

pikotek® *Insulating Kits*

For Complete Electrical Flange Isolation



www.pikotek.com

Pikotek Flange Insulation Kits are designed to work in conjunction with our insulating gaskets (Pikotek VCS and PGE) to effect the complete electrical insulation of a flanged assembly. The Insulation Kits consist of one full-length insulating sleeve, two insulating washers and two steel washers for each of the bolts in the flange assembly. The purpose of the insulating sleeves is to electrically separate the bolts from each side of the flange, while the insulating washers provide electrical insulation for each of the nuts attached to the bolts. This method of insulation provides the user with a high-reliability solution to complete the electrical insulation of a flanged joint.

Pikotek insulating kits/sets are designed to be used with our specialty line of high-strength, high-reliability insulating gaskets and are available for use in all types of flanges including raised-face, flat-face and RTJ. The gaskets and kits are sized according to the relevant flange specification including ANSI, API, DIN, BS, AS, MSSP, etc. Special insulating set configurations can be manufactured upon request for custom requirements that don't conform to standard specifications.

INSULATING KIT PRIMARY FEATURES AND BENEFITS INCLUDE:

- FLANGE INSULATION KITS DESIGNED FOR THE RIGORS OF OILFIELD APPLICATIONS
- FULL-LENGTH SLEEVES DESIGNED TO FIT INSIDE OF WASHERS AND SEAL OUT MOISTURE
- GRE WASHERS MADE OF HIGH COMPRESSIVE STRENGTH MATERIAL FOR ADDED RELIABILITY
- GRE SLEEVES AVAILABLE FOR GUARANTEED RELIABILITY EVEN IF MISHANDLED
- DOUBLE WASHER KITS PROVIDE ADDED ASSURANCE FOR ELECTRICAL INSULATION
- NO PHENOLIC OR POLYPROPYLENE MATERIALS USED



Insulating Kits

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Why Pikotek Insulating Kits?

Pikotek provides flange insulation kits which will withstand the severe rigors of the oil and gas environment. For this reason, we will only supply full-length sleeves and double washer sets (i.e. two insulating and two steel washers per bolt). We do not provide single washer insulating sets with half sleeves, as they do not provide a sufficient level of assurance for maintaining electrical insulation. Another example of our commitment to producing only first quality products may be found in our sleeve lengths. We size our sleeves exactly so that the sleeve completely passes through both washers, thereby completely covering the bolt all the way to the nut, sealing out moisture and preventing any sleeve damage from compression of the washers against the ends of the sleeve.

Likewise, we use only materials that will continue to insulate where inferior materials fail. For instance, **Pikotek** only provides insulating washers made from GRE material, which has a compressive strength of 60,000 psi. Other less expensive materials such as phenolic, Minlon or polypropylene are subject to crushing, cracking, breaking and thread pinch which can compromise product integrity.

Insulating Sleeve Options

Pikotek offers two standard insulating sleeve options: GRE (Glass-Reinforced Epoxy) and Mylar. If required, other materials can be made available by special request.

The GRE sleeves are the best solution for all around reliability. The material is extremely strong and can withstand significantly more abuse and harsh conditions than any other sleeve material available. GRE offers excellent resistance to crushing, cracking, breaking and thread pinch. For the ultimate in reliability and assurance of continued electrical insulation, GRE is the best selection for most every industrial application.

Mylar sleeves are suitable for less critical service. Mylar does not have the strength or durability of GRE but does have the primary advantage of being less expensive than GRE. Mylar is less forgiving than GRE and offers fair resistance to crushing, cracking, breaking and thread pinch. However, if economy is an issue and if installed with care, Mylar is an acceptable material for flange insulation. We do not offer polypropylene or phenolic as, again, these materials do not offer the reliability our customers have come to expect from us.



Components of an Insulating Kit

Washers

The insulating washers electrically insulate the nuts from the rest of the flange assembly. **Pikotek** only offers insulating washers that are made from GRE. These washers must withstand the full compressive force of the nuts when the flange is made up or electrical insulation will be lost. **Pikotek** GRE washers have a compressive strength of 60,000 psi. These washers will continue to insulate your flanges long after inferior materials such as phenolic, which has a compressive strength of only 12,000 psi (comparable to plywood) have cracked, broken and failed.

The steel washers are needed to prevent the twisting action of the nuts from scarring or gouging the insulating washers. **Pikotek's** standard insulating kit uses high-strength, zinc plated 1050 steel washers, which have excellent corrosion resistance and mechanical strength. For special situations, other steel washer types such as stainless steel or Teflon coated carbon steel are available.



Insulating Kit Advantages and Benefits

- Flange Insulation Kits designed for the rigors of oilfield applications
- Full-length sleeves designed to fit inside of washers and seal out moisture
- GRE washers made of high compressive strength material for added reliability
- GRE sleeves available for guaranteed reliability even if mishandled
- No phenolic or polypropylene materials used
- Double washer kits provide added assurance for electrical insulation
- Metal washers are either high-strength, zinc-plated carbon steel or stainless steel
- Manufactured to compliment the legendary **Pikotek** line of insulating gaskets
- Available for any flange type and/or specification (i.e. ANSI, API, DIN, etc.)

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