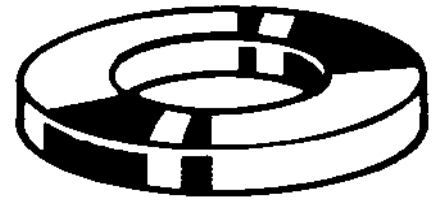
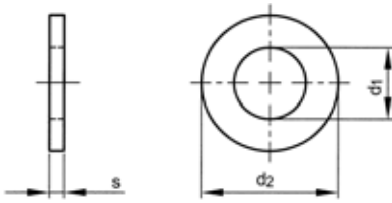


Plain washer type L

NF E25-513



Technical data

For nom.size	d ₁ (min.)	d ₂ (max.)	s
M3	3,2	12	0,8
M4	4,3	14	0,8
M5	5,3	16	1
M6	6,4	18	1,2
M7	7,4	20	1,5
M8	8,4	22	1,5
M10	10,5	27	2
M12	13	32	2,5
M14	15	36	2,5
M16	17	40	3
M18	19	45	3
M20	21	50	3
M22	23	55	3
M24	25	60	4
M27	28	65	4
M30	31	70	4

Article groups

Material	Surface treatment	Packaging	Code	Page
St		Standard	38063	7-11
St	Zipl	Standard	38065	7-11
St	Zipl yell.p.	Standard	38067	7-12
St.St. A2		Standard	51418	7-12
St.St. A4		Standard	55418	7-12

38063 Plain washer type L

L07G

Material Steel
 Packaging Standard



For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	500	38063.030.001	M10	200	38063.100.001	M22	100	38063.220.001
M4	500	38063.040.001	M12	200	38063.120.001	M24	100	38063.240.001
M5	500	38063.050.001	M14	200	38063.140.001	M27	100	38063.270.001
M6	500	38063.060.001	M16	100	38063.160.001	M30	100	38063.300.001
M7	250	38063.070.001	M18	100	38063.180.001			
M8	250	38063.080.001	M20	100	38063.200.001			

38065 Plain washer type L

L07G

Material Steel
 Surface treatment Zinc plated
 Packaging Standard



For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	500	38065.030.001	M10	200	38065.100.001	M22	100	38065.220.001
M4	500	38065.040.001	M12	200	38065.120.001	M24	100	38065.240.001
M5	500	38065.050.001	M14	200	38065.140.001	M27	100	38065.270.001
M6	500	38065.060.001	M16	100	38065.160.001	M30	100	38065.300.001
M7	250	38065.070.001	M18	100	38065.180.001			
M8	250	38065.080.001	M20	100	38065.200.001			

38067 Plain washer type L		L07G
Material	Steel	
Surface treatment	Zinc plated yellow passivated	
Packaging	Standard	

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	500	38067.030.001	M10	200	38067.100.001	M22	100	38067.220.001
M4	500	38067.040.001	M12	200	38067.120.001	M24	100	38067.240.001
M5	500	38067.050.001	M14	100	38067.140.001	M27	100	38067.270.001
M6	500	38067.060.001	M16	100	38067.160.001	M30	100	38067.300.001
M7	250	38067.070.001	M18	100	38067.180.001			
M8	250	38067.080.001	M20	100	38067.200.001			

51418 Plain washer type L		R05A
Material	Stainless steel A2	
Packaging	Standard	
	NF ≈E25-513	

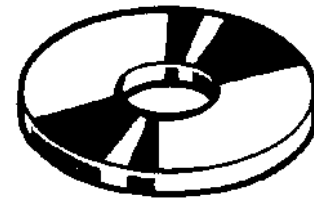
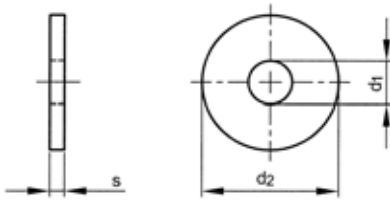
For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	250	51418.030.001	M10	250	51418.100.001	M20	100	51418.200.001
M4	250	51418.040.001	M12	200	51418.120.001	M24	50	51418.240.001
M5	250	51418.050.001	M14	200	51418.140.001	M27	50	51418.270.001
M6	250	51418.060.001	M16	100	51418.160.001			
M8	250	51418.080.001	M18	100	51418.180.001			

55418 Plain washer type L		R45A
Material	Stainless steel A4	
Packaging	Standard	
	NF ≈E25-513	

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	250	55418.030.001	M10	250	55418.100.001	M20	100	55418.200.001
M4	250	55418.040.001	M12	200	55418.120.001	M24	50	55418.240.001
M5	250	55418.050.001	M14	200	55418.140.001	M27	50	55418.270.001
M6	250	55418.060.001	M16	100	55418.160.001	M30	25	55418.300.001
M8	250	55418.080.001	M18	100	55418.180.001			

Plain washer type LL

NF E25-513



Technical data

For nom.size	d ₁ (min.)	d ₂ (max.)	s
M3	3,2	14	0,8
M4	4,3	16	0,8
M5	5,3	20	1
M6	6,4	24	1,2
M7	7,4	27	1,5
M8	8,4	30	1,5
M10	10,5	36	2
M12	13	40	2,5
M14	15	45	2,5
M16	17	50	3
M18	19	55	3
M20	21	60	3
M22 (#NF)	23	65	3
M24 (#NF)	25	70	4
M27 (#NF)	28	78	4
M30 (#NF)	31	80	4

Article groups

Material	Surface treatment	Packaging	Code	Page
St		Standard	38073	7-13
St	Zipl	Standard	38075	7-13
St	Zipl yell.p.	Standard	38077	7-14
St.St. A2		Standard	51419	7-14
St.St. A4		Standard	55419	7-14

38073 Plain washer type LL

L07G

Material Steel
 Packaging Standard



For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	1000	38073.030.001	M10	200	38073.100.001	M22	100	38073.220.001
M4	500	38073.040.001	M12	200	38073.120.001	M24	100	38073.240.001
M5	500	38073.050.001	M14	100	38073.140.001	M27	100	38073.270.001
M6	250	38073.060.001	M16	100	38073.160.001	M30	100	38073.300.001
M7	250	38073.070.001	M18	100	38073.180.001			
M8	250	38073.080.001	M20	100	38073.200.001			

38075 Plain washer type LL

L07G

Material Steel
 Surface treatment Zinc plated
 Packaging Standard



For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	1000	38075.030.001	M10	200	38075.100.001	M22	100	38075.220.001
M4	500	38075.040.001	M12	200	38075.120.001	M24	100	38075.240.001
M5	500	38075.050.001	M14	100	38075.140.001	M27	100	38075.270.001
M6	250	38075.060.001	M16	100	38075.160.001	M30	100	38075.300.001
M7	250	38075.070.001	M18	100	38075.180.001			
M8	250	38075.080.001	M20	100	38075.200.001			

38077 Plain washer type LL		L07G
Material	Steel	
Surface treatment	Zinc plated yellow passivated	
Packaging	Standard	

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3		1000 38077.030.001	M10		200 38077.100.001	M22		100 38077.220.001
M4		500 38077.040.001	M12		200 38077.120.001	M24		100 38077.240.001
M5		500 38077.050.001	M14		100 38077.140.001	M27		100 38077.270.001
M6		250 38077.060.001	M16		100 38077.160.001	M30		100 38077.300.001
M7		250 38077.070.001	M18		100 38077.180.001			
M8		250 38077.080.001	M20		100 38077.200.001			

51419 Plain washer type LL		R05A
Material	Stainless steel A2	
Packaging	Standard	
	NF ≈E25-513	

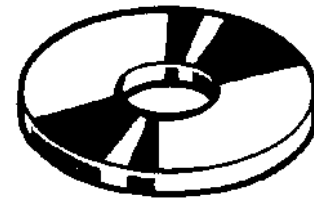
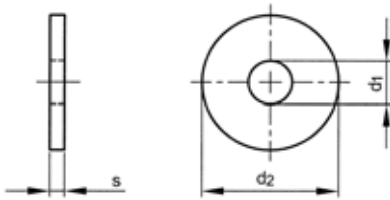
For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M4		250 51419.040.001	M8		250 51419.080.001	M14		100 51419.140.001
M5		250 51419.050.001	M10		250 51419.100.001	M16		100 51419.160.001
M6		250 51419.060.001	M12		200 51419.120.001			

55419 Plain washer type LL		R45A
Material	Stainless steel A4	
Packaging	Standard	
	NF ≈E25-513	

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M6		250 55419.060.001	M10		250 55419.100.001			
M8		250 55419.080.001	M12		200 55419.120.001			

Plain washer type M

NF E25-513



Technical data

For nom.size	d ₁ (min.)	d ₂ (max.)	s
M2,5	2,7	7	0,5
M3	3,2	8	0,8
M4	4,3	10	0,8
M5	5,3	12	1
M6	6,4	14	1,2
M7	7,4	16	1,5
M8	8,4	18	1,5
M10	10,5	22	2
M12	13	27	2,5
M14	15	30	2,5
M16	17	32	3
M18	19	36	3
M20	21	40	3
M22	23	45	3
M24	25	50	4
M27	28	55	4
M30	31	60	4
M33	34	65	5
M36	37	70	5
M39	40	75	6
M42	43	80	6
M45	46	85	7
M48	50	90	7
M52	54	100	8
M56 (#NF)	60	105	9

Article groups

Material	Surface treatment	Packaging	Code	Page
St		Standard	38053	7-15
St	Zipl	Standard	38055	7-16
St	Zipl yell.p.	Standard	38057	7-16
St.St. A2		Standard	51417	7-16
St.St. A4		Standard	55417	7-16

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38053 Plain washer type M

L07G

Material Steel
 Packaging Standard



For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	500	38053.030.001	M14	200	38053.140.001	M33	100	38053.330.001
M4	500	38053.040.001	M16	100	38053.160.001	M36	100	38053.360.001
M5	500	38053.050.001	M18	100	38053.180.001	M39	100	38053.390.001
M6	500	38053.060.001	M20	100	38053.200.001	M42	100	38053.420.001
M7	250	38053.070.001	M22	100	38053.220.001	M45	100	38053.450.001
M8	250	38053.080.001	M24	100	38053.240.001	M48	25	38053.480.001
M10	200	38053.100.001	M27	100	38053.270.001	M52	25	38053.520.001
M12	200	38053.120.001	M30	100	38053.300.001	M56	25	38053.560.001

38055	Plain washer type M	L07G
Material	Steel	
Surface treatment	Zinc plated	
Packaging	Standard	


For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	500	38055.030.001	M12	200	38055.120.001	M27	100	38055.270.001
M4	500	38055.040.001	M14	200	38055.140.001	M30	100	38055.300.001
M5	500	38055.050.001	M16	100	38055.160.001	M33	100	38055.330.001
M6	500	38055.060.001	M18	100	38055.180.001	M36	100	38055.360.001
M7	250	38055.070.001	M20	100	38055.200.001	M39	100	38055.390.001
M8	250	38055.080.001	M22	100	38055.220.001	M42	100	38055.420.001
M10	200	38055.100.001	M24	100	38055.240.001	M45	100	38055.450.001

38057	Plain washer type M	L07G
Material	Steel	
Surface treatment	Zinc plated yellow passivated	
Packaging	Standard	

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	500	38057.030.001	M14	200	38057.140.001	M33	100	38057.330.001
M4	500	38057.040.001	M16	100	38057.160.001	M36	100	38057.360.001
M5	500	38057.050.001	M18	100	38057.180.001	M39	100	38057.390.001
M6	500	38057.060.001	M20	100	38057.200.001	M42	100	38057.420.001
M7	250	38057.070.001	M22	100	38057.220.001	M45	100	38057.450.001
M8	250	38057.080.001	M24	100	38057.240.001	M48	50	38057.480.001
M10	200	38057.100.001	M27	100	38057.270.001			
M12	200	38057.120.001	M30	100	38057.300.001			

51417	Plain washer type M	R05A
Material	Stainless steel A2	
Packaging	Standard	
	NF ≈E25-513	

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M2,5	250	51417.025.001	M10	250	51417.100.001	M22	50	51417.220.001
M3	250	51417.030.001	M12	200	51417.120.001	M24	50	51417.240.001
M4	250	51417.040.001	M14	100	51417.140.001	M27	25	51417.270.001
M5	250	51417.050.001	M16	100	51417.160.001	M30	25	51417.300.001
M6	250	51417.060.001	M18	100	51417.180.001	M33	25	51417.330.001
M8	250	51417.080.001	M20	100	51417.200.001	M36	25	51417.360.001

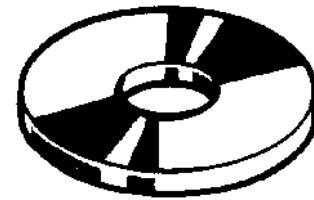
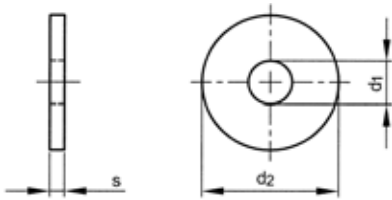
55417	Plain washer type M	R45A
Material	Stainless steel A4	
Packaging	Standard	
	NF ≈E25-513	

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	250	55417.030.001	M12	200	55417.120.001	M24	50	55417.240.001
M4	250	55417.040.001	M14	100	55417.140.001	M27	25	55417.270.001
M5	250	55417.050.001	M16	100	55417.160.001	M30	25	55417.300.001
M6	250	55417.060.001	M18	100	55417.180.001	M33	25	55417.330.001
M8	250	55417.080.001	M20	100	55417.200.001	M36	25	55417.360.001
M10	250	55417.100.001	M22	50	55417.220.001			

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Plain washer type Z

NF E25-513



Technical data

For nom.size	d ₁ (min.)	d ₂ (max.)	s
M3	3,2	6	0,8
M4	4,3	8	0,8
M5	5,3	10	1
M6	6,4	12	1,2
M7	7,4	14	1,5
M8	8,4	16	1,5
M10	10,5	20	2
M12	13	24	2,5
M14	15	27	2,5
M16	17	30	3
M18	19	32	3
M20	21	36	3
M22	23	40	3
M24	25	45	4
M27	28	48	4
M30	31	52	4

Article groups

Material	Surface treatment	Packaging	Code	Page
St		Standard	38043	7-17
St	Zipl	Standard	38045	7-17
St	Zipl yell.p.	Standard	38047	7-18
St.St. A2		Standard	51416	7-18
St.St. A4		Standard	55416	7-18

38043 Plain washer type Z

L07G

Material Steel
 Packaging Standard



For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	500	38043.030.001	M10	200	38043.100.001	M20	100	38043.200.001
M4	500	38043.040.001	M12	150	38043.120.001	M22	100	38043.220.001
M5	500	38043.050.001	M14	100	38043.140.001	M24	100	38043.240.001
M6	250	38043.060.001	M16	100	38043.160.001	M27	100	38043.270.001
M8	250	38043.080.001	M18	100	38043.180.001	M30	100	38043.300.001

38045 Plain washer type Z

L07G


Material Steel
 Surface treatment Zinc plated
 Packaging Standard



For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	500	38045.030.001	M10	200	38045.100.001	M20	100	38045.200.001
M4	500	38045.040.001	M12	150	38045.120.001	M22	100	38045.220.001
M5	500	38045.050.001	M14	100	38045.140.001	M24	100	38045.240.001
M6	250	38045.060.001	M16	100	38045.160.001	M27	100	38045.270.001
M8	250	38045.080.001	M18	100	38045.180.001	M30	100	38045.300.001

38047	Plain washer type Z	L07G
Material	Steel	
Surface treatment	Zinc plated yellow passivated	
Packaging	Standard	

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	500	38047.030.001	M10	200	38047.100.001	M22	100	38047.220.001
M4	500	38047.040.001	M12	150	38047.120.001	M24	100	38047.240.001
M5	500	38047.050.001	M14	100	38047.140.001	M27	100	38047.270.001
M6	250	38047.060.001	M16	100	38047.160.001	M30	100	38047.300.001
M7	250	38047.070.001	M18	100	38047.180.001			
M8	250	38047.080.001	M20	100	38047.200.001			

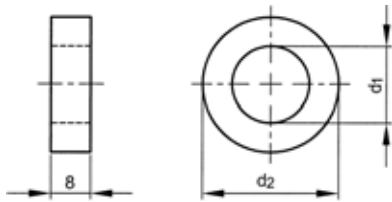
51416	Plain washer type Z	R05A
Material	Stainless steel A2	
Packaging	Standard	
	NF ≈E25-513	

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	250	51416.030.001	M8	250	51416.080.001	M20	100	51416.200.001
M4	250	51416.040.001	M10	200	51416.100.001	M24	50	51416.240.001
M5	250	51416.050.001	M12	200	51416.120.001	M27	25	51416.270.001
M6	250	51416.060.001	M16	100	51416.160.001	M30	25	51416.300.001

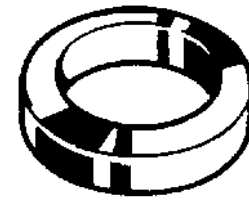
55416	Plain washer type Z	R45A
Material	Stainless steel A4	
Packaging	Standard	
	NF ≈E25-513	

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	250	55416.030.001	M8	250	55416.080.001	M20	100	55416.200.001
M4	250	55416.040.001	M10	200	55416.100.001	M24	50	55416.240.001
M5	250	55416.050.001	M12	200	55416.120.001	M30	25	55416.300.001
M6	250	55416.060.001	M16	100	55416.160.001			

Washer for steel structures



DIN 7989 A




Technical data

For nom.size	d ₁	d ₂	For nom.size	d ₁	d ₂	For nom.size	d ₁	d ₂
M10	11	20	M20	22	37	M30	33	56
M12	13,5	24	M24	26	44	M33 (#DIN)	35	60
M16	17,5	30	M27	30	50	M36 (#DIN)	38	66

- Thickness 8 mm, specially applicable for hexagon head bolts, for steel structures, acc. to DIN 7990.

Article groups

Material	Surface treatment	Packaging	Code	Page
St	Zipl	Standard	38280	7-19
St	Hot d.g.	Standard	38270	7-19

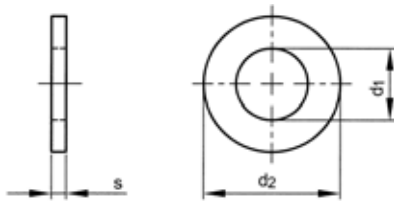
38280 Washer for steel structures				L07G
Material	Steel			
Surface treatment	Zinc plated			
Packaging	Standard			

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M10	500	38280.100.001	M20	100	38280.200.001	M30	50	38280.300.001
M12	500	38280.120.001	M24	100	38280.240.001	M33	25	38280.330.001
M16	250	38280.160.001	M27	50	38280.270.001	M36	25	38280.360.001

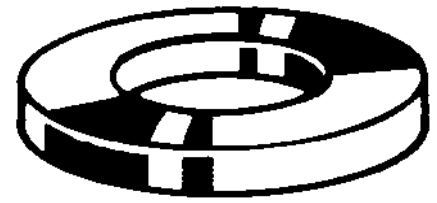
38270 Washer for steel structures				L07G
Material	Steel			
Surface treatment	Hot dip galvanized			
Packaging	Standard			

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M10	500	38270.100.001	M20	100	38270.200.001	M30	50	38270.300.001
M12	500	38270.120.001	M24	100	38270.240.001			
M16	250	38270.160.001	M27	50	38270.270.001			

Washer for bolts with heavy type spring pins



DIN 7349
NEN 2274



Technical data

For nom.size	d ₁	d ₂	s
M3	3,2	9	1
M4	4,3	12	1,6
M5	5,3	15	2
M6	6,4	17	3
M8	8,4	21	4
M10	10,5	25	4
M12	13	30	6
M14	15	36	6
M16	17	40	6
M18	19	44	8
M20	21	44	8
M22	23	50	8
M24	25	50	10
M27	28	60	10
M30	31	68	10

- These washers are applied in combination with spring type straight pins slotted acc. to DIN 1481 (ISO 8752).

Article groups

Material	Surface treatment	Packaging	Code	Page
St		Standard	38420	7-20
St	Zipl	Standard	38430	7-20
St	Zipl yell.p.	Standard	38435	7-21
St	Hot d.g.	Standard	38438	7-21
St.St. A2		Standard	51532	7-21
St.St. A4		Standard	55532	7-21

7

38420 Washer for bolts with heavy type spring pins		L07G
Material	Steel	
Packaging	Standard	

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	250	38420.030.001	M10	100	38420.100.001	M20	50	38420.200.001
M4	250	38420.040.001	M12	100	38420.120.001	M22	100	38420.220.001
M5	250	38420.050.001	M14	50	38420.140.001	M24	25	38420.240.001
M6	100	38420.060.001	M16	50	38420.160.001	M30	25	38420.300.001
M8	100	38420.080.001	M18	100	38420.180.001			

38430 Washer for bolts with heavy type spring pins		L07G
Material	Steel	
Surface treatment	Zinc plated	
Packaging	Standard	


For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	250	38430.030.001	M10	200	38430.100.001	M22	50	38430.220.001
M4	250	38430.040.001	M12	150	38430.120.001	M24	50	38430.240.001
M5	250	38430.050.001	M16	100	38430.160.001	M27	25	38430.270.001
M6	250	38430.060.001	M18	100	38430.180.001	M30	25	38430.300.001
M8	250	38430.080.001	M20	100	38430.200.001			

38435	Washer for bolts with heavy type spring pins	L07G
Material	Steel	
Surface treatment	Zinc plated yellow passivated	
Packaging	Standard	

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M5	250	38435.050.001	M10	200	38435.100.001	M20	100	38435.200.001
M6	250	38435.060.001	M12	150	38435.120.001	M24	50	38435.240.001
M8	250	38435.080.001	M16	100	38435.160.001			

38438	Washer for bolts with heavy type spring pins	L07G
Material	Steel	
Surface treatment	Hot dip galvanized	
Packaging	Standard	

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M5	250	38438.050.001	M12	150	38438.120.001	M22	50	38438.220.001
M6	250	38438.060.001	M16	100	38438.160.001	M24	50	38438.240.001
M8	250	38438.080.001	M18	100	38438.180.001			
M10	200	38438.100.001	M20	100	38438.200.001			

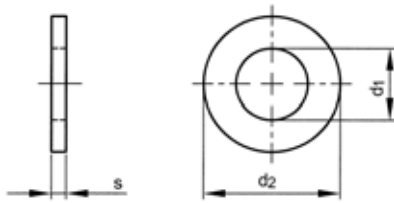
51532	Washer for bolts with heavy type spring pins	R09A
Material	Stainless steel A2	
Packaging	Standard	

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	100	51532.030.001	M10	100	51532.100.001	M20	50	51532.200.001
M4	100	51532.040.001	M12	50	51532.120.001	M22 *	50	51532.220.001
M5	100	51532.050.001	M14 *	100	51532.140.001	M24 *	50	51532.240.001
M6	100	51532.060.001	M16	50	51532.160.001			
M8	100	51532.080.001	M18 *	50	51532.180.001			

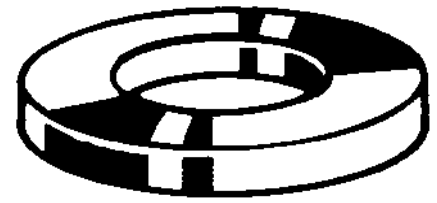
55532	Washer for bolts with heavy type spring pins	R49A
Material	Stainless steel A4	
Packaging	Standard	

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	100	55532.030.001	M8	100	55532.080.001	M16	50	55532.160.001
M4	100	55532.040.001	M10	100	55532.100.001	M20	50	55532.200.001
M5	100	55532.050.001	M12	50	55532.120.001	M22 *	50	55532.220.001
M6	100	55532.060.001	M14 *	100	55532.140.001	M24	50	55532.240.001

Plain washer for cheese head screws



ISO 7092
 DIN 433
 NEN 2270



Technical data

For nom.size	d ₁	d ₂	s
M2	2,2	4,5	0,3
M2,5	2,7	5,0	0,5
M2,6 (#DIN)	2,7	5,5	0,5
M3	3,2	6	0,5
M3,5	3,7	7	0,5
M4	4,3	8	0,5
M5	5,3	9	1
M6	6,4	11	1,6
M8	8,4	15	1,6
M10	10,5	18	1,6
M12	13	20	2
M14	15	24	2,5
M16	17	28	2,5
M18	19	30	2,5
M20	21	34	3

Article groups

Material	Class	Surface treatment	Colour	Packaging	Code	Page
St		Zipl		Standard	38250	7-22
Br		Ni.pl.		Standard	50100	7-22
St.St. A2				Standard	51930	7-23
St.St. A4				Standard	55930	7-23
Plastic PA	PA 6.6		White	Standard	56320	7-23

7

38250 Plain washer for cheese head screws

L07G

Material Steel
Surface treatment Zinc plated
Packaging Standard



For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M2	500	38250.020.001	M6	250	38250.060.001	M16	100	38250.160.001
M2,6	500	38250.026.001	M8	200	38250.080.001	M18	100	38250.180.001
M3	250	38250.030.001	M10	200	38250.100.001	M20	100	38250.200.001
M4	250	38250.040.001	M12	100	38250.120.001			
M5	250	38250.050.001	M14	100	38250.140.001			

50100 Plain washer for cheese head screws

M11F

Material Brass
Surface treatment Nickel plated
Packaging Standard



For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M2	500	50100.020.001	M5	250	50100.050.001	M12	100	50100.120.001
M2,6	500	50100.026.001	M6	250	50100.060.001	M14	100	50100.140.001
M3	250	50100.030.001	M8	200	50100.080.001	M16	100	50100.160.001
M4	250	50100.040.001	M10	200	50100.100.001			

51930 Plain washer for cheese head screws		R09A
Material	Stainless steel A2	
Packaging	Standard	
		

For nom. size	✉	Art.number	For nom. size	✉	Art.number	For nom. size	✉	Art.number
M2,5	500	51930.025.001	M6	500	51930.060.001	M16	100	51930.160.001
M3	500	51930.030.001	M8	200	51930.080.001	M18	100	51930.180.001
M3,5 *	1000	51930.035.001	M10	200	51930.100.001	M20	100	51930.200.001
M4	500	51930.040.001	M12	100	51930.120.001			
M5	500	51930.050.001	M14	100	51930.140.001			

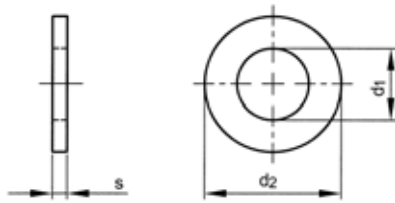
55930 Plain washer for cheese head screws		R49A
Material	Stainless steel A4	
Packaging	Standard	
		

For nom. size	✉	Art.number	For nom. size	✉	Art.number	For nom. size	✉	Art.number
M2	100	55930.020.001	M5	500	55930.050.001	M14	100	55930.140.001
M2,5	100	55930.025.001	M6	500	55930.060.001	M16	100	55930.160.001
M3	500	55930.030.001	M8	200	55930.080.001	M18	100	55930.180.001
M3,5 *	1000	55930.035.001	M10	200	55930.100.001	M20	100	55930.200.001
M4	500	55930.040.001	M12	100	55930.120.001			

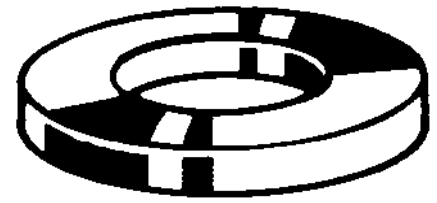
56320 Plain washer for cheese head screws		W02A
Material	Plastic Polyamide (nylon)	
Class	PA 6.6	
Colour	White	
Packaging	Standard	
	ISO ≈7092	
	DIN ≈433	
	NEN ≈2270	
		

For nom. size	✉	Art.number	For nom. size	✉	Art.number	For nom. size	✉	Art.number
M3	200	56320.030.001	M5	200	56320.050.001	M8	200	56320.080.001
M4	200	56320.040.001	M6	200	56320.060.001	M10	100	56320.100.001

Plain washer for clevis pins



ISO (8738)
DIN 1440



Technical data

For pin \varnothing	d_1 (H11)	d_2	s
3	3	6	0,8
4	4	8	0,8
5	5	10	0,8 (1)
6	6	12	1,6
7	7	14	1,6
8	8	16 (15)	2
10	10	20 (18)	2,5
12	12	25 (20)	3
13	13	25	3
14	14	28 (22)	3
16	16	28 (24)	3
18	18	30	4
20	20	32	4
22	22	34	4
23	23	36	4
24	24	38	4
25	25	40	4
26	26	40	5
27	27	40	5
28	28	42	5
30	30	45	5
32	32	50	5
40	40	58	6

• Depending on availability can be supplied acc. to ISO 8738 with the appropriate values stated between brackets.

Article groups

Material	Surface treatment	Packaging	Code	Page
St	Zipl	Standard	38760	7-24
St.St. A2		Standard	51534	7-24

7

38760 Plain washer for clevis pins

L07G

Material Steel
Surface treatment Zinc plated
Packaging Standard



For pin \varnothing	☒	Art.number	For pin \varnothing	☒	Art.number	For pin \varnothing	☒	Art.number
4MM	250	38760.040.001	14MM	150	38760.140.001	25MM	25	38760.250.001
5MM	250	38760.050.001	16MM	100	38760.160.001	26MM	25	38760.260.001
6MM	250	38760.060.001	18MM	100	38760.180.001	28MM	25	38760.280.001
8MM	250	38760.080.001	20MM	100	38760.200.001	30MM	25	38760.300.001
10MM	200	38760.100.001	22MM	50	38760.220.001			
12MM	150	38760.120.001	23MM	25	38760.230.001			

51534 Plain washer for clevis pins

R09A

Material Stainless steel A2
Packaging Standard



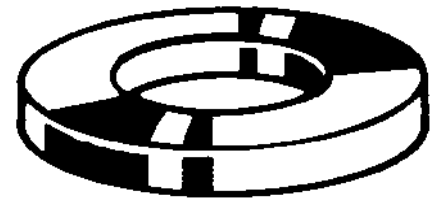
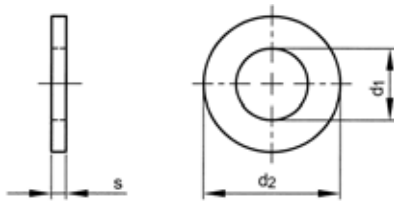
For pin \varnothing	☒	Art.number	For pin \varnothing	☒	Art.number	For pin \varnothing	☒	Art.number
3MM *	500	51534.030.001	6MM	100	51534.060.001	10MM	100	51534.100.001
4MM	100	51534.040.001	7MM *	500	51534.070.001	12MM	100	51534.120.001
5MM	100	51534.050.001	8MM	100	51534.080.001	13MM *	100	51534.130.001

51534 Plain washer for clevis pins ←

For pin ø	☒	Art.number	For pin ø	☒	Art.number	For pin ø	☒	Art.number
14MM	50	51534.140.001	23MM *	50	51534.230.001	28MM *	50	51534.280.001
16MM	50	51534.160.001	24MM *	50	51534.240.001	30MM *	50	51534.300.001
18MM *	100	51534.180.001	25MM *	50	51534.250.001	32MM *	50	51534.320.001
20MM *	100	51534.200.001	26MM *	50	51534.260.001	40MM *	25	51534.400.001
22MM *	100	51534.220.001	27MM *	50	51534.270.001			

Plain washer for clevis pins

DIN 1441



Technical data

For pin ø	d ₁	d ₂	s	For pin ø	d ₁	d ₂	s	For pin ø	d ₁	d ₂	s
5	5,5	10	0,8	20	21	32	4	36	37	52	6
6	7	12	1,6	22	23	34	4	40	41	58	6
7	8	14	1,6	23	24	36	4	50	51	68	8
8	9	16	2	24	25	38	4	60	62	80	9
10	11	20	2,5	25	26	40	4	70	72	95	10
12	13	25	3	26	27	40	5	75	78	100	10
14	15	28	3	28	29	42	5	80	82	110	12
16	17	28	3	30	31	45	5				
18	19	30	4	33	34	50	5				

38958 Plain washer for clevis pins

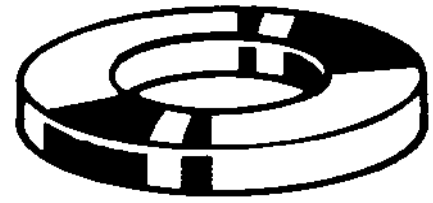
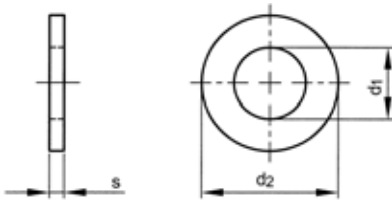
L07G

Material Steel
Packaging Standard



For pin ø	☒	Art.number	For pin ø	☒	Art.number	For pin ø	☒	Art.number
12MM	500	38958.120.001	23MM	100	38958.230.001	40MM	100	38958.400.001
14MM	500	38958.140.001	25MM	100	38958.250.001	50MM	100	38958.500.001
16MM	500	38958.160.001	28MM	100	38958.280.001	60MM	25	38958.600.001
18MM	100	38958.180.001	30MM	100	38958.300.001	70MM	25	38958.700.001
20MM	100	38958.200.001	33MM	100	38958.330.001	75MM	25	38958.750.001
22MM	100	38958.220.001	36MM	100	38958.360.001	80MM	25	38958.800.001

Plain washer



Technical data

For nom.size	d ₁	d ₂	s
M2	2,2	5,5	0,3
M2,6	2,8	7	0,5
M3	3,5	8	0,5
M3,5	3,7	8	0,5
M4	4,2	9	0,6
M5	5,2	12	0,7
M6	6,5	14	0,8
M8	8,5	18	1,5
M10	10,3	22	1,5
M12	13,2	28	2
M14	14,8	31	2
M16	16,5	34	2
M20	21	40	2,5
M22	22,8	46	2,5
M24	26,5	52	3

Article groups

Material	Surface treatment	Packaging	Code	Page
Al		Standard	45180	7-27
Br	Ni.pl.	Standard	50020	7-27
Br	Ni.pl.	Large	50030	7-28

45180 Plain washer

W01A

Material Aluminium
Packaging Standard



For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M4	1000	45180.040.001	M8	250	45180.080.001	M16	100	45180.160.001
M5	1000	45180.050.001	M10	250	45180.100.001	M20	50	45180.200.001
M6	1000	45180.060.001	M12	100	45180.120.001			

50020 Plain washer

M11F

Material Brass
Surface treatment Nickel plated
Packaging Standard

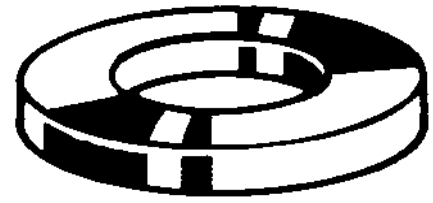
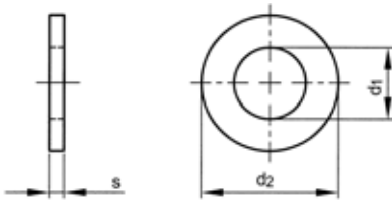


For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M2	500	50020.020.001	M3,5	250	50020.035.001	M6	250	50020.060.001
M2,6	500	50020.026.001	M4	250	50020.040.001			
M3	250	50020.030.001	M5	250	50020.050.001			

50030 Plain washer		M11F
Material	Brass	
Surface treatment	Nickel plated	
Packaging	Large	

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M8	250	50030.080.001	M14	100	50030.140.001	M22	50	50030.220.001
M10	250	50030.100.001	M16	100	50030.160.001	M24	50	50030.240.001
M12	100	50030.120.001	M20	50	50030.200.001			

Plain washer AG3



Technical data

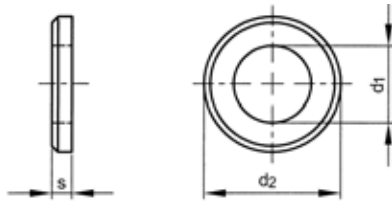
For nom.size	d ₁	d ₂	s
M3	3,5	8	0,8
M4	4,5	10	0,8
M5	5,5	12	1
M6	6,25	14	1,2
M8	8,25	18	1,5
M10	10,25	22	2
M12	12,5	27	2,5
M16	16,5	32	3
M20	21	40	3
M24	25	50	4

- SOPRAL AG3 washers are pickled and greased, and recommended for use with SOPRAL P60 hexagon head screws, see article group 45210.

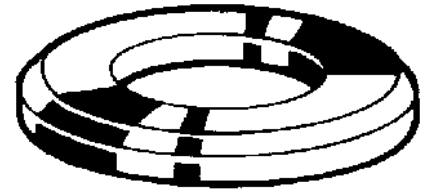
45150 Plain washer AG3		W01A
Material	Aluminium A-G3	
Surface treatment	Anodized	
Packaging	Standard	

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	500	45150.030.001	M5	500	45150.050.001	M8	250	45150.080.001
M4	500	45150.040.001	M6	500	45150.060.001	M10	200	45150.100.001

Single chamfer plain washer



ISO 7090
 DIN 125-1B
 NEN 2269 B



Technical data

For nom.size	d ₁	d ₂	s
M2,5	2,7	6	0,5
M3	3,2	7	0,5
M4	4,3	9	0,8
M5	5,3	10	1
M6	6,4	12	1,6
M7	7,4	14	1,6
M8	8,4	16	1,6
M10	10,5	20	2
M12	13	24	2,5
M14	15	28	2,5
M16	17	30	3
M18	19	34	3
M20	21	37	3
M22	23	39	3
M24	25	44	4
M27	28	50	4
M30	31	56	4
M33	34	60	5
M36	37	66	5
M39	40	72	6
M42	43	78	7
M45	46	85	7
M48	50	92	8
M52	54	98	8
M56	58	105	9
M60	62	110	9
M64	66	115	9

7

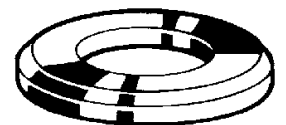
Article groups

Material	Surface treatment	Packaging	Code	Page
St 140HV		Standard	38160	7-30
St 140HV	Zipl	Standard	38180	7-31
St 140HV	Zipl	Large	38190	7-31
St.St. A4		Standard	55426	7-31
Br		Standard	50040	7-31
Br	Ni.pl.	Standard	50150	7-31

38160 Single chamfer plain washer

L07G

Material Steel 140HV
Packaging Standard



For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M4	250	38160.040.001	M18	100	38160.180.001	M42	10	38160.420.001
M5	250	38160.050.001	M20	100	38160.200.001	M45	10	38160.450.001
M6	250	38160.060.001	M22	50	38160.220.001	M48	10	38160.480.001
M7	250	38160.070.001	M24	50	38160.240.001	M52	5	38160.520.001
M8	250	38160.080.001	M27	25	38160.270.001	M56	5	38160.560.001
M10	200	38160.100.001	M30	25	38160.300.001	M60	5	38160.600.001
M12	150	38160.120.001	M33	25	38160.330.001	M64	5	38160.640.001
M14	100	38160.140.001	M36	25	38160.360.001			
M16	100	38160.160.001	M39	10	38160.390.001			

38180	Single chamfer plain washer						L07G	
Material	Steel 140HV							
Surface treatment	Zinc plated							
Packaging	Standard							

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M4	250	38180.040.001	M18	100	38180.180.001	M42	10	38180.420.001
M5	250	38180.050.001	M20	100	38180.200.001	M45	10	38180.450.001
M6	250	38180.060.001	M22	50	38180.220.001	M48	10	38180.480.001
M7	250	38180.070.001	M24	50	38180.240.001	M52	5	38180.520.001
M8	250	38180.080.001	M27	25	38180.270.001	M56	5	38180.560.001
M10	200	38180.100.001	M30	25	38180.300.001	M60	5	38180.600.001
M12	150	38180.120.001	M33	25	38180.330.001	M64	5	38180.640.001
M14	100	38180.140.001	M36	25	38180.360.001			
M16	100	38180.160.001	M39	10	38180.390.001			

38190	Single chamfer plain washer						L07G	
Material	Steel 140HV							
Surface treatment	Zinc plated							
Packaging	Large							

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M5	2500	38190.050.001	M8	2000	38190.080.001	M12	500	38190.120.001
M6	2000	38190.060.001	M10	1000	38190.100.001	M16	400	38190.160.001

55426	Single chamfer plain washer						R45A	
Material	Stainless steel A4							
Packaging	Standard							

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M5	250	55426.050.001	M12	200	55426.120.001	M27	25	55426.270.001
M6	250	55426.060.001	M16	100	55426.160.001	M30	25	55426.300.001
M8	250	55426.080.001	M20	100	55426.200.001			
M10	200	55426.100.001	M24	50	55426.240.001			

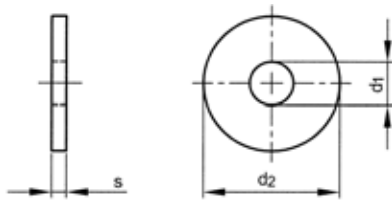
50040	Single chamfer plain washer						M11F	
Material	Brass							
Packaging	Standard							

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	250	50040.030.001	M10	100	50040.100.001	M22	50	50040.220.001
M4	250	50040.040.001	M12	100	50040.120.001	M24	50	50040.240.001
M5	250	50040.050.001	M14	100	50040.140.001	M27-11N	50	50040.270.001
M6	250	50040.060.001	M16	100	50040.160.001	M30	25	50040.300.001
M7	250	50040.070.001	M18	100	50040.180.001			
M8	250	50040.080.001	M20	50	50040.200.001			

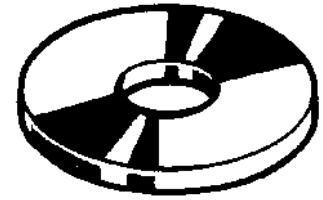
50150	Single chamfer plain washer						M11F	
Material	Brass							
Surface treatment	Nickel plated							
Packaging	Standard							

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M2,5	250	50150.025.001	M5	250	50150.050.001	M10	100	50150.100.001
M3	250	50150.030.001	M6	250	50150.060.001	M12	100	50150.120.001
M4	250	50150.040.001	M8	250	50150.080.001	M16	100	50150.160.001

Plain washer $d_2 \approx 3 \times d_1$



ISO 7093
 DIN 9021
 NEN 2276
 NF E25-513



Technical data

For nom.size	d_1 (min.)	d_2 (max.)	s
M2 (#DIN)	2,2	7	0,8
M2,5	2,7	8	0,8
M3	3,2	9	0,8
M3,5	3,7	11	0,8
M4	4,3	12	1
M5	5,3	15	1,2
M6	6,4	18	1,6
M7	7,4	22	2
M8	8,4	24	2
M10	10,5	30	2,5
M12	13	37	3
M14	15	44	3
M16	17	50	3
M18	20	56	4
M20	22	60	4
M24	26	72	5
M30	33	92	6
M36	39	110	8

Article groups

Material	Class	Surface treatment	Colour	Packaging	Code	Page
St		Zipl		Standard	38210	7-32
St		Zipl		Large	38220	7-32
St		Zipl yell.p.		Standard	38211	7-33
St.St. A2				Standard	51530	7-33
St.St. A4				Standard	55530	7-33
Plastic PA	PA 6.6		Black	Standard	56332	7-33
Plastic PA	PA 6.6		White	Standard	56330	7-33

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38210 Plain washer $d_2 \approx 3 \times d_1$

L01A

Material Steel
Surface treatment Zinc plated
Packaging Standard



For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	250	38210.030.001	M7	250	38210.070.001	M16	100	38210.160.001
M3,5	250	38210.035.001	M8	250	38210.080.001	M18	100	38210.180.001
M4	250	38210.040.001	M10	200	38210.100.001	M20	100	38210.200.001
M5	250	38210.050.001	M12	200	38210.120.001	M24	100	38210.240.001
M6	250	38210.060.001	M14	100	38210.140.001			

38220 Plain washer $d_2 \approx 3 \times d_1$

L01A

Material Steel
Surface treatment Zinc plated
Packaging Large



For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M4	2500	38220.040.001	M7	2000	38220.070.001	M12	500	38220.120.001
M5	2500	38220.050.001	M8	1000	38220.080.001			
M6	2000	38220.060.001	M10	750	38220.100.001			

38211	Plain washer $d_2 \approx 3 \times d_1$							L01A
Material	Steel							
Surface treatment	Zinc plated yellow passivated							
Packaging	Standard							

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	250	38211.030.001	M7	250	38211.070.001	M14	100	38211.140.001
M4	250	38211.040.001	M8	250	38211.080.001	M16	100	38211.160.001
M5	250	38211.050.001	M10	200	38211.100.001	M20	100	38211.200.001
M6	250	38211.060.001	M12	200	38211.120.001	M24	100	38211.240.001

51530	Plain washer $d_2 \approx 3 \times d_1$							R05A
Material	Stainless steel A2							
Packaging	Standard							

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M2 *	1000	51530.020.001	M6	200	51530.060.001	M16	200	51530.160.001
M2,5	1000	51530.025.001	M8	200	51530.080.001	M20	200	51530.200.001
M3	200	51530.030.001	M10	200	51530.100.001	M24 *	25	51530.240.001
M4	200	51530.040.001	M12	200	51530.120.001	M30 *	25	51530.300.001
M5	200	51530.050.001	M14	200	51530.140.001	M36 *	10	51530.360.001

55530	Plain washer $d_2 \approx 3 \times d_1$							R45A
Material	Stainless steel A4							
Packaging	Standard							

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M2 *	1000	55530.020.001	M6	200	55530.060.001	M18 *	50	55530.180.001
M2,5	1000	55530.025.001	M8	200	55530.080.001	M20	200	55530.200.001
M3	200	55530.030.001	M10	200	55530.100.001	M24 *	25	55530.240.001
M3,5	1000	55530.035.001	M12	200	55530.120.001	M30 *	25	55530.300.001
M4	200	55530.040.001	M14	200	55530.140.001			
M5	200	55530.050.001	M16	200	55530.160.001			

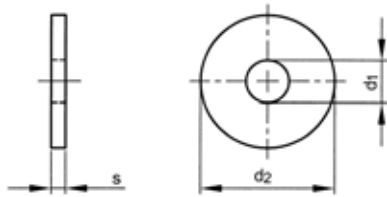
56332	Plain washer $d_2 \approx 3 \times d_1$							W02A
Material	Plastic Polyamide (nylon)							
Class	PA 6.6							
Colour	Black							
Packaging	Standard							

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	200	56332.030.001	M6	200	56332.060.001	M12	100	56332.120.001
M4	200	56332.040.001	M8	200	56332.080.001			
M5	200	56332.050.001	M10	100	56332.100.001			

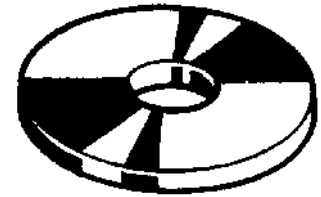
56330	Plain washer $d_2 \approx 3 \times d_1$							W02A
Material	Plastic Polyamide (nylon)							
Class	PA 6.6							
Colour	White							
Packaging	Standard							

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M3	200	56330.030.009	M6	200	56330.060.017	M10	100	56330.100.030
M4	200	56330.040.012	M6 (s=2)	200	56330.060.018	M12 (d ₂ =40)	100	56330.120.040
M5	200	56330.050.015	M8	200	56330.080.025	M16	100	56330.160.050

Washer for wood construction



ISO 7094
 DIN 440 R
 NEN 2275
 NF E25-513



Technical data

For nom.size	d ₁	d ₂	s
M5	5,5	18	2
M6	6,6	22	2
M8	9	28	3
M10	11	34	3
M12	13,5	44	4
M14	15,5	50	4
M16	17,5	56	5
M20	22	72	6
M22	24	80	6
M24	26	85	6
M27	30	98	6
M30	33	105	6

Article groups

Material	Surface treatment	Packaging	Code	Page
St	Zipl	Standard	38240	7-34
St	Hot d.g.	Standard	38230	7-34
St.St. A2		Standard	51590	7-34
St.St. A4		Standard	55590	7-35

38240 Washer for wood construction

L07G

Material Steel
Surface treatment Zinc plated
Packaging Standard



For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M5	100	38240.050.001	M10	100	38240.100.001	M20	50	38240.200.001
M6	100	38240.060.001	M12	100	38240.120.001	M24	25	38240.240.001
M8	100	38240.080.001	M16	100	38240.160.001	M27	25	38240.270.001

38230 Washer for wood construction

L07G

Material Steel
Surface treatment Hot dip galvanized
Packaging Standard



For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M5	100	38230.050.001	M12	100	38230.120.001	M27	25	38230.270.001
M6	100	38230.060.001	M16	100	38230.160.001	M30	25	38230.300.001
M8	100	38230.080.001	M20	50	38230.200.001			
M10	100	38230.100.001	M24	25	38230.240.001			

51590 Washer for wood construction

R09A

Material Stainless steel A2
Packaging Standard
 ISO ≈7094
 DIN ≈440R
 NEN ≈2275
 NF ≈E25-513



For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M5	50	51590.050.001	M8	50	51590.080.001	M12	50	51590.120.001
M6	50	51590.060.001	M10	50	51590.100.001	M14 *	50	51590.140.001

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51590 Washer for wood construction								
For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M16	50	51590.160.001	M22 *	25	51590.220.001			
M20	25	51590.200.001	M24	10	51590.240.001			

55590 Washer for wood construction								R49A
Material	Stainless steel A4							
Packaging	Standard							
	ISO ≈7094							
	DIN ≈440R							
	NEN ≈2275							
	NF ≈E25-513							

For nom. size	☒	Art.number	For nom. size	☒	Art.number	For nom. size	☒	Art.number
M5	50	55590.050.001	M10	50	55590.100.001	M20	25	55590.200.001
M6	50	55590.060.001	M12	50	55590.120.001	M22 *	25	55590.220.001
M8	50	55590.080.001	M16	50	55590.160.001	M24	10	55590.240.001