

# Insulating Blanket Mesh

For mechanical protection of insulation blankets in high-temperature and rough-service applications.

## Protection for insulation

For high-temperature equipment, no insulation is as flexible, heat-resistant, and cost-effective as insulating blankets. But the pliable thermal insulation used in these blankets—whether it's asbestos, spun fiberglass, ceramic fiber, or some other high-heat-resistance material—doesn't have the physical strength needed to take the continuous handling, vibrations, and other abuses heaped upon equipment in industrial applications.

That's why these insulations must be protected by a covering material with the ability to stand up to the roughest of industrial services. And like the thermal insulation it supports, the covering material has got to be flexible enough to wrap around equipment of all shapes and sizes. It's got to be able to take temperatures of up to 1200° F—and above. What's more, it's got to be something that's easy and inexpensive to produce.

At Koch Engineering, we make an insulating blanket covering that's more rugged, pliant, and heat-resistant than other covering materials. We make Koch insulating blanket mesh.

## Knitted mesh makes better blankets

When it comes to providing a tough, pliable covering for insulating blankets, nothing does the job like Koch blanket mesh. It's the same knitted mesh we use in Koch Fleximesh, a mist eliminator now operating successfully in hundreds of plants worldwide.

To make this mesh, we knit wire on a high-speed, circular knitting machine. The product is a tubular stocking of interlocking loops of wire. Unlike woven mesh (fly screens) or hex mesh (chicken wire), knitted mesh's interlinked loops give it two-way stretch—an added dimension of flexibility that allows it to fit around irregular curves and odd-shaped surfaces. And because it's knitted from either metal wire or plastic or fiber filaments, we can fabricate our mesh in a wide variety of materials. That means Koch blanket mesh can be tailor-made for specific applications. So whatever size, shape, and temperature equipment you need to insulate, Koch can make mesh to cover and support the insulating blanket.

## How to order the right blanket mesh

We've got standard insulating blanket meshes that'll satisfy most any insulating application (see table below). But nonstandard meshes are also readily available—you only have to specify wire diameter, blanket mesh width, material of construction, and size of the wire loop openings.

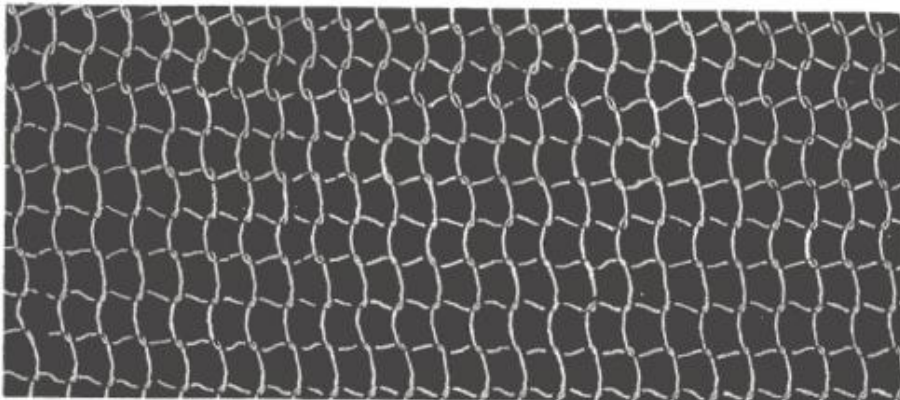
### Standard Insulating Blanket Meshes

Alloy	Temp. Range (°F)	Wire Diameter (in.)	Approx. Yield (One Ply 60 Density) (ft. <sup>2</sup> /lb.)
430 stainless steel	up to 1000	0.011	13
304 stainless steel	1000-1200	0.011 0.008	13 24
Inconel	1200-2300	0.011 0.008	12 22

Standard insulating blanket meshes available in standard widths of 9, 12, 18, 24, 30, and 42 inches.

## Wire diameter determines strength and flexibility

Common wire diameters for insulating blanket mesh are 0.008 and 0.011 inches. The heavier wire, 0.011-inch diameter, is used where great strength is required to withstand frequent removal (turbines and stress-relieving blankets) or temperature extremes and corrosion (furnaces). For less frequent blanket removal, the mesh is knitted from 0.008-inch diameter wire. For even greater flexibility in special applications, the blanket mesh can be made from 0.006-inch diameter wire.



## Standard blanket mesh widths cover most insulations

Blanket mesh is knitted in tubular stockings ranging in width from four to 42 inches. But just about every insulation job can be done with the standard widths of 9, 12, 18, 24, 30, and 42 inches.

## An abundance of different mesh materials

The three alloys used in standard blanket meshes, as listed in the table, are 430 stainless steel (for temperatures up to 1000° F), 304 stainless steel (1000 to 1200° F), and Inconel 600 (1200 to 2300° F).

For special applications (corrosive atmospheres, for example), blanket meshes can be knitted from a wide selection of metals and nonmetals including Monel, Teflon, and polypropylene.

## Choosing the right mesh density

Opening sizes—the diameters of the loops of interlocking wires in the mesh—are rated by “densities.” The larger this arbitrary density number, the tighter the knit and the smaller the loop. Small loops prevent tufts of thermal insulation from sticking out of the blanket cover, but mesh blankets with large opening sizes use less wire and are cheaper to produce.

We make blanket mesh in many different densities; five common opening sizes are shown in the photos below. But we suggest the use of 48 or 60-density mesh, where the loops are about 5/32 and 1/8 inch in diameter respectively. Sixty density provides a good balance between the low cost of large loops and the tuft-preventing close knit of a small-loop mesh, and it's the most commonly used material. In many applications the slightly more open 48 density is used because of its approximately 15 percent greater yield.

### Common Opening Sizes for Standard Meshes



48 DENSITY



60 DENSITY



76 DENSITY



100 DENSITY



130 DENSITY

## Blanket mesh in less than two weeks

If you need stainless steel mesh in 0.008 or 0.011-inch diameter wire, we can ship your order within one week and often the same day you place it. For other knitted meshes, we can ship what you need within two weeks. Koch Engineering manufactures mesh for insulating blankets at its plant in Fairfield, New Jersey and stocks many materials at its Houston, Texas plant. We can fill any mesh order, anywhere in the United States, in two weeks—or less.

## If you make insulating blankets...

If you make insulating blankets and need flexible, rugged, reliable coverings for thermal insulation, give us a call or drop us a line. We'll provide all the blanket mesh you need, when you need it, and at a competitive price.

For more information call or write:



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