

Protrusions, Support Brackets, and Cut-Outs – A Precise Fit

Designing removable insulation blankets for engine and exhaust components and process piping can sometimes be a challenge. While straight piping and simple geometries are straightforward, many components have either complex geometrical shapes, or a number of protrusions and supports which need to be accounted for when designing custom fitting removable insulation blankets.



“Removable insulation blankets are custom-designed for a precise fit; as such, we need to take into account the size, shape, and location of such items as support brackets, thermocouples, glycol lines, and other similar items”, notes Jon Miles, who heads up Firwin’s design team.



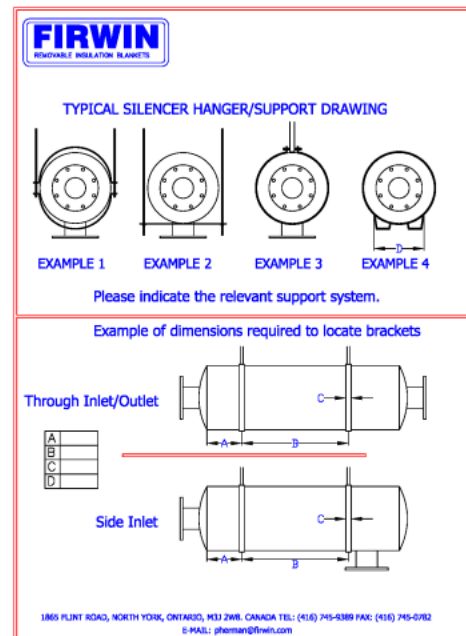
Brett Herman, Firwin V.P. of Sales and Customer Services adds: “When we design an insulation blanket, we automatically build in cut-outs and openings to allow for brackets, clamps, and the like. That is company policy, and unless the geometry is extremely complex, there is no extra charge for this service”.

There are basically two ways for Firwin's design engineers to obtain the information needed to factor in these items. Customers can either fill out a Firwin drawing such as the Muffler Support Bracket Drawing, where they indicate the location and width of any support brackets. Alternatively, they can supply Firwin with photos and dimensions showing the components for which cut-outs and openings will be necessary.

"It is always nice to have photos, even when a customer has filled in a drawing, as our designers will occasionally notice things from a photo that might have been missed on a drawing", adds Brett.

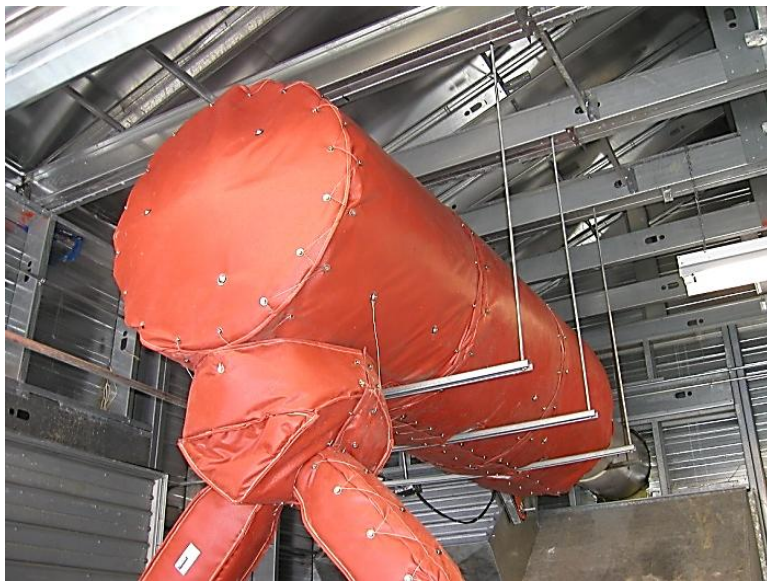
Firwin's design team ensures that any cut-outs or openings are designed in such a way as to allow sufficient room for the protruding item, while minimizing any heat loss due to the lack of insulation.

What if the customer does not yet know where the blankets cut-outs will be, or does not have access to that information? "On occasion a customer is not able to provide us with the location of support brackets and/or protrusions. In these situations, we will produce the blankets without any cut-outs, and the customer will need to cut the blanket once the blankets arrive. Ideally, any cuts in the blanket should be closed up using staples to protect the exposed insulation and minimize any deterioration at those cut points. Alternatively, in the case of support brackets, a customer can detach the component, e.g. the silencer, install the blankets, and re-attach the component, placing the support brackets over top of the insulation", said Brett. "We prefer of course, to build in the cut-outs



ourselves, as this ensures that they are done professionally and sized correctly. Plus, having the necessary cut-outs already built into the blankets can help with blanket installation, as the openings and cut-outs can help in orienting the blankets properly.”

“It is important to note that placing insulation blankets between a support bracket and silencer means that the blanket cannot be removed and the blanket will get damaged at the point of compression by the support, , so that if the blanket is ever removed it would need to be replaced prior to re-installing”, adds Brett.



“In summary, Firwin is a complete service company. We incorporate brackets, clamps, and other protrusions into our blanket design, designing to a precise fit. In addition, we are happy to walk the end-user through the installation process if he finds it to be a challenge”, said Brett.

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