

CLOVER DOME SPRING WASHERS™

Clover Dome™ spring washers are well suited for applications where a belleville washer or disc spring does not provide adequate deflection, or where the load obtained from a wave washer is not sufficient for application. By combining washers in various sequences, each size provides multiple load-carrying or deflection possibilities. These washers have had the set removed during the manufacturing process.

MATERIAL

Stainless steel: 17-7 PH per AMS5529

Carbon steel: Commercial 1074 - certified to ASTM A684

LOAD & DEFLECTION

(Include drawing from catalogue)

Typical load-deflection curves for three characteristic proportions of washers listed are shown Figure 1 below (include graph from catalogue)

From them, loads at intermediate heights may be estimated. The nominal amount of dish or cone (h) is found by subtracting 't' from 'H'.

The typical curves show deflections beyond 75%. The area beyond 75% should be avoided due to partial bottoming of the Clover Dome™ and excessive stress concentrations above 75% deflection

KEY TO MEASUREMENTS

Do = Outside diameter (maximum)

Di = Inside diameter (minimum)

t = Thickness

Lo = Approximate Free Height

L1 = Loaded Height

P1 = Load at deflection F (min/max)

F = Deflection Lo-L1

Dh = Free fit in hole diameter

Dr = Free fit over rod diameter

Pf = Load at flat position

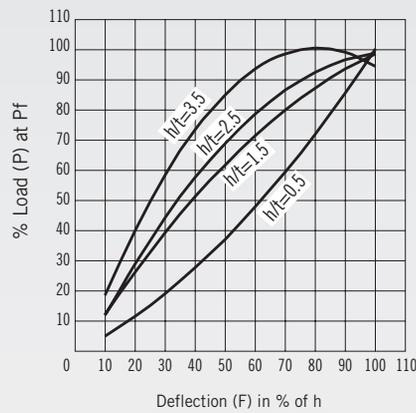
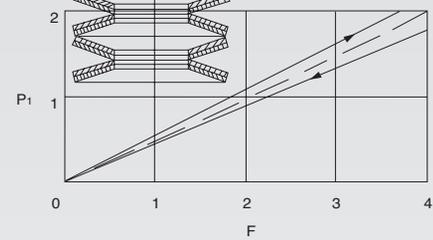
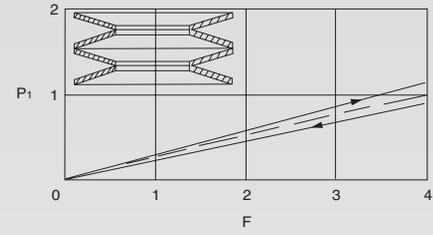
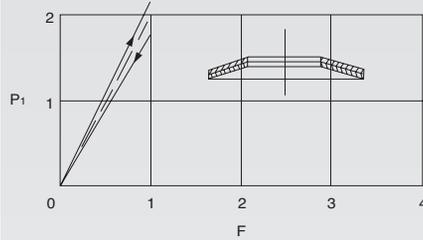
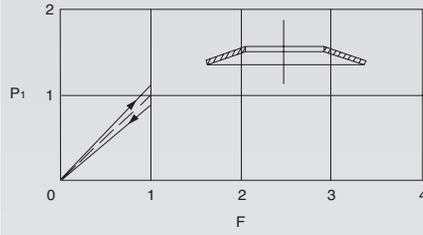
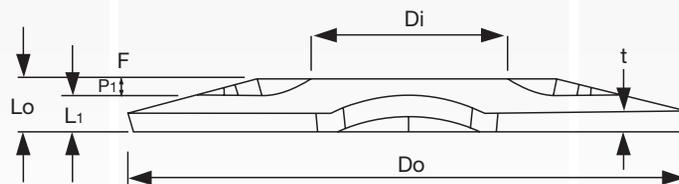


Fig. 1



CLOVER DOME SPRING WASHER™ - STAINLESS / INOX

Part Number	Dr (mm)	Di (mm)	Do (mm)	Dh (mm)	t (mm)	Lo (mm)	L ₁ (mm)	P ₁ (N)	Pf (N)
BC0250-008-S	3.18	3.18	6.35	6.35	0.20	0.56	0.29	27.1 - 40.5	49
BC0250-012-S					0.30	0.66	0.39	78.3 - 117	151
BC0312-012-S	3.51	3.63	7.92	7.95	0.30	0.81	0.43	81.4-122.4	102
BC0312-018-S					0.46	0.97	0.58	198 - 299	396
BC0343-014-S					0.36	0.86	0.48	106.3-159.7	156
BC0343-016-S	4.17	4.29	8.71	8.74	0.41	0.91	0.53	118 - 179	231
BC0343-020-S					0.51	1.02	0.64	231 - 349	463
BC0375-010-S					0.25	0.79	0.39	48-73	44
BC0375-016-S					0.41	0.94	0.54	102 - 155	200
BC0375-018-S	4.95	4.95	9.53	9.53	0.46	0.99	0.59	145 - 220	285
BC0375-020-S					0.51	1.04	0.64	200 - 302	400
BC0562-020-S			14.27	14.30	0.51	1.57	0.77	181 - 274	311
BC0562-030-S					0.76	1.83	1.03	613 - 926	1210
BC0437-018-S	5.59	5.59	11.10	11.13	0.46	1.09	0.62	160.1 - 240.2	316
BC0437-022-S					0.56	1.19	0.72	363.4 - 545.4	725
BC0500-014-S					0.36	1.07	0.53	93.9 - 140.6	160
BC0500-018-S					0.46	1.17	0.64	127.7 - 191.7	222
BC0500-022-S	6.35	6.48	12.70	12.70	0.56	1.27	0.74	303.4 - 455.1	596
BC0500-026-S					0.66	1.37	0.84	397.7 - 596.5	796
BC0709-015-S					0.38	1.70	0.71	79.2 - 118.8	120
BC0709-020-S			18.01	18.26	0.51	1.83	0.84	151 - 226.4	249
BC0709-025-S					0.64	1.96	0.97	252.7 - 379	431
BC0625-018-S					0.46	1.37	0.69	112.5 - 169	196
BC0625-022-S	7.95	8.05	15.88	15.88	0.56	1.47	0.79	233.5 - 350.1	409
BC0625-030-S					0.76	1.68	0.99	626 - 940.6	1232
BC0625-033-S					0.84	1.75	1.07	677.5 - 1016	1352
BC0896-015-S					0.38	2.06	0.80	76.2 - 114.3	85
BC0896-020-S	8.00	8.13	22.76	23.02	0.51	2.18	0.93	141.9 - 212.8	209
BC0896-025-S					0.64	2.31	1.05	241.9 - 362.9	400
BC0750-022-S					0.56	1.65	0.83	205.5 - 308.3	351
BC0750-026-S					0.66	1.75	0.93	326.5 - 489.8	569
BC0750-030-S					0.76	1.85	1.04	458.2 - 687.3	899
BC0750-033-S	9.53	9.65	19.05	19.05	0.84	1.93	1.11	613.9 - 920.8	1205
BC0750-039-S					0.99	2.08	1.26	981.7 - 1472.4	1957
BC0750-043-S					1.09	2.18	1.37	1323.8 - 1985.7	2642
BC1070-020-S		10.16	27.15	28.00	0.51	2.46	1.00	141.8 - 212.7	209
BC1070-025-S					0.64	2.59	1.12	222.3 - 334.4	347
BC0875-030-S	11.13	11.23	22.23	22.23	0.76	2.03	1.08	409.7 - 614.7	716
BC0875-033-S					0.84	2.11	1.16	529.3 - 793.6	1036
BC1000-033-S					0.84	2.29	1.20	454.6 - 681.5	792
BC1000-037-S	12.70	12.83	25.40	25.40	0.94	2.39	1.30	672.1 - 1008.4	1170
BC1000-039-S					0.99	2.44	1.35	822 - 1233.5	1610
BC1000-043-S					1.09	2.54	1.45	1130.7 - 1695.7	2215



CLOVER DOME SPRING WASHER™ - CARBON STEEL

Part Number	Dr (mm)	Di (mm)	Do (mm)	Dh (mm)	t (mm)	Lo (mm)	L ₁ (mm)	P ₁ (N)	Pf (N)
BC0250-008-CA	2.79	3.00	6.35	6.35	0.20	0.57	0.29	19.8 - 29.7	36
BC0250-012-CA	3.18	3.18			0.30	0.66	0.39	98.5 - 147.7	177
BC0312-012-CA	3.51	3.63	7.92	7.95	0.30	0.78	0.43	97.2 - 145.9	159
BC0312-018-CA			8.13	8.20	0.46	0.80	0.58	164.1 - 246.2	252
BC0343-014-CA					0.35	0.80	0.48	121.9 - 182.8	262
BC0343-016-CA	4.17	4.29	8.71	8.74	0.41	0.81	0.53	161.2 - 241.8	319
BC0343-020-CA					0.51	0.84	0.64	179.1 - 268.6	348
BC0375-010-CA					0.25	0.80	0.38	50.4 - 75.6	59
BC0375-016-CA					0.41	0.82	0.54	165.3 - 247.9	368
BC0375-018-CA	4.83	4.95	9.65	9.93	0.46	0.83	0.59	177.8 - 266.7	303
BC0375-020-CA					0.51	0.82	0.64	240.0 - 360.0	296
BC0562-020-CA			14.27	14.30	0.51	1.42	0.77	151.9 - 227.9	259
BC0562-030-CA					0.76	1.52	1.03	535.6 - 803.4	1334
BC0437-018-CA	5.49	5.59	11.10	11.13	0.45	1.08	0.62	198.3 - 297.4	324
BC0437-022-CA					0.55	1.17	0.72	349.1 - 523.7	510
BC0500-014-CA					0.35	1.07	0.53	90.5 - 135.7	245
BC0500-018-CA					0.45	1.16	0.64	176.6 - 264.9	358
BC0500-022-CA	6.35	6.48	12.75	13.11	0.55	1.25	0.74	327.3 - 491.0	660
BC0500-026-CA					0.65	1.34	0.84	467.0 - 700.5	693
BC0709-015-CA					0.38	1.70	0.71	914.1 - 1371.1	2060
BC0709-020-CA			18.26	18.67	0.51	1.80	0.84	112.2 - 168.2	392
BC0709-025-CA					0.64	1.90	0.96	436.1 - 654.1	2021
BC0625-018-CA					0.45	1.36	0.69	140.1 - 210.1	422
BC0625-022-CA		8.05	16.00	16.28	0.55	1.45	0.79	250.8 - 376.1	746
BC0625-030-CA					0.75	1.63	0.99	594.6 - 891.9	1295
BC0625-033-CA	7.95				0.85	1.72	1.07	778.4 - 1167.5	1619
BC0896-015-CA					0.38	2.13	0.80	68.1 - 102.2	172
BC0896-020-CA		8.13	22.99	23.02	0.51	2.26	0.94	118.0 - 176.9	343
BC0896-025-CA					0.64	2.36	1.07	240.8 - 361.2	1391
BC0750-022-CA					0.55	1.64	0.83	253.3 - 380.0	716
BC0750-026-CA					0.65	1.73	1.26	271.9 - 407.9	834
BC0750-030-CA					0.75	1.82	1.04	544.2 - 816.3	1275
BC0750-033-CA	9.53	9.65	19.30	19.46	0.85	1.91	1.11	782.5 - 1173.7	1834
BC0750-039-CA					1.00	2.05	1.26	815.7 - 1223.5	2286
BC0750-043-CA					1.10	2.14	1.37	1462.8 - 2194.2	3286
BC1070-020-CA		10.16	27.15	28.19	0.51	2.51	1.01	127.6 - 191.4	373
BC1070-025-CA					0.64	2.54	1.12	182.5 - 273.7	1109
BC0875-030-CA	11.13	11.23	22.33	22.63	0.75	2.02	1.08	489.8 - 734.7	1157
BC0875-033-CA					0.85	2.11	1.16	590.2 - 885.3	1055
BC1000-033-CA					0.85	2.30	1.20	582.7 - 874.0	1709
BC1000-037-CA	12.70	12.83	25.53	25.80	0.95	2.39	1.30	733.1 - 1099.7	1766
BC1000-039-CA					1.00	2.43	1.26	952.5 - 1428.7	2158
BC1000-043-CA					1.10	2.52	1.45	827.3 - 1241.0	2570

