

Thermal Expansion/ Contraction Compensation of Pressfit® Carbon and Stainless Steel Pipe

For carbon steel and stainless steel pipes, in general, an expansion/contraction of $\frac{3}{4}$ " per 100" (20 mm per 2540 mm) of pipe per 100°F (38°C) in temperature change may be assumed. This change in length may not seem significant; however, piping which cannot expand or contract may create substantial stresses within the piping system resulting in damage to the piping system and/or components.

The change in length due to thermal movement is normally absorbed by the flexibility of the piping system. In some cases, however, the piping system cannot accommodate this thermal movement. In these cases, expansion/contraction compensators must be installed.

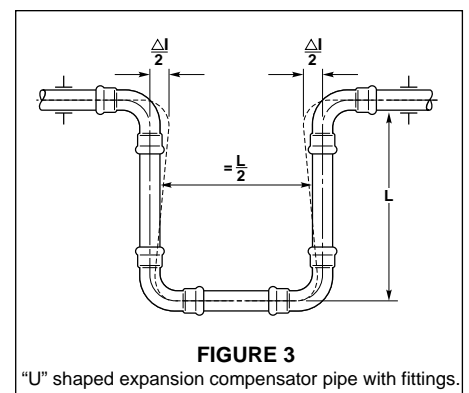
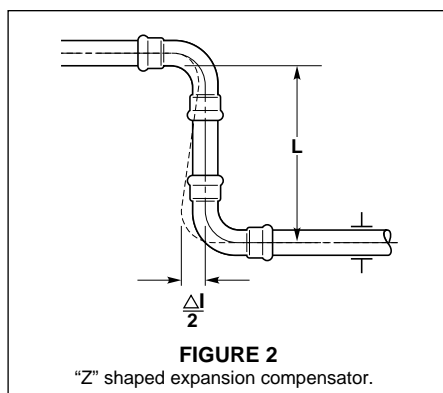
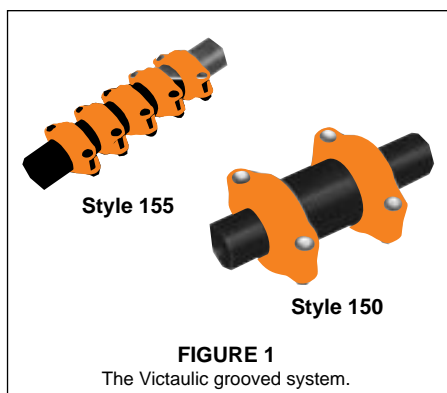
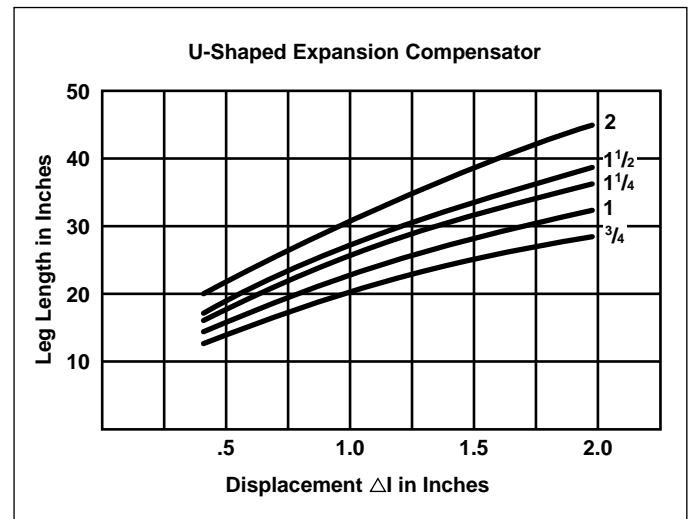
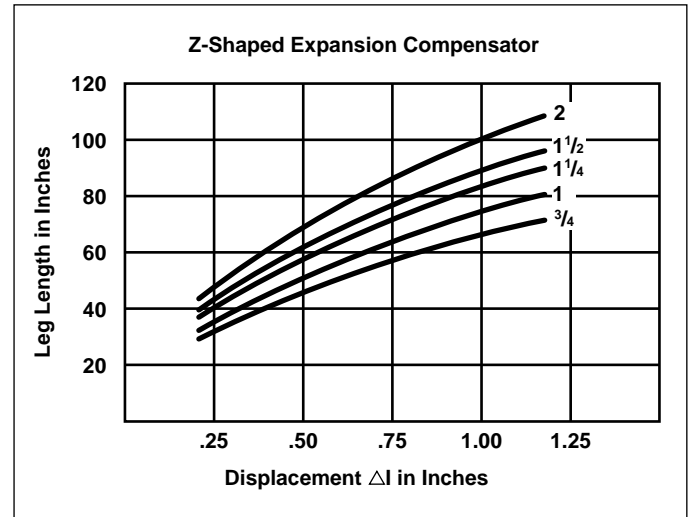
The Pressfit® System for both carbon steel and stainless steel easily integrates with standard Victaulic flexible couplings (Style 77, 75, and others) which provide expansion/contraction allowance on roll grooved pipe. Victaulic Mover® Style 150 (for carbon steel systems only) and Style 155 Expansion Joints (Fig. 1) are available where significant movement is anticipated. Accommodating thermal movement can easily be done with a combination of Victaulic grooved components to provide varied amounts of movement. Refer to 26.02 and 26.03.

The self-restraining nature of the grooved system makes this the most economical choice to handle thermal pipe movement.

"Z" shaped expansion compensators can be assembled using Pressfit components (see Fig. 2). In other cases, where a "Z" shaped expansion compensator cannot be used, a "U" shaped expansion compensator can be installed (See Fig. 3).

Configurations as shown in Figures 2 and 3 may be installed utilizing either Victaulic grooved flexible couplings or Pressfit products in carbon or stainless steel. Refer to 26.02 for grooved product installation for Figures 2 through 5 for installation of Pressfit products.

As a result of thermal expansion and contraction of pipes, the Pressfit connections may be subjected to torsional or rotational movement. Rotational angles must not exceed 5 degrees.





Carbon and Stainless Steel

Piping joined with Pressfit System products, like all other piping systems, requires support to carry the weight of pipes and equipment. As for other methods of joining pipes, the support or hanging method must be such as to eliminate undue stresses on joints, piping and other components. Additionally, the method of support must be such as to allow movement of the pipes where required and to provide drainage, etc., as may be specified by the designer.

The Maximum Hanger Spacing corresponds to ANSI B31.1 or B31.9 as noted and should be used only in conjunction with Victaulic Pressfit System products on Approved Schedule 5 stainless steel pipe.

Maximum Hanger Spacing Chart

18.01-13A

Nominal Pipe Size In./mm	Suggested Max. Span Between Supports - Feet/meters			
	Water Service		Gas/Air Service	
	B31.1	B31.9	B31.1	B31.9
3/4 20	7 2.1	8 2.4	9 2.7	8 2.4
1 25	7 2.1	9 2.7	9 2.7	9 2.7
1 1/4 32	7 2.1	11 3.4	9 2.7	11 3.4
1 1/2 40	7 2.1	12 3.7	9 2.7	13 4.0
2 50	10 3.1	13 4.0	13 4.0	15 4.6

This product shall be manufactured by Victaulic Company. All products shall be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.