Proper alignment of the anvils is assumed by use of a close fitting steel guide. The sample is contained between two halves of a split gasket, each half consisting of mica, AgCl and teflon discs contained in a lavite washer. The AgCl is used to transmit nearly hydrostatic pressure to the sample while the mica and teflon discs protect the anvil faces and the sample, respectively, from the corrosive behavior of AgCl at high temperature. Electrical leads are carried between the two lavite rings into the sample space. The thickness of each ring is 0.0125 in. while that of the stack of inner discs is 0.019 in. The extra thickness of the lavite rings is required to avoid overloading the gasket as the sample and electrical leads slightly increase the thickness of the cavity components. When the anvils are forced together, the rings crumble and the high friction between lavite and steel retains the sample by preventing extrusion of the sample cavity materials.

The nature of the pressure distribution in the Bridgman anvil pressure generator has been treated theoretically by Jackson and Waxman[6] and investigated empirically by Montgomery et al[7] and Meyers et al.[8] The dimensions of the components comprising the gasket and the orientation and shape of the sample contained in the gasket considerably influence the pressure distribution and, without calibration, it cannot be assumed that the pressure on the sample is the load applied to the anvils divided by their face area. Montgomery et al report that at room temperature a radial pressure