

OTA

FIBERGLASS



The Shaver Machine - F1 is used to prepare the Tapered spigot ends on the factory supplied pipes. F1 pipe shavers can produce spigot diameters from 25mm to 1000mm. They are designed for use on GRP & GRE pipes only



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Operating precautions



- Avoid accidental starting. Be sure switch is OFF before Plugging in.
- Remove adjusting keys or wrenches before turning the tool ON. A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.
- Do not overreach, Keep proper footing and balance at all times. Proper footing and balance enables better control.
- Use safety equipment. Always wear eye protection. Dust mask, non-skid safety shoes, hard hat and hearing protection must be used in appropriate conditions.



2. Pipe Shaver Sets

The shaver Sets Arrive in box enclosing all shaver and tools. Depending on the pipe shaver size, 1 or more boxes containing all shaver parts including its Aluminum block, Power Drive, shaft assembly, tools and all arbors (for 25-150mm pipe shaver set) No additional tools are normally required for the shaver assembly & operation.

Aluminum Block Assembly with Grinding
Drum no.1

Power Drive

Shaft Assembly

Grinding Drum - 1No

Tools

"AND"

Arbors - DN 25, 40 50, 80, 100, 150mm
(25-150mm set)

"OR"

Arbors - DN 200, 250, 300, 350, 400, 550, 600
mm (200-600mm set)

"OR"

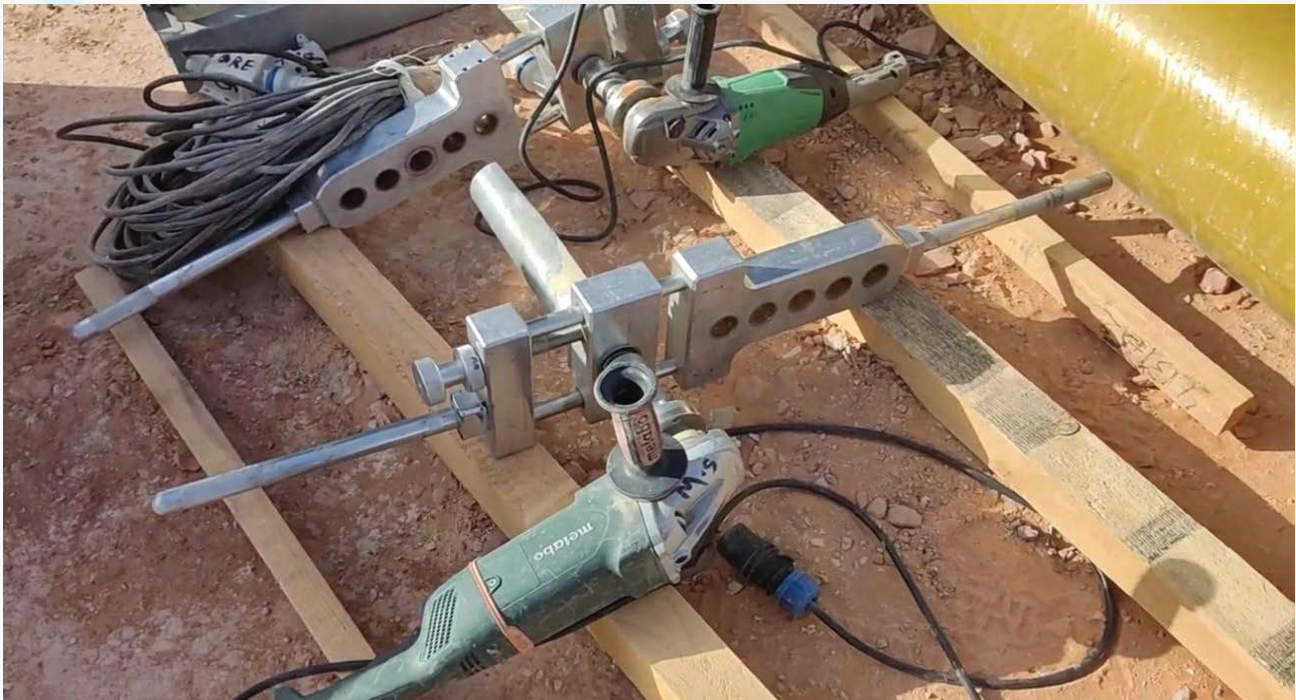
Arbors - DN 700, 750, 800, 900, 1000mm
(700-1000mm set)



2.1. Aluminum Block Assembly

Aluminum Block assembly

The Aluminum block assembly is provided with 3-5 holes as shown in page 5 below to accommodate shaving different pipe size



2.2 Arbors

Each Arbor assembly is composed of:-

- 2 Nos. Aluminum flanges
- 1 Nos. Aluminum Sleeve
- 2 Nos. Rubber Rings
- 1 Nut and bolt



Flange

Bolt

O rings

Flange & Name plate

Note: Arbor are fully assembled in pipe shaver sets (page 4)



2.3. Grinding Drum

This shaver is provided with one Tapered Diamond Grinding Drum as specified below

Grinding Drum: Dia 55, L=180, 260, 285mm or above Taper Angle. 1.75°, 2.5° or as per client specifications



Grinding Drum

2.4. Tools

For pipe shaver assembly and maintenance, the following tools are included in every set:

- Long handle Allen key
- Spanner



2.5. Power Drive

The Grinding Drum is driven using electric power drive. The portable tool powers the rotation of the grinding drum about its axis.

Specifications

- Rated current: 5.1 A
- Voltage: 230 V
- Input / Output Power 1100 W, 670 W
- Speed no load/at rated load: 10000, 7500 rpm
- 50/60 Hz

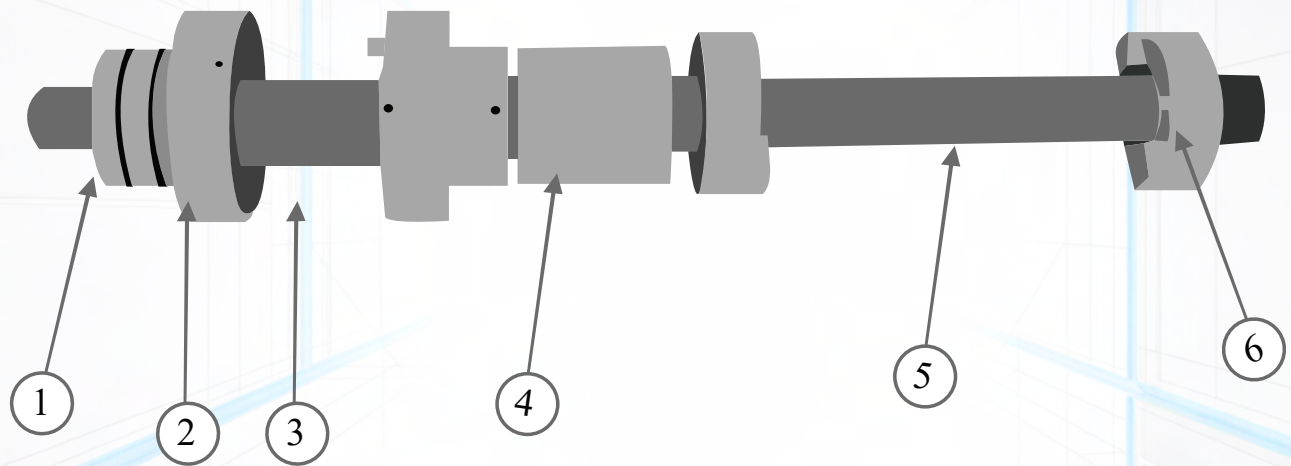
Note

Please read the power drive manual for more information and safety
Do not modify this tool for other application



Power Drive

2.6. Shaft Assembly



- 1- Nut
- 2- Thrust bearing assembly
- 3- Place for Aluminum block
- 4- Spacer
- 5- Place for arbor
- 6- Nut ring for arbor

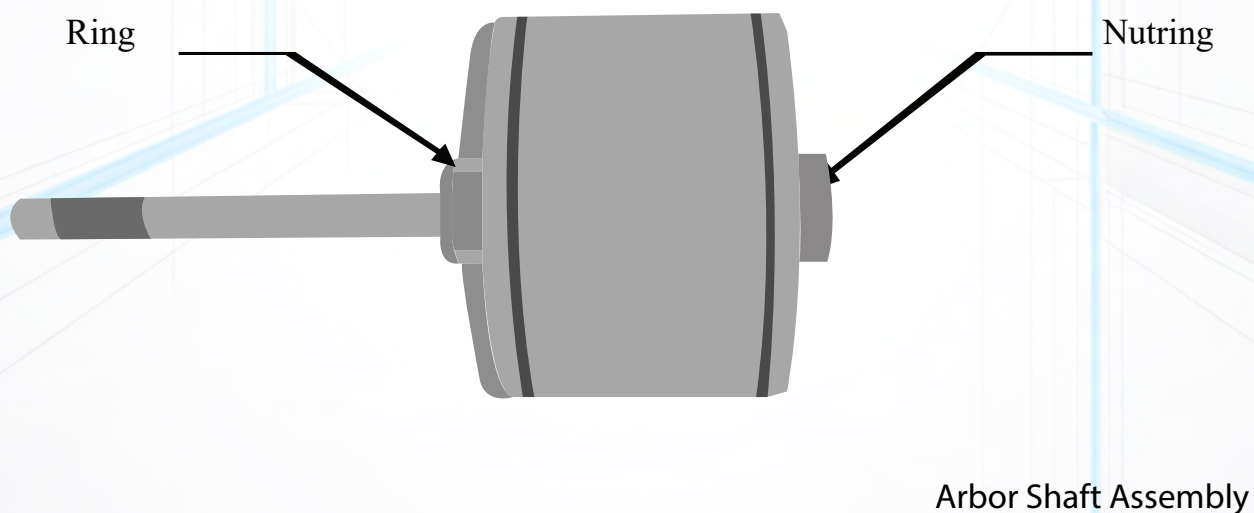
Shaft Assembly



3. Shaver Assembly

a. Arbor Shaft Assembly

Select the arbor which corresponds to the pipe diameter. To assembly the arbor with shaft assembly (no.23), insert the arbor into the shaft assembly and lock it between the ring (no. 28) and the nut (no.29)

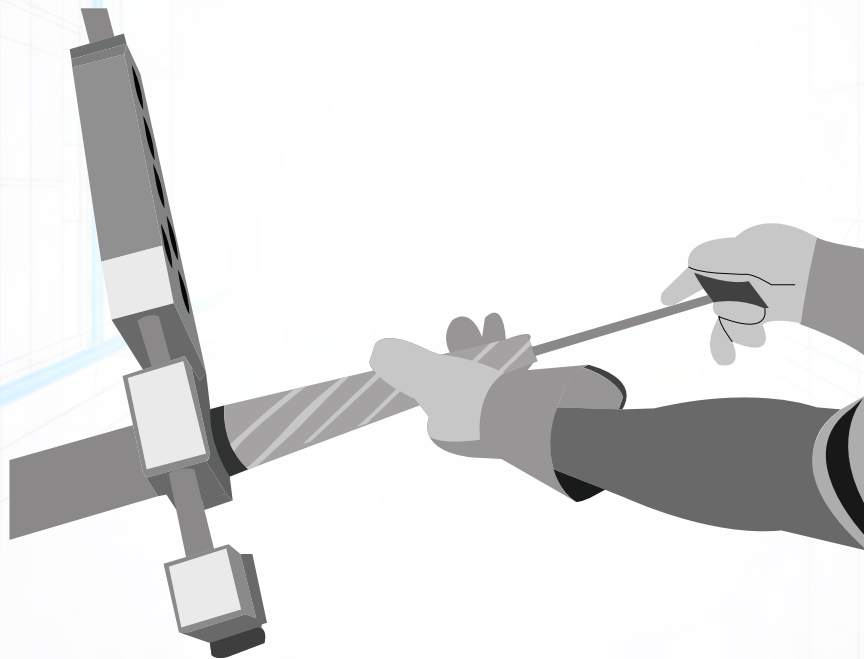




b. Grinding Drum Assembly

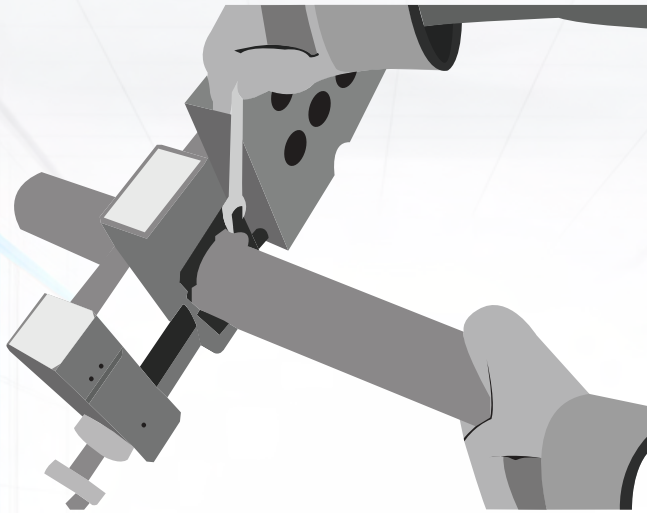
Follow these steps while changing the grinding drum.

1. Insert the required grinding drum (no. 17) and tighten it using the long handle Allen key.



Grinding Drum Assembly

2. Install the protective cap (no. 18) and secure it to the Aluminum block assembly. Check the rotation of the grinding drum by rotating the drive connector (no.20).

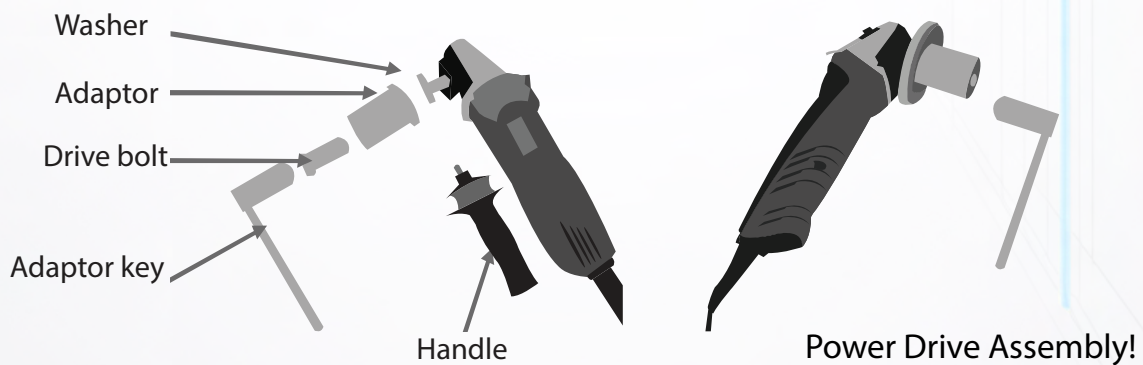


Protective Cover

c. Power Drive

i. Install the power drive handle.

ii. Insert the drive bolt into the drive adaptor (See below). iii. Tighten the bolt to lock the adaptor using the supplied adaptor tool. iv. Connect the power drive to the supply source.



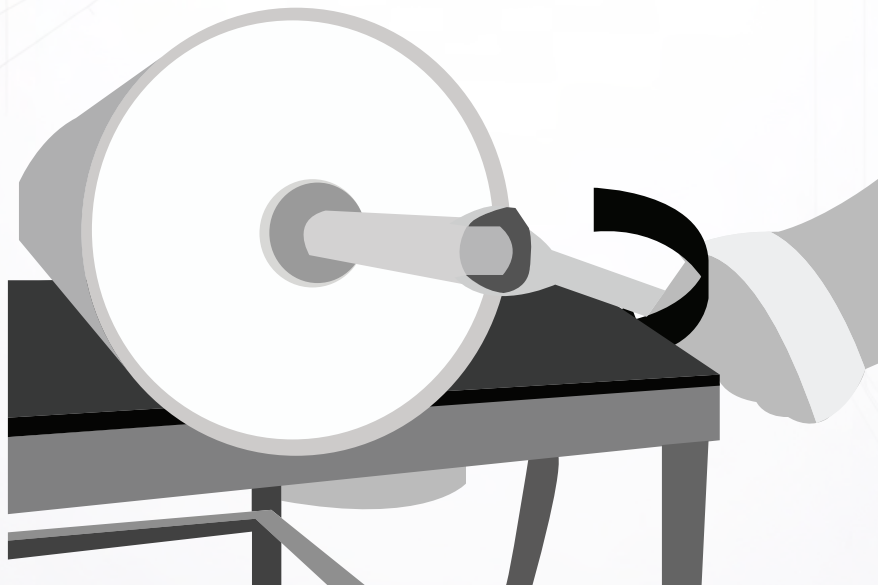


d. Pipe Setup

- i. The surface of the pipe must be dry and clean. If the pipe surface has been in contact with oil or grease, it should be cleaned using a cleaning agent (acetone or M.E.K.P.)
- ii. Clean the inner bore of the pipe (socket end) with a dry cloth to remove dirt, dust and other foreign matter.
- iii. Before installing the shaver make sure that the pipe is leveled in horizontal position and securely clamped.
- iv. Measure the socket length required, and scribe or mark the outer surface of the pipe at this distance.

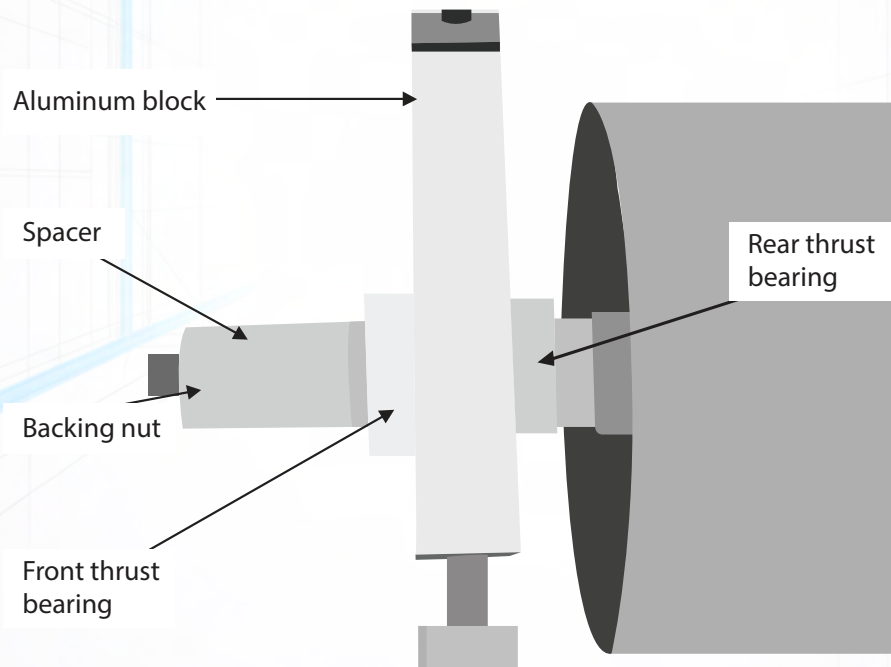
e. Mounting the Shaver on the Pipe end

- 1. Slip the "Arbor & Shaft assembly" into the pipe. Allow the arbor to slip in by about 5-10mm into the pipe. Level the arbor in this horizontal position and tighten the shaft using the supplied spanner (see below)

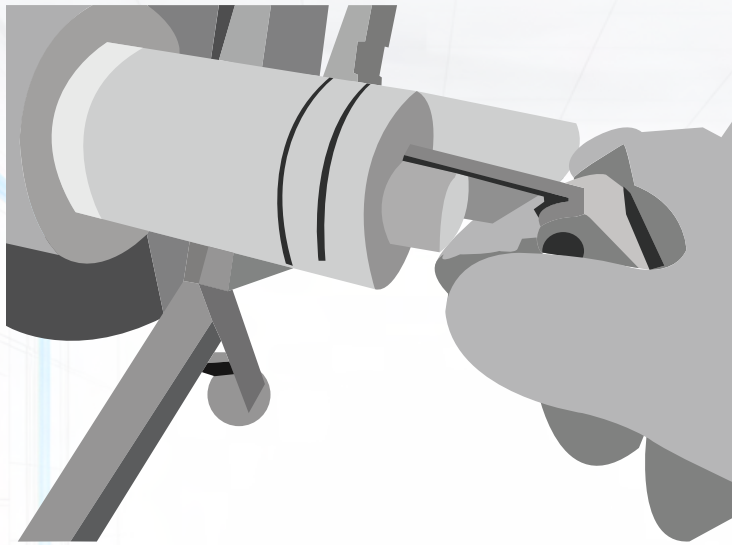




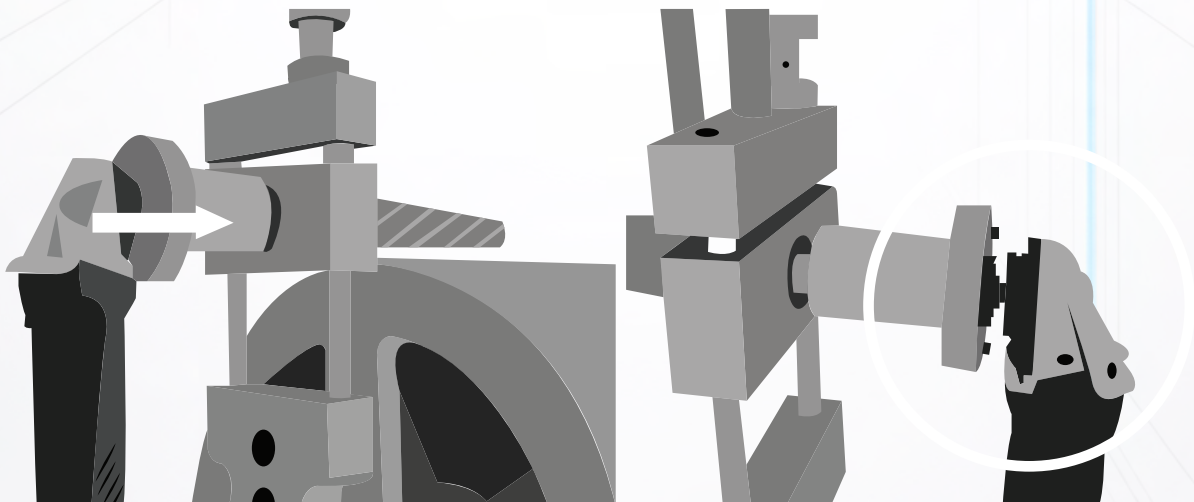
2. Insert the rear thrust bearing assembly (no.27).
3. Insert the aluminum block (no.1) through the desired hole specific to the required pipe diameter.
4. Insert the front thrust bearing assembly (no.26).
5. Insert the spacer (no.25,26).



6. Tighten the aluminum block by hand using the backing nut (no.24). (See Below
Note: Ensure that the frame can rotate freely without the power drive once before every pass rotation.
7. Lock the backing nut using the Allen bolt as shown below (see below).



8. Now position the power drive on the arbor shaft assembly as shown below.
Use the Allen key to connect the power drive adaptor to the drive connector with the supplied bolts. (See below)





4. Grinding Operation

- a. Turn the hand wheel (no.9) counterclockwise to make the grinding drum touch the outer surface of the pipe (See below).



- b. Turn the hand wheel counter clockwise to give the desired feed (See above)
Now switch ON the Power drive by its trigger switch.
- c. Manually begin rotating the aluminum block counterclockwise around the circumference of the pipe. One operator should physically rotate the aluminum block using one handle (no. 10 or 11) while another simultaneously supports the rotation with the other handle. No operator will be required to run the power drive once it's switched ON.



Note: Allow the shaver to grind at this feed for at least two rotations around the pipe making note of the start point. Uniform rotation around the pipe will lead towards a healthier spigot dimension.



d. Disengage the switch to stop power drive and allow it to completely stop.
Note: the start and stop positions to avoid any errors over travel.

e. Checking the Spigot

Clean the calibrated spigot with a clean dust bristle/brush (or a clean dry cloth). Following each rotation pass of the shaver, ensure that the machined end meets the dimensions within the tolerance levels.

If the dimensions are not within the tolerance levels then increase the depth of cut (section 4.b) and repeat instructions labeled from a to e, Or

If the dimensions meet the requirement within allowable tolerances then dismantle the shaver and proceed as prescribed in the pipe installation manual.



5. Maintaining the Shaver

In order to protect the shaver and benefit from longer life, the following preventive maintenance actions should be performed regularly.

Maintaining

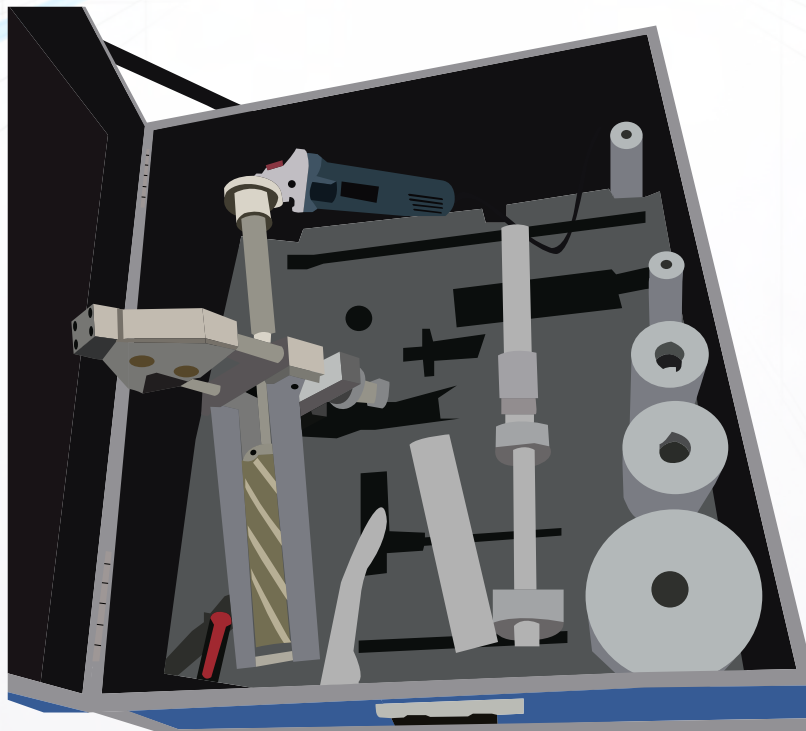
Clean all shaver components after each use by blowing compressed air to remove dust then using a dry cloth. Clean the grinding drum and the protective cover of any fiber dust residue. Clean power drive motor by blowing compressed air through the rear ventilation slots of the machine. Use the manual for maintenance steps.

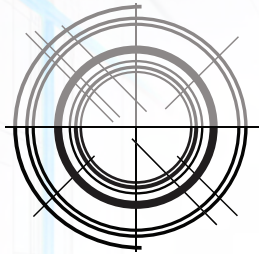
Handling and storage

Return all components to the box after every use.

Store away from humidity or water.

Note: For transportation and preservation of the pipe shaver, all components should be tucked in their reserved compartments.





OTA FIBERGLASS

UAE: OTA Fiberglass Enineering
Al Marrar Street, Saudi Building, Dubai, UAE
UAE Phone: +971 50 868 2217
Email: Sales@OTAFiberglass.com



OTA Fiberglass Youtube



OTA Fiberglass Facebook



OTA Fiberglass Instagram

Phone: +971 50 8682217

24/7  +971 50 868 2217



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