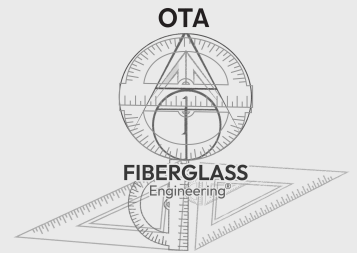


OTA Fiberglass Engineering®

Pipe Shaver Assembly Instructions



Introduction

These instructions describe the assembly of the Taper/Taper adhesive bonded joint and show how to cut tapers on the pipe using the pipe shaver to prepare the spigot/male pipe ends



Shaving Diameter Range

1. OTA® Pipe Shaving Machine 2"-6", 1-6"
2. OTA® Pipe Shaving Machine 2"-16", 6"-16", 2"-10"
3. OTA® Pipe Shaving Machine 8"-24", 16"-24"
4. OTA® Pipe Shaving Machine 24"-40"
5. OTA® Pipe Shaving Machine 42"-48"

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Recommended Tools

OTA Fiberglass Pipe Shaver Set includes:

- Pipe Shaver (In case)
- Arbors (In case)
- OToAworks Powerdrive (In case)
- Spare Parts and Tool Kit:
 - Sliding T Bar
 - 27mm Spanner
 - Pouch for tool storage
 - Half Round Spanner
 - Allen Key 3/4"
 - Allen Key 3/8"
 - Allen Key 1/8"
 - 2 steel pipes for ergonomic handling of pipe shaver
 - Spare cutting parts
 - Screwdriver
 - Additionally ordered Taper Parts

Not included

- Measuring Tape
- Marker to mark Pipe Shave Length

Safety Precautions

Personal protection and safety

The following personal protection gear must be used when cutting, shaving, sanding and grinding Glass-fiber



Reinforced Epoxy (GRE) material:

- Safety shoes
- Work gloves (GRE material can be very sharp and may cause cuts or splinters);
- Safety hat, well fitting, buttoned up protective clothing must be worn when operating the shaver;
- A hair net must be worn, if applicable, when shaving, cutting, grinding, etc;
- An appropriate dust mask is to be used when cutting, shaving, grinding and sanding.

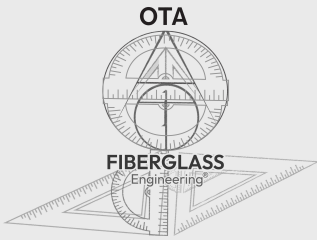


Operational safety

For safe operation of the shaving tool, the following rules must be followed:

- Use one hand to hold the grip of power drive and the other hand to operate the power switch;
- Release power switch immediately if not in operation to avoid injury
- The optional power drive support arm must never be used for safety reasons
- Pipe vise must be at ergonomic height to allow operator to maintain proper posture
- Before starting the power drive, ensure that the shaver will run free from pipe bench, table or support
- Shaving area must be clearly marked as such





Index

Videos & Guides.

<https://youtu.be/a01RbM-HmrA>

Pipe Shaver Operation

<https://youtu.be/mtmwMEgFpKU>

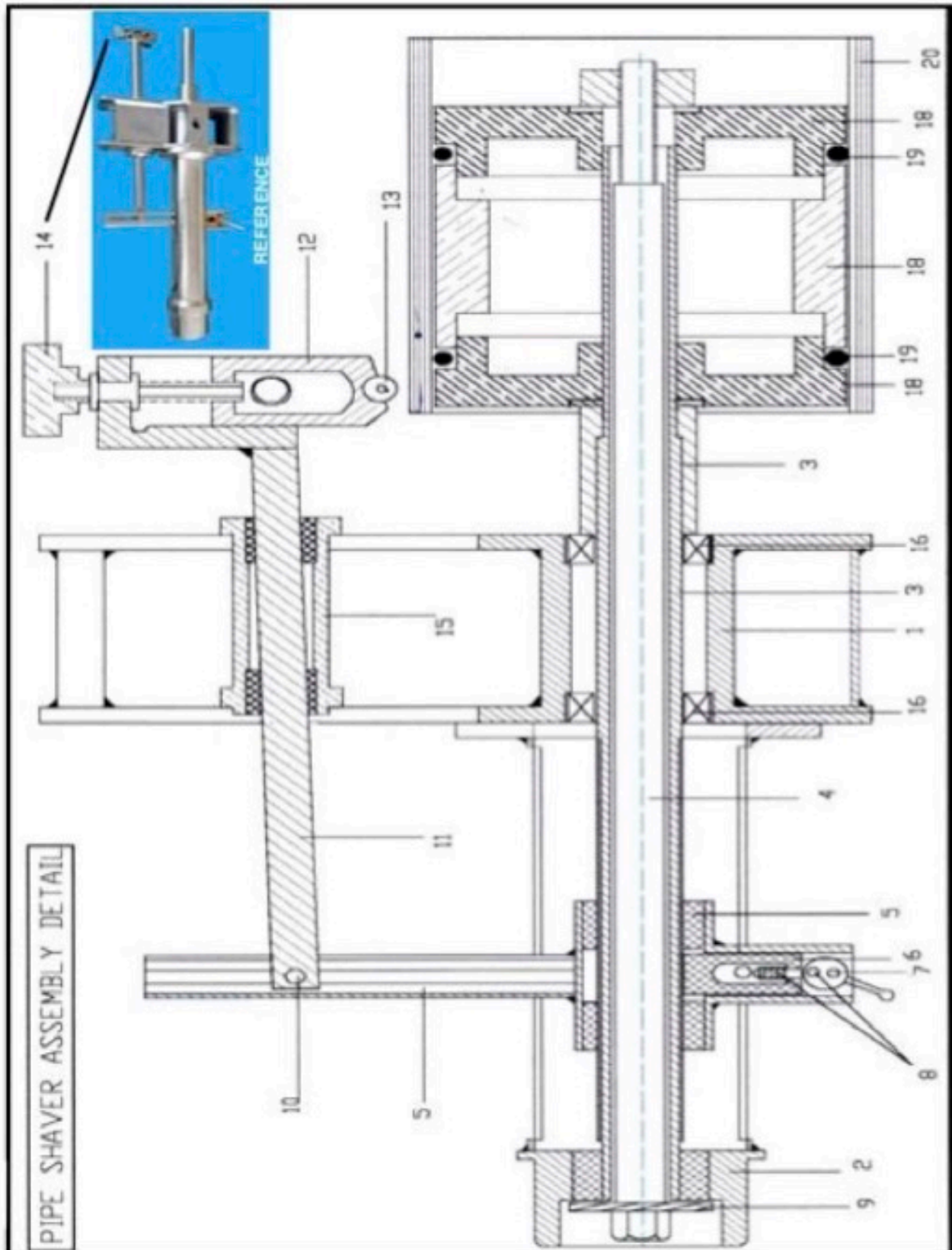
Pipe Shaver Guide

<https://youtu.be/HgOZAGVwVLQ>

Taper Angle Change

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Design

PART NO. (PN)	DISCRIPTION	PART NO. (PN)	DISCRIPTION
1	Main Body	18	Arbor
2	Powerdrive Holder	19	Rubber O-Ring
3	Spindle	20	Pipe
4	Arbor Bar		
5(1)	Guide Bush		
5(2)	Guide Angle Bar		
6	Spindle Nut		
7	Shaver Lock		
8	Spring		
9	Washer		
10	Pin		
11	Chrome Shaft		
12	Cutting Blade Holder		
13	Cutting Blade		
14	Adjuster		
15	Taper Degree		
16/17	Bearing		

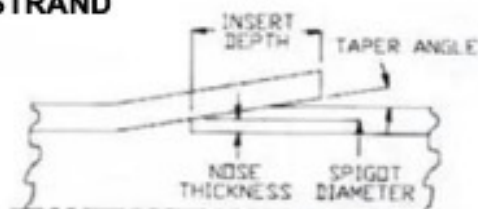
TAPER PER MANUFACTURER:



Insertion arbor with shaver

SHAPER COMPATIBILITY: FULLY COMPATIBLE
ON ALL FRP PIPE MANUFACTURERS

BONDSTRAND



Taper joint

BONDSTRAND SIZES BELOW: FPI & OTHER PIPE MANUFACTURER SIZES AVAILABLE UPON REQUEST

Taper Angle Degrees Available Range From 0° to 5° As Well As Per Custom Requirement

Pipe size	Taper angle	Insert depth	Nose thick.	Spigot diam.	Insert diam.	Nose thick.	Spigot diam.	Insert depth	Nose thick.	Spigot diam.	
mm	inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	
10 bar			12 bar			14 bar					
50	2	1 1/4	50	1.0	55.2	50	1.0	55.2	50	1.0	55.2
80	3	1 1/4	50	1.0	83.8	50	1.0	83.8	50	1.0	83.8
100	4	1 1/4	50	1.0	107.2	50	1.0	107.2	50	1.0	107.2
150	6	2 1/4	50	1.0	161.0	50	1.0	161.0	50	1.0	161.0
200	8	2 1/4	80	1.0	210.8	80	1.0	210.8	80	1.0	210.8
250	10	2 1/4	80	1.0	264.9	80	1.0	264.9	110	1.0	264.9
300	12	2 1/4	80	1.0	315.7	80	1.0	315.7	140	1.0	315.7
350	14	2 1/4	80	1.5	347.4	80	1.5	347.4	140	1.5	347.4
400	16	2 1/4	110	1.5	396.7	110	1.5	396.7	170	1.5	396.7
450	18	2 1/4	110	1.5	436.8	110	1.5	436.8	170	1.5	436.8
500	20	2 1/4	110	2.0	486.1	140	2.0	486.1	140	2.0	486.1
600	24	2 1/4	110	2.0	582.6	170	2.0	582.6	170	2.0	582.6
700	28	1 1/4	140	4.0	708.0	170	4.0	708.0	230	4.0	708.0
750	30	1 1/4	140	4.0	758.0	200	4.0	758.0	260	4.0	758.0
800	32	1 1/4	170	4.0	808.0	230	4.0	808.0	230	5.5	811.0
900	36	1 1/4	200	4.0	908.0	260	4.0	908.0	260	6.0	912.0
1000	40	1 1/4	200	4.5	1009.0	200/290	4.5	1009.0	290	6.5	1013
16 bar			20 bar			25 bar					
50	2	1 1/4	50	1	55.2	50	1	55.2	50	1	55.2
80	3	1 1/4	50	1	83.8	50	1	83.8	80	1	83.8
100	4	1 1/4	50	1	107.2	50	1	107.2	80	1	107.2
150	6	2 1/4	50	1	161	80	1	161	110	1	161
200	8	2 1/4	80	1	210.8	80	1	210.8	140	1	210.8
250	10	2 1/4	110	1	264.9	110	1	264.9	170	1.5	265.9
300	12	2 1/4	140	1	315.7	140	1	315.7	200	1.5	316.7
350	14	2 1/4	140	1.5	347.4	140	1.5	347.4	170	2	348.4
400	16	2 1/4	170	1.5	396.7	170	1.5	396.7	230	2.5	398.7
450	18	2 1/4	170	1.5	436.8	170	1.5	436.8	200	2.5	438.8
500	20	2 1/4	200	2	486.1	200	2	486.1	230	3	488.1
600	24	2 1/4	230	2.5	583.6	230	2.5	583.6	260	3.5	585.6
700	28	1 1/4	230	5.5	711	290	5.5	711	260/350	7	714
750	30	1 1/4	260	6	762	230/320	6	762	290/380	8	766
800	32	1 1/4	290	5.5	811	320	5.5	813	290/410	8.5	817
900	36	1 1/4	260/350	6	912	260/350	6	915			
1000	40	1 1/4	230/320	8	1016						

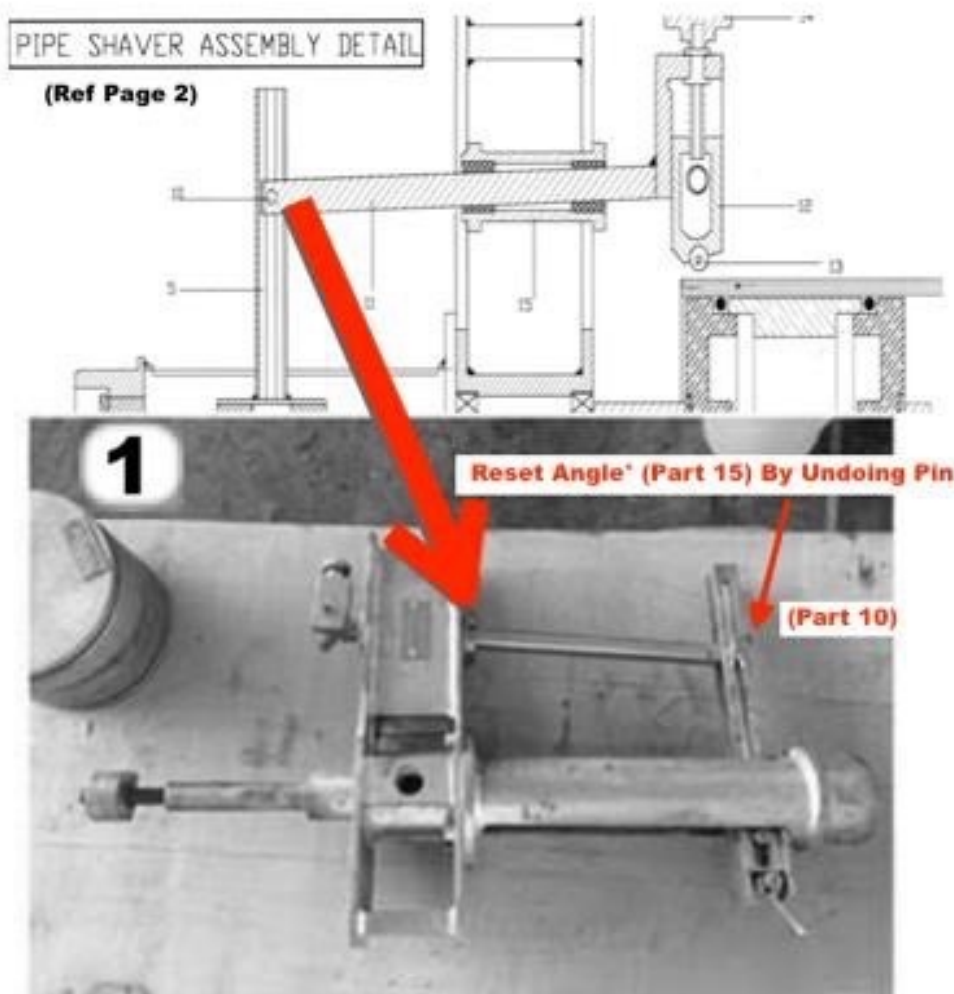
as per the
procedure 1.75
degree for 36 inch
16 bar (example)

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Taper Angle Degree Preset To $1\frac{1}{4}$

Setting/Resetting The Taper Angle Degree



Resetting The Taper Angle Degree

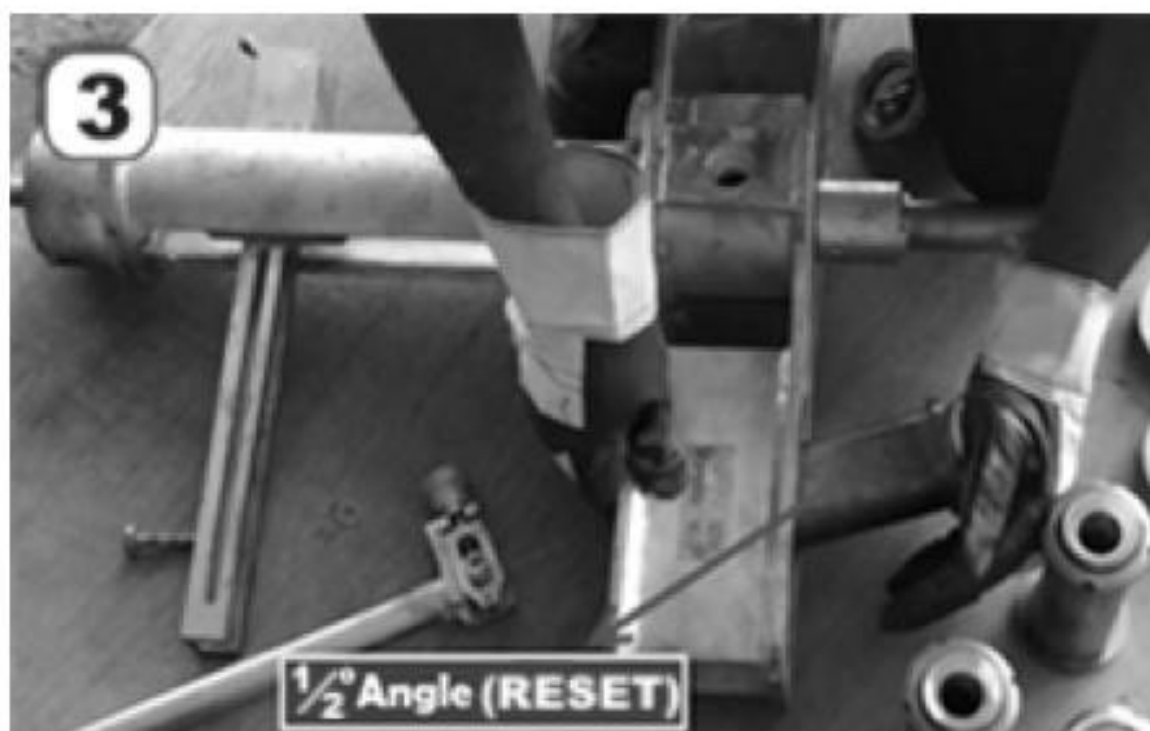


Unlock And Remove The Chrome Shaft (Part 11)

Then Remove The Preset Angle (Part 15)



Choose The Required
Taper Angle Degree



In This Example Case, We Reset The Taper Angle To 1/2° By Choosing This Replacement Taper Angle Degree Part



Arbors & Powerdrive Specifications

Arbors



Pipe Size	
mm	inch
50	2
80	3
100	4
150	6
200	8
250	10
300	12
350	14
400	16
450	18
500	20
600	24
700	28
750	30
800	32
900	36
1000	40

Powerdrive



Applicable Separate Data Sheet

For More OTA Fiberglass Pipe Shaver Resources:

How To Video: <https://youtu.be/a01RbM-HmrA>

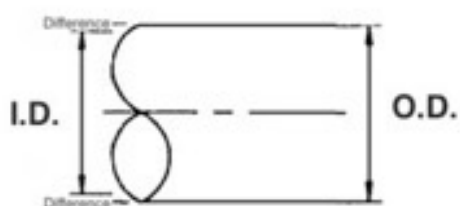
<https://www.otaest.com/frp/shaving-machine/>

Inner Diameter Per Manufacturer:



Adjustable arbor fitted with oring

NOV



ARBOR COMPATIBILITY: FULLY COMPATIBLE
 ✓ ON ALL FRP PIPE MANUFACTURERS

NOV SIZES BELOW: FPI & OTHER PIPE MANUFACTURER
 SIZES AVAILABLE UPON REQUEST

Expandable, rubber oring arbors adjustable to pipe inner diameters varying from 2mm to over 20mm from designated nominal diameters

MATL. CODE	NOM. DIA.	I.D. (MIN.)	O.D. (MIN.)
13000032	ND 50mm (2")	52.9	57.5
13000040	ND 80mm (3")	81.5	86.1
13000048	ND 100mm (4")	104.9	109.5
13000056	ND 150mm (6")	158.7	163.7
13000064	ND 200mm (8")	208.5	214.7
13000072	ND 250mm (10")	262.6	269.6
13000080	ND 300mm (12")	313.4	321.2
13000088	ND 350mm (14")	344.1	352.3
13000096	ND 400mm (16")	393.4	402.4
13000104	ND 450mm (18")	433.5	443.3
13000112	ND 500mm (20")	481.8	492.6
13000120	ND 600mm (24")	578.3	590.9
13000128	ND 700mm (28")	700.0	714.8
13000136	ND 750mm (30")	749.7	765.5
13000144	ND 800mm (32")	799.3	816.1
13000152	ND 900mm (36")	896.5	915.1
13000160	ND 1000mm (40")	999.9	1020.5

As per pipe varying
 properties, arbors
 MUST fit pipe inner
 diameter differences

Shaving



supporting of pipe

1. Support and fix the pipe firmly.
 - a Prevent the pipe from being damaged.



2. Carefully insert the pipe shaver, arbor first into the pipe.
 - a Fix the arbor to the inside of the pipe by turning the central tensioning bolt clockwise.



3. Attach the powerdrive to the other end of pipe shaver
 - a Fit the motor-end of the powerdrive to the pipe shaver
 - b Connect the powerdrive to electricity



4. Operate the pipe shaver by pressing down on the powerdrive start button
 - a Turn the shaver on/off by using the start button on the powerdrive



5. Cutting tool on pipe shaver must be adjusted to the edge of the pipe
 - a Turn the knob to close the distance between the cutting tool and the pipe

Shaving



6. Mark the Length of Pipe to undergo shaving
a Stop Shaver once the mark is reached

Mark on pipe



7. Pay close attention as the cutter gets closer to the marked area
a Stop Shaver once the cutting tool arrives at the mark



8. Once the shaving process is complete. Start removing the pipe shaver
by disassembling it using the switch first
a Turn the switch on the pipe shaver shaft to slide the cutting tool back to
the end of the pipe



b. Safely remove the shaver from the pipe

OTA Fiberglass Engineering®

Full Lifetime Warranty

What is covered

OTA Fiberglass Engineering® Pipe Shavers are warranted to be free of defects in workmanship and material

How long coverage lasts

This warranty lasts for the lifetime of the tool. Warranty coverage ends when the product becomes unusable for reasons other than defects in workmanship or material

Maintenance/ Service

We will offer free spare tool case spare parts for on-site maintenance, or service the pipe shaver at no charge in our factory. In addition to this manual, every Pipe Shaver comes equipped with a tool case that also includes spare shaving parts (ref page 4)

OTA Fiberglass Engineering® Guarantee

Warranted Pipe Shavers will be repaired or replaced, and returned free of charge

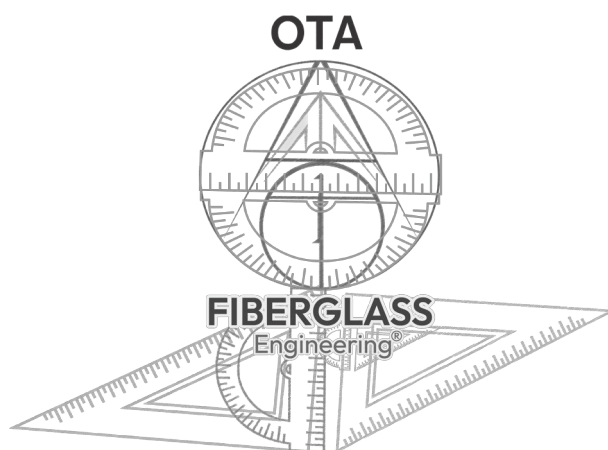
What is not covered

Failures due to misuse, abuse or normal wear and tear are not covered by this warranty

No other express warranty applies

This FULL LIFETIME WARRANTY is the sole and exclusive warranty for OTA Fiberglass Engineering® products





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