

651 EXPANSION JOINT



For pressure rating, listing, and approval information, refer to data sheet or visit SHURJOINT website www.shurjoint.com for details or contact your SHURJOINT representatives.

The Model 651 Expansion Joint is a combination of couplings and specially machined pipe nipples that are joined in a series to accommodate the expansion and contraction of a piping system. The nipples are precisely grooved to provide full linear allowance at each joint. Standard units are comprised of either Model 7705 or Model 7707 flexible couplings and cut-grooved Sch. 40 pipe nipples. The end pieces are supplied grooved-ends to ANSI/AWWA C606 requirements for use with grooved mechanical couplings. Customized units are also available. The components are epoxy coated (RAL3000 red) for ease of use and longer life.

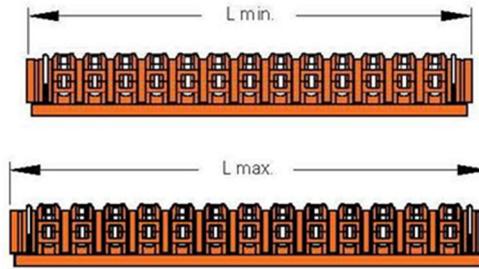
Shurjoint Model 651 Expansion Joints are designed only for use on straight pipe runs and should not be used on risers and require independent support to prevent deflection which will reduce the available expansion. More detailed design and installation information can be found on www.shurjoint.com or the Shurjoint Installation Instructions sheet II/650N-651/O.

* Brackets included on a limited basis.

material specification

- **Housing:**
Ductile Iron to ASTM A536, Gr. 65-45-12, min. tensile strength 65,000 psi (448 MPa).
- **Nipples:**
Carbon steel pipe Sch. 40 to ASTM A53.
- **End Pieces:**
Carbon steel pipe Sch. 40 to ASTM A53.
- **Surface Finish:**
Housing, sleeve and end pieces are all epoxy coated in red RAL 3000.

- **Rubber Gasket:**
Grade "E" EPDM (Color code: Green stripe) Good for cold & hot water up to +230°F (+110°C). Also good for services for water with acid, water with chlorine or chloramines, deionized water, seawater and wastewater, dilute acids, oil-free air and many chemicals.
Not recommended for petroleum oils, minerals oils, solvents and aromatic hydrocarbons.
Maximum Temperature Range: -30°F (-34°C) to +230°F (+110°C)*.
*EPDM gaskets for water services are not recommended for steam services unless couplings or components are accessible for frequent gasket replacement.
 - Other options: Grade "T" Nitrile
Grade "O" Fluoro-Elastomer
Grade "L" Silicone
- **Bolts & Nuts:**
Heat treated carbon manganese steel track bolts to ASTM A449-83a (or A183 Gr. 2), minimum tensile strength 110,000 psi (758 MPa), Zinc electroplated, with heavy-duty hexagonal nuts to ASTM A563.



Model 651 Expansion Joint

Nominal Size	Pipe O.D.	Couplings (Standard Units [†])	Max. Working Pressure (CWP)*	Max. Movement	L - (ref.) §		Weight
					Min. (Compressed)	Max. (Expanded)	
in	in	Model No.	PSI	in	in	in	lbs
mm	mm	No.	Bar	mm	mm	mm	kg
1½	1.900	7705 or 7707	350	2.91	28.25	31.18	24.2
40	48.3	10	24	74	718	792	11.0
2	2.375	7705 or 7707	350	3.11	28.25	31.38	27.0
50	60.3	10	24	79	718	797	12.2
2½	2.875	7705 or 7707	350	3.11	28.25	31.38	36.0
65	73.0	10	24	79	718	797	16.3
76.1	3.000	7705 or 7707	350	3.11	28.25	31.38	36.0
	76.1	10	24	79	718	797	16.3
3	3.500	7705 or 7707	350	3.11	28.25	31.38	46.0
80	88.9	10	24	79	718	797	20.9
4	4.500	7705 or 7707	350	2.09	26.50	28.58	36.5
100	114.3	7	24	53	673	726	16.6
133.0	5.250	7705 or 7707	350	2.09	26.50	28.58	72.0
	133.0	7	24	53	673	726	32.7

Model 651 Expansion Joint

Nominal Size	Pipe O.D.	Couplings (Standard Units)	Max. Working Pressure (CWP)*	Max. Movement [^]	L - (ref.) §		Weight
					Min. (Compressed)	Max. (Expanded)	
in	in	Model No.	PSI	in	in	in	lbs
mm	mm	No.	Bar	mm	mm	mm	kg
165.1	6.500	7705 or 7707	350	2.09	26.26	28.35	58.1
	165.1	7	24	53	667	720	26.4
6	6.625	7705 or 7707	350	2.09	26.26	28.35	91.1
150	168.3	7	24	53	667	720	41.4
8	8.625	7705 or 7707	350	1.93	28.50	30.43	159.7
200	219.1	7	24	49	724	773	72.6
10	10.750	7705 or 7707	350	1.93	32.51	34.45	257.2
250	273.0	7	24	49	826	875	116.9
12	12.750	7705 or 7707	350	1.93	32.51	34.45	373.0
300	323.9	7	24	49	826	875	169.3

Note: Available with greater or less movement by adding or eliminating couplings and nipple units. Please consult a Shurjoint representative for further details.

L - (ref.) § Length dimensions may vary due to tolerances.

* Working pressure is based on connection with roll- or cut-grooved standard wall carbon steel pipe.

[^]651 expansion joints should be installed onto pipes using Shurjoint Z07 or 7771 couplings.

General note

- Maximum Working Pressure (CWP) listed is the maximum cold water pressure for general piping services tested to ASTM F1476 and or AWWA C606 methods. Figures listed are based on roll- or cut-grooved standard wall carbon steel pipe. For other pipe schedules or pipe materials, contact Shurjoint for additional information.
- Field Joint Test: For one time only the system may be tested hydrostatically at 1½ times the maximum working pressure listed (AWWA C606 5.2.3).
- Warning: Piping systems must always be depressurized and drained before attempting disassembly and or removal of any components.
- The 10 Year Limited Warranty applies to manufacturing defects only and does not cover severe service/temperature applications or wear parts.
- Shurjoint reserves the right to change specifications, designs and or standard without notice and without incurring any obligations.