

QUICK & EASY INSTALLATION



1. Measure



2. Cut



3. Seal Raw Edges



4. Wrap



5. Repeat to Cover Additional Areas



6. Tape to Pipe/Equipment and Seal any Openings with Supplied Caulk



EverGreen®

Chill-In Insulation Kits

*Removable/Reusable Insulation Kit System
For Chilled Water Systems*



INSTALLATION & REPAIR GUIDE

*The All-In-One Modular Solution
for Combating Condensation and
Corrosion on Chilled Water Systems*

Installing Ever Green® Chill-In Insulation Blankets

The Ever Green Chill-In insulation system is designed for use on chilled water (down to an operating temperature of 35°F) pipe components such as valves, strainers, and flexible connectors as well as connecting bare pipe.

Kit Contents

- One 2" thick 4' x 8' modularized, flexible insulation blanket faced on both sides with a zero-perm vapor retarder
- 75' long, 4" wide roll of matching zero-perm pressure sensitive tape
- Silicone caulk
- Utility knife

Modular System Description

Chill-In insulation is an ice white, quilted 4' x 8' insulation blanket. The quilting provides the blanket with the flexibility it needs to insulate easily about convoluted surfaces. To provide a continuous vapor retarder surface, none of the quilt lines penetrate the vapor retarder facing. The inside of the insulation blanket consists of a low density, fiberglass insulation blanket that meets the requirements of ASTM C533, Type V. The finished blanket thickness is about 2 inches. Refill kits contain only insulation blanket and tape.

Recommendations Prior to Getting Started

Excellent performance with this insulation system will only be achieved with complete water vapor sealing of all Chill-In edges and cuts as well as vapor sealing of the installed system. Details matter: gaps and holes in the system will allow water vapor to migrate to the chilled metal pipe surfaces, where it may condense into water, and, in the case of gaps and holes in the blankets, allow water vapor to get into the fiberglass insulation where it may condense. It is recommended that installers are trained, skilled, and experienced insulation workers. The guidelines included in this guide are not of sufficient detail to advise the installer of all techniques required to install insulation blankets correctly in all scenarios.

INSTALLATION

1. Measure Pipe/Pipe Component

Measure the pipe and pipe component to be insulated to determine the minimum length and width of the insulation blanket (see Figure 1)



Figure 1 — Measure pipe length and circumference (a & b)

2. Prepare Pipe Insulation Surface

Wrap tape around top and bottom of pipe insulation. Note: this step is necessary when the pipe insulation is jacketed with ASJ or other fragile jacket material. When jacket is more substantial, such as metal or PVC, this step is unnecessary (See Figure 2).

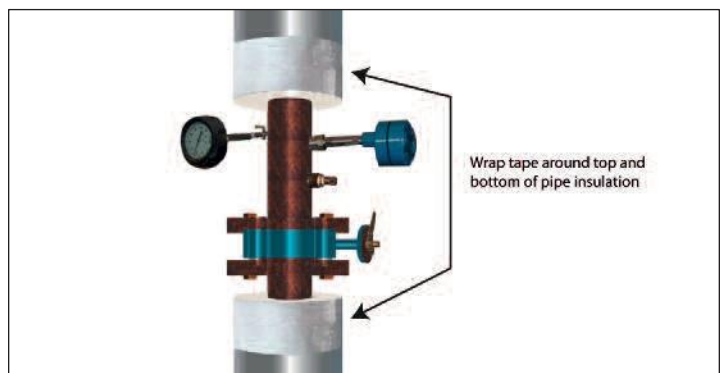


Figure 2 — Tape top and bottom surfaces with a single row of tape.

3. Mark Insulation Blanket

Mark the blanket to indicate where cuts will be made – make note of the necessary length and stretch-out. (See Figure 3).



Figure 3 — Marking blanket to indicate cuts

4. Cut Insulation to Fit

With the utility knife, cut the measured section to match measured dimensions (See Figure 4).



Figure 4 — Cuts should be made with blanket laying on a flat cutting surface

5. Tape Exposed Blanket Edges

Cut the strips of matching tape the width and length of the blanket to cover the cut edges of the insulation. Tape each exposed blanket edge to make sure all edges are sealed (See Figure 5).



Figure 5 — Taping exposed blanket edge

6. For Fittings With Protrusions, Mark and Measure

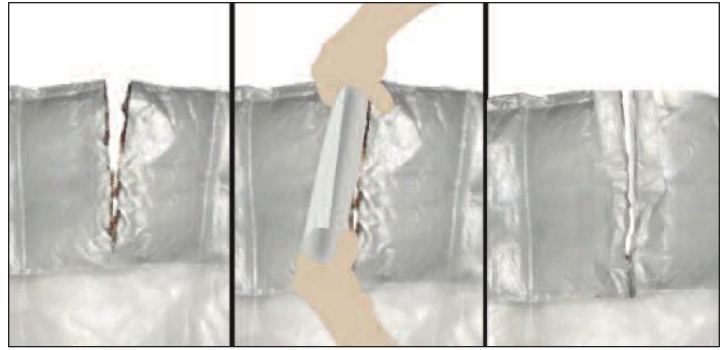
Wrap the insulation piece with sealed edges around the pipe. Using the pen, mark the locations and length of cuts for penetrations (See Figures 6a, 6b).



Figure 6a, 6b — Measuring and marking the blanket for one of the penetrations

7. Make Penetration Cuts

Hold insulation piece up against pipe and measure to determine location and depth of penetration cut. Make the necessary cuts for the penetrations, and tape the exposed edges (See Figure 7).



Figures 7 — Taping exposed blanket edges where a penetration cut has been made. All exposed edges must be sealed with tape before proceeding with installation.

8. Position Blanket for Installation

Wrap blanket around fitting. For fittings with protrusions, slide items through penetration cuts made in the blanket for them. Secure in place with several short strips of tape (See Figure 8).



Figure 8 — Wrap blanket around fitting

9. Tape Circumference of Blanket

Wrap a strip of tape matching the circumferential dimension around the installed blanket. If circumference is too long, cut the tape strip in half or into thirds and install one by one. Make a fold-over tab at the end of each tape strip to enable it to be more easily removed in the future when insulation needs to be removed (See Figure 9).

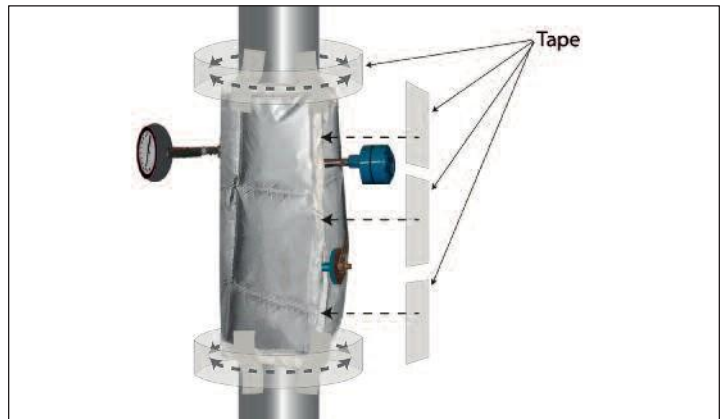


Figure 9 — Apply a strip of tape around the circumference of the blanket where it overlaps the pipe insulation

10. Tape All Edges

Cut several short pieces of tape to cover the gaps around each penetration. Press tape to assure a good seal in all locations.



Figure 10 — Tape vertical and circumferential seams

11. On Fittings with Penetrations - Tape All Edges of Cut-Outs

Apply short tape strips to close gaps around each penetration (See Figure 11).

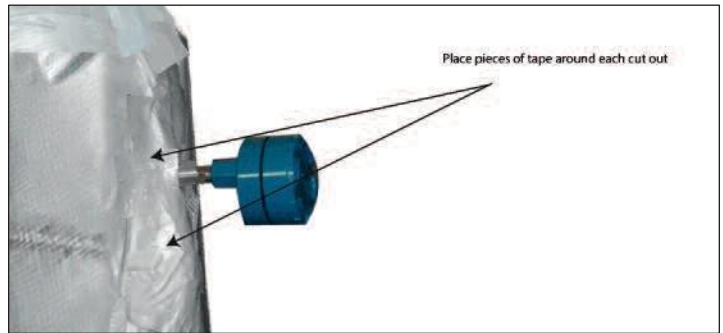


Figure 11 — Place pieces of tape around each cut-out

12. Caulk Penetrations

To completely seal the pipe surface from vapor intrusion, use the supplied tube of silicone caulk and apply at each penetration to create an airtight seal (See Figure 12).

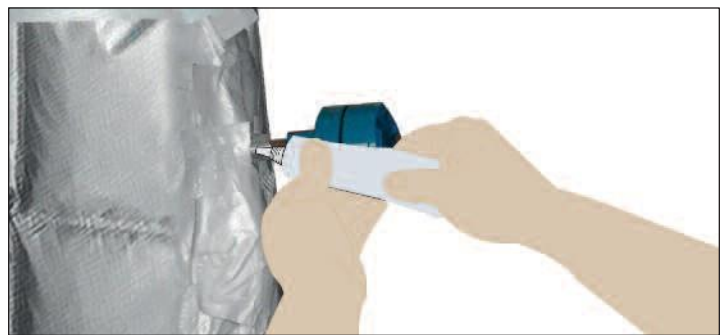


Figure 12 — Apply silicone caulk to seal penetrations to limit water vapor intrusion to the cold metal pipe and valve surfaces where it will condense into liquid water

13. Final Inspection

Do a final inspection ensure all seams and penetrations are tightly sealed so as to keep water vapor from reaching the pipe and component metal surfaces (See Figure 13).



Figure 13 — Finished insulation. All seams are tightly sealed with tape and penetrations are tightly sealed with silicone caulk

REPAIRING CHILL-IN INSULATION BLANKETS



A tear or puncture in the vapor retarder should be repaired as soon as it is discovered. Failure to do so can damage the Chill-In blanket as a result of moisture accumulation within it. The tear or puncture can easily be repaired using a strip of the Chill-In tape that is supplied with the kit. The vapor retarder surface should be clean and dry before applying the tape. Apply pressure to the tape to make certain that it seals the tear or puncture from water vapor intrusion.

REMOVING EVER GREEN CHILL-IN INSULATION TO ENABLE RE-USE

1. Carefully remove each piece of tape used to adhere and seal the blanket to the pipe at the butt joints, and to itself at the lap joints.
2. Discard the used tape and caulk.
3. Place the Chill-In blanket(s) in a clean, dust-free location where there is less likelihood of people stepping on them or laying heavy objects on them. If the outside surface of the blankets gets dusty/dirty they will need cleaning prior to installation to assure PSA tape adheres well.

REINSTALLATION OF EVER GREEN CHILL-IN INSULATION

Reinstallation of the blankets is virtually the same as the original installation.

1. If the chilled water pipe is operating (if it's cold), make sure to dry the pipe as well as possible with an absorbent rag immediately before applying the insulation.
2. AMI recommends using new matching tape. Do not use the old tape since the quality of the vapor seal may be compromised with the removal process.
3. AMI also recommends checking for any punctures that may have resulted and, if found, repair them with a short piece of new matching tape.

NOTES

- A. The guidelines in this manual do not purport to address all engineering issues associated with its use. It is the responsibility of the facility owner to have (1) qualified structural engineers perform calculations, as required, to make certain that the securement is sufficient, accounting for the weight of the insulation system; (2) qualified mechanical engineers determine the insulation meets the required thermal requirements and (3) qualified corrosion engineers to specify type and thickness of coatings to protect the metal surfaces from corrosion under insulation.
- B. The guidelines in this manual do not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this manual to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

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Auburn Manufacturing has been serving the mechanical insulation industry for over 30 years with a wide array of safe, heat-resistant textiles to cover a range of extreme temperatures. Our manufacturing experience, market and technical knowledge through association with NIA and its members, and a focus on continuous improvement, all form the basis of new product development at AMI. We are proud to introduce Ever Green Chill In insulation as the most recent example of our long-term commitment to the industry.



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Ever Green Insulation Kits are manufactured in the U.S. The insulation composite is produced domestically and meets the Buy American requirements.



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