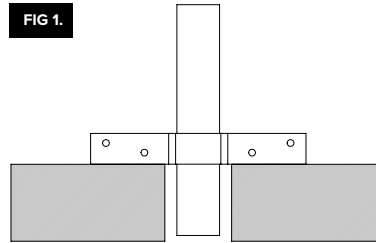


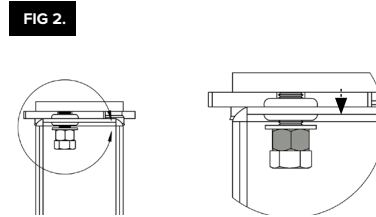
TYPE A
Floating Isolated Riser

1. Provide temporary supports for the pipe riser (Fig. 1) that do not interfere with the installation of floating riser components and that can support the riser filled with water. Do not transfer pipe riser's weight to spring isolators until step 11.

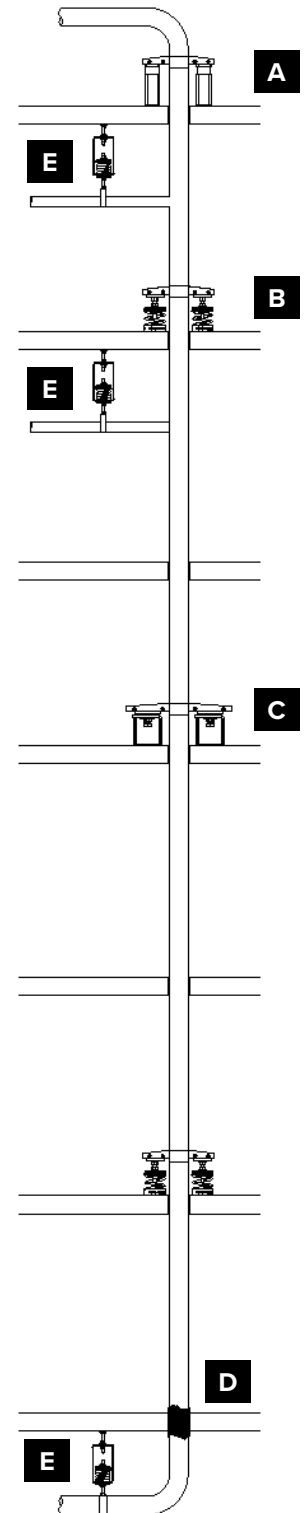


2. Locate and install riser isolators and guides as per submittal along with associated pipe clamps and/or brackets. Secure all isolators and guides to structure as required.
3. Use pipe riser clamps or brackets with adequate load ratings and dimensions to allow proper attachment to floating riser components. Secure the clamps/brackets to components with welding or bolts as shown in the accompanying submittal.
4. If not otherwise required by the accompanying submittal, Type FST isolators **B** may be installed without securing to supporting structure where placed on concrete.

5. Ensure shipping spacers remain in place for Type CSR and SCSR isolators **C** until Step 11. Secure these isolators to both structure and the riser, then lower the nuts on the hold-down bolts until they contact the bolt heads (Fig. 2).



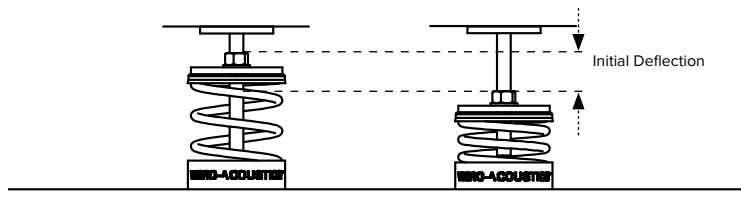
6. If pipe riser sliding guides (PRG) **A** are included, ensure they are installed at the appropriate initial height indicated in the submittal by using the provided spacers. Remove the PRG spacers once the clamp or bracket is secured to the top plate. Where PRG guides are not included, ensure rigid insulation is used at core-drilled hole penetrations as required in the accompanying submittal **D**.
7. Secure the pipe riser clamps and/or reinforce the pipe at pipe riser support points as appropriate with shear lugs or split couplings (as indicated in the submittal or as determined by others).



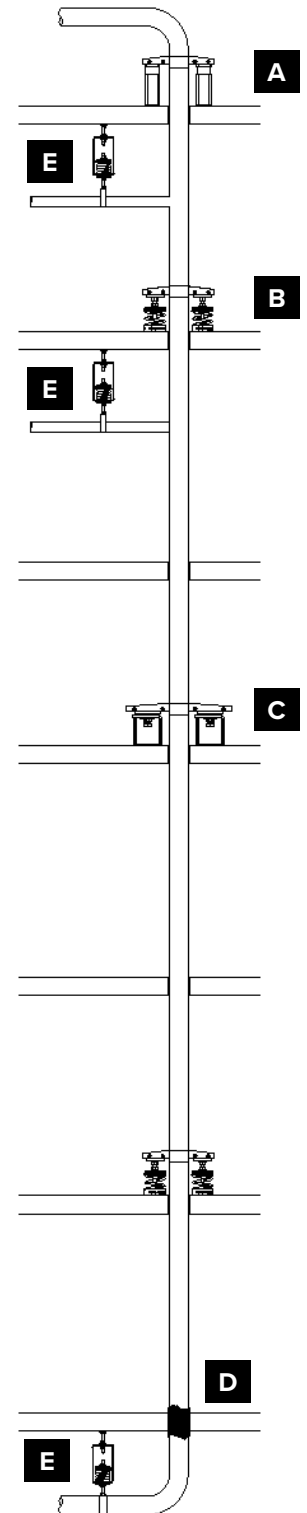
TYPE A
Floating Isolated Riser

8. Locate and install spring hangers as indicated in the accompanying submittal. For spring hangers located on branch lines **E** see product installation guidelines. Preferred method of installation is "Option A" which requires rigidly supporting the pipe until after filling it with water." Make adjustments to support pipe weight and allow expected thermal movement without binding or causing metal-to-metal contact.
9. Fill the riser and branch lines as appropriate. Do not bring the system to operating temperature at this time.
10. Adjust each isolator by the associated "initial deflection" amount shown in the submittal schedule, less 1/8" to 1/4". Measure the deflection by marking the adjustment nut's locations on the support rod before and after turning it to compress the spring (Fig. 3).

FIG 3.

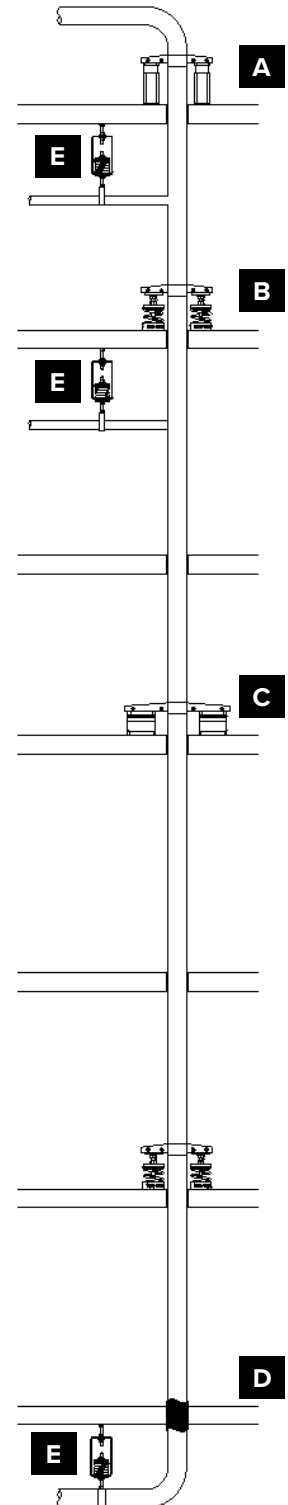
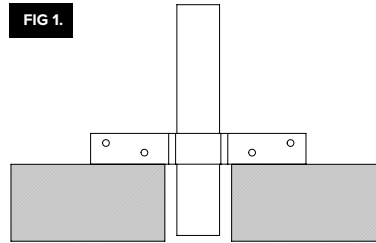


11. After all isolators have been adjusted as specified in step 10, proceed to adjust each one in vertical succession an additional two turns at a time to further compress the springs. Repeat the process until the riser weight is transferred to the isolators and then remove all temporary supports, including spacers on Type CSR/SCSR isolators.
12. Insulate the riser and branch lines as required. Fill spaces around floor penetrations with rigid insulation. Ensure any wall penetrations for horizontal runs or branch lines have adequate clearance to allow for thermal movement.
13. Check for and clear any obstructions around or attached to the riser that could affect its vertical movement.
14. Bring the riser to its operating temperature and inspect the guides and isolators for proper alignment and operation.



TYPE B
Anchored Isolated Riser

1. Provide temporary supports for the pipe riser (Fig. 1) that do not interfere with the installation of riser components and that can support the riser filled with water. Do not transfer pipe riser's weight to spring isolators until step 10.
2. Locate and install riser isolators, guides **A** and anchors **C** as per submittal along with associated pipe clamps and/or brackets. Secure all isolators, guides and anchors to structure as required.
3. If not otherwise required by the accompanying submittal, Type FST isolators **B** may be installed without securing to supporting structure where placed on concrete.
4. Use pipe riser clamps or brackets with adequate load ratings and dimensions to allow proper attachment to riser components. Secure the clamps/brackets to components with welding or bolts as shown in the accompanying submittal.
5. If pipe riser sliding guides (e.g., Type PRG) are included, ensure they are installed at the appropriate initial height indicated in the submittal by using the provided spacers. Remove the PRG spacers once the clamp or bracket is secured to the top plate. Where PRG guides are not included, ensure rigid insulation is used at core-drilled hole penetrations as required in the accompanying submittal **D**.
6. Secure the pipe riser clamps and/or reinforce the pipe at pipe riser support points as appropriate with shear lugs or split couplings (as indicated in the submittal or as determined by others).
7. Locate and install spring hangers as indicated in the accompanying submittal. For spring hangers located on branch lines **E** see product installation guidelines. Preferred method of installation is "Option A" which requires rigidly supporting the pipe until after filling it with water." Make adjustment to support pipe weight and allow expected thermal movement without binding or causing metal-to-metal contact.

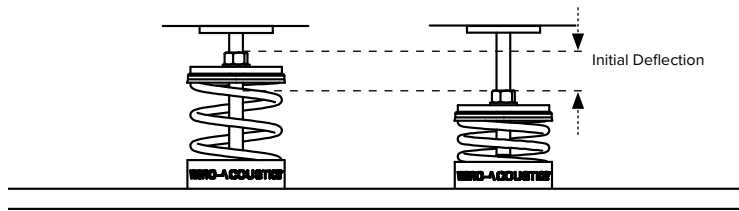


TYPE B

Anchored Isolated Riser

8. Fill the riser and branch lines as appropriate. Do not bring the system to operating temperature at this time.
9. Adjust each isolator by the associated “initial deflection” amount shown in the submittal schedule. Measure the deflection by marking the adjustment nut’s locations on the support rod before and after turning it to compress the spring (Fig. 2).

FIG 2.



10. After all isolators have been adjusted in their “initial deflection”, then remove all temporary supports.
11. Insulate the riser and branch lines as required. Fill spaces around floor penetrations with rigid insulation. Ensure any wall penetrations for horizontal runs or branch lines have adequate clearance to allow for thermal movement.
12. Check for and clear any obstructions around or attached to the riser that could affect its vertical movement.
13. Bring the riser to its operating temperature and inspect the guides and isolators for proper alignment and operation.

