

series 242 twin sphere expansion joints

Table 3: Sizes • Movements • Pressures • Flange Standards • Weights

NOMINAL PIPE Size I.D.	Neutral Length	PROCO Style Number ¹	242 Movement Capability: From Neutral Position ²					Pressure ⁴		Standard Flange Bolting Dimensions				Weight in lbs ⁶		
			Axial Compression Inches	Axial Extension Inches	Lateral Deflection Inches	Angular Deflection Degrees	Thrust ³ Factor	Positive ⁵ PSIG	Vacuum ⁶ Inches of Hg	Flange O.D. Inches	Bolt Circle Inches	Number of Holes	Size of Holes Inches	Bolt Hole ⁷ Thread	Exp. Joint & Flanges	Control Unit Set (2 Rod)
1	10.00	242-C	2.000	1.188	1.750	45	4.43	225	26	4.25	3.13	4	0.625	—	5.2	3.6
1.25	7.0	242-A	2.000	1.188	1.750	45	6.34	225	26	4.63	3.5	4	0.625	1/2-13 UNC	5.3	3.5
	7.0	242-HA						300					0.625		6.5	3.5
	10.00	242-C						225					0.625		6.2	3.6
1.5	6.00	242-B	2.000	1.188	1.750	45	6.49	225	26	5.0	3.88	4	0.625	1/2-11 UNC	6.1	4.6
	6.00	242-HB						300					0.625		7.6	4.6
	7.00	242-A						225					0.625		6.8	4.8
	7.00	242-HA						300					0.625		8.3	4.8
10.00	242-C	225	0.625	7.7	5.1											
2	6.00	242-B	2.000	1.188	1.750	45	7.07	225	26	6.0	4.75	4	0.750	5/8-11 UNC	9.0	6.6
	6.00	242-HB						300					0.750		10.5	6.6
	7.00	242-A						225					0.750		9.0	7.0
	7.00	242-HA						300					0.750		10.5	7.0
10.00	242-C	225	0.750	10.2	7.3											
2.5	6.00	242-B	2.000	1.188	1.750	43	11.05	225	26	7.0	5.5	4	0.750	5/8-11 UNC	12.9	7.6
	6.00	242-HB						300					0.750		15.3	7.6
	7.00	242-A						225					0.750		13.3	8.0
	7.00	242-HA						300					0.750		15.8	8.0
10.00	242-C	225	0.750	14.5	8.4											
3	7.00	242-A	2.000	1.188	1.750	38	13.36	225	26	7.5	6.0	4	0.750	5/8-11 UNC	14.3	8.6
	7.00	242-HA						300					0.750		18.2	8.6
	9.00	242-B						225					0.750		15.2	9.0
	10.00	242-C						225					0.750		15.8	9.1
12.00	242-C	225	0.750	16.0	9.9											
3.5	10.00	242-C	2.000	1.188	1.750	34	18.67	225	26	8.5	7.0	8	0.750	—	20.6	8.1
4	9.00	242-A	2.000	1.375	1.562	34	22.69	225	26	9.0	7.5	8	0.750	5/8-11 UNC	20.3	8.0
	9.00	242-HA						300					0.750		26.4	8.0
	10.00	242-C						225					0.750		21.3	8.2
	12.00	242-C						225					0.750		22.0	8.2
5	9.00	242-A	2.000	1.375	1.562	29	30.02	225	26	10.0	8.5	8	0.875	—	24.5	8.3
	9.00	242-HA						300					0.875		31.4	8.3
	10.00	242-C						225					0.875		25.5	9.1
	12.00	242-C						225					0.875		26.0	9.1
6	9.00	242-A	2.000	1.375	1.562	25	41.28	225	26	11.0	9.5	8	0.875	3/4-10 UNC	29.5	11.7
	9.00	242-HA						300					0.875		38.6	11.7
	10.00	242-C						225					0.875		30.5	11.9
	12.00	242-C						225					0.875		31.0	12.0
14.00	242-C	225	0.875	32.0	12.0											
8	9.00	242-B	2.375	1.375	1.375	19	63.62	225	26	13.5	11.75	8	0.875	—	42.3	14.5
	9.00	242-HB						300					0.875		55.4	14.5
	10.00	242-C						225					0.875		43.4	15.0
	12.00	242-C						225					0.875		44.0	15.2
	13.00	242-A						225					0.875		43.8	15.4
	13.00	242-HA						300					0.875		57.5	15.4
14.00	242-C	225	0.875	46.0	16.0											
10	12.00	242-B	2.375	1.375	1.375	15	103.87	225	26	16.0	14.25	12	1.000	—	64.1	23.5
	12.00	242-HB						275					1.000		86.5	23.5
	13.00	242-A						225					1.000		65.5	24.5
	13.00	242-HA						275					1.000		88.4	24.5
	14.00	242-C						225					1.000		66.7	24.5
12	12.00	242-B	2.375	1.375	1.375	13	137.89	225	26	19.0	17.00	12	1.000	7/8-9 UNC	94.0	30.0
	12.00	242-HB						275					1.000		110.0	30.0
	13.00	242-A						225					1.000		95.0	31.0
	13.00	242-HA						275					1.000		110.0	31.0
	14.00	242-C						225					1.000		99.1	31.0
14	12.00	242-C	1.750	1.118	1.118	9	182.65	150	26	19.0	18.75	12	1.125	—	110.0	30.5
	13.75	242-A						150					1.125		112.0	32.0
	13.75	242-HA						200					1.125		144.0	32.0
16	12.00	242-C	1.750	1.118	1.118	8	240.53	125	26	23.5	21.25	16	1.125	—	124.0	28.8
	12.00	242-HC						175					1.125		160.0	28.8
	13.75	242-A						125					1.125		132.0	30.8
	13.75	242-HA						175					1.125		170.2	30.8
18	12.00	242-C	1.750	1.118	1.118	7	298.65	125	26	25.0	22.75	16	1.250	—	138.0	35.1
	13.75	242-A						125					1.250		146.0	36.1
	13.75	242-HA						175					1.250		181.2	36.1
20	12.00	242-C	1.750	1.118	1.118	7	363.05	125	26	27.5	25.0	20	1.250	—	172.0	35.0
	13.75	242-A						125					1.250		182.0	35.5
	13.75	242-HA						175					1.250		182.0	35.5
22	12.00	242-C	1.750	1.118	1.118	6	433.74	115	26	29.5	27.25	20	1.375	—	181.0	35.5
24	12.00	242-C	1.750	1.118	1.118	5	510.70	110	26	32.5	29.5	20	1.375	—	190.0	47.0
	13.75	242-A						110					1.375		220.0	48.0
	13.75	242-HA						160					1.375		266.2	48.0
26	12.00	242-C	1.750	1.118	1.118	5	593.96	110	26	34.25	31.75	24	1.375	—	243.0	52.0
30	12.00	242-C	1.750	1.118	1.118	4	779.31	110	26	38.75	36.0	28	1.375	—	270.0	62.0

Standard PROCO Style 242-A Expansion Joints shown in Bold Type are considered Standards and inventoried in large quantities.

- NOTES: 1. "HA", "HB", and "HC" denote Heavy Weight Construction.
 2. Movements stated are non-concurrent.
 3. To determine End Thrust: Multiply Thrust Factor by Operating Pressure of System. This is End Thrust in pounds.
 4. Pressure rating is based on 170°F operating temperature. The pressure rating is reduced slightly at higher temperatures.
 5. Pressures shown are maximum "operating pressure." Test pressure is 1.5 times "operating pressure." Burst pressure is approximately 4 times "operating pressure."
 6. Vacuum rating is based on neutral installed length, without external load. Products should not be installed "extended" on vacuum applications.
 7. Style 240-AV/NN (Neoprene elastomer only) expansion joints 1.25" I.D. – 12.0" I.D. come with tapped holes in lieu of drilled holes.
 8. All expansion joints are furnished complete with flanges. Control units are required on applications where movements could exceed rated capabilities.

Installation Note:
 Install at the neutral length dimension as shown in Tables 2 & 3. Make sure the mating flanges are **FLAT-FACE TYPE**. When attaching beaded end flanged expansion joints to raised face flanges, the use of ring gaskets are required to prevent metal flange faces from cutting rubber bead during installation. **Care must be taken when pushing the joint into the breach between the mating flanges so as not to roll the leading edge of the joint out of its flange groove.**

Precompression Note:
 Joint must be precompressed approximately 1/8" to 3/16" in order to obtain a correct installed face-to-face dimension.



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