water in the drain to remove dust.

STARTING & USING THE MACHINE

⚠ WARNING

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

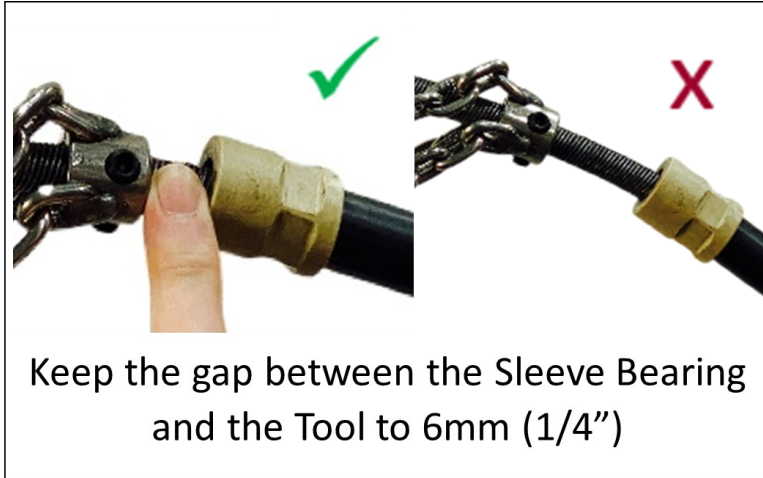
1. The machine has an operator presence control or 'OPC'. When the control is not held down, the machine stops. The machine can also be stopped by pushing the Emergency Stop Button down, rotating the power gear to "O" or by removing the battery.
2. Check the rotational speed of the shaft before powering up. The rotational speed control is located on the control box. The rotational speed can be set at speed levels from 1 to 10.
3. Place the tool inside the pipe.
4. Turn on the power switch.
5. Release the Red Emergency Switch Off Button.
6. The machine starts when the OPC foot pedal is pressed down. Always hold the flexible shaft with both hands firmly while operating the machine.
7. Rotating the tool slowly makes it easier to move the tool forward inside the pipe.
8. The lifespan of the shaft outer casing can be prolonged by using a Sleeve Bearing designed for the outer casing.

There is an electrical safety clutch in the Battery Mini Cleaner and Battery Mini Cleaner +C. If the machine is overloaded the safety clutch stops the motor. The user will notice a "flashing" red light when the motor is becoming overloaded. The light turns solid when the clutch engages. Release the foot pedal, pull the shaft back a little bit and continue working.

OPERATING INSTRUCTIONS

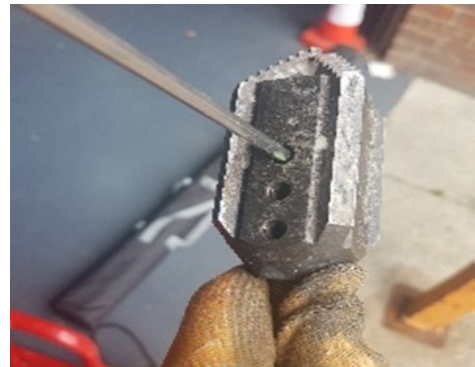
SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

ATTACHING TOOLS



TIGHTENING THE SET SCREWS

When you add a tool always tighten the screws starting from the screw furthest away from the end of the flexible shaft (where applicable).



ROTATION SPEED DIAL

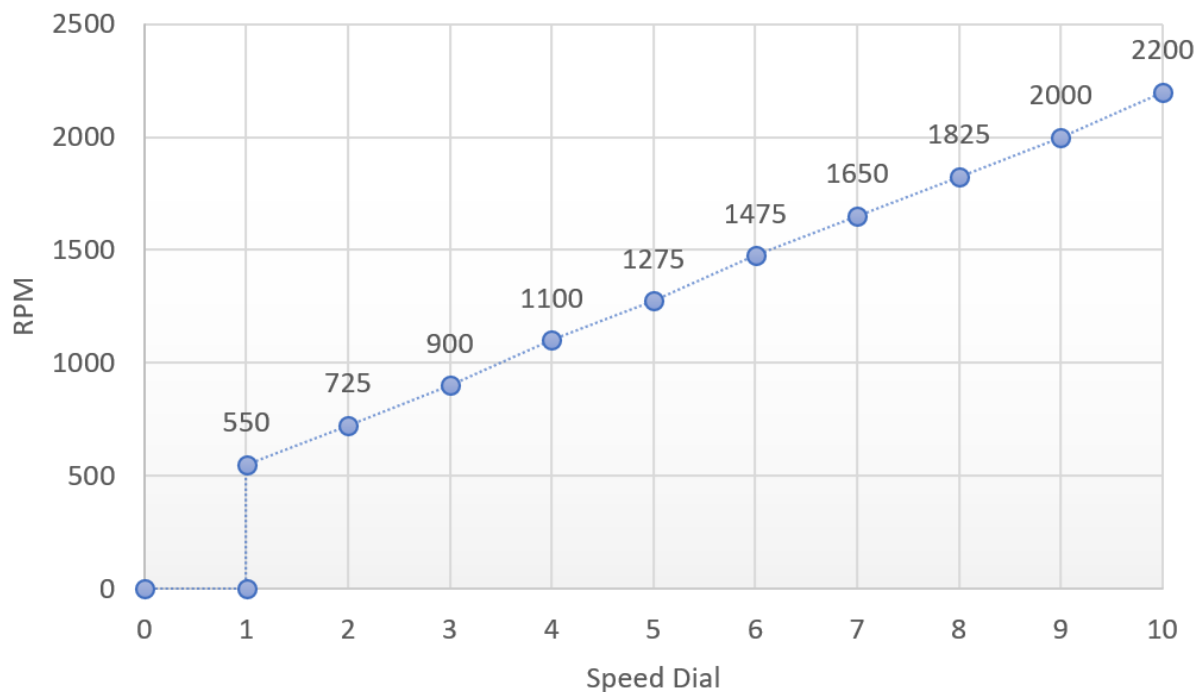
SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

WARNING

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

Optimal rotation speed of the Battery Mini Cleaner or Battery Mini Cleaner +C is dependent on the workload. Minimum rotation speed is normally 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.

The speed dial can be found on the control box (see below image). Set the speed by rotating the knob. Check the corresponding rotation speed from table below.

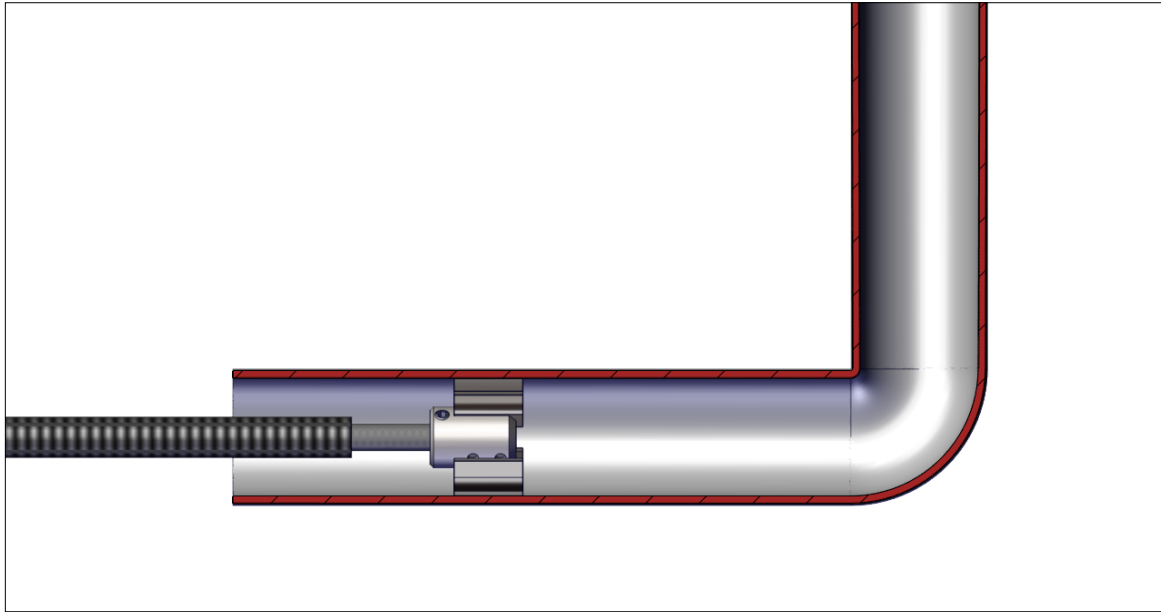


NAVIGATING DN32-DN50 / 1¼" - 2" KNUCKLE BENDS

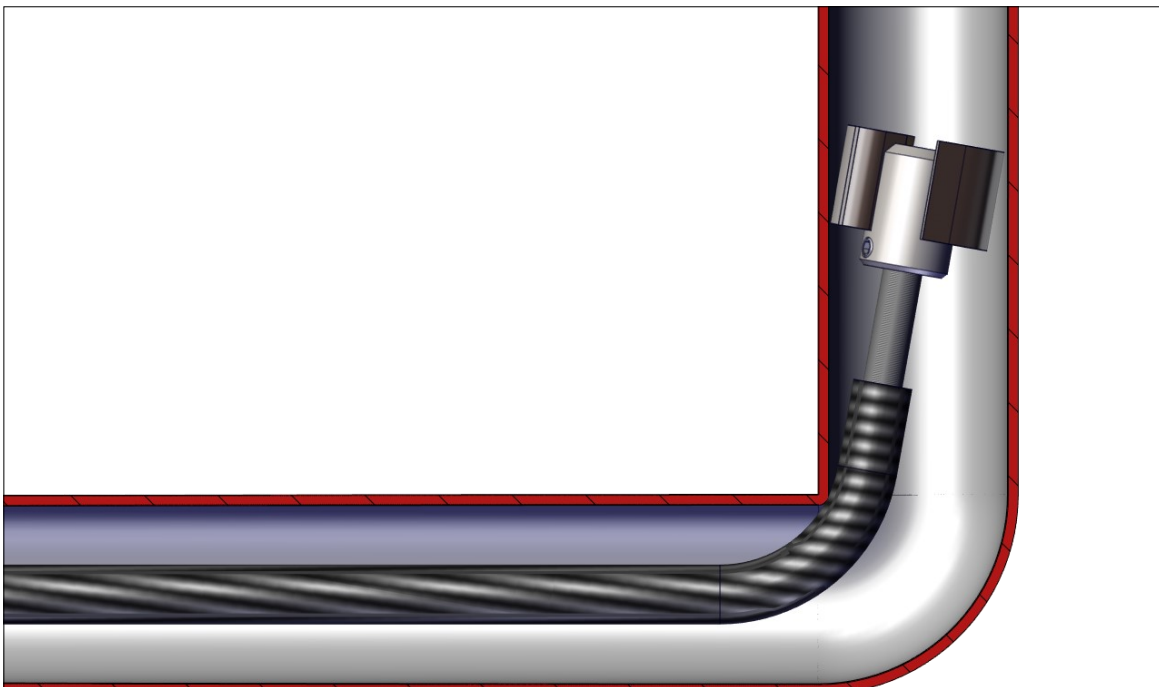
SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

Step 1. Always keep the Battery Mini Cleaner and Battery Mini Cleaner +C as close as possible to the pipe where work takes place. This way only a small portion of the shaft is unsupported.

Step 2. Place the tool completely inside the pipe before powering up. Rotating the tool slowly makes it easier to move the tool through tight bends.



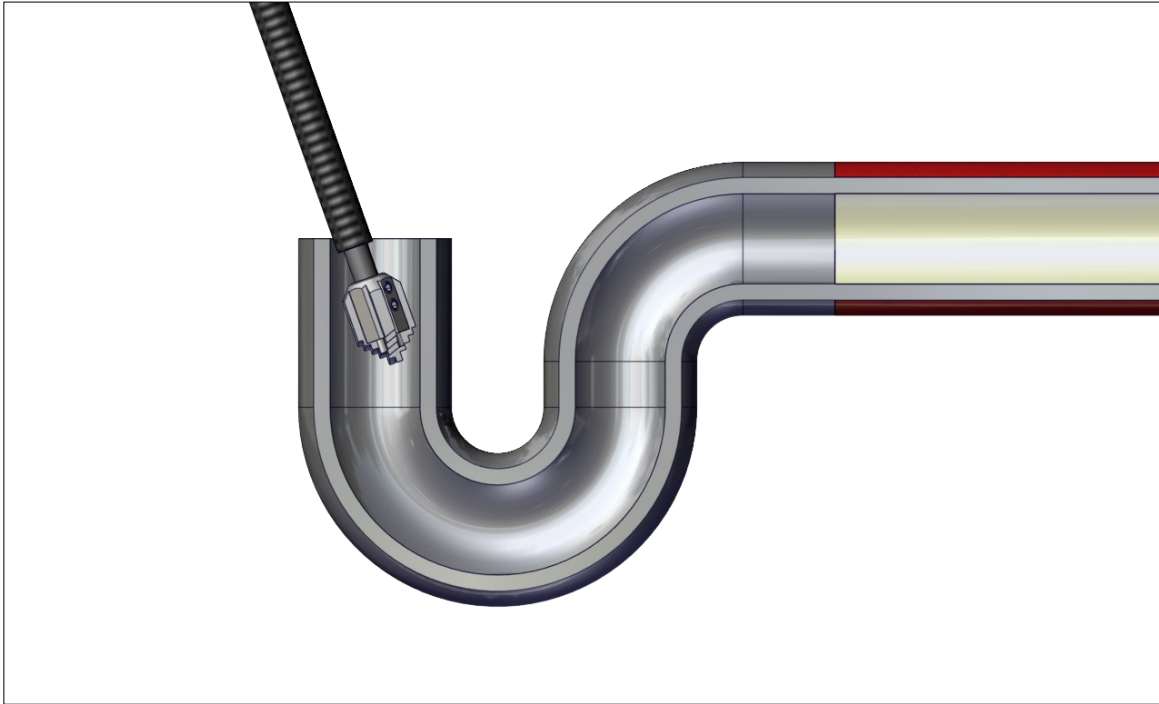
Step 3. Push and rotate at the same time at a low speed. The shaft is flexible enough to navigate through several 90° bends. Move the tool constantly back and forth in the pipe. The special spring outer casing in the Battery Mini Cleaner and Battery Mini Cleaner +C can melt because of the friction heat created if the tooling is kept in the same place for long periods of time.



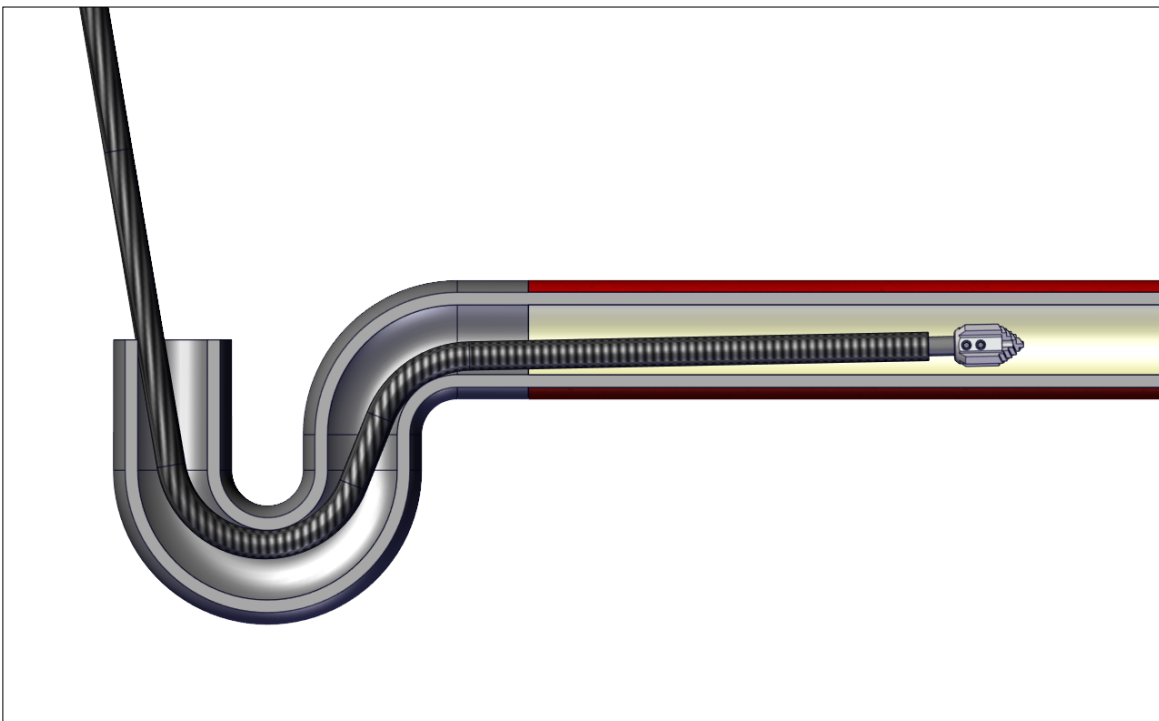
NAVIGATING THROUGH DN50/2" P-TRAPS

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

Step 1. Place the tool completely inside the pipe before powering up. Rotating the tool slowly makes it easier to navigate through tight bends.



Step 2. Move tool constantly back and forth in the pipe. The special spring outer casing in the Battery Mini Cleaner/ Battery Mini Cleaner +C can melt because of friction heat created by tooling being kept in the same place over long periods of time.



MAINTENANCE PROGRAMME & WARRANTY PERIODS

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

Maintenance task	Months			
	3	6	12	24
Tightness of motor fixing			I	I
Condition of frame			I	I
Condition of wheels & rubber bushes			I	I
Condition of control box			I	I
Vacuum the dust filter on the control box	P	P	P	P
Condition of electric cables	I	I	I	I
Condition of electrical connections	I	I	I	I
Lubricate Shaft	P	P	P	P
Operation of E-Stop	I	I	I	I

I: Inspect, fix or replace if needed.

P: Perform, replace if needed.

R: Replace

WARRANTY PERIODS

Picote Solutions Oy Ltd grants limited warranty for certain machines, equipment & components. Read more detailed information on page 31 (Picote Warranty Policy and Procedure).

Service Period	3 months	6 months	1 year
A			
B			
C			

A Milling machine & spare parts, except:

B Electric motors and battery

C Service Centre repair work

! WARNING



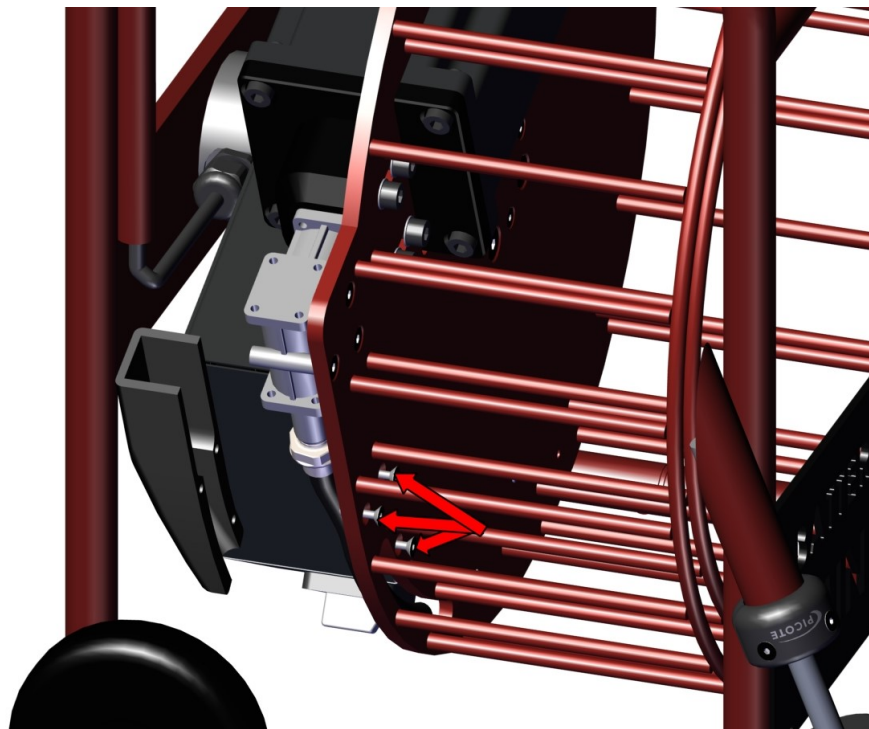
1. Before performing any maintenance always check that the machine is **fully turned off and battery removed**.
2. Always inspect the flexible shaft before each use. If there are potential weak points, or the shaft is damaged, cut off the damaged length using a band saw or replace the entire shaft as needed.
3. For safety and efficiency always keep the machine and its motor, drive unit, ventilation and cooling slots clean.
4. Remove handguard and check that the screws for the shaft socket are securely tightened (weekly check).
5. Check that all the bolts and screws on the machine are securely tightened.

CLEANING THE MACHINE

Do not pour or spray water on the machine! Use a damp cloth with mild soap solution to clean the surfaces.

REPLACING THE FLEXIBLE SHAFT

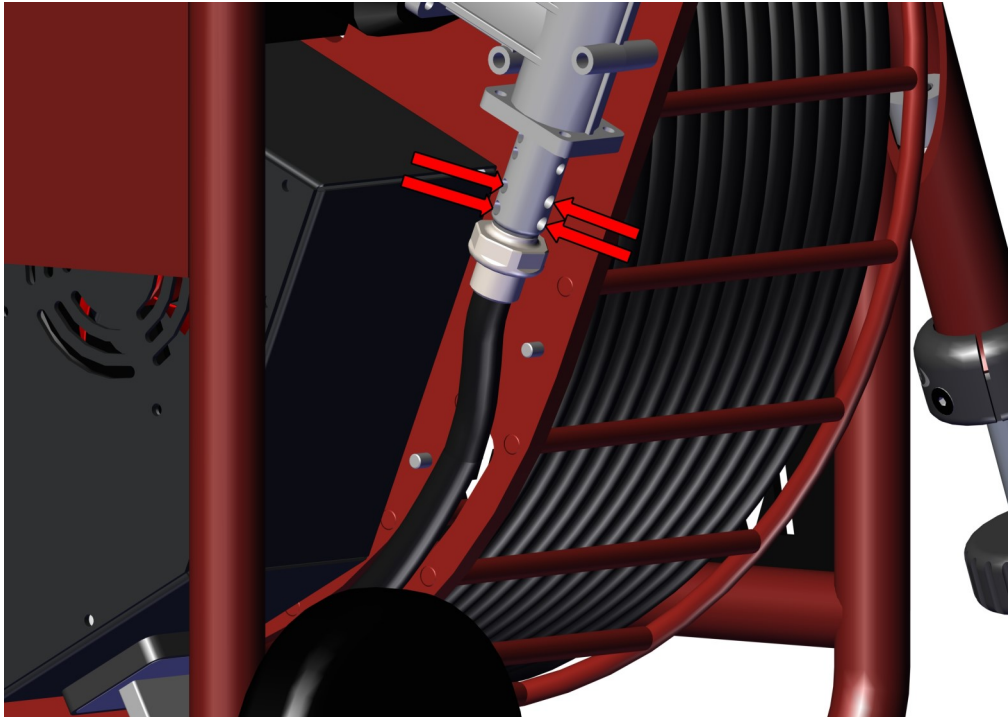
To replace the flexible shaft on the Battery Mini Cleaner or Battery Mini Cleaner +C pull out the shaft from the reel and remove hand guard.



MAINTENANCE

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

Next loosen the set screws on the shaft socket. Pull out the shaft from the socket.



Unscrew the strain relief from the outer casing.



Remove the shaft completely. Reassemble in reverse order.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

SERVICING THE FLEXIBLE SHAFT & ITS OUTER CASING

The flexible shaft is pre-treated with Picote Flexible Shaft Lubricant and the casing replaced prior to shipping. Always inspect the condition of the shaft and its outer casing regularly. Also, inspect at least once a week that the shaft is well attached under the hand guard at the machine end. If the shaft appears to have gaps between the windings from the beginning to the end, the entire shaft will need to be replaced.

Lubricant can be added between the flexible shaft and its outer casing when the shaft is attached to the machine. To add lubricant the shaft has to be disconnected from the shaft socket and removed from the reel. Around 1-1.5m (3-5ft) of shaft should be removed from the outer casing, with the lubricant applied to the inside of the casing. No more than **40ml/40g/1.4oz** will be required for the entire shaft. Too much lubricant can cause a strain on the shaft. After the lubricant has been poured, the free shaft end should be pushed through the outer casing. The shaft will push the lubricant evenly inside the outer casing. Connect the shaft to the machine and rotate on a low rotation speed so that the shaft will push excess lubricant to the outside. Use a mat to protect the work area under the machine to prevent damage to floors.

Keeping the shaft well lubricated will prolong its lifespan and decrease the friction caused by the shaft while it turns round. Lower friction will decrease the burden caused to the motor.

If preferred, the shaft can be taken out of its outer casing for lubrication.

Appropriate oil to use: Picote Flexible Shaft Lubricant (available from your reseller)

FLEXIBLE SHAFT EXTENSION

Flexible extension shafts **are NOT available** for the Battery Mini Cleaner or Battery Mini Cleaner +C.

Do not extend the shaft with extensions in any situations.

ACCESSORIES & SPARE PARTS

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

▲WARNING

Only use Picote Solutions accessories and attachments with the machine described in this operation 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.

BATTERY MINI CLEANER

3540002816	Battery Mini Cleaner G8/16
3540002816US	Battery Mini Cleaner G8/16 110V US
3540002816UK	Battery Mini Cleaner G8/16 110V UK
3540003816	Battery Mini Cleaner +C 8/16 EU
3540003816US	Battery Mini Cleaner +C 8/16 US
3540003816UK	Battery Mini Cleaner +C 8/16 AU

SPARE PARTS

131203108517	Mini Cleaner Replacement Shaft with Spring Casing 16.5m
9311713099	Mini Cleaner Shaft Spring Casing only 16.5m
9530000134	Strain Relief Micro/Mini 9/13mm casing
9540004014	Angle Gear for Battery Mini Miller/Cleaner
9540004013EU	Spare Charger EU for Mini Cleaner & Mini Miller Batteries
9540004013US	Spare Charger US for Mini Cleaner & Mini Miller Batteries
9540004013UK	Spare Charger UK for Mini Cleaner & Mini Miller Batteries
9540004022	Shaft Socket for Battery Mini Miller/Cleaner
9540004020	Hand Guard for Battery Mini Miller/Cleaner
9540003015	Battery Cleaner Control Box
9540001049	Electric Motor for Battery Mini Miller/Cleaner
9540004005	Lower Axle Package for Battery Mini Miller/Cleaner (Inc. Slip Ring)
9590001108	Foot Pedal with Quick Coupling
9540004012	Battery Dock for Battery Mini Miller/Cleaner
9990600024PIC	Hand Guard Special Screws
9540003012	Controller Mini Cleaner
9540004035	Spare High Output Battery
9540004011	Spare Standard Battery
1350000020	Picote Flexible Shaft Lubricant 0.5 liters
1350000021	Picote Flexible Shaft Lubricant Package, includes 6 bottles

ACCESSORIES & SPARE PARTS

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⚠ WARNING Only use 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.

ADDITIONAL TOOLS

1350000005	Pliers
1350000018	Shaft Rounder
1350000006	Sheath Cutter 1
1350000011	Sheath Cutter 2 (Shaft inside outer casing)
1350000013	Combo Hex Key 1-6mm
1350000012	Cutter for Side Grinding Panels
1350000008	Hex Key 4mm
1350000009	Hex Key 3mm
1350000010	Hex Key 2.5mm

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.



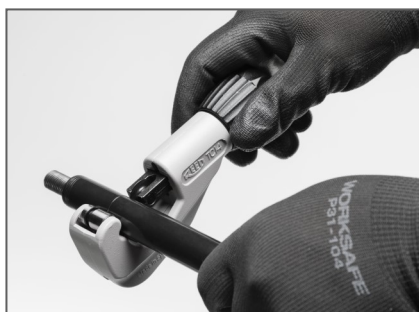
CUTTING THE FLEXIBLE SHAFT



Always inspect the flexible shaft before each use. Run the machine briefly in a clockwise direction to allow the shaft to return to its resting position. If there are potential weak points or the shaft is damaged, cut off the damaged length using a band saw. For most tools, the shaft should extend approximately 40mm (1 ½") past the outer casing.

NOTE: Hubs and Original chains without a leader require more exposed shaft.

CUTTING THE OUTER CASING



Always inspect the shaft outer casing before each use. The easiest and safest way to shorten the outer casing to the correct length is using a Sheath Cutter.

Only the necessary amount of bare shaft should be exposed at any time.



SHAFT ROUNDER



The Shaft Rounder smooths the end of the flexible shaft, preventing the user from being cut by the otherwise sharp metal edge.



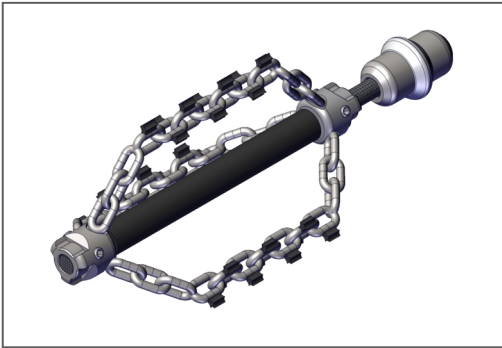
PRACTICAL TIPS & SAFETY ADVICE

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

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.



CREATING 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 can easily and quickly switch between tools. **Leaders should always be used if the situation permits it.**



ADDING A VISUAL MARKER FOR SAFETY



If not using a leader, attach a visual marker (tape) on the outer casing of the flexible shaft. Place it around 500mm (20") from the end of the shaft. The marker will indicate the tool location and help prevent possible injury from the rotating parts by alerting you when the tool is about to exit the pipe.



BATTERY MINI CLEANER +C 8/16

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE



This machine is intended for the following uses:

1. Tool for inspecting pipes before, during and after work (Navigates through DN50 (2") bends and P-traps)
2. Working inside pipes; the CCTV is fitted with an integrated Sonde (512hz)

Always follow Picote Solutions instructions when installing and using the machine with accessories.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

CAUTION

This section contains operating instructions only for Battery Mini Cleaner +C camera kit

BEFORE OPERATION

1. Before using the +C camera kit, install an SD card into SD card slot.
2. Connect DVR to camera reel with included cable



STARTING & USING THE MACHINE

DVR Icons:


1. SD Card
2. Battery level
3. Image Reverse
4. Image Reverse & Mirror
5. Image Mirror
6. Timestamp
7. LED Brightness
8. Record
9. Meter Counter





CAMERA FUNCTION GUIDE


SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

1. Live video

Press  to turn on/off the DVR


Press  to start/stop recording

Press  to mirror or/and reverse the image


Press  to adjust the brightness of the camera LEDs


Press  to take a picture

2. Video settings menu


Press  to enter settings menu

Use  and  to navigate in the menu


Press  to confirm the selection



Press  to exit to exit the settings menu

3. Playback menu


Press  to enter playback mode

Use  and  to browse through the files


Press  to confirm the selection and preview media files

Use  and  to preview previous/next file

Press  to playback video

Press  to enter the play settings


4. Playing video

Press  to play/pause the video



Press  to stop playing the video

Press  to rewind

Press  to forward

Press  to change rewind/forward speed

5. DVR settings menu

Press  to enter video settings,
then press  to enter DVR settings

CAMERA TECHNICAL DATA

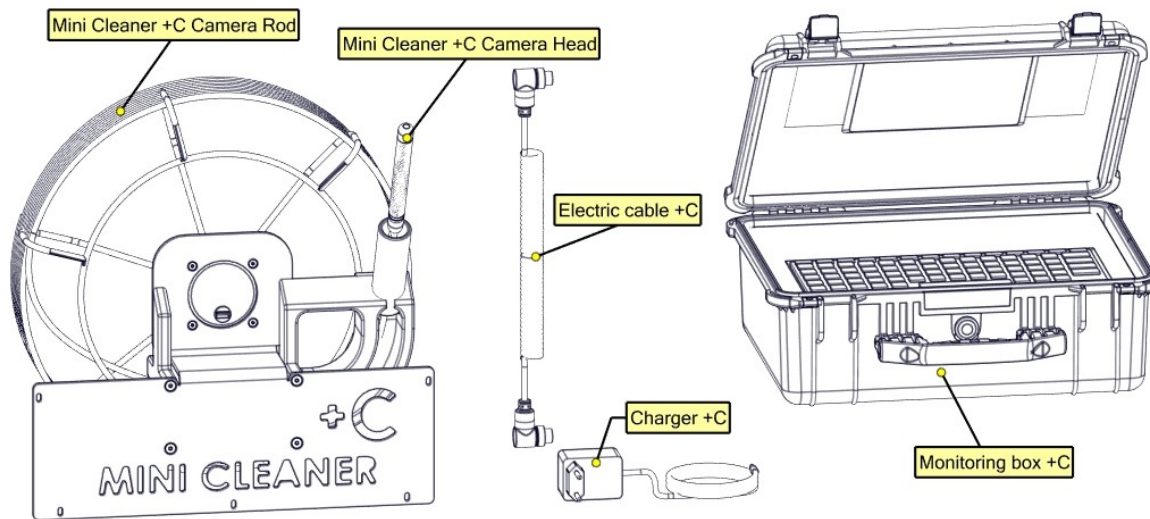
SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

	ITEM	PARAMETER
General	Unit Weight	14 Kg or 31 lb
Camera	Camera Size	Φ14mm×20.5mm (Main body)
	Video Resolution	PAL 720×576 25FPS Max. NTSC 720×488 30FPS Max
	Front Lens	Sapphire
	Shell Material	304# Stainless Steel
	Lighting	Built-in 4xLED (White)
	Water-Proof	20 m or 65 ft Water
	Power Consumption	40 mA (LED OFF), 60 mA (LED ON)
DVR	Screen	7-inch 16:9 color LCD screen
	Screen Resolution	800x480 RGB
	Features	Sonde, image mirror, image flip
	External Memory	SD Memory Card up to 32GB
	Cable Length	30 m or 100 ft
	Meter Counter	Yes
	Single Charge Work Time	6 Hours
	Charging time	8 Hours
	Language	English, German, French, Spanish, Italian, Chinese, Japanese, Russian, Portuguese
Tool Box	Size	380x260x150 mm (15x10x6 in.)(L x W x H)

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SPARE PARTS

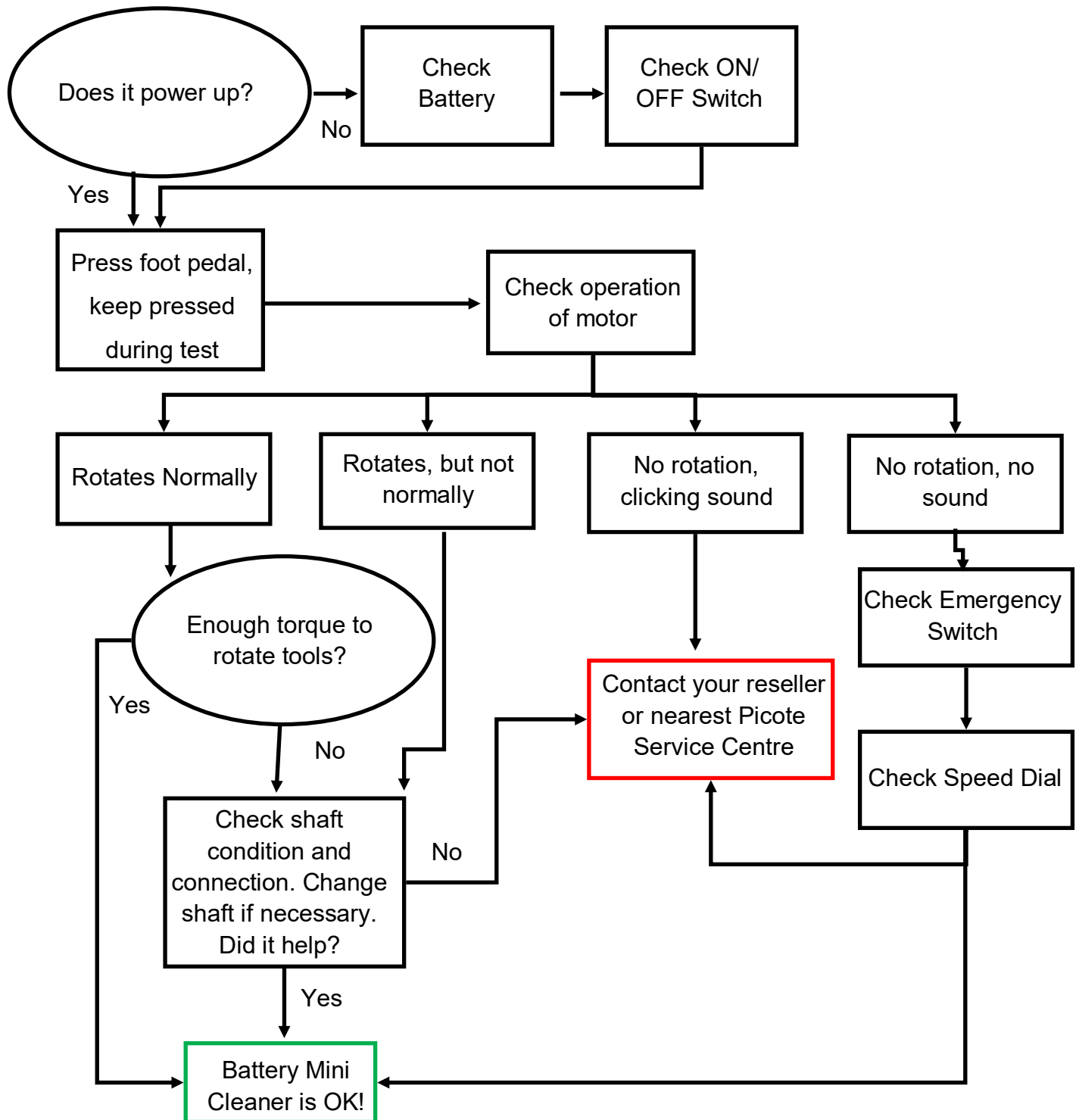
900001760	Battery Mini Cleaner +C Camera Head
900001688	+C Charger EU
900001691	+C Charger US
900001689	+C Charger UK
900001805	Battery Mini Cleaner +C Camera Rod
900001758	Electric cable +C
900001755	Monitoring Box +C



Number (config)	Description (config)	Qty
900001758	Electric cable +C	1
900001688 (EU), 900001691 (US), 900001689 (UK), 900001690 (AU)	Charger +C	1
900001760	Mini Cleaner +C Camera Head	1
900001755	Monitoring box +C	1
900001805	Mini Cleaner +C Camera Rod	1

TROUBLESHOOTING FLOWCHART

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE



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

WARRANTY POLICY & PROCEDURE

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

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.

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Date: MAY 2021

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