

FIBERGLASS PIPE GROUP



Unique Tapering Tool* Model 010

for fiberglass pipe 2- through 6-inch diameters

General

The Unique Tapering Tool Model 010 is designed to cut up to 3.5° taper angles on fiberglass pipe. It can be operated manually with the ratchet included or by an optional electric power drive.

The base tool is factory assembled with a 2-inch high pressure collet and also includes:

- a combination 2-inch low pressure and 2.5-inch high pressure collet,
- manual ratchet drive,
- 3/4-inch wrench,
- nipple bar,
- ring gauge
- operating instructions, and
- metal carrying case.

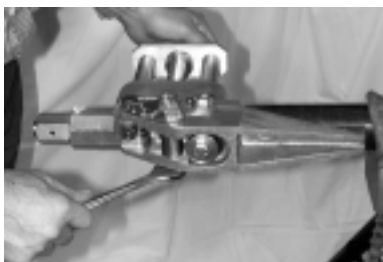
Collets for 3- and 4-inch high pressure pipe and for 3-, 4- and 6-inch low pressure pipe are available and may be ordered from Ameron.

Electric Power Drive

The tool can be driven by Power Drive Ridgid™ No. 700 with Ridgid No. 772 adapter or equivalent. Power drives should be purchased locally but are available on special order from Ameron.

Calibration

Numbers refer to parts diagram on page 4.



Before using always check the tool for correct alignment of the 2-inch high pressure collet and cones. These are the base for all other collets.

Cones (19) and (28) and one segment of the 2-inch high pressure collet are marked by a drilled hole. These marks must line up at all times. Handling can cause segments to become either slightly or one full turn out of alignment.

Contract the collet completely, making the cone (19) as close as possible to the hub (5). Then use the ring gauge (59) to calibrate the tool. The tool is properly calibrated when the ring gauge fits both ends of the collet with the same clearance.

1. Slide the ring gauge to hub end of collet.
2. Expand collet slightly by turning torque knob (1) clockwise while holding the collet until ring gauge is snug.
3. Slide ring gauge to opposite end of collet. If the ring gauge has approximately the same clearance as in Step 1, the tool is properly calibrated.
4. If the ring is loose, remove ring gauge. Turn the cone (28) clockwise one full turn, while holding the collet stationary, until marks are aligned. Repeat Steps 1 through 3.

Calibration (cont'd.)

Numbers refer to parts diagram on page 4.

5. If the ring gauge will not slide to the other end of the collet, remove ring gauge and turn cone (28) counterclockwise one full turn until marks are aligned. Repeat Steps 1 through 3.

Pipe Cutting

For all cutting and tapering, the pipe must be held securely. Before clamping, always wrap the pipe with protective (rubber) material to prevent damage to the pipe. Use a wrap around to assist in marking the pipe cut line. It is important to make a square cut. Cut end cannot be more than $\frac{3}{16}$ -inch out of square.

Pipe may be cut manually with a fine-tooth hacksaw or with a circular saw with an abrasive cutting wheel.

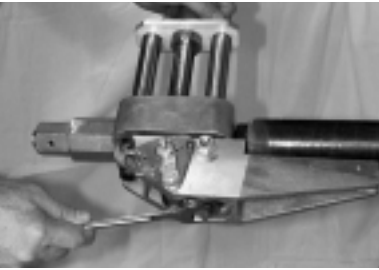
Note: Protective masks or respirators should be worn when cutting and shaving fiberglass pipe.

Taper Angle & R Collets



To change the taper angle, use the following procedure.

- Loosen hex head bolt (39) and hex nut (47) on rear of cam shaft (41).
- Pull lock pin (45) and turn indicator to desired angle position. Reinsert lock pin.



- Retighten nut (47).



- Tighten bolt (39) with $\frac{3}{4}$ -inch open end wrench by first snugging up with wrench, then tighten one-quarter turn more. **Do not overtighten bolt (39).** This can damage the tool and cause false taper angle settings.



- Adjust the height of the head (36) to the diameter of the pipe to be tapered by turning the hex head bolt (14).
- Slip additional collet(s) onto the tool to match the diameter of the pipe.

Tapering The Pipe



Always make a trial taper to assure proper adjustment and tapering procedure.

- Insert contracted collet into pipe until rear end of collet is flush with pipe end.
- Expand collet by turning the torque knob (1) clockwise. **(Note: overtorquing in either direction can lead to a chipped taper or damaged tool threads.)**
- Mark the appropriate taper length on the pipe.
- Lower head to cutting level by turning bolt (14) in feed post assembly. Keep the cutting depth to a minimum at beginning of taper.

- Rotate the tool in a clockwise direction only. After the first few rotations, the cutting depth can be increased by approximately one-quarter turn on bolt (14). Too much force applied to bolt can damage pipe and/or result in an incorrect taper angle. Continue rotating tool and lowering head until reaching taper length mark.

Taper Lengths and Angles for Bondstrand 3000A, 3200 Pipe

Nominal Pipe Size (in./mm)	Taper		Taper Length (in./mm)
	Angle (degrees)		
2	50	1.50	2.37 60.20
3	80	1.75	3.87 98.30
4	100	1.87	4.12 104.65
6	150	2.75	4.25 107.95

- Lift the head with the cutting blade away from the taper by turning bolt (14) in a counter-clockwise direction. Loosen the collet by turning torque knob (1) in a counter-clockwise direction and remove the tool.

Check Trial Taper

Measure the dimensions of the trial taper and check against the dimensions given in the taper length and angle table, above. Check the dry insertion fit of the trial taper into the bell end of an Ameron component. The fit should be snug and without clearance. If the component can be rocked while on tapered end of the pipe, the taper angle is incorrect and must be adjusted. Tapered pipe should fit to approximately $\frac{3}{8}$ inch from the end of a component.

If necessary, fine adjustments to the taper angle can be made by setting the indicator between the angle markings on the angle scale (42) and not inserting lock pin (45).

After having made a correct trial taper, the Tapering Tool is now correctly adjusted to taper the particular pipe size for which you have set the tool.

Fabrication of Short Nipples

To make a short nipple that is not long enough to be held in a pipe vise or clamp, the nipple bar (29) should be used. With this extension, the tool can be held in a vise and operated as described.

Changing Carbide Blade

When the four-edged carbide blade produces only dust and no shavings, it is dull and will increase cutting time. The blade can be repositioned to a new cutting edge.

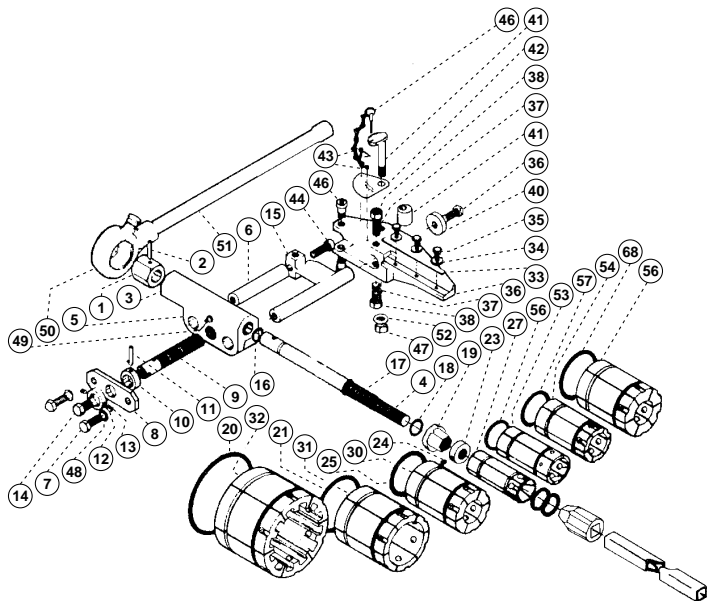
- Loosen bolts (35),
- Reposition carbide blade (33) to another cutting surface, and
- Tighten the bolts. Note: be sure to use blade washers (34) and keep the blade snug against the step when retightening bolts (35).

Spare and Replacement Parts, Repairs

Carbide blades, additional collets and other replacement parts, or repairs can be ordered directly from:

B & B Enterprises Unique
421 N.E. 31st Street
Grand Prairie, Texas 75050
972/262-2301

Parts Description



Item	Description	Item	Description	Item	Description
1	Torque knob	21	O-ring, collet 4" low pressure	41	Cam Shaft Assembly
2	Roll pin	22	O-ring, collet 2" high pressure	42	Angle scale
3	O-ring	23	Centering washer	43	Allen socket screw
4	Mandrel	24	Allen set screw	44	Allen socket screw
5	Hub	25	O-ring, collet 3" low pressure	45	Lock pin with chain
6	Rear post	26	Round head screw	46	Shoulder bolt
7	Hex head bolt	27	Collet, 2" high pressure	47	Hex nut
8	Feed plate	28	Cone, right hand thread	48	Lock washer, ext. tooth
9	Feed post	29	Nipple bar	49	Grease zert
10	Inner feed ring	30	Collet, 3" low pressure	50	Ratchet (Ridgid 11R)
11	Roll pin	31	Collet, 4" low pressure	51	Ratchet handle
12	Outer feed ring	32	Collet, 6" low pressure	52	Lock washer, ext. tooth
13	Allen set screw	33	Carbide blade	53	Collet, 2.5" high pressure
14	Hex head bolt	34	Blade washer	54	Collet, 3" high pressure
15	Front post	35	Hex head bolt	55	Collet, 4" high pressure
16	O-ring	36	Head	56	O-ring, collet 2.5" high pressure & 2" low pressure
17	Retainer ring	37	Allen socket screw	57	O-ring, collet 3" high pressure
18	O-ring	38	Hex nut	58	O-ring, collet 4" high pressure
19	Cone, left hand thread	39	Hex head bolt	59	Ring gauge (not shown)
20	O-ring, collet 6" low pressure	40	Holding washer		

Important Notice

This literature and the information and recommendations it contains are based on data reasonably believed to be reliable. However, such factors as variations in environment, application or installation, changes in operating procedures, or extrapolation of data may cause different results. Ameron makes no representation or warranty, expressed or implied, including warranties of merchantability or fitness for purpose, as to the accuracy, adequacy or completeness of the recommendations or information contained herein. Ameron assumes no liability whatsoever in connection with this literature or the information or recommendations it contains.



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