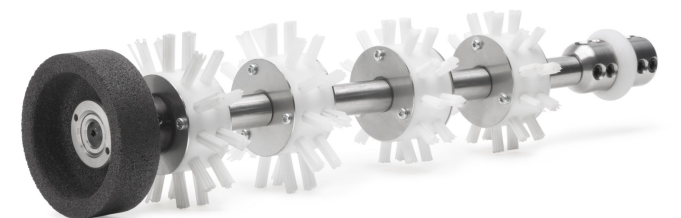
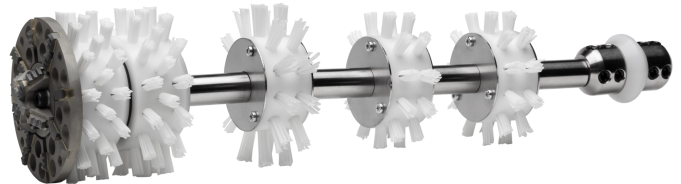
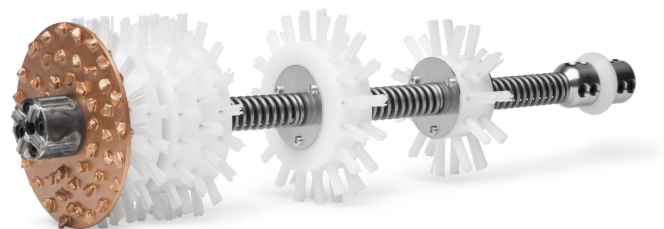
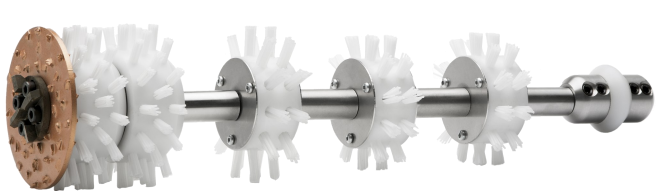
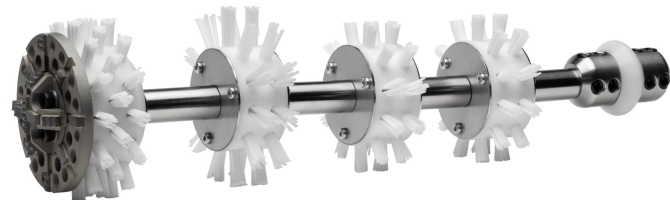
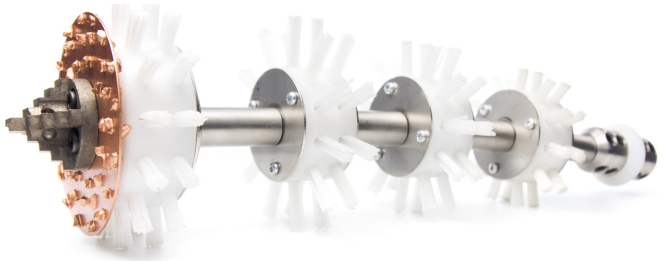
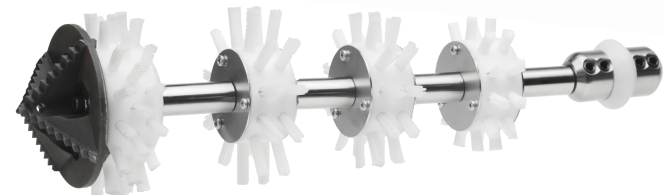


OPERATION & SAFETY MANUAL



WARNING

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

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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

WARNING

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

Safety Symbols

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



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



Danger risk of serious injury from hot parts, 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.

ENVIRONMENT, TRANSPORT, STORAGE & DISPOSAL

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

ENVIRONMENT

Operational Ambient Temperature Range: 0 to +50°C (32 to 122°F)

Storage Ambient Temperature Range: -20 to +50°C (-4 to 122°F)

Condensation Free

TRANSPORT

Picote Twisters should be transported inside of a vehicle properly secured to prevent any sudden movements caused by hard braking or accident. Using lidded boxes which are fastened and stored on the bottom of the vehicle is recommended.

Never transport Picote Millers with a Twister or other tooling attached to the shaft.

STORAGE

It is recommended that Twisters be stored indoors, protected from rain and sunlight and in a constant ambient temperature environment.

Clean used Twisters with fresh water after taken out from the pipe. Store in place where tool can dry out properly. Constant water exposure and attached dirt expose the Twisters to rust.

DISPOSAL

Twister components can be separated. Recycle metallic and plastic components in their respective waste collection points. Always follow the local waste handling rules and regulation.

GENERAL INFORMATION

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

AVAILABLE TYPES AND SIZES

Twisters have a variety of different applications and are available for use with the 8mm ($\frac{1}{3}$ "), 10mm ($\frac{3}{8}$ "), 12mm ($\frac{1}{2}$ "), and 18mm ($\frac{3}{4}$ ") shaft and depending on Picote Miller can be used to re-open lateral connects, removing intruding connections, collapsed liners, concrete, lime scale or nails & other metal inserts. The 18mm ($\frac{3}{4}$ ") Twisters are covered in a separate Operation & Safety Manual for Maxi Power+ Tooling.

Always select the most suitable Twister for the Job

Choosing the correct Twister for the job

TWISTER TYPE & PIPE SIZE	Shaft Size MM (Inches)	90° BENDS	45° BENDS
Twister Mini Flexi DN50 (2")	8 ($\frac{1}{3}$ ")	YES	YES
Twister Mini Flexi DN70 (3")	8 ($\frac{1}{3}$ ")	YES	YES
Twister Express DN50, 70 & 100 (2, 3, & 4")	8, 10, & 12 ($\frac{1}{3}$, $\frac{3}{8}$ & $\frac{1}{2}$ ")	YES	YES
Twister DN100, 150 & 200 (4, 6, & 8")	12 ($\frac{1}{2}$ ")	YES	YES
Tiger Twister DN100 (4")	10 ($\frac{3}{8}$ "), 12 ($\frac{1}{2}$ ")	YES	YES
Tiger Twister DN125, 150, & 200 (5, 6, & 8")	12 ($\frac{1}{2}$ ")	YES	YES
Twister Concrete Remover DN100 & 150 (4 & 6")	12 ($\frac{1}{2}$ ")	YES	YES
Twister Liner Remover DN100 & 150 (4 & 6")	12 ($\frac{1}{2}$ ")	YES	YES
Tiger Twister Liner & Concrete Remover DN100 & 150 (4 & 6")	12 ($\frac{1}{2}$ ")	YES	YES
Twister Metal Grinder DN100 (4")	12 ($\frac{1}{2}$ ")	YES	YES

- Twisters with 8mm ($\frac{1}{3}$ ") shaft connections are designed for the **Picote Mini Cleaner, Mini Miller, Battery Super Mini Cleaner, Battery Super Mini Miller.**
- Twisters with 10mm ($\frac{3}{8}$ ") shaft connections have been designed for use with the **Picote Midi Cleaner.**
- Twisters with 12mm ($\frac{1}{2}$ ") shaft connections have been designed for the **Picote Super Midi & Maxi Miller.**
- Twisters with 18mm ($\frac{3}{4}$ ") shaft connections have been designed to be operated with the **Picote Maxi Power+** and are covered in a separate Operation & Safety manual.

GENERAL INFORMATION

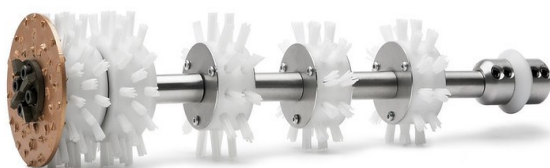
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Performance Related Cutting

The speed and cutting performance is dependent on the Twister type selected based on the following:

SOFT MATERIALS / SLOW CUTTING

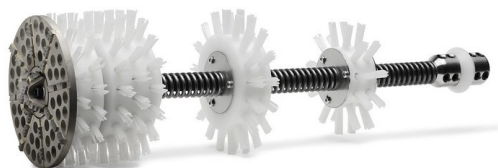
FAILED LINERS / CONCRETE



TWISTER LINER REMOVER

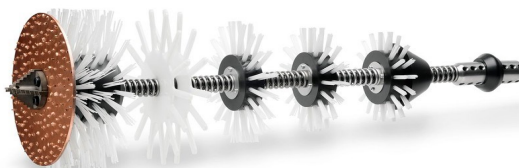


TWISTER CONCRETE REMOVER

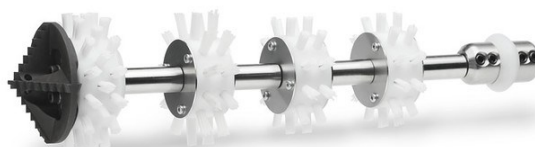


TIGER TWISTER LINER & CONCRETE REMOVER

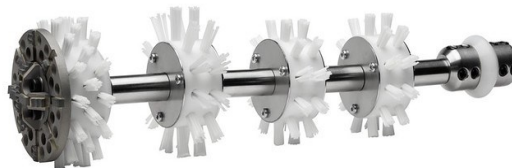
REINSTATEMENTS



STANDARD TWISTER



EXPRESS TWISTER



TIGER TWISTER

HARD MATERIALS / FAST CUTTING

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Twister Mini Flexi

For reinstatements through problematic bends, multiple bends or P-traps.

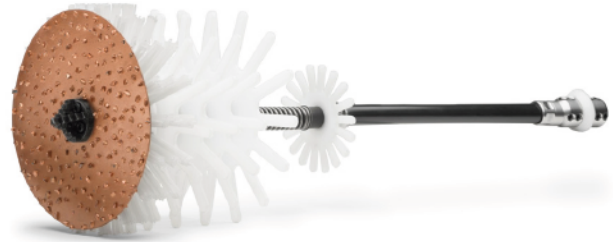
Product #	Model	Shaft Size
1230000054	2"	1/3"
1230000074	3"	1/3"



Twister Express

Time is money. Our fastest option for reinstating lined connections with an impressive initial opening inside cast iron, clay, concrete or PVC pipes.

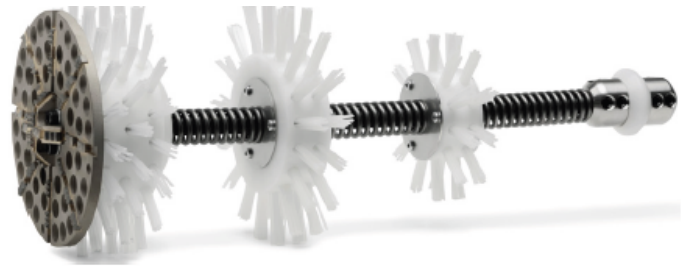
Product #	Model	Shaft Size
1230000052	2"	1/3"
1230000072	3"	1/3"
1230000372	3" Unlined Pipe	3/8"
1230000472	3" Lined Pipe	3/8"
1233075103	4" Lined Pipe	3/8"
1233085103	4" Unlined Pipe	3/8"
1230000371	3" Unlined Pipe	1/2"
1230000471	3" Lined Pipe	1/2"
1233075102	4" Lined Pipe	1/2"
1233085102	4" Unlined Pipe	1/2"



Twister

Reinstatements inside clay, cast iron, concrete or plastic pipes. Brushes keep tool centred in the pipe.

Product #	Model	Shaft Size
1230075100Y	4" Lined Pipe	1/2"
1230085100Y	4" Unlined Pipe	1/2"
1230115150Y	6" Lined Pipe	1/2"
1231125150Y	6" Unlined Pipe	1/2"
1230175200Y	8"	1/2"

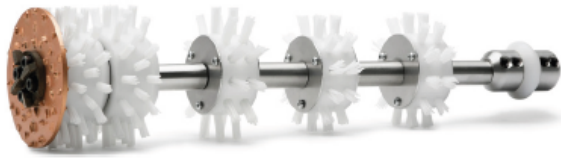


Tiger Twister Lateral Cutter

Reinstate connections even with Fiberglass Liners & UV Resins, creating an impressive initial opening. Features a precision Front Metal Panel and Front Drill Head equipped with extra-hard Tiger carbides.

Product #	Model	Shaft Size
1262075101	4" Lined Pipe	3/8"
1262085101	4" Unlined Pipe	3/8"
1262075100	4" Lined Pipe	1/2"
1262085100	4" Unlined Pipe	1/2"
1262090125	5" for Lined Pipe	1/2"
1262100125	5" Unlined Pipe	1/2"
1262115150	6" Lined Pipe	1/2"
1262125150	6" Unlined Pipe	1/2"
1262175200	8" Unlined Pipe	1/2"

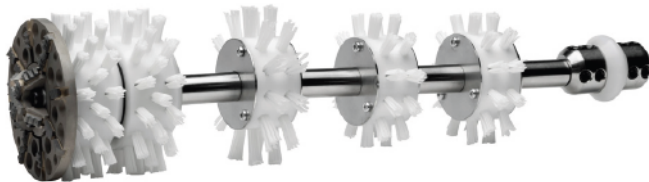
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Twister Liner Remover

Features two front brushes for stability with a custom built Flat Drill Head. The Front Metal Panel has aggressive carbides resulting in efficient liner removal in cast iron and concrete pipes.

Product #	Model	Shaft Size
1233075100	4" Lined Pipe	1/2"
1233085100	4" Unlined Pipe	1/2"
1231115150Y	6" Lined Pipe	1/2"
1230125150Y	6" Unlined Pipe	1/2"



Tiger Twister Liner & Concrete Remover

Two tough jobs, one tougher tool. Remove failed CIPP lining twice as fast as with a regular Twister Liner Remover or remove concrete from the pipe. A must-have for every tool box.

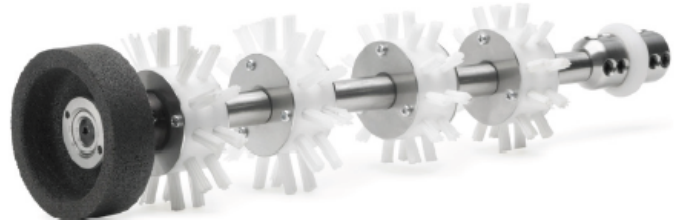
Product #	Model	Shaft Size
1263075100	4" Lined Pipe	1/2"
1263085100	4" Unlined Pipe	1/2"
1263115150	6" Lined Pipe	1/2"
1263125150	6" Unlined Pipe	1/2"



Twister Concrete Remover

For efficient concrete, grout, slurry, & rock removal. Dual front brushes provide added stability while the heavy duty Front Metal Panel with large carbides and specialized Front Drill Head deliver great results.

Product #	Model	Shaft Size
1234085100	4"	1/2"
1234125150	6"	1/2"
1234085100SA	4" + Steering Axle	1/2"
1234125150SA	6" + Steering Axle	1/2"



Twister Metal Grinder

1233075101N

- 4" pipe
- 1/2" Shaft

Quickly and efficiently grinds away most metal including rebar, steel rods, nails, screws, and lead joints in 4" pipes. Safe option even inside PVC and clay pipe.

Product #	Spare Part
900000776	Stone Replacement Head 4"

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE



Twister Mini Flexi

For reinstatements through problematic bends, multiple bends or P-traps.

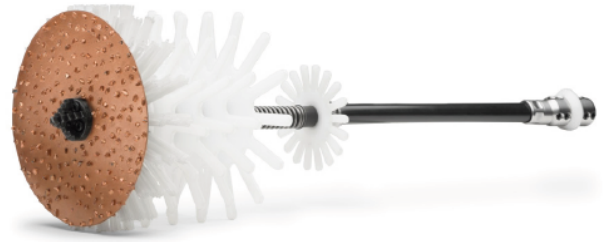
Product #	Model	Shaft Size
1230000054	DN50	8mm
1230000074	DN70	8mm



Twister Express

Time is money. Our fastest option for reinstating lined connections with an impressive initial opening inside cast iron, clay, concrete or PVC pipes.

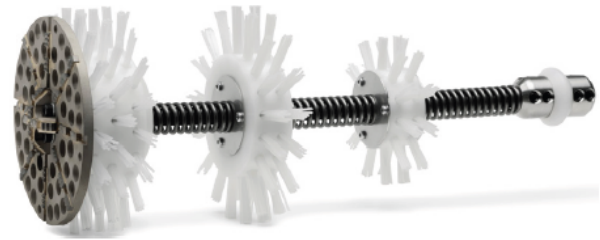
Product #	Model	Shaft Size
1230000052	DN50	8mm
1230000072	DN70	8mm
1230000372	DN70 Unlined Pipe	10mm
1230000472	DN70 Lined Pipe	10mm
1233075103	DN100 Lined Pipe	10mm
1233085103	DN100 Unlined Pipe	10mm
1230000371	DN70 Unlined Pipe	12mm
1230000471	DN70 Lined Pipe	12mm
1233075102	DN100 Lined Pipe	12mm
1233085102	DN100 Unlined Pipe	12mm



Twister

Reinstatements inside clay, cast iron, concrete or plastic pipes. Brushes keep tool centred in the pipe.

Product #	Model	Shaft Size
1230075100Y	DN100 Lined Pipe	12mm
1230085100Y	DN100 Unlined Pipe	12mm
1230115150Y	DN150 Lined Pipe	12mm
1231125150Y	DN150 Unlined Pipe	12mm
1230175200Y	DN200	12mm

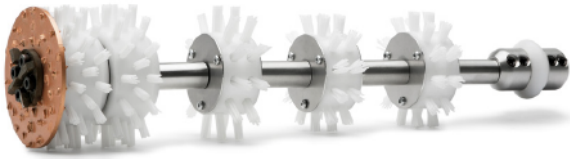


Tiger Twister Lateral Cutter

Reinstate connections even with Fiberglass Liners & UV Resins, creating an impressive initial opening. Features a precision Front Metal Panel and Front Drill Head equipped with extra-hard Tiger carbides.

Product #	Model	Shaft Size
1262075101	DN100 Lined Pipe	10mm
1262085101	DN100 Unlined Pipe	10mm
1262075100	DN100 Lined Pipe	12mm
1262085100	DN100 Unlined Pipe	12mm
1262090125	DN125 Lined Pipe	12mm
1262100125	DN125 Unlined Pipe	12mm
1262115150	DN150 Lined Pipe	12mm
1262125150	DN150 Unlined Pipe	12mm
1262175200	DN200 Unlined Pipe	12mm

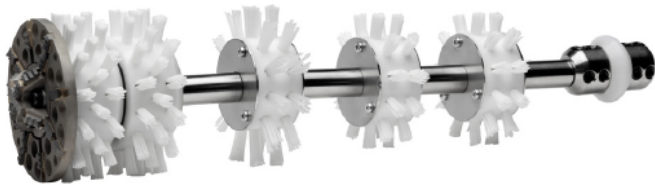
SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE



Twister Liner Remover

Features two front brushes for stability with a custom built Flat Drill Head. The Front Metal Panel has aggressive carbides resulting in efficient liner removal in cast iron and concrete pipes.

Product #	Model	Shaft Size
1233075100	DN100 Lined Pipe	12mm
1233085100	DN100 Unlined Pipe	12mm
1231115150Y	DN150 Lined Pipe	12mm
1230125150Y	DN150 Unlined Pipe	12mm



Tiger Twister Liner & Concrete Remover

Two tough jobs, one tougher tool. Remove failed CIPP lining twice as fast as with a regular Twister Liner Remover or remove concrete from the pipe. A must-have for every tool box.

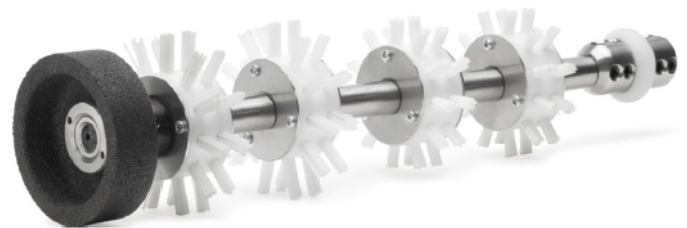
Product #	Model	Shaft Size
1263075100	DN100 Lined Pipe	12mm
1263085100	DN100 Unlined Pipe	12mm
1263115150	DN150 Lined Pipe	12mm
1263125150	DN150 Unlined Pipe	12mm



Twister Concrete Remover

For efficient concrete, grout, slurry, & rock removal. Dual front brushes provide added stability while the heavy duty Front Metal Panel with large carbides and specialised Front Drill Head deliver great results.

Product #	Model	Shaft Size
1234085100	DN100	12mm
1234125150	DN150	12mm
1234085100SA	DN100 + Steering Axle	12mm
1234125150SA	DN150 + Steering Axle	12mm



Twister Metal Grinder

1233075101N

- DN100
- 12mm Shaft

Quickly and efficiently grinds away most metal including rebar, steel rods, nails, screws and lead joints in DN100 pipes. Safe option even inside PVC and clay pipe.

Product #	Spare Part
900000776	Stone Replacement Head DN100

USER GUIDE - CIPP REINSTATEMENTS

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

Opening Connections

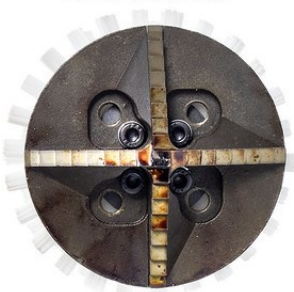
- Select the correct Twister according to the size of the original host pipe, taking into account whether or not the tool shall be used in a lined or unlined pipe.
- Place the tool completely inside the pipe before powering up the tool.
- It is possible to use a Twister designed for lined pipe inside an unlined pipe, but the opening will be smaller and will require significantly more grinding afterwards with the Smart Cutter™.
- **Do not** use a Twister designed for a unlined pipe in a lined pipe.

TWISTER EXPRESS
DN100 Lined pipe



75mm

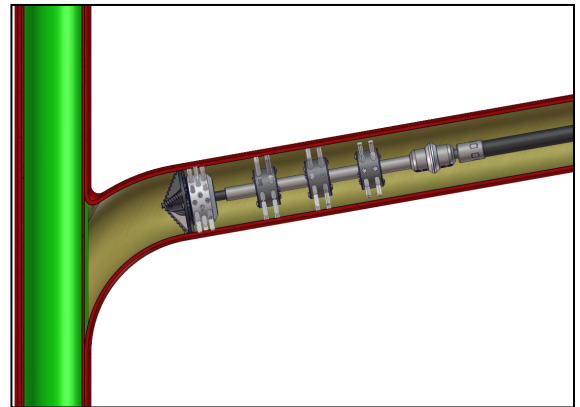
TWISTER EXPRESS
DN100 Unlined pipe



85mm

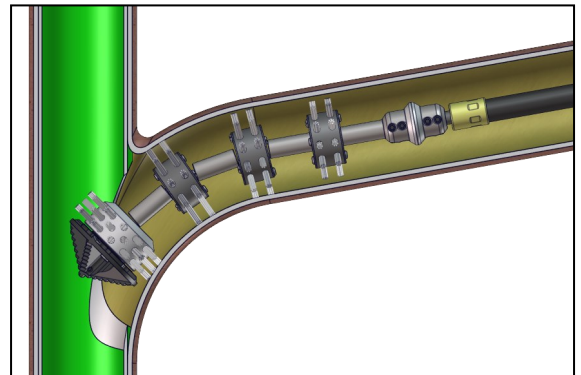
Step 1

- If coming from an unlined pipe select the **Unlined Twister Version**, according to the size of host pipe. If not then select a Lined versions
- Place a CCTV camera into lined pipe so that you will see how the work is progressing. **Never work blind!**



Step 2

- Carefully create the initial opening.
- Continue to push through so that you remove as much of the liner away from the connection as possible.
- **Be careful that you do not damage the already lined pipe during the process.**
- When satisfied with the opening, stop and proceed to Step 3.

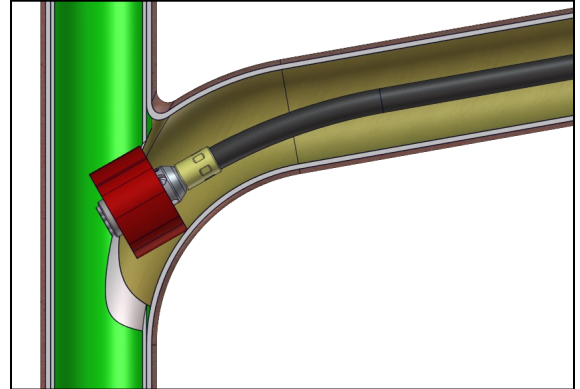


USER GUIDE - CIPP REINSTATEMENTS

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

Step 3

- Use Smart Cutter™ and Side Grinding Panels to finalize the connection opening.



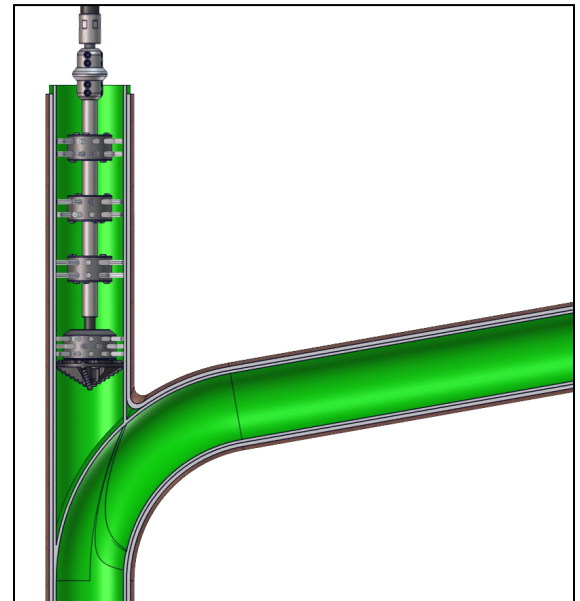
Options

If you are looking to rehabilitation and seal the entire system you can either then install a liner into the lateral branch utilizing the Picote 50/50 method demonstrated below, or shoot a liner in the lateral branch and install a Picote Connection Collar.

50/50 Method

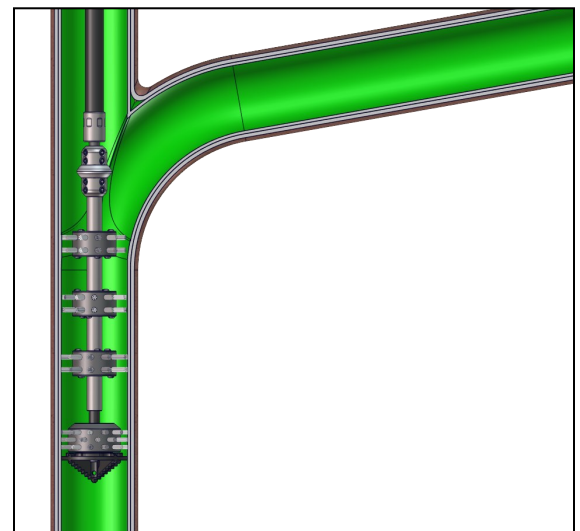
Step 1

- Install a CIPP liner in the lateral pipe, allowing it to extend into the stack pipe.
- Select the **Lined Twister Version**, according to the size of host pipe.
- Open the connection carefully.



Step 2

- Operate the Twister completely through the opening to remove all the remaining liner.
- If required finalize cleaning liner remnants with Picote Smart Cutter™.



USER GUIDE - FAILED LINER REMOVAL

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

Removing Failed CIPP Liners

- For cutting out polyester resin / felt liners we recommend the Twister Liner Remover or Tiger Twister Liner & Concrete Remover.
- For cutting out epoxy / silicate resin / GRP liners we recommend the Tiger Twister Liner & Concrete Remover tool.
- Before attempting to cut out a liner, it is important to make every attempt to cure it as much as possible.
 - The harder the liner is, the easier it will be to cut out.
- Select the correct Twister:
 - If working in an unlined section of pipe then use the “Unlined” version.
 - If using inside a lined pipe then select the “Lined” version.
 - If in doubt, always use the “Lined” version.
- Set the Picote Miller speed to the lowest speed setting.
- Place the Twister inside the pipe, turn on the Picote Miller and release the Emergency Stop.
- While rotating the Twister, slowly push the it down to the starting section of failed liner and push against the face of the failed liner while operating/rotating to start the removal.
- Listen to the noise of the front metal panel cutting against the face of the liner.
 - As you start cutting the noise will become more consistent.
 - At that point you can slowly increase the rotation speed.
 - Depending on the liner type and nature of the failure, the rotation speed should be between 900 to 1200 RPM.
- Cut for approximately 1 to 2 minutes, then pull back the Twister 0.5 metres (18”) to allow it to straighten and for any debris to be pulled away from to provide a clean cutting area.
- Keep repeating this process for 15 to 20 minutes as needed.
- Every 15-20 minutes, engage the Picote Miller Emergency Stop, turn off the Miller and remove the Twister from the pipe, clean the cutting head and allow the Twister and Miller to cool down.
- At this point you can inspect the failed liner area using a CCTV camera to check progress.
- Once complete, any excess material/resin left on the pipe wall can be removed with the Picote Cyclone Chains and/or the Picote Smart Cutter™ and side grinding panels.



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Concrete/Grout/Rock Removal

- The Twister Concrete Remover is best suited for removing concrete containing aggregate as the carbide stones on the 3mm thick front metal panel are randomly shaped and spaced.
- The Tiger Twister Liner & Concrete Remover is best used for removing concrete containing higher levels of cement vs aggregate as the carbide teeth on the 6mm thick front metal panel are uniform and equally spaced.
- Set the Picote Miller speed to the lowest speed setting.
- Place the Twister inside the pipe, turn on the Picote Miller and release the Emergency Stop.
- While rotating the Twister, slowly push it down to the starting section of concrete/grout/rock and push against the area while operating/rotating to start the removal.
- Listen to the noise of the front metal panel cutting against the material.
 - As you start cutting the noise will become more consistent as the full surface of the front metal panel begins to engage.
 - You can now slowly increase the rotation speed.
 - Depending on the type of material, the rotation speed should be between 900 to 1200 RPM.
- Operate the Twister against the face of the material for 2 to 3 minutes and then pull back 0.5 metres (18") to allow it to straighten and for any debris to be pulled back away from the cutting area to provide a clean cutting surface.
- Keep repeating this process for 15 to 20 minutes as needed.
- Every 15-20 minutes, engage the Picote Miller Emergency Stop, turn off the Miller and remove the Twister from the pipe, clean the cutting head and allow the Twister and Miller to cool down.
- At this point you can inspect the area using a CCTV camera to check progress.
- Once complete, any excess material concrete or material left on the pipe wall can be removed with the Picote Cyclone Chains and/or the Picote Smart Cutter[™] and side grinding panels.



TOOL HEAD REPLACEMENT

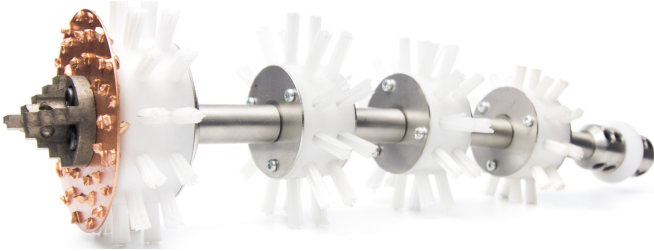
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! WARNING

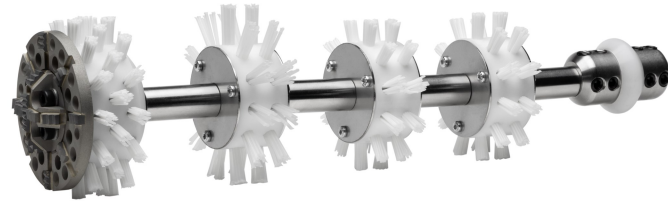
This section contains important safety information.
Failure to comply could result in serious injury or death.



Engage the Picote Miller Emergency Stop, then turn off and unplug the Miller before removing any tooling from the shaft.



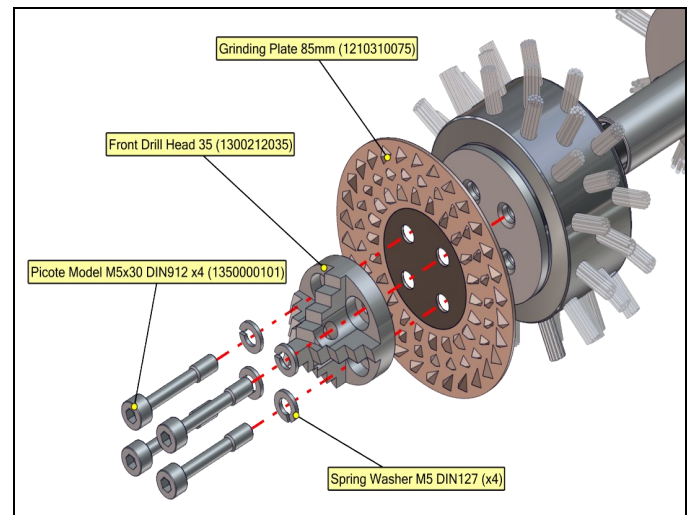
TWISTER



TIGER TWISTER

TWISTER / TIGER TWISTER

- Remove Allen Bolts and change the worn out Front Drill Head and Front Metal Panel.
- Repeat in opposite order to mount new front pieces.
- If needed, Twisters can be also equipped with 3mm front grinding panels when performing tougher jobs.
- The panels can be simply changed the same way that a worn out 1mm thick plate is replaced.
- Use Loctite 542 when reinstalling the bolts.



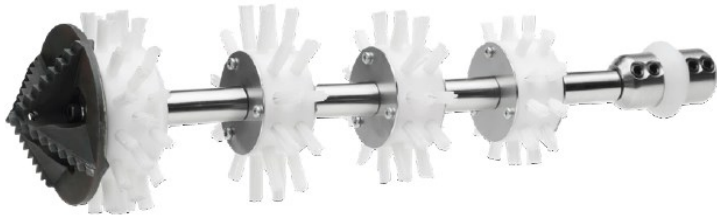
TWISTER UPGRADE TO TIGER TWISTER:

- Replace 1mm front metal panel with Tiger Front Metal Panel.
- Replace Front Drill Head with Tiger Front Drill Head.



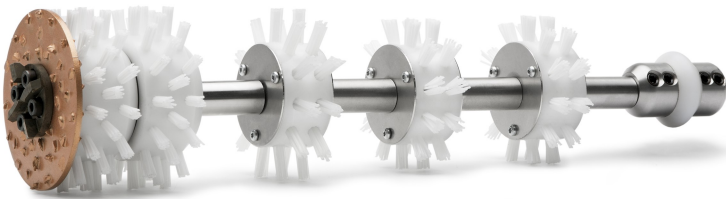
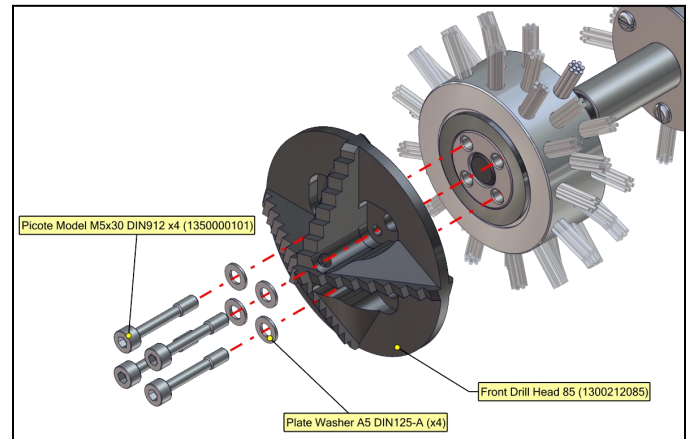
TOOLHEAD REPLACEMENT

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE



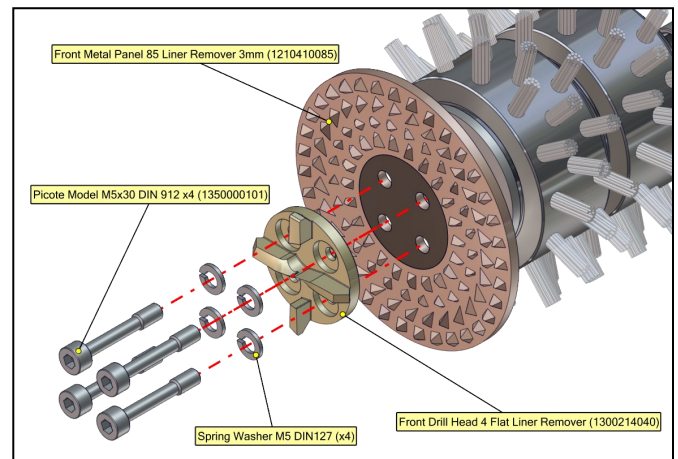
TWISTER EXPRESS

- Remove Allen Bolts
- Change out the Front Drill Head.
- Repeat in opposite order to mount new Drill Head.



TWISTER LINER REMOVER

- Remove Allen Bolts
- Change out Front Drill Head and Front Metal Panel.
- Repeat in opposite order to mount new front pieces.

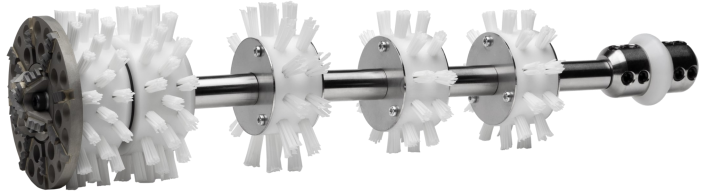


TOOL HEAD REPLACEMENT

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

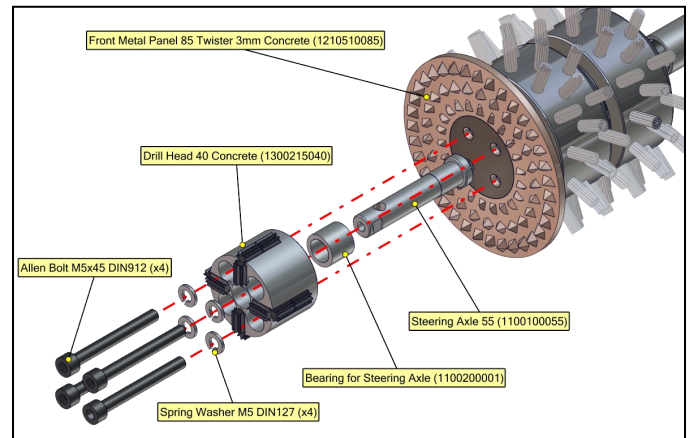


TWISTER CONCRETE REMOVER



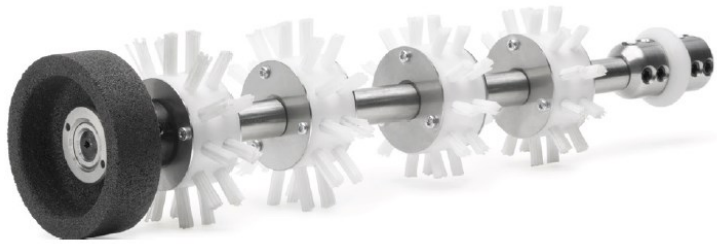
TIGER TWISTER LINER & CONCRETE REMOVER

- Remove Allen Bolts
- Change out Drill Head and Front Metal Panel.
- Repeat in opposite order to mount new front pieces.
- Note: The steering axle and bearing are optional with Twister Concrete Remover. When the host pipe is partially filled with concrete the steering axle allows the operative to pull the concrete cutter around bends.



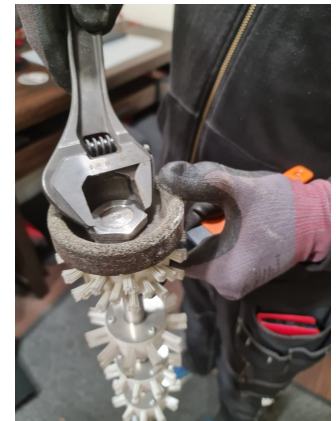
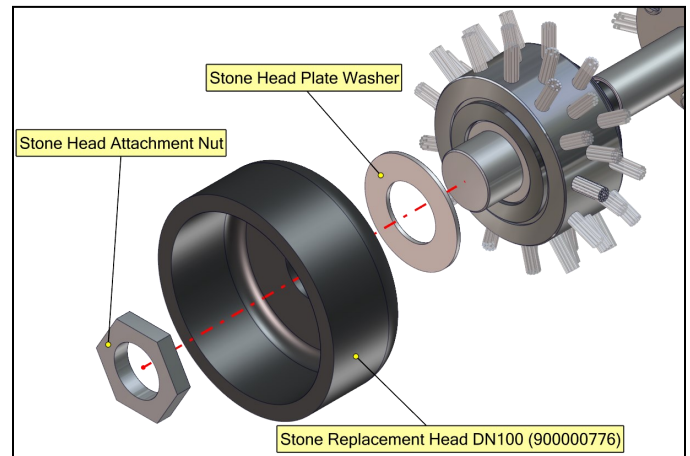
TOOL HEAD REPLACEMENT

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE



TWISTER METAL GRINDER

- Change out Stone Head using an adjustable pin and Crecent wrench.
- On the backside of the Front Brush Head there are 2 holes. Place the pin wrench into the 2 holes to allow you to hold the head in place.
- Remove Attachment Nut using adjustable Crecent wrench.
- Repeat in opposite order to mount new Stone Head.
- Be careful to not overtighten to avoid breaking the Stone Head.



TOOL HEAD REPLACEMENT

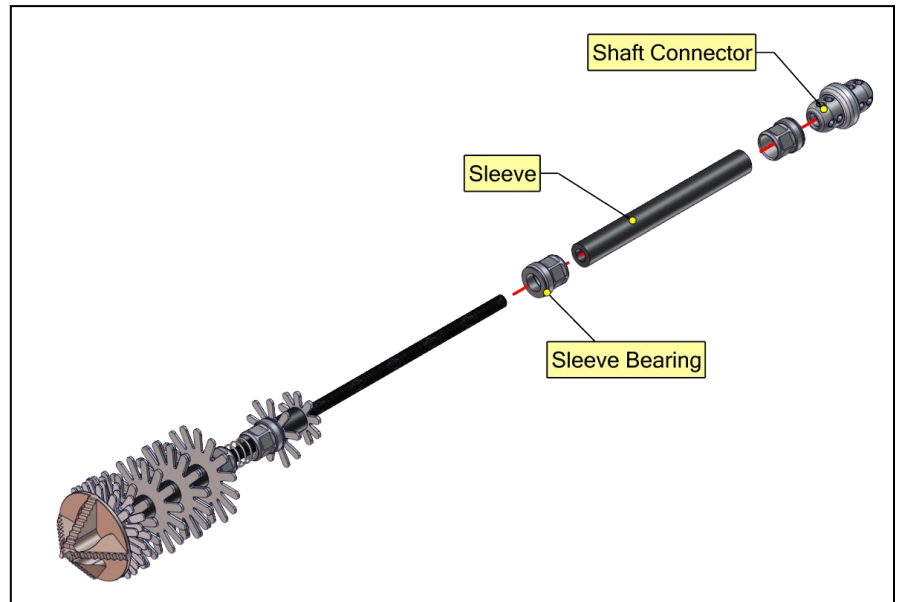
SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE



TWISTER MINI FLEXI

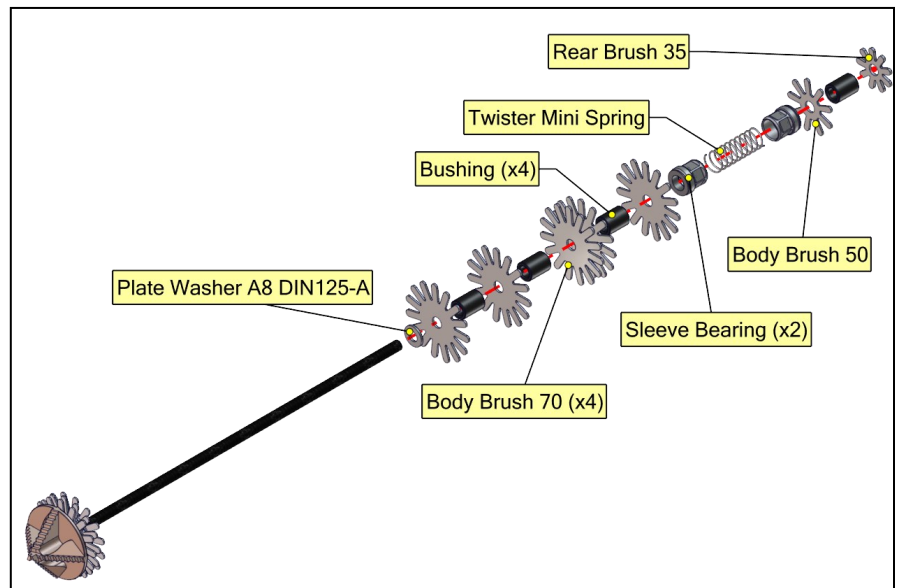
Step 1

- All of the components need to be removed to change the drill head.
- Keep track of the components so that you can easily assemble the tool after you have changed the drill head.
- Begin the process by removing the components shown.



Step 2

- Continue removing components.

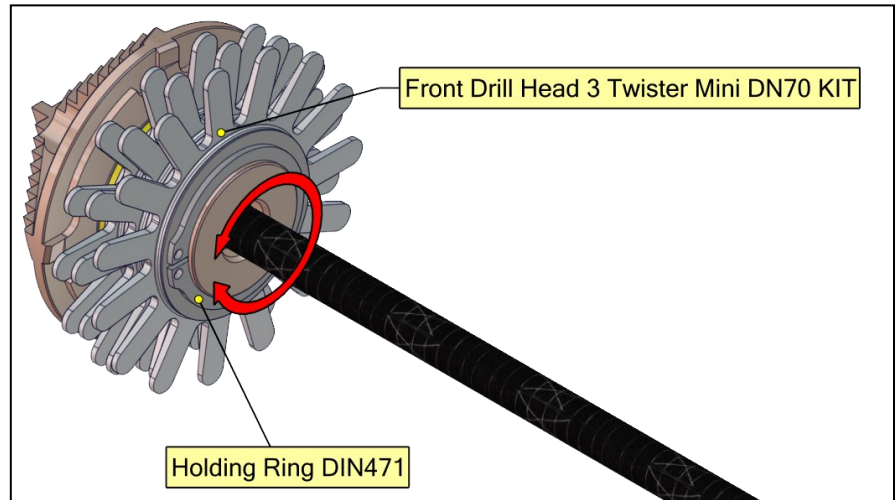


TOOL HEAD REPLACEMENT

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

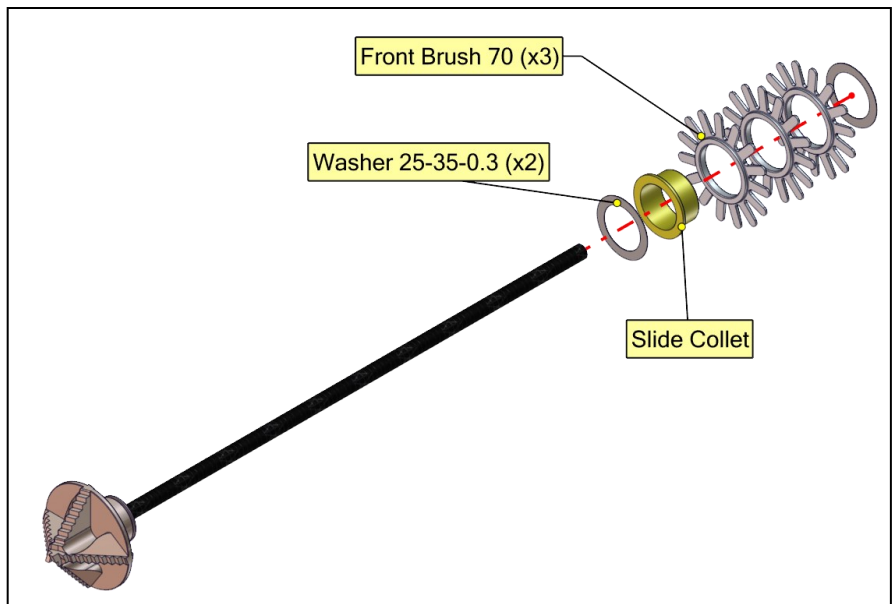
Step 3

- Take out the Holding Ring with circlip pliers.



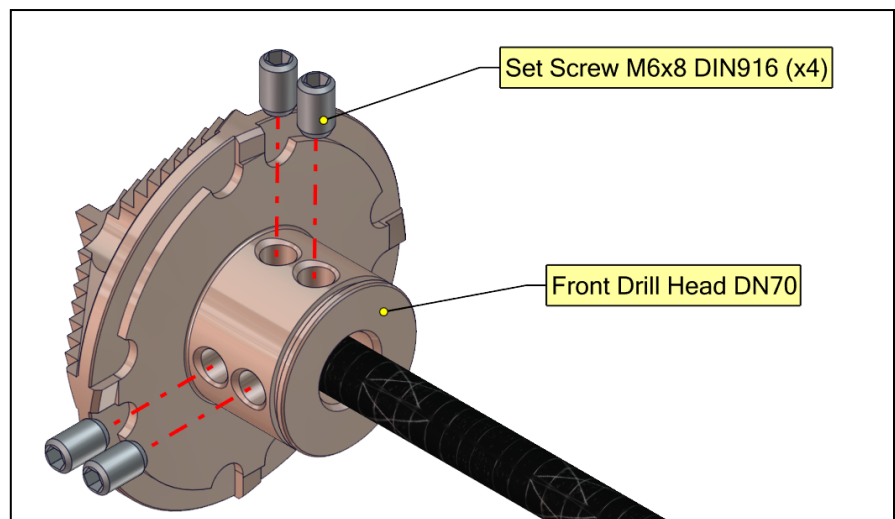
Step 4

- Continue to remove components.



Step 5

- Remove Set Screws to remove Front Drill Head.
- Repeat all the steps in opposite order to re-assemble.



INSTALLATION & SETUP

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

ATTACHING TWISTER TO MILLER SHAFT

- Always inspect the Picote Miller shaft before each use.
- If the shaft is damaged or there are potential weak points, cut off the damaged length or replace the entire shaft as needed.
- Round off any sharp edges to avoid cuts and to make it easier to insert the shaft into the tooling. Please see the corresponding Miller Operation & Safety Manuals for instructions.
- Run the shaft for 30 seconds and then check that there is sufficient length of exposed flexible shaft, without its outer casing, to adequately attach tooling and allow for shaft movement.



Damaged Shaft.
Needs to be trimmed.



Leave a gap between the sleeve and the Twister
of approximately 6mm (1/4").



TIGHTENING THE SET SCREWS / ALLEN BOLTS

- Check that all bolts have been loosened so that the shaft can be easily inserted.
- Position the shaft inside the Twister as far as it will go.
- Always tighten the screws starting from the screw furthest away from the end of the flexible shaft (where applicable).



OPERATION

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.



Before Use:

- Select the correct size and style of Twister for your job.
- Ensure water is flowing in the pipe or the vacuum extraction is used (dry cleaning).
- Ventilate the work area properly.
- Ensure that pipes are grounded/earthed. Twisters can cause friction and create a risk of electric shock.

During Use:

- Use a CCTV camera to position the Twister in the correct spot.
- Place the Twister inside the pipe so that it fits completely inside before turning the Miller power on.
- Start the Twister at a low speed and adjust up as needed while working.
- Tightly hold the shaft while operating.
- Make sure that you have your CCTV camera inside the lined pipe while opening connections.
- Do not force the Twister, let it do the work. If too much force or excessive high speed is used the Twister might get stuck resulting in damaging or breaking the Twister, shaft or the pipe.
- **NOTE: Twister tool heads get very hot during use.** Where water cooling is not being used, you need to take breaks, especially if working inside the plastic pipes, to cool down the tool head after 10-15 min.
- The Twisters can be cooled down using water or left to cool in the open air.
- Always monitor the temperature of the Miller shaft outer casing and let the Miller cool down after every 30 min periods of constant work or more frequently if needed.

After Use

- **WARNING: Risk of serious injury or death!** Engage the Miller emergency stop, turn the power off and unplug the unit before removing the Twister from the shaft.
- **The Twister can be very hot after use.** Wear heat resistant gloves and allow the Twister to cool down before touching.

WARRANTY POLICY & PROCEDURE

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Limited Warranty:

Picote warrants to the original End User that the Product purchased by such End User will operate in accordance with, and substantially conform to their published specifications when shipped or otherwise delivered to the End User and for a period of one (1) year, except electric motors and batteries for which the warranty period shall be six (6) months, provided, however, that Picote does not warrant any claim or damage under this Warranty if such claim or damage results from:

1. Consumable parts or normal wear and tear resulting from use of the Products,
2. Regular periodic maintenance of Products,
3. Misuse, neglect, or improper installation or maintenance of the Products, or use of Products not for their intended purpose,
4. Products that have been altered, modified, repaired, opened or tampered with by anyone other than Picote or an authorized Picote Service Centre, or unsuitable or unauthorized spare parts, accessories or third party products when using the Products or;
5. the use of the Products not in compliance with their respective Documentation, user manuals, safety and maintenance instructions, and any usage restrictions contained therein, or
7. accident, fire, power failure, power surge, or other hazard.

Otherwise, the Products are sold AS IS. End User is responsible for using the Products within their specifications and instructions as contained in the Documentation.

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, NON INFRINGEMENT, 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.

TRAINING

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TRAINING CENTRES:

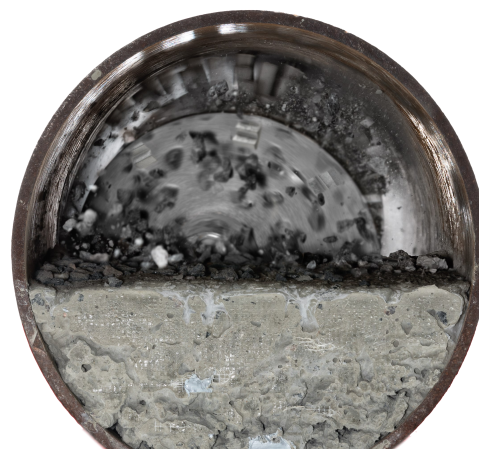
- Phoenix, Arizona, **USA**
- Porvoo, **Finland**
- Sandhurst, England, **UK**



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