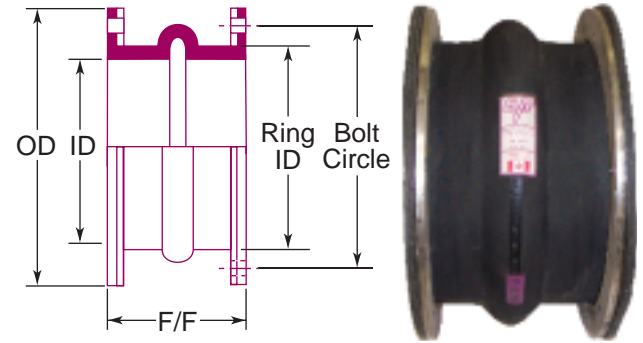


SJ-21 EXPANSION JOINT

The SJ-21 is the industry standard spool-type expansion joint. The SJ-21 is available in configurations

from zero to four arches - depending on movement requirements - and 3 standard pressure ratings in a variety of elastomers. This hand-built expansion joint can be adapted to the most unusual or difficult applications. Available options include filled arches to eliminate settling of solids in the arch, Teflon liners for severe chemical service, soft cuff ends for slip-on installation, and concentric or eccentric tapered ends for connecting different pipe sizes.



SR = Standard Pressure(psi) LP = Low Pressure(psi) HP = High Pressure(psi) AM⁽²⁾ = Allowable Movement(in.) TF⁽³⁾ = Total Force(lbs.)

Size ID	Flange OD ⁽⁴⁾	Bolt Circle	Holes No.	Holes Dia.	Ring ID	F/F (per Arch) ⁽¹⁾				Work Pressure			Axial Comp.		Axial Ext.		Traverse Def.		Est. Weight	
						1	2	3	4	SR	LP	HP	AM	TF	AM	TF	AM	TF	Joint	Rings
* 1	4-1/4	3-1/8	4	5/8	2-3/8	6	10	12	14	165	15	200	1/2	103	1/4	76	1/2	175	2	2.25
* 1-1/4	4-5/8	3-1/2	4	5/8	2-5/8	6	10	12	14	165	15	200	1/2	129	1/4	96	1/2	219	2.5	2.25
* 1-1/2	5	3-7/8	4	5/8	2-7/8	6	10	12	14	165	15	200	1/2	154	1/4	115	1/2	262	3	3
2	6	4-3/4	4	3/4	3-5/8	6	10	12	14	165	15	200	1/2	185	1/4	138	1/2	350	4	4
2-1/2	7	5-1/2	4	3/4	4-1/8	6	10	12	14	165	15	200	1/2	232	1/4	172	1/2	381	4.5	4.5
3	7-1/2	6	4	3/4	4-5/8	6	10	12	14	165	15	200	1/2	278	1/4	207	1/2	412	5.5	6
4	9	7-1/2	8	3/4	5-7/8	6	10	12	14	165	15	200	1/2	371	1/4	276	1/2	476	8	7.5
5	10	8-1/2	8	7/8	6-7/8	6	10	12	14	165	15	200	1/2	463	1/4	344	1/2	546	9	8
6	11	9-1/2	8	7/8	7-7/8	6	10	12	16	165	15	200	1/2	556	1/4	413	1/2	617	11	9
8	13-1/2	11-3/4	8	7/8	9-7/8	6	10	14	16	140	15	190	3/4	971	3/8	689	1/2	753	15	12
10	16	14-1/4	12	1	12-1/8	8	12	14	16	140	15	190	3/4	1214	3/8	861	1/2	809	23	16
12	19	17	12	1	14-1/2	8	12	14	16	140	15	190	3/4	1456	3/8	1033	1/2	948	34	22
14	21	18-3/4	12	1-1/8	16-1/2	8	12	16	20	85	15	130	3/4	1274	3/8	904	1/2	1117	40	25
16	23-1/2	21-1/4	16	1-1/8	18-1/2	8	12	16	20	65	15	110	3/4	1456	3/8	1033	1/2	1286	47	27
18	25	22-3/4	16	1-1/4	20-1/2	8	12	16	20	65	15	110	3/4	1638	3/8	1163	1/2	1420	56	29
20	27-1/2	25	20	1-1/4	22-5/8	8	12	16	20	65	15	110	7/8	2152	3/8	1505	1/2	1588	67	35
22	29-1/2	27-1/4	20	1-3/8	24-5/8	10	14	18	22	65	15	110	7/8	2367	7/16	1656	1/2	1648	70	44
24	32	29-1/2	20	1-3/8	26-5/8	10	14	18	22	65	15	110	7/8	2582	7/16	1807	1/2	1706	79	46
26	34-1/4	31-3/4	24	1-3/8	28-7/8	10	14	18	22	55	15	90	1	2869	1/2	1990	1/2	1829	100	50
28	36-1/2	34	28	1-3/8	30-7/8	10	14	18	22	55	15	90	1	3090	1/2	2143	1/2	1952	102	58
30	38-3/4	36	28	1-3/8	32-7/8	10	14	18	22	55	15	90	1	3311	1/2	2297	1/2	2075	117	55
34	43-3/4	40-1/2	32	1-5/8	37	10	14	18	22	55	15	90	1	3752	1/2	2603	1/2	2801	112	91
36	46	42-3/4	32	1-5/8	39	10	14	18	22	55	15	90	1	3973	1/2	2756	1/2	3164	143	99
40	50-3/4	47-1/4	36	1-5/8	43	10	14	18	22	55	15	90	1	4414	1/2	3062	1/2	3338	173	108
42	53	49-1/2	36	1-5/8	45-1/4	12	14	18	24	55	15	80	1-1/8	4732	1/2	3253	1/2	3423	193	110
44	55-1/4	51-3/4	40	1-3/4	47-1/4	12	14	18	24	55	15	80	1-1/8	4958	1/2	3407	1/2	3571	198	136
48	59-1/2	56	44	1-5/8	51-1/4	12	14	18	24	55	15	80	1-1/8	5408	1/2	3717	1/2	3866	211	154
50	61-3/4	58-1/4	44	1-7/8	53-1/4	12	14	18	24	55	15	80	1-1/8	5634	1/2	3872	1/2	4012	240	163
54	66-1/4	62-3/4	44	2	57-1/4	12	14	18	24	55	15	80	1-1/8	6085	1/2	4182	1/2	4303	265	185
56	68-3/4	65	48	2	59-1/4	12	14	18	24	55	15	80	1-1/8	6310	1/2	4341	1/2	4448	288	203
60	73	69-1/4	52	2	63-1/4	12	14	18	24	55	15	80	1-1/8	6761	1/2	4651	1/2	4736	309	215
62	75-3/4	71-3/4	52	2	65-1/4	12	14	18	24	55	15	80	1-1/8	7150	1/2	4860	1/2	4820	325	230
66	80	76	52	2	69-1/4	12	14	18	24	55	15	80	1-1/8	7437	1/2	5116	1/2	5108	350	255
72	86-1/2	82-1/2	60	2	75-1/4	12	14	18	24	45	15	70	1-1/8	8113	1/2	5581	1/2	5477	385	300
78	93	88-3/4	60	2-1/8	81-1/4	12	14	18	24	45	15	70	1-1/8	8789	1/2	6046	1/2	5951	410	325
84	99-3/4	95-1/2	64	2-1/4	87-1/2	12	14	18	24	45	15	70	1-1/8	9465	9/16	6511	1/2	6425	435	350
96	113-1/4	108-1/2	68	2-1/2	99-3/8	12	16	18	24	45	15	70	1-1/8	10817	9/16	7441	1/2	7375	485	400
102	120	114-1/2	72	2-5/8	--	12	16	20	24	45	15	70	2	19850	1	12890	1/2	8331	535	450
108	126-3/4	120-3/4	72	2-5/8	--	12	16	20	24	45	15	70	2	21915	1	14506	1/2	9785	585	500

(1) - Lengths shown are for new design. Replacement parts should be ordered to the exact F/F dimension. *Items are not normally supplied in multiple "open" arches, as squirm can occur. Minimum length of "face to face" can be reduced by eliminating the arch. Number of arches required depends upon anticipated total movement of the expansion joint.

2 - Multiple arch movement = single arch movement x number of arches. "Filled Arch" construction reduces movement by 50%. *Items are normally furnished with filled arches and movement shown should be reduced accordingly.

3 - Forces are based on one single open arch at zero pressure conditions, and should therefore be considered only as approximate. Contact EVR for forces of multiple and filled arch products. Angular force is expressed in "foot pounds". For spring rates, contact EVR.

4 - Flange dimensions shown are in accordance with 125/150 pound standards of ANSI B16.1, B16.5, AWWA C-207 Table 3 Class E; AWWA C-207 Table 1 and 2 Class D. Retaining ring width is 3/8" in all sizes. Flange thickness is EVR standard.

5 - Flange drilling is also available in all international standards or custom applications. For more information, contact EVR.

Notes: Control unit assemblies are recommended for all applications. To ensure correct length, customer should provide width of mating flange or flange specification.