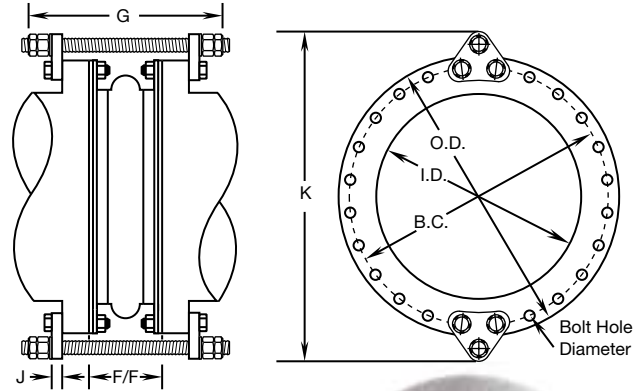


Control-Units

Expansion Joints

Features:

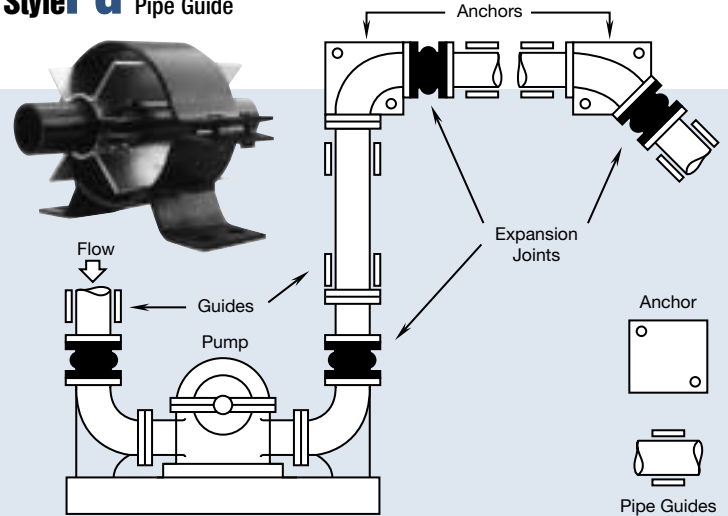
- Protects Expansion Joints from Over-Expansion and Over-Compression
- High Tensile Galvanized Steel Rods Standard, Stainless Steel and other Materials Available
- Galvanized Gusset Plates Standard, Stainless Steel and other Materials Available
- Rubber Grommets Isolate Vibration and are Standard on Sizes 1"-20" Diameter
- Internal Nuts or Compression Sleeves Available and Prevent Over-Compression
- Spherical Washers Available and Prevent Binding while Minimizing Lateral Forces
- Double Nuts are used to Lock Limit Points and allow for Field Adjustment
- Other Standard Drilling Available, Including ASA 300, DIN, PN, JIS, API, and Navy
- Universal Tied / Self-Guiding Control Units Available and Prevent Squirring on Longer Expansion Joints
- Hinges are Available and allow for Angular Movement in One Dimension
- Gimbles are Available and allow for Angular Movement in Two Dimensions



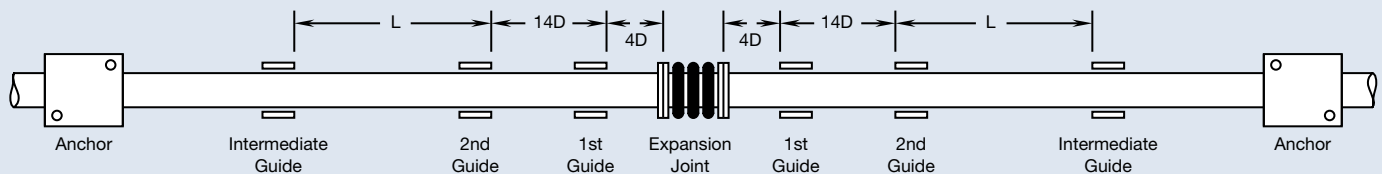
Style SW Stainless Steel Spherical Washers



Style PG Pipe Guide

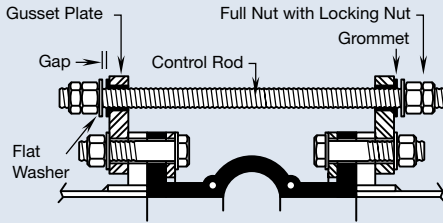


Style 1101DJ
Dismantling Joint with Turnbuckles



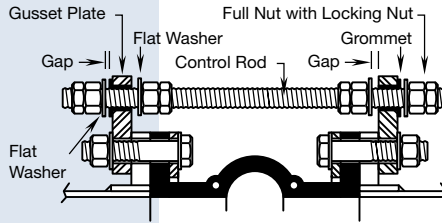
Style GR/B

Outer Grommet, Inner Bare



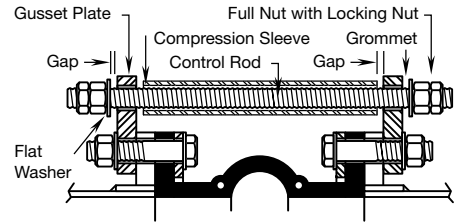
Style GR/W

Outer Grommet, Inner Washer



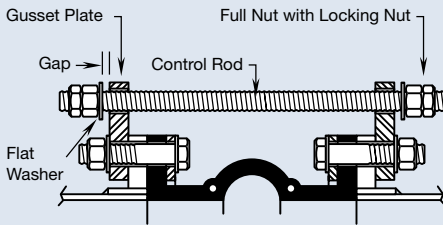
Style W/GS

Outer Washer, Inner Compression Sleeve



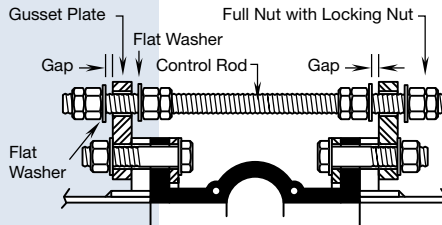
Style W/B

Outer Washer, Inner Bare



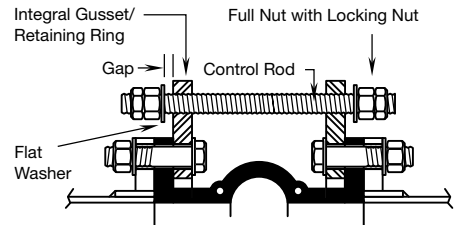
Style W/W

Outer Washer, Inner Washer



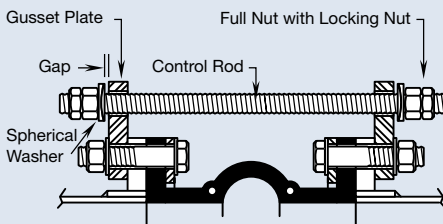
Style INT-W/B

Outer Washer, Inner Bare (Integral Design)



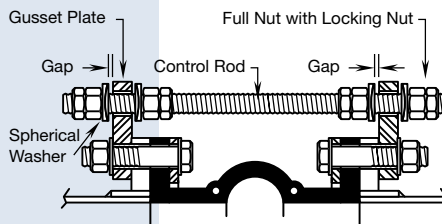
Style SW/B

Outer Spherical Washer, Inner Bare



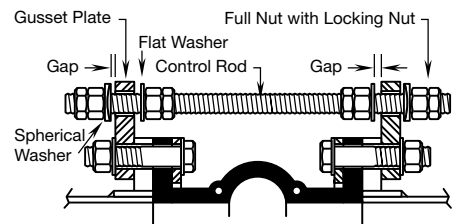
Style SW/SW

Outer Spherical Washer, Inner Spherical Washer



Style SW/W

Outer Spherical Washer, Inner Washer



Pipe SIZE (I.D.) (inch)	Standard LENGTH (F/F) (inch)	MAX Control Unit Length (G inch)	MAX Control Unit Dia. (K inch)	MAX Gusset TH. (J inch)	2 Rod Set MAX Pressure PSI	3 Rod Set MAX Pressure PSI	4 Rod Set MAX Pressure PSI	5 Rod Set MAX Pressure PSI	6 Rod Set MAX Pressure PSI	7 Rod Set MAX Pressure PSI	8 Rod Set MAX Pressure PSI	9 Rod Set MAX Pressure PSI	10 Rod Set MAX Pressure PSI
1	6	15	7-1/2	3/8	225	-	-	-	-	-	-	-	-
1-1/2	6	15	8-1/2	3/8	225	-	-	-	-	-	-	-	-
2	6	15	9-1/4	3/8	225	-	-	-	-	-	-	-	-
2-1/2	6	15	10-1/4	3/8	225	-	-	-	-	-	-	-	-
3	6	15	10-3/4	3/8	225	-	-	-	-	-	-	-	-
4	6	15	12-1/4	3/8	225	-	-	-	-	-	-	-	-
5	6	15	14-1/4	1/2	225	-	-	-	-	-	-	-	-
6	6	15	15-1/4	1/2	225	-	-	-	-	-	-	-	-
8	6	15	19-1/4	1/2	225	-	-	-	-	-	-	-	-
10	8	18	22-3/4	3/4	225	-	-	-	-	-	-	-	-
12	8	18	24-3/4	3/4	190	225	-	-	-	-	-	-	-
14	8	18	25-1/4	3/4	130	195	225	-	-	-	-	-	-
16	8	18	28-1/4	3/4	110	165	220	-	-	-	-	-	-
18	8	18	29-7/8	3/4	89	134	178	-	-	-	-	-	-
20	8	18	32-1/8	3/4	74	111	148	-	-	-	-	-	-
24	10	24	37-5/16	1	69	104	138	-	-	-	-	-	-
30	10	24	44	1-1/4	52	78	104	-	-	-	-	-	-
36	10	27	52-1/2	1-1/2	67	100	134	-	-	-	-	-	-
40	12	27	57-1/2	1-1/2	53	80	106	-	-	-	-	-	-
42	12	27	59-1/4	1-1/2	48	72	96	-	-	-	-	-	-
48	12	27	65-3/4	1-3/4	56	84	112	-	-	-	-	-	-
54	12	32	74-3/4	1-3/4	48	72	96	120	-	-	-	-	-
60	12	32	81-1/4	1-3/4	40	60	80	100	-	-	-	-	-
66	12	32	88	1-7/8	34	51	68	85	-	-	-	-	-
72	12	32	94-1/2	1-7/8	28	42	56	70	85	-	-	-	-
78	12	32	101-7/8	2	24	36	48	60	72	84	-	-	-
84	12	32	108-3/4	2-1/4	20	30	40	50	60	70	80	-	-
90	12	32	117-3/4	2-1/2	20	30	40	50	60	70	80	-	-
96	12	32	124	2-1/2	16	24	32	40	48	56	64	72	80
102	12	32	131	2-1/2	15	23	30	38	45	53	60	68	75
108	12	32	138	2-1/2	13	20	26	33	39	46	52	59	65

Notes:

- Maximum Control Unit lengths and diameters, as well as gusset thickness, are meant to assist in determining adequate clearance and mating hardware selection. The values are maximum values and are based on mild steel design. Dimensions will change when using high tensile steel and with different arrangements. Contact General Rubber and request a specific submittal drawing for your job.
- Expansion joints should be installed between anchors. Anchors should be located at changes in pipe direction and guides should be spaced according to industry standards. Piping must be supported so the expansion joints do not carry any pipe weight. Contact General Rubber for more details.
- WARNING:** Control units (sold separately) must be used when piping is not properly anchored. Number of rods are dependent upon maximum field test pressures. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended.
- Outer and inner Control Unit gaps are set to a maximum of 1/2 the allowable movements, equal on each side so that the sum does not exceed the allowable movement in any one direction.

