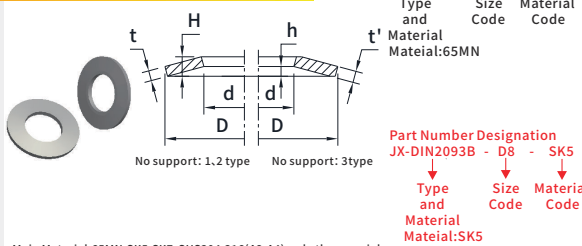


STAMPING FASTENERS SERIES

GB/T 1972B-DIN2093 Butterfly Washer



Main Material: 65MN, SK5, SK7, SUS304, 316(A2, A4) and other special customized material
Surface Treatment: stainless steel curing polished original color or spring steel in black, mechanical galvanizing, nickel plating, Dacromet coating treatment

Unit:mm

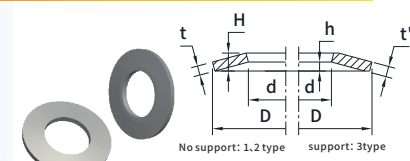
$$B \quad D/t \approx 28; h_0/t \approx 0.75; E=20600N/mm^2; \mu=0.3$$

Size D	P/N				d	t(t')	h	H	Weight 1000Pcs kg	Gasket type
	65MN	Sk5	Sk7	Stainless steel						
8	JX-DIN2093B-D8-65MN	JX-DIN2093B-D8-SK5	JX-DIN2093B-D8-SK7	JX-DIN2093B-D8-SS	4.2	0.3	0.25	0.55	0.086	1
10	JX-DIN2093B-D10-65MN	JX-DIN2093B-D10-SK5	JX-DIN2093B-D10-SK7	JX-DIN2093B-D10-SS	5.2	0.4	0.30	0.70	0.180	
12.5	JX-DIN2093B-D12.5-65MN	JX-DIN2093B-D12.5-SK5	JX-DIN2093B-D12.5-SK7	JX-DIN2093B-D12.5-SS	6.2	0.5	0.35	0.85	0.363	
14	JX-DIN2093B-D14-65MN	JX-DIN2093B-D14-SK5	JX-DIN2093B-D14-SK7	JX-DIN2093B-D14-SS	7.2	0.5	0.40	0.90	0.444	
16	JX-DIN2093B-D16-65MN	JX-DIN2093B-D16-SK5	JX-DIN2093B-D16-SK7	JX-DIN2093B-D16-SS	8.2	0.6	0.45	1.05	0.698	
18	JX-DIN2093B-D18-65MN	JX-DIN2093B-D18-SK5	JX-DIN2093B-D18-SK7	JX-DIN2093B-D18-SS	9.2	0.7	0.50	1.2	1.030	
20	JX-DIN2093B-D20-65MN	JX-DIN2093B-D20-SK5	JX-DIN2093B-D20-SK7	JX-DIN2093B-D20-SS	10.2	0.8	0.55	1.35	1.460	
22.5	JX-DIN2093B-D22.5-65MN	JX-DIN2093B-D22.5-SK5	JX-DIN2093B-D22.5-SK7	JX-DIN2093B-D22.5-SS	11.2	0.8	0.65	1.45	1.880	
25	JX-DIN2093B-D25-65MN	JX-DIN2093B-D25-SK5	JX-DIN2093B-D25-SK7	JX-DIN2093B-D25-SS	12.2	0.9	0.70	1.6	2.640	
28	JX-DIN2093B-D28-65MN	JX-DIN2093B-D28-SK5	JX-DIN2093B-D28-SK7	JX-DIN2093B-D28-SS	14.2	1	0.80	1.8	3.590	
31.5	JX-DIN2093B-D31.5-65MN	JX-DIN2093B-D31.5-SK5	JX-DIN2093B-D31.5-SK7	JX-DIN2093B-D31.5-SS	16.3	1.25	0.90	2.15	5.600	
35.5	JX-DIN2093B-D35.5-65MN	JX-DIN2093B-D35.5-SK5	JX-DIN2093B-D35.5-SK7	JX-DIN2093B-D35.5-SS	18.3	1.25	1	2.25	7.130	
40	JX-DIN2093B-D40-65MN	JX-DIN2093B-D40-SK5	JX-DIN2093B-D40-SK7	JX-DIN2093B-D40-SS	20.4	1.5	1.15	2.65	10.95	
45	JX-DIN2093B-D45-65MN	JX-DIN2093B-D45-SK5	JX-DIN2093B-D45-SK7	JX-DIN2093B-D45-SS	22.4	1.75	1.3	3.05	16.40	
50	JX-DIN2093B-D50-65MN	JX-DIN2093B-D50-SK5	JX-DIN2093B-D50-SK7	JX-DIN2093B-D50-SS	25.4	2	1.4	3.4	22.90	
56	JX-DIN2093B-D56-65MN	JX-DIN2093B-D56-SK5	JX-DIN2093B-D56-SK7	JX-DIN2093B-D56-SS	28.5	2	1.6	3.6	28.70	
63	JX-DIN2093B-D63-65MN	JX-DIN2093B-D63-SK5	JX-DIN2093B-D63-SK7	JX-DIN2093B-D63-SS	31	2.5	1.75	4.25	46.40	
71	JX-DIN2093B-D71-65MN	JX-DIN2093B-D71-SK5	JX-DIN2093B-D71-SK7	JX-DIN2093B-D71-SS	36	2.5	2	4.5	57.70	
80	JX-DIN2093B-D80-65MN	JX-DIN2093B-D80-SK5	JX-DIN2093B-D80-SK7	JX-DIN2093B-D80-SS	41	3	2.3	5.3	87.30	
90	JX-DIN2093B-D90-65MN	JX-DIN2093B-D90-SK5	JX-DIN2093B-D90-SK7	JX-DIN2093B-D90-SS	46	3.5	2.5	6	129.1	
100	JX-DIN2093B-D100-65MN	JX-DIN2093B-D100-SK5	JX-DIN2093B-D100-SK7	JX-DIN2093B-D100-SS	51	3.5	2.8	6.3	159.7	
112	JX-DIN2093B-D112-65MN	JX-DIN2093B-D112-SK5	JX-DIN2093B-D112-SK7	JX-DIN2093B-D112-SS	57	4	3.2	7.2	229.2	
125	JX-DIN2093B-D125-65MN	JX-DIN2093B-D125-SK5	JX-DIN2093B-D125-SK7	JX-DIN2093B-D125-SS	64	5	3.5	8.5	355.4	
140	JX-DIN2093B-D140-65MN	JX-DIN2093B-D140-SK5	JX-DIN2093B-D140-SK7	JX-DIN2093B-D140-SS	72	5	4	9	444.4	
160	JX-DIN2093B-D160-65MN	JX-DIN2093B-D160-SK5	JX-DIN2093B-D160-SK7	JX-DIN2093B-D160-SS	82	6	4.5	10.5	698.3	
180	JX-DIN2093B-D180-65MN	JX-DIN2093B-D180-SK5	JX-DIN2093B-D180-SK7	JX-DIN2093B-D180-SS	92	6	5.1	11.1	885.4	
200	JX-DIN2093B-D200-65MN	JX-DIN2093B-D200-SK5	JX-DIN2093B-D200-SK7	JX-DIN2093B-D200-SS	102	8(7.5)	5.6	13.6	1369	
225	JX-DIN2093B-D225-65MN	JX-DIN2093B-D225-SK5	JX-DIN2093B-D225-SK7	JX-DIN2093B-D225-SS	112	8(7.5)	6.5	14.5	1761	
250	JX-DIN2093B-D250-65MN	JX-DIN2093B-D250-SK5	JX-DIN2093B-D250-SK7	JX-DIN2093B-D250-SS	127	10(9.4)	7	17	2687	

- The t given in the table is the nominal value of the disc spring thickness and t' is the actual thickness of the disc spring of category 3.
- oom is the calculation of the OM point on the upper surface of the disc spring.
- The value with "*" is the maximum calculated stress at position II and the value without "*" is the maximum calculated tensile stress at position III.

STAMPING FASTENERS SERIES

GB/T 1972C-DIN2093 Butterfly Washer



Main Material: 65MN, SK5, SK7, SUS304, 316(A2, A4) and other special customized material
Surface Treatment: stainless steel curing polished original color or spring steel in black, mechanical galvanizing, nickel plating, Dacromet coating treatment

Unit:mm

$$C \quad D/t \approx 40; h_0/t \approx 1.3; E=20600N/mm^2; \mu=0.3$$

Size D	P/N				d	t(t')	h	H	Weight 1000Pcs kg	Gasket type
	65MN	Sk5	Sk7	Stainless steel						
8	JX-DIN2093C-D8-65MN	JX-DIN2093C-D8-SK5	JX-DIN2093C-D8-SK7	JX-DIN2093C-D8-SS	4.2	0.2	0.25	0.45	0.057	1
10	JX-DIN2093C-D10-65MN	JX-DIN2093C-D10-SK5	JX-DIN2093C-D10-SK7	JX-DIN2093C-D10-SS	5.2	0.25	0.30	0.55	0.112	
12.5	JX-DIN2093C-D12.5-65MN	JX-DIN2093C-D12.5-SK5	JX-DIN2093C-D12.5-SK7	JX-DIN2093C-D12.5-SS	6.2	0.35	0.45	0.80	0.251	
14	JX-DIN2093C-D14-65MN	JX-DIN2093C-D14-SK5	JX-DIN2093C-D14-SK7	JX-DIN2093C-D14-SS	7.2	0.35	0.45	0.80	0.311	
16	JX-DIN2093C-D16-65MN	JX-DIN2093C-D16-SK5	JX-DIN2093C-D16-SK7	JX-DIN2093C-D16-SS	8.2	0.4	0.5	0.90	0.466	
18	JX-DIN2093C-D18-65MN	JX-DIN2093C-D18-SK5	JX-DIN2093C-D18-SK7	JX-DIN2093C-D18-SS	9.2	0.45	0.60	1.05	0.661	
20	JX-DIN2093C-D20-65MN	JX-DIN2093C-D20-SK5	JX-DIN2093C-D20-SK7	JX-DIN2093C-D20-SS	10.2	0.5	0.65	1.15	0.912	
22.5	JX-DIN2093C-D22.5-65MN	JX-DIN2093C-D22.5-SK5	JX-DIN2093C-D22.5-SK7	JX-DIN2093C-D22.5-SS	11.2	0.6	0.8	1.40	1.410	
25	JX-DIN2093C-D25-65MN	JX-DIN2093C-D25-SK5	JX-DIN2093C-D25-SK7	JX-DIN2093C-D25-SS	12.2	0.7	0.9	1.60	2.060	
28	JX-DIN2093C-D28-65MN	JX-DIN2093C-D28-SK5	JX-DIN2093C-D28-SK7	JX-DIN2093C-D28-SS	14.2	0.8	1	1.80	2.870	
31.5	JX-DIN2093C-D31.5-65MN	JX-DIN2093C-D31.5-SK5	JX-DIN2093C-D31.5-SK7	JX-DIN2093C-D31.5-SS	16.3	0.8	1.05	1.85	3.580	
35.5	JX-DIN2093C-D35.5-65MN	JX-DIN2093C-D35.5-SK5	JX-DIN2093C-D35.5-SK7	JX-DIN2093C-D35.5-SS	18.3	0.9	1.15	2.05	5.140	
40	JX-DIN2093C-D40-65MN	JX-DIN2093C-D40-SK5	JX-DIN2093C-D40-SK7	JX-DIN2093C-D40-SS	20.4	1	1.3	2.30	7.300	
45	JX-DIN2093C-D45-65MN	JX-DIN2093C-D45-SK5	JX-DIN2093C-D45-SK7	JX-DIN2093C-D45-SS	22.4	1.25	1.6	2.85	11.70	
50	JX-DIN2093C-D50-65MN	JX-DIN2093C-D50-SK5	JX-DIN2093C-D50-SK7	JX-DIN2093C-D50-SS	25.4	1.25	1.6	2.85	14.30	
56	JX-DIN2093C-D56-65MN	JX-DIN2093C-D56-SK5	JX-DIN2093C-D56-SK7	JX-DIN2093C-D56-SS	28.5	1.5	1.95	3.45	21.50	
63	JX-DIN2093C-D63-65MN	JX-DIN2093C-D63-SK5	JX-DIN2093C-D63-SK7	JX-DIN2093C-D63-SS	31	1.8	2.35	4.15	33.40	
71	JX-DIN2093C-D71-65MN	JX-DIN2093C-D71-SK5	JX-DIN2093C-D71-SK7	JX-DIN2093C-D71-SS	36	2	2.60	4.60	46.20	
80	JX-DIN2093C-D80-65MN	JX-DIN2093C-D80-SK5	JX-DIN2093C-D80-SK7	JX-DIN2093C-D80-SS	41	2.25	2.95	5.20	65.20	
90	JX-DIN2093C-D90-65MN	JX-DIN2093C-D90-SK5	JX-DIN2093C-D90-SK7	JX-DIN2093C-D90-SS	46	2.5	3.2	5.70	92.20	
100	JX-DIN2093C-D100-65MN	JX-DIN2093C-D100-SK5	JX-DIN2093C-D100-SK7	JX-DIN2093C-D100-SS	51	2.7	3.5	6.20	123.2	
112	JX-DIN2093C-D112-65MN	JX-DIN2093C-D112-SK5	JX-DIN2093C-D112-SK7	JX-DIN2093C-D112-SS	57	3	3.9	6.90	171.9	
125	JX-DIN2093C-D125-65MN	JX-DIN2093C-D125-SK5	JX-DIN2093C-D125-SK7	JX-DIN2093C-D125-SS	64	3.5	4.5	8.0	248.9	
140	JX-DIN2093C-D140-65MN	JX-DIN2093C-D140-SK5	JX-DIN2093C-D140-SK7	JX-DIN2093C-D140-SS	72	3.8	4.9	8.70	337.7	
160	JX-DIN2093C-D160-65MN	JX-DIN2093C-D160-SK5	JX-DIN2093C-D160-SK7	JX-DIN2093C-D160-SS	82	4.3	5.6	9.9	500.4	
180	JX-DIN2093C-D180-65MN	JX-DIN2093C-D180-SK5	JX-DIN2093C-D180-SK7	JX-DIN2093C-D180-SS	92	4.8	6.2	11	708.4	
200	JX-DIN2093C-D200-65MN	JX-DIN2093C-D200-SK5	JX-DIN2093C-D200-SK7	JX-DIN2093C-D200-SS	102	5.5	7	12.5	1004	
225	JX-DIN2093C-D225-65MN	JX-DIN2093C-D225-SK5	JX-DIN2093C-D225-SK7	JX-DIN2093C-D225-SS	112	6.5(6.2)	7.1	13.6	1456	
250	JX-DIN2093C-D250-65MN	JX-DIN2093C-D250-SK5	JX-DIN2093C-D250-SK7	JX-DIN2093C-D250-SS	127	7(6.7)	7.8	17.8	1915	

- The t given in the table is the nominal value of the disc spring thickness and t' is the actual thickness of the disc spring of category 3.
- oom is the calculation of the OM point on the upper surface of the disc spring.
- The value with "*" is the maximum calculated stress at position II and the value without "*" is the maximum calculated tensile stress at position III.