



a WN Global Company

+

NORD-LOCK[®]



TSP Manufacturing + Nord-Lock Washers

Product Catalog



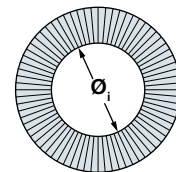
Nord-Lock steel washers

EN 1.7182 or equivalent, zinc flake coating (Delta Protekt®), through hardened

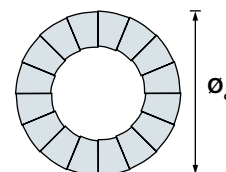
Dimension chart

Washer size	Bolt size		ϕ_i [inch]	ϕ_o [inch]	Thickness T [inch]	Approx. weight lbs / 100 pairs
	UNC	Metric				
NL3	#5	M3	0.13	0.28	0.07	0.07
NL3.5	#6	M3.5	0.15	0.30	0.07	0.09
NL3.5sp	#6	M3.5	0.15	0.35	0.07	0.13
NL4	#8	M4	0.17	0.30	0.07	0.09
NL4sp	#8	M4	0.17	0.35	0.07	0.13
NL5	#10	M5	0.21	0.35	0.07	0.11
NL5sp	#10	M5	0.21	0.43	0.07	0.24
NL6		M6	0.26	0.43	0.07	0.15
NL6sp		M6	0.26	0.53	0.10	0.44
NL1/4"	1/4"		0.28	0.45	0.07	0.18
NL1/4"sp	1/4"		0.28	0.53	0.10	0.40
NL8	5/16"	M8	0.34	0.53	0.10	0.33
NL8sp	5/16"	M8	0.34	0.65	0.10	0.62
NL3/8"	3/8"		0.41	0.65	0.10	0.51
NL3/8"sp	3/8"		0.41	0.83	0.10	1.06
NL10		M10	0.42	0.65	0.10	0.49
NL10sp		M10	0.42	0.83	0.10	1.04
NL11	7/16"	M11	0.45	0.73	0.10	0.64
NL12		M12	0.51	0.77	0.10	0.64
NL12sp		M12	0.51	1.00	0.13	2.05
NL1/2"	1/2"		0.53	0.77	0.10	0.60
NL1/2"sp	1/2"		0.53	1.00	0.13	1.98
NL14	9/16"	M14	0.60	0.91	0.13	1.23
NL14sp	9/16"	M14	0.60	1.21	0.13	3.11
NL16	5/8"	M16	0.67	1.00	0.13	1.48
NL16sp	5/8"	M16	0.67	1.21	0.13	2.82
NL18		M18	0.77	1.14	0.13	1.87
NL18sp		M18	0.77	1.36	0.13	3.48
NL3/4"	3/4"		0.79	1.21	0.13	2.31
NL3/4"sp	3/4"		0.79	1.54	0.13	4.85
NL20		M20	0.84	1.21	0.13	2.05
NL20sp		M20	0.84	1.54	0.13	4.48
NL22	7/8"	M22	0.92	1.36	0.13	2.84
NL22sp	7/8"	M22	0.92	1.65	0.18	7.30
NL24		M24	1.00	1.54	0.13	3.70
NL24sp		M24	1.00	1.91	0.18	9.94
NL1"	1"		1.10	1.54	0.13	3.37
NL1"sp	1"		1.10	1.91	0.18	9.26
NL27		M27	1.12	1.65	0.23	7.25
NL27sp		M27	1.12	1.91	0.23	11.88
NL30	1 1/8"	M30	1.24	1.85	0.23	9.26
NL30sp	1 1/8"	M30	1.24	2.30	0.26	19.75
NL33	1 1/4"	M33	1.35	1.91	0.23	8.75
NL33sp	1 1/4"	M33	1.35	2.30	0.26	18.32
NL36	1 3/8"	M36	1.47	2.17	0.23	12.32
NL36sp	1 3/8"	M36	1.47	2.48	0.26	20.17
NL39	1 1/2"	M39	1.59	2.30	0.23	13.85
NL42		M42	1.70	2.48	0.23	16.47
NL45	1 3/4"	M45	1.82	2.76	0.28	22.49
NL48		M48	1.95	2.95	0.28	26.46
NL52	2"	M52	2.11	3.15	0.28	28.66
NL56	2 1/4"	M56	2.33	3.35	0.28	29.76
NL60		M60	2.48	3.54	0.28	33.51
NL64	2 1/2"	M64	2.64	3.74	0.28	36.82
NL68		M68	2.80	3.94	0.37	62.15
NL72		M72	2.96	4.13	0.37	67.68
NL76	3"	M76	3.11	4.33	0.37	73.43
NL80	3 1/8"	M80	3.27	4.53	0.37	79.41
NL85		M85	3.47	4.72	0.37	83.42
NL90		M90	3.64	5.12	0.37	105.09
NL95		M95	3.83	5.31	0.37	109.81
NL100	4"	M100	4.07	5.71	0.37	129.87
NL105		M105	4.27	5.91	0.37	135.10
NL110		M110	4.46	6.10	0.37	140.32
NL115		M115	4.66	6.50	0.37	165.96
NL120		M120	4.86	6.69	0.37	171.83
NL125		M125	5.06	6.81	0.37	168.94
NL130	5"	M130	5.25	7.01	0.37	174.54

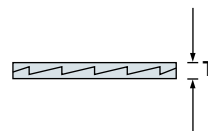
NL3-NL8
 $\phi_i \pm 0.004$ inch
 NL10-NL42
 $\phi_i \pm 0.008$ inch
 NL45-NL130
 $\phi_i +0.02/-0$ inch



NL3-NL24 (NL1")
 $\phi_o \pm 0.008$ inch
 NL27-NL42
 $\phi_o \pm 0.012$ inch
 NL45-NL130
 $\phi_o +0/-0.08$ inch



NL3-NL42
 $T \pm 0.01$ inch
 NL45-NL130
 $T \pm 0.03$ inch



Note that washers with thickness 0.26 inch has a thickness tolerance $+0.0 / -0.02$ inch

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Nord-Lock stainless steel washers

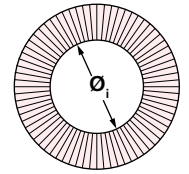
EN 1.4404 (AISI 316L) or equivalent, surface hardened

EN 1.4404 is an austenitic chromium-nickel stainless steel containing molybdenum. This stainless steel also has extra low carbon content in order to reduce the risk of chromium-carbide precipitation. EN 1.4404 is one of the most commonly used stainless steel grades and Nord-Lock washers made of EN 1.4404 are suitable for most applications where no chlorides or acids are present.

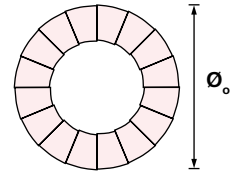
Dimension chart

Washer size	Bolt size		ϕ_i [inch]	ϕ_o [inch]	Thickness T [inch]	Approx. weight lbs / 100 pairs
	UNC	Metric				
NL3ss	#5	M3	0.13	0.28	0.09	0.09
NL3.5ss	#6	M3.5	0.15	0.30	0.09	0.09
NL3.5spss	#6	M3.5	0.15	0.35	0.09	0.15
NL4ss	#8	M4	0.17	0.30	0.09	0.09
NL4spss	#8	M4	0.17	0.35	0.09	0.15
NL5ss	#10	M5	0.21	0.35	0.09	0.13
NL5spss	#10	M5	0.21	0.43	0.09	0.24
NL6ss		M6	0.26	0.43	0.09	0.20
NL6spss		M6	0.26	0.53	0.08	0.35
NL1/4"ss	1/4"		0.28	0.45	0.09	0.20
NL1/4"spss	1/4"		0.28	0.53	0.09	0.33
NL8ss	5/16"	M8	0.34	0.53	0.08	0.26
NL8spss	5/16"	M8	0.34	0.65	0.08	0.48
NL3/8"ss	3/8"		0.41	0.65	0.08	0.42
NL3/8"spss	3/8"		0.41	0.83	0.08	0.84
NL10ss		M10	0.42	0.65	0.08	0.40
NL10spss		M10	0.42	0.83	0.08	0.82
NL11ss	7/16"	M11	0.45	0.73	0.09	0.57
NL12ss		M12	0.51	0.77	0.08	0.51
NL12spss		M12	0.51	1.00	0.12	1.81
NL1/2"ss	1/2"		0.53	0.77	0.08	0.53
NL1/2"spss	1/2"		0.53	1.00	0.13	1.76
NL14ss	9/16"	M14	0.60	0.91	0.12	1.08
NL14spss	9/16"	M14	0.60	1.21	0.13	2.89
NL16ss	5/8"	M16	0.67	1.00	0.12	1.30
NL16spss	5/8"	M16	0.67	1.21	0.13	2.49
NL18ss		M18	0.77	1.14	0.13	1.76
NL18spss		M18	0.77	1.36	0.13	3.44
NL3/4"ss	3/4"		0.79	1.21	0.13	2.12
NL3/4"spss	3/4"		0.79	1.54	0.13	4.63
NL20ss		M20	0.84	1.21	0.12	1.81
NL20spss		M20	0.84	1.54	0.13	4.54
NL22ss	7/8"	M22	0.92	1.36	0.13	2.71
NL22spss	7/8"	M22	0.92	1.65	0.13	4.92
NL24ss		M24	1.00	1.54	0.13	3.35
NL24spss		M24	1.00	1.91	0.13	7.72
NL1"ss	1"		1.10	1.54	0.13	3.13
NL1"spss	1"		1.10	1.91	0.13	7.10
NL27ss		M27	1.12	1.65	0.27	7.61
NL27spss		M27	1.12	1.91	0.27	12.90
NL30ss	1 1/8"	M30	1.24	1.85	0.27	9.77
NL30spss	1 1/8"	M30	1.24	2.30	0.27	21.01
NL33ss	1 1/4"	M33	1.35	1.91	0.27	9.37
NL36ss	1 3/8"	M36	1.47	2.17	0.27	13.14
NL39ss	1 1/2"	M39	1.59	2.30	0.27	14.86
NL42ss		M42	1.70	2.48	0.27	17.55
NL45ss	1 3/4"	M45	1.82	2.76	0.27	22.49
NL48ss		M48	1.95	2.95	0.27	26.46
NL52ss	2"	M52	2.11	3.15	0.35	44.31
NL56ss	2 1/4"	M56	2.33	3.35	0.35	46.96
NL60ss		M60	2.48	3.54	0.35	51.81
NL64ss	2 1/2"	M64	2.64	3.74	0.35	56.88
NL68ss		M68	2.80	3.94	0.35	62.17
NL72ss		M72	2.96	4.13	0.35	67.68
NL76ss	3"	M76	3.11	4.33	0.35	73.41
NL80ss	3 1/8"	M80	3.27	4.53	0.35	79.37

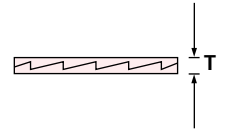
NL3ss – NL8ss
 $\phi_o \pm 0.004$ inch
 NL10ss – NL42ss
 $\phi_o \pm 0.008$ inch
 NL45ss – NL80ss
 $\phi_o +0.02/-0$ inch



NL3ss – NL24ss (NL1"ss)
 $\phi_o \pm 0.008$ inch
 NL27ss – NL42ss
 $\phi_o \pm 0.012$ inch
 NL45ss – NL80ss
 $\phi_o +0/-0.08$ inch



NL3ss – NL24ss (NL1"ss)
 T ± 0.01 inch
 NL27ss – NL42ss
 T $+0/-0.02$ inch
 NL45ss – NL80ss
 T ± 0.03 inch



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Nord-Lock 254 SMO® washers

EN 1.4547 or equivalent, surface hardened

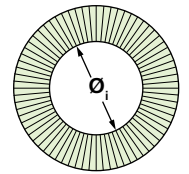
254 SMO® is a high performance austenitic stainless steel (according to EN 1.4547) with greater mechanical strength and resistance against corrosion than most austenitic stainless steel grades. The material is resilient against pitting and crevice corrosion due to high contents of chromium, nickel, molybdenum and nitrogen. Nord-Lock 254 SMO® washers are specially designed for chloride rich processes and salt water solutions / atmospheres, i.e. environments where stainless steel washers made of EN 1.4404 are not suitable.

Dimension chart

Washer size	Bolt size		ϕ_i [inch]	ϕ_o [inch]	Thickness T [inch]	Approx weight lbs / 100 pairs
	UNC	Metric				
NL3ss-254	#5	M3	0.13	0.28	0.09	0.09
NL3.5ss-254	#6	M3.5	0.15	0.30	0.09	0.09
NL3.5spss-254	#6	M3.5	0.15	0.35	0.09	0.15
NL4ss-254	#8	M4	0.17	0.30	0.09	0.09
NL4spss-254	#8	M4	0.17	0.35	0.09	0.15
NL5ss-254	#10	M5	0.21	0.35	0.09	0.13
NL5spss-254	#10	M5	0.21	0.43	0.09	0.24
NL6ss-254		M6	0.26	0.43	0.09	0.20
NL6spss-254		M6	0.26	0.53	0.09	0.35
NL1/4"ss-254	1/4"		0.28	0.45	0.09	0.20
NL1/4"spss-254	1/4"		0.28	0.53	0.09	0.33
NL8ss-254	5/16"	M8	0.34	0.53	0.08	0.26
NL8spss-254	5/16"	M8	0.34	0.65	0.09	0.48
NL3/8"ss-254	3/8"		0.41	0.65	0.08	0.42
NL3/8"spss-254	3/8"		0.41	0.83	0.09	0.84
NL10ss-254		M10	0.42	0.65	0.08	0.40
NL10spss-254		M10	0.42	0.83	0.09	0.82
NL11ss-254	7/16"	M11	0.45	0.73	0.09	0.57
NL12ss-254		M12	0.51	0.77	0.08	0.51
NL12spss-254		M12	0.51	1.00	0.12	1.81
NL1/2"ss-254	1/2"		0.53	0.77	0.09	0.53
NL1/2"spss-254	1/2"		0.53	1.00	0.13	1.76
NL14ss-254	9/16"	M14	0.60	0.91	0.12	1.08
NL14spss-254	9/16"	M14	0.60	1.21	0.13	2.89
NL16ss-254	5/8"	M16	0.67	1.00	0.12	1.30
NL16spss-254	5/8"	M16	0.67	1.21	0.13	2.49
NL18ss-254		M18	0.77	1.14	0.13	1.76
NL18spss-254		M18	0.77	1.36	0.13	3.44
NL3/4"ss-254	3/4"		0.79	1.21	0.13	2.12
NL3/4"spss-254	3/4"		0.79	1.54	0.13	4.72
NL20ss-254		M20	0.84	1.21	0.12	1.81
NL20spss-254		M20	0.84	1.54	0.13	4.36
NL22ss-254	7/8"	M22	0.92	1.36	0.13	2.62
NL22spss-254	7/8"	M22	0.92	1.65	0.13	5.34
NL24ss-254		M24	1.00	1.54	0.13	3.64
NL24spss-254		M24	1.00	1.91	0.13	7.72
NL1"ss-254	1"		1.10	1.54	0.13	3.13
NL1"spss-254	1"		1.10	1.91	0.22	7.10
NL27ss-254		M27	1.12	1.65	0.22	6.83
NL27spss-254		M27	1.12	1.91	0.22	12.90
NL30ss-254	1 1/8"	M30	1.24	1.85	0.22	8.90
NL33ss-254	1 1/4"	M33	1.35	1.91	0.22	9.37
NL36ss-254	1 3/8"	M36	1.47	2.17	0.22	13.14
NL39ss-254	1 1/2"	M39	1.59	2.30	0.22	14.86

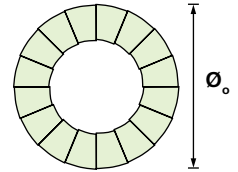
NL3ss-254–NL8ss-254
 $\phi_i \pm 0.004$ inch

NL10ss-254–NL39ss-254
 $\phi_i \pm 0.008$ inch

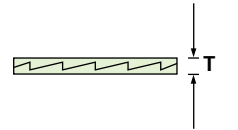


NL3ss254 –NL24ss -254
 (NL1"ss-254)
 $\phi_o \pm 0.008$ inch

NL27ss-254–NL39ss-254
 $\phi_o \pm 0.012$ inch



NL3ss-254 –NL39ss-254
 $T \pm 0.01$ inch



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*Nord-Lock's preferred
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- Technical product support

Washer Materials We Stock:

- Delta Protekt®
- Stainless steel
- 254 SMO®
- INCONEL®/HASTELLOY® C-276
- INCONEL® 718



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