

# 2000 Series Power Tools

## Introduction

The Model 2000 series power tools consist of a grinding drum centrally located between a set of mandrels. The tools are available in either a 120 volt version or a 240 volt version for international installations.

**2100/2100-I** - Tapers 2" and 3" Red Thread® II pipe and scarfs 3" and 4" Red Thread II-A pipe. Tapers 2" and 3" 3000/L pipe with the purchase of 2" and 3" Dualoy® mandrels.

**2102/2102-I** - Tapers 2", 3" and 4" Red Thread II pipe and scarfs 3" Red Thread pipe. Tapers 2" and 3" 3000/L pipe with the purchase of 2", 3" and 4" Dualoy mandrels.

**2106/2106-I** - Tapers 2"- 6" Red Thread II pipe. Tapers 2" - 6" Green Thread pipe with the purchase of optional Green Thread mandrels.

**2300** - Tapers 1"-4" Green Thread pipe.

**2306/2306-I** - Tapers 2"- 6" Green Thread® 175 and 250 pipe. Tapers 2"- 6" Red Thread II pipe with the purchase of optional Red Thread mandrels.

**2600** - Scarfs 1½"- 6" Marine Offshore pipe.

**2700** - Tapers 2"- 4" Silver Streak pipe.

## Warning

When tapering pipe with a 2000 series power tool, DO NOT ROTATE THE PIPE WITH YOUR HAND OVER THE END OF THE PIPE AS THIS CAN RESULT IN SERIOUS INJURY. Place both hands firmly around the pipe a minimum of 2 inches from the end of the pipe. Place pipe on mandrel and slowly rotate downward counter clockwise. Do not let the pipe bottom out before beginning rotation as this could result in the grinding drum locking up on the pipe. Keep pipe rotating until the end of the pipe bottoms out and the grinding drum is no longer making significant contact with the pipe. Keep a firm grip on the pipe AT ALL TIMES. A loose grip will result in the pipe locking up on the grinding drum or spinning backward causing possible injury and/or damage to the tool.

## To Taper or Scarf

1. For Red Thread II (2" - Tools 2102 and 2106) pipe, use the mandrels with the mandrel ID painted red. For Dualoy pipe, use the mandrels with the mandrel ID painted olive green. For Green Thread (Tools 2300, 2306), use the mandrels painted green. For MOS pipe (2106), use mandrels painted blue. On older 2100 tools, assure the "D" shaped wear washer behind the mandrel is replaced. The washer prevents wear to the backing plate. There is a small pin on the back plate and a pin hole on the washer. Insert the washer over the pin until flush on the back plate. If this washer a pin placement is not correct, the taper angle will be incorrect and will result in a bad taper angle. Call FGS if you have question on mandrel set up.
2. Cut pipe square and set up tool in either the horizontal or vertical direction. Tool legs are supplied to bolt the tool to a table or truck bed.
3. Turn motor on allowing a few seconds until the motor reaches speed.
4. With a firm grip, slowly insert the pipe onto the mandrel and turn counterclockwise. Keep a firm grip on the pipe at all times and keep moving in a slow but constant downward motion until the pipe stops at the depth stop of the mandrel. Keep rotating pipe until there is no significant grinding occurring. If the motor begins to bog down, slow your rotation and insertion.

If your grip loosens, the tool motor will grab the pipe and spin it backwards resulting in the pipe being locked up against the grinding drum. If the grinding drum locks up, turn the motor off immediately and try to loosen the pipe. If this does not work, cut the pipe off as near the top of the mandrel as possible. Loosen the mandrel with the supplied T-Allen® wrench, remove pipe and re-tighten mandrel.

**Adjusting Thickness of Cut for 1"- 6" Pipe** (2100, 2102, 2106, 2306, 2600, 2700).

The taper and scarf angles are factory set. To compensate for wear or if the insertions lengths are out of tolerance the tool can be adjusted. There is a cross mark line at the center of the tool and a reference mark on each mandrel. Loosen the mandrel with the supplied Allen® head T-wrench.

## For 1"- 6" Mandrels

- To increase thickness, rotate the mandrel reference mark away from the cross mark at the center of the tool.
- To decrease thickness (more insertion), rotate the mandrel reference mark toward the cross mark at the center of the tool.
- Re-tighten the Allen head bolt.

## For 6" Mandrels

 (2106 and 2306 tools)

- Loosen Allen head bolt on front of mandrel. Rotate shaft reference line away from the central cross mark to increase thickness and toward the central cross mark to make thinner then re-tighten Allen head bolt.

Optional Shop-Vac® Connection (available on most 2000 series tools)

- Remove cap from the vacuum port on side of tool.
- Insert standard Shop-Vac hose nozzle.
- The vacuum may not remove all of the dust.

## Non Shop-Vac Operation

- Remove the aluminum dust catch tray of the tool by loosening four bolts holding it in place. There are two bolts on the bottom and two on the side. Remove the tray and empty dust. Re-attach tray and tighten bolts.

## Taper and Scarf Dimensions

For Red Thread IIA fuel handling pipe, refer to Installation Manual. For Dualoy 3000/L pipe, refer to 3000 Tool Manual. Dualoy secondary containment pipe should be hand sanded. Do not use the 2100 tool for scarfing 3000/L pipe.

## Taper Dimensions

 (2100, 2102, 2300, 2106, 2306, 2700)

For 1" - 6" Red Thread II, Green Thread and Silver Streak pipe, refer to Matched Taper Joint Manual Installation instructions.

- Compare the insertions made with a freshly tapered pipe in the field with a factory end insertion. The field insertion should be within  $\pm 1/8$ " of the factory insertion.

## Scarf Dimensions

 (2100, 2102)

For 3" and 4" Red Thread UL/Secondary Containment and Green Thread Secondary Containment. Refer to UL Installation Manual for instructions and Clam Shell Installation for all other Secondary Containment instructions.

3"- 3.480  $\pm$ .010

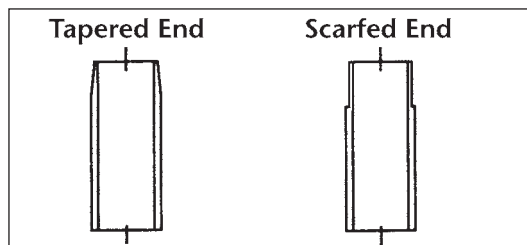
4"- 4.480  $\pm$ .010

Dualoy 3000/L pipe should be hand sanded. Do not use the 2100 tool for scarfing 3000/L pipe.

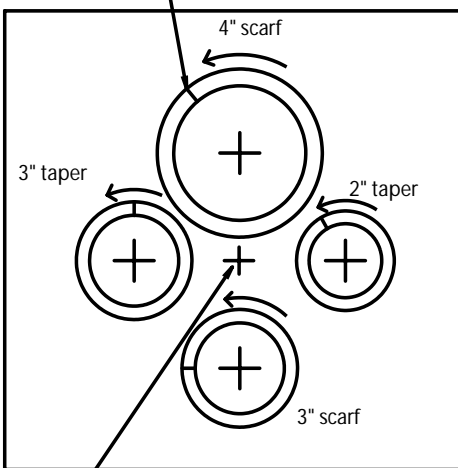
Scarf Dimensions (2600)

For 1½"- 6" MOS GT175, GT175C, GT175F and GT250, GT250C, GT250F pipe, refer to MOS Installation Manual for instructions.

- 1½" - 1.865 ±.005
- 2" - 2.445 ±.005
- 3" - 3.585 ±.005
- 4" - 4.585 ±.005
- 6" - 6.735 ±.005

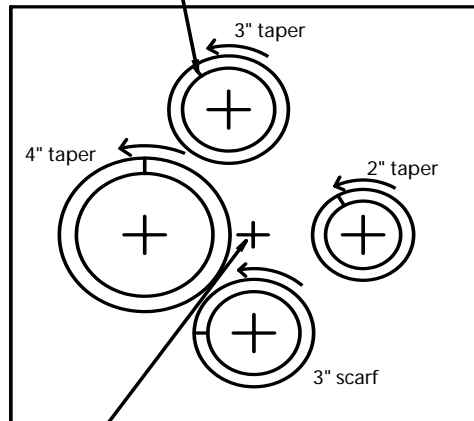


Reference Line 2100/2100-I

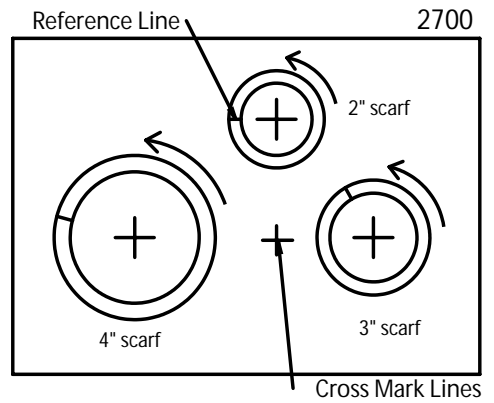
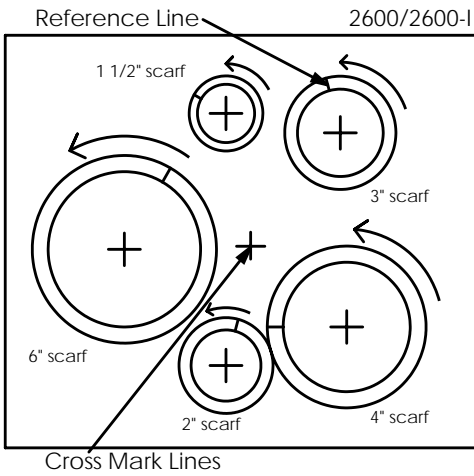
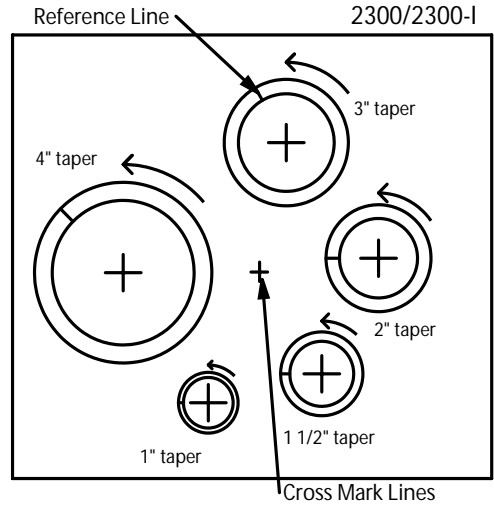
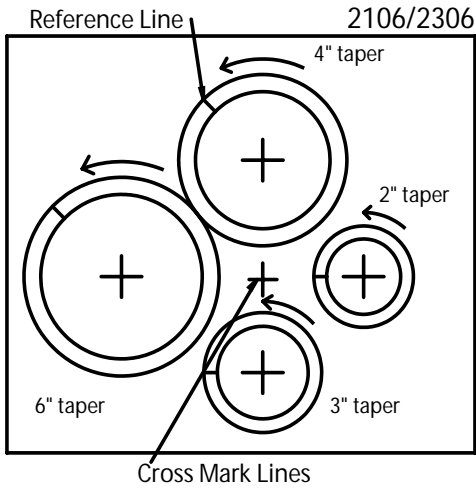


Cross Mark Lines

Reference Line 2102/2102-I



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