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# Onix™ Connections

For Radiant Manifolds and Other Hydronic Heating Equipment

**1. Choose the Tee Branch.** Watts Radiant brass barbed fittings for 3/8", 1/2", and 5/8" Onix can be soldered into standard 1/2" copper plumbing couplings. Fittings for 3/4" Onix solder into 3/4" fittings. Fittings for 1" Onix solder into 1" fittings. Solder the appropriate Watts Radiant fitting into the copper supply piping, radiant manifold, or fan coil.

Never use copper, brass, or plastic fittings designed for plastic pipe, as they are not engineered for use with Onix.

**2. Measure the Correct Length of Onix.** Cut the Onix to the desired length, leaving some slack whenever possible. Slack is desirable because if the equipment ever requires servicing, the Onix will have to be cut off the barbed fitting and several inches of slack may be needed for a new connection. NEVER stretch Onix to make splices or any other type of connection.

**CAUTION:** Do not permanently bend Onix more than the recommended bend radius. You can visualize this amount of bend by taking a short length of Onix and coiling it up in a small circle. Use a circle diameter of six inches for 3/8" Onix, eight inches for 1/2" Onix, ten inches for 5/8" Onix, twelve inches for 3/4" Onix. Overlap Onix where necessary to avoid exceeding this bend radius.

**3. Use the Correct Clamp.** See the chart at right for correct sizing.

**4. Make the Connection.** Slide the TorqueTite Clamps onto the Onix. Then slide the Onix onto the barbed fitting. Slide the TorqueTite clamp back over the barb. The clamp should be applied to the middle of the barbed area. Tighten the clamp using an in/lb torque wrench. Do not use a screw gun or wrench to tighten the clamp. See the chart at right for proper torque settings.

**CAUTIONS:**

- a. Do not solder near, or overheat, any Onix connections. Extreme temperatures associated with soldering may seriously damage the Onix and will void any warranty.
- b. All Onix and brass fitting surfaces must be clean and dry before making the connection.
- c. Whenever possible, avoid making connections or splices in inaccessible locations. Never "bury" manifolds behind walls or in concrete slabs.
- d. Repairing Onix that has been in service requires special attention, particularly when glycol has been used. Any residual amounts of glycol or any other coating inside the tube must be removed. An alcohol swab or pad must be used to remove the residue(s), then the tube should be allowed to dry prior to connection.



Watts Radiant TorqueTite™ Clamps

## Making a new Onix connection.



Before sliding the Onix onto the barbed fitting, slide the TorqueTite clamp about three inches onto the length of Onix. Slide the Onix onto the barbed fitting. Slide the clamp back over the middle of the barbed area and tighten using an in/lb torque wrench.



Tighten the clamp using an in/lb torque wrench.

### TorqueTite™ sizing and torque settings:

Tube Diameter:	Part Number:	Torque:
3/8" Onix	6641117	35 in/lbs.
1/2" Onix	6641524	45 in/lbs.
5/8" Onix	6641928	45 in/lbs.
3/4" Onix	6642232	45 in/lbs.
1" Onix	6643244	55 in/lbs.

# Onix™ Field Repairs

For Onix Energy Transfer Hose

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**WARNING:** Use this Field Repair Kit only for the repair of Onix damaged in the field. Read complete instructions before beginning repairs. Do not splice together multiple lengths of Onix. See Onix manual for recommended circuit lengths.

Purchase Onix barb-x-barb splices and TorqueTite™ clamps individually, or purchase field repair kits that contain all the necessary parts in one small package (See chart at bottom of page for part numbers).

**CAUTION:** Use of materials not supplied by Watts Radiant to make a splice or manifold connection may eventually result in leaks. Watts Radiant's Onix and fittings are engineered to work together. Watts Radiant extends no warranty — expressed or implied — to any failure or damage of any kind resulting from use of materials not specified by Watts Radiant (see Onix warranty for specifics).

**1. Cut the Onix.** Make a straight cut-off on both pieces of Onix to be spliced together.

**2. Select the Correct Brass Splice.** Use only Watts Radiant brass splices and clamps to repair Onix.

**NOTE:** Watts Radiant brass fittings are made to be used specifically with Onix tubing. Off-the-shelf brass fittings are made to different dimensions and tolerances — do not use them.

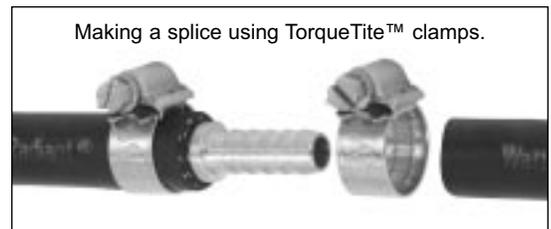
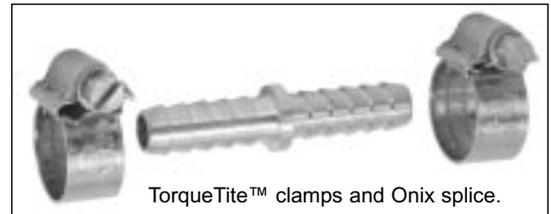
**3. Choose the Correct Clamp.** See the chart at right for correct sizing.

**4. Make the Connection.** Slide the TorqueTite Clamps onto the Onix. Then slide both lengths of Onix onto the brass splice. Slide the clamps back over the barbed area on both sides. The clamp should be applied to the middle of the barbed area. Tighten the clamp using an in/lb torque wrench. Do not use a screw gun or wrench to tighten the clamp. See the chart at right for proper torque settings. When making a buried slab repair, protect the final splice assembly with a double wrap of PVC electrician's tape or shrink wrap.

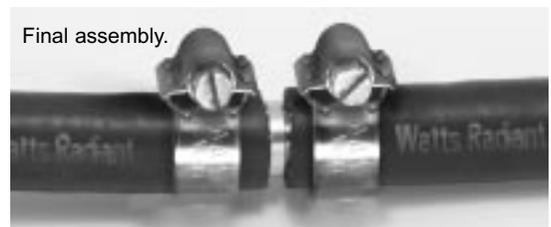
**CAUTIONS:**

- Do not solder near, or overheat, any Onix connection. Extreme temperatures associated with soldering may seriously damage the Onix and will void any warranty.
- All Onix and brass branch surfaces must be clean and dry before making the connection.
- Whenever possible, avoid making splices in inaccessible locations.
- Repairing Onix that has been in service requires special attention, particularly when glycol has been used. Any residual amounts of glycol or any other coating inside the tube must be removed. An alcohol swab or pad must be used to remove the residue(s), then the tube should be allowed to dry prior to connection.

**NOTE:** Field repairs are not covered by any warranty either expressed or implied. See Onix warranty statement.



Before sliding the Onix onto the barbed fitting, slide the TorqueTite clamp about three inches onto the length of Onix. Slide the Onix onto the barbed fitting. Slide the clamp back over the middle of the barbed area and tighten using an in/lb torque wrench.



Tighten the clamp using an in/lb torque wrench. Do not use a screw gun or wrench to tighten the clamp.

**TorqueTite™ sizing and torque settings:**

Tubing Diameter:	TorqueTite Part No:	Torque:
3/8" Onix	6641117	35 in/lbs.
1/2" Onix	6641524	45 in/lbs.
5/8" Onix	6641928	45 in/lbs.
3/4" Onix	6642232	45 in/lbs.
1" Onix	6643244	55 in/lbs.

**TorqueTite™ Onix Repair Kits:**

Description:	Part No:	Ship Wt:
3/8" Onix TorqueTite Repair Kit	660076	1 lb.
1/2" Onix TorqueTite Repair Kit	660086	1 lb.
5/8" Onix TorqueTite Repair Kit	660106	2 lbs.
3/4" Onix TorqueTite Repair Kit	660126	2 lbs.
1" Onix TorqueTite Repair Kit	660166	2 lbs.