Zeston® PVC Insulated Fitting Covers
Installation Instructions for USDA and FDA Piping Systems

1. Zeston PVC insulated fitting covers are quickly installed over ells, tees, valves, and other pipe fittings. Combined with Micro-Lok® HP jacketed pipe insulation, they provide a complete, color-coordinated system.

2. Position, tuck, and fold the fiber glass insulation insert as described below in steps 2 and 3 for hot systems.

3. Butt the ends of the fiber glass insert against the ends of the pipe covering. Tuck and fold the insulation so that it covers all bare surfaces. Keep the fiber glass fluffed up to the thickness of the adjacent pipe insulation to assure maximum thermal efficiency.

Installation Instructions for Cold Systems

1. Zeston PVC insulated fitting covers are quickly installed over ells, tees, valves, and other pipe fittings. Combined with Micro-Lok® HP jacketed pipe insulation, they provide a complete, color-coordinated system.

2. Place the pre-cut fiber glass insert around the fitting, positioning the points of the insert as the inside radius of the elbow. For applications with temperatures below 45°F (7°C) or above 250°F (121°C), additional layers of insulation may be required. In such cases, the first layer is secured by wrapping with fiber glass yarn.

3. But the ends of the fiber glass insert against the ends of the pipe covering. Tuck and fold the insulation so that it covers all bare surfaces. Keep the fiber glass fluffed up to the thickness of the adjacent pipe insulation to assure maximum thermal efficiency.

Installation Instructions for Hot Systems

1. Zeston PVC insulated fitting covers are quickly installed over ells, tees, valves, and other pipe fittings. Combined with Micro-Lok® HP jacketed pipe insulation, they provide a complete, color-coordinated system.

2. Secure the appropriate Zeston® Hi-Lo Temp fiber glass insert by wrapping it completely around the pipe fitting without overly compressing it or leaving any voids. Ensure that the insulation insert covers all exposed surfaces. The Zeston PVC fitting cover should then be installed over the pipe fitting and fiber glass insert by securing the throat using either serrated tacks, Perma-Weld adhesive or Zeston Z-Tape.

3. The following sequence describes the installation of Zeston PVC jacketing and fitting covers with Perma-Weld solvent welding adhesive:

   a. Position the Zeston PVC fitting cover over the insulated fitting.

   b. Install the appropriate Zeston® Hi-Lo Temp fiber glass insert by wrapping it completely around the pipe fitting without overly compressing it or leaving any voids. Ensure that the insulation insert covers all exposed surfaces. The Zeston PVC fitting cover should then be installed over the pipe fitting and fiber glass insert by securing the throat using either serrated tacks, Perma-Weld adhesive or Zeston Z-Tape.

   c. The following sequence describes the installation of Zeston PVC jacketing and fitting covers with Perma-Weld solvent welding adhesive:

   1. Position the Zeston PVC fitting cover over the insulated fitting.

   2. Install the appropriate Zeston® Hi-Lo Temp fiber glass insert by wrapping it completely around the pipe fitting without overly compressing it or leaving any voids. Ensure that the insulation insert covers all exposed surfaces. The Zeston PVC fitting cover should then be installed over the pipe fitting and fiber glass insert by securing the throat using either serrated tacks, Perma-Weld adhesive or Zeston Z-Tape.

   3. The following sequence describes the installation of Zeston PVC jacketing and fitting covers with Perma-Weld solvent welding adhesive:

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   b. Install the appropriate Zeston® Hi-Lo Temp fiber glass insert by wrapping it completely around the pipe fitting without overly compressing it or leaving any voids. Ensure that the insulation insert covers all exposed surfaces. The Zeston PVC fitting cover should then be installed over the pipe fitting and fiber glass insert by securing the throat using either serrated tacks, Perma-Weld adhesive or Zeston Z-Tape.

   c. The following sequence describes the installation of Zeston PVC jacketing and fitting covers with Perma-Weld solvent welding adhesive:

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   c. The following sequence describes the installation of Zeston PVC jacketing and fitting covers with Perma-Weld solvent welding adhesive:

   1. Position the Zeston PVC fitting cover over the insulated fitting.

   2. Install the appropriate Zeston® Hi-Lo Temp fiber glass insert by wrapping it completely around the pipe fitting without overly compressing it or leaving any voids. Ensure that the insulation insert covers all exposed surfaces. The Zeston PVC fitting cover should then be installed over the pipe fitting and fiber glass insert by securing the throat using either serrated tacks, Perma-Weld adhesive or Zeston Z-Tape.

   3. The following sequence describes the installation of Zeston PVC jacketing and fitting covers with Perma-Weld solvent welding adhesive:

   a. Position the Zeston PVC fitting cover over the insulated fitting.

   b. Install the appropriate Zeston® Hi-Lo Temp fiber glass insert by wrapping it completely around the pipe fitting without overly compressing it or leaving any voids. Ensure that the insulation insert covers all exposed surfaces. The Zeston PVC fitting cover should then be installed over the pipe fitting and fiber glass insert by securing the throat using either serrated tacks, Perma-Weld adhesive or Zeston Z-Tape.

   c. The following sequence describes the installation of Zeston PVC jacketing and fitting covers with Perma-Weld solvent welding adhesive:

   1. Position the Zeston PVC fitting cover over the insulated fitting.

   2. Install the appropriate Zeston® Hi-Lo Temp fiber glass insert by wrapping it completely around the pipe fitting without overly compressing it or leaving any voids. Ensure that the insulation insert covers all exposed surfaces. The Zeston PVC fitting cover should then be installed over the pipe fitting and fiber glass insert by securing the throat using either serrated tacks, Perma-Weld adhesive or Zeston Z-Tape.

   3. The following sequence describes the installation of Zeston PVC jacketing and fitting covers with Perma-Weld solvent welding adhesive:
2. Using a standard applicator gun or squeeze bottle, apply a bead of Perma-Weld adhesive along the throat overlap of the fitting cover. Snap the fitting cover into place and secure with elastic cord or PVC tape. Always feather the adhesive along the seam.

4. Overlap the jacketing on itself (approximately 1½" to 2" [38 mm to 51 mm]) and apply a bead of adhesive along the entire length of the longitudinal lap. Place elastic cords or PVC tape around the jacketing.

3. After the fitting cover has cured at least 10 minutes, run a bead of adhesive along the cover for approximately 1" (25 mm) with every 8 in (200 mm) of jacketing and secure the circumferential joint with an elastic cord. The cord may be removed after approximately 10 minutes.

4. Apply the mastic along the inside of the fitting cover throat overlap seam. Pressure-sensitive Z-Tape or serrated tacks may also be used.

5. Place the fitting cover over the insulation, lapping the mastic-covered edge over the other side of the throat seam.

6. Insert two stainless steel serrated tacks approximately ¼" (6 mm) from one of the lap edges of the fitting cover. Snap the cover into place over the fiberglass insulation.

5. After the fitting cover is in position, push the tacks into the overlapping throat seam. No further fastening is required.

6. As an option, apply color-matched, pressure-sensitive Z-Tape to the butt joints for a more attractive appearance.
6. Additional jacketing sections are applied in the following manner:

- Run a bead of adhesive around the circumferential edge of the most recently installed section. Position the jacketing and bond the circumferential and longitudinal laps as in step #4. When finished, visually check the entire installation. If necessary, use the adhesive to touch up areas, paying particular attention to areas where seams were covered by elastic cords or PVC tape.

Complete curing of the Perma-Weld adhesive takes approximately 8 to 10 hours.

Adhesive Coverage

Approximately 1 quart (0.95 liters) of adhesive is required to seal 100 linear feet (30.5 m) of fitting covers and pipe jacketing.

**Note**

On high-temperature installations, slip-joints should be used to compensate for the thermal expansion and contraction of the piping system. Slip joints can be formed by increasing the overlap between jacket sections. Apply white flexible caulking to slip-joints to maintain a sealed system.

**WARNING**

Perma-Weld adhesive and thinner are flammable, and may present a health hazard if not used properly. Please observe the precautions printed on the containers.

7. The completed insulated fitting cover provides a neat, finished look that enhances the overall appearance of the system. When installed, Zeston PVC insulated fitting covers offer long service life with little or no maintenance, at a low installed cost.

**Note:**

Where pipe insulation thickness is greater than 1½" (38 mm) or pipe temperature is below 45°F (7°C) or above 250°F (121°C), additional inserts must be used. A “rule of thumb” for temperatures over 250°F 

|°C | is to use one Hi-Lo Temp Insert for each additional 1" (25 mm) of pipe insulation.)

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**Installation Instructions for Refrigerant Systems and Cold Systems in Severe Ambient Conditions**

Insulate fittings to the same thickness as the adjacent pipe insulation with either pre-cut fiber glass inserts or segmented pipe insulation which has been redacted to conform to the Zeston PVC fitting cover. Apply an intermediate vapor barrier, compatible with the PVC, over the insulation. Apply a vapor barrier mastic around the edges of the adjoining pipe insulation and the fitting cover during installation. Apply vapor retarder tape, vapor barrier tape or Z-Tape to the insulation edges of the fitting cover to prevent condensation at the seam.

All surfaces to be taped should first be wiped clean with a cloth to remove all dust, dirt and grease to ensure a proper pressure-sensitive adhesive bond. Cold systems that are not designated to prevent condensation should have the circumferential edges of the Zeston cover wrapped with vapor retarder and pressure sensitive 2-Tape. The tape should extend over the adjacent vapor retarder pipe insulation jacket and have an overlap on itself at least 2" (51 mm) on the downward side.

**Note:**

Perma-Weld tapes have a tendency to wrinkle. A wrinkle should be straightened or shaped to be flush with the tape or cover to prevent condensation at the seam. Perma-Weld tape will cause the foam to expand, possibly allowing an opening to form in the system.
Zeston® 2000/300 PVC
Guide Specifications

Temporarily Bonded Systems (USDA Acceptance)
The contractor shall furnish and install Zeston 2000/300 PVC insu-
lated fitting covers on all pipe fittings, flanges, valves and pipe ter-
minations. The contractor shall also furnish and install Zeston 2000/300 PVC jacketing in 20 or 30 mil (0.5 or 0.8 mm) thickness as apro-
priate. Elastic cord or PVC tape shall be used to hold the jacket in
place for at least 10 minutes. Subsequent sections of the jacketing
shall be applied as noted above with the appropriate amounts of
Perma-Weld adhesive where necessary. Complete curing of the Perma-
Weld adhesive takes approximately 8 to 10 hours.

Cold Systems
The contractor shall furnish and install Zeston 2000/300 PVC insu-
lated fitting covers on all pipe fittings, flanges, valves and pipe ter-
minations. The contractor shall also furnish and install Zeston 2000/300 PVC jacketing in 20 or 30 mil (0.5 or 0.8 mm) thickness as apro-
priate. Elastic cord or PVC tape shall be used to hold the cover in
place for at least 10 minutes while the adhesive takes an initial set. Exposed
seams shall be visually checked for sealing and touched up with
Perma-Weld solvent welding adhesive in the lap area. Complete
curing of the Perma-Weld adhesive takes approximately 8 to 10 hours.

Hot Systems
The contractor shall furnish and install Zeston 2000/300 PVC insu-
lated fitting covers on all pipe fittings, flanges, valves and pipe ter-
minations. The contractor shall also furnish and install Zeston 2000/300 PVC jacketing in 20 or 30 mil (0.5 or 0.8 mm) thickness as apro-
priate. Elastic cord or PVC tape shall be used to hold the jacket in
place for at least 10 minutes. Subsequent sections of the jacketing
shall be applied as noted above with the appropriate amounts of
Perma-Weld adhesive where necessary. Complete curing of the Perma-
Weld adhesive takes approximately 8 to 10 hours.

On fittings where the operating temperature is below 45°F (7°C) or
where the pipe insulation thickness is greater than 1½" (38 mm) or
more than two of the Hi-Lo Temp insulation inserts shall be ap-
plied with a few wrappings of fiber glass yarn to eliminate voids or
hot spots. One additional Hi-Lo Temp insert shall be used for each
additional 1½" (38 mm) of pipe insulation above 1½" (38 mm).

Refrigerant Systems and Cold Systems in Severe Ambient Conditions
The contractor shall furnish and install Zeston 2000/300 PVC insu-
lated fitting covers on all pipe fittings, flanges, valves and pipe ter-
minations. The contractor shall also furnish and install Zeston 2000/300 PVC jacketing in 20 or 30 mil (0.5 or 0.8 mm) thickness as apro-
priate. Elastic cord or PVC tape shall be used to hold the jacket in
place for at least 10 minutes while the adhesive takes an initial set. Exposed
seams shall be visually checked for sealing and touched up with
Perma-Weld solvent welding adhesive in the lap area. Complete
curing of the Perma-Weld adhesive takes approximately 8 to 10 hours.

On fittings where the operating temperature is below 45°F (7°C) or
where the pipe insulation thickness is greater than 1½" (38 mm) or
more than two of the Hi-Lo Temp insulation inserts shall be ap-
plied with a few wrappings of fiber glass yarn to eliminate voids or
hot spots. One additional Hi-Lo Temp insert shall be used for each
additional 1½" (38 mm) of pipe insulation above 1½" (38 mm).

Guides for Specifications

Totally Sealed Systems (USDA Acceptance)
The contractor shall furnish and install Zeston 2000/300 PVC insu-
lated fitting covers on all pipe fittings, flanges, valves and pipe ter-
minations. The contractor shall also furnish and install Zeston 2000/300 PVC jacketing in 20 or 30 mil (0.5 or 0.8 mm) thickness as apro-
priate. Elastic cord or PVC tape shall be used to hold the jacket in
place for at least 10 minutes while the adhesive takes an initial set. Exposed
seams shall be visually checked for sealing and touched up with
Perma-Weld solvent welding adhesive in the lap area. Complete
curing of the Perma-Weld adhesive takes approximately 8 to 10 hours.

On fittings where the operating temperature is below 45°F (7°C) or
where the pipe insulation thickness is greater than 1½" (38 mm) or
more than two of the Hi-Lo Temp insulation inserts shall be ap-
plied with a few wrappings of fiber glass yarn to eliminate voids or
hot spots. One additional Hi-Lo Temp insert shall be used for each
additional 1½" (38 mm) of pipe insulation above 1½" (38 mm).
For high temperature installations, slip joints shall be applied periodically between fixed supports and on co-linear long runs of straight piping. Slip-joints shall be applied at least every 50 ft (15.2 m) to 100 ft (30.5 m) and by applying a white flexible caulking in the overlap area to maintain a sealed system.

For refrigerant systems or cold systems in severe ambient conditions, an intermediate vapor retarder shall be applied prior to the installation of the PVC fitting cover and jacketing.

Provide full thickness, the first layer shall be secured with a few wrap-overs of glass paper or similar backing. Allow some expansion of any louvers, gaps or preformed insulation shapes conforming to the Zeston® 2000/300 PVC fitting cover to seal in the use of A or B Seal inserts. An intermediate vapor retarder compatible with the PVC shall first be applied, completely sealing the insulation prior to installing the Zeston® 2000/300 PVC fitting cover.

An approved vapor retarder mastic compatible with the PVC shall then be applied around the edges of the adjoining pipe insulation and at the fitting cover seam. The Zeston® 2000/300 PVC fitting cover is then applied and shall be secured with pressure-sensitive PVC-Z Tape along the throat seam, and the circumferential edges overlapping itself 2" (51 mm) on the downward side.