

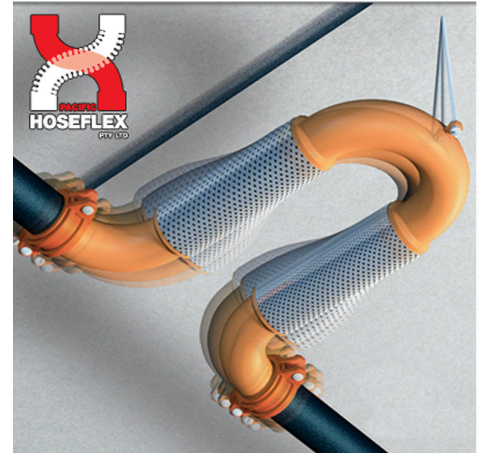
### V & U SHAPE EXPANSION JOINTS

#### SEISMIC MOVEMENT

**INSTALLATION:** Expansion joints can be installed in any orientation with the pipe vertical, horizontal or any angle in-between. The only critical element is that the return bend must be free to move as the joints moves.

The bend support should be designed with enough slack to allow the bend to move 100% of the joint's designed movement. For example a loop designed for +/- 4 inches of seismic movement will see the return bend move +/- 4 inches.

**Guiding Requirements:** Seismic movement – When spanning a building's seismic expansion joint, guides are not required.



#### THERMAL MOVEMENT

**INSTALLATION:** Expansion joints can be installed in any orientation with the pipe vertical, horizontal or any angle in-between. The only critical element is that the return bend must be free to move as the joints moves.

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

(a) **Centred in a pipe run:** When the loop is installed in the middle of a pipe run, the loop will flex symmetrically and the bend will move towards and away from the pipe. The bend support should be designed with enough slack to allow for the designed movement.

(b) **One end anchored:** When installed at or near an anchor, the bend will have a lateral component to its movement. The lateral movement will be 50% of the thermal expansion or contraction and will be in the same direction as the pipe movement. This is in addition to the movements specified. See(a).

**Guiding Requirements:** Thermal movement – Being the most flexible component of your piping system. As long as the U or V joint design parameters are not exceeded, the joint will not require guides.

