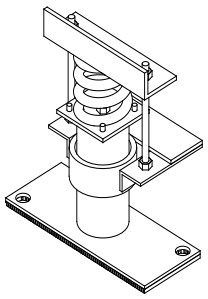
Free Standing Spring KRG Isolator Installation Instructions

KRG Guides available in a number of configurations. The KRG free standing spring type includes both a guide and a non-restrained spring isolator element. In this configuration, they act not only as a guide to "align" and "stabilize" a riser, but also as a support device that will allow a portion of the weight of the riser to be supported at KRG location. They look as shown at right.

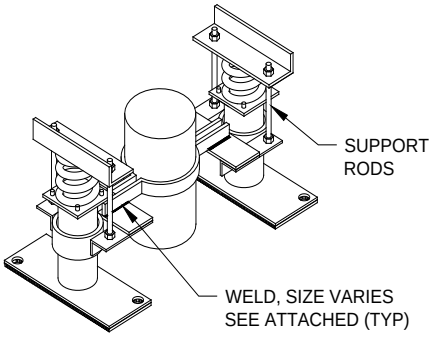


These components offer lateral cushioning but allow free movement along their axis to accommodate expansion or contraction in the piping system. KRG Isolators in riser applications should be used in pairs with one on either side of the guided pipe to balance the load.

There are 2 listed ratings for this type of KRG isolator. The lateral (guide) rating is assigned a letter code and the support rating is assigned a number indicating nominal deflection and load. Listed KRG ratings are suitable for either attachment to steel structures or for concrete anchorage using KNC provided anchors embedded in 3000 psi min concrete with minimum embedment and edge distance spacing equal to those called out on the KNC anchor submittal or in section P10 of the seismic design manual (available on the KNC website).

KRG's can also be welded in place, however welds should be made in a series of small passes using proper procedures to protect the internal rubber elements in the Guide itself.

KRG Isolators are intended to be connected to piping using heavy duty riser clamps or welded brackets. These must be positively attached to the pipe with welds or clamped in a fashion that will ensure that the clamp will not slip on the pipe. See also the sketch below.



Prior to installation, the riser pipe should be temporarily blocked and locked at the proper elevation. The Isolators can then be set in place and the riser clamps adjusted to mate with the sliding element when elevated to its optimum elevation. The sliding element of the guide is normally located at approximately the mid-travel position. However, if the pipe is expected to grow more than it shrinks (or vice versa), it can be offset to allow the full range of growth/shrinkage to be accommodated over the active travel range of the guide. The riser clamps can now be securely tightened against the pipe and welded to the sliding element. When welding the riser clamp or bracket, the weld should be done in a series of small passes allowing adequate time in between for cooling to protect the internal rubber elements in the sliding element itself.

At this point, the (2) top isolator support rod nuts can be tightened down evenly preloading the spring to the desired deflection.

Once located and properly anchored to the structure the KRG sliding element mounting plate should be welded to the riser clamp or bracket that is fitted to the pipe in a series of small passes allowing adequate time in between for cooling to protect the internal rubber elements in the sliding element itself.

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