

Installation Guide FDA, USDA, and Pharmaceutical Piping Systems (Completely sealed systems) Indoor Conditioned Spaces

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Proto PVC fitting covers and jacketing are designed for use on specialty piping systems where a fully sealed system is required. This system is designed to provide a hygienic covering with a cleanable surface, resistant to damage from water wash-down. It also minimizes the potential for microbial growth. The jacketing system is designed for repeated wash-downs. In areas where steam or scalding water wash-downs will be performed, use EXOD[®] (CPVC).

For applications of hot pipe, cold pipe or under severe conditions, care should be taken to ensure that the PVC system is fully sealed to prevent moisture from migrating into the system.

Fiberglass insulation inserts should be the same thickness as that of the pipe insulation. As a general guideline, one Proto insert should be installed for each inch of pipe insulation thickness. This will ensure that the thermal performance of Proto's insulation system matches that of the mineral fiber pipe insulation.

For a fully sealed system, follow the Installation Guides for hot pipe, cold pipe or severe service conditions. Once the inserts and vapor barrier system or vapor barrier mastic are in place, as defined by these Installation Guides, install Proto PVC fitting covers and jacketing using Proto's solvent weld adhesive to obtain a fully sealed system.



Position the Proto PVC fitting cover over the insulated fitting.



Using a standard applicator gun or squeeze bottle, apply a bead of Proto's solvent weld adhesive between the overlap of the PVC fitting cover.



Press the fitting cover into place and temporarily secure using a tourniquet, elastic cord or PVC tape.

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After the adhesive used on the fitting cover has cured for a minimum of 10 minutes, install Proto PVC jacketing (with or without SSL tape) using Proto's solvent weld adhesive. Run a bead of adhesive along the circumferential edge of the fitting cover. Overlap the fitting cover (by approximately 1^{1/2} to 2 inches [38 to 51mm]) with Proto PVC jacketing. Secure the circumferential joint with a temporary tourniquet or elastic cord. The tourniquet or cord may be removed after approximately 10 minutes.



Install Proto PVC jacketing (with or without SSL tape) over the pipe insulation using Proto's solvent weld adhesive along any longitudinal and circumferential seams. Make sure any long runs of PVC jacketing are overlapped 1^½ to 2 inches (38 to 51mm) for each jacket and any longitudinal joints overlap a minimum of 1^½ inches (38mm). Apply adhesive on the under side of the overlap or if using cut and curl jacketing with SSL tape, apply adhesive along the edge to seal the jacket.



Press the jacketing into place and temporarily secure using a tourniquet, elastic cord or PVC tape. The tourniquet or cord may be removed after approximately 10 minutes. When finished, visually check the entire installation. If necessary, use the adhesive to touch up seams, paying particular attention to points where seams were temporarily held in place by a tourniquet, elastic cord, or PVC tape.

Additional Notes

- Complete curing of Proto's solvent weld adhesive takes approximately 8 to 10 hours.
- If expansion joints are required, as specified by the architect or engineer, create an expansion joint by overlapping the PVC jacket by 6 to 8 inches. Underneath this expansion joint apply two ¼" circumferential beads of a flexible (non-hardening) vapor barrier caulking placed within the PVC jacket overlap. This will allow for expansion and contraction of Proto's PVC sealed system. As a general rule, for above ambient conditions (hot pipe), install 1 expansion joint for every 20 feet of continuous or straight run and between fittings with a span greater than 10 feet.
- For below ambient or severe service conditions, if a pipe run is continuous (with no breaks for more than 12 feet) make sure two circumferential vapor dams, using vapor barrier mastic, are located adjacent and on both sides of every expansion joint.

Adhesive Coverage

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

The physical and chemical properties of the products listed herein represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Please contact customer service at 800.875.7768 to assure current information.

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Quality Assurance

Proto Corporation recommends the use of the NIA Thermal Certified Inspector Program, which utilizes inspectors who maintain current certification by NIA to inspect and verify the materials used are, and the total insulation system has been, installed correctly in accordance with the Specifications; throughout the project.