

BELLEVILLE SPRING WASHERS

Stock sizes in high-carbon and stainless steels

Belleville spring washers are especially suited for applications requiring high loads in small spaces. By combining them in varying sequences, each size gives numerous load-carrying possibilities. These washers have had all set removed during the manufacturing process.

Material

Spring Steel

Commercial 1074 - Certified to ASTM-A684

Stainless Steel (Parts with suffix "S")

Thicknesses (t) up to and including 0.072 in (1.83 mm):

- Commercial - Type 302,
- Government AMS 5906 type 302 (Chemistry only).

Thicknesses (t) over 0.072 in (1.83 mm):

- Commercial - Type 17-7 PH certified to AMS 5528.

Certificate of compliance available upon request. Certificate of chemical analysis available at extra cost.

Load and Deflection

Typical load-deflection curves for three characteristic proportions of washers listed are shown in Figure 1 below. From them, loads at intermediate heights may be estimated. The nominal amount of dish or cone (h) is found by subtracting "t" from "H".

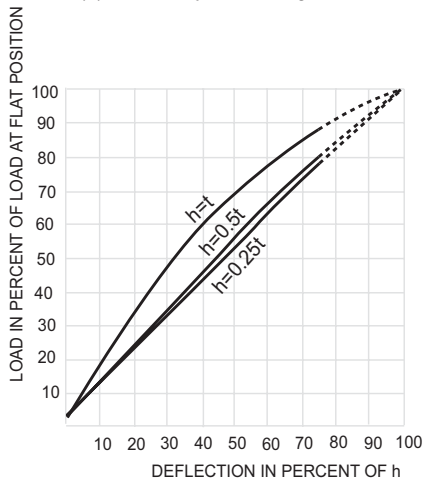


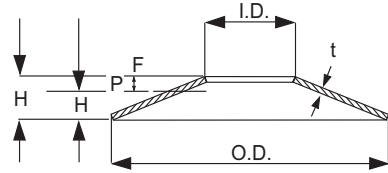
Figure 1

EXAMPLE: Using part B1250-040, estimate the load at 75% deflection.

$h = H - t = 0.082 \text{ in. (2.08 mm)} - 0.040 \text{ (1.02 mm)} = 0.042 \text{ (1.07 mm)}$; $h/t = 0.042/0.040 \sim 1$

From Fig. 1, using the curve "h = t", the load at 75% of the deflection is approximately 87% of the load at flat position. From the tables (see following pages), calculated load at flat is 330 lbs (1,468 N). $.87 \times 330 = 287 \text{ lbs (1,277 N)}$.

The typical curves in Fig. 1 are shown with dotted lines beyond 75% of deflection to indicate that load characteristics in this area are not reliable because of partial bottoming of the washers.



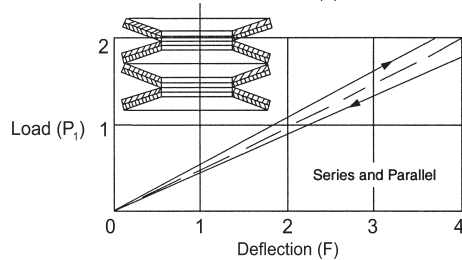
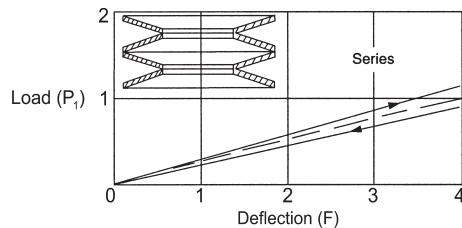
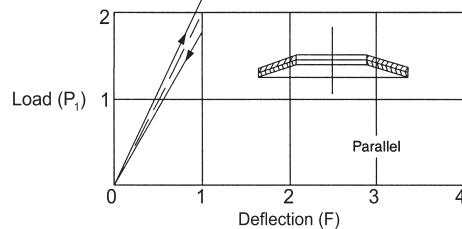
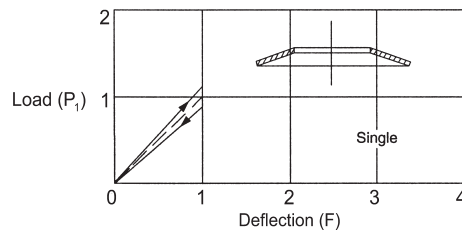
O.D.= Outside Diameter H₁= Loaded Height
I.D.= Inside Diameter P₁= Load at deflection F
t = Thickness F= Deflection H-H₁
H = Approx. Free height

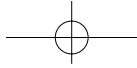
Stacked Spring Washers

Additional load or deflection can be obtained by stacking spring washers in series or in parallel. See charts below.

Contact our engineering department for tolerances.

Shown below are the comparative force/deflection graphs for the alternative methods of stacking.





贝勒维尔弹簧垫圈

高碳钢和不锈钢材质的常备元件

贝勒维尔弹簧垫圈特别适用于空间狭小、负载很大的场合。通过按不同的序列进行组合，每种尺寸都能承受多种载荷。在制造过程中，这些垫圈需进行强压处理。

材质

弹簧钢

工业用1074 - 经ASTM-A684认证

不锈钢（后缀“S”）

厚度（t）0.072 in (1.83mm) 或以下：

- 工业用 - 302钢；
- 美国政府行政管理学会5906, 302钢（仅化学特性）。

厚度（t）大于0.072 in (1.83 mm)：

- 工业用 - 17-7 PH, 经AMS 5528认证。

如果需要的话，可以免费提供合格证书。客户要求化学分析证书，需支付额外费用。

载荷和变形量

图1所示为在所列出的垫圈的三种特性参数下，载荷-变形量的典型曲线。根据这些曲线，可估算出变形量为50%时垫圈的承载载荷。内锥高度的公称值h等于垫圈自由高度H减去垫圈的厚度t。

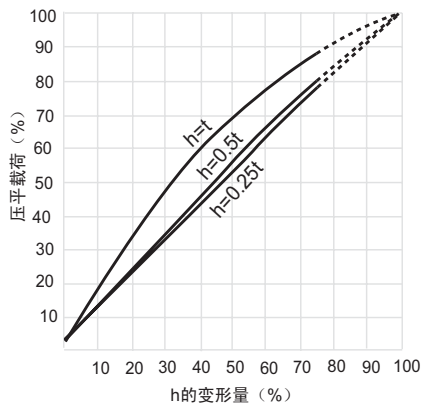


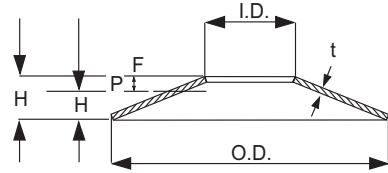
图 1

以部件B1250-040为例，估算75%变形量时的载荷。

$h = H - t = 0.082 \text{ in. (2.08 mm)} - 0.040 \text{ (1.02 mm)} = 0.042 \text{ (1.07 mm)}$; $h/t = 0.042/0.040 \sim 1$

在图1中，根据“ $h = t$ ”的对应曲线，75%变形量时的载荷约为压平载荷的87%。根据以下三页的表格查得，压平载荷为330 lbs (1,468 N)，则75%变形量时的载荷为 $87 \times 330 = 287 \text{ lbs (1,277 N)}$ 。

图2中典型曲线上的虚线部分表明了变形量超过75%时的负载情况，这个区域的负载特性不可靠，因为部分垫圈被压至最低点。



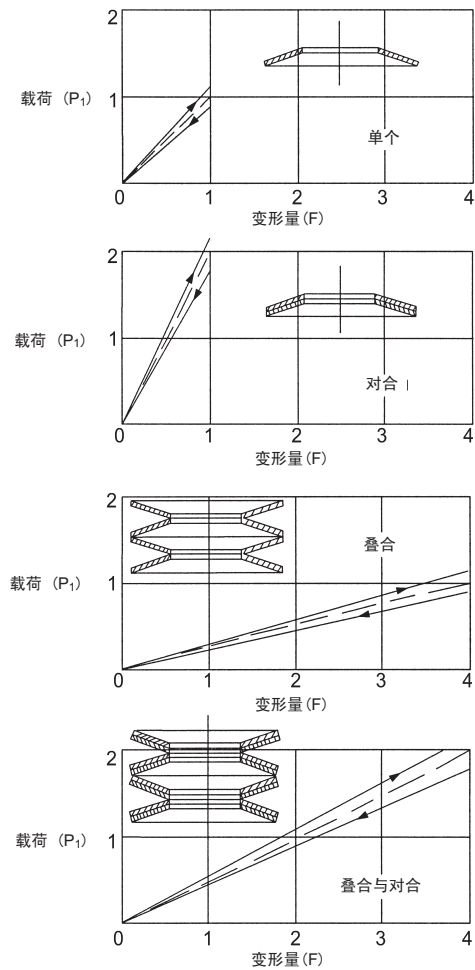
O.D. = 外径
I.D. = 内径
t = 垫圈厚度
H = 自由高度（估算）
 H_1 = 负载高度
 P_1 = 变形量F时的载荷
F = 变形量 $H - H_1$

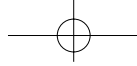
堆叠式贝勒维尔弹簧垫圈

通过对合或叠合的方式堆叠垫圈，可得到更大的载荷或变形量，见下图。

关于产品的具体尺寸公差，请联系我们的工程部门。

以下为不同堆叠方式的载荷/变形量的特性曲线图。





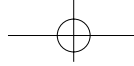
BELLEVILLE SPRING WASHERS 贝勒维尔弹簧垫圈																				
Catalog Number* 编号*	Free Fit over RodØ 轴配合直径 Ø			Minimum I.D. 最小内径		Maximum O.D. 最大外径		Free Fit in HoleØ 孔配合直径 Ø			Stock Thickness (t) 垫圈厚度(t)		Free Height (H) Approximate 自由高度 (H) (估算)		Loaded Height (H _L) 加载高度 (H _L)		Load at H _L (P _L) (Min./Max.) H _L 下的载荷(P _L) (最小/最大)		Ref. Load at Flat Position (P) 压平载荷 (P) (参考)	
	in	in	mm	in	mm	in	mm	in	in	mm	in	mm	in	mm	in	mm	lb	N	lb	N
B0187-007											0.0065	0.17	0.013	0.33	0.010	0.25	5.7-7.8	25.4-34.7	9.9	44
B0187-007-S	3/32	0.093	2.36	0.093	2.36	0.187	4.75	3/16	0.1875	4.76	0.0065	0.17	0.013	0.33	0.010	0.25	5.7-7.8	25.4-34.7	9.9	44
B0187-010											0.010	0.25	0.015	0.38	0.013	0.32	13-17.6	57.8-78.3	27.8	124
B0187-010-S											0.010	0.25	0.015	0.38	0.013	0.32	13-17.6	57.8-78.3	27.8	124
B0250-009											0.0086	0.22	0.017	0.44	0.013	0.33	9.9-13.5	44-60.1	16.9	75
B0250-009-S											0.0086	0.22	0.017	0.44	0.013	0.33	9.9-13.5	44-60.1	16.9	75
B0250-013	1/8	0.125	3.18	0.125	3.18	0.250	6.35	1/4	0.250	6.35	0.0133	0.34	0.020	0.51	0.017	0.43	22-30	97.9-133.5	48	214
B0250-013-S											0.0133	0.34	0.020	0.51	0.017	0.43	22-30	97.9-133.5	48	214
B0375-019						0.375	9.53	3/8	0.375	9.53	0.0185	0.47	0.028	0.71	0.023	0.58	35.3-47.7	156.7-211.8	73	325
B0281-010											0.010	0.25	0.020	0.51	0.015	0.38	12.8-17.3	56.8-76.8	23	102
B0281-013											0.013	0.33	0.021	0.53	0.017	0.43	20.8-28.2	92.5-125.4	43	191
B0281-015	#6	0.138	3.51	0.138	3.51	0.281	7.14	9/32	0.281	7.14	0.015	0.38	0.023	0.58	0.019	0.48	28.5-38.5	124.3-173.2	62	276
B0281-015-S											0.015	0.38	0.023	0.58	0.019	0.48	28.5-38.5	126.8-171.2	62	276
B0437-022						0.437	11.10	7/16	0.438	11.13	0.022	0.56	0.032	0.81	0.027	0.69	46.8-63.3	208.2-281.6	99	440
B0312-011											0.0108	0.27	0.022	0.55	0.016	0.41	15.8-21.4	70.3-95.2	27	120
B0312-011-S	5/32	0.156	3.97	0.156	3.96	0.312	7.92	5/16	0.313	7.95	0.0108	0.27	0.022	0.55	0.016	0.41	15.8-21.4	70.3-95.2	27	120
B0312-017											0.0166	0.42	0.025	0.64	0.021	0.53	35-48	155.7-214	75	334
B0312-017-S											0.0166	0.42	0.025	0.64	0.021	0.53	35-48	155.7-214	75	334
B0343-013											0.013	0.33	0.024	0.61	0.018	0.46	21.3-28.8	94.6-127.9	38	169
B0343-016											0.016	0.41	0.026	0.66	0.021	0.53	30.6-41.4	136.1-184.1	65	289
B0343-019	#8	0.164	4.17	0.164	4.17	0.343	8.71	11/32	0.344	8.74	0.0185	0.47	0.028	0.71	0.023	0.58	43-68	191.3-302.5	93	414
B0343-019-S											0.0185	0.47	0.028	0.71	0.023	0.58	43-68	191.3-302.5	93	414
B0499-025						0.500	12.70	1/2	0.500	12.70	0.025	0.64	0.037	0.94	0.031	0.79	61.6-83.4	274-371	131	583
B0375-015											0.015	0.38	0.027	0.69	0.021	0.53	29-40	129-177.9	55	245
B0375-015-S											0.0150	0.38	0.027	0.69	0.021	0.53	29-40	129-177.9	55	245
B0375-018											0.0175	0.44	0.028	0.71	0.023	0.58	39.1-52.9	173-236	81	360
B0375-020	3/16	0.188	4.78	0.190	4.83	0.375	9.53	3/8	0.375	9.53	0.020	0.51	0.030	0.76	0.025	0.64	51-69	227-307	110	489
B0375-020-S											0.020	0.51	0.030	0.76	0.025	0.64	51-69	227-307	110	489
B0375-030											0.030	0.76	0.036	0.91	0.033	0.84	106-144	471.5-640.6	233	1036
B0562-019						0.562	14.27	9/16	0.563	14.30	0.019	0.48	0.037	0.94	0.028	0.71	38.3-51.8	169-231	67	298
B0562-028											0.028	0.71	0.042	1.07	0.035	0.89	74-100	329-445	163	725
B0437-016											0.016	0.41	0.031	0.79	0.023	0.58	34-46	151.2-205	60	267
B0437-016-S											0.016	0.41	0.031	0.79	0.023	0.58	34-46	151.2-205	60	267
B0437-020	#12	0.216	5.49	0.220	5.59	0.437	11.10	7/16	0.438	11.13	0.020	0.51	0.032	0.81	0.026	0.66	48.5-65.6	213-393	98	436
B0437-023											0.023	0.58	0.034	0.86	0.029	0.74	64.6-87.4	289-396	139	618
B0687-034						0.687	17.45	11/16	0.688	17.48	0.034	0.86	0.050	1.27	0.042	1.07	106-144	471-641	229	1019
B0500-018											0.018	0.46	0.034	0.86	0.026	0.66	38-52	169-231	70	311
B0500-018-S											0.018	0.46	0.034	0.86	0.026	0.66	38-52	169-231	70	311
B0500-022											0.0215	0.55	0.036	0.91	0.029	0.74	55-77	245-343	115	512
B0500-022-S											0.0215	0.55	0.036	0.91	0.029	0.74	55-77	245-343	115	512
B0500-025											0.025	0.64	0.038	0.97	0.031	0.79	80-110	356-489	160	712
B0500-025-S	1/4	0.250	6.35	0.255	6.48	0.500	12.70	1/2	0.500	12.70	0.025	0.64	0.038	0.97	0.031	0.79	80-110	356-489	160	712
B0500-038											0.038	0.97	0.047	1.19	0.043	1.09	161-219	716-974	400	1779
B0500-038-S											0.038	0.97	0.047	1.19	0.043	1.09	161-219	716-974	400	1779
B0637-032						0.637	16.18	41/64	0.641	16.28	0.032	0.81	0.048	1.22	0.040	1.02	100-136	444-605	222	988
B0750-025											0.025	0.64	0.049	1.24	0.037	0.94	65-89	289-395	114	507
B0750-036						0.750	19.05	3/4	0.750	19.05	0.036	0.91	0.054	1.37	0.045	1.14	125-169	555-750	261	1161
B0750-052											0.052	1.32	0.065	1.65	0.058	1.47	264-358	1174-1592	560	2491
B0625-022											0.022	0.56	0.042	1.07	0.032	0.81	59-81	262-360	105	467
B0625-022-S											0.022	0.56	0.042	1.07	0.032	0.81	59-81	262-360	105	467
B0625-032						0.625	15.88	5/8	0.625	15.88	0.032	0.81	0.048	1.22	0.040	1.02	123-167	547-743	260	1157
B0625-032-S											0.032	0.81	0.048	1.22	0.040	1.02	123-167	547-743	260	1157
B0625-047	5/16	0.3125	7.94	0.317	8.05						0.047	1.19	0.059	1.50	0.053	1.35	255-345	1134-1535	600	2669
B0625-047-S											0.047	1.19	0.059	1.50	0.053	1.35	255-345	1134-1535	600	2669
B0937-030											0.030	0.76	0.060	1.52	0.045	1.14	93.5-127	415.9-564.9	159	707
B0937-045						0.937	23.80	15/16	0.938	23.83	0.045	1.14	0.067	1.70	0.056	1.42	185-251	823-1117	395	1757
B0937-045-S											0.045	1.14	0.067	1.70	0.056	1.42	185-251	823-1117	395	1757
B0750-028											0.028	0.71	0.051	1.30	0.039	0.99	93-127	414-565	175	778
B0750-028-S											0.028	0.71	0.051	1.30	0.039	0.99	93-127	414-565	175	778
B0750-034											0.034	0.86	0.055	1.40	0.044	1.12	141-191	627-850	282	1254
B0750-034-S	3/8	0.375	9.53	0.380	9.65	0.750	19.05	3/4	0.750	19.05	0.034	0.86	0.055	1.40	0.044	1.12	141-191	627-850	282	1254
B0750-040											0.040	1.02	0.059	1.50	0.049	1.24	199-271	885-1205	415	1846
B0750-040-S											0.040	1.02	0.059	1.50	0.049	1.24	199-271	885-1205	415	1846
B0750-056											0.056	1.42	0.070	1.78	0.063	1.60	365-495	1624-2202	845	3759

* Numbers with the suffix "S" are stainless steel.

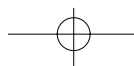
* 带有后缀“S”的编号表示不锈钢材质。

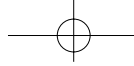
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BELLEVILLE SPRING WASHERS 贝勒维尔弹簧垫圈																					
Catalog Number* 编号*	Free Fit over RodØ 轴配合直径 Ø			Minimum I.D. 最小内径		Maximum O.D. 最大外径		Free Fit in HoleØ 孔配合直径 Ø			Stock Thickness (t) 垫圈厚度(t)		Free Height (H) Approximate 自由高度 (H) (估算)		Loaded Height (H ₁) 负载高度 (H ₁)		Load at H ₁ (P ₁) (Min./Max.) H ₁ 下的载荷(P ₁) (最小/最大)		Ref. Load at Flat Position (P) 压平载荷 (P) (参考)		
	in	in	mm	in	mm	in	mm	in	in	mm	in	mm	in	mm	in	mm	lb	N	lb	N	
B0750-056-S						0.750	19.05	3/4	0.750	19.05	0.056	1.42	0.070	1.78	0.063	1.60	365-495	1624-2202	845	3759	
B0950-047						0.950	24.13	61/64	0.953	24.21	0.047	1.19	0.070	1.78	0.058	1.47	222-300	986-1334	463	2060	
B1125-053	3/8	0.375	9.53	0.380	9.65						0.053	1.35	0.080	2.03	0.066	1.68	254-344	1128-1530	535	2380	
B1125-053-S						1.125	28.58	1 1/8	1.125	28.58	0.053	1.35	0.080	2.03	0.066	1.68	254-344	1128-1530	535	2380	
B1125-078											0.078	1.98	0.097	2.46	0.088	2.24	507-687	2251-3056	1235	5494	
B0875-031											0.031	0.79	0.059	1.50	0.045	1.14	114-156	507-694	205	912	
B0875-031-S	7/16	0.4375	11.11	0.442	11.23	0.875	22.23	7/8	0.875	22.23	0.031	0.79	0.059	1.50	0.045	1.14	114-156	507-694	205	912	
B0875-045											0.045	1.14	0.067	1.70	0.056	1.42	229-311	1018-1383	495	2202	
B0875-045-S											0.045	1.14	0.067	1.70	0.056	1.42	229-311	1018-1383	495	2202	
B1000-035											0.035	0.89	0.067	1.70	0.051	1.30	148-202	658-899	260	1157	
B1000-035-S											0.035	0.89	0.067	1.70	0.051	1.30	148-202	658-899	260	1157	
B1000-043											0.043	1.09	0.071	1.80	0.057	1.45	213-288	943-1281	431	1917	
B1000-043-S						1.000	25.40	1	1.000	25.40	0.043	1.09	0.071	1.80	0.057	1.45	213-288	943-1281	431	1917	
B1000-050											0.050	1.27	0.075	1.91	0.062	1.57	289-391	1286-1739	600	2669	
B1000-050-S											0.050	1.27	0.075	1.91	0.062	1.57	289-391	1286-1739	600	2669	
B1000-073	1/2	0.500	12.70	0.505	12.83						0.073	1.85	0.091	2.31	0.082	2.08	573-777	2549-3456	1335	5938	
B1000-073-S											0.073	1.85	0.091	2.31	0.082	2.08	573-777	2549-3456	1335	5938	
B1262-060						1.262	32.05	1 17/64	1.266	32.16	0.060	1.52	0.091	2.31	0.075	1.91	348-470	1548-2091	731	3252	
B1500-047											0.047	1.19	0.093	2.36	0.070	1.78	213-289	947-1285	366	1628	
B1500-070						1.500	38.10	1 1/2	1.500	38.10	0.070	1.78	0.104	2.64	0.087	2.21	420-570	1868-2535	896	3986	
B1500-070-S											0.070	1.78	0.104	2.64	0.087	2.21	420-570	1868-2535	896	3986	
B1500-102											0.102	2.59	0.128	3.25	0.115	2.92	883-1195	3928-5316	2060	9163	
B1125-038											0.038	0.97	0.073	1.85	0.055	1.40	165-225	733-1001	285	1268	
B1125-038-S	9/16	0.5625	14.29	0.567	14.40	1.125	28.58	1 1/8	1.125	28.58	0.038	0.97	0.073	1.85	0.055	1.40	165-225	733-1001	285	1268	
B1125-056											0.056	1.42	0.084	2.13	0.070	1.78	344-466	1530-2073	735	3269	
B1125-056-S											0.056	1.42	0.084	2.13	0.070	1.78	344-466	1530-2073	735	3269	
B1250-040											0.040	1.02	0.082	2.08	0.061	1.55	196-265	867-1179	330	1468	
B1250-040-S											0.040	1.02	0.082	2.08	0.061	1.55	196-265	867-1179	330	1468	
B1250-051											0.051	1.30	0.087	2.21	0.069	1.75	306-374	1361-1664	582	2589	
B1250-062						1.250	31.75	1 1/4	1.250	31.75	0.062	1.57	0.092	2.34	0.077	1.96	403-547	1793-2433	870	3870	
B1250-062-S											0.062	1.57	0.092	2.34	0.077	1.96	403-547	1793-2433	870	3870	
B1250-089	5/8	0.625	15.88	0.630	16.00						0.089	2.26	0.111	2.82	0.100	2.54	833-1127	3705-5013	1914	8514	
B1250-089-S											0.089	2.26	0.111	2.82	0.100	2.54	833-1127	3705-5013	1914	8514	
B1875-057											0.057	1.45	0.115	2.92	0.085	2.16	333-407	1481-1810	522	2322	
B1875-086						1.875	47.63	1 7/8	1.875	47.63	0.086	2.18	0.129	3.28	0.107	2.72	620-840	2758-3737	1319	5867	
B1875-086-S											0.086	2.18	0.129	3.28	0.107	2.72	620-840	2758-3737	1319	5867	
B1875-127											0.127	3.23	0.158	4.01	0.142	3.61	1399-1893	5223-8420	3105	13812	
B1375-044											0.044	1.12	0.088	2.24	0.065	1.65	225-305	1001-1357	375	1668	
B1375-044-S	11/16	0.6875	17.46	0.692	17.58	1.375	34.93	1 3/8	1.375	34.93	0.044	1.12	0.088	2.24	0.065	1.65	225-305	1001-1357	375	1668	
B1375-067											0.067	1.70	0.101	2.57	0.084	2.13	508-622	2260-2767	1025	4559	
B1500-045											0.045	1.14	0.093	2.36	0.069	1.75	241-327	1072-1450	400	1779	
B1500-045-S											0.045	1.14	0.093	2.36	0.069	1.75	241-326	1072-1450	400	1779	
B1500-060											0.060	1.52	0.102	2.59	0.081	2.06	387-523	1721-2326	774	3443	
B1500-062-S						1.500	38.10	1 1/2	1.500	38.10	0.062	1.57	0.107	2.72	0.081	2.06	364-546	1618-2428	774	3443	
B1500-072											0.072	1.83	0.107	2.72	0.089	2.26	565-765	2513-3403	1180	5249	
B1500-072-S	3/4	0.750	19.05	0.755	19.18						0.072	1.83	0.107	2.72	0.089	2.26	565-765	2513-3403	1180	5249	
B1500-107											0.107	2.72	0.134	3.40	0.121	3.07	1190-1610	5293-7162	2833	12602	
B1500-107-S											0.107	2.72	0.134	3.40	0.121	3.07	1190-1610	5293-7162	2833	12602	
B2250-068											0.068	1.73	0.137	3.48	0.103	2.62	463-553	2059-2460	732	3256	
B2250-102						2.250	57.15	2 1/4	2.250	57.15	0.102	2.59	0.153	3.89	0.127	3.23	910-1113	4048-4951	1822	8105	
B2250-150											0.150	3.81	0.188	4.78	0.169	4.29	1853-2509	8242-11161	4295	19105	
B1750-057											0.057	1.45	0.114	2.90	0.085	2.16	382-518	1699-2304	650	2891	
B1750-057-S	7/8	0.875	22.23	0.880	22.35	1.750	44.45	1 3/4	1.750	44.45	0.057	1.45	0.114	2.90	0.085	2.16	382-518	1699-2304	650	2891	
B1750-085											0.085	2.16	0.128	3.25	0.106	2.69	715-1105	3180-4915	1630	7251	
B1750-085-S											0.085	2.16	0.128	3.25	0.106	2.69	600-1220	2668-5427	1630	7251	
B2000-065											0.065	1.65	0.130	3.30	0.098	2.49	502-679	2233-3020	860	3825	
B2000-065-S											0.065	1.65	0.130	3.30	0.098	2.49	502-679	2233-3020	860	3825	
B2000-084											0.084	2.13	0.136	3.45	0.110	2.79	727-983	3322-4372	1488	6619	
B2000-097	1	1.000	25.40	1.000	25.40	2.000	50.80	2	2.000	50.80	0.097	2.46	0.145	3.68	0.121	3.07	1002-1358	4457-6041	2140	9519	
B2000-097-S											0.097	2.46	0.145	3.68	0.121	3.07	1002-1358	4457-6041	2140	9519	
B2000-142											0.142	3.61	0.177	4.50	0.160	4.06	2048-2772	9110-12330	4824	21458	
B3000-090						3.000	76.20	3	3.000	76.20	0.090	2.29	0.180	4.57	0.135	3.43	727-983	3234-4372	1244	5534	
B3000-135											0.135	3.43	0.202	5.13	0.168	4.27	1548-1893	6886-8420	3118	13870	
B2250-073	1 1/8	1.125	28.58	1.125	28.58	2.250	57.15	2 1/4	2.250	57.15	0.073	1.85	0.148	3.76	0.113	2.87	621-840	2762-3736	1100	4893	





BELLEVILLE SPRING WASHERS 贝勒维尔弹簧垫圈																				
Catalog Number* 编号*	Free Fit over RodØ 轴配合直径 Ø			Minimum I.D. 最小内径		Maximum O.D. 最大外径		Free Fit in HoleØ 孔配合直径 Ø			Stock Thickness (t) 垫圈厚度(t)		Free Height (H) Approximate 自由高度 (H) (估算)		Loaded Height (H _i) 负载高度 (H _i)		Load at H _i (P _i) (Min./Max.) H _i 下的载荷(P _i) (最小/最大)		Ref. Load at Flat Position (P) 压平载荷 (P) (参考)	
	in	in	mm	in	mm	in	mm	in	in	mm	in	mm	in	mm	in	mm	lb	N	lb	N
B2250-111	1 1/8	1.125	28.58	1.125	28.58	2.250	57.15	2 1/4	2.250	57.15	0.111	2.82	0.165	4.19	0.139	3.53	1241-1679	5520-7468	2780	12366
B2250-159											0.159	4.04	0.198	5.03	0.179	4.55	2550-3460	11343-15390	5973	26569
B2500-080											0.080	2.03	0.160	4.06	0.120	3.05	739-1000	3287-4448	1260	5605
B2500-080-S											0.080	2.03	0.160	4.06	0.120	3.05	739-1000	3287-4448	1260	5605
B2500-120											0.120	3.05	0.180	4.57	0.150	3.81	1496-2024	6655-9003	3200	14234
B2500-120-S	1 1/4	1.250	31.75	1.250	31.75	2.500	63.50	2 1/2	2.500	63.50	0.120	3.05	0.180	4.57	0.150	3.81	1469-2024	6655-9003	3200	14234
B2500-175											0.175	4.45	0.219	5.56	0.197	5.00	3085-4175	13722-18571	7149	31800
B3750-168						3.750	95.25	3 3/4	3.750	95.25	0.168	4.27	0.251	6.38	0.209	5.31	2348-2870	10444-12766	4754	21147
B2750-087	1 3/8	1.375	34.93	1.375	34.93	2.750	69.85	2 3/4	2.750	69.85	0.087	2.21	0.173	4.39	0.132	3.35	816-1104	3630-4911	1440	6405
B2750-132											0.132	3.35	0.196	4.98	0.165	4.19	1658-2243	7375-9977	3210	14279
B3000-093	1 1/2	1.500	38.10	1.500	38.10	3.000	76.20	3	3.000	76.20	0.093	2.36	0.189	4.80	0.143	3.63	944-1277	4199-5681	1630	7251
B3000-143											0.143	3.63	0.213	5.41	0.180	4.57	2052-2508	9127-11156	4380	19483
B4000-125	2	2.000	50.80	2.000	50.80	4.000	101.60	4	4.000	101.60	0.125	3.18	0.250	6.35	0.187	4.75	1709-2312	7602-10284	2910	12944
B4000-187											0.187	4.75	0.280	7.11	0.233	5.92	3409-4612	15163-20514	7280	32383

* Numbers with the suffix "S" are stainless steel.
* 带有后缀“S”的编号表示不锈钢材质。