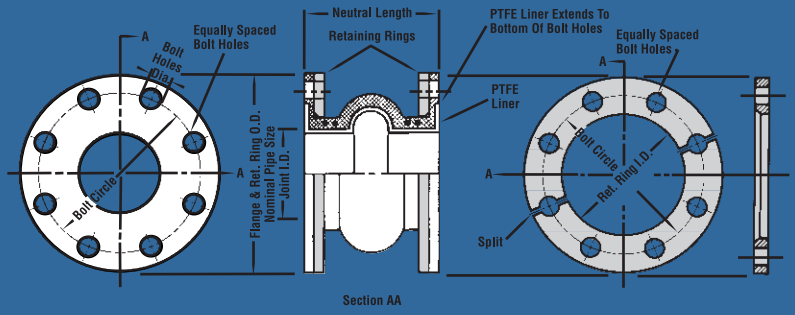
PTFE lined rubber expansion joints

Figure 1: Detail Of Style 231/BT



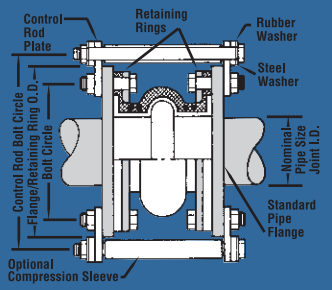


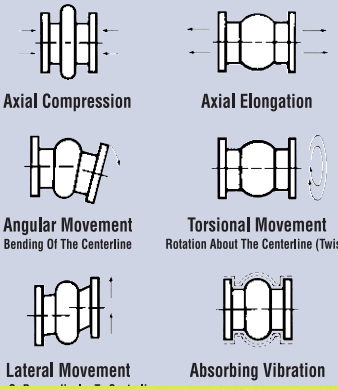
Table 2: Sizes • Movements • Pressures • Weights • Drilling

EXPANSION JOINT SIZE Nom. I.D. x Inch / (mm)[1]		NEUTRAL LENGTH Inch / (mm)		231/BT Movement Capability: From Neutral Position						Operating Conditions [5]		Weights in lbs / (kgs) [6]			Flange Dimensions and Drilling [8]			
				Axial Compression Inch / (mm)	Axial Extension Inch / (mm)	Lateral Deflection Inch / (mm)	Angular [2] Deflection Degrees	Torsional [3] Rotation Degrees	Thrust Factor [4] In2 / (cm2)	Positive PSIG / (Bar)	Vacuum Inches of Hg / (mm of Hg)	Joint Assembly	Retaining Ring Set	Control Unit [7] Assembly	O.D. of Exp. Joint / Ring Inch / (mm)	Bolt Circle Inch / (mm)	Number of Holes	Size of Holes Inch / (mm)
1.5	(40)	6	(150)	1.25 (32)	0.625 (16)	0.625 (16)	28.0°	1°	1.8 (11)	225 (15.5)	30 (762)	1.5 (0.7)	2.5 (1.1)	2.3 (1.0)	5.0 (127.0)	3.88 (98.6)	4	0.625 (15.88)
2	(50)				0.625 (16)	0.625 (16)	25.0°	1°	3.1 (20)	225 (15.5)	30 (762)	2.0 (0.9)	4.0 (1.8)	2.8 (1.3)	6.0 (152.4)	4.75 (120.65)	4	0.750 (19.05)
2.5	(65)				0.625 (16)	0.625 (16)	20.2°	1°	4.9 (32)	225 (15.5)	30 (762)	2.5 (1.2)	4.5 (2.0)	2.8 (1.3)	7.0 (177.8)	5.50 (139.7)	4	0.750 (19.05)
3	(80)				0.625 (16)	0.625 (16)	18.0°	1°	7.1 (46)	225 (15.5)	30 (762)	3.0 (1.4)	5.5 (2.5)	2.8 (1.3)	7.5 (190.5)	6.00 (152.4)	4	0.750 (19.05)
4	(100)				0.625 (16)	0.625 (16)	14.2°	1°	12.6 (81)	225 (15.5)	30 (762)	4.0 (1.8)	8.0 (3.6)	2.8 (1.3)	9.0 (228.6)	7.50 (190.5)	8	0.750 (19.05)
5	(125)				0.625 (16)	0.625 (16)	13.0°	1°	19.6 (127)	225 (15.5)	30 (762)	5.0 (2.3)	8.5 (3.9)	4.0 (1.8)	10.0 (254.0)	8.50 (215.9)	8	0.875 (22.23)
6	(150)				0.625 (16)	0.625 (16)	12.2°	1°	28.3 (182)	225 (15.5)	30 (762)	7.0 (3.2)	9.5 (4.3)	4.0 (1.8)	11.0 (279.4)	9.50 (241.3)	8	0.875 (22.23)
8	(200)				0.625 (16)	0.625 (16)	12.0°	1°	50.3 (324)	210 (14.5)	30 (762)	11.0 (5.0)	14.5 (6.6)	8.0 (3.6)	13.5 (342.9)	11.75 (298.4)	8	0.875 (22.23)
10	(250)	8	(200)	2.0 (50)	1.0 (25)	1.0 (25)	11.9°	1°	78.5 (507)	210 (14.5)	30 (762)	19.0 (8.6)	17.0 (7.7)	10.0 (4.5)	16.0 (406.4)	14.25 (362.0)	12	1.000 (25.40)
12	(300)				1.0 (25)	1.0 (25)	11.3°	1°	113.1 (730)	210 (14.5)	30 (762)	29.0 (13.2)	24.5 (11.0)	10.0 (4.5)	19.0 (482.6)	17.00 (431.8)	12	1.000 (25.40)
14	(350)				1.0 (25)	1.0 (25)	11.5°	1°	153.9 (993)	150 (10.0)	30 (762)	38.0 (17.2)	27.0 (12.3)	12.0 (5.4)	21.0 (533.4)	18.75 (476.3)	12	1.125 (28.58)
16	(400)				1.0 (25)	1.0 (25)	10.1°	1°	201.1 (1297)	150 (10.0)	30 (762)	44.0 (20.0)	33.5 (15.2)	15.0 (6.8)	23.5 (596.9)	21.25 (539.8)	16	1.125 (28.58)
18	(450)				1.0 (25)	1.0 (25)	8.9°	1°	254.5 (1642)	150 (10.0)	30 (762)	49.0 (22.2)	34.0 (15.5)	16.5 (7.2)	25.0 (635.0)	22.75 (577.9)	16	1.250 (31.75)
20	(500)				1.0 (25)	1.0 (25)	8.1°	1°	314.2 (2027)	150 (10.0)	30 (762)	54.0 (24.5)	38.0 (17.3)	16.5 (7.2)	27.5 (698.5)	25.00 (635.0)	20	1.250 (31.75)
24	(600)	10	(250)	3.0 (75)	1.5 (38)	1.5 (38)	9.0°	1°	452.4 (2919)	110 (7.5)	28 (711)	60.0 (27.2)	48.0 (21.8)	20.0 (9.0)	32.0 (812.8)	29.50 (749.3)	20	1.375 (34.93)
30	(750)				1.5 (38)	1.5 (38)	7.5°	1°	706.9 (4560)	100 (7.0)	28 (711)	88.0 (44.0)	63.0 (28.6)	29.5 (13.3)	38.8 (984.3)	36.00 (914.4)	28	1.375 (34.93)
36	(900)				1.5 (38)	1.5 (38)	6.7°	1°	1017.9 (6567)	100 (7.0)	28 (711)	112.0 (50.8)	76.0 (34.5)	43.0 (19.5)	46.0 (1168.4)	42.75 (1085.9)	32	1.625 (41.28)

Notes:

1. Teflon liner extends to bottom of bolt holes.
2. The degree of angular movement is based on the maximum rated extension.
3. Torsional movement is expressed when the expansion joint is a neutral length.
4. To determine "end thrust", multiply thrust factor by operating pressure of system.
5. Pressure rating is based on 194°F operating temperature. At higher temperature the pressure rating is slightly reduced.
6. Weights are approximate.
7. Control unit weight consists of one rod, four washers, three nuts and two control rod plates. Multiply number of control units needed for application (as specified in the Fluid Sealing Association Technical Handbook) to determine correct weights.
8. Dimensions shown are in accordance with 125/150# standards of ANSI B-16.1, B-16.24, B-16.5; AWWA C-207 Table 1 and 2 Class D.

PROCO™ Series 231/BT Products Are Designed To Absorb Different Movements Concurrently.



PROCO PRODUCTS, INC.

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Warning: Expansion joints may operate in pipelines or equipment carrying fluids and/or gases at elevated temperatures and pressures. Normal precautions should be taken to make sure these parts are installed correctly and inspected regularly. Precautions should be taken to protect personnel in the event of leakage or splash. Note: Piping must be properly aligned and anchored to prevent damage to an expansion joint. Movement must not exceed specified ratings and control units are always recommended to prevent damage in the event other anchoring in the system fails. Properties applications shown throughout this data sheet are typical. This information does not constitute a warranty or representation and we assume no legal responsibility or obligation with respect thereto and the use to which such information may be put. Your specific application should not be undertaken without indepen-