Victaulic® Dynamic Movement Joints

Style 257, 257C, and W257

⚠ WARNING

- **Read and understand all instructions before attempting to install any Victaulic products.**
- **Always verify that the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.**
- **Confirm that any equipment, branch lines, or sections of piping that may have been isolated for/during testing or due to valve closures/positioning are identified, depressurized, and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.**
- **Wear safety glasses, hardhat, and foot protection.**

Failure to follow these instructions could result in death or serious personal injury and property damage.

Victaulic Dynamic Movement Joints consist of up to four pairs of Victaulic flexible couplings, a grooved center pipe spool, and up to six grooved pipe nipples. When installed in accordance with these instructions, Victaulic Dynamic Movement Joints can accommodate up to 4 inches/102 mm of dynamic movement, including differential settlement, seismic, and thermal movement. The 'Installed Length' for Victaulic Dynamic Movement Joints is factory determined (refer to Section 3.0).

The system designer or their representative is responsible for ensuring that the installation site is prepared in accordance with national and local codes and standards for the jobsite with regard to dielectric/cathodic protection of the piping system, compaction, drainage, etc.

1.0 RECEIVING AND HANDLING THE VICTAULIC DYNAMIC MOVEMENT JOINT

- Upon receipt, and immediately prior to installation, visually inspect the Victaulic Dynamic Movement Joint. All components shall be free of damage, including coatings and linings.
- End couplings do not ship pre-assembled on the unit and shall be installed in accordance with the "Installation Requirements" section on the following page.
- Damage to the pipe, couplings, and coatings shall be avoided during handling of the Victaulic Dynamic Movement Joint.
- To unload the Victaulic Dynamic Movement Joint, use a fabric/cloth-type strap (i.e. nylon) around the outside diameter of the Victaulic Dynamic Movement Joint at the locations noted below. **DO NOT** use metallic strapping.
- Verify that the strap(s) and crane are rated for the weight of the Victaulic Dynamic Movement Joint. Do not use coupling lifting lugs or coupling hardware for lifting the Victaulic Dynamic Movement Joint. Use caution to prevent damage to the pipe and coatings during any handling.

1-Pair Configuration

2-Pair Configuration

3-Pair Configuration

4-Pair Configuration

2.0 STORAGE

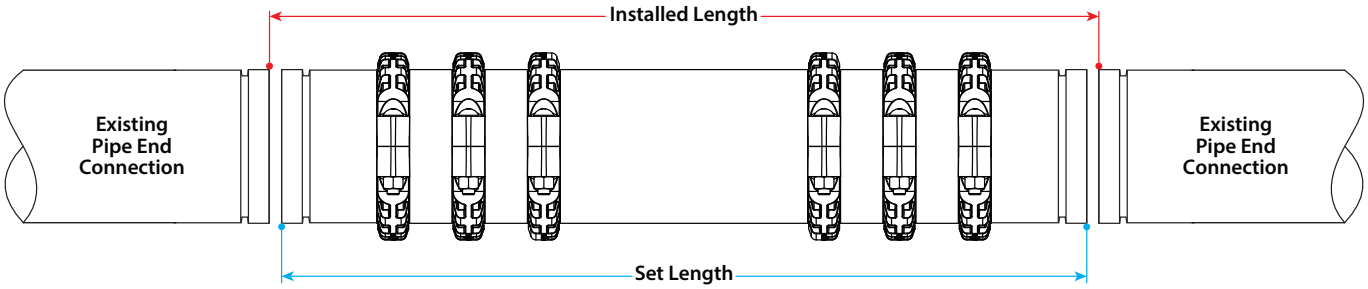
Until the time of installation, Victaulic products with exposed elastomeric components shall be stored in typical warehouse conditions, where components are protected from outside environmental factors such as: sun exposure, ozone exposure, extreme temperatures, and extreme relative humidity (or as specified by national and local codes and standards for the jobsite).

3.0 SITE PREPARATION/INSTALLED LENGTH

⚠ CAUTION

- **The 'Installed Length' and 'Set Length' shall be verified prior to installation of the Victaulic Dynamic Movement Joint.**
- **Verify that the two adjoining, field-installed pipe ends are concentric and colinear along their centerline.**

Failure to follow these instructions will decrease the ability of the joint to deflect.



- Installation of a Victaulic Dynamic Movement Joint requires verification of two critical values: the 'Installed Length' and the 'Set Length'.
- As defined above, the 'Installed Length' is the actual distance (opening) between the field-installed pipe ends into which a particular Victaulic Dynamic Movement Joint shall be installed. Having the pipe-to-pipe field opening at the calculated 'Installed Length' ensures that a particular Victaulic Dynamic Movement Joint can achieve the angular deflection necessary to accommodate the designed settlement value.
- As defined above, the 'Set Length' is the length of the assembled unit (without end couplings) when the couplings are set with the appropriate pipe end separation. Having the appropriate 'Set Length' ensures that a particular settlement joint can achieve the designed settlement value. The 'Set Length' is determined by reducing the marked 'Installed Length' by the values provided in the table below.

'Installed Length' Reduction Values for 'Set Length' Determination

Victaulic Dynamic Movement Joint Style Number	Victaulic Coupling Style Number‡	Actual Pipe Outside Diameter inches/mm	'Installed Length' Reduction Value inches/mm	Installation Instructions for Victaulic Couplings
257	77	2 – 3 60.3 – 88.9	1/16 1.6	Scan QR code to access the I-100 Field Installation Handbook
257	77	4 – 12 114.3 – 323.9	1/8 3.2	
257C	31	3 – 8 100.6 – 229.9	1/16 1.6	Scan QR code to access the I-300 Field Installation Handbook
257C	31	10 – 14 281.9 – 388.6	3/16 4.8	
257C	31	16 – 24 442.0 – 655.3	1/4 6.4	
257C	31	30 – 36 762.0 – 914.4	1/2 12.7	
W257	W77	14 – 24 355.6 – 609.6	7/16 11.1	Scan QR code to access the I-W07/W77/W77B/W77N Installation Instructions
W257	W77	26 – 38 660.4 – 965.0	11/16 17.5	
W257	W77	40 – 50 1016.0 – 1270.0	13/16 20.6	
W257	W77B	54 – 88 1371.6 – 2235.2	15/16 23.8	
W257	W77B	94 – 100 2387.6 – 2540.0	7/8 22.2	

‡ For configurations utilizing a Victaulic Style 77S Coupling, use the values listed for the Victaulic Style 77 Coupling.

3.0 SITE PREPARATION/INSTALLED LENGTH (CONTINUED)

- Check all pre-installed couplings prior to installation to verify that all sets of hardware are tightened completely and that metal-to-metal bolt pad contact is present at all bolt pads. Refer to the installation instructions that are supplied with the coupling. The latest version of these installation instructions can be downloaded at victaulic.com by scanning the appropriate QR code provided on the previous page.
- Before placing the unit for installation, verify that the two existing pipe end connections are concentric and colinear along their centerline. Measure the space between the two pipe ends and verify that it corresponds to the 'Installed Length' that is marked on the side of the Victaulic Dynamic Movement Joint.
- The existing pipe end connections shall remain fixed in order to maintain the 'Installed Length'.
- Measure the length of the Victaulic Dynamic Movement Joint to verify that it corresponds to the appropriate 'Set Length'. If the measured length is shorter than the appropriate 'Set Length', expand the Victaulic Dynamic Movement Joint until the appropriate 'Set Length' is achieved. If the measured length is longer than the appropriate 'Set Length', compress the Victaulic Dynamic Movement Joint until the appropriate 'Set Length' is achieved.
- Pre-install a gasket from each end coupling onto the end of each existing pipe end connection. Refer to the installation instructions that are supplied with the coupling. The latest version of these installation instructions can be downloaded at victaulic.com by scanning the appropriate QR code provided on the previous page.

4.0 INSTALLATION

Once the conditions listed in Section 3.0 are met:

- Lift the Victaulic Dynamic Movement Joint slowly while guiding it into place in the pipeline. Verify that the weight of the Victaulic Dynamic Movement Joint remains balanced as it is lifted and moved into position.
- Bring the Victaulic Dynamic Movement Joint into position between the two existing pipe end connections. To prevent damage to coatings and linings, DO NOT allow the Victaulic Dynamic Movement Joint to impact the two existing pipe end connections. Verify that the two existing pipe end connections and the Victaulic Dynamic Movement Joint are concentric and colinear and that the pipe ends are square to the Victaulic Dynamic Movement Joint.
- Provisions shall be made for supporting the Victaulic Dynamic Movement Joint throughout the entire installation process and for maintaining the 'Set Length'. If the 'Set Length' changes during the lifting process, the Victaulic Dynamic Movement Joint shall be either compressed or expanded to correspond to the marked 'Set Length' prior to installation of the end couplings.
- After the Victaulic Dynamic Movement Joint is in position (at the marked 'Installed Length' and concentric, colinear, and square to the two existing pipe end connections), install the end coupling connections. Refer to the installation instructions that are supplied with the coupling. The latest version of these installation instructions can be downloaded at victaulic.com by scanning the appropriate QR code provided on the previous page.
- **FOR BURIED APPLICATIONS:** The trench bed shall be prepared to ensure that continuous support is provided under the pipe and couplings. The haunching material, which is found in the area between the bedding and the underside of the pipe, shall be worked in and compacted before continuing backfill. Haunching shall have no voids, and the backfill material shall not be contaminated with debris or other foreign materials that could damage the pipe or cause loss of support. **All backfill shall be consistent and meet application-site specifications. Protection shall be implemented to prevent aggregate from entering the grooves adjacent to the coupling keys.**
- **FOR EXPOSED APPLICATIONS:** Victaulic Dynamic Movement Joints shall be supported per guidelines provided in Victaulic Design Data (Section 26 publications) and Victaulic Field Installation Handbooks. Thrust support placement shall be consistent with relevant product guides.

5.0 POST INSTALLATION

The 'Installed Length' and 'Set Length' shall be maintained during construction of the piping system.

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