




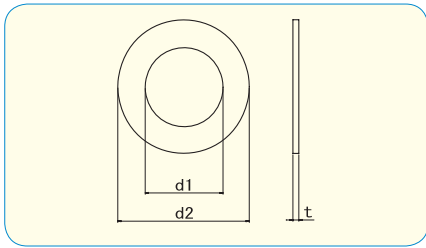


9. WASHERS

	ROUND WASHER	Steel / Zinc 3Cr. Plated , Steel / Zinc Black 3Cr. Plated , Stainless Steel A2 SUS 316L (Stainless Steel A4) SUS 310S (Stainless Steel) Titan	P.2~
	SPRING WASHER	Steel / Zinc 3Cr. Plated , Steel / Zinc Black 3Cr. Plated , Stainless Steel A2 , SUS 316L (Stainless Steel A4) Titan , DISGO	P.5~
	TOOTHED LOCK WASHERS A type	Steel / Zinc 3Cr. Plated , Stainless Steel A2	P.7
	TOOTHED LOCK WASHERS B type	Steel / Zinc 3Cr. Plated , Stainless Steel A2	P.7
	5°TAPER WASHER	Steel / Zinc 3Cr. Plated , Steel / Zinc Black 3Cr. Plated , Stainless Steel A2	P.8

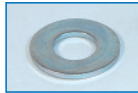
ROUND WASHER JIS B 1256



RoHS Directive Compliance

• Material · plating

Steel / Zinc 3Cr. Plated
Steel / Zinc Black 3Cr. Plated

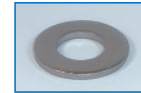


pcs / Box

	Box q'ty	SIZE		
		d1	d2	t
3	20,000	3.2	7	0.5
4	10,000	4.3	9	0.8
5	5,000	5.3	10	1
6	3,000	6.4	12.5	1.6
8	1,200	8.4	17	1.6
10	800	10.5	21	2
12	500	13	24	2.5
14	300	15	28	2.5
16	250	17	30	3
18	200	19	34	3
20	150	21	37	3

• Material

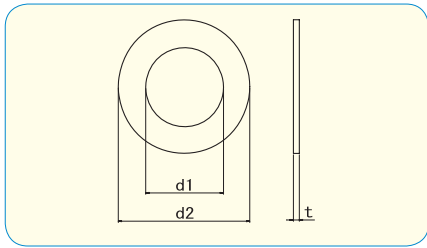
Stainless Steel A2



pcs / Box

	Box q'ty	SIZE		
		d1	d2	t
3	20,000	3.2	7	0.5
4	10,000	4.3	9	0.8
5	5,000	5.3	10	1
6	3,000	6.4	12.5	1.6
8	1,200	8.4	17	1.6
10	800	10.5	21	2
12	500	13	24	2.5
14	300	15	28	2.5
16	250	17	30	3
18	200	19	34	3
20	150	21	37	3
22	150	23	39	3
24	100	25	44	4
27	100	28	50	4
30	50	31	56	4
33	30	34	60	5
36	30	37	66	5
39	30	40	72	6
42	30	43	78	7
45	30	46	85	7

ROUND WASHER JIS B 1256



RoHS Directive Compliance

● Material

SUS 316L Stainless Steel A4



pcs / Box

	Box q'ty	SIZE		
		d1	d2	t
4	100	4.3	9	0.8
5	100	5.3	10	1
6	100	6.4	12.5	1.6
8	100	8.4	17	1.6
10	100	10.5	21	2
12	100	13	24	2.5
14	100	15	28	2.5
16	100	17	30	3
18	100	19	34	3
20	100	21	37	3
22	100	23	39	3
24	100	25	44	4
27	100	28	50	4
30	100	31	56	4
33	100	34	60	5
36	100	37	66	5
42	100	43	78	7
45	100	46	85	7
48	100	50	92	8

● Material

SUS 310S
Stainless Steel



pcs / Box

	Box q'ty	SIZE		
		d1	d2	t
6	100	6.4	12.5	1.6
8	100	8.4	17	1.6
10	100	10.5	21	2
12	100	13	24	2.5
14	100	15	28	2.5
16	100	17	30	3
18	100	19	34	3
20	100	21	37	3
22	100	23	39	3
24	100	25	44	4
27	100	28	50	4
30	100	31	56	4
36	100	37	66	5

WASHERS

● Material

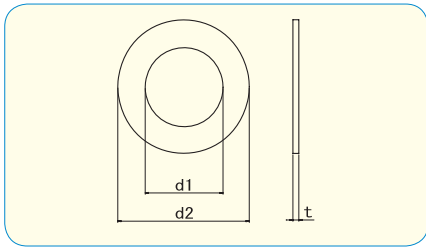
TITAN



pcs / Box

	Box q'ty	SIZE		
		d1	d2	t
4	500	4.3	9	0.8
5	500	5.3	10	1
6	500	6.4	12.5	1.6
8	500	8.4	17	1.6
10	500	10.5	21	2
12	500	13	24	2.5
14	500	15	28	2.5
16	500	17	30	3
18	500	19	34	3
20	500	21	37	3
22	500	23	39	3
24	500	25	44	4

ROUND WASHER JIS B 1256



RoHS Directive Compliance

● Material · plating

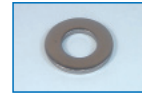
Steel / Zinc 3Cr. Plated

Steel / Zinc Black 3Cr. Plated

	Box q'ty	SIZE			pcs / Box
		d1	d2	t	
3	20,000	3.3	8	0.5	
4	10,000	4.5	10	0.8	
5	6,000	5.5	12	0.8	
6	5,000	6.5	13	1	
8	2,000	8.5	18	1.6	
10	1,000	10.5	22	1.6	
12	500	12.5	26	2.3	
14	350	15	30	2.6	
16	350	17	32	2.6	
18	200	19	36	2.6	
20	150	21	40	3.2	

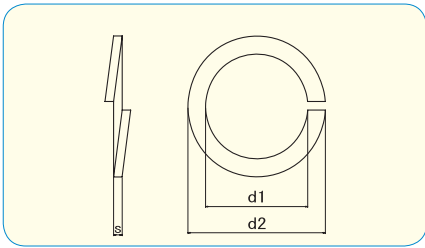
● Material

Stainless Steel A2



	Box q'ty	SIZE			pcs / Box
		d1	d2	t	
3	20,000	3.3	8	0.5	
4	10,000	4.5	10	0.8	
5	6,000	5.5	12	0.8	
6	5,000	6.5	13	1	
8	2,000	8.5	18	1.6	
10	1,000	10.5	22	1.6	
12	500	12.5	26	2.3	
14	350	15	30	2.6	
16	350	17	32	2.6	
18	200	19	36	2.6	
20	150	21	40	3.2	
22	125	23.5	44	3.2	
24	100	25.5	48	4	
30	70	31.5	58	4.5	

SPRING WASHER JIS B 1251 appendix



● Material · plating

Steel / Zinc 3Cr. Plated

Steel / Zinc Black 3Cr. Plated



pcs / Box

	Box q'ty	SIZE		
		d1	d2	t
3	5,000	3.1	5.9	0.7
4	2,000	4.1	7.6	1
5	1,000	5.1	9.2	1.3
6	1,000	6.1	12.2	1.5
8	1,500	8.2	15.4	2
10	800	10.2	18.4	2.5
12	500	12.2	21.5	3
14	300	14.2	24.5	3.5
16	250	16.2	28	4
18	150	18.2	31	4.6
20	150	20.2	33.8	5.1
22	100	22.5	37.7	5.6
24	80	24.5	40.3	5.9

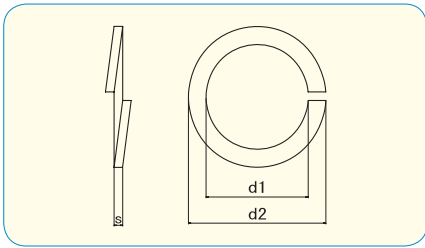
● Material

Stainless Steel A2

pcs / Box

	Box q'ty	SIZE		
		d1	d2	t
3	5,000	3.1	5.9	0.7
4	2,000	4.1	7.6	1
5	1,000	5.1	9.2	1.3
6	1,000	6.1	12.2	1.5
8	1,500	8.2	15.4	2
10	800	10.2	18.4	2.5
12	500	12.2	21.5	3
14	400	14.2	24.5	3.5
16	250	16.2	28	4
18	200	18.2	31	4.6
20	150	20.2	33.8	5.1
22	100	22.5	37.7	5.6
24	80	24.5	40.3	5.9
30	40	30.5	49.9	7.5

SPRING WASHER JIS B 1251 appendix



RoHS Directive Compliance

● Material

SUS 316L stainless steel A4

	Box q'ty	SIZE	
		d2	t
2	100	4.4	0.5
2.6	100	5.3	0.6
3	100	5.9	0.7
4	100	7.6	1
5	100	9.2	1.3
6	100	12.2	1.5
8	100	15.4	2
10	100	18.4	2.5
12	100	21.5	3
14	100	24.5	3.5
16	100	28	4
18	100	31	4.6
20	100	33.8	5.1
22	100	37.7	5.6
24	100	40.3	5.9
27	100	45.3	6.8
30	100	49.9	7.5
33	100	54.7	8.2
36	100	59.1	9
39	100	63.1	9.5
42	100	67	9.5
45	100	70	9.5



● Material

TITAN

	Box q'ty	SIZE	
		d2	t
4	500	7.6	1
5	500	9.2	1.3
6	500	12.2	1.5
8	500	15.4	2
10	500	18.4	2.5
12	500	21.5	3
14	500	24.5	3.5
16	500	28	4
18	500	31	4.6
20	500	33.8	5.1



WASHERS

● Material · plating

Steel / **DISGO**

	Box q'ty	SIZE	
		d2	t
8	1,500	15.4	2
10	800	18.4	2.5
12	500	21.5	3
16	250	28	4

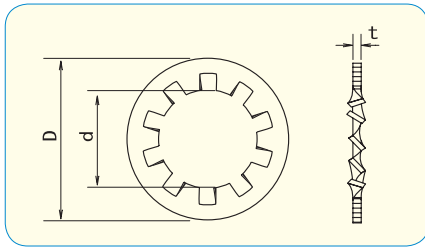


High Rustproof Plating

DISGO

- No Hydrogen-Embrittlement.
- No Cr. contained.
- Special plating for High tensile Fasteners. (class 8.8 / 10.9 / 12.9)

TOOTHED LOCK WASHERS A type JIS B1251 appendix



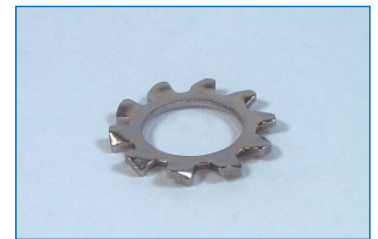
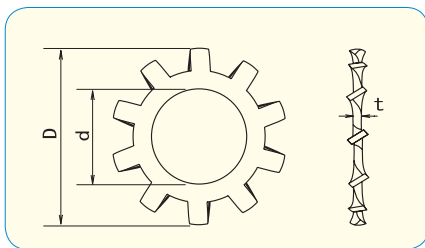
● **Material · plating**
Steel / Zinc 3Cr. Plated

	Box q'ty	SIZE		
		D	d	t
M2	60,000	4.8	2.2	0.3
M3	25,000	6.5	3.2	0.45
M4	15,000	8.5	4.3	0.45
M5	8,000	10	5.3	0.6
M6	7,000	11	6.4	0.6
M8	3,000	15	8.4	0.8
M10	1,800	18	10.5	0.9
M12	1,000	21	12.5	1
M14	1,000	23	14.5	1
M16	600	26	16.5	1.2
M18	500	29	19	1.2
M20	400	32	21	1.4
M22	250	35	23	1.4
M24	200	38	25	1.6

● **Material**
Stainless Steel A2

	Box q'ty	SIZE		
		D	d	t
M3	2,000	6.5	3.2	0.45
M4	2,000	8.5	4.3	0.45
M5	2,000	10	5.3	0.6
M6	2,000	11	6.4	0.6
M8	2,000	15	8.4	0.8
M10	1,000	18	10.5	0.9
M12	1,000	21	12.5	1
M14	500	23	14.5	1
M16	500	26	16.5	1.2
M20	500	32	21	1.4
M22	500	35	23	1.4
M24	500	38	25	1.6

TOOTHED LOCK WASHERS B type JIS B1251 appendix



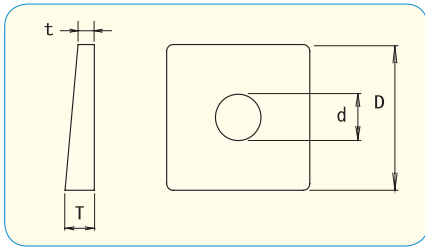
● **Material · plating**
Steel / Zinc 3Cr. Plated

	Box q'ty	SIZE		
		D	d	t
M2	60,000	4.8	2.2	0.3
M3	25,000	6.5	3.2	0.45
M4	15,000	8.5	4.3	0.45
M5	8,000	10	5.3	0.6
M6	7,000	11	6.4	0.6
M8	3,000	15	8.4	0.8
M10	1,800	18	10.5	0.9
M12	1,000	21	12.5	1
M14	1,000	23	14.5	1
M16	600	26	16.5	1.2
M20	400	32	21	1.4
M22	250	35	23	1.4
M24	200	38	25	1.6

● **Material**
Stainless Steel A2

	Box q'ty	SIZE		
		D	d	t
M3	2,000	6.5	3.2	0.45
M4	2,000	8.5	4.3	0.45
M5	2,000	10	5.3	0.6
M6	2,000	11	6.4	0.6
M8	2,000	15	8.4	0.8
M10	1,000	18	10.5	0.9
M12	1,000	21	12.5	1
M14	500	23	14.5	1
M16	500	26	16.5	1.2

5° TAPER WASHER



RoHS Directive Compliance



• Material - plating

Steel / Zinc 3Cr. Plated
Steel / Zinc Black 3Cr. Plated

	Box q'ty	SIZE				pcs / Box
		D	d	T	t	
M6	250	22	7	4.5	2.5	
M8	250	22	9	4.5	2.5	
M10	250	22	11	4.5	2.5	
M12	200	25	14	4.5	2	
M14	100	31	15.5	6	3	
M16	100	31	17.5	6	3	
M18	70	39	19.5	6	2.5	
M20	70	39	22	6	2.5	

• Material

Stainless Steel A2

	Box q'ty	SIZE				pcs / Box
		D	d	T	t	
M8	100	22	9	4.5	2.5	
M10	100	22	11	4.5	2.5	
M12	100	25	14	4.5	2	
M14	100	31	15.5	6	3	
M16	50	31	17.5	6	3	
M18	50	39	19.5	6	2.5	
M20	50	39	22	6	2.5	
M22	25	43	24	6	2	
M24	25	48	26	7	2.5	
M30	20	58	32	8	3	