

K-FLEX ELASTOMERIC INSULATION ID'S

K-FLEX USA elastomeric insulation products have been engineered to fit over the outside diameter of copper fittings such as couplings, ells, tees, etc. The wall thickness of copper fittings increases as the copper tube size increases and necessitates that the inside diameter of the insulation be sized proportionately larger than the corresponding copper pipe.

This insulation sizing convention was adopted to make installation easier and to maximize the effectiveness of the pressure sensitive adhesive (PSA) seam found on all self-seal (SS) or double-seal (DS) pipe insulation. For optimum performance there should be no stress on the PSA seam.

The gap between the insulation and the copper pipe should be expected and is evidence of correctly sized insulation. The air gap will also be present when sleeving the product to achieve insulation thicknesses greater than 2". The ID of the second layer will be slightly larger than the OD of the first layer. All insulation systems, especially those designed to control condensation, should be sealed properly. This involves the complete engagement of the PSA on the longitudinal (for SS and DS products), circumferential / butt seams and miter joints. It is recommended to adhere the beginning and end of insulation runs to the pipe being insulated to prevent moist air from penetrating into the gap between the pipe and the insulation. Where multiple layers of insulation are used, the gap between the insulation layers should also be sealed at the beginning and end of the run. Sealing the insulation to the pipe at regular intervals (every 18 to 24 feet) and at transition points (ells and tees) will limit any moisture ingress if a seam is left open or if the insulation is damaged.

The air gap allows for ease of sliding the insulation on the pipe. It also allows for expansion and contraction of the pipe without putting stress on the insulation during system cycling (hot to cold). When properly sealed, the air gap actually increases the R-value of the insulation system.

Engineering Note

An additional prerequisite is the compression fitting of the insulation. Install an additional 2 inches (2") of insulation for every 6 feet (6') of measured pipe to allow for any contraction of the insulation. The practice of compression fitting also applies to the installation of sheet products.