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Style 1203 "Flexi-Spool" Triple-Arch Expansion Joints

Use ***Style 1203 "Flexi-Spool" Triple-Arch*** rubber expansion joints when the expected piping movements surpass the capabilities of a single or double expansion joint. ***Style 1203 "Flexi-Spool"*** expansion joints have three wide arches, each of which is roughly equal in movement capabilities to the single arch that is built into our Style 1201 expansion joints. Triple arch expansion joints are also a great choice when low spring rates are essential.

In comparison to our single arch Style 1201, ***Style 1203*** expansion joints have approximately three times the movement ratings—triple the axial compression, axial elongation, lateral offset, and angular rotation. A high-pressure reinforcing and special arch configuration allows for high working pressures and vacuum ratings. A thick, wrapped-on rubber cover protects the reinforcing from damage and the environment. Full-face duck and rubber flanges provide an optimum sealing surface. Both tube and cover can be provided in a variety of elastomers to handle chemicals, moderate temperatures extremes, abrasion, or other conditions. Materials include Neoprene, Chlorobutyl, EPDM, Nitrile, natural rubber, Hypalon, and Viton. For applications where components are needed to convey drinking water or other food products, special FDA elastomer tubes and covers can be constructed. Open-arch is standard and filled-arch (designation FA) is available upon request.

Style 1203 Triple-Arch "Flexi-Spool" expansion joints can also be constructed in special face-to-face lengths. For greater motion requirements, Style 1204 4-Arch can be offered.

"Flexi-Spool" expansion joints are ideal for many demanding industrial applications such as water & waste treatment, power generation, pulp & paper, chemical handling, mine processing, and marine. Spool type expansion joints should always be installed using split steel retaining rings. Control units are always required in unanchored piping systems and are recommended in all other pressure applications as a back-up safety device in the event of anchor failure.

Materials & Temperatures:

Style Number	Cover Elastomer	Tube Elastomer	Max. Operating Temp
1203EE	EPDM	EPDM	250°F (121°C) [1]
1203BB	Chlorobutyl	Chlorobutyl	250°F (121°C) [1]
1203NN	Neoprene	Neoprene	225°F (107°C)
1203NP	Neoprene	Nitrile	212°F (100°C)
1203NR	Neoprene	Natural Rubber	180°F (82°C)
1203VN	Neoprene	Viton	225°F (107°C)
1203VV	Viton	Viton	250°F (121°C)[2]
1203FD	EPDM	FDA Black EPDM	250°F (121°C)
1203FW	White FDA EPDM	White FDA EPDM	250°F (121°C)

1) Rated 300°F (149°C) for blower service.
2) Viton tube and cover with Kevlar reinforcing is rated for 400°F (205°C).

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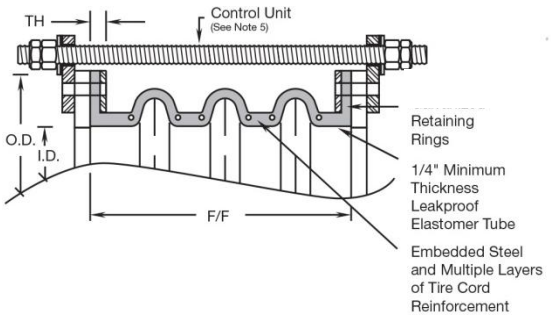

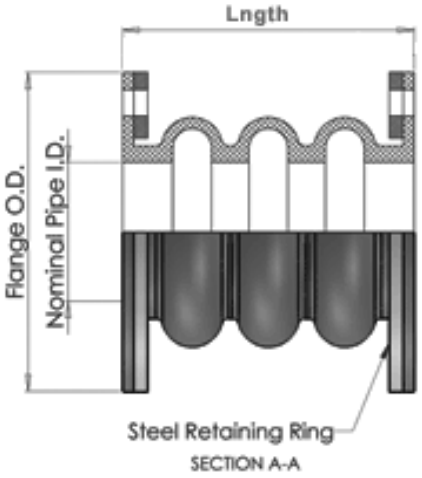

STYLE 1203 TRIPLE ARCH – SIZES, MOVEMENTS, PRESSURE RATINGS, WEIGHTS

Size (I.D.) (In.)	F/F (In.)	Allowable Movements From Neutral Face-to-Face (In.)				Effective Area (Sq. In.)	Pressure Ratings		Weights		
		Axial Comp	Axial Ext	Lateral Deflection	Angular Rotation		Positive (PSIG)	Vacuum [6] (in. Hg.)	Exp Jt.	Ret Rings	Control Rods[4]
1-1/2	14	5.25	2.63	3.00	78 Deg	7.4	220	15	16	3	12
2	14	5.25	2.63	3.00	78 Deg	12.4	220	15	17	4	14
2-1/2	14	5.25	2.63	3.00	66 Deg	15.7	220	15	19	5.6	14
3	14	5.25	2.63	3.00	56 Deg	19.4	220	15	22	6	15
4	14	5.25	2.63	3.00	44 Deg	27.9	220	15	28	7.5	16
5	14	5.25	2.63	3.00	36 Deg	38.1	220	15	33	8	16
6	14	5.25	2.63	3.00	30 Deg	49.9	220	15	48	9	20
8	14	5.25	2.63	3.00	24 Deg	78.0	220	15	57	12	24
10	16	6.75	3.38	3.75	34 Deg	120	220	15	69	16	30
12	16	6.75	3.38	3.75	28 Deg	162	220	15	90	22	32
14	16	6.75	3.38	3.75	24 Deg	210	220	15	122	25	40
16	16	6.75	3.38	3.75	22 Deg	265	160	15	144	27	40
18	16	6.75	3.38	3.75	20 Deg	326	160	15	157	29	42
20	16	6.75	3.38	3.75	18 Deg	393	130	15	189	35	42
24	20	7.5	3.75	4.50	16 Deg	562	130	15	211	46	64
26	20	7.5	3.75	4.50	15 Deg	649	130	15	250	50	64
28	20	7.5	3.75	4.50	14 Deg	743	100	10	260	55	64
30	20	7.5	3.75	4.50	14 Deg	842	100	10	283	58	64
36	20	7.5	3.75	4.50	12 Deg	1179	90	10	387	99	86
42	22	7.5	3.75	4.50	10 Deg	1628	90	10	469	110	86
48	22	7.5	3.75	4.50	8 Deg	2086	90	10	554	154	90
54	22	7.5	3.75	4.50	8 Deg	2599	85	10	680	185	150
60	22	7.5	3.75	4.50	7 Deg	3209	85	10	800	215	220
72	22	7.5	3.75		6 Deg	4527	85	10	1018	300	280

1) For concentric and eccentric reducing style, See Unisource 1201RC and 1201 RE specification pages.
2) For single arch , see Unisource 1201 style. For double arch, see Unisource 1202 style. For 4-arch, see Unisource 1204 style.
3) See chart on opposite page for temperature ratings.
4) Control unit weight is based on a two-rod set up to 48" diameter, and 3-rod set for 54" diameter and larger.
5) For filled arch, 1203FA, movement ratings will be 50% of those listed above.
6) Style 1203 double arch expansion joints can be specially manufactured for 30 In. Hg vacuum if required.

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