AMERICAN Earthquake Joint System

Assembly Instructions – 16-inch, 20-inch, 24-inch and 30-inch

General Note: The assembly of the AMERICAN Earthquake Joint System relies on the efficient and proven assembly features of the AMERICAN Flex-Ring joint. This system can be field assembled with various pushing or pulling devices and rigging to provide the nominal Flex-Ring joint assembly force of 200-500 lbs. times the outside diameter in inches.

The enhanced strain and deflection capabilities of the Earthquake system should be maximized by careful field positioning of a central ductile iron earthquake casting bell joint. The design of this joint features an extended socket depth, allowing the Flex-Ring weld ring on the Earthquake spigot end an expansive range of motion.

1. Ensure the required material to assemble and extend the joint (including the rubber backed Flex-Ring, Fastite gasket, AMERICAN Fastite Lubricant, two lever hoists, four choker cables, two hydraulic rams and one split restraining gland) is available. Remove the full-length strap holding the Earthquake Joint in the fully contracted position (Figure 1).

2. Thoroughly clean the pipe socket locking groove, the Fastite gasket recess area, and the casting plain end in accordance with standard 14-inch through 54-inch Flex-Ring and Fastite joint assembly instructions.

3. In accordance with 14-inch through 54-inch Flex-Ring joint assembly instructions, place the rubber-backed Flex-Ring in the socket restraining groove in gasket-like fashion. Ensure the yellow restraining segments are oriented toward the entering spigot and evenly spaced.

Figure 1

Figure 2

4. In accordance with standard Fastite joint assembly instructions, insert the Fastite gasket ensuring gasket is flush without protrusions. Lubricate the inside surface of the gasket (Figure 2) and the red plain end of the casting up to the ring abutment, paying close attention to the beveled nose end of the casting. There is no need to lubricate the Flex-Ring rubber-backing ring or segments. Ensure the lubricated portion of the casting does not come in contact with the ground to ensure dirt and debris does not contaminate the surface during assembly.

5. With the pipe in essentially straight alignment, assemble the casting plain end into the Flex-Ring pipe socket until the spigot stripe disappears into the bell. The orientation of the ring abutment and spigot stripe relative to the bell face is an indication of pipe alignment. Correct assembly is generally indicated by an audible snap of the Flex-Ring segments into the correct position; however, if any segment should not come down firmly on the casting, deflect the entering assembly slightly in that direction, allowing the segment to seat itself correctly. Verify the correct positioning of the yellow Flex-Ring segments by visual inspection or feeler gauge if conditions are limiting. The ring abutment is in the proper assembled position when it is fully beyond the yellow Flex-Ring segments and all segments are fully against the casting. For the most control and least disturbance of the intended position of the opposite earthquake joint and any previously installed Earthquake castings, assembly of this joint using two lever hoists and four reasonably short choker slings is recommended. Assembly using two choker slings anchored around/behind the previously installed pipe bell and two anchored around the long bell cylinder of the Earthquake casting with the two lever hoists between on each side is most applicable for applying the assembly force needed (Figure 3). Ensure even distribution of assembly force by tightening both lever hoists at the same rate.

Figure 3

6. When the fully contracted position is not desired, it is necessary to use a split restraining gland and two hydraulic rams to extend the Earthquake casting to the desired position. Install the split restraining gland on the Earthquake spigot with the leading edge facing away from the bell face at a distance sufficient to install hydraulic rams (Figure 4). Once installed in straight alignment per manufacturer's instructions, place the hydraulic rams between the split restraining gland and Earthquake casting bell face. Ensure even and consistent force is applied by the hydraulic rams until the desired placement is reached as indicated by paint stripes (Figure 5).

Figure 4

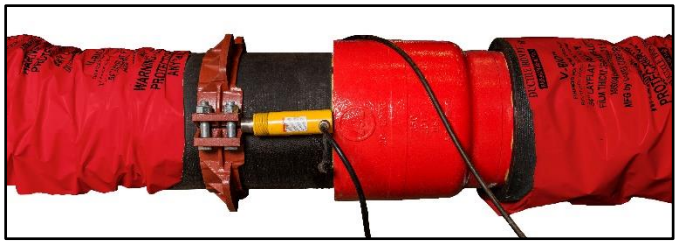

Figure 5

7. Once the Earthquake pipe location has been reached, remove the hydraulic rams and split restraining gland. After removal of the restraining gland ensure the pipe coating has not been damaged during extension. If coating damage has occurred during extension, repair coating per the AMERICAN coating repair procedure. The completed joint pictured in (Figure 6) is in the intermediate position* as previously described, with the first assembly stripe of the opposite Earthquake joint fully inserted and flush with the bell face; and the second stripe is fully exposed.

Figure 6

***Note: The expansion/contraction position can be varied as desired by the positioning of the two assembly stripes of the bell joint of the Earthquake casting. When a position other than mid-point is desired, the stripe position can be adjusted by moving/telescoping the spigot of the Earthquake joint in or out the amount desired.**