



Wide range fasteners manufacturer

WASHERS

CATALOG

- ✓ **DIN 125**
- ✓ **DIN 126**
- ✓ **DIN 127**
- ✓ **DIN 128**
- ✓ **DIN 137/B**
- ✓ **DIN 434**
- ✓ **DIN 435**
- ✓ **DIN 6796**
- ✓ **DIN 6798**
- ✓ **DIN 6916**
- ✓ **DIN 9021**
- ✓ **INCH Washers**



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DIN 125

EN ISO 7089

FLAT WASHERS



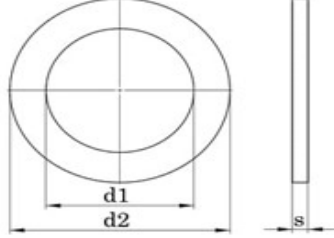
Teknik Bilgiler / Technical Informations		M3	M4	M5	M6	M7	M8	M10	M12
Thread size / Anma çapı (d)									
d ₁	min.	3,20	4,30	5,30	6,40	7,40	8,40	10,50	13,00
	max.	3,38	4,48	5,48	6,62	7,62	8,62	10,77	13,27
d ₂	min.	6,64	8,64	9,64	11,57	13,57	15,57	19,48	23,48
	max.	7,00	9,00	10,00	12,00	14,00	16,00	20,00	24,00
s	min.	0,45	0,70	0,90	1,40	1,40	1,40	1,80	2,30
	max.	0,55	0,90	1,00	1,80	1,80	1,80	2,20	2,70
gr/p		0,12	0,31	0,44	1,02	1,39	1,83	3,57	6,27

Thread size / Anma çapı (d)		M14	M16	M18	M20	M22	M24	M26	M27
d ₁	min.	15,00	17,00	19,00	21,00	23,00	25,00	27	28,00
	max.	15,27	17,27	19,33	21,33	23,33	25,33	27,33	28,33
d ₂	min.	27,48	29,48	33,38	36,38	38,38	43,38	49,38	49,38
	max.	28,00	30,00	34,00	37,00	39,00	44,00	50,00	50,00
s	min.	2,30	2,70	2,70	2,70	2,70	3,70	3,70	3,70
	max.	2,70	3,30	3,30	3,30	3,30	4,30	4,30	4,30
gr/p		8,62	11,30	14,70	17,20	18,30	28,48	43,70	42,30

Thread size / Anma çapı (d)		M28	M30	M32	M33	M36
d ₁	min.	29,00	31,00	33,00	34,00	37,00
	max.	29,33	31,39	33,62	34,62	37,62
d ₂	min.	49,38	55,26	58,80	58,80	64,80
	max.	50,00	56,00	60,00	60,00	66,00
s	min.	3,70	3,70	4,40	4,40	4,40
	max.	4,30	4,30	5,60	5,60	5,60
gr/p		40,90	53,60	72,40	75,30	94,30



DIN 125 Flat Washers are standard metric flat washers – a circular metal disc with a central hole. Typically used to distribute the load over a larger bearing surface either positioned below the head of a bolt or below the nut. This even distribution over a larger area reduces the chance of damaging the bearing surface.

**DIN 126**
EN ISO 7091**PLAIN WASHERS**

Teknik Bilgiler / Technical Informations						
Thread size / Anma çapı (d)	M5	M6	M7	M8	M10	M12
d1	5,50	6,60	7,60	9,00	11,00	14,00
d2	10,00	12,00	14,00	16,00	20,00	24,00
s	1,00	1,60	1,60	1,60	2,00	2,50
Diameter / Çap	5,00	6,00	7,00	8,00	10,00	12,00
gr/p	0,43	0,99	1,36	1,73	3,44	6,07
Thread size / Anma çapı (d)	M14	M16	M18	M20	22	24
d1	16,00	18,00	20,00	22,00	24,00	26,00
d2	28,00	30,00	34,00	37,00	39,00	44,00
s	2,50	3,00	3,00	3,00	3,00	4,00
Diameter / Çap	14,00	16,00	18,00	20,00	22,00	24,00
gr/p	8,38	11,00	14,00	16,40	17,50	31,10
Thread size / Anma çapı (d)	27	30	33	36	39	42
d1	30,00	33,00	36,00	39,00	42,00	45,00
d2	50,00	56,00	60,00	66,00	72,00	78,00
s	4,00	4,00	5,00	5,00	6,00	7,00
Diameter / Çap	27,00	30,00	33,00	36,00	39,00	42,00
gr/p	39,50	50,50	71,00	87,40	127,00	175,00



Stainless Steel and 140HV – 200HV – 300HV available



DIN 127

SPRING LOCK WASHERS



Teknik Bilgiler / Technical Informations		M3	M4	M5	M6	M7	M8
Thread size / Anma çapı (d)							
	d1 min.	3,10	4,10	5,10	6,10	7,10	8,10
	d1 max.	3,40	4,40	5,40	6,50	7,50	8,50
	d2 max.	6,20	7,60	9,20	11,80	12,80	14,80
h	min.	1,60	1,80	2,40	3,20	3,20	4,00
	max.	1,90	2,10	2,80	3,80	3,80	4,70
b	min.	1,30	1,40	1,70	2,35	2,35	2,85
	max.	1,40	1,60	1,90	2,65	2,65	3,15
s	min.	0,70	0,80	1,10	1,50	1,50	1,90
	max.	0,90	0,10	1,30	1,70	1,70	2,10
gr/p		0,11	0,18	0,36	0,83	0,93	1,60

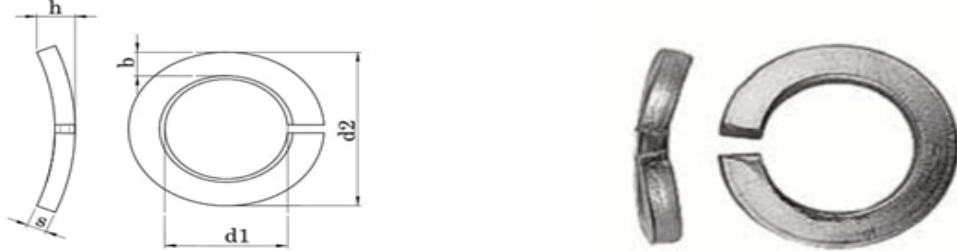
Thread size / Anma çapı (d)		M10	M12	M14	M16	M18	M20
d1	min.	10,20	12,20	14,20	16,20	18,20	20,20
	max.	10,70	12,70	14,70	17,00	19,00	21,20
d2	max.	18,10	21,10	24,10	27,40	29,40	33,60
h	min.	4,40	5,00	6,00	7,00	7,00	8,00
	max.	5,20	5,90	7,10	8,30	8,30	9,40
b	min.	3,30	3,80	4,30	4,80	4,80	5,80
	max.	3,70	4,20	4,70	5,20	5,20	6,20
s	min.	2,05	2,35	2,85	3,30	3,30	3,80
	max.	2,35	2,65	3,15	3,70	3,70	4,20
gr/p		2,53	3,82	6,01	8,91	9,73	15,20

Thread size / Anma çapı (d)		M22	M24	M27	M30	M33	M36
d1	min.	22,50	24,50	27,50	30,50	33,50	36,50
	max.	23,50	25,50	28,50	31,70	34,70	37,70
d2	max.	35,90	40,00	43,00	48,20	55,20	58,20
h	min.	8,00	10,00	10,00	12,00	12,00	12,00
	max.	9,40	11,80	11,80	14,20	14,20	14,20
b	min.	5,80	6,75	6,75	7,75	9,75	9,75
	max.	6,20	7,25	7,25	8,25	10,00	10,25
s	min.	3,80	4,80	4,80	5,80	5,80	5,80
	max.	4,20	5,20	5,20	6,20	6,20	6,20
gr/p		16,50	26,20	28,70	38,00	43,11	67,30

DIN 127 Helical Spring Split Lock Washers are commonly used metric lock washers – It is a split metal ring that is bent into a helical shape.

DIN 128

CURVED SPRING LOCK WASHERS



Teknik Bilgiler / Technical Informations		M2	M2.8	M3	M3.5	M4	M5	M6
d1	min.	2,10	2,60	3,10	3,60	4,10	5,10	6,00
d2	max.	4,40	5,10	6,20	6,70	7,60	9,20	11,80
s		0,50	0,60	0,70	0,70	0,80	1,00	1,30
h	max.	0,90	1,10	1,30	1,30	1,40	1,70	2,20
h	min.	0,70	0,90	1,10	1,10	1,20	1,50	2,00
Diameter /Çap		2,00	2,50	3,00	3,50	4,00	5,00	6,00
gr/p		0,04	0,06	0,09	0,10	0,15	0,30	0,70

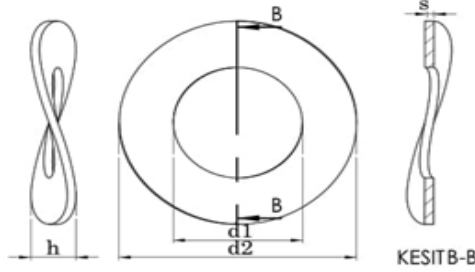
		M7	M8	M10	M12	M14	M16	M18
d1	min.	7,10	8,10	10,20	12,20	14,20	16,20	18,20
d2	max.	12,80	14,80	18,10	21,10	24,10	27,40	29,40
s		1,30	1,60	1,80	2,10	2,40	2,80	2,80
h	max.	2,20	2,75	3,15	3,65	4,30	5,10	5,10
h	min.	2,00	2,45	2,85	3,35	3,90	4,50	4,50
Diameter /Çap		7,00	8,00	10,00	12,00	14,00	16,00	18,00
gr/p		0,75	1,30	2,10	3,20	4,80	7,00	7,80

		M20	M22	M24	M27	M30	M36
d1	min.	20,20	22,50	24,50	27,50	30,50	36,50
d2	max.	33,60	35,90	40,00	43,00	48,20	58,20
s		3,20	3,20	4,00	4,00	6,00	6,00
h	max.	5,90	5,90	7,50	7,50	10,50	11,30
h	min.	5,10	5,10	6,50	6,50	9,50	10,30
Diameter /Çap		20,00	22,00	24,00	27,00	30,00	36,00
gr/p		12,20	13,30	21,50	23,70	42,50	68,00

DIN 128 Type A and B Spring Lock Washers are specialty spring lock washers – Both are split metal rings that are bent into a curved (Type A) or waved configuration (Type B). Unlike standard split helical spring lock washers, the DIN 128 lock washers are non-directionally specific allowing the screw and or nut to be tightened in a clockwise or counter-clockwise manner. When compressed by tightening the nut, the DIN 128 lock washer exert a spring force between the tightened bolt and the substrate creating frictional resistance to rotation.

DIN 137/B

SPRING LOCK WASHERS (Waved)



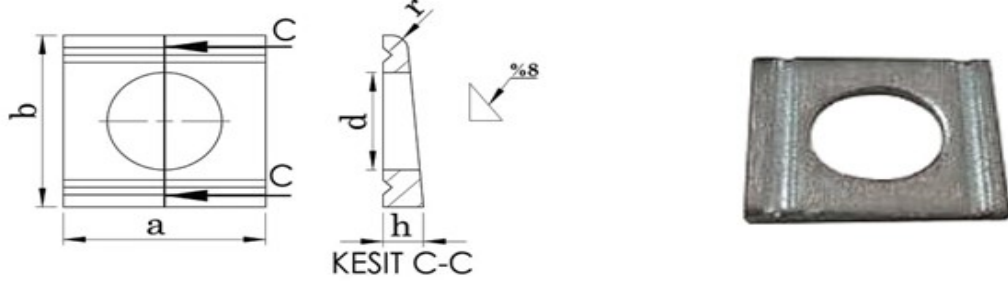
Teknik Bilgiler / Technical Informations		M3	M3,5	M4	M5	M6	M7	M8
d1		3,20	3,70	4,30	5,30	6,40	7,40	8,40
d2		8,00	8,00	9,00	11,00	12,00	14,00	15,00
s		0,50	0,50	0,50	0,50	0,50	0,80	0,50
h	max.	1,60	1,80	2,00	2,20	2,60	3,00	3,00
h	min.	0,80	0,90	1,00	1,10	1,30	1,50	1,50
Diameter /Çap		3,00	3,50	4,00	5,00	6,00	7,00	8,00
gr/p		0,17	0,15	0,19	0,27	0,32	0,80	0,76

	M10	M12	M14	M16	M18	M20	M22
d1	10,50	13,00	15,00	17,00	19,00	21,00	23,00
d2	21,00	24,00	28,00	30,00	34,00	36,00	40,00
s	1,00	1,20	1,60	1,60	1,60	1,60	1,50
h	max.	4,20	5,00	6,00	6,40	6,60	7,40
h	min.	2,10	2,50	3,00	3,20	3,30	3,70
Diameter /Çap		10,00	12,00	14,00	16,00	18,00	20,00
gr/p		2,04	3,10	5,50	6,00	7,80	8,43

	24	27	
d1	25,00	28,00	
d2	44,00	50,00	
s	1,80	2,00	
h	max.	8,20	
h	min.	4,10	
Diameter /Çap		24,00	27,00
gr/p		14,50	21,10



DIN 137 Type A and B Spring Lock Washers are specialty spring lock washers – Unlike standard split helical spring lock washers, the DIN 137 lock washers are uninterrupted formed disks in either a curved or waved configuration that are non-directional allowing the screw and or nut to be tightened in a clockwise or counterclockwise manner. When compressed by tightening the nut, the DIN 137 lock washers exert a spring force between the tightened bolt and the substrate creating frictional resistance to rotation.

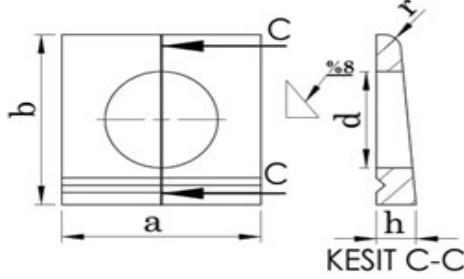
**DIN 434****SQUARE TAPER WASHERS FOR U SECTION**

Teknik Bilgiler / Technical Informations							
	M8	M10	M12	M16	M20	M22	M24
d	9,00	11,00	13,50	17,50	22,00	24,00	26,00
a	22	22	26	32	40	44	56
b	22	22	30	36	44	50	56
h	3,80	3,80	4,90	5,90	7,00	8,00	8,50
r	1,60	1,60	2,00	2,40	2,80	3,20	3,20
Diameter /Çap	8	10	12	16	20	22	24
gr/p	9,57	8,85	18,20	31,40	59,90	82,30	128,00

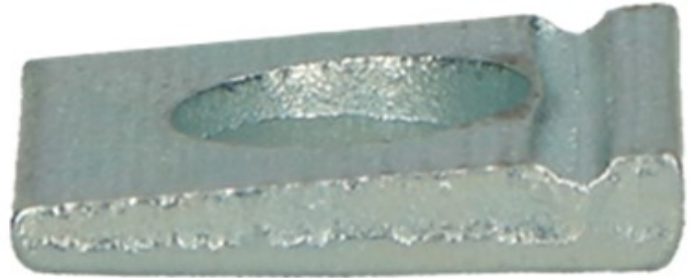


DIN 434 Square Taper Washers are wedge shaped square washers with an 8% taper. They have two grooves running the full length of the washer perpendicular to the taper and is used primarily for U channel sections.



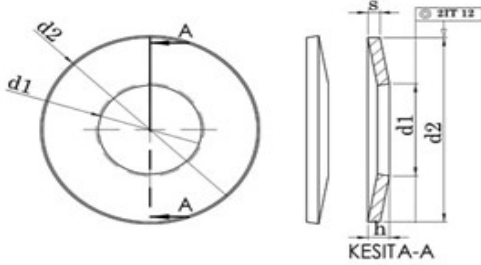
**DIN 435****SQUARE TAPER WASHERS**

Teknik Bilgiler / Technical Informations							
	M8	M10	M12	M16	M20	M22	M24
d	9,00	11,00	13,50	17,50	22,00	24,00	26,00
a	22,00	22,00	26,00	32,00	40,00	44,00	56,00
b	22,00	22,00	30,00	36,00	44,00	50,00	56,00
h	3,80	3,80	4,90	5,90	7,00	8,00	8,50
r	1,20	1,20	1,60	2,00	2,40	2,40	2,40
Diameter /Çap	8,00	10,00	12,00	16,00	20,00	22,00	24,00
gr/p	10,10	9,40	20,10	35,60	67,00	90,00	143,00



DIN 435 Square Taper Washers are wedge shaped square washers with an 8% taper. They have a single groove running the full length of the washer at the thick end perpendicular to the taper and is used primarily for I channel sections.



**DIN 6796****CONICAL SPRING WASHERS**

Teknik Bilgiler / Technical Informations							
	M2	M2,8	M3	M3,5	M4	M5	M6
d1	2,20	2,70	3,20	3,70	4,30	5,30	6,40
d2	5	6	7	8	9	11	14
s	0,40	0,50	0,60	0,80	1,00	1,20	1,50
h1	0,60	0,72	0,85	1,06	1,30	1,55	2,00
h2	0,50	0,61	0,72	0,92	1,12	1,35	1,70
Diameter /Çap	2	2,5	3	3,5	4	5	6
gr/p	0,05	0,09	0,14	0,25	0,38	0,69	1,43
	M7	M8	M10	M12	M14	M16	M18
d1	7,40	8,40	10,50	13,00	15,00	17,00	19,00
d2	17	18	23	29	35	39	42
s	1,75	2,00	2,50	3,00	3,50	4,00	4,50
h1	2,30	2,60	3,20	3,95	4,65	5,25	5,80
h2	2,00	2,24	2,80	3,43	4,04	4,58	5,08
Diameter /Çap	7	8	10	12	14	16	18
gr/p	2,53	3,13	6,45	12,40	21,60	30,40	38,90
	M20	M22	M24	M27	M30		
d1	21,00	23,00	25,00	28,00	31,00		
d2	45	49	56	60	70		
s	5,00	5,50	6,00	6,50	7,00		
h1	6,40	7,05	7,75	8,35	9,20		
h2	5,60	6,15	6,77	7,30	8,00		
Diameter /Çap	20	22	24	27	30		
gr/p	48,80	63,50	92,90	113,00	170,00		



DIN 6796 Conical Spring Washers for bolted connections are conical shaped washers that act as heavy duty spring discs when loaded in the axial direction. They are designed to be used in bolted connections where they help prevent loosening or unfastening of the connection due to thermal expansion/contraction and/or vibrational forces.

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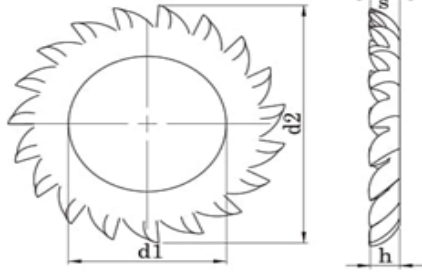
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DIN 6798/A

SERRATED LOCK WASHERS (EXTERNAL TEETH)



Teknik Bilgiler / Technical Informations								
mm.	d1	H13	d2	h12	s		A	B
2	2,2	0,140 / 0	4,5	0 / 0,300	0,3	0,020 / -0,020	9	0,38
2,3	2,5	0,140 / 0	5	0 / 0,300	0,4	0,020 / -0,020	9	0,61
2,5	2,7	0,140 / 0	5,5	0 / 0,300	0,4	0,020 / -0,020	9	0,81
2,6	2,8	0,140 / 0	5,5	0 / 0,300	0,4	0,020 / -0,020	9	0,81
3	3,2	0,180 / 0	6	0 / 0,300	0,4	0,020 / -0,020	9	1,4
3,5	3,7	0,180 / 0	7	0 / 0,360	0,5	0,025 / -0,025	10	2,17
4	4,3	0,180 / 0	8	0 / 0,360	0,5	0,025 / -0,025	11	3,3
5	5,1	0,180 / 0	9	0 / 0,360	0,5	0,025 / -0,025	11	6,7
5	5,3	0,180 / 0	10	0 / 0,360	0,6	0,025 / -0,025	11	6,7
6	6,18	0,220 / 0	10,9	0 / 0,430	0,7	0,030 / -0,030	12	11,2
7	7,4	0,220 / 0	12,5	0 / 0,430	0,8	0,030 / -0,030	14	18
8	8,2	0,220 / 0	14	0 / 0,430	0,8	0,030 / -0,030	14	27
8	8,4	0,220 / 0	15	0 / 0,430	0,8	0,030 / -0,030	14	27
9-3/8"	9,55	0,220 / 0	16	0 / 0,430	0,8	0,030 / -0,030	14	
10	10,5	0,270 / 0	18	0 / 0,430	0,9	0,030 / -0,030	16	53
11-7/16"	11,5	0,270 / 0	19,5	0 / 0,520	0,9	0,030 / -0,030	16	
12	12,6	0,270 / 0	20,22	0 / 0,520	1	0,030 / -0,030	16	93
13-1/2"	13,2	0,270 / 0	22	0 / 0,520	1	0,030 / -0,030	16	
14	15	0,270 / 0	24	0 / 0,520	1	0,030 / -0,030	18	145
16	16,5	0,270 / 0	26	0 / 0,520	1,2	0,035 / -0,035	18	230
18	19	0,330 / 0	30	0 / 0,520	1,4	0,035 / -0,035	18	310
20	21	0,330 / 0	33	0 / 0,620	1,4	0,035 / -0,035	18	440
22	23	0,330 / 0	36	0 / 0,620	1,5	0,035 / -0,035	18	600
24	25	0,330 / 0	38	0 / 0,620	1,5	0,035 / -0,035	18	770
26-1"	26,4	0,330 / 0	40	0 / 0,620	1,6	0,045 / -0,045	18	
27	28	0,330 / 0	44	0 / 0,620	1,6	0,045 / -0,045	20	1130
30	31	0,390 / 0	48	0 / 0,620	1,6	0,045 / -0,045	20	1550

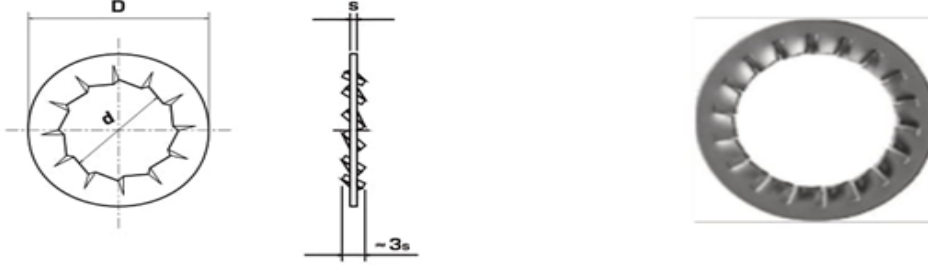
DIN 6798 Serrated Lock Washers that are available in Form A (external serrations), Form J (Internal serrations) and Form V (conical for countersunk head screws). Form A has teeth on the outer edge the washer allowing for maximum contact on the biggest possible surface area. The teeth are superimposed on one another maximizing the friction between the surface of the substrate and fastener.

DIN 6798/J

EN ISO 7089

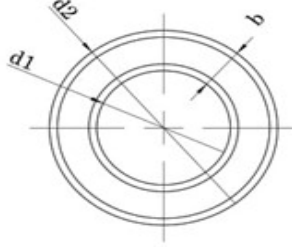
SERRATED LOCK WASHERS

(INTERNAL TEETH)



Teknik Bilgiler / Technical Informations								
mm.	d1	H13	d2	h12	s		A	B
2	2,2	0,140 / 0	4,5	0 / 0,300	0,3	0,020 / -0,020	9	0,38
2,3	2,5	0,140 / 0	5	0 / 0,300	0,4	0,020 / -0,020	9	0,61
2,5	2,7	0,140 / 0	5,5	0 / 0,300	0,4	0,020 / -0,020	9	0,81
2,6	2,8	0,140 / 0	5,5	0 / 0,300	0,4	0,020 / -0,020	9	0,81
3	3,2	0,180 / 0	6	0 / 0,300	0,4	0,020 / -0,020	9	1,4
3,5	3,7	0,180 / 0	7	0 / 0,360	0,5	0,025 / -0,025	10	2,17
4	4,3	0,180 / 0	8	0 / 0,360	0,5	0,025 / -0,025	11	3,3
5	5,1	0,180 / 0	9	0 / 0,360	0,5	0,025 / -0,025	11	6,7
5	5,3	0,180 / 0	10	0 / 0,360	0,6	0,025 / -0,025	11	6,7
6	6,18	0,220 / 0	10,9	0 / 0,430	0,7	0,030 / -0,030	12	11,2
7	7,4	0,220 / 0	12,5	0 / 0,430	0,8	0,030 / -0,030	14	18
8	8,2	0,220 / 0	14	0 / 0,430	0,8	0,030 / -0,030	14	27
8	8,4	0,220 / 0	15	0 / 0,430	0,8	0,030 / -0,030	14	27
9-3/8"	9,55	0,220 / 0	16	0 / 0,430	0,8	0,030 / -0,030	14	
10	10,5	0,270 / 0	18	0 / 0,430	0,9	0,030 / -0,030	16	53
11-7/16"	11,5	0,270 / 0	19,5	0 / 0,520	0,9	0,030 / -0,030	16	
12	12,6	0,270 / 0	20,22	0 / 0,520	1	0,030 / -0,030	16	93
13-1/2"	13,2	0,270 / 0	22	0 / 0,520	1	0,030 / -0,030	16	
14	15	0,270 / 0	24	0 / 0,520	1	0,030 / -0,030	18	145
16	16,5	0,270 / 0	26	0 / 0,520	1,2	0,035 / -0,035	18	230
18	19	0,330 / 0	30	0 / 0,520	1,4	0,035 / -0,035	18	310
20	21	0,330 / 0	33	0 / 0,620	1,4	0,035 / -0,035	18	440
22	23	0,330 / 0	36	0 / 0,620	1,5	0,035 / -0,035	18	600
24	25	0,330 / 0	38	0 / 0,620	1,5	0,035 / -0,035	18	770
26-1"	26,4	0,330 / 0	40	0 / 0,620	1,6	0,045 / -0,045	18	
27	28	0,330 / 0	44	0 / 0,620	1,6	0,045 / -0,045	20	1130
30	31	0,390 / 0	48	0 / 0,620	1,6	0,045 / -0,045	20	1550

DIN 6798 Serrated Lock Washers that are available in Form A (external serrations), Form J (Internal serrations) and Form V (conical for countersunk head screws). Form J has teeth that extend inward from the inside edge of the washer and is recommended when the head of the screw is smaller than the diameter washer or when the surface of the fastener is irregular or convex.

**DIN 6916****PLAIN WASHERS FOR STEEL
CONSTRUCTION**

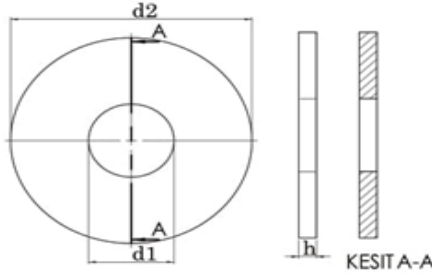
Teknik Bilgiler / Technical Informations									
Thread size / Anma çapı (d)		M12	M16	M20	M22	M24	M27	M30	M36
d ₁	min.	13,00	17,00	21,00	23,00	25,00	28,00	31,00	37,00
	max.	13,27	17,27	21,33	23,33	25,33	28,52	31,62	37,62
d ₂	min.	23,48	29,48	36,38	38,38	43,38	49,00	54,80	64,80
	max.	24,00	30,00	37,00	39,00	44,00	50,00	56,00	66,00
h	min.	2,70	3,70	3,70	3,70	3,70	4,40	4,40	5,40
	max.	3,30	4,30	4,30	4,30	4,30	5,60	5,60	6,60
gr/p		7,03	14,60	19,60	24,30	30,60	50,20	63,20	115,00
Vickers (HV)		295 - 350 HV.							

**Steel: 295-300 HV10****ADDRESS :**Fevzi Çakmak Mah. 10768. Sk.
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**DIN 9021**
EN ISO 7093**LARGE FLAT WASHERS**

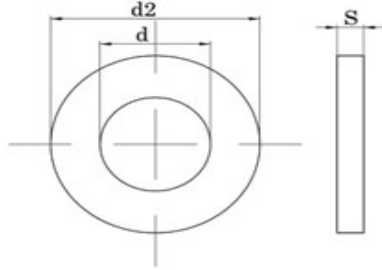
Teknik Bilgiler / Technical Informations						
	M2,5	M3	M3,5	M4	M5	M6
d1	2,70	3,20	3,70	4,30	5,30	6,40
d2	7,00	9,00	11,00	12,00	15,00	18,00
h	0,80	0,80	1,00	1,20	1,60	2,00
For nominal thread	2,50	3,00	3,50	4,00	5,00	6,00
gr/p	0,28	0,35	0,53	0,77	1,46	2,79
	M7	M8	M10	M12	M14	M16
d1	7,40	8,40	10,50	13,00	15,00	17,00
d2	22,00	24,00	30,00	37,00	44,00	50,00
h	2,00	2,50	3,00	3,00	3,00	4,00
For nominal thread	7,00	8,00	10,00	12,00	14,00	16,00
gr/p	5,29	6,23	12,20	22,20	31,60	40,90
	M18	M20	M24	M30	M36	
d1	20,00	22,00	26,00	33,00	39,00	
d2	56,00	60,00	72,00	92,00	110,00	
h	4,00	4,00	5,00	6,00	8,00	
Diameter /Çap	18,00	20,00	24,00	30,00	36,00	
gr/p	67,40	76,80	139,00	273,00	522,00	



DIN 9021 Flat Fender Washers are round flat washers with a larger outer diameter (OD) approximately 3 x inner diameter (ID). These larger OD washers are typically used to distribute the load over a larger bearing surface than a standard flat washer. The washer is to be positioned below the head of a bolt or below the nut. This even distribution over a larger area reduces the chance of damaging the bearing surface. A washer could also be used if the outer diameter of a mating nut is smaller than the hole through which the screw is placed.



INCH FLAT WASHERS

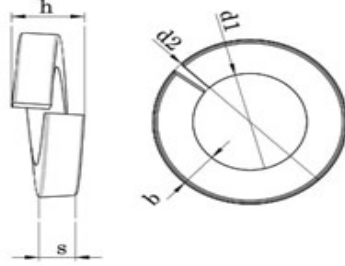


Teknik Bilgiler / Technical Informations						
Thread size / Anma çapı (d)		1/8	5/32	3/16	1/4	5/16
d ₁	min.	2,90	3,50	4,85	6,15	8,65
	max.	3,80	4,60	5,85	7,25	9,65
d ₂	min.	8,64	11,50	15,65	17,50	21,50
	max.	9,27	12,50	16,65	18,50	22,70
Thin / İnce s	min.	0,50	0,50	0,50	0,50	0,50
	max.	1,10	1,10	1,10	1,10	1,10
gr/p		0,37	0,61	1,31	1,82	3,12
Thin /Kalın s	min.					2,50
	max.					3,50
gr/p						7,14
Thread size / Anma çapı (d)		3/8	7/16	1/2	9/16	5/8
d ₁	min.	10,00	11,50	13,00	15,50	16,20
	max.	11,00	12,50	14,00	16,50	17,50
d ₂	min.	25,00	27,50	31,50	35,50	39,50
	max.	26,00	28,50	32,50	36,70	40,50
Thin / İnce s	min.	0,50	0,50	0,50		
	max.	1,10	1,10	1,10		
gr/p		3,45	4,16	5,55		
Thin /Kalın s	min.	9,09	2,50	2,50	2,50	2,50
	max.	2,50	3,50	3,50	3,50	3,50
gr/p		9,09	11,60	16,70	18,50	26,30
Thread size / Anma çapı (d)		3/4	7/8	1"	1 1/4	1 1/2
d ₁	min.	20,50	23,50	26,50	32,50	39,00
	max.	21,50	24,60	27,50	33,50	40,00
d ₂	min.	44,50	49,00	55,50	64,50	72,00
	max.	45,50	50,50	56,50	65,50	74,00
Thin / İnce s						
gr/p						
Thin /Kalın s	min.	2,50	2,50	3,00	3,50	3,50
	max.	3,50	3,50	4,00	4,50	4,50
gr/p		34,40	41,70	45,50	76,90	90,90





INCH SPRING LOCK WASHERS



Teknik Bilgiler / Technical Informations								
Thread size / Anma çapı (d)		1/8	5/32	3/16	1/4	5/16	3/8	7/16
d ₁ min.		3,60	4,10	5,10	6,50	8,10	10,20	11,30
+/- max.		0,30	0,30	0,30	0,40	0,40	0,50	0,50
d ₂		6,70	7,60	9,20	12,20	14,80	18,10	19,20
s		0,80	0,90	1,20	1,60	2,00	2,20	2,20
h		1,80	2,10	2,80	3,80	4,70	5,20	5,20
gr/p		0,10	0,18	0,36	0,77	1,54	2,50	4,00
Thread size / Anma çapı (d)		1/2	9/16	5/8	3/4	7/8	1"	1 1/8
d ₁ min.		13,00	14,20	16,20	20,20	22,50	26,50	30,50
+/- max.		0,50	0,50	0,80	1,00	1,00	1,00	1,20
d ₂		21,90	24,10	27,40	33,60	35,90	42,00	48,20
s		2,50	3,00	3,50	4,00	4,00	5,00	6,00
h		5,90	7,10	8,30	9,40	9,40	11,80	14,20
gr/p		5,88	6,67	9,09	15,15	16,17	27,78	43,48
Thread size / Anma çapı (d)		1 1/4	1 1/2	1 5/8	1 3/4	2"		
d ₁ min.		32,50	39,50	42,50	45,50	51,00		
+/- max.		1,20	1,20	1,20	1,20	1,50		
d ₂		50,20	61,20	68,20	71,20	77,00		
s		6,00	6,00	7,00	7,00	7,00		
h		14,20	14,20	16,50	16,50	16,50		
gr/p		59,18	71,70	111,00	117,00	152,00		

**ADDRESS :**

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