

AEROFIX-U™

Insulating Pipe Hanger Support

Protected by United States Patent 6460576 B2

Description

AEROFIX-U™ is a patented, closed-cell, lightweight polymeric rigid, high-compressive strength foam insulating pipe support, that is lined with closed-cell EPDM foam rubber, and encased in a zero-perm, weather-proof, corrosion-proof, EPDM polymer membrane with a high-performance pressure sensitive closure system.

Use

AEROFIX-U™ is designed for providing a high-strength, load-bearing insulation that will not compress or crush under loads imposed by active piping systems and their contents resting on the insulation material between the pipe and the pipe hanger. **AEROFIX-U™** can be used in applications with service temperatures ranging from -328°F to +257°F, including ammonia refrigeration, halo-carbon refrigeration, chilled water, brine, domestic cold and hot water, hot water heating, solar water heating, and low-pressure steam. Hanger types that **AEROFIX-U™** can be used with include trapeze(strut), split-ring, clevis, roller, clamps, and strap hangers. The rigid polymeric foam body provides superior insulating capacity and load-bearing properties to **AEROFIX-U™** Insulating Pipe Hanger Supports. The closed-cell EPDM elastomeric insulation layer inside the rigid polymeric structure provides an anti-abrasion surface for contact with all types of piping materials, and absorbs the vibrations associated with operational pipe systems. Pressure sensitive internal sealing strips on the elastomeric foam layer seal the top and bottom section of the hanger support to each other. The zero-perm external jacket of Protape® EPDM polymer membrane provides for protection against weathering, moisture and water-vapor intrusion, and abuse protection. This specialized jacketing also provides for abrasion resistance against the pipe support system, avoiding problems associated with lighter-weight insulation jackets. The composition of the jacketing material is polymeric, avoiding the problems of corrosion associated with metallic-containing jackets or shields, particularly galvanic corrosion caused by the contact of dissimilar metals. The Protape® exterior jacket also provides a means for completing a water-proof, vapor-proof seal to insulation materials that are used in conjunction with **AEROFIX-U™** insulating pipe

supports. **AEROFIX-U™** may be installed in insulation systems that use Aerocel® EPDM flexible elastomeric foam, fiberglass, expanded polystyrene, extruded polystyrene, phenolic resin foam, polyethylene foam, cellular glass, NBR-PVC elastomeric foam, and mineral wool as the main system insulating material. The sturdiness of **AEROFIX-U™** will not allow deformation that compromises the integrity of the insulation envelope as pressure is applied by pipe securement devices, like other products with soft insulation surrounded by metallic shields. The complete insulation envelope provided by **AEROFIX-U™** will not allow intrusion of water-vapor or thermal conductance as will pipe supports made of hard, thin-webbed polymer moldings designed to contact the pipe. **AEROFIX-U™** provides insulated support in pipe hanging systems in accordance with details provided in the *National Commercial & Industrial Insulation Standards Manual, 7th Edition*.

Forms Available

AEROFIX-U™ is available as common Inside Diameters (IDs) of 3/8" through 12-3/4" to fit all piping materials with matching Outside Diameters (ODs), pipe ID's ranging from 1/8" ID to 12" ID. **AEROFIX-U™** is supplied in thicknesses of 3/8", 1/2", 3/4", 1", 1-1/2" and 2". All ID/Thickness combinations are not available. The length of **AEROFIX-U™** is 3 inches long for any ID's up to 2-3/8". **AEROFIX-U™** is supplied 4 inches in length, for ID's above 2-3/8". The additional length for ID's above 2-3/8" ID allows for effective working length for the insulation installer, relative to the width of the pipe hanger system used.



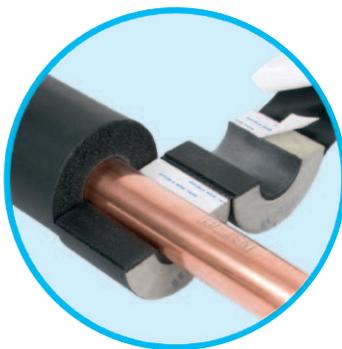
Application

AEROFIX-U™ is quickly installed when the piping system is being installed. The installer may insert the pipe into the support system(hanger), then install the AEROFIX-U™ on the pipe, and slide the AEROFIX-U™ slightly on the pipe so the AEROFIX-U™ is centered on the pipe hanger. Installation of AEROFIX-U™ involves opening the AEROFIX-U™, removing the release liners of the pressure sensitive closures on the EPDM foam insulation liner, placing the AEROFIX-U™ around the pipe, pressing the two halves of the AEROFIX-U™ together to complete the seal on the liner, removing the release liner from the Protape jacket, smoothly pressing the jacket onto itself, applying significant pressure to the adhesive area of the jacket to form a solid bond. Do not allow gaps to remain in any portion of the closure of the completed insulation envelope created by the AEROFIX-U™. The jacket of AEROFIX-U™ may be lifted and repositioned for a short time after initial contact. The pressure sensitive closure of the EPDM liner may be separated for a very short time after initial contact is made. When correctly installed, the seam of the Protape polymer jacket will face in a downward direction, and be turned away from a visible sight line. The seam between the two halves of the AEROFIX-U™ rigid polymer foam should be placed so it rests horizontally to the legs of the pipe support system. A small amount of deviation from the seam being horizontal to the pipe support will not impact the performance of the AEROFIX-U™. When installing AEROFIX-U™ in conjunction with Aerocel® EPDM Flexible Elastomeric Insulation, all systems that will operate below ambient for any period of time, must use Aeroseal Adhesive to bond the Aerocel® and the AEROFIX-U™ together. A wrap of Protape may be used to complete the seal and enhance the appearance of the finished project. In systems expected to operate below -20°F, both Aeroseal and Protape are required. When used on systems that will operate exclusively above ambient temperature, the installer may choose to use Protape as the only seal between the AEROFIX-U™ and Aerocel®. Adhesive is preferred. Consult Aeroflex USA, Inc. for use with other materials.

AEROFIX-U™ Insulating Pipe Hanger Supports provide the following performance properties:

AEROFIX-U™ Insulating Pipe Hanger Support Specifications

Physical Property	Result	Test Method
Compressive Strength, at yield	314 psi	ASTM D 1621
Thermal Conductivity	0.312 k-value	DIN 52613 / ISO 8203
Fire Response, Through 2" Thick	Self-Extinguishing	ASTM D 635
Service Temperature	-328°F to +257°F -57°C to +125°C	
Water Absorption, % by weight	<7%	ASTM D 1056
Water Vapor Permeability	.00 perm	ASTM E 96, Procedure A and B



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