AMERICAN Earthquake Joint System

Assembly Instructions – 6-inch, 8-inch and 12-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 Fastite gasket assembly force of 100-300 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 extended 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 Flex-Ring locking ring, Fastite gasket, AMERICAN Fastite lubricant, one lever hoist, two choker cables, one hydraulic ram and split restraining gland is available. Prior to joint insertion, remove the full-length strap holding the Earthquake Joint in the contracted position (Figure 1) as well as the packing material holding the split Flex-Ring onto the casting spigot (Figure 2), unless Flex-Rings have been shipped separately.

Figure 1

Figure 2

2. Thoroughly clean the pipe socket locking groove, the Fastite gasket recess and casting plain end in accordance with standard 4-inch through 12-inch Flex-Ring and Fastite joint assembly instructions.

3. 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 and the red plain end of the casting up to the ring abutment, paying close attention to the beveled nose end of the casting. 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.

4. With the pipe in essentially straight alignment, assemble the casting spigot end into the Flex-Ring pipe socket until the spigot stripe disappears into the bell. The orientation of the spigot stripe relative to the bell face is an indication of pipe alignment. For the most control and least disturbance of the intended position of the opposite earthquake joint and any previously installed joint, assembly of the joint with a lever hoist and two choker slings is recommended. Assemble by installing one choker anchored around/behind the previously installed pipe bell and one anchored around the long bell cylinder of the Earthquake casting with the lever hoist between. Use the lever hoist to apply assembly force needed to position the joint fully homed (Figure 3).

Figure 3

5. Tap the split flex-ring into the bell's Flex-Ring socket beginning with one end of the split flex-ring and progressing around the joint (Figure 4). This operation is made easier by holding one end of the split flex-ring inside the bell as the remainder of the ring is tapped into the socket. Correct seating is generally indicated by a snapping noise as the split flex-ring springs into position. Visually confirm that ring is fully in position (the split flex-ring is painted yellow to aid in this inspection). (Note: When a visual inspection to determine the split flex-ring position is not practical, underwater installations, a feeler gauge may be used to verify the correct positioning of the Flex-Ring in the socket locking groove. It may be necessary to move the entering pipe slightly to improve alignment if the ring does not readily spring into the socket locking groove.)

Figure 4

6. When the fully contracted position is not desired, extension can be performed with the use of a split restraining gland and one hydraulic ram 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. Distance should be sufficient to install hydraulic ram (Figure 5). Once installed in straight alignment per manufacturer's instructions, place the hydraulic ram between the split restrained gland and Earthquake casting bell face (Figure 6). Ensure consistent force is applied by the hydraulic ram until the desired placement is reached as indicated by paint stripes.

Figure 5

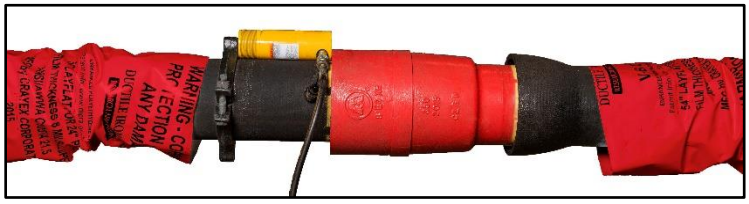

Figure 6

7. Once the Earthquake stripe location has been reached, remove the hydraulic ram and split restraining gland. After removal of 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 7) 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 7

*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.