

1. Spacers

THERM has the capability to model spacers in great detail, so that modeling of spacer effective conductivity is no longer needed. Spacer models can be easily reshaped in THERM, and the program's cut and paste feature allows spacers to be copied into each cross section as needed. A library of spacer models can be produced for each spacer type. See the *THERM User's Manual*, Section 3.5, "Adding a Custom Spacer". A sample spacer, *spacer.thm*, is included on the THERM installation CD.

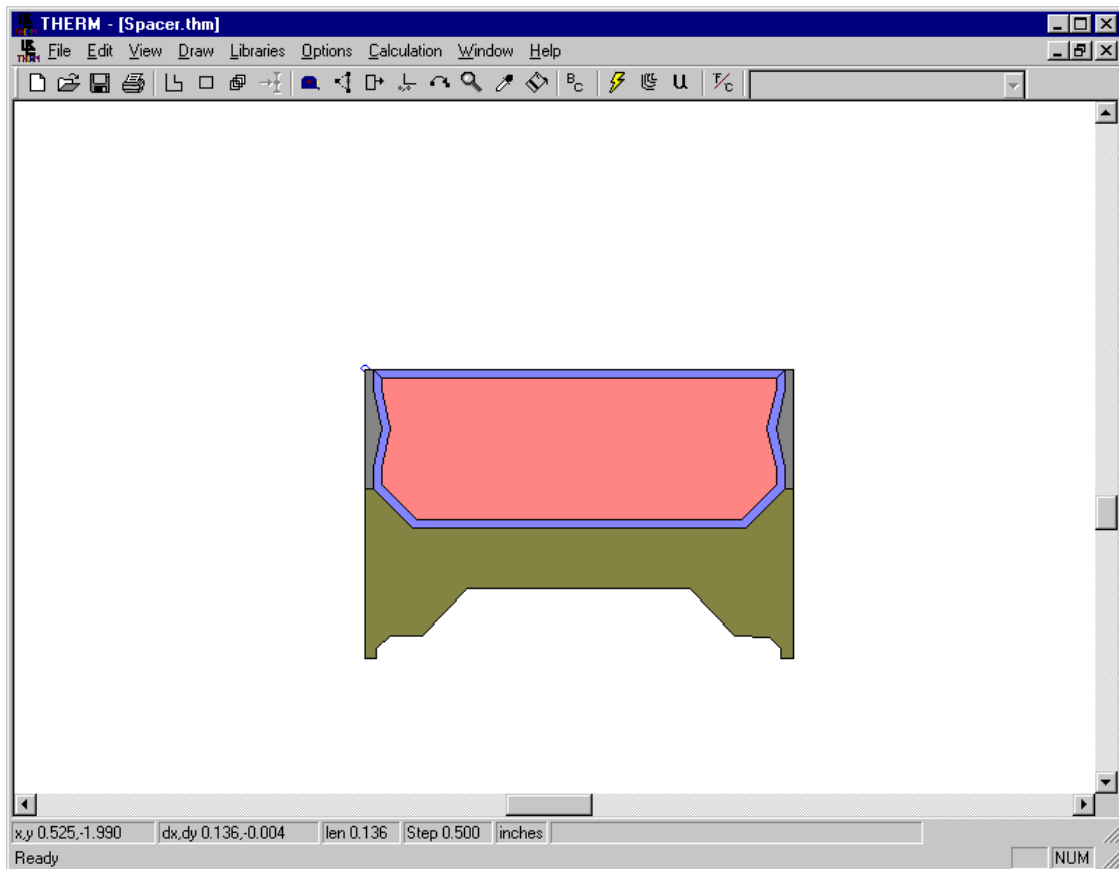


Figure 1-1. *Spacer.thm* sample file.

1.1. Linking Glazing Cavity properties (imported from WINDOW) for Open Spacers

The properties of a glazing cavity can be linked to another polygon in order to properly model spacers that are open to the glazing system cavity. Section 5.11.5, “Linking Materials Properties of Polygons” in the *THERM User Manual* explains this methodology in detail.

Follow the rules in Section 6.4.4 to determine whether the cavities in the open spacer cavity should be linked to the glazing system cavity.

To Link the properties of two materials, follow these steps:

- Select the polygon that is to be linked to another polygon
- Select the Libraries/Create Link menu choice.
- The cursor will become an Eye Dropper. Click the Eye Dropper cursor in the polygon to be linked to. The material properties of the first polygon are not linked to the material properties of the second polygon.

When using the multiple glazing calculation option, THERM will automatically use the glazing system cavity properties for each glazing option for the linked polygon.

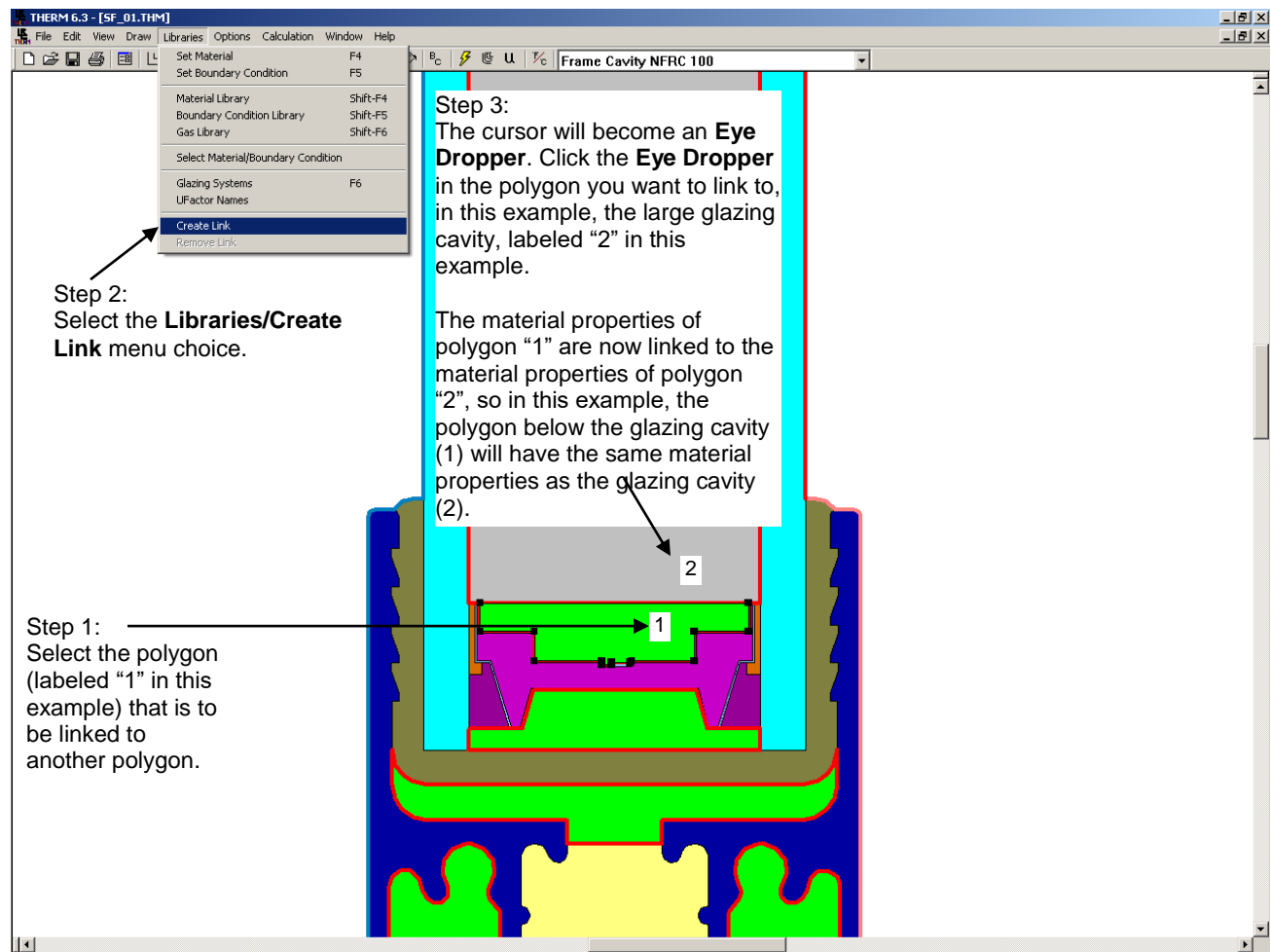
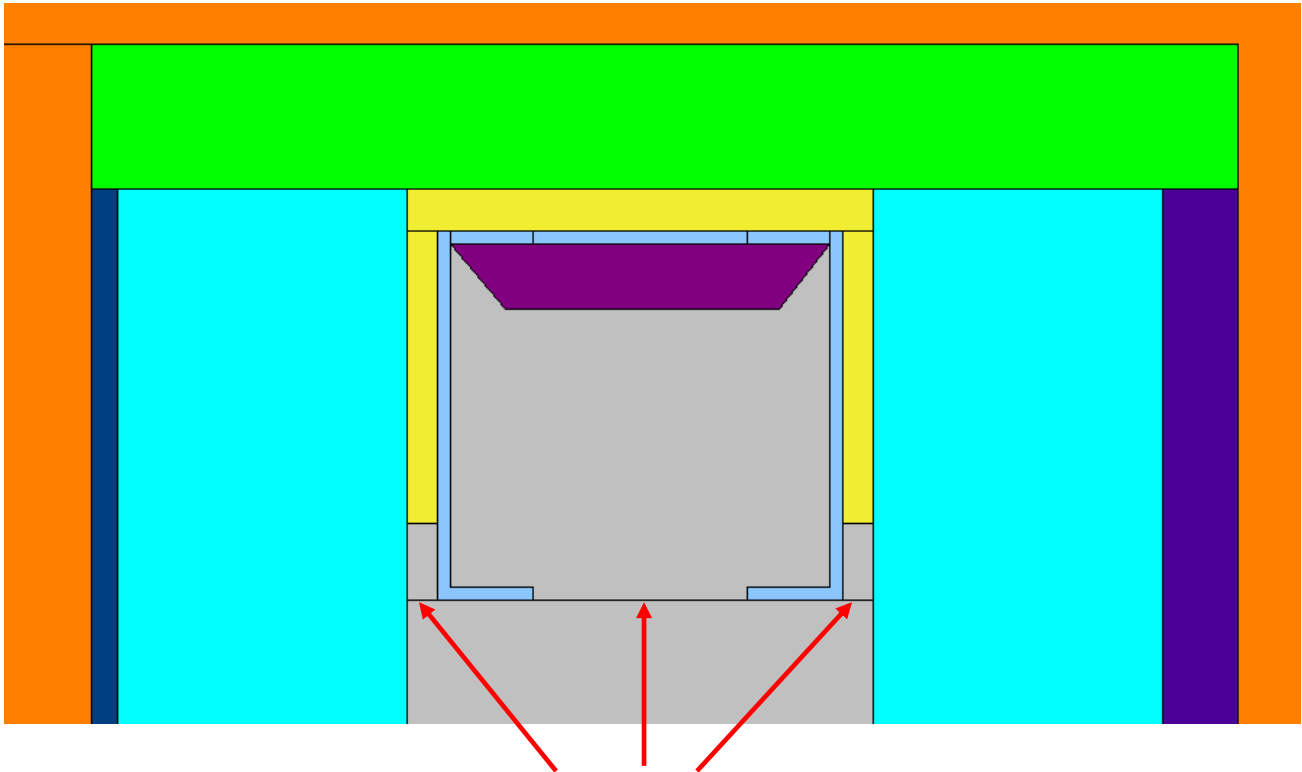


Figure 1-2. Link the open spacer cavity to the glazing system cavity using the Library/Create Link feature .

Another example of an “open” spacer is shown below. For sealed glazing systems (such as an IG) the 5 mm rule for linking frame cavities and glazing cavities does not apply. So in the example below, the frame cavity inside the spacer as well as the two small cavities on either side of it, all of which are connected to the glazing cavity, are linked to the glazing cavity even though the connection (throat) to the glazing cavity is less than 5 mm.



For sealed IG units, the 5 mm rule is not applied to frame cavities that touch the glazing cavity,

So in this example, all the frame cavities that touch the glazing cavity are linked to it, even if their throats are less than 5 mm.

Figure 1-3. Because the “throat” between the spacer opening and the glazing system cavity is < 5 mm, the two cavities are not linked.