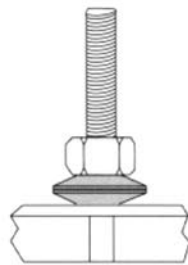


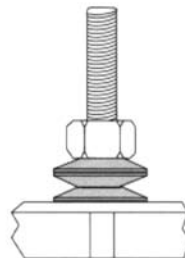
Spring Washers

Spring washers are used with repair products for HDPE pipe to help counteract the problem of pipe contraction during temperature and pressure changes. They are made of a special “spring” grade of stainless steel.

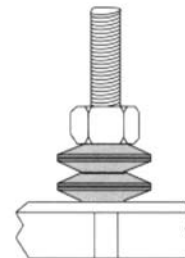
The proper number of bolts have been provided for each fitting based on the limitations on page J-2.



Two Spring Washers



Three Spring Washers



Four Spring Washers

Dimensions of Common HDPE Pipe

NOM. PIPE SIZE	O.D.	SDR 21		SDR 17		SDR 13.5		SDR 11		SDR 9	
		PRESSURE CLASS 80		PRESSURE CLASS 100		PRESSURE CLASS 128		PRESSURE CLASS 160		PRESSURE CLASS 200	
		INSIDE DIA.	WALL THICKNESS	INSIDE DIA.	WALL THICKNESS	INSIDE DIA.	WALL THICKNESS	INSIDE DIA.	WALL THICKNESS	INSIDE DIA.	WALL THICKNESS
3"	3.50	3.167	0.167	3.088	0.206	2.981	0.259	2.864	0.318	2.722	0.389
4"	4.50	4.071	0.214	3.971	0.265	3.833	0.333	3.682	0.409	3.500	0.500
	4.80	4.343	0.229	4.235	0.282	4.089	0.356	3.927	0.436	3.733	0.533
5"	5.56	5.033	0.265	4.909	0.327	4.739	0.412	4.552	0.506	4.327	0.618
6"	6.63	5.994	0.315	5.846	0.390	5.644	0.491	5.420	0.602	5.153	0.736
	6.90	6.243	0.329	6.088	0.406	5.878	0.511	5.645	0.627	5.367	0.767
8"	8.63	7.804	0.411	7.610	0.507	7.347	0.639	7.057	0.784	6.708	0.958
	9.05	8.188	0.431	7.985	0.532	7.709	0.670	7.405	0.823	7.039	1.006
10"	10.75	9.726	0.512	9.485	0.632	9.157	0.796	8.795	0.977	8.361	1.194
	11.10	10.043	0.529	9.794	0.653	9.456	0.822	9.082	1.009	8.633	1.233
12"	12.75	11.536	0.607	11.250	0.750	10.861	0.944	10.432	1.159	9.917	1.417
	13.20	11.943	0.629	11.647	0.776	11.244	0.978	10.800	1.200	10.267	1.467
14"	14.00	12.667	0.667	12.353	0.824	11.926	1.037	11.455	1.273	10.889	1.556
16"	16.00	14.476	0.762	14.118	0.941	13.630	1.185	13.091	1.455	12.444	1.778
18"	18.00	16.286	0.857	15.882	1.059	15.333	1.333	14.727	1.636	14.000	2.000
20"	20.00	18.095	0.952	17.647	1.176	17.037	1.481	16.364	1.818	15.556	2.222
22"	22.00	19.905	1.048	19.412	1.294	18.741	1.630	18.000	2.000	17.111	2.444
24"	24.00	21.714	1.143	21.176	1.412	20.444	1.778	19.636	2.182	18.667	2.667

NOTES:

- This chart is based on information in AWWA Standard ANSI/AWWAC906-90.
- All dimensions are nominal and subject to manufacturing tolerances.