SEISMIC V EXPANSION JOINT
THERMAL APPLICATION

OPERATION, INSTALLATION AND MAINTENANCE INSTRUCTIONS

OPERATION: The Seismic V is designed to absorb the thermal expansion or contraction of pipe. Unless otherwise noted, the Seismic Vs are shipped in their neutral movement positions, they can be cold sprung before installation for total movement in one direction. As the pipe changes temperature, the legs of the V will begin to flex. Both legs must be free to move to operate properly. For steam service, Vs should be installed with flexible legs horizontal to prevent condensate buildup.

INSTALLATION: The Seismic V can be installed in any orientation with pipe vertical, horizontal or any angle in-between. The only critical element is that the 90˚ return bend must be free to move as the V expands and contracts.

Seismic Vs can be installed in a neutral, pre-compressed or pre-extended condition as required for the application

Steam applications: Ideally the V should be installed horizontally to minimize the entrapment of condensate

Shipping Bar must be removed after installation

Centered in a pipe run: When a V is installed in the middle of a pipe run, the V will flex symmetrically and the 90˚ will move toward and away from the pipe. The 90˚ support should be designed with enough slack to allow the 90 to move 10% of the V's designed movement. For example, a V designed for +/-4" of axial movement will see the 90˚ return bend move 4 tenths (0.4") of an inch.

One end anchored: When installed at or near an anchor the 90˚ will have a lateral component to its movement, in addition to the movement described above ("Centered in a pipe run") the lateral movement will be 50% of the thermal expansion or contraction and will be in the same direction as the pipe movement. Again a sufficiently slack hanger rod or slide support is all that is required.

Guiding Requirements: Thermal movement – Being the most flexible component of your piping system, the Seismic V is the path of least of least resistance. As long as the V's design parameters are not exceeded, the V does not need guides.

However, the Mechanical Contractors Association of America "Guidelines for Quality Piping Installations: section 3; Pipe Hangers and Supports, suggests that to ensure movement is directed as expected and if your piping is supported on pipe hangers that will swing more than 4 degrees from vertical when the pipe moves, it is recommended that a pipe guide be installed within 15 pipe diameters on each side of the V. Seismic Vs anchored one side only need one guide on the "traveling" side.

Maintenance: Seismic Vs require no field adjustments and they only have no serviceable parts – no operation or maintenance required.

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