

# Acid Waste Assembly

## Mechanical Joint Assembly

### Grooving pipe in the field

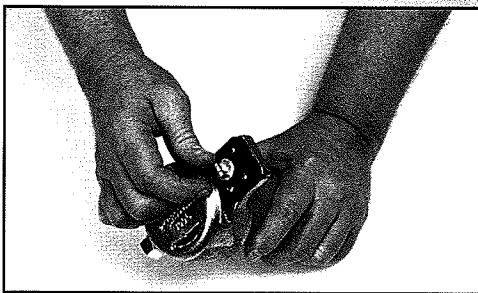
Although Orion's Acid waste pipe is supplied with factory grooves it may be necessary to groove cut pipe sections in the field. When field grooving is necessary, it is accomplished quickly and simply with an Orion grooving tool. A tool kit containing all the tools you will need is available from Orion.



#### STEP 1

Pipe to be used with the mechanical joint coupling must be cleanly cut with a thin wheel plastic tubing cutter to assure a clean square cut.

**STEP 2** Bevel and deburr the pipe with a deburring tool. The pipe must be beveled and deburred prior to grooving pipe.

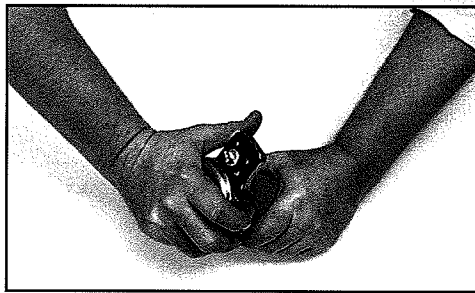


#### STEP 3

With handle of grooving tool up, place knob on handle at the top or 12 o'clock position.

Insert tool fully onto pipe. Make sure pipe is touching the stop in the tool.

**NOTE: DO NOT TEST ANY ORION PIPING SYSTEM WITH COMPRESSED AIR OR GASSES. TEST HYDROSTATICALLY ONLY**

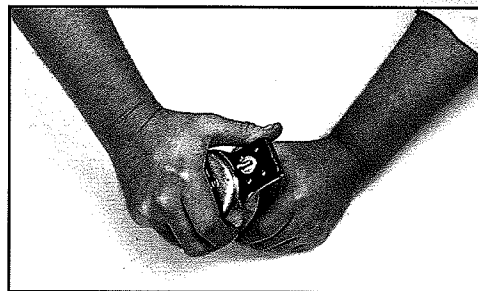


#### STEP 4

Turn knob ¼ turn clockwise, to 3 o'clock position.

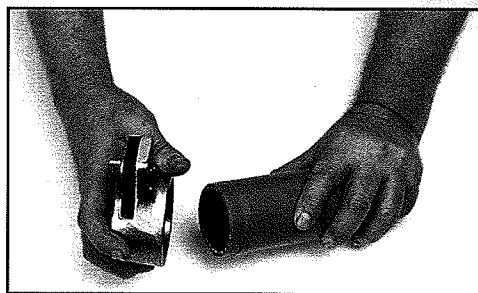
#### STEP 5

Pushing against pipe, rotate tool clockwise twice around pipe. Maintain constant inward pressure against tool at handle during rotation.



#### STEP 6

Turn knob another ¼ turn to 6 o'clock position. Proceed as in step 5, remembering to maintain constant inward pressure until no more material is removed from groove.



#### STEP 7

Return knob to 12 o'clock position and remove tool from pipe.

#### STEP 8

Remove any burrs or material from groove edges. See that all excess material is removed from the grooving tool before grooving the next piece of pipe.

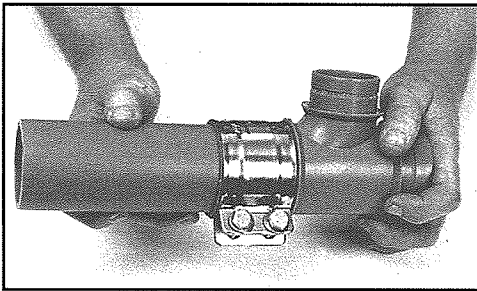
# Assembly

## Mechanical Joint Assembly



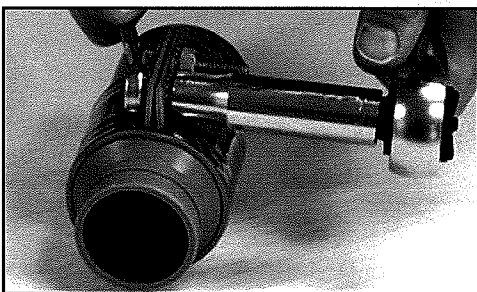
### STEP 1

Insert pre-grooved pipe or fitting into coupling until coupling rib snaps. This assures proper fit.



### STEP 2

Position stainless steel band so equal amounts of inner material show on each side of band.

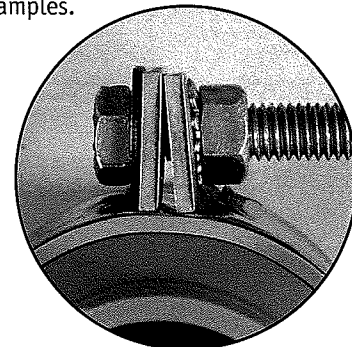


### STEP 3

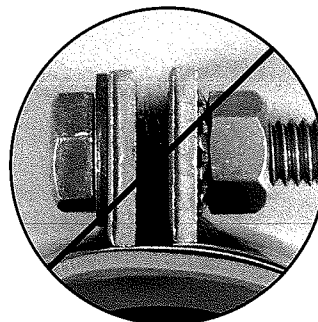
Tighten bolts until coupling bars come together at the top and have a  $\frac{1}{16}$ - to  $\frac{1}{8}$ -gap at the bottom. Do not over-tighten. A standard 10" length x  $\frac{1}{2}$ " drive ratchet wrench with 6-point x  $\frac{1}{2}$ " socket is recommended.

## General Information:

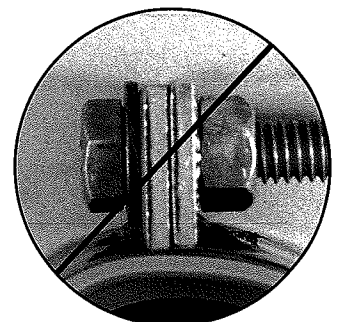
- Satisfactory installation requires careful measurement.
- Cheating on pipe lengths will cause a bind allowing joints to leak even when fully tightened.
- Pipe must be kept clean. Mud, dirt or other foreign matter in joints could cause leaks.
- Hanging specifications must be followed, taking care to see that system is not clamped tightly in hangers. System must be free to move to allow for thermal contraction and expansion. We strongly recommend the use of an Orion installation kit for installing the system. This kit has been developed to furnish everything necessary for proper installation of the system.
- The below pictures demonstrate what is typically the proper tightness for the Mechanical Joint coupling as well as an example of over-tightening and an example of insufficient tightening. Certain environmental conditions and/or manufacturing tolerances may require more or less tightening than is shown in the below examples.



Correctly Tightened



Too Loose



Too Tight

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