ROTARY RODS EQUIPMENT INSTRUCTION MANUAL

CAUTION: Read these instructions before using this equipment

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1. General Safety & Operating Tips

- Always wear appropriate eye protection, clothing, gloves and respirator or dust mask.

- Work on ladders and roofs should only be attempted by experienced individuals that have the proper knowledge and ability to execute all safety procedures.

- Be aware of all electrical hazards when working with ladders and all other equipment.

- Keep all loose clothing tucked in to prevent being tangled in rotating rods.

- Only add one rod at a time when using the rotating rods.

- Do not use rubber or grip type gloves, as these can get caught up and injury will occur.

- Always use suitable heavy duty or leather gloves when rotary cleaning.

- Never use a mains powered drill, as they generally do not have an adjustable torque setting. The reason we recommend a drill that has an adjustable torque is so that if you catch an unseen obstacle, then rather the drill break your fingers or wrist, the drill takes the brunt of the twisting and activates the drill torque adjuster.

2. Drills

We recommend using any good brand of cordless drill with 18V or higher that has an adjustable clutch and a minimum of 4.0Ah.

A higher AH is best since this will provide more power and longer run time.

Be sure to purchase a 2nd battery and a spare drill adapter to avoid down time.

Important Notes

Always remember to set the clutch on a setting that allows the drill to stop spinning if it binds up suddenly. This will prevent injury and reduces the risk of property damage and damage to your equipment.

Do not use a corded (or mains) drill as they spin at too high of an RPM and generally do not have an adjustable clutch.

The high speed can cause the rod material to heat up quickly which will weaken the rod and increase the likelihood of breakage.

Without a clutch, you are at risk of injury if the rods bind or catch suddenly. The clutch allows the drill to stop spinning so it does not twist or break your wrist.

3. Rod Construction & Uses

- **8mm Solid Nylon Rods:** Used for widths up to 150mm (6") dia. They are extremely flexible for tight offsets

- **10mm Solid Nylon Rods:** Used for widths up to 150mm (6") dia. They are extremely flexible for tight offsets.

- **12mm Solid Nylon Rods:** Widely used for 5" – 8"(125mm - 200mm) widths but can also be used as a leader rod in tight bend situations. They have great flexibility with excellent durability.

- **15mm Solid Nylon Rods:** These rods have a good mix of flexibility yet somewhat rigid for a wide range of rotary power applications. Good as leader rods or stand alone for smaller widths but generally too stiff for less than 150mm (6") dia. widths.

- **18mm Solid Nylon Rods:** These rods are extremely durable, fairly stiff (with a slight flex) and used for rotary cleaning large wider shafts. They have a little weight when several are connected but they are must have for the times there is no substitute.

- **22mm Polypropylene Rods:** These rods work great for rotary cleaning taller or long runs. They are lightweight, durable and semi-rigid. Add a few 15mm solid nylon rods as a leader to help guide through bends and offsets.

- **22mm Aluminium Rods:** These rods are rigid and ideal for straight long runs in shafts, designed to be used in conjunction with the 22mm Polypropylene Rods for height work. They are extremely lightweight, durable and rigid.

Fittings/Ferrules:

- **22mm Polypropylene/Aluminium rods, 18mm & 15mm Solid Nylon Rods:** All the double buttons are manufactured from stainless steel, the fittings/ferrules on the 22mm polypropylene & aluminium rods are made of steel that has been heat treated for superior strength and then double zinc plated. The 12mm, 15mm and 18mm rods are solid stainless steel fittings/ferrules. They are then quadruple crimped to form a torque tested locking fit to each rod end. When the rods are connected together, there is no exposed sharp metal joints or pins to cause any damage on metal components.

- **8mm & 10mm Solid Nylon Rods:** The 8mm & 10mm nylon rod fittings/ferrules are made of stainless steel, including the double buttons to resist corrosion. The fittings/ ferrules are quadruple crimped to create a solid connection to the rod. These fitting are only 16mm in width. When the rods are connected together, there is no exposed sharp metal joints or pins to cause any damage on metal components.

4. Rotary Cleaning Heads

The rotary whip heads are durable and easy to replace the whip line or cable. The nylon whip line is 6-sided industrial strength nylon, made of a unique, high tensile strength for peak effectiveness and durability and in two widths, 2.7mm and 4.0mm

Below is a description of the current whip heads:

4"/100mm Propeller Brush:
Soft brush - (fits 8mm & 10mm rotary rods)

5"/125mm Propeller Brush:
Soft brush - (fits 8mm & 10mm rotary rods)

6" / 150mm Propeller Brush:
Soft brush - (fits 8mm & 10mm rotary rods)

8" / 200mm Propeller Brush:
Soft brush - (fits 8mm & 10mm rotary rods)

5"/125mm Rapid Light Loader – 8/10mm Fitting:
Small whip head - (fits 8mm & 10mm rotary rods)

9"/230mm Bullet Whip:
The small core of this whip makes it ideal for feeding into small areas or past dampers. It's molded from industrial nylon for superior strength and won't damage liner systems.

12"/300mm Bullet Whip:
Same features as the 9" BulletWhip with slightly longer line.

18"/450mm Power Whip & Death Star:
Large nylon & aluminium whip head, plus a more robust solid aluminium Death Star whip head

24"/600mm Power Whip & Death Star:
Large nylon & aluminium whip head, plus a more robust solid aluminium Death Star whip head.

36"/900mm Power Whip:
Large nylon & aluminium whip head, plus a more robust solid aluminium Death Star whip head.

Replacing the Whip Line on the Cable Whips:

It's very fast and easy to replace the cable in both heads.

Simply loosen the grub screw located on the inside of the fitting. Make sure it's completely backed out almost to the point of removal but it is not necessary to completely remove the screw.

Remove the old whip line and replace with new.

Be sure to center the whip line in the head.

Tighten the grub screw securely and pull on the whips to ensure they are tight and cannot move.

Rotary Brushes & Mops

All the rotary brushes are manufactured from either perlon or nylon bristles dependent on the thickness on the hardness/stiffness of the brush. All the air cleaning brushes have a ball fitted on the end to prevent any damage when rotary cleaning, particularly on sharp offsets.

The stiff grease cleaning brushes have no ball but are designed with no exposed metal brush components to cause damage when rotary cleaning. All the brushes are manufactured with no pins, but are purely crimped in 4 places to secure the rotary fitting to the brush shaft.

The rotary mops are manufactured from a soft microfibre material to allow the wiping and polishing of shafts to remove dust or a cleaning liquid.

5. General Rod Use

- As mentioned earlier, only use a cordless drill with an adjustable clutch. Set the clutch at a halfway setting or less. You should be able to hold the chuck tightly in your hand and stop it from spinning. Increase slightly if needed but you want to be sure the drill stops spinning in an instant if the rods catch in any way.

- Gloves: Use a thicker glove that "does not" have any grip to it. You don't want them to get caught on the spinning rods which can cause injury. Never use thin latex gloves as they will surely wind up on the spinning rod and be torn from your hands. Keep all loose clothing tucked in to prevent being tangled in rotating rods.

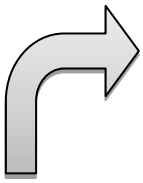
- **Connecting the Rods:** Simply push the rods together and give them a slight twist in either direction until you hear them lock. Usually a ¼ turn is all it takes. No need to depress the buttons to connect with the "Push Lock" system.

- **Disconnecting the rods:** Pinch the two buttons at the same time and pull apart.

- Keep the rods as straight as possible when connecting or disconnecting each rod. This can be done by slightly bending the rod you are connecting to (or disconnecting from) in order to keep the angle as straight as possible for the rod you are connecting (or disconnecting).

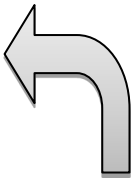
- If you encounter a snag or obstacle that causes the drill to bind, reverse the direction of the drill and slowly spin in the opposite direction to unwind or back out of the snag.

- When spinning through offsets, sharp bends or in larger shafts, keep in mind that spinning The rods in a "clockwise" direction will pull the head to the right.



Spin Clockwise to go right

- Likewise, spinning "counterclockwise" will pull the head to the left.



Spin Counterclock-wise to go left

6. Preventing Breakages

To avoid rod breakage, never spin rods in sharp/tight bend angles as shown below.

Only use a cordless drill with adjustable clutch.

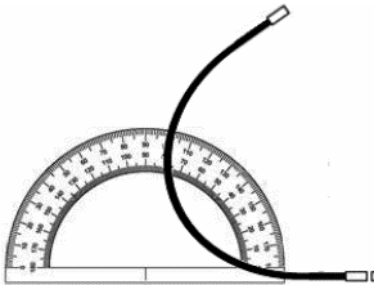
Always use a "Back & Forth" motion while spinning rods to

1) Prevent the rods from heating up and becoming weak or

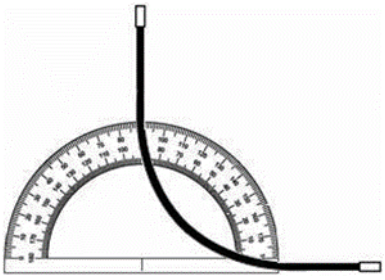
2) Prevent screws in ductwork from cutting through rods.

3) Use a rod guide when using rods through sharp edged access doors

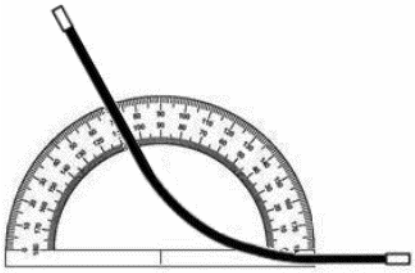
To help prevent rod breakage, avoid spinning the rods at sharp bends and keep the rods moving up and down while spinning to prevent the rods from heating up.



Wrong!
Rods may break if spun at this tight bend radius



Be sure to keep the rods moving up and down while spinning as the rods could weaken if spun at this angle.



Best
Spin rods at the least amount of angle for best results. Always use a up and down motion while spinning to prevent breakage.

7. General Rotary Cleaning Methods:

There are many different methods of rotary cleaning. The following guide is meant to provide a few different options to get you started.

Most of the rotary whip heads and brushes are designed to fit through very small areas and then expand when spun to conform to various duct sizes and shapes.

For square and rectangle ducts, spin in one direction for the entire length of one rod to get two opposing corners. Then reverse the drill to spin in the opposite direction to clean the other two opposing corners. Do this for each rod you add.

To clean deeper into the corners, use a slower speed. This will allow the whip line or brush to reach further into the corners.

For round shafts you can spin in the same direction the entire distance/height unless you need to navigate a corner. In this case, use the method mentioned above.

You will develop a feel for power cleaning over time, but in general, the faster you spin the more aggressive the cleaning action. The slower you spin, the less aggressive the cleaning action.

Be sure to keep the rods moving up & down or side to side to avoid damaging nylon rod material.

9. Maintenance

Be sure to wipe the rod fittings/ferrules off frequently then spray them with a silicone spray or light dry oil with PTFE. You may also want to hose them off with water then wipe them dry before lubricating them.

8. Limited Warranty

The Vent Duct Tool rotary rod system and all accessories are designed for professional use only.

All components are warranted for a period of **12 months** from date of purchase.

Should any part fail due to manufacturing defect, return the defective part to Vent Duct Tools and we will replace it free of charge.

All parts must be returned and inspected to determine part failure. Vent Duct Tools does not warranty failure of any part due to operator error or normal wear.

Normal wear items not covered include, but not limited to, nylon whip line or bent rods, etc.

Be sure to read all operating instructions and safety precautions before operating any of the tools.

Manufacturer accepts no liability for property damage or personal injury resulting from the operation of these tools and accessories. This is the full extent of the warranty made by Vent Duct Tools. There is no other expressed warranty. All implied warranties are hereby excluded.