

WHEN IS A DWV EXPANSION JOINT NEEDED IN A SYSTEM?

DWV expansion joints should be designed into a system meeting one of several conditions:

- Loops or offsets cannot be used due to space limitations
- Potential temperature changes 30°F or greater from ambient temperature at installation
- Systems experiencing frequent thermal cycling

EXPANSION JOINT ORIENTATION AND SUPPORT

The expansion joint should be mounted in the vertical position. Alignment is extremely critical, misalignment may result in failure of the expansion joint. The slide (inner tube) should be on the upper side of the expansion joint with flow arrow orientated in flow direction. The stack should be braced so that no horizontal movement can occur in the expansion joint. Follow state and local codes for system bracing requirements.

Before installing, fully expanded and contract the expansion joint to ensure free movement of the slide (inner tube). After this, move the expansion joint to the fully contracted position.

INITIAL SLIDE SET POSITION AT INSTALLATION

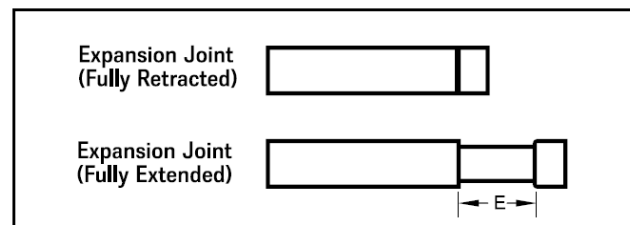
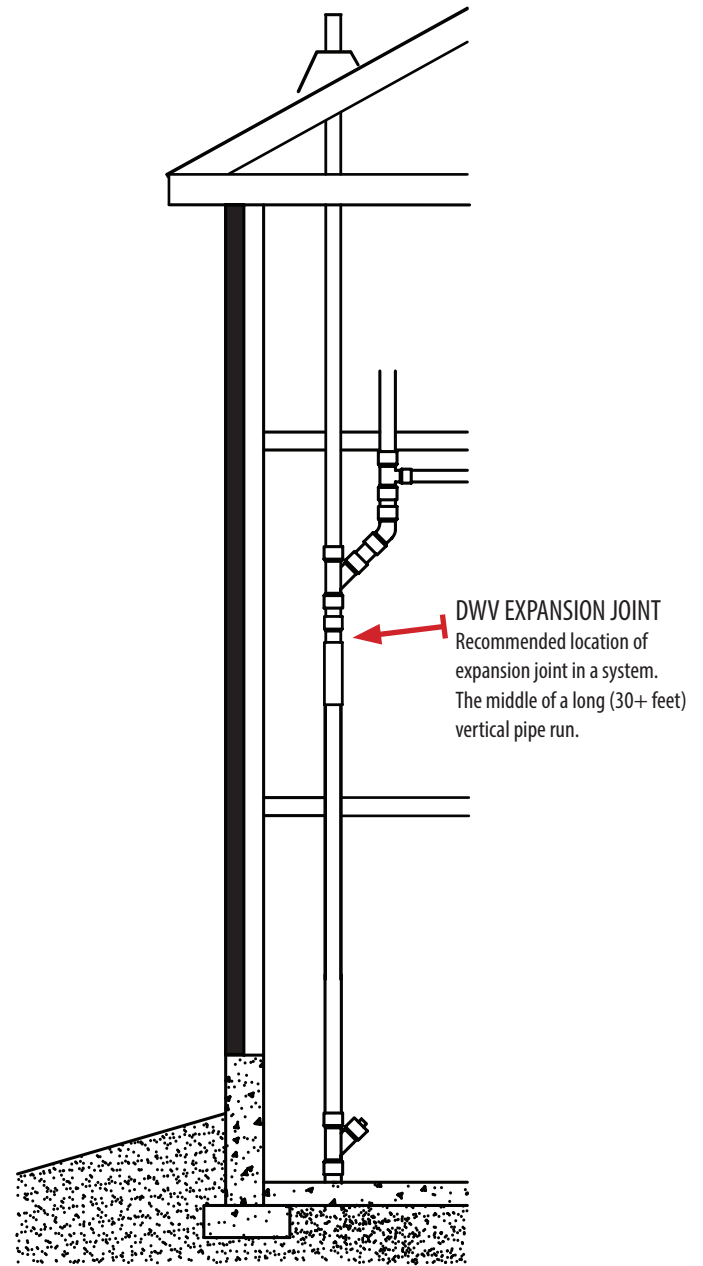
From the fully contracted position, the expansion joint slide must be set to a neutral position that will allow for the expansion joint to properly compensate for expansion/contraction. The neutral position of the expansion joint slide can be calculated using the following equation:

$$P = \frac{T_{max} - T_{amb}}{T_{max} - T_{min}} \times E$$

Expansion Joint Size (in)	Expansion Length E (in)
1½	2.125
2	2.688
3	3.188
4	3.00

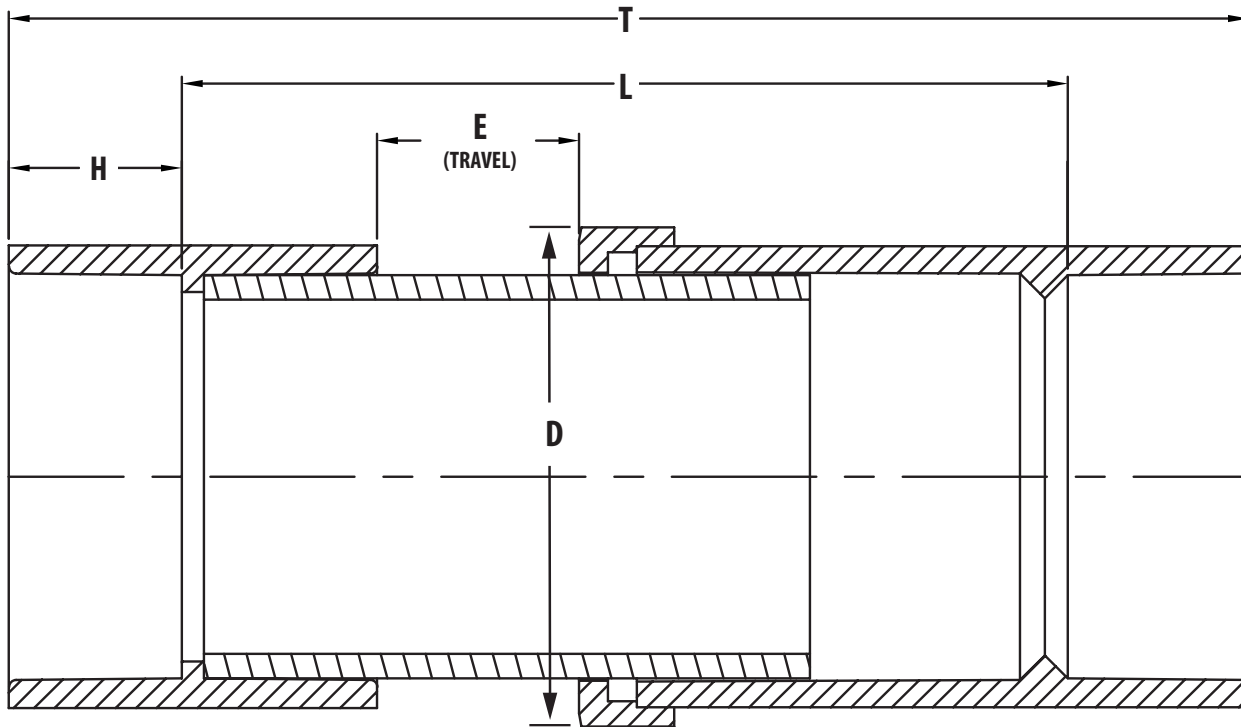
Where:

- P = Set point of the expansion joint from no expansion
- T_{max} = Maximum temperature the system will experience
- T_{min} = Minimum temperature the system will experience
- T_{amb} = Ambient temperature at time of installation
- E = Length of maximum expansion (see E dimension)



Follow all state and local plumbing codes for system requirements. Solvent weld the expansion joint according to ASTM D2855 and/or LASCO Fittings solvent cementing instructions.

DIMENSIONAL DATA



ALL SIZES ARE IN INCHES			COMPRESSED		EXPANSION LENGTH
IPS Pipe Size	D (max O.D)	H	Tmin	Lmin	E _{max}
1½	2 9/16	¾	6 1/16	5 ¾	2 1/8
2	3	7/8	7 1/16	6 ¾	2 11/16
3	4 3/8	1½	9 3/8	7 7/8	3 3/16
4	5 ½	1¾	10 ¾	8 ¾	3

The product shall be installed per manufacturer's written instructions and local plumbing code. Do not test with air. It is noted that piston type expansion joints have unrestricted travel.

Contact LASCO Technical Services for additional information.
Customer Service: 800-776-2756 • www.lascofittings.com

