



# CON II Installation Manual

C2IM  
13.201

GENERAL INSTALLATION INSTRUCTIONS

3.14.07

## INSTALLATION INSTRUCTIONS

### UNLOADING & HANDLING

Lift joints from trucks. DO NOT DROP SHARP OR HEAVY OBJECTS ON INSULATED UNITS. DO NOT use chains or other devices which might puncture insulation jacket.

### STORAGE

Pipe is stockpiled off the ground. Do not exceed a stacking height of 6'. Prevent dirt and debris from entering pipe. Fittings, joining materials, etc. must be stored indoors to protect them from freezing, overheating, moisture, or loss.

### LAYING OF PIPE UNITS – TRENCHING

All sharp rocks, roots, and other abrasive material must be removed from the trench. The trench bed should be 6" of sand or backfill as specified by the engineer, providing a smooth and uniform stabilizing surface (sandbags may be used as a means to keep pipe off the ground until backfilling is started). The trench width should provide a minimum of 6" from trench wall to jacket O.D. and a minimum of 6" between pipe units. Trench depths will be indicated on the contract drawing and in line with good construction practices. Trench depth should allow for a minimum cover of 24" on top of the insulated unit. Pipe is to be sloped 1" per 40' towards the drains. Pieces that are marked top should have "top" up.

### FIELD JOINING METHODS

Piping shall be joined in the field using approved methods of welding for appropriate pipe. Installation drawings will be provided to indicate location of each individual piece of pre-insulated pipe. Pre-insulated pipe will be marked with Job and Piece Number correlating to those on the installation drawings. Installation of pipe must follow the installation drawings. One end, and one end only, of conduit must have conduit sleeve. Shipping bars should be removed prior to welding. Care should be taken in removing shipping bars so as not to damage carrier pipe. Thermacor strongly recommends the use of a grinder when removing the bars from the carrier pipe. **Field changes to fabricated units must be authorized in writing by the factory.**

### ANCHORS AND COLD SPRINGING

All carrier pipe welds, with the exception of the cold spring welds, should be made and anchors poured prior to the cold springing. Anchors should be 1' above, 1' below, and 3' in length, extending into the undisturbed dirt of the trench wall. Cold springing is to be performed per the Engineer's instructions and as shown on the installation drawings. Bridging the conduit may be used when circumstance do not allow traditional methods.

### TESTING

The hydrostatic pressure test shall be performed per the engineer's specification with a factory recommendation of one and one-half times the normal operating pressure for not less than two hours. Inspect all welds at this time. *Appropriate safety precautions shall be taken to guard against possible injury to personnel in the event of a failure.*

### LEAK DETECTION

If leak detection has been specified by the Engineer, each spool piece will have a pull wire provided that is to be replaced with a continuous pull wire, cable, or rope by the contractor.

### CASING SLEEVES

Sleeves are welded and air tested at 15 psi for two hours. After testing, sleeves are to be cleaned of any weld splatter and either coated, heat shrink is applied, or both.

### HOLIDAY TESTING

Conduit should be holiday tested right before backfill or earlier if pipe is handled with care. Pipe should be holiday tested at the required voltage for the particular coating. Make any repairs with the patch sticks provided. (Larger repairs can be made with liquid coating from Thermacor.)

### CATHODIC PROTECTION

Cathodic protection should be installed right before backfill, per the instructions of the corrosion engineer.

### BACKFILL FINAL

Before backfilling is started, the trench should be cleaned of any trench wall cave-ins and general trash, especially metal. Backfilling should be done with sand or other engineer-approved material 6" below the casing to 6" above. Engineer-approved backfill may be used to fill the rest of the trench. This material should be free of rocks, roots, large clods, or anything that could cause damage to the casing or casing coating. Casing should have a minimum of 2' cover.

**WHEELED OR TRACKED VEHICLES SHALL NOT BE USED FOR TAMPING!**

## SHIPPING & HANDLING INSTRUCTIONS

**HANDLE COATED PIPE WITH EXTRA CARE! THIS PIPE CAN DAMAGE WHEN HANDLED, MOVED, OR STORED IMPROPERLY!**

### UPON RECEIPT OF MATERIALS

Make an overall inspection of the load, checking all bands and braces to see if they are intact. Also, check the load for shifting. If the load has shifted, or if the braces and bands are broken, examine each pipe for damage. **HAVE THE TRUCK DRIVER MAKE AN ITEMIZED NOTATION OF ANY DAMAGE ON THE DELIVERY RECEIPT AND HAVE IT SIGNED BY THE DRIVER.**

### CHECK PACKING LIST

Compare materials received with those listed on the packing list. Count all pipe and boxes. **NOTE ANY SHORTAGES ON DRIVER'S DELIVERY RECEIPT.**

### CHECK BOXES

Open all boxes and inspect for damages, shortages, and correct size. **REPORT ANY DISCREPANCIES WITHIN 30 DAYS AFTER RECEIPT.**

### CLAIMS FOR DAMAGES

Claims for damages in transit or lost goods must be made within 30 days. The filing of any claim is the Purchaser's Responsibility. Thermacor will file any claim on Purchaser's behalf upon receipt of the following:

1. Written authority to file such a claim.
2. Written notice of loss or damage (signed and noted Bill of Lading) by truck driver or carrier freight agent.

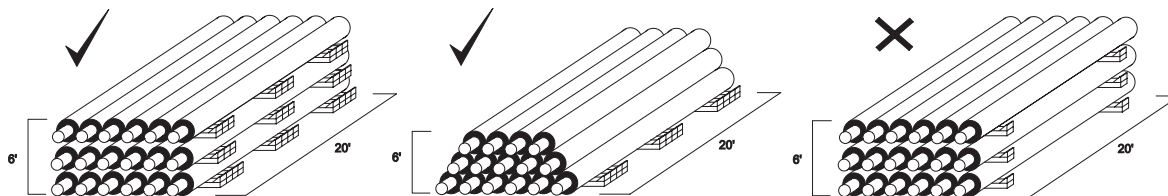
### UNLOADING PIPE

Pipe may be unloaded by hand or with fork lifts\*, cherry pickers, or cranes. **DO NOT HOOK** pipe ends. Minimum 4" wide straps or slings should be used.

\*Fork Lift – When using Fork Lift, wide tines or a large surface covering the fork tines must be used to prevent coating damage. Fork Lift must be able to handle the weight of the insulated pipe length.

### PIPE STOCKPILING

Pipe should be stored on level ground, elevated to be as dry as possible, and in such a way that the pipe ends do not lie in water or on the ground. To prevent deformation of the jacket and insulation due to the weight of the pipe, place a series of supports (3 for 20' or 5 for 40') of ample size generally constructed from 2" x 4"s under the pipe as shown below. Supports should increase in width as weight load increases so that the top supports of a fully loaded stockpile should be approximately 10" wide, gradually increasing to the bottom level, approximately 18" wide. Pipe can be pyramided (within reasonable and safe limits) approximately 6' high after a properly braced or chocked base is formed. Pipe stored outside for long periods of time can be covered with blue mesh tarpaulin (plywood can also be used). **Do not prevent airflow as jacket can be deformed from heat buildup.**



## BE VERY CAREFUL NOT TO DROP THE PIPE!

**NOTE: Thermacor does not approve of the practice of installing pipe and fittings, and backfilling the pipe before testing. Thermacor will not allow or pay claims for charges which arise in locating and digging up leaks regardless of cause.**