

## Installation Instructions

When handling Intra-Gard®, care must be taken to avoid striking the ends against hard surfaces. This can cause damage from impact or crushing of the end of the conduit.

### Assembly In Trench

1. In the trench, set the first layer of ducts by inserting the male ends into the female ends on the sections previously placed. Remove the protective caps as the sections of pipe are about to be joined together, and make sure the matching colors are aligned.



2. A thin coating of Carlon Quick Set Cement should be applied to the inside surface of the sockets lightly enough to prevent the formation of a bead of cement at the interior shoulder of the sockets. Then, apply in the same manner to the spigot ends of the conduits to the depth of the socket.
3. Immediately after applying the coat of cement to the conduit, insert the spigot ends into the sockets.



### Duct Proofing

Use appropriate seal-off kit (Reference pg. 9 for Line Blowing Kits). For maximum line blowing potential, use air compressor at 175 CFM (125 PSI Max.)

1. Slide pull line through opening in threaded nozzle end of seal-off. Attach blowing missile to pull line.
2. Insert blowing missile into individual duct and insert threaded end of seal-off into duct to assure minimal air loss.
3. Attach seal-off to air compressor with air release lever in off position. Hold seal off firmly in hands.
4. Open lever quickly making sure slight tension is on to prevent pull line from packing. CAUTION SHOULD BE EXERCISED AT THE EXIT POINT FOR MISSILE TO AVOID INJURY. Blow pull line in all ducts to ensure no blockages are present.

## Field Cuts

### Joining a Male/Female Connection

1. The pipes should be laid side by side and the male end marked at the base of the bell on the female end.
2. Make a straight through cut on the male end using a standard carpenter's saw. Deburr the ends of the cut pipe.
3. Apply Carlon Quick Set Cement in a thin uniform coating to the inside surface of the sockets and raise both ends and align the ducts on the male ends to the bells on the female end.
4. Once the ducts are aligned with their sockets, lower both of the pipes. The ducts will be automatically returned to their original position as the joints are forced together.



### Joining Two Male Ends

1. The pipes should be laid side by side, marked and flush cut to butt up against each other. Deburr the ends of the cut pipe and install a spare spacer if needed, and use standard couplings.
2. Place each individual coupling onto ducts using Carlon Quick Set Cement.
3. Lift sections to align each coupling with other ducts.
4. Lower both sections to a level position.

## Repairing Intra-Gard® Once Installed

Repair sections may use a standard 20' length of Intra-Gard with sockets and cut to length.

### Repairing Damaged Intra-Gard That Is Vacant

1. Cut out damaged section making a flush cut on both sides and deburr all pipes.
2. Measure damaged section and new section with a socket and measure from base of socket and cut flush. Intra-Gard couplings are installed onto the individual ducts of the section in the ground.
3. Install new section in trench by first applying Carlon Quick Set Cement and pushing sockets onto either spigot ends.
4. Line up ducts with couplings and raise or bow center of duct span, apply cement and slip ducts into couplings.

### Repairing Intra-Gard Housing a Cable

1. Carefully cut out the damaged section of the Intra-Gard.
2. Where cable is installed, slide the split couplings onto each individual duct, fitting the cable into the grooved coupling passage. Repeat the process on the other side.
3. Carefully insert the cable into the split duct. Push the split duct into the split coupling at both ends. Wrap all slit areas with sealing tape or shrink wrap, etc. as recommended by specifier to seal out water.
4. Install stop coupling onto other vacant ducts with Carlon Quick Set Cement and install the ducts into the other openings of the couplings with cement.
5. Ensure the duct system is straight and even before encasing in soil.