

INSTALLATION TECHNIQUES FOR K-FLEX USA INSULATION PRODUCTS

K-FLEX USA insulation products are easy to install. No special tools are needed. However, proper installation is critical to the insulation's performance.

Three basic concepts should be followed with all products:

1. Properly size the insulation
2. Push, don't pull on un-slit insulation
3. Seal all seams, butt joints, termination points and open ends

Properly Size the Insulation

Proper sizing applies to both insulation I.D. for pipe covering and wall / sheet thickness. The insulation must be properly sized according to the application parameters, i.e. pipe size, fluid temperature, ambient temperature, relative humidity, etc. If the insulation thickness is not properly sized its performance will be less than expected. In the case of condensation control, this could mean condensation formation on the outer surface of the insulation. Pipe insulation I.D.'s are designed so that the insulation will slide easily over piping and most fittings. Properly sized pipe insulation is loose, not snug on the pipe.

Fitting Chart

Insulation Nominal I.D.	Copper Tube Size (Nom. I.D. Plumbing)	Copper Tube Size (O.D. HVAC/R)	IPS Nominal
1/4"	--	1/4"	--
3/8"	1/4"	3/8"	1/8"
1/2"	3/8"	1/2"	1/4"
5/8"	1/2"	5/8"	3/8"
3/4"	5/8"	3/4"	1/2"
7/8"	3/4"	7/8"	--
1-1/8"	1"	1-1/8"	3/4"
1-3/8"	1-1/4"	1-3/8"	1"
1-5/8"	1-1/2"	1-5/8"	1-1/4"
1-1/2" IPS	--	--	1-1/2"
2-1/8"	2"	2-1/8"	--
2" IPS	--	--	2"

Refer to the Price Lists at www.kflexusa.com for complete fitting charts for specific products.

Items may fit loosely. Air space between layers of insulation will not adversely affect performance as long as butt joints and termination points are properly sealed. For pipe sizes 5" IPS and below, K-FLEX recommends using tube insulation to prevent the tension and stress cracking that can occur when using sheet insulation on smaller pipe sizes. Always use tube insulation where it is available.

Push Don't Pull

When installing un-slit product, it is important not to stretch the insulation; it should be pushed rather than pulled. Stretching the product can cause two problems; a reduction in thickness and stress on the insulation. All butt joints should be fitted under compression to insure proper adhesion. In addition, to prevent stress on the joint resulting from expansion and contraction, insulation should only be applied to systems which are not in service at the time of installation.

Seal all Seams

Using simple installation techniques, it is easy to seal the entire system, which is critical for condensation control applications and to limit heat gain or loss. All butt joints, longitudinal seams and termination points should be sealed by use of **320, 373, 420, 620 or 720-LVOC** solvent-based contact adhesives, factory-applied pressure sensitive adhesives or other methods recommended by the manufacturer. The use of electrical tape or duct tape is not recommended as a primary sealing method. When using a contact adhesive, the adhesive should be applied to both surfaces (thin uniform coating preferred), allowed to tack dry, and pressed firmly together.

One of the benefits of DS type Self-Sealing products is the consistent application of the sealing system via the pressure sensitive adhesive for the longitudinal seam and the overlap tape applied at the factory. There is no need to wait for it to become tack dry. Care should be taken when removing the release liner from the PSA to avoid contamination with dirt.

The insulation must also be sealed around all tees, ells, fittings, valves, and at the end of the pipe runs to prevent ambient air with moisture from entering the system. If the system is not sealed properly the insulation's performance will not meet expectations. For condensation control applications, this could result in condensation formation between the insulation and the pipe.

Installation Guidelines are available from our website, www.kflexusa.com, for more detailed information.